



North American Energy Standards Board

801 Travis, Suite 1675, Houston, Texas 77002
Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

NORTH AMERICAN ENERGY STANDARDS BOARD WHOLESALE ELECTRIC QUADRANT EXECUTIVE COMMITTEE MEETING MEETING MATERIALS

Tuesday, October 26, 2010 -- 10:00 am to 4:00 pm ET

**Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA
Pump House Building, Auditorium, 2nd Floor**



North American Energy Standards Board

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f.	Business Practices Subcommittee (BPS) : Update on Parallel Flow Visualization Solutions Tag all non-firm option: http://www.naesb.org/pdf4/weq_bps101410w6.doc Generator Prioritization Option: http://www.naesb.org/pdf4/weq_bps101410w9.doc Flowgate Allocation Option: http://www.naesb.org/pdf4/weq_bps101410w12.doc Presentation: http://www.naesb.org/pdf4/weq_ec102610w3.ppt	287 294 303 315
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Attire – Business Casual



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NAESB ANTITRUST GUIDELINES STATEMENT

ANTITRUST GUIDELINES

- The following guidelines will be reviewed by counsel at the meeting. The meeting will be monitored, transcribed, and minutes will be taken. The guidelines are as follows:

Antitrust guidelines direct meeting participants to avoid discussion of topics or behavior that would result in anticompetitive behavior including: restraint of trade and conspiracies to monopolize, unfair or deceptive business acts or practices, price discriminations, division of markets, allocation of production, imposition of boycotts, and exclusive dealing arrangements.

Any views, opinions or positions presented or discussed by meeting participants are the views of the individual meeting participants and their organizations. Any such views, opinions or positions are not the views, positions or opinions of NAESB, the NAESB Board of Directors, or any NAESB Committee or Subcommittee, unless specifically noted otherwise.

As it is not the purpose of the meeting to discuss any antitrust topics, if anyone believes we are straying into improper areas, please let us know and we will redirect the conversation.



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PRODUCERS SEGMENT		TERM END:
Jim Busch	Director of Energy Policy and Regulation, BP Energy Company	12-31-2010
Pete Frost	Director – Regulatory Affairs, ConocoPhillips Gas and Power Marketing	12-31-2010
Chuck Cook	Manager - Regulatory Affairs, Chevron	12-31-2011
Richard D. Smith	Regulatory & Compliance Manager, Noble Energy, Inc.	12-31-2011
Mike Shepard	General Counsel, Mewbourne Oil Company	12-31-2011
PIPELINE SEGMENT		
Bill Griffith	Consultant, El Paso Natural Gas Company	12-31-2011
Kathryn Burch	Project Manager - Standards and Regulatory, Spectra Energy Transmission	12-31-2011
Dale Davis	Consultant, Williams Gas Pipeline	12-31-2010
Randy Young	Vice President - Regulatory Compliance and Corporate Services, Boardwalk Pipeline Partners, LP	12-31-2012
Kim Van Pelt	Regulatory Compliance Manager, Panhandle Eastern Pipe Line	12-31-2012
LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT		
Rodger Schewecke	Director – Energy Markets and Capacity Products, Sempra Energy - Southern California Gas	12-31-2011
Phil Precht	Management Consultant – Pricing & Regulatory Services Department, Baltimore Gas and Electric Company	12-31-2011
Paul Buckley	Director of Rates and Regulatory Affairs, Washington Gas	12-31-2010
Mike Novak	Assistant General Manager, National Fuel Gas Distribution	12-31-2012
Craig Colombo	Energy Trader III, Dominion Resources	12-31-2012
END USERS SEGMENT		
Norm Spooner	Supply Chain Manager – Fuel & Term Trading Department, Arizona Public Service Company	12-31-2010
Valerie Crockett	Senior Program Manager - Energy Markets & Policy, Tennessee Valley Authority	12-31-2010
Lori-Lynn C. Pennock	Senior Fuel Supply Analyst, Salt River Project	12-31-2011
V A C A N C Y		12-31-2011
Tina Burnett	Natural Gas Operations Administrator, The Boeing Company	12-31-2011
SERVICES SEGMENT		
James Goerig	Vice President – Structured Risk Control, Sequent Energy Management	12-31-2010
Lisa Simpkins	Vice President, Energy Policy – Natural Gas, Constellation Energy Commodities Group	12-31-2010
Leigh Spangler	CEO, Latitude Technologies, Inc.	12-31-2011
Jim Buccigross	Vice President, 8760 Inc.	12-31-2011
Jeff Jarvis	Senior Counsel, EnCana Marketing (USA), Inc.	12-31-2011

EXECUTIVE COMMITTEE OFFICERS: Jim Buccigross is WGQ chairman of the Executive Committee, Dale Davis is WGQ vice chairman; Mike Novak is the RGQ chairman, Phil Precht is the REQ chairman, Jim Minneman is REQ vice chairman, Kathy York is the WEQ chairman and Alan Johnson is the WEQ vice chairman.



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SERVICE PROVIDERS/SUPPLIERS SEGMENT		TERM END:
Bill Barkas	Manager of Retail State Government Relations, Dominion Retail, Inc.	12-31-2011
Jim Minneman	Controller, PPL Solutions, LLC	12-31-2011
Jennifer Teel	Vice President of Client Services, ista	12-31-2010
Susan Munson	ERCOT Retail Market Liaison, Electric Reliability Council of Texas (ERCOT)	12-31-2010

UTILITIES SEGMENT		
Phil Precht	Management Consultant - Pricing and Regulatory Services Department, Baltimore Gas & Electric Company	12-31-2011
Patrick Eynon	Supervisor – Retail Access, Ameren Services	12-31-2011
Judy Ray	Industrial Segment Manager – Contract Administrator, Alabama Power Company	12-31-2010
Michael J. Jesensky	Director – Demand –Side Analysis, Dominion Resources Services, Inc. (representing Dominion Virginia Power)	12-31-2010

END USERS/PUBLIC AGENCIES SEGMENT		
V A C A N C Y		12-31-2011
V A C A N C Y		12-31-2011
Annunciata E. Marino	Utility Energy Policy and Technology Analyst, Pennsylvania Public Utility Commission	12-31-2010
Christopher Kotting	Administrator – Energy Assurance, Public Utility Commission of Ohio	12-31-2010



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TRANSMISSION SEGMENT		TERM END:	SUBSEGMENT:
Patrick McGovern	Manager - System Services, Georgia Transmission Corporation	12-31-2011	Muni/Coop
Luke O'Dwyer	Senior Engineer, Salt River Project	12-31-2010	Fed/State/Prov.
Daryl McGee	Manager – Transmission Services, Southern Company Services	12-31-2010	IOU
Edward Davis	Policy Consultant, Entergy Services, Inc.	12-31-2011	IOU
Marceline Otondo	Regulatory Compliance Advisory, Arizona Public Service Company	12-31-2010	at large
Bob Harshbarger	OASIS Trading Manager, Puget Sound Energy	12-31-2011	at large
Michelle Mizumori	Director of Market – Operations Interface, Western Electricity Coordinating Council (WECC)	12-31-2011	At-Large
GENERATION SEGMENT			
William J. Gallagher	Special Contracts Chief, Vermont Public Power Supply Authority	12-31-2011	Muni/Coop
Kathy York	Sr. Energy Markets & Policy Specialist, Tennessee Valley Authority	12-31-2010	Fed/State/Prov.
V A C A N C Y		12-31-2010	IOU
John Ciza	Project Manager Energy Policy and Regulatory Affairs, Southern Company Services	12-31-2011	IOU
Alan Johnson	Director Regulatory Compliance – Commercial Operations & Commodities, NRG Energy, Inc.	12-31-2010	Merchant
Trent Carlson	Vice President – Regulatory Affairs, RRI Energy Services, Inc.	12-31-2011	at large
Shah Hossain	Senior Regulatory Specialist, Westar Energy, Inc.	12-31-2011	at large
MARKETERS/BROKERS SEGMENT			
Chris Norton	Director of Market Regulatory Affairs, American Municipal Power, Inc.	12-31-2010	Muni/Coop
Belinda Thornton	General Manager - Energy Origination, Tennessee Valley Authority	12-31-2011	Fed/State/Prov.
V A C A N C Y		12-31-2010	at large
Richard Lehman	Supply and Trading, Salt River Project	12-31-2011	at large
John Apperson	Director – Commercial and Trading, PacifiCorp Energy	12-31-2010	IOU
Roy True	Manager of Regulatory and Market Affairs, ACES Power Marketing	12-31-2011	at large
Barry Green	Barry Green Consulting (representing Electric Power Supply Association (EPSA))	12-31-2011	at large



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DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT		TERM END:	SUBSEGMENT:
Ray Phillips	Manager of Compliance and Special Projects, Alabama Municipal Electric Authority	12-31-2010	Muni/Coop
V A C A N C Y		12-31-2011	at large
Alan Pritchard	Senior Engineer, Duke Energy Corporation	12-31-2010	IOU
Rufus D. Gladney	Executive Manager of Energy Services West, Consumers Energy Company	12-31-2011	IOU
Robert Martinko	Consultant FERC Compliance, FirstEnergy Service Company	12-31-2010	at large
Syd Berwager	Industry Restructuring Project Manager, Bonneville Power Administration/Power Business Line	12-31-2011	Other
Andy Rodriguez	Manager of Business Practice Coordination, NERC	12-31-2011	At-Large
<hr/> END USERS SEGMENT			
V A C A N C Y		12-31-2011	at large
Aaron Breidenbaugh	Senior Manager - Regulatory Affairs and Public Policy - New York, EnerNOC, Inc.	12-31-2010	at large
Lou Ann Westerfield	Policy Strategist, Idaho Public Utilities Commission, rep. National Association of Regulatory Utility Commissioners	12-31-2010	Regulator
V A C A N C Y		12-31-2011	at large
Christopher Kotting	Administrator – Energy Assurance, Public Utility Commission of Ohio	12-31-2010	at large
V A C A N C Y		12-31-2011	at large
Paul Sorenson	Vice President - Central Markets Strategy, Open Access Technology International, Inc.	12-31-2011	At-Large
<hr/> INDEPENDENT GRID OPERATORS/PLANNERS			
Thomas Bowe	Executive Director – Reliability Integration, PJM Interconnection, LLC	12-31-2010	
Jim Castle	Manager - Grid Operations, New York Independent System Operator, Inc.	12-31-2010	
Matt Goldberg	Director Reliability & Operations Compliance ISO New England, Inc.	12-31-2010	
Nancy Traweek	Director – Market Services, California ISO	12-31-2010	
Joel Mickey	Director of Grid Operations, Electric Reliability Council of Texas	12-31-2011	
Ed Skiba	Consulting Advisor, Standards Compliance & Strategy, Midwest ISO	12-31-2011	
Charles Yeung	Executive Director Interregional Affairs, Southwest Power Pool	12-31-2011	



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TECHNOLOGY AND SERVICES

Jim Buccigross	Vice President Energy Industry Practice, 8760, Inc.	12-31-2010
VACANCY		12-31-2010
VACANCY		12-31-2010
VACANCY		12-31-2010
VACANCY		12-31-2011
VACANCY		12-31-2011
VACANCY		12-31-2011



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NORTH AMERICAN ENERGY STANDARDS BOARD 2010 EXECUTIVE COMMITTEE TERMS – Retail Gas Quadrant

SERVICE PROVIDERS/SUPPLIERS SEGMENT		TERM END:
Dwight M. Whitley, Jr.	Corporate Counsel, Sierra Southwest Cooperative Services, Inc.	12-31-2011
V A C A N C Y		12-31-2011
Richard Zollars	Director - Data and Billing, Dominion Retail, Inc.	12-31-2010
V A C A N C Y		12-31-2010
<hr/> DISTRIBUTORS SEGMENT		
Dan Jones	Supervisor - Certified Supplier Business Center, Duke Energy	12-31-2011
Julie Compton Pellizzi	Project Leader, AGL Resources, Inc.	12-31-2011
Michael Novak	Assistant General Manager, National Fuel Gas Distribution Corporation	12-31-2010
V A C A N C Y		12-31-2010
<hr/> END USERS/PUBLIC AGENCIES SEGMENT		
V A C A N C Y		12-31-2010
V A C A N C Y		12-31-2010
V A C A N C Y		12-31-2011
V A C A N C Y		12-31-2011



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NORTH AMERICAN ENERGY STANDARDS BOARD 2010 EXECUTIVE COMMITTEE ALTERNATES – Wholesale Gas Quadrant

END USER SEGMENT

Paul A. Jones	Senior Marketing Representative, Salt River Project
Art Morris	Gas Originator, Florida Power & Light Company
Kenneth Nordlander	Fuel Procurement, Arizona Public Service Company

DISTRIBUTION SEGMENT

Rick Ishikawa	Interconnect Account Manager in Capacity Products Group, Southern California Gas Company
Jim Blasiak	Specialist Federal Regulatory Affairs, Washington Gas Light Company
George Simmons	FERC Specialist, NiSource Inc.
Scott Butler	Project Manager, Energy Markets Policy Group, Consolidated Edison Company of New York, Inc.

PIPELINE SEGMENT

Bill Grygar	Vice President, Panhandle Eastern Pipe Line
Scott Hansen	Questar Pipeline Company
Ronald G. Tomlinson	Manager – Business Technology, Dominion Gas Transmission, Inc.
Paul Love	Director, Electronic Customer Services, Natural Gas Pipe Line Company of America
Mark Gracey	Consultant, Tennessee Gas Pipeline Company
Christopher Burden	Consultant e-Commerce & Service Delivery, Williams Gas Pipeline
Tom Gwilliam	Iroquois Gas Transmission System

PRODUCER SEGMENT

Catherine R. Abercrombie	Director – Regulatory Affairs, ConocoPhillips Gas and Power Marketing
Rhonda Denton	Regulatory Affairs, BP Energy Company

SERVICES SEGMENT

Keith Sappenfield	Director, US Regulatory Affairs, Midstream and Marketing, EnCana Oil and Gas (USA), Inc.
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NORTH AMERICAN ENERGY STANDARDS BOARD 2010 EXECUTIVE COMMITTEE ALTERNATES – Retail Electric Quadrant

UTILITIES SEGMENT

Keith P. Hock	Director ARES Business Center, Ameren Services Company
Debbie McKeever	Market Advocate, Oncor
William J. Welzant	Principal Supplier Services Analyst, Supplier Account Management, Baltimore Gas and Electric

END USERS/PUBLIC AGENCIES SEGMENT

SERVICE PROVIDERS/SUPPLIERS SEGMENT

Brandon S. Siegel	Manager – Market Management, E:SO
H. Neal Allen	Profitability & Economic Analysis Manager, Southern Company Services
Wendell Miyaji	Senior Director – Systems, Converge, Inc.



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END USER SEGMENT		SUB-SEGMENT
Mark W. Hackney	Regional Director – Transmission, Open Access Technology International, Inc.	At-Large
DISTRIBUTION/LSE SEGMENT		SUB-SEGMENT
Gerry Adamski	Vice President of Standards, NERC	At-Large
Lee Hall	Coordination Manager – Power Services, Bonneville Power Administration	Other
Ronald C. Snead	General Manager, System Planning and Business Services, Duke Energy	IOU
GENERATION SEGMENT		SUB-SEGMENT
Lou Oberski	Director – Electric Market Policy, Dominion Resources Services, Inc	IOU
Francis Halpin	Bonneville Power Administration	Fed/State/Prov.
MARKETER/BROKER SEGMENT		SUB-SEGMENT
Jeff Ackerman	Manager, CRSP-Energy Mgmt., Western Area Power Administration	Fed/State/Prov
Brenda Anderson	Bonneville Power Administration	Fed/State/Prov
Valerie Crockett	Senior Program Manager, Energy Markets & Policy, Tennessee Valley Authority	Fed/State/Prov
Joel Dison	Project Manager, Southern Company Generation and Energy Marketing	IOU
TRANSMISSION SEGMENT		SUB-SEGMENT
Yvonne Coleman	Public Utilities Specialist (Policy), Bonneville Power Administration	Fed/State/Prov.
Chuck Feagans	Tennessee Valley Authority	Fed/State/Prov.
Sarah E. Edmonds	Director of Transmission Regulation, Strategy and Policy, PacifiCorp	IOU
Jane Daly	Rate & Regulatory Advisor, Arizona Public Service Company	IOU
Narinder Saini	Policy Consultant, Entergy Services, Inc.	IOU
J.T. Wood	Southern Company Services	IOU
Dean Ulch	Principal Engineer – Transmission Policy and Services, Southern Company Services, Inc.	IOU
Hasnah Mat-Amin	Market Interface Manager, Western Electricity Coordinating Council	At Large
Ross Kovacs	Transmission Strategic Coordinator, Georgia Transmission Corporation	Muni/Coop



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INDEPENDENT GRID OPERATORS/PLANNERS SEGMENT	SUB-SEGMENT
Paul Wattles	Supervisor Demand Side Programs, Electric Reliability Council of Texas (ERCOT)
Bill Blevins	Sr. Market Support Analyst, Electric Reliability Council of Texas (ERCOT)
Heather Sanders	Renewable Integration Support Manager, California ISO
Robert Coughlin	Principal Scientist Reliability & Operations Compliance, ISO New England, Inc.
Eric Winkler	Project Manager – FCM and Tariff Administration, ISO New England, Inc.
Cheryl Mendrala	Principal Engineer, ISO New England, Inc.
Jason Marshall	Technical Manager, Midwest ISO
Marie Knox	Sr. Standards Compliance Analyst, Midwest ISO
Dean Hartung	Manager Real Time Market Operations, PJM Interconnection, LLC
Cathy Wesley	Sr. Analyst, PJM Interconnection, LLC
Carl Monroe	Sr. Vice President Operations & Chief Operating Officer, Southwest Power Pool
Greg Campoli	Supervisor – Reliability Compliance and Assessment, New York ISO
Diana Pommen	Director Interjurisdictional Affairs, Alberta Electric System Operator
Jimmy Womack	Manager-Tariff Administration, Southwest Power Pool
Terry Bilke	Director Standards Compliance and Strategy, Midwest ISO



North American Energy Standards Board

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Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

October 21, 2010

TO: NAESB Wholesale Electric, Wholesale Gas and Retail Gas and Electric Quadrant Executive Committee Members, Alternates and Interested Industry Participants
FROM: Rae McQuade, NAESB President
RE: **Quadrant Executive Committee Meeting Draft Agendas and Links to Meeting Materials – Additional Material Links Added**

NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETINGS Hosted by Dominion at the Dominion Downtown Offices in Richmond, Virginia

First, let me thank Dominion, Ron Tomlinson, Rachel Hogge and Lou Oberski for the generosity and commitment to the NAESB organization through hosting this series of meetings. Without such support, it would be very difficult to maintain the NAESB budget and provide various locations around the country to encourage attendance at the NAESB in-person meetings.

As we have announced at prior Executive Committee meetings, meeting announcements and in other communications, the Executive Committee (EC) will meet in Richmond, Virginia hosted by Dominion:

Where: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA
Contact: Veronica Thomason, 713-356-0060
When: Tuesday, October 26 -- 10:00 a.m. to 4:00 p.m. E – Wholesale Electric Quadrant
Wednesday, October 27 -- 10:00 a.m. to 4:00 p.m. E – Retail Gas Quadrant and Retail Electric Quadrant
Thursday, October 28 -- 10:00 a.m. to 4:00 p.m. E – Wholesale Gas Quadrant

If you plan to attend any of the above EC meetings and have not already RSVPed to our office through the other announcements, please do so at your earliest convenience to the NAESB office (naesb@naesb.org) so that proper meeting arrangements can be made by NAESB and our host. Travel information is posted on the NAESB web site on the EC pages and can be directly accessed from the following link: <http://www.naesb.org/pdf4/ec102610ma.doc>. If you plan to participate by conference call, the information to do so is provided in this packet. The EC meetings will be web cast as well. The meetings, conference calling and web casting is open to any interested party.

If additional meeting materials for the meetings are made available, they will be provided in a separate release of the agenda with revised or new links to the additional material highlighted in yellow. In an effort to control costs and be more environmentally aware, we are not printing Executive Committee books any longer; the meeting materials from the agenda links will be assembled into a pdf document, which will be posted on the NAESB web site for each quadrant meeting.

Please note that in discussions with the Retail Quadrants EC chairs and vice chairs, it has been determined that all Retail EC meetings for 2010 will be conference call/web casts in recognition of the small number of in-person attendance from the 2009/2010 records, and also in recognition of the reduced travel budgets for 2010 of many of the Retail EC members. However, since NAESB staff will be on location to provide support for the retail EC meetings, any Retail EC participant may choose to join the staff and participate in-person. In making your travel plans and scheduling your participation, (either in-person or by phone/web cast), please note that there are several related meetings held in conjunction with the EC meetings. Those meetings and schedules are identified on the following page. When you RSVP to the NAESB office for the EC meetings, please note if you will be attending these meetings as well.

As always, the chair reserves the right to extend the time of the meeting to ensure that agenda items are addressed. The times indicated on the agenda will be followed to ensure that agenda items are allotted appropriate time slots. Should an agenda item conclude earlier than its stated time slot, the remaining time could be allotted to other agenda items at the discretion of the chair. Please feel free to call the NAESB office should you have any questions or comments. The assembled PDF documents should be made available shortly on the NAESB web site for download.

Best Regards, *Rae*



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EXECUTIVE COMMITTEE & RELATED SUBCOMMITTEE MEETINGS LOCATIONS AND CONFERENCE CALLING AND WEB CONFERENCING INFORMATION

There are other NAESB subcommittee meetings being held in conjunction with the EC meetings. They will have conference calling and web casts in addition to being held as in-person meetings at the Dominion downtown offices. As agendas and meeting materials become available, they can be downloaded from the NAESB web page noted for each meeting.

Date	Time	Meeting/Location
Monday, October 25	12 pm to 12:30 pm E	Retail Glossary Meeting Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Canal Room, 3 rd Floor Conference Call Number: 866-740-1260 Access Code: 7133560 Security Code: 2501 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/RGQ/rgq_glossary.asp
	12:30 pm to 4 pm E	Retail BPS Meeting (Day 1 of 2) Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Canal Room, 3 rd Floor Conference Call Number: 866-740-1260 Access Code: 7133560 Security Code: 2501 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/retail_bps.asp
Tuesday October 26	10 am to 4 pm E	Wholesale Electric Executive Committee Meeting Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Canal Room, 2 nd Floor Conference Call Number: 866-740-1260 Access Code: 7133564 Security Code: 1301 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/weq/weq_ec.asp
	9 am to 3 pm E	Retail BPS Meeting (Day 2 of 2) Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Canal Room, 3 rd Floor Conference Call Number: 866-740-1260 Access Code: 7133560 Security Code: 2501 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/retail_bps.asp



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Date	Time	Meeting/Location
	9 am to 4 pm E	WGQ IR/Technical Subcommittees Meeting (Day 1 of 2) Location: Riverside Bldg, NE Dining Room, 1st floor. Conference calling and web casting not available unless requested in advance with subcommittee chair approval NAESB web page: http://www.naesb.org/WGO/ir.asp
Wednesday, October 27	10 am to 4 pm E	Retail Electric & Gas Executive Committees Meeting, by phone/web cast/ for in person attendance, please join NAESB staff Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2 nd Floor Conference Call Number: 866-740-1260 Access Code: 7133564 Security Code: 4698 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/REQ/req_ec.asp
	9 am to 4 pm E	WGQ IR/Technical Subcommittees Meeting (Day 2 of 2) Location: Riverside Bldg, NE Dining Room, 1st floor. Conference calling and web casting not available unless requested in advance with subcommittee chair approval NAESB web page: http://www.naesb.org/WGO/ir.asp
	10 am to 5 pm E	WEQ OASIS Subcommittee (Day 1 of 3) Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Riverside Room, 6 th Floor Conference Call Number: 866-740-1260 Access Code: 7133562 Security Code: 8035 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/WEQ/weq_oasis.asp
Thursday, October 28	10 am to 4 pm E	Wholesale Gas Executive Committee Meeting Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2 nd Floor Conference Call Number: 866-740-1260 Access Code: 7133564 Security Code: 7318 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/WGO/ec.asp



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Date	Time	Meeting/Location
	10 am to 5 pm E	WEQ OASIS Subcommittee (Day 2 of 3) Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Riverside Room, 6 th Floor Conference Call Number: 866-740-1260 Access Code: 7133562 Security Code: 8035 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/WEQ/weq_oasis.asp
Friday, October 29	9 am to 12 pm E	WEQ OASIS Subcommittee (Day 3 of 3) Location: Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Riverside Building, Riverside Room, 6 th Floor Conference Call Number: 866-740-1260 Access Code: 7133562 Security Code: 8035 Web Cast: http://www.readytalk.com (please use same codes) NAESB web page: http://www.naesb.org/WEQ/weq_oasis.asp

Please feel free to call the NAESB office should you have any questions or comments. Instructions for dialing in or participating on the web casts follow.

Best Regards, *Rae*



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CONFERENCE CALLING AND WEB CONFERENCING INSTRUCTIONS FOR THE EXECUTIVE COMMITTEE AND RELATED SUBCOMMITTEE MEETINGS

OCTOBER 25-29, 2010

This conference call, as all NAESB meetings and conference calls, is open to any interested party.

To join the conference call:

- Dial the 11-digit toll free phone number (provided in the preceding chart – specific to the meeting and date)
- An automated attendant will ask you to enter a seven-digit access code (provided in the preceding chart – specific to the meeting and date)
- The automated attendant will ask you to record your name.
- Please note, if the conference leader has not yet initiated the conference call, you will be placed on hold until the conference leader starts the conference.
- The automated attendant will then ask you for a four-digit security code (provided in the preceding chart – specific to the meeting and date)

Please place your phone on mute unless you are speaking. For those participants that do not have a mute feature on your phone, please press (*6) to mute your phone and (*7) to un-mute your phone. Putting the conference call on hold may cause music to be played over the discussion and if so, the NAESB office will contact the conference call administrator to have the line disconnected.

To join the web conference, go to www.readytalk.com and enter the same access code and security code. Please note that if the conference leader has not yet initiated the web conference, you will view a screen that states, “The Chairperson has not yet arrived. Please standby for your web conference to begin.”

ReadyTalk recommends that you test your browser and network connections for compatibility prior to participating in a web conference. To do so, go to <http://test.callinfo.com>. If you have problems joining a conference call or need technical assistance, please contact ReadyTalk Customer Care, 1-800-843-9166. Please contact the NAESB Office (713-356-0060 or naesb@naesb.org) should you need any additional information or have questions or comments.



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING WHOLESALE ELECTRIC QUADRANT DRAFT AGENDA

Tuesday, October 26, 2010 -- 10:00 am to 4:00 pm ET
Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

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- | # | Agenda Item |
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1. Welcome
 - a. Antitrust Guidelines http://www.naesb.org/misc/antitrust_guidance.doc
 - b. Welcome to members and attendees
 - c. Quorum Establishment: Roll Call of WEQ EC Members and Alternates: http://www.naesb.org/pdf4/ec_terms.pdf (EC) and http://www.naesb.org/pdf4/alt_ec_members.pdf (EC Alt)
 - d. Adoption of WEQ Agenda (simple majority) <http://www.naesb.org/pdf4/ec102610a.doc>
 2. Adoption of Wholesale Electric Quadrant Draft Minutes (simple majority to approve):
 - a. August 17, 2010 Draft Minutes http://www.naesb.org/pdf4/weq_ec081710dm.doc
 3. Consideration and Vote on Minor Corrections (simple majority to approve):
 - a. Minor Correction MC10032 to be applied to Booklet Version 2.1 WEQ-007 On Peak and Off Peak definitions: http://www.naesb.org/pdf4/weq_mc10032.doc, with comments from E. Davis of Entergy: http://www.naesb.org/pdf4/weq_mc10032_comments_entergy.doc
 - b. Minor Correction MC10033 to be applied to Booklet Version 2.1 WEQ-003 OASIS Data Dictionary and WEQ-013 OASIS Implementation Guide: http://www.naesb.org/pdf4/weq_mc10033.doc
 4. Review and Consider for Approval 2010 WEQ Annual Plan 1(d): Monitor and Develop NAESB Business Practices as needed to complement NERC reliability standards for FAC-012 and FAC-013 (simple majority vote to approve)

Recommendation: http://www.naesb.org/pdf4/weq_2010_api_1d_rec.doc

Request for Comments 9-23-10: http://www.naesb.org/pdf4/weq_092410_reqcom.doc

Comments Due 10-25-10, No Comments Received To Date
 5. Review and Consider for Approval WEQ 2010 Annual Plan Item 1.a.i – Interim Solution for Parallel Flow Visualization (super majority vote to approve)

Recommendation: http://www.naesb.org/pdf4/weq_2010_api_1ai_rec.doc

Request for Comments 7-29-10: http://www.naesb.org/pdf4/weq_072910_reqcom.doc

Comments Due 8-30-10, submitted by:

 - NAESB WEQ BPS: http://www.naesb.org/pdf4/weq_072910_weq_bps.doc
 - E. Davis, Entergy: http://www.naesb.org/pdf4/weq_072910_entergy.doc
 - NAESB Standards Review Subcommittee: http://www.naesb.org/pdf4/weq_072910_weq_srs.doc
 - JT Wood, Southern Company: http://www.naesb.org/pdf4/weq_072910_southern.doc
 - T. Mallinger on behalf of the Midwest ISO, PJM and SPP: http://www.naesb.org/pdf4/weq_072910_miso_pjm_spp.doc
 - B. Green on behalf of EPSA: http://www.naesb.org/pdf4/weq_072910_epsa_late.doc (late)
 - NAESB WEQ BPS: http://www.naesb.org/pdf4/weq_072910_weq_bps_late.doc (late)
 6. Review, discuss, identify changes and vote to approve changes to the 2010 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval):
http://www.naesb.org/pdf4/weq_aplan102010a3.doc 2010 Redlined Annual Plan



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING WHOLESALE ELECTRIC QUADRANT DRAFT AGENDA

Tuesday, October 26, 2010 -- 10:00 am to 4:00 pm ET
Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

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7. Review, discuss, identify changes and vote to approve the 2011 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval)
Redlined Proposed Annual Plan: http://www.naesb.org/pdf4/weq_aplan102010a1.doc
Clean Version of the Proposed Annual Plan: http://www.naesb.org/pdf4/weq_aplan102010a2.doc
 8. Subcommittee Updates not already addressed in specific updates (meeting materials for updates will be provided by leadership as they are available):
 - a. Triage Subcommittee: <http://www.naesb.org/pdf4/tr102110agenda.doc>
 - b. Smart Grid Standards Development Subcommittee: on WEQ/REQ efforts for smart grid standards for NIST PAPs 3,4 and 9
Request for Comments Due 11/15/10: http://www.naesb.org/pdf4/weq_101510_reqcom.doc
Recommendation: http://www.naesb.org/pdf4/weq_2010_ap6_rec_101510.doc
 - c. Smart Grid Standards Development Subcommittee on PAP 10: Update on WEQ/REQ efforts for smart grid standards for NIST PAP 10, subject of a 10/22/10 WEQ/REQ EC Teleconference Meeting
Request for Comments Due 9/30/10: http://www.naesb.org/pdf4/weq_req_090110_reqcom.doc
Recommendation: http://www.naesb.org/pdf4/weq_2010_ap_6d_rec.doc
 - d. Smart Grid Standards Development Subcommittee on PAP 10 Task Force: Update on REQ efforts for OpenADE
OpenSG OpenADE System Requirements Document: http://www.naesb.org/pdf4/espi_task_force_100610w7.doc
OpenSG OpenADE Business and Users Requirements Document: http://www.naesb.org/pdf4/espi_task_force_100610w3.doc
 - e. DSM-EE Subcommittee: Update on WEQ/REQ DSM-EE Phase 2 and REQ Automated Enrollment for DR
 - f. Business Practices Subcommittee (BPS) : Update on Parallel Flow Visualization Solutions
Tag all non-firm option: http://www.naesb.org/pdf4/weq_bps101410w6.doc
Generator Prioritization Option: http://www.naesb.org/pdf4/weq_bps101410w9.doc
Flowgate Allocation Option: http://www.naesb.org/pdf4/weq_bps101410w12.doc
Presentation: http://www.naesb.org/pdf4/weq_ec102610w3.ppt
 - g. OASIS Subcommittee
 - h. Joint Electric Scheduling Subcommittee (JESS)
 - i. Standards Review Subcommittee (SRS): http://www.naesb.org/pdf4/weq_ec102610w2.ppt
 - j. Glossary Efforts
 - k. Publication Schedule: WGQ Publication Schedule: http://www.naesb.org/misc/wgq_publication_schedule_101510.doc,
WEQ Publication Schedule http://www.naesb.org/misc/weq_publication_schedule_101510.doc,
Retail Publication Schedule: http://www.naesb.org/misc/retail_publication_schedule_101510.doc (Retail and WGQ provided for context)
 9. Board of Directors, Board Committee and Regulatory Updates (no votes or action to be taken):
 - a. Board Updates – Board Meeting September 23, 2010: <http://www.naesb.org/pdf4/bd092310dm.doc>
 - b. Board Critical Infrastructure Committee: http://www.naesb.org/pdf4/bd_cic_093010notes.doc
 - c. Quadrant Updates: Wholesale Gas and Retail key activities – WGQ Annual Plan, Retail Annual Plan
http://www.naesb.org/pdf4/wgq_2010_annual_plan.doc (WGQ), http://www.naesb.org/pdf4/retail_2010_annual_plan.doc (Retail)
 - d. Regulatory Efforts
 - e. EIR Administrator RFP
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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING WHOLESALE ELECTRIC QUADRANT DRAFT AGENDA

Tuesday, October 26, 2010 -- 10:00 am to 4:00 pm ET
Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

- | # | Agenda Item |
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| 10. | Other Business |
| a. | EC and Officer Elections |
| b. | Schedules: http://www.naesb.org/misc/2010_schedule.pdf (2010), http://www.naesb.org/misc/2011_schedule.doc (2011) |
| 11. | Adjourn |

Attire – Business Casual



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING RETAIL QUADRANTS DRAFT AGENDA

Wednesday, October 27, 2010 -- 10:00 am to 4:00 pm ET

Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

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- | # | Agenda Item |
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1. Welcome
 - a. Antitrust Guidelines http://www.naesb.org/misc/antitrust_guidance.doc (Guidance)
 - b. Welcome to members and attendees
 - c. Quorum Establishment: Roll Call of Retail EC Members and Alternates: http://www.naesb.org/pdf4/ec_terms.pdf (EC) and http://www.naesb.org/pdf4/alt_ec_members.pdf (EC Alt)
 - d. Adoption of Retail Agenda (simple majority) <http://www.naesb.org/pdf4/ec102610a.doc>
 2. Adopt Retail Quadrants Executive Committee Draft Minutes (simple majority to approve):
 - a. August 18, 2010 Draft Minutes: http://www.naesb.org/pdf4/retail_ec081810dm.doc
 3. Consideration and Vote on Minor Corrections (simple majority to approve):
 - a. Minor Correction MC10034 (http://www.naesb.org/pdf4/wgq_retail_mc10034.doc) to be applied to WGQ Version 1.9 and RXQ Version 1.2 standards for Booklet Version 2.1 to Internet Electronic Transport Related Standards – withdrawn by submitter as duplicate of MC10035 – no action needed
 - b. Minor Correction MC10035 (http://www.naesb.org/pdf4/wgq_retail_mc10035.doc) to be applied to WGQ Version 1.9 and RXQ Version 1.2 standards for Booklet Version 2.1 to Internet Electronic Transport Related Standards
 4. Review and Consider for Approval 2010 Retail Annual Plan Item 5(a): Model Business Practices User Guide - Add a new section to Book 0 to describe what Books have been developed, how the Books are laid out, and revised the title of the Book to reflect the additions (super majority vote to approve)

Recommendation: http://www.naesb.org/pdf4/retail_2010_api_5a_rec.pdf

Request for Comments 9-24-10: http://www.naesb.org/pdf4/retail_092410_reqcom.doc

Comments Due 10-25-10, No Comments Received To Date
 5. Review and Consider for Approval 2010 Retail Annual Plan Item 11: Master List of Defined Terms - Review the definitions of all Defined Terms in Book 0 – Master List of Defined Terms, including other Ratified Terms not yet published, and revise the definitions of all Defined Terms not specifically related solely to the competitive marketplace to broaden their applicability to conform to NAESB’s expanded scope (super majority vote to approve)

Recommendation: http://www.naesb.org/pdf4/retail_2010_api_11_rec.pdf

Request for Comments 9-24-10: http://www.naesb.org/pdf4/retail_092410_reqcom2.doc

Comments Due 10-25-10, No Comments Received To Date
 6. Review, discuss, identify changes and vote to approve changes to the 2010 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval)

Redlined 2010 Plan: http://www.naesb.org/pdf4/retail_aplan101910a2.doc
 7. Review, discuss, identify changes and vote to approve the 2011 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval)

2011 Plan: http://www.naesb.org/pdf4/retail_aplan101910a1.doc



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING RETAIL QUADRANTS DRAFT AGENDA

Wednesday, October 27, 2010 -- 10:00 am to 4:00 pm ET

Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

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- | # | Agenda Item |
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8. Subcommittee Updates not already addressed in specific updates (meeting materials for updates will be provided by leadership as they are available):
 - a. Triage Subcommittee: <http://www.naesb.org/pdf4/tr102110agenda.doc>
 - b. Smart Grid Standards Development Subcommittee: on WEQ/REQ efforts for smart grid standards for NIST PAPs 3,4 and 9 Request for Comments Due 11/15/10: http://www.naesb.org/pdf4/req_101510_reqcom.doc Recommendation: http://www.naesb.org/pdf4/req_2010_ap9_rec_101510.doc
 - c. Smart Grid Standards Development Subcommittee on PAP 10: Update on WEQ/REQ efforts for smart grid standards for NIST PAP 10, subject of a 10/22/10 WEQ/REQ EC Teleconference Meeting Request for Comments Due 9/30/10: http://www.naesb.org/pdf4/weq_req_090110_reqcom.doc Recommendation: http://www.naesb.org/pdf4/req_2010_ap_9d_rec.doc
 - d. Smart Grid Standards Development Subcommittee on PAP 10 Task Force: Update on REQ efforts for OpenADE OpenSG OpenADE System Requirements Document: http://www.naesb.org/pdf4/espi_task_force_100610w7.doc OpenSG OpenADE Business and Users Requirements Document: http://www.naesb.org/pdf4/espi_task_force_100610w3.doc
 - e. DSM-EE Subcommittee: Update on WEQ/REQ DSM-EE Phase 2 and REQ Automated Enrollment for DR
 - f. Business Practices Subcommittee (BPS) and Texas Task Force
 - g. Information Requirements Subcommittee (IR – Not Active)
 - h. Technical Electronic Implementation Subcommittee (TEIS)
 - i. Glossary Efforts
 - j. Publication Schedule: WGQ Publication Schedule: http://www.naesb.org/misc/wgq_publication_schedule_101510.doc, WEQ Publication Schedule http://www.naesb.org/misc/weq_publication_schedule_101510.doc, Retail Publication Schedule: http://www.naesb.org/misc/retail_publication_schedule_101510.doc (WEQ and WGQ provided for context)
 9. Board of Directors, Board Committee and Regulatory Updates (no votes or action to be taken):
 - a. Board Updates – Board Meeting September 23, 2010: <http://www.naesb.org/pdf4/bd092310dm.doc>
 - b. Board Critical Infrastructure Committee: http://www.naesb.org/pdf4/bd_cic_093010notes.doc
 - c. Regulatory Efforts
 - d. Membership Activities
 - e. Wholesale Gas and Wholesale Electric key activities – WGQ Annual Plan, WEQ Annual Plan - http://www.naesb.org/pdf4/wgq_2010_annual_plan.doc (WGQ), http://www.naesb.org/pdf4/weq_2010_annual_plan.doc (WEQ)
 10. Other Business
 - a. EC and Officer Elections
 - b. Schedules: http://www.naesb.org/misc/2010_schedule.pdf (2010), http://www.naesb.org/misc/2011_schedule.doc (2011)
 11. Adjourn

Attire – Business Casual



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING WHOLESALE GAS QUADRANT DRAFT AGENDA

Thursday, October 28, 2010 -- 10:00 am to 4:00 pm ET

Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

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- | # | Agenda Item |
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1. Welcome
 - a. Antitrust Guidelines http://www.naesb.org/misc/antitrust_guidance.doc (Guidance)
 - b. Welcome to members and attendees
 - c. Quorum Establishment: Roll Call of WGQ Members and Alternates: http://www.naesb.org/pdf4/ec_terms.pdf (EC) and http://www.naesb.org/pdf4/alt_ec_members.pdf (EC Alt)
 - d. Adoption of WGQ Agenda (simple majority) <http://www.naesb.org/pdf4/ec081710a.doc>
 2. Adopt WGQ Executive Committee Minutes (simple majority to approve):
 - a. August 19, 2010 Draft Minutes: http://www.naesb.org/pdf4/wgq_ec081910dm.doc
 - b. October 5, 2010 Draft Minutes: http://www.naesb.org/pdf4/wgq_ec100510dm.doc
 3. Consideration and Vote on Minor Corrections (simple majority to approve):
 - a. Minor Correction MC10034 (http://www.naesb.org/pdf4/wgq_retail_mc10034.doc) to be applied to WGQ Version 1.9 and RXQ Version 1.2 standards for Booklet Version 2.1 to Internet Electronic Transport Related Standards – withdrawn by submitter as duplicate of MC10035 – no action needed
 - b. Minor Correction MC10035 (http://www.naesb.org/pdf4/wgq_retail_mc10035.doc) to be applied to WGQ Version 1.9 and RXQ Version 1.2 standards for Booklet Version 2.1 to Internet Electronic Transport Related Standards
 - c. Minor Correction MC10036 (http://www.naesb.org/pdf4/wgq_mc10036_rec_100710.doc) to be applied to WGQ Version 2.0 resulting from editorial review – no action needed, already approved by the WGQ EC notationally (http://www.naesb.org/pdf4/wgq_mc102010reqcom.doc)
 4. Review and discuss Recommendation R10003 - This request proposes the addition of two new data elements “Discount Begin Date” and “Discount End Date” in the following Transaction Datasets: Transactional Reporting – Capacity Release, NAESB WGQ Standard No. 5.4.20 and Transactional Reporting – Firm Transportation, NAESB WGQ Standard No. 5.4.21
Recommendation: http://www.naesb.org/pdf4/r10003_rec_092910.doc
Request for Comments 9-30-10: http://www.naesb.org/pdf4/wgq_093010reqcom.doc
Comments Due 11-1-10, No Comments Received To Date
 5. Review and discuss Recommendation R09016 - Add Rate Schedule data element to the Bid Upload and Bid Download datasets
Recommendation: http://www.naesb.org/pdf4/r09016_rec_092910.doc
Request for Comments 9-30-10: http://www.naesb.org/pdf4/wgq_093010reqcom.doc
Comments Due 11-1-10, No Comments Received To Date
 6. Review status of Recommendation R10004 – Modify the usage of beginning time and ending time as used in several of the nominations, flowing gas and invoicing data sets, Recommendation: http://www.naesb.org/pdf4/wgq_r10004_rec_080210.doc
 7. Review, discuss, identify changes and vote to approve changes to the 2010 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval)
Redlined Plan: http://www.naesb.org/pdf4/wgq_aplan102010a2.doc
-



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NORTH AMERICAN ENERGY STANDARDS BOARD EXECUTIVE COMMITTEE MEETING WHOLESALE GAS QUADRANT DRAFT AGENDA

Thursday, October 28, 2010 -- 10:00 am to 4:00 pm ET

Dominion Downtown Offices, 120 Tredegar Street, Richmond, VA – Pump House Building, Auditorium, 2nd Floor

-
- | # | Agenda Item |
|---|-------------|
|---|-------------|
-
8. Review, discuss, identify changes and vote to approve the 2011 Annual Plan to be proposed to the Board of Directors: (simple majority vote for EC endorsement of proposed changes to be forwarded for Board approval)
Proposed Plan: http://www.naesb.org/pdf4/wgq_aplan102010a1.doc
 9. Update on Subcommittee Activities (meeting materials for updates will be provided by leadership as they are available):
 - a. Triage Subcommittee: <http://www.naesb.org/pdf4/tr102110agenda.doc>
 - b. Business Practices Subcommittee (BPS)
 - c. Joint Information Requirements and Technical Subcommittee
 - d. Electronic Delivery Mechanisms (EDM) Subcommittee
 - e. Interpretations Subcommittee
 - f. Publication Schedule: WGQ Publication Schedule: http://www.naesb.org/misc/wgq_publication_schedule_101510.doc ,
WEQ Publication Schedule http://www.naesb.org/misc/weq_publication_schedule_101510.doc ,
Retail Publication Schedule: http://www.naesb.org/misc/retail_publication_schedule_101510.doc (WEQ and Retail provided for context)
 10. Board of Directors, Board Committee and Regulatory Updates (no votes or action to be taken):
 - a. Board Updates – Board Meeting September 23, 2010: <http://www.naesb.org/pdf4/bd092310dm.doc>
 - b. Board Critical Infrastructure Committee: http://www.naesb.org/pdf4/bd_cic_093010notes.doc
 - c. Quadrant Updates: Wholesale Electric and Retail key activities – WEQ Annual Plan, Retail Annual Plan
http://www.naesb.org/pdf4/weq_2010_annual_plan.doc (WEQ), http://www.naesb.org/pdf4/retail_2010_annual_plan.doc (Retail)
 - d. Regulatory Efforts
 11. Other Business
 - a. EC and Officer Elections
 - b. Schedules: http://www.naesb.org/misc/2010_schedule.pdf (2010), http://www.naesb.org/misc/2011_schedule.doc (2011)
 12. Adjourn

Attire – Business Casual



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October 19, 2010

TO: NAESB Wholesale Electric Quadrant Executive Committee and Interested Industry Participants
FROM: Cory Galik Cummings, NAESB Staff Attorney
RE: Wholesale Electric Quadrant Single Topic Executive Committee Meeting Draft Minutes

**NORTH AMERICAN ENERGY STANDARDS BOARD
WHOLESALE ELECTRIC QUADRANT
EXECUTIVE COMMITTEE MEETING
Tuesday, August 17, 2010 – 10:00 am to 4:00 pm Mountain
DRAFT MINUTES**

1. Welcome

Ms. York called the meeting to order and welcomed the Wholesale Electric Quadrant (“WEQ”) Executive Committee (“EC”) members, alternates and other participants. Ms. Cummings gave the antitrust guidance and called the roll of the WEQ EC members and alternates. Quorum was established. Mr. Rodriguez moved, seconded by Ms. Crockett, to adopt the agenda. The motion passed unanimously.

2. Adoption of the Wholesale Electric Quadrant Draft Minutes

In an effort to reduce the amount of time spent editing minutes, the draft minutes were sent out ahead of the meeting to allow participants time to submit redlined changes. Mr. Rodriguez moved, seconded by Mr. True, to approve the May 4, June 4, June 16 and July 7, 2010 WEQ EC meeting minutes. The motion passed unanimously.

3. Consideration and Vote on Minor Corrections

Mr. Skiba reviewed [MC10019](#), which was intended to make corresponding revisions to the comparable sections of the NAESB WEQ/WGQ Implementation Guide for Electronic Tariff Filing in order to be coordinated with FERC’s implementation guide. Mr. Skiba’s submitted [comments](#) provided a few additional minor corrections, which were applied. The Standards Review Subcommittee (SRS) also noted some additional minor corrections, which will be applied. Ms. McQuade noted that FERC references version 2.1, so the minor correction will also apply to that version. Mr. Green asked if minor corrections would have to be applied every time FERC makes a change, or could the process be automated. Ms. McQuade stated that each change would have to go through the minor correction process, which will allow the EC to verify that the proposed change is acceptable. Ms. Otondo moved, seconded by Mr. Skiba to approve the minor correction for the e-Tariff Implementation guide with the redlined changes, Mr. Skiba’s comments and the SRS comments. The motion passed unanimously.

The second minor correction, [MC10031](#), was submitted by Mr. Goldberg to correct a mis-numbering in WEQ-001. Ms. York agreed with the proposed numbering change but expressed concern with the second part of the minor correction regarding the deletion of the Other Service Definitions paragraph. Ms. Otondo stated that with the issuance of FERC Order No. 132, paragraph 22, she was hesitant to remove the language. The paragraph states:

The Commission finds that PNM improperly invalidated Cargill’s February 21, 2008 transmission service request because Cargill submitted its request in accordance with section 17 of PNM’s OATT. PNM’s OATT in Attachment P explicitly incorporates by reference all of the NAESB business practice standards. While the Commission does not require transmission providers to adopt each of the flexible services included in the NAESB standards, the Commission does require the OATT to state accurately which services are offered, and PNM’s OATT does not specify which services it actually offers. Consequently, it is reasonable for the Commission and customers, such as Cargill, to conclude that on February 21, 2008, when Cargill submitted its Blackwater–Four Corners transmission service request, PNM was offering all the types of point-to-point transmission services described in the NAESB business practice standards incorporated



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by reference into its OATT, including sliding service. Therefore, PNM acted unreasonably by denying Cargill's sliding service transmission request that complied with PNM's OATT.

Ms. Otondo recognized that the minor correction was submitted prior to the FERC Order and asked that the minor correction be looked at in context with the Order, or delay consideration to determine if there are alternative solutions. Mr. Goldberg withdrew the second part of this minor correction and agreed to work with Ms. Otondo offline. Ms. Crockett moved, seconded by Ms. Otondo to adopt MC10031, specifically the first portion on numbering conventions. The motion unanimously passed a simple majority vote.

4. Update on efforts for Parallel Flow Visualization

Mr. Skiba reviewed the recommendation that is currently out for [formal comment](#), with comments due August 30, 2010. The recommendation is an interim solution to ensure NAESB stays coordinated with [NERC](#) on Change Order 283. He noted that the interim solution work paper provides detail about the process and coordination with NERC. Ms. York noted that a single topic conference call would be held to discuss the recommendation.

5. Review and vote to approve scoping effort for coordination of service across multiple transmission systems

Mr. Pritchard provided a review of the [scope recommendation](#) with a [presentation](#). In February, the WEQ EC formed a task force to complete this assignment, which was chaired by Mr. Pritchard and Mr. Saini. Mr. Rodriguez noted that duplication of transmission reservations has been an issue and asked if that problem was addressed in the scoping document. Mr. Pritchard answered that each linked request will have information regarding the requests on other systems. However, it is the responsibility of the customer to communicate with each transmission provider.

Mr. McGee asked whether the task force discussed assigning a particular queue date. Mr. Pritchard answered that the task force did consider that issue and recognized that to do so, they would have to develop a procedure where there was a common request with a specific queue time associated with it. The task force thought it was appropriate that the OASIS subcommittee state that in the true up process, once the last transmission provider has responded, there should be a deadline for completing the true up. That way, the evaluation can take place as quickly as possible without having to determine the response time for linking multiple requests.

Ms. York explained that the scoping document would be used as a starting point for the OASIS subcommittee to develop the coordination of service across multiple transmission systems recommendation. She encouraged any participant with concerns to get involved in the standards development process.

Mr. Rodriguez moved, seconded by Mr. Hossain, to adopt the scoping document for coordination of service across multiple transmission systems for use by the OASIS Subcommittee when addressing WEQ 2010 Annual Plan Item 2a iii group 5. Ms. Otondo moved, seconded by Mr. Pritchard, to amend the language in the last sentence in section 5b to read, "Such a mechanism must allow linked requests that extend beyond the boundaries of the alliance." Ms. Otondo's motion passed a simple majority vote.

Ms. Otondo, as co-chair of the subcommittee, asked how the subcommittee should review Mr. Green's [white paper](#). She wanted to ensure the subcommittee's work was clear. Mr. Rodriguez answered that the purpose of his motion was to establish the scope document, and similar to any other input, the subcommittee can access Mr. Green's white paper. He did not think the subcommittee should be a requirement to make the changes suggested in the white paper, but rather it was a document that should be considered to determine if it has merit. If the white paper creates a significant increase in the subcommittee's work, it should not be considered any further. If the subcommittee determines that it will not address Mr. Green's white paper, he has the ability to submit a standards request to ask for that work to be done.

The motion passed a simple majority vote with one vote in opposition.

6. Update on WEQ/REQ efforts for smart grid standards for NIST PAPs 3, 4 and 9

Mr. Booe provided the [update](#). Phase one of the standards were voted on July 7 and passed a notational ballot on July 16. Those standards are in the ratification process, which ends Friday, August 20. The retail versions of the



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standards were ratified on July 30. The Task Force has continued to meet weekly to discuss the phase two effort, the purpose of which is to expand and fully detail the data requirements related to the use cases developed in phase one of the effort. Some identification of data requirements had been done as part of the phase one effort but it was determined that a complete identification of data requirements should be fleshed out in a subsequent phase.

A face-to-face meeting was held in Houston on July 13 and 14 and during that time the task force worked to develop a data requirement master list. The goal of the master list is to identify data requirements that have been developed in separate efforts related to PAP 9 by the IRC group (the wholesale group) and the Open SG group (representing the retail side) and to harmonize what has been developed. The group is in the process of that harmonization, sharing their work and trying to find overlap. The group has agreed that this review should be done on a smaller scale for the phase one PAPs 3 and 4 recommendations. Ms. McQuade urged participants to take the time to review the recommendations and to encourage subject matter experts within their company to get involved.

7. Update on WEQ/REQ efforts for Smart Grid Standards for NIST PAP10 and OpenADE

Mr. Booe provided the update. In May 2010, the assignments related to PAP10 were restructured by the SGIP in response to the urging of the Administration to produce a single standard information model for energy usage. NAESB was designated as the SDO to develop the standard and asked to complete such by year-end 2010. ASHRAE is beginning a similar effort as part of PAP 17. NAESB will share PAP 17 leadership at the committee level as NAESB has offered and they accepted leadership in PAP 10. While ASHRAE efforts are starting, the issue of shared leadership with ASHRAE has not yet been resolved. Part of the request from the SGIP was that NAESB leverage as much of the work of other groups in the area as a possible and try to create a model that is compatible or can be mapped to certain other work products. These work products included Open ADE 1.0, Smart Energy Profile 2.0 and EIS Alliance Requirements documents. The SGIP formed a Tiger Team that took the requirements from these specifications and created a white paper proposing a straw model, which was given to the subcommittee and has since been built upon to develop the recommendation.

The subcommittee has met every Tuesday since the first meeting on June 22, 2010 and is following a rigorous schedule to meet the year-end deadline. The subcommittee is scheduled to vote the recommendation out of the subcommittee for the formal comment period on August 31 and ask the EC to consider it in a single topic review session on October 15 and for vote on October 22. The standard will be ratified by December 1, which will allow NAESB an opportunity to present the work at the December 3rd SGIP governing board meeting.

In addition to the meetings included on the schedule, the subcommittee held several meetings for the WEQ to familiarize the WEQ EC with the recommendation and flesh out any potential issues that pertain specifically to wholesale electric market participants. These meetings were very productive. Similar meetings have begun on the retail side.

The current recommendation was posted for an informal comment on August 10 and ended August 16. Mr. Booe will compile the comments and make a matrix for the subcommittee to review in its next meeting on August 20.

Mr. Booe noted an upcoming project: R10008, which is related to PAP 10 but a separate item. The Open ADE Task Force within the UCA International Users Group recently submitted a standards request to NAESB for the standardization of the exchange of energy usage information that will facilitate the transfer of information between designated parties, and will build on the data model being developed by NAESB. This work is to build upon the requirements outlined in the requirements collected in OpenADE 1.0 Requirements documents. The item was triaged as of August 16 and will go to a task force of the PAP10 subcommittee.



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8. Subcommittee Updates

Triage Subcommittee: Ms. McQuade provided the [review](#) of triaged items. R10003, R10004, R10005 and R10007 were assigned to the WGQ. R10008 was assigned jointly to the WEQ and REQ. Request No. R10008 was provided by the OpenADE Task Force within the UCA International Users Group, to standardize the exchange of energy usage information from Smart Grid PAP 10. The item was triaged on August 16 and has been assigned to a task force of the PAP10 subcommittee, with the initial focus on the REQ.

Business Practices Subcommittee (BPS) TLR and Parallel Flow Visualization: Mr. Skiba provided a [power point presentation](#) review of the BPS. Mr. Rodriguez noted that NERC has discussed removing time error correction and is currently soliciting input from FERC to do a field test on this topic. NERC will be contacting NAESB in the next six months regarding the status of the field test.

Demand Side Management – Energy Efficiency (DSM-EE) Subcommittee: Mr. True provided the update. The retail demand response work group is working on completing its phase 2 efforts. The phase 2 recommendation has gone out for informal comment (minus the glossary). Only one response was received in support of the standards. The glossary work is underway to compare the wholesale and retail DR terms, as well as the smart grid glossary, to ensure consistency among the various work groups. Once the glossary work is completed, it will go out for informal comment again, with the glossary section.

The retail energy efficiency group has completed the scoping of its work product and has begun drafting the recommendation. The group currently has a draft glossary and are beginning to work on the process flows that will guide the development of the model business practices. The wholesale energy efficiency group has begun drafting its recommendation, which will be shared with the DSM-EE subcommittee at the upcoming September meeting.

The wholesale demand response work group created three task forces (glossary, model business practices and performance evaluation methods) to draft the second phase of the wholesale DR standards. The glossary task force has reviewed and synchronized the wholesale and retail demand response glossary terms and presented their work product to the wholesale demand response work group. They are currently working with the Retail DR work group to finalize the glossary. The Performance Evaluation group and the Model Business Practice group are meeting jointly to revise the standards. This work is ongoing, with a late August/early September expected completion date. It will go out for an informal comment period once the work is complete. Aaron Breidenbaugh, of EnerNOC, is working independently on a draft recommendation that will also be reviewed by the DSM-EE subcommittee. Sections of the EnerNOC work product may be used by the wholesale DR work group to provide more substance to the recommendation.

OASIS Subcommittee: Mr. Wood provided the update. The OASIS subcommittee is currently working on NITS on OASIS. The work on WEQ-001 was sent out for informal comment and several sets of comments were received and will be reviewed by the subcommittee in its upcoming meetings. The work related to WEQ-003 and the recommendation itself is partially complete. The original completion date was the end of August, but with the informal comments received, the subcommittee will need more time to review them. Once NITS is complete, the subcommittee will focus its attention on coordination of service across multiple transmission systems. The schedule for completion has been delayed to yearend 2010 and incorporates the work of coordination of transmission service requests across multiple transmission systems. Ms. McQuade stated that she would inform FERC of the delay regarding NITS and discuss options regarding publications and FERC filings.

Joint Electric Scheduling Subcommittee (JESS): The JESS met on June 2 to discuss WEQ-004, which has stalled due to NERC's INT standards development process. The JESS will meet again in late 3rd quarter or early 4th quarter once NERC has completed its work.

Standards Review Subcommittee (SRS): Mr. Saini provided a [power point presentation](#) to review the subcommittee's efforts.

Glossary Efforts: Mr. Wood stated that Ms. Rager is making consistency changes.



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Publication Schedule: Ms. Rager reviewed the [WEQ publication schedule](#). Version 2.2 is scheduled to be published in the 3rd quarter, 2010.

9. Review, discuss, identify changes and vote to approve changes to the 2010 Annual Plan to be proposed to the Board of Directors

Participants reviewed the [2010 WEQ Annual Plan](#) and made changes accordingly. Ms. Otondo moved, seconded by Mr. True, to approve the changes to the 2010 WEQ Annual Plan. The motion unanimously passed a simple majority vote.

10. Board of Directors, Board Committee and Regulatory Updates

Board Updates: Ms. McQuade urged participants to review the minutes from the [June 24 Board meeting](#). She noted the board resolution on the efforts on smart grid.

Board Critical Infrastructure Committee: Ms. McQuade asked participants to review the notes from the [July 19, 2010 Critical Infrastructure Committee meeting](#).

Wholesale Gas and Wholesale Electric activities: The [WGQ 2010 Annual Plan](#) and the Retail 2010 Annual Plan were briefly reviewed.

11. Other Business

Ms. McQuade noted that the NAESB office would develop the 2011 calendar shortly.

12. Adjourn

Mr. McGee moved, seconded by Mr. Ciza, to adjourn the meeting at 3:12 PM Mountain.



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10. Attendance

NORTH AMERICAN ENERGY STANDARDS BOARD WEQ EXECUTIVE COMMITTEE			
ATTENDANCE	TRANSMISSION SEGMENT		SUBSEGMENT
In Person	Patrick McGovern	Georgia Transmission Corporation	Muni/Coop
In Person	Y. Coleman for Luke O'Dwyer	Salt River Project	Fed/State/Prov.
In Person	Daryl McGee	Southern Company Services	IOU
Phone	Edward Davis	Entergy Services, Inc.	IOU
In Person	Marceline Otondo	Arizona Public Service	at large
	Bob Harshbarger	Puget Sound Energy	at large
In Person	Hasnah Mat-Amin for Michelle Mizumori	Western Electricity Coordinating Council	At-Large
GENERATION SEGMENT			SUBSEGMENT
Phone	William J. Gallagher	Vermont Public Power Supply Authority	Muni/Coop
In Person	Kathy York	Tennessee Valley Authority	Fed/State/Prov.
In Person	John Ciza	Southern Company Services	IOU
Phone	Alan Johnson	NRG Energy, Inc.	Merchant
	Trent Carlson	RRI Energy Services, Inc.	at large
In Person	Shah Hossain	Westar Energy, Inc.	at large
MARKETERS/BROKERS SEGMENT			SUBSEGMENT
	Chris Norton	American Municipal Power, Inc.	Muni/Coop
In Person	Valerie Crockett alt. for B. Thornton	Tennessee Valley Authority	Fed/State/Prov.
	Richard Lehman	Salt River Project	at large
	John Apperson	PacifiCorp Energy	IOU
In Person	Roy True	ACES Power Marketing	at large
In Person	Barry Green	Electric Power Supply Association (EPSA)	at large
DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT			SUBSEGMENT:
	Ray Phillips	Alabama Municipal Electric Authority	Muni/Coop
In Person	Alan Pritchard	Duke Energy Corporation	IOU
	Rufus D. Gladney	Consumers Energy Company	IOU
Phone	Robert Martinko	FirstEnergy Service Company	at large
Phone	Syd Berwager	Bonneville Power Administration	Other
In Person	Andy Rodriquez	NERC	At-Large
END USERS SEGMENT			SUBSEGMENT:
	Aaron Breidenbaugh	EnerNOC, Inc.	at large
	Lou Ann Westerfield	Idaho Public Utilities Commission, rep. National Association of Regulatory Utility Commissioners	Regulator



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Phone	Christopher Kotting	Public Utility Commission of Ohio	at large
In Person	Paul Sorenson	Open Access Technology International, Inc.	At-Large

INDEPENDENT GRID OPERATORS/PLANNERS SEGMENT

In Person	Thomas Bowe	PJM Interconnection
In Person	Jim Castle	New York Independent System Operator, Inc.
Phone	Matt Goldberg	ISO New England, Inc.
Phone	Nancy Traweek	California ISO
Phone	Joel Mickey	Electric Reliability Council of Texas
In Person	Ed Skiba	Midwest ISO
In Person	Charles Yeung	Southwest Power Pool

TECHNOLOGY AND SERVICES

	Jim Buccigross	8760, INC
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Other Participant Attendance

Participant	Organization	Attendance
Toby Considine	University of North Carolina	
Cory Cummings	NAESB	In Person
Chuck Feagans	TVA	Phone
Michele Greening	PPL Energy Plus	Phone
Marie Knox	Midwest ISO	In Person
Matt Laherty	Cisco	Phone
Rae McQuade	NAESB	In Person
Glen Perez	CAISO	Phone
Denise Rager	NAESB	Phone
Narinder Saini	Entergy	In Person
Charlie Spirakis	Google	Phone
Veronica Thomason	NAESB	In Person
Jill Vaughn	Court Reporter	In Person
Cathy Wesley	PJM	In Person
Eric Winkler	ISO New England	Phone
Jimmy Womack	SPP	In Person
JT Wood	Southern Company	In Person

MC10032

MINOR CORRECTION REQUEST

Quadrant: Wholesale Electric Quadrant
Description: WEQ 2010 AP Item 1.a.i – Interim Solution for Parallel Flow Visualization
Submitted By: Ed Skiba, JT Wood, Narinder Saini, and Marceline Otondo
Date: August 27, 2010

During the process of making conforming changes to the NAESB Business Practices we identified definitions for the terms On-Peak and Off-Peak were not included in the NAESB Business Practices yet the terms were capitalized in NAESB Business Practice Standards WEQ-007. We also identified that the appendix in this Business Practice Standard provided the clarification/definition for On-Peak and Off-Peak. Rather than trying to include large portions of the appendix in the definitions, we recommend that the definitions for these terms point to NAESB Business Practice Standard WEQ-007-A. This approach is similar to what what done for other terms such as Actual Daily Native Peak Load and Forecasted Daily Zonal Load.

We believe these changes meets the criteria of a minor correction in that it is a clarification and correction that does not materially change the standards. When the conforming changes are made for these terms the capitalization would only occur in WEQ-007.

TERM	DEFINITION
<u>Off-Peak</u>	<u>Shall have the meanings for Inadvertent Interchange payback as defined in Business Practice Standards WEQ-007-A.</u>
<u>On-Peak</u>	<u>Shall have the meanings for Inadvertent Interchange payback as defined in Business Practice Standards WEQ-007-A.</u>

**Entergy Comments on MC10032
Minor Correction Request
Definition of ON-PEAK and OFF-PEAK**

WEQ 2010 AP Item 1.a.i – Interim Solution for Parallel Flow Visualization
August 27, 2010

Ed Davis
September 8, 2010

Entergy is concerned that the definitions of On-Peak and Off-Peak contained in this Minor Correction could be considered somewhat vague and ripe for misinterpretation. The concept of On-Peak and Off-Peak has to do with the hours of the day, week and year. The Minor Correction does not seem to encompass the concept of hours of the day. The following is a short review of the industry understanding of the two terms, our understanding of what is being proposed in the Minor Correction, and our suggested definition of the two terms.

Historically and in general, On-Peak hours have been generally hour ending 0700 through hour ending 2200. All other hours of the week are defined as Off-Peak. Additionally, the hours of the day of six holidays have been defined as Off-Peak with the provision that if these holidays fall on a Saturday or Sunday then all the hours of the day of the following Monday will be considered Off-Peak (an Off-Peak day). These concepts and details are included in the NAESB standards, WEQ-007 Appendix A.

Note the current NERC definitions for these two terms are hours or periods:

Off-Peak	Those hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of lower electrical demand.
On-Peak	Those hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of higher electrical demand.

Unfortunately, the definitions of On-Peak and Off-Peak contained in the Minor Correction could be interpreted to have the meaning of “Inadvertent Interchange payback”. The definitions contained in the Minor Correction are:

Off-Peak - Shall have the meanings for Inadvertent Interchange payback as defined in Business Practice Standards WEQ-007-A.

On-Peak - Shall have the meanings for Inadvertent Interchange payback as defined in Business Practice Standards WEQ-007-A.

In order to clarify the definitions we suggest these definitions be changed to the following:

Off-Peak - Shall have the meanings of Off-Peak hours included in Business Practice Standards WEQ-007-A Appendix A - Inadvertent Interchange On- and Off-Peak Periods.

On-Peak - Shall have the meanings of On-Peak hours included in Business Practice Standards WEQ-007-A Appendix A - Inadvertent Interchange On- and Off-Peak Periods.

Please modify the Minor Correction request and consideration of these definitions to allow for consideration of Entergy’s comments in the review and approval process by the Executive Committee.

Thank you.

MC10033 MINOR CORRECTION REQUEST

Quadrant: Wholesale Electric Quadrant
Description: Booklet 2.1, WEQ 003 Data Dictionary and WEQ 013
Implementation Guide
Submitted By: Yvonne Coleman, Bonneville Power Administration
Date: September 13, 2010

During a review of Booklet 2.1, WEQ 003 and WEQ 013, a discrepancy in the definition of ANNULLED was identified. The discrepancy stems from earlier Booklet errors; however BPA's primary concern is that the discrepancy may cause confusion in the industry over determining which standard is correct. Therefore, we request that this discrepancy be corrected in Booklet 2.1, prior to the April 1, 2011 implementation date. This discrepancy should be considered a Minor Correction, because it is a clarification and correction that does not materially change the standards.

Current text in Booklet 2.1:

WEQ 003-0 OASIS DATA DICTIONARY Version 1.5

ANNULLED – assigned by the Seller when, by mutual agreement with the Customer, a confirmed reservation is to be voided or assigned unilaterally by the Primary Provider when a confirmed reservation is to be voided. (Final state).

WEQ-013 OASIS Implementation Guide Version 1.5

ANNULLED = assigned by the Seller when, by mutual agreement with the Customer, a reservation or pre-confirmed request is to be voided, or assigned unilaterally by the Primary Provider when a resale reservation is to be voided. (Final state)

Proposed Text for Booklet 2.1:

WEQ 003-0 OASIS DATA DICTIONARY Version 1.5

ANNULLED – assigned by the Seller when, by mutual agreement with the Customer, a reservation or pre-confirmed request is to be voided, or assigned unilaterally by the Primary Provider when a resale reservation is to be voided. (Final state)

WEQ-013 OASIS Implementation Guide Version 1.5

ANNULLED = assigned by the Seller when, by mutual agreement with the Customer, a reservation or pre-confirmed request is to be voided, or assigned unilaterally by the Primary Provider when a resale reservation is to be voided. (Final state)

Thank you for your consideration.

MC10033 MINOR CORRECTION REQUEST

Background:

DEFINITION OF ANNULLED - CHANGES OVER TIME

WEQ BOOKLET VERSION 000 January 15, 2005

WEQ 003-0 OASIS OASIS DATA DICTIONARY Version 1.4, pre-WEQ 013

- **Issue 1: The definition of ANNULLED was inadvertently omitted from the Data Dictionary in this version. I recall pointing this out, but due to other pressing issues, it was not added until Version 001 was published.**

WEQ 002.2.10.2 Version 1.4

ANNULLED = assigned by Provider or Seller when, by mutual agreement with the Customer, a confirmed reservation is to be voided. (Final state).

WEQ BOOKLET VERSION 001 October 31, 2007

- **Issue 2: The original definition of ANNULLED in the OASIS Data Dictionary Version 1.4, approved by FERC under Order 638 and later included in WEQ Booklet Version 000, is different from the NAESB Booklet 001, Data Dictionary Version 1.4 definition. I have not gone back to the Data Dictionary Version 1.3 for a comparison of language because of the watershed changes that came from Order 638 and the level of sophistication in the industry that was gained as a result of Order 638. This Booklet 1 is currently being implemented, under Order 676 C. I believe the additional underlined phrase at the end of this definition below was added in error, because this second phrase conflicts with the 1st phrase. It appears that the error was cut and pasted from the WEQ 003 Data Dictionary to WEQ 013 or vice versa.**
- **Issue 3: NAESB Business Practice Standards for Resales /Transfers were developed in this Booklet 1. However, the definition of ANNULLED, in either WEQ 003 or WEQ 013, was not modified to accommodate WEQ 001-11.1.2 on Resales until Booklet 2.0 was published. FERC approval of Booklet 2.0 is incorporated by reference into FERC approval of Booklet 2.1, under Order 676 E. Implementation of Booklet 2.1 is due by April 1, 2011.**

WEQ 003-0 OASIS OASIS DATA DICTIONARY Version 1.4

ANNULLED – assigned by the Seller when, by mutual agreement with the Customer, a confirmed reservation is to be voided or assigned unilaterally by the Primary Provider when a confirmed reservation is to be voided. (Final state).

WEQ-013 OASIS Implementation Guide Version 1.4

ANNULLED = assigned by the Seller when, by mutual agreement with the Transmission Customer, a confirmed reservation is to be voided, or assigned unilaterally by the Primary Provider when a confirmed reservation is to be voided. (Final state)

WEQ BOOKLET VERSION 002.0 September 30, 2008

- **Issue 4: Implementation of Resales/Transfers in Booklet 1 was delayed by FERC, under Order 676 C, until Jan 31, 2009. By then, Booklet 2.0 was published with the modified definition of ANNULLED in WEQ 013. However, the WEQ 003 Data Dictionary definition of ANNULLED was not updated to reflect the modified definition in WEQ 013. The modified definition of ANNULLED in WEQ 013 dropped the phrase, "or assigned unilaterally by the Primary Provider when a confirmed reservation is to be voided", when the new definition was modified to accommodate pre-confirmation priority under Order 890 and the phrase, "or assigned unilaterally by the Primary Provider when a resale reservation is to be voided." was added to accommodate WEQ 001-11.1.2 on Resales.**

WEQ 003-0 OASIS OASIS DATA DICTIONARY Version 1.5

MC10033 MINOR CORRECTION REQUEST

ANNULLED – assigned by the Seller when, by mutual agreement with the Customer, a confirmed reservation is to be voided or assigned unilaterally by the Primary Provider when a **confirmed** reservation is to be voided. (Final state).

WEQ-013 OASIS Implementation Guide Version 1.5

ANNULLED = assigned by the Seller when, by mutual agreement with the Customer, a reservation or pre-confirmed request is to be voided, or assigned unilaterally by the Primary Provider when a **resale** reservation is to be voided. (Final state)

WEQ BOOKLET VERSION 002.1 March 11, 2009

- **Issue 5: WEQ 003 Data Dictionary definition of ANNULLED was not updated to reflect the modified definition in WEQ 013.**

WEQ 003-0 OASIS DATA DICTIONARY Version 1.5

ANNULLED – assigned by the Seller when, by mutual agreement with the Customer, a confirmed reservation is to be voided or assigned unilaterally by the Primary Provider when a confirmed reservation is to be voided. (Final state).

WEQ-013 OASIS Implementation Guide Version 1.5

ANNULLED = assigned by the Seller when, by mutual agreement with the Customer, a reservation or pre-confirmed request is to be voided, or assigned unilaterally by the Primary Provider when a resale reservation is to be voided. (Final state)



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: WEQ

Requesters: Standards Review Subcommittee
Request No.: 2010 AP 1.d
Request Title: Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013

1. RECOMMENDED ACTION:

- Accept as requested
- Accept as modified below
- Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

- Change to Existing Practice
- Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

Per Recommendation:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

3. RECOMMENDATION

SUMMARY:

When NERC was working on the MOD standards in the 2006-2008 timeframe the SAR for the standards work was revised to include retiring FAC-012 and FAC-013. Through this revision to the SAR, the FAC-012 and FAC-013 standards became indirectly linked to the NAESB AFC/ATC related work. When the Commission issued Order 729 on November 24, 2009, the Order stated:

“the Commission directs the ERO to develop modifications to FAC-012-1 and FAC-013-1 to comply with the relevant directives of Order No. 693 and, as otherwise necessary, to make the requirements of those Reliability Standards consistent with those of the MOD Reliability Standards approved herein as well as this Final Rule.” (para. 291)

As a result of FERC’s directive in Order 729, a WEQ 2010 Annual Plan Provisional Item was created to determine if NAESB should develop complementary Business Practices



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: WEQ

Requesters: Standards Review Subcommittee

Request No.: 2010 AP 1.d

Request Title: Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013

Standards related to the FAC-012 and FAC-013 NERC Standards. At the May 4, 2010, WEQ Executive Committee (EC) Meeting the WEQ Standards Review Subcommittee (SRS) notified the WEQ EC that NERC had begun working on Project 2010-10 FAC Order 729 and suggested the Provisional Item be moved to an active item on the WEQ 2010 Annual Plan. Annual Plan Item 1.d was created and assigned to the WEQ SRS to monitor activity on the NERC project. The direction given was that if the WEQ SRS determined complementary standards should be developed, the WEQ SRS would bring the results back to the WEQ EC and a determination would be made on which subcommittee(s) would be responsible for developing standards.

The WEQ SRS has determined that complementary standards need not be developed and recommends that this WEQ 2010 Annual Plan Item 1.d be closed indicating that no additional Business Practice Standards are required.

RECOMMENDED STANDARDS:

No new standards or changes to existing standards are proposed.

4. SUPPORTING DOCUMENTATION

a. Description of Request:

WEQ 2010 Annual Plan Item 1.d – “Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013.”

b. Description of Recommendation:

The WEQ SRS is recommending that no further action be taken on WEQ 2010 Annual Plan Item 1.d.

c. Business Purpose:

Determine if NAESB complementary Business Practice Standards should be developed in conjunction with the NERC changes to FAC-012 and FAC-013.

d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

During the May 4, 2010, WEQ Executive Committee the WEQ 2010 Annual Plan Provisional Annual Item 6 “Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013” was moved to an active item, WEQ 2010 Annual Plan Item 1.d. In that meeting the item was assigned to the WEQ SRS to monitor. The WEQ SRS discussed the NERC Project 2010-10 FAC Order 729 at the May 18th, July 13th, August 10th, and September 21st meetings.



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: **WEQ**

Requesters: **Standards Review Subcommittee**

Request No.: **2010 AP 1.d**

Request Title: **Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013**

The NERC/NAESB Activity report provides a summary status of the discussions held related to Project 2010-10 FAC Order 729. Based on the WEQ SRS review, the WEQ SRS has determined that NAESB does not need to develop complementary business practices.

Additional background information can be found at:

WEQ SRS meeting minutes:

- [May 18, 2010](#)
- July 13, 2010
- August 10, 2010
- September 21, 2010

NERC NAESB Activity Report

- [NERC NAESB Activity Report from September 21, 2010 meeting](#)

NERC Project Page

- [Project 2010-10 FAC Order 729](#)



North American Energy Standards Board

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Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

via email and posting

TO: NAESB Wholesale Electric Quadrant (WEQ) Members and Interested Industry Participants
FROM: James Culliton, Staff Attorney
RE: WEQ Request for Formal Comments
DATE: September 24, 2010

An industry comment period begins today, September 24, 2010 and ends on October 25, 2010 for the following WEQ recommendation that is posted on the NAESB web site:

2010 WEQ Annual Plan Item No. 1.d: Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013

Recommendation: http://www.naesb.org/pdf4/weq_2010_api_1d_rec.doc

All interested parties, regardless of membership status within NAESB, are eligible to submit comments for consideration. The WEQ Executive Committee will review the recommendation and comments during the next scheduled meeting following the end of the comment period and consider the recommendation for vote. This meeting is open and we encourage those who submit comments to attend.

All comments received by the NAESB office by end of business on October 25, 2010 will be posted on the Request and Standards Activity Applicable to the WEQ page: http://naesb.org/weq_request.asp and forwarded to the WEQ Executive Committee members for their consideration. If you have difficulty downloading the recommendation, please call the NAESB office at (713) 356-0060.

Best Regards,

James Culliton

cc: Rae McQuade, President



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

1. RECOMMENDED ACTION:

- Accept as requested
- Accept as modified below
- Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

- Change to Existing Practice¹
- Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

Per Recommendation:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

3. RECOMMENDATION

SUMMARY:

The recommendation provides for an interim solution for establishing transmission service priorities for intra-BA delivery of generation to load for those entities that do not have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities. This recommendation is intended to be an interim solution for establishing generator priorities in support of the NERC IDC Change Order 283 (scheduled to move into a staging environment on November 1, 2010) and will not be used for production TLR curtailments. The Business Practices Subcommittee is submitting this recommendation with the understanding that the standards will be held in abeyance and not filed with the Commission. The subcommittee anticipates a final solution will be developed by November 1, 2011.

¹ The WEQ BPS passed a motion on July 15, 2010, to establish a November 1, 2011, sunset date for the Standards being submitted in this recommendation.



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

ASSUMPTIONS:

- It is not expected that the changes in this recommendation to the NAESB Business Practices by themselves will require changes to how current FERC-approved OATTs are administered.
- The assignment of firm and non-firm transmission service priorities for generators within a BA shall follow that Transmission Service Provider’s transmission tariff under which that generator operates.
- The Final Solution for Parallel Flow Visualization will be filed with FERC and will replace these interim solution Business Practice Standards.

RECOMMENDED STANDARDS:

000-1 ABBREVIATIONS AND ACRONYMS

The abbreviations and acronyms listed in the following table are used in the Business Practice Standards and shall have the meaning specified in the table.

Abbreviation / Acronym	Meaning
SDX	System Data Exchange

000-2 DEFINITION OF TERMS

The terms listed in the following table are used in the Business Practice Standards and shall have the definitions specified in the table.

TERM	DEFINITION
<u>Intra-BA Tag</u>	<u>Information describing a physical Transaction and its participants sourcing and sinking within the same BA using RFI format.</u>

WEQ-008 Transmission Loading Relief - Eastern Interconnection Standards

Business Practice Requirements

008-1 GENERAL REQUIREMENTS REGARDING USE OF INTERCONNECTION-WIDE TLR PROCEDURES



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

008-1.7 REPORTING TRANSMISSION SERVICE PRIORITIES FOR USE BY THE IDC

The following requirements provide options for reporting transmission service priorities to the IDC in the staging environment.² These options will have a sunset date of November 1, 2011.

008-1.7.1 Assignment of transmission service priorities can be done via a generator priority assignment or a market flow assignment.

008-1.7.1.1 Generator Priority Assignment

The BA shall identify the transmission service priority for all generators located in their BA and modeled in the IDC. Firm and non-firm transmission service priorities associated with generators shall be submitted via the SDX and/or Intra-BA Transactions. The default IDC treatment of generator transmission service priority level is firm.

008-1.7.1.1.1 Generator Priorities Submittal via the SDX

Generator priorities may be submitted via the SDX. The transmission priority for the generator will be submitted as either a percentage or MW value according to the timing requirements of the SDX data updates.

008-1.7.1.1.2 Generator Priorities Submittal via Intra-BA Transactions

BAs may use Intra-BA Transactions to represent non-firm PTP and network service. A generator MW output provided via the SDX will be subtracted by the scheduled MW of the tags mapped to the generator, whether these are Intra-BA Transactions or e-Tags. Intra-BA Transactions will follow the same update requirements as NERC Interchange Transactions.

008-1.7.1.2 Market Flow Assignment

For those entities that have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities (which are comparable to the generator assignment priorities for those entities not using flowgate allocations) a default of firm will be used by the IDC.

4. SUPPORTING DOCUMENTATION

a. Description of Request:

WEQ 2010 AP Item

1. Develop business practice standards as needed to complement reliability standards
 - a. Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection.

² The staging environment is the IDC test environment that will be used to determine whether the NERC IDC Change Order 283 should be moved into production.



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

- i. Develop interim solution for Parallel Flow Visualization to support November 1, 2010 implementation (into the IDC Staging Environment) of IDC Change Order 283.

b. Description of Recommendation:

The recommendation provides a mechanism for establishing generator transmission priorities for those entities that do not have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities.

c. Business Purpose:

Provide an interim solution for submitting priorities to support the IDC Change Order 283, which will be implemented in the IDC staging environment on November 1, 2010.

d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

On July 8, 2010, the WEQ BPS Leadership met with NAESB Management, WEQ Leadership and NERC staff to discuss the Parallel Flow Visualization project and the need for NAESB to provide priorities to NERC by November 1, 2010. The WEQ BPS Leadership was encouraged to develop an interim solution if they felt a final solution could not be reached and vetted through the NAESB standards process by November 1, 2010. The WEQ BPS agreed to develop an interim solution during the July 15-16, 2010, meeting with the understanding that the interim solution would be in a staging environment, would not be used for production TLR curtailments, and would have a sunset date of November 1, 2011.

Supporting Documents

[July 2, 2010, letter from Andy Rodriguez to Rae McQuade](#)

[July 12, 2010, letter from BPS Co-Chairs to WEQ BPS Exploder List](#)

July 15-16, 2010 meeting minutes

July 23, 2010 meeting minutes

[IDC Change Order 283 Revision 3.0](#)

[Interim Solution Work Paper](#)

[Motions from the WEQ BPS meeting for Parallel Flow Visualization](#)

The following options are currently under consideration for the final solution

- [Tag All Non-firm](#)
- [Generator Prioritization](#)
- [Flowgate Allocation](#)



North American Energy Standards Board

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Home Page: www.naesb.org

via email and posting

TO: Wholesale Electric Quadrant (WEQ) Members and Interested Industry Parties
FROM: James Culliton, NAESB Counsel
RE: WEQ Request for Formal Comments
DATE: July 29, 2010

An industry comment period begins today, July 29, 2010 and ends on August 30, 2010 for the following WEQ recommendation, as posted on the NAESB web site:

Recommendation:
WEQ 2010 Annual Plan Item 1.a.i – Interim Solution for Parallel Flow Visualization
Link: http://naesb.org/pdf4/weq_2010_api_1ai_rec.doc

All interested parties, regardless of membership status within NAESB, are eligible to submit comments for consideration. The WEQ Executive Committee (EC) will meet to review the recommendation and industry comments at the close of the comment period and consider the recommendation for vote. This meeting will be open to the public and those who submit comments are encouraged to attend.

All comments received by the NAESB office by end of business on August 30, 2010 will be posted on the Request and Standards Activity Applicable to the WEQ page (http://naesb.org/weq_request.asp) and forwarded to WEQ EC members for consideration. If you have difficulty downloading the recommendation link above, please call the NAESB office at (713) 356-0060.

Best Regards,

James Culliton

cc: Rae McQuade, President

Comments Submitted by the WEQ BPS

FORMAL COMMENTS

Quadrant: Wholesale Electric Quadrant
Recommendations: WEQ 2010 AP Item 1.a.i – Interim Solution for Parallel Flow Visualization
Submitted By: WEQ BPS Co-Chairs (Jim Busbin and Ed Skiba) on behalf of the WEQ BPS
Date: August 10, 2010

The WEQ BPS met on August 6, 2010 and finalized the work paper for the Parallel Flow Visualization Interim Solution. During the review, the subcommittee identified two consistency issues that should be incorporated by the WEQ Executive Committee into the Recommended Standards prior to approving the recommendation.

1. In WEQ-000-2 the term *Intra-BA Tag* should be changed to *Intra-BA Transaction*.
2. In WEQ-008-1.7.1.1.1 in the second sentence *transmission priority* should be change to *transmission service priority*.

Though not affecting the recommended standards it should be noted that there are some references in the Summary, Assumption, and Supporting Documentation sections of the recommendation that use the term *final solution*. For the Parallel Flow Visualization Interim Solution work paper the subcommittee agreed to change all references of *final solution* to *permanent solution*. The WEQ EC may also want to consider applying this conforming change to the recommendation.

Comments Submitted by E. Davis, Entergy

Entergy Formal Comments

**WEQ 2010 AP Item 1.a.i
Interim Solution for Parallel Flow Visualization**

Comments Due August 30, 2010

Ed Davis
Entergy Services

We appreciate the opportunity to comment on the above referenced draft recommendation from the BPS. In general we agree with the recommendation that the Generator Priority Assignment and Market Flow Assignment methods be used for testing the IDC Change Order 283. As described in the recommendation the Generator Priority Assignment method included in this recommendation is not the same as the final Generator Prioritization product that may be approved sometime in the future.

We have several thoughts and recommendations that we would like to see included in the approved recommendation for the Interim Solution for Parallel Flow Visualization.

ASSUMPTIONS FOR THE RECOMMENDATION

We are concerned about the numerous assumptions used by the BPS, and those contained in the NERC letter, to develop this recommendation. We are also concerned that the terms and conditions contained in the recommendation are not specific enough to address all possible divergent uses of the recommendation if the assumptions turn out to be incorrect. Also, the recommendation states the options will have a “sunset” date of November 1, 2011 without indicating any necessary transition actions, consequences, or requirements that would be associated with the sunset provisions.

Therefore we recommend the following changes:

**008-1 GENERAL REQUIREMENTS REGARDING USE OF
INTERCONNECTION-WIDE TLR PROCEDURES**

**008-1.7 REPORTING TRANSMISSION SERVICE PRIORITIES FOR USE
BY THE IDC**

The following requirements provide options for reporting transmission service priorities to the IDC during the testing of Change Order 283 for the IDC in the staging environment. These options will be used only for testing NERC Change Order 283. This recommendation will not be filed with FERC and will have a sunset date of November 1, 2011. Once this recommendation has reached the sunset date, participating entities will cease to have

Comments Submitted by E. Davis, Entergy

any obligations or requirements associated with this recommendation.

008-1.7.1 Assignment of transmission service priorities can be done via a generator priority assignment or a market flow assignment.

DATA SUBMITTAL - PERCENTAGE

The recommendation includes the requirement that transmission priority for a generator be submitted as either a percentage or MW value; percentage of what? Therefore we recommend the following changes that the percentage be percent of generator output:

008-1.7.1.1.1 Generator Priorities Submittal via the SDX

Generator priorities may be submitted via the SDX. The transmission priority for the generator will be submitted as either a percentage of generator output or MW value according to the timing requirements of the SDX data updates.

ASSIGNMENT OF TRANSMISSION PRIORITIES BY INTRA-BA TRANSACTIONS

Entergy has the following concerns regarding the Priorities Submittal via Intra-BA Transactions. First, transmission service contracted by transmission customers for specific generators for use within a BA can be any combination of Firm, or Non-firm, and PTP or network service. The recommendation unnecessarily restricts the use to “non-firm PTP and network service”. We recommend the following changes to remove this restriction as follows:

008-1.7.1.1.2 Generator Priorities Submittal via Intra-BA Transactions

BAs may use Intra-BA Transactions to represent Firm and Non-firm PTP and network service from designated Network Resources and sources not designated as Network Resources. A generator MW output provided via the SDX will be subtracted by the scheduled MW of the tags mapped to the generator, whether these are Intra-BA Transactions or e-Tags. Intra-BA Transactions will follow the same update requirements as NERC Interchange Transactions.

We expect the subtraction of the “scheduled MW of tags mapped to the generator” from the “generator MW output provided via the SDX” will not be zero in all cases and the remainder of that subtraction could be a positive or negative value of MWs. Our second concern is that the business practices do not address the use or priority of those remaining MWs other than assuming that the remaining MW default to the “firm” transmission

Comments Submitted by E. Davis, Entergy

service priority. We suggest that this scenario be more specifically addressed by the business practices.

PSEUDO-TIES

The industry makes extensive use of dynamically transferred generator capacity, also known as pseudo-ties. This term is used to describe the situation where a generator is physically located on one transmission providers transmission system (within a specific BA, Native BA) and some or all of that generator's output is telemetered into another BA's balancing authority area (Receiving BA). There are no BA-to-BA schedules nor e-tags for the output of these MWs. We recommend that the following be added to the recommendation to make it clear that the Receiving BA will submit an Intra-BA Tag to identify these pseudo-tied MWs:

008-1.7.1.1.2 Generator Priorities Submittal via Intra-BA Transactions

..... NERC Interchange Transactions.

The transmission service associated with generator capacity dynamically transferred to a Receiving BA will be submitted to the IDC by the Receiving BA using an Intra-BA Tag.

DEFINE "INTRA-BA TRANSACTION"

The term Intra-BA Transaction is used in the recommendation as a defined term, but it is not defined in the Definition of Terms. We recommend the following change to define the term or to use the term in lower case (intra-BA transaction):

Intra-BA Transaction – the Point-to-Point transmission service reservation associated with the sale of generator MW capacity from the generator to a sink within a Balancing Authority Area. The PTP transmission service reservation may be Firm or Non-Firm.

Comments Submitted by the WEQ SRS

FORMAL COMMENTS

Quadrant: Wholesale Electric Quadrant
Recommendation: WEQ 2010 AP Item 1(a)(i) Interim Solution for Parallel Flow Visualization
Submitted By: Standards Review Subcommittee
Date: August 30, 2010

Under the Standards Review Subcommittee (SRS) Scope of Work, which was approved by the SRS on May 18, 2010, the SRS agreed to review recommendations and if subcommittee deemed appropriate, they would submit advisory comments to the Executive Committee (EC) for consideration. As stated in the Scope of Work these comments are “not intended to change the scope of the Business Practices or recommendation, but to provide consistency and uniformity across all WEQ Business Practices.”

After a review of the proposed standards against other WEQ Standards Booklets, the following inconsistencies are noted:

- 008-1.7:
The last sentence in the proposed standard lists a sunset date for the standards. The SRS has not found this type of language in any other current standard since the inception of the WEQ.
- 008-1.7.1.1.2:
At the end of the first sentence in this section, space between last word and period needs to be deleted.
- 008-1.7.1.2:
A comma needs to be inserted between the parenthetical ending “allocations) and “a default...”
- To be consistent with the existing Business Practice Standards the section titles should use the following conventions prior to sending the document out for membership ratification:
 - **XXX-1.1.1.1** Level 4 Title (Proper Case, Arial 11)
 - **XXX-1.1.1.1.1** **Level 5 Title** (Proper Case, Arial 11, Bold, Underline, Italics)

These changes should be applied to Sections 008-1.7.1.1, 008-1.7.1.1.1, 008-1.7.1.1.2, and 008-1.7.1.2.

Comments Submitted by Southern Company



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

1. RECOMMENDED ACTION:

- Accept as requested
- Accept as modified below
- Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

- Change to Existing Practice¹
- Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
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- Document
- Data Element
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- X12 Implementation Guide
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Per Recommendation:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

3. RECOMMENDATION

SUMMARY:

The recommendation provides for an interim solution for establishing transmission service priorities for intra-BA delivery of generation to load for those entities that do not have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities. This recommendation is intended to be an interim solution for establishing generator priorities in support of the NERC IDC Change Order 283 (scheduled to move into a staging environment on November 1, 2010) and will not be used for production TLR curtailments. The Business Practices Subcommittee is submitting this recommendation with the understanding that the standards will be held in abeyance and not filed with the Commission. The subcommittee anticipates a final solution will be developed by November 1, 2011.

¹ The WEQ BPS passed a motion on July 15, 2010, to establish a November 1, 2011, sunset date for the Standards being submitted in this recommendation.

Comments Submitted by Southern Company



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

ASSUMPTIONS:

- It is not expected that the changes in this recommendation to the NAESB Business Practices by themselves will require changes to how current FERC-approved OATTs are administered.
- The assignment of firm and non-firm transmission service priorities for generators within a BA shall follow that Transmission Service Provider’s transmission tariff under which that generator operates.
- The Final Solution for Parallel Flow Visualization will be filed with FERC and will replace these interim solution Business Practice Standards.

RECOMMENDED STANDARDS:

000-1 ABBREVIATIONS AND ACRONYMS

The abbreviations and acronyms listed in the following table are used in the Business Practice Standards and shall have the meaning specified in the table.

Abbreviation / Acronym	Meaning
SDX	System Data Exchange

000-2 DEFINITION OF TERMS

The terms listed in the following table are used in the Business Practice Standards and shall have the definitions specified in the table.

TERM	DEFINITION
<u>Intra-BA Tag</u>	<u>Information describing a physical Transaction and its participants sourcing and sinking within the same BA using RFI format.</u>

WEQ-008 Transmission Loading Relief - Eastern Interconnection Standards

Business Practice Requirements

008-1 GENERAL REQUIREMENTS REGARDING USE OF INTERCONNECTION-WIDE TLR PROCEDURES

Comments Submitted by Southern Company

**RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE**

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

008-1.7 REPORTING TRANSMISSION SERVICE PRIORITIES FOR USE BY THE IDC

The following requirements provide options for reporting transmission service priorities to the IDC in the staging environment.² These options will have a sunset date of November 1, 2011.

008-1.7.1 Assignment of transmission service priorities can be done via a generator priority assignment or a market flow assignment.

008-1.7.1.1 Generator Priority Assignment

The BA shall identify the transmission service priority for all generators located in their BA and modeled in the IDC. Firm and non-firm transmission service priorities associated with generators shall be submitted via the SDX and/or Intra-BA Transactions. The default IDC treatment of generator transmission service priority level is firm.

008-1.7.1.1.1 Generator Priorities Submittal via the SDX

Generator priorities may be submitted via the SDX. The transmission priority for the generator will be submitted as either a percentage or MW value according to the timing requirements of the SDX data updates.

008-1.7.1.1.2 Generator Priorities Submittal via Intra-BA Transactions

BAs may use Intra-BA Transactions to represent non-firm PTP and secondary network service. A generator MW output provided via the SDX will be subtracted by the scheduled MW of the tags mapped to the generator, whether these are Intra-BA Transactions or e-Tags. Intra-BA Transactions will follow the same update requirements as NERC Interchange Transactions.

008-1.7.1.2 Market Flow Assignment

For those entities that have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities (which are comparable to the generator assignment priorities for those entities not using flowgate allocations) a default of firm will be used by the IDC.

4. SUPPORTING DOCUMENTATION**a. Description of Request:**

WEQ 2010 AP Item

1. Develop business practice standards as needed to complement reliability standards
 - a. Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection.

² The staging environment is the IDC test environment that will be used to determine whether the NERC IDC Change Order 283 should be moved into production.

Comments Submitted by Southern Company

**RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE**

For Quadrant: Wholesale Electric Quadrant
Requesters: Business Practices Subcommittee
Request No.: WEQ 2010 AP Item 1.a.i
Request Title: Interim Solution for Parallel Flow Visualization

- i. Develop interim solution for Parallel Flow Visualization to support November 1, 2010 implementation (into the IDC Staging Environment) of IDC Change Order 283.

b. Description of Recommendation:

The recommendation provides a mechanism for establishing generator transmission priorities for those entities that do not have a regulatory-approved market-based congestion management process using flowgate allocations to assign firm and non-firm market flow priorities.

c. Business Purpose:

Provide an interim solution for submitting priorities to support the IDC Change Order 283, which will be implemented in the IDC staging environment on November 1, 2010.

d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

On July 8, 2010, the WEQ BPS Leadership met with NAESB Management, WEQ Leadership and NERC staff to discuss the Parallel Flow Visualization project and the need for NAESB to provide priorities to NERC by November 1, 2010. The WEQ BPS Leadership was encouraged to develop an interim solution if they felt a final solution could not be reached and vetted through the NAESB standards process by November 1, 2010. The WEQ BPS agreed to develop an interim solution during the July 15-16, 2010, meeting with the understanding that the interim solution would be in a staging environment, would not be used for production TLR curtailments, and would have a sunset date of November 1, 2011.

Supporting Documents

[July 2, 2010, letter from Andy Rodriguez to Rae McQuade](#)

[July 12, 2010, letter from BPS Co-Chairs to WEQ BPS Exploder List](#)

July 15-16, 2010 meeting minutes

July 23, 2010 meeting minutes

[IDC Change Order 283 Revision 3.0](#)

[Interim Solution Work Paper](#)

[Motions from the WEQ BPS meeting for Parallel Flow Visualization](#)

The following options are currently under consideration for the final solution

- [Tag All Non-firm](#)
- [Generator Prioritization](#)
- [Flowgate Allocation](#)

Comments Submitted by Midwest ISO, PJM and SPP

FORMAL COMMENTS

Quadrant: Wholesale Electric Quadrant
Recommendations: WEQ 2010 AP Item 1 (a) (i) Interim Solution for Parallel Flow Visualization
Submitted By: Midwest ISO, PJM and Southwest Power Pool (SPP)
Date: August 30, 2010

Midwest ISO, PJM and SPP oppose the Parallel Flow Visualization Interim Solution as developed by the WEQ Business Practices Subcommittee. As discussed below, the interim solution fails to meet the original intent of the initiating RTOs, the ORS, and the FERC NOI. For the reasons outlined herein, Midwest ISO, PJM and SPP do not support the interim solution but have an alternative recommendation they would like NAESB to consider.

As an alternative to approving the interim solution, the three RTOs believe NAESB BPS consensus can be reached on a permanent solution by January 1, 2011 and recommend that this selection process go forward. Even without an interim solution, the Parallel Flow Visualization process could still be implemented in the IDC staging environment on November 1, 2010 using default generation-to load priorities. The default priorities would be replaced by generation-to-load priorities from the permanent solution at the earliest time possible following January 1, 2011.

Midwest ISO, PJM and SPP have a vested interest in a successful outcome of the Parallel Flow Visualization project. Midwest ISO and PJM submitted the future path of TLR as a line item in October 2007 for the 2008 WEQ Annual Plan. The three RTOs submitted a NERC SAR in August 2008 for modifications to the NNL calculation in the IDC. The three RTOs have been active participants in both the NERC and NAESB groups working on the Parallel Flow Visualization project. The three RTOs have also made a financial commitment to the success of the Parallel Flow Visualization project by agreeing to fund \$56,000 of IDC CO-283.

Midwest ISO, PJM and SPP do not believe the interim solution meets the requirements of having a single generation-to-load methodology for all entities in the Eastern Interconnection. Lacking a single methodology, the three RTOs view the interim solution as a stop-gap measure that has many of the same problems that exist in the current IDC (static data not being updated, lacking a single source for parallel flow visibility, and parties not recognizing the priority of their generation-to-load impacts).

Midwest ISO, PJM and SPP understand that NERC/NAESB made commitments to FERC to provide a solution by November 1, 2010. This was not a commitment to address all of the shortcomings in the IDC by November 1, 2010, but a commitment to provide a mechanism where affected parties would no longer have firm service being treated subordinate to non-firm service involving transactions internal to the BA (see pages 14-15 of NERC's March 29, 2010 response to FERC with respect to the NOI). Midwest ISO, PJM, and SPP do not believe the interim solution is needed to satisfy the treatment of firm versus non-firm curtailment priorities of transactions internal to the BA. First, if the interim solution were implemented, it would be located on the staging IDC environment that is not used for TLR curtailments. Second, the BAs have other steps available to them to make non-firm uses of internal transactions known to RCs that could be used until the permanent solution is in-place.

In response to this commitment, the NERC/NAESB staff requested that the NAESB BPS develop an interim solution that, while it does not fulfill the original intent of the ORS, it does provide a basic mechanism for a BA to categorize generator's use of transmission service as firm or non-firm. While the

Comments Submitted by Midwest ISO, PJM and SPP

interim solution may give the appearance of meeting the commitment made by NERC/NAESB, it fails to meet the intent of the effort initiated by Midwest ISO, PJM and SPP as well as the directive of the ORS. The intent of the interim solution is to require all entities to report firm and non-firm use of the transmission system on a comparable basis and to implement a single methodology for the determination of firm and non-firm generation-to-load flows that would support the FERC requirement to have a consistent method. This interim solution does not consistently classify firm and non-firm use of the transmission system. It is not a single method. Midwest ISO, PJM and SPP view the interim solution as merely injecting a one year delay in the Parallel Flow Visualization Project in order to meet this perceived NERC/NAESB commitment.

The intent of the NAESB standards development process goes beyond reporting of data and extends into appropriate actions to remediate the impact generation-to-load impacts on third parties. As NERC indicated on pages 10 to 11 of their March 29, 2010 response to FERC with respect to the NOI, the determination of what portion of generation-to-load flow is firm and non-firm was left to NAESB. As requested by the ORS, the NAESB BPS has been working diligently to satisfy the ORS request to provide a single methodology for the determination of firm and non-firm use of the transmission system for internal service of generation-to-load.

It is clear to these commenters that the interim solution delays delivery of a permanent solution to production, delays having a single solution in production used by all entities, and delays meeting FERC's desire to fully and appropriately address the equitable treatment of firm and non-firm use of the transmission system. Rather than moving forward with the interim solution, Midwest ISO, PJM, and SPP recommend that the BPS be given the opportunity to select a permanent solution that addresses the IDC shortcomings by January 1, 2011 and that the focus be on getting the permanent solution into production as-soon-as-possible following that date. Therefore, Midwest ISO, PJM and SPP do not support the interim solution and instead asks the WEQ Executive Committee to not approve the Parallel Flow Visualization interim solution and to consider our alternative recommendation.

Late Comments Submitted by EPSA

Formal Comments on
NAESB WEQ 2010 Annual Plan Item 1.a.i

Parallel Flow Visualization

Submitted on Behalf of EPSA

By Jack Cashin and Barry Green

The following are EPSA's comments on the proposed interim solution with respect to Parallel Flow Visualization.

EPSA and its members, have a strong interest in the TLR process and have strongly advocated for changes to the existing procedures at NAESB as well as at NERC and FERC. Most significantly, we believe, based on the NOPR issued on January 21, 2010 (Docket RM10-9-000), that FERC has recognized the inequities in the current procedures and is expecting the industry to recommend changes.

The proposed revised standards which are the subject of these comments, do not in our opinion represent an adequate response to these identified deficiencies. However, we are aware of the changes to the IDC and the associated Field Test starting on Nov. 1, 2010, that have been initiated by NERC and are supported by EPSA. We also recognize the advantages of an immediate response from NAESB to these developments and acknowledge that this standard, as recommended by the BPS, is probably the only feasible response that could have been approved by the EC and the membership by Nov. 1, 2010.

A critical aspect of this standard from EPSA's point of view, is the sunset clause of Nov. 1, 2011, which is included in it. EPSA could not support this standard as a longer term solution to the current problems with the TLR process. Therefore our support of this recommendation at the BPS and at the EC is dependent on the inclusion of this sunset clause.

EPSA is therefore prepared to support this interim solution, but urges the EC to request that the BPS continue to expeditiously evaluate the three alternative methodologies currently before it, for a more permanent solution to the TLR problems. We would hope that the BPS can conclude this work in advance of the Nov 1, 2011 sunset clause for this recommendation such that advantage can be taken of the NERC Field Test to evaluate whatever methodology is proposed as the ultimate solution.

Late Comments Submitted by the WEQ BPS

FORMAL COMMENTS (LATE)

Quadrant: Wholesale Electric Quadrant
Recommendations: WEQ 2010 AP Item 1.a.i – Interim Solution for Parallel Flow Visualization
Submitted By: WEQ BPS Co-Chairs (Jim Busbin and Ed Skiba) on behalf of the WEQ BPS
Date: September 20, 2010

The WEQ BPS met on September 15, 2010 and reviewed the formal comments submitted for the Parallel Flow Visualization Interim Solution recommendation. The WEQ BPS is providing the WEQ Executive Committee these late comments for consideration based on its review.

Midwest ISO/PJM/SPP Comments

- The BPS discussed the Midwest ISO/PJM/SPP comments. The following motion was made:

The BPS request the EC act in accordance of paragraph 2 of the comments submitted by the Midwest ISO, PJM & SPP.

The motion failed a balance vote 2.5 to 5.5

Entergy Comments

- The BPS is supportive of the Entergy Comments for sections WEQ-008-1.7 and WEQ-008-1.7.1.1.1 with the following changes:
 - WEQ-008-1.7 - The following requirements provide options for reporting transmission service priorities to the IDC during the testing of Change Order 283 for the IDC. These options will be used only for testing NERC Change Order 283. This Business Practice Standard will not be filed with FERC and will have a sunset date of November 1, 2011. Once this Business Practice Standard has reached the sunset date, participating entities will cease to have any obligations or requirements associated with this Business Practice Standard.

The WEQ BPS suggests changing “recommendation” to “Business Practice Standard.”

- WEQ-008-1.7.1.1.1 - Generator priorities may be submitted via the SDX. The transmission priority for the generator will be submitted as either a percentage of generator maximum output capability or MW value according to the timing requirements of the SDX data updates.

The WEQ BPS suggests adding the words “maximum” and “capability.”

The vote to support these changes was: 12 in support, no opposition and 2 abstentions.

- The BPS is supportive of the Entergy Comments for section WEQ-008-1.7.1.1.2 with the following changes:
 - WEQ-008-1.7.1.2 BAs may use Intra-BA Transactions to represent firm and non-firm PTP and network service from designated Network Resources and network service sources not designated as Network Resources. The generator MW output provided via the SDX will be subtracted by non-firm Intra-BA Transactions and the non-firm and firm e-Tags scheduled MW of the tags mapped to the generator, to determine the generator output

Late Comments Submitted by the WEQ BPS

using Firm Transmission Service. Intra-BA Transactions will follow the same update requirements as NERC Interchange Transactions.

The WEQ BPS added "network services" to the first sentence.

A number of changes were made to the second sentence to support the changes made in the first sentence. The original sentence was "A generator MW output provided via the SDX will be subtracted by the scheduled MW of the tags mapped to the generator, whether these are Intra-BA Transactions or e-Tags."

In the motion to support changes to this section, the WEQ BPS did not include the following sentence suggested by Entergy. "The transmission service associated with generator capacity dynamically transferred to a Receiving BA will be submitted to the IDC by the Receiving BA using an Intra-BA Tag."

The vote to support these changes was: 11 in support, no opposition, and 2 abstentions.

- Based on the formal comments the BPS submitted to change the term "Intra-BA Tag" to "Intra-BA Transaction" in WEQ-000, the WEQ BPS recommends no action is needed on adding a new term for Intra-BA Transaction.

Southern Company Comments

- Through the changes the BPS supported related to the Entergy comments it was determined that no action was needed on the Southern Company comments.

WEQ SRS Comments

- The WEQ BPS by a vote (11 in support, no opposition, and 2 abstentions) recommend that the Executive Committee include the following changes offered by the WEQ SRS:
 - WEQ-008-1.7.1.1.2 - At the end of the first sentence in this section, space between last word and period needs to be deleted.
 - WEQ-008-1.7.1.2 - A comma needs to be inserted between the parenthetical ending "allocations) and "a default...."
 - To be consistent with the existing Business Practice Standards the section titles should use the following conventions prior to sending the document out for membership ratification:
 - XXX-1.1.1.1 Level 4 Title (Proper Case, Arial 11)
 - XXX-1.1.1.1.1 ***Level 5 Title*** (Proper Case, Arial 11, Bold, Underline, Italics)These changes should be applied to Sections 008-1.7.1.1, 008-1.7.1.1.1, 008-1.7.1.1.2, and 008-1.7.1.2.

EPSA Comments

- The WEQ BPS reviewed the EPSA comments and determined no additional guidance to the EC was needed on these comments.



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NORTH AMERICAN ENERGY STANDARDS BOARD

2010 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

As Approved by NAESB Board of Directors on September 23, 2010 With Suggested Changes From the Annual Plan Subcommittee

Item Description	Completion ¹	Assignment ²
1 Develop business practices standards as needed to complement reliability standards		
Develop business practice standards to support and complement NERC reliability standards, NERC policies and NERC standards authorization requests (SARs) using the NERC/NAESB Coordination Joint Standards Development Process as appropriate. Current NAESB activities underway to develop business practice standards that are supportive of this annual plan item are:		
a) Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection.		
Note: Consideration should be given to provisional item 4. Work is being coordinated with the NERC IDC Working Group.		
i) Interim solution for Parallel Flow Visualization Status: Completed	3 rd Q, 2010	BPS
Interim solution is needed to support November 1, 2010 NERC implementation of IDC Change Order 283 into the IDC Staging Environment.		
ii) Permanent solution for Parallel Flow Visualization Status: Started	3rd Q, 2010 2 nd Q, 2011	BPS
b) Time Error and Inadvertent (BAL-004 and BAL-006) Coordination with NERC Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Standards Drafting Team (BARCSDT) created in July 2010)	TBD ¹	TIMTF
c) DCS and AGC (BAL-002 and BAL-005) Coordination with NERC Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Group created in July 2010)	TBD ¹	TIMTF
d) Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013. Status: Started — The SRS began reviewing Orders 693, 729, and 890 and NERC SARs to understand how FAC-012 and FAC-013 were linked to NAESB as possibly requiring coordination. <u>Completed</u>	TBD¹ 3rd Q, 2011 2011	SRS

¹ The activities for the WEQ 2010 Annual Plan Item Nos. 1b, 1c, and 1d are dependent on NERC standards development efforts. It is probable that this item will not start until 2012 when the field test from NERC is completed.



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Item Description	Completion ¹	Assignment ²
2 Develop business practice standards in support of the FERC RM05-25-000 and RM05-17-000 (OATT Reform)²		
a) Develop version 2 business practice standards to better coordinate the use of the transmission system among neighboring transmission providers. Such business practice standards would be based on recommendations from NERC's Long Term ATC/AFC Task Force and would involve revised procedures for the ATC calculation and/or revised protocols as determined by the final order.		
Status: Underway		
Development is using joint standards development process with NERC. Request R050004 was expanded to include the Order No. 890 (Docket Nos. RM05-25-000 and RM05-17-000) and Order No. 890-A (Docket Nos. RM05-17-001, 002 and RM05-25-001, 002), and Order No. 890-B (Docket Nos. RM05-17-03 and RM05-25-03) "Preventing Undue Discrimination and Preference in Transmission Services," issued April 11, 2007).		
i) Group 3: Network Service On OASIS ³		
1) Use of OASIS to Make Electronic Requests to Designate and Terminate Network Resource	3rd 4 th Q, 2010	OASIS
Status: Underway		
2) Ability to Query Requests to Designate and Terminate Network Resources and Allow for Queries of All Information Provided with Designation Requests	3rd 4 th Q, 2010	OASIS
Status: Underway		
3) Masking of Designated Network Resource Operating Restrictions and Generating Cost Information	3rd 4 th Q, 2010	OASIS
Status: Underway		
4) Procedural Requirements for Submitting Designations over new OASIS Functionality	3rd 4 th Q, 2010	OASIS
Status: Underway		
5) Specify How Designated Network Service Informational Postings are Posted on OASIS	3rd 4 th Q, 2010	OASIS
Status: Underway		
6) Develop standards for the treatment of OASIS Requests when the Customer Fails to Provide the Necessary Attestation	3rd 4 th Q, 2010	OASIS
Status: Underway		

² FERC Order No. 890, issued February 16, 2007 can be accessed from the following link - http://www.naesb.org/doc_view4.asp?doc=ferc021607.doc

³ The completion dates for the development activities listed under WEQ 2010 Annual Plan Item Nos. 2a(i), 2a(iii), 2b, and 3a(i) will be delayed. The dates should be altered before the September 23-, 2010 NAESB Board meeting.



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	Item Description	Completion ¹	Assignment ²
	7) Procedural Requirements for Submitting Both Temporary and Indefinite Terminations of Network Resources Status: Underway	3rd 4 th Q, 2010	OASIS
	8) Procedures for Submitting and Processing Requests for Concomitant Evaluations of Transmission Requests and Temporary Terminations Status: Underway	3rd 4 th Q, 2010	OASIS
ii)	Group 4: Pre-Emption; Request No. R05019		
	1) Pre-Emption Status: Not Started	2011	OASIS
	2) Request No. R05019 Status: Not Started	2011	OASIS
iii)	Group 5: Paragraph 1377 ⁴ – Group 5 work should precede group 4 work ³		
	1) Paragraph 1377-Coordination of Requests Across Multiple Transmission Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee.	4 th Q, 2010	OASIS
	2) Re-Bid Of Partial Service across Multiple Transmission Providers' Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	4 th Q, 2010	OASIS
	3) Group DNR requests from a system with point-to-point requests on other systems for synchronization Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	4 th Q, 2010	OASIS

⁴ Paragraph 1377 of FERC Order No. 890, issued February 16, 2007: The Commission agrees that transmission requests across multiple transmission systems should be coordinated by the relevant transmission providers. We will not, however, amend the pro forma OATT to require such coordination. Rather, we require transmission providers working through NAESB to develop business practice standards related to coordination of requests across multiple transmission systems. In order to provide guidance to NAESB, we will articulate the principles that should govern processing across multiple systems. All the transmission providers involved in a request across multiple systems should consider a request that requires studies across multiple systems to be a single application for purposes of establishing the deadlines for rendering an agreement for service, revising queue status, eliciting deposits and commencing service. In order to preserve the rights of other transmission customers with studies in the queue, the priority for the single application should be based on the latest priority across the transmission providers involved in the multiple system request. We note that regional entities like westTrans are already coordinating requests across multiple transmission systems and we believe such coordination is an acceptable solution to this issue.



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NORTH AMERICAN ENERGY STANDARDS BOARD

2010 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

As Approved by NAESB Board of Directors on September 23, 2010 [With Suggested Changes From the Annual Plan Subcommittee](#)

	Item Description	Completion ¹	Assignment ²
iv)	Group 6: Miscellaneous (Paragraphs 1390 ⁵ and 1627 ⁶ of FERC Order No. 890)		
	1) Paragraph 1390 of Order 890 – Terminations related to: deficient requests, customer failure to pay required annual reservation fee, and customer modifications to applications which are meaningfully different. Status: Not Started	2011	OASIS
	2) Paragraphs 1627 of Order 890 – Posting of additional information on OASIS regarding firm transmission curtailments Status: Not Started	2011	OASIS
	3) Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services. Status: Not Started	2011	OASIS

⁵ Paragraph 1390 of FERC Order No. 890, issued February 16, 2007: We will not modify the pro forma OATT to address requests to allow the transmission provider to terminate idle transmission service requests. NAESB's business practice 001-4.11 allows the transmission provider to retract a request if the transmission customer does not respond to an acceptance within the time established in NAESB business practice standard 001-4.13. Therefore, we interpret TDU Systems comments to refer to circumstances when a transmission customer fails to respond to the transmission provider's request for additional information during the course of a request study. As discussed above, by the time the transmission provider offers a system impact study agreement, it should have all of the information that it needs to complete the study. Pursuant to section 17.4 of the pro forma OATT, the transmission provider can deem a transmission service request deficient if the transmission customer does not provide all of the information the transmission provider needs to evaluate the request for service. We will revise section 17.7 of the pro forma OATT so that the transmission provider is able to terminate a request for transmission service if a transmission customer that is extending the commencement of service does not pay the required annual reservation fee within 15 days of notifying the transmission provider that it would like to extend the commencement of service. We will not change the pro forma OATT to allow the transmission provider to terminate a transmission service request if the transmission customer changes its application for service. We believe the existing pro forma OATT is sufficient to allow a transmission provider to manage situations where the transmission customer modifies its application for service to the point that the customer is requesting transmission service that is meaningfully different than its initial request.

⁶ Paragraph 1627 of FERC Order No. 890, issued February 16, 2007: We agree with suggestions for the posting of additional curtailment information on OASIS and, therefore, require transmission providers, working through NAESB, to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. Transmission providers need not implement this new OASIS functionality and any related business practices until NAESB develops appropriate standards. These postings must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail loads), and the duration of the curtailment. This information is in addition to the Commission's existing requirements: (1) when any transmission is curtailed or interrupted, the transmission provider must post notice of the curtailment or interruption on OASIS, and the transmission provider must state on OASIS the reason why the transaction could not be continued or completed; (2) information to support any such curtailment or interruption, including the operating status of facilities involved in the constraint or interruption, must be maintained for three years and made available upon request to the curtailed or interrupted customer, the Commission's Staff, and any other person who requests it; and, (3) any offer to adjust the operation of the transmission provider's system to restore a curtailed or interrupted transaction must be posted and made available to all curtailed and interrupted transmission customers at the same time.



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2010 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

As Approved by NAESB Board of Directors on September 23, 2010 With Suggested Changes From the Annual Plan Subcommittee

Item Description	Completion ¹	Assignment ²
b) Develop the needed business practices as companion to the NERC standards for ATC related efforts ³		
i) Develop standards to support existing Request No. R05004 .		
1) The processing of transmission service requests, which use TTC/ATC/AFC, in coordination with NERC changes to MOD 001 where the allocation of flowgate capability based on historical Network Native Load impacts the evaluation of transmission service requests, requiring the posting of those allocation values in conjunction with queries of service offerings on OASIS Status: Underway	3rd <u>4th</u> Q, 2010	OASIS
3 Develop business practices standards to improve the current operation of the wholesale electric market and develop and maintain business practice and communication standards for OASIS and Electronic Scheduling		
a) Develop and/or maintain business practice standards as needed for OASIS and electronic scheduling. Specific items to address include:		
i) Network Services: Determine and develop needed business practice standards or other support is needed to support use of OASIS for Network Service transactions (R04006E). (Related to AP 2(a)(iii)) ³ Status: Underway	3rd <u>4th</u> Q, 2010	OASIS
ii) Registry (TSIN): Determine and develop needed business practice standards to support the registry functions currently supported by NERC (R04037 , R06027).		
1) Transition the TSIN Registry from NERC to NAESB as the enhanced Electric Industry Registry (EIR), (R06027). Status: Underway, <u>contract signed</u> .	<u>4th Q 2010nd Q, 2011</u>	NAESB/NERC Administration, JESS
iii) Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff (R05019). Status: Deleted as a duplicate of 2009 AP item 2.a.ii.2		
iv) Make remaining incremental enhancements to OASIS as an outgrowth of the NAESB March 29, 2005 conference on the future of OASIS (R05026). Scoping statement completed by SRS. <u>There were a number of assignments from the Standards Request. The outstanding items are included below: and assignments made to BPS and OASIS.</u>		
1) Eliminate Masking of TSR tag source and sink when requested status is denied, withdrawn refused, displaced, invalid, declined, annulled or retracted Status: Not Started	201 <u>2</u>	OASIS



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As Approved by NAESB Board of Directors on September 23, 2010 With Suggested Changes From the Annual Plan Subcommittee

	Item Description	Completion ¹	Assignment ²
2)	Initiate standard that eliminates the disparity of posting "sensitive" information. This standard should also include procedures of user certification that allows access to this class of information. Status: Underway (upon further development of this item by NAESB, a completion date will be determined)	2012 +	OASIS
3)	Enhance the TSR result postings to allow showing of (i) limiting transmission elements and (ii) available generation dispatch options that would allow acceptance of reservation request. Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)	2012 +	OASIS
v)	Develop, coordinate interoperability testing, and implement e-Tag version 1.8.1 Status: Completed	1 st Q, 2010	JESS
vi)	Review and correct WEQ-004 Coordinate Interchange Business Practice Standard as needed based on activities in NERC Project 2008-12, Coordinate Interchange Standards Revisions and supporting EOP-002-2 R4 and R6. [note: this is a new item] Status: Underway_ Completion date dependent upon coordination activities with NERC_	2011	JESS
b)	Develop and/or maintain standard communication protocols and cyber-security business practices as needed.		
i)	Develop PKI certification program for e-Tag and OASIS Status: Underway	2010	Board Certification Program Committee
ii)	Develop PKI standards for OASIS. Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)	2011	OASIS
iii)	Develop Industry Implementation Plan for meeting PKI Standard requirements for e-tagging. Status: Underway. Full e-Tag implementation (server & client side) is linked to the transition of the Registry from NERC to NAESB and NAESB implementation.	TBD – dependent on item above (i) and EIR	JESS



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NORTH AMERICAN ENERGY STANDARDS BOARD

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As Approved by NAESB Board of Directors on September 23, 2010 [With Suggested Changes From the Annual Plan Subcommittee](#)

Item Description	Completion ¹	Assignment ²
<p>4 Review and develop business practices standards to Demand Response, Demand Side Management and Energy Efficiency Programs</p>		
<p>Review and develop needed model business practices for a standardized method for quantifying benefits, savings, cost avoidance and/or the reduction in energy demand and usage derived from the implementation of demand side management and energy efficiency programs. This effort will include demand side response, energy efficiency programs and metering, including the 'curtailment service provider' program.</p>		
<p>a) Review the NAESB Business Practices for Measurement and Verification of Wholesale Electricity Demand Response (WEQ-015) in conjunction with the IRC developed Demand Response Matrix and identify business practice requirements that could be improved or made clearer through the addition of specific technical detail. The wholesale and retail demand response work groups and the Smart Grid Standards Subcommittees should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.</p>	Phase 2 – 4 th Q 2010	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee
<p>Status: In Progress</p>		
<p>b) For each performance evaluation type/service type combination identified in WEQ-015, using the IRC matrix as a starting point, assess and determine what standards or guidelines, if any, should be developed to aid all participants in the use of measurement and verification methods for demand response programs in organized wholesale electric markets. If the determination is made that standards or guidelines will be developed, those items will be added as sub-items to 4(b).</p>	Phase 2 – 4 th Q 2010	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee
<p>Status: In Progress</p>		
<p>c) Develop glossary for business practice standards</p>	Ongoing	Joint WEQ/REQ DSM Subcommittee
<p>Status: Ongoing</p>		
<p>d) Develop business practice standards used to measure and verify reductions in energy and demand from energy efficiency in wholesale and retail markets.³ This includes developing business practice standards to measure and verify energy reductions that are made to comply with a Renewable Portfolio Standard that included energy efficiency or a stand-alone Energy Efficiency Portfolio Standard.</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee
<p>Status: Underway</p>		
<p>e) Create common interfaces and data structures necessary for enrolling DR sites into a DR program (Request No. R10002) – should have EC discussions on whether this should be assigned to REQ only.</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee with coordination with Smart Grid Standards Task Force and REQ BPS
<p>Status: Started</p>		



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Item Description	Completion ¹	Assignment ²
5 Maintain existing body of Version 2.x standards		
a) Make consistency changes to Version 2.2 standards as directed by the WEQ Leadership Committee on December 12, 2007 OASIS Consistency Changes (R08001, R08002, R08003, R08005) Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)	2011 TBD	OASIS
b) Consistent with ¶51 of FERC Order No. 890-A, add AFC and TFC values to the “System_Attribute” data element of the NAESB Standard WEQ-003: OASIS S&CP Data Dictionaries. (R08011) Status: Not Started. This Standards Request was assigned to the OASIS in May 2008.	2011 TBD	OASIS
c) Correct WEQ 013-2.6.7.2. – Resale off OASIS (R08027) Status: Not Started	TBD	OASIS
d) Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (R09003) Status: Not Started	TBD	OASIS
e) Create a new OASIS mechanism that allows for the merger of like reservations without the use of the resale mechanism (R09015) Status: Not Started	TBD	OASIS
6. Develop Smart Grid Wholesale and Retail Electric Standards - The wholesale and retail demand response work groups and the Smart Grid task force should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.		
a) Develop requirements and use cases for PAP 03 – Pricing Model		
i). Phase 1 Status: Completed	1 st Q, 2010	Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway Completed	3rd 4 th Q, 2010	Joint WEQ/REQ SGS Subcommittee
b) Develop requirements and use cases for PAP 04 – Scheduling Model		
i) Phase 1 Status: Completed	1 st Q, 2010	Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway Completed	3rd 4 th Q, 2010	Joint WEQ/REQ SGS Subcommittee
c) Develop requirements and use cases for PAP 09 – Demand Response/Distributed Energy Resources		



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As Approved by NAESB Board of Directors on September 23, 2010 With Suggested Changes From the Annual Plan Subcommittee

Item Description	Completion ¹	Assignment ²
i) Phase 1 Status: Completed	1 st Q, 2010	WEQ Section of the Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway Completed	3rd -4 th Q, 2010	WEQ Section of the Joint WEQ/REQ SGS Subcommittee
d) Develop standards to support PAP 10 – Standards Energy Usage Information		
i) Act as a convener (develop and implement a plan to expedite harmonized standards development and adoption within the associated standards bodies) and develop business practice standards as needed and assigned to NAESB for PAP 10 – Standard Energy Usage Information Status: Completed	2 nd Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
ii) Develop Information Model and related business practices Status: Underway	4 th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
e) Develop standards to support inclusion of OpenADE requirements document into the NAESB Smart Grid standards (R10008), specifically to standardize the exchange of Energy Usage Information..	4 th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee Task Force
7. Develop or modify standards to Support FERC Order No. 676-E, (Docket No. RM 05-5-013)		
a) Review standards 001-14.1.3 and 001-15.1.2 based on FERC Order No. 676-E (See ¶ 39 ⁷) Status: Not Started	<u>2nd Q</u> , 2011	OASIS

⁷ 39. In regards to Entergy's question of whether the transmission provider's calculated and posted available flowgate capability values should be used to fulfill the posting requirements set forth in Standard 001-14 and 001-15 in instances where there is no requirement to convert this calculation to available transfer capability values, we agree with Entergy that this requirement can be met by the transmission provider posting its available flowgate capability values. As to EPSA's argument that Standard 001-15 falls short of the goals of Order No. 890, we find that, with the exception of Standard 001-15.1.2, compliance with Standard 001-15 provides all of the information required by Order No. 890. However, Standards 001-14.1.3 and 001-15.1.2 permit transmission providers to post an available transfer capability change narrative within five business days of meeting the criteria under which a narrative is required to be posted. In Order No. 890, the Commission rejected calls for delays prior to posting data and required posting as soon as possible. We do not find the NAESB standard meets this criterion and therefore decline to incorporate Standards 001-14.1.3 and 001-15.1.2 by reference. Transmission providers must post their narratives as soon as feasibly possible. Posting within one day would appear in most cases to be reasonable.



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As Approved by NAESB Board of Directors on September 23, 2010 With Suggested Changes From the Annual Plan Subcommittee

Item Description	Completion ¹	Assignment ²
b) Develop standards to support the Transmission Provider right to reassess the availability of conditional firm (See ¶ 72 ⁸) Status: Not Started	<u>2nd Q.</u> 2011	OASIS
c) Prepare status reports every six months regarding the development of standards for the coordination of transmission service requests across multiple transmission systems (See ¶ 105 ⁹). This annual plan item is tied to Annual Plan Item 2(a)(iii) Status: Underway – first report filed.	Ongoing	NAESB Office

⁸ 72. However, we reiterate here the Commission's finding in Order No. 890 that a transmission provider is permitted to extend its right to reassess the availability of conditional firm service. Since the Version 002.1 Standards do not specifically address this issue, we would ask the industry, working through NAESB, to continue to look at additional business practice standards facilitating a transmission provider's extension of its right to perform a reassessment

⁹ 105. We agree that insufficient progress has been made on this issue. While we acknowledge that development of standards addressing this issue is included in NAESB's 2009 WEQ Annual Plan, we nevertheless urge NAESB to address this issue as soon as possible. Accordingly, we request that NAESB provide the Commission with a status report concerning its progress on this issue every six months, counting from the date this final rule is published in the Federal Register, until NAESB's adoption of the applicable standard(s).



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NORTH AMERICAN ENERGY STANDARDS BOARD 2010 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

As Approved by NAESB Board of Directors on June 24, 2010 with Proposed Revisions by WEQ EC

PROVISIONAL ITEMS

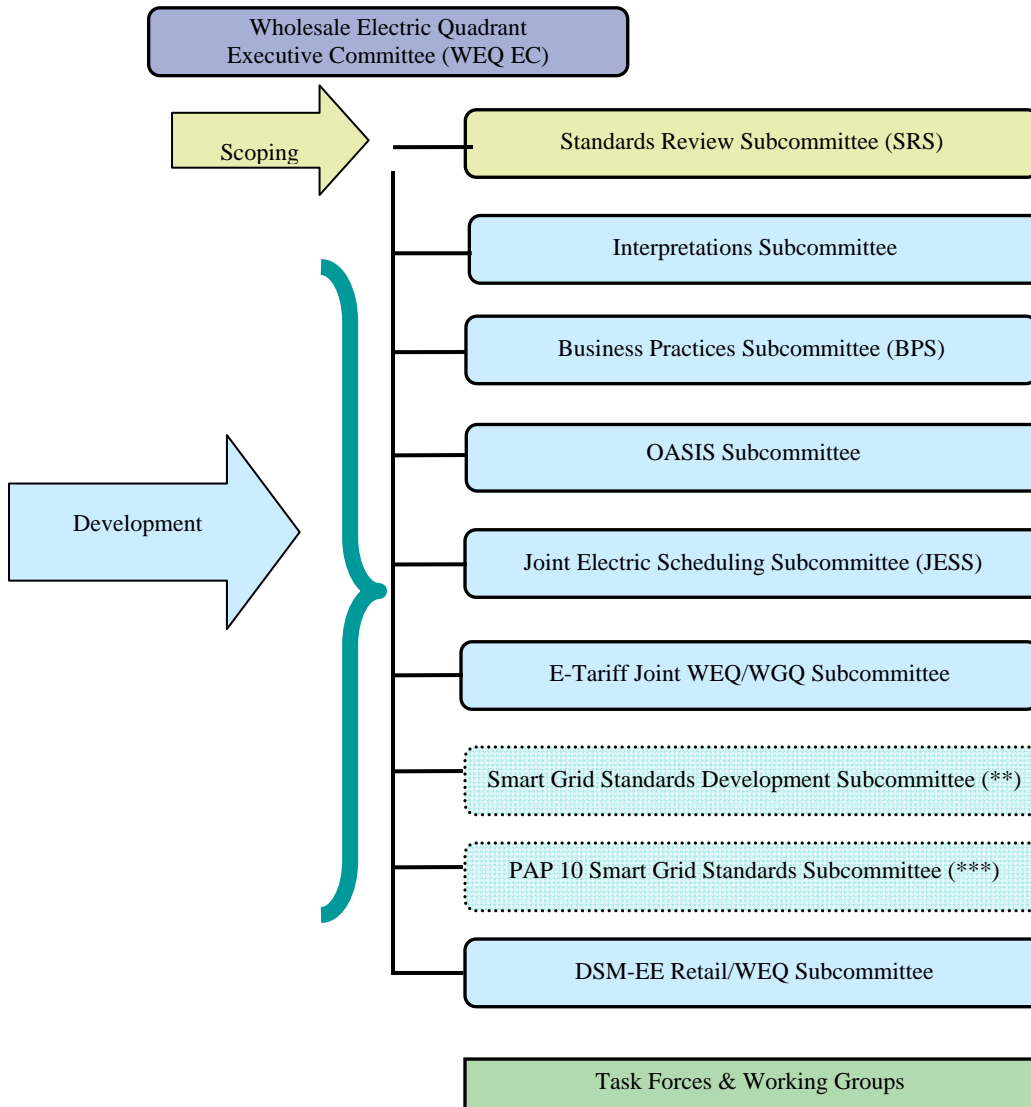
- 1 Develop and or modify business practices related to support of NERC effort on the NERC Resources and Transmission Adequacy (Project 2009-05 Resource Adequacy Assessment).
- 2 Develop business practices for allocating capacity among requests received during a submittal window Order 890-A ([Docket Nos. RM05-17-001, 002 and RM05-25-001, 002](#) - Paragraph 805).
- 3 Determine any needed NAESB action in support of the Interchange Distribution Calculator (IDC) and develop any necessary standards.
- 4 Prepare recommendations for future path for TLR (equity concerns) in concert with NERC, which may include alternative congestion management procedures⁴. Work on this activity is dependent on completing 2010 WEQ Annual Plan 1.a (Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection).
- 5 Develop complementary standards that align with NERC Project 2008-01 Voltage and Reactive Control, for which a white paper is expected after the SAR is authorized to proceed by the NERC Standards Committee.
- 6 *Provisional Item No. 6 was added to the 2010 Annual Plan as Item No. 1(d)*
- 7 Determine NAESB action needed to support FERC Action Plan for Smart Grid Technology.
- 8 Develop business practice standards for cap and trade programs for green house gas
- 9 Conduct assessment to determine if Electric Industry Requirements documented in WEQ-011 Gas / Electric Coordination should be considered reliability requirements and transition to NERC.
- 10 Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Common code usage is linked to the transition of the Registry from NERC to NAESB.
- 11 Support the second phase of retail development of model business practice standards for demand response programs (Shown as Item 3e on the Retail 2010 Annual Plan).
- 12 Review the need for, and develop standards where appropriate, in response to issues raised by FERC's National Action Plan on Demand Response.



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WHOLESALE ELECTRIC QUADRANT EXECUTIVE COMMITTEE AND SUBCOMMITTEE STRUCTURE



NAESB WEQ EC and Subcommittee Leadership:

Executive Committee: Kathy York (WEQ EC Chair) and Alan Johnson (WEQ EC Vice Chair)

Standards Review Subcommittee: Narinder Saini, Ed Skiba

Interpretations Subcommittee: Ed Skiba

Business Practices Subcommittee & Task Forces: Jim Busbin (TLR), Ed Skiba

Open Access Same Time Information System (OASIS): Paul Sorenson, J.T. Wood, Marcie Otondo

Joint Electric Scheduling Subcommittee (JESS): Bob Harshbarger (NAESB), Clint Aymond (NERC)

e-Tariff Joint WEQ/WGQ Subcommittee (e-Tariff): Jane Daly (WEQ), Keith Sappenfield (WGQ)

DSM-EE REQ/WEQ Subcommittee: Ruth Kiselewich and David Koogler (Retail), Roy True and Paul Wattles (WEQ)

(**) The Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS (Organization for the Advancement of Structured Information Standards, not Open Access Same Time Information Systems related to NAESB standards and FERC actions), CalConnect, FIX and UCAlug, among



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others. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQ ECs. The group is chaired by Brent Hodges, Joe Zhou, Wayne Longcore and Robert Burke.

(***) The PAP 10 Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, UCAIug, OpenADE, ZigBee, ASHRAE, EIS Alliance, NARUC and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQ_EC. The group is chaired by Brent Hodges, Phil Precht, Cathy Wesley, Sharon Dinges, David Kaufman, Brad Ramsay, Tobin Richardson and Ed Koch.



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End Notes WEQ 2010 Annual Plan:

¹ Dates in the completion column are by end of the quarter for completion by the assigned committee, sub-committee or task force. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

² The assignments are abbreviated. The abbreviations and sub-committee structure can be found at the end of the annual plan document.

³ Energy efficiency may be a wholesale product, such as capacity. Energy efficiency in retail markets may be from individual energy efficiency measures at the project level or a portfolio of projects that make up an energy efficiency program.

⁴ For additional information, please see comments submitted by PJM and MISO for this Annual Plan Item:
http://www.naesb.org/pdf3/weq_aplan102907w1.pdf.



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NORTH AMERICAN ENERGY STANDARDS BOARD

~~2010~~ **PROPOSED 2011** ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

Prepared by the Annual Plan Subcommittee For WEQ EC Consideration on October 26, 2010 - Redlined Comments Based on WEQ 2010 Annual Plan

As Approved by NAESB Board of Directors on September 23, 2010

Item Description	Completion ¹	Assignment ²
1 Develop business practices standards as needed to complement reliability standards		
Develop business practice standards to support and complement NERC reliability standards, NERC policies and NERC standards authorization requests (SARs) using the NERC/NAESB Coordination Joint Standards Development Process as appropriate. Current NAESB activities underway to develop business practice standards that are supportive of this annual plan item are:		
a) Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection - <u>Permanent Solution</u> -	<u>2nd Q, 2011</u>	<u>BPS</u>
Note: Consideration should be given to provisional item 4. Work is being coordinated with the NERC IDC Working Group.		
<u>Status: Started</u>		
i) <u>Interim solution for Parallel Flow Visualization</u>	<u>3rd Q, 2010</u>	<u>BPS</u>
<u>Status: Completed</u>		
<u>Interim solution is needed to support November 1, 2010 NERC implementation of IDC Change Order 283 into the IDC Staging Environment.</u>		
ii) <u>Permanent solution for Parallel Flow Visualization</u>	<u>3rd Q, 2011</u>	<u>BPS</u>
<u>Status: Started</u>		
b) Perform consistency review of WEQ-008 Transmission Loading Relief Business Practice Standards and develop recommendation.¹	<u>4th Q, 2011</u>	<u>BPS</u>
bc) Time Error and Inadvertent (BAL-004 and BAL-006) Coordination with NERC	TBD²	TIMTF
) Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Standards Drafting Team (BARCSDT) created in July 2010 (NERC Project 2010-14)		
Should NAESB consider moving this to Provisional based on the understanding that NERC may be performing a field test for Time Error Correction before they modify the NERC standards?		
cd) DCS and AGC (BAL-002 and BAL-005) Coordination with NERC	TBD¹TBD²	TIMTF
c) Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Group created in July 2010 <u>NERC Project 2010-14</u>)		

¹ In some sections of WEQ 008 it appears that the standards are applicable to all of the Interconnections and other it appears that the standards are only applicable to the Eastern Interconnection. The title indicates the standards are applicable to the Eastern Interconnection.

² The activities for the WEQ 2010 Annual Plan Item Nos. 1b, 1c, and 1d are dependent on NERC standards development efforts.
2010 Proposed -2011 WEQ Annual Plan as Approved by NAESB Board of Directors September 23 Comments October 13 for WEQ EC Consideration on October 26, 2010 -- redlined



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As Approved by NAESB Board of Directors on September 23, 2010

Item Description	Completion ¹	Assignment ²
<p>d) Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013.</p> <p>Status: Started—The SRS began reviewing Orders 693, 729, and 890 and NERC SARs to understand how FAC-012 and FAC-013 were linked to NAESB as possibly requiring coordination.</p>	TBD ⁴	SRS
d) Coordinate with NERC on the functional model glossary revisions	TBD	SRS
2 Develop business practice standards in support of the FERC RM05-25-000 and RM05-17-000 (OATT Reform)³		
<p>a) Develop version 2 business practice standards to better coordinate the use of the transmission system among neighboring transmission providers. Such business practice standards would be based on recommendations from NERC's Long Term ATC/AFC Task Force and would involve revised procedures for the ATC calculation and/or revised protocols as determined by the final order.</p> <p>Status: Underway</p> <p>Development is using joint standards development process with NERC. Request R050004 was expanded to include the Order No. 890 (Docket Nos. RM05-17-000 and RM02-25-000), (Docket Nos. RM05-25-000 and RM05-17-000) and Order No. 890-A (Docket Nos. RM05-17-001, 002 and RM05-25-001, 002) Order No. 890-A (Docket Nos. RM05-17-001, 002 and RM05-25-001, 002), and Order No. 890-B (Docket Nos. RM05-17-03 and RM05-25-03) "Preventing Undue Discrimination and Preference in Transmission Services;" issued April 11, 2007.</p>		
<p>i) Group 3: Network Service On OASIS⁴⁵ The dates for this section need to be updated with 2011 dates or removed if they will be completed in 2010.</p>		
<p>1) Use of OASIS to Make Electronic Requests to Designate and Terminate Network Resource</p> <p>Status: Underway</p>	3rd 4th Q, 2010	OASIS
<p>2) Ability to Query Requests to Designate and Terminate Network Resources and Allow for Queries of All Information Provided with Designation Requests</p> <p>Status: Underway</p>	3rd 4th Q, 2010	OASIS
<p>3) Masking of Designated Network Resource Operating Restrictions and Generating Cost Information</p> <p>Status: Underway</p>	3rd 4th Q, 2010	OASIS

³ FERC Order No. 890, issued February 16, 2007 can be accessed from the following link - http://www.naesb.org/doc_view4.asp?doc=ferc021607.doc

⁴ Several group 3 items may be removed from this plan if the 4th quarter completion dates are met.

⁵ ~~The completion dates for the development activities listed under WEQ 2010 Annual Plan Item Nos. 2a(i), 2a(iii), 2b, and 3a(i) will be delayed. The dates should be altered before the September 23, 2010 NAESB Board meeting.~~



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Prepared by the Annual Plan Subcommittee For WEQ EC Consideration on October 26, 2010 - Redlined Comments Based on WEQ 2010 Annual Plan

As Approved by NAESB Board of Directors on September 23, 2010

	Item Description	Completion ¹	Assignment ²
	4) Procedural Requirements for Submitting Designations over new OASIS Functionality Status: Underway	3rd 4 th Q, 2010	OASIS
	5) Specify How Designated Network Service Informational Postings are Posted on OASIS Status: Underway	3rd 4 th Q, 2010	OASIS
	6) Develop standards for the treatment of OASIS Requests when the Customer Fails to Provide the Necessary Attestation Status: Underway	3rd 4 th Q, 2010	OASIS
	7) Procedural Requirements for Submitting Both Temporary and Indefinite Terminations of Network Resources Status: Underway	3rd 4 th Q, 2010	OASIS
	8) Procedures for Submitting and Processing Requests for Concomitant Evaluations of Transmission Requests and Temporary Terminations Status: Underway	3rd 4 th Q, 2010	OASIS
ii)	Group 4: Pre-Emption; Request No. R05019		
	1) Pre-Emption Status: Not Started	3 rd Q, 2011	OASIS
	2) Request No. R05019 Status: Not Started	3 rd Q, 2011	OASIS



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~~2010~~ **PROPOSED 2011** ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

Prepared by the Annual Plan Subcommittee For WEQ EC Consideration on October 26, 2010 - Redlined Comments Based on WEQ 2010 Annual Plan

As Approved by NAESB Board of Directors on September 23, 2010

	Item Description	Completion ¹	Assignment ²
iii)	Group 5: Paragraph 1377 ⁶ – Group 5 work should precede group 4 work ³		
	1) Paragraph 1377-Coordination of Requests Across Multiple Transmission Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee.	<u>14th Q, 2011</u> 10	OASIS
	2) Re-Bid Of Partial Service across Multiple Transmission Providers' Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	<u>1st Q, 2011</u> 4th Q, 2010	OASIS
	3) Group DNR requests from a system with point-to-point requests on other systems for synchronization Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	<u>1st Q, 2011</u> 4th Q, 2010	OASIS

⁶ Paragraph 1377 of FERC Order No. 890, issued February 16, 2007: The Commission agrees that transmission requests across multiple transmission systems should be coordinated by the relevant transmission providers. We will not, however, amend the pro forma OATT to require such coordination. Rather, we require transmission providers working through NAESB to develop business practice standards related to coordination of requests across multiple transmission systems. In order to provide guidance to NAESB, we will articulate the principles that should govern processing across multiple systems. All the transmission providers involved in a request across multiple systems should consider a request that requires studies across multiple systems to be a single application for purposes of establishing the deadlines for rendering an agreement for service, revising queue status, eliciting deposits and commencing service. In order to preserve the rights of other transmission customers with studies in the queue, the priority for the single application should be based on the latest priority across the transmission providers involved in the multiple system request. We note that regional entities like wesTTrans are already coordinating requests across multiple transmission systems and we believe such coordination is an acceptable solution to this issue.



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~~2010~~ **PROPOSED 2011** ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT

Prepared by the Annual Plan Subcommittee For WEQ EC Consideration on October 26, 2010 - Redlined Comments Based on WEQ 2010 Annual Plan

As Approved by NAESB Board of Directors on September 23, 2010

Item Description	Completion ¹	Assignment ²
iv) Group 6: Miscellaneous (Paragraphs 1390 ⁷ and 1627 ⁸ of FERC Order No. 890)		
1) Paragraph 1390 of Order 890 – Terminations related to: deficient requests, customer failure to pay required annual reservation fee, and customer modifications to applications which are meaningfully different. Status: Not Started	<u>4th Q.</u> 2011	OASIS
2) Paragraphs 1627 of Order 890 – Posting of additional information on OASIS regarding firm transmission curtailments Status: Not Started	<u>4th Q.</u> 2011	OASIS

⁷ Paragraph 1390 of FERC Order No. 890, issued February 16, 2007: We will not modify the pro forma OATT to address requests to allow the transmission provider to terminate idle transmission service requests. NAESB's business practice 001-4.11 allows the transmission provider to retract a request if the transmission customer does not respond to an acceptance within the time established in NAESB business practice standard 001-4.13. Therefore, we interpret TDU Systems comments to refer to circumstances when a transmission customer fails to respond to the transmission provider's request for additional information during the course of a request study. As discussed above, by the time the transmission provider offers a system impact study agreement, it should have all of the information that it needs to complete the study. Pursuant to section 17.4 of the pro forma OATT, the transmission provider can deem a transmission service request deficient if the transmission customer does not provide all of the information the transmission provider needs to evaluate the request for service. We will revise section 17.7 of the pro forma OATT so that the transmission provider is able to terminate a request for transmission service if a transmission customer that is extending the commencement of service does not pay the required annual reservation fee within 15 days of notifying the transmission provider that it would like to extend the commencement of service. We will not change the pro forma OATT to allow the transmission provider to terminate a transmission service request if the transmission customer changes its application for service. We believe the existing pro forma OATT is sufficient to allow a transmission provider to manage situations where the transmission customer modifies its application for service to the point that the customer is requesting transmission service that is meaningfully different than its initial request.

⁸ Paragraph 1627 of FERC Order No. 890, issued February 16, 2007: We agree with suggestions for the posting of additional curtailment information on OASIS and, therefore, require transmission providers, working through NAESB, to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. Transmission providers need not implement this new OASIS functionality and any related business practices until NAESB develops appropriate standards. These postings must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail loads), and the duration of the curtailment. This information is in addition to the Commission's existing requirements: (1) when any transmission is curtailed or interrupted, the transmission provider must post notice of the curtailment or interruption on OASIS, and the transmission provider must state on OASIS the reason why the transaction could not be continued or completed; (2) information to support any such curtailment or interruption, including the operating status of facilities involved in the constraint or interruption, must be maintained for three years and made available upon request to the curtailed or interrupted customer, the Commission's Staff, and any other person who requests it; and, (3) any offer to adjust the operation of the transmission provider's system to restore a curtailed or interrupted transaction must be posted and made available to all curtailed and interrupted transmission customers at the same time.



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	Item Description	Completion ¹	Assignment ²
	<p>3) Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services.</p> <p>Status: Not Started</p>	<u>4th Q.</u> , 2011	OASIS
	<p>b) Develop the needed business practices as companion to the NERC standards for ATC related efforts³ <u>to support existing Request No. R05004: The processing of transmission service requests, which use TTC/ATC/AFC, in coordination with NERC changes to MOD 001 where the allocation of flowgate capability based on historical Network Native Load impacts the evaluation of transmission service requests, requiring the posting of those allocation values in conjunction with queries of service offerings on OASIS</u></p> <p><u>Status: Underway The dates for this section need to be updated with 2011 dates or removed if they will be completed in 2010. References to NERC should be removed if this item is retained in 2011. Would also suggest that information under i) and 1) be rolled up to b) since there are not other subsections.</u></p>	<u>4th Q.</u> , 2010	<u>OASIS</u>
	<p>i) Develop standards to support existing Request No. R05004.</p> <p>1) The processing of transmission service requests, which use TTC/ATC/AFC, in coordination with NERC changes to MOD 001 where the allocation of flowgate capability based on historical Network Native Load impacts the evaluation of transmission service requests, requiring the posting of those allocation values in conjunction with queries of service offerings on OASIS</p> <p>Status: Underway</p>	3rd Q. , 2010	OASIS
3	Develop business practices standards to improve the current operation of the wholesale electric market and develop and maintain business practice and communication standards for OASIS and Electronic Scheduling		
	<p>a) Develop and/or maintain business practice standards as needed for OASIS and electronic scheduling. Specific items to address include:</p>		
	<p>i) Network Services: Determine and develop needed business practice standards or other support is needed to support use of OASIS for Network Service transactions (<u>R04006E</u>). (Related to AP 2(a)(iii))³ <u>The dates for this section need to be updated with 2011 dates or removed if they will be completed in 2010. – to discuss at the WEQ EC meeting on whether this item can be closed out.</u></p> <p>Status: Underway</p>	3rd - <u>4th</u> Q., 2010	OASIS



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	Item Description	Completion ¹	Assignment ²
ii)	Registry (TSIN): Determine and develop needed business practice standards to support the registry functions currently supported by NERC (R04037, R06027) and transition the TSIN Registry from NERC to NAESB as the enhanced Electric Industry Registry (EIR). Suggest rolling 1) into ii) also may need to change the completion date. <u>Status: Underway, contract signed.</u>	<u>2nd Q, 2011</u>	<u>NAESB/NERC Administration, JESS</u>
	1) Transition the TSIN Registry from NERC to NAESB as the enhanced Electric Industry Registry (EIR), (R06027). <u>Status: Underway</u>	<u>4th Q 2010</u>	<u>NAESB/NERC Administration, JESS</u>
iii)	Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff (R05019). <u>Status: Deleted as a duplicate of 2009 AP item 2.a.ii.2</u>		
iii*)	Make remaining incremental enhancements to OASIS as an outgrowth of the NAESB March 29, 2005 conference on the future of OASIS (R05026). <u>Scoping statement completed by SRS. There were a number of assignments from the Standards Request. The outstanding items are included below; and assignments made to BPS and OASIS.</u>		
	1) Eliminate Masking of TSR tag source and sink when requested status is denied, withdrawn refused, displaced, invalid, declined, annulled or retracted <u>Status: Not Started</u>	<u>2012+</u>	<u>OASIS</u>
	2) Initiate standard that eliminates the disparity of posting "sensitive" information. This standard should also include procedures of user certification that allows access to this class of information. <u>Status: Underway (upon further development of this item by NAESB, a completion date will be determined)</u>	<u>2012+</u>	<u>OASIS</u>
	3) Enhance the TSR result postings to allow showing of (i) limiting transmission elements and (ii) available generation dispatch options that would allow acceptance of reservation request. <u>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</u>	<u>2012+</u>	<u>OASIS</u>
v)	Develop, coordinate interoperability testing, and implement e-Tag version 1.8.1 <u>Status: Completed</u>	<u>1st Q, 2010</u>	<u>JESS</u>



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Item Description	Completion ¹	Assignment ²
<p>iv) Review and correct WEQ-004 Coordinate Interchange Business Practice Standard as needed based on activities in NERC Project 2008-12, Coordinate Interchange Standards Revisions and supporting EOP-002-2 R4 and R6. <u>note: this is a new item. Need to have a quarter when this may be completed in 2011 or move to 2012.</u></p> <p>Status: Underway Completion date dependent upon coordination activities with NERC</p>	2011	JESS
<p>b) Develop and/or maintain standard communication protocols and cyber-security business practices as needed.</p>		
<p>i) Develop PKI certification program for e-Tag and OASIS <u>If this item will be completed in 2010 need to remove from 2011 Annual Plan. If not then a 2011 quarter needs to be specified.</u></p> <p>Status: Underway</p>	2010 <u>2013rd Q.</u> <u>2011</u>	Board Certification Program Committee
<p>ii) Develop PKI standards for OASIS.</p> <p>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</p>	2012+	OASIS
<p>iii) Develop Industry Implementation Plan for meeting PKI Standard requirements for e-tagging.</p> <p>Status: Underway. Full e-Tag implementation (server & client side) is linked to the transition of the Registry from NERC to NAESB and NAESB implementation.</p>	TBD – dependent on item above (i) and EIR	JESS

4 Review and develop business practices standards to Demand Response, Demand Side Management and Energy Efficiency Programs. Need to determine what line items will be completed by the subcommittee in 2010. If the dates hold the only item remaining would be the Develop glossary for business practice standards – need to determine who or whether to address the Renewable Portfolio Standard.

Review and develop needed model business practices for a standardized method for quantifying benefits, savings, cost avoidance and/or the reduction in energy demand and usage derived from the implementation of demand side management and energy efficiency programs. This effort will include demand side response, energy efficiency programs and metering, including the 'curtailment service provider' program.

- a) Review the NAESB Business Practices for Measurement and Verification of Wholesale Electricity Demand Response (WEQ-015) in conjunction with the IRC developed Demand Response Matrix and identify business practice requirements that could be improved or made clearer through the addition of specific technical detail. The wholesale and retail demand response work groups and the Smart Grid Standards Subcommittees should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.

Status: In Progress



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Item Description	Completion ¹	Assignment ²
<p>b) For each performance evaluation type/service type combination identified in WEQ-015, using the IRC matrix as a starting point, assess and determine what standards or guidelines, if any, should be developed to aid all participants in the use of measurement and verification methods for demand response programs in organized wholesale electric markets. If the determination is made that standards or guidelines will be developed, those items will be added as sub-items to 4(b).</p> <p>Status: In Progress</p>	Phase 2 – 4 th Q 2010	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee
<p>c) Develop <u>Coordinate</u> glossary <u>updates</u> for business practice standards <u>with the Retail Electric Quadrant</u></p> <p>Status: Ongoing</p>	Ongoing	Joint WEQ/REQ DSM Subcommittee
<p>d) Develop business practice standards used to measure and verify reductions in energy and demand from energy efficiency in wholesale and retail markets.³ This includes developing business practice standards to measure and verify energy reductions that are made to comply with a Renewable Portfolio Standard that includes energy efficiency or a stand-alone Energy Efficiency Portfolio Standard- <u>(Check against the Retail Annual Plan for 2011 – who split this item)</u></p> <p>Status: Underway</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee
<p>e) Create common interfaces and data structures necessary for enrolling DR sites into a DR program (Request No. <u>R10002</u>) <u>– should have EC discussions on whether this should be assigned to REQ only.</u></p> <p>Status: Started</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee with coordination with Smart Grid Standards Task Force and REQ BPS
<p>5 Maintain existing body of Version 2.x standards</p>		
<p>a) Make consistency changes to Version 2.2 standards as directed by the WEQ Leadership Committee on December 12, 2007 OASIS Consistency Changes (R08001, R08002, R08003, R08005)</p> <p>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</p>	2011 TBD	OASIS
<p>b) Consistent with ¶51 of FERC Order No. 890-A, add AFC and TFC values to the “System_Attribute” data element of the NAESB Standard WEQ-003: OASIS S&CP Data Dictionaries. (<u>R08011</u>)</p> <p>Status: Not Started. This Standards Request was assigned to the OASIS in May 2008.</p>	2011 TBD	OASIS
<p>c) Correct WEQ 013-2.6.7.2. – Resale off OASIS (<u>R08027</u>)</p> <p>Status: Not Started</p>	TBD	OASIS



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Item Description	Completion ¹	Assignment ²
d) Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (R09003) Status: Not Started	TBD	OASIS
e) Create a new OASIS mechanism that allows for the merger of like reservations without the use of the resale mechanism (R09015) Status: Not Started	TBD	OASIS
6. Develop Smart Grid Wholesale and Retail Electric Standards - The wholesale and retail demand response work groups and the Smart Grid task force should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.		
<u>Based on the items listed below all Smart Grid Work will be completed in 2010. Should we leave a placeholder here so we can include additional Smart Grid work as assigned by NIST and the SGIP?</u>		
a) Develop requirements and use cases for PAP 03—Pricing Model		
i) Phase 1 Status: Completed	1 st Q, 2010	Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway	3 rd Q, 2010	Joint WEQ/REQ SGS Subcommittee
b) Develop requirements and use cases for PAP 04—Scheduling Model		
i) Phase 1 Status: Completed	1 st Q, 2010	Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway	3 rd Q, 2010	Joint WEQ/REQ SGS Subcommittee
e) Develop requirements and use cases for PAP 09—Demand Response/Distributed Energy Resources		
i) Phase 1 Status: Completed	1 st Q, 2010	WEQ Section of the Joint WEQ/REQ SGS Subcommittee
ii) Phase 2 Status: Underway	3 rd Q, 2010	WEQ Section of the Joint WEQ/REQ SGS Subcommittee
⊕) Develop standards to support PAP 10 – Standards Energy Usage Information, a) <u>Phase 2, Harmonization with CIM and SEP 2.0</u> Status: <u>Not Started, pending discussions with CIM and SEP 2.0</u>	<u>2011</u>	<u>Joint WEQ/REQ PAP 10 SGS Subcommittee</u>



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Item Description	Completion ¹	Assignment ²
i) Act as a convener (develop and implement a plan to expedite harmonized standards development and adoption within the associated standards bodies) and develop business practice standards as needed and assigned to NAESB for PAP 10 – Standard Energy Usage Information Status: Completed	2nd Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
ii) Develop Information Model and related business practices Status: Underway	4th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
e) Develop standards to support inclusion of OpenADE requirements document into the NAESB Smart Grid standards (R10008), specifically to standardize the exchange of Energy Usage Information.	4th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee Task Force

7. Develop or modify standards to Support [FERC Order No. 676-E](#), (Docket No. RM 05-5-013)

- | | | |
|--|-------------------------------|--------------|
| a) Review standards 001-14.1.3 and 001-15.1.2 based on FERC Order No. 676-E (See ¶ 39 ⁹)
Status: Not Started | <u>2nd Q, 2011</u> | OASIS |
| b) Develop standards to support the Transmission Provider right to reassess the availability of conditional firm (See ¶ 72 ¹⁰)
Status: Not Started | <u>2nd Q, 2011</u> | OASIS |
| c) Prepare status reports every six months regarding the development of standards for the coordination of transmission service requests across multiple transmission systems (See ¶ 105 ¹¹). This annual plan item is tied to Annual Plan Item 2(a)(iii)
Status: Underway – first report filed. | Ongoing | NAESB Office |

⁹ 39. In regards to Entergy’s question of whether the transmission provider’s calculated and posted available flowgate capability values should be used to fulfill the posting requirements set forth in Standard 001-14 and 001-15 in instances where there is no requirement to convert this calculation to available transfer capability values, we agree with Entergy that this requirement can be met by the transmission provider posting its available flowgate capability values. As to EPSA’s argument that Standard 001-15 falls short of the goals of Order No. 890, we find that, with the exception of Standard 001-15.1.2, compliance with Standard 001-15 provides all of the information required by Order No. 890. However, Standards 001-14.1.3 and 001-15.1.2 permit transmission providers to post an available transfer capability change narrative within five business days of meeting the criteria under which a narrative is required to be posted. In Order No. 890, the Commission rejected calls for delays prior to posting data and required posting as soon as possible. We do not find the NAESB standard meets this criterion and therefore decline to incorporate Standards 001-14.1.3 and 001-15.1.2 by reference. Transmission providers must post their narratives as soon as feasibly possible. Posting within one day would appear in most cases to be reasonable.

¹⁰ 72. However, we reiterate here the Commission’s finding in Order No. 890 that a transmission provider is permitted to extend its right to reassess the availability of conditional firm service. Since the Version 002.1 Standards do not specifically address this issue, we would ask the industry, working through NAESB, to continue to look at additional business practice standards facilitating a transmission provider’s extension of its right to perform a reassessment

¹¹ 105. We agree that insufficient progress has been made on this issue. While we acknowledge that development of standards 2010 Proposed -2011 WEQ Annual Plan as Approved by NAESB Board of Directors September 23 Comments October 13 for WEQ EC Consideration on October 26, 2010 -- redlined



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addressing this issue is included in NAESB's 2009 WEQ Annual Plan, we nevertheless urge NAESB to address this issue as soon as possible. Accordingly, we request that NAESB provide the Commission with a status report concerning its progress on this issue every six months, counting from the date this final rule is published in the Federal Register, until NAESB's adoption of the applicable standard(s).

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Comments Based on WEQ 2010 Annual Plan

As Approved by NAESB Board of Directors on June 24, 2010 with Proposed Revisions by WEQ EC

PROVISIONAL ITEMS

- 1 Develop and or modify business practices related to support of NERC effort on the NERC Resources and Transmission Adequacy (Project 2009-05 Resource Adequacy Assessment).
- 2 Develop business practices for allocating capacity among requests received during a submittal window Order 890-A ([Docket Nos. RM05-17-001, 002 and RM05-25-001, 002](#) - Paragraph 805)¹².
- 3 Determine any needed NAESB action in support of the Interchange Distribution Calculator (IDC) and develop any necessary standards.
- 4 Prepare recommendations for future path for TLR (equity concerns) in concert with NERC, which may include alternative congestion management procedures⁴. Work on this activity is dependent on completing 2010 WEQ Annual Plan 1.a (Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection).
- 5 Develop complementary standards that align with NERC Project 2008-01 Voltage and Reactive Control, for which a white paper is expected after the SAR is authorized to proceed by the NERC Standards Committee.
- ~~6~~ ~~Provisional Item No. 6 was added to the 2010 Annual Plan as Item No. 1(d)~~
- ~~67~~ Determine NAESB action needed to support FERC Action Plan for Smart Grid Technology.
- ~~78~~ Develop business practice standards for cap and trade programs for green house gas
- ~~89~~ Conduct assessment to determine if Electric Industry Requirements documented in WEQ-011 Gas / Electric Coordination should be considered reliability requirements and transition to NERC.
- ~~109~~ Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Common code usage is linked to the transition of the Registry from NERC to NAESB.
- ~~101~~ ~~Support the second phase of retail development of model business practice standards for demand response programs (Shown as Item 3e on the Retail 2010 Annual Plan). (Can this be deleted? If it cannot be deleted it needs to be updated. There is no 3e in the Retail 2010 Annual Plan)~~
- ~~102~~ Review the need for, and develop standards where appropriate, in response to issues raised by FERC's National Action Plan on Demand Response.

¹² [805. The Commission recognizes that developing methods to allocate capacity among requests received during a submittal window may require detailed procedures, particularly when transmission requests received simultaneously exceed available capacity. As the Commission explained in Order No. 890, however, we believe that each transmission provider is in the best position to develop allocation procedures that are suitable for its system. This does not preclude transmission providers from working through NAESB to develop standardized practices, as suggested by Southern. For example, as we pointed out in Order No. 890, allocation methods such as that used by PJM to allocate monthly firm point-to-point transmission service could provide useful guidance in developing general allocation procedures.](#)



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- 11 Develop, modify or delete business practices to support Time Error and Inadvertent (BAL-004 and BAL-006) Coordination with NERC resulting from the NERC field test RC under NERC project

Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Standards Drafting Team (BARCSDT) created in July 2010 (NERC Project 2010-14)

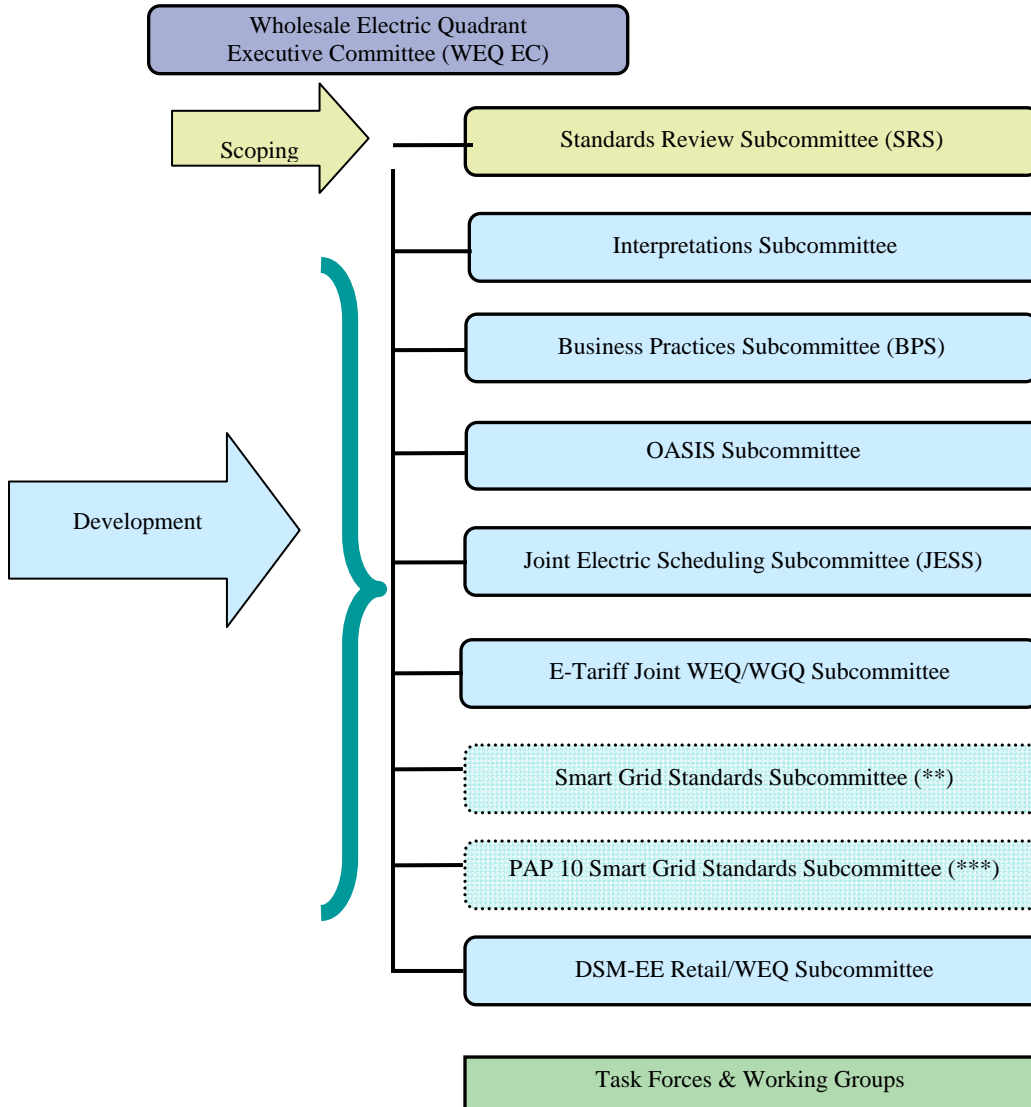
Should NAESB consider moving this to Provisional based on the understanding that NERC may be performing a field test for Time Error Correction before they modify the NERC standards?



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WHOLESALE ELECTRIC QUADRANT EXECUTIVE COMMITTEE AND SUBCOMMITTEE STRUCTURE



NAESB WEQ EC and Subcommittee Leadership:

Executive Committee (EC): Kathy York (WEQ-EC Chair) and Alan Johnson (WEQ-EC Vice Chair)

Standards Review Subcommittee (SRS): Narinder Saini, Ed Skiba

Interpretations Subcommittee: Ed Skiba

Business Practices Subcommittee (BPS) & Task Forces Time and Inadvertent Management Task Force (TIMTF): Jim Busbin (TLR), Ed Skiba

Open Access Same Time Information System (OASIS) Subcommittee (OS): Paul Sorenson, J.T. Wood, Marcie Otondo

Joint Electric Scheduling Subcommittee (JESS): Bob Harshbarger (NAESB), Clint Aymond (NERC)

e-Tariff Joint WEQ/WGQ Subcommittee (e-Tariff): Jane Daly (WEQ), Keith Sappenfield (WGQ)

Demand Side Management-Energy Efficiency (DSM-EE) REQ/WEQ Subcommittee: Ruth Kiselewich and David Koogler (Retail REQ), Roy True and Paul Wattles (WEQ)

(**) The Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other

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standards development groups such as OASIS (Organization for the Advancement of Structured Information Standards, not Open Access Same Time Information Systems related to NAESB standards and FERC actions), CalConnect, FIX and UCAIug, among others. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQ ECs. The group is chaired by Brent Hodges, Joe Zhou, Wayne Longcore and Robert Burke. (Should this subcommittee be removed if it has completed its work?)

(***) The PAP 10 Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, UCAIug, OpenADE, ZigBee, ASHRAE, EIS Alliance, NARUC and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQECs. The group is chaired by Brent Hodges, Phil Precht, Cathy Wesley, Sharon Dinges, David Kaufman, Brad Ramsay, Tobin Richardson and Ed Koch.



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End Notes WEQ ~~2010-2011~~ Annual Plan:

¹ Dates in the completion column are by end of the quarter for completion by the assigned committee, sub-committee or task force. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

² The assignments are abbreviated. The abbreviations and sub-committee structure can be found at the end of the annual plan document.

³ Energy efficiency may be a wholesale product, such as capacity. Energy efficiency in retail markets may be from individual energy efficiency measures at the project level or a portfolio of projects that make up an energy efficiency program.

⁴ For additional information, please see comments submitted by PJM and [Midwest](#) ISO for this Annual Plan Item:
http://www.naesb.org/pdf3/weq_aplan102907w1.pdf.



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**NORTH AMERICAN ENERGY STANDARDS BOARD
PROPOSED 2011 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT
Prepared by the Annual Plan Subcommittee For WEQ EC Consideration on October 26, 2010**

Item Description	Completion ¹	Assignment ²
1 Develop business practices standards as needed to complement reliability standards		
Develop business practice standards to support and complement NERC reliability standards, NERC policies and NERC standards authorization requests (SARs) using the NERC/NAESB Coordination Joint Standards Development Process as appropriate. Current NAESB activities underway to develop business practice standards that are supportive of this annual plan item are:		
a) Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection – Permanent Solution	2 nd Q, 2011	BPS
Note: Consideration should be given to provisional item 4. Work is being coordinated with the NERC IDC Working Group. Status: Started		
b) Perform consistency review of WEQ-008 Transmission Loading Relief Business Practice Standards and develop recommendation. ¹	4 th Q, 2011	BPS
c) DCS and AGC (BAL-002 and BAL-005) Coordination with NERC	TBD ²	TIMTF
Status: Monitor. (Will require coordination with Balancing Authority Reliability Based Controls Group created in July 2010 NERC Project 2010-14)		
d) Coordinate with NERC on the functional model glossary revisions	TBD	SRS
2 Develop business practice standards in support of the FERC RM05-25-000 and RM05-17-000 (OATT Reform)²		
a) Develop version 2 business practice standards to better coordinate the use of the transmission system among neighboring transmission providers. Status: Underway Request R050004 was expanded to include the Order No. 890 (Docket Nos. RM05-17-000 and RM02-25-000) , (Order No. 890-A (Docket Nos. RM05-17-001, 002 and RM05-25-001, 002)) , and Order No. 890-B (Docket Nos. RM05-17-03 and RM05-25-03) “Preventing Undue Discrimination and Preference in Transmission Services”		
i) Group 3: Network Service On OASIS ³		
1) Use of OASIS to Make Electronic Requests to Designate and Terminate Network Resource	4th Q, 2010	OASIS
Status: Underway		
2) Ability to Query Requests to Designate and Terminate Network Resources and Allow for Queries of All Information Provided with Designation Requests	4th Q, 2010	OASIS
Status: Underway		

¹ In some sections of WEQ 008 it appears that the standards are applicable to all of the Interconnections and other it appears that the standards are only applicable to the Eastern Interconnection. The title indicates the standards are applicable to the Eastern Interconnection.

² FERC Order No. 890, issued February 16, 2007 can be accessed from the following link - http://www.naesb.org/doc_view4.asp?doc=ferc021607.doc

³ Several group 3 items may be removed from this plan if the 4th quarter completion dates are met.



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Item Description	Completion ¹	Assignment ²
3) Masking of Designated Network Resource Operating Restrictions and Generating Cost Information Status: Underway	4th Q, 2010	OASIS
4) Procedural Requirements for Submitting Designations over new OASIS Functionality Status: Underway	4 th Q, 2010	OASIS
5) Specify How Designated Network Service Informational Postings are Posted on OASIS Status: Underway	4 th Q, 2010	OASIS
6) Develop standards for the treatment of OASIS Requests when the Customer Fails to Provide the Necessary Attestation Status: Underway	4 th Q, 2010	OASIS
7) Procedural Requirements for Submitting Both Temporary and Indefinite Terminations of Network Resources Status: Underway	4 th Q, 2010	OASIS
8) Procedures for Submitting and Processing Requests for Concomitant Evaluations of Transmission Requests and Temporary Terminations Status: Underway	4 th Q, 2010	OASIS
ii) Group 4: Pre-Emption; Request No. R05019		
1) Pre-Emption Status: Not Started	3 rd Q, 2011	OASIS
2) Request No. R05019 Status: Not Started	3 rd Q, 2011	OASIS
iii) Group 5: Paragraph 1377 ⁴ – Group 5 work should precede group 4 work ³		
1) Paragraph 1377-Coordination of Requests Across Multiple Transmission Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee.	1 st Q, 2011	OASIS

⁴ Paragraph 1377 of FERC Order No. 890, issued February 16, 2007: The Commission agrees that transmission requests across multiple transmission systems should be coordinated by the relevant transmission providers. We will not, however, amend the pro forma OATT to require such coordination. Rather, we require transmission providers working through NAESB to develop business practice standards related to coordination of requests across multiple transmission systems. In order to provide guidance to NAESB, we will articulate the principles that should govern processing across multiple systems. All the transmission providers involved in a request across multiple systems should consider a request that requires studies across multiple systems to be a single application for purposes of establishing the deadlines for rendering an agreement for service, revising queue status, eliciting deposits and commencing service. In order to preserve the rights of other transmission customers with studies in the queue, the priority for the single application should be based on the latest priority across the transmission providers involved in the multiple system request. We note that regional entities like wesTTrans are already coordinating requests across multiple transmission systems and we believe such coordination is an acceptable solution to this issue.



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Item Description	Completion ¹	Assignment ²
2) Re-Bid Of Partial Service across Multiple Transmission Providers' Systems Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	1 st Q, 2011	OASIS
3) Group DNR requests from a system with point-to-point requests on other systems for synchronization Status: Underway, Scoping Group work product approved by the WEQ EC and sent to the OASIS Subcommittee	1 st Q, 2011	OASIS
iv) Group 6: Miscellaneous (Paragraphs 1390 ⁵ and 1627 ⁶ of FERC Order No. 890)		
1) Paragraph 1390 of Order 890 – Terminations related to: deficient requests, customer failure to pay required annual reservation fee, and customer modifications to applications which are meaningfully different. Status: Not Started	4 th Q, 2011	OASIS

⁵ Paragraph 1390 of FERC Order No. 890, issued February 16, 2007: We will not modify the pro forma OATT to address requests to allow the transmission provider to terminate idle transmission service requests. NAESB's business practice 001-4.11 allows the transmission provider to retract a request if the transmission customer does not respond to an acceptance within the time established in NAESB business practice standard 001-4.13. Therefore, we interpret TDU Systems comments to refer to circumstances when a transmission customer fails to respond to the transmission provider's request for additional information during the course of a request study. As discussed above, by the time the transmission provider offers a system impact study agreement, it should have all of the information that it needs to complete the study. Pursuant to section 17.4 of the pro forma OATT, the transmission provider can deem a transmission service request deficient if the transmission customer does not provide all of the information the transmission provider needs to evaluate the request for service. We will revise section 17.7 of the pro forma OATT so that the transmission provider is able to terminate a request for transmission service if a transmission customer that is extending the commencement of service does not pay the required annual reservation fee within 15 days of notifying the transmission provider that it would like to extend the commencement of service. We will not change the pro forma OATT to allow the transmission provider to terminate a transmission service request if the transmission customer changes its application for service. We believe the existing pro forma OATT is sufficient to allow a transmission provider to manage situations where the transmission customer modifies its application for service to the point that the customer is requesting transmission service that is meaningfully different than its initial request.

⁶ Paragraph 1627 of FERC Order No. 890, issued February 16, 2007: We agree with suggestions for the posting of additional curtailment information on OASIS and, therefore, require transmission providers, working through NAESB, to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. Transmission providers need not implement this new OASIS functionality and any related business practices until NAESB develops appropriate standards. These postings must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail loads), and the duration of the curtailment. This information is in addition to the Commission's existing requirements: (1) when any transmission is curtailed or interrupted, the transmission provider must post notice of the curtailment or interruption on OASIS, and the transmission provider must state on OASIS the reason why the transaction could not be continued or completed; (2) information to support any such curtailment or interruption, including the operating status of facilities involved in the constraint or interruption, must be maintained for three years and made available upon request to the curtailed or interrupted customer, the Commission's Staff, and any other person who requests it; and, (3) any offer to adjust the operation of the transmission provider's system to restore a curtailed or interrupted transaction must be posted and made available to all curtailed and interrupted transmission customers at the same time.



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Item Description	Completion ¹	Assignment ²
<p>2) Paragraphs 1627 of Order 890 – Posting of additional information on OASIS regarding firm transmission curtailments</p> <p>Status: Not Started</p>	4 th Q, 2011	OASIS
<p>3) Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services.</p> <p>Status: Not Started</p>	4 th Q, 2011	OASIS
<p>b) Develop the needed business practices to support existing Request No. R05004: The processing of transmission service requests, which use TTC/ATC/AFC, in coordination with NERC changes to MOD 001 where the allocation of flowgate capability based on historical Network Native Load impacts the evaluation of transmission service requests, requiring the posting of those allocation values in conjunction with queries of service offerings on OASIS</p> <p>Status: Underway</p>	4 th Q, 2010	OASIS
<p>3 Develop business practices standards to improve the current operation of the wholesale electric market and develop and maintain business practice and communication standards for OASIS and Electronic Scheduling</p>		
<p>a) Develop and/or maintain business practice standards as needed for OASIS and electronic scheduling. Specific items to address include:</p>		
<p>i) Network Services: Determine and develop needed business practice standards or other support is needed to support use of OASIS for Network Service transactions (R04006E). (Related to AP 2(a)(iii))³ – to discuss at the WEQ EC meeting on whether this item can be closed out.</p> <p>Status: Underway</p>	4 th Q, 2010	OASIS
<p>ii) Registry (TSIN): Determine and develop needed business practice standards to support the registry functions currently supported by NERC (R04037, R06027) and transition the TSIN Registry from NERC to NAESB as the enhanced Electric Industry Registry (EIR).</p> <p>Status: Underway, contract signed.</p>	2 nd Q, 2011	NAESB/NERC Administration, JESS
<p>iii) Make remaining incremental enhancements to OASIS as an outgrowth of the NAESB March 29, 2005 conference on the future of OASIS (R05026).</p> <p>Scoping statement completed by SRS. There were a number of assignments from the Standards Request. The outstanding items are included below:</p>		
<p>1) Eliminate Masking of TSR tag source and sink when requested status is denied, withdrawn refused, displaced, invalid, declined, annulled or retracted</p> <p>Status: Not Started</p>	2012	OASIS
<p>2) Initiate standard that eliminates the disparity of posting “sensitive” information. This standard should also include procedures of user certification that allows access to this class of information.</p> <p>Status: Underway (upon further development of this item by NAESB, a completion date will be determined)</p>	2012	OASIS



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Item Description	Completion ¹	Assignment ²
<p>3) Enhance the TSR result postings to allow showing of (i) limiting transmission elements and (ii) available generation dispatch options that would allow acceptance of reservation request.</p> <p>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</p>	2012	OASIS
<p>iv) Review and correct WEQ-004 Coordinate Interchange Business Practice Standard as needed based on activities in NERC Project 2008-12, Coordinate Interchange Standards Revisions and supporting EOP-002-2 R4 and R6. Need to have a quarter when this may be completed in 2011 or move to 2012.</p> <p>Status: Underway Completion date dependent upon coordination activities with NERC</p>	2011	JESS
<p>b) Develop and/or maintain standard communication protocols and cyber-security business practices as needed.</p>		
<p>i) Develop PKI certification program for e-Tag and OASIS</p> <p>Status: Underway</p>	3 rd Q, 2011	Board Certification Program Committee
<p>ii) Develop PKI standards for OASIS.</p> <p>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</p>	2012	OASIS
<p>iii) Develop Industry Implementation Plan for meeting PKI Standard requirements for e-tagging.</p> <p>Status: Underway. Full e-Tag implementation (server & client side) is linked to the transition of the Registry from NERC to NAESB and NAESB implementation.</p>	TBD – dependent on item above (i) and EIR	JESS
<p>4 Review and develop business practices standards to Demand Response, Demand Side Management and Energy Efficiency Programs <i>(Need to determine what line items will be completed by the subcommittee in 2010. If the dates hold the only item remaining would be the Develop glossary for business practice standards – need to determine who or whether to address the Renewable Portfolio Standard.)</i></p> <p>Review and develop needed model business practices for a standardized method for quantifying benefits, savings, cost avoidance and/or the reduction in energy demand and usage derived from the implementation of demand side management and energy efficiency programs. This effort will include demand side response, energy efficiency programs and metering, including the 'curtailment service provider' program.</p>		
<p>a) Review the NAESB Business Practices for Measurement and Verification of Wholesale Electricity Demand Response (WEQ-015) in conjunction with the IRC developed Demand Response Matrix and identify business practice requirements that could be improved or made clearer through the addition of specific technical detail. The wholesale and retail demand response work groups and the Smart Grid Standards Subcommittees should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.</p> <p>Status: In Progress</p>	Phase 2 – 4 th Q 2010	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee



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Item Description	Completion ¹	Assignment ²
<p>b) For each performance evaluation type/service type combination identified in WEQ-015, using the IRC matrix as a starting point, assess and determine what standards or guidelines, if any, should be developed to aid all participants in the use of measurement and verification methods for demand response programs in organized wholesale electric markets. If the determination is made that standards or guidelines will be developed, those items will be added as sub-items to 4(b).</p> <p>Status: In Progress</p>	Phase 2 – 4 th Q 2010	WEQ Section of the Joint WEQ/REQ DSM- EE Subcommittee
<p>c) Coordinate glossary updates for business practice standards with the Retail Electric Quadrant</p> <p>Status: Ongoing</p>	Ongoing	Joint WEQ/REQ DSM Subcommittee
<p>d) Develop business practice standards used to measure and verify reductions in energy and demand from energy efficiency in wholesale and retail markets.³ This includes developing business practice standards to measure and verify energy reductions that are made to comply with a Renewable Portfolio Standard that included energy efficiency or a stand-alone Energy Efficiency Portfolio Standard (Check against the Retail Annual Plan for 2011 – who split this item)</p> <p>Status: Underway</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee
<p>e) Create common interfaces and data structures necessary for enrolling DR sites into a DR program (Request No. R10002) – should have EC discussions on whether this should be assigned to REQ only.</p> <p>Status: Started</p>	4 th Q, 2010	Joint WEQ/REQ DSM-EE Subcommittee with coordination with Smart Grid Standards Task Force and REQ BPS
5 Maintain existing body of Version 2.x standards		
<p>a) Make consistency changes to Version 2.2 standards as directed by the WEQ Leadership Committee on December 12, 2007 OASIS Consistency Changes (R08001, R08002, R08003, R08005)</p> <p>Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)</p>	TBD	OASIS
<p>b) Consistent with ¶51 of FERC Order No. 890-A, add AFC and TFC values to the “System_Attribute” data element of the NAESB Standard WEQ-003: OASIS S&CP Data Dictionaries. (R08011)</p> <p>Status: Not Started. This Standards Request was assigned to the OASIS in May 2008.</p>	TBD	OASIS
<p>c) Correct WEQ 013-2.6.7.2. – Resale off OASIS (R08027)</p> <p>Status: Not Started</p>	TBD	OASIS
<p>d) Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (R09003)</p> <p>Status: Not Started</p>	TBD	OASIS



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Item Description	Completion ¹	Assignment ²
e) Create a new OASIS mechanism that allows for the merger of like reservations without the use of the resale mechanism (R09015) Status: Not Started	TBD	OASIS
6. Develop Smart Grid Wholesale and Retail Electric Standards - The wholesale and retail demand response work groups and the Smart Grid task force should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.		
<i>Based on the items listed below all Smart Grid Work will be completed in 2010. Should we leave a placeholder here so we can include additional Smart Grid work as assigned by NIST and the SGIP?</i>		
a) Develop standards to support PAP 10 – Standards Energy Usage Information, Phase 2, Harmonization with CIM and SEP 2.0 Status: Not Started, pending discussions with CIM and SEP 2.0	2011	Joint WEQ/REQ PAP 10 SGS Subcommittee
7. Develop or modify standards to Support FERC Order No. 676-E, (Docket No. RM 05-5-013)		
a) Review standards 001-14.1.3 and 001-15.1.2 based on FERC Order No. 676-E (See ¶ 39 ⁷) Status: Not Started	2 nd Q, 2011	OASIS
b) Develop standards to support the Transmission Provider right to reassess the availability of conditional firm (See ¶ 72 ⁸) Status: Not Started	2 nd Q, 2011	OASIS
c) Prepare status reports every six months regarding the development of standards for the coordination of transmission service requests across multiple transmission systems (See ¶ 105 ⁹). This annual plan item is tied to Annual Plan Item 2(a)(iii) Status: Underway – first report filed.	Ongoing	NAESB Office

⁷ 39. In regards to Entergy's question of whether the transmission provider's calculated and posted available flowgate capability values should be used to fulfill the posting requirements set forth in Standard 001-14 and 001-15 in instances where there is no requirement to convert this calculation to available transfer capability values, we agree with Entergy that this requirement can be met by the transmission provider posting its available flowgate capability values. As to EPSA's argument that Standard 001-15 falls short of the goals of Order No. 890, we find that, with the exception of Standard 001-15.1.2, compliance with Standard 001-15 provides all of the information required by Order No. 890. However, Standards 001-14.1.3 and 001-15.1.2 permit transmission providers to post an available transfer capability change narrative within five business days of meeting the criteria under which a narrative is required to be posted. In Order No. 890, the Commission rejected calls for delays prior to posting data and required posting as soon as possible. We do not find the NAESB standard meets this criterion and therefore decline to incorporate Standards 001-14.1.3 and 001-15.1.2 by reference. Transmission providers must post their narratives as soon as feasibly possible. Posting within one day would appear in most cases to be reasonable.

⁸ 72. However, we reiterate here the Commission's finding in Order No. 890 that a transmission provider is permitted to extend its right to reassess the availability of conditional firm service. Since the Version 002.1 Standards do not specifically address this issue, we would ask the industry, working through NAESB, to continue to look at additional business practice standards facilitating a transmission provider's extension of its right to perform a reassessment

⁹ 105. We agree that insufficient progress has been made on this issue. While we acknowledge that development of standards addressing this issue is included in NAESB's 2009 WEQ Annual Plan, we nevertheless urge NAESB to address this issue as soon as possible. Accordingly, we request that NAESB provide the Commission with a status report concerning its progress on this issue every six months, counting from the date this final rule is published in the Federal Register, until NAESB's adoption of



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the applicable standard(s).



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PROVISIONAL ITEMS

- 1 Develop and or modify business practices related to support of NERC effort on the NERC Resources and Transmission Adequacy (Project 2009-05 Resource Adequacy Assessment).
- 2 Develop business practices for allocating capacity among requests received during a submittal window Order 890-A ([Docket Nos. RM05-17-001, 002 and RM05-25-001, 002](#) - Paragraph 805)¹⁰.
- 3 Determine any needed NAESB action in support of the Interchange Distribution Calculator (IDC) and develop any necessary standards.
- 4 Prepare recommendations for future path for TLR (equity concerns) in concert with NERC, which may include alternative congestion management procedures⁴. Work on this activity is dependent on completing 2010 WEQ Annual Plan 1.a (Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection).
- 5 Develop complementary standards that align with NERC Project 2008-01 Voltage and Reactive Control, for which a white paper is expected after the SAR is authorized to proceed by the NERC Standards Committee.
- 6 Determine NAESB action needed to support FERC Action Plan for Smart Grid Technology.
- 7 Develop business practice standards for cap and trade programs for green house gas
- 8 Conduct assessment to determine if Electric Industry Requirements documented in WEQ-011 Gas / Electric Coordination should be considered reliability requirements and transition to NERC.
- 9 Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Common code usage is linked to the transition of the Registry from NERC to NAESB.
- 10 Review the need for, and develop standards where appropriate, in response to issues raised by FERC's National Action Plan on Demand Response.
- 11 Develop, modify or delete business practices to support Time Error and Inadvertent (BAL-004 and BAL-006) resulting from the NERC field test under NERC project (NERC Project 2010-14).

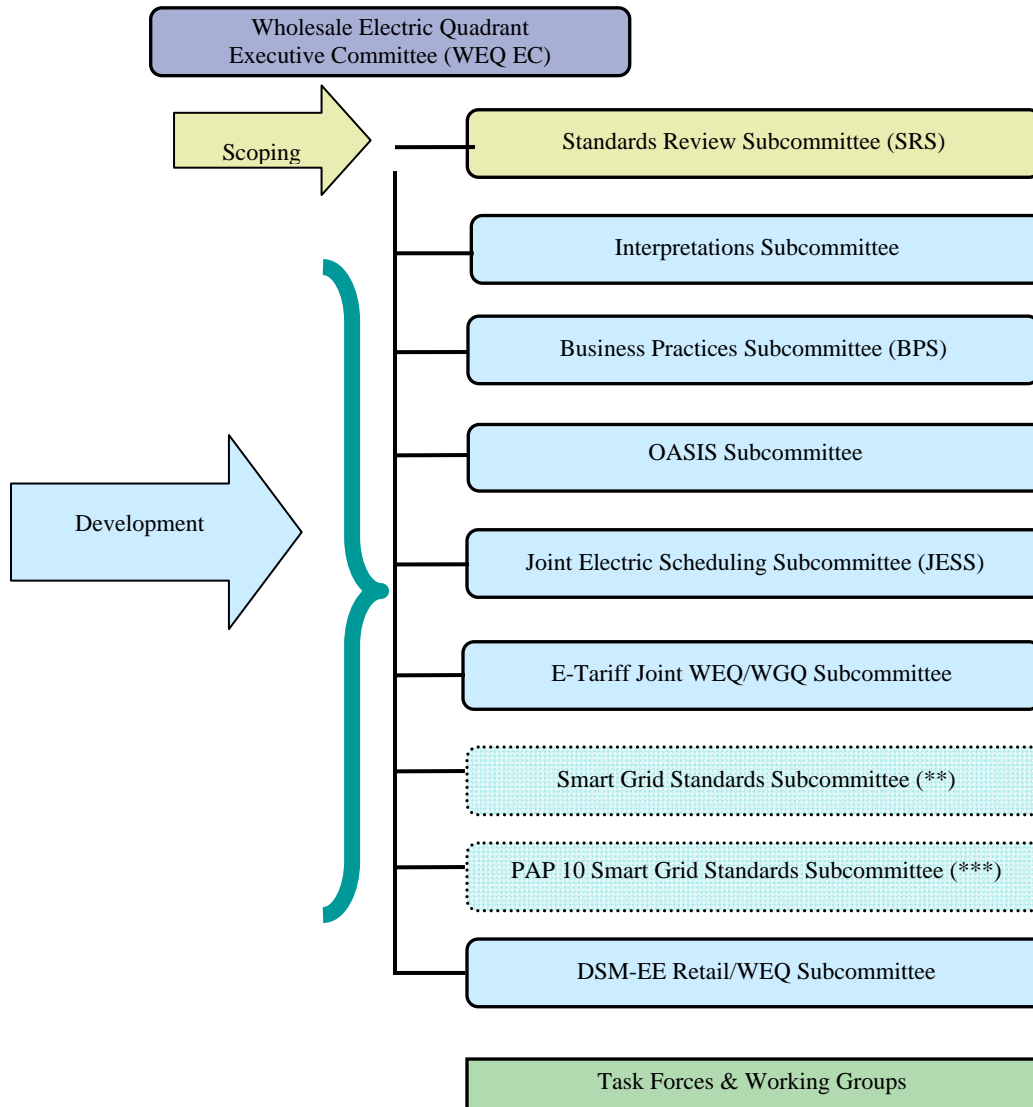
¹⁰ 805. The Commission recognizes that developing methods to allocate capacity among requests received during a submittal window may require detailed procedures, particularly when transmission requests received simultaneously exceed available capacity. As the Commission explained in Order No. 890, however, we believe that each transmission provider is in the best position to develop allocation procedures that are suitable for its system. This does not preclude transmission providers from working through NAESB to develop standardized practices, as suggested by Southern. For example, as we pointed out in Order No. 890, allocation methods such as that used by PJM to allocate monthly firm point-to-point transmission service could provide useful guidance in developing general allocation procedures.



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WHOLESALE ELECTRIC QUADRANT EXECUTIVE COMMITTEE AND SUBCOMMITTEE STRUCTURE



NAESB WEQ EC and Subcommittee Leadership:

Executive Committee (EC): Kathy York (Chair) and Alan Johnson (Vice Chair)

Standards Review Subcommittee (SRS): Narinder Saini, Ed Skiba

Interpretations Subcommittee: Ed Skiba

Business Practices Subcommittee (BPS) & Time and Inadvertent Management Task Force (TIMTF): Jim Busbin (TLR), Ed Skiba

Open Access Same Time Information System (OASIS) Subcommittee (OS): Paul Sorenson, J.T. Wood, Marcie Otondo

Joint Electric Scheduling Subcommittee (JESS): Bob Harshbarger (NAESB), Clint Aymond (NERC)

e-Tariff Joint WEQ/WGQ Subcommittee (e-Tariff): Jane Daly (WEQ), Keith Sappenfield (WGQ)

Demand Side Management-Energy Efficiency (DSM-EE) REQ/WEQ Subcommittee: Ruth Kiselewich and David Koogler (REQ), Roy True and Paul Wattles (WEQ)

(**) The Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS (Organization for the Advancement of Structured Information Standards, not Open



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Access Same Time Information Systems related to NAESB standards and FERC actions), CalConnect, FIX and UCAIug, among others. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQ ECs. The group is chaired by Brent Hodges, Joe Zhou, Wayne Longcore and Robert Burke. **(Should this subcommittee be removed if it has completed its work?)**

(***) The PAP 10 Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, UCAIug, OpenADE, ZigBee, ASHRAE, EIS Alliance, NARUC and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and REQECs. The group is chaired by Brent Hodges, Phil Precht, Cathy Wesley, Sharon Dinges, David Kaufman, Brad Ramsay, Tobin Richardson and Ed Koch.



North American Energy Standards Board

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End Notes WEQ 2011 Annual Plan:

¹ Dates in the completion column are by end of the quarter for completion by the assigned committee, sub-committee or task force. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

² The assignments are abbreviated. The abbreviations and sub-committee structure can be found at the end of the annual plan document.

³ Energy efficiency may be a wholesale product, such as capacity. Energy efficiency in retail markets may be from individual energy efficiency measures at the project level or a portfolio of projects that make up an energy efficiency program.

⁴ For additional information, please see comments submitted by PJM and Midwest ISO for this Annual Plan Item:
http://www.naesb.org/pdf3/weq_aplan102907w1.pdf.



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October 21, 2010
Via email and posting

TO: NAESB Executive Committee (EC) Members, posting for interested parties
FROM: NAESB Office
cc: EC Alternates, Submitters, Subcommittee Chairs of Subcommittees noted in text below
RE: NAESB Triage Actions Pending for R10009

Dear Triage Subcommittee and EC members,

We have one request to triage – R10009 -- provided below as a hyperlink. The NAESB office recommends the following actions:

For [R10009](#), submitted by [Tom Gwilliam](#) on behalf of Iroquois Gas Transmission:

This request is (1) found within scope; (2) to be assigned to the Wholesale Gas Quadrant (WGQ); and (3) because it is a request for a new data element “Open Season ID” to be added to Standard 5.4.21 (Transactional Reporting – Firm Transportation) to provide a cross-reference for interested parties between open seasons for firm capacity and the corresponding firm contract(s) that are generated as a result of the awarding of capacity pursuant to such open seasons, the request should be assigned to the WGQ Business Practices Subcommittee (BPS). While there was nothing in the request indicating that it should be assigned a high priority, therefore, it should be addressed in the normal course of business of the WGQ BPS.

If you have any questions on a specific request, please contact the requestor directly -- the email address is provided as a link with the request. If you have any concerns on the above actions, please respond via email with your concern stated, and we will convene a conference call for its resolution. Comments may certainly be provided and will be posted on the [Triage Subcommittee](#) page of the NAESB web site. If no concerns are raised, then on November 4, the disposition as noted above will be considered approved.



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via email and posting

TO: NAESB Wholesale Electric Quadrant (WEQ) Members and Interested Industry Participants
FROM: Jonathan Booe, Staff Attorney
RE: Request for Formal Comments on the NAESB Smart Grid Standards Development Subcommittee Phase Two Requirements Specifications for SGIP Priority Action Plans 3, 4 and 9 and the Smart Grid Data Element Table
DATE: October 15, 2010

Dear NAESB WEQ Members and Interested Industry Participants,

An industry formal comment period begins today, October 15, 2010, and ends on November 15, 2010 for the Wholesale Electric Quadrant recommendations below:

Recommendations:
2010 WEQ Annual Plan Item 6(a): Phase Two Requirements Specifications for Common Electricity Product and Pricing Definition – for NIST PAP03 Recommendation: http://www.naesb.org/pdf4/weq_2010_ap6a_rec_101510.doc
2010 WEQ Annual Plan Item 6(b): Phase Two Requirements Specifications for Common Scheduling Mechanism for Energy Transactions – for NIST PAP04 Recommendation: http://www.naesb.org/pdf4/weq_2010_ap6b_rec_101510.doc
2010 WEQ Annual Plan Item 6(c): Phase Two Requirements Specifications for Wholesale Standard DR Signals – for NIST PAP09 **Please note that the proposed modifications to WEQ-018 are included in redline format as an Adobe Acrobat (.pdf) file. Please make all redline modifications to the clean version of the recommendation posted as a Microsoft Word (.doc) file. Recommendation (Redline): http://www.naesb.org/pdf4/weq_2010_ap_6c_rec_101510_redline.pdf Recommendation (Clean): http://www.naesb.org/pdf4/weq_2010_ap_6c_rec_101510_clean.doc
2010 WEQ Annual Plan Item 6: Smart Grid Data Elements Table Recommendation: http://www.naesb.org/pdf4/weq_2010_ap6_rec_101510.doc

All interested parties, regardless of membership status within NAESB, are eligible to submit comments for consideration. The Wholesale Electric Quadrant Executive Committee will review the recommendations and consider them for vote during an upcoming Executive Committee meeting. The Executive Committee will review all submitted comments.

All comments received by the NAESB office by the end of business, November 15, 2010 will be posted on the Home Page (WEQ Request Page): http://www.naesb.org/weq_request.asp and forwarded to the WEQ Executive Committee members for their consideration. If you have difficulty downloading the recommendations, please call the NAESB office at (713) 356-0060.

Best Regards,

Jonathan Booe

NAESB
cc: Rae McQuade, President



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

1. RECOMMENDED ACTION:

- Accept as requested
- Accept as modified below
- Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

- Change to Existing Practice
- Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

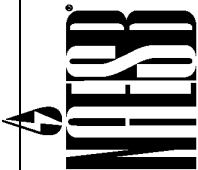
Per Recommendation:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

3. RECOMMENDATION

SUMMARY: The Master Data Requirements List contains the list of data elements used in the use cases that were developed for PAP 03 and PAP 09 in the phase one effort.



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

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Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

RECOMMENDED STANDARDS:

WEQ-020.1 Smart Grid Standards Data Requirements Table

Introduction

This Business Practice Standard contains the list of data elements used in Business Practice Standards WEQ-016 and WEQ-018. Specific application of the data elements to a given use case contained in WEQ-016 and WEQ-018 are identified within the appropriate Business Practice Standard. This Business Practice Standard and data elements included herein are not intended to replace applicable Governing Documents, and in the event of a conflict, the latter documents shall have precedence over this standard.

WEQ-020.1 Alphabetical Listing by Data Element Name

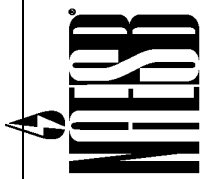
** Listing by Category ID and Category Element ID begins on page 45*

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
2-Location	2	10	Address1	Address line 1	-	-	Y	-	-	-	Y
2-Location	2	11	Address2	Address line 2	-	-	Y	-	-	-	Y



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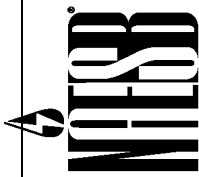
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>16</u>	<u>Ancillary Service Award - Cleared Price</u>	<u>Awarded Price</u>	<u>The market clearing price for the cleared ancillary service product MW.</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>13</u>	<u>Ancillary Service Award - End Time</u>	<u>End Time of the ancillary service Award</u>	<u>A Schedule is an ancillary service profile for a Resource for a future time period, by scheduling time interval.</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>14</u>	<u>Ancillary Service Award - Interval Start Time</u>	<u>Start Time of the ancillary service Interval within the ancillary service Award and the ancillary service Value of the Time Interval</u>	<u>The start time of a specific ancillary service schedule interval</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>15</u>	<u>Ancillary Service Award - Interval Value</u>	<u>The awarded Value for the Time Interval within the ancillary service Award</u>	<u>The value associated with a specific ancillary service schedule interval</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>12</u>	<u>Ancillary Service Award - Start Time</u>	<u>Start Time of the ancillary service Award</u>	<u>A Schedule is an ancillary service profile for a Resource for a future time period, by scheduling time interval.</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>0</u>	<u>Ancillary Service Instruction ID</u>	-	<u>Unique identifier assigned to each ancillary service instruction.</u>	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>20</u>	<u>Ancillary Service Product Qualification Type</u>	<u>Type of Qualification</u>	<u>Examples include initial, requalification, etc.</u>	-	-	Y	-	-	-



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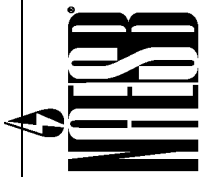
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
10-Ancillary Service Market	10	10	<u>Ancillary Service Product Type</u>	Type of Ancillary Service product(s) the Resource is enrolling to provide	-	-	Y	-	-	-	Y
10-Ancillary Service Market	10	22	<u>Ancillary Service Product Type Qualification Date</u>	Date of Qualification of the Resource	-	-	Y	-	-	-	-
10-Ancillary Service Market	10	23	<u>Ancillary Service Product Type Qualified</u>	Type of Ancillary Service Product(s) for which the Resource has Qualified	-	-	Y	-	-	-	-
10-Ancillary Service Market	10	17	<u>Ancillary Service Schedule ID</u>	-	Unique identifier assigned to each ancillary service schedule.	-	-	Y	-	-	-
6-Device and Qualification	6	229 4	<u>ANSI Compliance</u>	ANSI standard with which the Meter complies	-	-	Y	-	-	-	-
1-General Asset / Resource	1	30	<u>Asset Group ID</u>	The identifier of a group of assets	An Asset Group is a logical entity that has a reportable interval-level consumption.	-	-	Y	-	-	Y
1-General Asset / Resource	1	31	<u>Asset Group Name</u>	Name of the aggregated group of assets	-	-	Y	-	-	-	Y
1-General Asset / Resource	1	12	<u>Asset ID</u>	The unique identifier of the asset	-	-	Y	-	-	-	Y
6-Device and Qualification	6	83	<u>Asset Manufacture Date</u>	Date of Manufacture of the Asset	-	-	-	-	-	-	Y



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	80	<u>Asset Manufacturer</u>	<u>Manufacturer of the Asset</u>	-	-	-	-	-	-	Y
6-Device and Qualification	6	81	<u>Asset Model</u>	<u>Model identifier of the Asset, assigned by the Manufacturer</u>	-	-	-	-	-	-	Y
2-Location	2	51	<u>Asset Multiplier</u>	<u>Number of identical Assets within the Service Location</u>	-	-	Y	-	-	-	-
1-General Asset / Resource	1	13	<u>Asset Name</u>	<u>The name of the asset</u>	-	-	Y	-	-	-	-
5-Business Entity Relationships	5	90	<u>Asset Operator ID</u>	<u>The identifier of the business entity that operates the DR assets. This is the entity that has physical control of the asset and control of the capability to participate in DR Events.</u>	-	-	-	-	-	-	Y
5-Business Entity Relationships	5	91	<u>Asset Operator Name</u>	<u>The name of the business entity that operates the DR assets. This is the entity that has physical control of the asset and control of the capability to participate in DR Events.</u>	-	-	-	-	-	-	Y



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>92</u>	<u>Asset Owner ID</u>	The Identifier of the business entity that owns the DR assets (entity that has the right to use or transfer use of the asset).	-	-	-	-	-	-	<u>Y</u>
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>93</u>	<u>Asset Owner Name</u>	The Name of business entity that owns the DR assets (entity that has the right to use or transfer use of the asset).	-	-	-	-	-	-	<u>Y</u>
<u>6-Device and Qualification</u>	<u>6</u>	<u>84</u>	<u>Asset Type</u>	Type of Asset	-	-	-	-	-	-	<u>Y</u>
<u>6-Device and Qualification</u>	<u>6</u>	<u>82</u>	<u>Asset Version</u>	Model version identifier, assigned by the Manufacturer	-	-	-	-	-	-	<u>Y</u>
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>33</u>	<u>Base Load MW</u>	Level of Load at time of dispatch	-	-	-	<u>Y</u>	-	-	-



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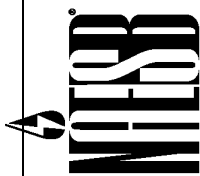
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
9-Energy Market	9	20	Base Point	Per-interval dispatch instruction	A Dispatch is a real-time instruction to a Resource to move to a Base Point at a specific time (Resource-Specific Deployment) or a set of real-time instructions to multiple Resources (Bulk Deployment). A Resource-Specific Deployment is the deployment, via established Communication Methods initiated by the System Operator, of one or more discrete and/or unique Resources designated to provide a selected service. The Baseline Window is the window of time preceding, and optionally following, a Demand Response Event, over which electricity consumption data is collected for the purpose of establishing a Baseline. The applicability of this term is limited to Meter Before/Meter After, and Baseline Type-I and Type-II.	-	-	Y	-	-	-
12-Event and Performance	12	21	Baseline Dates	Dates of days used to calculate the Energy Baseline	The Baseline Window is the window of time preceding, and optionally following, a Demand Response Event, over which electricity consumption data is collected for the purpose of establishing a Baseline. The applicability of this term is limited to Meter Before/Meter After, and Baseline Type-I and Type-II.	-	-	Y	-	-	Y
12-Event and Performance	12	22	Baseline Exclusion Dates	Dates of days Excluded from the calculation of the Energy Baseline		-	-	Y	-	-	Y
1-General Asset / Resource	1	51	Batch Load Flag	Flag set if the Resource is a Batch Load		-	-	Y	-	-	-
9-Energy Market	9	21	Breaker Status	Status of the Breaker for the Resource		-	-	Y	-	-	-



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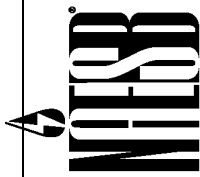
Category	Category ID	Category ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	45	Breaker Status During Event	Status of the Breaker for the Service Location during an Emergency Event	-	-	Y	-	-	-	-
1-General Asset / Resource	1	50	Business Segment	SIC or NAICS code of the Service Location	-	-	Y	-	-	-	-
6-Device and Qualification	6	43	Capable of Synchronizing to Grid	Flag set if the Service Location is capable of Synchronizing to the Grid	-	-	Y	-	-	-	-
11-Capacity Market	11	991	Capacity Comments	Comments associated with the Capacity market	-	-	Y	-	-	-	-
11-Capacity Market	11	31	Capacity Obligation Period	Period of time for which the Capacity Resource is Obligated	-	-	Y	-	-	-	-
11-Capacity Market	11	30	Capacity Obligation Period Type	Type of Capacity Obligation Time Period within which the Resource is obligated	-	-	Y	-	-	-	-
11-Capacity Market	11	50	Capacity Reference ID	Identifier assigned to the External System award	-	-	Y	-	-	-	-
11-Capacity Market	11	41	Capacity Supply Obligation	Capacity Obligation	-	-	Y	-	-	-	-



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Category	Category ID	Category ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>11-Capacity Market</u>	<u>11</u>	<u>10</u>	<u>Capacity Type</u>	<u>Type of Capacity</u>	Capacity Service is a type of Demand Response service in which Demand Resources are obligated over a defined period of time to be available to deliver upon deployment by the System Operator or Service Provider. Examples: Hourly, Monthly, etc.	-	-	Y	-	-	Y
<u>11-Capacity Market</u>	<u>11</u>	<u>11</u>	<u>Capacity Type description</u>	<u>Description of the Type of Capacity</u>		-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>12</u>	<u>City</u>	<u>City</u>		-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>50</u>	<u>Competitive Choice Area</u>	Flag set if the Service Location is in an area with Competitive Choice		-	-	Y	-	-	-
<u>4-Grid Connection</u>	<u>4</u>	<u>12</u>	<u>Connect Voltage</u>	<u>Voltage level</u>	Voltage at connection.	-	-	Y	-	-	-
<u>2-Location</u>	<u>2</u>	<u>72</u>	<u>Connection Address</u>	Address associated with the Connection Type	Example: Address of ICCP Connection, IP address	-	-	Y	-	-	-
<u>2-Location</u>	<u>2</u>	<u>71</u>	<u>Connection Type</u>	Additional type of connection associated with the Service Delivery Point	Example: ICCP Connection, IP address	-	-	Y	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>72</u>	<u>Constraint Interval</u>	The timeframe over which the constraint type applies.	Typically daily, hourly, weekly, date	-	-	Y	-	-	Y



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>8- Offer Parameters</u>	<u>8</u>	<u>71</u>	<u>Constraint Type</u>	Type of operational, schedule or offer constraint	Types of operational, offer or schedule parameters. Examples include: Select Operational Minimum Runtime, Schedule Minimum Runtime, Operational Maximum Runtime, Schedule Maximum Runtime, Minimum Load, Maximum Load, Minimum Downtime, Minimum Starts, Maximum Energy, Maximum Starts, Time of Day schedule constraints, Black out date, Maximum consecutive days of participation, Maximum calls per day, Minimum Advanced Notification, Minimum duration of participation, etc.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>8- Offer Parameters</u>	<u>8</u>	<u>73</u>	<u>Constraint Value</u>	Value of the Constraint Type and Interval	-	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>3- Contact</u>	<u>3</u>	<u>31</u>	<u>Contact Address Data</u>	Method-dependent Address of the Contact	This identifies specific information required for the contact method selected.	-	-	<u>Y</u>	-	-	-
<u>3- Contact</u>	<u>3</u>	<u>991</u>	<u>Contact Comments</u>	Comments associated with the Contact	-	-	-	<u>Y</u>	-	-	-
<u>3- Contact</u>	<u>3</u>	<u>30</u>	<u>Contact Method</u>	Method of communication with the Contact	This identifies the various types of communication options (phone, email, etc.) to be used.	-	-	<u>Y</u>	-	-	-
<u>3- Contact</u>	<u>3</u>	<u>32</u>	<u>Contact Method Priority</u>	Order in which a Communication Method should be selected for a Contact	A Communication Method is the medium by which an object communicates with another object for instruction, measurement, or control. The user specifies the sequence in which each medium is to be used when being contacted.	-	-	<u>Y</u>	-	-	-



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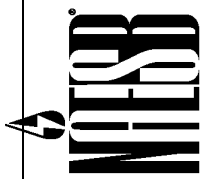
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
3-Contact	3	23	Contact Middle Name	Middle Name of the Contact	-	-	Y	-	-	-	-
3-Contact	3	11	Contact Priority	Order in which this Contact should be selected	This is used when multiple contacts are defined.	-	-	Y	-	-	-
3-Contact	3	10	Contact Type	Interest code associated with a Contact	This is a classification defining the function a particular contact serves. It supports "who to call for what needs" decisions. Examples are: Primary, Secondary, Billing, Third Party, and Authorized Representative.	-	-	Y	-	-	-
2-Location	2	15	Country	Country	-	-	Y	-	-	-	Y



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Category ID	Data Element	Short Description	Long Description	Wholesale			Retail						
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09				
12-Event and Performance	12	51	Criticality Level	This field defines the level of criticality of this event. The action taken by load control devices for an event can be solely based on this value, or combination with other Load Control Event fields supported by this device.	For example, additional fields such as Average Load Adjustment Percentage, Duty Cycle, Cooling Temperature Offset, Heating Temperature Offset, Cooling Temperature Set Point or Heating Temperature Set Point can be used in combination with the Criticality level. Criticality Level Description Participation 0 Reserved 1 Green Voluntary 2 1 Voluntary 3 2 Voluntary 4 3 Voluntary 5 4 Voluntary 6 5 Voluntary 7 Emergency Mandatory 8 Planned Outage Mandatory 9 Service Disconnect Mandatory 0x0A to 0x0F Utility Defined Utility Defined	-	-	-	-	-	-	Y			
6-Device and Qualification	6	291	CT Ratio	Ratio of the Current Transformer		-	-	Y	-	-	-	-	-	-	-
14-Price and Product	14	15	Currency	Economic unit of exchange in which the total price and price components are stated (e.g. dollars, euros)		Y	-	-	Y	-	-	-	-	Y	-
6-Device and Qualification	6	228	Date of Last Meter Test	Date of Last Test of the Meter		-	-	Y	-	-	-	-	-	-	-



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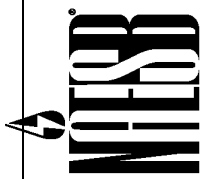
Category	Category ID	Category ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>31</u>	<u>Day Ahead Flag</u>	<u>Flag set if the Resource will be participating in the Day-Ahead market</u>	-	-	Y	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>38</u>	<u>Delivery Interval</u>	<u>The duration over which the product is available for physical consumption</u>	Y	-	-	Y	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>37</u>	<u>Delivery Time</u>	<u>Time at which the product is available for physical consumption</u>	Y	-	-	Y	-	-	Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>14</u>	<u>Demand Response Controlling Entity</u>	-	An identifier for the Service Provider issuing the DR event deployment instructions.	-	-	-	-	-	Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>13</u>	<u>Demand Response Provider</u>	-	The entity that is responsible for delivering Demand reductions from Demand Resources and is compensated for providing such Demand Response products.	-	-	-	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>16</u>	<u>Deployment MW</u>	<u>Absolute or relative Deployment quantity</u>	Expressed as an absolute or relative (%) MW value.	-	-	Y	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>11</u>	<u>Deployment Type</u>	<u>Type of Deployment</u>	Examples are: Advanced (Normal), Immediate, Audit/Test	-	-	Y	-	-	Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>80</u>	<u>Designated Dispatch Entity ID</u>	<u>Identifier assigned to the Designated Dispatch Entity</u>	The Designated Dispatch Entity receives and processes Demand Resource Dispatch instructions or market information and may provide response information.	-	-	Y	-	-	-



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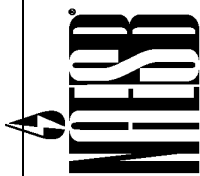
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<u>5-Business Entity Relationships</u>	<u>5</u>	<u>81</u>	<u>Designated Dispatch Entity Name</u>	Name of the Designated Dispatch Entity	-	-	Y	-	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>70</u>	<u>Device Class</u>	-	Note: From SEP2.0 Enumeration representing the Device Class to apply the current Load Control Event. 0 HVAC compressor or furnace 1 Strip Heaters/Baseboard Heaters 2 Water Heater 3 Pool Pump/Spa/Jacuzzi 4 Smart Appliances 5 Irrigation Pump 6 Managed Commercial & Industrial (C&I) loads 7 Simple misc. (Residential On/Off) loads 8 Exterior Lighting 9 Interior Lighting 10 Electric Vehicle 11 Generation Systems 12 to 15 Reserved	-	-	-	-	-	Y
<u>6-Device and Qualification</u>	<u>6</u>	<u>991</u>	<u>Distributed Generator Comments</u>	Comments associated with the Distributed Generator	-	-	Y	-	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	32	<u>Distributed Generator Fuel Type</u>	Type of Fuel consumed by the <u>Distributed Generator</u>	-	-	Y	-	-	-	-
6-Device and Qualification	6	34	<u>Distributed Generator Manufacturer</u>	Manufacturer of the <u>Distributed Generator</u>	-	-	Y	-	-	-	Y
6-Device and Qualification	6	39	<u>Distributed Generator Name</u>	Name of the <u>Distributed Generator</u>	-	-	Y	-	-	-	-
6-Device and Qualification	6	33	<u>Distributed Generator Permit Type</u>	Type of environmental authorization required to operate the <u>Distributed Generator</u>	The Environmental Authority is a regulatory authority responsible for the development, reporting, and enforcement of environmental activities.	-	-	Y	-	-	-
6-Device and Qualification	6	30	<u>Distributed Generator Type</u>	Type of <u>Distributed Generator</u>	This technology characteristic of the <u>Distributed Generator</u> , such as combined cycle, induction, etc.	-	-	Y	-	-	-
9-Energy Market	9	24	<u>DR Bus Load MW</u>	Instantaneous Bus Load of a <u>Demand Resource</u> providing <u>Ancillary Services</u>	Demand is the rate at which electric energy is being used by the customer (NERC Definition). Expressed in MW. This element only applies to DR	-	-	Y	-	-	-



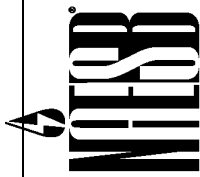
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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>13-Direct Load Control</u>	<u>13</u>	<u>11</u>	<u>DR Control Command: Direct Load Control Type</u>	The type of DR Direct Load Control Command: e.g. Set Point, Open/Close, Heating Temperature - offset/setpoint, Cooling Temperature - offset/setpoint, Load adjustment offset	-	-	-	-	-	-	<u>Y</u>
<u>13-Direct Load Control</u>	<u>13</u>	<u>12</u>	<u>DR Control Command: Direct Load Control Value</u>	Value associated with the Direct Load Control Type.	-	-	-	-	-	-	<u>Y</u>
<u>1-General Asset / Resource</u>	<u>1</u>	<u>22</u>	<u>DR Resource Group ID</u>	Grouping of Resources that can respond to the same DR signal	-	-	-	-	-	-	<u>Y</u>
<u>3-Contact</u>	<u>3</u>	<u>12</u>	<u>DUNS Number</u>	DUNS business number	-	-	-	<u>Y</u>	-	-	-
<u>13-Direct Load Control</u>	<u>13</u>	<u>13</u>	<u>Duty Cycle</u>	"Duty Cycle" : Defines the maximum On state duty cycle as a percentage of time. Example, if the value is 80, the device would be in an "on state" for 80% of the time for the duration of the event. Range of the value is 0 to 100. A value of 0xFF indicates the field	-	-	-	-	-	-	<u>Y</u>



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						<u>PAP 03</u>	<u>PAP 04</u>	<u>PAP 09</u>	<u>PAP 03</u>	<u>PAP 04</u>	<u>PAP 09</u>						
				-	-												
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>21</u>	<u>Effective Enrollment Date</u>	<u>Effective Start Date for the Enrollment</u>	<u>Market Enrollment is the collection of enrollment or tariff data for a Demand Resource to provide a specific market product or service.</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>2-Location</u>	<u>2</u>	<u>40</u>	<u>Electrical Node ID</u>	<u>Identifier assigned to the Electrical Node at which the Service Location is connected</u>		-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>2-Location</u>	<u>2</u>	<u>41</u>	<u>Electrical Node Name</u>	<u>Name of the Electrical Node at which the Service Location is connected</u>		-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>2-Location</u>	<u>2</u>	<u>42</u>	<u>Electrical Node Type</u>	<u>Type of Electrical Node at which the Service Location is attached</u>		-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>24</u>	<u>Energy Baseline Timestamp</u>	<u>Timestamp of Energy Baseline</u>		-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>	-	-	<u>Y</u>



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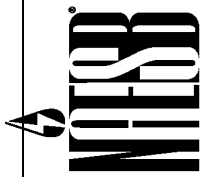
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<u>12-Event and Performance</u>	<u>12</u>	<u>23</u>	<u>Energy Baseline Value</u>	<u>Calculated Energy Baseline</u>	A <u>Baseline</u> is an estimate of the electricity that would have been consumed by a Demand Resource in the absence of a Demand Response Event. The <u>Baseline</u> is compared to the actual metered electricity consumption during the Demand Response Event to determine the Demand Modification Value. Depending on the type of Demand Response product or service, <u>Baseline</u> calculations may be performed in real time or after the fact.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>9-Energy Market</u>	<u>9</u>	<u>13</u>	<u>Energy Schedule - Cleared MW Interval Value</u>	<u>The Energy Value of cleared MW for the Time Interval within the Energy Schedule</u>	<u>The offered energy MW that have cleared the market.</u>	-	-	<u>Y</u>	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>14</u>	<u>Energy Schedule - Cleared Price</u>	<u>Awarded Price</u>	<u>The market clearing price for the cleared energy MW.</u>	-	-	<u>Y</u>	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>11</u>	<u>Energy Schedule - End Time</u>	<u>End Time of the Energy Schedule</u>	<u>A Schedule is an energy profile for a Resource for a future time period, by scheduling time interval (typically hourly).</u>	-	-	<u>Y</u>	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>12</u>	<u>Energy Schedule - Interval Start Time</u>	<u>Start Time of the Energy Interval within the Energy Schedule</u>	<u>The start time of a specific energy schedule interval</u>	-	-	<u>Y</u>	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>10</u>	<u>Energy Schedule - Start Time</u>	<u>Start Time of the Energy Schedule</u>	<u>A Schedule is an energy profile for a Resource for a future time period, by scheduling time interval (typically hourly).</u>	-	-	<u>Y</u>	-	-	<u>Y</u>



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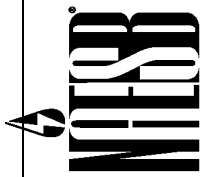
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
7-Market/Program Enrollment	7	25	<u>Enrollment End Date</u>	<u>Date of Termination of Enrollment</u>	-	-	Y	-	-	Y	-
7-Market/Program Enrollment	7	22	<u>Enrollment Status</u>	<u>Status of the Enrollment for the Facility or Resource</u>	-	-	Y	-	-	Y	-
12-Event and Performance	12	991	<u>Event & Performance comments</u>	<u>Comments associated with Event and Performance data</u>	-	-	Y	-	-	-	-
13-Direct Load Control	13	14	<u>Event Control</u>	<u>Event Control options for randomized start or end times:</u> 1= Randomize Start time, 0=Randomized Start not Applied 1= Randomize End time, 0=Randomized End not Applied. (from SEP2.0)	-	-	-	-	-	-	Y
12-Event and Performance	12	12	<u>Event Day</u>	<u>Operating Date of Start of Event</u>	-	-	Y	-	-	-	Y
12-Event and Performance	12	13	<u>Event Description</u>	<u>Description of the Event</u>	-	-	Y	-	-	-	-



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<u>12-Event and Performance</u>	<u>12</u>	<u>18</u>	<u>Event End Time</u>	<u>Time of End of deployment period</u>	<u>Release/Recall is the notification, sent from the System Operator or Service Demand Response Provider to the Demand Resource, that the Deployment Period has ended or announcing the time that it will end.</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>10</u>	<u>Event ID</u>	<u>Identifier assigned to the Event</u>	<u>An Event consists of the time periods, deadlines, and transitions during which Demand Resources perform. The System Operator shall specify the duration and applicability of a Demand Response Event. Some deadlines, time periods, and transitions may not be not applicable to all products or services.</u>	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>19</u>	<u>Event Modification Number</u>	<u>A modification number for the DR event. This is used to indicate if the DR Event has been modified by the Utility. Each time it is modified, this number is incremented.</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>112</u>	<u>Event Modification Reason Code</u>	<u>The reason the event is being cancelled or modified.</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>14</u>	<u>Event Start Time</u>	<u>Time of Start of deployment period for Event</u>	<u>The Deployment Period is the period of time from the Deployment to Release/Recall.</u>	-	-	<u>Y</u>	-	-	<u>Y</u>



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<u>12-Event and Performance</u>	<u>12</u>	<u>17</u>	<u>Event Status</u>	<u>Status of the Event</u> This is used to report that the load controller may not behave as commanded because of a variety of conditions including: • Faults in device • Customer override.	Examples include: initiated, completed, etc.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>13-Direct Load Control</u>	<u>13</u>	<u>15</u>	<u>Exception Conditions</u>			-	-	-	-	-	<u>Y</u>
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>991</u>	<u>External Entity Comments</u>	Comments associated with the External Entity		-	-	<u>Y</u>	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>21</u>	<u>First Name</u>	First Name of the Contact		-	-	<u>Y</u>	-	-	-
<u>1-General Asset / Resource</u>	<u>1</u>	<u>41</u>	<u>GenBillingID</u>	Billing Identifier assigned to the Resource		-	-	<u>Y</u>	-	-	-
<u>1-General Asset / Resource</u>	<u>1</u>	<u>40</u>	<u>GenEMSID</u>	Alias or point identifier assigned to the Resource		-	-	<u>Y</u>	-	-	-
<u>1-General Asset / Resource</u>	<u>1</u>	<u>991</u>	<u>General Resource Comments</u>	General comments associated with the Resource		-	-	<u>Y</u>	-	-	-
<u>2-Location</u>	<u>2</u>	<u>20</u>	<u>GPS Coordinates</u>	Latitude and longitude		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>4-Grid Connection</u>	<u>4</u>	<u>991</u>	<u>Grid Connection Comments</u>	Comments associated with the Grid Connection of the Resource		-	-	<u>Y</u>	-	-	-



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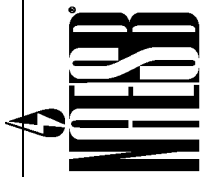
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<u>10-Ancillary Service Market</u>	<u>10</u>	<u>11</u>	<u>Have Engineering Diagram</u>	Flag set if <u>One-Line Diagrams</u> have been submitted	-	-	Y	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>13</u>	<u>Identifier Source (product)</u>	The <u>Identifier Source</u> references the product identification scheme for the <u>Product Identifier</u> .	Y	-	-	-	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>37</u>	<u>In-Service Date</u>	Date the <u>Distributed Generator</u> became operational	-	-	Y	-	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>36</u>	<u>Installation Date of Distributed Generator</u>	Date of installation of the <u>Distributed Generator</u>	-	-	Y	-	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>0</u>	<u>Instruction ID</u>	-	Unique identifier assigned to each instruction.	-	-	Y	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>41</u>	<u>Interconnection Agreement Type</u>	Type of <u>Interconnection Agreement</u> between the <u>Distributed Generator</u> or <u>Service Location</u> and the <u>TDSP</u>	-	-	Y	-	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>42</u>	<u>Interconnection Limits</u>	Limits associated with the <u>Interconnection</u> of the <u>Distributed Generator</u> or <u>Service Location</u>	-	-	Y	-	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>22</u>	<u>Last Name</u>	Last Name of the <u>Contact</u>	-	-	Y	-	-	-	-



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<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>30</u>	<u>Lead Time</u>	Time between the advanced notification and deployment	Notification is the transmittal of a Deployment message.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>13-Direct Load Control</u>	<u>13</u>	<u>16</u>	<u>Load Control State</u>	The state of the load, which includes both commanded states and user settings. This may include a schedule of future states if a particular control algorithm for the load controller is being executed.	-	-	-	-	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>113</u>	<u>Load Level Value</u>	Value of the load level to be achieved based on a set of enumerated values (e.g., moderate, high, etc.).	-	-	-	-	-	-	<u>Y</u>
<u>6-Device and Qualification</u>	<u>6</u>	<u>52</u>	<u>Load Resource Control Device</u>	Type of Control Device at a Service Location or deployed by a Response Method	-	-	-	<u>Y</u>	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>30</u>	<u>Load Serving Entity ID</u>	Identifier assigned to the LSE	The Load-Serving Entity serves end users and sells electric energy to end users.	-	-	<u>Y</u>	-	-	-



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

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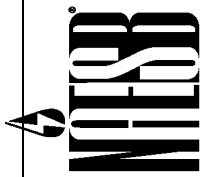
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09		
5-Business Entity Relationships	5	31	<u>Load Serving Entity Name</u>	<u>Name of the LSE</u>	-	-	Y	-	-	-	-	-	-
2-Location	2	991	<u>Location Comments</u>	<u>Comments associated with the Service Location</u>	-	-	Y	-	-	-	-	-	-
4-Grid Connection	4	10	<u>Loss Factor Type</u>	<u>Type of Loss Factor</u>	-	-	Y	-	-	-	-	-	-
4-Grid Connection	4	11	<u>Loss Factor Value</u>	<u>Loss Factor</u>	-	-	Y	-	-	-	-	-	-
6-Device and Qualification	6	35	<u>Manufactured Date of Distributed Generator</u>	<u>Date of Manufacturer of the Distributed Generator</u>	-	-	Y	-	-	-	-	-	Y
7-Market/Program Enrollment	7	12	<u>Market</u>	<u>Type of wholesale market</u>	-	-	Y	-	-	-	-	-	-
8-Offer Parameters	8	40	<u>Market Clearing Day</u>	<u>Market Clearing Day of the Offer</u>	-	-	Y	-	-	-	-	-	-
7-Market/Program Enrollment	7	991	<u>Market Enrollment Comments</u>	<u>Comments associated with the Enrollment</u>	-	-	Y	-	-	-	-	-	-
7-Market/Program Enrollment	7	13	<u>Market Product</u>	<u>Market Product</u>	-	-	Y	-	-	-	-	-	Y

Product types include the following: energy, capacity, regulation, operating reserves (spinning or non-spin).



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	28	<u>Maximum Error</u>	<u>Error of the Meter, including end-to-end Maximum Error.</u>	-	-	Y	-	-	-	-
6-Device and Qualification	6	229 3	<u>Measurement Interval</u>	<u>Interval of time between Measurement readings</u>	This is the time between electricity meter recordings. The Measurement records the consumption or supply of an End Device. An End Device is a physical end-use device that consumes or supplies electricity.	-	-	Y	-	-	-
12-Event and Performance	12	32	<u>Measurement Value (CIM)</u>	<u>Value of the interval reading</u>	-	-	Y	-	-	-	Y
12-Event and Performance	12	31	<u>Measurement Value Timestamp (CIM)</u>	<u>The time when the value was last updated</u>	-	-	Y	-	-	-	Y
12-Event and Performance	12	34	<u>Measurement Value Type</u>	<u>The type of measurement value.</u>	The Measurement Value Type identifies the type of information provided in the Measurement Value. For example, the Measurement Value type could be energy (kWh/MWh) or demand (kW or MW).	-	-	Y	-	-	-
6-Device and Qualification	6	26	<u>Meter Accuracy Class</u>	<u>Accuracy Class of the Meter</u>	-	-	Y	-	-	-	-
6-Device and Qualification	6	229 6	<u>Meter Asset Comments</u>	<u>Comments associated with the Meter Asset</u>	-	-	Y	-	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
5-Business Entity Relationships	60	5	<u>Meter Authority ID</u>	Identifier assigned to the Metering Authority	The Metering Authority provides electric usage data necessary to determine the performance of a Resource.	-	-	Y	-	-	-
5-Business Entity Relationships	61	5	<u>Meter Authority Name</u>	Name of the Metering Authority	-	-	Y	-	-	-	-
6-Device and Qualification	10	6	<u>Meter Configuration</u>	Configuration of the Meter at the Facility	The CIM defines the Meter as the physical asset that performs the metering role of the ServiceDeliveryPoint. It is used for measuring consumption and detecting events.	-	-	Y	-	-	-
6-Device and Qualification	224	6	<u>Meter Correction Factors</u>	Device-specific Factors used to adjust for atmospheric changes at the point of installation of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	227	6	<u>Meter Device QA Plan</u>	Quality Assurance plan for maintenance and testing of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	20	6	<u>Meter ID</u>	Identifier assigned to the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	221	6	<u>Meter Installation Date</u>	Date of Installation of the Meter	-	-	Y	-	-	-	-
5-Business Entity Relationships	50	5	<u>Meter Installation Provider ID</u>	Identifier assigned to the Meter Installation Provider	-	-	Y	-	-	-	-



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5-Business Entity Relationships	5	51	<u>Meter Installation Provider Name</u>	Name of the Meter Installation Provider	This is the competitive meter entity for the meter device.	-	-	Y	-	-	-
6-Device and Qualification	6	223	<u>Meter Installer License</u>	Professional License Number of the Installer of the Meter	-	-	Y	-	-	-	
6-Device and Qualification	6	27	<u>Meter Loss Compensation</u>	Line Losses included in the Meter	-	-	Y	-	-	-	
6-Device and Qualification	6	22	<u>Meter Manufacturer</u>	Manufacturer of the Meter	-	-	Y	-	-	-	
6-Device and Qualification	6	23	<u>Meter Model</u>	Model of the Meter	-	-	Y	-	-	-	
6-Device and Qualification	6	25	<u>Meter Multiplier (kH)</u>	Multiplier used to convert pulses into power units	-	-	Y	-	-	-	
6-Device and Qualification	6	229 5	<u>Meter Owner</u>	Owner of the Meter	-	-	Y	-	-	-	
6-Device and Qualification	6	29	<u>Meter Phase</u>	Specific Phase information	-	-	Y	-	-	-	
6-Device and Qualification	6	229	<u>Meter Qualification Date</u>	Date of Qualification of the Meter by the Metering Authority or System Operator	-	-	Y	-	-	-	
6-Device and Qualification	6	24	<u>Meter Rating</u>	Load Rating of the Meter	-	-	Y	-	-	-	



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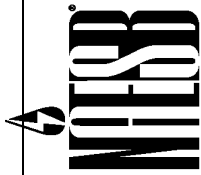
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	225	Meter Test Criteria	Test Criteria required to qualify the installation of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	226	Meter Test Frequency	Frequency of Tests of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	229	Meter Test Results	Results of Tests of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	21	Meter Type	Type of Meter installed at the Facility	-	-	Y	-	-	-	-
8-Offer Parameters	8	21	Min Gen MW	Minimum MW available for dispatch	-	-	Y	-	-	-	Y
8-Offer Parameters	8	22	MinGenCost	The cost per hour for each Min Gen MW value.	-	-	Y	-	-	-	Y
11-Capacity Market	11	40	Minimum Payment Nomination	Strike price for the economic dispatch of the energy component of the capacity program	-	-	Y	-	-	-	-
6-Device and Qualification	6	31	Nameplate Rating	Manufacturer's output rating of the Distributed Generator	-	-	Y	-	-	-	-
0-Common Message Parameters	0	20	NERC CIP Security - Availability	CIP Security Classification for Availability	-	-	Y	-	-	-	-



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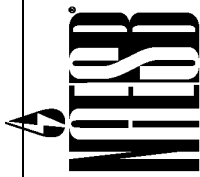
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<u>0-Common Message Parameters</u>	<u>0</u>	<u>21</u>	<u>NERC CIP Security - Confidentiality</u>	<u>CIP Security Classification for Confidentiality</u>	-	-	<u>Y</u>	-	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>22</u>	<u>NERC CIP Security - Integrity</u>	<u>CIP Security Classification for Integrity</u>	-	-	<u>Y</u>	-	-	-	-
<u>2-Location</u>	<u>2</u>	<u>60</u>	<u>NERC Control Area</u>	<u>The NERC control area of the resource</u>	-	-	<u>Y</u>	-	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>23</u>	<u>Nominal Capacity</u>	<u>Nominated load</u>	Expressed as a decimal value.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>6-Device and Qualification</u>	<u>6</u>	<u>44</u>	<u>Normal Breaker Status</u>	<u>Status of the Breaker for the Service Location under Normal operating conditions</u>	Normal Operations is the time following Release/Recall during which a System Operator or Service Provider may require a Demand Resource to have returned its Load consumption to normal levels and to be available again for Deployment.	-	-	<u>Y</u>	-	-	-
<u>6-Device and Qualification</u>	<u>6</u>	<u>38</u>	<u>Normal Load Rating</u>	<u>Average load picked up by the Distributed Generator during the applicable performance hours</u>	-	-	<u>Y</u>	-	-	-	-
<u>12-Event and Performance</u>	<u>12</u>	<u>111</u>	<u>Notification Acknowledgement</u>	<u>This is an acknowledgement of the receipt of a DR notification or dispatch. It should include any necessary provisions for non-reputation.</u>	-	-	<u>Y</u>	-	-	-	<u>Y</u>



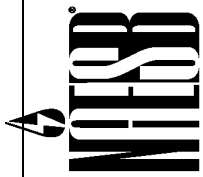
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
8- <u>Offer Parameters</u>	8	38	<u>Offer Commit Status</u>	<u>Commitment status of offer</u>	Product-specific commitment status types included with offer. Examples include: economic, emergency, must-run, not participating, outage run status, override status, etc. Product-specific commitment status types included with offer. Examples include: economic, emergency, not participating, not qualified, and self-schedule.	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	39	<u>Offer Dispatch Status</u>	<u>Dispatch Status of Offer</u>	May also be used to temporarily opt out of DR Events and to override the normal operational constraints. The opt-out can be specified using the following criteria: <ul style="list-style-type: none"> All events in a program indefinitely (unspecified time period) Specific DR Event All events in a specific time period. Other triggered programs for which an asset or DR resource is already called upon (reduce double counting of available capacity) 	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	30	<u>Offer Dispatch Type</u>	<u>Type of Offer</u>	Examples are Flexible (resource follows basepoint signals) or Fixed (resource requests DA commitment and RT schedules of 15 minutes or greater)	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	36	<u>Offer Expiration Date</u>	<u>Date of Expiration of the Offer</u>	This applies to DAM only.	-	-	Y	-	-	-



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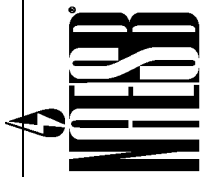
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
8- <u>Offer Parameters</u>	8	12	<u>Offer Limit Interval</u>	<u>Offer Limit Interval</u>	The period over which the offer limit applies, i.e., hour, day, etc.	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	11	<u>Offer Limit Type</u>	<u>Type of Offer Limit</u>	The limit may be associated with the bidding parameters of a resource. These may include limit types such as seasonal rating, reasonability, economic and ramp limits.	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	10	<u>Offer Limit Value</u>	<u>Offer Limit Value</u>	Expressed in MW or hours. Multiple Limit Types are applicable.	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	331	<u>Offer Price Curve Slope</u>	Flag to smoothe offer segments from step function to slope	-	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	33	<u>Offer Segment Hour</u>	Hour of Segment of the Offer	NOTE: When required as part of an enrollment request, this value becomes the default.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	31	<u>Offer Segment MW</u>	Energy of Segment of the Offer	The end value of the offer step, monotonically increasing, expressed in MW (NOTE: When required as part of an enrollment request, this value becomes the default)	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	32	<u>Offer Segment Price</u>	Price of Segment of the Offer	NOTE: When required as part of an enrollment request, this value becomes the default.	-	-	Y	-	-	-
12- <u>Event and Performance</u>	12	15	<u>Operator Comment</u>	Additional Event information provided by the Operator	-	-	-	Y	-	-	-
9- <u>Energy Market</u>	9	23	<u>Output MVAR</u>	Reactive Power Output of the Distributed Generator	Expressed in Mvar	-	-	Y	-	-	-



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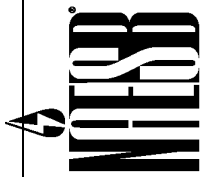
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
9-Energy Market	9	22	Output MW	Real Power Output of the Distributed Generator	Expressed in MW	-	-	Y	-	-	-
14-Price and Product	14	30	Override Unit of Measure	Optional Attribute of Price object If this is used, then Unit of Measure is not applicable	-	Y	-	-	-	-	-
6-Device and Qualification	6	11	Parent Meter id	Flag set if the Meter is a Master or Parent Meter	-	-	-	Y	-	-	-
11-Capacity Market	11	22	Peak Date/Time	Date and Time of measurement of Peak	-	-	-	Y	-	-	-
11-Capacity Market	11	21	Peak Type	Type of measurement of Peak	Examples are: Annual, Monthly, Weekly, and Seasonal.	-	-	Y	-	-	-
11-Capacity Market	11	20	Peak Value	Measurement of Peak	-	-	-	Y	-	-	-
7-Market/Program Enrollment	7	51	Performance Evaluation Method	Method used to Evaluate the Performance of a Resource	Based on NAESB M&V terms.	-	-	Y	-	-	-
7-Market/Program Enrollment	7	50	Performance Evaluation Method Type Code	Code representing the Type of Measurement	-	-	-	Y	-	-	-
8-Offer Parameters	8	20	Physical Min Gen	Minimum Operating Level of a Resource	-	-	-	Y	-	-	Y



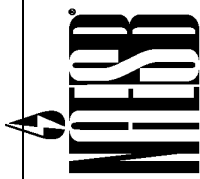
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2-Location	2	43	PNode	Name of the Price Node associated with the Service Location	The P-Node is the price location of the Service Location in the transmission and/or distribution network.	-	-	Y	-	-	Y
2-Location	2	44	PNode ID	Identifier assigned to the Price Node associated with the Service Location	-	-	-	Y	-	-	Y
8-Offer Parameters	8	50	Portfolio Name	Name of an aggregation of Resources for market participation	-	-	-	Y	-	-	-
14-Price and Product	14	33	Price Component Type	The portion of the price to which the corresponding value applies.	Examples: Energy, congestion, losses	Y	-	-	-	-	-
14-Price and Product	14	34	Price Component Value	The value of the price component.	-	Y	-	-	-	-	-
14-Price and Product	14	35	Price Location	The location at which the price is applicable.	-	Y	-	-	-	-	-
14-Price and Product	14	36	Price Type	Time characteristic of the price	The type of price (day-ahead, real-time, etc.).	Y	-	-	-	-	-
6-Device and Qualification	6	47	Private Use Network	Flag set if the Resource is an Electric Network connected to the transmission grid	This is used for load that is typically netted with internal generation.	-	-	Y	-	-	-
14-Price and Product	14	20	Product Identifier	Identifies specific product associated with the price	-	Y	-	-	Y	-	-



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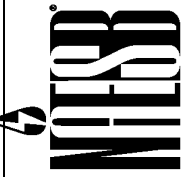
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<u>14-Price and Product</u>	<u>14</u>	<u>10</u>	<u>Product Name</u>	Same as 7.13 Market Product	An identifier for a particular electricity product offering: <u>energy</u> , <u>capacity</u> , <u>ancillary services</u> , etc.	Y	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>31</u>	<u>Product Price</u>	The sum of all Price Component Values for a given product (Total Price).		Y	-	-	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>32</u>	<u>Product Price Factor</u>	Terms of use attribute of Product Price	Examples: <u>Price absolute</u> , <u>Price relative</u> , <u>Price multiplier</u>	Y	-	-	Y	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>12</u>	<u>Product Sub-type</u>	Used to further define product types		Y	-	-	Y	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>11</u>	<u>Product Type</u>	Defines the source and product	Classifications used within industry for trading energy. Examples: <u>PJM Energy</u> , <u>NVISO 10-min Spin</u> , etc.	Y	-	-	-	-	Y
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>10</u>	<u>Program ID</u>	Program Identifier	The identifier of the program	-	-	Y	-	-	Y
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>11</u>	<u>Program Name</u>	Name of the Program		-	-	Y	-	-	Y
<u>6-Device and Qualification</u>	<u>6</u>	<u>222</u>	<u>PT Ratio</u>	Ratio of the Potential Transformer		-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>24</u>	<u>Qualified Capacity</u>	Nominal ICAP derated for performance	Derated based on past performance.	-	-	Y	-	-	Y
<u>8-Offer Parameters</u>	<u>8</u>	<u>25</u>	<u>Ramp Rate Direction</u>	Direction of the selected Ramp Rate Type and Ramp Rate Segment	Valid directions are: <u>Upward</u> , <u>Downward</u> , <u>Both</u> .	-	-	Y	-	-	Y



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
8- <u>Offer Parameters</u>	8	24	<u>Ramp Rate Segment</u>	Energy of Segment of the Ramp Rate	The end value of the Ramp Rate step, monotonically increasing or decreasing (as indicated by the Ramp Rate Direction), expressed in MW. (NOTE: When required as part of an enrollment request, this value becomes the default)	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	23	<u>Ramp Rate Type</u>	Type of Ramp Rate	Examples are: Normal, Emergency, Regulation.	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	26	<u>Ramp Rate Value</u>	Ramp Rate associated with the selected Ramp Rate Type for the selected Ramp Rate Segment and Ramp Rate Direction	The NERC definition of Ramp Rate is the rate, expressed in megawatts per minute, by which a generator changes its output. For a Demand Resource, the Ramp Rate is the rate, expressed in megawatts per minute, by which a Demand Resource changes its Load.	-	-	Y	-	-	Y
7- <u>Market/Program Enrollment</u>	7	32	<u>Real Time Flag</u>	Flag set if the Resource will be participating in the Real-Time market		-	-	Y	-	-	-



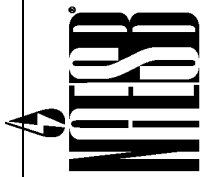
RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
10-Ancillary Service Market	10	32	<u>Regulation Base Point</u>	<u>Per-interval Regulation dispatch instruction</u>	<u>Regulation Service is a type of Demand Response service in which a Demand Resource corrects for short-term changes in electricity use that might affect the stability of the power system, matching generation and load to maintain a desired frequency. Demand Resources providing Regulation Service are subject to dispatch continuously during a commitment period. Provision of Regulation Service does not correlate to Demand Response deployment terms of the Event timelines, deadlines and durations.</u>	-	-	Y	-	-	-
0-Common Message Parameters	0	13	<u>Rejection Code Type</u>	<u>Type of rejection message</u>	<u>Rejection code type is categorizing the different kinds of rejection messages associated with enrollment, qualification, offers or meter data. May be combined with comments to provide details beyond the type of rejection.</u>	-	-	Y	-	-	-
0-Common Message Parameters	0	14	<u>Rejection Code Value</u>	<u>Code referring to the reason for a rejection message</u>	<u>Rejection code related to the type of rejection. May be combined with comments to provide details beyond the type of rejection.</u>	-	-	Y	-	-	-
12-Event and Performance	12	30	<u>Reporting Interval</u>	<u>Interval size required for Reporting</u>	-	-	-	Y	-	-	Y
10-Ancillary Service Market	10	24	<u>Regulation Requirement</u>	<u>Flag set if Regulation is Required</u>	-	-	-	Y	-	-	-



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>26</u>	<u>Requalification Test Date</u>	Date the Resource will retest its ability to deliver a product or service		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>31</u>	<u>Reserve Pickup Flag</u>	Flag set if this is a Reserve Pickup schedule	Reserve Service is a type of Demand Response service in which Demand Resources are obligated to be available to provide Demand reduction Energy Service, based on reserve capacity requirements that are established to meet applicable reliability standards. Reserve Services are defined by short-term response rates (Ramp Period) and synchronization with the electricity grid (i.e., spinning and non-spinning reserves).	-	-	<u>Y</u>	-	-	-
<u>1-General Asset /Resource</u>	<u>1</u>	<u>20</u>	<u>Resource ID</u>	Identifier assigned to the Resource	A Resource may be an individual asset or a group of assets that represent a dispatchable entity.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>1-General Asset /Resource</u>	<u>1</u>	<u>21</u>	<u>Resource Name</u>	Name of the Resource		-	-	<u>Y</u>	-	-	-
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>24</u>	<u>Resource Qualification Test Date</u>	Date the Resource demonstrated its ability to deliver a product or service		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>23</u>	<u>Resource Type</u>	Type of Resource	Examples are: load reduction (curtailable or interruptible load), distributed generation, combination, renewable, storage, etc.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>7-Market/Program</u>	<u>7</u>	<u>41</u>	<u>Response Method ID</u>	Identifier assigned to the Response Method		-	-	<u>Y</u>	-	-	-



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

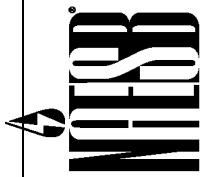
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Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

<u>Category</u>	<u>Category ID</u>	<u>Category ID</u>	<u>Data Element</u>	<u>Short Description</u>	<u>Long Description</u>	<u>Wholesale</u>			<u>Retail</u>				
						<u>PAP 03</u>	<u>PAP 04</u>	<u>PAP 09</u>	<u>PAP 03</u>	<u>PAP 04</u>	<u>PAP 09</u>		
<u>Enrollment</u>													
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>42</u>	<u>Response Method Name</u>	<u>Name of the Response Method</u>	-	-	Y	-	-	-	-	-	-
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>40</u>	<u>Response Method Type</u>	<u>Type of Response Method</u>	Expressed as a response type code								
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>43</u>	<u>Response Method Value</u>	<u>Value of the Response Method</u>	The Demand Response Value is the quantity of modified electrical consumption by a Demand Resource, expressed as MW.								
<u>7-Market/Program Enrollment</u>	<u>7</u>	<u>34</u>	<u>Response Time</u>	The amount of time before an asset/resource is capable of meeting its full performance, in response to a request by a Service Provider to shed load.									Y
<u>12-Event and Performance</u>	<u>12</u>	<u>33</u>	<u>Response Value</u>	<u>Response</u>									Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>44</u>	<u>Retail Rate</u>	<u>Retail Rate</u>	Expressed as Price per kWh								-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>41</u>	<u>Retail Rate Code</u>	Code representing the Retail Rate for the Service Location									-



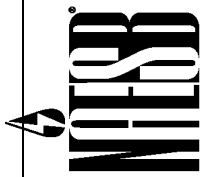
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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>43</u>	<u>Retail Rate Description</u>	<u>Description of the Retail Rate</u>	<u>This can also be used for comments associated with the Retail Rate.</u>	-	-	<u>Y</u>	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>40</u>	<u>Retail Rate ID</u>	<u>Identifier assigned to the Retail Rate</u>	-	-	-	<u>Y</u>	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>42</u>	<u>Retail Rate Name</u>	<u>Name of the Retail Rate for the Service Location</u>	-	-	-	<u>Y</u>	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>42</u>	<u>Schedule Description</u>	<u>Description of the Offer</u>	-	-	-	<u>Y</u>	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>15</u>	<u>Schedule ID</u>	-	<u>Unique identifier assigned to each schedule.</u>	-	-	<u>Y</u>	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>41</u>	<u>Schedule Name</u>	<u>Name or tag of the Offer</u>	-	-	-	<u>Y</u>	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>43</u>	<u>Schedule Status</u>	<u>Status of the Offer</u>	-	-	-	<u>Y</u>	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>70</u>	<u>Scheduling Entity ID</u>	<u>Identifier assigned to the Scheduling Entity</u>	<u>A Scheduling Entity submits bids and/or offers and receives Schedules and Awards.</u>	-	-	<u>Y</u>	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>71</u>	<u>Scheduling Entity Name</u>	<u>Name of the Scheduling Entity</u>	-	-	-	<u>Y</u>	-	-	-



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
7-Market/ Program Enrollment	7	33	<u>Self-Schedule Flag</u>	Flag set if the Resource is Self-Deploying	Self-Deployment is the Deployment via established Communication Methods initiated by the Service Provider or the Resource.	-	-	Y	-	-	-
1-General Asset / Resource	1	10	<u>Service Location ID</u>	Identifier assigned to the Service Location	The location at which connection to the transmission or distribution system is made.	-	-	Y	-	-	Y
1-General Asset / Resource	1	11	<u>Service Location Name</u>	Name of the Service Location	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	11	<u>Service Provider ID</u>	Identifier assigned to the Service Provider	The Service Provider coordinates Resources to deliver electricity products and services to a market or distribution operator.	-	-	Y	-	-	Y
5-Business Entity Relationships	5	12	<u>Service Provider Name</u>	Name of the Service Provider	-	-	-	Y	-	-	-
9-Energy Market	9	25	<u>Set Point</u>	Final dispatch target level	The real-time desired MW output signal calculated for a specific Resource by the Transmission Provider's control system on a specified periodicity that is equal to the current Energy Dispatch Target plus the Regulating Reserve Deployment instruction (which may be positive or negative) plus an adjustment to the Energy Dispatch Target to account for Contingency Reserve Deployment Instructions. The Setpoint Instruction represents the desired output level of the Resource.	-	-	Y	-	-	-

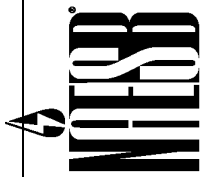


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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>12-Event and Performance</u>	<u>12</u>	<u>50</u>	<u>Simple Signal Levels</u>	Used as an alternate and simplified representation of the DR signal, whether it be price based or a dispatch. Takes on a small number of finite levels such as NORMAL, MODERATE, and HIGH, SPECIAL	-	-	-	-	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>40</u>	<u>Source Location Identifier</u>	The identifier of the source location of the product for which the price applies	Y	-	-	Y	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>41</u>	<u>Source Location Identifier Type</u>	The type of source location of the product for which the price applies	Y	-	-	-	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>34</u>	<u>Startup Cost</u>	Cost of starting a response activity	-	-	-	Y	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>37</u>	<u>Startup Cost Type</u>	Type of startup cost	-	-	-	Y	-	-	-
<u>2-Location</u>	<u>2</u>	<u>13</u>	<u>State/Province</u>	State or Province two-letter code	-	-	-	Y	-	-	Y

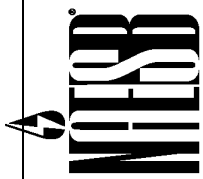
NOTE: When required as part of an enrollment request, this value becomes the default.

The type of Start Up Cost included in the offer. Options may include: Select cold, intermediate, hot or shutdown.



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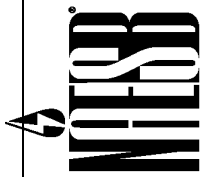
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>13-Direct Load Control</u>	<u>13</u>	<u>10</u>	<u>Status Check</u>	A signal to require the DR resource status to be sent back. (Only applicable to Direct Load Control)	-	-	-	-	-	-	<u>Y</u>
<u>8-Offer Parameters</u>	<u>8</u>	<u>35</u>	<u>Strike Price</u>	<u>Threshold Price</u>	Expressed as a decimal value of price/MW.	-	-	<u>Y</u>	-	-	-
<u>8-Offer Parameters</u>	<u>8</u>	<u>332</u>	<u>Strike Price Type</u>	Type of strike price	Indicates the type of strike price. Options may include: buy or sell.	-	-	<u>Y</u>	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>10</u>	<u>Submittal Date</u>	Timestamp for the sender's use	-	-	-	<u>Y</u>	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>11</u>	<u>Submitted By</u>	User ID of submitter	Common data element to indicate the user ID of the entity submitting the data	-	-	<u>Y</u>	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>12</u>	<u>Submitted Error</u>	ID of submission error detected	Common data element to capture any errors or exceptions during submission	-	-	<u>Y</u>	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>21</u>	<u>Synchronization Test Date</u>	Target Date of Test of Synchronization to the grid	-	-	-	<u>Y</u>	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>13</u>	<u>Third Party</u>	Flag set if the Contact is a third-party entity	-	-	-	<u>Y</u>	-	-	-
<u>2-Location</u>	<u>2</u>	<u>22</u>	<u>Time Zone Name</u>	Name of the Time Zone in which the Service Location is located	-	-	-	<u>Y</u>	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
3-Contact	3	20	<u>Title</u>	<u>Title of the Contact</u>	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	22	<u>Transmission / Distribution Service Provider Account Number</u>	<u>Transmission / Distribution Service Provider's account number for the Resource</u>	-	-	Y	-	-	-	Y
5-Business Entity Relationships	5	20	<u>Transmission / Distribution Service Provider ID</u>	<u>Identifier assigned to the Transmission / Distribution Service Provider</u>	<u>The Transmission / Distribution Service Provider operates a local electricity transmission and/or distribution system.</u>	-	-	Y	-	-	-
5-Business Entity Relationships	5	21	<u>Transmission / Distribution Service Provider Name</u>	<u>Name of the Transmission / Distribution Service Provider</u>	-	-	-	Y	-	-	-
6-Device and Qualification	6	51	<u>UFR Settings</u>	<u>Setting of the Under-Frequency Relay</u>	-	-	-	Y	-	-	-
14-Price and Product	14	14	<u>Unit of Measure</u>	<u>Attribute of Product Identifier</u>	-	-	-	-	-	-	Y
12-Event and Performance	12	52	<u>Usage Information</u>	<u>Information about the near real time electricity usage of the DR Resource.</u>	-	-	-	-	-	-	Y



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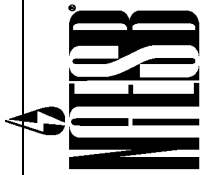
Category	Category ID	Category ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	229 2	<u>VEE Compliance</u>	<u>Compliance standard for Validation, Editing, and Estimation</u>	<u>Validation, Editing, and Estimation is the process of taking raw meter data and performing validation and, as necessary, editing and estimation of corrupt or missing data, to create validated data. VEE guidelines are published in the Edison Electric Institute's Uniform Business Practices for Unbundled Electricity Metering, Volume Two, Published 12/05/00, http://www.naesb.org/REQ/reg_form.asp.</u>	-	-	Y	-	-	-
7-Market/Program Enrollment	7	44	<u>Verified Capability</u>	<u>Audited Capability</u>	<u>Auditing is the validation of performance, conducted by the System Operator, of certain Response Aggregation Methods AFTER the Enrollment process.</u>	-	-	Y	-	-	-
7-Market/Program Enrollment	7	45	<u>Verified Capability Factor</u>	<u>Ratio of the Verified Capability to the qualified capability</u>	<u>Qualification is the validation of performance, conducted by the System Operator, of certain Response Aggregation Methods DURING the Enrollment process.</u>	-	-	Y	-	-	-
2-Location	2	21	<u>Weather Station</u>	<u>Weather Station code associated with the Service Location</u>	-	-	-	Y	-	-	Y
6-Device and Qualification	6	46	<u>Wholesale Delivery Point Status</u>	<u>Flag set if the Service Location is metered at the Wholesale level</u>	-	-	-	Y	-	-	-
2-Location	2	14	<u>Zip/Postal Code</u>	<u>Zip or Postal Code</u>	-	-	-	Y	-	-	Y
2-Location	2	31	<u>Zone</u>	<u>Name of the Zone in which the Service Location is</u>	<u>A Zone is a physical or electrical region.</u>	-	-	Y	-	-	Y



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09		
				located									
2-Location	2	30	Zone ID	Identifier assigned to the Zone in which the Service Location is located				Y	-	-			Y
2-Location	2	32	Zone Type	Type of Zone	Examples: Capacity, Dispatch, Price, Load, etc.			Y	-	-			-



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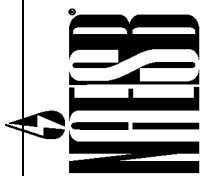
Listing by Category ID and Category Element ID

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>0-Common Message Parameters</u>											
<u>0-Common Message Parameters</u>	<u>0</u>	<u>10</u>	<u>Submittal Date</u>	Timestamp for the sender's use	-	-	-	Y	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>11</u>	<u>Submitted By</u>	User ID of submitter	<u>Common data element to indicate the user ID of the entity submitting the data</u>	-	-	Y	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>12</u>	<u>Submitted Error</u>	ID of submission error detected	<u>Common data element to capture any errors or exceptions during submission</u>	-	-	Y	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>13</u>	<u>Rejection Code Type</u>	Type of rejection message	<u>Rejection code type is categorizing the different kinds of rejection messages associated with enrollment, qualification, offers or meter data. May be combined with comments to provide details beyond the type of rejection.</u>	-	-	Y	-	-	-
<u>0-Common Message Parameters</u>	<u>0</u>	<u>14</u>	<u>Rejection Code Value</u>	Code referring to the reason for a rejection message	<u>Rejection code related to the type of rejection. May be combined with comments to provide details beyond the type of rejection.</u>	-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
0-Common Message Parameters	0	20	<u>NERC CIP Security - Availability</u>	CIP Security Classification for <u>Availability</u>	-	-	Y	-	-	-	
0-Common Message Parameters	0	21	<u>NERC CIP Security - Confidentiality</u>	CIP Security Classification for <u>Confidentiality</u>	-	-	Y	-	-	-	
0-Common Message Parameters	0	22	<u>NERC CIP Security - Integrity</u>	CIP Security Classification for <u>Integrity</u>	-	-	Y	-	-	-	
<u>1-General Asset / Resource</u>	<u>1</u>	-	<u>General Asset/Resource</u>	-	-	-	-	-	-	-	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>10</u>	<u>Service Location ID</u>	Identifier assigned to the <u>Service Location</u>	The location at which connection to the <u>transmission or distribution system is made.</u>	-	-	Y	-	Y	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>11</u>	<u>Service Location Name</u>	Name of the <u>Service Location</u>	-	-	Y	-	-	-	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>12</u>	<u>Asset ID</u>	The unique identifier of the <u>asset</u>	-	-	Y	-	-	Y	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>13</u>	<u>Asset Name</u>	The name of the <u>asset</u>	-	-	Y	-	-	-	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>20</u>	<u>Resource ID</u>	Identifier assigned to the <u>Resource</u>	A Resource may be an <u>individual asset or a group of assets that represent a dispatchable entity.</u>	-	-	Y	-	Y	
<u>1-General Asset / Resource</u>	<u>1</u>	<u>21</u>	<u>Resource Name</u>	Name of the <u>Resource</u>	-	-	Y	-	-	-	



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Element ID	Data Element	Short Description	Long Description	Wholesale			Retail			
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09	
1-General Asset / Resource	1	22	<u>DR Resource Group ID</u>	Grouping of Resources that can respond to the same DR signal		-	-	-	-	-	-	Y
1-General Asset / Resource	1	30	<u>Asset Group ID</u>	The identifier of a group of assets	An Asset Group is a logical entity that has a reportable interval-level consumption.	-	-	Y	-	-	-	Y
1-General Asset / Resource	1	31	<u>Asset Group Name</u>	Name of the aggregated group of assets		-	-	Y	-	-	-	Y
1-General Asset / Resource	1	40	<u>GenEMSID</u>	Alias or point Identifier assigned to the Resource		-	-	Y	-	-	-	-
1-General Asset / Resource	1	41	<u>GenBillingID</u>	Billing Identifier assigned to the Resource		-	-	Y	-	-	-	-
1-General Asset / Resource	1	50	<u>Business Segment</u>	SIC or NAICS code of the Service Location		-	-	Y	-	-	-	-
1-General Asset / Resource	1	51	<u>Batch Load Flag</u>	Flag set if the Resource is a Batch Load		-	-	Y	-	-	-	-
1-General Asset / Resource	1	991	<u>General Resource Comments</u>	General comments associated with the Resource		-	-	Y	-	-	-	-
2-Location	2	-	<u>Location</u>	-	-	-	-	-	-	-	-	-
2-Location	2	10	<u>Address1</u>	Address line 1		-	-	Y	-	-	-	Y
2-Location	2	11	<u>Address2</u>	Address line 2		-	-	Y	-	-	-	Y
2-Location	2	12	<u>City</u>	City		-	-	Y	-	-	-	Y
2-Location	2	13	<u>State/Province</u>	State or Province two-letter code		-	-	Y	-	-	-	Y



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Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

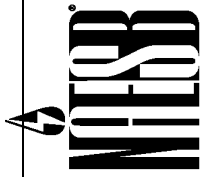
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>2-Location</u>	<u>2</u>	<u>14</u>	<u>Zip/Postal Code</u>	<u>Zip or Postal Code</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>15</u>	<u>Country</u>	<u>Country</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>20</u>	<u>GPS Coordinates</u>	<u>Latitude and longitude</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>21</u>	<u>Weather Station</u>	<u>Weather Station code associated with the Service Location</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>22</u>	<u>Time Zone Name</u>	<u>Name of the Time Zone in which the Service Location is located</u>	-	-	-	Y	-	-	-
<u>2-Location</u>	<u>2</u>	<u>30</u>	<u>Zone ID</u>	<u>Identifier assigned to the Zone in which the Service Location is located</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>31</u>	<u>Zone</u>	<u>Name of the Zone in which the Service Location is located</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>32</u>	<u>Zone Type</u>	<u>Type of Zone</u>	-	-	-	Y	-	-	-
<u>2-Location</u>	<u>2</u>	<u>40</u>	<u>Electrical Node ID</u>	<u>Identifier assigned to the Electrical Node at which the Service Location is connected</u>	-	-	-	Y	-	-	Y
<u>2-Location</u>	<u>2</u>	<u>41</u>	<u>Electrical Node Name</u>	<u>Name of the Electrical Node at which the Service Location is connected</u>	-	-	-	Y	-	-	Y



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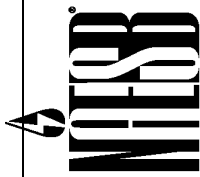
For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
2-Location	2	42	<u>Electrical Node Type</u>	Type of Electrical Node at which the Service Location is attached		-	-	Y	-	-	Y
2-Location	2	43	<u>PNode</u>	Name of the Price Node associated with the Service Location	The P-Node is the price location of the Service Location in the transmission and/or distribution network.	-	-	Y	-	-	Y
2-Location	2	44	<u>PNode ID</u>	Identifier assigned to the Price Node associated with the Service Location		-	-	Y	-	-	Y
2-Location	2	50	<u>Competitive Choice Area</u>	Flag set if the Service Location is in an area with Competitive Choice		-	-	Y	-	-	-
2-Location	2	51	<u>Asset Multiplier</u>	Number of identical Assets within the Service Location		-	-	Y	-	-	-
2-Location	2	60	<u>NERC Control Area</u>	The NERC control area of the resource		-	-	Y	-	-	-
2-Location	2	71	<u>Connection Type</u>	Additional type of connection associated with the Service Delivery Point	Example: ICCP Connection, IP address	-	-	Y	-	-	-
2-Location	2	72	<u>Connection Address</u>	Address associated with the Connection Type	Example: Address of ICCP Connection, IP address	-	-	Y	-	-	-
2-Location	2	991	<u>Location Comments</u>	Comments associated with the Service Location		-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>3-Contact</u>	<u>3</u>	<u>10</u>	<u>Contact Type</u>	Interest code associated with a Contact	This is a classification defining the function a particular contact serves. It supports "who to call for what needs" decisions. Examples are: Primary, Secondary, Billing, Third Party, and Authorized Representative.	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>11</u>	<u>Contact Priority</u>	Order in which this Contact should be selected	This is used when multiple contacts are defined.	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>12</u>	<u>DUNS Number</u>	DUNS business number	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>13</u>	<u>Third Party</u>	Flag set if the Contact is a third-party entity	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>20</u>	<u>Title</u>	Title of the Contact	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>21</u>	<u>First Name</u>	First Name of the Contact	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>22</u>	<u>Last Name</u>	Last Name of the Contact	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>23</u>	<u>Contact Middle Name</u>	Middle Name of the Contact	-	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>30</u>	<u>Contact Method</u>	Method of communication with the Contact	This identifies the various types of communication options (phone, email, etc.) to be used.	-	-	Y	-	-	-
<u>3-Contact</u>	<u>3</u>	<u>31</u>	<u>Contact Address Data</u>	Method-dependent Address of the Contact	This identifies specific information required for the contact method selected.	-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
3-Contact	3	32	<u>Contact Method Priority</u>	<u>Order in which a Communication Method should be selected for a Contact</u>	A Communication Method is the medium by which an object communicates with another object for instruction, measurement, or control. The user specifies the sequence in which each medium is to be used when being contacted.	-	-	Y	-	-	-
3-Contact	3	991	<u>Contact Comments</u>	<u>Comments associated with the Contact</u>		-	-	Y	-	-	-
<u>4-Grid Connection</u>	<u>4</u>	-	<u>Grid Connection</u>	-	-	-	-	-	-	-	-
4-Grid Connection	4	10	<u>Loss Factor Type</u>	<u>Type of Loss Factor</u>		-	-	Y	-	-	-
4-Grid Connection	4	11	<u>Loss Factor Value</u>	<u>Loss Factor</u>	<u>Expressed as a decimal value.</u>	-	-	Y	-	-	-
4-Grid Connection	4	12	<u>Connect Voltage</u>	<u>Voltage level</u>	<u>Voltage at connection.</u>	-	-	Y	-	-	-
4-Grid Connection	4	991	<u>Grid Connection Comments</u>	<u>Comments associated with the Grid Connection of the Resource</u>		-	-	Y	-	-	-
<u>5-Business Entity Relationships</u>	<u>5</u>	-	<u>Business Entity Relationships</u>	-	-	-	-	-	-	-	-
5-Business Entity Relationships	5	11	<u>Service Provider ID</u>	<u>Identifier assigned to the Service Provider</u>	<u>The Service Provider coordinates Resources to deliver electricity products and services to a market or distribution operator.</u>	-	-	Y	-	-	Y



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
5-Business Entity Relationships	5	12	<u>Service Provider Name</u>	Name of the Service Provider	-	-	Y	-	-	-	-
5-Business Entity Relationships	5	13	<u>Demand Response Provider</u>	-	The entity that is responsible for delivering Demand reductions from Demand Resources and is compensated for providing such Demand Response products.	-	-	-	-	-	Y
5-Business Entity Relationships	5	14	<u>Demand Response Controlling Entity</u>	-	An identifier for the Service Provider issuing the DR event deployment instructions.	-	-	-	-	-	Y
5-Business Entity Relationships	5	20	<u>Transmission / Distribution Service Provider ID</u>	Identifier assigned to the Transmission / Distribution Service Provider	The Transmission / Distribution Service Provider operates a local electricity transmission and/or distribution system.	-	-	Y	-	-	-
5-Business Entity Relationships	5	21	<u>Transmission / Distribution Service Provider Name</u>	Name of the Transmission / Distribution Service Provider	-	-	Y	-	-	-	-
5-Business Entity Relationships	5	22	<u>Transmission / Distribution Service Provider Account Number</u>	Transmission / Distribution Service Provider's account number for the Resource	-	-	Y	-	-	-	Y



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
5-Business Entity Relationships	5	30	<u>Load Serving Entity ID</u>	Identifier assigned to the LSE	The Load-Serving Entity serves end users and sells electric energy to end users.	-	-	Y	-	-	-
5-Business Entity Relationships	5	31	<u>Load Serving Entity Name</u>	Name of the LSE	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	40	<u>Retail Rate ID</u>	Identifier assigned to the Retail Rate	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	41	<u>Retail Rate Code</u>	Code representing the Retail Rate for the Service Location	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	42	<u>Retail Rate Name</u>	Name of the Retail Rate for the Service Location	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	43	<u>Retail Rate Description</u>	Description of the Retail Rate	This can also be used for comments associated with the Retail Rate.	-	-	Y	-	-	-
5-Business Entity Relationships	5	44	<u>Retail Rate</u>	Retail Rate	Expressed as Price per kWh	-	-	Y	-	-	-
5-Business Entity Relationships	5	50	<u>Meter Installation Provider ID</u>	Identifier assigned to the Meter Installation Provider	-	-	-	Y	-	-	-



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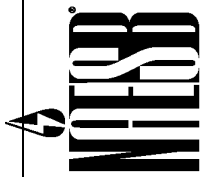
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
5-Business Entity Relationships	5	51	<u>Meter Installation Provider Name</u>	Name of the Meter Installation Provider	This is the competitive meter entity for the meter device.	-	-	Y	-	-	-
5-Business Entity Relationships	5	60	<u>Meter Authority ID</u>	Identifier assigned to the Metering Authority	The Metering Authority provides electric usage data necessary to determine the performance of a Resource.	-	-	Y	-	-	-
5-Business Entity Relationships	5	61	<u>Meter Authority Name</u>	Name of the Metering Authority	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	70	<u>Scheduling Entity ID</u>	Identifier assigned to the Scheduling Entity	A Scheduling Entity submits bids and/or offers and receives Schedules and Awards.	-	-	Y	-	-	-
5-Business Entity Relationships	5	71	<u>Scheduling Entity Name</u>	Name of the Scheduling Entity	-	-	-	Y	-	-	-
5-Business Entity Relationships	5	80	<u>Designated Dispatch Entity ID</u>	Identifier assigned to the Designated Dispatch Entity	The Designated Dispatch Entity receives and processes Demand Resource Dispatch instructions or market information and may provide response information.	-	-	Y	-	-	-
5-Business Entity Relationships	5	81	<u>Designated Dispatch Entity Name</u>	Name of the Designated Dispatch Entity	-	-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09					
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>90</u>	<u>Asset Operator ID</u>	The identifier of the business entity that operates the DR assets. This is the entity that has physical control of the asset and control of the capability to participate in DR Events.	-	-	-	-	-	-	-	-	-	-	Y	
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>91</u>	<u>Asset Operator Name</u>	The name of the business entity that operates the DR assets. This is the entity that has physical control of the asset and control of the capability to participate in DR Events.	-	-	-	-	-	-	-	-	-	-	-	Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>92</u>	<u>Asset Owner ID</u>	The Identifier of the business entity that owns the DR assets (entity that has the right to use or transfer use of the asset).	-	-	-	-	-	-	-	-	-	-	-	Y
<u>5-Business Entity Relationships</u>	<u>5</u>	<u>93</u>	<u>Asset Owner Name</u>	The Name of business entity that owns the DR assets (entity that has the right to use or transfer use of the asset).	-	-	-	-	-	-	-	-	-	-	-	Y



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5-Business Entity Relationships	5	991	External Entity Comments	Comments associated with the External Entity	-	-	Y	-	-	-	-	
6-Device and Qualification												
6-Device and Qualification	6	10	Meter Configuration	Configuration of the Meter at the Facility	The CIM defines the Meter as the physical asset that performs the metering role of the ServiceDeliveryPoint. It is used for measuring consumption and detecting events.	-	-	Y	-	-	-	
6-Device and Qualification	6	11	Parent Meter id	Flag set if the Meter is a Master or Parent Meter		-	-	Y	-	-	-	
6-Device and Qualification	6	20	Meter ID	Identifier assigned to the Meter		-	-	Y	-	-	-	
6-Device and Qualification	6	21	Meter Type	Type of Meter installed at the Facility	Examples: RTU, CT/PT, etc.	-	-	Y	-	-	-	
6-Device and Qualification	6	22	Meter Manufacturer	Manufacturer of the Meter		-	-	Y	-	-	-	
6-Device and Qualification	6	221	Meter Installation Date	Date of Installation of the Meter		-	-	Y	-	-	-	
6-Device and Qualification	6	222	PT Ratio	Ratio of the Potential Transformer		-	-	Y	-	-	-	



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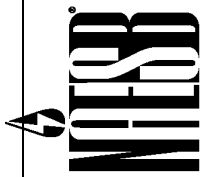
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6-Device and Qualification	6	223	<u>Meter Installer License</u>	Professional License Number of the Installer of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	224	<u>Meter Correction Factors</u>	Device-specific Factors used to adjust for atmospheric changes at the point of installation of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	225	<u>Meter Test Criteria</u>	Test Criteria required to qualify the installation of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	226	<u>Meter Test Frequency</u>	Frequency of Tests of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	227	<u>Meter Device QA Plan</u>	Quality Assurance plan for maintenance and testing of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	228	<u>Date of Last Meter Test</u>	Date of Last Test of the Meter	-	-	Y	-	-	-	-
6-Device and Qualification	6	229	<u>Meter Qualification Date</u>	Date of Qualification of the Meter by the Metering Authority or System Operator	-	-	Y	-	-	-	-
6-Device and Qualification	6	229	<u>Meter Test Results</u>	Results of Tests of the Meter	-	-	Y	-	-	-	-
					These are specific to the meter type.	-	-	Y	-	-	-



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6-Device and Qualification	<u>VEE Compliance</u>	Compliance standard for Validation, Editing, and Estimation	Validation, Editing, and Estimation is the process of taking raw meter data and performing validation and, as necessary, editing and estimation of corrupt or missing data, to create validated data. VEE guidelines are published in the Edison Electric Institute's Uniform Business Practices for Unbundled Electricity Metering, Volume Two, Published 12/05/00, http://www.naesb.org/REQ/reg_form.asp .	-	-	Y	-	-	-
6-Device and Qualification	<u>Measurement Interval</u>	Interval of time between Measurement readings	This is the time between electricity meter recordings. The Measurement records the consumption or supply of an End Device. An End Device is a physical end-use device that consumes or supplies electricity.	-	-	Y	-	-	-
6-Device and Qualification	<u>ANSI Compliance</u>	ANSI standard with which the Meter complies		-	-	Y	-	-	-
6-Device and Qualification	<u>Meter Owner</u>	Owner of the Meter		-	-	Y	-	-	-
6-Device and Qualification	<u>Meter Asset Comments</u>	Comments associated with the Meter Asset		-	-	Y	-	-	-
6-Device and Qualification	<u>Meter Model</u>	Model of the Meter		-	-	Y	-	-	-
6-Device and Qualification	<u>Meter Rating</u>	Load Rating of the Meter		-	-	Y	-	-	-



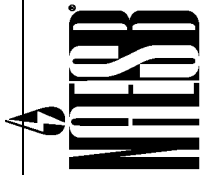
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Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	25	<u>Meter Multiplier (kH)</u>	<u>Multiplier used to convert pulses into power units</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	26	<u>Meter Accuracy Class</u>	<u>Accuracy Class of the Meter</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	27	<u>Meter Loss Compensation</u>	<u>Line Losses included in the Meter</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	28	<u>Maximum Error</u>	<u>Error of the Meter, including end-to-end Maximum Error</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	29	<u>Meter Phase</u>	<u>Specific Phase information</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	291	<u>CT Ratio</u>	<u>Ratio of the Current Transformer</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	30	<u>Distributed Generator Type</u>	<u>Type of Distributed Generator</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	31	<u>Nameplate Rating</u>	<u>Manufacturer's output rating of the Distributed Generator</u>	-	-	Y	-	-	-	
6-Device and Qualification	6	32	<u>Distributed Generator Fuel Type</u>	<u>Type of Fuel consumed by the Distributed Generator</u>	-	-	Y	-	-	-	



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6-Device and Qualification	6	33	<u>Distributed Generator Permit Type</u>	Type of environmental authorization required to operate the <u>Distributed Generator</u>	The Environmental Authority is a regulatory authority responsible for the development, reporting, and enforcement of environmental activities.	-	-	Y	-	-	-
6-Device and Qualification	6	34	<u>Distributed Generator Manufacturer</u>	Manufacturer of the <u>Distributed Generator</u>		-	-	Y	-	-	Y
6-Device and Qualification	6	35	<u>Manufactured Date of Distributed Generator</u>	Date of Manufacturer of the <u>Distributed Generator</u>		-	-	Y	-	-	Y
6-Device and Qualification	6	36	<u>Installation Date of Distributed Generator</u>	Date of Installation of the <u>Distributed Generator</u>		-	-	Y	-	-	-
6-Device and Qualification	6	37	<u>In-Service Date</u>	Date the <u>Distributed Generator</u> became operational		-	-	Y	-	-	-
6-Device and Qualification	6	38	<u>Normal Load Rating</u>	Average load picked up by the <u>Distributed Generator</u> during the applicable performance hours		-	-	Y	-	-	-
6-Device and Qualification	6	39	<u>Distributed Generator Name</u>	Name of the <u>Distributed Generator</u>		-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
6-Device and Qualification	6	41	<u>Interconnection Agreement Type</u>	Type of Interconnection Agreement between the Distributed Generator or Service Location and the TDSP	-	-	Y	-	-	-	-
6-Device and Qualification	6	42	<u>Interconnection Limits</u>	Limits associated with the Interconnection of the Distributed Generator or Service Location	-	-	Y	-	-	-	-
6-Device and Qualification	6	43	<u>Capable of Synchronizing to Grid</u>	Flag set if the Service Location is capable of Synchronizing to the Grid	-	-	Y	-	-	-	-
6-Device and Qualification	6	44	<u>Normal Breaker Status</u>	Status of the Breaker for the Service Location under Normal operating conditions	-	-	Y	-	-	-	-
6-Device and Qualification	6	45	<u>Breaker Status During Event</u>	Status of the Breaker for the Service Location during an Emergency Event	-	-	Y	-	-	-	-
6-Device and Qualification	6	46	<u>Wholesale Delivery Point Status</u>	Flag set if the Service Location is metered at the Wholesale level	-	-	Y	-	-	-	-



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6-Device and Qualification	6	47	Private Use Network	Flag set if the Resource is an Electric Network connected to the transmission grid	This is used for load that is typically netted with internal generation.	-	-	Y	-	-	-
6-Device and Qualification	6	51	UFR Settings	Setting of the Under-Frequency Relay	-	-	-	Y	-	-	-
6-Device and Qualification	6	52	Load Resource Control Device	Type of Control Device at a Service Location or deployed by a Response Method	-	-	-	Y	-	-	-
6-Device and Qualification	6	70	Device Class	-	<p>Note: From SEP2.0 Enumeration representing the Device Class to apply the current Load Control Event.</p> <ul style="list-style-type: none"> 0 HVAC compressor or furnace 1 Strip Heaters/Baseboard Heaters 2 Water Heater 3 Pool Pump/Spa/Jacuzzi 4 Smart Appliances 5 Irrigation Pump 6 Managed Commercial & Industrial (C&I) loads 7 Simple misc. (Residential On/Off) loads 8 Exterior Lighting 9 Interior Lighting 10 Electric Vehicle 11 Generation Systems 12 to 15 Reserved 	-	-	-	-	Y	



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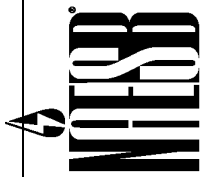
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6-Device and Qualification	6	80	<u>Asset Manufacturer</u>	<u>Manufacturer of the Asset</u>		-	-	-	-	-	-	Y
6-Device and Qualification	6	81	<u>Asset Model</u>	Model identifier of the Asset, assigned by the Manufacturer		-	-	-	-	-	-	Y
6-Device and Qualification	6	82	<u>Asset Version</u>	Model version identifier, assigned by the Manufacturer		-	-	-	-	-	-	Y
6-Device and Qualification	6	83	<u>Asset Manufacture Date</u>	Date of Manufacture of the Asset		-	-	-	-	-	-	Y
6-Device and Qualification	6	84	<u>Asset Type</u>	Type of Asset	Examples are: load reduction (curtailable or interruptible load), generation, combination, DG, renewable, storage, etc.	-	-	-	-	-	-	Y
6-Device and Qualification	6	991	<u>Distributed Generator Comments</u>	Comments associated with the Distributed Generator		-	-	-	-	-	-	-
7-Market / Program Enrollment	7	-	<u>Market/Program Enrollment</u>	-	-	-	-	-	-	-	-	-
7-Market / Program Enrollment	7	10	<u>Program ID</u>	Program Identifier	The identifier of the program	-	-	-	-	-	-	Y



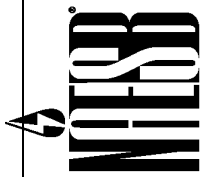
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7-Market/ Program Enrollment	7	11	<u>Program Name</u>	<u>Name of the Program</u>	-	-	Y	-	-	-	Y
7-Market/ Program Enrollment	7	12	<u>Market</u>	<u>Type of wholesale market</u>	-	-	Y	-	-	-	-
7-Market/ Program Enrollment	7	13	<u>Market Product</u>	<u>Market Product</u>	Product types include the following: <u>energy, capacity, regulation, operating reserves (spinning or non-spin).</u>	-	-	Y	-	-	Y
7-Market/ Program Enrollment	7	21	<u>Effective Enrollment Date</u>	<u>Effective Start Date for the Enrollment</u>	<u>Market Enrollment is the collection of enrollment or tariff data for a Demand Resource to provide a specific market product or service.</u>	-	-	Y	-	-	Y
7-Market/ Program Enrollment	7	22	<u>Enrollment Status</u>	<u>Status of the Enrollment for the Facility or Resource</u>	<u>Examples: Pending Enrollment, Approved Enrollment, Under Review, Denied, Separated</u>	-	-	Y	-	-	Y
7-Market/ Program Enrollment	7	23	<u>Resource Type</u>	<u>Type of Resource</u>	<u>Examples are: load reduction (curtailable or interruptible load), distributed generation, combination, renewable, storage, etc.</u>	-	-	Y	-	-	Y
7-Market/ Program Enrollment	7	24	<u>Resource Qualification Test Date</u>	<u>Date the Resource demonstrated its ability to deliver a product or service</u>	-	-	Y	-	-	-	Y
7-Market/ Program Enrollment	7	25	<u>Enrollment End Date</u>	<u>Date of Termination of Enrollment</u>	-	-	Y	-	-	-	Y



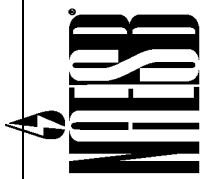
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7-Market/ Program Enrollment	<u>7</u>	<u>26</u>	<u>Requalification Test Date</u>	Date the Resource will retest its ability to deliver a product or service	-	-	Y	-	-	-	Y
7-Market/ Program Enrollment	<u>7</u>	<u>30</u>	<u>Lead Time</u>	Time between the advanced notification and deployment	-	-	Y	-	-	-	Y
7-Market/ Program Enrollment	<u>7</u>	<u>31</u>	<u>Day Ahead Flag</u>	Flag set if the Resource will be participating in the Day-Ahead market	-	-	Y	-	-	-	-
7-Market/ Program Enrollment	<u>7</u>	<u>32</u>	<u>Real Time Flag</u>	Flag set if the Resource will be participating in the Real-Time market	-	-	Y	-	-	-	-
7-Market/ Program Enrollment	<u>7</u>	<u>33</u>	<u>Self-Schedule Flag</u>	Flag set if the Resource is Self-Deploying	-	-	Y	-	-	-	-
7-Market/ Program Enrollment	<u>7</u>	<u>34</u>	<u>Response Time</u>	The amount of time before an asset/resource is capable of meeting its full performance, in response to a request by a Service Provider to shed load.	-	-	-	-	-	-	Y
7-Market/ Program Enrollment	<u>7</u>	<u>40</u>	<u>Response Method Type</u>	Type of Response Method	-	-	Y	-	-	-	-



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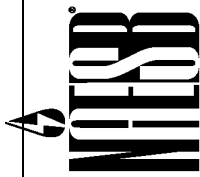
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
7-Market/ Program Enrollment	7	41	<u>Response Method ID</u>	Identifier assigned to the <u>Response Method</u>	-	-	Y	-	-	-	
7-Market/ Program Enrollment	7	42	<u>Response Method Name</u>	Name of the <u>Response Method</u>	-	-	Y	-	-	-	
7-Market/ Program Enrollment	7	43	<u>Response Method Value</u>	Value of the <u>Response Method</u>	The Demand Response Value is the quantity of <u>modified electrical consumption by a Demand Resource, expressed as MW.</u>	-	-	Y	-	-	
7-Market/ Program Enrollment	7	44	<u>Verified Capability</u>	<u>Audited Capability</u>	<u>Auditing is the validation of performance, conducted by the System Operator, of certain Response Aggregation Methods AFTER the Enrollment process.</u>	-	-	Y	-	-	
7-Market/ Program Enrollment	7	45	<u>Verified Capability Factor</u>	Ratio of the <u>Verified Capability to the qualified capability</u>	<u>Qualification is the validation of performance, conducted by the System Operator, of certain Response Aggregation Methods DURING the Enrollment process.</u>	-	-	Y	-	-	
7-Market/ Program Enrollment	7	50	<u>Performance Evaluation Method Type Code</u>	<u>Code representing the Type of Measurement</u>	-	-	Y	-	-	-	
7-Market/ Program Enrollment	7	51	<u>Performance Evaluation Method</u>	<u>Method used to Evaluate the Performance of a Resource</u>	<u>Based on NAESB M&V terms.</u>	-	-	Y	-	-	



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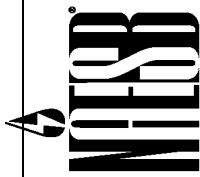
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7-Market/Program Enrollment	7	991	Market Enrollment Comments	Comments associated with the Enrollment	-	-	Y	-	-	-	-	
8- Offer Parameters												
8- Offer Parameters	8	10	Offer Limit Value	Offer Limit Value	Expressed in MW or hours. Multiple Limit Types are applicable.	-	-	Y	-	-	Y	
8- Offer Parameters	8	11	Offer Limit Type	Type of Offer Limit	The limit may be associated with the bidding parameters of a resource. These may include limit types such as seasonal rating, reasonability, economic and ramp limits.	-	-	Y	-	-	Y	
8- Offer Parameters	8	12	Offer Limit Interval	Offer Limit Interval	The period over which the offer limit applies, i.e., hour, day, etc.	-	-	Y	-	-	Y	
8- Offer Parameters	8	20	Physical Min Gen	Minimum Operating Level of a Resource	-	-	-	Y	-	-	Y	
8- Offer Parameters	8	21	Min Gen MW	Minimum MW available for dispatch	When required as part of an enrollment request, this value acts as a default.	-	-	Y	-	-	Y	
8- Offer Parameters	8	22	MinGenCost	The cost per hour for each Min Gen MW value.	The cost per hour for each MinGenMW value.	-	-	Y	-	-	Y	
8- Offer Parameters	8	23	Ramp Rate Type	Type of Ramp Rate	Examples are: Normal, Emergency, Regulation.	-	-	Y	-	-	Y	



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8- <u>Offer Parameters</u>	8	24	<u>Ramp Rate Segment</u>	<u>Energy of Segment of the Ramp Rate</u>	The end value of the Ramp Rate step, monotonically increasing or decreasing (as indicated by the Ramp Rate Direction), expressed in MW (NOTE: When required as part of an enrollment request, this value becomes the default).	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	25	<u>Ramp Rate Direction</u>	<u>Direction of the selected Ramp Rate Type and Ramp Rate Segment</u>	Valid directions are: <u>Upward, Downward, Both.</u>	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	26	<u>Ramp Rate Value</u>	<u>Ramp Rate associated with the selected Ramp Rate Type for the selected Ramp Rate Segment and Ramp Rate Direction</u>	The NERC definition of Ramp Rate is the rate, expressed in megawatts per minute, by which a generator changes its output. For a Demand Resource, the Ramp Rate is the rate, expressed in megawatts per minute, by which a Demand Resource changes its Load. Examples are Flexible (resource follows basepoint signals) or Fixed (resource requests DA commitment and RT schedules of 15 minutes or greater).	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	30	<u>Offer Dispatch Type</u>	<u>Type of Offer</u>	Examples are Flexible (resource follows basepoint signals) or Fixed (resource requests DA commitment and RT schedules of 15 minutes or greater).	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	31	<u>Offer Segment MW</u>	<u>Energy of Segment of the Offer</u>	The end value of the offer step, monotonically increasing, expressed in MW (NOTE: When required as part of an enrollment request, this value becomes the default).	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	32	<u>Offer Segment Price</u>	<u>Price of Segment of the Offer</u>	NOTE: When required as part of an enrollment request, this value becomes the default.	-	-	Y	-	-	-



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8- <u>Offer Parameters</u>	8	33	<u>Offer Segment Hour</u>	<u>Hour of Segment of the Offer</u>	NOTE: When required as part of an enrollment request, this value becomes the default.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	34	<u>Startup Cost</u>	<u>Cost of starting a response activity</u>	NOTE: When required as part of an enrollment request, this value becomes the default.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	35	<u>Strike Price</u>	<u>Threshold Price</u>	Expressed as a decimal value of price/MW.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	36	<u>Offer Expiration Date</u>	<u>Date of Expiration of the Offer</u>	This applies to DAM only.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	37	<u>Startup Cost Type</u>	<u>Type of startup cost</u>	The type of Start Up Cost included in the offer. Options may include: Select cold, intermediate, hot or shutdown.	-	-	Y	-	-	-
8- <u>Offer Parameters</u>	8	38	<u>Offer Commit Status</u>	<u>Commitment status of offer</u>	Product-specific commitment status types included with offer. Examples include: economic, emergency, must-run, not participating, outage run status, override status, etc.	-	-	Y	-	-	Y



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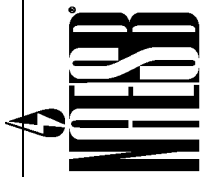
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8- <u>Offer Parameters</u>	8	39	<u>Offer Dispatch Status</u>	Dispatch Status of Offer	Product-specific commitment status types included with offer. Examples include: economic, emergency, not participating, not qualified, and self-schedule. May also be used to temporarily opt out of DR Events and to override the normal operational constraints. The opt-out can be specified using the following criteria: <ul style="list-style-type: none"> All events in a program indefinitely (unspecified time period) Specific DR Event All events in a specific time period. Other triggered programs for which an asset or DR resource is already called upon (reduce double counting of available capacity) 	-	-	Y	-	-	Y
8- <u>Offer Parameters</u>	8	331	<u>Offer Price Curve Slope</u>	Flag to smoothe offer segments from step function to slope				Y	-	-	-
8- <u>Offer Parameters</u>	8	332	<u>Strike Price Type</u>	Type of strike price	Indicates the type of strike price. Options may include: buy or sell.			Y	-	-	-
8- <u>Offer Parameters</u>	8	40	<u>Market Clearing Day</u>	Market Clearing Day of the Offer				Y	-	-	-
8- <u>Offer Parameters</u>	8	41	<u>Schedule Name</u>	Name or tag of the Offer				Y	-	-	-



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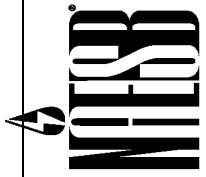
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<u>8-Offer Parameters</u>	<u>8</u>	<u>42</u>	<u>Schedule Description</u>	<u>Description of the Offer</u>	-	-	Y	-	-	-		
<u>8-Offer Parameters</u>	<u>8</u>	<u>43</u>	<u>Schedule Status</u>	<u>Status of the Offer</u>	-	-	Y	-	-	-		
<u>8-Offer Parameters</u>	<u>8</u>	<u>50</u>	<u>Portfolio Name</u>	<u>Name of an aggregation of Resources for market participation</u>	-	-	Y	-	-	-		
<u>8-Offer Parameters</u>	<u>8</u>	<u>71</u>	<u>Constraint Type</u>	<u>Type of operational, schedule or offer constraint</u>	<u>Types of operational, offer or schedule parameters. Examples include: Select Operational Minimum Runtime, Schedule Minimum Runtime, Operational Maximum Runtime, Schedule Maximum Runtime, Minimum Load, Maximum Load, Minimum Downtime, Minimum Starts, Maximum Energy, Maximum Starts, Time of Day schedule constraints, Black out date, Maximum consecutive days of participation, Maximum calls per day, Minimum Advanced Notification, Minimum duration of participation, etc.</u>					-	-	Y
<u>8-Offer Parameters</u>	<u>8</u>	<u>72</u>	<u>Constraint Interval</u>	<u>The timeframe over which the constraint type applies.</u>	Typically daily, hourly, weekly, date					-	-	Y
<u>8-Offer Parameters</u>	<u>8</u>	<u>73</u>	<u>Constraint Value</u>	<u>Value of the Constraint Type and Interval</u>						-	-	Y
<u>9-Energy</u>	<u>9</u>	-	<u>Energy Market</u>	-	-	-	-	-	-	-		



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<u>9-Energy Market</u>	<u>9</u>	<u>0</u>	<u>Instruction ID</u>	-	Unique identifier assigned to each instruction.	-	-	Y	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>10</u>	<u>Energy Schedule - Start Time</u>	<u>Start Time of the Energy Schedule</u>	A Schedule is an energy profile for a Resource for a future time period, by scheduling time interval (typically hourly).	-	-	Y	-	-	Y
<u>9-Energy Market</u>	<u>9</u>	<u>11</u>	<u>Energy Schedule - End Time</u>	<u>End Time of the Energy Schedule</u>	A Schedule is an energy profile for a Resource for a future time period, by scheduling time interval (typically hourly).	-	-	Y	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>12</u>	<u>Energy Schedule - Interval Start Time</u>	<u>Start Time of the Energy Interval within the Energy Schedule</u>	The start time of a specific energy schedule interval	-	-	Y	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>13</u>	<u>Energy Schedule - Cleared MW Interval Value</u>	<u>The Energy Value of cleared MW for the Time Interval within the Energy Schedule</u>	The offered energy MW that have cleared the market.	-	-	Y	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>14</u>	<u>Energy Schedule - Cleared Price</u>	<u>Awarded Price</u>	The market clearing price for the cleared energy MW.	-	-	Y	-	-	-
<u>9-Energy Market</u>	<u>9</u>	<u>15</u>	<u>Schedule ID</u>	-	Unique identifier assigned to each schedule.	-	-	Y	-	-	-



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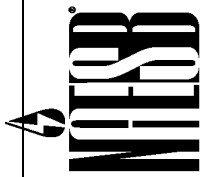
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
9-Energy Market	9	20	<u>Base Point</u>	Per-interval dispatch instruction	A Dispatch is a real-time instruction to a Resource to move to a Base Point at a specific time (Resource-Specific Deployment) or a set of real-time instructions to multiple Resources (Bulk Deployment). A Resource-Specific Deployment is the deployment, via established Communication Methods initiated by the System Operator, of one or more discrete and/or unique Resources designated to provide a selected service.	-	-	Y	-	-	-
9-Energy Market	9	21	<u>Breaker Status</u>	Status of the Breaker for the Resource		-	-	Y	-	-	-
9-Energy Market	9	22	<u>Output MW</u>	Real Power Output of the Distributed Generator	Expressed in MW	-	-	Y	-	-	-
9-Energy Market	9	23	<u>Output MVAR</u>	Reactive Power Output of the Distributed Generator	Expressed in Mvar	-	-	Y	-	-	-
9-Energy Market	9	24	<u>DR Bus Load MW</u>	Instantaneous Bus Load of a Demand Resource providing Ancillary Services	Demand is the rate at which electric energy is being used by the customer (NERC Definition). Expressed in MW. This element only applies to DR	-	-	Y	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
9-Energy Market	9	25	<u>Set Point</u>	Final dispatch target level	The real-time desired MW output signal calculated for a specific Resource by the Transmission Provider's control system on a specified periodicity that is equal to the current Energy Dispatch Target plus the Regulating Reserve Deployment instruction (which may be positive or negative) plus an adjustment to the Energy Dispatch Target to account for Contingency Reserve Deployment Instructions. The Setpoint Instruction represents the desired output level of the Resource.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>											
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>0</u>	<u>Ancillary Service Instruction ID</u>	-	Unique identifier assigned to each ancillary service instruction.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>10</u>	<u>Ancillary Service Product Type</u>	Type of Ancillary Service product(s) the Resource is enrolling to provide	-	-	-	Y	-	-	Y
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>11</u>	<u>Have Engineering Diagram</u>	Flag set if One-Line Diagrams have been submitted	-	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>12</u>	<u>Ancillary Service Award - Start Time</u>	Start Time of the ancillary service Award	A Schedule is an ancillary service profile for a Resource for a future time period, by scheduling time interval.	-	-	Y	-	-	-



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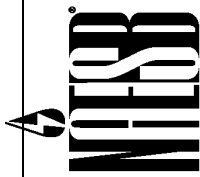
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>13</u>	<u>Ancillary Service Award - End Time</u>	End Time of the ancillary service Award	A Schedule is an ancillary service profile for a Resource for a future time period, by scheduling time interval.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>14</u>	<u>Ancillary Service Award - Interval Start Time</u>	Start Time of the ancillary service Interval within the ancillary service Award and the ancillary service Value of the Time Interval	The start time of a specific ancillary service schedule interval	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>15</u>	<u>Ancillary Service Award - Interval Value</u>	The awarded Value for the Time Interval within the ancillary service Award	The value associated with a specific ancillary service schedule interval	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>16</u>	<u>Ancillary Service Award - Cleared Price</u>	Awarded Price	The market clearing price for the cleared ancillary service product MW.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>17</u>	<u>Ancillary Service Schedule ID</u>	-	Unique identifier assigned to each ancillary service schedule.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>20</u>	<u>Ancillary Service Product Qualification Type</u>	Type of Qualification	Examples include initial, requalification, etc.	-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>21</u>	<u>Synchronization Test Date</u>	Target Date of Test of Synchronization to the grid	-	-	-	Y	-	-	-



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<u>10-Ancillary Service Market</u>	<u>10</u>	<u>22</u>	<u>Ancillary Service Product Type Qualification Date</u>	<u>Date of Qualification of the Resource</u>		-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>23</u>	<u>Ancillary Service Product Type Qualified</u>	<u>Type of Ancillary Service Product(s) for which the Resource has Qualified</u>		-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>24</u>	<u>Requalification Requirement</u>	<u>Flag set if Requalification is Required</u>		-	-	Y	-	-	-
<u>10-Ancillary Service Market</u>	<u>10</u>	<u>31</u>	<u>Reserve Pickup Flag</u>	<u>Flag set if this is a Reserve Pickup schedule</u>	<u>Reserve Service is a type of Demand Response service in which Demand Resources are obligated to be available to provide Demand reduction Energy Service, based on reserve capacity requirements that are established to meet applicable reliability standards. Reserve Services are defined by short-term response rates (Ramp Period) and synchronization with the electricity grid (i.e., spinning and non-spinning reserves).</u>		-	-	Y	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
10-Ancillary Service Market	10	32	<u>Regulation Base Point</u>	Per-interval Regulation dispatch instruction	Regulation Service is a type of Demand Response service in which a Demand Resource corrects for short-term changes in electricity use that might affect the stability of the power system, matching generation and load to maintain a desired frequency. Demand Resources providing Regulation Service are subject to dispatch continuously during a commitment period. Provision of Regulation Service does not correlate to Demand Response deployment terms of the Event timelines, deadlines and durations.	-	-	Y	-	-	-
10-Ancillary Service Market	10	33	<u>Base Load MW</u>	Level of Load at time of dispatch	-	-	-	Y	-	-	-
11-Capacity Market						-	-	-	-	-	-
11-Capacity Market	11	10	<u>Capacity Type</u>	Type of Capacity	Capacity Service is a type of Demand Response service in which Demand Resources are obligated over a defined period of time to be available to deliver upon deployment by the System Operator or Service Provider. Examples: Hourly, Monthly, etc.	-	-	Y	-	-	Y
11-Capacity Market	11	11	<u>Capacity Type description</u>	Description of the Type of Capacity	-	-	-	Y	-	-	Y
11-Capacity Market	11	20	<u>Peak Value</u>	Measurement of Peak	-	-	-	Y	-	-	-



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<u>11-Capacity Market</u>	<u>11</u>	<u>21</u>	<u>Peak Type</u>	Type of measurement of Peak	Examples are: Annual, Monthly, Weekly, and Seasonal.	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>22</u>	<u>Peak Date/Time</u>	Date and Time of measurement of Peak	-	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>23</u>	<u>Nominal Capacity</u>	Nominated load	Expressed as a decimal value.	-	-	Y	-	-	Y
<u>11-Capacity Market</u>	<u>11</u>	<u>24</u>	<u>Qualified Capacity</u>	Nominal ICAP derated for performance	Derated based on past performance.	-	-	Y	-	-	Y
<u>11-Capacity Market</u>	<u>11</u>	<u>30</u>	<u>Capacity Obligation Period Type</u>	Type of Capacity Obligation Time Period within which the Resource is obligated	Examples are: All hours, Business hours 1, Business hours 2, Business Hours 3, Non-Business hours.	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>31</u>	<u>Capacity Obligation Period</u>	Period of time for which the Capacity Resource is Obligated	Examples include: month, season, year, etc.	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>40</u>	<u>Minimum Payment Nomination</u>	Strike price for the economic dispatch of the energy component of the capacity program	Expressed in Price/MW.	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>41</u>	<u>Capacity Supply Obligation</u>	Capacity Obligation	This may result from an auction or other clearing mechanism.	-	-	Y	-	-	-
<u>11-Capacity Market</u>	<u>11</u>	<u>50</u>	<u>Capacity Reference ID</u>	Identifier assigned to the External System award	An Award is the selection of a Resource to provide energy, ancillary services, or capacity for a future time period. Expressed as a string.	-	-	Y	-	-	-



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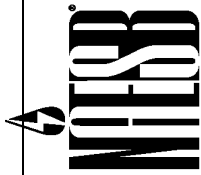
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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>11-Capacity Market</u>	<u>11</u>	<u>991</u>	<u>Capacity Comments</u>	Comments associated with the Capacity market	-	-	Y	-	-	-	-
<u>12-Event and Performance</u>	<u>12</u>	-	<u>Event and Performance</u>	-	-	-	-	-	-	-	-
<u>12-Event and Performance</u>	<u>12</u>	<u>10</u>	<u>Event ID</u>	Identifier assigned to the Event	An Event consists of the time periods, deadlines, and transitions during which Demand Resources perform. The System Operator shall specify the duration and applicability of a Demand Response Event. Some deadlines, time periods, and transitions may not be not applicable to all products or services.	-	-	Y	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>11</u>	<u>Deployment Type</u>	Type of Deployment	Examples are: Advanced (Normal), Immediate, Audit/Test	-	-	Y	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>12</u>	<u>Event Day</u>	Operating Date of Start of Event	-	-	-	-	-	-	-
<u>12-Event and Performance</u>	<u>12</u>	<u>13</u>	<u>Event Description</u>	Description of the Event	-	-	-	Y	-	-	-
<u>12-Event and Performance</u>	<u>12</u>	<u>14</u>	<u>Event Start Time</u>	Time of Start of deployment period for Event	The Deployment Period is the period of time from the Deployment to Release/Recall.	-	-	Y	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>15</u>	<u>Operator Comment</u>	Additional Event information provided by the Operator	-	-	-	Y	-	-	-



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<u>12-Event and Performance</u>	<u>12</u>	<u>16</u>	<u>Deployment MW</u>	Absolute or relative Deployment quantity	Expressed as an absolute or relative (%) MW value.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>17</u>	<u>Event Status</u>	Status of the Event	Examples include: initiated, completed, etc.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>18</u>	<u>Event End Time</u>	Time of End of deployment period	Release/Recall is the notification, sent from the System Operator or Service Demand Response Provider to the Demand Resource, that the Deployment Period has ended or announcing the time that it will end.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>19</u>	<u>Event Modification Number</u>	A modification number for the DR event. This is used to indicate if the DR Event has been modified by the Utility. Each time it is modified, this number is incremented.				<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>111</u>	<u>Notification Acknowledgement</u>	This is an acknowledgement of the receipt of a DR notification or dispatch. It should include any necessary provisions for non-repudiation.				<u>Y</u>	-	-	<u>Y</u>



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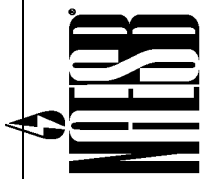
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<u>12-Event and Performance</u>	<u>12</u>	<u>112</u>	<u>Event Modification Reason Code</u>	The reason the event is being cancelled or modified.	-	-	Y	-	-	-	Y	
<u>12-Event and Performance</u>	<u>12</u>	<u>113</u>	<u>Load Level Value</u>	Value of the load level to be achieved based on a set of enumerated values (e.g., moderate, high, etc.).	-	-	-	-	-	-	Y	
<u>12-Event and Performance</u>	<u>12</u>	<u>21</u>	<u>Baseline Dates</u>	Dates of days used to calculate the Energy Baseline	The Baseline Window is the window of time preceding, and optionally following, a Demand Response Event, over which electricity consumption data is collected for the purpose of establishing a Baseline. The applicability of this term is limited to Meter Before/Meter After, and Baseline Type-I and Type-II.							Y
<u>12-Event and Performance</u>	<u>12</u>	<u>22</u>	<u>Baseline Exclusion Dates</u>	Dates of days Excluded from the calculation of the Energy Baseline	-	-	Y	-	-	-	Y	



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<u>12-Event and Performance</u>	<u>12</u>	<u>23</u>	<u>Energy Baseline Value</u>	<u>Calculated Energy Baseline</u>	A Baseline is an estimate of the electricity that would have been consumed by a Demand Resource in the absence of a Demand Response Event. The Baseline is compared to the actual metered electricity consumption during the Demand Response Event to determine the Demand Modification Value. Depending on the type of Demand Response product or service, Baseline calculations may be performed in real time or after the fact.	-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>24</u>	<u>Energy Baseline Timestamp</u>	<u>Timestamp of Energy Baseline</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>30</u>	<u>Reporting Interval</u>	<u>Interval size required for Reporting</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>31</u>	<u>Measurement Value Timestamp (CIM)</u>	<u>The time when the value was last updated</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>32</u>	<u>Measurement Value (CIM)</u>	<u>Value of the interval reading</u>		-	-	<u>Y</u>	-	-	<u>Y</u>
<u>12-Event and Performance</u>	<u>12</u>	<u>33</u>	<u>Response Value</u>	<u>Response</u>		-	-	<u>Y</u>	-	-	<u>Y</u>



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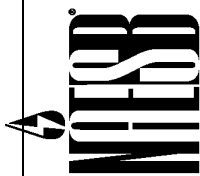
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12-Event and Performance	12	34	<u>Measurement Value Type</u>	The type of measurement value.	The Measurement Value Type identifies the type of information provided in the Measurement Value. For example, the Measurement Value type could be energy (kWh/MWh) or demand (KW or MW).	-	-	Y	-	-	-
12-Event and Performance	12	50	<u>Simple Signal Levels</u>	Used as an alternate and simplified representation of the DR signal, whether it be price based or a dispatch. Takes on a small number of finite levels such as NORMAL, MODERATE, and HIGH, SPECIAL.	-	-	-	-	-	-	Y



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<u>12-Event and Performance</u>	<u>12</u>	<u>51</u>	<u>Criticality Level</u>	<u>This field defines the level of criticality of this event. The action taken by load control devices for an event can be solely based on this value, or combination with other Load Control Event fields supported by this device.</u>	For example, additional fields such as Average Load Adjustment Percentage, Duty Cycle, Cooling Temperature Offset, Heating Temperature Offset, Cooling Temperature Set Point or Heating Temperature Set Point can be used in combination with the Criticality level. <u>Criticality Level Description Participation</u> 0 Reserved 1 Green Voluntary 2 1 Voluntary 3 2 Voluntary 4 3 Voluntary 5 4 Voluntary 6 5 Voluntary 7 Emergency Mandatory 8 Planned Outage Mandatory 9 Service Disconnect Mandatory 0x0A to 0x0F Utility Defined Utility	-	-	-	-	-	Y			
<u>12-Event and Performance</u>	<u>12</u>	<u>52</u>	<u>Usage Information</u>	<u>Information about the near real time electricity usage of the DR Resource.</u>	-	-	-	-	-	-	-	-	-	Y
<u>12-Event and Performance</u>	<u>12</u>	<u>991</u>	<u>Event & Performance comments</u>	<u>Comments associated with Event and Performance data</u>	-	-	-	Y	-	-	-	-	-	-
<u>13-Direct Load Control</u>	<u>13</u>	-	<u>Direct Load Control</u>	-	-	-	-	-	-	-	-	-	-	-



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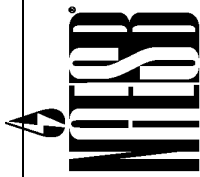
Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>13-Direct Load Control</u>	<u>13</u>	<u>10</u>	<u>Status Check</u>	A signal to require the DR resource status to be sent back. (Only applicable to Direct Load Control)	-	-	-	-	-	-	Y
<u>13-Direct Load Control</u>	<u>13</u>	<u>11</u>	<u>DR Control Command: Direct Load Control Type</u>	The type of DR Direct Load Control Command: e.g. Set Point, Open/Close, Heating, Temperature, offset/setpoint, Cooling Temperature, offset/setpoint, Load adjustment offset	-	-	-	-	-	-	Y
<u>13-Direct Load Control</u>	<u>13</u>	<u>12</u>	<u>DR Control Command: Direct Load Control Value</u>	Value associated with the Direct Load Control Type.	-	-	-	-	-	-	Y
<u>13-Direct Load Control</u>	<u>13</u>	<u>13</u>	<u>Duty Cycle</u>	"Duty Cycle" : Defines the maximum On state duty cycle as a percentage of time. Example, if the value is 80, the device would be in an "on state" for 80% of the time for the duration of the event. Range of the value is 0 to 100. A value	-	-	-	-	-	-	Y



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Wholesale Electric Quadrant
Requesters: Smart Grid Interoperability Panel
Request No.: 2010 REQ Annual Plan Item 6(a-c)
Request Title: Master Data Requirements List for Business Practice Standards associated with NIST PAP 03 and PAP 09

Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail													
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09											
-				-	-																	
				of 0xFF indicates the field is not used." (from SEP2.0)																		
<u>13-Direct Load Control</u>			<u>Event Control</u>	Event Control options for randomized start or end times: 1= Randomize Start time, 0=Randomized Start not Applied 1= Randomize End time, 0=Randomized End not Applied. (from SEP2.0)																		
<u>13-Direct Load Control</u>			<u>Exception Conditions</u>	This is used to report that the load controller may not behave as commanded because of a variety of conditions including: • Faults in device • Customer override.																		



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09	
<u>13-Direct Load Control</u>	<u>13</u>	<u>16</u>	<u>Load Control State</u>	The state of the load, which includes both commanded states and user settings. This may include a schedule of future states if a particular control algorithm for the load controller is being executed.	-	-	-	-	-	-	Y	
14-Price and Product												
<u>14-Price and Product</u>	<u>14</u>	<u>10</u>	<u>Product Name</u>	Same as 7.13 Market Product	An identifier for a particular electricity product offering: energy, capacity, ancillary services, etc.	Y	-	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>11</u>	<u>Product Type</u>	Defines the source and product	Classifications used within industry for trading energy. Examples: PJM Energy, NYISO 10-min Spin, etc.	Y	-	-	-	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>12</u>	<u>Product Sub-type</u>	Used to further define product types	-	Y	-	-	Y	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>13</u>	<u>Identifier Source (product)</u>	The Identifier Source references the product identification scheme for the Product Identifier.	-	Y	-	-	-	-	-	-



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						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>14-Price and Product</u>	<u>14</u>	<u>14</u>	<u>Unit of Measure</u>	<u>Attribute of Product Identifier</u>	-	Y	-	-	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>15</u>	<u>Currency</u>	<u>Economic unit of exchange in which the total price and price components are stated (e.g. dollars, euros)</u>	-	Y	-	-	Y	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>20</u>	<u>Product Identifier</u>	<u>Identifies specific product associated with the price</u>	-	Y	-	-	Y	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>30</u>	<u>Override Unit of Measure</u>	<u>Optional Attribute of Price object</u> <u>If this is used, then Unit of Measure is not applicable</u>	-	Y	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>31</u>	<u>Product Price</u>	<u>The sum of all Price Component Values for a given product (Total Price).</u>	-	Y	-	-	-	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>32</u>	<u>Product Price Factor</u>	<u>Terms of use attribute of Product Price</u>	-	Y	-	-	Y	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>33</u>	<u>Price Component Type</u>	<u>The portion of the price to which the corresponding value applies.</u>	-	Y	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>34</u>	<u>Price Component Value</u>	<u>The value of the price component.</u>	-	Y	-	-	-	-	-



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Category	Category ID	Category Element ID	Data Element	Short Description	Long Description	Wholesale			Retail		
						PAP 03	PAP 04	PAP 09	PAP 03	PAP 04	PAP 09
<u>14-Price and Product</u>	<u>14</u>	<u>35</u>	<u>Price Location</u>	The location at which the price is applicable.		Y	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>36</u>	<u>Price Type</u>	Time characteristic of the price	The type of price (day-ahead, real-time, etc.).	Y	-	-	-	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>37</u>	<u>Delivery Time</u>	Time at which the product is available for physical consumption		Y	-	-	Y	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>38</u>	<u>Delivery Interval</u>	The duration over which the product is available for physical consumption		Y	-	-	Y	-	Y
<u>14-Price and Product</u>	<u>14</u>	<u>40</u>	<u>Source Location Identifier</u>	The identifier of the source location of the product for which the price applies		Y	-	-	Y	-	-
<u>14-Price and Product</u>	<u>14</u>	<u>41</u>	<u>Source Location Identifier Type</u>	The type of source location of the product for which the price applies		Y	-	-	-	-	-



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4. Supporting Documentation

a. Description of Request:

2010 REQ Annual Plan Item 9 and 2010 WEQ Annual Plan Item 6 – “Develop Smart Grid Wholesale and Retail Electric Standards”

b. Description of Recommendation:

This recommendation provides the data requirements related to the use cases developed for Priority Action Plan 03 and 09 as part of the phase one effort

c. Business Purpose:

This recommendation has been developed in response to a request from NIST to provide use cases and requirements germane to the development of standard DR and DER signals.

d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

NAESB Smart Grid Standards Subcommittee Meeting Notes/Documents:

- March 11, 2010 Meeting Notes – To be posted
- March 18, 2010 Meeting Notes – To be posted
- March 25, 2010 Meeting Notes – To be posted
- April 1, 2010 Meeting Notes – To be posted
- April 8, 2010 Meeting Notes – To be posted
- April 29, 2010 Meeting Notes – To be posted
- May 13, 2010 Meeting Notes – To be posted
- May 20, 2010 Meeting Notes – To be posted
- June 10, 2010 Meeting Notes – To be posted
- June 17, 2010 Meeting Notes –
http://www.naesb.org/pdf4/smart_grid_ssd061710notes.doc
- July 1, 2010 Meeting Notes – To be posted
- July 13-14, 2010 Meeting Notes – To be posted
- July 22, 2010 Meeting Notes – To be posted
- August 5, 2010 Meeting Notes –
http://www.naesb.org/pdf4/smart_grid_ssd080510notes.doc
- August 12, 2010 Meeting Notes –
http://www.naesb.org/pdf4/smart_grid_ssd081210notes.doc



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- August 26, 2010 Meeting Notes – http://www.naesb.org/pdf4/smart_grid_ssd082610notes.doc
- September 9, 2010 Meeting Notes – http://www.naesb.org/pdf4/smart_grid_ssd090910notes.doc
- September 16, 2010 Meeting Notes – http://www.naesb.org/pdf4/smart_grid_ssd091610notes.doc
- September 23, 2010 Meeting Notes – To be posted



North American Energy Standards Board

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Home Page: www.naesb.org

via email and posting

TO: NAESB Wholesale Electric Quadrant (WEQ) Members, NAESB Retail Electric Quadrant (REQ) Members and Interested Industry Participants
FROM: Jonathan Booe, Staff Attorney
RE: Request for Formal Comments on the NAESB Business Practices and Information Model to Support Priority Action Plan 10 – Standardized Energy Usage Information
DATE: September 1, 2010

Dear NAESB WEQ and REQ Members and Interested Industry Participants,

An industry formal comment period begins today, September 1, 2010, and ends on September 30, 2010 for the Wholesale and Retail Electric Quadrant recommendations below:

Recommendations:
2010 WEQ Annual Plan Item 6(d): Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information Recommendation: http://www.naesb.org/pdf4/weq_2010_ap_6d_rec.doc
2010 REQ Annual Plan Item 9(d): Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information Recommendation: http://www.naesb.org/pdf4/req_2010_ap_9d_rec.doc

All interested parties, regardless of membership status within NAESB, are eligible to submit comments for consideration. The WEQ and REQ Executive Committees will review the recommendations during the October 15, 2010 review session and consider them for vote during the October 22, 2010 meeting. The Executive Committees will review all submitted comments.

All comments received by the NAESB office by the end of business, September 30, 2010 will be posted (WEQ Request Page: http://www.naesb.org/weq_request.asp and REQ Request Page: http://www.naesb.org/retail_request.asp) and forwarded to the WEQ and REQ Executive Committee members for their consideration. If you have difficulty downloading the recommendations, please call the NAESB office at (713) 356-0060.

Best Regards,

Jonathan Booe

NAESB

cc: Rae McQuade, President



RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE

For Quadrant: Retail Electric and Wholesale Electric Quadrants
Requesters: Smart Grid PAP 10 Subcommittee
Request No.: WEQ AP Item 6(d), REQ AP Item 9(d)
Request Title: Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information

1. RECOMMENDED ACTION:

- Accept as requested
- Accept as modified below
- Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

- Change to Existing Practice
- Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

Per Recommendation:

- Initiation
- Modification
- Interpretation
- Withdrawal

- Principle
- Definition
- Business Practice Standard
- Document
- Data Element
- Code Value
- X12 Implementation Guide
- Business Process Documentation

3. RECOMMENDATION

SUMMARY:

The Joint Retail Electric (REQ) and Wholesale Electric (WEQ) Quadrants’ PAP 10 Smart Grid Subcommittee submit this Recommendation for 2010 Retail Annual Plan Item No. 9d and WEQ Annual Plan Item No. 6d – Business Practices and Information Models to support Priority Action Plan 10, “Standardized Energy Usage Information,” based on the Tiger Team Report issued on June 22, 2010 by the NIST SGIP PAP10 Committee.

In initiating this standards development, NAESB agreed to by year-end 2010 develop an energy use information model standard defining a common data format that may be used when information is communicated between utilities, third parties and energy use customers, via customer devices and/or third party energy services providers. The energy usage information model standard will enable the exchange of detailed energy information in a consistent format for use by customers, utilities, service providers, consumer devices, and energy applications. Doing so will let Customers track their power use and help them manage energy consumption and cost. Without a standardized format for representing energy use data, a variety of approaches could emerge, leading to incompatibilities among energy management products and services. It is planned that the American Society of Heating, Refrigerating and AC Engineers (ASHRAE) will extend the NAESB standard to create a facilities data model providing additional energy use data elements for facility energy management including buildings.



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Request Title: Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information

RECOMMENDED STANDARDS:

WEQ-019 CUSTOMER ENERGY USAGE INFORMATION COMMUNICATION

EXECUTIVE SUMMARY

This standard establishes the Business Practice Standard for Retail Customer energy usage information communication. Specifically, these Business Practice Standards establish a data model for Energy Usage Information. The standard does not limit the form or function of the data model and is inclusive, but not limited to, information that may be communicated in a consistent format among a variety of Entities, including but not limited to Distribution Companies, energy service providers, meter-reading entities, and Retail Customers. Such communication may occur via multiple systems and devices. Establishment of this energy usage information model will standardize a common data format which may be used when information is communicated between utilities, third parties and energy use customers which may aid Retail Customers in tracking and managing their energy use.

The Business Practice Standards Business Practice Standard in this standard do not require that wholesale electricity markets administered by System Operators adopt this model since System Operators generally are not the system of record for individual Retail Customer energy usage information and load data or individual Retail Customer forecasted usage and load data. These Business Practice Standards are not intended to replace applicable Governing Documents, and in the event of a conflict, the latter documents shall have precedence over these standards. Without limiting the foregoing, these Business Practice Standards are only applicable to the extent the information covered by this model is collected, managed or communicated pursuant to the applicable Governing Documents. Retail Customer energy usage information communication encompasses a variety of interactions between Distribution Companies, Retail Customers and energy services providers. In a business environment where best practices are voluntary, Business Practice Standards such as those in this document may be applied within the context of regulatory or other market requirements and agreements.

INTRODUCTION

The North American Energy Standards Board (NAESB) is a voluntary, non-profit organization comprised of members from all aspects of the natural gas and electric industries. Within NAESB, the Retail Electric Quadrant (REQ) and the Retail Gas Quadrant (RGQ) focus on issues impacting the retail sale of energy to end-use Retail Customers. REQ / RGQ Business Practice Standards are intended to provide guidance to retail energy market participants not limited to: Distribution Companies, energy Suppliers, and energy service providers involved in providing competitive energy service to end-use Retail Customers. The focus of these Business Practice Standards is the representation of Retail Customer energy usage information. The scope of the energy usage information model is not intended to characterize the data information model for communication of billing information.

These Business Practice Standards are voluntary and do not address policy issues that are the subject of state legislation or regulatory decisions. These Business Practice Standards have been



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adopted with the realization that as the industry evolves, additional and amended Business Practice Standards may be necessary.

BUSINESS PROCESSES AND PRACTICES

Overview

The business processes and practices described below are not presently applicable to wholesale markets because wholesale markets do not generally communicate directly with Retail Customers and are not the system of record for individual Retail Customer energy usage information or individual Retail Customer load forecast. The energy usage information model and these model business processes and practices are not required of System Operators. As the energy usage information model and these business processes and practices evolve, System Operators may determine that use of the energy usage information model in these Business Practice Standard can be applied to other information. However, such use is not intended to replace or supplant applicable Governing Documents. Without limiting the foregoing, these Business Practice Standards are only applicable to the extent the information covered by this model is collected, managed or communicated pursuant to the applicable Governing Documents.

- WEQ-019.1 Principles**
- WEQ-019.1.1 Overall Principles**
- WEQ-019.1.1.1** These Business Practice Standards provide an energy usage information model, defining a collection of structured energy usage information elements that may be needed to allow customer management of their energy usage and costs, including environmental impacts.
- WEQ-019.1.1.2** The energy usage information model is specified in UML, as a syntax neutral notation, so that it may be used within exchange protocols using a variety of specific representation syntax and exchange mechanisms, specified separately.
- WEQ-019.1.1.3** The recommended use of the energy usage information model is in implementation specifications exposing Customer energy usage information. Specifications that conform to the model shall contain equivalent required and included classes and attributes, thus resulting in straightforward (preferably lossless) transformations between conformant specifications.
- WEQ-019.1.1.4** Neither **the energy usage information** model, nor **these Business Practice Standards** establish or govern ownership or any other rights in any information or data; as such ownership and other rights are subject to and governed by the Governing Documents and/or applicable laws and regulations.
- WEQ-019.1.1.5** Neither the energy usage information model nor these Business Practice Standards create any requirement to collect, manage or communicate any information.



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- WEQ-019.1.1.6** While this standard defines a data model to be used when energy usage information is communicated, the Governing Documents determine the ownership of the data, the access to the data, what systems and hardware are required to comply with providing this information, and how it is paid for. There are no assumed or implied regulations in this standard.
- WEQ-019.1.1.7** Appendix A describes the principles used in developing the energy usage information model and includes an explanatory verification paragraph describing how the energy usage information model satisfies each requirement. The Appendix A requirements up through REQ.18.4.2.11 were provided by the SGIP PAP10 Working Group to the NAESB PAP 10 Subcommittee.
- WEQ-019.1.1.8** The requirements in Appendix A represent a series of intended capabilities for the expressiveness of this standard and are specifically not intended to be requirements for the use of or on users of this standard.
- WEQ-019.2** **Energy Usage Abbreviations, Acronyms and Definition of Terms**
- WEQ-019.2.1** **Business Definitions**
- WEQ-019.2.1.1** **Applicable Regulatory Authority**
- The state regulatory agency or other governing body that provides oversight, policy guidance, and direction to any parties involved in the process of providing energy to Retail Customers through regulations and orders.
- WEQ-019.2.1.2** **(Retail) Customer**
- Any Entity that takes gas and/or electric service for its own consumption.
- WEQ-019.2.1.3** **Distribution Company**
- A regulated Entity which provides distribution services and may provide energy and/or transmission/transportation services in a given area.
- WEQ-019.2.1.4** **Entity**
- A person or organization with sufficient legal standing to enter into a contract or arrangement with another such person or organization (as such legal standing may be determined by those parties) for the purpose of conducting and/or coordinating energy transactions.



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WEQ-019.2.1.5

Governing Documents

Documents that govern the interactions among parties, including but not limited to: regulatory documents (e.g. tariffs, rules, regulations), contractual agreements, and Distribution Company Operational Manuals.

WEQ-019.2.1.6

Market Participant

A party engaged in the process of providing competitive retail energy to end-use Customers including but not limited to the Distribution Company, the Supplier, the Registration Agent, the settlement agent, and the meter reading Entity.

WEQ-019.2.1.7

Business Practice Standard Supplier

Persons engaged in the competitive sale of energy to end-users.

WEQ-019.2.2

Technical Definitions

This section contains technical terms and abbreviations used in this recommendation.

WEQ-019.2.2.1

Energy Management System (EMS)

An application used for controlling multiple energy-controllable devices (e.g., pool pump, Programmable Communicating Thermostat, light switches, PEV charging, etc.). This application may reside within a HAN Device (e.g. Programmable Communicating Thermostat, In-Home Display, computer, cable set-top box, other computing device, etc.). This application may also control other devices or systems in the home providing integrated automated services for the Consumer.

WEQ-019.2.2.2

Energy Services Interface (ESI)

A secure interface to a premises communications network (i.e. HAN) which facilitates relevant energy applications (e.g. remote load control, demand response, monitoring and control of DER, in-premises display of energy usage, reading of energy and non-energy meters, PEV charging and roaming coordination, and integration with energy management systems, etc.), provides auditing / logging functions that record transactions to and from HAN Devices, and, often, coordination functions that enable secure transactions between the HAN Devices Commissioned and Registered on its network and Enrolled in a Service Provider program.

WEQ-019.2.2.3

Fine Grained

Characterized by abundant use of detail or thoroughness of treatment.



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WEQ-019.2.2.4 Operations

One of the seven domains identified in the NIST Framework and Roadmap, defined there as “The managers of the movement of electricity”. This could apply to operators of equipment within any of the other domains.

WEQ-019.2.3 Abbreviations and Acronyms

Abbreviation / Acronym	Meaning
UML	Unified Modeling Language
EMS	Energy Management System
ESI	Energy Services Interface
PEV	Plug-in Electric Vehicle
EISA	Energy Independence and Security Act
DOE	Department of Energy
HAN	Home Area Network

WEQ-019.3 Energy Usage Information Business Practice Standards

WEQ-019.3.1 Introduction

The focus of these Business Practice Standards is the representation of energy usage information. As defined in [PAP10 Requirements] the energy usage information includes historic, present, and future projected usage and load together with the time period(s) for that information.

These Business Practice Standards draw on actors and use cases defined by the following groups:

- Energy Information Standards Alliance (the EIS Alliance) [EIS]
- NAESB Survey and Consolidation of PAP10 Use Cases [NAESB PAP10]
- UCAIug OpenADE [ADE]
- ZigBee/Home Plug Smart Energy Profile 2.0 Market Requirements [SEP MRD]

The relevant use cases are summarized as follows:



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- WEQ-019.3.1.1** The energy service provider and/or Distribution Company communicates historic and present energy usage information and load information to the Retail Customer or facility.¹
- WEQ-019.3.1.2** The Retail Customer or facility communicates future projected usage and load information to the energy service provider, Distribution Company, or grid Operations.²
- WEQ-019.3.1.3** The energy service provider and/or Utility communicates their projection of usage and load to the Retail Customer or facility.³
- WEQ-019.3.1.4** Devices within a facility communicate their present and future projected usage and load to controllers or facility EMS for aggregation and to be a component of facility aggregated future projected usage and load.⁴
- WEQ-019.3.1.5** Devices, business processes, EMS, ESI, and other functional units within the facility communicate usage and load information among themselves.⁵
- WEQ-019.3.1.6** These Business Practice Standards are limited to the seed specification which shall be usable by others to build standards and/or specification for exchange of energy usage information and load information appropriate to their needs without overly constraining those uses or including information that is not required in all implementations of specifications for exchanging load and usage.
- WEQ-019.3.2** **Energy Usage Information Model Format and Use**
- The energy usage information model is developed using a UML modeling tool. The model classes, attributes, types and descriptions are included in REQ 18.4. The model is made available as XMI, which is the standard XML import/export format for UML. The model is exported as HTML, and made available as a downloadable archive viewable with a web browser.
- WEQ-019.3.3** **Energy Usage Information Model Technical Considerations**
- WEQ-019.3.3.1** The energy usage information model will be used as the basis for smart grid interfaces exchanging customer usage information between energy services providers, consumers, and others.

¹ See e.g. EIS Alliance Use Cases v2 including UC-9, UC-11, UC-12, UC-14, UC-15, ZBHP_SE_MRD 3.1 "HAN Device Information Retrieval Request", and OpenADE use case "Publication".

² See e.g. EIS Alliance Use Cases v2 including UC-3, UC-11, UC-14, UC-15, and OpenADE use case "Publication".

³ Needs refs. This is an addition to EIS and OpenADE.

⁴ See e.g. EIS Alliance Use Cases v2 including UC-1, UC-2, UC-3, UC-8, UC-9.

⁵ See e.g. EIS Alliance Use Cases v2 including UC-1, UC-2, UC-3



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- WEQ-019.3.3.2** The energy usage information model permits schemas to be generated from it, using XML Schema Definition Language (XSD), and other format specification languages. Profiles may be constructed from the energy usage information model for this purpose.
- WEQ-019.3.3.3** Implementations may include all or a subset of the elements defined in the model, possibly using a profile of the model.
- WEQ-019.3.3.4** The informative example XSD shall conform to Naming and Design Rules best practices as described by IEC 62361-100, Naming and Design Rules for CIM Profiles to XML Schema Mapping.
- WEQ-019.3.3.5** The model facilitates multiple information exchange standards to be used, including The specifics are left to implementation specifications to define.
- WEQ-019.3.3.6** Though there may be elements useful for transfer of security-related information elements in the model, the specific details related to how to protect sensitive information, and how to authorize specific roles or identities to have access are not defined in this recommendation.
- WEQ-019.3.4** **Conformance**
- WEQ-019.3.4.1** A conformant specification that refines or extends this standard shall produce information for exchange that can be transformed algorithmically (that is based on the standard alone) into a form that can be validated through the method described in REQ.18.3.4.2.
- This requirement means that various formats for representation and exchange and various subsets and potentially supersets of information content are envisioned based on this standard. The use of the schema is not to impose its direct use in message validation. Rather, its use is intended to facilitate verification of conformance to the information model with respect to message content and semantics without imposing constraints on specific message payload schemas and data element representations. Some representations are anticipated to be entirely binary in nature. Others will trade off strings for integer representations of information contents. Regardless of the means, the information should be convertible to be testable as described herein.
- WEQ-019.3.4.2** A specification that claims conformance to this standard shall describe and define an automatable transformation between that specification’s model to and from this UML Model, including indicating attributes used and not used.
- WEQ-019.3.4.3** Conformant specifications shall map corresponding model components to and from at least the following required core model attributes as exchanged between data provider and data consumer in their defined messages:
- *One or more measurement or summary containers: IntervalReading, Reading, PowerQualitySummary, UsageSummary*



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- *At least two of the following attributes, for each IntervalReading: timeStamp, endTimeStamp, duration*
- *value (the value of the measurement, from IntervalReading or Reading)*
- *ReadingType – ID, defaultQuality, direction, kind, multiplier, name, unit*
- *Association to ReadingType for each measurement (IntervalReading or Reading) (exists in model through MeterReading)*
- *Measurement source / location – ServiceDeliveryPoint.ID or MeterAsset.ID and association to measurements or summary*

WEQ-019.4


Energy Usage Information Model

The energy usage information model herein is organized consistent with several related and well established models including the IEC TC57 Common Information Model [IEC 61968 Part 9], ZigBee Smart Energy Profile 2.0 [SEP2.0], that defined by the Energy Information Standards Alliance [EIS Alliance], and Open Automated Data Exchange [OpenADE]. New classes and attributes identified in the model in this standard will be proposed to IEC TC57 for extension of a future release of the CIM. The energy usage information model, where possible, uses classes, information elements and attribute names drawn from the CIM and the cited references.

The starting point for the energy usage information model is the ServiceDeliveryPoint. ServiceDeliveryPoints identify key references for the information set optionally including identification of the customer, the location, and the physical asset. ServiceDeliveryPoints are associated in turn with zero or more MeterReadings. A MeterReading composes information about a particular measurement such as kWh or kW. A MeterReading has a ReadingType which describes the nature of the measurement including its units of measure, and zero or more IntervalReadings or Readings and associated quality information. ServiceDeliveryPoint may also be associated with summary information on power and energy, and optionally, power quality. For applications requiring third party access to this information, additional classes are identified to facilitate associating customer and customer agreement information with the measurements available at a ServiceDeliveryPoint.

To find the use or load in a particular interval, identify the appropriate ServiceDeliveryPoint, select the MeterReading of interest (measurement) and then select the IntervalReading or Reading associated with the given interval.

The energy usage information model includes many optional components. The complete set of information expressible using the model satisfies a wide range of applicability requirements identified by industry. Users of this standard may optionally take advantage of these extended definitions based on need without requiring them. Applications built on the the energy usage information model may elect which optional components to present. However, clients of this information can be expected to recognize all components provided in the application.

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Section REQ.18.3.4.3 identifies the set of core model elements that shall be supported by specifications claiming conformance to this standard. The following class diagram illustrates a view of this core of the energy usage information model:

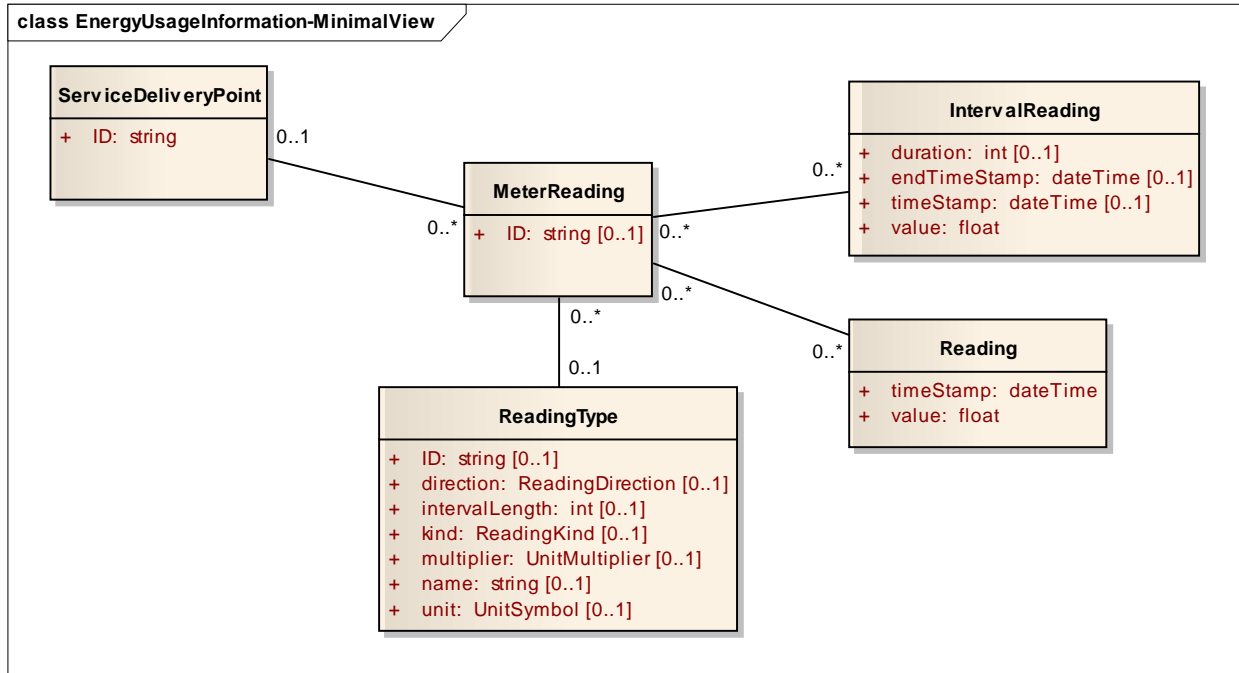


Figure 1: Energy Usage Information Model – Minimal View

The full energy usage information model, Illustrated in Figure 2, forms the basis of the required standard.



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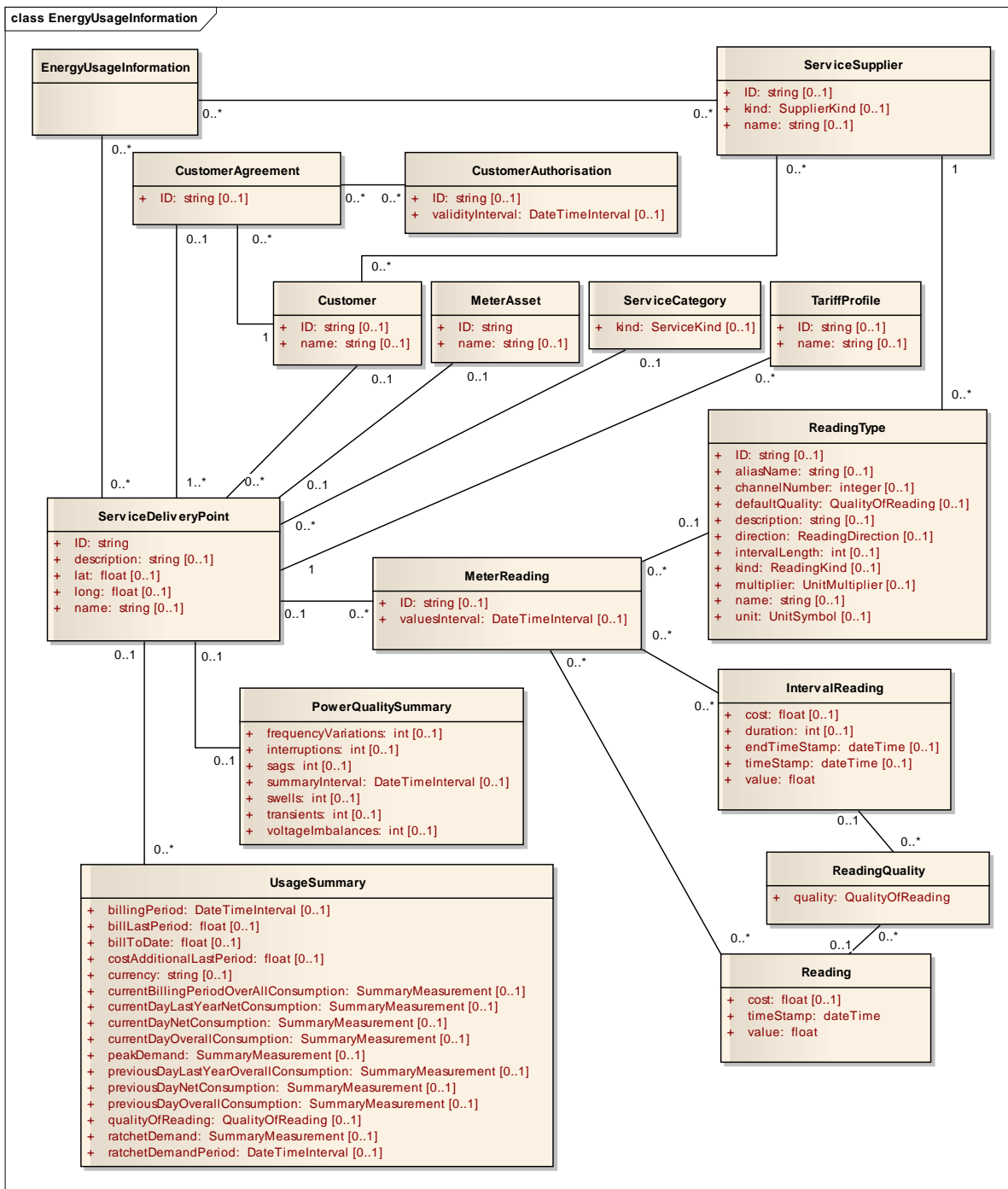


Figure 2: Full Energy Usage Information Model



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WEQ-019.4.1 Energy Usage Information Model Details

The following sections contain the classes and attributes defined in the model, along with their descriptions. Elements tagged with <<enumeration>> define the valid values for an enumerated data type.

WEQ-019.4.1.1 Customer

Organisation receiving services from ServiceSupplier.

Name	Type	Description
ID	<i>string</i>	Object identifier
name	<i>string</i>	Name of an attribute.

WEQ-019.4.1.2 CustomerAgreement

Agreement between the Customer and the ServiceSupplier to pay for service at a specific ServiceLocation. It specifies the type of service provided at the ServiceLocation and the rate, which determines how the customer bill is calculated.

Name	Type	Description
ID	<i>string</i>	Object identifier

WEQ-019.4.1.3 DateTimeInterval

Interval of date and time.

Name	Type	Description
duration	<i>int</i>	The duration of this interval, in seconds
end	<i>dateTime</i>	Date and time that this interval ended.
start	<i>dateTime</i>	Date and time that this interval started.

WEQ-019.4.1.4 EnergyUsageInformation

A collection of customer energy usage information

WEQ-019.4.1.5 IntervalReading

Data captured over a specific interval of time. If not specified, the duration is the intervalLength of the associated ReadingType, where the full definition of the units of measure is located.

Name	Type	Description
cost	<i>float</i>	The cost associated with this reading for this interval.
duration	<i>int</i>	The duration of the interval, in seconds.
endTimeStamp	<i>dateTime</i>	End interval timestamp
timeStamp	<i>dateTime</i>	The start date and time of an interval reading



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value	<i>float</i>	The value of the reading for this interval in the unit of measure defined by the associated ReadingType.
--------------	--------------	--

WEQ-019.4.1.6

MeterAsset

Physical asset that performs the metering role of the ServiceDeliveryPoint. Used for measuring consumption and detection of events.

Name	Type	Description
ID	<i>string</i>	Object identifier
name	<i>string</i>	Meter name

WEQ-019.4.1.7

MeterReading

Set of values obtained from the meter.

Name	Type	Description
ID	<i>string</i>	Object identifier
valuesInterval	<i>DateTimeInterval</i>	Interval in date time (start & end)

WEQ-019.4.1.8

PowerQualitySummary

A summary of power quality events.

Name	Type	Description
frequencyVariations	<i>int</i>	Number of frequency variations
interruptions	<i>int</i>	Number of interruptions
sags	<i>int</i>	Number of sags
summaryInterval	<i>DateTimeInterval</i>	Interval of summary period
swells	<i>int</i>	Number of swells
transients	<i>int</i>	Number of transients
voltageImbalances	<i>int</i>	Number of voltage imbalances

WEQ-019.4.1.9

QualityOfReading «enumeration»

List of codes indicating the quality of the reading

Name	Type	Description
estimated		
forecast		
mixed		
raw		
validated		



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normalizedForWeather		
other		

WEQ-019.4.1.10

Reading

Specific value measured by a meter or other asset. Each Reading is associated with a specific ReadingType and was taken at the specified time.

Name	Type	Description
cost	<i>float</i>	Cost in a currency
timeStamp	<i>dateTime</i>	The date and time of a reading
value	<i>float</i>	The value of the reading in the unit of measure defined by the associated ReadingType.

WEQ-019.4.1.11

ReadingDirection «*enumeration*»

Name	Type	Description
delivered		
received		
net		

WEQ-019.4.1.12

ReadingKind «*enumeration*»

Kind of reading.

Name	Type	Description
current		
currentAngle		
date		
demand		
energy		
other		
phaseAngle		
power		
powerFactor		
pressure		
time		
voltage		
voltageAngle		



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volume		
carbonDioxide		
NOx		
carbon		
SO2		
methane		
HCH		
perfluorocarbons		
sulfurHexafluoride		
phasorPower		
quantityPowerQ60		
quantityPowerQ45		
distortionPower		
voltageRMS		
voltageAverage		
currentRMS		
currentAverage		
voltageTHD		
currentTHD		

WEQ-019.4.1.13

ReadingQuality

Quality of a specific reading value or interval reading value. If not present, then is assumed to be the defaultQuality indicated by the ReadingType.

Name	Type	Description
quality	<i>QualityOfReading</i>	Quality, to be specified if different than defaultQuality

WEQ-019.4.1.14

ReadingType

Type of data conveyed by a specific Reading.

Name	Type	Description
ID	<i>string</i>	Object identifier
aliasName	<i>string</i>	The aliasName is free text human readable name of the object alternative to IdentifiedObject.name. It may be non unique and might not correlate to a naming



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		hierarchy.
channelNumber	<i>integer</i>	Logical positioning of this measurement data.
defaultQuality	<i>QualityOfReading</i>	Characteristics of a data value conveyed by a specific Reading, which allow an application to understand how a specific Reading is to be interpreted.
description	<i>string</i>	The description is a free human readable text describing or naming the object. It may be non unique and may not correlate to a naming hierarchy.
direction	<i>ReadingDirection</i>	Specifies the direction of flow of the measurement.
intervalLength	<i>int</i>	(if incremental reading value) Length of increment interval, in seconds. Interval duration specified at the IntervalReading overrides this default.
kind	<i>ReadingKind</i>	Kind of reading.
multiplier	<i>UnitMultiplier</i>	Multiplier for 'unit'.
name	<i>string</i>	Name of an attribute.
unit	<i>UnitSymbol</i>	Unit in symbol

WEQ-019.4.1.15

ServiceDeliveryPoint

Logical point on the network where the ownership of the service changes hands. It is one of potentially many service points within a ServiceLocation, delivering service in accordance with a CustomerAgreement. Used at the place where a meter may be installed.

Name	Type	Description
ID	<i>string</i>	Object identifier
description	<i>string</i>	The description is a free human readable text describing or naming the object. It may be non unique and might not correlate to a naming hierarchy.
lat	<i>float</i>	Latitude of the location
long	<i>float</i>	Longitude of the location
name	<i>string</i>	Name of an attribute.

WEQ-019.4.1.16

SummaryMeasurement

An aggregated summary measurement reading.

Name	Type	Description
multiplier	<i>UnitMultiplier</i>	The multiplier part of the unit of measure, e.g. "kilo" (k)



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timeStamp	<i>dateTime</i>	The date and time (if needed) of the summary measurement.
unit	<i>UnitSymbol</i>	The units of the reading, e.g. "Wh"
value	<i>float</i>	The value of the summary measurement.

WEQ-019.4.1.17

TariffProfile

A schedule of charges; structure associated with Tariff that allows the definition of complex tariff structures such as step and time of use when used in conjunction with TimeTariffInterval and Charge. Inherited 'status.value' is defined in the context of the utility's business rules, for example: active, inactive, etc.

Name	Type	Description
ID	<i>string</i>	Object identifier
name	<i>string</i>	Name of an attribute.

WEQ-019.4.1.18

UnitMultiplier «enumeration»

The unit multipliers defined for the CIM

Name	Type	Description
c		Centi 10**-2
d		Deci 10**-1
G		Giga 10**9
k		Kilo 10**3
m		Milli 10**-3
M		Mega 10**6
micro		Micro 10**-6
n		Nano 10**-9
none		
p		Pico 10**-12
T		Tera 10**12

WEQ-019.4.1.19

UnitSymbol «enumeration»

The units defined for usage in the CIM

Name	Type	Description
A		Current in ampere
deg		Plane angle in degrees
F		Capacitance in farad
g		Mass in gram
h		Time in hours



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H		Inductance in henry
Hz		Frequency in hertz
Hz-1		per Hertz
J		Energy in joule
J/s		Joule per second
kg/J		Mass per energy
m		Length in meter
m2		Area in square meters
m3		Volume in cubic meters
min		Time in minutes
N		Force in newton
none		Dimension less quantity, e.g. count, per unit, etc.
C		Relative temperature in degrees Celsius
ohm		Resistance in ohm
Pa		Pressure in pascal (n/m2)
rad		Plane angle in radians
S		Conductance in siemens
s		Time in seconds
s-1		per second
V		Voltage in volt
V/VAr		Volt per volt ampere reactive
VA		Apparent power in volt ampere
VAh		Apparent energy in volt ampere hours
VAr		Reactive power in volt ampere reactive
VArh		Reactive energy in volt ampere reactive hours
W		Active power in watt
W/Hz		Watt per hertz
W/s		Watt per second
Wh		Real energy in Watt hours
pct		Percent

WEQ-019.4.1.20

UsageSummary

Summary of usage for a billing period



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Name	Type	Description
billingPeriod	<i>DateTimeInterval</i>	The billing period to which the included measurements apply
billLastPeriod	<i>float</i>	The amount of the bill for the previous period
billToDate	<i>float</i>	The bill amount related to the billing period as of the date received
costAdditionalLastPeriod	<i>float</i>	Additional charges from the last billing period
currency	<i>string</i>	The ISO 4217 code indicating the currency applicable to the bill amounts in the summary. See list at http://www.unece.org/cefact/recommendations/rec09/rec09_ecetrd203.pdf
currentBillingPeriodOverAllConsumption	<i>SummaryMeasurement</i>	The total consumption for the billing period
currentDayLastYearNetConsumption	<i>SummaryMeasurement</i>	The amount of energy consumed one year ago
currentDayNetConsumption	<i>SummaryMeasurement</i>	Net consumption for the current day
currentDayOverallConsumption	<i>SummaryMeasurement</i>	Overall energy consumption for the current day
peakDemand	<i>SummaryMeasurement</i>	Peak demand recorded for the current period
previousDayLastYearOverallConsumption	<i>SummaryMeasurement</i>	The amount of energy consumed on the previous day one year ago
previousDayNetConsumption	<i>SummaryMeasurement</i>	Net consumption for the previous day
previousDayOverallConsumption	<i>SummaryMeasurement</i>	The total consumption for the previous day
qualityOfReading	<i>QualityOfReading</i>	Indication of the quality of the summary readings
ratchetDemand	<i>SummaryMeasurement</i>	The current ratchet demand value for the ratchet demand period
ratchetDemandPeriod	<i>DateTimeInterval</i>	The period over which the ratchet demand applies

WEQ-019.4.1.21

ServiceKind «*enumeration*»

Kind of service.



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Name	Type	Description
electricity		
gas		
water		
time		
heat		Includes hot water and steam
refuse		
sewerage		
rates		
tvLicence		
internet		
other		
cold		Includes chilled water and ice

WEQ-019.4.1.22

CustomerAuthorisation

Holds an authorisation for access to specific user-private data granted to a 3rd Party service provider. [OpenADE Extension - Specialization of "Agreement"]

Name	Type	Description
ID	<i>string</i>	Unique identifier for this authorisation
validityInterval	<i>DateTimeInterval</i>	Date and time interval this agreement is valid (from going into effect to termination).

WEQ-019.4.1.23

ServiceCategory

Category of service provided to the customer.

Name	Type	Description
kind	<i>ServiceKind</i>	Kind of service.

WEQ-019.4.1.24

SupplierKind «enumeration»

Kind of supplier.

Name	Type	Description
district		
intermediary		
local		
microgrid		
other		
retailer		



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utility		
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WEQ-019.4.1.25

ServiceSupplier

Organisation that provides services to Customers.

Name	Type	Description
ID	<i>string</i>	Unique identifier of this service supplier.
kind	<i>SupplierKind</i>	Kind of supplier.
name	<i>string</i>	The human-readable name for the service supplier.



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APPENDIX A Principle Verifications Against The Energy Information Usage Model

WEQ-019.4.2 Requirements validation method

A complete requirements process involves a sequential breakdown of a problem starting with the collection of high level functional user requirements. The high level requirements are broken down into ever more specific derived requirements. Eventually you get to design requirements. At the bottom of the requirements tree are simple, testable, atomic requirements. When the atomic requirements are met, the tracing to the higher level requirements allows them to be met by definition.

The PAP10 charter – the text of the abstract, description, and objectives from the NIST Framework Release 1.0 – contains high level user requirements {http://www.nist.gov/public_affairs/releases/upload/smartgrid_interoperability_final.pdf}. The requirements presented in REQ.18.3 can be considered the first level requirements breakdown of derived requirements.

This standard does not go to the final level of detailed design requirements. Instead, a parallel assessment was performed of the “derived requirements” against the evolving model, which itself was initially derived from detailed requirements identified in activities external to this standard.

Here is a sample requirement and how it is verified:

REQ 18.4.2.1.2 *Usage and load information shall be readily available*

While the availability of information is the realm of the utility and its customer, this model facilitates availability by providing a single simple information model for client applications.

WEQ-019.4.2.1 General

WEQ-019.4.2.1.1 *Facilities shall include residences, buildings, and industrial installations*

No specific limit as to the nature of the facility appears in the energy usage information model. Identifiers are for user, location, and device only.

WEQ-019.4.2.1.2 *Usage and load information shall be readily available*

While the availability of information is the realm of the utility and its customer, this model facilitates availability by providing a single simple information model for client applications

WEQ-019.4.2.1.3 *PAP 10 is an information model concept which is transport agnostic.*



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The information, classes, and attributes that are contained in the energy usage information model and concepts described in this standard are data encoding and communication protocol agnostic.

WEQ-019.4.2.2

Timeliness of Delivery

WEQ-019.4.2.2.1

Customers shall be able to use the information defined in these standards for real-time feedback on present and projected performance

There are no constraints on time stamps, latency or performance imposed by the model, so it is possible to represent past, present, or future usage.

WEQ-019.4.2.2.2

Premises based systems (e.g. EMS/ESI) shall be able to use the information defined in these standards for real-time feedback on present and projected performance

There are no constraints on time stamps, latency or performance imposed by the model, so it is possible to represent past, present, or future usage.

WEQ-019.4.2.2.3

Information exchanged shall be delivered in sufficient time to affect usage ["and this is the definition of real-time and near real-time "]

There are no constraints on time stamps, latency or performance imposed by the model, so it is possible to represent past, present, or future usage.

WEQ-019.4.2.2.4

Operations, Distribution, and Service Providers shall be able to use the information defined in these standards with the facility in near-real-time

There are no constraints on time stamps, latency or performance imposed by the model, so it is possible to represent past, present, or future usage.

WEQ-019.4.2.2.4.1

Customers and premises-based systems shall be able to use the information defined in these standards to provide real-time feedback on present and projected performance

There are no constraints on time stamps, latency or performance imposed by the model, so it is possible to represent past, present, or future usage.

WEQ-019.4.2.3

Benefits to Facilities

WEQ-019.4.2.3.1

Standard load and usage information shall enable improved energy efficiency by defining a consistent way to communicate usage information.

By minimizing the number of different physical representations of usage information, and aligning the logical elements included in the definition of this information, it will allow for the development of applications that require this information to provide energy efficiency services and functionality.

WEQ-019.4.2.3.2

Standard load and usage information shall enable helping [all] Customers and operations manage their energy usage [and load]



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The data model standardizes load and usage information so customer usage data provider services may be developed to interface with systems that help customers and operations with energy management.

WEQ-019.4.2.3.3

Standard load and usage information shall enable improved [facility] energy usage by availability of fine grained and timely information

The data model standard provides for measurement intervals enabling the availability of fine grained and timely load and usage information.

WEQ-019.4.2.3.4

Availability of fine grained and timely information will enable better decisions about energy usage and conservation

The data model enables a standard approach for fine grained and timely load and usage information so customer usage data provider services can interface to systems that help customers and/or operations with energy conservation.

WEQ-019.4.2.3.5

Facilities will benefit from consistent usage information exchange inside the facility, including meeting the energy efficiency goals of EISA 2007 and DOE initiatives

The data model provides consistent energy usage data representation so information exchanges are uniformly understood. This ensures facility energy efficiency systems using this data are acting on correct and consistent information.

WEQ-019.4.2.3.6

Standard model shall support aggregated projections that can be passed on to operations [the System Operator's] or [building management] [?] make forecasting and management better and increase the value of a facility to smart grid

Aggregated projections are supported via future timestamps in interval and other data. The model supports aggregation based on topology, device, and owner.

WEQ-019.4.2.3.7

Sharing usage and load information inside a facility makes that facility more valuable to smart grid

The data model provides usage, load, and pricing information from which a facility manager or system may take optimization actions.

WEQ-019.4.2.3.8

The information exchanged shall allow integration of usage information throughout facility decision processes

The data model standardizes usage information so customer usage data provider services may be developed to integrate with systems handling facility decision processes.

WEQ-019.4.2.4

Benefits to Grid and Service Provider Operations

WEQ-019.4.2.4.1

Standard load and usage information will improve forecasting and grid management by delivering aggregated projections to operations.



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By specifying future intervals, which could be larger than measured intervals, it is possible to represent aggregated projections.

WEQ-019.4.2.4.2 *Standard load and usage information will improve forecasting and grid management by delivering aggregated projections to service providers.*

By specifying future intervals, which could be larger than measured intervals, it is possible to represent aggregated projections.

WEQ-019.4.2.4.3 *Standard load and usage information will enable more responsive facilities.*

Interoperable models of load and usage information allow coordination of response capability, allowing those capabilities to be utilized more efficiently.

WEQ-019.4.2.4.4 *Standard load and usage information will enable early deployment of devices that deliver and understand usage information.*

By standardizing the information to be made available, devices and applications will be able to obtain access to that information.

WEQ-019.4.2.5 **Internet-Like Future**

WEQ-019.4.2.5.1 *Standard usage and load information enables innovation in novel ways to help customers manage energy usage.*

By standardizing on simple data sets that many providers and consumers can utilize, this information can be combined with additional information to find the specific way that will help customers the most.

WEQ-019.4.2.5.2 *Standard usage and load information enables innovation by third party service and software providers.*

By standardizing on simple data sets that many providers and consumers can utilize, this information can be combined with additional information to find the specific way that will help customers the most.

WEQ-019.4.2.6 **Improved Collaboration**

WEQ-019.4.2.6.1 *The Information model shall not restrict two way flows of information.*

Customers, utilities and third parties will have access to the model in real time with the appropriate usage information and customer permissions/allowances.

WEQ-019.4.2.6.2 *By standardizing usage and load information exchange, devices that deliver and understand usage and load can be deployed more quickly, contributing to achieving the energy efficiency goals of EISA 2007 and DOE .*

Uniformity among signals as required by the model standards will lead to greater acceptance and adoption.



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WEQ-019.4.2.7 Information Sources and Accessibility

WEQ-019.4.2.7.1 *Usage and load information shall be provided by utilities and aggregating service providers and may be provided by others.*

With consent from the customer, utilities and aggregators will provide access to usage and load information in the provided format for model integration.

WEQ-019.4.2.7.2 *Usage and load information shall be provided by devices and EMS/ESI implementations.*

With consent from the customer, devices and EMS/ESI implementations will provide usage and load information in the provided format for model integration.

WEQ-019.4.2.7.3 *Usage and load information can be accessed from the meter.*

With consent from the customer and the utility, usage and load information will be provided by the meter to accredited sources for purposes of running the model.

WEQ-019.4.2.7.4 *Usage and load information can be accessed from smart grid.*

With consent from the customer and the utility, usage and load information will be made available by any Smart Grid services provider via the public Internet.

WEQ-019.4.2.8 Interactions and Information Exchanges Supported

WEQ-019.4.2.8.1 *Interactions supported shall include those between Distribution [and Operations] and the industrial, commercial, and residential premises.*

The model does not exclude/include specific actors or potential exchange points, it merely describes data and format of information.

WEQ-019.4.2.8.2 *Standard information models and understanding of usage and load are essential to cross domain interactions between Distribution [and Operations]: and Industrial, Commercial, Residential, and PEVs.*

The standard information format does not exclude potential actors or exchange points including potential cross domain interaction including those between Distribution companies and other actors.

WEQ-019.4.2.8.3 *Interactions supported shall include those between Distribution [and Operations] and the industrial, commercial, residential premises, and plug-in electric vehicles.*

The model does not exclude/include specific actors or potential exchange points, it merely describes data and format of information.

WEQ-019.4.2.8.4 *Standard information models and understanding of usage and load are essential to cross domain interactions between Service Providers: and Industrial, Commercial, Residential, and PEVs.*



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The standard information format does not exclude potential actors or exchange points including potential cross domain interaction including those between Service Providers and other actors.

WEQ-019.4.2.8.5 *Interactions supported shall include those between Service Providers and the industrial, commercial, residential premises, and plug-in electric vehicles.*

The model does not exclude/include specific actors or potential exchange points, it merely describes data and format of information therefore by not excluding these actors.

WEQ-019.4.2.8.6 *This effort shall support information standards for load curtailment, load shaping, and energy market operations, hence load and usage must be supported (see PAP09, PAP03, and PAP04).*

Load and usage information are part of the model.

WEQ-019.4.2.8.1 *Information exchanges shall include to, from, and within facilities.*

The model does not preclude any potential exchange points therefore the requirement is met.

WEQ-019.4.2.9 **Information Characteristics**

WEQ-019.4.2.9.1 *Information model shall support exchange of both Fine Grained and summary information.*

Summary information is available at the top level through PowerQualitySummary and UsageSummary components. Fine-grained information is available through the list of MeterReading measurement structures which in turn have both summary, Reading, and interval level detail, IntervalReading components. Additionally, the energy usage information data structures can be associated by device, location, and owner facilitating variable aggregations.

WEQ-019.4.2.9.2 *Fine grained means that there is disaggregated information. Disaggregated information can include for example load, subsystem, premise, and variable time interval.*

Fine grained (disaggregated) information is described throughout the information model. From CustomerAccount, EventType, MeterAsset, ReadingKind, etc. there seems to be enough detailed data elements to support “Fine grained” information.

WEQ-019.4.2.9.3 *Support for exchanging standard historical, present, and projected load information is required.*

Historical information seems to be supported by the UsageSummary attributes for billing items only. Present (meter reading) information has fine grained as well as billing attributes defined. Projected usage is supported in the



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QualityOfReading <<enumeration>> attribute, which delineates the “estimated” and “forecast” attribute names. Historical, present, and projected load information is implicitly available at the interval and reading level based on the time stamps utilized -- past/present/future.

WEQ-019.4.2.9.4 *Energy Usage Information shall include usage, usage profile, and some component of cost (consistent with PAP03, PAP04)*

Energy usage information, including costs is contained in the data model. Interval data is supportive of usage profiles (PAP05) and PAP04.

WEQ-019.4.2.9.5 *The PAP 10 Energy Usage Information model shall allow for exchange of greater or lesser detail.*

Summary information is available at the top level through PowerQualitySummary and UsageSummary components. Fine-grained information is available through the list of MeterReading measurement structures which in turn have both summary, Reading, and interval level detail, IntervalReading components. Additionally, the energy usage information data structures can be associated by device, location, and owner facilitating variable aggregations.

WEQ-019.4.2.10 **Timing and Goals**

WEQ-019.4.2.10.1 *Initial steps include making usage information more readily available by defining and standardizing usage information [delivered] through existing SG infrastructure.*

The energy usage information data structures enable a diverse range of technologies to deliver usage information in a timely and protocol agnostic manner. Examples of this might be a premise ESI or through services provided by a utility, facility, aggregator, energy services provider, or others.

WEQ-019.4.2.10.2 *Information on device and facility usage is a primary goal in the initial focus.*

As the energy usage information data structures cover summary and device level information, device and facility (aggregated) information can be delivered.

WEQ-019.4.2.10.3 *Standard load and usage information will enable early deployment of devices that deliver and understand usage information.*

As the energy usage information data models are standardized, producers may deliver usage based devices with confidence in interoperability.

WEQ-019.4.2.11 **Requirements on Quality of Consensus Standard**

The information model shall support:

WEQ-019.4.2.11.1 *Consistent data representation for REST & Web Services.*



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This requirement will support REST and Web Services. However, other transports may be supported such as, but not limited to, IEEE 1703/ANSI C12.22 architecture per AEIC Guidelines V2.0 . See Section REQ.18.3.3 which implies support for alternative syntaxes.

WEQ-019.4.2.11.2

Specification of transactional exchange, syntax, and required population of the information model are beyond the scope of these requirements.

No transactional syntaxes or message services are defined in this standard.

WEQ-019.4.2.11.3

an extensible information model – e.g. ability to add custom extensions as needed

This model may be extended by adding new elements (classes, attributes, and associations). Implementations must utilize conventions to ignore any elements not understood by components, to allow them to continue to operate when future extensions are added.

WEQ-019.4.2.11.4

have an evolvable information model – e.g. the standards process supports future revisions

REQ.18.3.3 identifies how the model is evolvable. The reference in section 0 defines how the standard version can be revised.

WEQ-019.4.2.11.5

Forward compatible as we evolve

To maintain forward and backward compatibility, best practices on extensibility, which also includes evolvability through standards versions, should be followed.

WEQ-019.4.2.11.6

Supportive of versioning

Versioning in the UML Model is addressed by a tagged value.

WEQ-019.4.2.11.7

Usable without “knowing all the details”

Information in the model is arranged hierarchically. Greater detail can be understood the deeper into this hierarchy the reader goes. Summary information is exposed near the top of the hierarchy. These arrangements make it straightforward to accessing applications to ignore the level of detail they do not plan to use or comprehend, while getting value out of higher level information.

More flexibility for independent innovation shall be achieved through:

WEQ-019.4.2.11.8

Focus on information exchanged

The specification of an information-only model allows the standard to focus on the information exchanged.

WEQ-019.4.2.11.9

Agreed upon interfaces are maintained over time



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A profile of this EUI model supports the exposure of an interface. One is provided as an example in this standard. Section 0 verification references how the information model is to be maintained. See section REQ 18.3.3 which describes how the energy usage information model will be used as the basis for Smart Grid interfaces.

WEQ-019.4.2.11.10 *Minimal details = maximum interoperation*

The model provides a hierarchy of summary and detailed information. A balance is achieved by the definition of minimal set of details necessary to satisfy the cumulative set of use cases of the energy usage information and allocated to this model.

WEQ-019.4.2.11.11 *Intellectual Property Rights shall be clear & clean*

Sections 0, 0, 0, 0, 0 describe the IPR rights to use of the energy usage information model defined by this standard.

Results of PAP 10 shall produce:

WEQ-019.4.2.11.12 *Information model and XML schema*

There is no normative schema in this standard. There is an "example" non-normative schema to demonstrate how to take the EUI model and create a profile that can generate an XML schema or other description.

WEQ-019.4.2.11.13 *At information exchange level*

The information model is designed to be exchanged between participants. The information model and XML Schema provide the specificity to define an information exchange, but stops short of mandating one (see 0).

The information model shall be:

WEQ-019.4.2.11.14 *Readable without charge*

NAESB has agreed to make the energy usage information model included in REQ.18.4 and REQ.18.4.1 available to the public without charge.

WEQ-019.4.2.11.15 *Reusable without restriction or charge*

The use of the energy usage information model included in REQ.18.4 and REQ.18.4.1 for the production of derivative work products is not prohibited.

WEQ-019.4.2.11.16 *Adaptable without restriction or charge*

All NAESB standards may be modified through the NAESB process. (Please see: http://www.naesb.org/misc/naesb_process_for_standards_dev.doc)



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WEQ-019.4.2.11.17

Usable for open source

The use of the energy usage information model included in REQ.18.4 and REQ.18.4.1 may be distributed in any manner, however, must be made available without charge.

WEQ-019.4.2.12

Additional Considerations (not provided by SGIP PAP10 Working Group)

WEQ-019.4.2.12.1

In communicating energy usage information, the energy usage information model should be used and the information outlined within the model should be available.

The model provides a common, consensus-based, vendor-neutral model to represent usage information, to be used in exchange scenarios where it is applicable and desired by usage information providers and Customers. Section 18.3.3 elaborates the technical considerations for constructing implementing standards which do specify syntax.

WEQ-019.4.2.12.2

The energy usage information model data set has three unique identifiers, which serve the purpose of allowing various aggregations of data sets.

The model has the class ServiceDeliveryPoint which has an ID. Additionally, it has an association with Customer and MeterAsset which support aggregation by location, owner, and device.

Owner (customer): This is represented by the Customer class, provided the use of the term “owner” or similar verbiage is not indicative or dispositive of any ownership or other rights under applicable law in the model or any data.

Location: This is represented by ServiceDeliveryPoint.

Device: This is represented by MeterAsset.

WEQ-019.4.2.12.3

The TariffProfile component should be included in the energy information usage model.

TariffProfile is included in the energy usage information model as a reference. This reference supports the potential acquisition of details on the agreements between supplier and consumer of energy when this optional reference is included and populated.

WEQ-019.4.2.12.4

UsageSummary should include an optional cost attribute to interval and reading class.

UsageSummary has a cost roll up and optional cost attributes in interval and reading classes are included in the model.

WEQ-019.4.2.12.5

A known base currency should be included in the top level class associated with the MeterAsset for the energy usage information model, which would be applicable to all instances



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A base currency attribute is part of the UsageSummary class based on ISO 4217.

WEQ-019.4.2.12.6

The energy usage information model should be compliant with ISO8601.

The current model does not define the primitive to be used to represent the dateTime, however the default xs:dateTime is ISO8601 compliant.

WEQ-019.4.2.12.7

Optionally, both start and end of interval can be defined in order to support non-uniform interval information, which is accomplished in the energy information usage model through endTimestamp to IntervalReading.

The endTimeStamp element is included as an optional component of IntervalReading.

WEQ-019.4.2.12.8

Demand based elements are maintained in the TariffProfile including common demand and demand ratchets.

The model does not currently contain the full definition of TariffProfile, but this is the CIM element where thresholds associated with the rate are specified.

WEQ-019.4.2.12.9

The energy information usage model status structure includes a named pair of QualityOfReading and values of raw, forecast, validated, estimated, mixed, and other for qualifying the associated data set, as an explicit representation of these name value pairs can be processed in implementations by sending and receiving actors. The UsageSummary class also includes such summary information.

Model is specified as described.

WEQ-019.4.2.12.10

MeterEvent should be associated with MeterAsset, not MeterReading.

MeterEvent is not part of the Energy Usage Information Model. This will be forwarded to IEC 61968 Committee for resolution.

WEQ-019.4.2.12.11

PowerQualitySummary as events of enumerated type are provided in the energy information usage model to represent a simple exposure of summary information.

The model exposes these events in summary form as described.

WEQ-019.4.2.12.12

With respect to devices monitoring or capable of monitoring point source emissions, the energy usage information model should represent and take into account pollutant emissions (e.g. SO₂, NOX, etc.).

Detailed information about these emissions is possible through definition of a ReadingType specifying the appropriate kindReading values as enumerated in ReadingKind.

WEQ-019.4.2.12.13

energy usage information model should include a top level cost summary – billStart, billEnd, billToDate, lastPeriod, and costAdditional, so that the bill to date and bill as of the last billing period could be conveyed through a formula:



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$$\text{billLastPeriod} = \text{costAdditionalLastPeriod} + \sum \text{MeterReading}[i].\text{Reading.cost}$$

(constrained by datetime)

The model represents these elements in the UsageSummary class.



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4. SUPPORTING DOCUMENTATION

- a. Description of Request:

- b. Description of Recommendation:

- c. Business Purpose:

- d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

NAESB Process for Standards Development -
http://www.naesb.org/misc/naesb_process_for_standards_dev.doc

UCAIug OpenSG OpenADE Task Force

**OpenADE 1.01 System Requirements Specification~~OpenADE 1.01 System Requirements Specification~~
~~OpenADE 1.0 System Requirements Specification~~**

1 **OpenADE 1.01 System Requirements Specification**
2 **OpenADE 1.0 System Requirements Specification**

3 **Version: ~~Approved~~ Proposed v1.01**

4 **Release Date: ~~29/191~~ 2010**

UCAIug OpenSG OpenADE Task Force

OpenADE 1.01 System Requirements Specification~~OpenADE 1.01 System Requirements Specification~~~~OpenADE 1.0 System Requirements Specification~~

1 **Acknowledgements**

2 The following individuals and their companies have contributed and/or provided support to the
3 work of the OpenADE System Requirements Specification:

- 4 • Arthur Salwin from Noblis
- 5 • Belvin Louie from PG&E
- 6 • Brad Bogolia from Silver Spring Networks
- 7 • Brad Johnson from Oncor
- 8 • Brent Hodges from Reliant Energy
- 9 • Bin Qiu from E:SO
- 10 • Chad Maglaque from Microsoft
- 11 • Charles Spirakis from Google
- 12 • Chris Chen from Sempra / SDG&E
- 13 • Chris Thomas from Citizens Utility Board (State of Illinois)
- 14 • Chuck Thomas from EPRI
- 15 • Claudio Lima from Sonoma Innovation
- 16 • Darren Highfill from Saker Systems
- 17 • Dave Mollerstuen from Tendril Networks
- 18 • Gerald Gray from CIMple Integrations
- 19 • Gillis Melancon from FP&L
- 20 • Jeremy McDonald from SCE
- 21 • Joe Zhou from Xtensible Solutions
- 22 • John Mani from Comverge
- 23 • Larry Kohrman from Oncor
- 24 • Mark Ortiz from Consumers Energy
- 25 • Mary Zientara from Reliant
- 26 • Michael Shames from Utility Consumer's Action Network
- 27 • Patrick Beer from Ecologic Analytics
- 28 • Ramesh Reddi from IntellEnergyUtil
- 29 • Rohit Khera from PG&E
- 30 • Sandy Bacik from Sensus
- 31 • Shawn Hu from Xtensible Solutions / SCE
- 32 • Steve Van Ausdall from Xtensible Solutions / SCE

33 The OpenADE Task Force wishes to thank all of the above-mentioned individuals and their
34 companies for their support of this important endeavor, as it sets a key foundation for an
35 interoperable Smart Grid.

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1 **Document History**

2 **Revision History**

3 Date of this revision: Feb. 19, 2010

4

Revision Number	Revision Date	Revision By	Summary of Changes	Changes marked
0.1	10/16/09	Steve Van Ausdall	Initial draft "shell".	N
0.2	10/29/09	Steve Van Ausdall	Added data elements	N
0.4	1/20/10	Steve Van Ausdall	Resolved comments from Arthur Salwin	Y
0.5	2/2/10	Steve Van Ausdall	Complete version for F2F review	Y
0.6	2/4/10	OpenADE TF	Changes from F2F review comments	Y
0.7	2/15/10	OpenADE TF	Clarification of SLA reference, minor additions from Larry; Acronym improvements from Arthur; removed specification of authentication (login) method (3.3 #1) and clarification of FTP option from Chad; softened audit requirement to SHOULD;	Y
1.0	2/19/10	OpenADE TF	Accepted changes and deleted comments, moved issues requiring discussion to open issues log.	N
<u>1.01</u>	<u>9/1/10</u>	<u>Steve Van Ausdall</u>	<u>Added elements from approved schema missing from this document to bring in sync</u>	<u>Y</u>

5 **Open Issues Log**

6 Last updated: Feb. 19, 2010

7

8 As issues are addressed in new versions of this document, they are removed from this list.

9

Issue Date	Provided By	Summary of the Issue
2/15/10	Chad Maglaque	Add authentication options beyond service provider portal identity
2/15/10	Chad Maglaque	Discuss whether to require Secure FTP for batch transfers

10

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1 Introduction

Open Automatic Data Exchange (OpenADE) is an industry-led initiative under the Open Smart Grid (OpenSG) subcommittee within the UCA International Users Group (UCAIug). The OpenADE Task Force defines systems requirements, policies and principles, best practices, and services, required for information exchange and control between 3rd Party energy usage data service providers (3rd Party), and public utility web services, and customers. OpenADE, as an open user group forum, is developing a set of utility-ratified requirements and specifications for utilities and 3rd Parties to adopt and implement. The end-state of this effort will contribute to the development of open and interoperable utility data sharing applications. Please see the [OpenADE Charter](#) for additional information.

The OpenADE group is organized with three sub-groups:

- **Use Case Team:** to develop common business process models and functional requirements.
- **SRS Team:** to develop overall systems architecture principles, integration requirements and specifications.
- **Service Definition Team:** to develop standards-based, platform independent integration services that support the business processes, adhere to the architecture principles and patterns, and are open and support extensible interoperability.

The main goal of the task force is to work with utilities and 3rd Parties to develop requirements and specifications necessary to enable 3rd Parties to gain access to Customer usage data. This will be achieved by defining and making the following OpenADE related items available to the market:

- Common business processes and functional requirements
- Common architecture principles and patterns
- Common information requirements and model
- Common integration services (functional & informational)
- Tested interoperability between vendor products

Our current charter can be found on Smartgridipedia, at http://www.smartgridipedia.org/index.php/OpenADE_Charter.

1.1 Purpose

The purpose of this document is to provide both the functional and technical guidance and requirements needed to serve as the “rules of engagement” for messaging and data exchange to achieve interoperability. This would lead to open and interoperable components that can be delivered with different vendor products and/or solutions within the scope of OpenADE. The functional requirements will be driven by business processes and the technical requirements will be driven by desired architectural principles and best practices.

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1.2 Scope

The scope of OpenADE 1.0 SRS includes authorization and transfer of Customer consumption information. Future functional scope may include prices and billing related information. The SRS defines the logical components and business functions in order to identify the interfaces that must be specified to enable interoperability across different implementations, for many utilities to many 3rd Parties. It includes architectural aspects and specific requirements. The inputs include OpenADE use cases, as well as industry best practices and standards, including information models and other specifications.

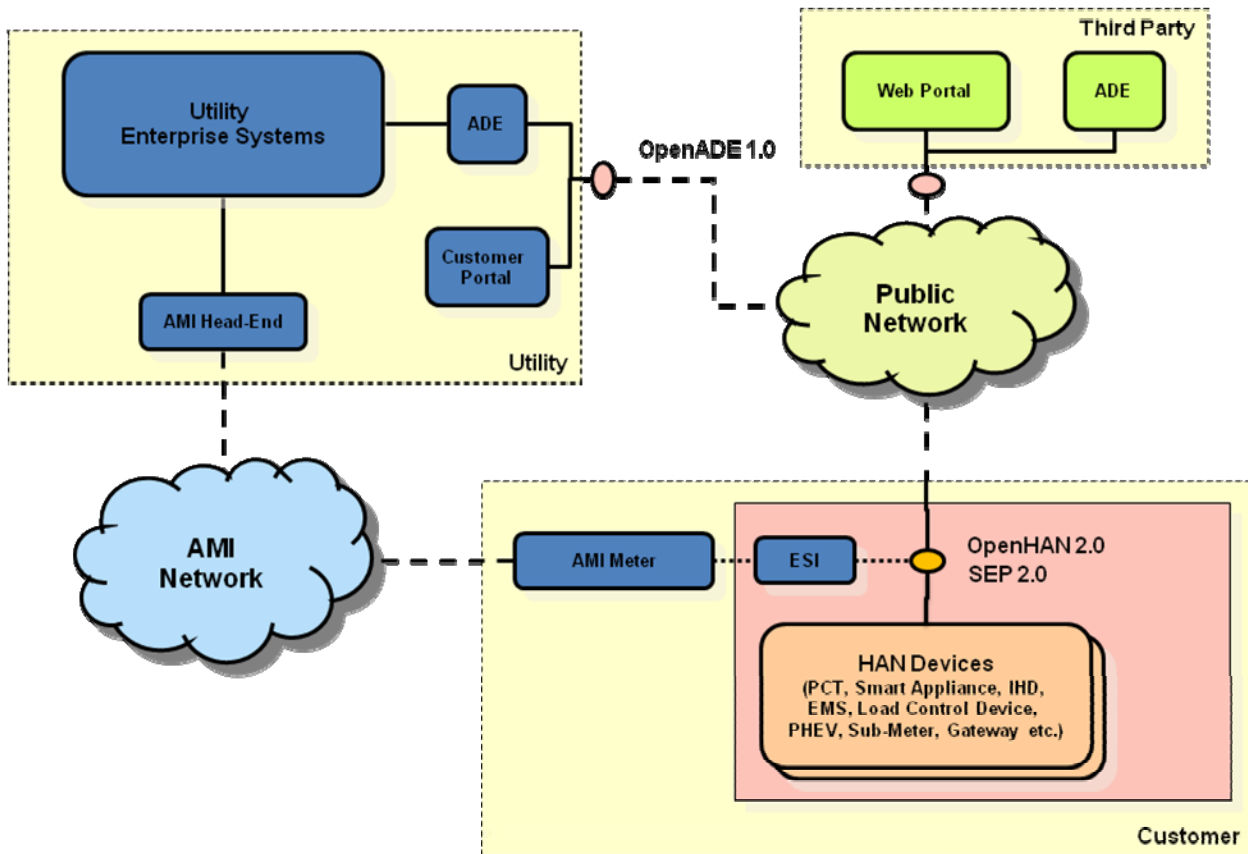


Figure 1. OpenADE component diagram showing the actors and components.

OpenADE SRS does not include the following items that are typically a part of solution architecture. Some of them are or have been addressed by other parts of the OpenSG initiative. Others will need to be dealt with specifically for each implementation.

- Network and hardware infrastructure architecture
- Operational architecture
- Testing methodology and architecture
- Internal application architecture

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1.3 Acronyms and Abbreviations

This subsection provides a list of all acronyms and abbreviations required to properly interpret the OpenSG OpenADE System Requirements Specification.

Acronym	Name
ADE	Automatic Data Exchange
AMI	Advanced Metering Infrastructure
CIM	IEC TC57 Common Information Model
EMS	Energy Management System
ESI	Energy System Interface; Energy Services Interface
HAN	Home Area Network
IETF	Internet Engineering Task Force
IHD	In-Home Display
PHEV	Plug-In Hybrid Electric Vehicle
SDO	Standards Development Organization
SEP 2.0	Smart Energy Profile
SLA	Service Level Agreement
SRS	System Requirements Specification
TOGAF	The Open Group Architecture Framework

4
5

1.4 External Considerations and References

The work of OpenADE SRS is dependent upon the best practices available from the following entities and standards organizations:

9

- [OADE] OpenSG OpenADE Business and User Requirements 1.0
- IETF Internet Suite - Internet Standards, including the following
 - [RFC-793] IETF Transmission Control Protocol (TCP)
 - [RFC-791] IETF Internet Protocol (IP)
 - [RFC-2616] Hypertext Transfer Protocol -- HTTP/1.1
- [IEC-61968] IEC TC57 Working Group 14 (IEC 61968) (Common Information Model)
- [ASAP-SG-3P] Security Profile for Third Party Access (ASAP-SG)

1.4.1 RFC 2119 Keyword interpretation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

1.5 Document Overview

TOGAF 9.0 defines four architecture domains that are commonly accepted as subsets of overall enterprise architecture, all of which TOGAF is designed to support, see Figure 2:

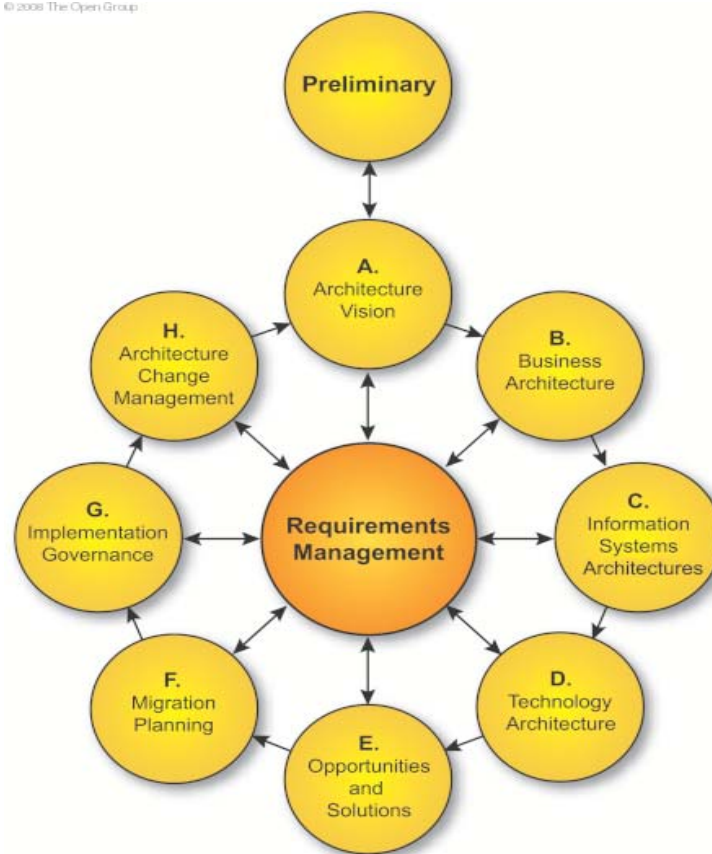
- **Architecture Vision** defines overall architecture guiding principles, goals and objectives and desired traits.

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- 1 • The **Business Architecture** defines the business strategy, governance, organization, and key business
2 processes.
- 3 • The **Information Systems Architecture**, including the following.
- 4 ○ The **Data Architecture** describes the structure of an organization's logical and physical data assets and
5 data management resources.
- 6 ○ The **Application Architecture** provides a blueprint for the individual application systems to be deployed,
7 their interactions, and their relationships to the core business processes of the organization.
- 8 • The **Technology Architecture** describes the logical software and hardware capabilities that are required to
9 support the deployment of business, data, and application services. This includes IT infrastructure,
10 middleware, networks, communications, processing, standards, etc.

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11 **Figure 2. The Open Group Architecture Framework (TOGAF) architecture development cycle.**

12 As such, the document will be structured as follows:

13 **Section 2** describes the overall Architecture Vision for the system, including Guiding Principles, Architectural
14 Considerations, and the OpenADE Reference Model, all relevant to providing a consistent framework within
15 which the four architecture components can be developed.

16 **Section 3** provides details on the following:

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- 1 1. **Business Architecture:** This will refer to work products produced by the Use Case and Service
2 Definition Teams of OpenADE, which includes the list of use cases and integration requirements and
3 business services at the functional level.
- 4 2. **Data Architecture:** This provides the technical level requirements relative to how the OpenADE data
5 should be modeled and represented consistently across all integration services to ensure semantic
6 interoperability.
- 7 3. **Application Architecture:** This provides the technical level requirements relative to how applications are
8 modeled as logical components, and what services each logical component may provide or consume. This
9 should be an instantiation of the business services identified within the Business Architecture.
- 10 4. **Technology Architecture:** This provides the technical level requirements relative to how services will
11 interact with each other to support end-to-end AMI business processes.
12

13 **Section 4** contains the Appendices, which includes terms and definitions, logical components list, integration
14 requirements list, and integration services view.

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2 Architecture Vision

The following diagram gives an overview of the key stakeholders. Key elements of this problem space are that we want to enable a 3-way authorization handshake, and allow for many-to-many data transfers between many utilities and 3rd Parties.

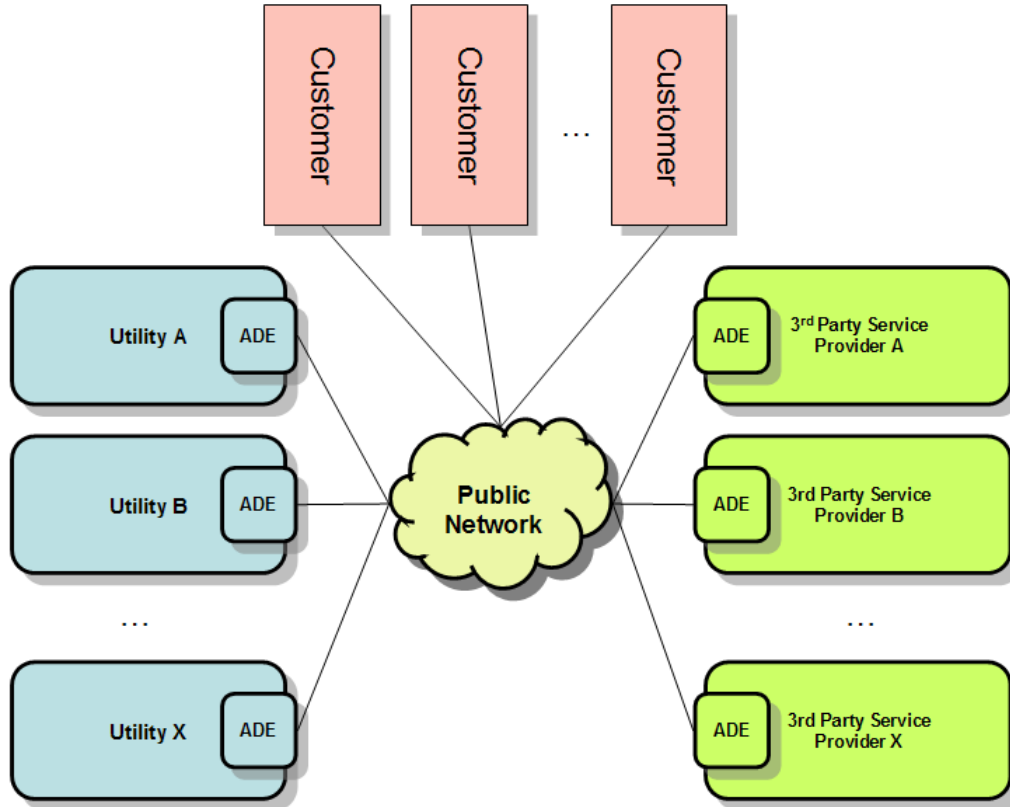


Figure 3. OpenADE Stakeholders Overview

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2.1 Architectural Goals and Guiding Principles

Architecture guiding principles are rules of engagement designed to ensure that all aspects of the implementation fit within a well-defined framework. These principles, discussed and agreed upon with all stakeholders of the OpenADE, are used to drive the architectural approach and patterns to be implemented. These principles should not be taken lightly as they imply what and how the overall goals of OpenADE will be met. Each of the principles has a level of effort and cost implications for utilities and 3rd Parties looking to adopt this specification. Adherence to these principles can be adjusted for specific cases driven by time and budget constraints. These exceptions should be approved by all stakeholders and must be documented.

- Exchanges of data cross enterprise boundaries
 - Industry best practices must be followed
 - The most interoperable and widely supported technologies should be used to ensure adoption regardless of development and deployment platforms used
 - The technologies chosen shall be well specified, with active communities and tools and/or frameworks available. For example, WS-I, or RESTful in conjunction with AtomPub, OData or GData.
 - Technologies chosen shall be compatible and interoperable with technologies specified for access to HAN resources.
 - Security and privacy of customer information is of utmost importance, since transfers must use public networks, and sensitive customer information may be exchanged across enterprise boundaries.
- Recommendations must promote and enable interoperability
 - Many utilities need to be interoperable with many 3rd Parties, so there are significant efficiency savings possible by defining a common interface for the OpenADE message exchanges. Therefore, recommendations must be specific and prescriptive, actionable and testable
- Must meet the goals of several different types of stakeholders
 - Requires an open process to allow discussion and negotiation of the recommendation
- Forwards and backwards version compatibility is needed
 - Existing implementations must remain operational when either side adds future extensions

2.2 Architectural Considerations

OpenADE as a system needs to be architected with requirements that cover the entire spectrum of business, technical, and market needs. The following list of architectural attributes will be used as guidelines for OpenADE systems requirements development.

- System quality attributes discernable at runtime
 - Performance - Services SHALL provide and consume data in a timely manner
 - Security – All transfers of information SHALL be encrypted (OADE BR-11)

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- 1 ○ Authorization – Protected resources SHALL be authorized individually by the user(s) associated
- 2 with those resources.
- 3 ○ Availability – Services SHALL be highly available
- 4 ○ Functionality – SHALL meet the functional needs of customers and regulators
- 5 ○ Usability – SHALL require only commonly available tools and technologies
- 6 ○ Scalability – SHALL be able to add additional servers to meet performance
- 7 ● System quality attributes requiring assessment for evaluation
- 8 ○ Modifiability – SHALL allow additions without affecting existing systems (OADE BR-8)
- 9 ○ Portability – SHALL be possible to implement on a variety of platforms
- 10 ○ Reusability – SHALL use standard industry object representations
- 11 ○ Integrability – SHALL be possible to map to a variety of other interfaces
- 12 ○ Testability – SHALL be possible to perform testing using a variety of methods
- 13 ● Business Qualities
- 14 ○ Time to market – SHALL be available 1Q 2010
- 15 ○ Cost – SHALL not be cost-prohibitive
- 16 ○ Projected life time of the system – SHALL allow growth
- 17 ○ Rollout schedule - SHALL be operational in 2010
- 18 ● Qualities directly related to the architecture
- 19 ○ Conceptual integrity – Semantics of defined elements SHALL be consistent across objects that
- 20 use those elements
- 21 ○ Correctness and completeness - Is aligned with common application architectures and addresses
- 22 all considerations required for interoperability.

23 Note that desired, minimum and maximum levels for performance, availability, functionality, acceptable use, and
24 other characteristics will likely be specified and negotiated in Service Level Agreements (SLAs) between 3rd
25 Parties and Utilities. Regulators may also require certain service levels. Each side will likely have some number
26 of terms required for use of their services. This is not part of the standardization effort, just a note to prepare for
27 these agreements.

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3 OpenADE Systems Architecture

3.1 OpenADE Business Architecture View

The primary business flows include configuration, registration, and authorization of 3rd Party providers, and exchange of authorized data, as shown in the following diagram.

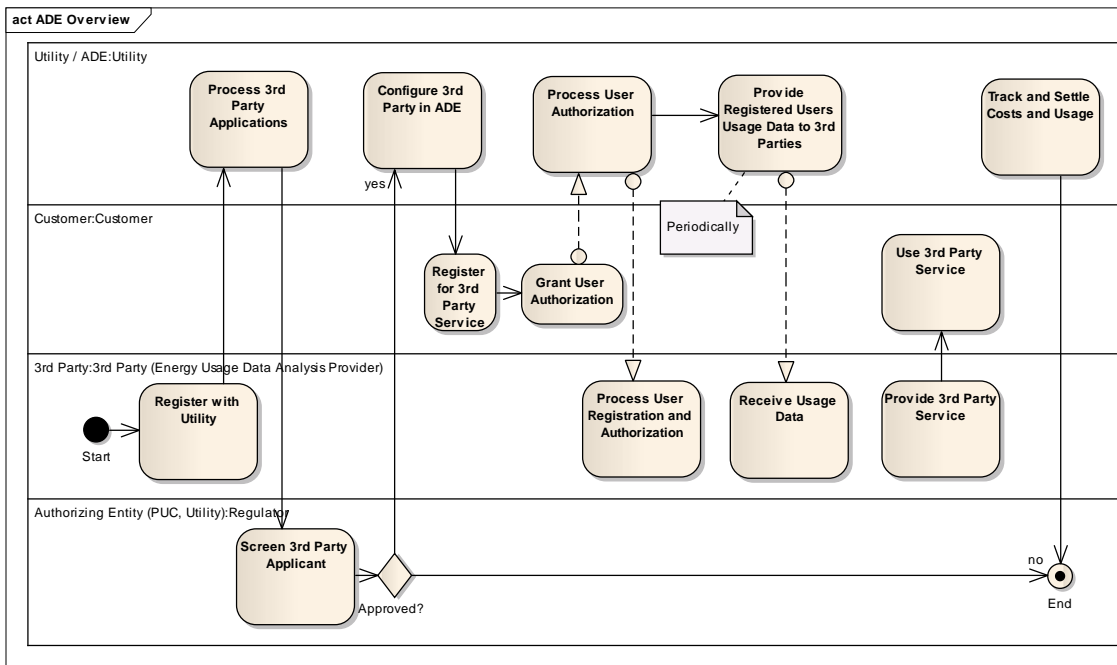


Figure 4. Overview of Business Process Flows

The business architecture is the primary topic covered in the “[Business and User Requirements](#)” document, where additional use cases and requirements are located.

3.1.1.1 Logical Components List

Logical Components are used in this document to organize interfaces (integration services) for OpenADE. These functional components may be mapped to specific physical components for a particular implementation. Following is a table listing all major logical components that will provide some functions to support ADE business processes. All services will be organized accordingly.

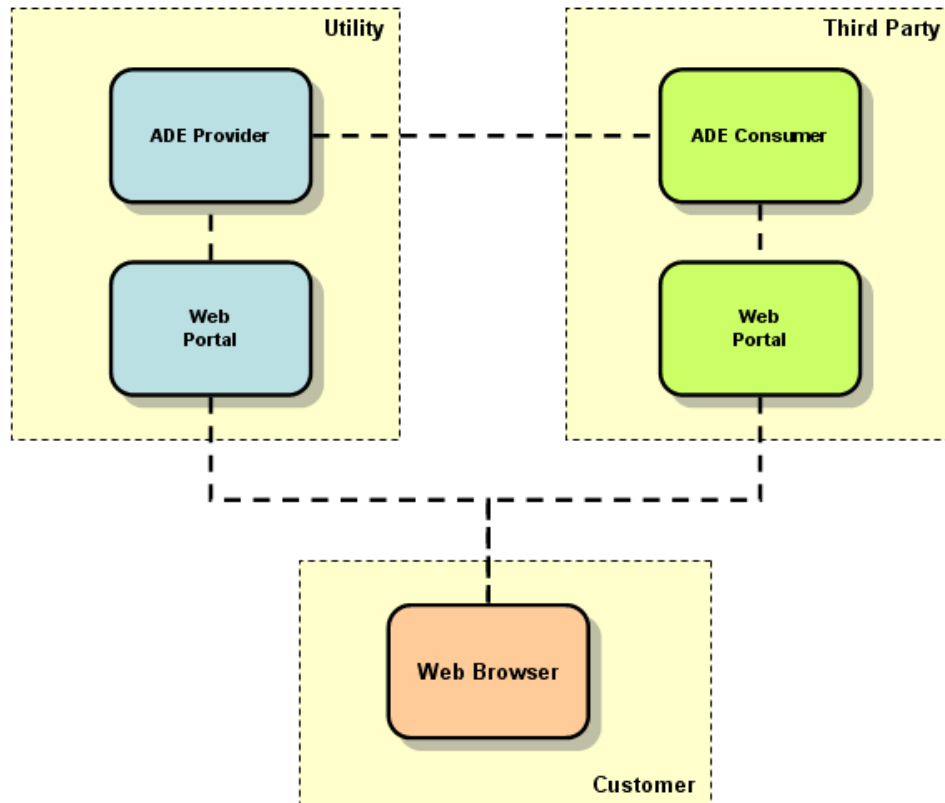
Logical Components	Description / Key Business Functions	Map to NIST
Utility	The distributors of electricity to and from customers. May also store and generate electricity. The carriers of bulk electricity over long distances. May also store and generate electricity.	Distribution Transmission
3 rd Party	The organizations providing services to electrical customers and utilities. Any entity that has authorization to exchange	Service Provider

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	information with customers and their systems.	3 rd Party
Customer	The end users of electricity. May also generate, store, and manage the use of energy. Traditionally, three customer types are discussed, each with its own domain: home, commercial/building, and industrial.	Customer
Authorizing Entity	Either the utility or a regulatory body that verifies each 3 rd Party meets all requirements for use of OpenADE services.	

- 1 The following diagram shows the components involved in data exchanges. Note that while authorizations are
- 2 expected to use a web browser, the 3rd Party services are not required to use a web browser to deliver their service.



- 3
- 4 **Figure 5. Overview diagram of Logical Components**

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1 **3.2 Integration Requirements Specification**

2 3.2.1 Functional Requirements – Business Processes

3 The business processes that have been developed as part of OpenADE are listed as follows. Note that the
4 “OpenADE Business and User Requirements” contains the details of each business process (use case).

- 5 ▪ ADE Discovery
 - 6 ○ 3rd Party and Utility agree to SLAs and configure OpenADE services (OADE BR-10, 12)
 - 7 ○ 3rd Party retrieves listing of supported operations with extensions and versions (OADE BR-8)
 - 8 ○ Utility retrieves listing of supported operations with extensions and versions (OADE BR-8)
 - 9 ○ 3rd Party and Utility subscribe to notifications
- 10 ▪ ADE Authorization
 - 11 ○ Customer Grants Permission (OADE BR-1, 2, 3, 4, 9)
 - 12 ○ Customer Extends Permission (OADE BR-3)
 - 13 ○ Customer Terminates Permission (OADE BR-4, 7)
- 14 ▪ ADE Publication
 - 15 ○ 3rd Party Requests or Subscribes to Customer Consumption Data
 - 16 ○ Utility Provides Customer Consumption Data to 3rd Party (OADE BR-14)

17 3.2.2 Functional Requirements – Integration Services

18 Using a consistent methodology to identify integration requirements from the use cases list above, the Services
19 Definitions Team identified the following requirements.

20

Use Case Scenario	Service Name	Service Provider	Functional Description of the Service
Grant Authorization	Auth Request Token	Utility	Requested from 3 rd Party to Utility to obtain an unauthorized request token.
Grant Authorization	(HTML Page)	Utility	3 rd Party passes unauthorized request token to service provider for authorization. (Redirect)
Grant Authorization	Auth Authorization	3 rd Party	After grant or deny, verification code is returned to 3rd Party.
Grant Authorization	Auth Access Token	Utility	3rd Party requests access token with signed request from 3 rd Party. Token is returned if successful in the response.
Publication	CustomerConsumption Data	Utility	Support individual requests for consumption data, listings of new or updated data, or prepared batch of data (new and updates)
Publication	Notification	3 rd Party	If necessary, notify about available data or authorization changes.

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3.2.3 Technical Requirements – Integration Services

Integration services that are well defined, understood and managed are the linchpin of an open and interoperable implementation between the utility enterprise and other business entities. Following is a list of guiding principles for integration services design:

- Common protocol and business semantics SHALL be used to achieve loose coupling of end-point service (directly or indirectly)
- Services SHALL be representative of a unique unit of work and reusable across business functions.
- Services SHALL be reusable across common practices of utilities.
- Service design SHALL be driven by business requirements and reflected in the architecture.
- Service design SHALL be governed with a common approach and framework to achieve conceptual integrity.
- Service level agreement should be defined to support key architecture qualities: security, reliability, performance, availability, scalability, data quality, information fidelity, etc.

3.3 OpenADE Application Architecture View

1. OpenADE application architecture SHALL use the data service provider (Utility, or its representative) web site / portal for identity (authentication). *(Note that expanding these options is in discussion.)*
2. All users SHALL have verified accounts at the data service provider (Utility) as well as at each 3rd Party.
3. Users SHALL be allowed to view and manage (change) their authorizations for each 3rd Party, possibly within limits set by the provider (Utility).
4. Audit information SHOULD be maintained, so that a report could be produced containing details (who, what, when, etc.) about authorizations, transfers, and other significant events.

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1 **3.4 OpenADE Data Architecture View**

2 Based on OpenADE use cases, the following data objects have been identified. The OpenADE services SHALL
3 implement methods to make requests related to these objects.

- 4
- 5 • Authorization Request
 - 6 ○ Request an unauthorized access token
 - 7 • User Authorization (Page)
 - 8 ○ Grant access to 3rd Party X to access resource Y data related to date/time range Z
 - 9 • 3rd Party Authorization Callback
 - 10 ○ To redirect back to 3rd Party to continue authorization flow
 - 11 • Access Token
 - 12 ○ An authorized access token
 - 13 • Notification
 - 14 ○ e.g. authorization for data resource X was revoked, data Y is available
 - 15 • Consumption Readings Request
 - 16 ○ Get data from period X through Y, or since Z
 - 17 • Consumption Readings
 - 18 ○ Measurements

19 **3.4.1 Consumption Readings Data Requirements**

20 The list of logical data elements needed for the main “Consumption Readings” publication contains the following items.

Data Element	Description	CIM Element
Utility Identifier	Used to distinguish between data elements from different utilities	ServiceSupplier name
User Resource	A key value, generated during the authorization process, to be used by the utility and 3 rd party to represent a user / service point combination.	CustomerAuthorization
Service Point Name	An identifier (name) for the (metered) point at which the commodity was delivered to the customer. (Optional)	ServiceDeliveryPoint name
Service Type	The type of commodity related to the readings, such as energy, gas, water, etc.	ServiceCategory kind
Interval Start Date/Time	The date and time of the beginning of the interval during which the readings apply.	IntervalReading <u>startTimeStamp</u>
Interval End Date/Time	The date and time of the end of the interval during which the readings apply.	IntervalReading <u>endTimeStamp</u>
Reading Type	The type of measurement represented by the value of the reading (e.g. energy, voltage, pressure)	ReadingType kind

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Data Element	Description	CIM Element
Interval Reading	The number of measured units delivered, for this interval.	IntervalReading value
Reading Units	The units of the reading value (e.g. kW, kWh)	ReadingType unit
Reading Source	Specifies whether the reading is an estimate or actual reading	<u>IntervalReading</u> <u>ReadingQualityMeasurementValueSource</u> name
Reading Date / Time or Interval	The start or end time of each individual reading, or which interval within the block.	<u>IntervalReading</u> timeStamp <u>IntervalReading</u> endTimeStampMeasurementValue timeStamp or <u>IntervalReading</u> sequenceNumber (new)
<u>Service Account</u>	<u>Identifier associated with the agreement to pay for service at a specific service location</u>	<u>CustomerAgreement</u>
<u>Supplier Type</u>	<u>Indicates the type of supplier (utility, retailer, other)</u>	<u>ServiceSupplier</u> kind
<u>Meter number</u>	<u>physical meter number</u>	<u>MeterAsset</u> ID
<u>Reading Type Direction</u>	<u>Indicates the direction of the measurement reading type (delivered, received, net)</u>	<u>ReadingType</u> direction
<u>Reading Type Unit Multiplier</u>	<u>Indicates the multiplier as enumeration applied to the reading type units (k, M)</u>	<u>ReadingType</u> multiplier
<u>Reading Type Name</u>	<u>Provides a human-readable name for the reading type "Energy Delivered (kWh)"</u>	<u>ReadingType</u> name

1

2 Note that it is assumed there may be some missing intervals.

3 To help understand how the elements relate to each other, the following shows a preview of what selected sections of a
4 typical message might look like. This is only a sample, and may change significantly during the service definition phase.

```

5 [...] (header, etc. will go here)
6   <MeterReading>
7   [...] (user resource, etc. will go here)
8       <IntervalReading>
9           <endTime>2009-06-23T00:00:00-07:00</endTime>
10          <startTime>2009-06-23T01:00:00-07:00</startTime>
11          <MeasurementValueSource>
12              <name>ACTUAL</name>
13          </MeasurementValueSource>
14          <value>2.716549</value>
15      </IntervalReading>
16  </IntervalReadingList>
17  <ReadingType>
18      <kind>ENERGY</kind>
19      <unit>Wh</unit>
20  </ReadingType>
21 </IntervalBlock>

```

22 [...] (full message could contain multiple MeterReading elements)

23 Note that some extensions may have been included in the above that are not shown in the logical data model diagram in the
24 next section, but these will be in sync when the actual message structure is built.

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1 3.5 OpenADE Technical Architecture View

2 Given a large variety of integration technologies that exist in the market place and in the utility enterprises, it
3 would be up to each utility to implement the OpenADE systems requirements specification that fit with their
4 chosen technology infrastructure and architecture goals. However, regardless of the technologies, the following
5 architectural issues are important and needs to be addressed when it comes to achieving interoperability.

6 3.5.1 Networking Standards

- 7 1. OpenADE services SHALL be provided via TCP/IP (internet) networks. (See [RFC-1122])
- 8 2. OpenADE services SHALL be exposed primarily using the HTTPS protocol. (See [RFC-1123])
- 9 3. OpenADE services MAY support Secure FTP. Since OpenADE requires HTTPS, FTP is only an option if both
10 parties implement and agree to use FTP. (*Note that requiring support is in discussion.*)

11 3.5.2 Security Standards

12 A major component of OpenADE is ensuring that protected resources, including data, can and will be secured to prevent
13 unauthorized access. This responsibility originates with the utility, where the data is obtained, and is passed to 3rd Party
14 providers when customers authorize their use of specific utility data. To ensure that data is not provided to unauthorized
15 parties, the constraints and controls documented in [ASAP-SG-3P] are to be complied with for OpenADE installations.

16 Using the terminology specified in the ASAP-SG Third Party Data Access document, the customer is the Resource Owner,
17 the Data Service Provider is the Resource Custodian. (The 3rd Party is still called the Third Party)

18 3.5.3 Service / Resource Patterns

19 Service and/or resource naming standards are important to achieve a level of “plug & play” at the run time
20 environment. It implies the semantics of the service and its operations.

21 The OpenADE services naming convention has the following rules:

- 22 ○ **Information Object** – Collection of entities (classes and attributes) to describe an object in a business
23 context.
- 24 ○ **Service / Resource Name** – Service naming convention follows the information object in a business
25 process for an interface definition.
- 26 ○ **Operation Name** – Operation name indicates a specific action that will be performed to the Information
27 Object. Here is a list of operation naming patterns utilizing IEC 61989 verbs (See IEC61968-1
28 Specification for details):
 - 29 • The following verbs are used for service/operation provided by the master system that owns the
30 Information Object to entertain the request for the specified action implied by the verb.
 - 31 ▪ **Create**
 - 32 ▪ **Change**
 - 33 ▪ **Cancel**
 - 34 ▪ **Close**
 - 35 ▪ **Delete**
 - 36 • The following verbs are used for service/operation provided by systems that are interested in
37 receiving the Information Object as the result of the specified action implied by the verb. This
38 can be invoked by the master system or an intermediary to supply the Information Object.

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- **Created**
- **Changed**
- **Closed**
- **Canceled**
- **Deleted**
- The following verbs are used for query type services provided by the master system of the Information Object.
 - **Get**
 - **Show**
- The following verbs are not used within OpenADE.
 - **Subscribe**
 - **Unsubscribe**

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1 **3.6 Governance**

2 Governance defines the rules by which parties participating in interoperability (integration, or data exchange)
3 efforts can change the interfaces and components providing and consuming them, in order to maintain efficient
4 operation. For OpenADE, governance includes guidelines recommended for addition or extension of standard
5 interfaces, as well as modifications to or extensions to become part of the standard.

- 6 1. Changes shall be made to be backwards compatible (optional additions only), to allow existing implementations to
7 continue to operate.
- 8 2. Participants are encouraged to submit extensions to the working group as business requirements, with additional
9 recommendations as necessary, to be discussed, ratified, and added to periodic updates.

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1 **4 Appendices**

2 **4.1 Terms and Definitions**

3 This subsection provides the definitions of all terms required to properly interpret the OpenSG OpenADE SRS.

Term	Definition
Advanced Metering Infrastructure (AMI)	The infrastructure built around advanced metering allowing the utility and consumer to communicate in real time with respect to energy consumption. Based on the information collected, the utility is able to obtain an accurate reading of demands, while consumers are able to modify their usage to save energy.
Daily Consumption	The amount of energy a customer uses in a 24 hour period. This information is used to drive business intelligence solutions.
Data Service Provider	The utility, or organization acting on behalf of the utility, that is providing the OpenADE service.
IEC	The International Electrotechnical Commission (IEC). The IEC TC57 maintains an electric utility focused information model called CIM (Common information model).
IEC 61968	International standards for Energy Distribution Managements Systems, respectively, specify a Common Information Model (CIM) for utility data exchange, Applications Programming Interfaces (API) for application integration (GID), and XML messaging standards.
Logical Data Model	A representation of an organization’s data based upon entities and attributes of those entities. A logical data model is often a logical representation of a business’ integration or business requirements.
SLA	Service Level Agreement: the part of a service contract where the level of the services are agreed upon between two systems.

4

5

CIM Term	Definition
IntervalBlock	Used within a MeterReading to identify a time sequence of Readings of the same ReadingType.
IntervalReading	Data captured at regular intervals of time. Interval data could be captured as incremental data, absolute data, or relative data. The source for the data is usually a tariff quantity or an engineering quantity. Data is typically captured in time-tagged, uniform, fixed-length intervals of 5, 10, 15, 30, or 60 minutes. Interval Data is sometimes also called “Interval Data Readings” (IDR).
MeasurementValueSource	MeasurementValueSource describes the alternative sources updating a MeasurementValue. User conventions for how to use the MeasurementValueSource attributes are described in the introduction to IEC 61970-301.
MeterReading	Used to convey quantities that are measured by a meter.

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CIM Term	Definition
Reading	Used to convey a specific value measured by a meter or other asset. Each Reading is associated with a specific ReadingType.
ReadingType	Used to identify the type of data that is conveyed by a specific Reading.
ServiceDeliveryPoint	There can be multiple service points at a single ServiceLocation, each one identified as a ServiceDeliveryPoint. They deliver service in accordance with a CustomerAgreement.

1

OpenADE Business and User Requirements Document

(Version 1.00)

Version:	1.00
Created:	11 June 2009
Last Update:	29 October 2009
Print Date:	
By:	SG-Systems OpenADE Team
Distribution:	Public

Acknowledgements

The following individuals and their companies have contributed and/or provided support to the work of the OpenADE Business and User Requirements Specification:

Brad Bogolia from Greenbox
Brad Johnson from Oncor
Brent Hodges from Reliant Energy
Bin Qiu from E:SO
Charles Spirakis from Google
Chris Chen from Sempra / SDG&E
Chris Thomas from Citizens Utility Board (State of Illinois)
Claudio Lima
Darren Highfill from Saker Systems
Dave Mollerstuen from Tendril Networks
Gerald Grey from CIMple ~~Solutions~~Integrations, Inc.
Gillis Melancon from FP&L
Jeremy McDonald from SCE
Joe Zhou from Xtensible Solutions
John Mani from Comverge
Larry Khorman from Oncor
Mark Ortiz from Consumers Energy
Mary Zientara from Reliant
Michael Shames from Utility Consumer's Action Network
Patrick Beer from Ecologic Analytics
Ramesh Reddi from IntelliEnergyUtil
Rohit Khera from PG&E
Sandy Bacik from Sensus
Shawn Hu from Xtensible Solutions
Steve Van Ausdall from Xtensible Solutions

The OpenSG OpenADE Task Force wishes to thank all of the above-mentioned individuals and their companies for their support of this important endeavor, as it sets a key foundation for the interoperable Smart Grid of the future.

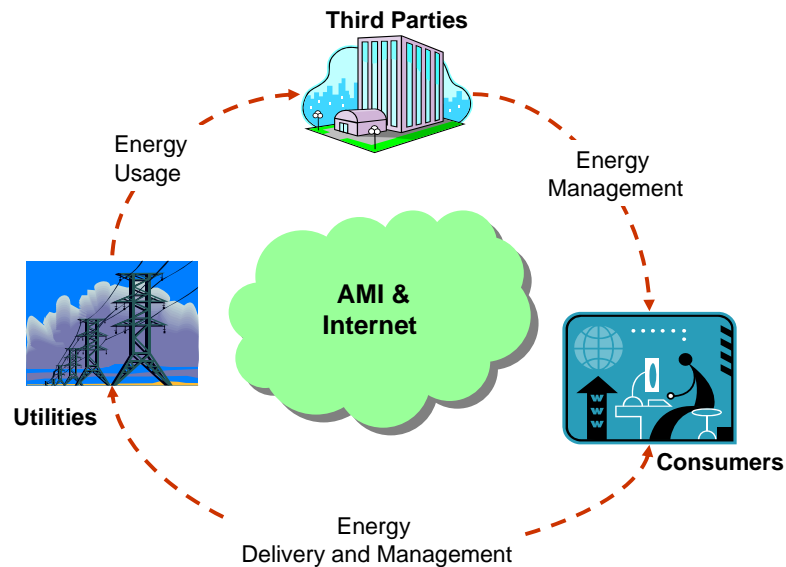
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1.0 INTRODUCTION

1.1 Introduction to Automated Data Exchange

Smart Grid developments will revolutionize how energy is delivered to consumers, improving reliability and efficiency, and will also change the way consumers manage their energy use. Consumers will be able to participate in the wholesale market through distributed generation such as solar, or indirectly through load reduction during times of peak demand or load shaping through dynamic pricing. To help consumers make more economical decisions about their energy consumption, new information and tools must be made available to both commercial and industrial customers as well as the mass market (residential customers). In order for consumers to realize the benefits of the Smart Grid, customer related data (e.g. usage information, etc.) must be made available in a timely manner to the customer and to third parties whom the customer chooses. Third parties will develop products and services for consumers that will enable the consumer to make informed decisions and to take action regarding their electric usage. Therefore, the term Automated Data Exchange (ADE) is coined to refer to a standardized Machine-to-Machine (M2M) interface that permits utilities to share, at the consumer's request and under the consumer's direction, a broad set of that consumer's utility data with specific third parties.

With the advent of AMI and Smart Grid capabilities, demand side management services will be available to a broader set of consumers, especially the residential and small business consumer. Traditionally energy management services have been provided by the integrated electric utility to this group of consumers, but with the deployment of interoperable¹ Smart Grid systems which use open



The Changing Dynamics of Energy Services

¹ Interoperability is the capability of two or more networks, systems, devices, applications, or components to share and readily use information securely and effectively with little or no inconvenience to the user. The characteristics of interoperability as set forth in the GridWise® Interoperability Context- Setting Framework are (1) exchange of meaningful, actionable information between two or more systems across organizational boundaries, (2) a shared understanding of the exchanged information, (3) an agreed expectation for the response to the information exchange, and (4) a requisite quality of service: reliability, fidelity, and security. The result of interoperability is that interfaces, systems, and devices are capable of being integrated, scalable, adaptable, and upgradable and utilize open standards to promote competitive technology and to avoid stranded investments. Interoperability can only be achieved if there is a seamless, end-to-end coordination and exchange of data between many organizations, interfaces, systems, and devices resulting in behavior changing information given to the consumer.

1 standards, third party providers will also be able to offer products and services to consumers.

2 Today, most of the on-going Smart Grid deployments have components of customer web
3 presentment, and some include third party access portals. OpenADE interface specifications are
4 being developed to provide a standardized interoperable machine-to-machine interface. This
5 interface should accommodate a broad set of parties such as:

- 6
- 7 • Consumers
 - 8 • Consumer Energy Management Service and/or Platform providers;
 - 9 • Retail Service Providers;
 - 10 • Demand Response (DR) aggregators;
 - 11 • Third parties for whom a utility manages AMI infrastructure and need to have access to
12 meter data and events of their customers.
 - 13 • Energy Management service providers for future Smart Grid features such as distributed
14 generation, PHEV management, energy storage, etc.
 - 15 • Other public authorities (PUC, city, etc.) may also be a consumer of ADE data.
 - 16 • Etc.
- 17

18 From a data perspective, ADE may include access to the following types of information:

- 19
- 20 • Consumer energy usage
 - 21 • Consumer energy management data (demand response program, events, pricing, actions,
22 and notifications.)
 - 23 • Consumer meter events including power quality, outages, and others.
 - 24 • HAN-related data
- 25

26 1.2 Purpose of Document

27

28 The Purpose of this Document is to define the business and user requirements for a specific
29 Automated Data Exchange system (hereafter OpenADE).

30

31 1.3 Terms and Definitions

32

33 This subsection provides the definition of select terms used in this document.

1

Term	Definition
Authorizing Entity	The entity (e.g. PUC, Utility, bonding agent, etc.) who approves a 3 rd Party to utilize the OpenADE interface.
Authorized Request Token	A unique identifier (without Personal Information) shared between the Utility and 3 rd Party, defined based on the authentication standard being used.
Automated Data Exchange (ADE)	System by which third parties can receive Consumer Utility Data from utilities.
Customer	A consumer who receives service from the Utility.
Consumer Utility Data	May include consumer electrical usage data, consumer energy management data, meter events, HAN information
Consumption Data	Generally, the collection of current and historical consumer electrical usage data.
Personal Information	Information that pertains to a specific individual and can be used to identify that individual, such as Customer name, address, zip code, utility account number, or other information which identifies the individual customer in the utility back office system
OpenADE	A standard interoperable interface, as defined by OpenSG SG System Working Group, the business and user requirements of which are contained in this document.
Service Delivery Point (SDP)	Logical point on the network where the ownership of the service changes hands -- typically where a meter may be installed.
3 rd Party	A party who has been authorized by an authorizing agent (e.g. utility, PUC, bonding agent, etc.) to receive customer information through the OpenADE interface at the request of the customer.
Utility	The electric service provider, which, at a minimum, is responsible for reading the electric meter, providing HAN access to the meter, and delivering energy to the consumer. This may be an integrated electric utility or a Transmission and Distribution utility.

2

2.0 OPENADE BUSINESS RATIONALE

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5 This section describes the business rationale behind OpenADE – that is, the fundamental
6 business justification for defining the system.

7

2.1 Background

8

9

1 In response to local and federal initiatives toward improving grid reliability and promoting
2 consumer involvement in balancing supply and demand of energy resources, the Open Smart
3 Grid (OpenSG) subcommittee within the UCA International Users Group has organized a
4 number of working groups and task forces to develop requirements and specifications for Smart
5 Grid needs. Among them, the need for Automated Data Exchange (ADE) between utilities,
6 customers, and third parties that wish to provide smart grid enabled products and services to
7 consumers has become a high priority. Subsequently, a task force (OpenADE) has been formed
8 within OpenSG to gather requirements and use cases for ADE from all interested stakeholders,
9 including utilities, 3rd parties, consumers, regulators, and others.

10

11 Under the Energy Independence and Security Act (EISA) of 2007, the National Institute of
12 Standards and Technology (NIST) was given the “primary responsibility to coordinate
13 development of a framework that includes protocols and model standards for information
14 management to achieve interoperability of smart grid devices and systems...” [EISA Title XIII,
15 Section 1305]. NIST has engaged a broad range of stakeholders in the development of a Smart
16 Grid Interoperability Standards Roadmap. The outcome of two workshops hosted by NIST was
17 a list of critical standards and standards development activities needed for the Smart Grid. In an
18 August 10, 2009 report, NIST proposed a set of fourteen Priority Action Plans (PAPs) for
19 developing standards necessary to build an interoperable Smart Grid. Access to customer
20 information was included as one of the fourteen PAPs as PAP10 Standard Energy Usage
21 Information. The objectives of PAP10 are as follows and this document will address the second
22 objective. OpenSG will address the remaining objectives (1, 3, and 4).

23

- 24 1. Develop a summary of information needs for various means of customer information
25 access about metering and billing.
- 26 2. Develop short term plans for near-term customer access to usage data based upon today’s
27 installed meters.
- 28 3. Develop composite information model that can be easily transformed without loss for
29 transport via standards in OASIS, IEC61970/61968, IEC61850, ANSI C12.19/22,
30 AHRAE 135, and ZigBee.
- 31 4. Development and implement a plan to expedite harmonized standards development and
32 adoption within the associated standards bodies.

33 2.2 Opportunity

34

- 35 • Currently, consumer and 3rd Party access to Consumer Utility Data may not be available
36 or may be provided through a custom utility interface and may be different for each 3rd
37 Party.
- 38 • Custom implementations increase development latency, cost, and variation
- 39 • Regulatory scrutiny, approval required for each implementation

40

1 Define a standard interoperable interface that addresses the above points whereby consumers and
2 3rd parties can have access to Consumer Utility Data.

3
4 Also required: 3rd Parties providing services to consumers, based on access to consumption data

5 **2.3 Objectives and Success Criteria**

- 6
- 7 • Utility: address regulatory and market requirements with a cost effective interoperable
8 standard interface that includes protection of consumer data and cyber security.
 - 9 • PUC: can reference OpenADE directly in rules related to consumer and 3rd Party access
10 to Customer Utility Data.
 - 11 • Customer: can release their Consumer Utility Data to 3rd Parties who provide products
12 and services which utilize Customer Utility Data.
 - 13 • 3rd Parties: ability to gain secure access to Consumer Utility Data for use in enhanced
14 energy management products and services.

15
16 Goal: Finish Business and User Requirements document by Q4 2009 and the System
17 Requirements Specification (SRS) document by Q1 2010.

18 19 **2.4 Risks**

- 20
- 21 • Regulatory concerns – ameliorate by involving regulators in OpenADE definition.
 - 22 • Time to market – external pressures (i.e. NIST et al), concern about rushing definition
 - 23 • Other standards bodies or users groups with conflicting work or agendas.

24 25 **2.5 Specific Business Requirements**

26
27 The business requirements provide a frame of reference, or domain, in which to define a specific
28 system. In some senses, the business requirements serve as constraints on a project's vision and
29 scope. As such, they are generally defined independently and in advance of the vision and
30 scope.

31
32 We acknowledge that there may be a need (due to regulatory or other considerations) for
33 alternate authorization approaches (in conjunction with federal and state law); however, we
34 encourage specific conformance with the requirements outlined in this document

1
2 The following table lists specific business requirements for OpenADE. Many of these
3 requirements were originally sourced from work done in the Texas PUCT Implementation
4 Project relating to Advanced Metering.

5

ID	Business Requirement
OADE BR-1	Ability of a Customer to authorize the Utility to release Consumption Data to a 3 rd Party
OADE BR-2	Ability for the Customer to authorize multiple registered 3 rd parties to have limited time based read only access, with a default expiration (suggested: 6 months, or at the discretion of the local jurisdictional authority) , to their Consumption Data
OADE BR-3	Ability for the Customer to actively indicate a specific expiration date or unlimited access timeframe for 3rd Party access other than the default of 6 months
OADE BR-4	The OpenADE data provider must support the ability to electronically allow select / revoke which 3rd parties are authorized for read-only access to Customer Utility Data
OADE BR-5	Ability for 3rd Parties and Customers to receive notification from the Utility when access has been granted, access has been changed, or access has been revoked for a Service Delivery Point.
OADE BR-6	All parties will follow industry standard best practices around security and authorization; additionally, OpenADE will be compliant with the upcoming (Q4 2009) ASAP-SG security profile for 3 rd Party Data Access.
OADE BR-7	Ability to terminate all users' access to all future Service Delivery Point specific information whenever the utility is notified a Customer has moved out of a premise, including any authorization for 3rd Party access.
OADE BR-8	Future versions of the OpenADE interface shall be backwards compatible, including provisions for exchanging versioning information and negotiating interface capabilities. <i>(Ed.: There was some controversy regarding this requirement; some members wanted to soften the requirement by using the term "should" rather than "shall".)</i>
OADE BR-9	The Customer shall be able to grant a 3 rd Party access to all or a subset of Consumption Data (e.g. historical consumption data, ongoing consumption data, etc.)
OADE BR-10	Any 3rd Party wishing to access data via the OpenADE interface must establish a trusted relationship with each participating Utility. Both the Utility and the 3rd Party must disallow requests from untrusted parties.
OADE BR-11	Neither Utility nor 3rd Party shall use unencrypted communication channels to exchange OpenADE data.

OADE BR-12	If an Authorizing Entity exists, 3rd Parties must be authorized by the Authorizing Entity to utilize the OpenADE interface.
OADE BR-13	If an Authorizing Entity exists within a jurisdiction, Customers must be able to view a complete list of authorized 3rd Parties who have been authorized to use the OpenADE interface.
OADE BR-14	OpenADE utility data will be made available to 3 rd Parties (as directed by the Customer) in a reasonable and timely fashion.

1
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3.0 OPENADE VISION

4

This section on OpenADE Vision attempts to define the full potential of the OpenADE interface, rather than just those elements that will be part of the initial release (covered in OpenADE 1.0 Scope, below).

8

3.1 Project Vision Statement

10

The vision of the OpenADE effort is that consistent set of business requirements can be used to foster the development of a standard interfaces between the utility and third parties. This work will be provided to stakeholders to develop standards and best practices that will foster innovation.

3.2 Major Features

16

This section attempts to delineate all features that are (and specifically are not) part of the broader OpenADE vision.

19

Feature	In	Out
Defining criteria for determining which 3 rd Parties are "accredited" (i.e. permitted to access consumption data) within a regulatory region		X
Specific 3 rd Party presentation of consumer utility data		X
Criteria for Consumer Utility Data availability	X	
Criteria that PUC uses to assess 3 rd Parties' qualifications		X
Data security, between the Utility and 3 rd Party	X	

Data security, after delivery to 3 rd Party		X
Consumer energy usage (e.g. consumption, etc.)	X	
Consumer energy management data (e.g. Demand Response, pricing, etc.)	X	
Consumer meter event data	X	
Other data (e.g. HAN data)	X	
All aspects of consumer data in ADE context between Utility and 3 rd Parties	X	
Methods to authorize / revoke 3 rd Party access	X	
Support for billing mechanisms between Utilities and 3 rd Parties		X
Specific requirements around auditability		X
Definition and standardization of Customer Utility Data (e.g. timing of data availability, format of data, units, etc.)	X	

1

3.3 Assumptions and Dependencies

2

3
4 The following assumptions were made in development of these requirements.

5

- As per their charter, local regulatory agencies will want to have input on specific policy decisions within their jurisdiction; therefore, this requirements specification does not attempted to standardize specifics around privacy, data longevity, vetting of 3rd Party providers, etc.

6

- OpenADE will provide a subset of the interface required between the Smart Meter Texas Portal and 3rd Parties; that is, the OpenADE interface should be usable for communications of consumption information between the Smart Meter Texas Portal and 3rd Parties

7

- If an Authorizing Entity exists, 3rd Parties must go through a vetting process and be authorized by an Authorizing Entity to use the OpenADE interface to get access to Consumer Utility Data.

8

- Customer must provide the information required by the utility to identify themselves as a Customer to gain access to the OpenADE system.

9

- Customer must individually grant 3rd Parties to access their Consumer Utility Data or a subset of that data.

10

- Utilities will provide no Personal Information through the OpenADE interface. 3rd parties will have their own representation of the user profile.

11

12

- 3rd Parties have the responsibility to manage and protect consumer's data and privacy in accordance with state and federal regulations.

4.0 OPENADE 1.0 SCOPE

This section on OpenADE 1.0 Scope attempts to constrain the definition of the initial version of OpenADE, so as to speed time to market.

4.1 Scope of Initial Release

OpenADE 1.0 will be limited to the functions required for a Utility to provide a Consumer's Consumption Data to an authorized, specific 3rd Party. Availability of that data will be in accordance with industry best practices and / or jurisdictional requirements.

4.2 Scope of Subsequent Releases

Subsequent versions of OpenADE may include access to the following Consumer Utility Data elements:

1. Pricing information
2. Event information
3. HAN and configuration information

Additional suggestions include:

1. Additional authorization scenarios, including data captured by customer or 3rd Party.
2. Use of these mechanisms as a platform for other information exchanges, for example Demand Response.

4.3 Limitations and Exclusions

Throughout general OpenADE discussions and the requirements elicitation process, the question of whether a specific item or feature is within scope for OpenADE 1.0 has been broached. The following table is an attempt to capture and document those discussions and decisions, to further refine the question of scope and to insure that we don't have to revisit specific scope issues.

1

Feature	In	Out
Consumer energy usage	X	
Consumer energy management data		X
Event information		X
Other data (e.g. HAN data)		X
Law enforcement-specific interface mechanism		X

2

5.0 OPENADE CONTEXT

5.1 Stakeholder Profiles

5

6 *Ed.: Additional actor / stakeholder definitions are being developed on a SG-Systems-wide basis,*
7 *and the relevant elements will be included in this document when available.*

8

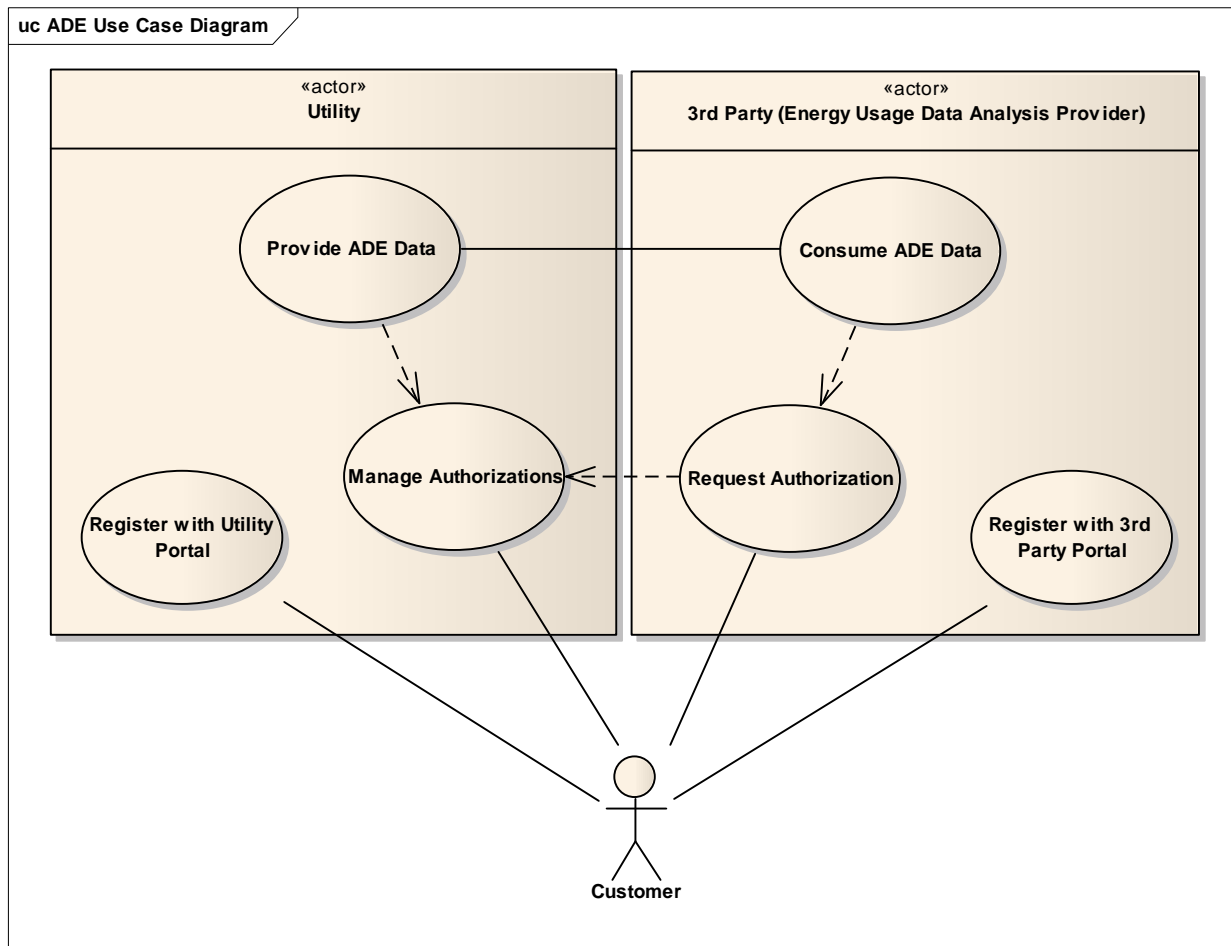
Stakeholder	Stakeholder Goal
Consumer	Able to make informed decisions about their electric consumption by having timely access to current and historic consumption information; consumption is "more transparent"
	Able to grant 3 rd Parties access to their Consumption Data in order to receive 3 rd Party value-added products and services.
Utilities	Provide better / more appropriate services to consumers
	Provide the standard machine to machine interface to enable additional categories of services, as appropriate (including e.g. Demand Aggregation)
	"Social" benefit
	Increased customer satisfaction.
	Access to customer Consumption Data is a basic enabler of 3 rd Party products and services

3 rd Parties	Provide Smart Grid enabled products and services to energy consumers
	Increases likelihood of utility providing 3 rd Party access to consumer data.
	Simplifies the utility interface , versus a non-standard interface on a per-utility basis
PUC	Satisfies PUC goal of maximizing consumer value
	Lowers utility overall costs
	Lowers overall cost of data access implementations

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6.0 OPENADE USE CASES

The following diagram shows an overview of the use cases involved in this recommendation. Note that while the two registration steps are necessary to obtain a login / password with each portal, they are not covered in this recommendation, and should use whatever mechanisms are currently in place. Other functions, such as configuring systems to allow secure communication channels between Utility and 3rd Party, providing the actual energy usage data analysis service (by the 3rd Party), and reading meters to obtain consumption data (by the Utility), are necessary, but are not specified by this recommendation so are not shown.



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The OpenADE interface, provided by Utilities and used by 3rd Parties, is responsible for allowing authorization for and access to a consumer's Consumption Data to authorized 3rd Party.

6.1 ADE Authorization - Consumer Grants Permission

Ed.: This use case is intended to be non-prescriptive; that is, the technical specifics within the textual Use Case and Activity Diagram are only intended to flush out user requirements, rather than to explicitly specify technology implementations

Context: Consumer wants to take advantage of value-added services provided by a specific 3rd Party, and therefore must grant permission for their Utility to share their consumption data with that 3rd Party.

A preeminent goal throughout these Authorization use cases is to ensure that there's no "leakage" of Personal Information between the Utility and the 3rd Party, that each entity maintains its own account / user information separately – consequently there is no explicit or implied requirement to federate / map user identities across entities. The envisioned authorization model uses the

1 open standard for this purpose, OAuth, as a model, though technical implementation details will
2 be discussed in subsequent documents. The result of the process is a shared resource key, linked
3 at the Utility and 3rd Party to each of their identities for the customer. Through this resource key,
4 the linkage is made at the Utility to the appropriate meters, which are chosen during the
5 authorization process. Federated identity is not necessary, but could be used by either the Utility
6 or 3rd Party for authentication, or proof of identity, which is separate from the authorization to
7 share the Utility resources.

8
9 **Primary Actor:** Consumer

10
11 **Stakeholders and Interests:** Utility, 3rd Party

12
13 **Preconditions:**

- 14 1. Consumer has pre-existing account on Utility web site.
- 15 2. Consumer has pre-existing account on 3rd Party web site (or establishes account during
16 authorization process).
- 17 3. 3rd Party has been authorized by the Authorizing Entity (if one exists) to use the
18 OpenADE interface.

19
20 **Triggers:** Consumer's decision to utilize 3rd Party service.

21
22 **Main Success Scenario:**

- 23 1. (Optional) Customer visits Utility web site, navigates to "3rd Party Access" section. The
24 Utility or Authorizing Entity should list all authorized 3rd Parties, so that consumers can
25 verify separately that a given 3rd Party is in good standing, but it may be optional to visit
26 the utility website or this list prior to starting the authorization flow.
- 27 2. Customer logs in to Utility website, navigates to "3rd Party Access" page. Customer then
28 chooses the access parameters (e.g. which 3rd Party, Service Delivery Point(s), length of

1 access, etc.) See example authorization page layout below.



- 2
- 3 3. Utility sends notification to Customer through trusted channel (e.g. registered e-mail) that
- 4 there is an authorization change. The Utility web site directs the Customer (e.g. through
- 5 web browser redirect, e-mail link, etc.) to the 3rd Party web site with an authorization
- 6 token. (Some technical details are not called out here, but subsequent documents will
- 7 contain full specification of this exchange.)
- 8 4. Customer logs in (if not logged in) to 3rd Party web site and completes any required
- 9 administrative functions. 3rd Party uses Authorized Request Token to request historical
- 10 data and subscribe to future data from Utility via OpenADE data service interface.

11

12 **Extensions:**

- 13 0. Customer begins at 3rd Party website, rather than Utility website:
- 14 a. Consumer indicates their Utility provider to 3rd Party website
- 15 b. 3rd Party website redirects to specific landing page on utility web site
- 16 1. Customer doesn't have account / isn't logged into Utility account
- 17 a. Customer creates / logs into Utility account
- 18 4. Customer doesn't have account / isn't logged into 3rd Party account:
- 19 a. Customer creates / logs into 3rd Party account
- 20

21 **Minimal Guarantees:** No Personal Information is shared among 3rd Party and Utility

22

23 **Success Guarantees:** Utility is prepared to provide Consumer Utility Data to 3rd Party, 3rd Party

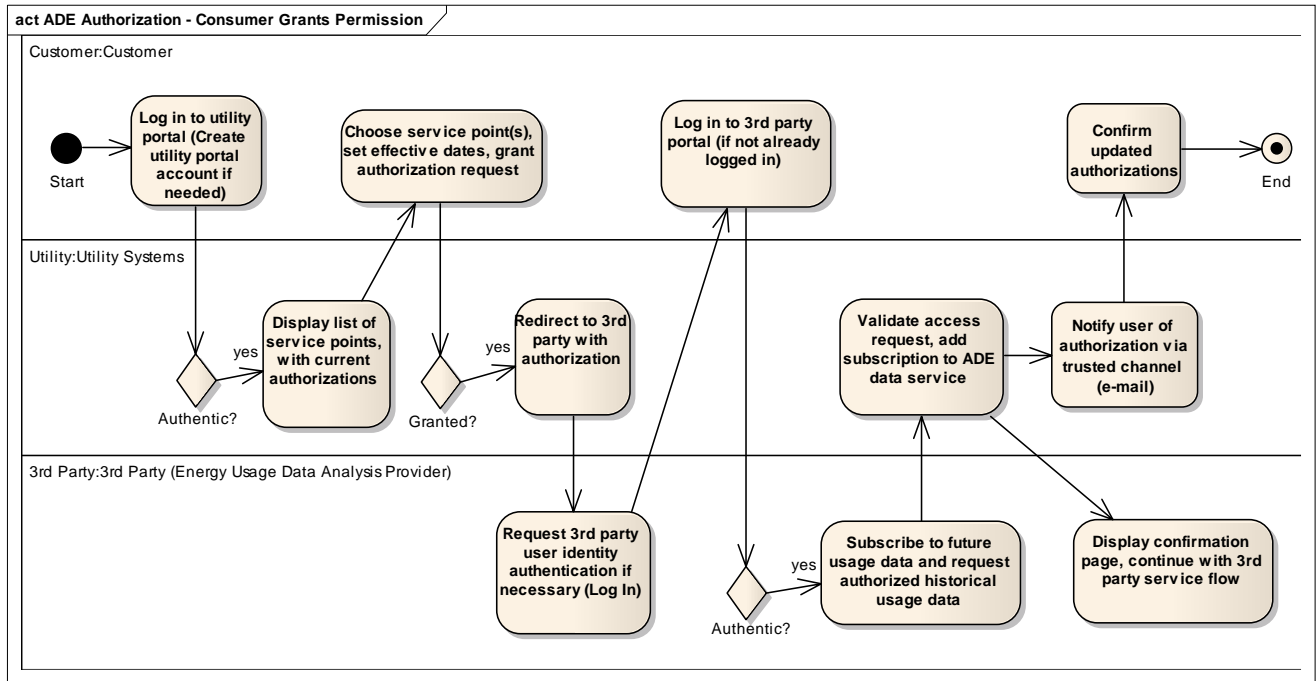
24 has an Authorized Request Token through which the Utility can validate and serve requests for

25 protected resources.

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Frequency of Occurrence: Rarely; only when establishing initial relationship between Consumer, Utility, and 3rd Party

Activity Diagram:



6.2 ADE Authorization - Consumer Extends Permission

Context: Consumer wants to extend existing permission for their Consumption Data to be available to a specific 3rd Party

Primary Actor: Consumer

Stakeholders and Interests: Utility, 3rd Party

Preconditions: Consumer has granted initial permission for Utility to provide Consumption Data to specific 3rd Party (implies Consumer has accounts with both Utility and 3rd Party).

1 **Triggers:** Consumer's decision to extend a 3rd Party's access to their Consumption Data.

2

3 **Main Success Scenario:**

4 1. Consumer logs into Utility web site, navigates to "3rd Party Access" section, indicates
5 desire to modify / extend Authorization.

6 2. Utility presents a list of 3rd Party / Service Point / Authorizations/ access parameters.

7 3. Consumer selects 3rd Party, updates length of access parameter, and grants permission
8 using a screen similar to the original grant.

9 4. Utility updates internal information systems with extended authorization parameters, and
10 notifies the Customer via trusted channel about the authorization change.

11 5. Utility will communicate extended authorization parameters to affected 3rd Parties.

12

13 **Extensions:** None

14

15 **Minimal Guarantees:** No Personal Information is shared among 3rd Party and Utility

16

17 **Success Guarantees:** Utility continues making Consumer Utility Data available to 3rd Party for
18 extended authorization period.

19

20 **Frequency of Occurrence:** Rarely; only when extending relationship between Consumer,
21 Utility, and 3rd Party

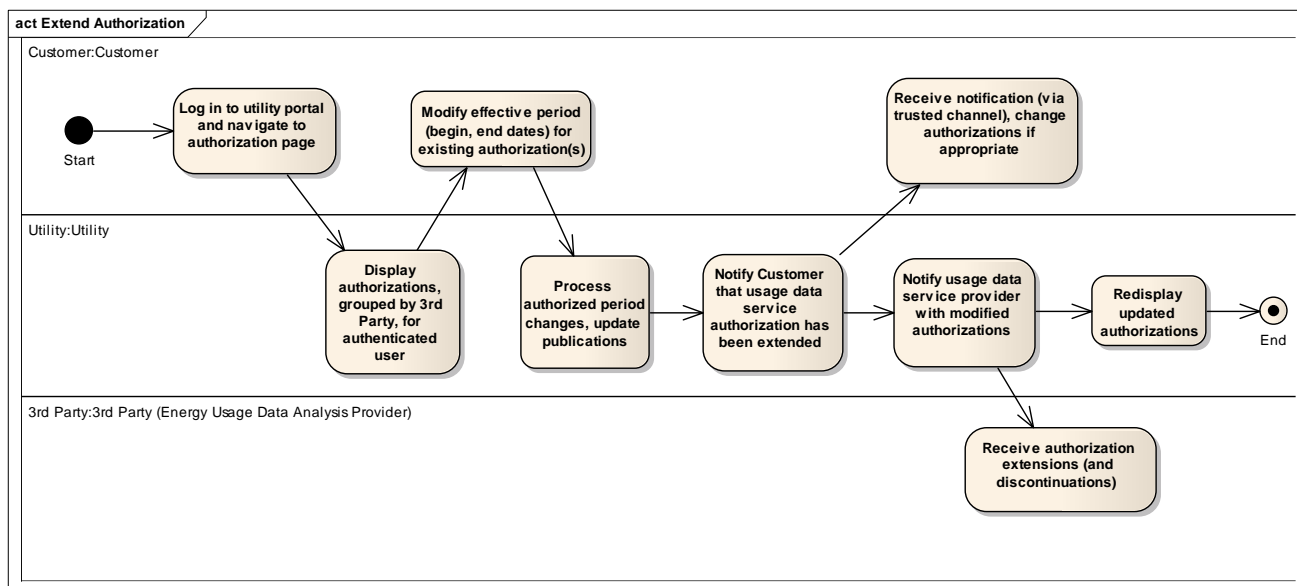
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23 **Open Issues:**

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25 **Activity Diagram:**

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6.3 ADE Authorization - Consumer Terminates Permission

Context: Consumer has determined that they want their Utility to terminate a specific 3rd Party's access to their Consumer Utility Data.

Primary Actor: Consumer

Stakeholders and Interests: Utility, 3rd Party

Preconditions: Consumer has granted initial permission for Utility to provide consumption data to specific 3rd Party.

Triggers: Consumer's decision to terminate a 3rd Party's access to their Consumption Data.

Main Success Scenario:

1. Consumer logs into Utility web site, navigates to "3rd Party Access" section, indicates desire to terminate a 3rd Party's authorization.
2. Utility presents a list of 3rd Party / Service Point / Authorizations / access parameters.
3. Consumer selects 3rd Party whose access is to be terminated and specifies the date access is terminated.

- 1 4. Utility updates internal information systems with terminated authorization parameters,
- 2 and notifies the Customer via trusted channel about the authorization change.
- 3 5. Utility may communicate terminated authorization parameters to affected 3rd Parties.
- 4 6. Utility will make available all data up to and including the termination date to the 3rd
- 5 Party... Subsequently, the Utility will no longer provide the Consumption Data to the 3rd
- 6 Party whose access has been terminated.

7

8 **Extensions:** None

9

10 **Minimal Guarantees:** No Personal Information is shared among 3rd Party and Utility

11

12 **Success Guarantees:** 3rd Party no longer has access to the Customer's Consumption Data.

13

14 **Frequency of Occurrence:** Rarely; only when terminating relationship between Consumer,

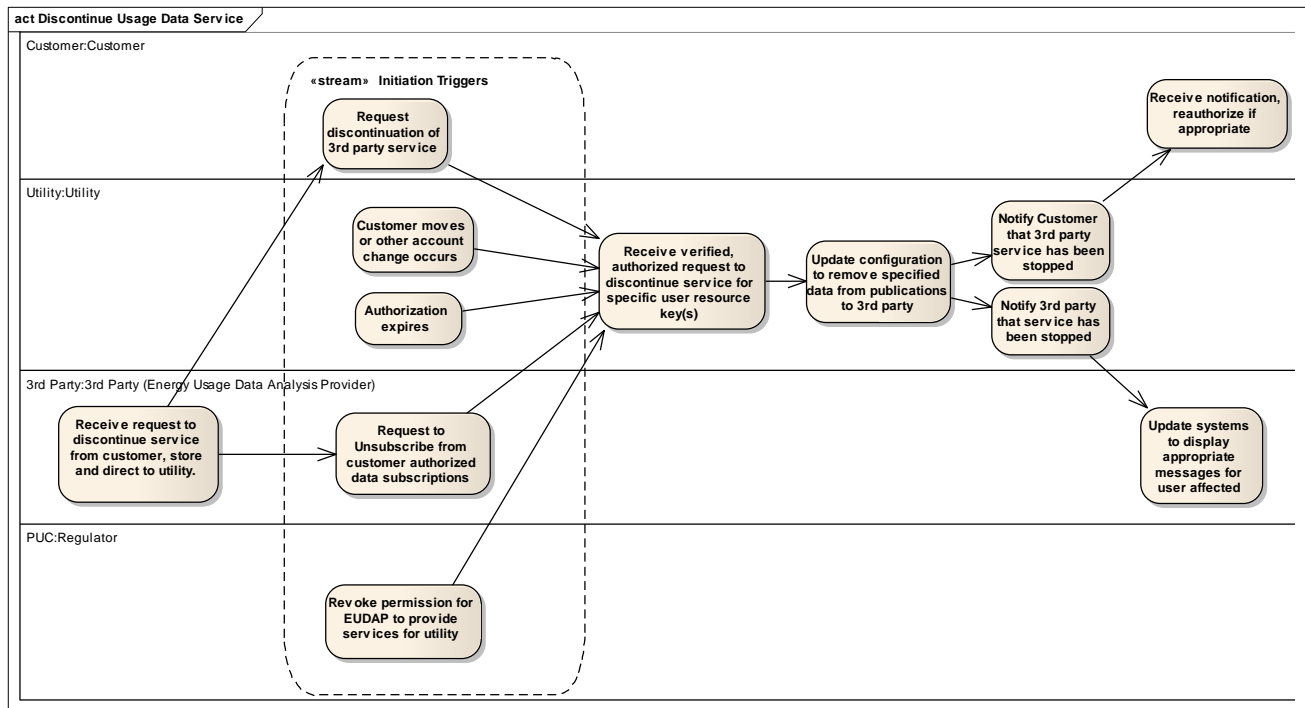
15 Utility, and 3rd Party around a specific Service Delivery Point.

16

17 **Open Issues:**

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19 **Activity Diagram:**



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6.4 ADE Publication - Utility Provides Consumer Data to 3rd Party

This is the main processing function of the OpenADE interface, to collect the permitted Consumer Utility Data from Utility systems, and make it available to 3rd Parties. This flow handles distribution of authorized consumer data to the appropriate 3rd parties.

Context: Utility information system is ready to transfer Consumer's data to 3rd Party via Utility OpenADE interface. The Consumer's Data is to be made available in a timely manner to 3rd Party, after access has been granted.

Primary Actor: Utility OpenADE service.

Stakeholders and Interests: Utility back office, Utility OpenADE, 3rd Party

Preconditions:

1. Consumer has completed "ADE Authorization - Consumer Grants Permission"
2. Utility back office has prepared new data for exchange with 3rd party

Triggers:

1. Periodic, as determined by Utility back office
2. Upon request, namely for historical data outside of normal publication.

Main Success Scenario:

1. Utility back office system compiles consumer data
2. Utility back office system transfers data to OpenADE service. Data is to remain available until the next interval update.
3. OpenADE service may notify a registered 3rd Party that new data is available. New data will be provided at pre-determined known intervals (e.g. daily, etc.). Publications to each 3rd Party are specific to the usage data that they are authorized and subscribed to receive. Data shall include new readings taken since the last interval was published, as well as updates to previously published readings, mainly for the scenario where readings were estimated but then later obtained.

- 1 4. 3rd Party may receive notification, or at a pre-determined known time, will initiate
2 electronic communication to Utility via OpenADE interface, requesting Consumption
3 Data for those Customers who have granted them access. The 3rd party may anticipate
4 availability of new data (based on a predetermined interval) and independently initiate a
5 transfer of data from the OpenADE interface.
- 6 5. Utility authenticates 3rd Party identity, and if 3rd Party is authorized, OpenADE replies
7 with requested data via encrypted communication channel.
- 8 6. Utility may store success or failure of each request, with details including client network
9 details, resource requested, date/time, bytes transferred, and exception details if
10 applicable.

11
12 **Extensions:**

- 13 5.
 - 14 a. If Utility authenticates 3rd Party identity, and 3rd Party is NOT authorized,
15 OpenADE replies with error code indicating reason.
 - 16 b. If Utility is pushing data to 3rd Party, will attempt periodic retries until the next
17 interval. After that point, if unsuccessful, the 3rd Party can request missing data.

18
19 **Minimal Guarantees:**

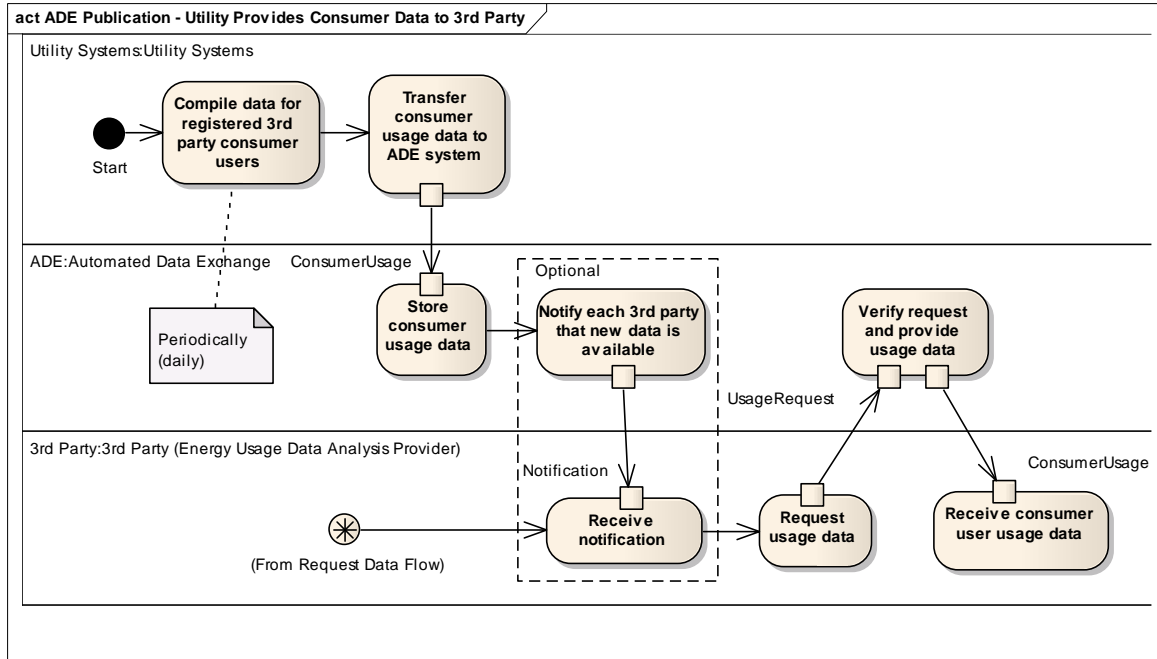
- 20 1. OpenADE service prevents any access from unauthorized 3rd Parties
- 21 2. No Personal Information is shared among 3rd Party and Utility

22
23 **Success Guarantees:** 3rd Party has received and stored Consumption Data, and (generally) will
24 not ask for same data again.

25
26 **Frequency of Occurrence:** TBD, expected to be daily in initial Utility implementations.

27
28 **Open Issues:**

29
30 **Activity Diagram:** Utility Provides Consumer Data to 3rd Party



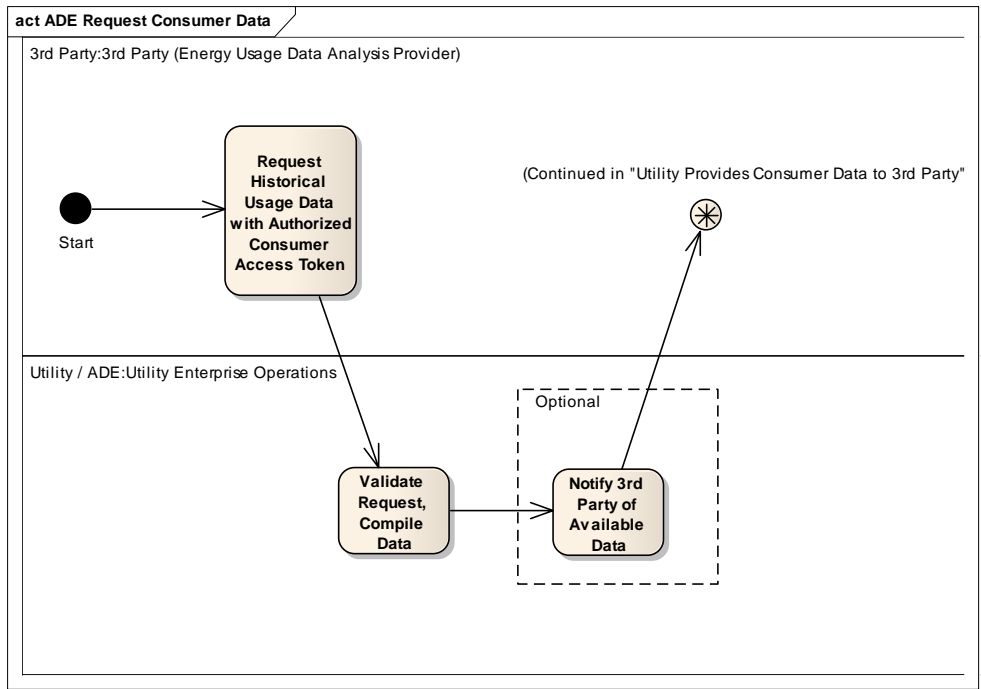
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Note that since the notification step is optional, if it is not used and data is not yet available, an error code would be returned, and the 3rd Party would try again later (as agreed by both parties)

Also note that this diagram depicts the ADE System as a separate entity from utility systems, but the ADE system is still assumed to be part of the Utility.

Activity Diagram: Request Consumer Data

The activity diagram for requesting specific historical is included below. Again, notification is optional.



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2 APPENDIX A BEST PRACTICES

3

4 A.1 Authorization Termination Requests Initiated at the 3rd Party Web Site

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6 Consumer-initiated Termination requests that start on the 3rd Party web site should also
7 "courtesy redirect" Termination sequence to the Utility web site.

8 The system should make it clear that the Consumer should provide the Utility with explicit
9 notification to cease sharing information with a specified 3rd Party.

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12 A.2 Utility Presentation of Indemnification Clause

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14 The Utility may choose to present an Indemnification Clause during the authorization process,
15 e.g. MSS Step 2 in 6.1.

Option Name: *Tagging Options – Option 1(a) Tag All Non-Firm Intra-BA Transactions*

Work Group (Indicate Work Group Lead with an asterisk ‘’)**

Work Group Member	Organization
Jim Busbin*	Southern Company
Alan Pritchard	Duke Energy
Barry Green	EPSA
Narinder Saini	Entergy
Carlos Gonzalez-Perez	OATI
Wes Yeomans	NYISO
James Manning	NCEMC
Ed Skiba	Midwest ISO

Problem Statement

The Generation To Load (GTL) / Parallel Flow Visualization (PFV) project seeks to improve the wide-area view of Reliability Coordinators (RCs) in the Eastern Interconnection such that they better understand the current operating state of the bulk electric system and are better equipped to assign relief obligations during periods of congestion that are more representative of those actually contributing to congestion. The role of the NAESB WEQ Business Practices Subcommittee (BPS) is to determine a methodology for the identification of transmission service priorities utilized by all generating units in any given Balancing Authority, commonly called generation prioritization, which will be an input to this project. Three methodology options to generation prioritization have been identified for further examination by the BPS – Generation Priority Option, Tagging Option and Flowgate Allocation Option. This document seeks to act as a “strawman” for the development of the Tagging Option. The Tagging Option seeks to identify and provide transmission service priorities utilized by all generating units to the congestion management process through the use of expanded tagging requirements. The Tagging Option is found in two forms. The first form, Option 1(a), requires the tagging of all non-firm intra-BA transactions while the second form, Option 1(b), requires the tagging of all intra-BA transactions - firm and non-firm.

Detail Description of Solution:

Tagging Option 1(a) – Tag All Non-Firm Intra-BA Transactions

Tagging Option 1(a) would require the tagging of all intra-BA non-firm transactions flowing in the Eastern Interconnection. By doing so, the congestion management process will have tags for non-firm intra-BA secondary network, non-firm intra-BA point-to-point and all inter-BA transactions that can be subtracted from the outputs of generators identified as source generation on a tag. The remaining generator output will be deemed firm service within the IDC. This deemed firm service includes both intra-BA firm network and intra-BA firm point-to-point transactions; however, this is not a limitation of

the methodology since both of these transaction types receive the same treatment in the TLR process. Generators electrically resident in, but physically located outside of, a BA through the use of pseudo-tie(s) will utilize intra-BA tags for each non-firm transaction ascribable to those generators. Firm transactions identified as sourcing, in whole or in part, from these generators will not be tagged. This untagged generation output utilizing firm transmission service priority will be subject to NNL treatment within the IDC.

Current NERC and NAESB standards require only the tagging of firm and non-firm inter-BA point-to-point and firm and non-firm inter-BA network transactions. When coupled with FERC Order 693, which directs the ERO to craft standards requiring the tagging all intra-BA point-to-point transactions, the transmission service priority of all intra-BA transactions will be identified to the IDC – with the possible exception of intra-BA firm network transactions. A further exception might be in markets that manage congestion utilizing security constrained economic dispatch without an explicit identification of physical transmission service.

Detail Explanation for Implementing Solution (What is required to implement the solution?)

Option 1(a) – Tag All Non-Firm Intra-BA Transactions

The implementation of Option 1(a) results in the tagging of all generation output using a non-firm transmission service priority. Dynamic tags can be employed to reflect the priority of a specific generator output to network and native load commitments. Inter-BA transactions will be tagged and treated as they are today with no change. In order to avoid “double counting” of generation flows for purposes of Network and Native Load (NNL) treatment within the area-wide congestion management process, the following sequential implementation procedures can be considered in the accounting of tagged generation flows; whereby a:

- Specific generation unit is named as Source generation on the tag; the MW value of the tag is subtracted from the specified generation unit output.
- Specific generation plant is named as Source generation on the tag; the MW value of the tag is subtracted from the total specified generation plant output and, on a pro-rata basis, from each of the specified plant’s generating unit’s output.
- System generation fleet, as defined in the TSIN Registry, is named as Source generation on the tag, the MW value of the tag is subtracted from all total generation plant outputs in the system fleet on a pro-rata (on-line total generation plant capability) basis and from each generating unit’s output on a pro-rata basis.

The use of a pro-rata allocation procedure as a proxy for economic dispatch is intended to reflect conditions as they are today under the second and third bullet points and could introduce possibly substantial errors in the generator prioritization calculations. Implementation of a NERC Source mapping requirement and Change Order #283 would result in Plant and System Fleet sourced transactions being mapped directly to individual generating units.

Reporting of dynamic tag values to the IDC should be synchronized with the reporting of generator output values in the required fifteen minute periodicity. Since all generation flow that remains utilizes

firm transmission service to serve firm point-to-point and firm network commitments for native load, the modified (original outputs minus tag values) generation outputs will be utilized in the NNL procedure within the IDC.

In summary, generator priorities will be determined based on generator total output and the subtraction of all tagged transactions from that total output. The priority of the portions of the generator output associated with a tag will be assigned based on the appropriate transmission service priority utilized by each tag. The remainder of the generator output will be deemed as firm.

Review of solution to “Directions for the Work Groups” document (Does the solution address the issues and concerns? Does the solution take into account the consideration items?)

Assumptions:

- It is assumed that all requirements for inter-BA interchange transactions will remain unchanged.
- Implementation of this option requires tagging of non-firm intra-Balancing Authority (BA) transactions. FERC Order 693 at Paragraph 817 directs NERC to create a standard requiring the tagging of all intra-BA point to point transactions. The NERC INT Standard Drafting Team has produced a draft standard, INT-012, to accomplish this. It is assumed that NERC will adopt this standard and that the standard will receive FERC approval (for the U.S.).
- The focus of the discussion in this document will be on the use of this option as it applies to the area-wide congestion management process in the Eastern Interconnection and specifically to the transmission priorities given to generation flows produced within the electrical boundaries of a given BA and their treatment by the Interchange Distribution Calculator (IDC).
- It is assumed the reader is familiar with the Generation To Load / Parallel Flow Visualization project, NERC IDC Change Order #310 – IDC Treatment of Tagged, Intra-Control Area Transactions, Version 1 and the reliability based portion of the project as encompassed by NERC IDC Change Order #283 – Generation to Load Reporting Requirements, Version 3.
- It is assumed that Change Order #283 will provide a mechanism for mapping each TSIN registered Source to an individual, or group of, generating unit(s) provided that NERC establishes a standard that provides such a mapping.
- Transaction tags which utilize multiple transmission service priorities (horizontally and/or vertically stacked) will receive appropriate treatment in the generator prioritization processes and in the IDC.
- It is assumed that a mechanism exists for the reservation of non-firm network service.
- The assumption is made that there is no need for additional detail with regard to the identified Sink for a given transaction.

Impacted Entities (e.g. Marketer/Brokers, Transmission Service Providers/Transmission Providers, Generators, Balancing Authorities, Reliability Coordinators)

Impacted Entity	Description of Impact(s)
Purchasing-Selling Entities (PSE)	PSE's will be required to submit a larger volume of tags in order to include non-firm secondary, non-firm point-to-point and (by FERC Order 693) firm point-to-point, intra-BA transactions.
Interchange Authorities (IA) Transmission Service Providers (TSP)	IA's and TSP's will be required to process a larger volume of tags as a result of Option 1(a). These entities will also be required to implement the assumed cross reference mapping of TSIN Sources to individual

Benefits:

- Includes intra-BA transactions flowing in the Eastern Interconnection previously not accounted for in the IDC.
- Deals with the situation within a BA Area where the flow of inter-BA transactions utilizing Firm transmission service is made subordinate to the flow of intra-BA transactions which utilize Non-Firm Transmission Service.
- Provides a mechanism for identifying transmission service priority utilized by all generation output.

Drawbacks:

- "Generation system fleet" and "generation plant" sourcing introduces an obstacle into the calculation of remaining generation output levels. The mapping of TSIN registered Sources to individual generators would reduce this error.
- The BPS has discussed the alternative of relying on Designated Network Resource (DNR) status for generation priorities – remainder of DNR generator output is firm, remainder of non-DNR unit is non-firm. This, however, also introduces error.
- In using dynamic schedules for tagging of all intra-BA transactions except firm intra-BA transactions, the timing of the reported value of the dynamic schedule along with the generator output is critical. Any skewing of this timing results in a misrepresentation of the total generator output. Where dynamic schedules are not utilized, the introduced error is expected to be much greater due to the necessity of updating the tag in concert with the reporting of the generator output. In either case, timing requirements are critical to the process.
- Also, in using dynamic schedules, it is possible to have a resultant mix of firm and non-firm schedules. The process must be able to assure that priorities can be accurately defined for each generator output.
- Some Transmission Providers sell firm and non-firm point-to-point transmission service under their FERC approved Open Access Transmission Tariffs (OATT) in the form of financial rights

rather than “physical” point-to-point service. Under these tariffs, Transmission Customers are required to pay transmission congestion costs. For these Transmission Providers, it will be difficult to develop intra-BA generator to load tags.

- Use of a pro-rata approach for assigning certain transmission service priorities as a proxy for economic dispatch can be an obstacle when identifying incremental units as Sources for transactions.

Impact on NERC Standards and NAESB WEQ Business Practice Standards

- *Current NAESB Business Practice Standards – Include WEQ Business Practice Standard number and section number with a description of what needs to change.*

WEQ BPS Reference	Description of Change

- *Current NERC Standards– Include NERC Standard and Requirement Number with a description of what needs to change.*

NERC Standard	Description of Change
IRO-006	Curtailement of tags within a market.

- *New NAESB Business Practice Standards – Include WEQ Business Practice Number where changes would be applied and a description for each of the changes*

WEQ BPS Reference	New Standard Description
WEQ-004	Coordinate Business Practice Standard may need to be expanded to address intra-BA tags and re-dispatch in lieu of curtailment.

- *New NERC Standards– Include NERC Standards where changes would be applied and a description for each of the changes.*

NERC Standard	Description of Change
NERC/NAESB	Provision for Cross-Reference of TSIN Registered Sources to individual generating units.
NERC	INT standard to require tagging of non-firm PTP intra-BA transactions
NERC	INT standard to require tagging of non-firm intra-BA secondary network transactions.

Impact on IDC Change Order 283:

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Impact on IDC Change Order 310:

-

Coordination with Other Groups (e.g. OASIS Subcommittee, Joint Electric Scheduling Subcommittee, IDC Working Group, Coordinate Interchange Standard Drafting Team, TLR Standard Drafting Team) - include the group and what coordination needs to occur.

Entity Name	Coordination Required
INT Standards Drafting Team	Tagging requirements for Eastern Interconnection.
NAESB Joint Electric Scheduling Subcommittee (JESS)	Electric Industry Registry (EIR). E-Tagging functional specification.
OASIS Subcommittee	Proper priorities
TLR Standard Drafting Team	Modification of IRO-006
IDC Working Group	Implementation of Option
Coordinate Interchange Standard Drafting Team	Standard may need to be expanded to address intra-BA tags and re-dispatch in lieu of curtailment. (Nelson Muller's issue)

Outstanding Issues Not Addressed in Solution:

- Impacts on internal billing functions
- This methodology might require an alternative work-around for the market areas.
- May lend itself to Market Re-Dispatch

Option Name: Generator Prioritization Option

Work Group (Indicate Work Group Lead with an asterisk '*')

Work Group Member	Organization
Advena, Chris	PJM
Bressers, Bert	Southwest Power Pool
Colby, Mike	PJM
Danis, Deral	Constellation
DeSocio, Mike	New York ISO
Erhardt, Blaine	Basin Electric
Johnson, Alan	NRG
Mallinger, Tom	Midwest ISO
Muller, Nelson	OATI
Nelson, Emilie	New York ISO
Parsons, Marjorie	TVA
Sanders, Steve	WAPA
Skiba, Ed*	Midwest ISO
Taylor, Ben	TVA
Wesley, Cathy	PJM

Problem Statement:

The Generation To Load (GTL) / Parallel Flow Visualization (PFV) project seeks to improve the wide-area view of Reliability Coordinators (RCs) in the Eastern Interconnection such that they better understand the current operating state of the bulk electric system and are better equipped to assign relief obligations during periods of congestion that are more representative of those actually contributing to congestion. The role of the NAESB WEQ Business Practices Subcommittee (BPS) is to develop a mechanism to assign TLR curtailment priorities to the GTL impacts. Three methodology options to assign curtailment priorities have been identified for further examination by the BPS – Generation Prioritization Option, Tagging Option and Flowgate Allocation Option. This document seeks to act as a “strawman” for the development of the Generator Prioritization Option. The work group developed a mechanism to assign priorities of generation-to-load impacts that will be used in the IDC to assign relief obligations during TLR. The NERC ORS has approved modifications to the IDC to collect data and make a centralized generation to load impact calculation. In order for the IDC to curtail these impacts on a pro-rata basis along with tags, appropriate priorities must be assigned to these generation-to-load impacts.

Detail Description of Solution:

In the Generator Prioritization Option the Transmission Service Provider shall identify firm/non-firm transmission service usage for all units on their system and submit Priority Schedules through the System Data eXchange (SDX) to the IDC. Impacts from generators will be assigned curtailment priorities based on the generators’ transmission service priorities. The Transmission Service Provider will

establish the firm/non-firm transmission priorities based on planning studies and agreements with other Transmission Service Providers. The methodology for establishing the Priority Schedules will be posted on the Transmission Service Provider's website, such that it is publicly available. A detail list of the requirements for establishing the priorities is found below.

1. The Transmission Service Provider (TSP) shall identify firm/non-firm usage for all units on their system and submit Priority Schedules to the SDX for all generators serving load in their BA, market or transmission footprint.
 - A Priority Schedule is a schedule provided by the TSP that indicates the transmission usage priority of the generator output. There are different types of Priority Schedules described further in this document.
2. Establishing firm/non-firm service on Transmission Service Provider's Own System
 - a. Planning Studies, when available, and Operating Guides, with certain generation, if applicable will be used to establish firm/non-firm service on their own system. Potential studies include the following provided such studies meet minimum requirements:
 - Generation Interconnection, System Impact Studies, or Feasibility Studies
 - b. Each TSP will post on a public website their minimum requirements for considering firm use of transmission on their own system.
 - c. Minimum requirements for studies include:
 - Consider Coordinated Flowgates internal versus external transmission system limits (for the TSP) in the studies. Must recognize transmission limits outside of the TSP's footprint. For external coordinated flowgates, only need to consider those that are significantly impacted, with a 5% or greater impact, or percentages that apply in the future. (It is assumed that the RCs will use the future NERC defined Coordinated Flowgate identification process.)
 - Identify the amount of firm transmission service. Anything above this level will be treated as non-firm, with appropriate non-firm priority.
 - A TSP study that has impact on the priority of service shall be used to identify firm/non-firm rights.
 - A generator that has not been evaluated by a TSP study shall use the System Wide Defaults.
 - d. Requirements for TSPs with agreements that allow coordination of parallel flows on other TSPs system (Phase 1).
 - The curtailment order during TLR 5 on the TSP system:
 - The impacts from firm generators on the TSP's system where the generator is located are firm.
 - The impacts from firm transmission service sold by the TSP is firm on its own system.
 - The curtailment order during TLR 5 of parallel flows on the TSP system:
 - Agreements to honor flowgates between two TSP will result in firm curtailment priority of firm generation on both TSPs systems.

- Agreements to honor flowgates between two TSPs will result in firm curtailment priority of firm transmission service on both TSPs systems.
 - Where no agreements exist between TSPs the curtailment order of the firm impacts on other TSPs during TLR 5 will be considered prior to the curtailment of parallel flows that have an agreement or the TSPs own firm impacts.
 - Though not a part of this proposed solution a Phase 2 Process for agreements is recommended. (See Outstanding Issues Not Addressed in Solution for description of Phase 2.)
- e. Internal Generation Resources and Pseudo-tied generation (inside the TSP where they are interconnected) must meet the following criteria.
 - All Jurisdictional Entities and Non-Jurisdictional Entities generators must meet the NERC Transmission Planning (TPL) reliability standards (including system performance criteria under Category A, B C and D conditions) to qualify as firm for generation-to-load reporting in the TSP area where they are interconnected.
 - FERC Jurisdictional entities' generators must meet their Open Access Transmission Tariff requirements for designated network resources (firm NITS, not secondary network).
- f. Requirements for any TSP that does not participate in a capacity market to consider generation as firm on their own system (studies done on a comparable and equitable basis as other TSP's to establish Firm priority transmission service and firm priority generation.)
 - The following represent general requirements that should be included in all TSP minimum requirements.
 - Studies done consistent with reliability standards and criteria (NERC TPL studies related to transmission service and generation deliverability).
 - Studies evaluate the necessary range of reasonable worst case Firm dispatches to support Firm transmission service priority (on-peak, off-peak, and minimum load).
 - Studies consider internal and external transmission system constraints (includes the coordinated flowgates as a minimum. Full network analysis including all monitored elements and contingencies. At a minimum the network model should include first tier BA equipment in the BES as requested by the TSP that owns the first tier BA equipment.)
 - Studies coordinated with neighboring TSPs, and include other TSPs' relevant Firm service. Each TSP will determine which firm reservations will be considered by their neighboring TSP consistent with the treatment of the reservations in their AFC/ATC process.
 - Transmission upgrades necessary to provide the Firm service are completed
- g. Requirements for any TSP that does participate in a capacity market to consider generation as firm on their own system:

Markets in the Eastern Interconnection with capacity requirements¹ have study requirements that define delivery firmness of capacity resources. Markets with capacity requirements that meet the requirements listed above (Item 2.e) and the requirements below may qualify their capacity resources as firm (NERC bucket 7) for generation-to-load reporting.

- Internal Capacity Resources

Deliverable from the generator to a designated capacity zone (either the TSP area or a sub-zone of the TSP).

- *Internal:*

- Tariff interconnection studies (feasibility, system impact and facilities studies) are completed as required² by the Tariff and consistent with NERC TPL standards.
- The generator executed an interconnection service agreement and completed upgrades required in the construction service agreement.

- *External:* Firm transmission service to the TSP border and firm Network service from the border to the capacity zone.

- Unit specific designation.

- Letter of non-recallability from the owner of the generation output stating the resource can be called upon to serve the TSP under emergency conditions and is not otherwise designated to serve load in another TSP.

- Meets any FERC filed requirements for qualification as a capacity resource.

3. If a unit has multiple Transmission Service Providers represented as separate units in the IDC, each Transmission Service Provider will send a Priority Schedule for their share of the unit. This is only applicable for pseudo-tied units with owners in different TSP footprints.
4. External generation resources (except pseudo-tied generation) are assigned priority based on their NERC tag, like any other tagged transaction and will not be included in the generation-to-load calculation.
5. Grandfathered Firm Transmission Usage.
 - a. Many grandfathered services cannot point to specific studies, but instead historical acceptance of Firm status
 - b. Grandfathered Service that does not meet the minimum requirements to justify firmness described above during TLR 5 will be considered prior to the curtailment of parallel flows that have a bilateral agreement or the TSPs own firm impacts.
6. Pre-OATT Transmission Usage Practices will be used where appropriate.
7. Priority Schedules
 - a. There will be a new message for the generator Priority Schedules. Generator Priority Schedules may be tracked using long/short term records where the required information for each record would include start/stop times (profiles), MW value or

¹ For example, Installed Capacity (ICAP) or Uninstalled Capacity (UCAP) requirements as in Midwest ISO and PJM.

² Resources that demonstrate deliverability at the feasibility study or system impact study without the need for reinforcements are not required to proceed to the next study.

percent, and a flag to identify if it is a MW value or percent. The TSP will be responsible for sending the priority schedule to the IDC through the SDX whenever the profile changes, but not more frequently than every 15 minutes.

- b. Defaults
 - o There will be two types of Generator Priority Schedules that can be submitted by the TSP
 - o Unit-default Priority Schedule (long-term unit specific priority schedules which must be a minimum of six months).
 - o Short-term Priority Schedule (can be for a Transmission Service Provider specific time length)
 - o If there are Short-term Priority Schedules, the Short-term Priority Schedules are used. (Short-term Priority Schedules override the Unit-default Priority Schedules.)
 - o If there are no Short-term Priority Schedules, the Unit-default Priority Schedule is applied.
 - o If the Unit-default Priority Schedule has expired the unit will go to the System-wide Priority Default (notifications will be sent prior to the expiration and after expiration at some periodicity.)
 - o If no Unit-defaults Priority Schedules have been submitted, the System-wide Priority Default will be used. The System-wide Priority Default is managed by the IDC in the event no active Unit-default or Short-term Priority Schedule is submitted from the TSP. The System-wide Priority Default is non-firm.
 - c. Sometime before a Unit-default Priority Schedule expires a warning message will be sent from the IDC to the Transmission Service Provider. The TSP will have the ability to establish how it receives the message (example via email, at logon, etc.).
 - d. The Transmission Service Provider's methodology for determining Unit-default and Short-term Priority Schedules shall be posted on a public website.
8. There will be two priorities (Priority 7 and Priority 6) for normal generator prioritization. However, the software will be designed to handle all other existing non-firm priorities on an exception basis, because some TSPs have only granted priorities less than 6 to some generation deliveries. These additional priorities (Priority 0 through 5) may be used at the discretion of the TSP.
 9. A firm generation redispatch credit will be applied to non-firm generation after the first hour and will be a running total for future hours of the non-firm TLR event. If firm generation impact increases causing the credit to go negative, the firm generation redispatch credit will be capped at zero. The credit will be applied to the unconstrained non-firm generation to load to determine the relief obligation. The unadjusted unconstrained non-firm generation will be used to set the target. The IDC will calculate the redispatch credit.

Detail Explanation for Implementing Solution (What is required to implement the solution?)

- **Change Order 283**

1. A new message will need to be developed by the IDCWG for uploading Priority Schedules to the SDX to be used by the IDC. This message will need to be added to the scope of change order 283.
 2. A message will need to be developed by the IDCWG to be included in Change Order 283 that will notify a Transmission Service Provider xx number of days prior to a Unit-default Priority Schedule expiring. The “number of days prior” will be configurable by TSP.
 3. Additional logic will have to be added to change order 283 to support the System-wide Priority Default, and the Unit-default and Short-term Priority Schedules.
 4. The Transmission Service Provider will be required to submit Unit-default and/or Short-term Priority Schedules or accept the System-wide Priority Default.
- **Change Order 310**
 1. Change Order 310 will be required for all internal point-to-point tagged transactions, so that all point-to-point (inter and intra) transmission service is tagged.

Review of solution to “Directions for the Work Groups” document (Does the solution address the issues and concerns? Does the solution take into account the consideration items?)

- The work group reviewed the Directions for the Work Groups and believes that the solution outlined in this option addresses the directions provided to the work groups.
- The work group reviewed the directions prior to developing its solution and added another assumption for the solution. (See the first assumption in the next section.)

Assumptions:

- Any generating resources in the EMS model have to be reported. If a generator is in the EMS model it should also be in the IDC model. This will include pseudo-ties.
- NERC will approve INT-012-1 requiring intra-BA transactions to be tagged for point-to-point transactions. These transactions will be recognized by the IDC and subject to curtailment based on the tag transmission service priority and will not be included in the gen-to-load impacts.

Impacted Entities (e.g. Marketer/Brokers, Transmission Service Providers/Transmission Providers, Generators, Balancing Authorities, Reliability Coordinators)

Impacted Entity	Description of Impact(s)
Transmission Service Providers	The Transmission Service Providers will be required to upload Unit-default and/or Short-term Priority Schedules to the SDX.

Benefits:

- The option allows for proper identification and for changes/override to unit default long-term generator priority schedules.

- The option incorporates requirements to reflect a lower TLR priority in the event that a Transmission Service Provider chooses not to upload its Priority Schedules to the SDX, compared to today where all deliveries would be assumed to be firm.

Drawbacks:

- Entities that are not FERC-jurisdictional may classify all of its generation as firm.
- Entities that are not FERC-jurisdictional are not required to follow NAESB business practices.
- NERC has not yet committed to implement Change Order 310, secured funding or established an implementation timeline.
- INT-012-1 has not been approved

Impact on NERC Standards and NAESB WEQ Business Practice Standards

- *Current NAESB Business Practice Standards – Include WEQ Business Practice Standard number and section number with a description of what needs to change.*

WEQ BPS Reference	Description of Change
WEQ-008	Minor changes may have to be made to sections of WEQ-008 but the bulk of the changes will be new sections.

- *Current NERC Standards– Include NERC Standard and Requirement Number with a description of what needs to change.*

NERC Standard	Description of Change
None	Don't foresee changes to the existing standards but do see changes to the IDC Change Order 283 requirements.

- *New NAESB Business Practice Standards – Include WEQ Business Practice Number where changes would be applied and a description for each of the changes*

WEQ BPS Reference	New Standard Description
WEQ-008 – Transmission Loading Relief	New language will have to be added to WEQ-008 to address the requirements listed in the Detail Description of the Solution section.
WEQ-001	It will be dependent on whether the BPS wants to put specificity on where methodology for determining unit-default and short-term priority

WEQ BPS Reference	New Standard Description
	schedules shall be posted. If the methodology is posted on OASIS coordination would be required to make changes to WEQ-001.
tbd	Study Criteria (Methodology posted on a public website)

- *New NERC Standards– Include NERC Standards where changes would be applied and a description for each of the changes.*

NERC Standard	Description of Change
INT-012-1	Intra BA point-to-point transactions will be tagged

Impact on IDC Change Order 283:

- Modifications will be needed to support sending Priority Schedules to the SDX and processing the Priority Schedules by the IDC.
- Expiration messages will need to be supported under the change order.

Impact on IDC Change Order 310:

- None

Coordination with Other Groups (e.g. OASIS Subcommittee, Joint Electric Scheduling Subcommittee, IDC Working Group, Coordinate Interchange Standard Drafting Team, TLR Standard Drafting Team) - include the group and what coordination needs to occur.

Entity Name	Coordination Required
NERC Group (Tbd)	NERC will be responsible for determining the tests to identify coordinated flowgates.
NERC - INT Standards Drafting Team	Need to confirm that all internal point-to-point transactions will be tagged.
OASIS Subcommittee	Not sure this is needed. It will be dependent on whether the BPS wants to put specificity on where methodology for determining unit-default and short-term priority schedules shall be posted. If the methodology is posted on OASIS coordination would be required to make changes to WEQ-001. If we remain silent on where the methodology is posted then coordination is not required.
IDCWG	Will need to coordinate modifications to Change Order 283. A new change order will need to be developed in support of TLR changes.

Outstanding Issues Not Addressed in Solution:

1. How to address a second TLR after the firm generation was cut and left the non-firm generation (Would you curtail firm before you cut the non-firm wind?) (Credit for re-dispatch already taken?)

Status: To do this would require the TSP to identify the generators that were moved to provide the relief obligation and by how much and then reported to the IDC. It would have to be limited to just those units that were moved because of the TLR. Because of the changes in the system you cannot identify which units are moving for which TLR. This issue is not going to be addressed in this proposal. This issue exists today.

2. May be a user defined request via the GUI as to when notifications are received for pending expirations of priority schedules. May be an automated message sent to the Transmission Service Provider.

Status: This issue can be addressed once this solution has been accepted to move forward.

3. Will percentages or MW values be uploaded to the IDC to determine firm and non-firm? An option is to use percentages where 100% of the unit output or pmax is firm or non-firm or MW amounts that represent firm entitlements.

Status: This issue can be addressed once this solution has been accepted to move forward.

4. If this option is selected the BPS will need to develop the metrics for data collection during the parallel test mode in order to assess the appropriateness of the approach. Failing to meet acceptance criteria could result in the creation of a new approach.

Status: Establishing the metrics for data collection during the parallel test mode is not specific to this option. This needs to be a separate WEQ BPS task undertaken once a solution is selected to move forward.

5. Phase 2 Recommendation: If this solution is selected the work group recommends a Phase 2 be initiated by NAESB to develop a common bilateral agreement template which shall be used by parties when establishing bilateral agreement criteria to reciprocally recognize each others flowgates.

- There should be some minimum criteria in the bilateral agreement in order for it to use in place of the standard agreement.
- Recommend that a NAESB task force under the BPS be established, including planners, be formed to develop minimum criteria to be included in a bilateral or standard agreement for the determination of the curtailment order within TLR 5.
- Parties who do not abide by the standard agreement or develop a substitute agreement will by default be assigned a first cut priority during TLR 5 for impacts on external systems. This is the same process as the Phase 1 Process.

Status: Phase 1 could be implemented without Phase 2 being developed or implemented.

6. The non-firm priority levels for System-wide Priority Defaults will need to be addressed if this option is selected to move forward.

Status: The group agreed that this issue did not need to be resolved before this option is discussed with the full Business Practices Subcommittee.

Option Name: *Flowgate Allocation*

Work Group (Indicate Work Group Lead with an asterisk ‘’)**

Work Group Member	Organization
Advena, Chris	PJM
Johnson, Alan	NRG
Bressers, Bert	SPP
Erhardt, Blaine	Basin Electric
Desocio, Mike	New York ISO
Muller, Nelson	OATI
Taylor, Ben	TVA
Luong, Thanh	FERC
Skiba, Ed	Midwest ISO
Wesley, Cathy	PJM
Mallinger, Tom*	Midwest ISO
Nelson, Emilie	New York ISO
Sanders, Steve	WAPA
Colby, Mike	PJM
Danis, Deral	Constellation

Problem Statement:

The Generation To Load (GTL) / Parallel Flow Visualization (PFV) project seeks to improve the wide-area view of Reliability Coordinators (RCs) in the Eastern Interconnection such that they better understand the current operating state of the bulk electric system and are better equipped to assign relief obligations during periods of congestion that are more representative of those actually contributing to congestion. The role of the NAESB WEQ Business Practices Subcommittee (BPS) is to develop a mechanism to assign TLR curtailment priorities to the GTL impacts. Three methodology options to assign curtailment priorities have been identified for further examination by the BPS – Generation Prioritization Option, Tagging Option and Flowgate Allocation Option. This document seeks to act as a “strawman” for the development of the Flowgate Allocation Option. ~~Each~~The work group will developed a mechanism to assign priorities of generation-to-load impacts that will be used in the IDC to assign relief obligations during TLR. The NERC ORS has approved modifications to the IDC to collect data and make a centralized generation to load impact calculation. In order for the IDC to curtail these impacts on a pro-rata basis along with tags, appropriate priorities must be assigned to these generation-to-load impacts.

Overview Description of Solution:

Last Edit Date: [06/1709/10/2010](#)

In the Flowgate Allocation Option, the GTL impacts reported to the IDC will have their priorities established using flowgate allocations (also called firm rights on flowgates). Hourly flowgate allocations will be made in-advance of real-time (there will be a day-ahead allocation and an hour-ahead allocation). These hourly allocations will be used in real-time to set GTL priorities in the IDC. The day-ahead and hour-ahead allocations are based on expected firm transmission usage by those BAs with impacts on the flowgate. To the extent the real-time flows exceed the expected usage, these excess real-time flows will be assigned a curtailment priority that is the highest priority of non-firm. The day-ahead and hour-ahead impacts used in the allocation process will come from generators having firm transmission service and from transactions having firm transmission service (use reservations in day-ahead allocations and use schedules in hour-ahead allocations). The flowgate allocation process allocates the total capacity of the flowgate for firm usage based on day-ahead and hour-ahead predicted firm usage. The predicted firm usage includes generation-to-load (GTL) impacts from generators considered to have firm transmission service and firm point-to-point (PTP) impacts (day-ahead impacts will be based on firm reservations and hour-ahead impacts will be based on firm schedules). As a starting point, the flowgate allocation process needs to have the set of generators with firm transmission service that will be used to determine GTL impacts and the set of firm PTP reservations/schedules to determine PTP impacts for the period under review.

On a day-ahead basis, 24 hourly allocations will be performed to determine firm rights in the forward and reverse directions. Each hourly allocation will be based on the predicted load, topology of the system and transactions. Load will be reduced for imports to avoid double counting the impact of reservations (while load will be decreased for import reservations, generation will not be increased for export reservations). Merit order/block loading files that take into account units off for maintenance will be used to dispatch generators (see third major bullet in Detailed Description of Solution). Since these hourly allocations only consider generators with firm transmission service, they do not represent the actual dispatch of generators expected to occur in real-time. Consequently, this dispatch will be considered a fictitious dispatch and ramp rates will not be applied in the day-ahead and hour-ahead allocations.

On an hourly basis, an hour-ahead allocation will be performed but will use schedules in place of reservations and will use the latest information on loads and outages to make a next-hour allocation.

Both the day-ahead and the hour-ahead allocations will follow a similar process to determine firm allocations that will be assigned to each Aggregate Entity¹. There will be a single allocation of firm GTL and firm PTP impacts down to 0% in the forward and reverse directions. All Aggregate Entities will receive their 5% and greater impacts on the flowgate. If the flowgate is not over allocated (the sum of the 5% and greater impacts exceed the capacity of the flowgate), the Aggregate Entities will receive either a portion or their full impacts down to 0%. If there is still flowgate capacity remaining after

¹ Aggregate Entity refers to a group of BAs and TPs that can be rolled-up for the purposes of the allocation process. For example, all of the Midwest ISO LBA GTL impacts can be aggregated into Midwest ISO.

assigning impacts down to 0%, any remaining flowgate capacity will be assigned to Aggregate Entities on a proportional basis (based on total impacts down to 0%).

To obtain 5% allocations, impacts between 0% and 5% will be removed from the down to 0% allocation. This will leave the impacts greater than 5% and excess capacity (if any) in the 5% allocation.

The higher-of logic will be applied between the day-ahead allocation and the hour-ahead allocation. This means that to the extent the day-ahead allocation is greater than the hour-ahead allocation, you use the day-ahead allocation in real-time to set priorities. This is being done to avoid the situation where an error in the hour-ahead allocation could drive the allocation to zero and there is no time to correct this error before allocations are used to set priorities used in real-time to assign curtailments.

Even after applying the higher-of logic, it is likely that the real-time firm GTL impacts and firm PTP impacts (from generators considered to have firm transmission service and from firm PTP schedules) will exceed the firm allocation. When this happens, OATI has proposed to make pro-rata curtailments where proportional amounts of firm PTP impacts and firm GTL impacts will be placed into a lowest level of firm bucket that will be curtailed first during TRL 5 (first to curtail firm service).

The following process will be used by OATI to make pro-rata curtailments when real-time firm PTP impacts and firm GTL impacts exceed the firm allocation.

- The GTL impacts will be placed into one of three buckets in real-time:
 - 7 FN firm service – will be curtailed on a pro-rata basis with all other firm.
 - 7 FCN first to curtail firm service – will be curtailed on a pro-rata basis with other first to curtail firm service. First to curtail firm service will be entirely curtailed before firm service is curtailed.
 - 6 NN non-firm service – highest priority of non-firm service.
- The firm PTP impacts will be placed into one of two buckets in real-time:
 - 7 F firm service - will be curtailed on a pro-rata basis with all other firm.
 - 7 FC first to curtail firm service - will be curtailed on a pro-rata basis with other first to curtail firm service. First to curtail firm service will be entirely curtailed before firm service is curtailed.
- The size of the GTL buckets and the PTP buckets for each Aggregate Entity will be determined based on the Aggregate Entity's firm allocations versus the Aggregate Entity's impacts from the hour-ahead allocation. The following review will be performed for each Aggregate Entity:

- The firm GTL impacts down to 0% in the forward direction and the firm PTP impacts down to 0% in the forward direction from the hour-ahead allocation will be summed and compared to the firm allocation
- If the summed value is less than the Aggregate Entity's allocation, no pro-rata curtailments will be made between firm PTP impacts and firm GTL impacts. In real-time, all firm PTP schedules will be assigned a firm curtailment priority and all GTL impacts will be assigned first to the firm GTL bucket that is remaining after reducing it for firm PTP service. Any GTL remaining after filling the firm GTL bucket will be assigned to the non-firm GTL bucket.
- If the summed value is greater than the Aggregate Entity's allocation, the firm allocation will be proportionally assigned to GTL and PTP based on impacts down to 0%. This proportional assignment of firm allocation represents the size of the firm bucket (7 FN for GTL and 7 F for PTP). The remaining impacts down to 0% will be assigned a first to be curtailed firm service and will establish the size of the first to be curtailed firm bucket (7 FCN for GTL and 7 FC for PTP). In real-time, all firm PTP schedules will be assigned a proportional amount of 7 F and 7 FC for use during TLR 5. In real-time, all GTL impacts will first be assigned to the firm GTL bucket. Any GTL impacts remaining after filling the firm GTL bucket will then be assigned to the first to be curtailed firm GTL bucket. Any GTL impacts still remaining after filling both firm GTL buckets will be assigned to the non-firm GTL bucket.

Detailed Description of Solution:

- The total capacity of a coordinated flowgate will be allocated to Aggregate Entities on a day-ahead basis using estimated next-day conditions.
 - Aggregate Entities refers to a group of BAs and TSPs that can be "rolled-up" for the purposes of the allocation process. For example, all of the Midwest ISO LBA GTL impacts can be aggregated into Midwest ISO.
 - Day- Ahead – 24 Hour Profile one-time run
 - Provides an opportunity to review results and make corrections, if needed.
 - Day ahead will use reservations except for IESO, NY ISO, and ISO NE, which will use input from the day ahead market to calculate allocations at 12:00 pm
 - (Verify when Day-Ahead firm reservation window closes.)
 - Verify whether IESO can provide day-ahead schedules.
 - Reservations on the Midwest ISO and PJM OASIS that source or sink in one of the three entities that do not have reservation systems will have the total impacts split between Midwest ISO and PJM for allocation purposes and real-time assignment of priorities.

- Example 1: If the reservation is from NY ISO to PJM (no wheel through), PJM would receive 100% of the impacts.
 - Example 2: If the reservation is from PJM to Midwest ISO to IESO (wheel through), Midwest ISO and PJM would each receive 50% of the impacts.
 - In BAs that do not have reservation systems the allocations would be on Gen-to-Load.
 - Hour-Ahead – 1 Hour sent 24 times per day
 - Address possible change in ratings, transmission and generation outages, change in load, new temporary flowgates, changes in unit commitment and changes between reservations and schedules.
 - For Hour-Ahead will use schedules for determining allocations submitted 45 minutes prior to the start of the next hour.
 - Allocations will be performed at 35 minutes prior to the start of the next hour
 - TLR will be issued for next hour at 30 minutes prior to the start of the next hour.
 - Will do a Day Ahead and then do an Hour Ahead. The Day-Ahead will be used as a back stop.
 - Will use the higher-of either the Day Ahead allocation or the Hour Ahead allocation.
- What if there is not enough generation to serve firm load (potential options not listed in any priority)
 - Ramp online generation with firm transmission service
 - Ramp offline non-outage generation with firm transmission service
 - Ramp generation with non-firm transmission service
 - Ramp outaged generation with firm transmission service
 - Curtail load
 - Ramp above pmax
- Scenario 1 (with prioritized order)
 1. Ramp online generation with firm transmission service
 2. Ramp offline non-outage generation with firm transmission service
 3. Curtail load
- Scenario 2 (with prioritized order)
 1. Ramp online generation with firm transmission service
 2. Ramp offline non-outage generation with firm transmission service
 3. Ramp generation with non-firm transmission service
- Scenario 3 (with prioritized order)
 1. Ramp online generation with firm transmission service
 2. Ramp offline non-outage generation with firm transmission service
 3. Ramp above pmax

- Merit order/Block Loading should be made in conjunction with IDC model updates or with approvals by the IDCWG. This should only include firm generation with firm transmission service usage.
- If an hourly generation dispatch file (energy dispatch file) option is used by an entity, this should only include generation with firm transmission service usage. The following requirements must be followed:
 - 24 hour hourly generation dispatch file must be submitted at a minimum of once a day.
 - More frequent updates could be submitted.
 - Will provide Pmax, Pmin, and Ramp
 - If there is a problem with the hourly generation dispatch file submitted, there will be a pro-rata adjustment to the hourly generation dispatch by the IDC.
 - If there is a problem with the file submittal and there is no data available, the IDC will go back to the previous hour for the first hour. (or previous day)
- The impact of other entities are considered in the allocation process but the other entities do not receive an allocation since this is not a coordinated flowgate for them.
- Because flowgate capacity is allocated among Aggregate Entities based on their projected next day usage of firm GTL and firm transmission service, still need to know which generators have firm transmission service usage to make the allocation.
- The firm allocations are then used by the IDC to assign pro-rata curtailments to the real-time GTL impacts and PTP impacts.

Detail Explanation for Implementing Solution (What is required to implement the solution?)

- **Impact Calculation and Allocation Calculation**
 1. An OATI change order is needed to make the firm GTL and firm PTP impact calculation on all coordinated flowgates. This will be both a day-ahead and an hour-ahead impact calculation.
 - It will require the following data to make the calculation:
 - List of generators by BA with firm transmission service.
 - Merit order/block loading file for generators.
 - Load plus losses for each BA.
 - Topology of transmission system to calculate response factors.
 - Firm reservations for day-ahead impact calculation.
 - List of coordinated flowgates and the Aggregate Entities that have significant impacts on these flowgates.
 - Impacts will be calculated down to 0% and 5% and greater in both the forward and reverse directions. GTL impacts and PTP impacts will be calculated separately.
 - The details on how load/generation will be adjusted for firm import/export transactions, how intra-BA PTP impacts will be determined, and what steps will be taken when there is not sufficient firm generation available to serve load will be documented in the change order requirements.

2. An OATI change order is needed to provide an allocation calculation based on the rating of the flowgate, TRM, CBM and Aggregate Entity impacts.
 - An allocation calculation will be performed using impacts down to 0% to allocate the full capacity of the flowgate. The allocation down to 0% will then be used to determine the 5% allocation by removing impacts between 0% and 5% that were included in the 0% allocation. The 0% and 5% allocation calculation will determine allocations for all Aggregate Entities on the flowgate and will be made in the forward and reverse directions. OATI will calculate both a day-ahead allocation that include a 24 hourly profile and a hour-ahead allocation.
 - OATI will then apply the higher-of logic to determine the firm allocation down to 0%. Once the higher-of value for the down to 0% allocation has been determined (based on either the day-ahead or the hour-ahead allocation), the 5% allocation corresponding to the higher-of down to 0% allocation will be used. OATI will not apply the higher-of logic to both the down to 0% allocation and the 5% allocation such that the down to 0% allocation could come from the day-ahead allocation calculation and the 5% allocation could come from the hour ahead allocation calculation (or vice versa).
 - The higher-of comparison is made immediately after completing the hour-ahead allocation calculation and it identifies the next-hour firm allocation for the Aggregate Entity. Before using these allocations to set the priorities of the GTL impacts, there will be a check performed whether there needs to be pro-rata curtailments assigned to both the firm GTL impacts and the firm PTP impacts from the hour-ahead allocation calculation. This means the next hour impacts down to 0% will be summed (both firm GTL impacts and firm PTP impacts). If this summed value is less than the firm allocation from the higher-of comparison (down to 0%), there is no need for pro-rata curtailments and there is no first to be curtailed firm allocation assigned to the Aggregate Entity of this flowgate. If the summed value is greater than the firm allocation from the higher-of comparison (down to 0%), the firm allocation from the higher-of comparison will be split into a firm GTL allocation and a firm PTP allocation on a pro-rata basis using firm GTL impacts and firm PTP impacts from the hour-ahead allocation calculation. The amount of the short-fall needed to cover impacts down to 0% from the hour-ahead allocation calculation will be assigned to the Aggregate Entity in the first to be curtailed firm service category. Once this is done, the firm allocation plus the first to be curtailed firm allocation will match the sum of the firm GTL impacts and firm PTP impacts from the hour-ahead allocation calculation.
 - OATI will then assign the real-time GTL flows and PTP impacts into the correct priority buckets before reporting them to the IDC.
 - Where there were no pro-rata curtailments assigned between firm GTL and firm PTP, the firm allocation will be reduced by impacts from firm PTP schedules. The remainder will then be used to set firm priority of the real-time GTL flows.

If there is more real-time GTL flow than the remainder of the firm allocation, this will be assigned a non-firm curtailment priority (6 NN).

- Where there were pro-rata curtailments, the firm allocation from the higher-of comparison has been split between firm GTL and firm PTP. This split along with the amount of first to be curtailed firm allocation will be used to assign the priorities of real-time GTL flows and PTP impacts.

- **Change Order 283**

1. Rather than calculate a GTL flow for each generator and assign it to a priority bucket based on the priority of the generator, will calculate the combined GTL flows of all generators inside the BA (in the forward and reverse direction and for those generators with impacts below 5% versus above 5%).
2. Will have an interface with the allocation calculation that provides BA GTL flows that then get assigned the correct priority bucket.

- **Change Order 310**

1. Change Order 310 will be required for all internal point-to-point tagged transactions, so that all point-to-point (inter and intra) transmission service is tagged.

Review of solution to “Directions for the Work Groups” document (Does the solution address the issues and concerns? Does the solution take into account the consideration items?)

- The work group reviewed the Directions for the Work Groups and believes that the solution outlined in this option addresses the directions provided to the work groups.
- The work group reviewed the directions prior to developing its solution and added another assumption for the solution. (See the first assumption in the next section.)

Assumptions:

- Any generating resources in the EMS model have to be reported. If a generator is in the EMS model it should also be in the IDC model. This will include pseudo-ties.
- NERC will approve INT-012-1 requiring intra-BA transactions to be tagged for point-to-point transactions. These transactions will be recognized by the IDC subject to curtailment based on the tag transmission service priority and will not be included in the gen-to-load impacts.

Impacted Entities (e.g. Marketer/Brokers, Transmission Service Providers/Transmission Providers, Generators, Balancing Authorities, Reliability Coordinators)

Impacted Entity	Description of Impact(s)
Transmission Service	Will need to identify generators with firm transmission service and firm

Impacted Entity	Description of Impact(s)
Providers	PTP reservations to be used in the impact calculation process.
See Note Below	Will need to identify the firm merit order/block loading file that can be used in the impact calculation process.

Note: This applies to Load Serving Entities or entities responsible for operating a market on behalf of Load Serving Entities.

Benefits:

- Provides a better overall economic solution to congestion management in that once firm allocations have been established, can use either firm or non-firm generation to serve load without risk of curtailment during TLR 3 as long as do not exceed firm allocation.
- No longer have an issue of not receiving credit for firm redispatch or not receiving credit for redispatch that was done for a first TLR event once you have a second TLR event.
- Treat firm GTL flows and firm PTP impacts on an equal basis and does not make one subordinate to the other.
- Does not disrupt the priority of firm PTP service in that it still does not get curtailed until a TLR 5 is issued.
- Reduces the effects of non-jurisdictional entities that classify all of its generation as firm. With an allocation process, some of that generation having firm transmission service may now be classified as first to be curtailed firm service (even on the non-jurisdictional entity's own flowgates).

Drawbacks:

- Requires additional change orders for impact calculation and allocation calculation. OATI already has significant experience doing both.
- There is no requirement for non-FERC jurisdictional entities in the Eastern Interconnection to follow the NAESB business practices.
- NERC has not yet committed to implement Change Order 310, secured funding or established an implementation timeline.
- INT-012-1 has not been approved
- A situation can occur where an Aggregate Entity with only generation that has firm transmission service finds that some of its GTL flows are non-firm. This could be caused by the load forecast and merit order/block loading file used in the hour-ahead allocation calculation and not due to GTL impacts being treated subordinate to PTP impacts. Also, the decision on how we will determine GTL impacts when we run out of generation with firm transmission service in the

impact calculation of the allocation process (see Outstanding Issue 3 below) will affect the size of the firm GTL impacts down to 0% and the first to be curtailed firm allocation for GTL flows.

Impact on NERC Standards and NAESB WEQ Business Practice Standards

- *Current NAESB Business Practice Standards – Include WEQ Business Practice Standard number and section number with a description of what needs to change.*

WEQ BPS Reference	Description of Change
WEQ-008	Minor changes may have to be made to sections of WEQ-008 but the bulk of the changes will be new sections.

- *Current NERC Standards– Include NERC Standard and Requirement Number with a description of what needs to change.*

NERC Standard	Description of Change
None	Don't foresee changes to the existing standards but do see changes to the IDC Change Order 283 requirements.

- *New NAESB Business Practice Standards – Include WEQ Business Practice Number where changes would be applied and a description for each of the changes*

WEQ BPS Reference	New Standard Description
WEQ-008 – Transmission Loading Relief	New language will have to be added to WEQ-008 to address the requirements listed in the Detail Description of the Solution section.
tbd	Study Criteria (Methodology posted on a public website)

- *New NERC Standards– Include NERC Standards where changes would be applied and a description for each of the changes.*

NERC Standard	Description of Change
INT-012-1	Intra BA point-to-point transactions will be tagged

NERC Standard	Description of Change

Impact on IDC Change Order 283:

- Modifications are needed to the aggregation of GTL flows in the GTL flow calculation. Needs an interface between the GTL flow calculation and the allocation calculation.

Impact on IDC Change Order 310:

- None

Coordination with Other Groups (e.g. OASIS Subcommittee, Joint Electric Scheduling Subcommittee, IDC Working Group, Coordinate Interchange Standard Drafting Team, TLR Standard Drafting Team) - include the group and what coordination needs to occur.

Entity Name	Coordination Required
NERC Group (Tbd)	NERC will be responsible for determining the tests to identify coordinated flowgates.
NERC - INT Standards Drafting Team	Need to confirm that all internal point-to-point transactions will be tagged.
IDCWG	Will need to coordinate modifications to Change Order 283. A new change order will need to be developed in support of TLR changes.

Outstanding Issues Not Addressed in Solution:

1. Firm PTP reservations internal to the BA will have their impacts determined in the day-ahead allocation process. How do we determine these impacts if the reservation granularity is at the BA level.
2. A question has been raised on the load/generation adjustments that are needed for import/export transactions. Need to run through an example that shows there is no double counting.
3. We have three scenarios that describe what to do when do not have enough generation with firm transmission service to serve adjusted load during the impact calculation of the allocation process. If this option is selected the NAESB BPS will need to reach agreement of which scenario will be applied.
4. We still have to resolve any issues on when NYISO and IESO schedules are available for the day-ahead and hour-ahead allocations (these two entities do not have firm transmission service

reservations). Also need to check on when day-ahead firm reservations are available for all other entities.

5. Is there still a need to have Midwest ISO and PJM assigned 100% of reservation/schedule impacts involving IESO and NYISO, respectively?
6. Study Criteria needs to be developed to establish firm transmission usage of generators that will be used in the allocation process.

Business Practices Subcommittee Update

October 26, 2010

WEQ BPS Update - Meetings

- Recent meetings
 - September 15-16, 2010
 - October 14-15, 2010
- Scheduled meetings
 - November 10-11, 2010, hosted by OATI in St. Paul, MN
 - December 1-2, 2010, hosted by NAESB in Houston, TX
 - January 11- 12, 2010, hosted by PJM in Baltimore, MD
- Monthly meetings scheduled through 2011 (looking for host locations)

Parallel Flow Visualization

- WEQ AP Item 1.a.i “Interim Solution for Parallel Flow Visualization”
 - Reviewed all comments submitted during the formal comment period
 - Developed late comments in response to the review as late comments for Executive Committee consideration
- WEQ AP Item 1.a.ii “Permanent Solution for Parallel Flow Visualization”
 - Restarted discussions on three remaining options in September:
 - Tag All Non-Firm
 - Generator Prioritization
 - Flowgate Allocation
 - Identified issues/concerns/questions to be addressed for each option in order to select a permanent solution option
 - Option Work Groups began addressing issues/concerns/questions

Parallel Flow Visualization - (continued)

- WEQ AP Item 1.a.i “Interim Solution for Parallel Flow Visualization”
 - Tag All Non-Firm Option Work Group - suggested “if markets cannot tag non-firm transactions, a hybrid method may be an option which uses a form of generator prioritization for the market areas and this method for the non-market areas”
 - Generator Prioritization Option Work Group - “is recommending that the work on the Generator Prioritization Option be stopped provided key components of this option are blended into the Tag All Non-Firm Option”
 - November meeting objective is to get to two options for consideration
 - December meeting the objective is to select one of the two options to move forward

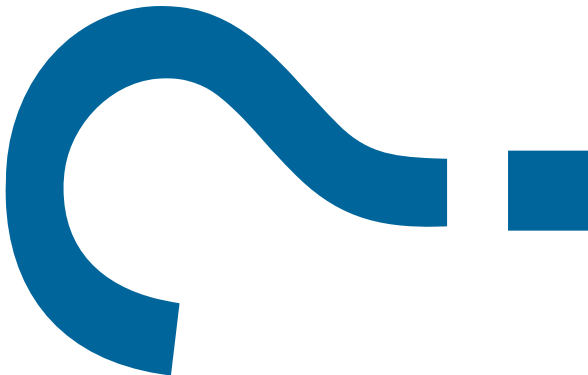
Joint NERC TLR SDT / NAESB BPS Update

- Recirculation ballot for TLR standards IRO-006.5 and IRO-006-EAST.1 ended August 30, 2010
- Voting Statistics
 - Quorum: 88.26 %
 - Approval: 93.93.98 %
- Standards will be submitted to the Board of Trustees for approval

Joint NERC BACSDT / NAESB TIMTF Update

- Balancing Authority Reliability-based Control (Project 2010-14) - "Status Coming Soon"
- Still foresee some coordination required with NERC Standards Drafting Team and TIMTF
- NERC Standards Committee approved a Time Error Correction Field Test, contingent on NERC Operating Committee approval and appropriate waivers from NERC compliance and NAESB Business Practice Standards
 - Field test to last for a year, with possible extensions
 - Results of the field test may have an impact on the NAESB Business Practices
 - Field test start date has not been finalized
- TIMTF chair will monitor activity of Balancing Authority Reliability-based Control Project to determine when the TIMTF should schedule its next meeting

Questions/Feedback



Standards Review Subcommittee Update

October 26, 2010

Meetings

- Recent Meetings:
 - August 25, 2010
 - September 21, 2010
 - October 19, 2010
- Upcoming Meetings
 - November 16, 2010
 - December 21, 2010
 - January 18, 2010

Recent Activities

- Ongoing Activities
 - Monthly Review of NERC Activities
 - Review of recommendations posted for formal comments
 - Annual Plan Item 6 (d) Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information
 - Review of minor corrections posted for comments
 - Minor Correction MC10019 Corrections to the WEQ/WGO Implementation Guide for Electronic Tariff Filing to correspond to modifications made by FERC to its Implementation Guide for Electronic Filing of Parts 35, 154, 284, 300, and 341 Tariff Filings.
- Specific Activities
 - Determined no Business Practice Standards were needed for Annual Plan Item 1.d “Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013.”
 - Developed NAESB Comments for the NERC Reliability Standards Development Plan: 2011- 2013

Annual Plan Item 1.d

- Annual Plan Item 1.d “Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013.”
 - The subcommittee reviewed a draft of FAC 013-2 which was posted for formal comments from September 20, 2010 to November 3, 2010.
 - The subcommittee agreed that, as written, the standard does not have any impact on NAESB Business Practice Standards.
 - The subcommittee drafted a No Action Recommendation for Annual Plan Item 1.d for consideration by the Executive Committee.
 - Formal comment on No Action Recommendation closed on October 25, 2010.

NERC Reliability Standards Development Plan: 2011- 2013

- Provide feedback to NERC on Reliability Standards Development Plan 2011 -2013
 - The subcommittee held a special meeting on August 25, 2010, in Houston
 - Reviewed NERC Reliability Standards Development Plan
 - Cross-referenced NERC Reliability Standards Development Plan to WEQ Annual Plan to identify potential gaps
 - Provided comments for review by Managing Committee on September 8, 2010
 - NAESB filed comments with NERC on September 10, 2010

Scope of Work

- Subcommittee made minor corrections to its scope of work on April 13, 2010 and May 18, 2010
- Redlines to Scope of Work were posted on the WEQ EC web page on August 27, 2010 per a request from the Executive Committee.
http://www.naesb.org/pdf4/weq_ec102610w1.doc
- The SRS is seeking approval of the May 18, 2010 Scope of Work document

Questions/Feedback

- Request others also to look at the NERC activities to assess whether they think NAESB should be developing complementary standards
- Seeing participation dropping off,
 - September 21st - 6 participants
 - October 19th - 5 participants
- Seek continued participation in monthly conference call meetings
- Difficult developing comments related to Smart Grid Business Practice Standards
 - Standards are structured differently from other Business Practice Standards
 - Smart Grid recommendations focus on goals, objectives, concepts, use cases, etc., rather than enforceable standards



North American Energy Standards Board

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**NAESB UPDATE: VERSION 2.0 – WHOLESALE GAS QUADRANT (WGQ)
OCTOBER 15, 2010**

ACTIONS TO BE APPLIED TO WGQ VERSION 1.9 TO CREATE WGQ VERSION 2.0:

Version 1.9 was published on September 30, 2009.

2009-10:

Final Actions:

2009 Annual Plan Item 3/2009 Annual Plan Item 2(a)/R07009 – Update Model ISDA North American Gas Annex, November 2004 to correspond to the updated Base Contract for Sale and Purchase of Natural Gas, dated September 5, 2005, in accordance with NAESB WGQ Request No. R07009 as adopted by the WGQ Executive Committee on October 29, 2009 - http://naesb.org/member_login_check.asp?doc=model_isda_addendum102909.pdf (*This is a model and does not require member ratification*)

R08020 – Provide for enhanced granularity for public utilities in identifying critical operational flow orders, - Approved by the WGQ EC on February 4, 2010.

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08020.doc (*Ratified June 23, 2010*)

R09001 – Add two data elements to the Transactional Reporting – Interruptible Transportation Document (5.4.22) – Approved by the WGQ EC on February 4, 2010.

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r09001.doc (*Ratified June 23, 2010*)

R09011 - Change the term Power Plant Operator to Power Plant Gas Coordinator in WEQ-011
Formal comment period ends April 29, 2010.

Final Action: http://naesb.org/pdf4/r09011_rec.doc (*Ratified July 15, 2010*)

R08028/2010 WGQ Annual Plan Item 3/2009 WGQ Annual Plan Item 4/2008 WGQ Annual Plan Item 5 – Eliminate Standards 5.4.4. (Replacement Capacity);

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3.doc ,

Attachment 1 Offer:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach1.doc ,

Attachment 2 Bid:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach2.doc ,

Attachment 3 Award Download:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach3.doc ,

Attachment 4 Withdrawal Download:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach4.doc ,

Attachment 5 Business Documentation:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach5.doc , and

Attachment 6 Principles/Standards/Interpretations as modified in redline:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08028_wgq_2010_api_3_attach6.doc – revised by the WGQ EC on August 19, 2010 – (*Ratified September 27, 2010*)

R99033/R96018/R04028 – Redesign of Operationally Available and Unsubscribed data set

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r99033_r96018_r04038.doc ,

Attachment 1 Data Dictionary:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r99033_r96018_r04038_attach1.doc , and



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Attachment 2 EDI Technical:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r99033_r96018_r04038_attach2.doc

Attachment 3 EDISM G873OACY:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r99033_r96018_r04038_attach3.rtf

Attachment 4 EDISM G873UNSC:

http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r99033_r96018_r04038_attach4.rtf - approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

R08008 - Develop customer security administration standards

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r08008.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

R09006 - Add a new data element “Contract” in the following Transaction Datasets for the NAESB WGQ Version 1.8 release: NAESB WGQ Standard No. 3.4.2, Payment Remittance and NAESB WGQ Standard No. 3.4.4, Service Requester / Charge Allowance Invoice.

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r09006.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

R09021/R09022 – Change Charge Type conditionality in NAESB WGQ Standard No. 3.1.14.1 Transportation/Sales Invoice.

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r09021_r09022.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

R09025 – Create a new WGQ EDM standard

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r09025.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

2010 WGQ Annual Plan Item 5 – the NAESB WGQ EDM subcommittee reviews and updates to the NAESB WGQ technical standards per NAESB WGQ Standard No. 4.3.59.

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_2010_api_5.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

R10001 - Update the NAESB Wholesale Gas Quadrant (WGQ) Quadrant Electronic Delivery Mechanism (QEDM) Manual to add the ability to provide Informational Postings reports downloads in a CSV file format

Final Action: http://www.naesb.org/member_login_form.asp?doc=fa_wgq_r10001.doc - Approved by the WGQ EC on August 19, 2010 – *(Ratified September 27, 2010)*

Recommendations:

R09014 / 2010 WGQ Annual Plan Item 6 – add NAESB WGQ Standard to the NAESB WGQ QEDM as requested by Tennessee Valley Authority and modify NAESB WGQ Standard No. 4.3.23 per R09014 and WGQ Annual Plan Item #6 –

Formal comment period ended June 24, 2010 - http://www.naesb.org/pdf4/wgq_052510reqcom.doc.

Recommendation: http://naesb.org/pdf4/r09014_wgq_2010_api_6_rec_052510.doc – revised/approved by the WGQ Executive Committee on October 5, 2010 (*WGQ Member Ratification Period ends November 5, 2010*)



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Minor Corrections:

MC10036 – Submitted by D. Davis, Williams Gas Pipeline – Minor corrections for the version 2.0 publication resulting from editorial review: http://www.naesb.org/pdf4/wgq_mc10036_rec_100710.doc - approved by the WGQ EC via notational ballot on October 17, 2010 - (*Effective date November 30, 2010*)

MC10030 – Submitted by Williams Gas Pipeline – Correction (Errata) to WGQ Version 1.9 – Standard No. 5.4.7 (Offer Upload) data dictionary for the condition of the data element Special Terms and Miscellaneous Notes – Storage Inventory Conditions: http://www.naesb.org/pdf4/wgq_mc10030_rec_081810.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10018 – Submitted by D. Davis and C. Burden, Williams Gas Pipeline for NAESB WGQ Version 2.0, NAESB WGQ Standard 2.4.3 – Allocation, NAESB WGQ Standard 2.4.4 – Shipper Imbalance and NAESB WGQ Standard 3.4.1 – Transportation/Sales Invoice: http://www.naesb.org/pdf4/wgq_mc10018_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10022 – Version 2.0 Add code value description “Deferred Asset Surcharge” with code value “DAS” to the list of standardized code values for the following datasets and data elements: 3.4.1, 5.4.1, 5.4.2, 5.4.3, 5.4.7, 5.4.8, 5.4.18, 5.4.19, 5.4.20, 5.4.21, 5.4.22, Submitted by T. Gwilliam, Iroquois Gas Transmission System, L.P. - http://www.naesb.org/pdf4/wgq_mc10022_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10024 – Version 2.0 Add additional Reduction Reason code value(s) to NAESB WGQ Standard No. 1.4.6, Submitted by R. Hogge, Dominion Transmission - http://www.naesb.org/pdf4/wgq_mc10024_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10026 – Version 2.0 Addition of a Code Value for the data element “Transaction Type” to the following data element “Transaction Type” to the following Transaction Data Sets: Nomination (1.4.1), Scheduled Quantity (1.4.5), Per-determined Allocation (2.4.1), Allocation (2.4.3), Shipper Imbalance (2.4.4), and Transportation/Sales Invoice (3.4.1), Submitted by K. Brooks, Williston Basin Interstate Pipeline Company - http://www.naesb.org/pdf4/wgq_mc10026_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10028 – This request proposes adding back the Code Value for the data element “Surcharge Indicator” to the following Transaction Data Sets: Offer Download (5.4.1), Bid Download (5.4.2) and Award Download (5.4.3), Submitted by M. Mahle, Transcanada - http://www.naesb.org/pdf4/wgq_mc10028_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC10029 – NAESB WGQ Standards 4.3.54, Submitted by K. Brooks, Williston Basin Interstate Pipeline Company - http://www.naesb.org/pdf4/wgq_mc10029_rec_081910.doc - approved by the WGQ EC on August 19, 2010 - (*Effective date October 7, 2010*)

MC09034 Correct references in 3 lines of Section 4.12 of the NAESB WGQ Standard No. 6.3.3 – Electronic Data Trading Partner Agreement (Version 1.8), Submitted by C. Burden, Williams Gas Pipeline - http://www.naesb.org/pdf4/wgq_retail_mc09034_rec_011510.doc – approved by the WGQ EC via notational ballot January 15, 2010. (*Effective date September 27, 2010*)



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MC09035 Information Requirements/Technical Subcommittee – corrections to Transaction set Tables and ANSI X12 mapping in NAESB WGQ Standard Nos. 5.4.1 – Offer Download and 5.4.3 – Award Download (Version 1.9) http://www.naesb.org/pdf4/wgq_mc09035_rec_011510.doc – approved by the WGQ EC via notational ballot January 15, 2010. *(Effective date September 27, 2010)*

MC10009 – Version 1.9 (Errata) for: NAESB WGQ Standard No.5.4.1 (Offer Download), NAESB WGQ Standard No.5.4.2 (Bid Download) and NAESB WGQ Standard No.5.4.3 (Award Download), Submitted by D. Davis, Williams Gas Pipeline - Recommendation: http://www.naesb.org/pdf4/wgq_mc10009_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10010 – Version 1.9 (Errata) for NAESB WGQ Standard No.5.4.20 (Transactional Reporting – Capacity Release), Submitted by D. Davis, Williams Gas Pipeline - Recommendation: http://www.naesb.org/pdf4/wgq_mc10010_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10011 – Version 1.9 (Errata) for NAESB WGQ Standard Nos.3.4.1 (Transportation/Sales Invoice), Submitted by D. Davis, Williams Gas Pipeline - Recommendation: http://www.naesb.org/pdf4/wgq_mc10011_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10014 – Version 1.9 (Errata) for NAESB WGQ Standard No.5.4.18 (Bid Upload), Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee – Recommendation: http://www.naesb.org/pdf4/wgq_mc10014_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10015 – Version 1.9 (Errata) to NAESB WGQ Standard No.5.4.15 (Response to Upload of Request for Download of Posted Datasets), Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee – Recommendation http://www.naesb.org/pdf4/wgq_mc10015_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10016 – Version 1.9 (Errata) for NAESB WGQ Version 1.9 Standard No.3.4.1 (Transportation/Sales Invoice), Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee – Recommendation http://www.naesb.org/pdf4/wgq_mc10016_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10017 - Version 1.9 (Errata) to NAESB WGQ Standard No. 2.4.6 – Measurement Volume Audit Statement, Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee – Recommendation http://www.naesb.org/pdf4/wgq_mc10017_rec_080610.doc - approved by the WGQ EC on August 6, 2010. *(Effective date September 27, 2010)*

MC10019 - Minor Correction Submitted by D. Davis, Williams Gas Pipeline for NAESB WGQ Version 1.9: Joint NAESB WEQ Version 002.1 Standard WEQ-014-A and WGQ Version 1.0 Standard No. 11.4.1 (Implementation Guide for Electronic Tariff Filing): http://www.naesb.org/pdf4/wgq_weq_mc10019_revised.doc - revised/approved by the WEQ EC on August 17, 2010 and the WGQ EC on August 19, 2010. *(Effective date October 7, 2010)*

MC10020 – Version 1.9 (Errata) for NAESB WGQ Capacity Release, Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee – Recommendation:



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http://www.naesb.org/pdf4/wgq_mc10020_rec_080610.doc - approved by the WGQ EC on August 6, 2010.
(Effective date September 27, 2010)

MC10021 – Version 1.9 (Errata) to NAESB WGQ Standard 5.4.22, Submitted by K. Brooks, Williston Basin Interstate Pipeline, Company – Recommendation: http://www.naesb.org/pdf4/wgq_mc10021_rec_080610.doc - approved by the WGQ EC on August 6, 2010. (Effective date September 27, 2010)

MC10023 – Version 1.9 (Errata) to the offer Download – NAESB WGQ Standard No. 5.4.1 – PID Segment and Correct the Technical Implementation of Business Process for Confirmation Response – NAESB WGQ Standard No. 1.4.4, Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee - http://www.naesb.org/pdf4/wgq_mc10023_rec_080610.doc - approved by the WGQ EC on August 6, 2010.
(Effective date September 27, 2010)

MC10025 – Version 1.9 (Errata) for NAESB WGQ Internet Electronic Transport (Internet ET) Manual and NAESB RXQ Internet ET Manual, Version 1.2, Submitted by C. Burden, Joint WGQ Information Requirements/Technical Subcommittee - http://www.naesb.org/pdf4/wgq_req_rgq_mc10025_rec_080610.doc - approved by the WGQ EC on August 6, 2010. (Effective date September 27, 2010)

MC10027 - Errata to NAESB WGQ Version 1.9: Correct the condition for the data element Amendment Reporting in the following data sets: Transactional Reporting - Capacity Release (NAESB WGQ Standard No. 5.4.20), Transactional Reporting – Firm Transportation (NAESB WGQ Standard No. 5.4.21) and Transactional Reporting – Interruptible Transportation (NAESB WGQ Standard No. 5.4.22), Submitted by D. Davis/M. Stender, Co-Chairs Information Requirements/Technical Subcommittee - http://www.naesb.org/pdf4/wgq_mc10027_rec_080610.doc - approved by the WGQ EC on August 6, 2010. (Effective date September 27, 2010)

MC10012 –Errata for NAESB WGQ Internet Electronic Transport (Internet ET) Manual, Version 1.9 and NAESB RXQ Internet ET Manual Version 1.2: http://www.naesb.org/pdf4/wgq_req_rgq_mc10012_rec_030510.doc - approved by the WGQ and Retail ECs on March 5, 2010 (Effective date July 7, 2010)

MC10001 - Revised - Minor Correction Submitted by M. Stender, El Paso Natural Gas to NAESB standard 5.4.1, 5.4.2 and 5.4.17 version 1.9: http://www.naesb.org/pdf4/wgq_mc10001_rec_020410.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC10002/R09019 - Minor Correction (errata to Version 1.9) to modify three and add one new Allocation Transaction Type Code Values and modify the Allocation Transaction Type Matrix accordingly in the following data set: Allocation, NAESB WGQ Standard No. 2.4.3 (Note: This recommendation corrects the actions taken for R05028 which were published in Version 1.9.): http://www.naesb.org/pdf4/wgq_mc10002_rec_020410.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC10003 - Minor Correction to Version 1.9 NAESB WGQ Standard No. 2.2.4 – Shipper Imbalance (EDI Implementation: ASC X12 Mapping Guidelines and Data Element Cross Reference): http://www.naesb.org/pdf4/wgq_mc10003_rec_020410.doc - approved by the WGQ EC on February 4, 2010.
(Effective date April 19, 2010)

MC10005 - Recommendation – Submitted by C. Burden, Williams Gas Pipeline – This request proposes the correction of language for the NAESB WGQ Version 1.9 release: NAESB WGQ Standard 4.3.16: http://www.naesb.org/pdf4/wgq_mc10005_rec_020410.doc - approved by the WGQ EC on February 4, 2010.
(Effective date April 19, 2010)



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MC10006 Recommendation – Submitted by C. Burden, Williams Gas Pipeline – This request proposes corrections to NAESB WGQ Standards Booklet 1 of 2, NAESB WGQ QEDM Standards Manual and NAESB WGQ Capacity Release Standards Manual to correct an error in wording:

http://www.naesb.org/pdf4/wgq_mc10006_rec_020410.doc - approved by the WGQ EC on February 4, 2010.
(Effective date April 19, 2010)

MC10007 Recommendation – Submitted by C. Burden, Williams Gas Pipeline – This request proposes corrections to NAESB WGQ QEDM Standards Manual, Version 1.9 to correct browser and plug-in information and a spelling correction: http://www.naesb.org/pdf4/wgq_mc10007_rec_020410.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC10008 Recommendation – Submitted by D. Davis / M. Stender, Chair / Co-Chair WGQ Information Requirements / WGQ Technical Subcommittees – This request proposes corrections to NAESB WGQ Standard Nos. 3.4.1 (Transportation/Sales Invoice) and 3.4.4 (Service Requester Level Charge/Allowance Invoice, Version 1.9 to correct the code values in the Code Values Dictionaries: http://www.naesb.org/pdf4/wgq_mc10008_rec_020410.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC09024 Recommendation - Submitted by M. Schmitz, Northern Natural Gas - This request proposes the addition of 1 code values for the data element “Validation Code (Detail)” in the following datasets for the NAESB WGQ Version 1.9 release: NAESB WGQ Standard 1.4.2 - Nomination Quick Response http://www.naesb.org/pdf4/wgq_mc09024_rec_011810.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC09033 Recommendation - Submitted by M. Schmitz, Northern Natural Gas - This request proposes the addition of 4 code values for the data element “Charge Type” in the following datasets for the NAESB WGQ Version 1.9 release: NAESB WGQ Standard 3.4.1 – Transportation / Sales Invoice: http://www.naesb.org/pdf4/wgq_mc09033_rec_011910.doc - approved by the WGQ EC on February 4, 2010. (Effective date April 19, 2010)

MC09032 Minor Correction to the Canadian Addendum, dated August 2, 2007 (NAESB Standard 6.3.1.CA) as submitted by K. Sappenfield, Chair, WGQ Contracts Subcommittee - http://www.naesb.org/pdf4/wgq_mc09032_rec_102909.doc - approved by the WGQ EC on October 29, 2009 (Effective date December 14, 2009)

TIMELINE:

- Version 2.0 is scheduled for publication no earlier than November 1, 2010 and no later than November 30, 2010.
- To back into this date – all standards should be ratified by date of publication, and EC actions should be taken one month prior, to publication, all subcommittee actions should be taken three months prior to publication.

Month - 4	Subcommittee Recommendations Completed and sent out for comment
Month - 3	EC Actions taken
Month - 2	Ratifications sent out and completes, minor corrections applied
Month - 1	Review of draft publication
Month - 0	Date of Publication.



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Items not to be included:

*R09017 – Develop a new ISDA Gas Confirmation Form for use with the ISD Gas Annex based on the current Confirmation Form under the NAESB Base Contract for Sale and Purchase of Natural Gas –
http://naesb.org/member_login_form.asp?doc=wgq_rat011310_r09017_rec.doc - Ratification on February 12, 2010.*

Attachment (Exhibit A):

http://naesb.org/member_login_form.asp?doc=wgq_rat011310_r09017_rec_attachment.doc



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**NAESB UPDATE: VERSION 002.2 – WHOLESALE ELECTRIC QUADRANT (WEQ)
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ACTIONS TO BE APPLIED TO WEQ VERSION 002.1 TO CREATE WEQ VERSION 002.2:

Version 002.1 was published on March 11, 2009.

2009-10:

Final Actions:

2008 WEQ Annual Plan Item 5(a) – Review and develop business practice standards to support DR and DSM-EE programs – Ratified March 16, 2009 - http://naesb.org/member_login_check.asp?doc=fa_weq_2008_api5a.doc (New WEQ-015)

2009 WEQ Annual Plan Item 3(d) – Order 717, Standards of Conduct – Ratified June 15, 2009 - http://naesb.org/member_login_check.asp?doc=fa_weq_2009_api_3d.doc (WEQ-001, WEQ-002, WEQ-003)

2009 WEQ Annual Plan Item 2(a)(ii)(3) – Rollover Rights on Redirect on a Firm Basis – Ratified July 27, 2009 - http://naesb.org/member_login_check.asp?doc=fa_weq_2009_ap_2aii3.doc (WEQ-001, WEQ-002, WEQ-003, WEQ-013)

2009 WEQ Annual Plan Item 1(a), 3(a)(vii)/R05020 – Modifications to WEQ-004 Coordinate Interchange as approved by the WEQ EC on October 27, 2009 – Ratified December 14, 2009 - http://naesb.org/member_login_form.asp?doc=fa_weq_2009_api_1a_3avii_r05020.doc (WEQ-001, WEQ-002, WEQ-003, WEQ-004, WEQ-013)

Attachment: http://naesb.org/member_login_form.asp?doc=fa_weq_2009_api_1a_3avii_r05020_attach.doc

2009 WEQ Annual Plan Item 5(b) – Modify NAESB definition to address internal inconsistencies and inconsistencies with the NERC glossary – approved by the WEQ EC on February 2, 2010 – Ratified March 24, 2010 - http://naesb.org/member_login_check.asp?doc=fa_weq_2009_api5b.doc

2009 WEQ Annual Plan Items 5(a)(2), 5(i)/R08004/R09011 – Multiple Annual Plan Items affecting WEQ-011 Gas/Electric Coordination – Approved by the WEQ EC on June 11, 2010 via Notational Ballot. – Ratified July 15, 2010 - http://www.naesb.org/member_login_form.asp?doc=fa_weq_2009_api_5a2_5i_r08004_r09011.doc

Attachments:

http://www.naesb.org/member_login_form.asp?doc=fa_weq_2009_api_5a2_5i_r08004_r09011_attach1.doc

2009 WEQ Annual Plan Items 3(a)(ii)(1)/R07013 - Develop a Confidentiality Agreement - http://www.naesb.org/pdf4/weq_2009_api_3aii1_r07013_rec.doc - Approved by the WEQ EC on May 4, 2010 (*No further action needed*)

2010 WEQ Annual Plan Item No. 6.a - Requirements Specifications for Common Electricity Product and Pricing Definition – for NIST PAP03 as revised by the WEQ EC on July 7, 2010 – Ratified August 21, 2010 - http://www.naesb.org/member_login_form.asp?doc=fa_weq_2010_api_6a.doc



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2010 WEQ Annual Plan Item No. 6.b - Requirements Specifications for Common Scheduling Mechanism for Energy Transactions – for NIST PAP04 as revised by the WEQ EC on July 7, 2010 – Ratified August 21, 2010 - http://www.naesb.org/member_login_form.asp?doc=fa_weq_2010_api_6b.doc

2010 WEQ Annual Plan Item No. 6.c - Requirements Specifications for Wholesale Standard DR Signals - for NIST PAP09 as revised by the WEQ EC on July 7, 2010 – Ratified August 21, 2010 - http://www.naesb.org/member_login_form.asp?doc=fa_weq_2010_api_6c.doc

Recommendations:

2009 WEQ Annual Plan Item 2(a)(i)(1-8) – Develop business practice standards to better coordinate the use of the transmission system among neighboring transmission providers. Such business practice standards would be based on recommendations from NERC’s Long Term ATC/AFC Task Force and would involve revised procedures for the ATC calculation and/or revised protocols as determined by the final order. Development is using joint standards development process with NERC. Request R050004 was expanded to include the Order No. 890 ([Docket Nos. RM05-25-000 and RM05-17-000](#)) and Order No. 890-A ([Docket Nos. RM05-17-001, 002 and RM05-25-001, 002](#)), “Preventing Undue Discrimination and Preference in Transmission Services,” issued April 11, 2007). Group 3: Network Service on OASIS – Recommendation currently under development by the WEQ OASIS Subcommittee http://naesb.org/weq/weq_oasis.asp

2009 Annual Plan Item 2.a.i.1 through 2.a.i.8 and 3.a.i - Network Service on OASIS – Recommendation currently under development by the WEQ OASIS Subcommittee.

Draft Recommendation: http://www.naesb.org/pdf4/weq_oasis062110reqcom_a1.doc

Request for Informal Comments - http://www.naesb.org/pdf4/weq_oasis062110reqcom.doc - ended July 12, 2010

2010 WEQ Annual Plan Item 1.a.i – Interim Solution for Parallel Flow Visualization

Recommendation: http://www.naesb.org/pdf4/weq_2010_api_1ai_rec.doc

Request for Formal Comments - http://www.naesb.org/pdf4/weq_072910_reqcom.doc - ended August 30, 2010

2010 WEQ Annual Plan Item 6d – Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information

Recommendation: http://www.naesb.org/pdf4/weq_2010_ap_6d_rec.doc

Request for Formal Comments - http://www.naesb.org/pdf4/weq_req_090110_reqcom.doc - ended September 30, 2010

2010 WEQ Annual Plan Item 1.d – Monitor and develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013

Recommendation: http://www.naesb.org/pdf4/weq_2010_api_1d_rec.doc

Request for Formal Comments - http://www.naesb.org/pdf4/weq_092410_reqcom.doc - comment period ends October 25, 2010

Minor Corrections:

Minor Correction MC10033, Submitted by Y. Coleman, Bonneville Power Administration – Book 2.1, WEQ-003 Data Dictionary and WEQ-013 Implementation Guide: http://www.naesb.org/pdf4/weq_mc10033.doc - for EC consideration October 26, 2010



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NAESB UPDATE: VERSION 002.2 – WHOLESALE ELECTRIC QUADRANT (WEQ) OCTOBER 15, 2010

Minor Correction MC10032, Submitted by E. Skiba, JT. Wood, N. Saini, M.Otondo – WEQ 2010 AP Item 1.a.i – Interim Solution for Parallel Flow Visualization: http://www.naesb.org/pdf4/weq_mc10032.doc - for EC consideration October 26, 2010

Minor Correction MC10019, Submitted by D. Davis, Williams Gas Pipeline for NAESB WGQ Version 1.9: Joint NAESB WEQ Version 002.1 Standard WEQ-014-A and WGQ Version 1.0 Standard No. 11.4.1 (Implementation Guide for Electronic Tariff Filing): http://www.naesb.org/pdf4/wgq_weq_mc10019_revised.doc - revised/approved by the WEQ EC on August 17, 2010 and the WGQ EC on August 19, 2010 – (*Effective date October 7, 2010*)

Minor Correction MC10031, WEQ-001 Minor Correction to be applied to Version 002.2, Submitted by M. Goldberg, ISO New England Inc.: http://www.naesb.org/pdf4/weq_mc10031_revised.doc - revised/approved by the WEQ EC on August 17, 2010 - (*Effective date October 7, 2010*)

Minor Correction for WEQ-001 to be applied to versions 002.1 and 002.2 submitted by JT Wood, Southern Company and approved by the WEQ Executive Committee on October 27, 2009. - http://naesb.org/pdf4/weq_mc111209_reqcom.doc Comment period ends November 30, 2009 (*Effective date December 14, 2009*)

TIMELINE:

- Version 002.2 is scheduled for publication end of second quarter 2011.
- To back into this date – all standards should be ratified by date of publication, and EC actions should be taken one month prior, to publication, all subcommittee actions should be taken three months prior to publication.

Month - 4	Subcommittee Recommendations Completed and sent out for comment
Month - 3	EC Actions taken
Month - 2	Ratifications sent out and completes, minor corrections applied
Month - 1	Review of draft publication
Month - 0	Date of Publication.



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NAESB UPDATE: VERSION 1.3 – RETAIL ELECTRIC AND RETAIL GAS QUADRANT (REQ/RGQ) OCTOBER 15, 2010

ACTIONS TO BE APPLIED TO RETAIL VERSION 1.2 TO CREATE RETAIL VERSION 1.3:

Version 1.2 was published on December 31, 2009.

2009-10:

Final Actions:

2010 REQ Annual Plan Item No. 9.a - Requirements Specifications for Common Electricity Product and Pricing Definition – for NIST PAP03 as approved by the REQ EC on June 16, 2010 -
http://www.naesb.org/member_login_check.asp?doc=fa_req_2010_retail_api_9a.doc – Ratified July 30, 2010

2010 REQ Annual Plan Item No. 9.b - Requirements Specifications for Common Scheduling Mechanism for Energy Transactions – for NIST PAP04 as approved by the REQ EC on June 16, 2010 -
http://www.naesb.org/member_login_check.asp?doc=fa_req_2010_retail_api_9b.doc - Ratified July 30, 2010

2010 REQ Annual Plan Item No. 9.c - Requirements Specifications for Retail Standard DR Signals - for NIST PAP09 as approved by the REQ EC on June 16, 2010 -
http://www.naesb.org/member_login_check.asp?doc=fa_req_2010_retail_api_9c.doc - Ratified July 30, 2010

2009 Retail Annual Plan Item 1/R05016 – Develop Technical Electronic Implementation Standards and Data Dictionaries (*Book 9: Customer Billing and Payment Notification via Uniform Electronic Transaction*) – approved by the Retail ECs on February 3, 2010.

Final Action – Part A with Revised Attachments -
http://www.naesb.org/member_login_form.asp?doc=fa_retail_2009_api1_r05016.doc – Ratified August 30, 2010

Revised Attachment 1 – Data Dictionaries -
http://www.naesb.org/member_login_form.asp?doc=fa_retail_2009_api1_r05016_attach1.doc – Ratified August 30, 2010

Revised Attachment 2 – X12 Technical Implementation Guidelines -
http://www.naesb.org/member_login_form.asp?doc=fa_retail_2009_api1_r05016_attach2.rtf – Ratified August 30, 2010

Recommendations:

Retail 2009 Annual Plan Item 10a and 10c - Service Request, Disconnection and Reconnection in the Registration Agent Model – revised by the Retail Executive Committees on 05/05/2010.

Recommendation - http://www.naesb.org/pdf4/retail_2009_ap_10a_10c_rec_revised_081810_clean.doc

Attachment: http://www.naesb.org/pdf4/retail_2009_ap_10a_10c_rec_attach.ppt (Models) – approved by the Retail EC's on September 7, 2010 – *membership ratification period ends November 8, 2010*

Recommendation 2010 Retail Annual Plan Item No. 4 - Billing and Payments

Recommendation: http://www.naesb.org/pdf4/retail_2010_ap4_rec_revised_081810_clean.doc and

Attachment: http://naesb.org/pdf4/retail_2010_ap4_rec_attachment.ppt (Models) – approved by the Retail EC's on September 7, 2010 – *membership ratification period ends November 8, 2010*



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NAESB UPDATE: VERSION 1.3 – RETAIL ELECTRIC AND RETAIL GAS QUADRANT (REQ/RGQ) OCTOBER 15, 2010

Retail 2010 Annual Plan Item 9d – Business Practices and Information Models to Support Priority Action Plan 10 – Standardized Energy Usage Information

Recommendation: http://www.naesb.org/pdf4/req_2010_ap_9d_rec.doc - Formal Request for Comments Due September 30, 2010

Retail 2010 Annual Plan Item 5a – Users Guide for Book 0

Recommendation: http://www.naesb.org/pdf4/retail_2010_api_5a_rec.pdf - Formal Request for Comments Due October 25, 2010

Retail 2010 Annual Plan Item 11 – Revised Master List of Defined Terms

Recommendation: http://www.naesb.org/pdf4/retail_2010_api_11_rec.pdf - Formal Request for Comments Due October 25, 2010

Minor Corrections:

MC09034 Correct references in 3 lines of Section 4.12 of the NAESB WGQ Standard No. 6.3.3 – Electronic Data Trading Partner Agreement (Version 1.8), Submitted by C. Burden, Williams Gas Pipeline - http://www.naesb.org/pdf4/wgq_retail_mc09034_rec_011510.doc – approved by the WGQ EC via notational ballot January 15, 2010. (*Effective date September 27, 2010*)

MC10025 – Version 1.9 (Errata) for NAESB WGQ Internet Electronic Transport (Internet ET) Manual and NAESB RXQ Internet ET Manual, Version 1.2, Submitted by C. Burden, Joint WGQ Information Requirements/Technical Subcommittee - http://www.naesb.org/pdf4/wgq_req_rgq_mc10025_rec_080610.doc - approved by the WGQ EC on August 6, 2010. (*Effective date September 27, 2010*)

MC10012 –Errata for NAESB WGQ Internet Electronic Transport (Internet ET) Manual, Version 1.9 and NAESB RXQ Internet ET Manual Version 1.2: http://www.naesb.org/pdf4/wgq_req_rgq_mc10012.doc - approved by the WGQ and Retail ECs on March 5, 2010. (*Effective Date June 24, 2010*)

TIMELINE:

- Version 1.3 is scheduled for publication in first quarter 2011.
- To back into this date – all standards should be ratified by date of publication, and EC actions should be taken one month prior, to publication, all subcommittee actions should be taken three months prior to publication.

Month - 4	Subcommittee Recommendations Completed and sent out for comment
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October 20, 2010

TO: NAESB Board of Directors, Executive Committee (EC) Members, EC Alternates, and Invited Guests
FROM: Cory Galik Cummings, NAESB Staff Attorney
RE: Draft Minutes of the NAESB Board Meeting –September 23, 2010

NAESB BOARD OF DIRECTORS MEETING
Marriott IAH Airport Hotel, Houston, Texas
Thursday, September 23, 2010 – 9:00 a.m. to 1:00 pm Central
DRAFT MINUTES

1. Administration and Welcome

Mr. Cleveland welcomed the Board members and guests in the room and on the phone. Mr. Boswell provided the antitrust guidance. Ms. Cummings called the roll of the NAESB Board members. Quorum was established.

2. Adoption of the Agenda and Minutes

Mr. Cleveland explained that the agenda, June 24, 2010 draft minutes and the three annual plans would be adopted via a consent agenda. Ms. Crockett moved, seconded by Mr. Lucas, to approve the consent agenda. The motion passed unanimously.

3. Membership and Financial Report

Membership Report: Ms. McQuade reviewed the [membership report](#). This quarter NAESB has experienced a net gain in membership, largely in response to the creation of the new WEQ segment and smart grid activities. The hard work of the Board has paid off this quarter and there are currently several new prospects in touch with the NAESB staff. Mr. Cleveland was recognized for the new members and leaders that have resulted from his reach-out efforts.

Financial Report: Ms. Wishart provided the [financial report](#). IRS 990 requirements have resulted in some changes to the reporting. NAESB's revenues are strong and expenses are staying even with last year. Ms. McQuade thanked the Revenue Committee for their hard work, the results of which are reflected in the financials.

4. Reports from Board Committees

Resources: Mr. True provided the [report](#) of the Resources Committee. He noted the increase in membership due to NAESB's smart grid and demand response efforts. Several companies have expressed an interest in joining and the NAESB office will follow up with them.

Critical Infrastructure Committee: Mr. Hurley provided an [update](#) of the activities of the Critical Infrastructure Committee. He noted that the Lieberman bill was briefly discussed during yesterday's WEQ Leadership conference call. The bill has undergone significant changes and will be merged with several other bills into one cybersecurity bill. He encouraged the board to continue to pay close attention to this legislation.

Retail Restructuring Update: Mr. Novak provided an update of the restructuring of the Retail Quadrants. The restructuring actions taken last year appear to be moving the Quadrants in the right direction, even though the Quadrants membership statistics are still below the minimum requirements.

Managing Committee: Mr. Cleveland provided an [update](#) of the Managing Committee, which met on August 20 to review and approve 2010 compensation changes, IRS policy 990 changes, segment blocks and procedural discussions, and NAESB's succession plan. Board approval was required to approve the IRS policy 990 changes, NAESB's succession plan, the compensation policy, document retention policy and the whistle blower policy in accordance to the requirements of the IRS 990 form.

Mr. Desselle moved, seconded by Mr. Ellsworth, to adopt the [policies recommended by the Managing Committee](#).



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Mr. Kruse asked a question regarding the short term absence in the succession plan. He asked that the Managing Committee report back to the board for approval of an absence longer than three months. Mr. Cleveland responded that, as a matter of standard practice, the Managing Committee always reports to the board on any action it takes. The board can always ask the Managing Committee to reconsider or make changes the board thinks is necessary. Next, Mr. Kruse asked if there was information on the IRS policy 990 procedures that the general public can review. Mr. Boswell answered that it was available on the Internet. He also asked if approving the succession plan and policies would grant the Managing Committee any additional authority. Mr. Cleveland responded that it would not; the Managing Committee will always inform the board of its action, and the Board has the authority to reconsider and make changes it deems necessary.

The motion unanimously passed a simple majority vote.

5. Discussion on WGQ Segment Block

Ms. Crockett informed the board of a WGQ recommendation that did not pass due to a segment block during the August WGQ EC meeting. The board developed and approved a [policy for efficient standards development](#) and provided guidelines that if there was a block, the board should be informed. As there was no early indication of the segment block through formal comments on the recommendation or in notes in any of the subcommittee meetings, the NAESB office and the WGQ officers were unable to inform the WGQ board members prior to the WGQ EC meeting. As a result, the WGQ EC will hold a meeting on [October 5](#) to reconsider the recommendation and provide for an opportunity of additional comments to be prepared prior to the October 5 meeting.

6. Updates on Specific Efforts

Publications: Ms. McQuade provided an update of the NAESB publication schedule. WEQ Version 2.2 will be published in the 2nd Quarter of 2011 and will include the smart grid and NITS standards currently under development – this is a delay from the original publication date of 3rd quarter 2010 – and has been delayed to accommodate WEQ OASIS standards development underway. The Retail Quadrant is on target for Version 1.3 to be published in first quarter 2011 and the WGQ is on target to publish Version 2.0 in November 2010.

WEQ Update on FERC Order No. 890 efforts: Ms. York provided an update on the Order No. 890 efforts. The OASIS Subcommittee has continued to meet in an effort to address the industry comments they received during the informal comment period on the Network Integrated Transmission Service (NITS) and modify the standards in relation to those comments. The comments received were pertinent to developing the best overall standards to meet industry needs, and therefore, has forced a delay in the delivery date of those NITS standards. The subcommittee is scheduled now to complete by 4th quarter 2010. This delay will not only provide additional time needed to complete the NITS standards, but will also allow the subcommittee to complete work on coordination of service requests across multiple transmission systems, and to recognize the interdependencies of these two work products. NAESB has reported these delays to FERC staff and received positive feedback stating that they are in favor of the delay because it will help the organization produce more robust standards. These delays will, however, delay the publication date for the new version of the WEQ standards to second quarter 2011. NAESB has readjusted the publication schedule to accommodate this delay.

WEQ/Retail Electric, Update on Demand Response and Demand Side Management: Mr. True provided an update of the DR and DSM activities. The retail demand response work group continues to work on completing its phase 2 efforts. The phase 2 recommendation has gone out for informal comment. Only one response was received, which was supportive of the standards. The glossary work is underway to compare the wholesale and retail DR terms, as well as the smart grid glossary, to ensure consistency among the various work groups. Once the glossary work is complete, the retail demand response recommendation will go out for informal comment again, with the glossary section.

The retail demand response work group has also begun its development efforts on Request No. R10002; to develop new standards to create common interfaces and data structures necessary for enrolling demand response sites into a demand response program. The work group has reviewed various work papers, including the NAESB Smart Grid



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wholesale PAP09 and retail PAP09 resource enrollment processes, as well as Converge's demand response enrollment process. Mr. Precht worked with Mr. Tillett, the original requestor, offline to review NAESB's Retail Customer Enrollment model business practices and process flows to develop a rough draft for the Customer Enrollment for DR programs model business practices. At the September 21 retail DR work group meeting, participants agreed to review the required data for DR enrollment for both the wholesale and retail electric quadrants to determine where there is overlap.

The retail energy efficiency group has completed the scoping of its work product and has begun drafting the recommendation. The group currently has a draft glossary and are beginning to work on the process flows that will guide the development of the model business practices. The group will review the wholesale energy efficiency draft recommendation at its upcoming September 24 work group meeting.

The wholesale energy efficiency group presented the draft recommendation on September 15. The work group is looking for volunteers to review the recommendation to determine if any sections, including the glossary, require additional information. There will be a joint wholesale/retail energy efficiency work group meeting on September 29 to further review both recommendations.

The wholesale demand response work group created three task forces (glossary, model business practices and performance evaluation methods) to draft the second phase of the wholesale DR standards. The glossary task force is currently working with the Retail DR work group to finalize the glossary. The Performance Evaluation group and the Model Business Practice group met jointly and have submitted a draft recommendation. This work product will be presented at the September 28 full DSM-EE subcommittee meeting. Aaron Breidenbaugh, of EnerNOC, worked independently on a baseline study and presented it to the wholesale demand response work group on September 20. Sections of the EnerNOC work product may be used by the wholesale DR work group to provide more substance to the recommendation.

The next full DSM-EE subcommittee meeting is scheduled for September 28, 2010 in Austin, Texas, hosted by ERCOT.

RFP Status for the Electric Industry Registry: Ms. McQuade noted that NAESB was in the final stages of contract negotiation. Once the contract is signed, NAESB will release a report announcing the transition to the new registry.

Smart Grid Activities: Phase one of the REQ standards (use cases) were reviewed and approved by the REQ Executive Committee on June 16 and ratified by the REQ Quadrant on July 30. Phase one of the WEQ standards were reviewed on June 16 and July 7 and were adopted by the WEQ Executive Committee on July 16 through notational ballot. The standards were ratified by the WEQ on August 20. The task force has continued to meet weekly to discuss the phase two effort, the purpose of which is to expand and fully detail the data requirements related to the use cases developed in phase one of the effort. A face-to-face meeting was held in Houston on July 13 and 14 and the task force worked to develop a data requirement master list. The purpose of the master list is to identify data requirements that have been developed in separate related efforts by the IRC (wholesale side) and Open SG (retail side) and to harmonize that work. The group is wrapping up that harmonization and currently developing the phase two recommendations based upon the master list. They are on schedule to vote the phase two recommendations out of the task force next week and will meet the 3rd Quarter deadline in the annual plan.

In May 2010, the assignments related to PAP10 were restructured by the SGIP in response to the urging of the Administration to produce a single standard information model for energy usage. NAESB was designated as the standards development organization to develop the standard and asked to complete such by year end 2010. Part of the request from the SGIP was that NAESB leverage as much of the work of other groups in the area as a possible and try to create a model that is compatible or can be mapped to certain other work products. These work products included Open ADE 1.0, Smart Energy Profile 2.0 and EIS Alliance Requirements documents. The SGIP formed a Tiger Team that took the requirements from these specifications and created a white paper proposing a straw model which was given to the subcommittee and has since been built upon to develop the recommendation. The subcommittee voted to post the recommendation for the 30 day formal comment period on August 31. The recommendation is currently out for comment, with comments due on September 30. The subcommittee will meet in Houston on October 4 and 5 to review the comments submitted and develop a set of late comments to be



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submitted to the REQ and WEQ Executive Committees. The ECs are scheduled to consider the recommendations in a single topic review session on October 15 and vote on them on October 22. If approved, the standards will be ratified by December 1, and will be presented at the December 3 SGIP Governing Board meeting.

The Energy Services Provider Interface Task Force is a task force of the PAP 10 subcommittee and was created to address a request submitted by the Open ADE Task Force within the UCA International Users Group. The request calls for the standardization of the exchange of energy usage information to facilitate the transfer of information between designated parties, and will build on the data model being developed by NAESB. The OpenADE 1.0 Requirements documents were contributed to the task force as seminal work products and will serve as basis for the standards development.

7. Strategic Session

During the strategic session, both [Mr. Mintz of Southern Company](#) and [Mr. Carpenter of Oncor](#) presented presentations on Smart Grid applications. After the presentations Ms. McQuade asked why the focus was solely on the electric industry and not also on the gas industry. Mr. Smead responded that, initially, gas companies were not eligible for the federal funding, but there was an effort underway at the Gas Technology Institute to determine how Smart Grid issues fit together between the electric and gas industries.

Mr. True asked Mr. Carpenter what impediments may occur due to cyber security concerns that are posed because of the two-way input into utilities. Mr. Carpenter responded that Oncor has an independent communication system. He noted that there is significant debate on the best way to access the meter, some of which allow for additional security opportunities.

Mr. Lucas asked Mr. Mintz if the work currently being addressed by NITS was going to cause his company to reassess work it has already accomplished. Mr. Mintz answered that he was concerned that the cyber security standards may have an impact on the existing Legacy communication infrastructure, and Southern Company would have to evaluate those communication systems.

Mr. Lucas also asked if there were any areas they thought could benefit from standards development. Mr. Mintz answered that standards for interoperability and data sharing between systems would be beneficial.

Mr. Hodges noted that he saw potential gaps in the intersection of the electric industry and other industries (such as the transportation industry). He also noted that there was a global aspect to this work. He thought NAESB could play a key role in the knowledge base, not just in this country and in the gas and electric industry, but internationally as well.

Mr. Morris asked Mr. Carpenter to comment on the security aspects related to ownership of the data used in the electric industry. Mr. Carpenter responded that there has been a lot of discussion on the national level as to who owns the data. In Texas, the customer owns their data and the wire company and electric provider has the right to access that data. The security behind that data has been one of the most difficult technical challenges.

Mr. Desselle noted that NAESB previously debated integrating timelines with respect to providing fuel resources to generation in the electric industry. At the time it was decided that the issue was not ripe for discussion. He asked if any participants in the gas industry had a renewed interest, given the work accomplished in the electric industry. Mr. Kruse responded that the last time this concept was discussed, it was proposed by the gas industry. It did not move forward because the electric industry did not want to develop a standard electric day. The impact of Smart Grid has focused on the downstream of the electric industry. He was not sure how this would impact the gas-electric interface. Mr. Desselle responded that at the time there was debate about not wanting a standard day because the wholesale electric markets administrated by the ISO/RTOs varied. They are now more consistent. [Ms. McIntyre](#) responded that Smart Grid should also be viewed in context with renewable energy systems. She saw the role of the gas industry in Smart Grid as directly related to the amount of renewables on the Smart Grid. The Interstate National Gas Association of America has approached the federal government, FERC and DOE asking for recognition of their role within Smart Grid and renewables. If Smart Grid includes intermittent renewables, it would have to be backed up by gas. Mr. Kirby responded that to standardize the day for the electric market is problematic. He asked if the issue in this situation was not the start of the day but rather operation and flexibility during the day.



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He suggested putting effort into defining the potential range of operation issues between the two and determining the problem that should be solved, and build off that to get a solution. Mr. Cleveland responded that the common theme in all Smart Grid conversations is integration: integration of renewables, the integration of natural gas resources to back up renewables, the integration of distributed generation, integration across various industries, and the integration of information. Integration does not necessarily mean synchronization. There may be various solutions to the problems and he encouraged participants to frame them broadly. Ms. Daly noted she was involved in that earlier discussion and pointed out that the first time NAESB discussed gas-electric coordination, the issues discussed did not relate to Smart Grid implications. She acknowledged that the reliability concerns for renewables were increasing. If NAESB does not act on this issue, there may be outside influences that will make the decision for the industries.

Ms. Ogg encouraged the board to look at its relationship with various agencies outside of FERC and DOE, because the regulatory influences on the energy markets and on the work products produced by NAESB extend past FERC, NARUC and DoE.

8. Old and New Business

Ms. McQuade stated that NAESB continues to have a good working relationship with FERC, NARUC and various state commissioners and remain in close communication. She also noted that the next board meeting was [scheduled](#) for December 9, 2010.

9. Adjourn

The meeting adjourned at 12:26 pm Central.



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12. Board Attendance and Voting Record (Vacancies Omitted)

WGQ PRODUCERS SEGMENT		ATTENDANCE
Richard D. Smith	Regulatory & Compliance Manager, Noble Energy Inc.	In Person
Mark Stultz	Vice President – Policy and Regulatory Affairs, US America Gas and Power, BP Energy Company	
Keith Sappenfield	Regional Director – US Regulatory Affairs, EnCana Oil & Gas (USA), Inc.	In Person
Randy E. Parker	Global Regulatory Advisor, ExxonMobil Gas and Power Marketing Company	In Person
Pete Frost	Director – Regulatory Affairs, ConocoPhillips Gas and Power Marketing	
WGQ PIPELINE SEGMENT		
Cathie Legge	Manager – Customer Service, Alliance Pipeline, LP	
Bill Grygar	Vice President, Panhandle Eastern Pipe Line	In Person
Susanna B. Barry	Vice President – Commercial Operations, Tennessee Gas Pipeline Company	In Person
Randy Young	Vice President – Regulatory Compliance and Corporate Services, Boardwalk Pipeline Partners, LP	In Person
Richard Kruse	Senior Vice President, Spectra Energy Transmission	In Person
WGQ LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT		
Craig Colombo	Energy Trader III, Dominion Resources	Phone
Adrian Chapman	Vice President – Regulatory Affairs & Energy Acquisition, Washington Gas	Phone
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	Phone
Lee Stewart	Senior Vice President, Gas Transmission, Southern California Gas Company	
WGQ END USERS SEGMENT		
Valerie Crockett	Senior Program Manager – Energy Markets & Policy, Tennessee Valley Authority	In Person
Timothy W. Gerrish	Director of Origination-Energy Marketing and Trading, Florida Power & Light	
Tina Burnett	Natural Gas Resources Administrator, The Boeing Company	In Person
Lori-Lynn C. Pennock	Senior Fuel Supply Analyst, Salt River Project	In Person
Jim Templeton	Principal, Comprehensive Energy Services	In Person
WGQ SERVICES SEGMENT		
Darilyn Jones	Senior Vice President – Risk Control, Sequent Energy Management	In Person
Rusty Brazier	Managing Director, Bentek Energy, LLC	
Marty Patterson	Senior Vice President Commercial Services, American Midstream Partners, LP	
Paul Kahler	Midstream Regulatory Advisor, Cenovus Energy Inc.	
Lori Leeder	Relationship Manager/Business Development – Asset Optimization,	Phone



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12. Board Attendance and Voting Record (Vacancies Omitted)

Vega Energy Partners, Ltd

REQ SERVICE PROVIDERS/SUPPLIERS SEGMENT

Wendell Miyaji	Senior Director – Systems, Comverge, Inc.	In Person
Jim Minneman	Controller, PPL Solutions LLC	
J Cade Burks	Executive Vice President of ista	
Austin Morris	Managing Partner – Energy, SunGard Consulting Services, LLC	In Person

REQ UTILITIES SEGMENT

David Koogler	Director – State Regulation, Dominion Virginia Power	Phone
Dennis Derricks	Director Regulatory Policy and Analysis, Wisconsin Public Service Corporation	
Ruth Kiselewich	Director – Demand Side Management Programs, Baltimore Gas & Electric Company	
Debbie McKeever	Market Advocate, Oncor	In Person

REQ END USERS/PUBLIC AGENCIES SEGMENT

Kevin Cooney	Managing Director – Energy, Navigant Consulting, Inc.	In Person
James P. Cargas	Senior Assistant City Attorney, City of Houston	In Person

WEQ TRANSMISSION SEGMENT

SUBSEGMENT

Dan Klempel	Director Transmission Regulatory Compliance, Basin Electric Power Cooperative	Muni/Coop	
Chuck Feagans	Senior Manager, Reliability Policy, Tennessee Valley Authority	Fed/State/Prov	Phone
John E. Lucas	Director – Transmission Policy and Services, Southern Company Transmission	IOU	In Person
Jill Horswell	Director Transmission, Southern California Edison	at large	
Edward J. Davis	Policy Consultant, Entergy Services, Inc.	at large	In Person

WEQ GENERATION SEGMENT

Douglas L. Curry	Administrator and CEO, Lincoln Electric System	Muni/Coop	
Belinda Thornton	General Manager – Energy Origination, Tennessee Valley Authority	Fed/State/Prov	
Lou Oberski	Director – Electric Market Policy, Dominion Resources Services, Inc.	IOU	Phone
Wayne Moore	Regulatory Affairs & Energy Policy Director and Compliance Officer – Generation, Southern Company Services, Inc.	IOU	In Person
Brent Hodges	Director – Strategy and Development, NRG Energy, Inc.	at large	In Person
Gloria Godson	Vice President Energy Policy, Conectiv Energy Supply, Inc.	Merchant	
Shah Hossain	Senior Regulatory Specialist, Westar Energy, Inc.	at large	



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12. Board Attendance and Voting Record (Vacancies Omitted)

WEQ MARKETERS/BROKERS SEGMENT

Roy True	Manager of Regulatory and Market Affairs, ACES Power Marketing	Muni/Coop	In Person
Jeff Ackerman	Manager – Colorado River Storage Project Energy Management and Marketing Office, Western Area Power Administration	Fed/State/Prov	Phone
Gavin Cunningham	Manager – FirstEnergy Solutions Corp.	at large	Phone
Jack Cashin	Senior Manager of Policy, Electric Power Supply Association (EPSA)	at large	
Sam Forrest	Vice President – Energy Marketing and Trading, Florida Power & Light	IOU	
R. Scott Brown	Vice President and Director, Exelon Generation Power Team	IOU	

WEQ DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT

Arthur G. Fusco	Vice President and General Counsel, Central Electric Power Cooperative Inc.	Muni/Coop	In Person
Paul McCurley	Manager – Power Supply, National Rural Electric Cooperative Association	Muni/Coop	In Person
Nelson Peeler	Vice President System Operations, Duke Energy	IOU	
Joe Hartsoe	Managing Director – Federal Policy, American Electric Power Service Corp.	at large	Phone
Bruce Ellsworth	New York State Reliability Council	At-Large	In Person

WEQ END USERS SEGMENT

Jesse D. Hurley	Chief Executive Officer, Shift Research, LLC	at large	In Person
Aaron Breidenbaugh	Senior Manager – Regulatory Affairs and Public Policy – New York, EnerNOC, Inc.	at large	
Thomas G. Dvorsky	Director of the Office of Electricity, Gas, and Water at the New York State Department of Public Service, rep. National Association of Regulatory Utility Commissioners	Regulator	
Marie Pieniazek	Consultant, Rep: Energy Curtailment Specialists, Inc.	at large	
Rick Lentz	Fellow with SunGard	at large	Phone
Michehl Gent	Open Access Technology International, Inc.	At-Large	In Person

WEQ INDEPENDENT GRID OPERATORS/PLANNERS

Michael Desselle	Vice President Process Integrity, Southwest Power Pool		In Person
Kent Saathoff	Vice President of System Operations, ERCOT		
Kevin Kirby	Vice President Market Operations, ISO New England, Inc.		In Person
Rana Mukerji	Vice President Market Structures, New York Independent System Operator, Inc. (NYISO)		
Andy Ott	Senior Vice President Marketing, PJM Interconnection, LLC		



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12. Board Attendance and Voting Record (Vacancies Omitted)

Bill Phillips	Vice President Standards Compliance & Strategy, Midwest ISO (MISO)	In Person
Peter Sergejewich	Director of Corporate Planning, Independent Electricity System Operator (IESO)	Phone

WEQ TECHNOLOGY AND SERVICES

Jim Buccigross	Vice President Energy Industry Practice, 8760 Inc.	Phone
Laurent M. Liscia	Executive Director, Organization for the Advancement of Structured Information Standards (OASIS)	
David A. Wollman	Leader, Smart Grid Team – Standards and Electrical Metrology Groups, National Institute of Standards and Technology (NIST)	Phone
Dr. Scott Coe	Vice President, Utility Integration Solutions, Inc. (UISOL)	In Person

RGQ SERVICE PROVIDERS/SUPPLIERS SEGMENT

Leigh Spangler	President, Latitude Technologies Inc.	In Person
Rick Vogel	Vice President – Sales and Natural Gas Operations, Sierra Southwest Cooperative Services, Inc.	
Dave Darnell	President & CEO, Systrends USA	
Greg Lander	President, Capacity Center	

RGQ DISTRIBUTORS SEGMENT

Alonzo Weaver	Vice President of Engineering and Operations, Memphis Light, Gas & Water Division (APGA)	
Ralph Cleveland	Senior Vice President – Engineering and Operations, AGL Resources, Inc.	In Person

RGQ END USERS/PUBLIC AGENCIES SEGMENT



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13. Other Attendance

Name	Organization	Attendance
Catherine Abercrombie	ConocooPhillips	In Person
David Alonzo	Spectra	In Person
DeAndra Black	Spectra Energy	In Person
Jonathan Booe	NAESB	In Person
Bill Boswell	NAESB	In Person
Kathryn Burch	Spectra Energy Transmission	In Person
Christopher Burden	Williams Gas Pipeline	Phone
Mark Carpenter	Oncor	In Person
Yvonne Coleman	BPA	Phone
James Culliton	NAESB	Phone
Cory Cummings	NAESB	In Person
Kelly Daly	Stinson, Morrison, Hecker	In Person
Dale Davis	Williams Gas Pipeline	In Person
Rae Davis	Carolina Gas Transmission	In Person
Mike Dionisio	Devon Energy	In Person
Mark Gracey	El Paso Gas Pipeline Company	In Person
Bill Griffith	El Paso Natural Gas	In Person
Shah Hossain	Westar Energy	In Person
Alan Johnson	NRG Energy	Phone
Susan Munson	ERCOT	In Person
Marcy McCain	Spectra Energy	In Person
Annie McIntyre	Sandia National Labs	In Person
Rae McQuade	NAESB	In Person
Bill Mintz	Alabama Power Company	In Person
Joelle Ogg	Brunenkant Law Firm, LLP	In Person
Phil Precht	Baltimore Gas and Electric	Phone
Denise Rager	NAESB	In Person
Andy Rodriguez	NERC	In Person
Kent Saathoff	ERCOT	In Person
Lisa Simpkins	Constellation Energy Resources	Phone



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Rick Smead	Navigant Consulting	In Person
Micki Schmitz	Northern Natural Gas	In Person
Veronica Thomason	NAESB	In Person
Ron Tomlinson	Dominion	In Person
Kim Van Pelt	Panhandle Eastern Pipeline	In Person
Jill Vaughn	Preferred Legal Services	In Person
Darla Wishart	NAESB	In Person
Kathy York	Tennessee Valley Authority	In Person



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via posting

TO: NAESB Board Critical Infrastructure Committee Members and posting for Interested Industry Parties
FROM: Cory Galik Cummings, NAESB Counsel
RE: Meeting Notes for the NAESB Board Critical Infrastructure Committee
DATE: October 6, 2010

Dear Critical Infrastructure Committee Members,

A Critical Infrastructure Committee conference call was held on September 30, 2010. The meeting was called to order at 1:00 pm C. Mr. Hurley presided over the meeting and Ms. Cummings served as counsel for the meeting. The notes below serve as a record for the meeting.

Notes for the September 30, 2010 NAESB Board Critical Infrastructure Meeting

Administrative: Mr. Hurley welcomed the participants to conference call and thanked them for attending. Ms. Cummings provided the antitrust guidance. The draft agenda was reviewed. Ms. Crockett made a motion to adopt the agenda as drafted and Mr. Spangler seconded the motion. The motion passed without opposition.

Discussion of Cyber Security Legislation Mr. Hurley provided a review of the status of the [Draft Lieberman Senate Bill](#) (Senate Bill S. 3480). The bill is being merged with the Rockefeller Cyber Security bill to create an omnibus bill for critical infrastructure protection. He anticipated a draft would be available in November, which may not be publicly available. The legislature is still waiting on the administration's wish list for the bill. Ms. Barry asked how the bill would be impacted by the upcoming elections. Mr. Hurley answered that the issue is a big enough national security interest that it will remain important, regardless of the election outcomes.

Next, Mr. Hurley discussed stuxnet, which has been referred to as a polymorphic virus that can change over time to attack specific types of hardware.

In discussing NIST's Smart Grid Cyber Security efforts, it was noted that there has not been consensus in the manner they were produced and few electric industry participants were involved in the process. Ms. McQuade noted that it would be difficult for standards that have not been vetted through the industry responsible for them to garner industry support. Mr. Gallagher noted there was a strong coalition from the electric industry that was working on cybersecurity, so the industry would not be taken by surprise with regulation or legislation.

Ms. McQuade stated that she was unsure if any of these activities would result in NAESB action but it was important to stay informed of the ongoing activities that could have a possible impact on NAESB's body of work.

Other Business/Next Meeting and Action Items: The next meeting is scheduled for November 11, 2010. The two items to be discussed at that meeting are:

- 1) evaluation of existing body of standards in light of cybersecurity
- 2) an update on recent administration meetings regarding cybersecurity and critical infrastructure.

Adjourn: Mr. McCurley moved to adjourn the meeting at 2:12 pm Central.

Work Papers Provided for the Meeting:

Meeting Related Documents:

- July 19, 2010 meeting notes: http://www.naesb.org/pdf4/bd_cic_071910notes.doc
- Antitrust Guidelines: http://www.naesb.org/misc/antitrust_guidance.doc
- NIST IR 7628 – Smart Grid Cyber Security Strategy and Requirements
 - Volume 1: http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol1.pdf
 - Volume 2: http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol2.pdf
 - Volume 3: http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol3.pdf



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Notes for the September 30, 2010 NAESB Board Critical Infrastructure Meeting

Introduction to NIST IR 7628: http://www.naesb.org/pdf4/bd_cic_093010w1.doc



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Notes for the September 30, 2010 NAESB Board Critical Infrastructure Meeting

CRITICAL INFRASTRUCTURE COMMITTEE MEMBERS

Name	Organization	Attendance
Jim Buccigross	8760, Inc.	
Ralph Cleveland	AGL Resources, Inc.	
Joelle Ogg	Brunenkant & Cross, LP	Phone
Chris Eisenbrey	Edison Electric Institute	
Bob Gee	Gee Strategies Group	Phone
J. Cade Burks	ista	
Leigh Spangler	Latitude Technologies	Phone
Paul McCurley	NRECA	Phone
Bill Boswell	NAESB General Counsel	
Rick Smead	Navigant Consulting, Inc.	
Diane Barney	New York State Department of Public Service Staff	
Bruce Ellsworth	New York State Reliability Council	
Michehl Gent	Open Access Technology International, Inc	
Chris Kotting	Public Utilities Commission of Ohio	
Thomas Pearce	Public Utilities Commission of Ohio	
Jesse D. Hurley	Shift Research, LLC	Phone
Michael Desselle	Southwest Power Pool	
Dave Darnell	Systrends USA	
Susanna B. Barry	Tennessee Gas Pipeline Company	Phone
Chuck Feagans	Tennessee Valley Authority	Phone
Valerie Crockett	Tennessee Valley Authority	Phone
Christopher Freitas	US Department of Energy	
Brett Perlman	Vector Consultants	
William Gallagher	Vermont Public Power Supply Authority	Phone



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Notes for the July 19, 2010 NAESB Board Critical Infrastructure Meeting

OTHER ATTENDEES

Attendee	Organization
Kathryn Burch	Spectra Energy
Ed Skiba	Midwest ISO
Keith Sappenfield	Encana
Ed Davis	Entergy
Mark Gracey	El Paso
Kathy York	TVA
Bill Griffith	El Paso
Ward Pyles	Southern Company
Richard Ishikawa	Southern California Gas Company
Allan Shaw	Capitol
Rae McQuade	NAESB
Cory Cummings	NAESB



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NORTH AMERICAN ENERGY STANDARDS BOARD

2010 Annual Plan for the Wholesale Gas Quadrant as Approved by the Board of Directors on September 23, 2010

Item Description	Completion ¹	Assignment ²
1. Gas-Electric Interdependency		
Respond to directives of FERC Order No. 698 issued 6-25-07 , Docket Nos. RM05-5-001 and RM96-1-027 as related to the NAESB reports submitted in Docket No. RM05-28-000 :		
a. Provide for Enhanced Granularity for Public Utilities in Identifying Critical Operational Flow Orders. (R08020) Status: Completed	4th Q, 2009	BPS, IR/Tech jointly with WEQ BPS
2. Promotion of a More Efficient Capacity Release Market		
Review FERC Order Nos. 712 and 712A and modify NAESB standards as appropriate (Docket Nos. RM08-1-000, RM08-1-001).		
a. Review recent FERC order on flow-through of Discounted or Negotiated Rates (Docket No. RP09-70 et al, October 15, 2009) and develop business practice standards as appropriate Status: Completed, No Standards Needed.	2 nd Q, 2010	BPS/Interpretations
3. Capacity Release EDI Review		
Review capacity release transactions upload and related responses to determine suitability for EDI		
a. Develop Business Practice Standards as appropriate Status: Completed	3 rd Q, 2010	BPS
b. Prepare fully staffed recommendation Status: Completed	3 rd Q, 2010	BPS, IR/Technical
4. Customer Security Administration		
Review and develop standards as appropriate to support Customer Security Administration Standards (Comment Submittal, 10-29-07, R08008) Status: Completed	3 rd Q, 2010	BPS, IR/Technical, EDM
5. Electronic Delivery Mechanisms		
Review minimum technical characteristics in Appendices B, C, and D of the WGQ QEDM Manual, and make changes as appropriate. Status: Completed	2 nd Q, 2010	EDM
6. FERC Strategic Plan FY2009-2014		
a. For the FERC Strategic Plan , under the section “Promote efficient design and operation of natural gas facilities”, review and develop standards as needed to support EBB posting requirements regarding waste heat feasibility (NAESB Standard No. 4.2.23) Status: Completed	2 nd Q, 2010	BPS, IR/Technical



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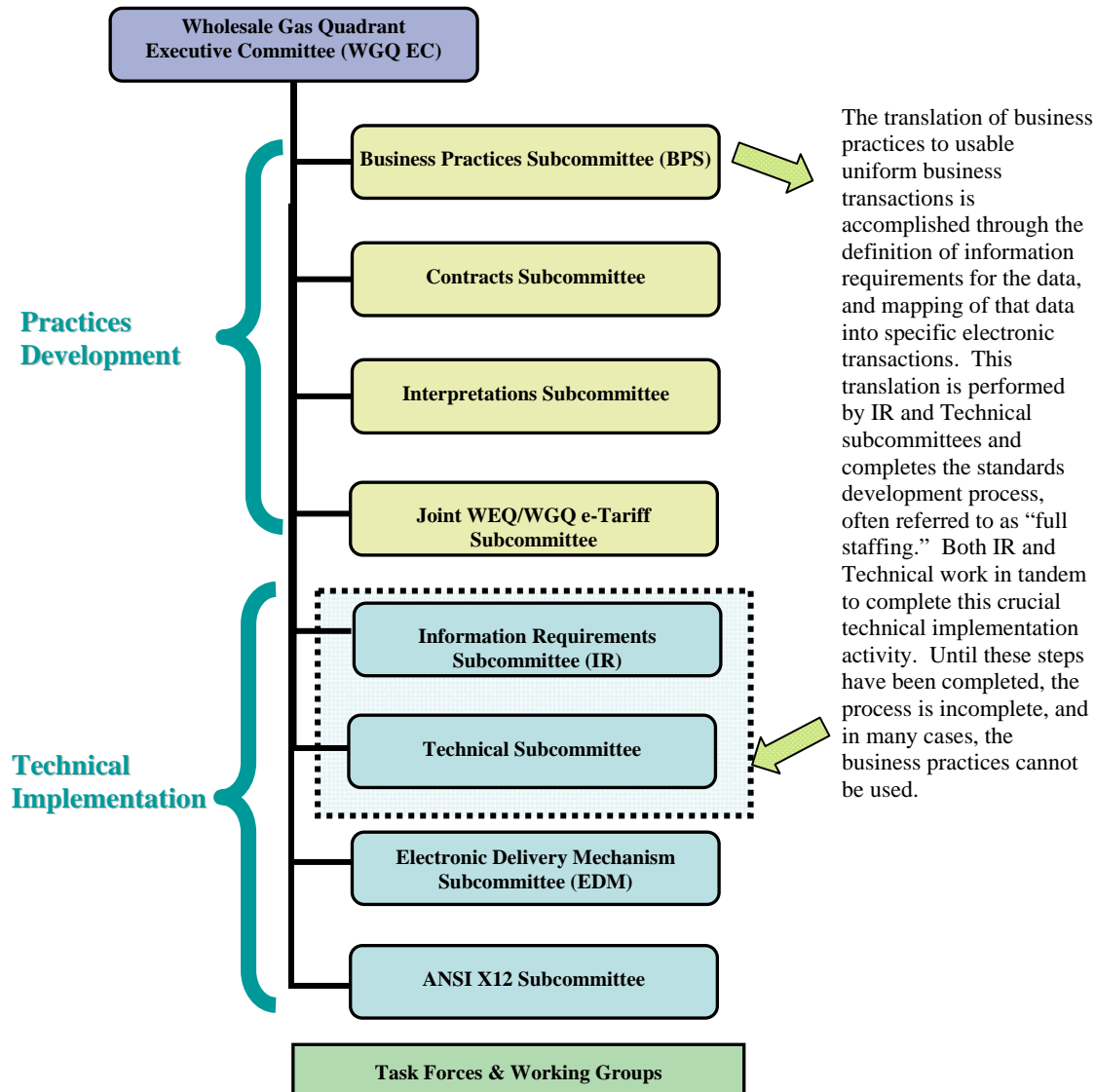
NORTH AMERICAN ENERGY STANDARDS BOARD

2010 Annual Plan for the Wholesale Gas Quadrant as Approved by the Board of Directors on September 23, 2010

Item Description	Completion ¹	Assignment ²
7. Common Codes		
a. Review common code specifications for common location codes and determine if changes are necessary to the existing specifications to support both intrastate and interstate pipelines Status: Not Started	4 th Q, 2010	BPS
Program of Standards Maintenance & Fully Staffed Standards Work		
Business Practice Requests	Ongoing	Assigned by the EC ³
Continue review against plan for migration to ANSI ASC X12 new versions as needed and coordinate such activities with DISA.	Ongoing	ANSI X12 Subcommittee
Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC ³
Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC ³
Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC ³
Maintenance of Contracts Standards	As Requested	Contracts Subcommittee
Maintenance of eTariff Standards	As Requested	Assigned by the EC ³
Provisional Activities		
1 Review and develop standards as needed, related to Docket No. RM09-2-000 , (Contract Reporting Requirements of Intrastate Natural Gas Companies).		
2 Review and develop standards as needed related to the FERC Strategic Plan 2009-2014		

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NAESB 2010 WGQ EC and Subcommittee Leadership:

Executive Committee: Jim Buccigross, Chair and Dale Davis, Vice-Chair
 Business Practices Subcommittee: Kim Van Pelt, Valerie Crockett, Mike Novak and Richard Smith
 Information Requirements Subcommittee: Dale Davis
 Technical Subcommittee: Mike Stender, Kim Van Pelt
 Contracts Subcommittee: Keith Sappenfield
 Electronic Delivery Mechanism Subcommittee: Leigh Spangler, Christopher Burden
 Interpretations Subcommittee: Paul Love
 Joint WEQ/WGQ e-Tariff Subcommittee: Keith Sappenfield, Jane Daly



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End Notes, WGQ 2010 Annual Plan:

¹ Dates in the completion column are by end of the quarter for completion by the assigned committee. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

² The assignments are abbreviated. The abbreviations and committee structure can be found at the end of the annual plan document.

³ The EC assigns maintenance of existing standards on a request-by-request basis.



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**NORTH AMERICAN ENERGY STANDARDS BOARD
2010 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
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Item Number & Description ¹	Completion ²	Assignment ³⁴
1. Develop Technical Electronic Implementation Standards and Data Dictionaries – Book 10: Customer Enrollment, Drop and Account Information Change		
a.. For the Distribution Company Registration Model Registration Agent Model Status: Not Started	2011	TEIS
2. Develop NAESB Certification checklist criteria for Retail Quadrants to be used in the NAESB Certification Program. The certification checklist may address test scripts, a checklist of items to be tested, data connectivity for test scripts and EDM testing. Status: Not Started. Dependent upon publication of Version 2.0 at a minimum, but more dependent upon completion of Customer Choice efforts, expected 1 st Q 2011 at the earliest.	2011	Ad Hoc EC Certification Group
3. Review and develop business practices standards to Demand Response, Demand Side Management and Energy Efficiency Programs Review and develop needed model business practices for a standardized method for quantifying benefits, savings, cost avoidance and/or the reduction in energy demand and usage derived from the implementation of demand side management and energy efficiency programs. This effort will include demand side response, energy efficiency programs and metering, including the 'curtailment service provider' program. The wholesale and retail demand response work groups and the Smart Grid Standards Subcommittees should actively and timely communicate and coordinate work products to ensure consistency between the three work groups. Each work group should take into account the work products developed by the other.		
a. Develop glossary for business practice standards Status: Ongoing	Ongoing	Joint WEQ/REQ DSM Subcommittee
b. Develop business practice standards used to measure and verify reductions in energy and demand from energy efficiency in wholesale and retail markets. ⁵ This includes developing business practice standards to measure and verify energy reductions that are made to comply with a Renewable Portfolio Standard that included energy efficiency or a stand-alone Energy Efficiency Portfolio Standard. Status: Underway	1stQ, 2011	Joint WEQ/REQ DSM-EE Subcommittee
c. Support the second phase of retail development of model business practice standards for demand response programs Status: Underway	4th Q, 2010	REQ Section of the Joint WEQ/REQ DSM Subcommittee
d. Create common interfaces and data structures necessary for enrolling DR sites into a DR program (Request No. R10002) Status: Underway	4 th Q, 2010	Joint WEQ/REQ DSM Subcommittee with coordination with Smart Grid Standards Task Force and REQ BPS
4. Billing and Payments		
a. Develop Process Flows to be included as models in Book 3 – Billing and Payments Status: Completed	2 nd Q, 2010	BPS
b. If the development of Process Flows indicate a gap in the model business practices, then develop new model business practices to address the gap. Status: Completed	2 nd Q, 2010	BPS



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Item Number & Description ¹	Completion ²	Assignment ³⁴
5. Model Business Practices User Guide		
a. Add a new section to Book 0 to describe what Books have been developed, how the Books are laid out, and revised the title of the Book to reflect the additions Status: Underway	4 th Q, 2010	BPS
b. Develop process flows to support the user's guide Status: Not Started	2011	BPS
6. Additional Registration Agent Processes		
a. Review all existing Model Business Practices to determine if the Customer Information process is already covered, and if necessary develop any new Model Business Practices required Status: Completed	1 st Q, 2010	BPS
b. Review all existing Model Business Practices to determine if the disconnection and reconnection process is already covered, and if necessary develop any new Model Business Practices required. Status: Completed		
i. Create MBPs for disconnection/reconnection initiated by the supplier Status: Completed	4 th Q, 2009	BPS
ii. Create MBPs for disconnection/reconnection initiated by the distribution company Status: Completed	4 th Q, 2009	BPS
c. Review all existing Model Business Practices to determine if there are other Registration Agent Model processes not covered, and develop a prioritized list of those processes, if any. Status: Underway	2011	BPS
d. Develop Model Business Practices and Process Flows for those Registration Agent Model processes on the prioritized list developed in (c) above, if any. Status: Underway	2011	BPS
e. Develop Technical Electronic Implementation Standards and Data Dictionaries to support Model Business Practices of Book 14 – Service Requests, Disconnections and Reconnections in the registration Agent Model Status: Underway	2011	IR/TEIS
f. Develop Technical Electronic Implementation Standards and Data Dictionaries to support any Model Business Practices developed in (d) above Status: Underway	2011	IR/TEIS
7. Supplier Certification	2011	BPS
Develop practices for Distribution Companies to register/certify new Suppliers when they seek to begin doing business in the Distribution Company's service area. Status: Not Started		



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Item Number & Description ¹	Completion ²	Assignment ³⁴
<p>8. Supplier Marketing Practices</p> <p>Develop Model Business Practices providing for a “Consumer Disclosure Statement” to be presented to residential and small commercial customers describing the Supplier’s service offering and related contract provisions. This statement would also identify how certain Supplier-Customer interactions are conducted.</p> <p>Amongst the topics to be considered for inclusion on the statement would be the following:</p> <ul style="list-style-type: none"> • the most important terms of the Supplier agreement, such as the contract’s term and termination fee provisions; • training and identification of Supplier marketing representatives; • protocols for Supplier in-person and telephone contacts with customers; • added measures for protecting non-English speaking customers; and • Processes for handling customer complaints and resolving disputes arising from Supplier marketing activities. <p>Status: Underway</p>	4 th Q, 2010	BPS
<p>9. Develop Smart Grid Wholesale and Retail Electric Standards</p> <p>a. Develop Requirements and Use Cases for PAP 03 – Pricing Model</p> <p style="padding-left: 20px;">i. Phase 1 Status: Completed</p> <p style="padding-left: 20px;">ii. Phase 2 Status: Underway</p> <p>b. Develop Requirements and Use Cases for PAP 04 – Scheduling Model</p> <p style="padding-left: 20px;">i. Phase 1 Status: Completed</p> <p style="padding-left: 20px;">ii. Phase 2 Status: Underway</p> <p>c. Develop Requirements and Use Cases for PAP 09 – Demand Response/Distributed Energy Resources</p> <p style="padding-left: 20px;">i. Phase 1 Status: Completed</p> <p style="padding-left: 20px;">ii. Phase 2 Status: Underway</p>	<p>1st Q, 2010</p> <p>3rd Q, 2010</p> <p>1st Q, 2010</p> <p>3rd Q, 2010</p> <p>1st Q, 2010</p> <p>3rd Q, 2010</p>	<p>Joint WEQ/REQ SGS Subcommittee</p> <p>Joint WEQ/REQ SGS Subcommittee</p> <p>Joint WEQ/REQ SGS Subcommittee</p> <p>Joint WEQ/REQ SGS Subcommittee</p> <p>REQ Section of the Joint WEQ/REQ SGS Subcommittee</p> <p>REQ Section of the Joint WEQ/REQ SGS Subcommittee</p>



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Item Number & Description ¹	Completion ²	Assignment ³⁴
d. Develop standards to support PAP 10 – Standards Energy Usage Information		
i. Act as a convener (develop and implement a plan to expedite harmonized standards development and adoption within the associated standards bodies) and develop business practice standards as needed and assigned to NAESB for PAP 10 – Standard Energy Usage Information Status: Completed	2 nd Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
ii. Develop Information Model and related business practices Status: Underway	4 th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee
e. Develop standards to support inclusion of OpenADE requirements document into the NAESB Smart Grid standards (R10008), specifically to standardize the exchange of Energy Usage Information.	4 th Q, 2010	Joint WEQ/REQ PAP 10 SGS Subcommittee Task Force
10. Reserved (Items added under action item 6)		
11. Master List of Defined Terms: Review the definitions of all Defined Terms in Book 0 – Master List of Defined Terms, including other Ratified Terms not yet published, and revise the definitions of all Defined Terms not specifically related solely to the competitive marketplace to broaden their applicability to conform to NAESB’s expanded scope. Status: Completed	3 rd Q, 2010	Glossary

Program of Standards Maintenance & Fully Staffed Standards Work⁶

Business Practice Requests	Ongoing	Assigned by the EC
Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC
Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC
Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC
Ongoing Development and Maintenance of Definitions	Ongoing	Glossary

Provisional Activities

Joint Effort:

- Modify TPA as necessary.
- Review security standards as may be deemed necessary, such as Public Key Infrastructure (PKI).
- Review existing body of model business practices for consistency and develop or modify model business practices as needed.
- Review and update the technical implementation of Book 3 – Billing and Payment



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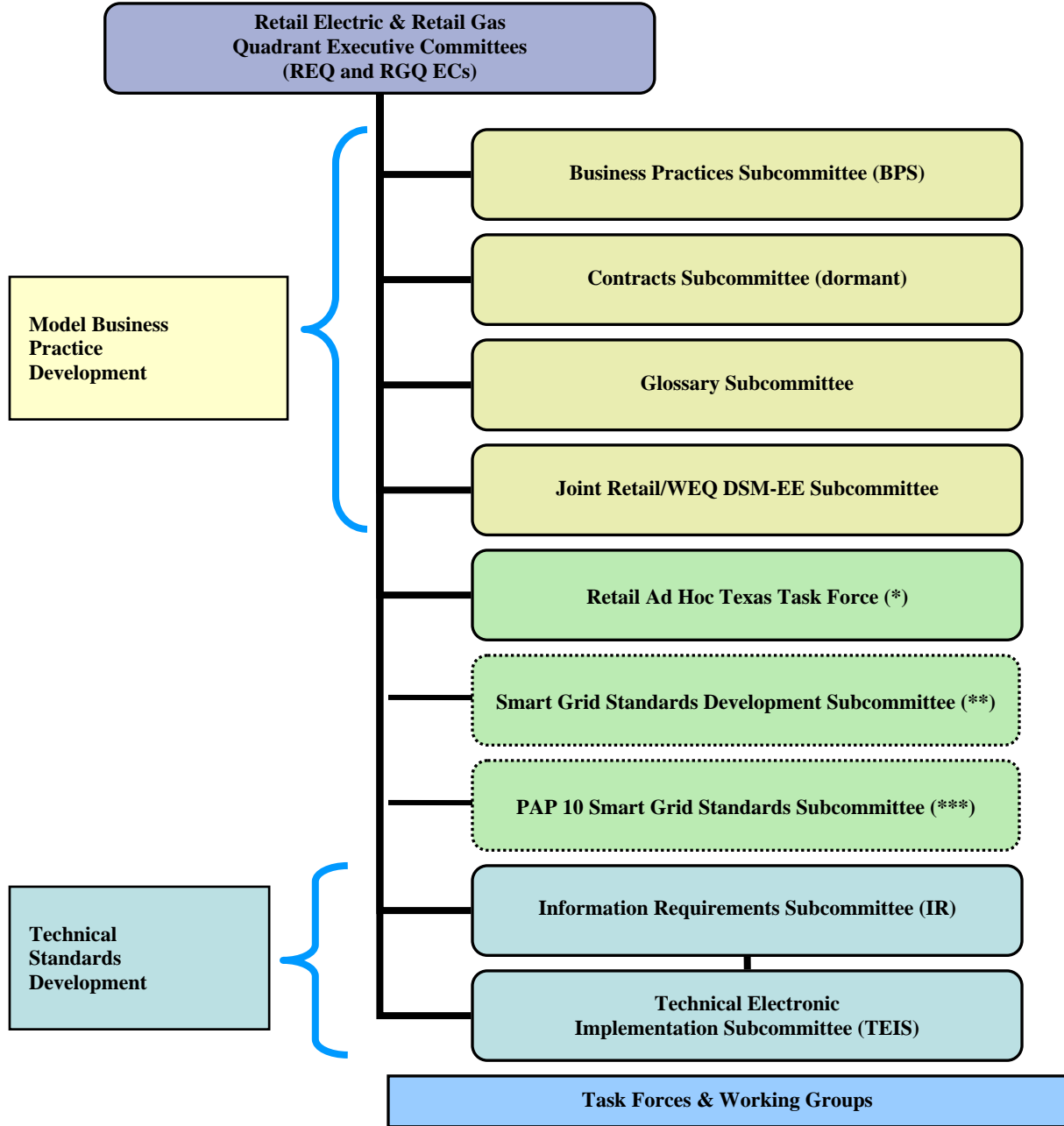
**NORTH AMERICAN ENERGY STANDARDS BOARD
2010 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
As Approved by the NAESB Board of Directors on September 23, 2010**

Item Number & Description¹	Completion²	Assignment³⁴
Retail Electric Quadrant Effort Only:		
Retail Meter Data Validation, Editing & Estimating: Develop procedures for insuring the integrity and validity of retail customer metering data that is needed by utilities and suppliers for billing, etc. Issues related to unbundled or competitive metering are not to be considered.		
Settlement Process: Reconcile energy schedules and energy delivered by suppliers within a given market. Note: will need to be coordinated with the WEQ for the REQ.		
Develop business practice standards for cap and trade programs for green house gas (See action item 6h).		
Retail Gas Quadrant Effort Only:		
Examine Wholesale Gas Quadrant Non-EDM Standards for applicability to retail business practices.		
Settlement Process: Reconcile energy schedules and energy delivered by suppliers within a given market.		



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NAESB Retail Subcommittee Leadership: ⁷

Executive Committee: Mike Novak, Chair (RGQ), Phil Precht, Chair (REQ)

Business Practices Subcommittee: Phil Precht (RGQ), Dan Jones (REQ)

Information Requirements Subcommittee: Jennifer Teel (REQ)

Technical Electronic Implementation Subcommittee: TBD



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Glossary Subcommittee: Patrick Eynon (REQ)

DSM-EE Subcommittee: Ruth Kiselewich, David Koogler (REQ), Roy True (WEQ), and Paul Wattles (WEQ)

Retail Ad Hoc Texas Task Force: Debbie McKeever (REQ) and Susan Munson (REQ)

(*) The Retail Ad Hoc Texas Task Force may draft MBPs, process flows, implementation guides and technical standards supportive of the Registration Agent. The group is chaired by Debbie McKeever and Susan Munson.

(**) The Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, CalConnect, FIX and UCAIug, and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the REQ EC. The group is chaired by Brent Hodges, Wayne Longcore, Joe Zhou and Robert Burke.

(***) The PAP 10 Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, UCAIug, OpenADE, ZigBee, ASHRAE, EIS Alliance, NARUC and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the REQ EC. The group is chaired by Brent Hodges, Phil Precht, Cathy Wesley/Heather Sanders, Sharon Dinges, David Kaufman, Brad Ramsay, Tobin Richardson and Ed Koch.



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Retail 2010 Annual Plan End Notes:

¹ As outlined in the NAESB Bylaws, the REQ and RGQ will also address requests submitted by members and assigned to the REQ and RGQ through the Triage Process.

² Dates in the completion column are by end of the quarter for completion by the assigned committee. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

³ The assignments are abbreviated. The abbreviations and committee structure can be found at the end of the annual plan document.

⁴ The DSM-EE subcommittee is expected to be split into several separate subcommittees to support concurrent development of separate standards sets. The split is to take place at the end of May after which the assignments will be modified.

⁵ Energy efficiency may be a wholesale product, such as capacity. Energy efficiency in retail markets may be from individual energy efficiency measures at the project level or a portfolio of projects that make up an energy efficiency program.

⁶ This work is considered routine maintenance and thus the items are not separately numbered. The REQ and RGQ ECs will assign maintenance efforts on a request-by-request basis.

⁷ The ECs and the subcommittees can create task forces and working groups to support their development activities for development of model business practices and technical standards.



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December 10, 2009

TO: NAESB Executive Committee
FROM: Rae McQuade
RE: Schedule of 2010 Meetings

Below is the schedule of 2010 meetings for the Board of Directors, Advisory Council and Executive Committee.

2010 Calendar of Board and Advisory Council Meetings

Date	Meeting	Location
February 13	Advisory Council Meeting	Washington D.C. – Renaissance Washington Hotel (in conjunction with NARUC Winter Meeting)
March 25	Board of Directors	Houston – Marriott IAH
June 24	Board of Directors	Houston – Marriott IAH
September 23	Board of Directors, Meeting of the Members and Strategic Session	Houston – Marriott IAH
December 9	Board of Directors	Houston – Marriott IAH

2010 Calendar of Executive Committee Meetings

Date	Meeting	Location
February 2-4	Executive Committee (WEQ, Retail, WGQ)	Phoenix, AZ hosted by Salt River Project
May 4-6	Executive Committee (WEQ, Retail, WGQ)	Harrisburg, PA hosted by the Pennsylvania PUC
August 17-19	Executive Committee (WEQ, Retail, WGQ)	Colorado Springs, CO hosted El Paso Western Pipeline
October 26-28	Executive Committee (WEQ, Retail, WGQ)	Glen Allen, VA hosted by Dominion

The Retail Executive Committee meetings will be held by conference call and web cast unless otherwise determined by the retail leadership. The Wholesale Gas Executive committee meetings may be changed to only be held as a conference call/web cast dependent on the agenda items.



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October 18, 2010

TO: NAESB Board of Directors and Executive Committee
FROM: Rae McQuade
RE: Schedule of 2011 Meetings

Below is the schedule of 2011 meetings for the Board of Directors, Advisory Council and Executive Committee. Where the location is noted as "TBD," if you are interested in sponsoring the meetings, please contact the NAESB office. We are working with previous years' sponsors to determine if they can sponsor for 2011.

2011 Calendar of Board and Advisory Council Meetings

Date	Meeting	Location
February 12	Advisory Council Meeting	Washington D.C. – Renaissance Washington Hotel (in conjunction with NARUC Winter Meeting)
March 24	Board of Directors	Houston, Marriott Houston Intercontinental Airport
June 23	Board of Directors	Houston, Marriott Houston Intercontinental Airport
September 22	Board of Directors, Meeting of the Members and Strategic Session	Houston, Marriott Houston Intercontinental Airport
December 8	Board of Directors	Houston, Marriott Houston Intercontinental Airport

2011 Calendar of Executive Committee Meetings

Date	Meeting	Location
February 1-3	Executive Committee (WEQ, Retail, WGQ)	Hosted by SRP
May 3-5	Executive Committee (WEQ, Retail, WGQ)	Host TBD
August 16-18	Executive Committee (WEQ, Retail, WGQ)	Host TBD
October 25-27	Executive Committee (WEQ, Retail, WGQ)	Host TBD

The Retail Executive Committee meetings will be held by conference call and web cast unless otherwise determined by the retail leadership.