North American Energy Standards Board
1301 Fannin, Suite 2350, Houston, Texas 77002
Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

NAESB BOARD OF DIRECTORS MEETING ASSEMBLED MEETING MATERIALS

SEPTEMBER 24, 2009

North American Energy Standards Board

1301 Fannin, Suite 2350, Houston, Texas 77002
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NAESB BOARD OF DIRECTORS MEETING ASSEMBLED MEETING MATERIALS
Marriott IAH Airport Hotel, Houston, Texas
September 24, 2009 -- 9 am to 1 pm C

TABLE OF CONTENTS – CROSS REFERENCE OF MEETING MATERIALS TO AGENDA ITEMS

North American Energy Standards Board

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NAESB BOARD OF DIRECTORS MEETING ASSEMBLED MEETING MATERIALS
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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 the 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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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 BOARD TERMS – Wholesale Gas Quadrant

PRODUCERS SEGMENT		**TERM END:**
Richard D. Smith	Regulatory & Compliance Manager, Noble Energy Inc.	12-31-2010
Bill Hebenstreit	Marketing Manager, Goodrich Petroleum Company, LLC	12-31-2009
Keith Sappenfield	Regional Director – US Regulatory Affairs, EnCana Oil & Gas (USA), Inc.	12-31-2009
Marty Patterson	Executive Vice President of Operations & COO, Foothills Energy Ventures, LLC	12-31-2010
Pete Frost	Director - Regulatory Affairs, ConocoPhillips Gas and Power Marketing	12-31-2009
PIPELINE SEGMENT		
Cathie Legge	Manager – Customer Service, Alliance Pipeline, LP	12-31-2010
Bill Grygar	Vice President, Panhandle Eastern Pipe Line	12-31-2010
Susanna B. Barry	Vice President – Commercial Operations, Tennessee Gas Pipeline Company	12-31-2010
Machelle Grim	Director – Regulation and FERC Compliance, Dominion Resources Services, Inc.	12-31-2009
Richard Kruse	Senior Vice President, Spectra Energy Transmission	12-31-2009
LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT		
Craig Colombo	Energy Trader III, Dominion Resources	12-31-2010
Adrian Chapman	Vice President, Regulatory Affairs & Energy Acquisition, Washington Gas	12-31-2010
Carlos Thillet	Manager, Gas Supply & Transportation, PECO Energy Co.	12-31-2009
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	12-31-2009
Lee Stewart	Senior Vice President, Gas Transmission, Southern California Gas Company	12-31-2009
END USERS SEGMENT		
Valerie Crockett	Senior Program Manager, Energy Markets & Policy, Tennessee Valley Authority	12-31-2010
Timothy W. Gerrish	Director of Origination-Energy Marketing and Trading, Florida Power & Light	12-31-2010
Tina Burnett	Natural Gas Resources Administrator, The Boeing Company	12-31-2010
Lori-Lynn C. Pennock	Senior Fuel Supply Analyst, Salt River Project	12-31-2009
Jim Templeton	Principal, Comprehensive Energy Services	12-31-2009
SERVICES SEGMENT		
Steve Abbey	Manager of Regulatory Affairs, Marketing Department, Anadarko Energy Services Company	12-31-2010
Rusty Braziel	Managing Director, Bentek Energy, LLC	12-31-2010
Jim Buccigross	Vice President Energy Industry Practice, 8760 Inc.	12-31-2009
V A C A N C Y		12-31-2009
Lori Leeder	Relationship Manager/Business Development – Asset Optimization, Vega Energy Partners, Ltd	12-31-2010

OFFICERS: Michael Desselle is CEO and Chairman of the Board of Directors. Rae McQuade as President serves as Secretary and COO. J. Cade Burks is the REQ Vice Chairman. Ralph Cleveland is the RGQ Vice Chairman. Valerie Crockett is the WGQ Vice Chairman. Jim Templeton is Chair Emeritus.

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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 BOARD TERMS – Retail Electric Quadrant

SUPPLIERS SEGMENT		**TERM END:**
Robert K. Koger	President, North Carolina Advanced Energy Corporation	12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2010
V A C A N C Y		12-31-2010
DISTRIBUTORS SEGMENT		
David Koogler	Director – State Regulation, Dominion Virginia Power	12-31-2009
Dennis Derricks	Director Regulatory Policy and Analysis, Wisconsin Public Service Corporation	12-31-2009
Ruth Kiselewich	Director, Demand Side Management Programs, Baltimore Gas & Electric Company	12-31-2010
Debbie McKeever	Market Advocate, Oncor	12-31-2010
END USERS SEGMENT		
Sonny Popowsky	Consumer Advocate, Pennsylvania Office of Consumer Advocate	12-31-2009
V A C A N C Y		12-31-2009
James P. Cargas	Senior Assistant City Attorney, City of Houston	12-31-2010
V A C A N C Y		12-31-2010
SERVICE PROVIDERS SEGMENT		
Jim Minneman	Controller, PPL Solutions LLC	12-31-2009
David Pickles	Vice President, ICF International	12-31-2009
J Cade Burks	Executive Vice President of E:SO *(Formerly EC Power)*	12-31-2010
Austin Morris	Managing Partner – Energy, SunGard Consulting Services, LLC	12-31-2010

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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 BOARD TERMS – Wholesale Electric Quadrant

TRANSMISSION SEGMENT		**TERM END:**	**SUBSEGMENT:**
Dan Klempel	Director Transmission Regulatory Compliance, Basin Electric Power Cooperative	12-31-2009	Muni/Coop
Chuck Feagans	Senior Manager, Reliability Policy, Tennessee Valley Authority	12-31-2010	Fed/State/Prov.
John E. Lucas	Director - Transmission Policy and Services, Southern Company Transmission	12-31-2010	IOU
V A C A N C Y		12-31-2009	at large
Jill Horswell	Director Transmission, Southern California Edison	12-31-2010	at large
Edward J. Davis	Policy Consultant, Entergy Services, Inc.	12-31-2009	at large
Michelle Mizumori	Director of Market – Operations Interface, Western Electricity Coordinating Council (WECC)	12-31-2009	At-Large
GENERATION SEGMENT			
Curtis Winterfeld	Vice President of Power Marketing, Deseret Generation & Transmission Cooperative	12-31-2009	Muni/Coop
Belinda Thornton	General Manager - Energy Origination, Tennessee Valley Authority	12-31-2010	Fed/State/Prov.
Lou Oberski	Director – Electric Market Policy, Dominion Resources Services, Inc.	12-31-2010	IOU
Charles W. Severance	Manager – Supply & Wholesale Services, Wisconsin Public Service Corporation	12-31-2009	IOU
V A C A N C Y		12-31-2009	Merchant
Gloria Godson	Vice President Energy Policy, Conectiv Energy Supply, Inc.	12-31-2010	Merchant
Shah Hossain	Senior Regulatory Specialist, Westar Energy, Inc.	12-31-2009	at large
MARKETERS/BROKERS SEGMENT			
Roy True	Manager of Regulatory and Markets Development, ACES Power Marketing	12-31-2010	Muni/Coop
Jeff Ackerman	Manager, Colorado River Storage Project Energy Management and Marketing Office, Western Area Power Administration	12-31-2009	Fed/State/Prov.
Gavin Cunningham	Manager – FirstEnergy Solutions Corp.	12-31-2010	at large
Jack Cashin	Senior Manager of Policy, Electric Power Supply Association (EPSA)	12-31-2009	at large
Sam Forrest	Vice President, Energy Marketing and Trading, Florida Power & Light	12-31-2010	IOU
R. Scott Brown	Vice President and Director, Exelon Generation Power Team	12-31-2009	IOU
Rick Smead	Director, Navigant Consulting, Inc.	12-31-2009	At-Large

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DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT		TERM END:	SUBSEGMENT:
Arthur G. Fusco	Vice President and General Counsel, Central Electric Power Cooperative Inc.	12-31-2010	Muni/Coop
Paul McCurley	Manager – Power Supply, National Rural Electric Cooperative Association	12-31-2009	Muni/Coop
V A C A N C Y		12-31-2010	at large
Frank Johnson	Senior Vice President Electric Transmission and Distribution, Consumers Energy	12-31-2009	IOU
V A C A N C Y		12-31-2009	at large
Joe Hartsoe	Managing Director – Federal Policy, American Electric Power Service Corp.	12-31-2010	at large
Bruce Ellsworth	New York State Reliability Council	12-31-2009	At-Large
END USERS SEGMENT			
Jesse D. Hurley	Chief Executive Officer, Shift Research, LLC	12-31-2009	at large
Aaron Breidenbaugh	Senior Manager - Regulatory Affairs and Public Policy - New York, EnerNOC, Inc.	12-31-2010	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	12-31-2010	Regulator
V A C A N C Y		12-31-2009	at large
Rick Lentz	Fellow with SunGard	12-31-2010	at large
V A C A N C Y		12-31-2009	at large
Michehl Gent	Open Access Technology International, Inc.	12-31-2009	At-Large
INDEPENDENT GRID OPERATORS/PLANNERS			
Michael Desselle	Vice President Process Integrity, Southwest Power Pool	12-31-2010	
Kent Saathoff	Vice President of System Operations, ERCOT	12-31-2010	
Kevin Kirby	Vice President Market Operations, ISO New England, Inc.	12-31-2010	
Rana Mukerji	Vice President Market Structures, New York Independent System Operator, Inc. (NYISO)	12-31-2010	
Andy Ott	Senior Vice President Marketing, PJM Interconnection, LLC	12-31-2009	
Bill Phillips	Vice President Standards Compliance & Strategy, Midwest ISO (MISO)	12-31-2009	
Don Tench	Director Planning & Assessments, Independent Electricity System Operator (IESO)	12-31-2009	

The subsegments noted in the above roster are:

At-Large -- Regional reliability organizations, regional transmission organizations, consultants, service companies, information services and software companies, law firms, and other such organizations that are not specifically encompassed in the other subsegments for a given segment.

Competitive Retailer (not available to MUNI/COOP, IOU or IOU affiliates)

End Use (also in another segment)

Federal/State/Provincial

IOU – Investor Owned Utility or IOU Affiliated

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ITC – Independent Transmission Company

Large Industrials (not in other segments)

Merchant

Muni/Coop – Municipals, Cooperatives

Not IOU Affiliated

OTHER -- (not available to MUNI/COOP, IOU or IOU affiliates)

Regulator

Residential/Commercial

End Use (Self Generation)

The number of seats within each segment that are allotted to sub-segments are controlled through the WEQ Procedures.

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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 BOARD TERMS – Retail Gas Quadrant

SUPPLIERS SEGMENT		**TERM END:**
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		12-31-2010
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2009
DISTRIBUTORS SEGMENT		
Alonzo Weaver	Vice President of Engineering and Operations, Memphis Light, Gas & Water Division (APGA)	12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2010
Ralph Cleveland	Senior Vice President – Engineering and Operations, AGL Resources, Inc.	12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2010
END USERS 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		12-31-2010
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2009
SERVICE PROVIDERS SEGMENT		
Leigh Spangler	President, Latitude Technologies Inc.	12-31-2010
V A C A N C Y		12-31-2010
Dave Darnell	President & CEO, Systrends USA	12-31-2009
Greg Lander	President, Capacity Center	12-31-2009
V A C A N C Y		12-31-2009
V A C A N C Y		12-31-2010

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Via email and posting
September 9, 2009

TO: NAESB Board of Directors, Executive Committee (EC) Members, EC Alternates, NAESB Members and Invited Guests

FROM: Rae McQuade, NAESB President and COO

RE: **Agenda with Information Links:** NAESB Board Meeting, Meeting of the Members, Strategic Session and related NAESB Meetings – September 23-24, 2009

Dear Board members, EC members, EC alternates, NAESB Members and invited guests,

As noted in other communications, we are pleased to announce the upcoming Board meeting which includes the meeting of the members and strategic session on September 24 in Houston, Texas at the Marriott IAH Airport Hotel. I hope you are able to travel to Houston for our upcoming Board meeting, related committee meetings and our Board dinner.

This Board meeting will also serve as our meeting of the members and our strategic session. In addition to the normal activities of reviewing progress made against our 2009 plans, discuss membership and financial reports, review publication plans for upcoming versions, and updates for a number of key development efforts including FERC Order No. 890, DSM-EE and Smart Grid, we will have speakers to discuss topics that may impact our standards development activities. The time spent covering normal topics may be abbreviated to ensure adequate time for discussion during the strategic session. I hope you are able to travel to Houston for our upcoming Board meeting, related committee meetings and our Board dinner. We have wonderful speakers slated for both the Board meeting itself and the dinner the night before. At the dinner at the Petroleum Club, our dear friend, Emil Pena will have remarks. You can find Emil's biography at the following link: http://www.media.rice.edu/media/NewsBot.asp?MODE=VIEW&ID=10278.

The specifics of the meetings are:

Events: Board of Directors Meeting, Meeting of the Members, Strategic Session and related NAESB meetings

Where: Marriott IAH Airport, 18700 John F. Kennedy Blvd, Houston, TX 77032, phone (281) 443-2310 (excepting Board Reception and Dinner)

When:

September 23	Wholesale Gas Quadrant Leadership Meeting from 3:00 pm to 5:00 pm C (Brazos AB)
September 23	Board Reception and Dinner - 6:00 pm reception and 7:00 pm dinner seating (held at the Petroleum Club with bus transportation provided to/from the Marriott IAH Airport Hotel)
September 24	Resources Committee Meeting from 8:00 am to 9:00 am C (Brazos AB)
September 24	Board Meeting from 9:00 am to 1:00 pm C, (a buffet lunch will be served during the meeting) (Ballroom A)

As with all our meetings, these events are open to any interested party. For the meetings, conference calling will be available should you be unable to attend in person. Please contact Veronica Thomason (vthomason@naesb.org, 713-356-0060) for additional information on the meetings and conference calling information. Board materials should be posted shortly.

We hope you will be able to make the leadership meeting and the dinner on September 23, followed by the Resources Committee meeting and the Board meeting (including the meeting of the members and the strategic session) on September 24. If you haven't already RSVPed your intention to attend the Board dinner or Board of Directors meeting or any of the related meetings, or your intention to bring a guest or colleague to the dinner, please do so at your earliest convenience (vthomason@naesb.org, naesb@naesb.org, 713-356-0060). We look forward to seeing you at the dinner on September 23 and our meeting on September 24 and at any of the related meetings noted above.

Best Regards,

Rae McQuade

Rae McQuade
NAESB President and COO

North American Energy Standards Board

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CONFERENCE CALLING AND WEB CONFERENCING DETAILS

FOR THE SEPTEMBER 23-24, 2009 SET OF BOARD AND RELATED MEETINGS:

The meetings are open to all interested parties, who may participate by phone if unable to attend in person. The Board meeting is also web cast.

September 23 3:00 to 5:00 pm C Wholesale Gas Quadrant Leadership Meeting (Conference call only)

- Call in number 866-740-1260
- Access Code – 356-0062
- Security Code 7318

September 24 8:00 to 9:00 am C Resources Committee Meeting (Conference Call Only)

- Call in number 866-740-1260
- Access Code – 356-0062
- Security Code 2843

September 24 9:00 am to 1:00 pm C Board Meeting, Strategic Session & Meeting of the Members (Conference Call/Webcast)

- Call in number 866-740-1260
- Access Code – 356-0060
- Security Code 6515

To join a conference call:

- Dial the 11-digit toll free call-in phone number shown above for the specific meetings
- An automated attendant will ask you to enter a seven-digit access code (shown in the table above)
- The automated attendant will ask you to record your name.
- Please note that if the conference leader has not yet initiated the conference call, you will be placed on music hold until the conference leader starts the conference.
- The automated attendant will then ask you for a four-digit security code (shown in the table above)

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 on-hold line to have it disconnected.

I f the meeting has the web conferencing feature enabled, to join the web conference, go to www.readytalk.com and enter the same access code and **s**ecurity 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.

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NAESB BOARD OF DIRECTORS MEETING, MEETING OF THE MEMBERS, & STRATEGIC SESSION
Marriott IAH Airport Hotel, Houston, Texas
Thursday, September 24– 9:00 a.m. to 1:00 pm Central

DRAFT AGENDA WITH INFORMATION LINKS

8:00 a.m. **Resources Committee Meeting**
8:30 a.m. **Continental Breakfast**

9:00 a.m.

1. Administration and Welcome

a) Antitrust Guidelines: : http://www.naesb.org/misc/antitrust_guidance.doc (Guidance)
b) Introduction of Board Members and Guests: http://www.naesb.org/pdf4/bod_terms.pdf (Board Roster)

2. Adoption of the Agenda and Minutes

a) Agenda Adoption: : http://www.naesb.org/pdf4/bd092409a.doc (Agenda)
b) Adoption of Draft Minutes – June 25, 2009 http://www.naesb.org/pdf4/bd062509dm.doc (Draft Minutes)

3. Membership and Financial Report

a) Membership Report: http://www.naesb.org/misc/membership_slide_090409.pdf, http://www.naesb.org/misc/membership_report_090409.doc (Report)
b) Financial Report for 2009 YTD: http://www.naesb.org/misc/financial_chart_092409.ppt, http://www.naesb.org/misc/financial_report_092409.doc (Chart and Report as of 7-31-09), http://www.naesb.org/misc/naesb_2008_review.pdf (2008 Financial Review Results)

4. Reports from board committees

a) Resources: http://www.naesb.org/pdf4/board_resource092409w1.pdf (Resources Committee Report)
b) Retail Restructuring Considerations: http://www.naesb.org/pdf4/retail090409reqcom.doc (Request for Comments on Quadrant Procedure Changes), http://www.naesb.org/pdf4/retail090409reqcom_a2.doc (Proposed Amendments to the RGQ Procedures), http://www.naesb.org/pdf4/retail090409reqcom_a1.doc (Proposed Amendments to the REQ Procedures)
c) Managing Committee: http://www.naesb.org/pdf4/managing082109notes.doc (Managing Committee Notes)

5. Updates on specific efforts:

a) Publications –WGQ Version 1.9 to be published September 30, 2009: http://www.naesb.org/misc/wgq_publication_schedule_090109.doc (Report), Retail Version 1.1 published June 30, 2009, and WEQ Version 2.2 expected to be published first quarter 2010
b) Update on Order 890 efforts: http://www.naesb.org/pdf4/update090209w1.pdf (OASIS Progress Report)
c) Update on Demand Response and Demand Side Management: http://www.naesb.org/pdf4/update090209w2.doc (Retail DR M&V Recommendation), http://www.naesb.org/pdf4/update090209w3.doc (Renewable Portfolio Scoping Paper), http://www.naesb.org/pdf4/update090209w5.doc (EE Scoping Paper), http://www.naesb.org/pdf4/update090209w4.doc (Cap and Trade Scoping Paper), http://www.naesb.org/pdf4/ferc091709_dr_nopr.pdf (FERC Notice of Proposed Rulemaking on NAESB WEQ Phase 1 DR M&V Standards)
d) Smart Grid Update: http://www.naesb.org/pdf4/update090209w12.doc (Assignment Paper)

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6. Strategic Session Speakers and Panel Discussions

- Panel members include: Mr. Robert Gee, Mr. James Slutz, Ms. Lorraine Cross, Ms. Joelle Ogg and Mr. Richard Brooks and will be moderated by Mr. Desselle
- Topics discussed will include pending legislation, the forecasts for gas supply that will impact both natural gas and gas-fired power generation, smart grid and the possible transformation of the market, and international impacts
- Speakers will discuss the topics and invite discussion from other panel members and Board members.
- The intent of the strategic session is to provide input for the upcoming planning sessions for NAESB.
- Background materials for some of the remarks are: http://www.naesb.org/misc/bios092409.doc (biographies of speakers), http://www.naesb.org/misc/cross_correspondence_0909.doc (letter on cap and trade) http://www.naesb.org/misc/report_to_nist_provides_insight.pdf (Recent Smart Grid article[1])

7. Executive Committee Reports

a) Review of 2009 WGQ Annual Plan and vote to adopt with any revisions made during the meeting: http://www.naesb.org/pdf4/draft_wgq_2009_annual_plan.doc (WGQ Annual Plan)
b) Review of 2009 Retail Annual Plan and vote to adopt with any revisions made during the meeting: http://www.naesb.org/pdf4/draft_retail_2009_annual_plan.doc (Retail Annual Plan)
c) Review of 2009 WEQ Annual Plan and vote to adopt with any revisions made during the meeting: http://www.naesb.org/pdf4/draft_weq_2009_annual_plan.doc (WEQ Annual Plan)

8. Plan for December 2009 Board Meeting

9. Old and New Business

a) Board Meeting Schedule for 2009 and 2010: http://www.naesb.org/misc/2009_brd_ec_schedule.doc (Schedule of 2009 Meetings), http://www.naesb.org/misc/2010_proposed_board_schedule.doc (Proposed Schedule for 2010 Board Meetings)
b) FERC issuances on NAESB Standards: WGQ Standards http://www.naesb.org/pdf4/ferc071609.doc (NOPR Docket No. RM96-1-030, issued July 16, 2009), also see agenda item 5c.
c) Induction of Ralph Cleveland as NAESB Chairman

1:00 p.m. 10. Adjourn

Attire – Business Casual -- Working buffet lunch will be provided.

[1] Included with the permission of Mr. Jeff Young and Mr. Mr. Christopher Kelly of Alston & Bird LLP, 1201 West Peachtree Street, Atlanta, Georgia 30309, (404) 881-4416 - Direct Dial, (404) 253-8216 – Facsimile, christopher.kelly@alston.com | www.alston.com.

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July 28, 2009

TO: NAESB Board of Directors, Executive Committee (EC) Members, EC Alternates, and Invited Guests

FROM: Jonathan Booe, Staff Attorney

RE: Drafts Minutes of the NAESB Board Meeting – June 25, 2009

NAESB BOARD OF DIRECTORS MEETING
Marriott IAH Airport Hotel, Houston, Texas
Thursday, June 25 – 9:00 a.m. to 1:00 pm Central
DRAFT MINUTES

1. Administration and Welcome

Mr. Desselle welcomed the Board members and guests in the room and on the phone. Mr. Booe read the antitrust guidelines and called the roll of the NAESB Board members. Quorum was established.

The Board members reviewed the draft agenda. Mr. Hossain moved to adopt the agenda as drafted and Mr. Chapman seconded the motion. The agenda was adopted as drafted. The Board members reviewed the draft minutes from the March 26, 2009 meeting. Ms. Kiselewich moved to adopt the minutes as drafted and Mr. Lucas seconded the motion. The motion passed without objection. The final minutes from the March 26, 2009 Board meeting can be found on the NAESB website through the following hyperlink: http://www.naesb.org/pdf4/bd032609fm.doc.

2. Membership and Financial Report

Membership Report: Ms. McQuade reviewed the membership report. The membership profile reflects a net 14 member loss since March, 2009; the largest loss occurring in the Wholesale Gas Quadrant ("WGQ"). Based upon exit interviews, most companies cited the poor economy and consolidation of multiple memberships as the grounds for resignation. None of the resignations were due to the increase in dues. Ms. McQuade reminded the Board members to review the contact list for accuracy and noted that companies may have multiple primary contacts.

Financial Report: Ms. Wishart provided an account of the financial report. She noted that year to date expenses are up one percent and that income is up fifteen percent as compared to this period last year. Based upon the current financial status and year end estimates for 2009, expenses will be over budget by $34,000 and income will be under budget by $40,000. Ms. McQuade noted that the publication efforts have increased the frequency of conference call meetings by thirty percent compared to last year and that face to face meetings have remained consistent. She also noted that the renegotiation of the telecommunication contract has helped mitigate the cost of the increased number of conference call meetings. Mr. Lucas noted that the year to date income is almost double the expenses, which Ms. McQuade noted was due to the collection of dues which would be spent throughout the year.

3. Reports from Board Committees

Board Resources: Mr. Brown presented the Board Resources report. He noted that for the second quarter in a row there has been a significant discrepancy between the number of new memberships and the increase in resignations. In response to the loss in membership, the Board Resource Committee has discussed several action items that will be addressed in the next quarter. The Resource Committee will (1) contact the members who did not renew their membership, (2) work with NAESB staff to focus attention on organizations involved in the wind energy industry, the solar energy industry, demand response and the smart grid efforts, (3) work with NAESB staff to develop an electronic package that can be circulated among all Board Members and distributed to potential members and (4) encourage cities to take the lead from the city of Houston and become members. Mr. Brown noted that the Board Resources Committee has been comprised of the same participants for several years and encouraged Board Members who have not participated to get involved. He suggested that each Quadrant assign specific members to act as point persons for each of the Quadrants and take the lead in recruiting new membership. He stated that he, Mr. Desselle and Mr. True will volunteer from the Wholesale Electric Quadrant ("WEQ") and that Mr. Hebenstreit has volunteered from the WGQ. Mr. Brown requested that any member of the Retail Quadrants interested in

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volunteering contact him. Ms. McQuade noted that the National Institute of Standards and Technology ("NIST") has agreed to join.

Retail Restructuring Considerations: Mr. Minneman provided a review of the retail restructuring activities and noted the Proposed Modifications to the Retail Electric Quadrant Procedures and the Proposed Modifications to the Retail Gas Quadrant Procedures included in the Board materials. He stated that the Retail Structure Review Committee met in May and made proposed modifications to the Retail Quadrants Procedures that reflect the segment structure modifications discussed at the March Board meeting. He noted that the modifications have not been controversial and expects that they will be adopted by the next Board meeting in September. The Retail Electric Quadrant will require one more member to join the petition to adopt the proposed modifications in order for the process to begin. Mr. Brown stated that three of the new memberships are in the Retail Quadrants.

4. Updates on Specific Efforts

Publications: Ms. McQuade provided an update of the Retail Version 1.1 publication. The publication is scheduled to be released on June 30, 2009 and will be distributed to the state commissioners by Ms. McQuade at the July NARUC meeting. The NAESB office will coordinate a press release with publication in an effort to encourage membership. The publication is predominately customer choice standards and does not include the Demand Response standards that will be included as an addendum after ratification.

Ms. McQuade provided an update of the WGQ Version 1.9 publication and confirmed that the Quadrant is on schedule for a September 30, 2009 release. She noted that the final modifications are being processed and commended Ms. Rager and Ms. Davis on their efforts to meet the publication deadlines. Ms. McQuade noted that the WEQ Version 2.2 publication is on schedule to be released first quarter 2010 will include the remaining FERC Order No. 890 items.

WEQ/REQ Smart Grid Update: Mr. Desselle provided an update of the NAESB involvement in the national smart grid effort. He referenced the FERC Notice of Inquiry Analysis, the Analysis of the 16 Standards Proposed by NIST and the Report to NIST on the Smart Grid Interoperability Standards Roadmap contained in the Board materials. Since the last Board meeting Ms. McQuade, Ms. Ogg, Mr. Booe and Mr. Desselle have attended more than twenty meetings with various organizations involved in the development. The purpose of the meetings have been to notify the participants of the potential impact any actions taken by NIST may have on existing NAESB standards or future standards development. Mr. Desselle noted his concerns with the lack of participation by energy companies in the effort. Mr. Cargas noted that a post Hurricane Ike study has shown that the development of the smart grid will be the most effective action that can be taken in preparation for future emergency events. Ms. McQuade urged the Board members to get involved in the Smart Grid effort as to date she has noticed only a few utilities participating in the various venues. Ms. Ogg noted that developments resulting from the smart grid effort are likely to be very expansive and that the initial list of sixteen standards released by NIST are only preliminary to many other developments.

WGQ: Completion of Standards for FERC Order Nos. 698 and 712: Mr. Davis provided a Presentation of the recommendation for the proposed modifications to the capacity release items resulting from FERC Order Nos. 698 and 712. The recommendation included the technical implementation of the standards developed and modified in response to FERC Order No. 698 as well as the technical implementation of the standards modifications resulting from FERC Order No. 712. She noted that the recommendation required over thirty meeting days during the last twelve months and approximately two thousand man hours to complete. Ms. McQuade and Mr. Desselle stated that the recommendation is a great example of what is required to fully staff a business practice and noted that fully staffing a business practice saves the industry considerable time and money by requiring only a single implementation of a standard rather that a cascading implementation with business practices and then a later retrofitting of the implementation to support additional technical standards.

WEQ: Update on Order 890 Efforts: Mr. York provided an update of the FERC Order No. 890 Work Plan. The WEQ has meet all of the required deadlines set by FERC Order No. 890 and is currently working on group three of the Order 890 Work Plan involving network service on OASIS. Ms. York noted that the recommendation on rollover rights contained in group four of the Work Plan was approved by the WEQ Executive Committee ("EC")

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and is currently out for ratification. Due to the time required to complete the rollover right recommendation the WEQ EC is recommending that the completion date for the recommendation concerning network service on OASIS be moved to fourth quarter 2009. The Electronic Scheduling Subcommittee and the Information Technology Subcommittee ("ESS/ITS") have been addressing the items noted. The WEQ EC approved recommendations to rename the ESS/ITS the OASIS Subcommittee and to modify the Quadrant's subcommittee structure making the Joint Interface Scheduling Working Group ("JISWG") a subcommittee named the Joint Electronic Scheduling Subcommittee ("JESS") rather than a working group of the ESS/ITS. The subcommittee meetings, as with all NAESB meetings, are open to anyone wishing to participate.

WEQ and Retail DSM-EE efforts: Mr. Winkler provided the update of the DSM-EE efforts, noting that the WEQ completed the Wholesale Demand Response ("DR") standards and definitions in April and have been submitted to the FERC. He reviewed the IRC DSM Matrix, which is a compilation of the measurement and verification aspects of all DR programs offered in ISO control areas. He noted that the IRC will maintain and update the document as products change through the stakeholder process. Mr. Winkler stated that phase two of the effort is underway and that the group has meet four times to begin adding more technical detail to the standards developed in phase one. The group expects that the effort will gain more momentum once the FERC issues a Notice of Proposed Rulemaking on the standards and definitions submitted in April. Mr. Brown asked that the members participating in the effort discuss membership with the non-member participants, to encourage their participation and their consideration of NAESB membership.

Mr. Precht provided a review of the Retail DSM-EE efforts and the draft recommendation for the measurement and verification DR standards under development. He stated the retail recommendation was based upon the wholesale recommendation and that the standards and definitions have been modified and amended to be applicable to the retail markets. The goal is to submit the retail standards to the entire DSM-EE group at the July 29, 2009 meeting. Mr. Winkler stated that the retail recommendation contains improvements to the definitions contained in the wholesale final action and that the wholesale group will review those definitions to make conforming changes.

5. Executive Committee Reports

Mr. Buccigross reviewed the 2009 WGQ Annual Plan and noted the modifications approved by the WGQ EC at the May 14, 2009 meeting. The modifications are shown in redline format in the board materials. Ms. Kiselewich reviewed the 2009 Retail Annual Plan and noted the modifications approved by the Retail EC at the May 13, 2009 meeting. The modifications are shown in redline format in the board materials. Ms. York reviewed the 2009 WEQ Annual Plan and noted the modifications approved by the WEQ EC at the May 12, 2009 meeting and suggested by the WEQ Leadership at the June 24, 2009 meeting. The modifications are shown in redline format in the board materials. Ms. York noted that in addition to the changes noted in the board materials the status of item 5.a.2 should be changed to underway and the completion date changed to third quarter 2009, as the recommendation was remanded to the WEQ Business Practice Subcommittee ("BPS") so that the recommendation could be coordinated with the WGQ BPS and NERC. She also noted that item 5.f should be modified to reflect that the request had been withdrawn by the submitter and removed from the Annual Plan.

Ms. Kiselewich suggested that the Retail Gas Quadrant ("RGQ") be included in the development of items f, g and h of the DSM-EE portions of the WEQ (item 4) and Retail (item 6) Annual Plans, given that phase two and the scoping of the items has begun. Mr. Desselle agreed and stated that the gas industry will be affected by the development of the items and should be included in their scoping. Mr. Cleveland concurred and noted that three of the five states within AGL's region are implementing EE programs. Mr. True and Mr. Minneman supported the inclusion of the RGQ in the scoping of the items. Mr. Novak raised an issue that the Board confirm that the items apply to the retail gas market before designating the RGQ in the Annual Plans. Mr. Desselle responded that Mr. Novak's comment is the reason why the RGQ should be included in the scoping of the items. Mr. Novak noted that many LDCs do not believe that NAESB should address standards for energy efficiency, cap and trade and renewable portfolios as they pertain to the retail gas market – a position supported by the AGA. Mr. Desselle noted that the items are only at the scoping phase. Ms. Kiselewich made a motion to include the RGQ as assignees of items 4.f, 4.g and 4.h of the 2009 WEQ Annual Plan and items 6.f, 6.g and 6.h of the 2009 Retail Annual Plan. Mr. Cleveland seconded the motion and the motion passed a simple majority vote with one vote in opposition by Mr. Novak. Mr.

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True moved to adopt the 2009 WGQ Annual Plan, the 2009 WEQ Annual Plan and the 2009 Retail Annual Plan as modified during the meeting. Mr. Minneman seconded the motion and the motion passed a simple majority vote with one vote in opposition by Mr. Novak.

6. Plan for September 2009 Board Meeting

Ms. McQuade requested that the Board leadership begin thinking about items to be included on the 2010 Annual Plans and that she will organize a meeting in September to discuss their ideas. She also noted that very few items will carry over from the 2009 WGQ Annual Plan to the 2010 WGQ Annual Plan. The next NAESB Board of Directors meeting will be held on Thursday, September 25, 2009 at the Marriott Houston Intercontinental Hotel from 9:00 am to 1:00 pm Central.

7. Old and New Business

Ms. McQuade noted that she has visited with FERC, NIST, DOE, the Gridwise Architecture Council and other organizations involved with smart grid efforts in order to ensure that NAESB interests are identified. She also noted that has visited with the leadership of NARUC to ensure that NAESB is addressing the correct issues in our standards development. Mr. Desselle urged participation by NAESB members to ensure that the smart grid development is compatible/interoperable with the bulk power system.

Mr. Desselle noted that Bill Lohrman has been transitioned to another part of FERC and that Mr. McAllister will be taking over his role as NAESB/FERC liaison. Mr. Desselle thanked Mr. Lohrman, Mr. McAllister and Ms. Ogg for their attendance at the Board meeting. Ms. Ogg noted that she and Ms. McQuade have developed a report for the International Gas Union ("IGU") that compares the U.S. experience of the standardization of the gas industry with the experiences of the E.U. and Australia and that the report will be discussed at the next IGU conference in October. Ms. McQuade thanked Ms. Ogg for her work on the report.

8. Adjourn

Mr. Cargas moved to adjourn the meeting, seconded by Mr. Desselle. The meeting adjourned at 11:33 am Central.

9. Board Attendance and Voting Record (Vacancies Omitted)

		ATTENDANCE
WGQ PRODUCERS SEGMENT		
Richard D. Smith	Regulatory & Compliance Manager, Noble Energy Inc.	In Person
Bill Hebenstreit	Marketing Manager, Goodrich Petroleum Company LLC	In Person
Keith Sappenfield	Regional Director – US Regulatory Affairs, EnCana Oil & Gas (USA) Inc.	In Person
Marty Patterson	Vice President – Commercial Operations, Foothills Energy Ventures LLC	
Pete Frost	Director - Regulatory Affairs, ConocoPhillips Gas and Power Marketing	In Person
WGQ PIPELINE SEGMENT		
Cathie Legge	Manager – Customer Service, Alliance Pipeline LP	In Person
Bill Grygar	Vice President, Panhandle Eastern Pipe Line	Phone
Susanna B. Barry	Vice President – Commercial Operations, Tennessee Gas Pipeline Company	
Anne Bomar	Vice President, Dominion	Phone
Richard Kruse	Senior Vice President, Spectra Energy Transmission	Phone
WGQ LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT		
Craig Colombo	Energy Trader III, Dominion Resources	In Person
Adrian Chapman	Vice President, Regulatory Affairs & Energy Acquisition, Washington Gas	In Person
Carlos Thillet	Manager, Gas Supply & Transportation, PECO Energy Co.	
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	Phone
Lee Stewart	Senior Vice President, Gas Transmission, Southern California Gas Company	Phone
WGQ END USERS SEGMENT		
Valerie Crockett	Senior Energy & Policy Specialist, Tennessee Valley Authority	In Person
Timothy W. Gerrish	Director of Origination-Energy Marketing and Trading, Florida Power & Light	Phone

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			ATTENDANCE
Tina Burnett	Natural Gas Resources Administrator, The Boeing Co.		Phone
Lori-Lynn C. Pennock	Senior Fuel Supply Analyst, Salt River Project		In Person
Jim Templeton	Principal, Comprehensive Energy Services		In Person
WGQ SERVICES SEGMENT			
Steve Abbey	Manager of Regulatory Affairs, Marketing Department, Anadarko		Phone
Rusty Braziel	Managing Director, Bentek Energy, LLC		
Jim Buccigross	Vice President Energy Industry Practice, 8760 Inc.		Phone
Lori Leeder	Relationship Manager/Business Development – Asset Optimization, Vega Energy Partners		In Person
REQ SUPPLIERS SEGMENT			
Robert K. Koger	President, North Carolina Advanced Energy Corporation		
REQ DISTRIBUTORS SEGMENT			
David Koogler	Director – State Regulation, Dominion Virginia Power		
Dennis Derricks	Director Regulatory Policy and Analysis, Wisconsin Public Service Corporation		Phone
Ruth Kiselewich	Director, Conservation Programs, Baltimore Gas & Electric Company		In Person
Debbie McKeever	Market Advocate, Oncor		
REQ END USERS SEGMENT			
Sonny Popowsky	Consumer Advocate, Pennsylvania Office of Consumer Advocate		
James P. Cargas	Senior Assistant City Attorney, City of Houston		In Person
REQ SERVICE PROVIDERS SEGMENT			
Jim Minneman	Controller, PPL Solutions LLC		In Person
David Pickles	Vice President, ICF International		
J Cade Burks	President, EC Power		In Person
Austin Morris	Managing Partner – Energy, Sungard Consulting Services, LLC		In Person
WEQ TRANSMISSION SEGMENT		**SUB SEG:**	
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	Phone
Edward J. Davis	Policy Consultant, Entergy Services, Inc.	at large	Phone
Michelle Mizumori	Market Interface Manager, Western Electricity Coordinating Council (WECC)	At-Large	Phone
WEQ GENERATION SEGMENT			
Curtis Winterfeld	Vice President of Power Marketing, Deseret Generation & Transmission Cooperative	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
Charles W. Severance	Manager – Supply & Wholesale Services, Wisconsin Public Service Corporation	IOU	Phone
Gloria Godson	Vice President Energy Policy, Conectiv Energy Supply, Inc.	Merchant	
Shah Hossain	Senior Regulatory Specialist, Westar Energy, Inc.	at large	In Person
WEQ MARKETERS/BROKERS SEGMENT			
Roy True	Manager of Regulatory and Markets Development, 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.	In Person
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	

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			ATTENDANCE
R. Scott Brown	Vice President and Director, Exelon Generation Power Team	IOU	Phone
Rick Smead	Director, Navigant Consulting, Inc.	At-Large	
WEQ DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT			
Arthur G. Fusco	Vice President and General Counsel, Central Electric Power Cooperative Inc.	Muni/Coop	Phone
Paul McCurley	Manager – Power Supply, National Rural Electric Cooperative Association	Muni/Coop	In Person
Frank Johnson	Senior Vice President Electric Transmission and Distribution, Consumers Energy	IOU	
Thomas Burgess	Director – FERC Compliance, FirstEnergy Service Company	at large	
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			
Aaron Breidenbaugh	Senior Manager – Regulatory Affairs and Public Policy – New York, EnerNOC, Inc.		
Thomas G. Dvorsky	Director of the Office of Electricity, Gas, and Water at the New York State Department of Public Service	Regulator	
Rick Lentz	Fellow with Sungard	at large	
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.		Phone
Rana Mukerji	Vice President Market Structures, New York Independent System Operator, Inc. (NYISO)		Phone
Andy Ott	Senior Vice President Marketing, PJM Interconnection		In Person
Bill Phillips	Vice President Standards Compliance & Strategy, Midwest ISO (MISO)		Phone
Don Tench	Director Planning & Assessments, Independent Electricity System Operator (IESO)		Phone
RGQ DISTRIBUTORS SEGMENT			
Alonzo Weaver	Vice President of Engineering and Operations, Memphis Light, Gas & Water Division (APGA)		In Person
Ralph Cleveland	Senior Vice President – Engineering and Operations, AGL Resources, Inc.		In Person
SERVICE PROVIDERS SEGMENT			
Leigh Spangler	President, Latitude Technologies Inc.		
Dave Darnell	President & CEO, Systrends USA		
Greg Lander	President, Capacity Center		

The subsegments noted in the above roster are:

At-Large – Regional reliability organizations, regional transmission organizations, consultants, service companies, information services and software companies, law firms, and other such organizations that are not specifically encompassed in the other subsegments for a given segment.

Competitive Retailer (not available to MUNI/COOP, IOU or IOU affiliates)

End Use (also in another segment)

Federal/State/Provincial

IOU – Investor Owned Utility or IOU Affiliated

ITC – Independent Transmission Company

Large Industrials (not in other segments)

Merchant

Muni/Coop – Municipals, Cooperatives

Not IOU Affiliated

OTHER – (not available to MUNI/COOP, IOU or IOU affiliates)

Regulator

Residential/Commercial

End Use (Self Generation)

The numbers of seats within each segment that are allotted to sub-segments are controlled through the WEQ Procedures.

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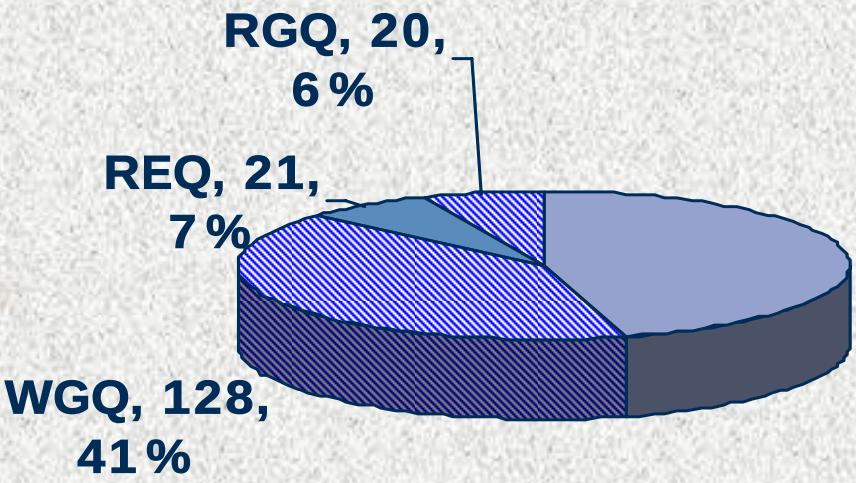
10. Other Attendance

Name	Organization	Attendance
Jonathan Booe	NAESB	In Person
Bill Boswell	NAESB	In Person
Jim Buccigross	8760 Inc.	Phone
Kathryn Burch	Spectra Energy Transmission	In Person
Christopher Burden	Williams Gas Pipeline	In Person
Cory Cummings	NAESB	In Person
Deonne Cunningham	NAESB	In Person
Dale Davis	Williams Gas Pipeline	In Person
Mark Gracey	Tennessee Gas Pipeline	In Person
Bill Lohrman	FERC	In Person
Bruce McAllister	FERC	In Person
Rae McQuade	NAESB	In Person
Joelle Ogg	Brunenkant & Cross, LLP	In Person
Phil Precht	BGE	Phone
Denise Rager	NAESB	In Person
Andy Rodriquez	NERC	In Person
Lisa Simpkins	Constellation Energy	Phone
Ed Skiba	Midwest ISO	In Person
Gwen Schoepp	Williston Basin Pipeline	Phone
Veronica Thomason	NAESB	In Person
Jill Vaughn	Preferred Legal Services	In Person
Kim Van Pelt	Panhandle Eastern Pipeline	In Person
Eric Winkler	ISO New England	Phone
Darla Wishart	NAESB	In Person
Charles Yeung	SPP	In Person
Kathy York	Tennessee Valley Authority	In Person

North American Energy Standards Board

Organizational Profile



Membership Profile

September 4, 2009

Total Membership

310

Quadrant Statistics	WEQ	WGQ	REQ	RGQ	Total
Membership YE 2008	150	135	23	19	327
Reclassification	-1	0	+1	0	0
Net Change	-8	-7	-3	+1	-17
Membership YTD	141	128	21	20	310

North American Energy Standards Board Membership List
As of September 4, 2009

NAESB Membership Statistics – Changes by Quadrant for 2009 as of September 4, 2009

NAESB Membership Report - Quadrant/Segment Membership Analysis		Number of Members
WGQ Segments	**TOTAL**	**128**
	End Users	18
	Distributors	21
	Pipelines	42
	Producers	17
	Services	30
REQ Segments	**TOTAL**	**21**
	End Users	3
	Distributors	7
	Services	7
	Suppliers	4
RGQ Segments	**TOTAL**	**20**
	End Users	1
	Distributors	7
	Services	6
	Suppliers	6
WEQ Segments	**TOTAL**	**141**
	End Users	8
	Distributors	24
	Transmission	45
	Generation	27
	Marketers	26
	None Specified	1
	Independent Grid Operators/Planners	10

North American Energy Standards Board Membership List
As of September 4, 2009

WEQ	New Members:	+ 6
	Los Angeles Department of Water and Power (Transmission, Muni/Coop), Los Angeles Department of Water and Power (Marketers/Brokers, Muni/Coop); SunGard Consulting Services, LLC (End User, at large), Alabama Municipal Electric Authority (Distribution, Muni/Coop), Arkansas Electric Cooperative Corporation (Generation, Muni/Coop), Shift Research, LLC (End Users, at large)	
	Member Resignations:	- 14
	Imperial Irrigation District (Marketers/Brokers, Muni/Coop), PSEG Energy Resources and Trading LLC (Marketers/Brokers, IOU), PSEG Power, LLC (Generation, Merc), North Carolina Electric Municipal Power Agency #1 (Marketers/Brokers, Muni/Coop), ElectriCities of North Carolina (Generation, Muni/Coop), SUEZ Energy Marketing NA, Inc. (Marketers/Brokers, Not IOU), Exelon Corporation – PECO Energy (Distribution, IOU), Otter Tail Power Company (Transmission, IOU), Public Power Council (Distribution, Muni/Coop), PacifiCorp (Generation, IOU), ExxonMobil Gas Marketing (End Users, Self Generator), Ameren Services (Marketer/Broker, IOU), Ontario Power Generation (Generation, Merchant), Portland General Electric Company (Marketer/Broker, IOU)	
	Membership Reclassification:	
	SunGard Consulting Services, LLC (from WEQ, End User, at large to REQ, Services)	
WGQ	New Members:	+ 1
	Golden Pass Pipeline, LLC (Pipeline),	
	Member Resignations:	- 8
	Cascade Natural Gas Corporation (LDC), UBS Energy LLC (Services), Westfield Gas & Electric Light Dept. (LDC), Hess Corporation (Services), Lehman Brothers Commodity Services, Inc. (Services), Chandeleur Pipe Line Company (Pipeline), Virginia Power Energy Marketing, Inc. (Services), Cheniere LNG Marketing, Inc. (Services), NiSource, Inc. (LDC) reinstated	
REQ	New Members:	+ 2
	City of Houston (End Users), Pennsylvania Public Utility Commission (End Users)	
	Member Resignations:	- 5
	Public Service Electric & Gas Co. (Distribution), MidAmerican Energy (Distribution), Office of Public Advocate, State of Maine (End Users), Consolidated Edison Co. (Distribution), Advantage IQ, Inc. (End Users)	
	Membership Reclassification:	
	SunGard Consulting Services, LLC (from WEQ, End User, at large to REQ, Services)	
RGQ	New Members:	+ 2
	Asgard Energy, LLC (Supplier), Clarity Systems, Ltd. (Services)	
	Member Resignations:	- 1
	Xcel Energy (Distribution)	
TOTAL	New Members	11
	Member Resignations:	28

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
Retail Electric Quadrant Members:				
1	Alabama Power	d	Judy W. Ray	
2	Ameren Services Company	d	Patrick Eynon	
3	Baltimore Gas & Electric Co.	d	Ruth Kiselewich, Phil Precht	
4	City of Houston	e	James P. Cargas	
5	Constellation NewEnergy, Inc.	d	Jansen Pollock	
6	Direct Energy Business Services	su	David Booty	
7	Dominion Retail	su	William Barkas, Richard Zelenko	
8	Dominion Virginia Power	d	David F. Koogler, Mary Edwards	
9	E:SO *(Formerly EC Power International)*	s	Judy Bailey, J. Cade Burks, Jennifer Teel	
10	Electric Reliability Council of Texas (ERCOT)	s	Susan Munson, Kent Saathoff	
11	Exelon Energy Delivery	d	Toni Garza	
12	ICF International	s	David Pickles	
13	North Carolina Advanced Energy Corporation	su	Robert K. Koger	
14	Oncor	d	Larry Williford, Debbie McKeever	
15	Pennsylvania Office Of Consumer Advocate	e	Tanya J. McCloskey, Sonny A. Popowsky	
16	Pennsylvania Public Utility Commission	e	Robert F. Wilson, Annunciata E. Marino	
17	PPL Solutions, LLC	s	James M. Minneman, Kim Wall	
18	Southern Company Services	s	Barbara Hingst	
19	SunGard Consulting Services, LLC	s	Austin Morris	
20	Ventyx, Inc.	s	Anthony Hill	
21	Wisconsin Public Service Corporation	d	Dennis Derricks, Les Nishida, Ken Thiry	
Wholesale Gas Quadrant Members:				
1	8760, Inc.	s	Jim Buccigross	
2	Alliance Pipeline LP	pl	Jim Goldmann, Cathie Legge, Brian Troicuk	
3	Ameren Corporation	l	Scott Glaeser, Ken Dothage, Jim Massmann	
4	Anadarko Energy Services Company	s	John Bretz, Steven Abbey	
5	ANR Pipeline Company	s	Sandy Meyers, Joseph E. Polland, Rene Staeb, Debbie Forth, Carol Wehlmann	
6	Apache Corporation	pr	Kelley Powell	
7	Arizona Public Service Company	e	Tom Carlson, Kelly Daly	
8	Atmos Energy	pl	Steve Easley	
9	Ballard Natural Gas, LLC	s	Susan Thibodeaux	
10	Baltimore Gas & Electric Co.	l	Phil Precht, Ron Jennings	

[1] The segment abbreviations are: **REQ**: d – distributors, e – end users, s – service providers, su – suppliers. **RGQ**: d – distributors, e – end users, s – service providers, su – suppliers. **WEQ**: m – marketer/broker, d – distribution, i – independent grid operators/planners, t – transmission owner, e – end user, g – generator. **WGQ**: s – services, pl – pipeline, l – LDC, pr – producer, e – end user.

[2] The sub-segment apply only to the WEQ and the abbreviations are – muni – municipal/cooperative, iou – investor owned utility, itc – independent transmission company, fed – federal/state/provincial facility/agency, lind – large industrial, sgen – self generation, end use – end user that may be represented in other segments, merc – merchant, N – no designation, reg – regulatory agency, niou – not investor owned utility. To get a full description of the subsegment, please reference the WEQ Procedures: http://www.naesb.org/pdf/weq_quadrant_procedures.doc

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
11	Barclays Bank PLC	s	Guy Kern-Martin	
12	Bentek Energy, LLC	s	E. Russell Braziel	
13	BG Energy Merchants, LLC	s	Martha Braddy, Denise Almoina, Susan Bailey, Melody Fontenot	
14	Boardwalk Pipelines, LP	pl	Randy Young, Mitch Whitehead	
15	Boeing Co., The	e	Tina Burnett	
16	BP Energy	pr	Mark Stultz, Rhonda Denton	
17	Calpine Energy Services, LP	e	Shonnie Daniel, Jay Dibble	
18	Cargill Incorporated	s	Lester Welch	
19	Carolina Gas Transmission Corporation	pl	Rae Davis, Dana B. Randall	
20	CenterPoint Energy Gas Services, Inc.	s	James G. Beste, Larry Kunkle	
21	CenterPoint Energy Gas Transmission Company	pl	Larry Thomas	
22	CenterPoint Energy Mississippi River Transmission Corporation	pl	Robert Trost	
23	Cheniere Pipeline Company	pl	Whit Scott	
24	Chevron Natural Gas	pr	Charles (Chuck) Cook	
25	Chevron Pipe Line Company	pl	Mary Anne Collins, Deborah Plattsmier, Jeff Kirk	
26	Cimarex Energy Co.	pr	Charlotte Baker	
27	Citigroup Energy Inc.	s	Carrie Southard, Angela Davis	
28	Colorado Springs Utilities	l	Joe M. Holmes	
29	Columbia Gas Transmission	pl	Claire Burum	
30	Comprehensive Energy Services	e	Jim Templeton	
31	ConocoPhillips Gas and Power	pr	Peter Frost	
32	Consolidated Edison Company of NY	l	Scott Butler, Paul Olmsted	
33	Constellation Energy Commodities Group Inc.	s	Lisa Simpkins, Joseph Kirwan, Andrea Kullman, Jennifer Scott	
34	Dauphin Island Gathering Partners	pl	Katie Rice	
35	DB Energy Trading	s	William Donnelly, Travis McCullough	
36	Defense Energy Support Center	e	Veronica Jones, Kevin Ahern	
37	Department of Energy	e	Christopher Freitas	
38	Devon Energy Corporation	pr	Bill Green	
39	Dominion Resources	l	Craig Columbo	
40	Dominion Transmission, Inc.	pl	Gary Sypolt, Iris King	
41	DTE Energy Trading, Inc.	s	Gregory V. Staton, James Buck, Dena Crawford, Marcia L. Hissong, Ann Marie Jambor, Cynthia Klots, Shelley Greene	
42	El Paso Natural Gas	pl	William Griffith	
43	El Paso Exploration & Production Company	pr	David A. Webster, Stephanie Karm	
44	Enbridge Energy Company, Inc.	pl	Terry McGill	
45	EnCana Marketing (USA) Inc.	s	Keith Sappenfield	
46	EnCana Corporation	pr	Keith Sappenfield	
47	Energy East Management Corporation	l	Mark Marini	

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
48	Entergy Services, Inc.	e	Laura Berryman, Terry Shields	
49	Enterprise Products Partners L.P.	pl	Richard W. Porter, Jeff Molinaro	
50	Equitrans, LP	pl	Joseph M. Dawley	
51	ExxonMobil Gas & Power Marketing Company a division of Exxon Mobil Corporation	pr	John W. Poe, Greg Belyakov	
52	Florida Power & Light Company	e	Dona Gussow, Art Morris	
53	Foothills Energy Ventures, LLC	pr	Marty Patterson	
54	FPL Energy Power Marketing, LLC	e	Marty Jo Rogers	
55	Gas Transmission Northwest Corp.	pl	Jay Story	
56	Golden Pass Pipeline, LLC	pl	Susan Braden	
57	Goodrich Petroleum Company, L.L.C.	pr	Bill Hebenstreit	
58	Great Lakes Gas Transmission	pl	Gene Fava	
59	High Mount Exploration and Production, Inc.	pr	David Ogden, Gary Weaver, Sheri Heslington	
60	Houston Pipe Line Company LP	pl	Josie Castrejana, Melissa Graves, Robert Walker	
61	Husky Energy Marketing, Inc.	pr	Jan Bindon	
62	Husky Gas Marketing, Inc.	pr	Jan Bindon	
63	Husky Marketing and Supply Company	e	Jan Bindon	
64	Imperial Irrigation District	e	William Rapp	
65	Integrys Energy Group, Inc.	l	David E. Wear	
66	Iroquois Gas Transmission System	pl	Tom Gwilliam	
67	JP Morgan Ventures Energy Corp	S	Paul Tramonte	
68	Kern River Gas Transmission Co	pl	Brenda Horton	
69	Laclede Gas Co.	l	Kenneth Neises	
70	Latitude Technologies	s	Leigh Spangler	
71	Louis Dreyfus Energy Services	s	Mary Ellen Bell, Ruby H. Melton	
72	Lower Colorado River Authority	e	Mickey Bell	
73	Macquarie Cook Energy, LLC	s	Angela Jones	
74	Marathon Oil Company	pr	Robin Perrine	
75	Mewbourne Oil Company	pr	Michael F. Shepard	
76	Mirant Energy Trading, LLC	e	Laura Trautman, John F. Hogan	
77	National Fuel Gas Distribution	l	Michael Novak	
78	National Fuel Gas Supply Corp.	pl	Joseph Kardas	
79	National Grid Gas Distribution Companies	l	Bob Superty	
80	Natural Gas Pipeline Co of America	pl	Paul Love, Stan Thomas, Mike Schisler, Paul Haas	
81	New Jersey Natural Gas Company	l	Douglas C. Rudd	
82	Nexen Marketing	s	Shelley Leavitt	
83	NiSource, Inc.	l	George Simmons, Sorana Linder	
84	Noble Energy, Inc.	pr	Richard Smith, Tammy M. Stevens	
85	Northern Border Pipeline Company	pl	Scott Coburn	
86	Northern Natural Gas	pl	Mary Darveaux	
87	Northwest Natural Gas Company	l	Randolph Friedman	

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
88	NOVA Gas Transmission Ltd.	pl	Doug Miller	
89	OGE Energy Resources, Inc.	s	Cary Metz	
90	ONEOK	l	Richard Tangeman	
91	ONEOK Partners GP, LLC	pl	Teri Tingler	
92	Ozark Gas Transmission, LLC	pl	David A. Harrell	
93	Pacific Gas & Electric	l	John Breen, Don Petersen	
94	Panhandle Eastern Pipe Line	pl	William Grygar, Kim Van Pelt	
95	PECO Energy Co.	l	Reed R. Horting	
96	Pemex Gas Y Petroquimica Basica	s	Juan Enrique Gonzalez Azuara	
97	Peoples Gas System (A division of Tampa Electric Co)	l	Wraye Grimard	
98	Platts	s	Bill Murphy	
99	Portland Natural Gas Transmission System	pl	David Haag	
100	PPL EnergyPlus, LLC	e	Anne Lovett	
101	Public Service Electric & Gas	l	David Wohlfarth	
102	Questar Pipeline Co.	pl	Scott Hansen	
103	Quorum Business Solutions Inc.	s	Anne Golenternek, Michael Lewis	
104	Reliance Gas Transportation Infrastructure Limited	pl	Jagjit S. Yadav	
105	Salt River Project Agricultural Improvement & Power District	e	Lori-Lynn C. Pennock	
106	Sempra Energy - Southern California Gas Co.	l	Lee Stewart, Rodger Schwecke	
107	Sequent Energy Management, L.P.	s	Pat Metteauer	
108	Shell Energy North America (US), L.P.	s	Eric Gillaspie	
109	SolArc, Inc.	s	Mark Davis	
110	Southern California Edison Company	e	Roman Bakke, Curt Roney	
111	Southern Company Services, Inc.	e	Alan Kilpatrick, Bryan Mitchell	
112	Southern Natural Gas Co.	pl	Renee Hyde, Tracey Nicholson, Ludean Wyatt	
113	Southern Star Central Gas Pipeline	pl	Philip Rullman, Dale Sanders	
114	Southwest Gas Corporation	l	Larry Black	
115	Spectra Energy Transmission	pl	Richard Kruse	
116	SUEZ Energy Marketing NA, Inc.	s	Shirley Tidor	
117	SunGard	s	Lucia Nail	
118	Tennessee Gas Pipeline Company	pl	Sue Barry, Mark Gracey	
119	Tennessee Valley Authority	e	Valerie Crockett	
120	Tiger Natural Gas	s	Tracy Phillips	
121	TransCanada Pipelines	pl	Doug Miller	
122	Transwestern Pipeline Company, LLC	pl	Blair V. Lichtenwalter, Mary Draemer, David Mendoza	
123	Vector Pipeline L.P.	pl	Amy Bruhn	
124	Vega Energy Partners, Ltd	s	Julie Pincus, Lori Leeder	
125	Washington Gas Light Co.	l	Adrian Chapman, Mark Lowe, Paul Buckley	
126	Williams Gas Marketing, Inc.	s	Rich Ficken	

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
127	Williams Gas Pipeline	pl	Dale Davis, Christopher Burden	
128	Williston Basin Interstate Pipeline	pl	Keith Tiggelaar, Gwen Schoepp, Kelly Brooks, Lori Myerchin	
Wholesale Electric Quadrant Members:				
1	ACES Power Marketing LLC	m	Roy J. True, Amadou Fall	muni
2	Alabama Municipal Electric Authority	d	Ray Phillips	muni
3	Alberta Electric System Operator	i	Diana Pommen, Henry Ren	
4	American Electric Power Service Corp.	d	Barbara Radous, Joseph Hartsoe, Phil Cox	iou
5	American Municipal Power - Ohio, Inc.	m	Mack Thompson, Chris Norton	muni
6	American Public Power Association	d	Allen Mosher	muni
7	American Wind Energy Association	g	Robert Gramlich	merc
8	APS Marketing and Trading	m	Steve Norris	iou
9	Arizona Public Service Company	t	Mark W. Hackney	iou
10	Arkansas Electric Cooperative Corporation	g	Ricky Bittle	muni
11	Basin Electric Power Cooperative	t	Dan Klempel	muni
12	Basin Electric Power Cooperative	m	David Raatz	muni
13	Basin Electric Power Cooperative	g	Jason Doerr	muni
14	Black Hills Corporation	t	Larry D. Williamson	iou
15	Bonneville Power Administration	d	Sydney D. Berwager	other
16	Bonneville Power Administration	g	Francis Halpin, Robin Chung	fed
17	Bonneville Power Administration	m	Brenda Anderson	fed
18	Bonneville Power Administration	t	Barbara Rehman, Tom Davis	fed
19	BP America Inc.	e	Jeanne Zaiontz	lind
20	British Columbia Transmission Corporation	t	Rohan Soulsby	fed
21	California Department of Water Resources	g	William (Bill) Forsythe, Chi Doan	fed
22	California ISO	i	Yakout Mansour	
23	Central Electric Power Cooperative	d	Arthur Fusco	muni
24	Cleco Power, LLC	t	Cindy Guillot	iou
25	Comprehensive Energy Services	e	Jim Templeton	enduse
26	Conectiv Energy Supply, Inc.	g	Gloria Godson	merc
27	Consolidated Edison Company of New York, Inc.	t	Scott Butler	iou
28	Consumers Energy Company	d	Andrew C. Dotterweich, Frank Johnson	iou
29	Dairyland Power Cooperative	t	Chuck Callies	muni
30	Deseret Power Electric Co-op	g	Curt Winterfeld	muni
31	Dominion Energy Marketing, Inc.	g	Lou Oberski, Jalal Babik	iou
32	Duke Energy Americas, LLC (DEA)	g	Walt Yeager	iou
33	Duke Energy Corp.	d	Alan Pritchard	iou
34	Dynegy Power Marketing, Inc.	g	Barry Huddleston	merc
35	Edison Electric Institute	n	David Owens, Dave Dworzak, James P. Fama	N
36	Edison Mission Marketing & Trading, Inc.	g	William Roberts	merc

North American Energy Standards Board Membership List
As of September 4, 2009

	Organization	Seg[1]	Contact	Sub-Seg[2]
37	Electric Power Supply Association	m	Jack Cashin, Barry Green	at large
38	Electric Reliability Council of Texas (ERCOT)	i	Bill Blevins, Paul Wattles, Joel Mickey	
39	Empire District Electric Company, The	t	Bary K. Warren	iou
40	Energy East Management Corporation	t	Mark Marini	iou
41	EnerNOC, Inc.	e	Aaron Breidenbaugh	end use
42	Entegra Power Group, LLC	g	Rebecca Turner	merc
43	Entergy Services, Inc.	t	Edward J. Davis, Narinder Saini	iou
44	Exelon Generation - Power Team	m	Jack Crowley	iou
45	First Energy Service Company	d	Robert M. Martinko, Thomas C. Burgess	iou
46	FirstEnergy Solutions Corp.	m	Mark Travaglianti	iou
47	Florida Municipal Power Agency	g	Frank Gaffney	muni
48	Florida Municipal Power Agency	d	Frank Gaffney	muni
49	Florida Power & Light Company	m	Gerry Yupp, Tim Gerrish	iou
50	Florida Power & Light Company	t	Marty Mennes, Bob Birch	iou
51	Georgia Transmission Corporation	t	Patrick McGovern	muni
52	Hydro One Networks	t	Mark Graham	itc
53	Hydro – Quebec Transenergie	t	Glenn Sylvain	fed
54	Idaho Power Company	t	Tessia Park	iou
55	Independent Electricity System Operator (IESO)	i	Cristian Dragnea, Biju Gopi	
56	Indiana Municipal Power Agency	g	Scott Berry	muni
57	ISO New England, Inc.	i	Matthew F. Goldberg	
58	Lincoln Electric System	g	Douglas Bantam	muni
59	Los Angeles Department of Water and Power	t	Mohammed Johar Beshir	muni
60	Los Angeles Department of Water and Power	m	Bradford L. Packer, Joel F. Cordero	muni
61	Michigan Public Power Agency	d	James R. Nickel, Daniel E. Cooper	muni
62	MidAmerican Energy Company	m	Dennis Kimm	iou
63	Midwest Independent Transmission System Operator	i	William (Bill) Phillips, Ed Skiba	
64	Midwest Reliability Organization	t	Dan Schoenecker	at large
65	Missouri River Energy Services	d	Brian Zavesky	muni
66	Modesto Irrigation District	t	Roger Van Hoy	muni
67	National Association of Regulatory Utility Commissioners	e	Lou Ann Westerfield	reg
68	National Grid	t	Edward M. Kremzier	iou
69	National Rural Electric Cooperative Assoc.	d	Barry Lawson, Paul McCurley	muni/coop
70	Navigant Consulting, Inc.	m	Richard G. Smead, Laurie J. Oppel, Kenneth C. Lotterhos	at large
71	New York Independent System Operator (NYISO)	i	Rana Mukerji	
72	New York State Reliability Council	d	P. Donald Raymond	at large
73	North American Electric Reliability Corporation	d	Gerry Adamski, Andy Rodriquez	at large
74	North Carolina Electric Membership Corporation	d	David Beam	muni

North American Energy Standards Board Membership List
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	Organization	Seg[1]	Contact	Sub-Seg[2]
75	NCMPA1	d	Martin Summe, George Landis	muni
76	Northeast Utilities Service Company	t	David Boguslawski, Calvin A. Bowie	iou
77	Northwestern Corporation	t	Mike Cashell	iou
78	NRG Energy, Inc.	g	Alan Johnson, Jennifer J. Vosburg	merc
79	NV Energy	m	Sheryl Torrey	iou
80	NV Energy, Inc.	t	Patricia Englin	iou
81	Open Access Technology International, Inc.	e	Michehl Gent	at large
82	Open Access Technology International, Inc.	t	Paul R. Sorenson	at large
83	PacifiCorp	m	John Apperson	iou
84	PacifiCorp	t	Shay Labray	iou
85	PHI Power Delivery	t	Ken Gates	iou
86	PJM Interconnection	i	Patrick Brown, Cathy Wesley	
87	Portland General Electric	t	Frank Afranji, John Walker	iou
88	Powerex Corp	m	Michael L McWilliams, Sharole Tylor	fed
89	PowerSouth Energy Cooperative	d	William Ronald Graham	muni
90	PPL Electric Utilities Corporation	t	Ray Mammarella	iou
91	Progress Energy (Regulated)	m	James Eckelkamp	iou
92	Progress Energy	t	Phillip W. Lewis, Michael Anthony, Leslie Williams, Lee Schuster	iou
93	Public Service Company of New Mexico	m	Steven Maestas, Darren Wilkins, Patricia Merville	iou
94	Public Service Electric and Gas Company	d	Jeffrey C. Mueller	iou
95	Public Service Electric and Gas Company	t	Kenneth D. Brown	iou
96	Puget Sound Energy, Inc.	t	George Marshall, Bob Harshbarger	iou
97	Qualedi, Inc.	g	Stephen A. Morocco	at large
98	RRI Energy Services, Inc.	g	Trent Carlson	merc
99	Sacramento Municipal Utility District	d	Steve Sorey	muni
100	Salt River Project Agricultural Improvement and Power District	t	Wendy Weathers, Michael J. Pfeister	fed
101	Salt River Project Agricultural improvement and Power District	m	Richard Lehman	fed
102	San Diego Gas & Electric Company	t	Patricia vanMidde	iou
103	Santee Cooper	t	Tom Abrams	fed
104	Seattle City Light	d	Marilynn Semro, Thomas P. Rowan, Doug Rough	muni
105	Seminole Electric Cooperative, Inc.	m	Steve Wallace	muni
106	Shell Energy America (US), L.P.	m	Robert Reilley, Paul Kerr	niou
107	Shift Research, LLC	e	Jesse D. Hurley	at large
108	South Carolina Electric & Gas Company	t	S. Porcher Stoney	iou
109	South Carolina Electric & Gas Company	m	Kevin Spitzform	iou
110	Southeastern Power Administration	g	Bob Goss	fed
111	Southern California Edison	t	Weston Williams	iou
112	Southern California Edison Co.	g	Tracy Bibb	iou

North American Energy Standards Board Membership List
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	Organization	Seg[1]	Contact	Sub-Seg[2]
113	Southern Company Services, Inc.	d	Gary Rozier, Greg Butrus	iou
114	Southern Company Services, Inc.	g	John Ciza	iou
115	Southern Company Services, Inc.	m	Joel Dison	iou
116	Southern Company Services, Inc.	t	R.D. (Dean) Ulch, John Lucas, JT Wood, James Y. Busbin, Daryl McGee	iou
117	Southwest Power Pool	i	Carl Monroe, Michael Desselle, Charles Yeung	
118	Southwest Transmission Cooperative, Inc.	t	Larry D. Huff	muni
119	Southwestern Power Administration	t	Tracey Stewart	fed
120	SunGard	e	Andrew Tritch	at large
121	Tampa Electric Company	m	Gail M. McKaig	iou
122	Tenaska, Inc.	g	Scott Helyer	merc
123	Tennessee Valley Authority	d	Emily Oxford, Dianne H. Nunez	other
124	Tennessee Valley Authority	g	Kathy York	fed
125	Tennessee Valley Authority	m	Belinda Thornton, Valerie Crockett	fed
126	Tennessee Valley Authority	t	Chuck Feagans	fed
127	TranServ International, Inc.	i	Kevin Burns	
128	Tri-State Generation and Transmission Association, Inc.	t	Keith V. Carman	muni
129	Tri-State G&T Association, Inc.	g	Janelle Marriott	muni
130	Tucson Electric Power Company	t	Raquel Aguilar, Judy Fregoso, Ed Beck	iou
131	United Illuminating Company, The	t	Rose Pysh	iou
132	Vermont Public Power Supply Authority	g	William J. Gallagher	muni
133	Westar Energy, Inc.	g	Shah Hossain, Grant Wilkerson	iou
134	Western Area Power Administration	t	JB Hite	fed
135	Western Area Power Administration	m	Jeffrey Ackerman	fed
136	Western Electricity Coordinating Council	t	Michelle Mizumori, Louise McCarren	at large
137	We Energies (Wisconsin Electric)	d	Linda Horn	iou
138	We Energies (Wisconsin Electric)	g	James R. Keller	iou
139	WPPI Energy	d	Mike Stuart	muni
140	Wisconsin Public Service Corporation	g	Christopher Plante, Charles W. Severance, Neal Balu	iou
141	Xcel Energy Inc.	m	David Lemmons	iou
Retail Gas Quadrant Members:				
1	AGL Resources Inc.	d	Gregory Becker	
2	Allegro Development	s	Kimberly Page	
3	American Public Gas Association (APGA)	d	Alonzo Weaver, Joe Stengel	
4	Asgard Energy, LLC	su	Rhett C. Shumway	
5	Baltimore Gas & Electric Company	d	Phil Precht	
6	Capacity Center	s	Greg Lander	
7	Clarity Systems, Ltd.	s	Paul Hill	
8	Dominion Retail, Inc.	su	Richard A. Zollars	

North American Energy Standards Board Membership List
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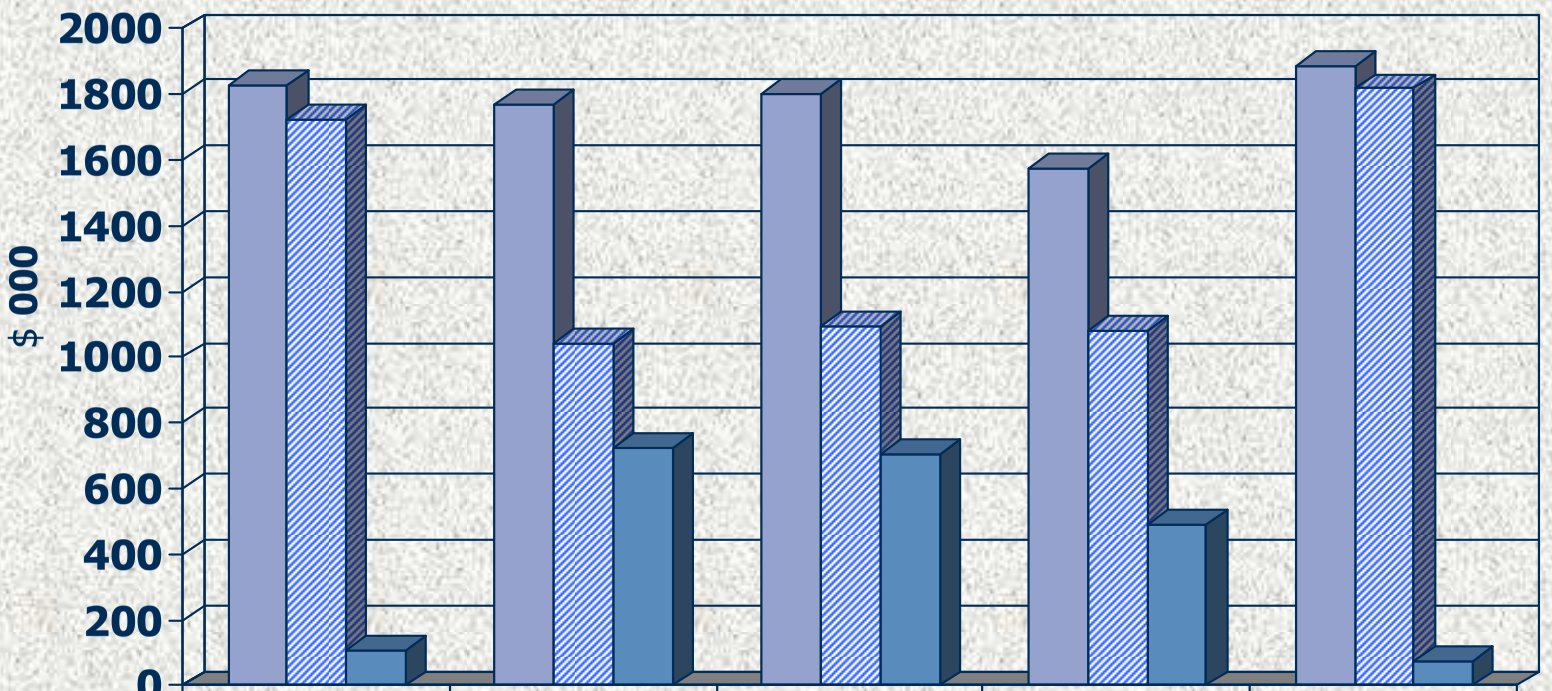
	Organization	Seg[1]	Contact	Sub-Seg[2]
9	Duke Energy Corp	d	Dan Jones	
10	Exelon Energy	su	Sheree M. Petrone	
11	International LNG Alliance	s	David Sweet	
12	Interstate Gas Supply	su	Ginger Fletcher	
13	Latitude Technologies	s	Leigh Spangler	
14	National Fuel Gas Distribution Corporation	d	Mike Novak	
15	Pennsylvania Office of Consumer Advocate	e	Tanya J. McCloskey	
16	Sprague Energy Corp.	su	Paul Scoff	
17	Systrends USA	s	Dave Darnell	
18	UGI Utilities, Inc.	d	Paul Szykman	
19	Vectren Retail, LLC	su	Tami Wilson	
20	Wisconsin Public Service Corporation	d	Dennis Derricks, Ken Thiry, Les Nishida	

North American Energy Standards Board
Board of Directors Meeting – 9-24-09

As of July 31, 2009 Accrual Based Income and Expenses



	2009 Budget	YTD Jul Bud	YTD Jul Act	YTD Jul 08	YE Est. 2009
Income	1829	1769	1800	1575	1889
Expense	1721	1042	1093	1082	1818
Net Income	108	727	707	493	72

North American Energy Standards Board

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Home Page: www.naesb.org

MEMBERSHIP STATISTICS

- **December 31, 2008**: Membership in December is 327. Membership by quadrant is: 135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ). Year to date, we have had 25 new memberships (8 – WEQ, 3 – REQ, 1 – RGQ, 13 – WGQ) and 34 member resignations (7 – WGQ, 6 – REQ, 8 – RGQ, 13 – WEQ). We began the year with 336 members **(**127 (WGQ), 26 (REQ), 26 (RGQ), 157 (WEQ)).
- **January 31, 2009:** Membership in January is 322. Membership by quadrant is: 134 (WGQ), 23 (REQ), 18 (RGQ), 147 (WEQ). Year to date, we have had three new memberships (2 – WEQ, 0 – REQ, 0 – RGQ, 1 – WGQ) and nine member resignation (3 – WGQ, 0 – REQ, 1 – RGQ, 5- WEQ). We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In March we had three new members join Golden Pass Pipeline, LLC (WGQ, Pipeline), Los Angeles Department of Water and Power (WEQ, Transmission, Muni/Coop), and Los Angeles Department of Water and Power (WEQ, Marketers/Brokers, Muni/Coop). We had eight member resignations Cascade Natural Gas Corporation (WGQ, LDC), UBS Energy LLC (WGQ, Services), Xcel Energy (RGQ, Distribution), Imperial Irrigation District (WEQ, Marketers/Brokers, Muni/Coop), PSEG Energy Resources and Trading LLC (WEQ, Marketers/Brokers, IOU), PSEG Power, LLC (WEQ, Generation, Merc), North Carolina Electric Municipal Power Agency #1 (WEQ, Marketers/Brokers, Muni/Coop), and ElectriCities of North Carolina (WEQ, Generation, Muni/Coop).
- **February 28, 2009:** Membership in February is 320. Membership by quadrant is: 133 (WGQ), 23 (REQ), 18 (RGQ), 146 (WEQ). Year to date, we have had three new memberships (2 – WEQ, 0 – REQ, 0 – RGQ, 1 – WGQ) and 10 member resignation (4 – WGQ, 0 – REQ, 1 – RGQ, 6- WEQ). We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In February we had no new members join. We had two member resignations SUEZ Energy Marketing NA, Inc. (WEQ, Marketers/Brokers, Not IOU) and Westfield Gas & Electric Light Dept. (WGQ, LDC).
- **April 30, 2009:** Membership in April is 316. Membership by quadrant is: 130 (WGQ), 22 (REQ), 18 (RGQ), 146 (WEQ). Year to date, we have had five new memberships (4 – WEQ, 0 – REQ, 0 – RGQ, 1 – WGQ) and 16 member resignation (6 – WGQ, 1 – REQ, 1 – RGQ, 8- WEQ). We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In April, we had two new members join, Alabama Municipal Electric Authority (WEQ, Distribution, Muni/Coop) and SunGard Consulting Services, LLC (WEQ, End User, at large). We had two member resignations Otter Tail Power Company (WEQ, Transmission, IOU) and Public Service Electric & Gas Company (REQ, Distribution).
- **May 31, 2009:** Membership in May is 311. Membership by quadrant is: 127 (WGQ), 21 (REQ), 18 (RGQ), 145 (WEQ). Year to date, we have had five new memberships (4 – WEQ, 0 – REQ, 0 – RGQ, 1 – WGQ) and 21 member resignation (9 – WGQ, 2 – REQ, 1 – RGQ, 9- WEQ). We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In May, we had no new members join. We had five member resignations, Virginia Power Energy Marketing (WGQ, Services), Cheniere LNG Marketing (WGQ, Services), MidAmerican Energy Company (REQ, Distribution), Public Power Council (WEQ, Distribution, Muni/Coop) and NiSource, Inc. (WGQ, LDC).
- **June 30, 2009:** Membership in June is 310. Membership by quadrant is: 127 (WGQ), 22 (REQ), 19 (RGQ), 142 (WEQ). Year to date, we have had seven new memberships (4 – WEQ, 1 – REQ, 1 – RGQ, 1 – WGQ) and 24 member resignation (9 – WGQ, 3 – REQ, 1 – RGQ, 11- WEQ) and *one reclassification of membership for Sungard Consulting Services, LLC membership from WEQ, end user, at large to REQ, services on June 11, 2009*. We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In June, we had two new members join Asgard Energy, LLC (RGQ, Supplier) and City of Houston (REQ, End Users). We had three member resignations, Exxon Mobil Gas Marketing (WEQ, Generation, Self Generator), Office of Public Advocate, State of Maine (REQ, End Users) and PacifiCorp (WEQ, Generation, IOU).

North American Energy Standards Board

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Home Page: www.naesb.org

- **July 31, 2009:** Membership in June is 309. Membership by quadrant is: 128 (WGQ), 21 (REQ), 19 (RGQ), 141 (WEQ). Year to date, we have had nine new memberships (6 – WEQ, 1 – REQ, 1 – RGQ, 1 – WGQ) and 27 member resignation (8 – WGQ, 4 – REQ, 1 – RGQ, 14- WEQ (*Note: NiSource, Inc. was reinstated July 1, 2009 in the WGQ, LDC segment*)) and *one reclassification of membership for Sungard Consulting Services, LLC membership from WEQ, end user, at large to REQ, services on June 11, 2009*. We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In July, we had two new member join, Arkansas Electric Cooperative Corporation (WEQ, Generation, Muni/Coop) and Shift Research, LLC (WEQ, End User, at large). We had four member resignations, Ameren Services (WEQ, Marketer/Broker, IOU), Consolidated Edison Company of NY (REQ, Distribution), Ontario Power Generation (WEQ, Generation, Merchant) and Portland General Electric (WEQ, Marketer/Broker, IOU).
- **August 31, 2009:** Membership in August is 309. Membership by quadrant is: 128 (WGQ), 21 (REQ), 19 (RGQ), 141 (WEQ). Year to date, we have had ten new memberships (6 – WEQ, 2 – REQ, 1 – RGQ, 1 – WGQ) and 28 member resignation (8 – WGQ, 5 – REQ, 1 – RGQ, 14- WEQ (*Note: NiSource, Inc. was reinstated July 1, 2009 in the WGQ, LDC segment*)) and *one reclassification of membership for Sungard Consulting Services, LLC membership from WEQ, end user, at large to REQ, services on June 11, 2009*. We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). In August, we had one new member join, Pennsylvania Public Utility Commission (REQ, End Users). We had one member resignation, Advantage IQ, Inc. (REQ, End Users).
- **September 4, 2009:** Membership as of September 4 is 310. Membership by quadrant is: 128 (WGQ), 21 (REQ), 20 (RGQ), 141 (WEQ). Year to date, we have had 11 new memberships (6 – WEQ, 2 – REQ, 2 – RGQ, 1 – WGQ) and 28 member resignation (8 – WGQ, 5 – REQ, 1 – RGQ, 14- WEQ (*Note: NiSource, Inc. was reinstated July 1, 2009 in the WGQ, LDC segment*)) and *one reclassification of membership for Sungard Consulting Services, LLC membership from WEQ, end user, at large to REQ, services on June 11, 2009*. We began the year with 327 members **(**135 (WGQ), 23 (REQ), 19 (RGQ), 150 (WEQ)). As of September 4, we had one new member join, Clarity Systems, Ltd. (RGQ, Services). We have received no resignations.

North American Energy Standards Board
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MEETING STATISTICS

Month	Event	WEQ	WGQ	Retail	Joint	Board
January	Meetings/Hours	7/32	3/12.5	0	1/5	0
	Conf. Calls/Hours	8/22	4/7	5/11	5/9	0
February	Meeting/Hours	4/18	4/19	2/7	0	0
	Conf. Calls/Hours	5/16.5	0	0	1/2	1/2
March	Meeting/Hours	8/41	6/29.5	0	0	2/5
	Conf. Calls/Hours	6/21	2/5	5/13	2/4	0
April	Meeting/Hours	4/24	5/28	0	1/4	0
	Conf. Calls/Hours	6/21.5	6/14	2/7	4/8	0
May	Meeting/Hours	9/51	3/17	1/5	0	0
	Conf. Calls/Hours	4/14	3/6.5	2/3.5	4/8.5	1/2
June	Meeting/Hours	6/33	3/18	1/2	1/4	2.5
	Conf. Calls/Hours	6/23	2/4	4/4.5	3/5.5	0
July	Meeting/Hours	5/31	5/25.5	0	1/5	0
	Conf. Calls/Hours	4/16	1/1	1/5	6/12	0
August	Meeting/Hours	7/42	3/16	0	1/3.5	0
	Conf. Calls/Hours	2/9	0	1/2	1/3	0
September	Meeting/Hours					
	Conf. Calls/Hours					
October	Meeting/Hours					
	Conf. Calls/Hours					
November	Meeting/Hours					
	Conf. Call/Hours					
December	Meeting/Hours					
	Conf. Call/Hours					
Total	**Meetings/Hours**	**50/272**	**32/165**	**4/14**	**5/21.5**	**4/10**
	Conf. Calls/Hours	**41/143**	**18/37.5**	**20/46**	**26/52**	**2/4**

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PRODUCT ACCESS

- **Monthly:** The copyright policy and list of companies with authorized access to our standards is prepared monthly and posted on the NAESB web site. It includes all companies who have legal access to the NAESB standards.
- **September 1, 2009:** The copyright report as of September 1, 2009 is posted on the web site. Statistics for purchases of standards are maintained monthly and can be seen below as of August 31, 2009.

Purchases of NAESB Products as of August 31, 2009

Product	J	F	M	A	M	J	J	A	S	O	N	D	Total
NAESB Home Page Access for Password Protected Area ($3500)	2	0	1	2	0	0	2	1					**8**
NAESB WGQ / REQ / RGQ Internet Electronic Transport Manual, Version 1.0 ($150/$900)	0	0	0	0	0	0	0	0					**0**
Retail Base Contract for Sales/Purchase of Natural Gas/Electricity ($25/$50)	0	0	4	2	2	1	1	0					**10**
WGQ Base Contract for Sales/Purchases of Natural Gas/FTAA/OBA (Versions 1.7 and older) ($25/$50 ea)	0	0	0	0	0	0	0	1					**1**
WGQ Base Contract for Sales/Purchases of Natural Gas/FTAA/OBA (Version 1.8) ($25/$50 ea)	13	9	3	16	6	2	1	4					**54**
WGQ Electronic CD-Rom of Standards Manuals (Versions 1.7 and older) ($150/$900)	0	4	0	1	1	2	0	0					**8**
WGQ Electronic CD-Rom of Standards Manuals (Version 1.8) ($150/$900)	10	2	1	3	7	3	0	1					**27**
WEQ Electronic CD-Rom of Standards Manuals (Versions 002 and older) ($150/$900)	3	0	0	0	0	0	0	0					**3**
WEQ Electronic CD-Rom of Standards Manuals (Version 002.1) ($150/$900)	0	0	0	1	1	0	2	0					**4**
NAESB WGQ Contracts Course/ eTariff Workshop CD-Rom	34	0	0	0	0	0	11	0					**45**
NAESB REQ/RGQ Model Business Practices CD-Rom ($150/$900)	0	0	0	0	0	0	0	1					**1**
Final Actions ($50)	0	0	0	0	2	0	1	0					**3**
Total	**62**	**15**	**9**	**25**	**19**	**8**	**18**	**8**					**164**

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FINANCIAL REPORT

- **YE December 31, 2008:** Total assets and total liabilities and equity for the yearend 2008 were $853,280.24. Accounts Receivables related to outstanding membership dues were $312,500, of which $282,500 were related to 2009 dues. $25,000 is 90 days or more in arrears, and $5,000 is 30 days or less in arrears. Our net income year end is a negative $118,025.20 (Expenses $1,794,011.95 and net revenue of $1,675,986.75). On a cash basis, we have an ending balance as of December 31 of $463,306.
- **2009 Budget:** On December 18, 2008, the Board approved the budget for 2009 at $1,829,143.48 (http://www.naesb.org/misc/budget_121808.pdf). The dues increases approved by the Board at the September 2008 meeting begin to take effect in 2009, ($5000 annual membership dues were increased to $6500). The full effect of the dues increase will not be seen until 2010, as dues for 2009 at $5000 extend into 2010 on a calendar basis for a significant portion of the members.

FINANCIAL REPORT YEAR-TO-DATE 2009 – ACCRUAL BASED, AS OF JULY 31, 2009

BALANCE SHEET

Assets	
Current Assets	$529,683.80
Accounts Receivable	$347,100.00
Fixed Assets	$46,601.72
Other Assets	$10,277.94
Total Assets	$933,663.46
Liability & Equity	
Deferred Revenue	$579,916.65
Accounts Payable	$21,045.09
Retained Earnings	($374,185.91)
Net Income	$706,887.63
Total Liability and Equity	$933,663.46

INCOME AND EXPENSE

Income	$1,799,620.20
Expense	$1,092,732.57
Net Income	$706,887.63

INCOME AND EXPENSES TO BUDGET - YTD

2009 YTD Budget for Income	$1,768,630.99
Income Variance	$30,989.21
2009 YTD Budget for Expenses	$1,041,994.44
Expenses Variance	$50,738.13

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YEAR END ANALYSIS

2009 Budget	$1,829,143.48
Revenue YTD Actual	$1,799,620.20
Remaining Revenue Estimated through YE	$90,000.00
Estimated YE Revenue	$1,889,620.20
Expenses YTD Actual	$1,092,732.57
Remaining Expenses Estimated through YE	$725,000.00
Estimated YE Expenses	$1,817,732.57
Difference – YE Revenue – YE Expenses	$71,887.63

CASH BASIS ANALYSIS

Beginning Balance 1-1-09	$463,306
Total Cash Income	$1,162,207
Total Costs	$1,102,895
Ending Balance	$522,618

ACCOUNTS RECEIVABLE ANALYSIS

Accounts Receivable	$347,100
Items more than 60 Days Outstanding	$46,000
Items 60 Days Outstanding	$156,500
Items 30 Days or less Outstanding	$144,600

DISHONGH, JANKOWSKI & EUBANK, P.C.
CERTIFIED PUBLIC ACCOUNTANTS

800 Gessner, Suite 12
Houston, Texas 770
(713) 932-67
Fax (713) 932-61

To the Managing Board of Directors
North American Energy Standards Board
Houston, Texas

We have reviewed the accompanying statements of financial position of the North American Energy Standards Board (a non-profit organization) as of December 31, 2008 and 2007, and the related statements of activities and cash flows for the years then ended, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management of the North American Energy Standards Board.

A review consists primarily of inquiries of company personnel and analytical procedures applied to financial data. It is substantially less in scope than an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modification that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles.

Dishongh, Jankowski & Eubank, P.C.

Dishongh, Jankowski & Eubank, P.C.
Certified Public Accountants
Houston, Texas
August 10, 2009

NORTH AMERICAN ENERGY STANDARDS BOARD

STATEMENTS OF FINANCIAL POSITION

As Of December 31, 2008 and 2007

	2008	2007
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 463,306.45	$ 498,320.28
Accounts receivable	312,500.00	296,500.00
Prepaid expenses	17,087.21	25,431.93
TOTAL CURRENT ASSETS	792,893.66	820,252.21
PROPERTY AND EQUIPMENT		
Furniture, fixtures and equipment	246,729.69	229,729.06
Leasehold improvements	6,679.18	6,679.18
	253,408.87	236,408.24
Less accumulated depreciation	203,300.23	185,831.16
NET PROPERTY AND EQUIPMENT	50,108.64	50,577.08
OTHER ASSETS		
Deposits	10,277.94	10,277.94
TOTAL ASSETS	$ 853,280.24	$ 881,107.23
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Accounts payable	$ 52,132.82	$ 51,642.91
Accrued salaries	94,700.00	87,500.00
Deferred revenue	1,175,333.33	1,085,625.03
TOTAL CURRENT LIABILITIES	1,322,166.15	1,224,767.94
UNRESTRICTED NET ASSETS (DEFICIT)	(468,885.91)	(343,660.71)
TOTAL LIABILITIES AND NET ASSETS	$ 853,280.24	$ 881,107.23

See Accompanying Notes and Accountants' Review Report

NORTH AMERICAN ENERGY STANDARDS BOARD

STATEMENTS OF ACTIVITIES

For The Years Ended December 31, 2008 and 2007

	ALL UNRESTRICTED 2008	ALL UNRESTRICTED 2007
REVENUES AND OTHER SUPPORT		
Dues	$ 1,558,791.70	$ 1,589,583.37
Home page & access fees	18,000.00	7,000.00
Workshops and seminars	54,410.00	51,150.00
Standards and contract sales	47,789.89	50,411.05
Certification	11,000.00	6,000.00
Interest	340.82	923.50
TOTAL REVENUES	1,690,332.41	1,705,067.92
EXPENDITURES		
Salaries and wages	737,170.88	659,404.08
Travel and meetings	397,180.93	384,975.60
Office rent	146,403.09	125,918.95
Telecommunications	89,097.48	77,271.58
Pension benefits	82,701.95	75,322.87
Legal	77,282.94	71,941.32
Insurance - health	72,555.32	77,249.42
Accounting	35,290.00	35,192.50
Office expenses	32,338.50	27,930.00
Repairs and maintenance	28,815.34	26,240.70
Dues and subscriptions	26,875.80	20,477.25
Seminar classes	11,212.55	24,026.45
Depreciation	17,469.07	17,779.63
Transcription service	17,374.86	15,234.87
Home page	11,697.47	9,074.91
Bank and credit card charges	9,096.75	8,959.30
Insurance - general	8,835.01	8,865.32
Outside services	6,250.00	6,250.00
NAESB standards	3,133.11	11,052.82
Postage and delivery	2,775.90	2,882.23
Publications, printing and books	1,819.66	4,159.72
Taxes	181.00	25.00
TOTAL EXPENDITURES	1,815,557.61	1,690,234.52
INCREASE (DECREASE) IN NET ASSETS	(125,225.20)	14,833.40
NET ASSETS (DEFICIT), BEGINNING OF YEAR	(343,660.71)	(358,494.11)
NET ASSETS (DEFICIT), END OF YEAR	$ (468,885.91)	$ (343,660.71)

See Accompanying Notes and Accountants' Review Report

NORTH AMERICAN ENERGY STANDARDS BOARD

STATEMENTS OF CASH FLOWS

For The Years Ended December 31, 2008 and 2007

	2008	2007
CASH FLOWS FROM OPERATING ACTIVITIES:		
Increase (decrease) in net assets	$ (125,225.20)	$ 14,833.40
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation	17,469.07	17,779.63
Changes in assets and liabilities:		
(Increase) decrease in accounts receivable	(16,000.00)	(87,500.00)
(Increase) decrease in prepaid expenses	8,344.72	(14,607.38)
Increase (decrease) in accounts payable	489.91	6,002.44
Increase (decrease) in accrued expense	7,200.00	5,544.00
Increase (decrease) in deferred revenue	89,708.30	(10,083.37)
Net cash provided by (used in) operating activities	(18,013.20)	(68,031.28)
CASH FLOWS FOR INVESTING ACTIVITIES:		
Purchase of property and equipment	(17,000.63)	(40,790.41)
Net cash used in investing activities	(17,000.63)	(40,790.41)
NET INCREASE (DECREASE) IN CASH AND EQUIVALENTS	(35,013.83)	(108,821.69)
CASH AND EQUIVALENTS AT BEGINNING OF YEAR	498,320.28	607,141.97
CASH AND EQUIVALENTS AT END OF YEAR	$ 463,306.45	$ 498,320.28

See Accompanying Notes and Accountants' Review Report

NOTES TO FINANCIAL STATEMENTS
Years Ended December 31, 2008 and 2007

NOTE A – NATURE OF ACTIVITIES AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Activities: The North American Energy Standards Board ("NAESB") develops and promotes voluntary standards and model business practices for electronic data interchange, communications protocols and related business practices that streamline the transactional processes of the natural gas and electric industries. The NAESB's voluntary membership is composed of energy companies located primarily in North America.

Basis of Accounting and Presentation: The financial statements of the NAESB have been prepared using the accrual basis of accounting. Financial statement presentation follows the recommendations of the Financial Accounting Standards Board in its Statement of Financial Accounting Standards No. 117, *Financial Statements of Not-for Profit Organizations*. The statements of activities are based on the concept that standard setting is the sole program of the NAESB.

Deferred Revenue: The NAESB accounts for dues billed in the current period but relating to future periods as deferred revenue.

Furniture, Equipment and Leasehold Improvements: Furniture, equipment and leasehold improvements are recorded at cost. Depreciation and amortization are provided for at rates designed to amortize the cost over the estimated useful life. The cost of maintenance and repairs is charged to expense as incurred.

Federal Income Taxes: The NAESB is exempt from income tax under Section 501(c)(6) of the U.S. Internal Revenue Code (the "Code"), and as such, is subject to income taxes only on unrelated business income.

Use of Estimates: The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Fair Value of Financial Instruments: The NAESB's financial instruments include cash, receivables and payables. Due to their short-term nature, the estimated fair values of these financial instruments approximate their carrying values.

Cash and Equivalents: For the purposes of the statement of cash flows, the NAESB considers cash and cash equivalents to consist of petty cash, demand deposits, and money market accounts.

NOTES TO FINANCIAL STATEMENTS
Years Ended December 31, 2008 and 2007

NOTE B -- ACCUMULATED DEPRECIATION

The accumulated depreciation for the various classes of property and equipment is as follows:

	December 31 2008	December 31 2007
Furniture, fixtures and equipment	$ 197,228.28	$ 180,164.01
Leasehold improvements	6,071.95	5,667.15
	$ 203,300.23	$ 185,831.16

NOTE C -- EMPLOYEE BENEFIT PLAN

The NAESB maintains a qualified defined contribution plan that covers all eligible employees. Under the terms of the plan the NAESB can contribute 15% of each employee's salary to the plan. Contributions to the plan in 2008 and 2007 were $82,701.95 and $75,322.86, respectively.

NOTE D -- CONCENTRATIONS OF CREDIT RISK

The NAESB maintains cash balances at several financial institutions located in Houston, Texas. Accounts at each institution are insured by the Federal Deposit Insurance Corporation (FDIC) up to $100,000.00 as of December 31, 2007. In conjunction with the Emergency Economic Stabilization Act of 2008, the FDIC increased the insurance limit from $100,000.00 to $250,000.00 effective October 3, 2008 through December 31, 2009.

At December 31, 2008 and 2007, the Company's uninsured cash balances totaled $267,461.10 and $466,652.77, respectively

The NAESB provides credit in the normal course of business to its members and performs ongoing credit evaluations of those members. Credit losses, when realized, have been within the range of the Company's expectations and, historically have not been significant.

See Accountant's Review Report

NOTES TO FINANCIAL STATEMENTS
Years Ended December 31, 2008 and 2007

NOTE E -- LEASE OBLIGATIONS

The NAESB occupies office space pursuant to a noncancelable operating lease. Total rental expense for 2008 and 2007 was $125,918.95 and $124,174.42, respectively. The current operating lease agreement for office space was entered into effective April 1, 2003, for a period of 84 months with rent abated for the first 6 months. Future minimum lease payments are as follows:

2009	$	122,029.89
2010		40,911.76
	$	162,941.65

See Accountant's Review Report

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September 1, 2009

TO: NAESB Resources committee

FROM: Rae McQuade, NAESB President and COO

RE: Membership Analysis, Vacancies on the Board and EC, Membership Prospects – September 1, 2009

via email

Dear NAESB Resources Committee:

This report has several parts, all of which should provide information to support the committee as it determines actions to take to solicit participation and membership in NAESB. We truly appreciate your efforts in helping grow our organization --

Best Regards,
Rae

Enclosures:
(1) Resources Committee Roster
(2) Membership Prospects: (a) short-term, (b) wind generators, (c) solar, (d) demand side management – energy efficiency, (e) groups, (f) long-term, (g) smart grid – technology companies
(3) New Members in 2008 and 2009
(4) Member Resignations in 2008 and 2009
(5) Vacancies on the Board and Executive Committee
(6) Membership Roster Sorted by Company

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Attachment 1

North American Energy Standards Board
Board Resources Committee Roster

Quadrant	Contact and Company	Phone	Email
WEQ	Jeff Ackerman, Western Area Power Administration	970-240-6209	ackerman@wapa.gov
WEQ	Scott Brown, Exelon Corporation	202-347-8096	scott.brown@exeloncorp.com
WGQ	Adrian Chapman, Washington Gas	703-750-7677	achapman@washgas.com
WEQ	Michael Desselle, Southwest Power Pool	501-614-3206	mdesselle@spp.org
WEQ	Bruce Ellsworth, New York State Reliability Council	603-746-3447	ellsworth@conket.com
WGQ	Bill Hebenstreit, Goodrich Petroleum Company, LLC	832-399-3180	bill_heben@hotmail.com
REQ	Ruth Kiselewich, Baltimore Gas & Electric	410-470-1361	ruth.c.kiselewich@bge.com
REQ	David Koogler, Dominion Virginia Power	804-771-3429	david.koogler@dom.com
RGQ	Greg Lander, Commerce Energy Group	978-535-7500	glander@skippingstone.com
WGQ	Mike Novak, National Fuel Gas Distribution	716-857-7884	novakm@natfuel.com
WGQ	Jim Templeton, Comprehensive Energy Services	713-759-6999	jrtemplton@aol.com
WEQ	Roy True, Aces Power Marketing	317-344-7203	royt@acespower.com

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Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

Membership Prospects	Source	Contact/Notes	Assignment
AARP			S. Brown, J. Ackerman
Accenture	R. McQuade	John Bartley – sent membership packet 6/26/2008, sent letter 12/17/2008, follow-up 5/28/2009 not joining at this time	D. Rager
American PowerNet	Office	David R. Butsack – sent membership information 7/22/09.	D. Rager
✓ Asgard Energy, LLC	Office	Rhett C. Shumway – received application 5/21/2009, ***Has Joined***	D. Rager
BPZ Energy, Inc.	Office	Xavier A. Suniga – sent membership information 7/30/09.	D. Rager
✓ City of Houston	R. McQuade	Jim Cargas – contacted our office 5/5/2009, ***Has Joined***	D. Rager
Comverge	S. Brown/R. True	S. Brown will provide contact information and R. True will follow-up	S. Brown, R. True
GreenSmith Energy Management Systems		Dr. Chen-Young – sent information on 12/3/08 as requested by R. McQuade	R. McQuade
Gridwise Alliance	R. McQuade	Karen Hamilton – Rae meeting on 04/02/2009	R. McQuade
InterGen Mexico	Office	Lillian Gonzalez – sent information on 6/04/2009, reply will discuss options with management. Sept 1, not joining at this time –purchased standards.	D. Rager
International Transmission Company (ITC)	S. Brown	Terry Harvill – Scott to provide outreach (meeting July 8)	S. Brown
John Deere Wind	R. True	Roy will send Denise contact information for John Harvey.	D. Rager
Manitoba Hydro (WEQ, Marketer/Broker)	Office	Received application to join – ***fee not paid.***	D. Rager
Manitoba Hydro (WEQ, Transmission)	Office	Received application to join – ***fee not paid.***	D. Rager
National Institute of Standards and Technology (NIST)	R. McQuade/J. Booe	Dr. David A. Wollman – sent membership information 4/15/2009, D. Rager follow-up by phone 5/25/2009 and by email 5/26/2009, reply on 5/26/2009 will run by his lawyers and get back with Denise with any questions	D. Rager/J. Booe

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Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

Membership Prospects		Source	Contact/Notes	Assignment
	NexEra Energy Power Marketing, LLC	Office	Angela Ewers – sent membership information 8/4/09.	D. Rager
	Novellus	Office	Marty Collins – sent membership information 7/28/09.	D. Rager
	OPSI	G. Ogenyi	Raj Barua, Executive Director – sent packet 4/1/08	D. Rager, S. Brown
	Paloma Business Solutions	R. McQuade	John McNevin - sent membership information 4/3/2009, D. Rager follow-up 4/13/2009	D. Rager
✓	Pennsylvania Public Utility Commission	R. McQuade	Annunciata Marino and Robert F. Wilson – sent membership information 4/3/2009 – ***Has joined***	D. Rager
	PNE Wind USA, Inc.	M. Desselle/R. McQudade	Edmundo O. Toro – Rae sent information 8/13/09.	R. McQuade
	RWE Supply & Trading GmbH (Germany)	Office	Isolde M. Hemmer – sent membership information 6/22/09. Follow-up 8/27/09 under review.	D. Rager
✓	Shift Research, LLC	R. McQuade	Jeff Hurley – ***joined July 2009 also serving on the WEQ Board.***	D. Rager
	Solar Alliance, The	S. Brown	Carrie Cullen Hitt – Scott will contact with infor. Provided by Rae	S. Brown

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Attachment 2b

NAESB Membership Prospects – Wind Generators

Membership Prospects	Source	Contact/Notes	Assignment
Acciona	Resource Committee		S. Brown, R. McQuade, M. Desselle
American Wind Energy Assoc.		*Has Joined*	R. McQuade, M. Desselle
First Wind	Resource Committee	Kurt Adams	S. Brown
Gamesa	Resource Committee		S. Brown
Horizon	Resource Committee		S. Brown, R. McQuade, M. Desselle
Iberdola	Resource Committee		S. Brown, R. McQuade, M. Desselle
John Deere Wind	Resource Committee	John Harvey	R. True
PNE Wind USA, Inc.	M. Desselle/R. McQudade	Edmundo O. Toro – Rae sent information 8/13/09.	R. McQuade

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Attachment 2c

NAESB Membership Prospects – Solar

Membership Prospects	Source	Contact/Notes	Assignment
Solar Alliance, The	S. Brown	Carrie Cullen Hitt – Scott will contact with infor. Provided by Rae	S. Brown

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Attachment 2d

NAESB Membership Prospects – Demand Side Management – Energy Efficiency

Membership Prospects	Source	Contact/Notes	Assignment
Accenture	Participant DSM	Jeb Bartley	
Allegheny Energy, Inc.	Participant DSM	*David P. Johnson, Cynthia A. Menhorn*	
Allegheny Power	Participant DSM	*Terri Brabiak, Cassandra Robinson, Thomas Rone, Jason J. Wojciechowicz*	
Alliance to Save Energy	Participant DSM	Steve Capanna, Joe Loper	
American Gas Association	Participant DSM	Mariam Arnaout	
ANB Enterprises, Inc.	Participant DSM	S. Blakrishnan	
Arizona Corporation Commission	Participant DSM	Bob Gray	
Association of Energy Services Professionals (AESP)	Participant DSM	Meg Matt	
Balhoff & Rowe, LLC	Participant DSM	Bob Rowe	
Ballard Spahr Andrews & Ingersoll, LLP	Participant DSM	Howard H. Shafferman	
Bayboro EC, Inc.	Participant DSM	Yolanda Mason	
BHMM Energy Services, LLC	Participant DSM	Vicky A. Bailey	
Brattle Group, The	Participant DSM	Philip Q. Hanser	
Brickfield, Burchette, Ritts and Stone	Participant DSM	Shaun Moher, Damon Xenopoulos	
California Public Utility Commission	Participant DSM	Dian Grueneich	
CLEAResult Consulting	Participant DSM	Eric Stern	
CLEAResult Incorporated	Participant DSM	Glenn Garland, Jonathan Kleinman, John Oyhenart	
Climate Master	Participant DSM	Dan Ellis, Robert Sallee	
Colorado Public Utilities Commission	Participant DSM	Jeff Hein	
ComVerge	Participant DSM	Cynthia Arcate, Bob Bress, Wendell Miyaji, Blake Morris	
Consortium for Energy Efficiency	Participant DSM	Marc Hoffman, Monica Nevius	
CPower, Inc.	Participant DSM	Janette Dudley, Murtaza Kapadia, Dirk Mahling, Nicholas Justice Planson	
Demand Response Coordinating Committee	Participant DSM	Katherine George, Paul M. Pietsch	

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NAESB Membership Prospects – Demand Side Management – Energy Efficiency

Membership Prospects	Source	Contact/Notes	Assignment
Demand Response & Energy Consulting, LLC	Participant DSM	Marie Pieniazek	
Distributed Energy Financial Group LLC	Participant DSM	Jamie Wimberly	
Distribution Control Systems, Inc.	Participant DSM	Ben Boyd	
District of Columbia Public Service Commission	Participant DSM	Daniel Cleverdon	
Duquesne Light Company	Participant DSM	Dan Flaherty	
Eagle Energy Partners	Participant DSM	Mary Anne Berlinsky	
Efficiency Valuation Organization	Participant DSM	John Cowan, Abraham Raher	
Electric Power Research Institute	Participant DSM	Bob Entriken, Krish Gomatom, Jennifer Robinson	
Electricity Consumers Resource Council (ELCON)	Participant DSM	John Hughes	
Energy and Environmental Economics, Inc.	Participant DSM	Ren Orans	
Energy Connect	Participant DSM	Jacob Dobscha	
Energy Curtailment Specialists, Inc.	Participant DSM	Daniel Perez, Glen E. Smith, Paul Tyno	
Energy Regulatory Affairs, Alcoa, Inc.	Participant DSM	Tom Gianneschi	
Energy Services Group	Participant DSM	George Behr	
Energy Trust of Oregon	Participant DSM	Fred Gordon	
Energy Washington Week	Participant DSM	David Clarke	
Bector Consulting	Participant DSM	Brett A. Perlman	
Environmental Law and Policy Center	Participant DSM	John N. Moore	
EPRI	Participant DSM	Bernie Neenan	
Evergreen Software Inc.	Participant DSM	Marc Tannenbaum	
Fox, Smolen & Associates	Participant DSM	Paul N. Smolen	
Frontier Associates	Participant DSM	Phil Audet, Ed Garcia, John McClain, Greg Landreth, Jay Zarnikau	
Gainesville Regional Utilities	Participant DSM	Earl Fair	
GDS Associates, Inc.	Participant DSM	Richard Spellman	

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NAESB Membership Prospects – Demand Side Management – Energy Efficiency

Membership Prospects	Source	Contact/Notes	Assignment
Good Company Associates	Participant DSM	Greg Ewing, Steve Isser, Robert King	
GoodCents	Participant DSM	Bill Bland, Robert Mason, Liza Thompson	
GreenSmith Energy Management Systems	Participant DSM	Michael Chen-Young	
Gridpoint	Participant DSM	Marija Zivanovic	
Honeywell	Participant DSM	Donna Harper	
Honeywell Utility Solutions	Participant DSM	Thomas McMahon	
Institute for Electric Efficiency	Participant DSM	TD Smith	
International Program Measurement and Verification Protocol (IPMVP)	Participant DSM	Steve Schiller	
Itron, Inc.	Participant DSM	Chris Haslund, Dave Hanna	
JEA	Participant DSM	PG (Bud) Para	
Kansas City Power & Light	Participant DSM	Jason Jones	
KEMA Services	Participant DSM	Daniel Waintroob	
Kema/Xnergy	Participant DSM	Mimi Goldberg, Liz Hicks	
Lawrence Berkeley National Laboratory	Participant DSM	Chuck Goldman, Gryason Heffner	
Lockhheed Martin Information Technology	Participant DSM	Mark R. Bowen	
Loeffler Tuggey Pauerstein Rosenthal, LLP	Participant DSM	Rebecca A. Klein	
Maine Office of Public Advocate	Participant DSM	Richard Davies	
Maine Public Utilities Commission	Participant DSM	Denise Bergeron	
Market Development Group	Participant DSM	Katherine Johnson	
Mass. Department of Telecommunication & Energy	Participant DSM	W. Robert Keating	
Mendota Group, LLC	Participant DSM	Grey Staples	
Metropolitan Washington Council of Governments	Participant DSM	Jeff King	
Midwest Energy Efficiency Alliance	Participant DSM	Alicia Ward	
Monsanto	Participant DSM	Gary Kajander	
National Association of State Utility Consumer Advocates	Participant DSM	Charles A. Acquard	

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NAESB Membership Prospects – Demand Side Management – Energy Efficiency

Membership Prospects	Source	Contact/Notes	Assignment
National Energy Board	Participant DSM	John McCarthy	
National Energy Marketers Association	Participant DSM	Stacey Rantala	
NC Utilities Commission – Public Staff	Participant DSM	Jack Floyd, Bob Hinton	
New York Public Service Commission	Participant DSM	Diane Barney	
New York Department of Public Service	Participant DSM	Alice Miller, Lia Rosi	
New York State Department of Public Service	Participant DSM	Sigmund Peplowski, Stacey Harwood, William (Bill) Saxonis	
Nexus Market Research, Inc.	Participant DSM	Greg Clendenning, Tim Pettit	
Northeast Energy Efficiency Partnerships, Inc.	Participant DSM	Julie Michals, Elizabeth Titus	
Northeast Energy Efficiency Project	Participant DSM	Sue Coakley	
Norhtrop Grumman, Tech. Services	Participant DSM	Thomas A. Adams	
Northwest Power and Conservation Council	Participant DSM	Tom Eckman	
NSTAR Electric & Gas	Participant DSM	David Olivier, Dave Weber, Lisa Shea	
Occidental Energy Ventures Corp	Participant DSM	Michelle D'Antuono	
Occidental Chemical	Participant DSM	Scott Wardle	
Office of Weatherization and Intergovernmental Program, EE-2K	Participant DSM	Faith S. Lambert	
Public Utilities Commission of Ohio	Participant DSM	Thom Pearce	
Ontario Power Authority	Participant DSM	Neil Hutchings	
Otter Tail Power Company	Participant DSM	Kim Pederson, Rebeca Wentler	
Peak Load Management Association (PLMA)	Participant DSM	Elliott Boardman, Craig Boice	
Policy Solutions	Participant DSM	Anne Arquit	
Praxair	Participant DSM	David Meade	
Public Utility Commission of Texas	Participant DSM	Shawnee Claiborn-Pinto, Cliff Crouch, Ernest Garcia, Theresa Gross, Voiteh Yaroshevich	
RETX	Participant DSM	Ross Malme	
Southeast Energy Efficiency Alliance	Participant DSM	Kelly Ross Gillespie	

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NAESB Membership Prospects – Demand Side Management – Energy Efficiency

Membership Prospects	Source	Contact/Notes	Assignment
Southern California Gas Company	Participant DSM	Lee Stewart	
Southwest Energy Efficiency Alliance	Participant DSM	Howard Geller	
Summit Blue Consulting	Participant DSM	Mark Klos, Daniel Violette, Kevein Coney	
Synapse Energy Economics	Participant DSM	Paul Peterson	
TecMarket Works	Participant DSM	Nick Hall	
The Gee Strategies Group	Participant DSM	Robert W. Gee	
The Regulatory Assistance Project	Participant DSM	Richard Sedano	
TXU Energy	Participant DSM	Mack Wallace	
U.S. Environmental Protection Agency	Participant DSM	Stacy Angel, Nikolaas Dietsch	
U.S. Demand Response Coordinating Committee	Participant DSM	Dan Delurey	
UISOL	Participant DSM	Scott Coe	
University of Texas MD Anderson Cancer Center	Participant DSM	Ron Russell	
VA State Corporation Commission	Participant DSM	David R. Eichenlaub	
Vermont Energy Investment Corp.	Participant DSM	Bolleen Orsburn	
Vermont Public Service Board	Participant DSM	Pam Stonier	
Virginia State Corporation Commission	Participant DSM	Diane Jenkins	
Warren Energy engineering, LLC	Participant DSM	Kevin Warren	

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Attachment 2e

NAESB Membership Prospects – Groups

Membership Prospects	Source	Contact/Notes	Assignment
End Users	Resources Committee	Should hold meetings with john Anderson for ideas after we begin the sessions for ISOs and RTOs.	S Brown/M Desselle
ISOs and RTOs (ISO-NE, NYISO, AESO, IESO, CAISO, PJM)	Board action	Letter sent in April asking for membership and participation. They responded in June with interest. We have set up a meeting to discuss participation and membership on August 24 in Washington, D.C.	S Brown/M Desselle
California ISO (CASIO) – Contact: Yakout Mansour		*Has Joined*	
Independent Electricity System Operator (IESO) – Contacts: Ron Falsetti and David Short		*Has Joined*	
New York Independent System Operator, Inc. (NYISO) – Contacts: Michael Calimano and Mark S. Lynch		*Has Joined*	
TranServ International, Inc. – Contact: Kevin Burns		*Has Joined*	
PJM Interconnection – Contact: Alicia Daugherty		*Has Joined*	
Alberta Electric System Operator – Contact: Diana Pommen		*Has Joined*	
ISO New England, Inc. – Contact: Matthew F. Goldberg		*Has Joined*	
Munis and Coops	Resources Committee	R. True will approach APPA and NRECA about opportunities to speak about NAESB to raise awareness and increase interest in membership. Mr. True followed up with APPA but will provide the NAESB office with a more up to date calendar prior of APPA events prior to the next meeting.	R. True
Western Groups - WECC	Resources Committee	WECC has been a member since May 2005. Conference call held with J Ackerman, B Schwermann, M Wells and L Westerfield. Meeting held on October 27 to speak to them about NAESB.	S Brown/M Desselle/R. McQuade
ABBA Energy Limited ?	Resource Committee		
Solar Trade Association	Resource Committee	Mack Thompson	
Solar Alliance, The	Resource Committee	CarrieCullen Hitt	

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NAESB Membership Prospects – Groups

Membership Prospects	Source	Contact/Notes	Assignment
Solar Electric Power Association (SEPA)	Resource Committee	Julia Hamm, Executive Director	

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Attachment 2f

NAESB Membership Prospects – Long Term

Membership Prospects	Source	Contact/Notes	Assignment
AES Corporation - Indianapolis Power & Light Company	EEI - EPSA		
Alaska Energy and Resources Company	EEI		
ALLETE - Minnesota Power - Superior Water, Light and Power	EEI		
Alliant Energy Corporation - Interstate Power and Light Co - Wisconsin Power and Light Co	EEI		
Arizona Corporation Commission	NERC		
Avista Utilities	EEI		
Big Rivers Electric Corp.	NERC		
Black Hills Corporation - Black Hills Power	**EEI**	*Has Joined*	
British Columbia Transmission Corporation	**NERC**	*Has Joined*	
Central Vermont Public Service Corporation	EEI		
CH Energy Group, Inc. - Central Hudson Gas & Electric Corp	EEI		
Clarksdale Public Utilities Commission	NERC		
DPL Inc. - The Dayton Power and Light Company	EEI		
Duquesne Light Holdings - Duquesne Light Company	EEI		S. Brown
East Kentucky Power Coop.	NERC		
El Paso Electric Company	EEI		M. Desselle
Electric Energy, Inc.	EEI		
Electric Power Research Institute	NERC		
Electric Power Supply Association	NERC	*Has Joined*	
Farmington Electric Utility System	NERC		
Goldman Sachs & Co.	EPSA		S. Brown
Great Plains Energy, Inc. - Kansas City Power & Light Company	EEI		M. Desselle
Great River Energy	NERC		
GridAmerica LLC	NERC		
Hawaiian Electric Industries, Inc. - Hawaii Electric Light Co., Inc. - Maui Electric Co., Ltd.	EEI		
Huntsville Utilities	NERC		
InterGen	EPSA		
Kansas City Board of Public Utilities	NERC		
Manitoba Hydro	NERC		
MDU Resources Group, Inc. - Montana-Dakota Utilities Co.	EEI		

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NAESB Membership Prospects – Long Term

Membership Prospects	Source	Contact/Notes	Assignment
MGE Energy, Inc. - Madison Gas and Electric Co.	EEI		
Missouri Office of Public Counsel	NERC		
Mt. Carmel Public Utility Company	EEI		
National Energy & Gas Transmission Inc.	EPSA		
National Energy Board	NERC		
Nebraska Public Power District	NERC		
Northeast Power Coordinating Council			M Desselle
Northern Star Generation Co. -- NSTAR	EPSA-EEI		
NorthWestern Corporation - NorthWestern Energy	EEI	*Has Joined*	
Nuclear Management Company, LLC	EEI		
OGE Energy Corporation - OG&E Electric Services	**EEI - NERC**	*Has Joined*	M. Desselle
Ohio Public Utilities Commission	NERC		
Ohio Valley Electric Corporation	EEI		
Omaha Public Power District	NERC		
Ontario Energy Board	NERC		
Pennsylvania Public Utility Commission	NERC	*Has Joined*	
Pepco Holdings, Inc. - Pepco	EEI		
Pinnacle West Capital Corporation -- (APS)	EEI		
PNM Resources, Inc. - Public Service Co of New Mexico	EEI		
Praxair, Inc.	NERC		
Quebec Energy Board	NERC		
Shell Trading	EPSA		S. Brown
Sierra Pacific Resources - Nevada Power Company - Sierra Pacific Power Company	EEI		
Sithe Energies Inc.	EPSA		
Snohomish County PUD No.1	NERC		
Strategic Energy LLC	EPSA		
TECO Energy, Inc. - Tampa Electric Company	EEI		S. Brown
TNP Enterprises, Inc. - Texas-New Mexico Power Company	EEI		
TransAlta	NERC		
Trans-link			M Desselle
UIL Holdings Corporation - The United Illuminating Company	EEI		
UniSource Energy Corporation - Tucson Electric Power Company	EEI		

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NAESB Membership Prospects – Long Term

Membership Prospects	Source	Contact/Notes	Assignment
Utah Public Service Commission	NERC		
Vermont Electric Power Company, Inc.	EEI		
Westar Energy Inc.	**EEI**	*Has Joined*	M. Desselle
Wheelabrator Technologies Inc.	EPSA		
Wolf Creek Nuclear Operating Corporation	EEI		

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Attachment 2g

NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
Abidance Consulting (DLC International)	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Aegix Consulting	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
AESI-US, Inc.	S. Brown	Loreto D. Sarrachini - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Agiliance, Inc.	S. Brown	Mark Lockareff - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Akonix Sytems, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Akuacom	**Participant SGSTF**	Edward Koch	
Allen Systems Group, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
AssurX, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
AUS, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Axentis	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Barbeion Software Corporation	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
BOW Networks	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Bullzi Security, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
CA, Inc.	S. Brown	Bill Warren - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Ceelox, Inc.	S. Brown	D. Rager - sent letter with	D. Rager

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NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
		membership information 4/23/2009	
CipherOptics	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Compliance Spectrum	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
ControlPath	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Cooper Power Systems, Inc. (Cybectec)	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
CoreTrace Corporation	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Corpedia, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Critical Watch	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Corporate Risk Solutions, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Deloitte & Touche, LLP	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Dyonyx	S. Brown	Fred Pratt - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Ember	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
EnerVision, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
ENOSERV	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Eviance	S. Brown	D. Rager - sent letter with membership information	D. Rager

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NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
		4/23/2009	
Erado Message Control Solutions	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
ERLPhase Power Technologies, Ltd.	S. Brown	Michael Weiblen - D. Rager - sent letter with membership information 4/23/2009	D. Rager
EthicsPoint, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Eureka Software	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
FishNet Security, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Fix Protocol	**Participant SGSTF**	Kathleen Callahan, Courtney Doyle, Jim Northey, Ryan Pierce	
General Electric	**Participant SGSTF**	Charles Smith	
Gilliam Wesley International	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Global DataGuard, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Gridpoint	**Participant SGSTF**	R. Scott Crowder, III, Stephen Haber	
Gridwise Architecture Council	**Participant SGSTF**	Dr. Kenneth P. Wacks	
Grier Consulting Group, LLC	S. Brown	Chris Grier - D. Rager - sent letter with membership information 4/23/2009	D. Rager
HP Atalla Security Products	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Industrial Defender	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Industry Compliance Institute	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Intellibind	S. Brown	D. Rager - sent letter with	D. Rager

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NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
		membership information 4/23/2009	
Ivara Corporation	S. Brown	Kathy Steel - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Jefferson Wells	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
KEMA	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Kestrel Power Engineering, LLC	S. Brown	Mike Fogarty - D. Rager - sent letter with membership information 4/23/2009	D. Rager
KPMG LLP	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Lawrence Berkeley National Laboratory	**Participant SGSTF**	Dave Watson	
LogRhythm, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Loma Consulting	S. Brown	Earl S. Hill - D. Rager - sent letter with membership information 4/23/2009	D. Rager
The MathWorks	S. Brown	Jack Little - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Matrikon	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
McCoy Power Consultants	S. Brown	Steven W. McCoy - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Methodware	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
MetricStream, Inc.	S. Brown	Gunjan Sinha - D. Rager - sent letter with membership information 4/23/2009	D. Rager
MLJ Energy Group	S. Brown	Michael T. Brown - D. Rager - sent letter with membership information 4/23/2009	D. Rager

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NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
National Institute of Standards and Technology (NIST)	**Participant SGSTF**	David Holmberg	J. Booe
NCircle Network Security	S. Brown	Abe Kleinfeld - D. Rager - sent letter with membership information 4/23/2009	D. Rager
N-Dimension Solutions Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
NetVision	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Network & Security Technologies, Inc.	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Nexant, Inc.	S. Brown	Basem Sarandah - D. Rager - sent letter with membership information 4/23/2009	D. Rager
North American Energy Services	S. Brown	D. Rager - sent letter with membership information 4/23/2009	D. Rager
Oxford Consulting	S. Brown	Michelle Abreu - D. Rager - sent letter with membership information 4/23/2009	D. Rager
Pacific Northwest National Laboratory	**Participant SGSTF**	Steve Widergren	
Policy Technologies International, Inc.	S. Brown	D. Rager - sent letter with membership information 4/24/2009	D. Rager
Portland Gas and Electric	**Participant SGSTF**	Albert Chiu	
Power Decisions Consulting	S. Brown	D. Rager - sent letter with membership information 4/24/2009	D. Rager
POWER Testing and Energization, Inc.	S. Brown	D. Rager - sent letter with membership information 4/24/2009	D. Rager
Powersmiths International, Inc.	S. Brown	D. Rager - sent letter with membership information 4/24/2009	D. Rager
PricewaterhouseCoopers LLP	S. Brown	D. Rager - sent letter with membership information 4/24/2009	D. Rager
Quality Plus Engineering, LLC	S. Brown	Greg Hutchins - D. Rager - sent letter with membership information 4/24/2009	D. Rager

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Attachment 2g

NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
Quanta Technology	S. Brown	James (Jim) M. Blackman - D. Rager - sent letter with membership information 4/24/2009	D. Rager
Quizzicle	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
RavenEye	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Resolver, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Rocky Mountain Power Services, Inc.	S. Brown	Matthew Fulk - D. Rager - sent letter with membership information 4/29/2009	D. Rager
RW Beck	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Securicon, LLC	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
SecuSolutions Ltd.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
SenSage, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Sirius Solutions, LLP	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Slalom Consulting	S. Brown	Brian Jacobsen - D. Rager - sent letter with membership information 4/29/2009	D. Rager
Softential, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
SOURCEfire	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Southwest Microwave, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager

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Membership Prospects	Source	Contact/Notes	Assignment
Sph3r3, LLC	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Structure Consulting Group, LLC	S. Brown	Mike Peterson - D. Rager - sent letter with membership information 4/29/2009	D. Rager
Surf Technologies, Inc.	S. Brown	Jacques Davignon - D. Rager - sent letter with membership information 4/29/2009	D. Rager
Symantec	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
System Operations Success, Int'l. (SOS Int'l)	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Telkonet, Inc.	S. Brown	Jason L. Tienor - D. Rager - sent letter with membership information 4/29/2009	D. Rager
Teltone	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Towerline Software	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
TriGeo Network Security	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Tripwire	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Utility Decision Support (UDS) Group	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Universal Safety Response, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
University of North Carolina	**Participant SGSTF**	Toby Considine	
Utility Services LLC	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Utility System Efficiencies, Inc.	S. Brown	Daniel H. Wood - D. Rager - sent letter with membership information 4/29/2009	D. Rager

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NAESB Membership Prospects – Smart Grid (Technology Companies)

Membership Prospects	Source	Contact/Notes	Assignment
Vidient	S. Brown	Frank Pao - D. Rager - sent letter with membership information 4/29/2009	D. Rager
Vigilant Power Solutions, Inc.	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Verisign	S. Brown	D. Rager - sent letter with membership information 4/29/2009	D. Rager
Xtensible Solutions	**Participant SGSTF**	Joe Zhou	
Z Global Engineering & Energy Solutions	S. Brown	Ziad Alaywan - D. Rager - sent letter with membership information 4/29/2009	D. Rager

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Attachment 3

North American Energy Standards Board
New Members since January 2008

Quadrant	Segment	Contact and Company	Reason Joined	Month Joined
RGQ	End Users	Advantage IQ, Inc. Contact: Suzanne Figy	Participation	September
WEQ	Generation	American Wind Energy Association Contact: Robert Gramlich	Participation	October
WEQ	Transmission	Black Hills Corporation Contact: Larry D. Williamson	Participation	August
WEQ	Transmission	British Columbia Transmission Corporation Contact: Janet Fraser	Participation	January
WGQ	Pipeline	Cheniere Pipeline Company Contact: Whit Scott	Participation	December
WGQ	Producer	Devon Energy Corporation Contact: Bill Green	Participation	October
WEQ	Generation	Entegra Power Group, LLC Contact: Rebecca Turner	Participation	January
WGQ	Services	EnergySouth Midstream, Inc. Contact: Russell Murrell	Participation	January
WEQ	End Users	EnerNOC, Inc. Contact: Aaron Breidenbaugh	Participation	December
WGQ	Pipeline	Equitrans, LP Contact: Joseph M. Dawley	Participation	December
WGQ	Producer	Foothills Energy Ventures, LLC Contact: Marty Patterson	Participation	January
WGQ	Services	Goodrich Petroleum Company, LLC Contact: Bill Hebenstreit	Participation	July
WGQ	Producer	Husky Energy Marketing, Inc. Contact: Jan Bindon	Participation	August
WGQ	End Users	Husky Marketing and Supply Company Contact: Jan Bindon	Participation	August
WGQ	Producer	Husky Gas Marketing, Inc. Contact: Jan Bindon	Participation	August
REQ	Services	ICF International Contact: David Pickles	Participation	June
WGQ	Services	JP Morgan Ventures Energy Corp Contact: Paul Tramonte	Participation	October
WGQ	Producer	Noble Energy, Inc. Contact: Richard D. Smith	Participation	July
REQ	Supplier	North Carolina Advanced Energy Corporation Contact: Robert K. Koger	Participation	July

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WGQ	Services	OGE Energy Resources, Inc. Contact: Cary Metz	Participation	February
WEQ	Distribution	Public Power Council Contact: Nancy Baker	Participation	February
WEQ	Transmission	San Diego Gas & Electric Company Contact: Patricia vanMidde	Participation	January
WEQ	Transmission	Santee Cooper Contact: Tom Abrams	Participation	February
WEQ	Transmission	United Illuminating Company, The Contact: Rose Pysh	Participation	December
RGQ	Supplier	Vectren Retail, LOC Contact: Tami Wilson	Participation	January
WGQ	Services	Vega Energy Partners, Ltd. ***(rejoined)*** Contact: Lori Leeder	Participation	May
WEQ	Generation	Westar Energy, Inc. Contact: Shah Hossain	Participation	June

****** Membership dues not yet received.

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New Members since January 2009

Quadrant	Segment	Contact and Company	Reason Joined	Month Joined
WEQ	Distribution	Alabama Municipal Electric Authority Contact: Ray Phillips	Participation	April
WEQ	Generation	Arkansas Electric Coopeartive Corporation Contact: Ricky Bittle	Participation	July
RGQ	Supplier	Asgard Energy, LLC Contact: Rhett C. Shumway	Participation	June
REQ	End Users	City of Houston Contact: James P. Cargas	Participation	June
WGQ	Pipeline	Golden Pass Pipeline, LLC Contact: Susan Braden	Participation	January
WEQ	Marketer	Los Angeles Department of Water and Power Contact: Michael S. Webster	Participation	January
WEQ	Transmission	Los Angeles Department of Water and Power Contact: Mohammed Johar Beshir	Participation	January
REQ	End Users	Pennsylvania Public Utility Commission Contacts: Robert F. Wilson and Annunciata E. Marino	Participation	August
WEQ	End Users	Shift Research, LLC Contact: Jesse D. Hurley	Participation	July
WEQ	End Users	SunGard Consulting Services, LLC Contact: Austin Morris	Participation	April

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North American Energy Standards Board
Member Resignations in 2008

Quadrant	Segment	Contact and Company	Reason Resigned	Month Resigned
WEQ	Transmission	Allegheny Energy, Inc.	Company decision to not renew	October
WEQ	Transmission	American Transmission Company LLC	Company decision to not renew due to resources	October
RGQ	Supplier	Center Point Energy Minnegasco	Contact (Andrea Newman) left company – new contact Tracy Bridge did not want to renew	February
WEQ	End User	ChevronTexaco Energy Research	No reason given for non renewal	March
WEQ	Marketer/Broker	Conective Energy Supply, Inc.	Company decision to only keep "one" active membership	February
WEQ	Generation	Constellation Energy	Company decision to not renew	June
RGQ	Services	Energy Services Group, Inc.	Company decision to not renew due to resources	February
WGQ	Services	EnergySouth Midstream, Inc.	Company acquired by Sempra Energy	October
WGQ	LDC	Equitable Gas Company	Company decision to not renew due to resources	July
WEQ	Transmission	Florida Reliability Coordinating Council	No reason given for non renewal	January
WGQ	End User	Florida Reliability Coordinating Council	No reason given for non renewal	April
REQ	Distribution	Gulf Power Company	Company decision to not renew due to resources	June
WGQ	Pipeline	H S Resources, Inc.	No reason given for non renewal	February
WEQ	Transmission	Imperial Irrigation District	Already participating in other segment	April
RGQ	End User	Indiana Office of Utility Consumers	Company decision to not renew due to resources	April
REQ	Services	ista North America	Company decision to not renew due to resources	September
WGQ	Services	J.P. Morgan Ventures Energy	No reason given for non renewal	April
WEQ	Marketers/Brokers	Luminant	No reason given for non renewal	December
WEQ	End User	Maryland People's Counsel	No reason given for non renewal	June
WEQ	Transmission	Michigan Electric Transmission Company	No reason given for non renewal	April
REQ	Distribution	Mississippi Power Company	Company decision to not renew due to resources	June
WGQ	LDC	National Grid USA	Company decision to not renew due to resources	September

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WEQ	End Users	New York State Department of Public Service	No reason given for non renewal	December
RGQ	Distribution	Niagara Mohawk	Company decision to not renew due to resources	April
RGQ	Distribution	Northern Indiana Public Service Company (NiSource, Inc.)	No reason given for non renewal	December
RGQ	End User	Ohio Consumers Council	Company decision to not renew due to resources	April
WEQ	End User	Ohio Consumers Council	Company decision to not renew due to resources	February
REQ	End User	Ohio Consumers Council	Company decision to not renew due to resources	April
WEQ	Transmission	Oncor	Company decision to not renew due to resources	May
RGQ	Distributor	Public Service Electric & Gas	No reason given for non renewal	February
WEQ	Generation	Sacramento Municipal Utility District	Company decision to only have "1" membership in NAESB	July
WEQ	Distribution	Salt River Project Agricultural	Company decision to only have "2" memberships in NAESB	September
REQ	Supplier	TXU Energy Retail	Non renewal	September
RGQ	Supplier	UBS Energy LLC	No reason given for non renewal	April
REQ	End User	Wal-Mart Stores, Inc.	No reason given for non renewal	April

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Member Resignations in 2009

Quadrant	Segment	Contact and Company	Reason Resigned	Month Resigned
REQ	End Users	Advantage IQ, Inc.	No reason given for non renewal	August
WEQ	Marketers/Brokers	Ameren Services	No reason given for non renewal	July
WGQ	LDC	Cascade Natural Gas Corporation	Company decision to not renew due to resources *(May reconsider later in year)*	January
WGQ	Pipeline	Chandeleur Pipe Line Co	No reason given for non renewal	March
WGQ	Services	Cheniere LNG Marketing	May reconsider in June 2009	May
REQ	Distribution	Consolidated Edison Company of NY	Non-renewal due to budget	July
WEQ	Generation	ElectriCities of North Carolina (North Carolina Eastern Municipal Power Agency)	Company decision to not renew – only keeping one membership	January
WEQ	Distribution	Exelon Corporation – PECO Energy	No reason given for non renewal	March
WEQ	Generation	Exxon Mobil Gas Marketing	Company decision to not renew – only keeping one membership	June
WGQ	Services	Hess Corporation	No reason given for non renewal	March
WEQ	Marketers/Brokers	Imperial Irrigation District	Company decision to not renew – only keeping one membership	January
WGQ	Services	Lehman Brothers Commodity Services, Inc.	No reason given for non renewal	March
REQ	Distribution	MidAmerican Energy Company	Company decision to not renew – only keeping one membership	May
WEQ	Marketers/Brokers	North Carolina Electric Municipal Power Agency #1	Company decision to not renew – only keeping one membership	January
REQ	End Users	Office of Public Advocate, State of Maine	No reason given for non renewal	June
WEQ	Generation	Ontario Power Generation	Non-renewal due to budget	July
WEQ	Transmission	Otter Tail Power Company	No reason given for non renewal	April
WEQ	Generation	PacifiCorp	Company decision to not renew – only keeping two membership	June
WEQ	Marketers/Brokers	Portland General Electric	Company decision to not renew – only keeping one membership	July
WEQ	Marketers/Brokers	PSEG Energy Resources and Trade LLC	No reason given for non renewal	January
WEQ	Generation	PSEG Power LLC	No reason given for non renewal	January
WEQ	Distribution	Public Power Council	No reason given for non renewal	May
REQ	Distribution	Public Service Electric & Gas Company	No reason given for non renewa	April
WEQ	Marketers/Brokers	SUEZ Energy Marketing NA, Inc.	No reason given for non renewal	February
WGQ	Services	UBS Energy LLC	No reason given for non renewal	January
WGQ	Services	Virginia Power Energy Marketing	No reason given for non renewal	May

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North American Energy Standards Board
Member Resignations in 2009

WGQ	LDC	Westfield Gas & Electric Light Dept.	No reason given for non renewal	February
RGQ	Distribution	Xcel Energy	Company decision to not renew due to resources *(May reconsider later in 2010)*	January

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Attachment 5

North American Energy Standards Board and Executive Committee Vacancies as of June 10, 2009

Vacant Seats	Quadrant	Seat	Segment	Subsegment
15	Retail Electric	Board (5)	Supplier (3) End User (2)	
		Executive Committee (7)	End User (3) Services (1) Supplier (3)	
38	Retail Gas	Board (19)	Distribution (4) End User (6) Service Providers (3) Suppliers (6)	
		Executive Committee (19)	Distribution (2) End User (6) Service Providers (6) Suppliers (5)	
14	Wholesale Electric	Board (6)	Distribution/Load Serving Entities (LSE) (2)	IOU (at large) (1) Competitive Retailer (at large) 1
			Transmission (1)	IOU (at large) (1)
			Generation (1)	Merchant (1)
			End User (2)	Commercial/Residential (at large) (1) Large Industrial (at large) (1)
		Executive Committee (7)	End User (4)	Large Industrial (at large) (1) Commercial/Residential (at large) (1) End Use (In other segments) (at large) (1) Large Industrial (at large) (1)
			Generation (1)	Merchant (1)
			Distribution/LSE (1)	Muni/Coop (at large) (1)
			Marketers/Brokers (1)	Not IOU Affiliated (at large) (1)
2	Wholesale Gas	Board (1)	Services (1)	
		Executive Committee (1)	LDC (1)	

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Attachment 6

Membership Roster Sorted by Company

Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
WGQ	s		8760, Inc.	Jim Buccigross	AL
WEQ	m	muni	ACES Power Marketing LLC	Roy J. True, Amadou Fall	IN
RGQ	d		AGL Resources Inc.	Gregory Becker	GA
WEQ	d	muni	Alabama Municipal Electric Authority	Ray Phillips	AL
REQ	d		Alabama Power	Judy W. Ray	AL
WEQ	i		Alberta Electric System Operator	Diana Pommen, Henry Ren	ALB
RGQ	s		Allegro Development	Kimberly Page	TX
WGQ	pl		Alliance Pipeline LP	Jim Goldmann, Cathie Legge, Brian Troicuk	ONT
WGQ	l		Ameren Corporation	Scott Glaeser, Ken Dothage, Jim Massmann	MO
REQ	d		Ameren Services Company	Patrick Eynon	MO
WEQ	d	iou	American Electric Power Service Corp.	Barbara Radous, Joseph Hartsoe, Phil Cox	OH
WEQ	m	muni	American Municipal Power - Ohio, Inc.	Mack Thompson, Chris Norton	OH
RGQ	d		American Public Gas Association (APGA)	Alonzo Weaver, Joe Stengel	PA
WEQ	d	muni	American Public Power Association	Allen Mosher	DC
WEQ	g	merc	American Wind Energy Association	Robert Gramlich	DC
WGQ	s		Anadarko Energy Services Company	John Bretz, Steven Abbey	TX
WGQ	pl		ANR Pipeline Company	Sandy Meyers, Joseph E. Polland, Rene Staeb, Debbie Forth, Carol Wehlmann	ALB
WGQ	pr		Apache Corporation	Kelley Powell	TX
WEQ	m	iou	APS Marketing and Trading	Steve Norris	AZ
WEQ	t	iou	Arizona Public Service Company	Mark W. Hackney	AZ
WGQ	e		Arizona Public Service Company	Tom Carlson, Kelly Daly	AZ
WEQ	g	muni	Arkansas Electric Cooperative Corporation	Ricky Bittle	AR
RGQ	su		Asgard Energy, LLC	Rhett C. Shumway	CO
WGQ	pl		Atmos Energy	Steve Easley	TX
WGQ	s		Ballard Natural Gas, LLC	Susan Thibodeaux	TX
REQ	d		Baltimore Gas & Electric Co.	Ruth Kiselewich, Phil Precht	MD
WGQ	l		Baltimore Gas & Electric Co.	Phil Precht, Ron Jennings	MD
RGQ	d		Baltimore Gas & Electric Company	Phil Precht	MD
WGQ	s		Barclays Bank PLC	Guy Kern-Martin	NY
WEQ	g	muni	Basin Electric Power Cooperative	Jason Doerr	ND
WEQ	m	nd	Basin Electric Power Cooperative	David Raatz	ND
WEQ	t	muni	Basin Electric Power Cooperative	Dan Klempel	ND
WGQ	s		Bentek Energy, LLC	E. Russell Braziel	CO
WGQ	s		BG Energy Merchants, LLC	Martha Braddy, Denise Almoina, Susan Bailey, Melody Fontenot	TX
WEQ	t	iou	Black Hills Corporation	Larry D. Williamson	SD
WGQ	pl		Boardwalk Pipelines, LP	Randy Young, Mitch Whitehead	TX
WGQ	e		Boeing Company	Tina Burnett	WA
WEQ	d	other	Bonneville Power Administration	Sydney D. Berwager	OR
WEQ	g	fed	Bonneville Power Administration	Francis Halpin, Robin Chung	OR
WEQ	m	fed	Bonneville Power Administration	Brenda Anderson	OR

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Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
WEQ	t	fed	Bonneville Power Administration	Barbara Rehman, Tom Davis	OR
WEQ	e	lind	BP America, Inc.	Jeanne Zaiontz	TX
WGQ	pr		BP Energy	Mark Stultz, Rhonda Denton	TX
WEQ	t	fed	British Columbia Transmission Corporation	Rohan Soulsby	BC
WEQ	g	fed	California Department of Water Resources	William (Bill) Forsythe, Chi Doan	CA
WEQ	i		California ISO	Yakout Mansour	CA
WGQ	e		Calpine Energy Services, LP	Shonnie Daniel, Jay Dibble	TX
RGQ	s		Capacity Center	Greg Lander	MA
WGQ	s		Cargill Incorporated	Kathy Gerken	MN
WGQ	pl		Carolina Gas Transmission Corporation	Rae Davis, Dana B. Randall	SC
WGQ	s		CenterPoint Energy Gas Services, Inc.	James G. Beste, Larry Kunkle	TX
WGQ	pl		CenterPoint Energy Gas Transmission Company	Larry Thomas	TX
WGQ	pl		CenterPoint Energy Mississippi River Transmission Corp.	Robert Trost	TX
WEQ	d	muni	Central Electric Power Cooperative	Arthur Fusco	SC
WGQ	pl		Cheniere Pipeline Company	Whit Scott	TX
WGQ	pr		Chevron Natural Gas	Charles (Chuck) Cook	TX
WGQ	pl		Chevron Pipe Line Company	Mary Ann Collins, Deborah Plattsmier, Jeff Kirk	TX
WGQ	pr		Cimarex Energy Co	Charlotte Baker	OK
WGQ	s		Citigroup Energy Inc.	Carrie Southard, Angela Davis	TX
REQ	e		City of Houston	James P. Cargas	TX
WEQ	t	iou	Cleco Power, LLC	Cindy Guillot	LA
WGQ	l		Colorado Springs Utilities	Joe M. Holmes	CO
WGQ	pl		Columbia Gas Transmission	Claire Burum	VA
WEQ	e	enduse	Comprehensive Energy Services	Jim Templeton	TX
WGQ	e		Comprehensive Energy Services	Jim Templeton	TX
WEQ	g	merc	Conectiv Energy Supply, Inc.	Gloria Godson	DE
WGQ	pr		ConocoPhillips Gas and Power	Peter Frost	TX
WGQ	l		Consolidated Edison Company of NY	Scott Butler, Paul Olmsted	NY
WEQ	t	iou	Consolidated Edison Company of NY, Inc.	Scott Butler	NY
WGQ	s		Constellation Energy Commodities Group, Inc.	Lisa Simpkins, Joseph Kirwan, Andrea Kullman, Jennifer Scott	MD
REQ	su		Constellation NewEnergy, Inc.	Janson Pollock	MD
WEQ	d	iou	Consumers Energy Company	Andrew C. Dotterweich, Frank Johnson	MI
WEQ	t	muni	Dairyland Power Cooperative	Chuck Callies	WI
WGQ	pl		Dauphin Island Gathering Partners	Katie Rice	CO
WGQ	s		DB Energy Trading	William Donnelly, Travis McCullough	NY
WGQ	e		Defense Energy Support Center	Veronica Jones, Kevin Ahern	VA
WGQ	e		Department of Energy	Christopher Freitas	DC
WEQ	g	muni	Deseret Generation & Transmission Co-operative	Curtis Winterfeld	UT
WGQ	pr		Devon Energy Corporation	Bill Green	OK
REQ	su		Direct Energy Business Services	David Booty	TX
WEQ	g	iou	Dominion Energy Marketing, Inc.	Lou Oberski, Jalal Babik	VA
WGQ	l		Dominion Resources (Previously CNG)	Craig Columbo	VA
REQ	su		Dominion Retail	William Barkas, Richard Zelenko	VA

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RGQ	su		Dominion Retail, Inc.	Richard A. Zollars	VA
WGQ	pl		Dominion Transmission, Inc.	Gary Sypolt, Iris King	VA
REQ	d		Dominion Virginia Power	David F. Koogler, Mary Edwards	VA
WGQ	s		DTE Energy Trading, Inc.	Gregory V. Staton, James Buck, Dena Crawford, Marcia L. Hissong, Ann Marie Jambor, Cynthia Klots, Shelley Greene	MI
WEQ	g	iou	Duke Energy Americas, LLC (DEA)	Walt Yeager	OH
RGQ	d		Duke Energy Corp.	Dan Jones	OH
WEQ	d	iou	Duke Energy Corp.	Alan Pritchard	NC
WEQ	g	merc	Dynegy Power Marketing, Inc.	Barry Huddleston	TX
REQ	s		E:SO (Formerly EC Power International)	Judy Bailey, J. Cade Burks, Jennifer Teel	TX
WEQ	n	n	Edison Electric Institute	David Owens, Dave Dworzak, James P. Fama	DC
WEQ	g	merc	Edison Mission Marketing & Trade, Inc.	William Roberts	MA
WGQ	pr		El Paso Exploration & Production Company	David A. Webster, Stephanie Karm	TX
WGQ	pl		El Paso Natural Gas	William Griffith	TX
WEQ	m		Electric Power Supply Association	Jack Cashin, Barry Green	DC
REQ	s		Electric Reliability Council of Texas (ERCOT)	Susan Munson, Kent Saathoff	TX
WEQ	i		Electric Reliability Council of Texas (ERCOT)	Bill Blevins, Paul Wattles, Joel Mickey	TX
WEQ	t	iou	Empire District Electric Company, The	Bary K. Warren	MO
WGQ	pl		Enbridge Energy Company Inc	Terry McGill	TX
WGQ	pr		EnCana Corporation	Keith Sappenfield	ALB
WGQ	s		EnCana Marketing (USA) Inc.	Keith Sappenfield	CO
WEQ	t	iou	Energy East Management Corporation	Mark Marini	NY
WGQ	l		Energy East Management Corporation	Mark Marini	NY
WEQ	e	enduse	EnerNOC, Inc.	Aaron Breidenbaugh	MA
WEQ	g	merc	Entegra Power Group, LLC	Rebecca Turner	FL
WEQ	t	iou	Entergy Services, Inc.	Edward J. Davis, Narinder Saini	LA
WGQ	e		Entergy Services, Inc.	Laura Berryman, Terry Shields	LA
WGQ	pl		Enterprise Products Partners, LP	Richard W. Porter, Jeff Molinaro	TX
WGQ	pl		Equitrans, L.P.	Joseph M. Dawley	PA
RGQ	su		Exelon Energy	Sheree M. Petrone	PA
REQ	d		Exelon Energy Delivery	Toni Garza	IL
WEQ	m	iou	Exelon Generation - Power Team	Jack Crowley	IL
WGQ	pr		ExxonMobil Gas & Power Marketing Company a division of Exxon Mobil Corporation	John W. Poe, Greg Belyakov	TX
WEQ	e	sgen	ExxonMobil Gas Marketing	Kerrie Anne Lanigan, Carol A. Nichols	TX
WEQ	d	iou	First Energy Service Company	Robert M. Martinko, Thomas C. Burgess	OH
WEQ	m	iou	FirstEnergy Solutions Corp.	Mark Travaglianti	OH
WEQ	d	muni	Florida Municipal Power Agency	Frank Gaffney	FL
WEQ	g	muni	Florida Municipal Power Agency	Frank Gaffney	FL
WEQ	m	iou	Florida Power & Light Company	Gerry Yupp, Tim Gerrish	FL
WEQ	t	iou	Florida Power & Light Company	Marty Mennes, Bob Birch	FL
WGQ	e		Florida Power & Light Company	Dona Gussow, Art Morris	FL

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Attachment 6

Membership Roster Sorted by Company

Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
WGQ	pr		Foothills Energy Ventures, LOC	Marty Patterson	TX
WGQ	e		FPL Energy Power Marketing, LLC	Marty Jo Rogers	FL
WGQ	pl		Gas Transmission Northwest Corporation	Jay Story	OR
WEQ	t	muni	Georgia Transmission Corporation	Patrick McGovern	GA
WGQ	pl		Golden Pass Pipeline, LLC	Susan Braden	TX
WGQ	pr		Goodrich Petroleum Company, LLC	Bill Hebenstreit	TX
WGQ	pl		Great Lakes Gas Transmission	Gene Fava	MI
WGQ	pr		High Mount Exploration and Production, LLC	David Ogden, Sheri Heslington, Gary Weaver	VA
WGQ	pl		Houston Pipe Line Company LP	Josie Castrejana, Melissa Graves, Robert Walker	TX
WGQ	pr		Husky Energy Marketing, Inc.	Jan Bindon	ALB
WGQ	pr		Husky Gas Marketing, Inc.	Jan Bindon	ALB
WGQ	e		Husky Marketing and Supply Company	Jan Bindon	ALB
WEQ	t	fed	Hydro - Quebec Transenergie	Glenn Sylvain	QUE
WEQ	t	itc	Hydro One Networks	Mark Graham	ONT
REQ	s		ICF International	David Pickles	DC
WEQ	t	iou	Idaho Power Company	Tessia Park	ID
WGQ	e		Imperial Irrigation District	Susie Carrillo	CA
WEQ	i		Independent Electricity System Operator (IESO)	Cristian Dragnea, Biju Gopi	ONT
WEQ	g	muni	Indiana Municipal Power Agency	Scott Berry	IN
WGQ	l		Integrys Energy Group, Inc.	David E. Wear	WI
RGQ	s		International LNG Alliance	David Sweet	DC
RGQ	su		Interstate Gas Supply	Ginger Fletcher	OH
WGQ	pl		Iroquois Gas Transmission System	Tom Gwilliam	CT
WEQ	i		ISO New England, Inc.	Matthew F. Goldberg	MA
WGQ	s		JP Morgan Ventures Energy Corp	Paul Tramonte	TX
WGQ	pl		Kern River Gas Transmission Company	Brenda Horton	UT
WGQ	l		Laclede Gas Co.	Kenneth Neises	MO
RGQ	s		Latitude Technologies	Leigh Spangler	TX
WGQ	s		Latitude Technologies	Leigh Spangler	TX
WEQ	g	muni	Lincoln Electric System	Douglas Bantam	NE
WEQ	t	muni	Los Angeles Department of Water and Power	Mohammed Johar Beshir	CA
WEQ	m	muni	Los Angeles Department of Water and Power	Bradford Packer, Joel F. Cordero	CA
WGQ	s		Louis Dreyfus Energy Services L.P.	Mary Ellen Bell, Ruby Melton	CT
WGQ	e		Lower Colorado River Authority	Mickey Bell	TX
WGQ	s		Macquarie Cook Energy, LLC	Angela Jones	CA
WGQ	pr		Marathon Oil Company	Robin Perrine	TX
WGQ	pr		Mewbourne Oil Company	Michael F. Shepard	TX
WEQ	d	muni	Michigan Public Power Agency	James R. Nickel, Daniel E. Cooper	MI
WEQ	m	iou	MidAmerican Energy Company	Dennis Kimm	IA
WEQ	i		Midwest Independent Transmission System Operator	Bill Phillips, Ed Skiba	IN
WEQ	t	at large	Midwest Reliability Organization	Dan Schoenecker	MN
WGQ	e		Mirant Energy Trading, LOC	Laura Trautman, John F. Hogan	GA
WEQ	d	muni	Missouri River Energy Services	Brian Zavesky	MO
WEQ	t	muni	Modesto Irrigation District	Roger Van Hoy	CA

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Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
WEQ	e	reg	National Association of Regulatory Utility Commissioners	Lou Ann Westerfield	DC
WGQ	l		National Fuel Gas Distribution	Michael Novak	NY
RGQ	d		National Fuel Gas Distribution Corporation	Mike Novak	NY
WGQ	pl		National Fuel Gas Supply Corp.	Joseph Kardas	NY
WEQ	t	iou	National Grid	Edward M, Kremzier	MA
WGQ	l		National Grid Gas Distribution Companies	Bob Superty	NY
WEQ	d	muni	National Rural Electric Cooperative Assoc.	Barry Lawson, Paul McCurley	VA
WGQ	pl		Natural Gas Pipeline Co of America	Paul Love, Stan Thomas, Mike Schisler, Paul Haas	TX
WEQ	m	at large	Navigant Consulting, Inc.	Richard G. Smead, Laurie J. Oppel, Kenneth C. Lotterhos	TX
WEQ	d	muni	NCMPA1	Martin Summe, George Landis	NC
WGQ	l		New Jersey Natural Gas Company	Douglas C. Rudd	NJ
WEQ	i		New York Independent System Operator	Rana Mukerji	NY
WEQ	d	at large	New York State Reliability Council	P. Donald Raymond	NY
WGQ	s		Nexen Marketing	Shelley Leavitt	ALB
WGQ	l		NiSource, Inc.	George Simmons, Sorana Linder	IN
WGQ	pr		Noble Energy, Inc.	Richard D. Smith, Tammy M. Stevens	TX
WEQ	d	at large	North American Electric Reliability Corporation (NERC)	Gerry Adamski, Andy Rodriquez	NJ
REQ	su		North Carolina Advanced Energy Corporation	Robert K. Koger	NC
WEQ	d	muni	North Carolina Electric Membership Corporation	David Beam	NC
WEQ	t	iou	Northeast Utilities Service Company	David Boguslawski, Calvin A. Bowie	CT
WGQ	pl		Northern Border Pipeline Company	Scott Coburn	NE
WGQ	pl		Northern Natural Gas	Mary Darveaux	NE
WGQ	l		Northwest Natural Gas Company	Randolph Friedman	OR
WEQ	t	iou	Northwestern Corporation	Mike Cashell	MT
WGQ	pl		NOVA Gas Transmission Ltd.	Doug Miller	ALB
WEQ	g	merc	NRG Energy, Inc.	Alan Johnson, Jennifer J. Vosburg	NJ
WEQ	m	iou	NV Energy	Sheryl Torrey	NV
WEQ	t	iou	NV Energy, Inc.	Patricia Englin	NV
REQ	e		Office of Public Advocate, State of Maine	Agnes Gormley	ME
WGQ	s		OGE Energy Resources, Inc.	Cary Metz	OK
REQ	d		Oncor	Larry Williford, Debbie McKeever	TX
WGQ	l		ONEOK	Richard Tangeman	OK
WGQ	pl		ONEOK Partners GP, LLC	Teri Tingler	NE
WEQ	e	at large	Open Access Technology International, Inc.	Michehl Gent	MN
WEQ	t	at large	Open Access Technology International, Inc.	Paul R. Sorenson	MN
WGQ	pl		Ozark Gas Transmission, LLC	David A. Harrell	OK
WGQ	l		Pacific Gas & Electric	John Breen, Don Petersen	CA
WEQ	g	iou	PacifiCorp	Greg Maxfield	OR
WEQ	m	iou	PacifiCorp	John Apperson	OR
WEQ	t	iou	PacifiCorp	Shay Labray	OR
WGQ	pl		Panhandle Eastern Pipe Line Co.	William Grygar, Kim Van Pelt	TX
WGQ	l		PECO Energy Co.	Reed R. Horting	TX
WGQ	s		Pemex Gas Y Petroquimica Basica	Juan Enrique Gonzalez Azuara	MEXICO
REQ	e		Pennsylvania Office Of Consumer Advocate	Tanya J. McCloskey, Sonny A.	PA

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Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
				Popowsky	
RGQ	e		Pennsylvania Office of Consumer Advocate	Tanya J. McCloskey	PA
REQ	e		Pennsylvania Public Utility Commission	Robert F. Wilson, Annunciata E. Marino	PA
WGQ	l		Peoples Gas System (A division of Tampa Electric Co)	Wraye Grimard	FL
WEQ	t	iou	PHI Power Delivery	Ken Gates	DE
WEQ	i		PJM Interconnection	Patrick Brown, Cathy Wesley	PA
WGQ	s		Platts	Bill Murphy	CO
WEQ	t	iou	Portland General Electric	Frank Afranji, John Walker	OR
WGQ	pl		Portland Natural Gas Transmission System	David Haag	OR
WEQ	m	fed	Powerex Corp.	Michael L. McWilliams, Sharole Tylor	BC
WEQ	d	muni	PowerSouth Energy Cooperative	William Ronald Graham	AL
WEQ	t	iou	PPL Electric Utilities Corporation	Ray Mammarella	PA
WGQ	e		PPL EnergyPlus, LLC	Anne Lovett	PA
REQ	s		PPL Solutions, LLC	James M. Minneman, Kim Wall	PA
WEQ	t	iou	Progress Energy	Phillip W. Lewis	NC
WEQ	m	iou	Progress Energy (regulated)	James Eckelkamp	NC
WEQ	m	iou	Public Service Company of New Mexico	Steven Maestas, Darren Wilkins, Patricia Merville	NM
WGQ	l		Public Service Electric & Gas	David Wohlfarth	NJ
WEQ	d	nd	Public Service Electric and Gas Company	Jeffrey C. Mueller	NJ
WEQ	t	nd	Public Service Electric and Gas Company	Kenneth D. Brown	NJ
WEQ	t	iou	Puget Sound Energy, Inc.	George Marshall, Bob Harshbarger	WA
WEQ	g	at large	Qualedi, Inc	Stephen A. Morocco	CT
WGQ	pl		Questar Pipeline Co.	Scott Hansen	UT
WGQ	s		Quorum Business Solutions Inc.	Anne Golenternek, Michael Lewis	TX
WGQ	pl		Reliance Gas Transportation Infrastructure Limited	Jagjit S. Yadav	India
WEQ	g	merc	RRI Energy Services, Inc.	Trent Carlson	TX
WEQ	d	muni	Sacramento Municipal Utility District	Steve Sorey	CA
WGQ	e	fed	Salt River Project Agricultural Improvement & Power District	Lori-Lynn C. Pennock	AZ
WEQ	m	fed	Salt River Project Agricultural Improvement and Power District	Richard Lehman	AZ
WEQ	t	fed	Salt River Project Agricultural Improvement and Power District	Wendy Weathers, Michael J. Pfeister	AZ
WEQ	t	iou	San Diego Gas & Electric Company	Patricia vanMidde	CA
WEQ	t	fed	Santee Cooper	Tom Abrams	SC
WEQ	d	muni	Seattle City Light	Marilynn Semro, Thomas P. Rowan, Doug Rough	WA
WEQ	m	muni	Seminole Electric Cooperative, Inc.	Steve Wallace	FL
WGQ	l		Sempra Energy - Southern California Gas Co.	Lee Stewart, Rodger Schwecke	CA
WGQ	s		Sequent Energy Management, L.P.	Pat Metteauer	TX
WEQ	m	niou	Shell Energy North American (US), L.P.	Robert Reilley, Paul Kerr	TX
WGQ	s		Shell Energy North American (US), L.P.	Eric Gillaspie	TX
WEQ	e	at large	Shift Research, LLC	Jesse D. Hurley	NV
WGQ	s		SolArc, Inc.	Mark Davis	TX
WEQ	m	iou	South Carolina Electric & Gas Company	Kevin Spitzform	SC

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Attachment 6

Membership Roster Sorted by Company

Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
WEQ	t	iou	South Carolina Electric & Gas Company	S. Porcher Stoney	SC
WEQ	g	fed	Southeastern Power Administration	Bob Goss	GA
WEQ	t	iou	Southern California Edison	Weston Williams	CA
WEQ	g	iou	Southern California Edison Company	Tracy Bibb	CA
WGQ	e		Southern California Edison Company	Roman Bakke, Curt Roney	CA
REQ	s		Southern Company Services	Barbara Hingst	GA
WEQ	d	iou	Southern Company Services, Inc.	Gary Rozier, Greg Butrus	GA
WEQ	g	iou	Southern Company Services, Inc.	John Ciza	GA
WEQ	m	iou	Southern Company Services, Inc.	Joel Dison	GA
WEQ	t	iou	Southern Company Services, Inc.	R.D. (Dean) Ulch, John Lucas, JT Wood, James Y. Busbin, Daryl McGee	GA
WGQ	e		Southern Company Services, Inc.	Alan Kilpatrick, Bryan Mitchell	GA
WGQ	pl		Southern Natural Gas Co.	Renee Hyde, Tracey Nicholson, Ludean Wyatt	AL
WGQ	pl		Southern Star Central Gas Pipeline	Philip Rullman, Dale Sanders	KY
WGQ	l		Southwest Gas Corporation	Larry Black	NV
WEQ	i		Southwest Power Pool	Carl Monroe, Michael Desselle, Charles Yeung	AR
WEQ	t	muni	Southwest Transmission Cooperative, Inc.	Larry D. Huff	AR
WEQ	t	fed	Southwestern Power Administration	Tracey Stewart	OK
WGQ	pl		Spectra Energy Transmission	Richard Kruse	NC
RGQ	su		Sprague Energy Corp.	Paul Scoff	NH
WGQ	s		SUEZ Energy Marketing NA, Inc.	Shirley Tidor	TX
WEQ	e	at large	Sungard	Andrew Tritch	TX
WGQ	s		SunGard	Lucia Nail	TX
REQ	s		SunGard Consulting Services, LLC	Austin Morris	TX
RGQ	s		Systrends	Dave Darnell	AZ
WEQ	m	iou	Tampa Electric Company	Gail M. McKaig	FL
WEQ	g	merc	Tenaska, Inc.	Scott Helyer	NE
WGQ	pl		Tennessee Gas Pipeline Company	Sue Barry, Mark Gracey	TX
WEQ	d	other	Tennessee Valley Authority	Emily Oxford, Dianne H. Nunez	TN
WEQ	g	fed	Tennessee Valley Authority	Kathy York	TN
WEQ	m	fed	Tennessee Valley Authority	Belinda Thornton, Valerie Crockett	TN
WEQ	t	fed	Tennessee Valley Authority	Chuck Feagans	TN
WGQ	e		Tennessee Valley Authority	Valerie Crockett	TN
WGQ	s		Tiger Natural Gas	Tracy Phillips	OK
WGQ	pl		TransCanada Pipelines	Doug Miller	ALB
WEQ	i		TranServ International, Inc.	Kevin Burns	MN
WGQ	pl		Transwestern Pipeline Company, LOC	B lair V. Lichtenwalter, Mary Dramer, David Mendoza	TX
WEQ	g	muni	Tri-State G&T Association, Inc.	Janelle Marriott	CO
WEQ	t	muni	Tri-State Generation and Transmission Association, Inc.	Keith V. Carman	CO
WEQ	t	iou	Tucson Electric Power Company	Raquel Aguilar, Judy Fregoso, Ed Beck	AZ
RGQ	d		UGI Utilities, Inc.	Paul Szykman	PA
WEQ	t	iou	United Illuminating Company, The	Rose Pysh	CT
WGQ	pl		Vector Pipeline L.P.	Amy Bruhn	MI

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Attachment 6

Membership Roster Sorted by Company

Quadrant	Segment	Sub-Segment	Member Company	Contact	State / Province
RGQ	su		Vectren Retail, LLC	Tami Wilson	IN
WGQ	s		Vega Energy Partners, Ltd.	Julie Pincus, Lori Leeder	TX
REQ	s		Ventyx, Inc.	Anthony Hill	TX
WEQ	g	muni	Vermont Public Power Supply Authority	William J. Gallagher	VT
WGQ	l		Washington Gas Light Co.	Adrian Chapman, Mark Lowe, Paul Buckley	DC
WEQ	d	iou	We Energies	Linda Horn	WI
WEQ	g	iou	We Energies	James R. Keller	WI
WEQ	g	iou	Westar Energy, Inc.	Shah Hossain, Grant Wilkerson	KS
WEQ	m	fed	Western Area Power Administration	Jeffrey Ackerman	CO
WEQ	t	fed	Western Area Power Administration	JB Hite	CO
WEQ	t	at large	Western Electricity Coordinating Council	Michelle Mizumori, Louise McCarren	UT
WGQ	s		Williams Gas Marketing, Inc.	Rich Ficken	OK
WGQ	pl		Williams Gas Pipeline	Dale Davis, Christopher Burden	TX
WGQ	pl		Williston Basin Interstate Pipeline	Keith Tiggelaar, Gwen Schoepp, Kelly Brooks, Lori Myerchin	ND
REQ	d		Wisconsin Public Service Corporation	Dennis Derricks, Les Nishida, Ken Thiry	WI
RGQ	d		Wisconsin Public Service Corporation	Dennis Derricks, Ken Thiry, Les Nishida	WI
WEQ	g	iou	Wisconsin Public Service Corporation	Christopher Plante, Charles W. Severance, Neal Balu	WI
WEQ	d	muni	WPPI Energy	Mike Stuart	WI
WEQ	m	iou	Xcel Energy Inc.	David Lemmons	CO

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September 4, 2009

TO: NAESB Retail Gas Quadrant Members, Retail Electric Quadrant Members, and Interested Industry Participants

CC: Bill Boswell, NAESB General Counsel, Michael Desselle, NAESB Chairman of the Board

FROM: Rae McQuade, NAESB President

RE: Request for Comments on the Amendments to the Retail Quadrants Procedures

Dear All –

On August 25, 2009 the Retail Gas Quadrant (RGQ) and Retail Electric Quadrant (RGQ) met via conference call to discuss proposed amendments the RGQ and REQ Procedures. During this conference call the participants reviewed the proposed amendments and unanimously supported the modifications in compliance with Section 18 of both the REQ and RGQ Procedures. The notes from this meeting, including the voting tally can be found on the NAESB web site through the following hyperlink: http://www.naesb.org/pdf4/retail_quadrant082509notes.doc.

The proposed amendments in redline format as approved during the August 25, 2009 conference call can be found below:

Proposed Amendments to the Quadrants Procedures Adopted August 25, 2009:
Proposed Amendments to the RGQ Procedures: http://www.naesb.org/pdf4/retail090409reqcom_a2.doc
Proposed Amendments to the REQ Procedures: http://www.naesb.org/pdf4/retail090409reqcom_a1.doc

Section 18 of the RGQ and REQ Procedures require that proposed amendments be distributed to the REQ and RGQ membership for a comment period in advance of a notational ballot. Please Section 18 of the REQ and RGQ Procedures below:

RGQ Procedures

Section 18.1 Amendments

In order for RGQ Procedures to be amended, upon petition of at least five (5) RGQ Members, the Vice Chair of the EC for the RGQ shall announce an RGQ meeting. Such announcement shall provide for at least a 30-day notice. In order to transact business at the RGQ meeting, there shall be a quorum consisting of at least 1/3 of the RGQ Membership. Following such meeting, the proposed resolution adopted at the meeting shall be sent out for comment, and the comments shall be distributed to all RGQ Members in advance of a notational vote. Any RGQ Member not choosing to vote shall be considered to have voted in favor of the proposed change. In order for a proposed change to take effect, it must be approved by at least 2/3 of RGQ Members and 40% of each RGQ Segment's Membership.

REQ Procedures

Section 18.1 Amendments

In order for these REQ Procedures to be amended, upon petition of at least five (5) REQ Members, the Vice Chair of the EC for the REQ shall announce an REQ meeting. Such announcement shall provide for at least a 30-day notice. In order to transact business at the REQ meeting, there shall be a quorum consisting of at least 33% of the REQ Membership. Following such meeting, the proposed resolution adopted at the meeting shall be sent out for comment, and the comments shall be distributed to all REQ Members in advance of a notational vote. Any REQ Member not choosing to vote shall be considered to have voted in favor of the proposed resolution. In order for a proposed resolution to take effect, it must be approved by at least 67% majority of REQ Members and 40% of each REQ Segment's Membership.

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The comment period begins today, September 4, 2009 and ends on September 18, 2009 for the proposed amendments to the REQ and RGQ Procedures. At the conclusion of the comment period a notional ballot will be distributed to all members of the REQ and RGQ.

All comments received by the NAESB office by end of business on September 18, 2009 will be posted on the NAESB REQ Board page: http://www.naesb.org/req/req_bod.asp and NAESB RGQ Board page: http://www.naesb.org/RGQ/rgq_bod.asp, respectively. All comments will be distributed to the REQ and RGQ membership with the notational ballot. If you have difficulty downloading the proposed amendments or have any other questions, please call the NAESB office at (713) 356-0060.

With best regards,
Rae McQuade

North American Energy Standards Board

Bylaws Addendum

Exhibit 3

Retail Gas Quadrant Procedures

Section 1 - DEFINITIONS

Section 1.1 Definitions Included in the NAESB Bylaws

All capitalized terms, if not defined in Section 1.2, shall have the same definitions as specified in the NAESB Bylaws and Certificate of Incorporation.

Section 1.2 Definitions for the Purposes of this Exhibit

~~The following terms have not been defined in Section 1.1 of the NAESB Bylaws and when used in this Exhibit, shall have the meanings set forth below:~~

A. "NAESB Office" means the administrative office of the Secretary of NAESB.

B. "RGQ" means the Retail Gas Quadrant ~~of NAESB~~.

C. "RGQ Designated Alternate" is defined as a person named by a Segment of the Retail Gas Quadrant Segment, submitted to the NAESB office, to serve in place of a RGQ EC Member who is unable to attend an EC meeting.

D. "RGQ EC" means the Executive Committee of the R~~etail G~~as Q~~uadrant of NAESB~~.

~~E. "RGQ EC Subcommittee" means a subcommittee established by the Executive Committee of the Retail Gas Quadrant of NAESB.~~

~~F~~E. "RGQ Members" means Voting Members of the Retail Gas Quadrant of NAESB that satisfy the requirements of membership set forth in Section 5.1 ~~and, if applicable, in the respective Segment Procedures in this Exhibit~~.

~~G~~F. "RGQ Segment" means one of the ~~four~~ three co-equal Segments of the Retail Gas Quadrant of NAESB.

~~H. "Segment Procedures" means the procedures attached to this document as exhibits for each of the Segments, as amended.~~

Section 2 – PURPOSES, SCOPE, ACTIVITIES, AND POLICIES

Section 2.1 Purposes, Scope and Activities

A. Purpose

The purpose of the RGQ of NAESB is to propose, develop and adopt voluntary model business practices or standards to promote more competitive, efficient and reliable service in the retail natural gas industry.

B. Scope & Activities

The RGQ is concerned with and tasked to handle natural gas related issues and practices that are within the scope of NAESB and typically addressed at the retail natural gas distribution level. The RGQ shall work closely with other NAESB Quadrants to mitigate inconsistencies where proposed standards and model business practices affect those other Quadrants.

Section 2.2 Policies

The RGQ shall comply with the policies and procedures laid out in the NAESB ~~b~~Bylaws and the ~~c~~Certificate of ~~i~~Incorporation~~ of NAESB. Further, the RGQ intends to operate in conformance with the principles of the umbrella organization, as established in Section 2.2 (b) of the NAESB Bylaws and in compliance with ANSI guidelines. As such, the RGQ encourages a widely based membership and has identified Segments, which reflect this principle of inclusiveness. Also consistent with this approach, the RGQ shall ensure that all meetings, including those of its Members, Executive Committee (EC), and Subcommittees and Task Forces, shall be open to all persons and that all minutes thereof shall be available to the public~~.

Section 2.3 ~~RGQ~~ Segment Organization

~~What follows is a description of the RGQ organizational structure, including a listing of RGQ Segments.~~

~~Suppliers:~~ ~~Persons engaged in competitive retail sales of natural gas and/or capacity, including marketers , aggregators, producers, asset managers and pipelines.~~

~~Distributors:~~ ~~Persons engaged in the local distribution of natural gas.~~

~~End Users:~~ ~~Persons that consume natural gas or represent consumers of natural gas.~~

~~Service Providers:~~ ~~Persons that provide services to the participants in the retail natural gas industry, including equipment manufacturers, equipment and service vendors, software providers, energy consultants, and other companies not otherwise declared in any other Segment.~~

~~Each RGQ Segment shall have the flexibility to determine its own Segment rules and procedures and to elect or select its own representatives to the NAESB Board and to the RGQ EC, as long as those rules and procedures conform with NAESB Bylaws and the RGQ procedures in this Exhibit.~~

Each prospective Member shall declare the Segment with which they are to be identified.

What follows is a description of the RGQ organizational structure, including a listing of RGQ Segments.

A. Service Providers/Suppliers

Persons engaged in the competitive sale of natural gas and/or capacity to end users, including marketers, aggregators, producers, asset managers and pipelines or that provide services to the participants in the retail natural gas industry, including equipment manufacturers, equipment and service vendors, software providers, energy consultants, and other companies or individuals not otherwise eligible for membership in any other Segment.

B. Distributors

Persons engaged in the local distribution of natural gas.

C. End Users/Public Agencies

Persons that consume natural gas, represent consumers of natural gas or are employed by a public agency associated with the retail electric industry.

Section 3 - RESERVED

Section 4 - RESERVED

Section 5 – RGQ MEMBERS

Section 5.1 RGQ Voting Members

~~The definition of Membership applies to all RGQ Segments. RGQ Members are persons with legitimate business interest[1] in the retail natural gas market and which meet the definitions of one of the four RGQ Segments. Upon applying for Voting Membership (as~~

~~described in NAESB Bylaws Sections 1.1 and 5.1), each prospective RGQ Member shall declare the RGQ Segment with which they are to be identified. Voting~~ Membership and voting rights in the RGQ of NAESB shall be open to ~~all~~ any person~~s~~ that meet~~s~~ ~~all of~~ the following requirements:

A. The person has a ~~legitimate~~ significant business interest[2] in the retail natural gas market (or is a representative or Agent of such person), as determined by a simple majority of the Quadrant Membership, if challenged;

B. ~~The person meets the description of one of the co-equal industry Segments identified by the RGQ of NAESB, as determined by a simple majority of the Segment Membership, if challenged~~Representatives designated by any person in any Segment should have the authority to represent the interests of the person seeking to be a Segment Member.~~;~~

C. ~~The person has designated a representative who has the authority and willingness to represent its interests; and~~Memberships in multiple Segments of the RGQ are permissible for any person provided each membership is filed and declared with NAESB and the person meets the membership requirements of each Segment joined.

D. ~~The person has declared its affiliation to one, and only one, of the RGQ Segments.~~Only one membership per Segment is permissible for any person.

E. The person may be a trade association or an advocacy group representing a group of prospective members.

[2] As used in this section, "significant business interest" specifically includes the interests of statutorily appointed consumer advocates.

~~The RGQ Member may be a trade association or an advocacy group representing a group of prospective members, provided that the trade association or advocacy group meets the requirements defined by the Segment Procedures of its declared Segment. Only RGQ EC Members shall have the right to vote to adopt model business practices or standards affecting only the RGQ.~~

Section 5.2 Removal of Members

Segment Members who do not have a significant business interest pertaining to the descriptions contained in Section 2.3 may be removed from Segment Membership by a simple majority vote of their declared Segment Membership.

Section 6 – RESERVED

Section 7 – BOARD

Section 7.1 Board Representation

The RGQ shall elect Directors to the Board from each Segment in accordance with Section 7.3 ~~have representatives on the NAESB Board of Directors, with each RGQ Segment electing or selecting an equal number of these representatives, pursuant to the procedures specified by the respective RGQ Segment in this Exhibit~~.

Section 7.2 Qualifications of ~~RGQ~~ Directors

A. Eligibility

To be eligible to serve as representative on the NAESB Board of Directors, the Member's representative must:

1. ~~The person must be a Member of the RGQ~~be willing to commit the time and

resources necessary;

2. have the authority to fulfill the obligations as a RGQ Director

3. be willing to meet the minimum threshold of participation and attendance established in the NAESB Bylaws, Section 9.7(f), and any other applicable provisions, as set forth in the NAESB Bylaws

~~2~~4. ~~The person should~~ have broad understanding of the natural gas industry and have sufficient authority to make decisions on behalf of the organization represented; for example, a representative of a corporate entity should ideally be an executive of that corporation;

~~3~~5. ~~The person must~~ have a working knowledge of the NAESB process; and

~~4. The person must be willing to commit the time and resources necessary to fulfill their obligations as a NAESB Director and to meet the minimum threshold of participation and attendance established in the NAESB Bylaws [Section 9.7 (f)]; and~~

~~5~~6. ~~The person should~~ disclose their interest, or their employer's interest, in the natural gas industry and the relationship with other entities with which the employer may be affiliated.

~~B. One Member, One Seat Per Quadrant~~

~~Once elected to serve as Director on the NAESB Board, the individual may hold not more than one directorship, representing only one Segment within the RGQ.~~

Section 7.3 Number and Election of Directors

A. Number of Directors

The RGQ shall elect twelve (12) NAESB Directors and each Segment of the Quadrant will elect four (4) Directors.

~~The RGQ of NAESB shall be represented on the NAESB Board of Directors by twenty-four (24) persons who shall be elected, from time to time, as required by Article 7 of the NAESB Bylaws and in this Exhibit to those Bylaws. The NAESB office shall coordinate the election process for the RGQ representatives to the NAESB Board during the second week of November of each year.~~

B. Election of Directors

~~The elections of RGQ representatives to the NAESB Board shall be subject to the following provisions~~Nominations for and election of all Directors will be as follows:

1. ~~Any RGQ Member who is current in the payment of its dues is eligible to vote; and~~ When Directors' terms approach expiration the NAESB office will ask those Board members if they will consider an additional term.

2. ~~The candidates receiving the greatest numbers of votes shall be elected.~~ The NAESB office will send out a request for candidates letter to all members of the segment for the open seats or seats with term limits. In that communication, if the existing Board member is interested in holding the seat or if other segment members have noted their willingness to be considered as a candidate, they are so noted as candidates.

3. The nomination period is a minimum of two weeks but can extend to one month. Interested members of the segment for the seat in question can self-nominate or nominate others through communication to the NAESB office.

4. If there are contested seats, an election is held for a period of two weeks. Members of the segment are eligible to vote and receive a ballot via email.

5. The ballot can be forwarded to the office in email or fax communication. The tally takes place at the conclusion of the balloting period, and the candidate receiving the most votes wins.

6. In case of a tie, the candidates are approached to resolve the matter.

7. For vacancies, the same steps noted above are followed with the exception that the existing Board member is not approached to determine if he is interested in serving additional terms.

Section 7.4 Term of Office

~~The initial RGQ Directors on the NAESB Board shall be divided into three groups within each RGQ Segment whose terms shall expire as follows: Group A, consisting of two Board seats, on December 31, 2004; group B, consisting of three Board seats, on December 31, 2003; and group C, consisting of one Board seat, on December 31, 2002. Upon the completion of those initial terms, all succeeding Directors shall thereafter be elected for a two-year term, consistent with the NAESB Bylaws.~~

Section 7.4 Term of Office

A. Terms

Directors shall be elected for two-year terms, with half of the terms expiring in alternating years.

1. Two Directors will be elected from each Segment each year to fill expiring terms.

2. Group A Director terms will expire in odd numbered years.

3. Group B Director terms will expire in even numbered years.

4. Term expiration will be in conjunction with the end of the operating year of NAESB or as otherwise defined by the Board, Certificate of Incorporation or Bylaws, as amended.

B. Limit on Number of Terms of Office

Directors elected from the RGQ may run for re-election without restriction on the number of terms held.

C. Change of Affiliation

In the event that the Director

1. changes affiliation to another Member within the same industry Segment, the Director's term will continue until its natural expiration, provided that there is no other Director already representing the Director's new affiliation, in which case the Director changing affiliation will vacate the seat for election of a new Director;

2. is no longer affiliated with the electing industry Segment, the Director will vacate the seat for election of a new Director.

Section 7.5 RESERVED

Section 7.6 Removal of Directors

~~Each RGQ Segment shall have the authority to remove a Director for cause. Prior to voting on such resolution to remove a Director for cause, the RGQ Segment shall give the Director at least 30-day notice of the proposed action and an opportunity to respond. A simple majority of the RGQ Segment Membership shall be required to remove a Director.~~ In addition to being subject to removal from office by the NAESB Board of Directors, Directors may also be removed from office for cause. The RGQ Segment shall give the

Director at least a 30-day notice of the proposed action and an opportunity to respond. A 67% majority of the applicable RGQ Segment Membership shall be required to remove a Director.

Section 8 – RESERVED

Section 9 – RESERVED

10 - EXECUTIVE COMMITTEE

Section 10.1 EC Representation

The RGQ shall elect representatives to the EC from each Segment in accordance with Section 10.3~~have an Executive Committee (EC), which shall also participate in the larger NAESB EC body, consisting of representatives from each RGQ Segment, with each RGQ Segment electing an equal number of these RGQ EC Members, pursuant to procedures specified by the respective Segment in this Exhibit. Only Voting Members of the RGQ have the right to ratify model business practices and standards that were adopted by the RGQ EC and that affect only the RGQ~~.

Section 10.2 Qualifications of RGQ EC Members

A. Eligibility

To be eligible to serve as a representative on the RGQ EC, ~~Member~~ the representative must:

1. ~~The person should have broad understanding and practical experience within the natural gas industry~~be willing to commit the time and resources necessary;

2. have the authority to fulfill the obligations as a RGQ EC Member~~The person should typically be a manager or be at a level of responsibility within the organization represented to act on its behalf~~;

3. be willing to meet the minimum threshold of participation and attendance established in the NAESB Bylaws, Section 9.7(f), and any other applicable provisions, as set forth in the NAESB Bylaws;

4~~3~~. have broad understanding of the natural gas industry and have sufficient authority to make decisions on behalf of the organization represented; for example, a representative of a corporate entity should ideally be in senior leadership of that corporation;

5. ~~The person should~~ have a working knowledge of the NAESB process; and ~~The person must be willing to commit the time and resources necessary to fulfill their obligations as a RGQ EC Member and to meet the minimum threshold of participation and attendance established in the NAESB Bylaws [Section 9.7 (f)]; and~~

~~4~~6. ~~The person should~~ disclose their interest, or their employer's interest, in the natural gas industry and the relationship with other entities with which the employer may be affiliated.

~~B. One Member, One Seat Per Quadrant~~

~~Once elected to serve as RGQ EC Member, the individual may hold not more than one EC seat, representing only one Segment within the RGQ.~~

Section 10.3 Number and Election of RGQ EC Members

A. Number of EC Members

The RGQ ~~of NAESB~~ shall elect twelve (12) EC Members and each Segment of the Quadrant will elect four (4) Representatives~~be represented on the RGQ EC by twenty-four (24) persons who shall be elected, from time to time, as required by Article 10 of the NAESB Bylaws and in this Exhibit to those Bylaws~~.

B. Election of EC Members

~~The~~ Nominations for and election~~s~~ of all~~RGQ~~ EC Members will be as follows~~shall be subject to the following provisions~~:

1. When Representatives' terms approach expiration the NAESB office will ask those EC members if they will consider an additional term~~Any RGQ Member who is current in the payment of its dues is eligible to vote; and~~

2. The NAESB office will send out a request for candidates letter to all members of the segment for the open seats or seats with term limits. In that communication, if the existing EC member is interested in holding the seat or if other segment members have noted their willingness to be considered as a candidate, they are so noted as candidates~~The candidates receiving the greatest numbers of votes shall be elected~~.

3. The nomination period is a minimum of two weeks but can extend to one month. Interested members of the segment for the seat in question can self-nominate or nominate others through communication to the NAESB office.

4. If there are contested seats, an election is held for a period of two weeks. Members of the segment are eligible to vote and receive a ballot via email.

5. The ballot can be forwarded to the office in email or fax communication. The tally takes place at the conclusion of the balloting period, and the candidate receiving the most votes wins.

6. In case of a tie, the candidates are approached to resolve the matter.

7. For vacancies, the same steps noted above are followed with the exception that the existing EC member is not approached to determine if he is interested in serving additional terms.

~~C. Timing of Elections~~

~~The NAESB office shall coordinate the election process for RGQ EC Members during the second week of November of each year.~~

Section 10.4 Term of Office

~~The initial RGQ EC Members shall be divided into three groups within each RGQ Segment whose terms shall expire as follows: Group A, consisting of two EC seats, on December 31, 2004; Group B, consisting of three EC seats, on December 31, 2003; and Group C, consisting of one EC seat, on December 31, 2002. Upon the completion of those initial terms, all succeeding EC Members shall thereafter be elected for a two-year term, consistent with the NAESB Bylaws.~~

A. Terms

EC Members shall be elected for three-year staggered terms of office and will end in conjunction with end of the operating year of NAESB or as otherwise defined by the Board of Directors, Certificate of Incorporation or Bylaws, as amended.

B. Limit on Number of Terms of Office

EC Members from the RGQ may run for re-election without restriction on the number of terms held.

C. Change of Affiliation

In the event that the EC Member

1. changes affiliation to another Member within the same industry Segment, the EC Member's term will continue until its natural expiration, provided that there is no other EC Member already representing the EC Member's new affiliation, in which case the EC Member changing affiliation will vacate the seat for election of a new EC Member.

2. is no longer affiliated with the electing industry Segment, the EC Member will vacate the seat for election of a new EC Member.

Section 10.5 Vacanies

In the event that an EC Member resigns or otherwise vacates the seat, and more than 120 days remain in the term of office, the Segment will hold an election within 60 days to fill the vacant seat, and a Designated Alternate will serve until a new EC Member is elected.

Section 10.~~5~~6 Removal of RGQ EC Members

In addition to being subject to removal from office by the NAESB Board of Directors, EC Members may also be removed from office for cause. The RGQ Segment shall give the EC Member at least a 30-day notice of the proposed action and an opportunity to respond. A 67% majority of the applicable RGQ Segment Membership shall be required to remove an EC Member. The vacant seat is to be refilled in accordance with the requirements of Section 10.5.

~~Each RGQ Segment shall have the authority to remove an RGQ EC Member for cause.~~

~~Prior to voting on such resolution to remove an RGQ EC Member for cause, the RGQ Segment shall give the RGQ EC Member at least 30-day notice of the proposed action and the opportunity to respond. A simple majority of the RGQ Segment Membership shall be required to remove an RGQ EC Member.~~

Section 10.7 Designated Alternates

A. Authority

Any person presenting themselves at an EC meeting as a Designated Alternate will be accepted as a participant provided that:

1. An EC Member from that Segment either indicates to the NAESB Office, EC Chair or Vice-Chair that they will be absent, or is in fact absent and remains absent, and
2. The name of the Designated Alternate is on a list of approved Designated Alternates selected by the appropriate Segment Membership, and on file with the NAESB Office.

B. Election of Designated Alternates

Each Segment will annually select Designated Alternates.

Section 10.8 EC Meetings

A. RGQ EC Meetings

RGQ EC meetings shall be held at times and locations determined by the Chair or Vice-Chair of the RGQ EC. EC Members may participate and vote by means of tele-conference or other electronic means unless in-person attendance is required of all EC Members by both the Chair and Vice-Chair of the EC, and subject to the attendance requirements of Article 10, Section 10.4(j) of the Bylaws.

B. Joint EC Meetings

In the event that the EC of the RGQ meets jointly with an EC of another NAESB Quadrant, the choice of Quadrant EC Chair presiding over the joint meeting will be determined by the precedence established in the order of rotation of EC Vice-Chairs as specified in the NAESB Bylaws.

Section 10.~~9~~6 ~~RGQ~~ EC Subcommittees

~~While there may be Subcommittees and Task Forces established by the NAESB EC, to be comprised of NAESB Members and other interested parties, the RGQ shall set up its own Subcommittees and Task Forces to deal with RGQ-specific issues. Each RGQ EC Subcommittee shall report to the RGQ EC and each shall:~~

~~1. Elect a chair who shall be an RGQ EC Member and who shall serve until he or she resigns or is removed by the RGQ Subcommittee's membership;~~

~~2. Carry out its work in accordance with procedures adopted by the NAESB EC for EC Subcommittees;~~

~~3. Provide notice of meetings and agendas;~~

~~4.Practice balanced voting and record voting results; and~~

~~5.Keep regular minutes of its proceedings and provide copies of these minutes promptly to the NAESB office.~~

~~Any task force established by RGQ EC Subcommittees shall be open to all NAESB Members and other interested parties. At NAESB joint Subcommittee or joint Task Force meetings, the same individual may represent different Segments from different NAESB Quadrants, as long as that individual declares prior to the joint meeting the NAESB Quadrant and Segment for which he or she is casting a vote. At RGQ Subcommittee or Task Force meetings,~~

~~the same individual may represent different RGQ Segments, as long as that individual declares prior to the meeting the RGQ Segment for which he or she is casting a vote.~~

A. Establishing Subcommittees & Task Forces

The EC of the RGQ shall set up its own subcommittees and task forces to deal with RGQ-specific issues. The EC may establish voluntary standing subcommittees or special purpose task forces to perform various functions required of the organization.

1. The Executive Committee will prepare a written statement of the purpose of the subcommittee or task force and the tasks to be performed, name the subcommittee or task force, and appoint a temporary chair.

2. The Temporary Chair will be a Member of the EC willing to perform the required startup tasks and to continue chairing the subcommittee / task force if elected by the Members after its first meeting.

3. The Temporary Chair shall

a) set up the first meeting of the subcommittee or task force.

b) prepare a meeting notice that:

(i) states the name and purpose of the subcommittee / task force,

(ii) solicits participation in the subcommittee / task force, and

(iii) announces the agenda for the first meeting.

c) post the meeting notice to all Members and non-members via the NAESB website.

d) post the notice at least two weeks prior to the meeting date. Shorter time periods for notices of subsequent meetings will be permitted by a 75% vote of the participants attending a duly scheduled meeting.

4. All meeting notices shall be posted on the NAESB website and transmitted in writing, facsimile, or other electronic means to parties who have indicated an interest in the duly scheduled meeting.

B. Meeting Minutes

In the event that an individual from the NAESB Office is unavailable to take minutes, the Chair of any subcommittee / task force meeting will designate an individual to take minutes and forward them to the NAESB Office.

C. Reporting

Each EC subcommittee or task force will report to the EC at no less than quarterly intervals, on a schedule to be defined by the EC for as long as the subcommittee or task force continues to exist.

11 – RESERVED

12 – RESERVED

13 – RESERVED

14 – RESERVED

15 – RESERVED

16 – RESERVED

17 – RESERVED

18 - AMENDMENTS

Section 18.1 Amendments

In order for RGQ Procedures to be amended, upon petition of at least five (5) RGQ Members, the Vice Chair of the EC for the RGQ shall announce an RGQ meeting. Such announcement shall provide for at least a 30-day notice. In order to transact business at the RGQ meeting, there shall be a quorum consisting of at least 3~~1~~/3% of the RGQ Membership. Following such meeting, the proposed resolution adopted at the meeting shall be sent out for comment, and the comments shall be distributed to all RGQ Members in advance of a notational vote. Any RGQ Member not choosing to vote shall be considered to have voted in favor of the proposed change. In order for a proposed ~~change~~ resolution to take effect, it must be approved by at least 67%~~2/3~~ majority of RGQ Members and 40% of each RGQ Segment's Membership.

~~19 – TRANSITION PROCEDURES~~

~~During the initial startup of the RGQ, the Quadrant and Segments may operate with vacant Board and EC seats in a transitional period in accordance with the following provisions. This transitional voting period will be sunset on June 30, 2003, unless the RGQ EC decides to extend the period prior to its expiration. In the event one or more Segments does not populate the maximum number of NAESB Board seats or RGQ EC~~

~~seats, the number of seats per Segment will be reduced from six to five on January 1, 2003, unless the RGQ EC decides otherwise during its December 2002 meeting.~~

~~Section 19.1 Initial Election of RGQ Directors~~

~~The founding membership of the RGQ will elect no less than three (3) Directors of their choosing per Segment by means that are consistent with NAESB Bylaws and the requirements of Section 7 of these Procedures. Selection of candidates and their election will be by procedures agreed to by consensus or voting methods adopted by the founding group. Such elected representatives will be presented to the NAESB Board for acceptance as Directors of the RGQ, and acceptance by the Board will place all the requirements and restrictions of the Bylaws, including these Procedures, upon those individuals. Subsequent elections to fill vacant seats, as necessary, will be held each month until all seats are filled.~~

~~Section 19.2 Initial Election of RGQ Executive Committee~~

~~The founding membership of the RGQ will elect no less than three (3) EC representatives of their choosing per Segment by means that are consistent with NAESB Bylaws and the requirements of Section 10 of these Procedures. Selection of candidates and their election will be by procedures agreed to by consensus or voting methods adopted by the founding group. Such elected representatives will be presented to the NAESB Board for acceptance as representatives of the RGQ, and acceptance by the Board will place all the requirements and restrictions of these Procedures upon those individuals. Subsequent elections to fill vacant seats, as necessary, will be held each month until all seats are filled.~~

~~Section 19.3 Balanced Voting During the Transition Period~~

~~A. Transitional Voting Multiplier~~

~~Recognizing that the RGQ Segments might fill their allotted Board and EC seats at varying rates, a Transitional Voting Multiplier mechanism will be used to ensure balanced voting between Segments until all Board and EC seats are filled.~~

~~1. The Transitional Voting Multiplier shall be calculated for each RGQ Segment by dividing the number of populated seats in the largest REQ Segment by the greater of the number of seats populated in each of the other RGQ Segments.~~

~~The following example is used to illustrate this: A given RGQ Segment populates three seats, while the largest RGQ Segment in this case populates six. To determine the Transitional Voting Multiplier for the smaller RGQ Segment in this example, the number of seats in the largest RGQ Segment (which in this case is 6) would be divided by the number of seats populated in the smaller Segment (which is 3 in this case) to arrive at 2.00 as the Transitional Voting Multiplier for the smaller REG Segment in this case.~~

~~2. The Transitional Voting Multiplier for each Segment will be recalculated as each additional vacant seat is filled by the Quadrant on the Board or the EC.~~

~~3. Once each of a Segment's seats on the Board or the EC has been populated at least once, the Transitional Voting Multiplier will no longer be needed or used for either the Board or EC (whichever applies). Subsequent vacancies on the Board or the EC will not re-institute use of the Transitional Voting Multiplier mechanism.~~

~~B. Application~~

~~When non-procedural votes are tallied at NAESB Board or EC meetings, each of the voters present will have their votes weighted by the Transitional Voting Multiplier applicable to that voter's RGQ Segment. Where applicable, NAESB balanced voting rules will be applied after votes have been weighted. Thus in the example given in Section 19.3(A), if all three representatives from the smaller RGQ Segment vote, the tally of their votes would be 6.~~

~~C. Limitation on Transitional Voting Multiplier~~

~~To the extent that the number of individuals identifying with a RGQ Segment at a sub-committee or task force meeting is less than or equal to the number of RGQ EC seats populated by the Segment, the Transitional Voting Multiplier may be used to weight votes prior to the application of balanced voting rules.~~

North American Energy Standards Board

Bylaws Addendum

Exhibit 4

Retail Electric Quadrant Procedures

Section 1 – DEFINITIONS

Section 1.1 Definitions Included in the NAESB Bylaws

All capitalized terms, if not defined in Section 1.2, shall have the same definitions as specified in the NAESB Bylaws ~~or~~and Certificate of Incorporation ~~of NAESB~~.

Section 1.2 Definitions for the Purposes of this Exhibit

~~A."EC Member" means a Member's representative serving on the EC.~~

~~B.~~A. "NAESB Office" means the administrative office of the Secretary of NAESB.

~~C.~~B. "REQ" means the Retail Electric Quadrant.

~~D.~~C. "~~REQ~~Designated Alternates" is defined as a person named by a Segment of the Retail Electric Quadrant, submitted to the NAESB office, to serve in place of a REQ EC Member who is unable to attend an EC meeting~~mean the group of individuals selected by each REQ Segment Membership to serve in the stead of REQ EC representatives who are unable to attend EC meetings~~.

~~E.~~D. "REQ EC" means the Executive Committee of the REQ.

~~F.~~E. "REQ Members~~hip~~" means the Voting Members of the Retail Electric Quadrant, ~~collectively~~ of NAESB that satisfy the requirements of membership set forth in Section 5.1.

~~G.~~F. "REQ Segment" means one of the three co-equal ~~membership~~ Segments of the ~~NAESB~~ Retail Electric Quadrant of NAESB~~representing the following four (4) segments of the retail electric industry: Distributors, End Users, Services, and Suppliers~~.

~~H."Segment Membership" means the Segment Members collectively.~~

~~I."Segment Procedures" means the procedures attached to this document as exhibits for each of the Segments, as amended.~~

Section 2 PURPOSES, SCOPE, ACTIVITIES, AND POLICIES

Section 2.1 Purpose , Scope & Activities

A. Purpose

The purpose of the REQ of ~~the North American Energy Standards Board (~~NAESB~~)~~ is to propose, ~~evaluate~~ develop and adopt voluntary ~~standards and~~ model business practices or standards to promote more competitive, efficient and reliable service in the retail electric industry.

B. Scope & Activities

The REQ is concerned with and tasked to handle electric related ~~address~~ issues and practices that are within the scope of NAESB and typically addressed at the retail electric distribution level. ~~appropriate to electric usage at the individual consumer level; that is, usage by an individual, partnership, corporation, or other entity consuming electricity at one or more facilities served by an electric distributor.~~The REQ shall work closely with other NAESB Quadrants to mitigate inconsistencies ~~strive for consistency~~ where proposed ~~S~~standards and ~~M~~model ~~B~~business ~~P~~practices affect those other Quadrants.

Section 2.2 Policies

The Retail Electric Quadrant shall comply with the policies and procedures laid out in the NAESB Bylaws and the Certificate of Incorporation ~~of NAESB~~.

Section 2.3 Segment Organization & Membership Requirements

Each prospective Member shall declare the Segment with which they are to be identified. What follows is a description of the REQ organizational structure, including a listing of REQ Segments.

A. Service Providers/Suppliers

Persons engaged in the competitive sale of electricity and/or capacity to end users including marketers, aggregators and producers or that provide services to participants in the retail electric industry, including equipment manufacturers, equipment and service vendors, software providers, energy consultants, and other companies or individuals not otherwise eligible for membership in another Segment.

B. Utilities

Persons engaged in the local distribution of electricity.

C. End Users/Public Agencies

Persons that consume electricity, represent consumers of electricity or are employed by a public agency associated with the retail electric industry.

~~1. Distributors - Persons engaged in the local distribution of electricity.~~

~~2. End Users - Persons that consume electricity, or who represent consumers of electricity.~~

~~3. Services - Persons that provide services to participants in the retail electric industry, including equipment manufacturers, equipment vendors, software providers, consultants, and other companies or individuals not otherwise eligible for membership in another Segment.~~

~~4. Suppliers - Persons engaged in the competitive sale of electricity to end users.~~

Section 3 – RESERVED

Section 4 – RESERVED

Section 5 – MEMBERS

Section 5.1 Voting Members

Membership and voting rights in the REQ of NAESB shall be open to any person that meets the following requirements:

A. The person has a significant business interest[1] in the retail electric market (or is a representative or Agent of such person), as determined by a simple majority of the Segment Membership, if challenged.

B. Representatives designated by any person in any Segment should have the authority to represent the interests of the person seeking to be a Segment Member.

C. Memberships in multiple Segments of the REQ are permissible for any person provided each membership is filed and declared with NAESB~~,~~ and the person meets the membership requirements of each Segment joined~~, and membership dues are paid for each Segment~~.

D. Only one membership per Segment is permissible for any person.

~~Multiple companies under common control within a corporate organization that desire to become Members must join individually. Members cannot extend their membership to their parent company, affiliates, or subsidiaries.~~

[1] As used in this section, "significant business interest" specifically includes the interests of statutorily appointed consumer advocates.

E. The person may be a trade association or an advocacy group representing a group of prospective members~~, provided that the trade association or advocacy group meets the requirements defined by its declared Segment in Segment Procedures~~.

Section 5.~~5~~2 Removal of Members

Segment Members who do not have a significant business interest pertaining to the descriptions contained in Section 2.3 may be removed from Segment Membership by a simple majority vote of their declared Segment Membership.

Section 6 RESERVED~~Meetings of the Members~~

~~All meetings held in association with the NAESB organization or the REQ are open to any interested person. From time to time, there may be joint meetings of the REQ with other Quadrants within NAESB, and Segments may meet jointly to transact Quadrant business.~~

Section 7 BOARD

Section 7.1 Board Representation

The REQ shall elect Directors to the Board from each Segment in accordance with ~~Segment Procedures~~Section 7.3.

Section 7.2 Qualifications of Directors

A. Eligibility

To be eligible to serve as a representative on the NAESB Board of Directors, the Member's representative must:

1. be willing to commit the time and resources necessary~~,~~;

2. have the authority to fulfill the obligations as a REQ Director~~, and~~;

3. be willing to meet the minimum threshold of participation and attendance established in the NAESB Bylaws, Section 9.7(f), and any other applicable provisions, as set forth in the NAESB Bylaws;~~.~~

4. have broad understanding of the electric industry and have sufficient authority to make decisions on behalf of the organization represented; for example, a representative of a corporate entity should ideally be an executive of that corporation;

5. have a working knowledge of the NAESB process; and

6. disclose their interest, or their employer's interest, in the electric industry and the relationship with other entities with which the employer may be affiliated.

~~B. One Member, One Seat Per Quadrant~~

~~No two Directors elected by the REQ may be employees of the same Member holding membership in multiple Segments within the Quadrant. This restriction does not prohibit election of two Directors from two affiliated companies within a holding company having individual Member status, or from two companies with a parent-subsidiary relationship, provided that the two Directors from companies with such a relationship represent Members of differing Segments.~~

~~C. One Office Per Member Representative~~

~~Directors elected from the REQ may not hold both a Board seat and a seat on the REQ EC at any point in time. If an REQ EC Member is elected as a Director from the REQ, the REQ EC seat is vacated when the Board seats the EC Member as a Director.~~

Section 7.3 Number and Election of Directors

A. Number of Directors

The REQ shall elect ~~sixteen~~ twelve (12~~16~~) NAESB Directors~~, subject to the provisions of Section 19 of these Procedures. E~~ and each Segment of the Quadrant will elect four (4) Directors~~, subject to the provisions of Section 19 of these Procedures~~.

B. Election of Directors

Nominations for and election of all Directors will be ~~in accordance with Segment Procedures,~~ as follows:

~~In preparation for any election of NAESB Directors (other than initial Directors, as provided for in Section 19),~~

1. When Directors' terms approach expiration the NAESB office will ask those Board members if they will consider an additional term~~A nominating committee of five EC Members of the REQ consisting of one Member from each Segment plus the REQ EC Vice-Chair, shall identify a slate of potential candidates from the Segment Membership~~.

2. The NAESB office will send out a request for candidates letter to all members of the segment for the open seats or seats with term limits. In that communication, if the existing Board member is interested in holding the seat or if other segment members have noted their willingness to be considered as a candidate, they are so noted as candidates~~Other nominations may be made at or prior to the close of the REQ nomination period by any Segment Member eligible to serve on the Board of Directors by submitting the candidate names to the NAESB Office in a form as specified in NAESB Operating Procedures, if such requirements exist~~.

3. The nomination period is a minimum of two weeks but can extend to one month. Interested members of the segment for the seat in question can self-nominate or nominate others through communication to the NAESB office~~All nominations must be made and conveyed in writing to the NAESB Office no less than 31 days prior to the election date~~.

4. If there are contested seats, an election is held for a period of two weeks. Members of the segment are eligible to vote and receive a ballot via email.

5. The ballot can be forwarded to the office in email or fax communication. The tally takes place at the conclusion of the balloting period, and the candidate receiving the most votes wins.

6. In case of a tie, the candidates are approached to resolve the matter.

7. For vacancies, the same steps noted above are followed with the exception that the existing Board member is not approached to determine if he is interested in serving additional terms.

Section 7.4 Term of Office

A. Terms

Directors shall be elected for two-year terms, with half of the terms expiring in alternating years.

1. Two Directors will be elected from each Segment each year to fill expiring terms.

2. Group A Director terms will expire in odd numbered years.

3. Group B Director terms will expire in even numbered years.

4. Term expiration will be in conjunction with the end of the operating year of NAESB or as otherwise defined by the Board, Certificate of Incorporation or Bylaws, as amended.

B. Limit on Number of Terms of Office

Directors elected from the REQ may run for re-election without restriction on the number of terms held.

C. Change of Affiliation

In the event that the Director

1. changes affiliation to another Member within the same industry Segment, the Director's term will continue until its natural expiration, provided that there is no other Director already representing the Director's new affiliation, in which case the Director changing affiliation will vacate the seat for election of a new Director;

2. is no longer affiliated with the electing industry Segment, the Director will vacate the seat for election of a new Director.

Section 7.5 RESERVED~~Vacancies~~

~~In the event that a Director resigns or otherwise vacates the Board seat, and more than 120 days remain in the term of office, the Segment will hold an election within 60 days to fill the vacant seat.~~

Section 7.6 Removal of Directors

In addition to being subject to removal from office by the NAESB Board of Directors, Directors may also be removed from office for cause. The REQ Segment shall give the Director at least a 30-day notice of the proposed action and an opportunity to respond. A

67% majority of the applicable REQ Segment Membership shall be required to remove a Director. ~~The vacant seat is to be refilled in accordance with the requirements of Section 7.5.~~

Section 8 – RESERVED

Section 9 – RESERVED

Section 10 EXECUTIVE COMMITTEE

Section 10.1 EC Representation

The REQ shall elect representatives to the EC from each Segment in accordance with ~~Segment Procedures~~Section 10.3.

Section 10.2 Qualifications of EC Members

A. Eligibility

To be eligible to serve as ~~an EC Member~~a representative on the REQ EC, the ~~Member's~~ representative must:

1. be willing to commit the time and resources necessary;
2. have the authority to fulfill the obligations as a~~n~~ REQ EC Member;~~EC representative, and~~
3. be willing to meet the minimum threshold of participation and attendance established in the NAESB Bylaws, Section ~~10.4~~9.7(~~j~~f), and any other applicable provisions, as set forth in the NAESB Bylaws~~.~~;

4. have broad understanding of the electric industry and have sufficient authority to make decisions on behalf of the organization represented; for example, a representative of a corporate entity should ideally be in senior leadership of that corporation;

5. have a working knowledge of the NAESB process; and

6. disclose their interest, or their employer's interest, in the electric industry and the relationship with other entities with which the employer may be affiliated.

~~B. One Member, One Seat Per Quadrant~~

~~No two EC Members elected by the REQ may be employees of the same Member holding membership in multiple Segments within the Quadrant. This restriction does not prohibit election of two EC Members from two affiliated companies within a holding company having individual Member status, or from two companies with a parent-subsidiary relationship, provided that the two EC Members from companies with such a relationship represent Members of differing Segments.~~

~~C. One Office Per Member Representative~~

~~Directors elected from the REQ may not hold both a Board seat and a seat on the REQ EC at any point in time. If an REQ EC Member is elected as a Director from the REQ, the REQ EC seat is vacated when the Board seats the EC Member as a Director.~~

Section 10.3 Number and Election of EC Members

A. Number of Executive Committee Members

The REQ shall elect ~~sixteen~~twelve (1~~6~~2) EC Members~~, subject to the provisions of Section 19 of these Procedures.~~ and E~~e~~ach Segment of the Quadrant will elect four (4) ~~EC Members~~Representatives~~, subject to the provisions of Section 19 of these Procedures~~.

B. Election of EC Members

Nominations for and election of all EC Members will be ~~in accordance with Segment Procedures,~~ as follows:

~~In preparation for any election of EC Members, other than initial EC Members as provided for in Section 19),~~

1. When Representatives' terms approach expiration the NAESB office will ask those EC members if they will consider an additional term~~A nominating committee of five EC Members of the REQ consisting of one Member from each Segment plus the EC Vice Chair, shall identify a slate of potential candidates from the Segment Membership~~.
2. The NAESB office will send out a request for candidates letter to all members of the segment for the open seats or seats with term limits. In that communication, if the existing EC member is interested in holding the seat or if other segment members have noted their willingness to be considered as a candidate, they are so noted as candidates~~Other nominations may be made at or prior to the close of the REQ nomination period by any Segment Member eligible to serve on the EC by submitting the candidate names to the NAESB Office in a form as specified in NAESB Operating Procedures, if such requirements exist~~.
3. The nomination period is a minimum of two weeks but can extend to one month. Interested members of the segment for the seat in question can self-nominate or nominate others through communication to the NAESB office~~All nominations~~

~~must be made and conveyed in writing to the NAESB Office no less than 31 days prior to the election date~~.

4. If there are contested seats, an election is held for a period of two weeks. Members of the segment are eligible to vote and receive a ballot via email.

5. The ballot can be forwarded to the office in email or fax communication. The tally takes place at the conclusion of the balloting period, and the candidate receiving the most votes wins.

6. In case of a tie, the candidates are approached to resolve the matter.

7. For vacancies, the same steps noted above are followed with the exception that the existing EC member is not approached to determine if he is interested in serving additional terms.

~~C. Timing of Elections~~

~~Subject to the provisions of Section 19, election of EC Members shall occur in the same month for all Segments of the REQ, and shall be coordinated by the NAESB Office.~~

~~D. Chair Rotation~~

~~The REQ EC shall elevate the prior year Vice Chair of the REQ EC to Chair of the REQ EC at its first meeting in the new operating year and elect a new Vice Chair. If the Vice Chair is vacant at the time of the first meeting of a new operating year, both a Chair and Vice Chair will be elected.~~

~~E. Meeting Minutes~~

~~In the event that an individual from the NAESB Office is unavailable to take minutes, the Chair of any REQ EC meeting will designate an individual to take minutes and forward them to the NAESB Office.~~

Section 10.4 Term of Office

A. Terms

EC Members shall be elected for ~~two~~three-year staggered terms~~, with half of the terms expiring in alternating years.~~

~~1. Subject to the provisions of Section 19, two EC Members will be elected from each Segment each year to fill expiring terms.~~

~~2. Group A EC Member terms will expire in odd numbered years.~~

~~3. Group B EC Member terms will expire in even number years.~~

~~4. Terms~~ of office and will end in conjunction with end of the operating year of NAESB or as otherwise defined by the Board of Directors, Certificate of Incorporation or Bylaws, as amended.

B. Limit on Number of Terms of Office

EC Members from the REQ may run for re-election without restriction on the number of terms held.

C. Change of Affiliation

In the event that the EC Member

1. changes affiliation to another Member within the same industry Segment, the EC Member's term will continue until its natural expiration, provided that there is no other EC Member already representing the EC Member's new affiliation, in which case the EC Member changing affiliation will vacate the seat for election of a new EC Member.
2. is no longer affiliated with the electing industry Segment, the EC Member will vacate the seat for election of a new EC Member.

Section 10.5 Vacancies

In the event that an EC Member resigns or otherwise vacates the seat, and more than 120 days remain in the term of office, the Segment will hold an election within 60 days to fill the vacant seat, and a Designated Alternate will serve until a new EC Member is elected.

Section 10.6 - Removal of EC Members

In addition to being subject to removal from office by the NAESB Board of Directors, EC Members may also be removed from office for cause. The REQ Segment shall give the EC Member at least a 30-day notice of the proposed action and an opportunity to respond. A 67% majority of the applicable REQ Segment Membership shall be required to remove an EC Member. The vacant seat is to be refilled in accordance with the requirements of Section 10.5.

Section 10.7 Designated Alternates

A. Authority

Any person presenting themselves at an EC meeting as a Designated Alternate will be accepted as a participant provided that:

1. An EC Member from that Segment either indicates to the NAESB Office, EC Chair or Vice-Chair that they will be absent, or is in fact absent and remains absent, and
2. The name of the Designated Alternate is on a list of approved Designated Alternates selected by the appropriate Segment Membership~~ according to Segment Procedures~~, and on file with the NAESB Office.

B. Election of Designated Alternates

Each Segment will annually select Designated Alternates~~ according to Segment Procedures~~.

Section 10.8 EC Meetings

A. REQ EC Meetings

REQ EC meetings shall be held at times and locations determined by the Chair or Vice-Chair of the REQ EC. EC Members may participate and vote by means of tele-conference or other electronic means unless in-person attendance is required of all EC Members by both the Chair and Vice-Chair of the EC, and subject to the attendance requirements of Article 10, Section 10.4(j) of the Bylaws.

B. Joint EC Meetings

In the event that the EC of the REQ meets jointly with an EC of another NAESB Quadrant, the choice of Quadrant EC Chair presiding over the joint meeting will be determined by the precedence established in the order of rotation of EC Vice-Chairs as specified in the NAESB Bylaws.

Section 10.9 EC Subcommittees

A. Establishing Subcommittees & Task Forces

The EC of the REQ shall set up its own subcommittees and task forces to deal with REQ-specific issues. The EC may establish voluntary standing subcommittees or special purpose task forces to perform various functions required of the organization.

1. The Executive Committee will prepare a written statement of the purpose of the subcommittee or task force and the tasks to be performed, name the subcommittee or task force, and appoint a temporary chair.

2. The Temporary Chair will be a Member of the EC willing to perform the required startup tasks and to continue chairing the subcommittee / task force if elected by the Members after its first meeting.

3. The Temporary Chair shall

   a) set up the first meeting of the subcommittee or task force.

   b) prepare a meeting notice that:

      (i) states the name and purpose of the subcommittee / task force,

      (ii) solicits participation in the subcommittee / task force, and

      (iii) announces the agenda for the first meeting.

   c) post the meeting notice to all Members and non-members via the NAESB website.

   d) post the notice at least two weeks prior to the meeting date. Shorter time periods for notices of subsequent meetings will be permitted by a 75% vote of the participants attending a duly scheduled meeting.

4. All meeting notices shall be posted on the NAESB website and transmitted in writing, facsimile, or other electronic means to parties who have indicated an interest in the duly scheduled meeting.

B. Meeting Minutes

In the event that an individual from the NAESB Office is unavailable to take minutes, the Chair of any subcommittee / task force meeting will designate an individual to take minutes and forward them to the NAESB Office.

C. Reporting

Each EC subcommittee or task force will report to the EC at no less than quarterly intervals, on a schedule to be defined by the EC for as long as the subcommittee or task force continues to exist.

11 – RESERVED

12 – RESERVED

13 – RESERVED

14 – RESERVED

15 – RESERVED

16 – RESERVED

17 – RESERVED

Section 18 AMENDMENTS

Section 18.1 Amendments

In order for these REQ Procedures to be amended, upon petition of at least five (5) REQ Members, the Vice Chair of the EC for the REQ shall announce an REQ meeting. Such announcement shall provide for at least a 30-day notice. In order to transact business at

the REQ meeting, there shall be a quorum consisting of at least 33% of the REQ Membership. Following such meeting, the proposed resolution adopted at the meeting shall be sent out for comment, and the comments shall be distributed to all REQ Members in advance of a notational vote. Any REQ Member not choosing to vote shall be considered to have voted in favor of the proposed resolution. In order for a proposed resolution to take effect, it must be approved by at least 67% majority of REQ Members and 40% of each REQ Segment's Membership.

~~**Section 19 TRANSITION PROCEDURES**~~

~~During the initial startup of the REQ, the Quadrant and Segments may operate with vacant Board and EC seats in a transitional period in accordance with the following provisions.~~

~~**Section 19.1 Initial Election of Directors**~~

~~The founding membership of the REQ will elect no less than three (3) Directors per Segment by means that are consistent, to the extent practical, with NAESB Bylaws and the requirements of Section 7 of these Procedures. Selection of candidates and their election will be by procedures agreed to by consensus or voting methods adopted by the founding group. Such elected representatives will be presented to the NAESB Board for acceptance as Directors of the REQ. Acceptance by the Board will place all the requirements and restrictions of the Bylaws, including these Procedures, upon those individuals. Elections will be held as needed by any Segment to fill any vacant seats until all four Segment seats are filled for the first time.~~

~~**Section 19.2 Initial Election of Executive Committee**~~

~~The founding membership of the REQ will elect no less than three (3) EC Members per Segment by means that are consistent with NAESB Bylaws and the requirements of Section 10~~

~~of these Procedures to the extent practical. Selection of candidates and their election will be by procedures agreed to by consensus or voting methods adopted by the founding group. Such elected representatives will be presented to the NAESB Board for acceptance as representatives of the REQ. Acceptance by the Board will place all the requirements and restrictions of these Procedures upon those individuals. Elections will be held as needed by any Segment to fill any vacant seats until all four Segment seats are filled for the first time.~~

~~Section 19.3 Balanced Voting During the Transition Period~~

~~A. Transitional Voting Multiplier~~

~~Recognizing that the REQ Segments might fill their allotted Board and EC seats at varying rates, a Transitional Voting Multiplier mechanism will be used to ensure balanced voting between Segments until all Board and EC seats are filled.~~

~~1. During the period when a Segment is initially operating with three seats filled rather than four, each Director or EC Member from the Segment shall be allocated 1.33 votes, so that the weighted votes total four and are equal to the votes of all other REQ Segments.~~

~~2. Once all four of a Segment's seats on the Board or the EC have been populated at least once, the Transitional Voting Multiplier will no longer be needed or used for either the Board or EC (whichever applies). Subsequent vacancies on the Board or the EC will not re-institute use of the Transitional Voting Multiplier mechanism.~~

~~B. Application~~

~~When non-procedural votes are tallied at NAESB Board or EC meetings, each of the voters present will have their votes weighted by the Transitional Voting Multiplier applicable to that voter's REQ Segment. Where applicable, NAESB balanced voting rules will be applied~~

~~after votes have been weighted. Thus in the example given in Section 19.3(A), if all three representatives from the smaller REQ Segment vote, the tally of their votes would be 4.~~

North American Energy Standards Board

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TO: NAESB Files
FROM: Rae McQuade, NAESB President and COO
RE: Review and Approval of 2009 Compensation Changes, Introductory Discussions on Succession Planning
DATE: September 1, 2009

The NAESB Managing Committee met via conference call and in person in Colorado Springs on August 21, 2009 to review compensation issues and succession planning. The meeting was convened at 8:30 am MT. All members were in attendance except Mr. Templeton and Ms. Crockett. Mr. Boswell gave the antitrust guidance. Mr. Desselle reviewed the expectations of the meeting – to review and approve mid-year compensation changes, and to begin discussions on succession planning.

The salary changes were discussed for staff, modified and approved with supporting documentation including financial analysis and ASAE salary charts for similar positions. Succession plans for staff were discussed and reviewed in conjunction with job descriptions, research, and with materials from ASAE as applicable to the size of the organization, region and staff responsibilities. Further work will be prepared by Ms. McQuade and forwarded to the Managing Committee for its approval. There was a review of the Board agenda for September and the strategic session. The expectation is that the strategic session discussion will be the focal point of the Board meeting on September 24 and will kick-start the 2010 annual planning effort.

The meeting adjourned at 11:30 am MT.

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NAESB UPDATE: VERSION 1.9 – WHOLESALE GAS QUADRANT (WGQ)
SEPTEMBER 1, 2009

THE FINAL ACTIONS TO BE APPLIED TO WGQ VERSION 1.8 TO CREATE WGQ VERSION 1.9:

Version 1.8 was published on September 30, 2006. Version 1.9 will be published September 30, 2009.

2006:

R02008 Final Action - Add new transaction types in the Nomination (1.4.1) and Scheduled Quantity (1.4.5) data sets. - Ratified December 28, 2006.

R03005 Final Action - Add code values for the Service Code data element in the Transportation/Sales Invoice (3.4.1). - Ratified December 28, 2006.

R03009 Final Action - Add a Transactional category to the Informational Posting under NAESB WGQ Standard 4.3.21 and the following subcategories to NAESB WGQ Standard 4.3.23: Transactional Firm, Interruptible, Capacity Release. - Ratified December 28, 2006.

2007:

WGQ 2007 Annual Plan Item 6 Final Action - Update the NAESB WGQ Canadian Addendum related to the UPDATE of the NAESB WGQ Base Contract for Sale and Purchase of Natural Gas (NAESB WGQ Standard 6.3.1) dated September 5, 2006 and other industry comments proposed during the discussions - Ratified August 2, 2007

R06008 Final Action - Modify WGQ Business Practice Standard 4.3.90 to clarify that all available data at representative points should be made available by Transmission Service Providers - Ratified August 2, 2007.

R06014 - Add code values for the Rate Identification Code data element in the Transactional Reporting datasets. - Ratified February 17, 2008.

2007 WGQ Annual Plan Item 5 Final Action - Develop Frequently Asked Questions (FAQs) related to the UPDATE of the NAESB WGQ Base Contract for Sale and Purchase of Natural Gas (NAESB WGQ Standard 6.3.1) dated September 5, 2006. - Ratified August 18, 2007.

2008:

R04001 Final Action – Add new data element “Contact Person (E-mail Address)” to data set: NAESB WGQ Standard No. 2.4.4 Shipper Imbalance. - Ratified December 17, 2008.

R04002 Final Action – Add new data elements “Billable Party (Payer) Contact” at the same level as the Billable Party (Payer Data) and add new data element “Invoice Status Code” to the header level and two corresponding code values in data sets: NAESB WGQ Standard No. 3.4.1 Transportation Sales/Invoice and NAESB WGQ Standard No. 3.4.4 Service Requester Level Charge/Allowance Invoice. - Ratified December 17, 2008.

R04004 Final Action – Add new data element “Voluntary GRI Paid” at the detail level (billable party level) in data set: NAESB WGQ Standard No. 4.3.2 Payment Remittance. - Ratified December 17, 2008.

R04012 Final Action – Add new data element “Location Data” (SO) and delete data element “PI Data Ref. Number” (SO) in data set: NAESB WGQ Standard No. 2.4.6 Measured Volume Audit Statement. - Ratified December 17, 2008.

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R04033/R05011/R05023/R05025/R05029 Final Action – Add three code values for data element "Adjustment Type" in data set: NAESB WGQ Standard No. 2.4.3 Allocation and add six code values for data element "Adjustment Type" in data set: NAESB WGQ Standard No. 2.4.4 Shipper Imbalance. - Ratified December 17, 2008.

R04041 Final Action – Add three code values for data element "Allocation Method" in data set: NAESB WGQ Standard No. 2.4.1 Pre-determined Allocation. - Ratified December 17, 2008.

R06019 Final Action – Add three warning validation code values in data set: NAESB WGQ Standard No. 2.4.2 Pre-determined Allocation Quick Response. - Ratified December 17, 2008.

R07012 Final Action – Add four code values for data element "Meter Type" to data set: NAESB WGQ Standard No. 2.4.6 Measured Volume Audit Statement. - Ratified December 17, 2008.

R96121-a23/R07011 Final Action – Add code value definitions for various code values associated with 49 different data elements in one or more of the following 22 data sets: NAESB WGQ Standard No. 2.4.4 Shipper Imbalance, NAESB WGQ Standard No. 2.4.6 Measured Volume Audit Statement, NAESB WGQ Standard No. 2.4.8 Response to Request for Information, NAESB WGQ Standard No. 3.4.1 Transportation / Sales Invoice, NAESB WGQ Standard No. 5.4.1 Offer Download, NAESB WGQ Standard No. 5.4.2 Bid Download, NAESB WGQ Standard No. 5.4.3 Award Download, NAESB WGQ Standard No. 5.4.4 Replacement Capacity, NAESB WGQ Standard No. 5.4.5 Withdrawal Capacity, NAESB WGQ Standard No. 5.4.6 Withdrawal Upload, NAESB WGQ Standard No. 5.4.7 Offer Upload, NAESB WGQ Standard No. 5.4.8 Offer Upload Quick Response, NAESB WGQ Standard No. 5.4.9 Offer Upload Notification, NAESB WGQ Standard No. 5.4.10 Offer Upload Bidder Confirmation, NAESB WGQ Standard No. 5.4.11 Offer Upload Bidder Confirmation Quick Response, NAESB WGQ Standard No. 5.4.12 Offer Upload Final Disposition, NAESB WGQ Standard No. 5.4.13 Operationally Available and Unsubscribed Capacity, NAESB WGQ Standard No. 5.4.14 Upload of Request for Download of Posted Datasets, NAESB WGQ Standard No. 5.4.15 Response to Upload of Request for Download of Posted Datasets, NAESB WGQ Standard No. 5.4.16 System Wide Notices, NAESB WGQ Standard No. 5.4.17 Note/Special Instruction and NAESB WGQ Standard No. 5.4.18 Bid Upload. - Ratified December 17, 2008.

R05028 Final Action – Add three new codes in the "Allocation Transaction Type Matrix" Code Values Dictionary for data set: NAESB WGQ Standard No. 2.4.3 Allocation and add three new code values for data element "Allocation Transaction Type" in dataset: NAESB WGQ Standard 2.4.7 Request for Information. - Ratified December 17, 2008.

R04024/R04039/R05024 Final Action – Add eight and modify three code values, modify one code value description, and one code value definition for data element "Charge Type" in data element: NAESB WGQ Standard No. 3.4.1 Transportation / Sales Invoice. - Ratified December 17, 2008.

R05003 Final Action – Add code value "Special Fuel Surcharge" to data element "Charge Type" in data set: NAESB WGQ Standard No. 3.4.1 Transportation / Sales Invoice. - Ratified December 17, 2008.

R06013 Final Action – Add 13 code values for the data element "Charge Type" in data set: NAESB WGQ Standard No. 3.4.1 Transportation / Sales Invoice. - Ratified December 17, 2008.

R06017 Final Action – Add three warning and two error validation code values in data set: NAESB WGQ Standard No. 1.4.2 Nomination Quick Response. - Ratified December 17, 2008.

R06018 Final Action – Add two error validation code values in data set: NAESB WGQ Standard No. 1.4.7 Confirmation Response Quick Response. - Ratified December 17, 2008.

R06020 Final Action – Add one warning validation code value to data set: NAESB WGQ Standard No. 2.4.2 Pre-determined Allocation Quick Response. - Ratified December 17, 2008.

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NAESB UPDATE: VERSION 1.9 – WHOLESALE GAS QUADRANT (WGQ)
SEPTEMBER 1, 2009

R06021 Final Action – Add new code values for the data element "Transaction Type" in data sets: NAESB WGQ Standard No. 1.4.1 Nominations, NAESB WGQ Standard No. 1.4.5 Scheduled Quantity, NAESB WGQ Standard No. 2.4.4 Shipper Imbalance, and NAESB WGQ Standard No. 2.4.4 Transportation / Sales Invoice. - Ratified December 17, 2008.

R07006 Final Action – Add two code values for the data element "Reduction Reason" in data set: NAESB WGQ Standard No. 1.4.6 Scheduled Quantity for Operator. - Ratified December 17, 2008.

R07016 Final Action – Add two code values for the data element "Reduction Reason" in data sets: NAESB WGQ Standard No. 1.4.4 Confirmation Response, NAESB WGQ Standard No. 1.4.5 Scheduled Quantity, and NAESB WGQ Standard No. 1.4.6 Scheduled Quantity for Operator. - Ratified December 17, 2008.

R07017 Final Action – Add two warning validation code values in data set: NAESB WGQ Standard No. 1.4.2 Nomination Quick Response. - Ratified December 17, 2008.

R06023 Final Action – Add 19 code values for data element "Reduction Reason" in data sets: NAESB WGQ Standard No. 1.4.5 Scheduled Quantity and NAESB WGQ Standard 1.4.6 Scheduled Quantity for Operator. - Ratified December 17, 2008.

2007 WGQ Annual Plan Item 7a/2008 WGQ Annual Plan Item 4a Final Action - Develop standards to provide for index-based pricing for capacity release. (FERC Order No. 698 issued 6-25-07, Docket Nos. RM05-5-001 and RM96-1-027). - Ratified August 25, 2008.

2007 WGQ Annual Plan Item 7b/2008 WGQ Annual Plan item 4b Final Action - Develop standards for providing increased receipt and delivery point flexibility through the use of redirects of scheduled quantities. (FERC Order No. 698 issued 6-25-07, Docket Nos. RM05-5-001 and RM96-1-027). - Ratified August 25, 2008.

2007 WGQ Annual Plan Item 3/2007 Retail Annual Plan Item 9 Final Action - Develop or amend WGQ technical standards, as appropriate, to address the DOE Sandia National Laboratories 2006 surety assessment findings and recommendations (WGQ)/Address issues raised in the Department of Energy's Sandia National Laboratories on NAESB technical standards and respond to the surety assessment finding and recommendations (REQ/RGQ) - Ratified July 11, 2008.

C07003 Final Action - Interpretation of NAESB WGQ Standard 6.3.1 – Base Contract for Sale and Purchase of Natural Gas – Dated April 19, 2002. - Ratified June 21, 2008.

C07002 Final Action - Interpretation of NAESB WGQ Standard 4.3.16. - Ratified June 21, 2008.

R05005 Final Action - Add six code values for the data element Transaction Type in data sets: NAESB WGQ Standard No. 1.4.1 - Nomination, NAESB WGQ Standard No. 1.4.5 - Scheduled Quantity, NAESB WGQ Standard No. 3.4.1 - Transportation/ Sales Invoice. - Ratified June 21, 2008.

R07015 Final Action - Adds a new internet browser plug-in, Adobe Flash Player, to the NAESB Wholesale Gas Quadrant Electronic Delivery Mechanism - Ratified May 2, 2008.

2007 WEQ Annual Plan Item 5 and 2007 WGQ Annual Plan Item 8 Final Action: Develop business practices as needed to support the e-Tariff program including submittal of tariffs and metadata. - Ratified April 4, 2008. 2007 WEQ Annual Plan Item 5 and 2007 WGQ Annual Plan Item 8 Final Action - Attachment

2007 WGQ Annual Plan Item 4 and Retail 2007 Annual Plan Item 6 Final Action - Prepare a joint analysis for AS2 and AS3 protocols as compared to the NAESB IET. - Ratified February 17, 2008.

R01003 Final Action - Add a System Management Service Quantity data element to various capacity release datasets. - Ratified February 17, 2008.

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R02007 Final Action - Add new data element 'Notes Codes' and two related codes for the Invoicing data sets (3.4.1). - Ratified February 17, 2008.

R02011 Final Action - Add code values for NAESB WGQ Standard 2.4.3 - Allocation, NAESB WGQ Standard 2.4.4 - Shipper Imbalance. - Ratified February 17, 2008.

R03001 Final Action - Request two new data elements be added to the Request for Confirmation, Confirmation Response and Scheduled Quantity for Operator. The new data elements would be used at the same level as the Location Data and would be used to define a limit on the total amount of capacity that could be confirmed as delivery or receipt. - Ratified February 17, 2008.

R03010 Final Action - Modifications to the NAESB WGQ Transactional Reporting - Capacity Release Standard 5.4.20 to enhance the display of capacity release data sets at the Sender's Option, including modifications to existing data elements and new data elements. - Ratified February 17, 2008.

R03011 Final Action - Modifications to NAESB WGQ Transactional Reporting - Firm Transportation Standard 5.4.21 to enhance the display of firm data at the Sender's Option, including the addition of new data elements, changes to existing data elements, and the addition of new code values. - Ratified February 17, 2008.

R03012 Final Action - Modifications to NAESB WGQ Transactional Reporting - Interruptible Transportation Standard 5.4.22 to enhance the display of interruptible data at the Sender's Option, including the additional of new data elements, changes to existing data elements, and the addition of new code values. - Ratified February 17, 2008.

R03016 Final Action - Add a new code value - Corrected / Updated - for Contract Status to provide the ability to identify when the contract data as reported on the transactional reports has been corrected or updated. - Ratified February 17, 2008.

R03020 Final Action - Develop a new defined term/definition for Applicable Regulatory Authority and review NAESB WGQ Standards to make corresponding changes. - Ratified February 17, 2008.

R03021 Final Action - Create a new Standard that indicates that unless otherwise denoted, all times contained with the NAESB WGQ Standards are Central Clock Time. - Ratified February 17, 2008.

R03025 Final Action - Add a new notice type - Rates and Charges - to NAESB WGQ Standard 4.3.2. - Ratified February 17, 2008.

R03028 Final Action - Add a reduction reason code to Scheduled Quantity, Operator Scheduled Quantity and Confirmation Response. - Ratified February 17, 2008.

R03029 Final Action - Add a new Notice Type to System-Wide Notices Standard 5.4.16 to support firm capacity including subscribed ROFR Capacity. - Ratified February 17, 2008.

R03032 Final Action - Change existing data elements of NAESB WGQ Transactional Reporting - Firm Transportation Standard 5.4.21. - Ratified February 17, 2008.

R04022 Final Action - Amend WGQ Standards 1.4.5 and 1.4.6 to allow new reduction reason codes. - Ratified February 17, 2008.

R04023 Final Action - Amend WGQ Standards to add new reduction reason code data element. - Ratified February 17, 2008.

R04026 Final Action - Amend WGQ Standard 1.4.1 to add new storage limitation code value. - Ratified February 17, 2008.

R05006 Final Action - Add code value to Validation Code and Message elements in Nomination Quick Response dataset. - Ratified February 17, 2008.

North American Energy Standards Board
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NAESB UPDATE: VERSION 1.9 – WHOLESALE GAS QUADRANT (WGQ)
SEPTEMBER 1, 2009

R05010 Final Action - Add code values to Validation Code and Message elements in Nomination Quick Response dataset. - Ratified February 17, 2008.

R05012 - Add Reduction Reason code to Scheduled Quantity, Operator Scheduled Quantity and Confirmation Response. - Ratified February 17, 2008.

R05017 - Delete or change the usage of the data element Rate Form/Type Code from datasets 5.4.20, 5.4.21 and 5.4.22. - Ratified February 17, 2008.

R06001 - Add two Nomination Transaction Type codes to support the nomination and tracking of the shipping entity or producing entity on the interconnecting facility where title tracking is employed by the TSP. - Ratified February 17, 2008.

R06007 - Add Reduction Reason code to Scheduled Quantity, Operator Scheduled Quantity and Confirmation Response. - Ratified February 17, 2008.

RR06011 - Add 3 detail (contract) level and 1 sub detail (nomination) level code values to Validation Code and Message elements in Nomination Quick Response dataset. - Ratified February 17, 2008.

R06012 - Add two (2) new code values for the data element "Transaction Type" into Scheduled Quantity and Invoice Datasets. - Ratified February 17, 2008.

R06014 - Add code values for the Rate Identification Code data element in the Transactional Reporting datasets. - Ratified February 17, 2008.

WGQ 2008 Annual Plan Item 10 / R08026 Final Action - Standards of Conduct. – Ratified February 6, 2009.

R06016 Final Action - "Modify NAESB WGQ Standard No: 4.3.69 to expand the 'Submit' function to include sending records to the TSP for processing from the Matrix to now include the Form as well.": - Ratified March 13, 2009.

R08007 Final Action - "Modify NAESB WGQ Standard No: 4.3.16 to refer to Appendix C for valid display and download formats. - Ratified March 13, 2009.

R08015/2009 WGQ Annual Plan Item 2.b/2009 Retail Annual Plan Item 5 Final Action – Revise the Trading Partner Agreement TPA by removing the Exhibits from the agreement and relegate such information as contained in the Exhibits to operational worksheet(s): -Ratified June 15, 2009.

2007 WGQ Annual Plan Item 7.a, 2008 WGQ Annual Plan Item 4.a.ii, 2009 WGQ Annual Plan Item 3.a.i, 2008 WGQ Annual Plan Item 9, 2009 WGQ Annual Plan Item 4, R07018, R08019 and R08024 Final Action - Modify the capacity release data sets as approved by the WGQ Executive Committee on May 14, 2009. – Ratified June 15, 2009.

R07014 Final Action - Modify the Confirmation Response Quick Response (NAESB WGQ Std. 1.4.7) to be the newly re-named Confirmation Quick Response such that it can be used as a quick response for both the Request for Confirmation (NAESB WGQ Std. 1.4.3) and the Confirmation Response (NAESB WGQ Std. 1.4.4) as approved by the WGQ EC on May 14, 2009. – Ratified June 15, 2009.

2009 WGQ Annual Plan Item 9 Final Action - Review minimum technical characteristics in Appendices B, C, and D of the WGQ QEDM Manual, and make changes as appropriate as approved by the WGQ EC on May 14, 2009.– Ratified June 15, 2009.

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NAESB UPDATE: VERSION 1.9 – WHOLESALE GAS QUADRANT (WGQ)
SEPTEMBER 1, 2009

TIMELINE:

- Version 1.9 publication date was originally intended to follow the 24-month schedule outlined in the NAESB Operating Practices (September 2008), but has now been scheduled for 3rd Quarter 2009 ***(including Order 698, Order 712, Gas Quality and TPA items pending and completion of member ratification for those pending items)*** (refer to November WGQ EC Minutes).
- 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.

2008 Annual Plan Item	2009 Annual Plan Item	Annual Plan Item	Scheduled	Underway	Concept Discussion	Draft Recommendation	Sub-committee Review	Post Informal Comments	Review Comments	Sub-committee Final Review	Sub-committee Approval	NAESB Clean-up	Post for Formal Comments	EC Passed	Ratified
2.a.iii.1	2.a.i.1	Use of OASIS to Make Electronic Requests to Designate and Terminate Network Resource		■	■	■									
2.a.iii.2	2.a.i.2	Ability to Query Requests to Designate and Terminate Network Resources and Allow for Queries of All Information		■	■	■									
2.a.iii.3	2.a.i.3	Masking of Designated Network Resource Operating Restrictions and Generating Cost Information		■	■	■									
2.a.iii.4	2.a.i.4	Procedural Requirements for Submitting Designations over new OASIS Functionality		■	■	■									
2.a.iii.5	2.a.i.5	Specify How Designated Network Service Informational Postings are Posted on OASIS		■	■	■									
2.a.iii.6	2.a.i.6	Set Forth the Treatment of OASIS Requests when the Customer Fails to Provide the Necessary Attestation		■	■	■									
2.a.iii.7	2.a.i.7	Procedural Requirements for Submitting Both Temporary and Indefinite Terminations of Network Resources		■	■	■									
2.a.iii.8	2.a.i.8	Procedures for Submitting and Processing Requests for Concomitant Evaluations of Transmission Requests and Temporary Terminations		■	■	■									
2.a.iv.1	2.a.ii.1	Pre-Emption													
2.a.iv.2	2.a.ii.2	Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff (R05019)													
2.a.iv.3	2.a.ii.3	Revisions to Standard 9.7		■	■	■	■	■	■	■	■	■	■	■	■
2.a.v.1	2.a.iii.1	Paragraph 1377 The coordination of requests across multiple transmission systems													
2.a.v.2	2.a.iii.2	Re-Bid Of Partial Service across Multiple Transmission Providers' Systems													
	2.a.iii.3	Group DNR requests from a system with point-to-point requests on other systems for synchronization	■												
2.a.vi.1	2.a.iv.1	Paragraph 1390 of Order 890 Review existing business functions to determine if there is any impact on these business functions related to TC modifying its application for service to the point that the request is "meaningfully different" than initial request													
2.a.vi.2	2.a.iv.2	Paragraphs 1627 of Order 890 The posting of additional curtailment information on OASIS													
2.a.vi.3	2.a.iv.3	Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services.													
2.b.i.1	2.b.i.1	The processing of transmission service requests, which use TTC/ATC/AFC, in coordination with NERC changes to MOD 001 (R05004)		■	■	■									
3.a.ii	3.a.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.a.v	3.a.iii	Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff. (R05019)													
3.a.vi.2	3.a.iv.1	Eliminate Masking of TSR tag source and sink when requested status is denied, withdrawn refused, displaced, invalid, declined, annulled or retracted (R05026)													
3.a.vi.4	3.a.iv.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. (R05026)													
3.a.vi.5	3.a.iv.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. (R05026)													
3.b.ii	3.b.ii	Develop PKI standards for OASIS.													
6.c.1	5.a.1	OASIS Consistency Changes (R08001, R08002, R08003, R08005)													
6.n	5.d	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)													
	5.g	Correct WEQ 013-2.6.7.2 - Resale off OASIS (R08027)	■												
	5.h	Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (R09003)	■												
provisional 5	provisional 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)													

LEGEND:

Progress legend
- Completed Prior to August 2009 EC Meeting
- Completed since August 2009 EC Meeting

AP item legend
- 890 Work Plan
- Normal Annual Plan Items
- New Items Added

2009 AP item legend
- AP items linked to 9.7
- AP items linked to NITS
- AP items linked to R05019
- AP items linked to services across multiple TP
- AP items linked to R05026
- AP items that stand alone

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

1. RECOMMENDED ACTION:

X	Accept as requested
	Accept as modified below
	Decline

EFFECT OF EC VOTE TO ACCEPT RECOMMENDED ACTION:

X	Change to Existing Practice
	Status Quo

2. TYPE OF DEVELOPMENT/MAINTENANCE

Per Request:		**Per Recommendation:**	
X	Initiation	X	Initiation
	Modification		Modification
	Interpretation		Interpretation
	Withdrawal		Withdrawal
X	Principle	X	Principle
X	Definition	X	Definition
X	Business Practice Standard	X	Business Practice Standard
	Document		Document
	Data Element		Data Element
	Code Value		Code Value
	X12 Implementation Guide		X12 Implementation Guide
	Business Process Documentation		Business Process Documentation

3. RECOMMENDATION

SUMMARY:

The DSM-EE Subcommittee submits this Recommendation for 2009 Retail Annual Plan Item No. 6.e to support retail development of Model Business Practices for Measurement & Verification (M&V) for Demand Response programs.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

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RECOMMENDED STANDARDS:

MEASUREMENT & VERIFICATION (M&V) OF DEMAND RESPONSE PROGRAMS

Table of Contents

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters:	**DSM-EE Subcommittee**
Request No.:	**2009 Retail Annual Plan Item No. 6.e**
Request Title:	**M&V for Demand Response Programs**

Executive Summary

This section provides a common framework of the Model Business Practices for Measurement and Verification (M&V) of Demand Response programs in retail energy markets. The purpose of these Model Business Practices is to provide:

- Transparency: accessible and understandable M&V requirements for Demand Response programs
- Accountability: criteria that will enable the Program Administrator to accurately measure performance of Demand Response Resources; and
- Consistency: a process or protocol that will allow Program Administrators, Applicable Regulatory Authorities, or program participants to agree on the required steps to take to verify demand reductions resulting from Demand Response programs in retail energy markets.
- Comprehensive: strives to cover all forms of Demand Response

The purpose of this Standard is to ensure that regulatory commissions and participants in retail electric markets in which dispatchable Demand Response products are administered have access to uniform information that will enable them to report consistent values for Measurement and Verification of the programs.

These Model Business Practices were designed in concert with Wholesale Electric Quadrant Standards covering Demand Response programs operating in wholesale electric markets. In the event of a conflict between these business practices and business practices developed by the Wholesale Electric Quadrant for products that are bid into wholesale markets, the Wholesale Electric Quadrant Standard should have precedence. Additionally, all Entities supplying Demand Response Services should comply with applicable North American Electric Reliability Corporation(NERC) reliability standards.

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Request Title:	**M&V for Demand Response Programs**

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 customers. REQ / RGQ Model Business Practices are intended to provide guidance to Distribution Companies, Suppliers, and other Market Participants involved in providing energy service to end-use Customers. The focus of these Model Business Practices is performing M&V for Demand Response programs. These Model Business Practices are intended to be consistent with the Wholesale Electric Standards, but also acknowledge differences in product and program types between the two markets.

These Model Business Practices are voluntary and do not address policy issues that are the subject of state legislation or regulatory decisions. These Model Business Practices have been adopted with the realization that as the industry evolves, additional and amended Model Business Practices may be necessary. Any industry participant seeking additional or amended Model Business Practices (including principles, definitions, data elements, process descriptions, and technical implementation instructions) should submit a request to the NAESB office, detailing the change, so that the appropriate process may take place to amend the Model Business Practice.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
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Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

Business Processes and Practices

MEASUREMENT & VERIFICATION (M&V) OF DEMAND RESPONSE PROGRAMS

REQ.13 Overview

These M&V Model Business Practices establish criteria for the use of equipment, technology, and procedures to quantify the Demand Reduction Value delivered. Model Business Practices developed may include commonalities among product types. The following outline of Model Business Practices is applicable to the Demand Response product categories.

General	Advance Notification
	Deployment Time
	Reduction Deadline
	Release/Recall
	Normal Operations
	Demand Resource Availability Measurement
	Aggregation
	Transparency of Requirements
Telemetry	Telemetry Requirement
	Telemetry Accuracy
	Telemetry Interval
	Other Telemetry Measurements
	Communication Protocol
	Governor Control Equivalent
	On-Site Generation Telemetry Requirement
After-The-Fact Metering	After-the-Fact Metering Requirement
	Meter Accuracy
	Details of Meter/Equipment Standards
	Meter Data Reporting Deadline
	Meter Data Reporting Interval
	Clock / Time Accuracy
	Validating, Editing & Estimating (VEE) Method
	On-Site Generation Meter Requirement
Performance Evaluation	Rules for Performance Evaluation

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Performance Evaluation Methodology

For each Demand Response service, a performance evaluation methodology is used to determine the Demand Reduction Value provided by a Demand Resource. The Model Business Practices include descriptions of acceptable Baselines and alternative performance measurements that are appropriate for each type of Demand Response service. The table below provides an outline of the applicable criteria for performance evaluation methodologies.

Baseline Information	Baseline Window
	Calculation Type
	Sampling Precision and Accuracy
	Exclusion Rules
	Baseline Adjustments
	Adjustment Window
Event Information	Use of Real-Time Telemetry
	Use of After-The-Fact Metering
	Performance Window
	Measurement Type
Special Processing	Highly-Variable Load Logic
	On-Site Generation Requirements

These Model Business Practices do not specify detailed characteristics of performance evaluation methodologies, but rather provide a framework that may be used to develop performance evaluation methodologies for specific Demand Response services. This approach is believed to be most appropriate at this time as development of performance evaluation methodologies and baseline calculations continues to mature. The following methodology types are applicable to retail Demand Response Services:

- Maximum Base Load
- Meter Before / Meter After
- Baseline
- Metering Generator Output

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Request Title:	**M&V for Demand Response Programs**

REQ.13.1 Principles

REQ.13.1.1 The processes for M&V of Demand Response programs should be efficient to minimize the time and effort needed to accomplish these operational details.

REQ.13.1.2 The processes for M&V of Demand Response programs should be consistent with the requirements set forth by the Applicable Regulatory Authority.

REQ.13.1.3 The processes for M&V of Demand Response programs should minimize the occurrence of unauthorized activity in the marketplace.

REQ.13.1.4 A contract or agreement between participants may establish different processes, timeframes, or operational requirements. Any conflict between these recommended processes and an applicable contract is resolved according to the provisions of the contract.

REQ.13.1.5 These processes do not address contractual obligations between participants and their Customers, but because they are intended to be business practices, entities may incorporate them into contractual arrangements

REQ.13.1.6 All Customer specific data must remain confidential unless the parties otherwise agree.

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REQ.13.2 Definitions

REQ.13.2.A Business Definitions

REQ.0.2.xx **Adjustment Window:** The period of time prior to a Demand Response Event used for calculating a Baseline Adjustment.

REQ.0.2.xx **Advance Notification(s):** One or more communications to Demand Resources of an impending Demand Response Event in advance of the actual event.

REQ.0.2.xx **After-the-Fact Metering:** Interval meter data separate from Telemetry that is used to measure Demand Response. May not apply to Demand Resources under Baseline using statisitical sampling.

RXQ.0.2.1 **Applicable Regulatory Authority:** The state regulatory agency or other local governing body that provides oversight, policy guidance, and direction to any parties involved in the process of providing energy to retail access Customers through regulation and orders.

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REQ.0.2.xx **Baseline:** A method of estimating the electricity that would have been consumed by a Customer or Demand Resource in the absence of a Demand Response Event. It may be calculated using interval metering and/or statistical sampling techniques. The figure below illustrates the concept of Baseline relative to a Demand Response Event.

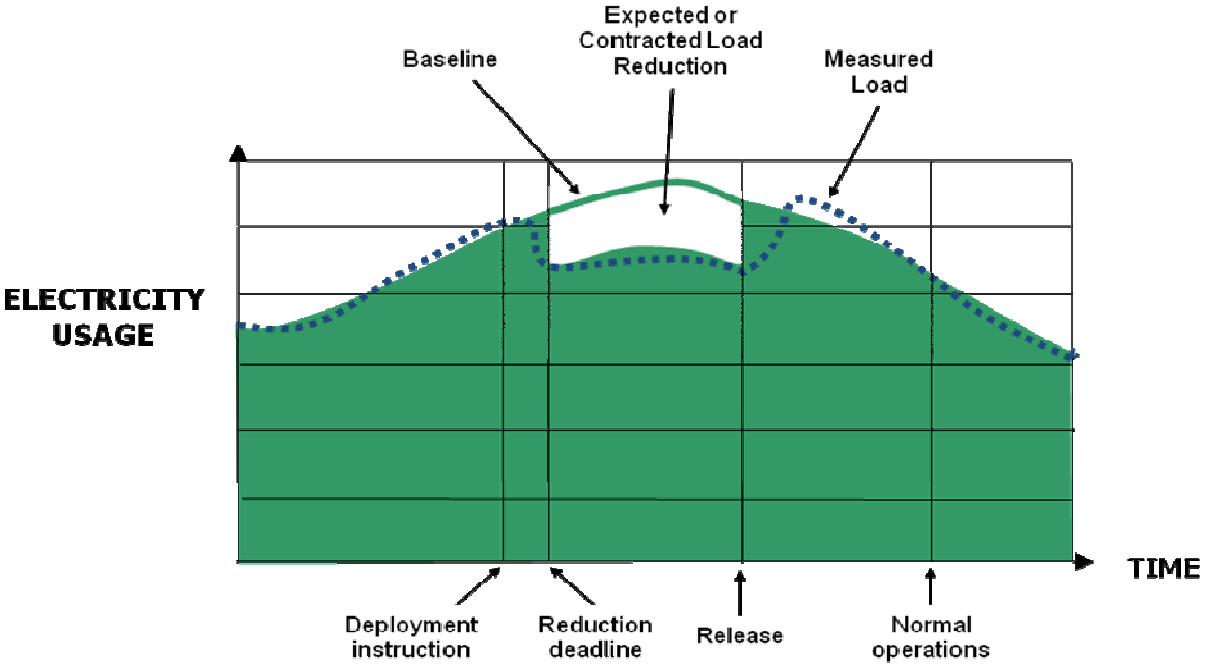

Figure. Illustration of Baseline Concept.

REQ.0.2.xx **Baseline Adjustment:** An adjustment that modifies the Baseline to reflect actual conditions immediately prior to or during a Demand Response Event to provide a better estimate of the energy the Demand Resource would have consumed but for the Demand Response Event. The adjustments may include but are not limited to weather conditions, near real time event facility Load, current Demand Resource operational information, or other parameters based on the Program Administrator's requirements.

REQ.0.2.xx **Baseline Window:** The window of time preceding and optionally following, a Demand Response Event over which the electricity consumption data is collected for the purpose of establishing a Baseline.

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REQ.0.2.xx **Capacity Service:** A type of Demand Response service in which Demand Resources are obligated over a defined period of time to be available to provide Demand Response upon deployment by the Program Administrator.

REQ.0.2.xx **Critical Peak Pricing**: Rates which typically charge a much higher price during a few hours per day on critical peak days. The number of critical peak days is usually capped for a calendar year and is linked to conditions such as system reliability concerns or very high supply prices.

RXQ.0.2.16 **Customer:** Any Entity that takes gas and/or electric service for its own consumption.

REQ.0.2.xx **Demand:** The rate at which electric energy is delivered to or by a system or part of a system, generally expressed in kilowatts or megawatts, at a given instant or averaged over any designated interval of time; and the rate at which energy is being used by the customer.

REQ.0.2.xx **Demand Reduction Value:** Quantity of reduced electrical Demand consumption by a Demand Resource, expressed in MW or MWh, respectively.

REQ.0.2.xx **Demand Resource:** A Load or aggregation of Loads capable of measurably and verifiably providing Demand Response.

REQ.0.2.xx **Demand Resource Availability Measurement:** The amount of Load available to be dispatched for a given Demand Response Event.

REQ.0.2.xx **Demand Response:** Changes in electric use by demand-side resources from their normal consumption patterns in response to changes in the price of electricity, or to incentives designed to induce lower electricity use at times of potential peak load, high cost periods, or when system reliability is jeopardized.

For purposes of these Model Business Practices, this definition does not include energy efficiency or permanent Load reduction.

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REQ.0.2.xx **Demand Response Event:** The time periods, deadlines and transitions during which Demand Resources perform. The Program Administrator should specify the duration and applicability of a Demand Response Event. All deadlines, time periods and transitions may not be applicable to all Demand Response products or services.

The figure below represents the terms for timing events and time durations applicable to the characteristics of a dispatchable Demand Response Event. The definitions of the ten elements in the figure are the basis for describing the Timing of a Demand Response Event.

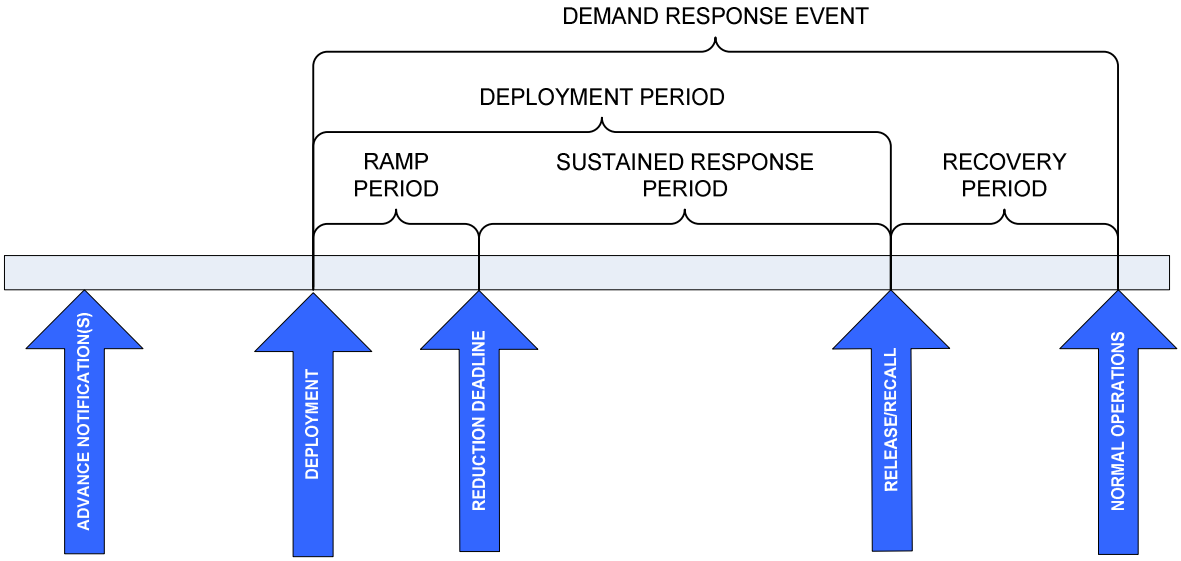

Figure. Timing of a Demand Response Event

REQ.0.2.xx **Demand Response Provider:** The Entity that is responsible for delivering Demand reductions from Demand Resources.

REQ.0.2.xx **Deployment:** The time at which a Demand Resource begins reducing Demand on the system in response to an instruction.

REQ.0.2.xx **Deployment Period:** The time in a Demand Response Event beginning with the Deployment and ending with the Release/Recall.

REQ.0.2.xx **Direct Load Control:** A Demand Response activity by which the program sponsor remotely shuts down or cycles a Customer's electrical equipment (e.g. air conditioner, water heater). Direct Load Control programs are primarily offered to residential or small commercial Customers.

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REQ.0.2.xx **Dispatchable Programs:** Programs that allow a Program Administrator to declare a Demand Response Event that has a specific start time and end time.

RXQ.0.2.17 **Distribution Company:** A regulated Entity which provides distribution services and may provide energy and/or transmission / transportation services in a given area.

REQ.0.2.xx **Energy Service:** A type of Demand Response service in which Demand Resources are compensated solely based on their performance during a Demand Response Event.

RXQ.0.2.47 **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.

REQ.0.2.xx **Firm Service Level:** Demand level that a Customer must not exceed during a Demand Response Event.

RXQ.0.2.22 **Governing Documents:** Documents that determine the interactions among parties, including but not limited to: regulatory documents (e.g., tariffs, rules, regulations), contractual agreements, and Distribution Company Operational Manuals.

REQ.0.2.xx **Guaranteed Load Drop:** Reduction of a specified amount of Load.

REQ.0.2.xx **Highly-Variable Load:** A Load with a fluctuating or unpredictable electricity consumption pattern.

REQ.0.2.xx **Load:** An end-use device or customer that receives power from the electric system.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
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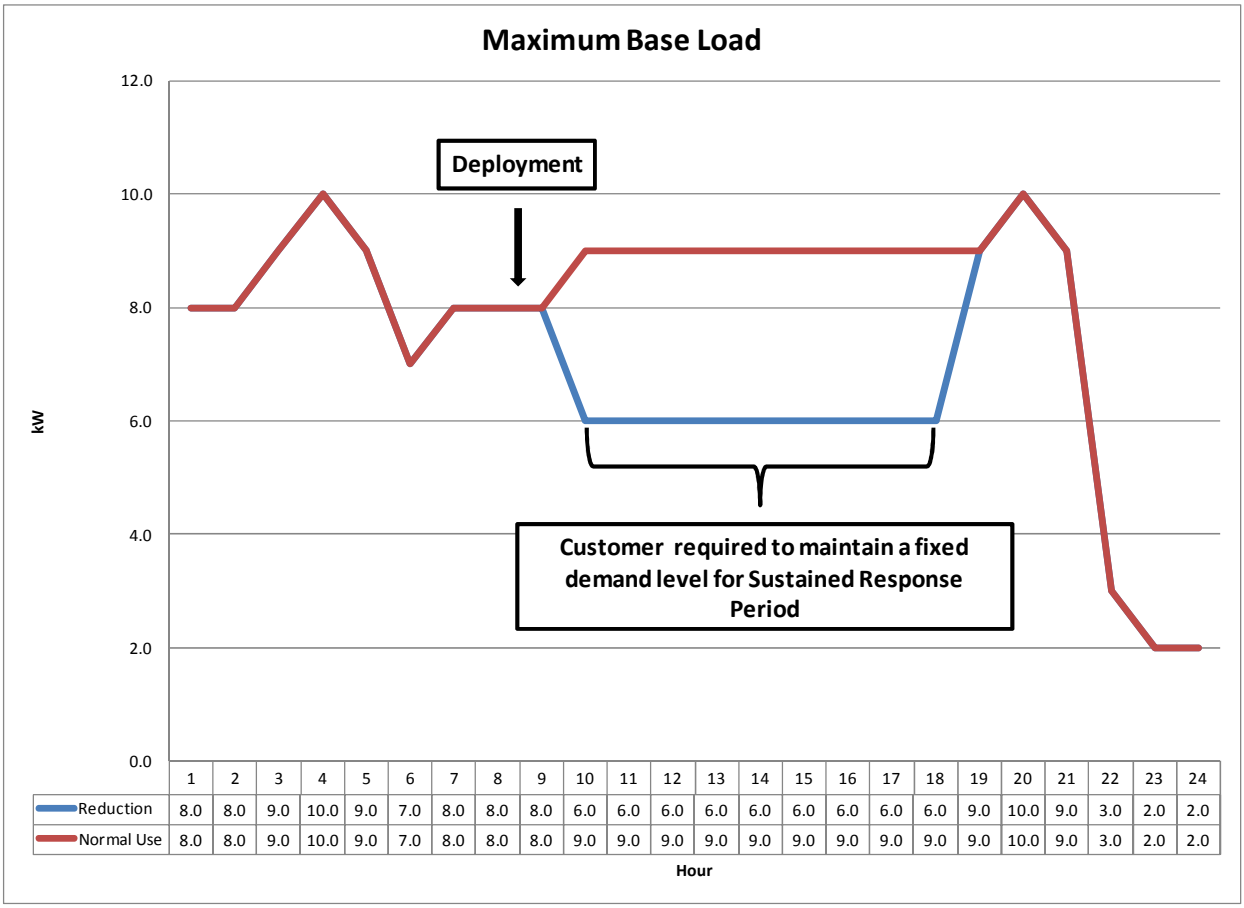
Request Title: M&V for Demand Response Programs

REQ.0.2.xx **Maximum Base Load:** A performance evaluation methodology based solely on a Demand Resource's ability to reduce to a Firm Service Level, regardless of its electricity consumption or Demand at Deployment.

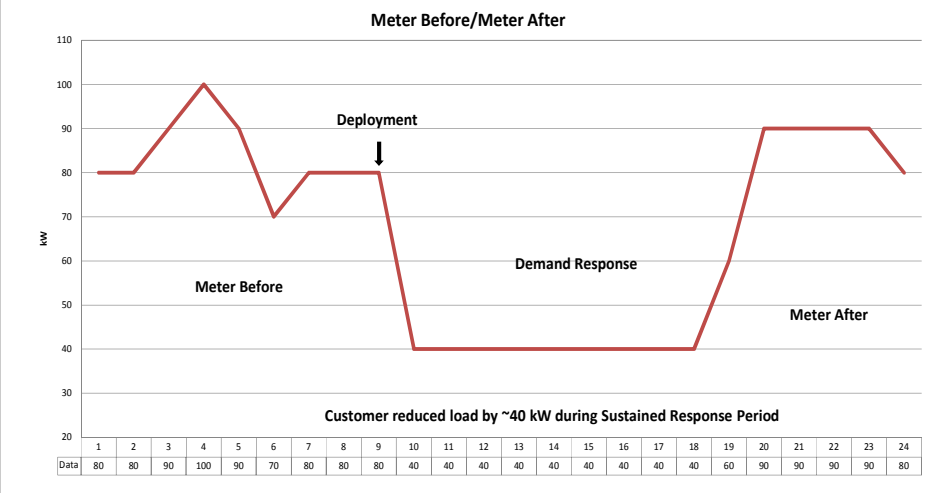


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reduction	8.0	8.0	9.0	10.0	9.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	9.0	10.0	9.0	3.0	2.0	2.0
Normal Use	8.0	8.0	9.0	10.0	9.0	7.0	8.0	8.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	10.0	9.0	3.0	2.0	2.0

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: DSM-EE Subcommittee
Request No.: 2009 Retail Annual Plan Item No. 6.e
Request Title: M&V for Demand Response Programs

REQ.0.2.xx **Meter Before / Meter After:** A performance evaluation methodology where electricity Demand over a prescribed period of time prior to Deployment is compared to similar readings during the Sustained Response Period.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Data	80	80	90	100	90	70	80	80	80	40	40	40	40	40	40	40	40	40	60	90	90	90	90	80

REQ.0.2.xx **Meter Data Recording Interval:** The time between electricity meter consumption recordings.

REQ.0.2.xx **Meter Data Reporting Deadline:** The maximum allowed time from the end of a Demand Response Event (Normal Operations) to the time when meter data is required to be submitted for performance evaluation and settlement. The Meter Data Reporting Deadline may be either relative (a number of hours/days after Normal Operations) or fixed (a fixed calendar time, such as end-of-month).

REQ.0.2.xx **Metering Generator Output:** A performance evaluation methodology in which the Demand Reduction Value is based on the output of the generation asset, used when a generation asset is located behind the Demand Resource's revenue meter.

REQ.0.2.xx **Non-Dispatchable Programs:** Programs in which Demand Resources curtail according to tariff structure, not in response to instructions from a Program Administrator.

REQ.0.2.xx **Non-Spinning Reserve:** Operating reserves that can be started, synchronized and loaded within a specified time period.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

REQ.0.2.xx **Normal Operations:** The time following Release/Recall at which a Program Administrator may require a Demand Resource to have returned its Load consumption to normal levels, and to be available again for Deployment.

REQ.0.2.xx **Operability Factor:** A net-to-gross percentage applied to the Demand Resource Availability Measurement, developed using a defined and documented testing protocol to verify both signal reception and device operation of the units in a retail Demand Response program, specific to a time period.

REQ.0.2.xx **Performance Window:** The period of time in a Demand Response Event analyzed by the Program Administrator to measure and verify the Demand Reduction Value for a Demand Resource.

REQ.0.2.xx **Program Administrator:** An investor-owned, governmental or cooperative utility with the responsibility for developing and operating Demand Response programs.

REQ.0.2.xx **Ramp Period:** The time between Deployment and Reduction Deadline, representing the period of time over which a Demand Resource is expected to achieve its change in Demand.

REQ.0.2.xx **Ramp Rate:** The rate, expressed in megawatts per minute, that a generator changes its output or a Demand Resource changes its Load.

REQ.0.2.xx **Real Time Pricing:** A retail rate in which the price for electricity fluctuates reflecting changes in the wholesale price of electricity.

REQ.0.2.xx **Recovery Period:** The time between Release/Recall and Normal Operations, representing the window over which Demand Resources are required to return to their normal Load.

REQ.0.2.xx **Reduction Deadline:** The time at the end of the Ramp Period when a Demand Resource is required to have met its Demand Reduction Value obligation.

REQ.0.2.xx **Regulation Service:** A type of Demand Response service in which a Demand Resource increases and decreases Load in response to real-time signals from the Program Administrator. Demand Resources providing Regulation Service are subject to dispatch continuously during a commitment period. Provision of Regulation Service does not correlate to Demand Response Event timelines.

REQ.0.2.xx **Release/Recall:** The time when a Program Administrator notifies a Demand Resource that the Deployment Period has ended or will end.

REQ.0.2.xx **Sustained Response Period:** The time between Reduction Deadline and Release/Recall, representing the window over which a Demand

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

Resource is required to maintain its reduced net consumption of electricity.

REQ.0.2.xx **Spinning Reserve:** Operating reserves from resources that are synchronized to the grid and can respond to instructions from the Program Administrator.

REQ.0.2.xx **Telemetry:** Real-time continuous communication between a Demand Resource or Demand Response Provider and the Program Administrator.

REQ.0.2.xx **Telemetry Interval:** The time unit between communications between a Demand Resource or Demand Response Provider and a Program Administrator.

REQ.0.2.xx **Time-of-Use Rates:** Rates where usage unit prices vary by more than one time period within a 24-hour day to reflect the average cost of generating and delivering power during those time periods. Daily pricing blocks may include, but are not limited to, an on-peak, partial-peak, and an off-peak price for non-holiday weekdays, with the on-peak price as the highest price, and the off-peak price as the lowest price.

REQ.0.2.xx **Validation, Editing and Estimation:** The process of confirming the accuracy of raw meter data and, if necessary, replacing corrupt or missing data. VEE guidelines are published in the Edison Electric Institute's Uniform Business Practices for Unbundled Electricity Metering.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters:	**DSM-EE Subcommittee**
Request No.:	**2009 Retail Annual Plan Item No. 6.e**
Request Title:	**M&V for Demand Response Programs**

REQ.13.3 Model Business Practices

REQ.13.3.1 General Characteristics of a Demand Response Event

REQ.13.3.1.1 All actions taken in a Demand Response Event should be in accordance with the Governing Documents.

REQ.13.3.1.2 Advance Notification: The Program Administrator should specify any requirements for the Advance Notification.

REQ.13.3.1.3 The Program Administrator should initiate Deployment of the Demand Resource(s) depending on the specific circumstance(s) of the Demand Response Event.

REQ.13.3.1.4 The Reduction Deadline will depend on the specific circumstance(s) of the Demand Response Event and should be specified by the Program Administrator.

REQ.13.3.1.5 Any requirement(s) for a Ramp Period or a specified Ramp Rate will depend on the specific circumstance(s) of the Demand Response Event and should be specified by the Program Administrator.

REQ.13.3.1.6 The Release / Recall will depend on the specific circumstance(s) of the Demand Response Event and should be specified by the Program Administrator.

REQ.13.3.1.7 Any requirement for a return to Normal Operations will depend on the specific circumstance(s) of the Demand Response Event and the Recovery Period should be specified by the Program Administrator.

REQ.13.3.2 Measurement of Load

REQ.13.3.2.1 Demand Response performance may be measured via Telemetry or After-the-Fact metering or both.

REQ.13.3.2.2 After-the-Fact Measurement is required and may be either by metering each individual site or by statistical sampling.

REQ.13.3.2.3 Meter accuracy should meet or exceed industry standards or as specified by the Applicable Regulatory Authority.

REQ.13.3.2.4 Meters and other equipment should meet or exceed industry standards equivalent to ANSI C12 or as specified by the Applicable Regulatory Authority.

REQ.13.3.2.5 The Meter Data Reporting Deadline should be specified in the Governing Documents.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

REQ.13.3.2.6 The Meter Data Reporting Interval should be specified in the Governing Documents.

REQ.13.3.2.7 The meter clock / time accuracy should meet or exceed industry standards equivalent to ANSI C12 or as specified by the Applicable Regulatory Authority.

REQ.13.3.2.8 The method of Validating, Editing and Estimation should conform to an accepted methodology (such as the guidelines published in the current edition of the Edison Electric Institute's Uniform Business Practices for Unbundled Electricity Metering), and should be specified in the Governing Documents.

REQ.13.3.3 Statistical Sampling

REQ.13.3.3.1 The method of statistical sampling used should conform to an accepted methodology and should be specified in the Governing Documents. The following list provides examples of currently accepted methodologies:

- The Association of Edison Illuminating Companies (AEIC) Load Research Manual
  - Chapter 4 – Sample Design and Selection
  - Chapter 5 – Sample Implementation[1]
- The Federal Energy Management Program M&V Guidelines: Measurement and Verification for Federal Energy Projects – Appendix B[2];
- The California Energy Efficiency Evaluation Protocols[3];
- The California Evaluation Framework – Chapter 13[4]; or
- The Independent System Operator (ISO)-New England Manual for Measurement and Verification of Demand Reduction Value from Demand Resources, Section 7[5].

REQ.13.3.3.2 The general steps to be taken in statistical sampling are, but are not limited to:

- Design the sample to meet program objectives.
- Define the population

[1] Association of Edison Illuminating Companies (AEIC), *Load Research Manual,* 2nd ed., Birmingham, AL, 2001, www.aeic.org
[2] US Department of Energy. M&V Guidelines: Measurement and Verification for Federal Energy Management Projects Version 3.0. 2008. (http://www1.eere.energy.gov/femp/financing/superespcs_measguide.html).
[3] California Public Utilities Commission, California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals, 2006. (http://www.cpuc.ca.gov/PUC/)
[4] California Public Utilities Commission, The California Evaluation Framework, 2006. (http://www.cpuc.ca.gov/PUC/).
[5] ISO-New England, Manual for Measurement and Verification of Demand Resources, (M-MVDR), 2007. (http://www.iso-ne.com).

- Specify the listing of units available to be sampled which is sometimes called the sampling frame
- Identify design (auxiliary) variables
- Choose the sampling technique
  - Choose stratification variable(s)
  - Select allocation procedure
  - Estimate means and variances of loads
  - Examine sample size requirements
  - Select sampling techniques and design
- Determine the sample size
- Identify those units to be in the sample
  - Identify the criteria for selecting those units to be substituted for sample units who decline
  - Select sample and alternates
  - Validate sample
- Contacting and enroll the Customers to be in the sample, and install the metering devices

REQ.13.3.3.3 The sample should ultimately achieve an accuracy of 90% confidence with 20% error, but be designed to achieve a minimum accuracy of 90% confidence with 10% error.

REQ.13.3.4 Performance Evaluation

Performance is evaluated through the use of one of the following methods unless otherwise specified by the Program Administrator:

- Maximum Base Load
- Meter Before / Meter After
- Baseline
- Metering Generator Output

REQ.13.3.4.1 Maximum Base Load Evaluation

REQ.13.3.4.1.1 Any requirement for real-time Telemetry data to be used to measure performance should be specified by the Program Administrator.

REQ.13.3.4.1.2 Any requirement for After-The-Fact metering should be specified by the Program Administrator.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

REQ.13.3.4.1.3 The Performance Window is the Sustained Response Period (Reduction Deadline through Release/Recall) unless otherwise specified by the Program Administrator.

REQ.13.3.4.1.4 During the Performance Window, the Demand Resource must maintain its electricity consumption at or below the Maximum Base Load. The criteria used to evaluate performance is one of the following unless otherwise specified by the Program Administrator:

- Peak Demand
- Average Demand

REQ.13.3.4.2 Meter Before / Meter After Evaluation

REQ.13.3.4.2.1 The Program Administrator should specify the Baseline Window.

REQ.13.3.4.2.2 During the Baseline Window, the Demand of the Demand Resource is evaluated using one of the following measurements as specified by the Program Administrator:

- Instantaneous Demand
- Maximum Demand
- Average Demand

REQ.13.3.4.2.3 Statistical sampling is not used for this performance evaluation type, unless otherwise specified by the Program Administrator.

REQ.13.3.4.2.4 The Program Administrator should specify any time periods to be excluded from Baseline Window.

REQ.13.3.4.2.5 The Program Administrator should specify any Baseline Adjustments.

REQ.13.3.4.2.6 No Adjustment Window is used for this model unless otherwise specified by the Program Administrator.

REQ.13.3.4.2.7 The Program Administrator should specify if real-time Telemetry data is to be used to measure performance.

REQ.13.3.4.2.8 After-The-Fact metering should be used to measure performance, unless otherwise specified by the Program Administrator.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

REQ.13.3.4.2.9 The Performance Window is the Sustained Response Period (Reduction Deadline through Release/Recall) unless otherwise specified by the Program Administrator.

REQ.13.3.4.2.10 During the Performance Window, the Demand Resource is evaluated using one of the following measurements unless otherwise specified by the Program Administrator:

- Instantaneous Demand
- Maximum Demand
- Average Demand

REQ.13.3.4.2.11 The Program Administrator should specify any performance evaluation requirements for Highly-Variable Loads.

REQ.13.3.4.2.12 The Program Administrator should specify any performance evaluation requirements for on-site generation.

REQ.13.3.4.3 Baseline Evaluation

REQ.13.3.4.3.1 The Program Administrator should specify the Baseline Window.

REQ.13.3.4.3.2 The Program Administrator should specify the method of developing the Baseline value using, but not limited to, the following calculation types:

- Maximum
- Average
- Regression

REQ.13.3.4.3.3 Statistical sampling is generally permitted for this Performance Evaluation type, unless otherwise specified by the Program Administrator.

REQ.13.3.4.3.4 The Program Administrator should specify any rules for excluding data from the Baseline Window. Exclusion rules may be based on, but are not limited to the following:

- Historical Demand Response Events
- Testing/Audit Periods
- Calendar data
- Outages
- Weather emergencies or force majeure events

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

- Usage threshold
- Known, discrete load additions or reductions that have occurred during the Baseline Window

REQ.13.3.4.3.5 The Program Administrator should specify any rules for Baseline Adjustments. Adjustment rules may be based on, but are not limited to the following:

- Temperature
- Humidity
- Calendar data
- Sunrise/Sunset time
- Event day operating conditions

REQ.13.3.4.3.6 The Program Administrator should specify the Adjustment Window.

REQ.13.3.4.3.7 The Program Administrator should specify if real-time Telemetry data is to be used to measure performance.

REQ.13.3.4.3.8 After-The-Fact metering is used to measure performance, unless otherwise specified by the Program Administrator.

REQ.13.3.4.3.9 The Program Administrator should specify the Performance Window.

REQ.13.3.4.3.10 During the Performance Window, the Demand Resource is evaluated using one of the following measurements unless otherwise specified by the Program Administrator:

- Maximum
- Average
- Regression

REQ.13.3.4.3.11 The Program Administrator may specify performance evaluation requirements for Highly-Variable Loads.

REQ.13.3.4.3.12 The Program Administrator may specify performance evaluation requirements for on-site generation.

REQ.13.3.4.4 Metering Generator Output

REQ.13.3.4.4.1 The Program Administrator should specify Baseline calculations for Metering Generator Output.

RECOMMENDATION TO NAESB EXECUTIVE COMMITTEE
For Quadrant: Retail Electric Quadrant (REQ)

Requesters: **DSM-EE Subcommittee**
Request No.: **2009 Retail Annual Plan Item No. 6.e**
Request Title: **M&V for Demand Response Programs**

REQ.13.3.4.4.2 The Program Administrator should specify if real-time Telemetry data is to be used to measure performance.

REQ.13.3.4.4.3 After-The-Fact metering on the generator and optionally on the associated Load is used to measure performance unless otherwise specified by the Program Administrator.

REQ.13.3.4.4.4 The Program Administrator should specify the Performance Window.

REQ.13.3.4.4.5 During the Performance Window, the Demand Resource is evaluated using the total measured generation output unless otherwise specified by the Program Administrator.

REQ.13.3.4.4.6 The Program Administrator should specify any special processing rules.

4. SUPPORTING DOCUMENTATION

a. Description of Request:

b. Description of Recommendation:

c. Business Purpose:

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

DSM/EE Scoping Process – 4.f.

Quadrant:	Wholesale Electric Quadrant
Recommendation:	2009 AP Item 4.f – Develop business practice standards to measure and verify energy reductions that are made to comply with a Renewable Portfolio Standard.
Submitted By:	DSM/EE Scoping Subcommittee
Date:	June 11, 2009

The following illustrates in the 2009 Annual Plan relevant business practice tasks and status as of May 12, 2009.

4 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.

f)	Develop 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:** ~~Not Started (Scope to be initiated in 2nd Q, 2009, after which a completion date will be set)~~Upon further review, the task force has determined this work will be completed under Annual Plan Item 4g	See 4g~~Phase 2~~	WEQ Section/Joint WEQ/REQ DSM-EE Subcommittee

Below contains the original request (R06024) for Business Practice Standards and resets the stage for future development for M&V standards for Energy Efficiency.

1. Submitting Entity & Address:

Advanced Energy
909 Capability Dr.
Suite 2100
Raleigh, NC 27606-3870

2. Contact Person, Phone #, Fax #, Electronic Mailing Address:

Name: Carl Wilkins

Title: Director Utility Services
Phone: (919) 857-9008

Fax: (919) 832-2696
E-mail: cwilkins@advancedenergy.org

3. Title and Description of Proposed Standard or Enhancement:

Title:

Standardized Method for Quantifying Benefits, Savings, Cost Avoidance and/or the Reduction in Energy Demand Derived from the Implementation of Demand Side Management and Energy Efficiency Programs

Description:

Efforts are underway throughout the electricity industry to develop and implement demand side management measures and techniques in order to moderate the growth for electricity. However, a standardized method for quantifying the energy and demand impact of implementing proposed demand side management techniques does not exist. Entities involved in these activities are using a wide variety of methods to estimate the benefits of these programs. As various utilities across the nation look at implementing DSM and EE measures, it is evident that results may vary depending on many factors that are localized and at the discretion of the evaluating entity. On the other hand there are fairly standardized techniques for evaluating and presenting the benefits and costs for a supply side option. As regulatory commissions investigate utility integrated resource plans, the development and presentation of the DSM and EE options are vigorously challenged by interveners as being incomplete, inconsistent and not treated as fairly as supply side options. Furthermore, utilities recognize the uncertainty of some proposed demand side options because they lack standardized quantitative justification which may address issues such as program persistence and other variables out of the DSM/EE program's control. DSM and EE programs often fail to pass cost effectiveness tests (RIM, UTC, PCT, etc.) because the benefit/cost data that is presented may be inaccurate or based on poor assumptions. Having a standardized method that is both recognized and understood by utilities, regulatory agencies, program administrators, consumer advocates and energy service professionals is vital. For example, the amount of energy reduction for a DSM measure in a small building can be simulated by a computer model, obtained by actual load research, using results from another similar program or estimated by engineering calculations. The benefits, costs and energy impacts from either of the aforementioned techniques can vary widely.

4. Use of Proposed Standard or Enhancement (include how the standard will be used, documentation on the description of the proposed standard, any existing documentation of the proposed standard and required communication protocols):

The proposed standard will be used by regulatory agencies, utilities, program administrators and any entity that are involved with quantifying impacts of a DSM or energy efficiency program. This standard may become an important part of a utility's integrated resource planning process. As more electric utilities announce new base-load generation additions to their long-term resource plans, the opportunity for this proposed standard to be use becomes more evident.

5. Description of Any Tangible or Intangible Benefits to the Use of the Proposed Standard or Enhancement:

Having a standardized process will prove beneficial to all stakeholders. The amount of time and resources expended in today's IRP hearings should be less if all parties adopt and use a standardized process and procedure for determining energy impacts of DSM and energy efficiency. The number of interveners and the amount of interrogatories should diminish once an accepted standard is made known to all. Future hearings should be less contentious, which will be appreciated by all parties. This standard if developed and adopted will lower the regulatory cost of implementation.

6. Estimate of Incremental Specific Costs to Implement Proposed Standard or Enhancement:

N/A.

7. Description of Any Specific Legal or Other Considerations:

N/A.

8. If This Proposed Standard or Enhancement Is Not Tested Yet, List Trading Partners Willing to Test Standard or Enhancement (Corporations and contacts):

N/A.

9. If This Proposed Standard or Enhancement Is In Use, Who are the Trading Partners:

N/A.

10. Attachments (such as : further detailed proposals, transaction data descriptions, information flows, implementation guides, business process descriptions, examples of ASC ANSI X12 mapped transactions):

N/A.

DSM/EE Scoping Process – 4.g.

Quadrant:	Wholesale Electric Quadrant and Retail Electric Quadrant
Recommendation:	Scoping Process 2009 AP Item 4.g – Develop business practice standards for measurement and verification of Energy Reductions from Energy Efficiency.
Submitted By:	DSM/EE Scoping Subcommittee
Date:	June 11, 2009

The following illustrates in the 2009 Annual Plan relevant business practice tasks and status as of May 12, 2009.

4 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.

g)	Develop business practice standards ~~to factor Demand Control and~~used to measure and verify reductions in energy and demand from ~~Ee~~nergy ~~Ee~~fficiency in wholesale and retail markets.~~programs into reliability / supply decisions at the wholesale level for generation and transmission planning and operations in ISO/RTO footprint areas.~~[1] **Status:** ~~Not Started~~Underway (~~Scope to be initiated in 2nd Q, 2009, after which a completion date will be set~~An estimated completion date will be established in 4th Q after the new subcommittee has been formalized)	~~Phase 2~~TBD	WEQ Section/Joint WEQ/REQ DSM-EE Subcommittee

Below contains the original request (R06024) for Business Practice Standards and resets the stage for future development for M&V standards for Energy Efficiency.

1. Submitting Entity & Address:

Advanced Energy
909 Capability Dr.

[1] 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.

Suite 2100
Raleigh, NC 27606-3870

2. Contact Person, Phone #, Fax #, Electronic Mailing Address:

Name: Carl Wilkins

Title: Director Utility Services
Phone: (919) 857-9008
Fax: (919) 832-2696
E-mail: cwilkins@advancedenergy.org

3. Title and Description of Proposed Standard or Enhancement:

Title:

Standardized Method for Quantifying Benefits, Savings, Cost Avoidance and/or the Reduction in Energy Demand Derived from the Implementation of Demand Side Management and Energy Efficiency Programs

Description:

Efforts are underway throughout the electricity industry to develop and implement demand side management measures and techniques in order to moderate the growth for electricity. However, a standardized method for quantifying the energy and demand impact of implementing proposed demand side management techniques does not exist. Entities involved in these activities are using a wide variety of methods to estimate the benefits of these programs. As various utilities across the nation look at implementing DSM and EE measures, it is evident that results may vary depending on many factors that are localized and at the discretion of the evaluating entity. On the other hand there are fairly standardized techniques for evaluating and presenting the benefits and costs for a supply side option. As regulatory commissions investigate utility integrated resource plans, the development and presentation of the DSM and EE options are vigorously challenged by interveners as being incomplete, inconsistent and not treated as fairly as supply side options. Furthermore, utilities recognize the uncertainty of some proposed demand side options because they lack standardized quantitative justification which may address issues such as program persistence and other variables out of the DSM/EE program's control. DSM and EE programs often fail to pass cost effectiveness tests (RIM, UTC, PCT, etc.) because the benefit/cost data that is presented may be inaccurate or based on poor assumptions. Having a standardized method that is both recognized and understood by utilities, regulatory agencies, program administrators, consumer advocates and energy service professionals is vital. For example, the amount of energy reduction for a DSM measure in a small building can be simulated by a computer model, obtained by actual load research, using results from another similar program or estimated by engineering calculations. The benefits, costs and energy impacts from either of the aforementioned techniques can vary widely.

4. Use of Proposed Standard or Enhancement (include how the standard will be used, documentation on the description of the proposed standard, any existing documentation of the proposed standard and required communication protocols):

The proposed standard will be used by regulatory agencies, utilities, program administrators and any entity that are involved with quantifying impacts of a DSM or energy efficiency program. This standard may become an important part of a utility's integrated resource planning process. As more electric utilities announce new base-load generation additions to their long-term resource plans, the opportunity for this proposed standard to be use becomes more evident.

5. Description of Any Tangible or Intangible Benefits to the Use of the Proposed Standard or Enhancement:

Having a standardized process will prove beneficial to all stakeholders. The amount of time and resources expended in today's IRP hearings should be less if all parties adopt and use a standardized process and procedure for determining energy impacts of DSM and energy efficiency. The number of interveners and the amount of interrogatories should diminish once an accepted standard is made known to all. Future hearings should be less contentious, which will be appreciated by all parties. This standard if developed and adopted will lower the regulatory cost of implementation.

6. Estimate of Incremental Specific Costs to Implement Proposed Standard or Enhancement:

N/A.

7. Description of Any Specific Legal or Other Considerations:

N/A.

8. If This Proposed Standard or Enhancement Is Not Tested Yet, List Trading Partners Willing to Test Standard or Enhancement (Corporations and contacts):

N/A.

9. If This Proposed Standard or Enhancement Is In Use, Who are the Trading Partners:

N/A.

10. Attachments (such as : further detailed proposals, transaction data descriptions, information flows, implementation guides, business process descriptions, examples of ASC ANSI X12 mapped transactions):

N/A.

DSM/EE Scoping Process – 4.h.

Quadrant:	Wholesale Electric Quadrant
Recommendation:	Scoping Process 2009 AP Item 4.h – Develop business practice standards for cap and trade programs for green house gas
Submitted By:	DSM/EE Scoping Subcommittee
Date:	June 11, 2009

The following illustrates in the 2009 Annual Plan relevant business practice tasks and status as of May 12, 2009.

4 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.

h)	Develop business practice standards for cap and trade programs for green house gas **Status:** Moved to ~~Pending~~Provisional Item 8. This item will not be addressed until Congress has addressed pending legislation.	Phase 2	Joint WEQ/REQ DSM-EE Subcommittee

Below contains the original request (R06024) for Business Practice Standards and resets the stage for future development for M&V standards for Energy Efficiency.

1. Submitting Entity & Address:

Advanced Energy
909 Capability Dr.
Suite 2100
Raleigh, NC 27606-3870

2. Contact Person, Phone #, Fax #, Electronic Mailing Address:

Name: Carl Wilkins

Title: Director Utility Services
Phone: (919) 857-9008
Fax: (919) 832-2696
E-mail: cwilkins@advancedenergy.org

3. Title and Description of Proposed Standard or Enhancement:

Title:

Standardized Method for Quantifying Benefits, Savings, Cost Avoidance and/or the Reduction in Energy Demand Derived from the Implementation of Demand Side Management and Energy Efficiency Programs

Description:

Efforts are underway throughout the electricity industry to develop and implement demand side management measures and techniques in order to moderate the growth for electricity. However, a standardized method for quantifying the energy and demand impact of implementing proposed demand side management techniques does not exist. Entities involved in these activities are using a wide variety of methods to estimate the benefits of these programs. As various utilities across the nation look at implementing DSM and EE measures, it is evident that results may vary depending on many factors that are localized and at the discretion of the evaluating entity. On the other hand there are fairly standardized techniques for evaluating and presenting the benefits and costs for a supply side option. As regulatory commissions investigate utility integrated resource plans, the development and presentation of the DSM and EE options are vigorously challenged by interveners as being incomplete, inconsistent and not treated as fairly as supply side options. Furthermore, utilities recognize the uncertainty of some proposed demand side options because they lack standardized quantitative justification which may address issues such as program persistence and other variables out of the DSM/EE program's control. DSM and EE programs often fail to pass cost effectiveness tests (RIM, UTC, PCT, etc.) because the benefit/cost data that is presented may be inaccurate or based on poor assumptions. Having a standardized method that is both recognized and understood by utilities, regulatory agencies, program administrators, consumer advocates and energy service professionals is vital. For example, the amount of energy reduction for a DSM measure in a small building can be simulated by a computer model, obtained by actual load research, using results from another similar program or estimated by engineering calculations. The benefits, costs and energy impacts from either of the aforementioned techniques can vary widely.

4. Use of Proposed Standard or Enhancement (include how the standard will be used, documentation on the description of the proposed standard, any existing documentation of the proposed standard and required communication protocols):

The proposed standard will be used by regulatory agencies, utilities, program administrators and any entity that are involved with quantifying impacts of a DSM or energy efficiency program. This standard may become an important part of a utility's integrated resource planning process. As more electric utilities announce new base-load generation additions to their long-term resource plans, the opportunity for this proposed standard to be use becomes more evident.

5. Description of Any Tangible or Intangible Benefits to the Use of the Proposed Standard or Enhancement:

Having a standardized process will prove beneficial to all stakeholders. The amount of time and resources expended in today's IRP hearings should be less if all parties adopt and use a standardized process and procedure for determining energy impacts of DSM and energy efficiency. The number of interveners and the amount of interrogatories should diminish once an accepted standard is made known to all. Future hearings should be less contentious, which will be appreciated by all parties. This standard if developed and adopted will lower the regulatory cost of implementation.

6. Estimate of Incremental Specific Costs to Implement Proposed Standard or Enhancement:

N/A.

7. Description of Any Specific Legal or Other Considerations:

N/A.

8. If This Proposed Standard or Enhancement Is Not Tested Yet, List Trading Partners Willing to Test Standard or Enhancement (Corporations and contacts):

N/A.

9. If This Proposed Standard or Enhancement Is In Use, Who are the Trading Partners:

N/A.

10. Attachments (such as : further detailed proposals, transaction data descriptions, information flows, implementation guides, business process descriptions, examples of ASC ANSI X12 mapped transactions):

N/A.

128 FERC ¶ 61,263
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 38

(Docket No. RM05-5-017)

Standards for Business Practices and
Communication Protocols for Public Utilities

(Issued September 17, 2009)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Federal Energy Regulatory Commission (Commission) proposes to incorporate by reference in its regulations at 18 CFR 38.2 business practice standards adopted by the Wholesale Electric Quadrant of the North American Energy Standards Board (NAESB) to categorize various demand response products and services and to support the measurement and verification of these products and services in wholesale electric energy markets.

DATES: Comments on the proposed rule are due [insert date 30 days after publication in the **FEDERAL REGISTER**].

ADDRESSES: You may submit comments identified by Docket No. RM05-5-017, by one of the following methods:

- Agency Web Site: http://www.ferc.gov. Follow the instructions for submitting comments via the eFiling link found in the Comment Procedures Section of the preamble.

- Mail: Commenters unable to file comments electronically must mail or hand deliver an original and 14 copies of their comments to the Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426. Please refer to the Comment Procedures Section of the preamble for additional information on how to file paper comments.

FOR FURTHER INFORMATION CONTACT:

Bruce McAllister (technical issues)
Office of Energy Market Regulation
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
(202) 502-8296

Ryan M. Irwin (technical issues)
Office of Energy Market Regulation
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
(202) 502-6454

Gary D. Cohen (legal issues)
Office of the General Counsel
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
(202) 502-8321

SUPPLEMENTARY INFORMATION:

128 FERC ¶ 61,263
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Standards for Business Practices and
Communication Protocols for Public Utilities Docket No. RM05-5-017

NOTICE OF PROPOSED RULEMAKING

(Issued September 17, 2009)

1. In this Notice of Proposed Rulemaking (NOPR), the Federal Energy Regulatory Commission (Commission) proposes to amend its regulations under the Federal Power Act[1] to incorporate by reference business practice standards adopted by the Wholesale Electric Quadrant (WEQ) of the North American Energy Standards Board (NAESB) to categorize various demand response products and services and to support the measurement and verification of these products and services in wholesale electric energy markets.

I. Background

2. NAESB is a non-profit standards development organization that serves as an industry forum for the development of business practice standards. These standards promote a seamless marketplace for wholesale and retail natural gas and electricity.[2] Since 1995, NAESB and its predecessor, the Gas Industry Standards Board, have

[1] 16 U.S.C. 791a, et seq.

[2] See Standards for Business Practices and Communication Protocols for Public Utilities, Final Rule, FERC Stats. & Regs. ¶ 31,274, at P 2 (2008).

been accredited members of the American National Standards Institute (ANSI), complying with ANSI's requirements that its standards reflect a consensus of the affected industries.[3]

3. NAESB's standards include business practices that streamline the transactional processes of the natural gas and electric industries, as well as communication protocols and related standards designed to improve the efficiency of communication within each industry. NAESB supports all four quadrants of the gas and electric industries – wholesale gas, wholesale electric, retail gas, and retail electric. All participants in the gas and electric industries are eligible to join NAESB and participate in standards development.[4]

4. Wholesale electric industry business practice standards are developed by the WEQ (Wholesale Electric Quadrant) of NAESB. To become a WEQ standard, a consensus of six industry segments, transmission, generation, marketer/brokers, distribution/load serving entities, end users, and independent grid operators/planners, must approve the standard. Under the WEQ process, for a standard to be approved, it must receive a super-majority vote of 67 percent of the members of the WEQ's Executive Committee with support from at least 40 percent of each of the six industry segments. For final approval, 67 percent of the WEQ's general membership must

[3] Id.

[4] Id. P 3.

ratify the standards.[5] In a series of Orders,[6] the Commission has incorporated certain of NAESB's standards into its regulations. These standards include standards for business practices as well as standards and protocols for electronic communication, and business practice standards related to reliability standards promulgated by NERC and approved by the Commission.

5. On April 17, 2009, after two years of development, NAESB reported to the Commission that, on March 16, 2009, it adopted its initial set of business practice standards for the measurement and verification of demand response products and services (NAESB Phase I M&V Standards).[7] NAESB states that these initial standards will need to be followed by the development of more detailed technical standards for the measurement and verification of demand response products and services in independent system operator/regional transmission organization (ISO/RTO) footprint areas. NAESB states that its Demand Side Management-Energy

[5] Standards for Business Practices and Communication Protocols for Public Utilities, Notice of Proposed Rulemaking, FERC Stats. & Regs. ¶ 32,582, at P 13 (2005); Standards for Business Practices of Interstate Natural Gas Pipelines, Final Rule, Order No. 587-O, FERC Stats. & Regs. ¶ 31,129, n. 14 (2002).

[6] See n.2 supra.

[7] When NAESB adopts a business practice standard as a Final Action, the standard is considered complete from NAESB's perspective, but, from the Commission's perspective, compliance with such a standard is not mandatory until such time as the Commission takes formal action to incorporate such a standard by reference into its regulations. NAESB's Phase I M&V Standards were adopted in the WEQ's 2009 Annual Plan 5(a) Final Action. NAESB's Apr. 17, 2009 submittal is also available for viewing in eLibrary under Docket No. RM05-5-017. The link to eLibrary is as follows: http://www.ferc.gov/docs-filing/efiling.asp.

Efficiency subcommittee has already begun efforts to plan the development of these more detailed (Phase II) standards; however, actual standards development has not yet started.

6. The NAESB Phase I M&V Standards include 40 definitions and 31 business practice standards. The definitions identify basic product categories, i.e., energy service, capacity service, reserve service and regulation service. They identify the measurement and verification characteristics of demand response products and services offered in organized wholesale electricity markets, such as reduction deadlines, advance notification instructions, telemetry accuracy, and communication protocols. The business practice standards address the major operational categories associated with demand response. NAESB stresses that the key to several NAESB participants' willingness to accept the standards submitted on April 17th was the agreement among participants to include more specific technical measurement and verification standards in NAESB's current annual work plan and to proceed with further work on more detailed technical standards.

II. Description of NAESB's Phase I M&V Standards

7. The Phase I M&V Standards include two parts. First, there are standards that identify operational information about demand response products that system operators need to make available. Second, specific standards address the performance evaluation methods appropriate to use for demand response products. These standards are described briefly below. In addition, associated terms are defined in a glossary.

8. First, the NAESB Phase I M&V Standards address transparency of the provision of four wholesale electric demand response products: energy (WEQ-015-1.0 through WEQ-015-1.3); capacity (WEQ-015-1.4 through 1.7); reserves (WEQ-015-1.8 through 1.11); and regulation (WEQ- 015-1.12 through 1.15). For each of these products, the standards require system operators to make information publicly available on: (1) specific operational requirements listed in the business practice standards, e.g., notification requirements; (2) telemetry requirements, e.g., the telemetry interval shall not exceed five minutes; (3) after-the-fact metering requirements, e.g., the metering accuracy shall not exceed three percent of full scale; and (4) performance evaluation rules, e.g., the performance evaluation method applicable to the product being delivered. Most of these transparency requirements are the same for all four products, although some only apply where appropriate. Other requirements apply only to one product; for example, demand resources providing regulation services are required to automatically respond to grid frequency deviations, similar to the governor action provided by generation resources, unless otherwise specified by the system operator.

9. Second, the NAESB Phase I M&V Standards require the system operator to make publicly available the specific method to be used and the information required for the performance of resources providing demand response products (the performance evaluation method). Information standards specify that a system operator must define criteria and requirements for telemetry, metering, and performance evaluation, including baseline window, calculation type, sampling,

baseline adjustments and measurement methods for each method that may be used to evaluate the performance of each demand response product. The system operator must specify that some or all of five methods may be used: Maximum Base Load Evaluation (WEQ-015-1.16 through WEQ-015-1.18); Meter Before/Meter After (WEQ-015-1.19 through WEQ-015-1.21); Baseline Type I – Interval Meter (WEQ-015-1.22 through WEQ-015-1.24); Baseline Type II – Non-Interval Meter (WEQ-015-1.25 through WEQ-015-1.27); and Metering Generator Output (WEQ-015-1.28 through WEQ-015-1.30).

III. Discussion

10. The Commission proposes to incorporate by reference into our regulations the NAESB Phase I M&V Standards and associated terms used in the WEQ-015 glossary.[8] The Phase I M&V Standards are primarily intended to enhance the transparency and consistency of the methods used to measure and verify demand response products in wholesale electricity markets administered by RTO's and ISO's. The glossary provides standardized definitions of demand response services,

[8] We propose to incorporate by reference the following standards collectively identified by NAESB as 2008 Annual Plan Item 5(a): Provision of Wholesale Electric Demand Response Energy Products- Standards 015-1.0–1.3; Provision of Wholesale Electric Demand Response Capacity Products- Standards 015-1.4–1.7 Provision of Wholesale Electric Demand Response Reserve Products- Standards 015-1.8–1.11; Provision of Wholesale Electric Demand Response Regulation Products- Standards 015-1.12-1.15; Maximum Base Load Evaluation- Standards 015-1.16-1.18; Meter Before/Meter After- Standards 015-1.19–1.21; Baseline Type I – (Interval Meter)- Standards 015-1.22–1.24; Baseline Type II – (Non-Interval Meter)- Standards 015-1.25-1.27; and Metering Generator Output- Standards 015-1.28-1.30.

operational terms and performance measurements. The NAESB Phase I M&V Standards that we are proposing to incorporate by reference in this NOPR provide a starting place to develop a more comprehensive set of standards for the provision of demand response products in wholesale markets.

11. NAESB adopted its Phase I M&V Standards under its consensus procedures.[9] Adoption of consensus standards is appropriate because the consensus process helps to ensure the reasonableness of the standards by requiring that the standards draw support from a broad spectrum of all segments of the industry. Moreover, because the industry itself has to conduct business under these standards, the Commission's regulations should reflect those standards that have the widest possible support. In section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTT&AA), Congress affirmatively requires federal agencies to use technical standards developed by voluntary consensus standards organizations, like NAESB, as a means to carry out policy objectives or activities determined by the agencies unless use of such standards would be inconsistent with applicable law or otherwise impractical.[10]

12. The NAESB Phase II M&V Standards are intended to establish business practice standards that facilitate the ability of demand response providers to participate in electricity markets, reducing transaction costs and providing an

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[9] See P 4 supra.

[10] Pub. L. No. 104-113, 12(d), 110 Stat. 775 (1996), 15 U.S.C. 272 note (1997).

opportunity for more customers to participate in these programs, especially customers that operate in more than one organized market. The NAESB Phase I M&V Standards provide a framework for further business practice standardization efforts, and participants in the WEQ process can use these standards to identify those elements for which standardization would be beneficial. We believe it is appropriate to develop criteria and standards that system operators can use to determine how demand response will be initiated, communicated, controlled, adjusted, measured and verified.

13. We appreciate the efforts of the WEQ thus far in developing these standards. It is clear, however, that much work still needs to be done. Members of the WEQ need to continue their efforts to develop the substantive standards needed to achieve greater efficiency in the operation and evaluation of the performance of demand response products and services. The Commission continues to believe that the industry should take the lead in developing and implementing demand response standards that will be both practical and workable. However, we request comments on whether the Commission should establish a deadline for the development of these remaining critical standards and, if so, what that deadline should be.

IV. Notice of Use of Voluntary Consensus Standards

14. Office of Management and Budget Circular A-119 (section 11) (Feb. 10, 1998) provides that federal agencies should publish a request for comment in a NOPR when the agency is seeking to issue or revise a regulation proposing to adopt a voluntary consensus standard or a government-unique standard. In this NOPR, the Commission

is proposing to incorporate by reference a voluntary consensus standard developed by the NAESB WEQ.

V. Information Collection Statement

15. The following collections of information contained in this proposed rule have been submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507(d). The Commission solicits comments on the Commission's need for this information, whether the information will have practical utility, the accuracy of the provided burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques. Respondents subject to the filing requirements of this rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB Control number.

16. The following burden estimate is based on the projected costs for the industry to implement revisions to the WEQ Standards currently incorporated by reference into the Commission’s regulations at 18 CFR 38.2 and to implement the new standards adopted by NAESB that we propose here to incorporate by reference.

Data Collection	No. of Respondents	No. of Responses Per Respondent	Hours Per Response	Total No. of Hours
FERC-516[11]	6	1	6	36
FERC-717[12]	6	1	12	72
Totals				108

Total Annual Hours for Collection

(Reporting and Recordkeeping, (if appropriate)) = 108 hours

Information Collection Costs: The Commission seeks comments on the costs to comply with these requirements. It has projected the average annualized cost for all respondents to be the following:[13]

	FERC-516	FERC-717
Annualized Capital/Startup Costs	$13,320	$26,640
Annualized Costs (Operations & Maintenance)	N/A	
Total Annualized Costs	$13,320	$26,640[14]

[11] "FERC-516" is the Commission's identifier that corresponds to OMB control no. 1902-0096 which identifies the information collection associated with Electric Rate Schedules and Tariff Filings.

[12] "FERC-717" is the Commission's identifier that corresponds to OMB control no. 1902-0173 which identifies the information collection associated with Standards for Business Practices and Communication Protocols for Public Utilities.

[13] The total annualized costs for the information collection is $39,960. This number is reached by multiplying the total hours to prepare responses (108) by an hourly wage estimate of $370 (a composite estimate that includes legal, technical and support staff rates, $250+$95+$25=$370), 108 hours x $370/hour= $39,960.

[14] We note that 36 hours at $370/hr.= $13,320 and 72 hours at $370/hr.=$26,640. Together, $13,320+$26,640=$39,960 as in note 13 supra.

17. OMB regulations[15] require OMB to approve certain information collection requirements imposed by agency rule. The Commission is submitting notification of this proposed rule to OMB. These information collections are mandatory requirements.

Title: Standards for Business Practices and Communication Protocols for Public Utilities (formerly Open Access Same Time Information System) (FERC-717); Electric Rate Schedule Filings (FERC-516).

Action: Proposed collection.

OMB Control No.: 1902-0096 (FERC-516); 1902-0173 (FERC-717).

Respondents: Business or other for profit, (Public Utilities - Not applicable to small businesses).

Frequency of Responses: One-time implementation (business procedures, capital/start-up).

Necessity of the Information: This proposed rule, if implemented would standardize the definitions used by ISOs and RTOs to identify their various demand response products and to measure and verify the results obtained by these products.

18. Internal Review: The Commission has reviewed the revised business practice standards proposed in this NOPR and has made a preliminary determination that these standards are necessary to maintain consistency among the ISOs/RTOs as to the demand response products they offer in their wholesale electricity markets. The

[15] 5 CFR 1320.11.

Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimate associated with the information requirements.

19. Interested persons may obtain information on the reporting requirements by contacting the following:

Federal Energy Regulatory Commission,
Attn: Michael Miller, Office of the Executive Director
888 First Street, NE
Washington, DC 20426
Tel: (202) 502-8415 / Fax: (202) 273-0873
Email: michael.miller@ferc.gov

20. Comments concerning the information collections proposed in this NOPR and the associated burden estimates, should be sent to the contact listed above and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission, phone: (202) 395-7345, fax: (202) 395-7285].

VI. Environmental Analysis

21. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.[16] The Commission has categorically excluded certain actions from these requirements as not having a significant effect on the

[16] Regulations Implementing the National Environmental Policy Act, Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987).

human environment.[17] The actions proposed here fall within categorical exclusions in the Commission's regulations for rules that are clarifying, corrective, or procedural, for information gathering, analysis, and dissemination, and for sales, exchange, and transportation of electric power that requires no construction of facilities.[18] Therefore, an environmental assessment is unnecessary and has not been prepared in this NOPR.

VII. Regulatory Flexibility Act Certification

22. The Regulatory Flexibility Act of 1980 (RFA)[19] generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. The regulations proposed here impose requirements only on ISOs and RTOs, which are not small businesses. Moreover, these requirements are designed to benefit all customers, including small businesses.

23. The Commission has followed the provisions of both the RFA and the Paperwork Reduction Act on potential impact on small business and other small entities. Specifically, the RFA directs agencies to consider four regulatory alternatives to be considered in a rulemaking to lessen the impact on small entities: tiering or establishment of different compliance or reporting requirements for small entities, classification, consolidation, clarification or simplification of compliance and reporting requirements, performance rather than design standards, and exemptions.

[17] 18 CFR 380.4.

[18] See 18 CFR 380.4(a)(2)(ii), 380.4(a)(5), 380.4(a)(27).

[19] 5 U.S.C. 601-612.

As these proposed standards would only be applicable to ISOs and RTOs, which are not small entities, the Commission hereby certifies, pursuant to section 605(b) of the RFA,[20] that the regulations proposed herein will not have a significant adverse impact on a substantial number of small entities.

VIII. Comment Procedures

24. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due [insert date 30 days from publication in the **FEDERAL REGISTER**]. Comments must refer to Docket No. RM05-5-017, and must include the commenter's name, the organization they represent, if applicable, and their address. Comments may be filed either in electronic or paper format.

25. Comments may be filed electronically via the eFiling link on the Commission's web site at http://www.ferc.gov. The Commission accepts most standard word processing formats and commenters may attach additional files with supporting information in certain other file formats. Commenters filing electronically do not need to make a paper filing. Commenters that are not able to file comments electronically must send an original and 14 copies of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street NE, Washington, DC 20426.

[20] 5 U.S.C. 605(b).

26. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

IX. Document Availability

27. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through FERC's Home Page (http://www.ferc.gov) and in FERC's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

28. From FERC's Home Page on the Internet, this information is available in the eLibrary. The full text of this document is available in the eLibrary both in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, go to the FERC website at http://www.ferc.gov and type the docket number "RM05-5" in the docket number field, type "017" under the subdocket field, and request submittals filed on April 17, 2009.

29. User assistance is available for eLibrary and the FERC's web site during our normal business hours. For assistance contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll-free at (866) 208-3676, or for TTY, contact (202) 502-8659.

List of subjects in 18 CFR Part 38

Conflict of interests, Electric power plants, Electric utilities, Incorporation by reference, Reporting and recordkeeping requirements.

By direction of the Commission.

Nathaniel J. Davis, Sr.,
Deputy Secretary.

In consideration of the foregoing, the Commission proposes to revise Chapter I, Title 18, part 38 of the Code of Federal Regulations, as follows:

PART 38 – BUSINESS PRACTICE STANDARDS AND COMMUNICATION PROTOCOLS FOR PUBLIC UTILITIES

1. The authority citation for part 38 continues to read as follows:

Authority: 16 U.S.C. 791-825r, 2601-2645; 31 U.S.C. 9701; 42 U.S.C. 7101-7352.

2. In § 38.2, paragraph (a)(12) is added to read as follows:

§ 38.2 Incorporation By Reference Of North American Energy Standards Board Wholesale Electric Quadrant Standards

(a) * * *

(12) Measurement and Verification of Wholesale Electricity Demand Response (WEQ-015, 2008 Annual Plan Item 5(a), Mar. 16, 2009).

* * * * *

North American Energy Standards Board

1301 Fannin, Suite 2350, Houston, Texas 77002
Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

via posting

TO:	NAESB Board of Directors, NAESB Advisory Council, NAESB Wholesale Electric Quadrant Executive Committee Members and Alternates, NAESB Retail Electric Quadrant Executive Committee Members and Alternates and Interested Industry Participants
FROM:	Jonathan Booe and Rae McQuade
RE:	NAESB Assignments Resulting from August 3-4, 2009 NIST Smart Grid Standards Workshop
DATE:	August 12, 2009

Dear NAESB Advisory Council, WEQ and REQ Board Members, Executive Committee Members and Alternates,

As reported at the March 26, 2009 and June 25, 2009 Board meetings and the May 12, 2009 WEQ Executive Committee ("EC") meeting, the NAESB leadership, including several Advisory Council members, and NAESB staff have been involved in the national smart grid development initiative being led by the National Institute of Standards and Technology ("NIST"). This involvement has included a number of meetings with NIST, FERC commissioners and staff, NARUC leadership, DOE, EEI, ELCON, and many other organizations with an interest in the smart grid development, as well as, attendance at all of the three smart grid workshops hosted by NIST and EPRI and EPRI web presentations.

The purpose of our involvement in the initiative has been to ensure that the interests of the NAESB membership are both recognized and protected. We attended the workshops to identify where there may be conflicts between our work products and plans, and the standards development expected to support the Smart Grid implementation. In particular, as the federal legislation indicates that Smart Grid standards are to be coordinated by NIST and will be forwarded to the FERC for its consideration, we were very interested in seeing that the interests of our members -- especially those that interact with the regulated community, are represented.

In our meetings with the various organizations involved we have publicized the need for the electric industry community to participate in the Smart Grid standards development efforts and made it known that it is crucial that the electric industry, both wholesale and retail, weigh in on these standards in a balanced forum where all market players have an equal voice in the decision making process, which should be both transparent and well documented. We have discussed this issue with the leadership of other involved standards development organizations to promote the realization that the participants in the electric market should have a seat at their tables when decisions are made – to ensure that the impact of these standards on the regulated community should FERC determine to take action is recognized. This is a still an ongoing concern.

As a result of our efforts, NAESB has been identified as an integral standards development organization that must be involved in the smart grid standards development process in two specific areas:

1. The development of a common pricing model and scheduling mechanism, and
2. The development of demand response and distributed energy resource signal semantics,

with a potential area noted for:

3. Cyber security aspects of the smart grid interoperability framework.

There remains some ambiguity on the assignment of leaders and the accountability for the success of the defined tasks for items 1 and 2. We have communicated such to NIST staff and will continue to do so, as NIST has the ultimate authority for making these assignments and coordinating the work effort. The ambiguity is exacerbated by the technical difficulties NIST has experienced with its web site (referred to as 'TWIKI', http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/WebHome), and the resulting effect of the unavailability of needed documentation. Once the site and documentation are available, it is hoped that the ambiguity will be resolved. In addition, some of the confusion is to be expected though, as it is a massive undertaking for the NIST and EPRI staff to manage for more than a thousand participants.

In the NIST/EPRI Smart Grid meetings, we have begun work with Duke Energy, ISO New England, Edison Electric Institute, NERC, Reliant, AEP, Xtensible Solutions, E:SO (EC Power), FIX Protocol and Consumers Energy as well

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Home Page: www.naesb.org

as state commission staff to review assignments made to NAESB and determine how best to proceed. Please find attached the information that has been developed regarding the two specific areas assigned to NAESB contained in the "Report to NIST on the Smart Grid Interoperability Standards Roadmap" and the "NIST Priority Action Plans." The information includes both background on the tasks and deadlines and assignments. Also included in the appendices are the list of action plans, initial set of 16 NIST standards and both sets of NAESB comments to NIST. The comments filed on July 9 are not yet publicly available although NIST has noted that the 100+ comments are generally supportive of the 16 standards selected. The more than 90 comments filed on July 30 have been extracted and added to a HTML page on the NIST web site: http://collaborate.nist.gov/twiki-sggrid/bin/view/_SmartGridInterimRoadmap/InterimRoadmapFinal.

We urge all interested parties to participate in this important development activity. We are in the process of forming task forces to address the issues assigned to NAESB and should you have interest, please let us know. Moreover, should your organization have interests in the other areas, we will work with you to access the correct groups so that you can provide input.

With Best Regards,

Jonathan Booe
Jonathan Booe
Staff Attorney, NAESB

Rae McQuade
Rae McQuade
President, NAESB

Attachments:

- Background Information on the Common Pricing Model and Scheduling Mechanism (PAP03[1] and PAP04)
- NAESB Tasks Related to the Common Pricing Model and Scheduling Mechanism
- Background Information on the Demand Response and Distributed Energy Resource Signal Semantics (PAP09)
- NAESB Tasks Related to the Demand Response and Distributed Energy Resource Signal Semantics

Appendices:

A. List of NIST Smart Grid Priority Action Plans (PAPs)
B. Appendix B: NIST Recognized Standards for Inclusion in the Smart Grid Interoperability Standards Framework, Release 1.0
C: NAESB Comments to NIST on the Initial Set of 16 Standards that Comprise the Smart Grid Interoperability Standards Framework submitted on July 9, 2009
D. NAESB Comments on the Report to NIST on the Smart Grid Interoperability Standards Roadmap submitted on July 30, 2009

[1] PAP references the NIST priority action plans for each of the areas to support standards development identified in the gap analysis performed by EPRI and NIST.

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Common Pricing Model and Scheduling Mechanism

BACKGROUND INFORMATION FOR THE COMMON PRICING MODEL AND SCHEDULING MECHANISM		
SOURCE	**CITE**	**TEXT**
Report to NIST on the Smart Grid Interoperability Standards Roadmap	Page 90, Section 6.1.1	**6.1.1 Common Pricing Model Standard** The need for a common pricing model crosses all domains that use price. Price is more than a simple number; it carries market context, and information such as quantity, units, time for use, and characteristics including source type and potentially carbon characteristics. A common and interoperable pricing model is a key to Demand-Response systems, Dynamic Pricing in all its forms, and energy markets and trading including forward markets. The complexity of tariff structures and content means that to fully understand a price one needs to fully understand thousands of pages of tariffs for each jurisdiction. Driving toward simplified tariffs or (at minimum) machine-readable descriptions of tariffs would lead to more efficient markets. For example, the machine-readable tags for end user license agreements have simplified licensing decisions; a similar markup language for tariffs would allow better decisions in markets without implicit knowledge beyond price. Key Actions: (1) Develop and standardize a pricing model – NIST should work with IEEE, IEC, OASIS, ASHRAE, NAESB and other relevant SDOs to develop an approach for developing a common pricing model to traverse the entire value chain. The model must include price, currency, delivery time, and product definition.
NIST Priority Action Plans – Illustrative Versions – July 30, 2009	Page 9, Section 3	**What: Develop Common Specification for Price and Product Definition** **Abstract:** Price is more than a number. Price is a number associated with product characteristics. Already identified product characteristics include delivery schedule, quality, environmental characteristics, and regulatory characteristics. A common specification for price is a precursor to new market developments, to demand response, to distributed energy resources, to understanding meter information, and to every other hand-off between domains. **Description:** Shared responsibility for balancing energy production and consumption requires shared access to information about energy markets and actual use. Price is a common abstraction for market conditions including abundance, scarcity, and quality. Energy quality may include reliability, power quality, and source. Energy source may be as a important as energy price to influencing consumption decisions in some scenarios. A common price model will define how to exchange energy characteristics, availability, and schedules to support free and effective exchange of information in any market. In financial markets, this type of description is called product definition. Although today's energy markets are almost exclusively wholesale, the product definition will be usable in other scenarios including retail markets and "prices to devices" scenarios. The completed price model will be used in Demand Response (DR) communications, in usage sharing between the meter and the premises Energy Service Interface, and in potential market operations Today's large-scale trading systems are built using the FIX (Financial Information) Protocol. The FIX product attribute dictionary already includes

BACKGROUND INFORMATION FOR THE COMMON PRICING MODEL AND SCHEDULING MECHANISM

SOURCE	CITE	TEXT
		many elements used in today's wholesale energy markets; this plan's work can be completed more quickly if it re-uses this work. A common product profile compatible with FIX is a secondary deliverable of this plan. Energy prices and energy products are closely tied to schedules and intervals. Building systems and enterprise activities must share an understanding of those schedules for effective collaborative energy. Product definitions must include schedule information. **Objectives:** • Develop a summary of product characteristics of interest to energy consumers. • Develop summary of power reliability and quality characteristics that affect price and availability (supply side) and desirability (demand side). • Develop and implement a plan to expedite harmonized standards development and adoption within the associated standards bodies. **Why:** Coordination of energy supply and demand requires a common understanding of supply and demand. Future energy markets will see greater variability than today. Consumer interests in green power, parallel markets for energy, and carbon regulations may create increased interest in energy sources. Distributed energy resources introduce new market focuses and new market sources. Better communication of actionable energy prices will help enable and expand efficient markets (including forward or futures markets) that satisfy growing demand for lower-carbon, lower-energy buildings, net zero-energy systems, and supply-demand integration that take advantage of dynamic pricing. Local generation and local storage require that the consumer (in today's situation) make investments in technology and infrastructure including electric charging and thermal storage systems. Businesses, homes, electric vehicles and the power grid will benefit from automated and timely communication of energy pricing, characteristics, quantities, and related information. A consistent model for market information exchange can be applied, with elaboration or use of defined subsets, to allow essentially the same information communication for homes, individual appliances, electric vehicles, small businesses, commercial buildings, office parks, neighborhood grids, and industrial facilities, simplifying communication flow and improving the quality of actions taken across the broad range of energy providers, distributors, and consumers. A consistent information model will reduce costs for implementation. Price and characteristics of energy are not necessarily simple. Retail markets typically have simple actionable information, in large measure because the retail markets combined with distribution are defined with clear and specific prices; wholesale markets are more complex, with transactions subject to later adjustments, e.g. for balancing costs, as well as the complexities of tariff market definitions. This work does not intend to address those complexities, rather to define a means for effective information exchange that permits immediate decisions—wholesale market participants must independently understand the complexities of the markets in which they operate. But a simple quotation of price, quantity, and characteristics in a consistent way across markets has significant value, even though the participants must understand and anticipate later adjustments. Without transparency and common formats, energy markets, as with other markets, are prone to manipulation and gaming. Pricing and product definition are the key to transparent market accounting. Commonly agreed upon schedule and interval information is essential to developing forward

BACKGROUND INFORMATION FOR THE COMMON PRICING MODEL AND SCHEDULING MECHANISM

SOURCE	CITE	TEXT
		markets. **Where:** Price and product definition is a common component of information exchange across almost every domain. In the evolving transactive power grid market communications will involve energy consumers, producers, transmission and distribution systems, and must enable aggregation for both consumption and curtailment resources. Market makers, such as Independent System Operators (ISOs), Regional Transmission Operators (RTOs), utilities, and other evolving mechanisms need to deliver actionable information in consistent formats as the Smart Grid evolves. With information in consistent formats, building and facility agents can make decisions on energy sale, purchase, and use that fit the goals and requirements of their home, business, or industrial facility. Price and product definition are critical to open market operations. Machine understandable product definitions will be included in any retail forward markets. Wherever a decision to use or not use energy is made, energy product definition and price are potential decision points. **How:** • Use interval and schedule formats from other domains, especially the WS-Calendar specifications. • Engage today's market makers in energy (ISO/RTOs) to better support today's markets • Engage FIX Protocol organization to supply those attributes and definitions already in use in commodity and energy markets. Extend FIX attributes as needed. • Engage NAESB to formulate market rules for FIX profiles.
Report to NIST on the Smart Grid Interoperability Standards Roadmap	Page 93, Section 6.1.3.2	**6.1.3.2 Common Scheduling Mechanism** The Smart Grid will be a dynamic marketplace with many participants. Synchronized activities are dependent upon shared schedules. Scheduling activities, prices, maintenance, etc. will help level the playing field across the participants and support a dynamic, competitive, and efficient environment. ICALENDAR (IETF RFC 2445) [19] is a calendar exchange specification for time intervals. It is used for appointment and meeting invitations in personal calendars. This same functionality is needed for pricing, market bidding, weather predictions, building management, and other decisions. A web services standard, or WS-Calendar, could provide calendar functions to the Smart Grid. Development of the WS-Calendar standard could be quick since the requirements are well understood. WS-Calendar should be developed outside the Smart Grid effort as its anticipated uses extend into many business interactions. Development in a larger e-commerce sphere will lead to wider adoption and more benefit. Key Actions: (1) Communicate with Smart Grid stakeholders on scheduling standard – NIST shall communicate with Smart Grid stakeholders to determine if existing scheduling specifications may be used or whether new standards need to be created.

BACKGROUND INFORMATION FOR THE COMMON PRICING MODEL AND SCHEDULING MECHANISM		
SOURCE	**CITE**	**TEXT**
		(2.a) If existing specifications may be used, than Create a scheduling standard – NIST to communicate with specification owner and coordinate activities necessary to make it a Smart Grid standard. SDO shall convert specification into a Smart Grid standard. (2.b) On the other hand, if new standards are needed, identify a SDO to create a new Smart Grid scheduling model – NIST communicate with IEEE, IEC, UCA, OASIS, OpenADR to identify and select scheduling model SDO. NIST shall choose a SDO based on meeting results. SDO shall develop requirements for scheduling standard. Chosen SDO develop common scheduling model that meets Smart Grid requirements.
NIST Priority Action Plans – Illustrative Versions – July 30, 2009	Page 14, Section 4	**What: Develop Common Specification for Schedules and Coordination** **Abstract:** The coordination of supply and demand is already of critical importance on the grid; tomorrow, with the increase of distributed energy resources, this coordination becomes more critical. The coordination must involve more than electromechanical coordination; it also involves enterprise activities, home operations and family schedules, and market operations. A common specification, developed for other domains as well as in smart grid, would better support interactions with those other domains and get broader adoption. **Description:** For human interactions and human scheduling, the well-known ICalendar format is used.. There is no equivalent standard for web services. As an increasing number of physical processes are managed by web services, the lack of a similar standard for calendaring of services becomes critical. The goal of this action plan is to survey the existing specifications for calendaring and develop a standard for how schedule and event information is passed between and within services. The standard should support all of the functionality currently supported by ICalendar for application to the completion of a web service contract. The scheduling specification will be a micro-specification, and then a micro-standard. A calendar event without associated contract is of little use. The micro-specification can then be incorporated into other specifications through composition, bringing a common scheduling operation to diverse contracts in different domains. **Objectives:** • Survey work to date and determine short-list precursors. • Determine plan to expedite development of specifications to standards. • Develop a plan for cross-referencing schedules and other documents/contracts in a message. **Why:** One of the most fundamental components of negotiating services is agreeing when something should occur. Short running services have traditionally been handled as if they were instantaneous, and thereby dodged this requirement through just-in-time requests. Longer running processes may require significant lead times. When multiple long-running services participate in the same business process, it may be more important to negotiate a common completion time than a common start time. Central coordination of such services reduces interoperability as it requires the coordinating agent to know the lead time of each service. As we reach out to multiple processes with the span of the grid, coordination must take into

BACKGROUND INFORMATION FOR THE COMMON PRICING MODEL AND SCHEDULING MECHANISM

SOURCE	CITE	TEXT
		account local time zones as well. A growing number of specifications envision synchronization of processes through broadcast scheduling. The smart grid relies on coordinating processes in homes, offices, and industry with projected and actual power availability, including different prices at different times. Weather reports including time are becoming increasingly important to projecting energy availability. Emergency management coordinators wish to inform geographic regions of future events, such as a projected tornado touchdown. These efforts would benefit from a common standard for transmitting calendaring. Web services are meeting increased acceptance to interact with the low level [control] systems world. Business systems can interact with building systems using web services specifications such as oBIX, BACnet/WS, and a number of proprietary specifications including LON-WS, TAC-WS, and others. Energy use in buildings can be reduced while improving performance if building system operation is coordinated with the schedules of the buildings occupants. Coordination of energy supply and demand requires a common understanding of supply and demand. Future energy markets will see greater variability than today. Consumer interests in green power, parallel markets for energy, and carbon regulations may create increased interest in energy sources. Distributed energy resources introduce new market focuses and new market sources. A scheduling component within energy market operations coordinates both short-lead and long-lead-time activities. This will promote the development of autonomous agents to drive performance while reducing costs for implementation. **Where:** Coordination is a common component of information exchange across almost every domain. In the evolving transactive power grid market communications will involve energy consumers, producers, transmission and distribution systems, and must enable aggregation for both consumption and curtailment resources. Market makers, such as Independent System Operators (ISOs), Regional Transmission Operators (RTOs), utilities, and other energy services providers. With information in consistent formats, building and facility agents can make decisions on energy production, sale, purchase, and use that fit the goals and requirements of their home, business, or industrial facility. **How:** • Identify pre-existing work from enterprise domains. _The Calendar Consortium (www.calconnect.org) and the ISO20022 financial schedule elements are likely candidates.. _ • Seek agreement from those who have existing work as to completion, submission as a standard, IP assertions, etc. • Expedite completion to deliver as component of developing specifications for DR (Energy Interoperation), Market Information (EMIX) and other specifications

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COMMON PRICING MODEL AND SCHEDULING MECHANISM ASSIGNMENTS GIVEN TO NAESB AT THE AUGUST 3-4, 2009 NIST SMART GRID WORKSHOP

TASK	ORGANIZATIONS ASSIGNED	DEADLINE
Convene Cross-Domain Group Price + (Gather and process all work products resulting from other tasks)	Lead: NAESB and OASIS Others Involved: NIST Domain Expert Working Groups ("DEWGs"), FIX Protocols, others	November 2009
Survey existing price communication (The existing price communication models will serve as a starting point for the draft pricing specification)	Lead: NAESB and FIX Protocols Others Involved: JP Morgan, Financial Industry Services Division ("FISD"), NARUC, ISO/RTO Council, EEI, AHAM, ZigBee, Open HAN, OASIS	October 2009
Draft pricing specification (The draft pricing specification will be created by OASIS and processed through NAESB to ensure functionality in the energy market)	Lead: OASIS Reviewed by: IEC, FIX Protocols, CalConnect, NAESB, FIATECH, NIBS, DEWGs, others	April 2010
Define Attributes (NAESB will coordinate with OASIS to determine what product characteristics will be included in dynamic pricing)	Lead: NAESB and OASIS	Deferred until other parts are complete
Convene Schedule Group (NAESB will coordinate with the work of CalConnect to ensure that the scheduling application developed does not affect the scheduling of power through OASIS)	Lead: CalConnect, NAESB and OASIS Others Involved: DEWGs, FIATECH, others	December 2009

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Demand Response and Distributed Energy Resource Signal Semantics

BACKGROUND INFORMATION FOR DEMAND RESPONSE AND DISTRIBUTED ENERGY RESOURCE SIGNAL SEMANTICS

SOURCE	CITE	TEXT
Report to NIST on the Smart Grid Interoperability Standards Roadmap	Page 95, Section 6.2.1	**6.2.1 Demand Response & Consumer Energy Efficiency (DRCEE)** There are 3 key gaps or issues (other than the pricing model, which was discussed in 6.1.1) within DRCEE. The first gap is in standardizing the DR signals to DER devices. There are competing standards and specifications that include OpenADR, NAESB, and others. A common standard for communicating to both load control and supply control devices will help accelerate DR implementations at the utilities and DER device manufacturing with products. Market information is currently not available to the customer domain. Without this information, customers cannot participate in the wholesale or retail markets. In order to include customers in the electricity marketplace, they need to understand when opportunities present themselves to bid into the marketplace and how much electricity is needed. Once a bid is made, the contractual obligation to commit the accepted amount of electricity for the set period of time needs to also be communicated in a standard way. As DER devices become pervasive and consumers can buy them at retail stores, the complexity of provisioning and tracking all the DER devices must be automated. The DERs may be provisioned at the premise energy management system (EMS) and allow the EMS to aggregate and report total premise DER baseline capabilities. Or the DERs may announce themselves to the service provider or utility or perhaps even the ISO. Both of these approaches use device discovery and profiles. Regardless, these reporting and management issues need to be resolved and an automated mechanism for announcing, configuring, and removing devices must be standardized or we limit opportunities for wide-spread adoption of DER and limit the amount of efficiency we can create in the system. Measurement and verification of demand reduction is of growing importance, with many issues such as what is the baseline, or is the device actually off. Key Actions: (1) **Develop or adopt standard DR signals** – NIST shall organize a meeting with IEC TC57, OASIS, NAESB, and AMI-ENT to specify a process for developing a common semantic model for standard DR signals. The effort shall ensure DR signal standards support load control, supply control, and environmental DERs. Report to NIST on the Smart Grid Interoperability Standards Roadmap *June 17, 2009* ***6*** 5BPrioritized Actions (2) **Develop market signal standards** – NIST shall organize a meeting with policy makers, market operators/ISOs, and standards committees to develop common syntax and semantics for communicating market opportunities through the value chain and all the way to the customer. The effort shall develop policies that protect customers, but allow them to participate in the market. This is not an immediate need, but is something that requires a lot of thought and situational analysis. (3) **Develop DER discovery and profiling standards** – NIST shall coordinate a meeting with IEC TC57, OASIS, NAESB, and AMI-ENT for developing standard mechanisms for DER device discovery and profiling, persistence checks, and registry updates. The effort shall develop standard mechanisms for DER device discovery and profiling, persistence checks, and registry updates.

BACKGROUND INFORMATION FOR DEMAND RESPONSE AND DISTRIBUTED ENERGY RESOURCE SIGNAL SEMANTICS

SOURCE	CITE	TEXT
NIST Priority Action Plans – Illustrative Versions – July 30, 2009	Page 9, Section 9	**9 What: Standard DR Signals (6.2.1)** **9.1 Abstract**: Develop or adopt standard DR and DER signals – NIST shall organize a meeting with IEC TC57, OASIS, NAESB, and AMI-ENT to specify a process for developing a common semantic model for standard DR signals. The effort shall ensure DR signal standards support load control, supply control, and environmental signals. **9.2 Description**: The semantics of Demand Response are generally well understood, but the information that is conveyed varies. Signals range from price, optionally with time of effectiveness, grid integrity, to proposed environmental signals (e.g. air quality). Defining consistent signals for Demand Response will make the information conveyed more consistent as a signal flows from grid management through aggregators to customers and within premises networks. Some of the standards define business processes, while others define XML or other data models with a variety of delivery mechanisms. The semantics for Distributed Energy Resources should fit into the same sort of signaling framework. This group will also develop a plan for DER signal definition. **9.3 Objectives**: Define a framework and common terminology for: • Price communication, • Grid safety or integrity signals, • DER support, and • Other signals and/or an extensibility mechanism. **9.4 Why**: Demand Response has evolved over the years; previous mechanisms included phone calls, pagers, and other messaging to plant managers; current mechanisms support varying levels of automation. As technologies, such as Open Automated Demand Response, allow rapid and un-attended automation of curtailment based on price or grid integrity, consistent signals across the entire Demand Response signaling and validation chain have raised in importance. Consistent signals will allow further automation of the Demand Response chain, and improve the responsiveness as well as the value to all stakeholders. Renewable and other intermittent resource integration increases the need for balancing reserve, spinning reserve, and other techniques for successful integration to take advantage of lower operating cost for renewables. However, the responsiveness of the entire power generation and delivery system needs to improve in correspondence with the extent and degree of intermittency. Distributed Energy Resource integration raises interoperation issues related to distribution automation, signals and information exchanges, and profiles; some of these (e.g. storage) are being addressed specifically in other action plans. Markets, Operations, Distribution, distribution-related capital costs, and the Customer domain are the primary areas affected, though all are affected to

BACKGROUND INFORMATION FOR DEMAND RESPONSE AND DISTRIBUTED ENERGY RESOURCE SIGNAL SEMANTICS

SOURCE	CITE	TEXT
		some extent. **9.5 Where**: This is primarily levels 4 (Semantic Understanding), 5 (Business Context) and 6 (Business Procedures) of the GWAC stack, though it involves most of the cross-cutting issues. Security and privacy can be composed in; the focus of this activity is consistent semantics that work with business processes of today and those we cannot specify that may develop in the future. **9.6 How**: A broad range of stakeholders need to be involved, broadly from the distribution management and markets area, building automation, industrial automation, home automation and energy management, and vehicles.3 There are several formalized or standardized specifications in these areas that need to share common semantics where they overlap; we should aim at a high level rather than details that may not be relevant in cross-domain interactions and interoperation. Since there are a number of existing bodies of work, a survey of relevant efforts and their overlap and gaps relative to DR/DER signaling would seem to be a good starting point. Other issues: • Should requirements analysis—what information needs to be exchanged for which use cases—be done as part of this process? • When do we need a high-level light interface, versus deep integration? • What are differences between ISO/RTO Demand Response and Distributed Energy Resource integration and the local utility counterparts? • Can we incorporate ancillary (fast-DR) services in the signaling approach? Or is fast DR only applicable to deep integration that will support the short time scales? • Measurement and verification need to be addressed for both curtailment and DER. How should we address in this process? **9.6.1 Task Descriptions** Develop along with project team. **9.6.2 Deliverables** Develop along with project team.

DEMAND RESPONSE AND DISTRIBUTED ENERGY RESOURCE ASSIGNMENTS GIVEN TO NAESB AT THE AUGUST 3-4, 2009 NIST SMART GRID WORKSHOP

TASK	ORGANIZATIONS ASSIGNED	DEADLINE
Define proper DER Interaction, Scope (Determine the process and scope of DER transactions)	Lead: No Lead Assigned Involved: NAESB, x2G DEWG, IEC TC57 Storage Models, IEEE 1547.3, Outcomes of PAP07	TBD
Collect, Analyze and Consolidate Use Cases and deliver UML (include DER) (Gather and document requirements for DR/DER among all actors in the business process)	Lead: NAESB and Utility Communications Architecture International User Group ("UCAIug") Others Involved: Incorporating OpenADR use as a starting point for OASIS	October 2009
Message Semantics Work DR (Determine the information to be conveyed related to DR signals)	Lead: OASIS Energy Interoperation Technical Committee ("EITC") Review by: NAESB, UNCIug, BAE, SEP, TC57 CIM, Multispeak	Underway
Message Semantics Work DER (Determine the information to be conveyed related to DER signals)	Lead: OASIS EITC Review by: NAESB, UNCIug, BAE, SEP, TC57 CIM, Multispeak	Convene October 2009
Message Semantics Calendar and Price (Determine the information related to scheduling and price as DR/DER signals)	Lead: OASIS EITC and CalConnect Review by: NAESB, UNCIug, BAE, SEP, TC57 CIM, Multispeak	TBD contingent on work from PAP03 and PAP04
Resale and process for safety and interconnection and resale (Determine the process and scope of DER transactions)	Lead: NAESB Others Involved: UL	October 2009
Common Vocabulary – Normalize OpenADR, NAESB, UCAIug, definitions (Review terminology for consistency)	Lead: NAESB, UCAIug, BACNET, LonMark Others Involved: NIST	ASAP

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Appendix A: NIST Smart Grid Priority Action Plans

PRIORITY ACTION PLANS DISCUSSED AT THE AUGUST 3-4, 2009 NIST SMART GRID MEETING			
PRIORITY ACTION PLAN	**GROUP LEAD**	**NAESB ASSIGNMENT**	**INFORMATION**
PAP01: Role of Internet in the Smart Grid	NIST Lead: David Su EPRI Lead: Joe Hughes	No Assignments	This PAP addresses the development of the Internet Protocol suite that will be used for all smart grid applications. Networking profiles will have to be developed in response to the smart grid applications and requirements that are created.
PAP02: Wireless Communications for the Smart Grid	NIST Lead: David Su EPRI Lead: Joe Hughes, Francis Cleveland	No Assignments	This PAP addresses the identification and development of guidelines and requirements for wireless communications for the smart grid
PAP03: Common Pricing Model	NIST Lead: David Holmberg EPRI Lead: Toby Considine, William Cox	NAESB Serving as Primary Co-Lead	NAESB has been tasked with coordinating with OASIS to serve as a convener of all work products assigned as a result of this PAP. NAESB will work with FIX Protocol to survey all pricing models and develop requirements that will serve as starting point for the draft pricing specification. NAESB has also been tasked with developing the attributes that will be included in the pricing specification and reviewing the document upon completion.
PAP04: Common Scheduling Mechanism	NIST Lead: David Holmberg EPRI Lead: Toby Considine, William Cox	NAESB Serving as Primary Co-Lead	NAESB has been assigned the task of convening a group to address this PAP in coordination with OASIS and CalConnect. NAESB will participate to identify where if any, there are relationships to the federal regulations for scheduling power on the grid through OASIS.
PAP05: Standard Meter Data Profiles	NIST Lead: Tom Nelson EPRI Lead: Aaron Snyder, Ben Rankin	No Assignments	This PAP addresses the design of one or more standard meter profiles using ANSI C12.19 Exchange Data Language
PAP06: Data Tables Common Semantic Model for Meter Data Tables	NIST Lead: Tom Nelson EPRI Lead: Aaron Snyder, Eric Gunther	No Assignments	This PAP addresses the need to translate the ANSI C12.19 end device meter data model into a common form to facilitate the harmonization of other end devise models.

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Appendix A: NIST Smart Grid Priority Action Plans

PRIORITY ACTION PLANS DISCUSSED AT THE AUGUST 3-4, 2009 NIST SMART GRID MEETING			
PRIORITY ACTION PLAN	**GROUP LEAD**	**NAESB ASSIGNMENT**	**INFORMATION**
PAP07: Electric Storage Interconnection Guidelines	NIST Lead: Al Hefner EPRI Lead: Francis Cleveland, Mark McGranaghan	No Assignments	This PAP addresses the development of storage device electrical interconnection guidelines. Coordination with NERC and FERC would bee advisable regarding related regulatory and reliability requirements.
PAP08: CIM for Distribution Grid Management	NIST Lead: Jerry Fitzpatrick EPRI Lead: Grant Gilchrist, Francis Cleveland	No Assignments	This PAP addresses the development of the Common Information Model for Distribution Grid Management including CIM and Multispeak harmonization. The PAP calls for the development of key requirements and use cases that define the type of integration needed across IEC 61968, IEC 61850 and Multispeak.
PAP09: Standard DR Signals	NIST Lead: David Holmberg EPRI Lead: Toby Considine, William Cox	NAESB Serving as Primary Co-Lead	NAESB has been assigned the task of collecting and analyzing use cases and requirements for DR and DER transactions and delivering a Unified Modeling Language (UML) to be used for DER and DER message semantics. NAESB will participate to review the message semantics that are developed related to DR and DER and Calendaring and Price signals. NAESB will also participate in the definition of the scope and process of DER transactions for resale and the process of ensuring interconnection safety. NAESB will also participate in review to ensure consistent terminology is used for transactions related to DR and DER.
PAP10: Standard Energy Usage Information	NIST Lead: David Wollman, Tom Nelson EPRI Lead: Marty Burns, Toby Considine	No Assignments	This PAP addresses the standardization of information that will be provided to customers' energy management systems to enable informed consumer decisions. This includes access to information provided for metering and billing.
PAP11: Common Object Models for Electric Transportation	NIST Lead: Eric Simmon EPRI Lead: Stuart McCafferty, Francis Cleveland	No Assignments	This PAP addresses the development and standardization of common object models for electric transportation.

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PRIORITY ACTION PLANS DISCUSSED AT THE AUGUST 3-4, 2009 NIST SMART GRID MEETING			
PRIORITY ACTION PLAN	**GROUP LEAD**	**NAESB ASSIGNMENT**	**INFORMATION**
PAP12: IEC 61850 Objects/DNP3 Mapping	NIST: Jerry Fitzpatrick, Tom Nelson EPRI Lead: Bruce Muschlitz, Christoph Brunner	No Assignments	The purpose of this PAP is to enable the use of smart grid management functions over legacy DNP3 networks. To this end a method to map DNP3 objects onto IEC 61850 objects must be developed.
PAP13: Time Synchronization, IEC 61850 Objects/IEEE C37.118	NIST Lead: Jerry Fitzpatrick EPRI Lead: Joe Hughes	No Assignments	The purpose of this PAP is to integrate phasor measurement unit (PMU) data based on IEEE C37.118 into use through IEC 61850.
PAP14: Transmission and Distribution Power Systems Model Mapping	NIST Lead: Jerry Fitzpatrick EPRI Lead: Joe Hughes	No Assignments	The purpose of this PAP is to identify and/or develop key requirements and use cases for different smart grid applications and the mapping of that information on the exiting models.
Cyber Security Coordination Task Group	NIST Lead: Annabelle Lee	Unclear – awaiting response from Annabelle Lee	This Task Group is was created as an inter-agency effort to address the cross-cutting cyber security issues that will result from the development of the smart grid. The groups task is to address the major high-level vulnerabilities of the smart grid and develop a comprehensive set of cyber security requirements.

Appendix B: NIST Recognized Standards for Inclusion in the Smart Grid Interoperability Standards Framework, Release 1.0

REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0			
STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
AMI-SEC System Security Requirements	Open SG Users Group	Application: Advanced metering infrastructure (AMI) and Smart Grid end-to-end security Description: This document provides the utility industry and vendors with a set of security requirements for Advanced Metering Infrastructure (AMI). These requirements are intended to be used in the procurement process, and represent a superset of requirements gathered from current cross-industry accepted security standards and best practice guidance documents. This document provides substantial supporting information for the use of these requirements including scope, context, constraints, objectives, user characteristics, assumptions, and dependencies. This document also introduces the concept of requirements for security states and modes, with requirements delineated for security states. These requirements are categorized into three areas: 1) Primary Security Services, 2) Supporting Security Services and 3) Assurance Services. The requirements will change over time corresponding with current security threats and countermeasures they represent. The AMI-SEC Task Force presents the current set as a benchmark, and the authors expect utilities and vendors to tailor the set to individual environments and deployments. While these requirements are capable of standing on their own, this document is intended to be used in conjunction with other 2008 deliverables from the AMI-SEC Task Force, specifically the Risk Assessment, the Architectural Description, the Component Catalog (in development as of this writing), and the Implementation Guide (to be developed late 2008). This document also discusses the overall process for usage of this suite."	Relationship: This standard may have a tangential relationship to the NAESB PKI standards Cost: Available at no cost on the Open SG web site Link: http://osgug.ucaiug.org/utilisec/amisec/Shared%20Documents/1.%20System%20Security%20Requirements/AMI%20System%20Security%20Requirements%20-%20v1_01%20-%20Final.doc

Appendix B: NIST Recognized Standards for Inclusion in the Smart Grid Interoperability Standards Framework, Release 1.0

REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0

STANDARD	ORGANIZATION	APPLICATION / DESCRIPTION	RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST
ANSI C12.19 – 2008	American National Standards Institute (formal standards body)	Application: Revenue metering information model Description: This Standard defines a Table structure for utility application data to be passed between an End Device and any other device	Relationship: Metering information that is created or mandated by utilities may have an impact on the NAESB OASIS S&CP or the Data Dictionary. It may also have dependence on the data that is being maintained in the NAESB Energy Industry Registry ("EIR") Cost: $228 Link: http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI+C12.19-2008
BACnet ANSI ASHRAE 135-2008	American Society of Heating, Refrigerating and Air-Conditioning Engineers (formal standards body)	Application: Building automation Description: The purpose of this standard is to define data communication services and protocols for computer equipment used for monitoring and control of HVAC&R and other building systems and to define, in addition, an abstract, object-oriented representation of information communicated between such equipment, thereby facilitating the application and use of digital control technology in buildings.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: $119 Link: http://resourcecenter.ashrae.org/store/ashrae/newstore.cgi?itemid=30853&view=item&page=1&loginid=39839941&priority=none&words=135-2008&method=and&
DNP3	Distributed Network Protocol	Application: Substation and feeder device automation Description: The development of DNP3 was a comprehensive effort to achieve open, standards-based Interoperability between substation computers, RTUs, IEDs (Intelligent Electronic Devices)	Relationship: No Direct Relationship to NAESB Standards Identified

Appendix B: NIST Recognized Standards for Inclusion in the Smart Grid Interoperability Standards Framework, Release 1.0

REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0			
STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
		and master stations (except inter-master station communications) for the electric utility industry. Also important was the time frame; the need for a solution to meet today's requirements. As ambitious an undertaking as this was, we reached this objective. And since the inception of DNP, the protocol has also become widely utilized in adjacent industries such as water / waste water, transportation and the oil and gas industry. DNP3 is based on the standards of the International Electrotechnical Commission (IEC) Technical Committee 57, Working Group 03 who have been working on an OSI 3 layer "Enhanced Performance Architecture" (EPA) protocol standard for telecontrol applications. DNP3 has been designed to be as close to compliant as possible to the standards as they existed at time of development with the addition of functionality not identified in Europe but needed for current and future North American applications (e.g. limited transport layer functions to support 2K block transfers for IEDs, RF and fiber support). DNP3 has been selected as a Recommended Practice by the IEEE C.2 Task Force; RTU to IED Communications Protocol. DNP3 was developed by Harris, Distributed Automation Products. In November 1993, responsibility for defining further DNP3 specifications and ownership of the DNP3 specifications was turned over to the DNP3 Users Group, a group composed of utilities and vendors who are utilizing the protocol. DNP3 is an open and public protocol. In order to ensure interoperability, longevity and upgradeability of, protocol the DNP3 Users Group has taken ownership of the protocol and assumes responsibility for its evolution. The DNP3 Users Group Technical Committee evaluates suggested modifications or additions to the protocol and then amends the protocol description as directed by the Users Group members. Complete documentation of the protocol is available to the public. The four core documents that define DNP3 are: Data Link Layer Protocol Description, Transport Functions, Application Layer Protocol Description and Data Object Library (referred to as the "Basic 4 Document"). The Users Group also has available to members the document "DNP3 Subset Definitions" which will help implementers to identify protocol elements that should be implemented.	Cost: $300 Membership Link: http://www.dnp.org/About/Default.aspx
IEC 60870-6 / TASE.2	International Electrotechnical Commission	Application: Inter-control center communications (ICCP) Description: Specifies a method of exchanging time-critical control centre data through wide-area and local-area networks using a full ISO compliant protocol stack. Both centralized and distributed architectures are supported. Includes the exchange of real-time data indications,	Relationship: No Direct Relationship to NAESB Standards Identified

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STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
	(formal standards body)	control operations, time-series data, scheduling and accounting information, remote program control and event notification.	Cost: $327 Link: http://webstore.iec.ch/webstore/webstore.nsf/artnum/034806
IEC 61850	International Electrotechnical Commission (formal standards body)	Application: Substation automation and protection Description: Communication networks and systems in substations is a technical report applicable to substation automation systems. Defines the communication between intelligent electronic devices in the substation and the related system requirements.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: $3290 (all parts) Link: http://webstore.iec.ch/webstore/webstore.nsf/artnum/033549!opendocument
IEC 61968	International Electrotechnical Commission (formal standards body)	Application: Application level energy management system interfaces Description: Application integration at electric utilities – System interfaces for distribution management is a series of standards that define interfaces for the major elements of an interface architecture for Distribution Management Systems. Identifies and establishes requirements for standard interfaces based on an Interface Reference Model. This set of standards is limited to the definition of interfaces and is implementation independent; it provides for interoperability among different computer systems, platforms, and languages.	Relationship: Metering information that is created or mandated by utilities may have an impact on the NAESB OASIS S&CP or the Data Dictionary. It may also have dependence on the data that is being maintained in the NAESB Energy Industry Registry ("EIR") Cost: $250 Link: http://webstore.iec.ch/webstore/webstore.nsf/artnum/031109!opendocument

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STANDARD	ORGANIZATION	APPLICATION / DESCRIPTION	RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST
IEC 61970	International Electrotechnical Commission (formal standards body)	Application: Application level energy management system interfaces Description: Energy management system application program interface is a set of guidelines and general infrastructure capabilities required for the application of the EMS-API interface standards. Describes typical integration scenarios where these standards are to be applied and the types of applications to be integrated. Defines a reference model and provides a framework for the application of the other parts of these EMS-API standards.	Relationship: Metering information that is created or mandated by utilities may have an impact on the NAESB OASIS S&CP or the Data Dictionary. It may also have dependence on the data that is being maintained in the NAESB Energy Industry Registry ("EIR") Cost: $190 Link: http://webstore.iec.ch/webstore/webstore.nsf/artnum/035316!opendocument
IEC 62351 Parts 1-8	International Electrotechnical Commission (formal standards body)	Application: Information security for power system control operations Description: The scope of the IEC 62351 series is information security for power system control operations. Its primary objective is to undertake the development of standards for security of the communication protocols defined by IEC TC 57, specifically the IEC 60870-5 series, the IEC 60870-6 series, the IEC 61850 series, the IEC 61970 series, and the IEC 61968 series.	Relationship: This standard may have a tangential relationship to the NAESB PKI standards Cost: Vary per part from $55 to $220 Link: (to section 1) http://webstore.iec.ch/webstore/webstore.nsf/artnum/037996!opendocument
IEEE C37.118	IEEE (formal standards body)	Application: Phasor measurement unit (PMU) communications Description: This standard defines synchronized phasor measurements used in power system applications. It provides a method to quantify the measurement, tests to be sure the measurement conforms to the definition, and error limits for the test. It also defines a data communication protocol including message formats for communicating this data in a real-time system.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: $77

Appendix B: NIST Recognized Standards for Inclusion in the Smart Grid Interoperability Standards Framework, Release 1.0

REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0			
STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
		Explanation, examples, and supporting information are also provided.	Link: https://sbwsweb.ieee.org/ecustomercme_enu/start.swe?SWECmd=GotoView&SWEView=Catalog+View+(eSales)_Standards_IEEE&mem_type=Customer&SWEHo=sbwsweb.ieee.org&SWETS=1192713657
IEEE 1547	IEEE (formal standards body)	Application: Physical and electrical interconnections between utility and distributed generation (DG) Description: This standard is the first in the 1547 series of interconnection standards and is a benchmark milestone demonstrating the open consensus process for standards development. Traditionally, utility electric power systems (EPS--grid or utility grid) were not designed to accommodate active generation and storage at the distribution level. As a result, there are major issues and obstacles to an orderly transition to using and integrating distributed power resources with the grid. The lack of uniform national interconnection standards and tests for interconnection operation and certification, as well as the lack of uniform national building, electrical, and safety codes, are understood. IEEE Std 1547 and its development demonstrate a model for ongoing success in establishing additional interconnection agreements, rules, and standards, on a national, regional, and state level. IEEE Std 1547 has the potential to be used in federal legislation and rule making and state public utilities commission (PUC) deliberations, and by over 3000 utilities in formulating technical requirements for interconnection agreements for distributed generators powering the electric grid. This standard focuses on the technical specifications for, and testing of, the interconnection itself. It provides requirements relevant to the performance, operation, testing, safety considerations, and maintenance of the interconnection. It includes general requirements, response to abnormal conditions, power quality, islanding, and test specifications and requirements for design, production, installation evaluation, commissioning, and periodic tests. The stated requirements are universally needed for interconnection of distributed resources (DR), including synchronous machines, induction machines, or power inverters/converters and will be sufficient for most installations. The criteria and requirements are applicable to all DR technologies.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: $77 Link: https://sbwsweb.ieee.org/ecustomercme_enu/start.swe?SWECmd=GotoView&SWEView=Catalog+View+(eSales)_Standards_IEEE&mem_type=Customer&SWEHo=sbwsweb.ieee.org&SWETS=1192713657

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STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
IEEE 1686-2007	IEEE (formal standards body)	Application: Security for intelligent electronic devices (IED) Description: The functions and features to be provided in substation intelligent electronic devices (IEDs) to accommodate critical infrastructure protection programs are defined in this standard. Security regarding the access, operation, configuration, firmware revision, and data retrieval from an IED is addressed in this standard. Communications for the purpose of power system protection (teleprotection) is not addressed. Encryption for the secure transmission of data both within and external to the substation, including supervisory control and data acquisition, is not part of this standard as this is addressed in other efforts.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: $77 Link: https://sbwsweb.ieee.org/ecustomercme_enu/start.swe?SWECmd=GotoView&SWEView=Catalog+View+(eSales)_Standards_IEEE&mem_type=Customer&SWEHo=sbwsweb.ieee.org&SWETS=1192713657
NERC CIP 002-009	North American Electric Reliability Corporation (formal standards body)	Application: Cyber security standards for the bulk power system Description: NERC Standards CIP-002 through CIP-009 provides a cyber security framework for the identification and protection of Critical Cyber Assets to support reliable operation of the Bulk Electric System. These standards recognize the differing roles of each entity in the operation of the Bulk Electric System, the criticality and vulnerability of the assets needed to manage Bulk Electric System reliability, and the risks to which they are exposed. Responsible Entities should interpret and apply Standards CIP-002 through CIP-009 using reasonable business judgment. Business and operational demands for managing and maintaining a reliable Bulk Electric System increasingly rely on Cyber Assets supporting critical reliability functions and processes to communicate with each other, across functions and organizations, for services and data. This results in increased risks to these Cyber Assets.	Relationship: This standard may have a tangential relationship to the NAESB PKI standards. NAESB is already fully coordinated with NERC Cost: Available at no cost on the NERC website. Link: http://www.nerc.com/page.php?cid=2|20
NIST SP 800-53	National Institute of Standards and Technology	Application: Cyber security standards and guidelines for federal information systems, including those for the bulk power system Description: The purpose of this publication is to provide guidelines for selecting and specifying security controls for information systems supporting the executive agencies of the federal government. The guidelines apply to all components of an information system that process, store,	Relationship: This standard may have a tangential relationship to the NAESB PKI standards Cost: Available at no cost on

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REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0			
STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
		or transmit federal information.	the NIST website. Link: http://csrc.nist.gov/publications/nistpubs/800-53-Rev1/800-53-rev1-final-clean-sz.pdf
NIST SP 800-82	National Institute of Standards and Technology	Application: Cyber security standards and guidelines for federal information systems, including those for the bulk power system Description: The purpose of this document is to provide guidance for securing industrial control systems (ICS), including supervisory control and data acquisition (SCADA) systems, distributed control systems (DCS), and other systems performing control functions. The document provides an overview of ICS and typical system topologies, identifies typical threats and vulnerabilities to these systems, and provides recommended security countermeasures to mitigate the associated risks. Because there are many different types of ICS with varying levels of potential risk and impact, the document provides a list of many different methods and techniques for securing ICS. The document should not be used purely as a checklist to secure a specific system. Readers are encouraged to perform a risk-based assessment on their systems and to tailor the recommended guidelines and solutions to meet their specific security, business and operational requirements. The scope of this document includes ICS that are typically used in the electric, water and wastewater, oil and natural gas, chemical, pharmaceutical, pulp and paper, food and beverage, and discrete manufacturing (automotive, aerospace, and durable goods) industries.	Relationship: This standard may have a tangential relationship to the NAESB PKI standards Cost: Available at no cost on the NIST website. Link: http://csrc.nist.gov/publications/drafts/800-82/draft_sp800-82-fpd.pdf
Open Automated Demand Response (Open ADR)	Lawrence Berkeley National Laboratory / Organization for the Advancement of Structured Information Standards (OASIS) / UCA International Users Group (UCAIug)	Application: Price responsive and direct load control Description: The Open Automated Demand Response Communications Specification defines the interface to the functions and features of a Demand Response Automation Server (DRAS) that is used to facilitate the automation of customer response to various Demand Response programs and dynamic pricing through a communicating client. This specification, referred to as OpenADR, also addresses how third parties such as utilities, ISOs, energy and facility managers, aggregators, and hardware and software manufacturers will interface to and utilize the functions of the DRAS in order to automate various aspects of demand response (DR) programs and dynamic pricing.	Relationship: This standard must be made compatible with the NAESB Wholesale and Retail Electric demand response measurement and verification standards. This standard may also impact the NAESB OASIS standards suite and NAESB curtailment standard and may have dependence on the data that is being maintained in the

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REVIEW OF NIST RECOGNIZED STANDARDS FOR INCLUSION IN THE SMART GRID INTEROPERABILITY STANDARDS FRAMEWORK, RELEASE 1.0			
STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
			NAESB Energy Industry Registry ("EIR") Cost: Available at no cost on the Lawrence Berkeley Laboratory / Open ADR website. Link: http://openadr.lbl.gov/pdf/cec-500-2009-063.pdf
OpenHAN	Open SG Users Group	Application: Home Area Network device communication, measurement, and control Description: The utility members of the UtilityAMI OpenHAN Task Force jointly drafted this system requirements specification. It represents the collaboration of more than nine investor-owned North American utilities serving more than 28 million electric and gas customers in 17 states and provinces. Although this document is a system requirements specification, it follows the IEEE 830-1998 Recommended Practice for Software Requirements Specification given the focus on Home Area Network (HAN) applications for utilities and consumers.	Relationship: As this standard relates to measurement it should be reviewed for compatibility with the NAESB Wholesale and Retail Electric demand response measurement and verification standards Cost: Available at no cost on the Open SG web site Link: http://osgug.ucaiug.org/utilityami/openhan/HAN%20Requirements/Forms/AllItems.aspx
ZigBee/HomePlug Smart Energy Profile	Zigbee Alliance	Application: Home Area Network (HAN) Device Communication and Information Model Description: The ZigBee Smart Energy public application profile provides standard interfaces and device definitions to allow easy interoperability among ZigBee Smart Energy devices produced by various manufacturers.	Relationship: No Direct Relationship to NAESB Standards Identified Cost: Available at no cost on the Zigbee Alliance web site for non-commercial purposes Link: http://www.zigbee.org/Products

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STANDARD	**ORGANIZATION**	**APPLICATION / DESCRIPTION**	**RELATIONSHIP TO NAESB/ LOCATION OF STANDARDS/COST**
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Appendix C: NAESB Comments to NIST on the Initial Set of 16 Standards that Comprise the Smart Grid Interoperability Standards Framework submitted on July 9, 2009

Dr. George Arnold
Deputy Director
National Institute of Standards and Technology
100 Bureau Drive, Stop 2000
Gaithersburg, MD 20899-2000

Dear Dr. Arnold,

NAESB appreciates the opportunity to offer these comments to the initial set of standards and specifications proposed by NIST for inclusion in Release 1.0 of the Smart Grid Interoperability Standards Framework. We understand from NIST documentation that Release 1.0 is a work in progress with the recognition that it is not complete, nor is it exclusionary.

For the criteria upon which the standards and specifications are selected by NIST as industry consensus work products, we offer the following comments:

- Standards and specifications to be applied at a national level should be developed at a national level, or at a minimum vetted at a national level, where entities that will be expected to use the standards have had an opportunity to vote on the standards or otherwise provide input into their development and acceptance through an open and transparent process. We are unclear if all the standards and specifications noted in the list (see attached appendix) have undergone such review and national endorsement, and we understand that some of the items on the list are only now undergoing such a review. For those items that have not completed a national review and vote by a Standards Development Organization, we would recommend that it is premature to endorse the item as part of the initial list until the review and vote, including the incorporation of any changes endorsed by the SDO, is completed.
- Similarly, for standards and specifications that were developed for use regionally and in place for regional use, but that are now proposed to be applied nationally, we would again recommend that entities that will be expected to use the standards have an opportunity to vote on the standards or otherwise provide input into their development and acceptance. For those items that have not completed a national review by a SDO, we would recommend that it is premature to endorse the item as part of the initial list until the review and vote, including the incorporation of any changes endorsed by the SDO, is completed.
- Interoperability extends from the Smart Grid to the Power Grid, and for standards and specifications that interact with the bulk power system and may impact standards already in place that support reliability or market transactions, coordination should take place with either the North American Electric Reliability Corporation or NAESB.

We commend the groups that prepared the list of the initial set of standards and specifications, particularly considering the large industry meetings held to identify the list. We hope that you find our comments helpful in support of the development of an interoperable Smart Grid. We look forward to continuing to participate in your process as the needed Smart Grid suite of standards and specifications are adopted and put to use in the energy market.

With Best Regards,

Rae McQuade

Rae McQuade, President, NAESB

cc: Michael D. Desselle, Chairman of the NAESB Board of Directors
William P. Boswell, NAESB General Counsel
Jonathan Booe, NAESB Counsel

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Appendix D: NAESB Comments on the Report to NIST on the Smart Grid Interoperability Standards Roadmap submitted on July 30, 2009

Dr. George Arnold
Deputy Director
National Institute of Standards and Technology
100 Bureau Drive, Stop 8100
Gaithersburg, MD 20899-8100

Dear Dr. Arnold,

NAESB appreciates the opportunity to offer these comments to "Report to NIST on the Smart Grid Interoperability Standards Roadmap" (Contract No. SB1341-09-CN-0031-- Deliverable 7) prepared by the Electric Power Research Institute (EPRI). We commend EPRI for the considerable organizational effort put forth in a compressed schedule to produce the report.

We offer the following four general suggestions for consideration – which apply both to the creation and acceptance of the roadmap and the development of Smart Grid Interoperability standards:

- Transparency. Transparency in decision making is a key factor in garnering support. Transparency includes both the identification of the decision makers and how decisions are made. Transparency applies to standards development, standards selection and it also applies to the development of the plans and strategies. While providing adequate transparency can take time, it has been our experience that it expedites industry acceptance and support.
- Inclusion. Stakeholders should be given the opportunity to take part in the decision making and standards development. Reaching out to trade associations and industry organizations to encourage their stakeholders to participate has proven essential in assuring that diverse groups are made aware of the planned standards development activities. Trade associations, industry organizations, regional groups and the industry itself play key roles in soliciting a broad and regionally diverse group of participants. Regulatory staff, both state and federal should be encouraged to participate to ensure that directions taken support their policies.
- Balance. Decision making, particularly for standards that have broad applicability, should not only include the stakeholders who will be responsible for modifying their business processes to implement the standards, but also the service providers. The market interests should be balanced and there are a number of ways in which this balance can be achieved. Balance of geographic areas can be important when the decisions made or the standards developed are not specific to a given region, but rather are intended to apply more broadly. Equally important, those entities either politically accountable for the success or operationally accountable for the success of the standards and related decisions must have a strong voice in the overall planning and strategic sessions, and also in the identification of standards needed, the development of the standards and the ultimate adoption of the standards.
- Documented and Accessible Process. Participants should have access to the process by which the standards are developed and also the process by which related decisions are reached. Importantly, an appeal process should be defined not only as it pertains to endorsement of standards, but also to the standards development process itself.

The four suggestions made are particularly important when the standards may be the subject of regulatory action either at the state or federal level. Ensuring the broadest level of inclusion, balance of interests, transparency in all aspects and easily accessible documentation on the process strengthens the work products and supports building industry consensus – crucial when the work products are intended to be forwarded to regulators for their consideration.

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Appendix D: NAESB Comments on the Report to NIST on the Smart Grid Interoperability Standards Roadmap submitted on July 30, 2009

We look forward to continuing to participate in your process as the needed Smart Grid suite of standards and specifications are adopted and put to use in the energy market, and we are grateful for the opportunity to contribute as co-leaders in the panels and working sessions set for August 3 and 4, 2009.

With Best Regards,

Rae McQuade

Rae McQuade, President, NAESB

cc: Michael D. Desselle, Chairman of the NAESB Board of Directors
William P. Boswell, NAESB General Counsel
Jonathan Booe, NAESB Counsel

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STRATEGIC SESSION, SPEAKER BIOGRAPHIES – NAESB BOARD MEETING
SEPTEMBER 24, 2009

Mr. Richard Brooks

Richard Brooks is a Principal System Architect with responsibility for ISO-NE's Enterprise Architecture since 2004. He was a cofounder and the Chief Technical Officer for eight years at Group 8760 (http://www.8760.com), the leader in Business-to-Business ecommerce software, based on the NAESB EDM standard, for the deregulated Retail Electric Industry since 1995. Prior to forming his own Company Richard worked as a Software Engineer for Digital Equipment Corporation for 17 years. Richard majored in Computer Science at the University of Massachusetts, Lowell and is a Carnegie Mellon University, Software Engineering Institute Certified Professional Software Architect. Richard has been instrumental in the development of standards since 1992 within the Internet Engineering Task Force (IEFT), World Wide Web Consortium (W3C), North American Energy Standards Board (NAESB) and the International Electro-technical Commission (IEC). In 2001 he received the prestigious ANSI Meritorious Service Award for his work in the development of Energy Industry Standards (http://www.naesb.org/pdf/082801pr.pdf)

Ms. Lorraine Cross

Ms. Cross received a juris doctorate from the University of Virginia School of Law. She is admitted to practice in the Commonwealth of Virginia and the District of Columbia. She is a member of the Energy Bar Association and past President of the National Capitol Area Chapter of the International Association of Energy Economists. In addition, Ms. Cross earned a Masters degree from The Johns Hopkins University in Baltimore, Maryland and a Bachelor of Arts Degree sumuon bonum from Mary Washington University, in Virginia. Ms. Cross was elected a member of the Phi Beta Kappa National Honor Society, Alpha Pi Sigma National Honor Society, and the Pi Gamma Mu Honor Society for Social Studies. She received the Pi Gamma Mu Scholarship for Graduate Studies; the Chancellor's Fund Award and was nominated to be a Danforth Fellow. Ms. Cross was selected by the then Chief Judge of the U.S. Nuclear Regulatory Commission, Alan Rosenthal, to serve a two-year honors law clerkship. Subsequently, she spent twelve years as Counsel, Regulatory Affairs and then Director, Executive Branch Relations, at the American Gas Association ("A.G.A."). A.G.A. is the representative organization of natural gas distribution companies in the United States. She spent eight years as Vice President of Executive Branch Relations for the Interstate Natural Gas Association of America, the representative organizations for natural gas pipeline companies in North America. During Ms. Cross' tenure with these organizations, she was responsible for Regulatory Affairs during the implementation of open access transportation policies in the U.S. natural gas industry. In 2001, Ms. Cross was engaged by the Edison Electric Institute, the premier organization representing electric transmission, distribution and generator companies in the United States. Ms. Cross was responsible for directing the liaison of the power sector with the Administrations of Presidents Clinton and George W. Bush during an electricity crisis that in the Western Interconnection. Ms. Cross subsequently joined the Mirant Americas Inc., a global power developer. In 2003, Ms. Cross joined the law firm of Brunenkant & Haskell, LLP. She was named partner in 2004 and the firm was re-named Brunenkant & Cross, LLP. In 2009, Ms. Cross formed her own law firm, Cross & Company, PLLC.

Mr. Robert W. Gee

Robert W. Gee is President and Founder of the Gee Strategies Group LLC, a consulting firm providing policy analysis, advocacy, and litigation support services for the energy, electric utility and critical infrastructure industries based in Washington, D.C. His diverse client base includes investors, trade associations, utilities, and public sector institutions. He has a thirty-year record of achievement as a seasoned Washington and Texas-based senior public official, attorney, and executive performing complex assignments involving major energy and telecommunications issues at the state, national, and international level. He has testified numerous times before the United States

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Congress, and quoted by news media, including USA Today, The Wall Street Journal, the Los Angeles Times, National Journal, Energy News Live and CNBC television. His editorials have appeared in the Los Angeles Times, the Dallas Morning News, and the Houston Chronicle. He served as Vice President for Development and Partner Relations for the Electricity Innovation Institute (E2I), an affiliate of the Electric Power Research Institute (EPRI), where he advocated development of the "smart grid" to digitize the electric utility power delivery system. From 1997 to 2000 he served as Assistant Secretary for Policy and International Affairs and as Assistant Secretary for Fossil Energy of the U.S. Department of Energy in Washington, D.C. He chaired the Energy Department's Central Asia/Caspian energy strategy, and was responsible for the timely completion of the Department's 1998 Comprehensive National Energy Strategy. He also oversaw the operation of the Strategic Petroleum Reserve, and the national research program to develop and demonstrate advanced clean coal, natural gas, and petroleum technologies. From 1991 until 1997 he served on the Public Utility Commission of Texas and as its Chairman from 1991 through 1995. During his service, he chaired the Committee on Electricity for the National Association of Regulatory Utility Commissioners. He has served as an Attorney Advisor at the Interstate Commerce Commission and as a Supervisory Trial Attorney at the Federal Energy Regulatory Commission. He held the position of General Attorney at Tenneco Oil Company, and was Of Counsel to the law firm of Akin, Gump, Strauss, Hauer & Feld. Mr. Gee received a Bachelor of Arts Degree in government with honors from the University of Texas and a Doctor of Jurisprudence degree from the University of Texas School of Law. He currently serves on the board of the Northeast-Midwest Institute. He is also a member of the Committee of 100. His past affiliations included serving as a trustee for St. Edward's University in Austin, Texas, and as a member of the Dallas Regional Panel of the President's Commission on White House Fellowships.

Ms. Joelle K. Ogg

Joelle Ogg is an attorney with the law firm Brunenkant & Cross, LLP located in Washington, D.C. where she specializes in energy law matters. Ms. Ogg provides counsel on U.S. federal and state natural gas, electricity and other fuel regulatory, transactional, and administrative litigation matters. Ms. Ogg also has served as special counsel for the North American Energy Standards Board (NAESB) and has recently represented NAESB at various International Gas Union events. Prior to joining Brunenkant & Cross, LLP in 2004, Ms. Ogg was an attorney with the law firms John & Hengerer (formerly John, Hengerer & Esposito) and Williams Mullen. She received a Juris Doctorate with Honors from the George Washington University Law School in Washington, D.C. and graduated Cum Laude and with Honors from Wellesley College.

Mr. James A. Slutz

Mr. Slutz is the President and Managing Director of Global Energy Strategies LLC, focusing on energy project development, carbon capture and storage business strategy, and technology commercialization. GES also provides strategic energy advisory services. Jim serves on the Advisory Board of Hart Energy Publishing. In addition, Jim serves on the Advisory Board of the Canada Institute of the Woodrow Wilson International Centre for Scholars. Mr. Slutz recently completed his tenure as Assistant Secretary of Energy in the United States. In that position, he was the executive responsible for leading the Office of Fossil Energy which includes the coal, oil, and natural gas business lines in the Department of Energy. This office is responsible for extensive research in areas such as carbon sequestration; reduced emission and high efficiency power generation; and ultra deepwater and unconventional natural gas production. Jim also oversaw the nation's Strategic Petroleum Reserve and served as the primary policy advisor to the Secretary on fossil energy issues. Jim previously served as the Deputy Assistant Secretary for Oil and Natural Gas and served as the co-chair of the management committee for the National Petroleum Council study, "Facing the Hard Truths About Energy." Prior to joining DOE, Slutz served as the Indiana Oil and Gas Director,

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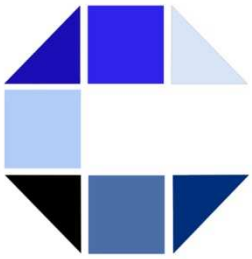
regulating the State's upstream oil and gas industry. He holds an MBA degree from The Ohio State University, Fisher College of Business, and a B.S. degree from The Ohio State University, School of Natural Resources.



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Ms. Rae McQuade
President
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Re: More NAESB Standards Will Be Needed If GHG Legislation Is Enacted

Dear Rae;

I am writing to summarize briefly certain provisions of the American Clean Energy and Security Act ("ACES") that may interest NAESB's members. As background, ACES (H.R. 2454) is legislation to reduce and regulate Greenhouse Gas Emissions ("GHGs"). ACES passed out of the House of Representatives on June 26, 2009 by a 219-to-212 vote.

Although far from being enacted into law at this point,[1] ACES merits discussion. Many of the GHG regulatory programs in H.R. 2454 require data standards in order for regulated companies to exchange information efficiently. Several examples follow.

- **Exchange of Data on Gas Consumption Between LDCs and Power Generators:** The Legislation requires power generators to reduce GHG emissions (by a gradually increasing annual percentage commencing in 2012). LDCs are required to reduce or offset GHGs (from increased throughput) starting in 2016. In order to prevent double counting, an LDC may deduct gas used by power electric generators from the LDC's total deliveries. The data elements for this information transfer between power generators and LDCs need to be standardized, if the programs to work efficiently.

1 Senators Boxer (D-Ca) and Kerry (D-Ma) issued the following statement this week: "Majority Leader Reid has agreed to provide some additional time to work on the final details of our bill, and to reach out to colleagues and important stakeholders. We have told the Majority Leader that our goal is to introduce our bill later in September.

- **Exchange of Renewable Energy Data:** The Legislation requires retail electricity sellers to procure[2] a gradually increasing percentage of Renewable Energy Credits, *e.g.* certificates that a unit of electricity was produced by a rewable energy source. Some (but not all) States centrally procure Renewable Energy Credits. Absent such central procurement, FERC will regulate the Renewable Energy Credit market. The data elementts for this program need to be standardized in order for the program to work efficiently.

- **Exchange of Data on Offsets:** The Legislation permits retail electricity sellers to use Offsets (which are governmentally validated GHG emission reductions from carbon sequestration, energy efficiency and conservation) to fulfill some (but not all) of a Retail Electric Seller's obligation to acquire Renewable Energy Credits. Because the Administrator of EPA manages the Offset program, data standards for Offsets and Renewable Energy Credits should be compatible for efficient data exchange between government agencies, retail electricity sellers, renewable energy generators and entities that create offsets.

  For example, distributed generation (including fuel cells) and 'enhanced' cogeneration systems may provide Offsets. Thus, sectors of the natural gas industry that develop such systems should support data standardization as well.

- **Trading of Regulated Allowances:** The Legislation creates a number of emission commodities, including Offsets and Renewable Energy Credits as discussed above, as well as Emission Allowances. All of these new commodities may be bought and sold, subject to FERC regulation. In order for the proposed "cap and trade" plan to function efficiently, the energy industry will need to standardize many data exchanges.

Although I cannot predict what form climate change legislation will take – if and when it emerges from the Congress – NAESB is likely to be called upon for impelentation help when the legislation is transformed into regulation. Good luck.

Very truly yours,

Lorraine Cross

2 Regulated entities may also comply by making a defaul payment into a fund that will be used to procure renewable energy or other purposes approved in the Legislation.

REPORT TO NIST PROVIDES INSIGHT ON SMART GRID INTEROPERABILITY STANDARDS DEVELOPMENT

By Christopher B. Kelly

Chris Kelly is an intellectual property lawyer in the Atlanta office of Alston & Bird, LLP and a registered patent attorney. The views expressed in the article are his own and not necessarily those of Alston & Bird or its clients.

The Report

On June 17, 2009, the National Institute of Standards and Technology (NIST) released the *Report to NIST on the Smart Grid Interoperability Standards Roadmap* (the Report), an extensive interim report on the development of Smart Grid interoperability standards.[1] The Report details major steps made toward achieving a Smart Grid Interoperability Framework, identifies applicable Smart Grid interoperability standards, discusses the gaps present in currently available standards, and lays out priorities for near-term development of Smart Grid standards. The Report's analysis of various interoperability issues will aid NIST as it selects standards for various aspects of the Smart Grid. The eventually adopted standards will have a significant impact on clients' businesses, the value of their intellectual property (IP), and the landscape of important IP owned by their competitors. As an illustration of Smart Grid IP activity, a table of U.S. patents and patent applications related to various Smart Grid functional priorities is provided at the end of this article.

Since 2007, NIST has been assigned primary responsibility for developing a framework of standards and protocols designed to achieve interoperability among Smart Grid technologies (the Interoperability Framework). The Report, produced by the Electric Power Research Institute (EPRI), was commissioned by NIST to evaluate the current status, issues, and priorities for Smart Grid interoperability standards development and harmonization. NIST has issued a request for public comment on the Report via the *Federal Register*[2] and will use the Report and subsequent public comments as input in drafting its own interim "roadmap" for the development of Smart Grid interoperability standards.[3] For additional guidance, NIST will look to the Federal Energy Regulatory Commission's (FERC) recent Smart Grid policy statement, which contains

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[1] *Report to NIST on the Smart Grid Interoperability Standards Roadmap* (June 17, 2009), *available at* http://www.nist.gov/smartgrid/InterimSmartGridRoadmapNISTRestructure.pdf (prepared by the Electric Power Research Institute).

[2] Request for Comments on "Report to NIST on the Smart Grid Interoperability Standards Roadmap," 74 Fed. Reg. 124, 31524 (June 30, 2009).

[3] Development of the interim "roadmap" is required of NIST under The Energy Independence and Security Act (EISA) of 2007. The NIST "roadmap" is targeted for delivery in mid to late September will also be made available for public comment via the *Federal Register*.

FERC's thoughts on current Smart Grid standards development.[4] NIST's upcoming roadmap will be the next major step toward arriving at a consensus on Smart Grid standards sufficient for FERC to institute a formal rulemaking proceeding to adopt the standards.[5]

Opportunities for Smart Grid Stakeholders

Although NIST intends to use the Report as one piece of input in developing its own roadmap, the Report does provide Smart Grid stakeholders with a clear look at the direction of the Interoperability Framework development and the issues likely to be at the top of NIST's list of priorities in its upcoming roadmap. In addition, Smart Grid stakeholders have an opportunity to influence the development of the Interoperability Framework through the following avenues:

- Public Comment via *Federal Register* on the "Report to NIST on the Smart Grid Interoperability Standards Roadmap." (Comments due July 30, 2009)[6]
- Public Workshop on Smart Grid Interoperability Standards. (Washington D.C., Aug. 3rd & 4th, 2009)[7]
- Public Comment via *Federal Register* on NIST's upcoming interim roadmap for Smart Grid interoperability standards. (Expected September 2009).

Smart Grid stakeholders would be well advised to review this Advisory and pertinent sections of the Report to identify issues worth advocating via the forums listed above. The opportunities to comment on the contents of the Report and NIST's upcoming roadmap, as well as to attend the public workshop, are valuable tools for influencing the standards selected for the Interoperability Framework. As the Report itself recognizes, most participants thus far in the development of Smart Grid standards have detailed knowledge of a small set of standards. As a result, it is critical for entities with specialized knowledge in various areas of Smart Grid technology to come forward and provide input for development of the Interoperability Framework.

The summary of the Report provided below is intended to be a user-friendly guide for understanding the contents of the Report and identifying issues ripe for discussion via public comment or the public workshop. EPRI's Report is divided into six sections and covers, generally, the following:

[4] Smart Grid Policy Statement, 74 Fed. Reg. 142, 37098 (July 27, 2009).

[5] *See* Energy Independence and Security Act of 2007, H.R. 6, 110th Cong. § 1305(d) (requiring FERC to institute a rulemaking to adopt Smart Grid standards upon sufficient consensus).

[6] 74 Fed. Reg. 124, 31524 (June 30, 2009). Although comments on the Report are officially due to NIST on or before July 30, 2009, it is unlikely comments submitted soon after that date will be ignored.

[7] Third Smart Grid Interoperability Standards Roadmap Public Workshop, 74 Fed. Reg. 141, 36672 (July 24, 2009).

I. Purpose & Scope of the Report
II. Smart Grid Vision and Summary of On-Going Governance Process
III. Smart Grid Conceptual Model
IV. Priority Smart Grid Applications and Requirements
V. Cyber-Security Considerations for the Smart Grid
VI. Near-Term Actions for Developing Interoperability Framework

I. Purpose & Scope of the Report[8]

In the Energy Independence and Security Act (EISA) of 2007, Congress assigned primary responsibility for developing a framework of standards and protocols for Smart Grid technologies to NIST. Since 2008, NIST has been working with the Department of Energy and Smart Grid stakeholders to establish an Interoperability Framework. In light of the American Reinvestment and Recovery Act of 2009, NIST has recently sought to expedite development of the Interoperability Framework.

In April of 2009, NIST announced a 3-phase plan for reaching a consensus on an initial set of Smart Grid standards and establishing a framework for development of future standards.

- Phase 1: Publish a report describing stakeholder consensus on the following:
  - The Smart Grid Architecture
  - Standardization Priorities
  - An Initial Set of Standards ("Smart Grid Release 1")
  - A Roadmap for Addressing Remaining Standards Needs
- Phase 2: Launch a public-private partnership to develop additionally needed standards.
- Phase 3: Develop a plan for testing and certification to ensure Smart Grid devices and systems conform to interoperability and cyber-security standards.

The Report will be used as input into Phase 1 of NIST's plan. The Report's high-level overview of the Smart Grid's architecture, principles, and interface design, as well as its summary of the current status, issues, and priorities for Smart Grid interoperability standards development and harmonization, is likely to be integrated into NIST's upcoming roadmap.

II. Smart Grid Vision[9]

Defining the Smart Grid

The Report describes the Smart Grid as the "modernization of the electricity delivery system [such that] it monitors, protects, and automatically optimizes the operation of its interconnected

[8] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 1-5.

[9] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 6-18.

elements."[10] By delivering real-time information over a distributed computing and communications infrastructure, the Smart Grid seeks to provide a near-instantaneous balance of electricity supply (from the power grid) and electricity demand (from electrically powered devices). The benefits of implementing the Smart Grid include improved power reliability and quality, enhanced safety and cyber-security, optimized energy efficiency, reduction in greenhouse gases and other pollutants, and financial benefits for suppliers and consumers.

Specifically, the Report lists seven characteristics that distinguish a "Smart" Grid:

1. Enables active participation by consumers by providing choices and incentives to modify electricity purchasing patterns and behavior.
2. Accommodates all generation and storage options, including wind and solar power.
3. Enables new products, services, and markets through a flexible market providing cost-benefit tradeoffs to consumers and market participants.
4. Provides reliable power that is relatively interruption-free.
5. Optimizes asset utilization and maximizes operational efficiency.
6. Has the ability to "self-heal" by anticipating and responding to system disturbances.
7. Resists attacks on physical infrastructure by natural disasters and attacks on cyber-structure by malware and hackers.

Procedural and Technical Issues

The advanced Smart Grid capabilities described above bring with them a number of technical and procedural challenges. On the technical side, for example, computer or microprocessor based equipment must be robust enough to handle a variety of future applications. In addition, communications systems, which are in various stages of maturity, must be capable of handling new media technologies as they emerge. Finally, and perhaps most significant, new Smart Grid technologies must be capable of interoperability with legacy systems currently in use, as these legacy systems will be replaced gradually for many years to come.

On the procedural side, efforts to establish the Interoperability Framework must consider a broad set of Smart Grid stakeholders. Conceivably, every person and every business in the United States will be affected by the Smart Grid. In addition, as mentioned above, the transition to the Smart Grid will be a lengthy process due to the large number of existing systems and equipment that will be replaced over time. This gradual process necessitates a well defined plan for integrating the Smart Gird into current legacy systems in various phases.

[10] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 6.

III. Smart Grid Conceptual Model[11]

The Report also sets forth a Smart Grid Conceptual Model to be used as a tool for describing, discussing, and developing the final architecture of the Smart Grid. This Conceptual Model will provide a common language allowing Smart Grid stakeholders to discuss the Smart Grid at varying levels of focus. The Report recognizes that it is particularly critical to establish this Conceptual Model in the infancy of the Smart Grid Interoperability Framework.

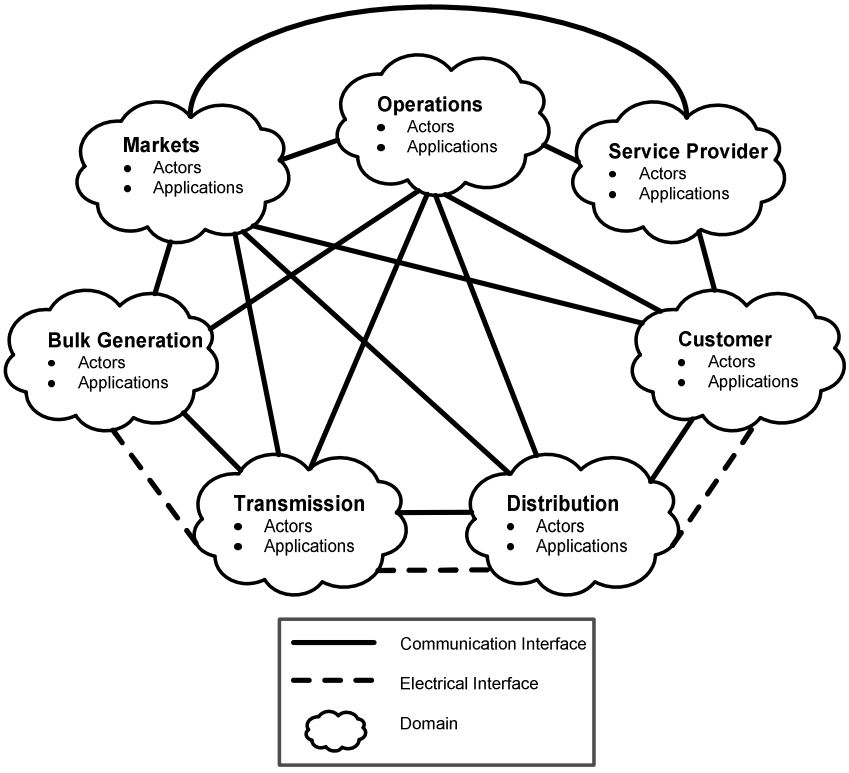

Figure 1

As illustrated in Figure 1,[12] at the highest level of the conceptual model, the Smart Grid is divided into several "domains:"

- *Markets*: operators and participants in electricity markets
- *Operations*: managers of the movement of electricity
- *Service Providers*: organizations providing service to electrical customers and utilities
- *Bulk Generation*: generators of electricity in bulk quantities
- *Transmission*: carriers of bulk electricity over long distances
- *Distribution*: distributors of electricity to and from customers
- *Customers*: end users of electricity

[11] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 19-44.

[12] *See Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 21 (Figure 3).

Each domain is comprised of a group of "actors" and "applications." The actors are devices, systems, or programs (or organizations that own them) that make decisions and exchange information through a variety of interfaces in order to perform applications. The applications are various tasks performed by an actor or actors within a certain domain. Accordingly, the domains comprise groups of actors with similar objectives performing a variety of applications. As shown in the Figure 1, the domains are able to communicate with one another via communications interfaces. This communication is critical to the overall interoperability of the Smart Grid, allowing it to collectively generate and distribute electricity efficiently based on input from all domains.

Each domain may be further divided into sub-domains. For example, Table 1 shows "Customer" domain applications and actors. This hierarchical structure of the Smart Grid Conceptual Model is used throughout the Report to discuss the Smart Grid at varying levels of specificity.

Domain	Sub-Domain	Application	Actors
Customer	Home	Home Automation	*For Temperature Control*: • Thermostat, • Automated Control Unit, • Air Conditioning Unit *For Lighting Control*: • Lighting user interface, • Automated Lighting Control, • Light Sources
		Solar Generation	• Solar Panels, • Power Storage Devices • Control Unit
		Energy Management	• Meter • Energy Management System configured to communicate with other domains
	Building/Commercial	Building Automation	*Similar to Home Automation Actors*
		Solar Generation	*Similar to Home Solar Generation Actors*
		Energy management	*Similar to Home Energy Management Actors*
	Industrial	Industrial Automation	*Similar to Home Automation Actors*
		Wind Generation	• Wind Turbines • Power Storage Devices • Control Unit
		Energy Management	*Similar to Home Energy Management Actors*

Table 1

Finally, the Smart Grid Conceptual Model also includes a series of layers developed by the GridWise Architecture Council (GWAC) to organize various issues underlying domains, actors, and applications. The layers, or "GWAC Stacks," include:[13]

- Organizational (e.g., Policy, Business Objectives, Business Procedures)
- Informational (e.g., Business Context, Semantic Understanding)
- Technical (e.g., Syntactic Interoperability, Network Interoperability, Connectivity)
- Cross-Cutting Issues (e.g., Security, Resource Identification, Time Synch)

IV. Priority Smart Grid Applications and Requirements

The Report also presents results from a study of priority Smart Grid functionalities identified by FERC in their draft "Smart Grid Policy" issued on March 19, 2009 (denoted by *) and additional priority functionalities chosen as a result of stakeholder feedback:

- Wide-Area Situational Awareness (WASA)*
- Demand Response*
- Electric Storage*
- Electric Transportation*
- Advanced Metering Infrastructure (AMI)
- Distribution Grid Management (DGM)

Each functionality describes a broad attribute of the Smart Grid. The Report discusses the selection of standards needed for each functionality in terms of "Use Cases" and "Requirements." A series of "Use Cases," or examples of how a particular functionality might be used in the Smart Grid context, are identified for each functionality. For each Use Case, the technical "Requirements" for satisfying the Use Case are derived. Finally, standards are selected that afford capabilities to satisfy the derived Requirements.

Wide-Area Situational Awareness[14]

Wide-Area Situational Awareness (WASA) refers to the Smart Grid's ability to monitor its power system across wide geographic areas. WASA includes monitoring the state of various power system components and effectively managing the power system components based on an understanding of how each component affects the system as a whole. The large number of complex components comprising the power system makes WASA a challenging, yet necessary functionality of the Smart Grid.

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[13] *See GridWise Interoperability Context-Setting Framework* (March 2008), *available at* http://www.gridwiseac.org/pdfs/interopframework_v1_1.pdf (prepared by The GridWise Architecture Council).

[14] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 46-52.

The Report identifies and discusses in further detail the following WASA Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

- *Contingency Analysis*: Analyzing the ability of the Smart Grid to withstand outages of a critical infrastructure element and simulating the effects of various contingency events.
- *Inter-Area Oscillation Damping*: Identifying inter-area oscillations and modulating voltage to damp out those oscillations to ensure maximum power transfer and optimal power flow.
- *Wide Area Control System for Self Healing Grid Application*: Evaluating power system behavior to prepare for combinations of contingency events, prevent wide-area blackouts, and fast recovery from an emergency state.
- *Voltage Security*: Detecting low voltage conditions and initiating corrective action (e.g., load shed).
- *Monitoring Distribution Operations*: Monitoring and analyzing the behavior of distribution operations and providing transmission automated management systems and the transmission operator with results of the analysis.
- *Voltage, Var, and Watt Control*: Adjusting loads with respect to voltage tolerances, eliminating overload and voltage violations, and providing reactive power support and spinning reserve support.

Demand Response[15]

Demand Response refers to the Smart Grid's ability to vary the supply of electricity via "Distributed Energy Resources" (DERs) in response to changes in demand for electricity from "Demand Resources." DERs represent small-scale energy generation and storage sources configured to provide temporary changes in electricity supply. Demand Resources represent loads or aggregations of loads on the Smart Grid (e.g., home appliances) capable of providing temporary changes in energy consumption. By allowing communication between DERs and Demand Resources, the Smart Grid is able to control peak power conditions, limit blackout instances, maximize the use of available power, increase power system efficiency through time-of-use and dynamic pricing models, and allow customers to make market participation and electricity consumption choices.

The Report identifies and discusses in further detail the following Demand Response Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

[15] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 53-58.

- *Direct Load Control*: Managing direct load control programs and conveying direct load control information to customers.
- *Managing Demand in Response to Pricing Signals*: Managing the transmission of price signal information to demand response enabled devices.
- *Customer Reduction in Usage in Response to Pricing/Load Reduction Events*: Providing customers with timely price, event, and usage information in conjunction with national system market.
- *External Clients Use of AMI to Interact with Devices at Customer Site*: Allowing third parties (e.g., energy management companies) to control customer equipment located at a customer's premise.
- *Customer Use of Energy Management System or In-Home Display*: Connecting customers' personal control and display devices to utility grid allowing customers to make educated energy decisions.
- *Utility Procures Energy & Settles Wholesale Transactions*: Providing the retail market with information regarding availability to resources and usage data gathered by metering system.
- *Dynamic Pricing*: Facilitating dynamic bid/offer system between customers and service providers.
- *Voltage, Var, and Watt Control*: Calculating optimal settings for various control devices.

Electric Storage[16]

Electric Storage refers to new electricity storage technologies currently being developed to address energy resource and management concerns. Generally, these technologies may be deployed in a distributed manner or as bulk storage. Distributed storage is generally configured as local storage that may be aggregated (e.g., local storage for uninterrupted power supply systems), while bulk storage is generally configured as a direct interface to system energy management functions (e.g., pumped storage hydroelectric technology).

Electric Storage technology is expected to benefit all levels of the Smart Grid. At the generation level, storage technologies will aid in frequency control, spinning reserve, supply-ramping, demand-leveling, and minimum loading. At the transmission level, they will improve stability, power quality, transfer-leveling, reactive power (Var) support, and reliability. At the distribution level, they will contribute to peak shaving, voltage support, power quality, capacity investment deferral, and reliability. Finally, at the end-use level, they will enhance demand control, interruption protection, voltage support, and power quality.

[16] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 59-62.

The Report identifies and discusses in further detail the following Electric Storage Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

- *Energy Storage Owners Store Energy from the Power System*
- *Energy Storage Owners Discharge Energy into the Power system*
- *Building Energy Usage Optimization using Electric Storage*: Optimizing building energy usage in response to real-time pricing signals.
- *RTO/ISO Directly Dispatches Electric Storage to Meet Power Demand*: Using market-based energy scheduling or emergency control capabilities to dispatch stored electric energy to meet local or regional power demand.
- *Utility Dispatches Electric Storage to Support Intentional Islanding*
- *Electric Storage Used to Provided Fast Voltage Sag Correction*
- *Impact on Distribution Operations of Plug-in Electric Vehicles as Electric Storage*: Taking into account behavior of Energy Storage as loads and as sources of energy.

Electric Transportation[17]

With the automotive industry focused on development plug-in electric vehicles (PEVs) for mass production, FERC has insisted that the Smart Grid be capable of handling the loads a mass deployment of PEVs would entail. A primary concern is that increased loads from PEVs on the Smart Grid could significantly increase the cost of peak power without proper regulation, coordination, and incentives. However, the Report notes that PEVs may balance on- and off-peak loads through shifting when PEVs are charged. Future developments may also utilize PEVs for their storage and discharging capacity, which could improve energy efficiency and power quality. Accordingly, the Smart Grid is being designed under the assumption that it must handle the load of large amounts of PEVs and with an optimistic view toward taking advantage of the attributes of that PEV presence.

The Report identifies and discusses in further detail the following Electric Transportation Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

- *Customer Does Not Enroll in any PEV-Specific Program*: Customer plugs PEV into electrical connections lacking smart meters or other communication with grid resulting utility having no knowledge of PEV load.
- *Utility/ESP Develops Different Tariffs and Service Programs*: Utility or Energy Services Provider offers PEV-specific programs.

[17] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 63-70.

- *PEV Charges After Customer Establishes Charging Parameters*
- *PEV Charges at Different Locations*: Roaming scenarios with customer plugging PEV into grid a location away from "home" location.
- *PEV Roaming, Assuming Unbundled Retail Electricity Reselling*: Permitting customers to store electricity during low price times and resell electricity to PEVs during high price times for profit.
- *PEV Used for On-Premise Backup Power or Other Use of Storage*
- *Utility Provides Accounting Services to PEV Customer*
- *Impact of PEV as Load on Distribution Operations*: Allowing distribution operations to assess when, where, and how fast PEVs are charging.
- *PEV Network Testing, Diagnostics, and Maintenance*

Advanced Metering Infrastructure[18]

Many of the most advantageous aspects of the Smart Grid, such as demand response and dynamic pricing, will require enhanced communication with customers in order to function. Advanced Metering Infrastructure (AMI) systems integrated into the Smart Grid will allow utilities to interact with meters at customer sites. For example, external clients may use an AMI system to interact with devices at a customer site. This allows clients to monitor the power used by particular customer equipment, make on-demand control requests of customer equipment, and detect outages to customer portions of the power grid. In addition, AMI systems may allow utilities to communicate instantaneous kWhr pricing and notification of load reduction events to customers. The integration of AMI systems into the Smart Grid will be particularly challenging, however, as the information exchanged between devices have varied complexity, ownership, and access rights.

The Report identifies and discusses in further detail the following Advanced Metering Infrastructure Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

- *External Clients Use AMI System to Interact with Devices at Customer Site*: Allowing third party vendors to detect the power drawn by customer equipment and make on-demand status and control requests of said equipment.
- *Demand Response Management System Manages Demand through Direct Load Control*: Allowing utilities to communicate pricing and voluntary load reduction events to customers.

[18] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 71-77.

- *Building Automation Software/System Optimization Using Electric Storage*: Allowing building operators to adjust how equipment responds to pricing/operational signals.
- *Outage detection and restoration using AMI*

Distribution Grid Management[19]

A significant component of the Smart Grid infrastructure will be the addition of sophisticated Distribution Management Systems (DMSs) to distribution grids, which currently operate with limited automation and intelligence. These new management systems will be capable of managing the distribution of electricity, identifying and isolating outages, and supporting various efficiency technologies. The DMSs must be configured to communicate with field intelligent electronic devices, transmission systems and distribution systems (e.g., SCADA, EMS), and customer systems (e.g., AMI, DER, DR, PEV, and Electric storage). The ability to communicate with these advanced systems will be critical to the management system's interoperability with the Smart Grid.

The Report identifies and discusses in further detail the following Distribution Grid Management Use Cases, for which requirements will be derived and considered in the selection of applicable standards:

- *Monitoring Distribution Operations with Demand Response, DER, PEV, and Electric Storage*
- *Service Restoration*: Utilizing Electric Storage for improvement of power reliability and contingency analysis.
- *Voltage, Var, and Watt Control with Demand Response, DER, PEV and Electric Storage*
- *Coordination of Emergency and Restorative Actions in Distribution*
- *Impact of PEV and Load and Electric Storage on Distribution Operations*: Allowing distribution monitoring functions to assess PEV loads as electric storage and provide look-ahead monitoring.

V. Cyber Security Considerations for the Smart Grid[20]

Although the Smart Grid will provide dramatic improvements in the reliability, quality, and efficiency of power delivery, its advanced capabilities are much more dependent on information and telecommunications infrastructures. As such, cyber security will be a primary concern in developing all aspects of the Smart Grid. To further development of cyber security standards, the Report identifies a significant number of use cases that are architecturally significant for

[19] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 78-83.

[20] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 88-89.

cyber security requirements. For each use case, the Report identifies cyber security objectives, requirements, and potential stakeholder issues.[21] These use cases are divided into the following categories:

- Advanced Metering Infrastructure
- Demand Response
- Customer Interfaces
- Electricity Market
- Distribution Automation
- Plug-In Hybrid Electric Vehicles
- Distributed Resources
- Transmission Operations
- RTO/ISO Operations
- Asset Management

The Report also identifies three Vulnerability Classes that represent categories of weakness that could adversely impact the operation of the electric grid. The Vulnerability Classes include (1) People, Policy, & Procedure Vulnerabilities, (2) Platform Vulnerabilities, and (3) Network Vulnerabilities. Each Vulnerability Class is comprised of identified vulnerabilities that can be leveraged to cause disruption or negative influence over the Smart Grid and are noted in the appendix to the Report. The vulnerabilities identified in the Report are intended to provide a starting point for development of cyber security requirements.

VI. Near-Term Actions for Developing Interoperability Framework[22]

Although NIST will finalize its priorities in its upcoming roadmap, the Report provides a look at the near-term actions likely to be given priority by NIST. The Report identifies a list "Cross-Cutting and Overarching Issues" and "Priority Functionality Issues" that are limiting wide-spread deployment of the Smart Grid and suggests actions NIST may take to address these issues. In addition, steps needed to complete the roadmap for the Smart Grid Interoperability Framework are highlighted.

The Report provides a detailed analysis of the following priorities:

- Cross-Cutting & Overarching Issues:
  - Common Pricing Model Standard
  - Common Time Synchronization and Management
  - Common Semantic Model
  - Application of Internet-Based Networking Technology
  - Communications Interference in Unlicensed Radio Spectrums

[21] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at Appendix D.

[22] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at 90-103.

- Priority Functionality Issues:
    - Demand Response & Consumer Energy Efficiency
    - Wide Area Situational Awareness
    - Electric Storage
    - Electric Transportation
    - Advanced Metering Infrastructure
    - Distribution Grid Management Initiatives
    - Cyber Security Strategy
- Further 2009 Roadmap Activities:
    - Completion of NIST Standards Evaluation Process
    - Architecture Framework Development and NIST IKB
    - Policy and Regulatory

The Report also provides a table of requirements, standards gaps, and discussion issues for the actions items listed above.[23] The table provides detailed actions NIST should promote, as well as issues that will need further discussion before definite actions on standards are appropriate.

VII. Additional Information

Identified Standards[24]

The Report provides a profile of currently identified standards organized by Domain in a table. The standards identified were selected based on the following criteria:

1. Standard was supported by an Standards Developing Organization (SDO) or via an emergent SDO process
2. Standard is also supported by a users community
3. Standard is directly relevant to the Use Cases analyzed for the Smart Grid
4. Consideration was given to those standards with a viable installed base and vendor community

As the included standards are analyzed further, standards gaps will be filled and, with certain standards being valued over others, an increase in harmonization across standards should be realized. This harmonization is significant in light of the need for adaptor devices (e.g., bridges, routers, gateways) at all interfaces having mismatched standards. Although adaptors will be necessary for remaining legacy technologies, the harmonization of standards and construction of non-duplicative profiles should minimize the need for interface adaptors

[23] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at Appendix C.

[24] *Report to NIST on the Smart Grid Interoperability Standards Roadmap*, *supra* note 1, at Appendix A.

Smart Grid Patent Activity

Table 2 provides a sample of U.S. Patents and Patent Applications directed to a variety of the priority functionalities identified in the Report.

FUNCTIONALITY	*PATENT OR APPLICATION NO.*	*TITLE*	*OWNER*
Electric Storage	6,614,132	Multiple Flywheel Energy Storage System	Beacon Power Corporation
Distribution Grid Management	7,184,903	System and Method for a Self-Healing Grid using Demand Side Management Techniques and Energy Storage	VRB Power Systems, Inc.
Wide Area Situational Awareness	7,233,843	Real-Time Performance Monitoring and Management System	Electric Power Group, LLC
Distribution Grid Management Demand Response	7,274,975	Optimized Energy Management System	GridPoint, inc.
Electric Storage	7,299,633	Solar Dish Concentrator with a Molten Salt Receiver Incorporating Thermal Energy Storage	Pratt & Whitney Rocketdyne, Inc.
Distribution Grid Management	7,305,281	Management of a Bulk Electric Power Market	ISO New England, Inc.
Distribution Grid Management Demand Response	7,337,153	Resolving Energy Imbalance Requirements in Real-Time	Siemens Power Transmission & Distribution, Inc.
Distribution Grid Management Demand Response	2008/0005044	Method and Apparatus for Using Power-Line Phase-Cut Signaling to Change Energy Usage	Filed by University of California Davis.
Electric Storage	2008/0044725	High-Amperage Energy Storage Device and Method	No assignment of record
Electric Storage Electric Transportation	2008/0052145	Power Aggregation System for Distributed Electric Resources	V2 Green, Inc.
Distribution Grid Management Wide Area Situational Awareness	2008/0088183	Integrated Closed Loop Control Method and Apparatus for Combined Uninterruptible Power Supply and Generation System	Electric Power Research Institute, Inc.
Advanced Metering Infrastructure Demand Response	2008/0177678	Method of Communicating Between a Utility and its Customer Locations	Southern California Edison
Consumer Energy Efficiency	2008/0009979	Device for the Controlled Power Consumption of Electric Drives in Machinery . . .	Heldelberger Druckmaschinen AG
Application of Internet-Based Networking Technology	2009/0034419	Method and system of routing in a utility smart-grid network	No assignment of record
Advanced Metering Infrastructure	2009/0088907	Modular Electrical Grid Interface Device	GridPoint, Inc.

Table 2

Links to Related Content:

The full *Report to NIST on the Smart Grid Interoperability Standards Roadmap* is available at http://www.nist.gov/smartgrid/InterimSmartGridRoadmapNISTRestructure.pdf.

Smart Grid Public Workshop, Aug. 3 and 4, 2009 at
http://www.nist.gov/public_affairs/releases/smartgrid_wkshp_072409.html

Request for Public Comment on *Report to NIST on the Smart Grid Interoperability Standards Roadmap* at http://edocket.access.gpo.gov/2009/E9-15467.htm

FERC's Recent Policy Statement at
http://www.ferc.gov/whats-new/comm-meet/2009/071609/E-3.pdf

The Impact of Patents on Smart Grid Objectives, by Jeff Young, Smart Grid News, April 24, 2009 at
http://www.smartgridnews.com/artman/uploads/1/The_Impact_of_Patents_on_Smart_Grid_Objectives.pdf

Additional Smart Grid Information at
http://www.nist.gov/smartgrid/
http://www.ferc.gov/industries/electric/indus-act/smart-grid.asp
http://www.smartgridnews.com

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NORTH AMERICAN ENERGY STANDARDS BOARD

2009 WGQ Annual Plan as Approved by the Board on June 25, 2009

Item Description	Completion[i]	Assignment[ii]
1. Damage Reporting for Natural Gas Pipeline Facilities		
Review and develop standards as appropriate to support posting of information as noted in Docket No. RM06-18-000, Order No. 682 and Docket No. RM06-18-001, Order No. 682-A. Review transmission line damage reporting to identify commonality and apply as appropriate. Status: Complete	2nd Q, 2009	Interpretations
2. Contracts Activities		
a. Update ISDA Gas Annex to correspond to the updated NAESB Base Contract for Sale and Purchase of Sale of Natural Gas, dated September 5, 2006. Status: Underway	3rd Q, 2009	Contracts
b. Revise the Trading Partner Agreement TPA by removing the Exhibits from the agreement and relegate such information as contained in the Exhibits to operational worksheet(s), (R08015). Status: Complete	2nd Q, 2009	Joint Retail BPS/WGQ Contracts
3. 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. ¶ 56 of Order No. 698: "… Under the Commission regulations, the releasing shipper is responsible for clearly setting out the terms and conditions of the release and that would include the means for implementing the formula rate. This is also an issue on which NAESB can develop standards to ensure that such releases can be processed quickly and efficiently." (emphasis added)		
i.) Prepare fully staffed recommendation Status: Complete	2nd Q, 2009	BPS, IR/Technical
b. Provide for Enhanced Granularity for Public Utilities in Identifying Critical Operational Flow Orders. (R08020) Status: Underway	4th Q, 2009	BPS, IR/Tech jointly with WEQ BPS
4. 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. Develop business practice standards as appropriate Status: Complete	2nd Q, 2009	BPS/Interpretations
b. Prepare fully staffed recommendation Status: Complete	2nd Q, 2009	BPS, Interpretations, IR and Technical

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NORTH AMERICAN ENERGY STANDARDS BOARD

2009 WGQ Annual Plan as Approved by the Board on June 25, 2009

	Item Description	Completion[i]	Assignment[ii]
5.	**Capacity Release EDI Review**		
	Review capacity release transactions upload and related responses to determine suitability for EDI		
a.	Conduct Technical Investigation and prepare report for BPS consideration Status: Not Started (Dependent on conclusion of Item 4)	4th Q, 2009	IR/Technical
b.	Develop Business Practice Standards as appropriate Status: Not Started (Adjustments may be made to Completion Dates based on report from Item 5.a)	4th Q, 2009	BPS
c.	Prepare fully staffed recommendation Status: Not Started (Adjustments may be made to Completion Dates based on report from Item 5.a)	1st Q, 2010	BPS, IR/Technical
6.	**Customer Security Administration**		
	Review and develop standards as appropriate to support Customer Security Administration Standards (Comment Submittal, 10-29-07) Status: Not started (Scoping to take place 3rd Q, 2009 after which a Completion Date will be set)	2009	BPS
7.	**Gas Quality Reporting**		
a.	Respond to directives of FERC Docket No. RP07-504-000: ¶ 10 "… develop a uniform set of standards regarding the posting of rapidly changing gas quality information applicable to those pipelines which are required by their tariffs to do so." (Docket No. RP07-504-000) Status: Complete	1st Q, 2009	BPS
b.	Prepare fully staffed recommendation Status: Complete	2nd Q, 2009	IR/Technical
8.	**Standards of Conduct**		
	Review and develop standards, as appropriate, to support posting of standards of conduct information pursuant to Docket No. RM07-1-000, Order No. 717 Status: Complete	1st Q, 2009	BPS
9.	**Electronic Delivery Mechanisms**		
	Review minimum technical characteristics in Appendices B, C, and D of the WGQ QEDM Manual, and make changes as appropriate. Status: Complete	1st Q, 2009	EDM

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2009 WGQ Annual Plan as Approved by the Board on June 25, 2009

Item Description	Completion[i]	Assignment[ii]
Program of Standards Maintenance & Fully Staffed Standards Work		
Business Practice Requests	Ongoing	Assigned by the EC[iii]
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[4]
Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC[4]
Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[4]
Provisional Activities		
Respond to requests as received that are related to Docket No. AD06-11-000 (Market Transparency Reporting).		

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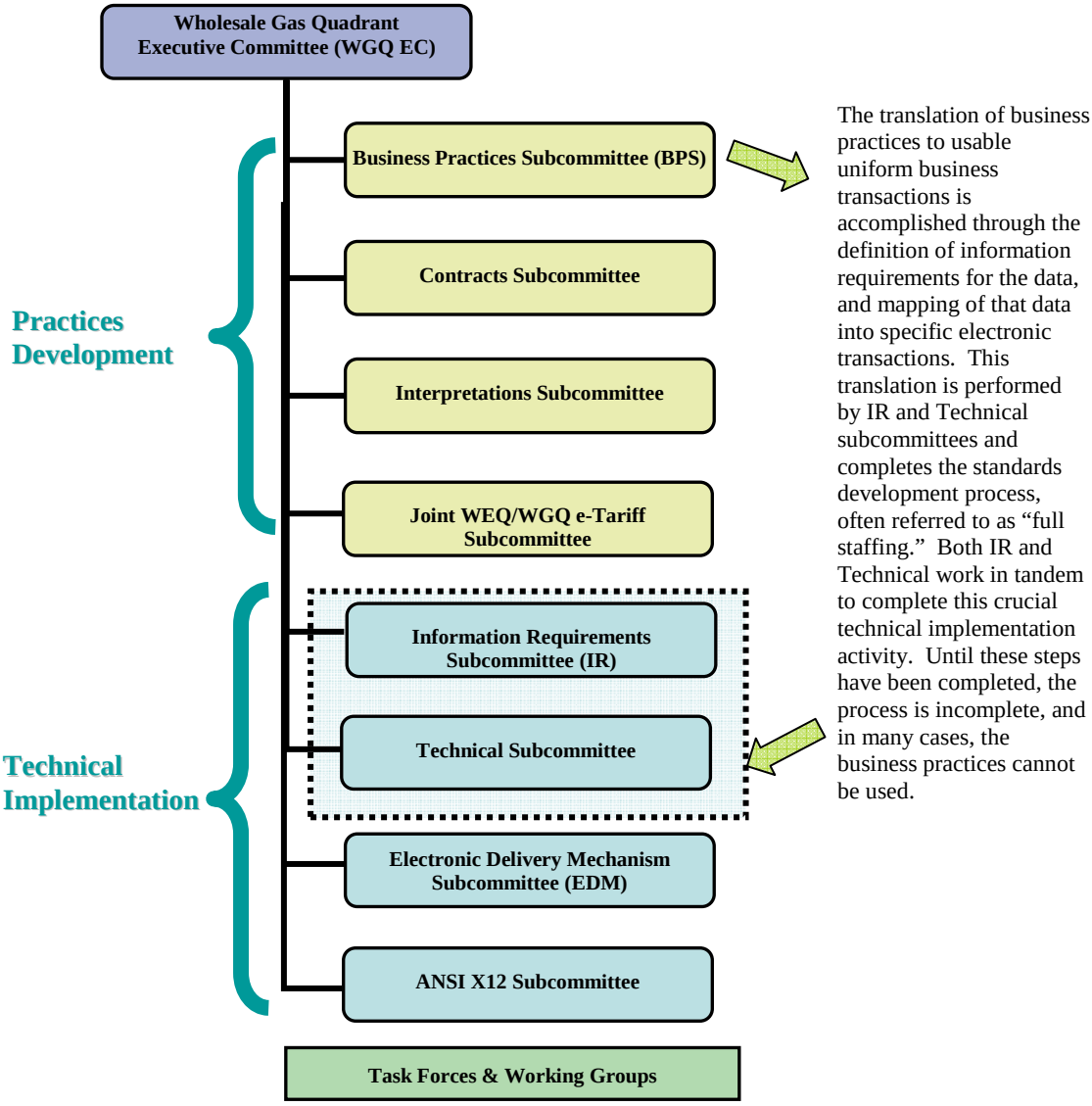

The translation of business practices to usable uniform business transactions is accomplished through the definition of information requirements for the data, and mapping of that data into specific electronic transactions. This translation is performed by IR and Technical subcommittees and completes the standards development process, often referred to as "full staffing." Both IR and Technical work in tandem to complete this crucial technical implementation activity. Until these steps have been completed, the process is incomplete, and in many cases, the business practices cannot be used.

NAESB 2009 WGQ EC and Subcommittee Leadership:

Executive Committee: Jim Buccigross, Chair and Mike Novak, Vice-Chair
Business Practices Subcommittee: Kim Van Pelt, Valerie Crockett, Steve Abbey 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 2009 Annual Plan:

[i] 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.

[ii] The assignments are abbreviated. The abbreviations and committee structure can be found at the end of the annual plan document.

[iii] The EC assigns maintenance of existing standards on a request-by-request basis.

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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
Adopted by the NAESB Board of Directors on June 25, 2009

	Item Number & Description[i]	Completion[ii]	Assignment[iiiiv]
1.	Electronic Retail Billing.		
	Develop Technical Electronic Implementation Standards and Data Dictionaries – Book 9: Customer Billing and Payment Notification via Uniform Electronic Transactions, (R05016 and Attachment, submitted by Wal-Mart/J.C. Penney) Status: Complete	2nd Q, 2009	TEIS
2.	Develop Technical Electronic Implementation Standards and Data Dictionaries – Book 8: Customer Information Status: Complete	2nd Q, 2009	TEIS
3.	Develop Technical Electronic Implementation Standards and Data Dictionaries – Book 10: Customer Enrollment, Drop and Account Information Change (Non Texas Model) Status: Complete	2nd Q, 2009	TEIS
4.	Customer Inquiries		
	a. Develop Model Business Practices and procedures for responding to customer inquiries directed to Distributors and/or Suppliers and for notification of the other party. Status: Complete	2nd Q, 2009	BPS
	b. Develop Technical Electronic Implementation Standards to support MBPs for customer inquiries directed to Distributors and/or Suppliers and for notification of the other party. Status: Underway	3rd Q, 2009	IR/TEIS/Texas Task Force
5.	Develop NAESB Certification checklist criteria for Retail Quadrants to be used in the NAESB Certification Program. Status: Not Started. Dependent upon publication of Version 1.1 at a minimum, but more dependent upon completion of Customer Choice efforts.	4th Q, 2009	Ad Hoc EC Certification Group
6.	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. Status: Underway		Joint WEQ/REQ DSM Subcommittee
	a. Develop matrix and business practice standards for measurement and verification for demand response products and services in ISO/RTO footprint areas. Status: Completed	4th Q, 2008	WEQ Section of the Joint WEQ/REQ DSM Subcommittee
	b. Develop more detailed technical standards for the measurement and verification of demand response products and services in ISO-RTO footprint areas. Status: Underway	Phase 2	WEQ Section of the Joint WEQ/REQ DSM Subcommittee
	c. Develop preamble for business practice standards for measurement and verification for demand response and energy efficiency programs. Status: Underway	3rd Q, 2009	Joint WEQ/REQ DSM Subcommittee

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NORTH AMERICAN ENERGY STANDARDS BOARD
2009 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
Adopted by the NAESB Board of Directors on June 25, 2009

	Item Number & Description[i]	Completion[ii]	Assignment[iiiiv]
	d. Develop glossary for business practice standards Status: Underway	3rd Q, 2009	Joint WEQ/REQ DSM Subcommittee
	e. Support retail development of matrix and model business practice standards for measurement and verification for demand response programs Status: Underway	3rd Q, 2009	Retail Section of the Joint WEQ/REQ DSM Subcommittee
	f. Develop 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: Scoping Underway (Scope to be initiated in 2nd Q, 2009, after which a completion date will be set)	Phase 2*	WEQ Section of the Joint WEQ/REQ/RGQ DSM Subcommittee
	g. Develop business practice standards to factor Demand Control and Energy Efficiency programs into reliability / supply decisions at the wholesale level for generation and transmission planning and operations. Status: Scoping Underway (Scope to be initiated in 2nd Q, 2009, after which a completion date will be set)	Phase 2*	WEQ Section of the Joint WEQ/REQ/RGQ DSM Subcommittee
	h. Develop business practice standards to support cap and trade programs for green house gas. Status: Scoping Underway (Scope to be initiated in 2nd Q, 2009 at the earliest. Upon conclusion of the scoping statement it will be determined whether NAESB standards development is appropriate)	Phase 2*	Joint WEQ/REQ/RGQ DSM Subcommittee
7.	Revise the Trading Partner Agreement TPA by removing the Exhibits from the agreement and relegate such information as contained in the Exhibits to operational worksheet(s), (R08015). Status: Complete	2nd Q, 2009	Joint Retail/WGQ Contracts
8.	Billing and Payments		
	a. Develop Process Flows to be included as models in book 3 – billing and payments Status: Underway	3rd Q, 2009	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: Underway	3rd Q, 2009	BPS
9.	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 Status: Not Started	4th Q, 2009	BPS
10.	Additional Registration Agent Processes		
	a. Review all existing Model Business Practices to determine if the Service Request process is already covered, and if necessary develop any new Model	4th Q, 2009	BPS

* These items may be moved to Provisional Activities

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2009 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
Adopted by the NAESB Board of Directors on June 25, 2009

	Item Number & Description[i]	Completion[ii]	Assignment[iiiiv]
	Business Practices required Status: Underway		
	b. Review all existing Model Business Practices to determine if the update Customer Information process is already covered, and if necessary develop any new Model Business Practices required Status: Underway	4th Q, 2009	BPS
	c. 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: Underway	4th Q, 2009	BPS
	d. Review all existing Model Business Practices to determine if the billing & payment process is already covered, and if necessary develop any new Model Business Practices required Status: Underway	4th Q, 2009	BPS
11.	Supplier Certification Review Book 1 – Market Participant Interactions to determine if Supplier Certification is fully covered, and if necessary develop any new Model Business Practices required with the potential of moving all related Model Business Practices to a new Book Status: Not Started	4th Q, 2009	BPS
12.	Supplier Marketing Practices 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. Amongst the topics to be considered for inclusion on the statement would be the following: • 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. Status: Not Started	4th Q, 2009	BPS

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2009 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS
Adopted by the NAESB Board of Directors on June 25, 2009

Item Number & Description[i]	Completion[ii]	Assignment[iiiiv]
Program of Standards Maintenance & Fully Staffed Standards Work[v]		
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:

Supplier Certification: Develop practices for Distribution Companies to register/certify new Suppliers when they seek to begin doing business in the Distribution Company's service area.

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.

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.

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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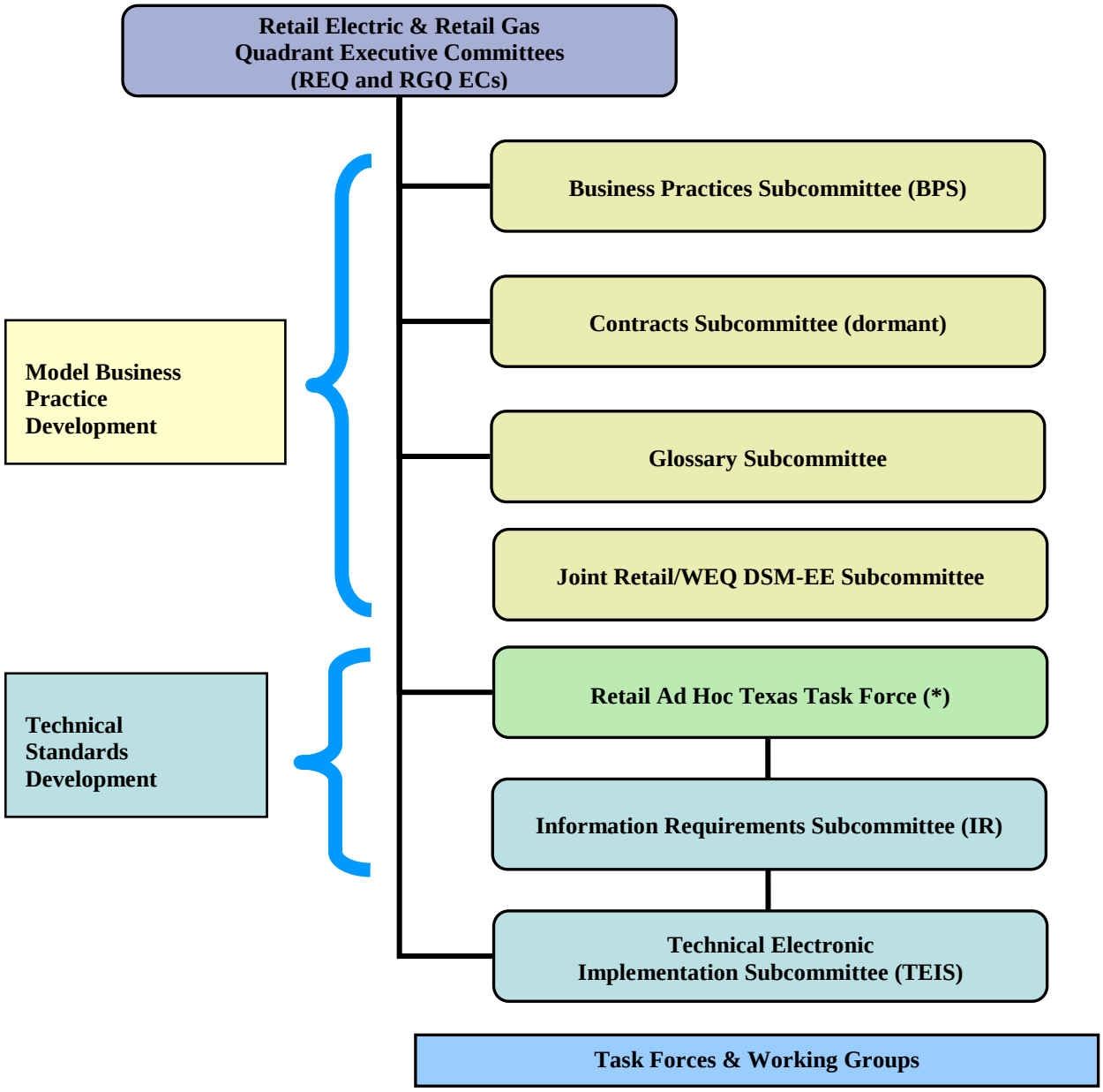

NAESB Retail Subcommittee Leadership: [vi]

Executive Committee: Mike Novak, Chair (RGQ), Ruth Kiselewich, Chair (REQ)
Business Practices Subcommittee: Phil Precht (RGQ), Mary Edwards and Dan Jones (REQ)
Information Requirements Subcommittee: Jennifer Teel (REQ)
Technical Electronic Implementation Subcommittee: TBD
Glossary Subcommittee: Don Sytsma (RGQ), Mary Edwards and 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), Jennifer Teel (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.

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Retail 2009 Annual Plan End Notes:

[i] 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.

[ii] 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.

[iii] The assignments are abbreviated. The abbreviations and committee structure can be found at the end of the annual plan document.

[iv] 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.

[v] 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.

[vi] 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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NORTH AMERICAN ENERGY STANDARDS BOARD
NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
With Changes Made by the WEQ EC on August 17, 2009

	Item Description	Completion[1]	Assignment[2, 3]
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)	Develop business practices to support Coordinate Interchange – R05020 "Include a guideline for rounding schedules with partial MWh's in the coordinate interchange business practice WEQ BPS-002-000" the rounding standard recommendation Status: Underway - 20090716 on track to get a WEQ-004 recommendation developed 3Q 2009	3rd Q, 2009	JESS
b)	Continuous support of TLR Procedure in alignment with NERC efforts on TLR Phase II and Phase III development.		
i)	Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection. Note: Activity is dependent on NERC approval of SAR expected in 2nd Q, 2009. Upon approval of the SAR and NAESB action on this item, consideration should be given to provisional item 4. Status: Not Started	2010	BPS
ii)	Update WEQ-008 Appendix D to include the Market Flow Threshold Percentage recommended by NERC working group/task force Status: Completed. The WEQ BPS voted a minor correction out of subcommittee on August 12, 2009	3rd Q, 2009	BPS
c)	Conduct analysis as to whether standards can be developed which outline a standardized process for the coordination and execution of emergency energy schedules. These would be complementary standards to EOP-002-2 Requirements R4 and R6 (SRS Analysis of EOP-002-2 R4 & R6) Status: Completed and as a result item (3)(a)(viii) has been added to the plan	1st Q, 2009	JESS
d)	Time Error and Inadvertent (BAL-004 and BAL-006) Coordination with NERC Status: Not Started (Upon initiation of this item by NAESB. a completion date will be determined. The date of 2011 is based on a completion date provided in the NERC BAC project schedule which includes extensive field testing and diverse proposed TIMTF directions to be reconciled in subcommittee meetings.)	2011	TIMTF
e)	DCS and AGC (BAL-002 and BAL-005) Coordination with NERC Status Not Started (Upon initiation of this item by NAESB. a completion date will be determined. The date of 2011 is based on a completion date provided in the NERC BAC project schedule which includes extensive field testing and diverse proposed TIMTF directions to be reconciled in subcommittee meetings.)	2011	TIMTF

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NORTH AMERICAN ENERGY STANDARDS BOARD
NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
With Changes Made by the WEQ EC on August 17, 2009

	Item Description	Completion[1]	Assignment[2, 3]

2 Develop business practice standards in support of the FERC RM05-25-000 and RM05-17-000 (OATT Reform)

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), "Preventing Undue Discrimination and Preference in Transmission Services," issued April 11, 2007).

i) Group 3: Network Service On OASIS

1.	Use of OASIS to Make Electronic Requests to Designate and Terminate Network Resource Status: Underway	4th Q, 2009	OASIS
2.	Ability to Query Requests to Designate and Terminate Network Resources and Allow for Queries of All Information Provided with Designation Requests Status: Underway	4th Q, 2009	OASIS
3.	Masking of Designated Network Resource Operating Restrictions and Generating Cost Information Status: Underway	4th Q, 2009	OASIS
4.	Procedural Requirements for Submitting Designations over new OASIS Functionality Status: Underway	4th Q, 2009	OASIS
5.	Specify How Designated Network Service Informational Postings are Posted on OASIS Status: Underway	4th Q, 2009	OASIS
6.	Develop standards for the treatment of OASIS Requests when the Customer Fails to Provide the Necessary Attestation Status: Underway	4th Q, 2009	OASIS
7.	Procedural Requirements for Submitting Both Temporary and Indefinite Terminations of Network Resources Status: Underway	4th Q, 2009	OASIS

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NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
With Changes Made by the WEQ EC on August 17, 2009

Item Description	Completion[1]	Assignment[2, 3]
8. Procedures for Submitting and Processing Requests for Concomitant Evaluations of Transmission Requests and Temporary Terminations Status: Underway	4th Q, 2009	OASIS
ii) Group 4: Pre-Emption; Request No. R05019; and Revisions to Standard 9.7		
1. Pre-Emption Status: Not Started	4th Q, 2009	OASIS
2. Request No. R05019 Status: Not Started	4th Q, 2009	OASIS
3. Modify WEQ-001-9.7 Rollover Rights for Redirect on a Firm Basis Status: Completed	2nd Q, 2009	OASIS
iii) Group 5: Paragraph 1377 – Group 5 work should precede group 4 work		
1. Paragraph 1377 Status: Not Started	4th Q, 2009	OASIS
2. Re-Bid Of Partial Service across Multiple Transmission Providers' Systems Status: Not Started	4th Q, 2009	OASIS
3. Group DNR requests from a system with point-to-point requests on other systems for synchronization Status: Not Started	1st Q, 2010	OASIS
iv) Group 6: Miscellaneous (Paragraphs 1390 and 1627 of Order 890)		
1. Paragraph 1390 of Order 890 Status: Not Started	4th Q, 2009	OASIS
2. Paragraphs 1627 of Order 890 Status: Not Started	4th Q, 2009	OASIS
3. Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services. Status: Not Started	4th Q, 2009	OASIS
b) Develop the needed business practices as companion to the NERC standards for ATC related efforts		
i) Develop standards to support existing Request No. R05004.		

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NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
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	Item Description	Completion[1]	Assignment[2, 3]
	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	4th Q, 2009	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)) Status: Underway	4th Q, 2009	OASIS
	ii) Registry (TSIN): Determine and develop needed business practice standards to support the registry functions currently supported by NERC (R04037, R06027).		
	1) Work with the NAESB counsel to develop a confidentiality agreement, (R07013) Status: Underway – 20090716 needs cover letter for informal comment posting – move completion to 4Q 2009	4th Q, 2009	JESS
	2) Transition the TSIN Registry from NERC to NAESB as the enhanced Electric Industry Registry (EIR), (R06027). Status: Underway	1st Q, 2010	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	4th Q, 2009	OASIS
	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 and assignments made to BPS and OASIS.		
	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	4th Q, 2009	OASIS

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NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
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		Item Description	Completion[1]	Assignment[2, 3]
	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)	2010	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)	2010	OASIS
v)		Develop, coordinate interoperability testing, and implement e-Tag version 1.8.1 Status: Underway – 20090716 discussed rough time frames laid out needs test plans drafted	4th Q, 2009	JESS
vi)		Transition e-Tag Specification and schema to NAESB Status: Complete. Version 1.8.1 will be identified as the NAESB Electronic Tagging Functional Specification	1st Q, 2009	JESS
vii)		Review and correct the WEQ-004 Coordinate interchange Business Practice Standard as noted during the development of the e-Tag 1.8 development process. Status: Underway – 20090716 going out for informal comments vote out of JESS Sept 1st meeting	3rd Q, 2009	JESS
viii)		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: Not started – dependent on NERC activity (upon initiation of this item by NAESB, a completion date will be determined)	2010	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: Not Started (upon initiation of this item by NAESB, a completion date will be determined)	4th Q, 2009	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)	2009	OASIS

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NORTH AMERICAN ENERGY STANDARDS BOARD
NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
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	Item Description	Completion[1]	Assignment[2, 3]
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. 20090716 – server-side certificate underway – change TSIN to accept https URLs with a September 2009 target.	TBD – dependent on item above (i) and EIR	JESS
c)	Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Status: Underway (upon further development of this item by NAESB, a completion date will be determined) Common code usage is linked to the transition of the Registry from NERC to NAESB	2009	NAESB Staff with WEQ support
d)	Develop business practice standards in support of FERC Order No. 717 Status: Complete	1st Q, 2009	BPS
4	**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.		
a)	Develop matrix and business practice standards for measurement and verification for demand response products and services in ISO/RTO footprint areas. Status: Completed	4th Q, 2008	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee
b)	Develop more detailed technical standards for the measurement and verification of demand response products and services in ISO-RTO footprint areas, including examples to be developed to support item 4(a) above. Status: In Progress	Phase 2	WEQ Section of the Joint WEQ/REQ DSM-EE Subcommittee
c)	Develop preamble for business practice standards for measurement and verification for demand response and energy efficiency programs. Status: Underway	3rd Q, 2009	Joint WEQ/REQ DSM-EE Subcommittee
d)	Develop glossary for business practice standards Status: Underway	3rd Q, 2009	Joint WEQ/REQ DSM-EE Subcommittee

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	Item Description	Completion[1]	Assignment[2, 3]
e)	Support retail development of matrix and model business practice standards for measurement and verification for demand response programs Status: Underway	3rd Q, 2009	Retail Section of Joint WEQ/REQ DSM-EE Subcommittee
f)	Develop 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: Upon further review, the task force has determined this work will be completed under Annual Plan Item 4g.	Combined with 4g	WEQ Section/Joint WEQ/REQ DSM-EE Subcommittee
g)	Develop business practice standards used to measure and verify reductions in energy and demand from energy efficiency in wholesale and retail markets.[1] **Status:** Underway (An estimated completion date will be established in 4th Q after the new subcommittee has been formalized)	Phase 2	WEQ Section/Joint WEQ/REQ DSM-EE Subcommittee
h)	Develop business practice standards for cap and trade programs for green house gas Status**:** Moved to Provisional Item 8. This item will not be addressed until Congress has addressed pending legislation.	Moved to Provision Item 8	Joint WEQ/REQ DSM-EE Subcommittee
5	**Maintain existing body of Version 2 standards**		
a)	Make consistency changes to Version 1.0 standards as directed by the WEQ Leadership Committee on December 12, 2007 (R08001 – BPS, OASIS, R08002 - OASIS, R08003 - OASIS - BPS, R08004, R08005 - OASIS)		
1)	OASIS Consistency Changes (R08001, R08002, R08003, R08005) Status: Not Started (upon initiation of this item by NAESB, a completion date will be determined)	2009	OASIS
2)	Gas / Electric Communication Consistency Changes (R08004) Status: Underway. The recommendation requires coordination with the WGQ BPS	4th Q, 2009	WEQ BPS / WGQ BPS

[1] 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.

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NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
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	Item Description	Completion[1]	Assignment[2, 3]
b)	Modify NAESB definitions to address internal inconsistencies and inconsistencies with the NERC glossary. Revise existing NAESB glossary/definition of terms to be applicable to entire set of WEQ Business Practices. (http://www.naesb.org/pdf3/weq_ec051308w3.doc) Status: Underway Subcommittee co-chairs are developing WEQ-000 Definition of Terms/Acronyms to replace definitions being included in each NAESB Business Practice.	4th Q, 2009	BPS/OASIS/SRS Co-chairs
c)	Develop standards to allow for registered Market Operators to request changes to the Market Level profile of Implemented Interchange (R06006) Status: Complete	1st Q, 2009	JESS
d)	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.	3rd Q, 2009	OASIS
e)	Provide for Enhanced Granularity for Public Utilities in Identifying Critical Operational Flow Orders. (R08020) Status: WEQ Complete/WGQ In Progress. This Standards Request was assigned to the BPS in August 2008 (upon initiation of this item by NAESB, a completion date will be determined)	2nd Q, 2009	BPS jointly with WGQ BPS
f)	Synchronize Bidding Credit Requirements for FTR, TCC and CRR (R08025) Posting of collateral is an important issue for financial marketers. Most financial marketers and smaller entities are required to post cash for FTR transactions, while most utilities post unsecured credit. Therefore, the timing for posting collateral is especially crucial to financial marketers. There are two posting periods for FTRs: 1. The Bidding Requirement: Credit must be posted with FTR bids and these monies are held until bids are cleared. 2. The Holding Requirement: After bids are cleared and FTRs awarded, collateral is required for the amount of time the FTR is active. Status: Withdrawn by requester	4th Q, 2009	SRS (Scoping)
g)	Correct WEQ 013-2.6.7.2. – Resale off OASIS (R08027)	TBD	OASIS
h)	Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (R09003)	TBD	OASIS
i)	Change Power Plant Operator to Power Plant Gas Coordinator (R09011)	4th Q, 2009	WEQ BPS/WGQ BPS

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NORTH AMERICAN ENERGY STANDARDS BOARD
NAESB 2009 WEQ Annual Plan as approved by the Board on June 25, 2009
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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).

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 procedures[4]. Work on this activity is dependent on completing 2009 WEQ Annual Plan 1.c.i (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 2009 SAR is processed.

6 Develop NAESB business practices as needed to complement NERC reliability standards for FAC-012 and FAC-013.

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 (See action item 4h)

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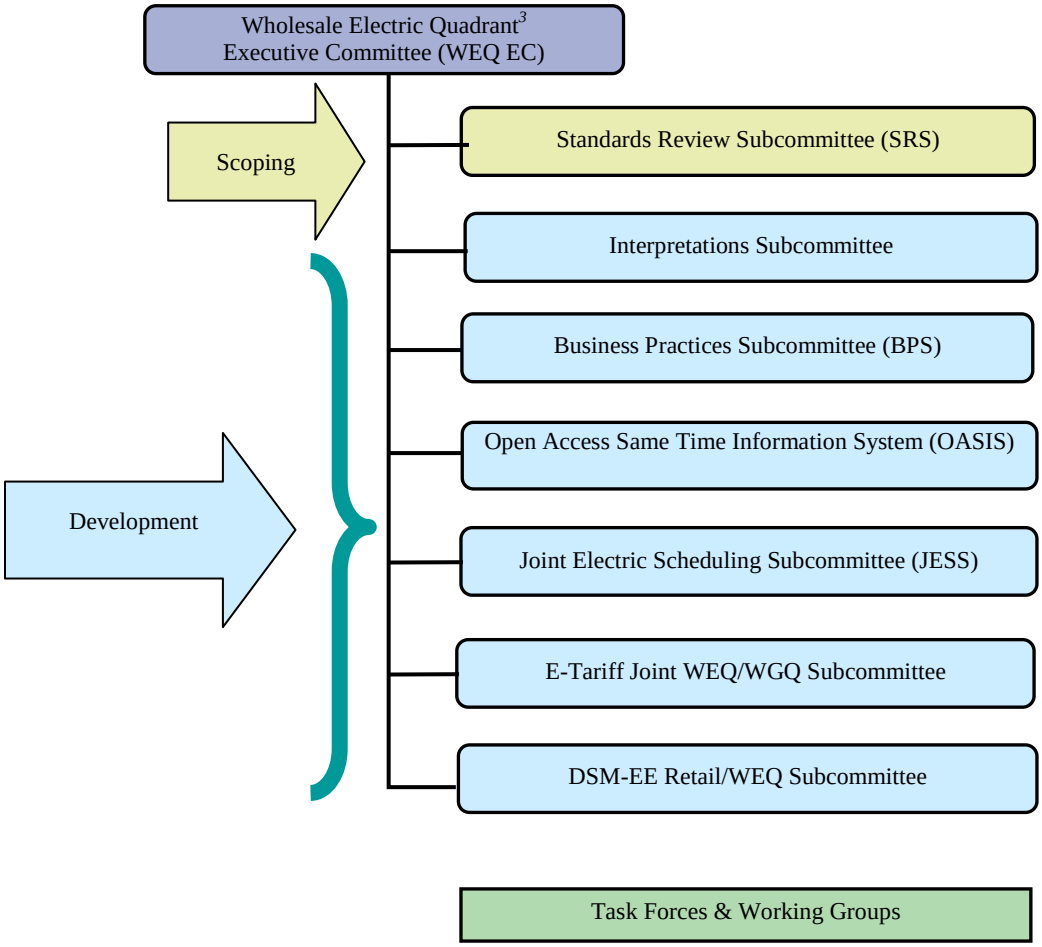

NAESB WEQ EC and Subcommittee Leadership:
Executive Committee: Kathy York (WEQ EC Chair) and Matthew Goldberg (WEQ EC Vice Chair)
Standards Review Subcommittee: Narinder Saini, Ed Skiba
Interpretations Subcommittee: Robert Schwermann
Business Practices Subcommittee & Task Forces: Jim Busbin (TLR), Ed Skiba
Open Access Same Time Information System (OASIS): Paul Sorenson, J.T. Wood, Marcie Otondo
Joint Electric Scheduling Subcommittee (JESS): Bob Harshbarger (NAESB), Jim Hansen (NERC)
e-Tariff Joint WEQ/WGQ Subcommittee (e-Tariff): Jane Daly (WEQ), Keith Sappenfield (WGQ)
DSM-EE Joint Retail/WEQ Subcommittee: Ruth Kiselewich and David Koogler (Retail), Roy True and Paul Wattles (WEQ)

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End Notes WEQ 2009 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 Electronic Scheduling Subcommittee and Information Technology Subcommittee (ESS/ITS) were merged together through a decision made at the May 12, 2009 WEQ EC meeting. The new subcommittee is named Open Access Same Time Information System Subcommittee (OASIS) and is now shown for assignments in this and future annual plans as OASIS. Similarly the Joint Interchange Scheduling Working Group (JISWG) was renamed the Joint Electric Scheduling Subcommittee and now reports to the WEQ EC. JESS is now shown for assignments in this and future annual plans rather than JISWG. The changes took effect on August 1, 2009.

[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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January 28, 2009

TO: NAESB Executive Committee and Interested Industry Participants
FROM: Rae McQuade, NAESB Executive Director
RE: Schedule of 2009 Meetings

Below is the schedule of 2009 meetings for the Executive Committee, Board of Directors and Advisory Council.

2009 Calendar of Board and EC Meetings

Date	Meeting	Location
March 26	Board of Directors	Houston – Marriott IAH
June 25	Board of Directors Meeting and Meeting of the Members	Houston – Marriott IAH
September 24	Board of Directors	Houston – Marriott IAH
December 10	Board of Directors	Houston – Marriott IAH
February 3-5	Executive Committee (WEQ, Retail, WGQ)	Phoenix, Hosted by SRP
February 14	Advisory Council Meeting	Washington D.C. – Renaissance Washington Hotel (in conjunction with NARUC Winter Meeting)
May 12-14	Executive Committee (WEQ, Retail, WGQ)	Carmel, IN hosted by ACES Power
August 18-20	Executive Committee (WEQ, Retail, WGQ)	Colorado Springs hosted by El Paso Western Pipelines
October 27-29	Executive Committee (WEQ, Retail, WGQ)	Richmond, VA hosted by Dominion

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September 1, 2009

TO: NAESB Board of Directors
FROM: Rae McQuade
RE: Proposed Schedule of 2010 Meetings

Below is the proposed schedule of 2010 meetings for the Board of Directors and Advisory Council.

2010 Calendar of Proposed 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

128 FERC ¶ 61,031
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 284

[Docket No. RM96-1-030]

Standards for Business Practices for Interstate Natural Gas Pipelines

(Issued July 16, 2009)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Federal Energy Regulatory Commission (Commission) is proposing to amend its regulations prescribing standards for interstate natural gas pipeline business practices and electronic communications (found at 18 CFR § 284.12) to incorporate by reference standards adopted by the Wholesale Gas Quadrant of the North American Energy Standards Board (NAESB) for (1) Index-Based Capacity Release and (2) Flexible Delivery and Receipt Points. These standards can be obtained from NAESB at 1301 Fannin, Suite 2350, Houston, TX 77002, 713-356-0060, http://www.naesb.org, and are available for viewing in the Commission's Public Reference Room.

The proposed standard for Flexible Delivery and Receipt Points allows natural gas-fired generators easier access to fuel at times when capacity is scarce. The proposed standard for Index-Based Capacity Release provides clarity on the timing and use of price indices for pricing and arranging index-based capacity release transactions.

DATES: Comments are due [insert date 45 days after publication in the **FEDERAL REGISTER**].

ADDRESSES: You may submit comments, identified by docket number RM96-1-030, by any of these methods:

- Agency Web Site: http://www.ferc.gov. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format.
- Mail/Hand Delivery: Commenters unable to file comments electronically must mail or hand deliver an original and 14 copies of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, N.E., Washington, DC 20426.

FOR FURTHER INFORMATION CONTACT:

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Gary D. Cohen (legal issues)
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SUPPLEMENTARY INFORMATION:

128 FERC ¶ 61,031
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Standards for Business Practices for Interstate Natural Gas Pipelines — Docket No. RM96-1-030

NOTICE OF PROPOSED RULEMAKING

(Issued July 16, 2009)

1. The Federal Energy Regulatory Commission (Commission) proposes to amend its regulations at 18 CFR § 284.12 to incorporate by reference the consensus standards adopted by the Wholesale Gas Quadrant (WGQ) of the North American Energy Standards Board (NAESB) that (1) permit the use of indices to price capacity release transactions and (2) afford greater flexibility on the receipt and delivery points for redirects of scheduled gas quantities.

I. Background

2. Since 1996, the Commission has adopted regulations to standardize the business practices and communication methodologies of natural gas interstate pipelines to create a more integrated and efficient pipeline grid. These regulations have been promulgated in the Order No. 587 series of orders,[1] wherein the Commission has incorporated by reference standards for interstate natural gas pipeline business practices and electronic

[1] This series of orders began with the Commission's issuance of Standards for Business Practices of Interstate Natural Gas Pipelines, Order No. 587, FERC Stats. & Regs. ¶ 31,038 (1996).

communications that were developed and adopted by NAESB's WGQ. Upon incorporation by reference by the Commission, these standards have become a part of the Commission's regulations and have become mandatory and binding on the natural gas pipelines under the Commission's jurisdiction.

3. A cold snap in January 2004 in New England highlighted the need for better coordination and communication between the gas and electric industries as coincident peaks occurred in both industries making the acquisition of gas and transportation by power plant operators more difficult. In response to this need, in early 2004, NAESB established a Gas-Electric Coordination Task Force to examine issues related to the interrelationship of the gas and electric industries and identify potential areas for improved coordination through standardization. NAESB developed a number of standards to enhance the coordination of scheduling and other business practices between the gas and electric industries. On June 27, 2005, NAESB filed these standards and requested clarification regarding a number of additional proposals that it was considering, including capacity release indexed pricing, the use of flexible receipt and delivery points upstream of a constraint, and changes to the intra-day nomination cycle.

4. In Order No. 698,[2] the Commission incorporated these standards by reference and provided the clarification requested in NAESB's June 27, 2005 filing. The NAESB report highlighted several issues relating to Commission policy that were inhibiting the

[2] Standards for Business Practices for Interstate Natural Gas Pipelines; Standards for Business Practices for Public Utilities, Order No. 698, FERC Stats. & Regs. ¶ 31,251 (2007), order on clarification and reh'g, Order No. 698-A, 121 FERC ¶ 61,264 (2007).

development of additional standards and requested Commission guidance and clarification on these issues. In the NOPR[3] and in Order No. 698, the Commission provided clarification and guidance to NAESB regarding Commission policies in the following three areas: (1) uses of gas indices for pricing capacity release transactions; (2) flexibility in the use of receipt and delivery points; and (3) changes to the intraday nomination schedule to increase the number of scheduling opportunities for firm shippers.

5. On September 3, 2008, NAESB submitted a report to the Commission with respect to these three issues. NAESB reports its membership conducted thirteen subcommittee meetings, many of which were multi-day meetings, held in a one year period from June 2007 to July 2008. While the standards discussed related only to gas issues, NAESB states that all interested parties including the Wholesale Electric Quadrant membership were asked to participate and make their perspectives known. Two hundred participants, including many from the electric industry, participated in these meetings.

6. NAESB's September 2008 report indicates that the WGQ has adopted business practice standards for (1) increasing the flexibility of gas receipt and delivery points and (2) index-based pricing for capacity releases. In addition, despite holding 12 meetings with respect to modifying the intra-day nomination schedule, NAESB reports that none of the standards proposed achieved a sufficient consensus.

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[3] Standards for Business Practices for Interstate Natural Gas Pipelines; Standards for Business Practices for Public Utilities, FERC Stats. & Regs. ¶ 32,609 (2006) (NOPR).

II. Discussion

7. We recognize that the issues considered by NAESB were neither simple nor straightforward, and very much appreciate the hard work, and many hours committed by NAESB, and the 200 volunteers that participated in the process of developing and considering these standards. We propose to incorporate by reference the standards developed by NAESB with respect to index pricing and to flexible receipt and delivery points.[4] These standards will not only assist in providing gas for generation, but will provide enhanced flexibility to all shippers. The index pricing standards provide rules under which releasing and replacement shippers can create rate formulas for capacity release that will better reflect the value of capacity. These standards also reflect a reasonable compromise for dealing with copyright issues that arise in using gas indices to set prices, ensuring that shippers have a reasonable choice of available indices to use while equitably spreading the costs entailed by the use of such indices among the pipelines and shippers. The standard for the use of flexible receipt and delivery points will enable all shippers to quickly and efficiently redirect gas when such gas may be needed by gas generators or other shippers. With respect to the question of intra-day nominations on which consensus was not reached, we do not find a sufficient basis in the NAESB record for us to propose any changes to our current regulations and policies.

[4] The WGQ adopted the following changes to its standards: for index-based pricing of capacity release transactions, it modified WGQ Standards 5.3.1, 5.3.3, and 5.3.26, added WGQ Definitions 5.2.4 and 5.2.5, and added WGQ Standards 5.3.61, 5.3.62, 5.3.62a, 5.3.63, 5.3.64, 5.3.65, 5.3.66, 5.3.67, 5.3.68, and 5.3.69; and for flexible points of receipt and delivery, it added WGQ Standard 1.3.80.

A. NAESB's Business Practice Standards for Index-Based Pricing for Capacity Release Transactions and Flexible Point Rights

8. In Order No. 698, the Commission explained that under its regulations, releasing shippers are permitted to use price indices or other formula rates on all pipelines, regardless of whether the pipeline has included a provision allowing the use of indices as part of its discounting provisions.[5] The Commission asked NAESB to examine standards to help ensure that such releases can be processed quickly and efficiently.

9. The standards for index-based pricing provide that shippers wishing to release capacity may use a variety of specified indices and methods to evaluate bids. The standards provide that pipelines must support at least two non-public price index references that are representative of receipt and delivery points on its system,[6] and must support all price indices it references in its gas tariff, or general terms and conditions of service. Releasing shippers are permitted to use alternative indices if the releasing shipper provides licenses to the pipeline for the use of those indices. The standards provide that the releasing shipper is responsible for providing the pipeline, and the

[5] An index-based release is a transaction in which the price for capacity is determined by differentials in the value of gas between the upstream and downstream market. As the Commission found in Order No. 637, the implicit value of transportation is the most that any person who can purchase gas in the downstream market would pay if it purchased gas in the upstream market and had to transport it to the downstream market. Regulation of Short-Term Natural Gas Transportation Services, and Regulation of Interstate Natural Gas Transportation Services, Order No. 637, FERC Stats. & Regs. ¶ 31,091, at 31,271 (2000).

[6] We understand NAESB's use of the phrase non-public to refer to commercial indices that charge subscription or license fees.

replacement shipper, with the method of calculating the reservation rate from the index. The pipeline is required to adhere to the standard capacity release timeline for processing releases if the releasing shipper has provided the pipeline with sufficient instructions to evaluate corresponding bids. However, if the offer includes unfamiliar or unclear terms and conditions, or an index not supported by the pipeline, the pipeline may process the release on a slower time frame.

10. At the time NAESB filed its report with the Commission, it had not completed the technical standards for implementation of these standards. However, these technical standards have been completed,[7] and will be included in version 1.9 of the standards.

11. The Commission regulations require that pipelines permit shippers flexibility to change their receipt and delivery points on both a primary and secondary basis.[8] In its June 27, 2005 report to the Commission, NAESB requested clarification regarding its consideration of a possible standard that would permit shippers to shift gas deliveries from a primary to a secondary delivery point when a pipeline constraint occurs upstream of both points.[9] In Order No. 698, the Commission explained that, under its policies, pipelines must implement within-the-path scheduling under which a shipper seeking to use a secondary delivery point within its scheduling path has priority over another

[7] See NAESB WGQ 2007 Annual Plan Item 7a / NAESB WGQ 2008 Annual Plan Item 4a / NAESB WGQ 2009 Annual Plan Item 4.

[8] 18 CFR 284.221(g) & (h).

[9] See Order No. 698, FERC Stats. & Regs. ¶ 31,251 at P 7-8.

shipper seeking to use the same delivery point but that point is outside of its transportation path, and found that NAESB's proposal regarding scheduling through upstream constraint points appeared consistent with the Commission's regulations and policy.

12. In its September 3, 2008 filing, NAESB included a standard that would require pipelines to permit shippers to redirect scheduled quantities to other receipt points upstream of a constraint point or delivery points downstream of a constraint point without a requirement that the quantities be rescheduled through the point of constraint. This standard will provide shippers, including gas-fired generators, with increased flexibility to obtain capacity or gas from other shippers without adversely affecting other shippers' scheduling rights.

13. The standards for indexed capacity releases and flexible point rights appear to establish reasonable methods of providing enhanced flexibility to shippers and to increase the efficiency of the interstate pipeline grid, and we propose to incorporate these standards by reference.

14. NAESB approved the new and modified standards and related definitions under its consensus procedures.[10] Adoption of consensus standards is appropriate because the consensus process helps to ensure the reasonableness of the standards by requiring that

[10] This process first requires a super-majority vote of 17 out of 25 members of the WGQ's Executive Committee with support from at least two members from each of the five industry segments – Distributors, End Users, Pipelines, Producers, and Services (including marketers and computer service providers). For final approval, 67 percent of the WGQ's general membership voting must ratify the standards.

the standards draw support from a broad spectrum of all segments of the industry. Moreover, since the industry itself has to conduct business under these standards, the Commission's regulations should reflect those standards that have the widest possible support. In § 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTT&AA), Congress affirmatively requires federal agencies to use technical standards developed by voluntary consensus standards organizations, like NAESB, as a means to carry out policy objectives or activities determined by the agency.[11]

B. Intra-Day Nomination Standards

15. The NAESB report raised the possibility of developing standards that would offer an additional intraday nomination cycle with rights for firm shippers to bump interruptible nominations. In Order No. 698, the Commission stated that NAESB should actively consider whether changes to existing intra-day schedules would benefit all shippers, and provide better coordination between gas and electric scheduling.

16. The Commission's regulations provide that nominations by shippers with firm transportation priority have priority over nominations by shippers with interruptible service.[12] In Order No. 587-G,[13] issued in 1998, the Commission, however, followed the

[11] Pub L. No. 104-113, 12(d), 110 Stat. 775 (1996), 15 U.S.C. 272 note (1997).

[12] 18 CFR 284.12 (b)(1)(i).

[13] Standards for Business Practices of Interstate Natural Gas Pipelines, Order No. 587-G, FERC Stats. & Regs. ¶ 31,062, at 30,672 (1998).

Gas Industry Standards Board[14] consensus and permitted pipelines with three intra-day nomination opportunities to exempt the last intra-day opportunity from bumping. The Commission found that the consensus created a fair balance between firm shippers, who will have had two opportunities to reschedule their gas, and interruptible shippers and will provide some necessary stability in the nomination system, so that shippers can be confident by mid-afternoon that they will receive their scheduled flows.

17. The NAESB standards currently provide shippers four nomination opportunities: the Timely Nomination Period (11:30 am CCT[15] the day prior to gas flow), the Evening Nomination Cycle (6 pm CCT the day before gas flow); Intra-Day 1 (10 am CCT the day of gas flow); and Intra-Day 2 (5 pm CCT the day of gas flow). A firm nomination for the first three nomination cycles has priority over (can bump) an already scheduled interruptible (IT) nomination. But at the Intra-Day 2 cycle, a firm nomination will not bump already scheduled interruptible service.

Cycle	Nomination Time (CCT)	Nomination Effective	Bumping IT	Bumping Notice	Schedule Confirmed
Timely	11:30 am	Day-Ahead	Yes	4:30 pm	4:30 pm
Evening	6 pm	Day-Ahead	Yes	10 pm	10 pm
Intra-Day 1	10 am	Day of	Yes	2 pm	2 pm
Intra-Day 2	5 pm	Day of	No	NA	9 pm

18. The NAESB committee held 12 meetings and considered a wide variety of possible revisions to the nomination schedule adopted in 1998. These included complete

[14] At that time, NAESB was the Gas Industry Standards Board and had not yet expanded to include the electric industry or the retail gas and electric segments.

[15] Central clock time.

revisions of the timeline, including changing the gas day; adding intra-day nomination opportunities within the existing framework; changing the Intra-Day 2 to a bump nomination while adding an additional no-bump nomination period, and merely changing the Intra-Day 2 cycle to a bumpable nomination. None of these proposals achieved a sufficient consensus at the subcommittee level.

19. Comments to the Executive Committee were mixed on whether any of these options were practicable, cost effective, or feasible. Some commenters contended that changing the gas nomination schedule would accomplish little for gas electric coordination without a coordinated development of a standardized electric schedule.[16] They also argued that no compelling need existed to change the gas schedule and that such a change could cause problems, because: problems persist with pipeline confirmations under the current gas nomination timeline and increasing the number of nomination cycles or shortening confirmation windows is likely to exacerbate those problems; modifying the intraday nomination timeline to increase and/or add to the number of bumpable cycles will further reduce the time to react to a cut in interruptible service; increasing the number of bumpable nomination cycles or delaying scheduling will decrease the number of available counter-parties in the event of a cut in scheduled volumes; adding more and later nomination cycles will cause staffing issues for LDCs,

[16] As an example of these comments, see NAESB September 3, 2008 filing at 26 (Comments of New Jersey Natural Gas Co., New Jersey Natural Gas Company, http://naesb.org/pdf3/wgq_060308njng.doc.), Comments of Interested LDCs, http://naesb.org/pdf3/wgq_060308ldc.pdf).

pipelines and gas marketers resulting in increased costs with no assurance of commensurate benefits.[17] A number of commenters also highlighted the need, in their view, to retain the no-bump rule for interruptible transportation as being important for electric generators as well as the market in general.[18]

20. Others, however, argued that changes in the operation of the gas markets since 1998 warrant ensuring that firm shippers receive the full value of their firm contracts. These changes include the imposition of strict pro rata hourly take obligations along with significant imbalance charges and penalties; the development of the organized wholesale electric bid market that has increased the need to synchronize the scheduling of natural gas-fired generation units with dispatch notification timelines; the introduction of more third-party storage and service providers that require synchronization of scheduling opportunities in times of peak usage; the introduction of hourly gas contracting without hourly gas scheduling; and technological developments that permit automated and expedited scheduling.[19]

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[17] Id.

[18] As an example, see NAESB September 3, 2008 filing at 26 (Comments of New England Power Generators Association, http://naesb.org/pdf3/wgq_060308nepga.pdf, Independent Power Producers, http://naesb.org/pdf3/wgq_060308ippny.pdf.).

[19] As an example, see NAESB September 3, 2008 filing at 26 (Joint Comments of Multiple Entities, http://naesb.org/pdf3/wgq_060308aps.pdf for a detailed presentation of these arguments).

21. We agree with BG Energy Merchants that "all in all it was a difficult task that FERC gave to NAESB,"[20] and we appreciate the amount of work and time committed to the consideration of these issues. Ultimately, however, we agree with the Interested LDCs that "a simple, one-size fits-all solution does not exist that will solve the complex issue of coordinating between the electric and gas industries, [because] the diversity within the electric industry (e.g., differing timelines, system peaks times, generation mixes, and prevalence of firm gas service), in particular, does not suggest that revising gas scheduling procedures is the most effective means to improve coordination."[21] Based on the extensive NAESB record that we reviewed, we are not convinced that we have a sufficient basis for finding that any of the proposed revisions create a superior balance of interests compared with the original consensus.[22] We therefore are not proposing any changes to our regulations with regard to intra-day nominations.

22. The changes we implemented in Order No. 712,[23] the removal of the price ceiling for short term releases and the use of asset manager agreements, together with the

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[20] See NAESB September 3, 2008 filing at 26 (Comments of BG Energy Merchants, http://naesb.org/pdf3/wgq_060308bgem_dmt.doc).

[21] NAESB September 3, 2008 filing at 26 (Comments of Interested LDCs, http://naesb.org/pdf3/wgq_060308ldc.pdf).

[22] For example, we do not know the costs to the pipelines and practical implications to shippers or others of creating more numerous intra-day nomination opportunities or adding a late nomination period well after normal business hours.

[23] Promotion of a More Efficient Capacity Release Market, Order No. 712, FERC Stats. & Regs. ¶ 31,271 (2008), order on reh'g, Order No. 712-A, 73 Fed. Reg. 72,692 (December 1, 2008), FERC Stats. & Regs. ¶ 31,284 (2008).

standards that NAESB has approved for index pricing for capacity release and greater flexibility in using receipt and delivery points should assist electric generators as well as other shippers in obtaining firm transportation capacity quickly and effecting changes in the way their gas is used. Rather than making a nation-wide change in scheduling affecting all pipelines, this is an area best addressed by individual pipelines adding additional nomination opportunities or services to better accommodate specific conditions of their systems and the needs of gas-fired generation within their regions.

III. Notice of Use of Voluntary Consensus Standards

23. Office of Management and Budget Circular A-119 (section 11) (February 10, 1998) provides that federal agencies should publish a request for comment in a NOPR when the agency is seeking to issue or revise a regulation proposing to adopt a voluntary consensus standard or a government-unique standard. In this NOPR, the Commission is proposing to incorporate by reference voluntary consensus standards developed by the WGQ.

IV. Information Collection Statement

24. The following collection of information contained in this proposed rule has been submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507(d). The Commission solicits comments on the Commission's need for this information, whether the information will have practical utility, the accuracy of the provided burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected, and any suggested methods for minimizing respondents' burden, including the use of automated

information techniques. The following burden estimates include the costs to implement the WGQ's definitions and business practice standards for interstate natural gas pipelines and electronic communication protocols. The burden estimates are primarily related to start-up to implement these standards and regulations and will not result in ongoing costs.

Data Collection	No. of Respondents	No. of Responses Per Respondent	Hours Per Response	Total No. of Hours
FERC-549C	126	1	12	1,512
Totals				1,512

Total Annual Hours for Collection
(Reporting and Recordkeeping, (if appropriate)) = 1,512

Information Collection Costs: The Commission seeks comments on the costs to comply with these requirements. It has projected the average annualized cost for all respondents to be the following:[24]

	FERC-549C
Annualized Capital/Startup Costs	$226,800
Annualized Costs (Operations & Maintenance)	N/A
Total Annualized Costs	$226,800

25. OMB regulations[25] require OMB to approve certain information collection requirements imposed by agency rule. The Commission is submitting notification of this proposed rule to OMB. These information collections are mandatory requirements.

[24] The total annualized cost for the two information collections is $ 226,800. This number is reached by multiplying the total hours to prepare a response (hours) by an hourly wage estimate of $150 (a composite estimate that includes legal, technical and support staff rates). $226,800= $150 x 1,512.

[25] 5 CFR 1320.11.

Title: Standards for Business Practices of Interstate Natural Gas Pipelines (FERC-549C)

Action: Proposed collections

OMB Control No.: 1902-0174

Respondents: Business or other for profit, (Natural Gas Pipelines (Not applicable to small business.))

Frequency of Responses: One-time implementation (business procedures, capital/start-up)

32. Necessity of Information: This proposed rule, if implemented, would upgrade the Commission's current business practice and communication standards to provide for greater accessibility to fuel in times of scarcity and rules to allow for alternative indices to establish rates for capacity release to better reflect the value of that capacity. The implementation of these standards will permit greater flexibility by providing a reasonable choice of available indices to use while simultaneously providing a greater equalization of costs for their use. Incorporation of the standard for use of flexible receipt and delivery points allows for the efficient redirection of gas when it may be needed by gas-fired generators or other shippers thereby improving the reliability in both the electric and gas industries.

33. The implementation of these data requirements will help the Commission carry out its responsibilities under the Natural Gas Act of promoting the efficiency and reliability of the gas industries' operations. The Commission's Office of Energy Market and Regulation will use the data for general industry oversight.

34. Internal Review: The Commission has reviewed the requirements pertaining to business practices of natural gas pipelines and made a preliminary determination that the proposed revisions are necessary to establish more efficient coordination between the gas and electric industries. Requiring such information ensures both a common means of communication and common business practices to limit miscommunication for participants engaged in the sale of electric energy at wholesale and the transportation of natural gas. These requirements conform to the Commission's plan for efficient information collection, communication, and management within the natural gas pipeline industries. The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

35. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, Attn: Michael Miller, Office of the Executive Director, 888 First Street, N.E., Washington, DC 20426 Tel: (202) 502-8415 / Fax: (202) 273-0873, Email: michael.miller@ferc.gov.

36. Comments concerning the collection of information(s) and the associated burden estimate(s), should be sent to the contact listed above and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission, phone: (202) 395-4638, fax: (202) 395-7285].

V. Environmental Analysis

37. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.[26] The Commission has categorically excluded certain actions from these requirements as not having a significant effect on the human environment.[27] The actions proposed here fall within categorical exclusions in the Commission's regulations for rules that are clarifying, corrective, or procedural, for information gathering, analysis, and dissemination, and for sales, exchange, and transportation of natural gas that requires no construction of facilities.[28] Therefore, an environmental assessment is unnecessary and has not been prepared as part of this NOPR.

VI. Regulatory Flexibility Act Certification

38. The Regulatory Flexibility Act of 1980 (RFA)[29] generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. In drafting a rule an agency is required to: (1) assess the effect that its regulation will have on small entities; (2) analyze effective alternatives that may minimize a regulation's impact; and (3) make the analysis available for public

[26] Order No. 486, Regulations Implementing the National Environmental Policy Act of 1969, FERC Stats. & Regs. ¶ 30,783 (1987).

[27] 18 CFR 380.4.

[28] See 18 CFR 380.4(a)(2)(ii), 380.4(a)(5), 380.4(a)(27).

[29] 5 U.S.C. 601-612.

comment.[30] Based on our analysis of the requirements proposed in this NOPR, we do not think the proposed rule will have a significant impact on a substantial number of small entities.

VII. Comment Procedures

39. The Commission invites interested persons to submit written comments on the NAESB business practice standards proposed for incorporation by reference in this NOPR, as well as any related matters or alternative proposals that commenters may wish to discuss. Comments are due [insert date 45 days from publication in the **FEDERAL REGISTER**]. Comments must refer to Docket No. RM96-1-030, and must include the commenter's name, the organization they represent, if applicable, and their address. Comments may be filed either in electronic or paper format.

40. Comments may be filed electronically via the eFiling link on the Commission's web site at http://www.ferc.gov. The Commission accepts most standard word processing formats and commenters may attach additional files with supporting information in certain other file formats. Commenters filing electronically do not need to make a paper filing. Commenters that are not able to file comments electronically must send an original and 14 copies of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, N.E., Washington, DC 20426. For paper filings, the original and 14 copies of such comments should be

[30] 5 U.S.C. 601-604.

submitted to the Secretary of the Commission, Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, DC 20426.

41. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely, as described in the Document Availability section below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

VIII. Document Availability

42. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through FERC's Home Page (http://www.ferc.gov) and in FERC's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, N.E., Room 2A, Washington, DC 20426.

43. From FERC's Home Page on the Internet, this information is available in eLibrary. The full text of this document is available in eLibrary both in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number, excluding the last three digits of this document in the docket number field.

44. User assistance is available for eLibrary and the FERC's website during the Commission's normal business hours. For assistance, contact FERC Online Support by e-mail at FERCOnlineSupport@ferc.gov, or by telephone at 202-502-6652 (toll-free at (866) 208-3676) or for TTY, contact (202) 502-8659.

List of subjects in 18 CFR part 284

Incorporation by reference, Natural gas, Reporting and recordkeeping requirements.

By direction of the Commission.

Kimberly D. Bose,
Secretary.

In consideration of the foregoing, the Commission proposes to amend part 284, Chapter I, Title 18, Code of Federal Regulations, as follows:

Part 284 -- CERTAIN SALES AND TRANSPORTATION OF NATURAL GAS UNDER THE NATURAL GAS POLICY ACT OF 1978 AND RELATED AUTHORITIES

1. The authority citation for part 284 continues to read as follows:

Authority: 15 U.S.C. 717-717w, 3301-3432; 42 U.S.C. 7101-7352; 43 U.S.C. 1331-1356.

2. Section 284.12 is amended by revising paragraph (a)(1) to read as follows:

Sec. 284.12 Standards for pipeline business operations and communications.

(a) * * *

(1) * * *

(i) Additional Standards (General Standards, Creditworthiness Standards, and Gas/Electric Operational Communications Standards) (Version 1.8, September 30, 2006);

(ii) Nominations Related Standards (Version 1.8, September 30, 2006) and including the standards contained in NAESB WGQ 2007 Annual Plan Item 7b/ NAESB WGQ 2008 Annual Plan Item 4b (August 25, 2008);

(iii) Flowing Gas Related Standards (Version 1.8, September 30, 2006);

(iv) Invoicing Related Standards (Version 1.8, September 30, 2006);

(v) Quadrant Electronic Delivery Mechanism Related Standards (Version 1.8, September 30, 2006) with the exception of Standard 4.3.4;

(vi) Capacity Release Related Standards (Sep. 3, 2008) and including the standards contained in NAESB WGQ 2007 Annual Plan Item 7a/ NAESB WGQ 2008 Annual Plan Item 4a (August 25, 2008) and the Standards included in NAESB WGQ 2007 Annual Plan Item 7a / NAESB WGQ 2008 Annual Plan Item 4a / NAESB WGQ 2009 Annual Plan Item 4; and

(vii) Internet Electronic Transport Related Standards (Version 1.8, September 30, 2006) with the exception of Standard 10.3.2.

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