North American Energy Standards Board

Board of Directors Meeting

December 14, 2006

NORTH AMERICAN ENERGY STANDARDS BOARD

MEETING OF THE MEMBERS, STRATEGIC SESSION & BOARD OF DIRECTORS MATERIALS

DECEMBER 14, 2006

TABLE OF CONTENTS

Tab 1 Welcome and Administrative Items (Agenda item #1)
- Welcome and opening remarks
- Members of the Board of Directors & Terms
- Antitrust Guidelines

Tab 2 Meeting Announcement & Agenda (Agenda item #1)

Tab 3 Draft Minutes of Prior Meeting (Agenda item #1)
- Minutes of September 21, 2006

Tab 4 Board Committee Updates (Agenda Item No. 2)
- Resources
  - Analysis of membership report
- Retail Structure Review
  - Report & Motion

Tab 5 Updates on Specific Efforts (Agenda Item No. 3)
- Joint NERC –NAESB efforts for TLR and ATC Standards Development - Summary
- Retail Contracts – Approval Summary
- OASIS enhancements – Summary of efforts
- WEQ Structure – 6th Segment – WEQ Board ballot
- Sandia Report

Tab 6 Copyright Update (Agenda Item No. 4)
- Copyright report

Tab 7 Executive Committee Reports (Agenda Item No. 5)
- Standards Adopted Since the September 21 Board Meeting
- Filings with the FERC
- Wholesale Gas 2006 Annual Plan
- Wholesale Electric 2006 Annual Plan
- Retail Gas and Electric 2006 Annual Plan
- Wholesale Gas 2007 Annual Plan
- Wholesale Electric 2007 Annual Plan & MISO Comments
- Retail Gas and Electric 2007 Annual Plan
- Motion to adopt 2007 Annual Plans

Tab 8 Financial & Membership Reports (Agenda Item No. 6)
- Membership Report and Statistics
- Financial Statements 2006 YTD
- 2007 Proposed Budget
- Motion to adopt 2007 Budget
- Motion to extend promotional dues program

Tab 9 Old and New Business (Agenda Item No. 8)
- Liaisons with external groups
- Calendar of 2007 meetings

TAB 1

WELCOME AND OPENING REMARKS

This section includes:

- Welcome and opening remarks including meeting specifics.
- The roster of the members of the Board of Directors.
- Antitrust guidelines to be covered by General Counsel Bill Boswell at the beginning of the meeting.

This section tracks with agenda item 1. There are no actions expected of the Board members.

NORTH AMERICAN ENERGY STANDARDS BOARD

MEETING OF THE MEMBERS, STRATEGIC SESSION & BOARD OF DIRECTORS MATERIALS

DECEMBER 14, 2006

WELCOME AND OPENING REMARKS

- The meeting specifics are:

  Where: Houston Airport Marriott Hotel
  18700 John F. Kennedy Blvd., Houston, Texas 77032
  Hotel Phone: 281-443-2310

When:			
	Wed, December 13	3:00 pm to 5:00 pm	Retail Leadership Meeting
	Thu, December 14	8:00 am to 9:00 am	Board Resources Meeting
		9:00 am to 1:30 pm	Board Meeting A working lunch will be provided

  Please feel free to call (713-356-0060) if you have any questions or comments, additions to the agenda, or additional meeting materials. If you would prefer attending by conference call, the NAESB Office can provide the conference calling information for any of the above meetings.

- For further assistance please reach:

  Veronica Thomason at (713) 356 - 0060

- The officers presiding over the Board of Directors meeting are:

Joe Stepenovitch	- Chairman
Michael Desselle	- Vice Chairman Wholesale Electric Quadrant
Leonard Haynes	- Vice Chairman Retail Electric Quadrant
Bill Bourbonnais	- Vice Chairman Retail Gas Quadrant
Rae McQuade	- President, COO and Secretary
Bill Boswell	- General Counsel

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.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 BOARD TERMS – Wholesale Gas Quadrant

PRODUCERS SEGMENT		**TERM END:**
Jay Ellzey	Manager – Regulatory and Opco Support, ChevronTexaco Natural Gas	12-31-2006
William T. Benham	Vice President – Regulatory Affairs, BP Energy Company	12-31-2007
Keith Sappenfield	Regional Director – US Regulatory Affairs, EnCana Oil & Gas (USA) Inc.	12-31-2007
V A C A N C Y		12-31-2006
Pete Frost	Director - Regulatory Affairs, ConocoPhillips Gas and Power Marketing	12-31-2007
PIPELINE SEGMENT		
Jim Goldmann	Vice President for Transportation Services and Development, Alliance Pipeline	12-31-2006
Larry Smith	Vice President Commercial Operations, Tennessee Gas Pipeline Company	12-31-2006
Bill Grygar	Vice President, Panhandle Eastern Pipe Line	12-31-2006
Anne Bomar	Vice President, Dominion	12-31-2007
Richard Kruse	Senior Vice President, Duke Energy Gas Transmission	12-31-2007
LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT		
Clifton Olson	Vice President of Supply and Transmission, Energy East Corporation	12-31-2008
Adrian Chapman	Vice President, Regulatory Affairs & Energy Acquisition, Washington Gas	12-31-2008
Reed Horting	Vice President, Gas Supply & Transportation, PECO Energy Co.	12-31-2008
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	12-31-2007
Lee Stewart	Senior Vice President, Gas Transmission, Southern California Gas Company	12-31-2007
END USERS SEGMENT		
Valerie Crockett	Tennessee Valley Authority	12-31-2006
Joe Stepenovitch		12-31-2006
Diane McVicker	Senior Principal Fuel Analyst, Salt River Project	12-31-2006
Terry Morrison	Vice President of Energy Marketing and Trading, Florida Power & Light	12-31-2007
Jim Templeton	Principal, Comprehensive Energy Services	12-31-2007
SERVICES SEGMENT		
John Bretz	Vice President - Gas Marketing, Anadarko Energy Services Company	12-31-2006
Michael Smith	Vice President—Regulatory and Legislative Affairs, Constellation Energy Commodities Group	12-31-2006
Jim Buccigross	Vice President Energy Industry Practice, Group 8760 LLC	12-31-2007
Bill Hebenstreit	Manager – Contract Administration, Cheniere Marketing, Inc.	12-31-2007
V A C A N C Y		12-31-2006

OFFICERS: Joe Stepenovitch is CEO and Chairman of the Board of Directors. Rae McQuade as President serves as Secretary and COO. Leonard Haynes is the REQ Vice Chairman. RGQ Vice Chairman - TBA. Michael Desselle is the WEQ Vice Chairman. Joe Stepenovitch is the WGQ Vice Chairman, Jim Templeton is Chair Emeritus.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 BOARD TERMS – Retail Electric Quadrant

SUPPLIERS SEGMENT		**TERM END:**
Peter Kelly-Detwiler	Director of Operations, Constellation NewEnergy	12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2006
Richard Zelenko	General Manager, Dominion Retail Inc.	12-31-2006
DISTRIBUTORS SEGMENT		
David Koogler	Director – State Regulation, Dominion Virginia Power (SERC NERC Region)	12-31-2007
Dennis Derricks	Director Regulatory Policy and Analysis, Wisconsin Public Service Corporation	12-31-2007
Ruth Kiselewich	Director Special Projects and Supplier Services, Baltimore Gas & Electric Company (MAAC NERC Region)	12-31-2006
Leonard Haynes	Executive Vice President, Supply Technologies, Renewables, and Demand, Southern Company Services (SERC NERC Region)	12-31-2006
END USERS SEGMENT		
Sonny Popowsky	Consumer Advocate, Pennsylvania Office of Consumer Advocate	12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2006
SERVICE PROVIDERS SEGMENT		
Jim Minneman	Director of Business Services, PPL Solutions LLC	12-31-2007
V A C A N C Y		12-31-2007
J Cade Burks	President, EC Power	12-31-2006
V A C A N C Y		12-31-2006

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 BOARD TERMS – Wholesale Electric Quadrant

TRANSMISSION SEGMENT		**TERM END:**	**SUBSEGMENT:**
Dan Klempel	Director Transmission Regulatory Compliance, Basin Electric Power Cooperative	12-31-2007	Muni/Coop
W Terry Boston	Executive Vice President – Transmission/Power Supply Group, Tennessee Valley Authority	12-31-2006	Fed/State/Prov.
John E. Lucas	Manager, Transmission Services, Southern Company	12-31-2006	IOU
Michael Desselle	Chief Administrative Officer and Vice President of Process Integrity – Southwest Power Pool	12-31-2007	IOU
Paul McCoy	Managing Director & Chief Operating Officer, Trans-Elect	12-31-2006	ITC
V A C A N C Y		12-31-2007	ITC
Ken Wiley	President and Chief Executive Officer, Florida Reliability Coordinating Council	12-31-2007	At-Large
GENERATION SEGMENT			
Curtis Winterfeld	Vice President of Power Marketing, Deseret Generation & Transmission Cooperative	12-31-2007	Muni/Coop
Belinda Thornton	Senior Manager – Real Time Trading, Tennessee Valley Authority	12-31-2006	Fed/State/Prov.
V A C A N C Y		12-31-2006	IOU
Charles W. Severance	Manager – Supply & Wholesale Services, Wisconsin Public Service Corporation	12-31-2007	IOU
Michael Gildea	Executive Director, Regulatory Affairs, Constellation Generation Group	12-31-2007	Merchant
Gloria Ogenyi	Vice President Energy Policy, Conectiv Energy Supply, Inc.	12-31-2006	Merchant
Ron Mucci	Manager - Regulatory Affairs, Williams Power Company	12-31-2007	At-Large
MARKETERS/BROKERS SEGMENT			
Roy True	Manager of RTO Market Development, ACES Power Marketing	12-31-2006	Muni/Coop
Jeff Ackerman	Manager, Colorado River Storage Project Energy Management and Marketing Office, Western Area Power Administration	12-31-2007	Fed/State/Prov.
Michael Grim	Director of Markets and Regulation, TXU Business Services	12-31-2006	Not IOU Affiliated
V A C A N C Y		12-31-2007	Not IOU Affiliated
Joseph Hartsoe	Vice President and Associate General Counsel, American Electric Power Service Corp.	12-31-2006	IOU
R. Scott Brown	Vice President and Director, Exelon Generation Power Team	12-31-2007	IOU
Rick Smead	Director, Navigant Consulting, Inc.	12-31-2007	At-Large

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

DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT		TERM END:	SUBSEGMENT:
Arthur G. Fusco	Vice President and General Counsel, Central Electric Power Cooperative Inc.	12-31-2006	Muni/Coop
Barry R. Lawson	Manager-Power Delivery, National Rural Electric Cooperative Association	12-31-2007	Muni/Coop
Mark Crosswhite	Senior Vice President & General Counsel – Generation and Energy Marketing, Southern Company	12-31-2006	IOU
Frank Johnson	Senior Vice President Electric Transmission and Distribution, Consumers Energy	12-31-2007	IOU
V A C A N C Y		12-31-2006	Competitive Retailer
V A C A N C Y		12-31-2007	Other
Bruce Ellsworth	New York State Reliability Council	12-31-2007	At-Large
END USERS SEGMENT			
V A C A N C Y		12-31-2007	End Use (Also in another segment)
Carol Guthrie	General Manager, Electric Market Strategies, ChevronTexaco Energy Research and Technology Company	12-31-2006	End Use (Self Generator)
John Reese	Senior Policy Advisor & Director of the Office of Economic Development and Policy, New York State Department of Public Service	12-31-2006	Regulator
V A C A N C Y		12-31-2007	Residential/Commercial
Jeanne Zaiontz	Director, Regulatory Affairs, BP Energy Co.	12-31-2006	Large Industrial
John A. Anderson	President and CEO, Electricity Consumers Resource Council (ELCON)	12-31-2007	Large Industrial
Michehl Gent	Open Access Technology International, Inc.	12-31-2007	At-Large

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 number of seats within each segment that are allotted to subsegments are controlled through the WEQ Procedures.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 BOARD TERMS – Retail Gas Quadrant

SUPPLIERS SEGMENT		**TERM END:**
Kathy Fudali	Manager, Contract Administration, Sprague Energy Corp.	12-31-2006
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2007
DISTRIBUTORS SEGMENT		
Craig White	Chief Operating Officer, Philadelphia Gas Works	12-31-2006
William Bourbonnais	Vice President – Transmission, WPS Resources Corporation	12-31-2007
V A C A N C Y		12-31-2006
Ralph Cleveland	Senior Vice President – Engineering and Operations, AGL Resources, Inc.	12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2006
END USERS SEGMENT		
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2006
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2007
SERVICE PROVIDERS SEGMENT		
Leigh Spangler	President, Latitude Technologies Inc.	12-31-2006
V A C A N C Y		12-31-2006
Dave Darnell	President & CEO, Systrends USA	12-31-2007
Greg Lander	Principal, Commerce Energy Group	12-31-2007
V A C A N C Y		12-31-2007
V A C A N C Y		12-31-2006

TAB 2

MEETING ANNOUNCEMENT AND AGENDA

This section includes:

- The meeting announcement and agenda for the Board normal business,

The material presented is background information for the discussion of agenda item 1. no changes were offered to the agenda since its availability with one exception, that the meeting was originally set to begin at 10:00 am central and was revised to begin at 9:00 am central.

The Board will discuss and review agenda and will be asked to adopt the agenda through a simple majority vote.

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

November 29, 2006

TO: NAESB Board of Directors, Invited Guests, Speakers, Participants

FROM: Rae McQuade, NAESB President and COO

RE: Meeting Announcement for the NAESB Board Meeting – December 14, 2006 -- **REVISIONS**

Dear Board Members, Speakers, Invited Guests and Participants:

The December Board meeting will be held in Houston at the Houston Airport Marriott Hotel, which is located adjacent to the George Bush Intercontinental Airport. The specifics of the meeting are:

Where: Houston Airport Mariott Hotel
18700 John F. Kennedy Blvd.
Houston, Texas 77032
Hotel Phone: 281-443-2310

When: December 14 Board meeting 9:00 am to 1:30 pm
A working lunch will be provided.

We look forward to seeing you at the meeting. Conference calling will be available should you be unable to attend in person. Prior to the Board meeting, from 8:00 am to 9:00 am, the Resources Committee will meet at the Marriott Hotel. All Board members are invited to attend the Resources Committee meeting. More information on the Board meeting and the Resources Committee meeting will be forwarded to you shortly, including the announcement of the availability of the meeting materials. Both meetings are available via conference cal for those unable to attend in person. The agendas and materials will also be posted on the NAESB web site at the following address: http://www.naesb.org/weq/weq_bod.asp for the Board meeting, and http://www.naesb.org/board_resource.asp for the Resources Committee meeting.

Best Regards,

Rae McQuade
NAESB President & COO

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
Houston Airport Marriott Hotel, Houston, Texas
Thursday, December 14 – 9:00 a.m. to 1:30 pm Central
DRAFT AGENDA

7:30 a.m. Resources Committee Meeting

8:30 a.m. Continental Breakfast

9:00 a.m.

1. Administration and Welcome
   - Antitrust Guidelines
   - Introduction of Board Members and Guests
   - Agenda Adoption
   - Adoption of Draft Minutes – September 21, 2006
2. Reports from board committees
   - Resources Committee
   - Retail Structure Review Committee
3. Updates on specific efforts:
   - Joint NERC –NAESB efforts for TLR and ATC Standards Development
   - Retail Contracts
   - OASIS enhancements
   - WEQ Structure – 6th Segment
   - Sandia Report
4. Copyright Update
5. Executive Committee Reports
   - Executive Committee Report from each Quadrant
   - Standards Adopted Since the September 21 Board Meeting
   - Filings with the FERC
   - Adoption of 2006 Annual Plans
   - Review and Adoption of 2007 Annual Plans
6. Financial Report
   - Financial Report for 2006 YTD
   - Review and Adoption of 2007 Budget
7. Plan for March 2007 Board Meeting
8. Old and New Business
   - Liaisons with external groups
     - FERC
     - International Gas Union
   - Meeting Schedule for 2007

1:30 p.m. Adjourn

Attire – Business Casual
Working buffet lunch will be provided.

TAB 3

DRAFT MINUTES – SEPTEMBER 21, 2006

This section includes:

- The draft minutes for the Board meeting on September 21, 2006.

The material presented is background information for the discussion of agenda item 1.

The Board will discuss and review minutes and will be asked to adopt the minutes as final through a simple majority vote. The minutes were made available and posted and no suggested edits to the minutes were forwarded prior to this meeting.

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

September 28, 2006

TO: NAESB Board Members, Posting for Interested Industry Participants

FROM: Laura Kennedy, NAESB Meeting/Project Manager

RE: Draft Minutes from the NAESB Board of Directors Meeting – September 21, 2006

NORTH AMERICAN ENERGY STANDARDS BOARD
NAESB BOARD OF DIRECTORS MEETING
September 21, 2006 in Houston, TX
Draft Minutes

1. Administration and Welcome

Mr. Boswell read the antitrust guidelines. Mr. Stepenovitch welcomed the Board Members and guests. Mr. Desselle moved, seconded by Mr. Brown, to adopt the agenda. The motion passed unanimously. Next, the Board members reviewed the draft minutes from the June 22, 2006 Board meeting. The draft minutes were included in the Board Book behind Tab 3, beginning on page 16. Mr. Desselle moved, seconded by Mr. Horting, to adopt the draft minutes from the June 22, 2006 meeting as the final minutes. The motion passed unanimously. The final minutes from the June 22, 2006 Board meeting are posted on the NAESB website at http://www.naesb.org/pdf2/bd062206fm.doc.

2. Reports from Board Committees

Resources Committee: Mr. Brown provided the update of the work of the Resources Committee. The material in the Board Book provided by the Resources Committee was included behind Tab 4, on pages 30-72. Mr. Brown stated that NAESB membership has increased by a net of 2 since the last Board meeting. Since the creation of the Resources Committee, the efforts of the Committee have resulted in 52 new members and 6 home page access applications. There have been 45 member resignations since the creation of the Resources Committee. The Resources Committee members are involved in several initiatives to increase the membership including the development of a Quarterly Report, limited to one page, which will highlight NAESB accomplishments to include with invoices. The Resources Committee has also developed a Membership Prospects list that includes the names of prospective members, the source of the lead, the contact at the organization, and who has been assigned that particular lead. During the next quarter, the members of the Resources Committee will conduct an outreach to several trade organizations including: EPSA, WECC, AGA, and AWEA. The Resources Committee will also encourage the Board and Executive Committee members who have terms that expire on December 31, 2006 to run for their seats again in the end of term elections.

Retail Structure Review: Mr. Bourbonnais provided the update of the work of the Retail Structure Review Committee (RSRC). The material in the Board Book provided by the RSRC was included behind Tab 4, on pages 73-77. Mr. Bourbonnais met with the National Accounts contingent of EEI on behalf of the NAESB RSRC on two occasions. Mr. Bourbonnais stated that the National Accounts indicated a fair amount of interest in NAESB and provided items for model business practice development that may be included in the Joint Retail 2007 Annual Plan. Mr. Bourbonnais also met with several state commissioners during the Summer NARUC meetings. Mr. Bourbonnais stated that based on the amount of time he spent providing an

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

overview of the work of NAESB when he spoke to the commissioners, an educational outreach should be conducted to increase NAESB awareness.

Mr. Koogler stated that he met with representatives of Advanced Energy, a research and development organization that was commissioned by the North Carolina Public Utility Commission. Advanced Energy conducts research and develops tools in the area of energy efficiency. The North Carolina Public Utility Commissioners recently charged Advanced Energy with developing a methodology to measure the impacts of its demand side initiatives. Mr. Koogler talked to the Advanced Energy representatives about NAESB providing a forum where the methodology could be developed. Mr. Koogler's staff is working with Advanced Energy to draft information on the effort that will be submitted as a potential Joint Retail 2007 Annual Plan item. Mr. Haynes noted that EEI has initiated an effort to evaluate similar issues.

ISO/RTO Participation: Mr. Desselle stated that the Board authorized him to name a committee to work with the ISO/RTO Council (IRC) to determine if the WEQ Segment definitions can be modified in order to provide a place for IRC members to join and participate in NAESB standards development. On August 24, the committee met with the IRC members in Washington, DC. The notes from the meeting were included in the Board Book behind Tab 4, on pages 78-82.

> If the following four conditions are met, the Board Committee supports the creation of a sixth segment in the WEQ Quadrant: Independent Grid Operators/Planners, to be composed of ISOs, RTOs and other independent grid operators – with no sub-segments defined at this time. The sixth segment will have 7 Board seats and 7 EC seats, as required by the NAESB bylaws. The conditions to be met are:
>
> a. The IRC and NAESB support the dissolution of the JIC and will pursue such action with NERC.
>
> b. The creation of the new segment will comply fully with the WEQ sub-segment principles as noted in Section 2.4 on the WEQ Procedures.
>
> c. The "At Large" sub-segment in the other five segments will be redefined to exclude the ISOs, RTOs and other independent grid operators and planners.
>
> d. The nine IRC members will join NAESB as members and commit resources to the development of NAESB business practices.

Mr. Desselle requested that the Board members, particularly the WEQ Board Members, indicate whether the direction of the committee was appropriate. Mr. Desselle noted that during the WEQ Leadership meeting on September 20 participants indicated concern whether creation of the new segment would comply with the sub-segment principles set forth in the WEQ Quadrant Procedures Section 2.4. Mr. Desselle stated that a response from the IRC is expected at any time.

Mr. Haynes asked if the IRC accept the recommendation, what steps would need to be taken to implement the recommendation. Mr. Boswell stated that the revised procedures would need to be reviewed by himself as General Counsel to assure that what has been decided is consistent with the NAESB Certificate and NAESB Bylaws.

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

Mr. Ellsworth asked whether sub-segments would be required to be established in the new segment. Mr. Boswell stated that the WEQ Procedures permit creation of sub-segments within the segments, but that sub-segments were not required to be created.

Mr. Lawson stated that while NRECA is supportive of representatives of ISOs and RTOs having seats on the Board of Directors and Executive Committee, if the new segment is not divided into sub-segments, the members of the new segment would have the ability to block action, whether on the Executive Committee or Board level. Mr. Lawson stated that a new segment should include legitimate sub-segments, much like the sub-segments in the existing segments. Mr. Anderson stated that he agreed with Mr. Lawson. The members of the IRC have cited the potential of compromising their independence requirements by joining a particular segment within NAESB as a reason to not join within the existing segment structure, but three of the nine ISOs and RTOs are members of NAESB. Mr. Anderson noted that when the WEQ was created, NAESB offered the ISOs and RTOs the establishment of a specific segment. The ISOs and RTOs declined the establishment of segment.

Mr. Brown stated that he was a member of the committee that negotiated with the IRC and that the recommendation, if accepted by the IRC, would be beneficial for NAESB. Mr. Brown noted that the committee that met with the IRC included a diverse representation of industry participants, including co-ops, end users, investor owned utilities, and government representatives. Mr. Brown stated that there is a need for the technical resources available to the ISOs and RTOs in the standards development subcommittees and in order to have access to those resources, the ISOs and RTOs need to be members.

Mr. Severance stated that NAESB should pursue the membership of the IRC members as a worthy goal, but it would affect the credibility of the WEQ for a segment to have veto power. Mr. Klempel stated that even if the IRC does not organize sub-segments and therefore do not violate the sub-segment principles, it would violate the intent to provide a membership option for the IRC members that does not provide a way for them to block action as a group. Mr. Bourbonnais echoed Mr. Severance's concern with the IRC members having veto power as a group and noted that this has been a concern since the beginning of the formation of the WEQ. Mr. Klempel asked Mr. Boswell to interpret Section 2.4 of the WEQ Quadrant Procedures.

Mr. Boswell stated that nothing in the WEQ Quadrant Procedures require sub-segments, but if sub-segments are created, then Section 2.4 would apply. Mr. Klempel stated that the WEQ should consider revising the Quadrant Procedures because it was the intent of the drafters of the procedures to require the establishment of sub-segments.

Mr. Lucas stated that he was also a member of the committee that negotiated with the IRC. He stated that the proposal provides a reasonable compromise to obtain resources to assist NAESB in standards development. Mr. Lucas stated that he thought the intent of section b of the proposal was to say that the ISO/RTO Grid Planner group as a block could not block action. Mr. Lucas stated that if there is a loophole in the WEQ Quadrant Procedures that sub-segments are not required, the Procedures should be revised.

Mr. Boswell stated that the checks and balances that are included in the NAESB procedures currently allow for one segment to block action. Mr. Lawson stated that while a segment can block action, a sub-segment, which is a single business interest or stakeholder group, cannot block action alone.

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

Mr. Anderson stated that the credibility of NAESB would be affected if a single business interest were able to control the action of the organization. The ISOs and RTOs would be a more homogenous segment than any other NAESB segment.

After further discussion, Mr. Ellsworth suggested that the committee and Board members wait to receive the response of the IRC. At that time, the WEQ can determine whether the proposal will lend itself to the IRC members having more control over the actions of the WEQ than any other segment. Mr. Ellsworth suggested that the Board members give the committee the vote of confidence to move ahead with the recommendation and to request that the committee provide an update at the next Board meeting. Mr. Desselle stated that he has heard the comments of the Board members and that once NAESB received a response from the IRC that the committee will present a proposed modification to the WEQ Quadrant Procedures to the WEQ Board for approval and then to the WEQ membership for ratification.

Managing Committee: Mr. Boswell provided the report of the Managing Committee. On August 11, the Managing Committee adopted a Resolution on Member Benefits and Access to Copyrighted Materials. The Resolution was included behind Tab 4, pages 84-104 of the Board book. The modification, effective September 30, 2006, provides the opportunity for NAESB members to purchase NAESB standards at the discounted membership rate for use by an affiliate. This discount applies to standards purchased in CD or printed format and does not extend to the ability to download the standards via the NAESB website.

Mr. Boswell stated that the Managing Committee wanted to report its action to the full Board. Ms. Davis asked whether the discount would be retroactively applied to the time since the June 22, 2006 Board meeting where these issues were discussed. Mr. Boswell stated that the policy is effective as of September 30 and would not be applied retroactively.

Ms. Van Pelt asked if the discount would extend to Final Actions in between publication periods. Ms. McQuade stated that the discount would only apply to CD or printed format versions of the standards and do not apply to Final Actions.

Mr. Boswell stated that NAESB will send letters to the compliance officers of the organizations that are obligated to implement the NAESB standards pursuant to FERC regulations to notify the organizations that the NAESB standards are copyrighted.

Mr. Kruse stated that NAESB members are providing the resources to generate the NAESB standards and that the Board has had discussions about the need for additional resources. NAESB should not turn its copyright into a monetary consideration. Mr. Kruse noted that many organizations have copyrighted material that is made available at no charge. Mr. Kruse stated it sends the wrong signal to NAESB members to require members who provide significant resources to the standards development process pay for each affiliate that uses the standards. Mr. Kruse stated that members should be able to obtain a site license for its affiliates.

Mr. Boswell stated that NAESB must protect its copyrighted materials not only for monetary reasons but also to ensure that the organizations that utilize the standards have the most current versions of the standards.

Mr. Haynes stated that it was his idea to send a letter to the compliance officers of organizations that are not NAESB members but are required by the FERC to implement NAESB standards, not to send the letter to NAESB members. Mr. Haynes supported consideration of site licenses for NAESB members to be able to use for their affiliates.

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

3. Updates on Specific Standards Development

OATT NOPR Reform Comments and Analysis: Mr. Desselle provided the review of the comments NAESB submitted on the NOPR issued in FERC Docket Nos. RM05-17-000 and RM05-25-000 Preventing Undue Discrimination and Preference in Transmission Services." The comments filed with the FERC were included in the Board Book behind Tab 5, on pages 106-123. Mr. Desselle stated that the comments stated that "NAESB reviewed the NOPR and identified potential NAESB standards development efforts and estimated the level of effort for each task" as well as staging the development of the standards.

NAESB will not file reply comments to this NOPR, but member organizations that wish to provide their own comments are able to do so. Several trade organizations have submitted reply comments that are supportive of the NAESB comments.

Gas Quality Progress: Mr. Buccigross began the review of the development of Gas Quality business practice standards in the WGQ. On October 20, 2004, the WGQ ratified Recommendation R03035A. Recommendation R03035A included standards to establish web-based reports for tracking all physical and chemical properties of natural gas defined in pipeline tariffs, including timelines for reporting. On June 23, 2006, the WGQ ratified Recommendation R0303B that included standards to develop a uniform process, including the underlying assumptions and methodologies, for determining gas quality specifications from measured data.

National Fuel Gas Distribution submitted Request No. R06008 to 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. This request will result in a modification to the standards adopted to address R03035A. Mr. Buccigross stated that the WGQ Business Practices Subcommittee has been meeting to address this request. While several proposals have been considered and a proposal as been adopted at the subcommittee level, it is expected that the recommendation will not receive the required 40% support in each segment on the WGQ Executive Committee. Mr. Buccigross noted that if the recommendation does not garner the super majority vote at the Executive Committee it will nevertheless be submitted to the FERC for information purposes. Material that applies to this standards development effort was included in the Board Book, behind Tab 5 pages 128-133.

Mr. Novak stated that the segments within the WGQ should be able to reach a compromise prior to the WGQ Executive Committee meeting in November. Ms. Van Pelt stated that this issue was not properly resolved in the WGQ Business Practices Subcommittee. Ms. Van Pelt stated that she was not sure what will be able to be accomplished between now and the November WGQ Executive Committee meeting, but that she was sure that the pipeline segment participants would submit comments on the recommendation during the comment period.

Retail Invoicing: Ms. Kiselewich stated that the Retail Quadrant subcommittees are working to complete the model business practices to address Request No. R05016 (Standards or model business practices for electronic retail billing transactions and bill payment transactions between customers, suppliers, and utilities) submitted by J.C. Penney Company, Inc. The model business practices have been completed and the Retail Information Requirements Subcommittee and Technical Electronic Implementation Subcommittee are working to complete the technical implementation pieces to correspond with the model business practices. It is the expectation that the entire recommendation will be posted for comment in October in order that the Joint Retail Executive Committees can vote on the recommendation during the November Executive Committee meeting.

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

Retail Contracts: Ms. Kiselewich stated that the Retail Contracts Subcommittee has completed its work to develop a model retail contract. The recommendation should be posted for comment soon. The Contracts Subcommittee used the NAESB WGQ Base Contract for the Purchase and Sale of Natural Gas as a basis to develop the Retail contract. Ms. Kiselewich commended Ms. McCain's work as Retail Contracts Subcommittee co-chair.

Wholesale Gas Base Contract: Mr. Sappenfield conducted the review of the adoption of the revised NAESB WGQ Base Contract for Purchase and Sale of Natural Gas. The WGQ membership ratified the new contract on October 4, 2006. The contract was given a publication date of October 5 as October 4 was a holiday.

Mr. Sappenfield reviewed the material provided that includes the differences in the new contract when compared to the contract included in NAESB WGQ Standards 1.7. The list of major changes was included behind Tab 5 on page 143 of the Board Book. Most of the changes were made in the financial responsibility and credit area. The cover page was modified from one page to two pages and the layout of the cover page was revised to provide more space for information. NAESB has scheduled a Contracts class on October 25-26 in Houston. The class will include review of the new Base Contract.

Joint effort with Sandia National Laboratories: Ms. McQuade stated that report from the Department of Energy surety assessment of NAESB technical standards should be released to the NAESB office soon. The assessment will go to each quadrant so that a response can be drafted. It is the expectation that items that are identified in the report will become 2007 Annual Plan items for the applicable quadrants. A Summary of Department of Energy Sponsored Information Assurance Work for NAESB can be found behind Tab 5 on page 144 of the Board Book.

Joint Efforts with NERC: Mr. Desselle provided an update on the joint efforts with NERC. The Joint Interchange Scheduling Working Group (JISWG) is a joint NERC and NAESB subcommittee that has been working to draft standards for Public Key Infrastructure (PKI) and developing standards to modify the e-tag specification.

Mr. Desselle stated that NERC and NAESB are scheduled to implement the NERC/NAESB Joint Standards Development Procedure to review the split of the TLR standards. The NERC SAR has not been presented to the NERC Standards Authorization Committee (SAC) to date. It is the expectation that the SAR will be presented during the first quarter of 2007. Mr. Desselle noted that if the TLR standards are completed in 2007 it will be two years later than the time that NAESB represented to the FERC the standards would be completed and filed with the FERC.

NERC and NAESB are using the Joint Standards Development Procedure to develop standards to address R05004A (Develop transmission service request and scheduling standards using TTC/ATC/AFC and CBM/TRM) and the complementary NERC SARs. The standards development subcommittees that have been assigned these requests will incorporate standards to address FERC OATT Reform Order when the order is issued.

4. Executive Committee Reports

Wholesale Gas Quadrant: Mr. Buccigross reviewed the progress of the WGQ Executive Committee. The WGQ 2006 Annual Plan as revised by the WGQ Executive Committee during the August 17, 2006 conference call is included behind Tab 6, pages 155-158 of the Board

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

Book. Mr. Buccigross stated that the majority of the items on the 2006 Annual Plan have been completed and were completed on time.

Item 4 – Review of minimum technical characteristics in Appendices, B, C, and D of the WGQ QEDM Manual will likely be on the WGQ 2007 Annual Plan as the WGQ Electronic Delivery Mechanisms Subcommittee conducts this review of the QEDM every year. The WGQ will also include any modifications that are deemed to be necessary as a result of the review of the surety assessment findings and recommendations issued by the Department of Energy and Sandia National Laboratories in the WGQ 2007 Annual Plan.

Wholesale Electric Quadrant: Mr. Desselle reviewed the progress of the WEQ Executive Committee. The WEQ 2006 Annual Plan as revised by the WEQ Executive Committee during the August 15, 2006 meeting is included behind Tab 6, pages 159-164 of the Board Book. Item 1(a)(ii) – Review the NAESB WEQ "Version 0" business practice standards and remove any references to ERCOT (R05007) was ratified on June 22, 2006. Item 2 – Develop business practice standards for Version 1 to support ATC calculations was modified to include the expanded request to include the OATT NOPR items. Item 3(a)(i) – Business Practices for Resale or Reassignment of transmission service (R04006D) has been posted for ratification, with ballots due on October 2, 2006.Item 3(a)(x) – Respond to issues in FERC Order No. 676 (Docket NO. RM05-5-000) – NAESB WEQ Standards 001-9.7, (paragraph 51 of the order) was delayed awaiting an order on rehearing. Item 3(c) – Develop business practices as needed for clarification of definitions and terminology in the Standards of Conduct has been posted for ratification, with ballots due on October 2, 2006.

Joint Retail Quadrants' Annual Plan: Mr. Novak reviewed the progress of the 2006 Annual Plan for the Retail Gas and Retail Electric Quadrants as revised by the Retail Gas and Electric Executive Committees during the August 16, 2006 conference call. The revised Annual Plan was included behind Tab 6, pages 165-169 of the Board Book. The Billing & Payment model business practices for reversal and reissue, transformer loss factors, budget billing and payment plans, and missed bill windows have been completed by the Retail Business Practices Subcommittee and submitted to the Information Requirements Subcommittee. It is the expectation that the Retail Executive Committees will vote on recommendations for Pre-Enrollment Customer Information, Electronic Retail Billing, Customer Enrollment, and the Retail Contract at the November Executive Committee meeting.

Mr. Chapman moved, seconded by Mr. Lucas, to approve all three Annual Plans as modified in the Board Book. The motion unanimously passed a simple majority vote. [*Vote 1*].

Annual Plans for 2007: Ms. McQuade stated that the WGQ and Retail Quadrants have begun the process to draft the 2007 Annual Plans. An e-mail was distributed to any interested party to request submission of prospective Annual Plan Items for the 2007 Annual Plans with responses due on October 11. The proposals will be presented to the Executive Committees during the November Executive Committee meetings and presented to the Board of Directors for approval during the December meeting.

The draft of the WEQ 2007 Annual Plan will be developed by the subcommittee chairs and presented for comment to the entire WEQ. The 2007 Annual Plan will be presented to the WEQ Executive Committee at the November Executive Committee meeting and presented to the Board of Directors for approval during the December meeting.

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

Standards Adopted Since the June 22 Board Meeting: Ms. McQuade stated that thirteen requests have been submitted since the June 22 Board Meeting. All thirteen requests have been assigned to the WGQ.

NAESB has submitted two FERC Filings since the June 22 Board Meeting: On June 28, 2006 in Docket No. RM05-28-000: permanent numbers were assigned to the NAESB WGQ and WEQ standards to implement uniform gas/electric coordination communications that were previously provided to the Commission on June 27, 2005. The renumbered standards were provided to the FERC for the Commission's reference. On August 7, 2006 in Docket Nos. RM05-25-000 and RM05-17-000: NAESB reviewed the NOPR issued in the referenced Dockets and identified potential NAESB standards development efforts. The analysis includes identification of possible NAESB standards development tasks, estimates of the level of effort for each task, and identifies possible task interdependencies.

The Recommendations that have been ratified since the June 22 Board Meeting can be found behind Tab 6 on pages 171-172 of the Board Book.

5. Financial Report

Ms. McQuade provided the Financial Report. The material that corresponds to this agenda item can be found behind Tab 7 of the Board Book. As of July 31, NAESB had $792,509.05 in Total Assets and Total Liability and Equity. The Total Accounts Receivable as of July 2006 was $299,500, with only $15,500 90 days or more outstanding. On September 12, 2006, Dishongh, Jankowski and Eubank, PC began the financial review of the 2005 financial statements. There are currently 319 members.

6. Plan for December 14, 2006 Board Meeting

The December 14, 2006 Board Meeting is scheduled at the Marriott Houston Intercontinental Hotel. The meeting is scheduled from 9:00 AM to 1:00 PM Central.

7. Old and New Business

Mr. Ellsworth provided a presentation titled "Natural Gas Pipeline Regional Disruption Project". Mr. Ellsworth stated that he and Mr. Smead were members of the Natural Gas Pipeline Regional Disruption Project sponsored by the Department of Energy – Office of Electricity Delivery and Energy Reliability. The objective of this effort is to "provide information and analyses to assist development of effective policies and action plans to assure natural gas deliveries in the face of potential disruptions."

8. Adjourn

The meeting adjourned by consensus at 12:53 PM Central.

9. Board Attendance (Vacancies Omitted)

Wholesale Gas Quadrant Board Members

PRODUCERS SEGMENT		ATTENDANCE:	VOTE 1
Jay Ellzey	Manager – Regulatory and Opco Support, ChevronTexaco Natural Gas	Absent	
William T. Benham	Vice President – Regulatory Affairs, BP Energy Company	Absent	
Keith Sappenfield	Regional Director – US Regulatory Affairs, EnCana Oil & Gas (USA) Inc.	In Person	Support
Pete Frost	Director - Regulatory Affairs, ConocoPhillips Gas and Power Marketing	Absent	
PIPELINE SEGMENT			
Jim Goldmann	Vice President for Transportation Services and Development, Alliance Pipeline	Absent	
Larry Smith	Vice President Commercial Operations, Tennessee Gas Pipeline Company	In Person	Support
Bill Grygar	Vice President, Panhandle Eastern Pipe Line	Absent	
Anne Bomar	Vice President, Dominion	Phone	Support
Richard Kruse	Senior Vice President, Duke Energy Gas Transmission	In Person	Support
LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT			
Clifton Olson	Vice President of Supply and Transmission, Energy East Corporation	Phone	Support
Adrian Chapman	Vice President, Regulatory Affairs & Energy Acquisition, Washington Gas	In Person	Support
Reed Horting	Vice President, Gas Supply & Transportation, PECO Energy Co.	In Person	Support
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	Phone	Support
Lee Stewart	Senior Vice President, Gas Transmission, Southern California Gas Company		
END USERS SEGMENT			
Valerie Crockett	Tennessee Valley Authority	In Person	Support
Joe Stepenovitch		In Person	Support
Diane McVicker	Senior Principal Fuel Analyst, Salt River Project	In Person	Support
Terry Morrison	Vice President of Energy Marketing and Trading, Florida Power & Light	In Person	Support
Jim Templeton	Principal, Comprehensive Energy Services	Absent	
SERVICES SEGMENT			
John Bretz	Vice President - Gas Marketing, Anadarko Energy Services Company	Absent	
Michael Smith	Vice President—Regulatory and Legislative Affairs, Constellation Energy Commodities Group	Absent	
Jim Buccigross	Vice President Energy Industry Practice, Group 8760 LLC	Phone	Support

Retail Electric Quadrant Board Members

SUPPLIERS SEGMENT	ATTENDANCE:	VOTE 1

Assembled Document Page 23 of 255

Peter Kelly-Detwiler	Director of Operations, Constellation NewEnergy	Absent	
Richard Zelenko	General Manager, Dominion Retail Inc.	Absent	
DISTRIBUTORS SEGMENT			
David Koogler	Director – State Regulation, Dominion Virginia Power (SERC NERC Region)	In Person	Support
Bill Bourbonnais	Vice President - Transmission, WPS Resources Corporation (MAIN NERC Region)	In Person	Support
Ruth Kiselewich	Director Special Projects and Supplier Services, Baltimore Gas & Electric Company (MAAC NERC Region)	In Person	Support
Leonard Haynes	Executive Vice President, Supply Technologies, Renewables, and Demand, Southern Company Services (SERC NERC Region)	In Person	Support
END USERS SEGMENT			
Sonny Popowsky	Consumer Advocate, Pennsylvania Office of Consumer Advocate	Absent	
SERVICE PROVIDERS SEGMENT			
Jim Minneman	Director of Business Services, PPL Solutions LLC	Absent	
J Cade Burks	President, EC Power	In Person	Support

Wholesale Electric Quadrant Board Members

TRANSMISSION SEGMENT		SUBSEGMENT:	ATTENDANCE	VOTE 1
Dan Klempel	Director Transmission Regulatory Compliance, Basin Electric Power Cooperative	Muni/Coop	In Person	Support
W Terry Boston	Executive Vice President – Transmission/Power Supply Group, Tennessee Valley Authority	Fed/State/Prov.	Absent	
John E. Lucas	Manager, Transmission Services, Southern Company	IOU	In Person	Support
Michael Desselle	Chief Administrative Officer and Vice President of Process Integrity – Southwest Power Pool	IOU	In Person	Support
Paul McCoy	Managing Director & Chief Operating Officer, Trans-Elect	ITC	Absent	
Ken Wiley	President and Chief Executive Officer, Florida Reliability Coordinating Council	At-Large	Absent	
GENERATION SEGMENT				
Curtis Winterfeld	Vice President of Power Marketing, Deseret Generation & Transmission Cooperative	Muni/Coop	Absent	
Belinda Thornton	Senior Manager – Real Time Trading, Tennessee Valley Authority	Fed/State/Prov.	Absent	
John J. Dellas	Executive Manager, Electric Supply, Consumers Energy	IOU	Absent	
Charles W. Severance	Manager – Supply & Wholesale Services, Wisconsin Public Service Corporation	IOU	In Person	Support
Michael Gildea	Executive Director, Regulatory Affairs, Constellation Generation Group	Merchant	Absent	
Gloria Ogenyi	Vice President Energy Policy, Conectiv Energy Supply, Inc.	Merchant	Phone	Support

Assembled Document Page 24 of 255

Ron Mucci	Senior Vice President Shared Services, Williams Power Company	At-Large	Absent	
MARKETERS/BROKERS SEGMENT				
Roy True	Manager of RTO Market Development, ACES Power Marketing	Muni/Coop	In Person	Support
Jeff Ackerman	Manager, Colorado River Storage Project Energy Management and Marketing Office, Western Area Power Administration	Fed/State/Prov.	Absent	
Michael Grim	Director of Markets and Regulation, TXU Business Services	Not IOU Affiliated	Phone	Support
Joseph Hartsoe	Vice President and Associate General Counsel, American Electric Power Service Corp.	IOU	Absent	
R. Scott Brown	Vice President and Director, Exelon Generation Power Team	IOU	In Person	Support
Rick Smead	Director, Navigant Consulting, Inc.	At-Large	In Person	Support
DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT		**SUBSEGMENT:**		
Arthur G. Fusco	Vice President and General Counsel, Central Electric Power Cooperative Inc.	Muni/Coop	Phone	Support
Barry R. Lawson	Manager-Power Delivery, National Rural Electric Cooperative Association	Muni/Coop	Phone	Support
Mark Crosswhite	Senior Vice President & General Counsel – Generation and Energy Marketing, Southern Company	IOU	Absent	
Frank Johnson	Senior Vice President Electric Transmission and Distribution, Consumers Energy	IOU	Absent	
Bruce Ellsworth	New York State Reliability Council	At-Large	In Person	Support
END USERS SEGMENT				
Carol Guthrie	General Manager, Electric Market Strategies, ChevronTexaco Energy Research and Technology Company	End Use (Self Generator)	Absent	
John Reese	Senior Policy Advisor & Director of the Office of Economic Development and Policy, New York State Department of Public Service	Regulator	Absent	
Jeanne Zaiontz	Director, Regulatory Affairs, BP Energy Co.	Large Industrial	Absent	
John A. Anderson	President and CEO, Electricity Consumers Resource Council (ELCON)	Large Industrial	In Person	Support
Kevin Burns	Vice President Sales and Marketing, Open Access Technology International, Inc.	At-Large	Absent	

Retail Gas Quadrant Board Members

SUPPLIERS SEGMENT		**ATTENDANCE:**	**VOTE 1**
Kathy Fudali	Manager, Contract Administration, Sprague Energy Corp.	Absent	

Assembled Document Page 25 of 255

DISTRIBUTORS SEGMENT			
Craig White	Chief Operating Officer, Philadelphia Gas Works	Absent	
Mark T. Maassel	President, Northern Indiana Public Service Company (NiSource, Inc.)	Absent	
Ralph Cleveland	Senior Vice President – Engineering and Operations, AGL Resources, Inc.	Absent	
END USERS SEGMENT			
SERVICE PROVIDERS SEGMENT			
Leigh Spangler	President, Latitude Technologies Inc.	In Person	Support
Dave Darnell	President & CEO, Systrends USA	Phone	Support
Greg Lander	Principal, Commerce Energy Group	Absent	

10. Other Attendance

Name	Organization	Attendance
Barbara Alexander	State of Maine Public Advocate	Phone
Kathryn Burch	Duke Energy Gas Transmission	In Person
Christopher Burden	Williams Gas Pipeline	In Person
LaRita Cormier	Riverside Reporting	In Person
Dale Davis	Williams Gas Pipeline	In Person
Rhonda Denton	BP Energy	In Person
Mark Gracey	Tennessee Gas Pipeline	In Person
Dona Gussow	Florida Power and Light	Phone
Laura Kennedy	NAESB	In Person
Deborah McKeever	TXU Electric Delivery	In Person
Rae McQuade	NAESB	In Person
Susan Munson	ERCOT	In Person
Phil Precht	Baltimore Gas and Electric	Phone
Lisa Simpkins	Constellation Energy Commodities Group	In Person
Veronica Thomason	NAESB	In Person
Kim Van Pelt	Panhandle Eastern Pipe Line	Phone
Tommy Weathersbee	TXU Electric Delivery	In Person
Charles Yeung	Southwest Power Pool	In Person

TAB 4

BOARD COMMITTEE UPDATES

This section includes:

- Most reports of each of the following board committees as posted on the web site:
  - Resources Committee analysis report
  - Retail Structure Review Report and motion to adopt report.
- The material presented is background information for the discussion of agenda item 2. Depending on the course of the discussion, there may be a simple majority vote to approve the direction recommended by the Retail Structure Review Committee.

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

December 8, 2006

TO: NAESB Resources committee

FROM: Rae McQuade, NAESB President and COO

RE: Membership Analysis, Vacancies on the Board and EC, Membership Prospects

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) groups, (c) long-term.
(2) New Members in 2006
(3) Member Resignations in 2006
(4) Vacancies on the Board and Executive Committee
(6) Membership Roster Sorted by Company

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

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
WEQ	Michael Desselle, Southwest Power Pool	501-614-3206	mddesselle@spp.org
WEQ	Bruce Ellsworth, New York State Reliability Council	603-746-3447	ellsworth@conket.com
WEQ	Mike Grim, TXU Business Services	214-875-9595	mike.grim@txu.com
WEQ	Roy True, Aces Power Marketing	317-344-7203	royt@acespower.com
REQ	Leonard Haynes, Southern Company	404-506-0206	ljhaynes@southernco.com
WGQ	Bill Hebenstreit, Cheniere Marketing, Inc.	832- 518-4629	bhebenstreit@cheniere.com
REQ	David Koogler, Dominion Virginia Power	804-771-3429	David_koogler@dom.com
RGQ	Mark Maassel, NiSource	219-647-6400	mtmaassel@nisource.com
WEQ	Gloria Ogenyi, Conectiv Energy	302-451-5365	gloria.ogenyi@conectiv.com
WGQ	Joe Stepenovitch	561 371-4722	joestep@bellsouth.net
WGQ	Jim Templeton, Comprehensive Energy Services	713-759-6999	jtemplton@aol.com

Invitations to join the committee have been made to:

- Ron Mucci -- Williams Power

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

Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

	Membership Prospects	Source	Contact/Notes	Assignment
	Advantage IQ, Inc.	office	Suzanne Figy, interested in NAESB Retail would like to participate in development of billing and payment process.	D. Rager
	Advanced Energy	D. Koogler		D. Koogler
	Alcoa	office	Steve Frank, interested in NAESB contract and in membership, letter sent 7-10-06.	D. Rager
✔	***Allegheny Energy, Inc. - Allegheny Power***	EEI - NERC	Terri Grabiak, possible interest as a WEQ board member. Materials provided 7-20-06. Mr. Brown followed up with them prior to 8/22/06 meeting. ***Has Joined***	S. Brown
	APPA			
	American Wind Energy Assoc.			R. McQuade
	BFI Waste Mgmt.			
✔	***California Department of Water***	***office***	***Debbie Terzoli, asked for payee data record completion before she can process membership application and remit payment (WEQ, Generation segment). Has Joined***	***D. Rager***
	Chesapeake Energy	office	James C. "Jim" Johnson, President of Chesapeake Energy Marketing, Inc. Initial contact was Bill Hebenstreit. Letter to Jim should be sent from the office shortly	B. Hebenstreit
	Choice Energy Services	M. Novak	Jeff Sterba, membership packet sent by NAESB office as requested by M. Novak.	M. Novak
	Cirro Energy Services	M. Novak	Jeff Nottingham, membership packet sent by NAESB office as requested by M. Novak.	M. Novak
✔	***Citigroup***	office	Angela D. Davis, joining WGQ, Services segment –***Has Joined***	
		office	Jim Torgerson. Understands NAESB process. Should contact shortly.	R. McQuade
	Coral Energy Resources, LP	office	Eric Gillaspie submitted application WGQ, Services segment and has been invoiced for fees – ***Has Not Paid***	

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

Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

Membership Prospects		Source	Contact/Notes	Assignment
	Coral Power, LLC	office	Robert Reilley submitted application WEQ, Marketer/Broker segment and has been invoiced for fees – ***Has Not Paid***	
✔	***Deseret Power***	***NRECA***	***Curt Winterfeld, interested in a WEQ Board seat, has received membership info from the office. Waiting for membership form and payment (invoice sent). Has Joined***	***B Lawson***
	Devon Energy		Bill Green. John Bretz of Anadarko, has offered to follow up.	B. Hebenstreit
	Duke Energy Corp	office	Dan Jones submitted application to join REQ, Distributors – ***Has Not Paid***	D. Rager
✔	***Electric Power Supply Association EPSA***		Mark Bennett submitted application WEQ, Marketer/Broker segment and payment – ***Has Joined***	S. Brown
	E.ON U.S. (LG&E Energy, Kentucky Utilities, Western Kentucky Energy))	office	Daryn Barker, interested in access to NAESB work products, requested information on NAESB membership. Letter sent to Mr. Barker on 7-14-06.	D. Rager
	Entessa	office	Marcus Patrinicola, interested in certification, pricing makes it advantageous to be a member.	D. Kirby
	EOG Resources		Mark G. Papa. Letter to Mark should be sent from the office shortly.	B. Hebenstreit
	First Choice Power	M. Novak	Jeff Sterba, membership packet sent by NAESB office as requested by M. Novak.	M. Novak
	First Energy		Going to join as of September 2006 meeting	R. McQuade
	General Motors	office	Jon Shuh, former GISB Board member, interested in possible membership and Board seat, letter sent 7-10-06 – ***Should be removed – Jon is unable to join at this time.***	R McQuade
✔	***Hess Energy***		Contact J. Cooper submitted application for WGQ, Services segment– ***Has Joined***	

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

Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

	Membership Prospects	Source	Contact/Notes	Assignment
✔	***JP Morgan Ventures Energy Corp***	office	Ike Gibbs, submitted application to join WGQ, Services – ***Has Joined***	D. Rager
	Lehman Brothers Commodity Services, Inc.	office	David Perlman submitted application to join WGQ, Services – ***Has Not Paid***	
	Liberty Power	R. Kiselewich	David Hernandez, membership packet sent by NAESB office as requested by M. Novak to be sent to Mr. Hernandez.	R. Kiselewich/ M. Novak
	Lincoln Electric System	office	Douglas Bantam submitted application WEQ, Generation segment – ***Has Not Paid***	
	LODESTAR Corporation	office	Carolyn Heinen, Interested in participation software provider company covering both wholesale and retail markets.	D. Rager
	Lukens Energy Group, a subsidiary of Black and Veetch	***office***	***Possible membership, partner with Rich Rudden – not able to pursue at this time***	***R McQuade***
	Marriott	Office	EJ Hilt, possible membership	D. Kirby
	Merrill Lynch	office	Anchalee Do, asked about contract, WGQ, could result in several memberships. Letter sent 7-11-06.	L Kennedy
	MRO			B. Bourbonnais
	New Era Energy, Inc.	M. Edwards	Jack Greenhalgh, relationship with SAIC may be interested in joining.	M. Edwards
	New Jersey Division of the Ratepayer	office	Felicia Thomas-Friel, initial contact was Barbara R. Alexander. Possible interest in membership	D. Rager
	Newfield Exploration		David Sills. In March of 2005, their management decided not to join NAESB. The office will send a letter to their CEO, David A. Trice shortly.	B. Hebenstreit
	Noble Energy		Robert K. "Bob" Burleson, president of their marketing affiliate, Noble Energy Marketing, Inc. Letter to Bob should be sent from the office shortly.	B. Hebenstreit
x	NRG Energy	office	Lloyd Will, initial contact was Kevin Burns. He is interested in membership. We have sent a membership packet. He may be	R. McQuade

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

Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

	Membership Prospects	Source	Contact/Notes	Assignment
			interested in a leadership role. Mr. Brown contacted NRG prior to the 8/22/06 meeting. NRG is still interested in membership but no commitment has been made. ***10/18/06 – Note – NRG not going to join***	
	Power Holdings of Illinois	office	Steve Shaw, Power Holdings of Illinois LLC contacted Denise Rager regarding the gas contract and possible membership or access to standards. Letter sent on 7-12-06.	D. Rager
	Public Service of New Mexico	office	David Eubank, Manager of Transmission Contracts and Policy Analysis, is interested and will comment on our OATT Analysis and asked for membership information.	L. Kennedy
✔	***Reliant Energy Services***	S. Brown	Gary A. Hinners submitted application WEQ, Generation segment and payment – ***Has Joined***	S. Brown
	Seattle City Light	office	Bill Gaines. Initial contact was Jim Hansen.	R. McQuade
	Shell Trading	S. Brown		S. Brown
	Siemens NewEnergy Associates	office	Bob Usher, Initial contact was Dave Koogler. Possible interest in membership. Material sent. Has indicated they might join depending on the 2007 Annual Plan 10/18/06	D. Rager, D. Koogler will follow up on this lead
✔	***Sierra Pacific Resources***	***office***	***Marilyn Franz, attendee to many NAESB meetings. Considering membership but weighing it against the $2 million in dues to support WECC, NERC and FERC(?) submitted application WEQ, Transmission segment - Has Joined***	***L Kennedy, R McQuade***
	Strategic Energy, LLC	office	Pam Melton, interested in possibly filling a vacany in the retail electric quadrant.	D. Rager, R. Kiselewich
	Structure Group	office	Lisa Blackwood, possible interest in membership, lunch set up with Cade Burk who was initial contact	R. McQuade

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

Attachment 2a

NAESB Membership Prospects – Short Term, Individual Companies and Organizations

	Membership Prospects	Source	Contact/Notes	Assignment
x	Summit Power	office	Mike Gent, possible interest in NAESB membership, letter sent on 7-14-06. Summit Power is going to join 10/18/06 – ***should be removed Summit has determined not to join due to conflicts of interest. Mike has joined the Board representing OATI.***	R. McQuade, S. Brown
	Targa Resources, Inc.	office	Janet Sullivan, initial contact was Ellen Klecka. Possible interest in membership.	D. Rager
	Textron Financial	office	Lisa M. Rubano, called Denise about access to materials and the contract. Possible interest in membership. Letter sent 7-12-06.	D. Rager
	UIL Holding Corporation -- Connecticut Power and Light	office	Jim Torgerson, Rae has contacted regarding membership – will probably join by yearend.	R. McQuade
	Vectren Corporation - Southern Indiana Gas and Electric Company			
	Virginia Citizens Consumer Council	office	Irene Leech. Initial contact was Dave Koogler. Possible interest in membership. Material sent.	D. Rager, D. Koogler will follow up on this lead
	XTO Energy		Bob R. Simpson, CEO. Letter to Bob should be sent from the office shortly.	B. Hebenstreit

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

Attachment 2b

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
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	Conference call held with J Ackerman, B Schwermann, M Wells and L Westerfield. Should have opportunity on October 27 to speak to them about NAESB.	S Brown/M Desselle/R. McQuade

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

Attachment 2c

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		
British Columbia Transmission Corporation	NERC		
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		
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		

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

Attachment 2c

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		
Nuclear Management Company, LLC	EEI		
OGE Energy Corporation - OG&E Electric Services	EEI - NERC		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		
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		

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

Attachment 2c

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		M. Desselle
Wheelabrator Technologies Inc.	EPSA		
Wolf Creek Nuclear Operating Corporation	EEI		

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

Attachment 3

North American Energy Standards Board
New Members since January 2006

Quadrant	Segment	Contact and Company	Reason Joined	Month Joined
WEQ	Generation	Allegheny Energy, Inc.	Run for Board seat – Terri Grabiak	October
WGQ	LDC	American Public Gas Association (APGA)	Company participation	November
WEQ	Generation	California Department of Water Resources	Company participation	September
WGQ	Services	Cheniere LNG Marketing, Inc., Mark Stubbe and Tammy Miller	Stan Horton, new marketing company	February
WGQ	Services	Citigroup Energy, Inc.	Access to Standards, Models and Contracts	October
WEQ	Generation	Deseret Generation & Transmission Co-operative – Curtis Winterfeld	Barry Lawson, interest in NAESB WEQ Board seat	July
WGQ	Services	DTE Energy Trading, Inc., Miki Kolobara	Company participation on the gas side	May
WEQ	Marketer/Broker	Electric Power Supply Association (EPSA)	Participation and run for Board seat	December
WGQ	End User	FPL Energy Power Marketing, Inc.	Access to Standards, Models and Contracts	September
WGQ	Services	Hess Corporation	Company participation and access to standards and contracts	November
WEQ	Transmission	Hydro One Networks, Mark Graham	No reason given at this time	April
RGQ	Supplier	Interstate Gas Supply, Elizabeth Clothier	Company participation on the gas side	May
WGQ	Services	J.P. Morgan Ventures Energy Corp.	Company participation and access to standards and contracts	September
WGQ	Services	Macquarie Cook Energy, LLC, Angela Jones	No reason given at this time	May
WEq	Marketer/Broker	MidAmerican Energy Company	No reason given at this time	August
WGQ	End User	Mirant Energy Trading, LLC, Laura Trautman and Nicole Daggs	Scott Brown	April
WGQ	Services	ONEOK, Patricia Anderson	Company participation on the gas side	May
WGQ	Services	Pemex Gas Y Petroquimica Basica, Juan Enrique Gonzalez Azuara	Rejoined after difficulties with accounting systems in Pemex	July**
WEQ	Marketer	Powerex Corp., Michael L. McWilliams,	Access to Standards, Models and Contracts	May
WEQ	Generation	Reliant Energy Services	Access ot Standards, Models and Contracts	October
WEQ	Transmission	Sierra Pacific Resources	No reason given at this time	November

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

Attachment 3

North American Energy Standards Board
New Members since January 2006

WEQ	Transmission	South Carolina Electric & Gas Company, S. Porcher Stoney	Company participation on the electric side	January
WEQ	Marketer	South Carolina Electri & Gas Company	No reason given at this time	August
WEQ	Marketer	SUEZ Energy Marketing NA, Inc., Ken Lackey/Cesar Seymour	Company needed access to documents	February
REQ	Distribution	TXU Electric Delivery, Tommy Weathersbee and Debbie McKeever	ERCOT references of NAESB and Debbie McKeever	January
WGQ	Services	Vega Energy Partners, Ltd.	Access to Standards, Models and Contracts	September

** Membership dues not yet received.

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

Attachment 4

North American Energy Standards Board
Member Resignations in 2006

Quadrant	Segment	Contact and Company	Reason Resigned	Month Resigned
WEQ	End User	Boeing Company, Steve LaFond	Consolidating multiple memberships	February
WEQ	Generation	Calpine Corporation, William Taylor/Jim Stanton	Shifting Priorities	May
REQ	Supplier	Calpine Energy Services, LP, Janet Dixon	Contact left, company no longer interested in renewing membership	October
WGQ	End User	Cingery	Company merger with Duke	September
WGQ	End User	Cinergy – regulated, John Procario	Company merger with Duke	March
WEQ	End User	Cinergy, John Procario	Company merger with Duke	March
WGQ	Services	Cinergy Marketing and Trading, Maribeth Bedevian	Company merger with Duke	October
REQ	Distribution	Cinergy Services, Inc., Paul K. Jett	Company decision to not renew	October
WEQ	Generation	Consumers Energy Company	Interest covered by participation in WEQ, Distribution segment	September
REQ	End Users	Defense Energy Support Center, Lisa Robert	Company accounting, may rejoin in the future	November
RGQ	Supplier	Duke Energy Gas Transmission	Company merger with Cinergy	August
WEQ	Marketer	Duke Energy Americas, LOC (DEA), Walt Yeager	Company merger with Cinergy	October
WEQ	Marketer	DTE Energy, David G. Nick	Shifting Priorities	January
WGQ	Pipeline	Enbridge Offshore Pipelines, LLC, Chuck Cook and Neal Gerstandt	Will purchase documents as needed and understands copyright policy for access to standards for non-members	April
WEQ	Marketer	Entergy Services, Inc., James M. Smith	Budget Cuts	June
WEQ	Transmission	ITC Transmission, Jim D. Cyrulewski	No reason given for non renewal	November
WGQ	Producer	Kerr-McGee Oil and Gas Company	Company merger with Anadarko	October
WEQ	End User	Minneapolis Consulting Group, Mike Pritchett	Shifting Priorities	July
WGQ	LDC	Nicor Gas, Mary Wolosek and Shirley Holmes	Cost savings initiative	December
WGQ	Services	NJR Energy Services Company, Ginger Richman	No reason given for non renewal	November
WEQ	Generation	Oglethorpe Power Corporation, Billy Ussery	Shifting Priorities	June
WGQ	Services	Oxadel Consulting, LLC, Lyn Maddox	Changing positions	May
WGQ	Services	Pemex Gas Y Petroquimica Basica, Juan Enrique Gonzales Azuara	Accounting reorganization	June
WGQ	Pipeline	Portland General Electric, Kathy Davies	No reason given for non renewal	October
WGQ	Services	Powerex Corp., Sharole Tylor	Will participate under other membership help by Powerex	October

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

Attachment 4

North American Energy Standards Board
Member Resignations in 2006

RGQ	Services	R.J. Rudden Associates, Inc., Richard J. Rudden/Don Sytsma,	Shifting Priorities	January
REQ	Distribution	Savannah Electric and Power Company, Osman Bholat	Shifting Priorities	April
WGQ	Services	SolArc Inc., Angie Brashears	Contact left, company not interested in renewing membership	October
WEQ	Transmission	Sunflower Electric Power Coroporation, L. Earl Watkins	No reason given for non renewal	October
RGQ	Services	SunGard EnForm Consulting, David F. Pfeifer	Contact left, company not interested in renewing.	March
WGQ	Services	Telvent, William (Bill) Morrow	Company strategic direction has changed	October
RGQ	Distribution	Union Gas, Greg Tetreault	Company may consider rejoining next year	October

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

Attachment 5

North American Energy Standards Board
Vacancies on the Board and Executive Committee as of December 8, 2006

Vacant Seats	Quadrant	Seat	Segment	Subsegment
11	Retail Electric	Board (7)		
			End User (3)	
			Service Providers (2)	
			Supplier (2)	
		Executive Committee (4)	End User (3)	
			Supplier (1)	
35	Retail Gas	Board (17)	Distribution (3)	
			End User (6)	
			Service Providers (3)	
			Suppliers (5)	
		Executive Committee (18)	Distribution (3)	
			End User (6)	
			Service Providers (5)	
			Suppliers (4)	
18	Wholesale Electric	Board (7)	Distribution/LSE (2)	Other (1) Competitive Retailer (1)
			End User (2)	Commercial/Residential (1) Investor Owned Utility (In other segments) (1)
			Generation (1)	IOU
			Marketer/Broker (1)	Non-Investor Owned Utility
			Transmission (1)	Independent Transmission Company
		Executive Committee (11)	Distribution/LSE (2)	Competitive Retailer (1) At Large (1)
			End User (4)	Large Industrial (1) End Use – Self Generation (1) Commercial/Residential (1) End Use (In other segments) (1)
			Generation (2)	Merchant (1) At Large (1)
			Marketer/Broker (2)	Not IOU Affiliated(1) At Large (1)
			Transmission (1)	Independent Transmission Company (1)
2	Wholesale Gas	Board (2)	Producers (1)	
			Services (1)	

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

Attachment 5

North American Energy Standards Board
Vacancies on the Board and Executive Committee as of December 8, 2006

Vacant Seats	Quadrant	Seat	Segment	Subsegment
		Executive Committee (0)		

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
8760	WGQ	s	Jim Buccigross
ACES Power Marketing LLC	WEQ	m	Roy J. True
American Electric Power Service Corp.	WGQ	s	Cathy Szasz
AGL Resources Inc.	RGQ	d	Katrina Bond
Alabama Electric Cooperative, Inc.	WEQ	d	William Ronald Graham
Alabama Power	REQ	d	Judy W. Ray Yvette Camp
Allegheny Energy, Inc.	WEQ	t	Terri Grabiak
Alliance Pipeline LP	WGQ	pl	Neil Coghlan
Ameren Corporation	WGQ	l	Scott Glaeser
Ameren Services	WEQ	m	Shawn Schukar
Ameren Services Company	REQ	d	Patrick Eynon
American Electric Power Service Corp.	WEQ	m	Barbara Radous Joseph Hartsoe Phil Cox
American Electric Power Service Corp.	WEQ	t	John Stough
American Municipal Power - Ohio, Inc.	WEQ	d	Pat Frazier Chris Norton
American Public Gas Association (APGA)	WGQ	l	Alonzo Weaver
American Public Power Association	WEQ	d	Allen Mosher
American Transmission Company LLC	WEQ	t	Julie Voeck
Anadarko Energy Services Company	WGQ	s	John Bretz
Apache Corporation	WGQ	pr	Kelley Powell
Aquila, Inc.	WEQ	g	Tom Saitta
Arizona Public Service Company	WGQ	e	Ken Nordlander Kelly Daly Curt Brechtel Norm Spooner
Arizona Public Service Company	WEQ	t	Mark W. Hackney
Atmos Energy	WGQ	pl	Steve Easley
Ballard Natural Gas, LLC	WGQ	s	Susan Thibodeaux
Baltimore Gas & Electric Co.	REQ	d	Ruth Kiselewich
Baltimore Gas & Electric Co.	WGQ	l	Phil Precht
Baltimore Gas & Electric Company	RGQ	d	Phil Precht
Barclays Bank PLC	WGQ	s	Guy Kern-Martin
Basin Electric Power Cooperative	WEQ	g	Jason Doerr

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
Basin Electric Power Cooperative	WEQ	m	David Raatz
Basin Electric Power Cooperative	WEQ	t	Dan Klempel
BG LNG Services, LLC	WGQ	s	Martha Braddy
Boeing Company, The	WGQ	e	Tina Burnett
Bonneville Power Administration	WEQ	d	Sydney D. Berwager
Bonneville Power Administration	WEQ	g	Francis Halpin
Bonneville Power Administration	WEQ	m	Brenda Anderson
Bonneville Power Administration	WEQ	t	Barbara Rehman
BP America Inc.	WEQ	e	Jeanne Zaiontz
BP Energy	WGQ	pr	Bill Benham Lauren Kaestner
Bridgeline Gas Marketing	WGQ	pl	Georgia Blanchard
Burlington Resources	WGQ	pr	Paul Keeler
California Department of Water Resources	WEQ	g	William (Bill) Forsythe
Calpine Energy Services, LP	WGQ	e	Janet Dixon Craig Chancellor
Cargill Incorporated	WGQ	s	Kathy Gerken
Cascade Natural Gas Corporation	WGQ	l	Mark Sellers-Vaughn
Center Point Energy Minnegasco	RGQ	su	Andrea Newman
CenterPoint Energy Gas Services, Inc.	WGQ	s	James G. Beste
CenterPoint Energy Gas Transmission Company	WGQ	pl	Larry Thomas
CenterPoint Energy Mississippi River Transmission Corp.	WGQ	pl	Robert Trost
Central Electric Power Cooperative	WEQ	d	Arthur Fusco
Chandeleur Pipe Line Company	WGQ	pl	Janice E. Rogers
Cheniere Marketing, Inc.	WGQ	s	Mark Stubbe Tammy Miller
Chevron/Texaco	WGQ	pr	Charles (Chuck) Cook
ChevronTexaco Energy Research and Technology	WEQ	e	Carol Guthrie
Cimarex Energy Co.	WGQ	pr	Charlotte Baker
Citigroup Energy, Inc.	WGQ	s	Carrie Southard Angela Davis
Cleco Power, LOC	WEQ	t	Cindy Guillot
Columbia Gas Transmission Corporation	WGQ	pl	Carl Levander
Commerce Energy Group	RGQ	s	Greg Lander
Comprehensive Energy Services	WGQ	e	Jim Templeton
Comprehensive Energy Services	WEQ	e	Jim Templeton
Conectiv Energy Supply, Inc.	WEQ	g	Gloria Ogenyi

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
			Paul Dwyer
Conectiv Energy Supply, Inc.	WEQ	m	Gloria Ogenyi Paul Dwyer
ConocoPhillips Gas and Power	WGQ	pr	Peter Frost
Consolidated Edison Company of New York, Inc.	WEQ	t	Scott Butler
Consolidated Edison Company of NY	REQ	d	Hollis Krieger
Consolidated Edison Company of NY	WGQ	l	Scott Butler Paul Olmsted
Constellation Energy Commodities Group, Inc.	WGQ	s	Lisa Simpkins
Constellation Generation Group	WEQ	g	Michael Gildea
Constellation NewEnergy, Inc.	REQ	su	Sara O'Neill Peter Kelly-Detwiler Jansen Pollock
Consumers Energy Company	WEQ	d	Andrew C. Dotterweich Frank Johnson
Dairyland Power Cooperative	WEQ	t	Chuck Callies
Dauphin Island Gathering Partners	WGQ	pl	Katie Rice
Defense Energy Support Center	WGQ	e	Veronica Jones Kevin Ahern
Department of Energy	WGQ	e	Christopher Freitas
Department of the Interior, US Bureau of Reclamation	WEQ	g	Deborah M. Linke
Deseret Generation & Transmission Co-operative	WEQ	g	Curtis Winterfeld
Direct Energy Business Services	REQ	su	David Booty
Dominion Energy Marketing, Inc.	WEQ	g	Louis Oberski
Dominion Exploration and Production, Inc.	WGQ	pr	David Ogden Gary Weaver Sheri Heslington
Dominion Resources	WGQ	l	Craig Colombo
Dominion Retail	REQ	su	William Barkas Richard Zelenko
Dominion Retail, Inc.	RGQ	su	Richard A. Zollars
Dominion Transmission, Inc.	WGQ	pl	Gary Sypolt Iris King
Dominion Virginia Power	REQ	d	David F. Koogler Mary Edwards
DTE Energy Trading, Inc.	WGQ	s	Miki Kolobara
Duke Energy Americas, LLC (DEA)	WEQ	g	Walt Yeager
Duke Energy Corp.	WEQ	d	Ollie Frazier
Duke Energy Gas Transmission - Texas Eastern	WGQ	pl	Richard Kruse
Dynegy Power Marketing, Inc.	WEQ	g	Barry Huddleston

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
EC Power International	REQ	s	Judy Bailey J. Cade Burks Jennifer Teel
Edison Electric Institute	WEQ	n	David Owens Dave Dworzak
Edison Mission Marketing & Trading, Inc.	WEQ	g	William Roberts
El Paso Natural Gas	WGQ	pl	William Griffith
El Paso Exploration & Production Company	WGQ	pr	Susan Lum
Electric Power Supply Association	WEQ	m	Mark Bennett
Electric Reliability Council of Texas (ERCOT)	WEQ	n	Sam R. Jones Ray Giuliani
Electric Reliability Council of Texas (ERCOT)	REQ	s	Sam R. Jones Rob Connell Ray Giuliani
ElectriCities of North Carolina (North Carolina Eastern Municipal Power Agency)	WEQ	g	Gregory Locke
Electricity Consumers Resource Council (ELCON)	WEQ	e	John Anderson John Hughes
Empire District Electric Company, The	WEQ	t	Bary K. Warren
Enbridge Energy Company, Inc.	WGQ	pl	Terry McGill
EnCana Corporation	WGQ	pr	Keith Sappenfield
EnCana Marketing (USA) Inc.	WGQ	s	Keith Sappenfield
Energy East Management Corporation	WGQ	l	Marjorie Perlman
Energy East Management Corporation	WEQ	t	Marjorie Perlman
Energy Services Group, Inc.	RGQ	s	George Behr
Entergy Services, Inc.	WGQ	e	Laura Berryman Terry Shields
Entergy Services, Inc.	WEQ	t	Edward J. Davis Narinder Saini
Enterprise Products Partners, L.P.	WGQ	pl	Richard W. Porter
Equitable Gas Company	WGQ	l	Steve Rafferty
Equitrans, L.P.	WGQ	pl	Mina Speicher
Exelon Corporation - PECO Energy	WEQ	d	John McCawley
Exelon Energy	RGQ	su	Sheree M. Petrone
Exelon Energy Delivery	REQ	d	Toni Garza
Exelon Generation - Power Team	WEQ	m	Jack Crowley
ExxonMobil Gas Marketing	WEQ	e	Steve Sayuk Mark Scheel Mark Ulrich
ExxonMobil Gas Marketing	WGQ	pr	Richard Smith

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
FirstEnergy Solutions Corp.	WEQ	m	Edward C. Stein
Florida Municipal Power Agency	WEQ	d	Steven H. McElhaney
Florida Municipal Power Agency	WEQ	g	Robert C. Williams
Florida Power & Light Company	WGQ	e	Dona Gussow
Florida Power & Light Company	WEQ	m	Gerry Yupp Raleigh Nobles
Florida Power & Light Company	WEQ	t	Marty Mennes
Florida Reliability Coordinating Council	WEQ	t	Linda D. Campbell
Florida Reliability Coordinating Council	WGQ	e	Ken Wiley
FPL Energy Power Marketing, Inc.	WGQ	e	Michael Jessop
Gas Transmission Northwest Corporation	WGQ	pl	Jay Story
Georgia Transmission Corporation	WEQ	t	Patrick McGovern
Great Lakes Gas Transmission	WGQ	pl	Gene Fava
Group 8760	WGQ	s	Jim Buccigross
Gulf Power Company	REQ	d	Joel Thomas Kilgore Yvette Camp
Gulf South Pipeline	WGQ	pl	Randy Young
Hess Corporation	WGQ	s	Rebecca Batchelder
H S Resources Inc.	WGQ	pl	Carol Hall
Hydro One Networks	WEQ	t	Mark Graham
Hydro - Quebec Transenergie	WEQ	t	Victor Bissonnette
Idaho Power Company	WEQ	t	Tessia Park
Imperial Irrigation District	WGQ	e	William Rapp
Imperial Irrigation District	WEQ	m	Kim M. Kiener Frank M. Barbera
Imperial Irrigation District	WEQ	t	Juan Carlos Sandoval Javier Esparza
Indiana Muncipal Power Agency	WEQ	g	Dick Foltz
Indiana Office of Utility Consumer Counselor	RGQ	e	Matthew Parsell
International LNG Alliance (Sweet Strategies)	RGQ	s	David Sweet
Interstate Gas Supply	RGQ	su	Elizabeth Clothier
Iroquois Gas Transmission System	WGQ	pl	Tom Gwilliam
J.P. Morgan Ventures Energy Corp.	WGQ	s	Ike Gibbs
Kern River Gas Transmission Company	WGQ	pl	Brenda Horton
KeySpan Energy	WGQ	l	Dolores Chezar
Laclede Gas Co.	WGQ	l	Kenneth Neises
Latitude Technologies	RGQ	s	Leigh Spangler

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
Latitude Technologies	WGQ	s	Leigh Spangler
Louis Dreyfus Energy Services L.P.	WGQ	s	Mary Ellen Bell Ruby H. Melton
Lower Colorado River Authority	WGQ	e	Mickey Bell
Macquarie Cook Energy, LLC	WGQ	s	Angela Jones
Marathon Oil Company	WGQ	pr	Robin Perrine
Maryland People's Counsel	WEQ	e	Mike Tomczak
Mewbourne Oil Company	WGQ	pr	Michael F. Shepard
Michigan Electric Transmission Company LLC	WEQ	t	Charles V. Waits
Michigan Public Power Agency	WEQ	d	James R. Nickel Daniel E. Cooper
MidAmerican Energy	REQ	d	James E. Wilson
MidAmerican Energy Company	WEQ	m	Norman B. Stratton
Midwest Independent Transmission System Operator	WEQ	n	William (Bill) Phillips
Mirant Energy Trading, LOC	WGQ	e	Laura Trautman John F. Hogan
Mississippi Power Company	REQ	d	Dorman Davis Yvette Camp
Missouri River Energy Services	WEQ	d	Brian Zavesky
Modesto Irrigation District	WEQ	t	Roger Van Hoy
National Association of Regulatory Utility Commissioners	WEQ	e	Lou Ann Westerfield
National Fuel Gas Distribution	WGQ	l	Michael Novak
National Fuel Gas Distribution Corporation	RGQ	d	Mike Novak
National Fuel Gas Supply Corp.	WGQ	pl	Joseph Kardas
National Grid USA	WEQ	t	Herbert Schrayshuen Peter Flynn Mary Ellen Paravalos
National Grid USA	WGQ	l	Bruce Garcy
National Rural Electric Cooperative Assoc.	WEQ	d	Barry Lawson
Natural Gas Pipeline Co of America	WGQ	pl	Paul Love
Navigant Consulting, Inc.	WEQ	m	Richard G. Smead
New Jersey Natural Gas Company	WGQ	l	Douglas C. Rudd
New York State Dept. of Public Service	WEQ	e	William Heinrich
New York State Reliability Council	WEQ	d	P. Donald Raymond
Niagara Mohawk	RGQ	d	James Dillon
NiSource Inc.	WGQ	l	George Simmons
North American Electric Reliability Council (NERC)	WEQ	d	Donald M. Benjamin Larry Kezele

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
			Tom Vandervort
North Carolina Electric Membership Corporation	WEQ	d	David Beam
North Carolina Electric Municipal Power Agency #1	WEQ	d	Andrew Fusco
North Carolina Electric Municipal Power Agency #1	WEQ	m	Clay A. Norris
Northeast Utilities Service Company	WEQ	t	David Boguslawski Calvin A. Bowie
Northern Indiana Public Service Company (NiSource Inc.)	RGQ	d	Mark T. Maassel
Northern Natural Gas	WGQ	pl	Mary Darveaux
Northwest Natural Gas Company	WGQ	l	Randolph Friedman
NOVA Gas Transmission Ltd.	WGQ	pl	Doug Miller
Occidental Energy Marketing Inc. (OEMI)	WGQ	pr	Melinda Duncan
Office of Public Advocate, State of Maine	REQ	e	Barbara Alexander
Ohio Consumers Council	REQ	e	Randy Corbin
Ohio Consumers Council	WEQ	e	Randy Corbin
Ohio Consumers Council	RGQ	e	Bruce M. Hayes
ONEOK	WGQ	l	Patricia Anderson
ONEOK Partners GP, LOC	WGQ	pl	Scott Coburn
Ontario Power Generation	WEQ	g	Barry Green
Ontario Power Generation	WEQ	m	Renzo Marcuzzi
Open Access Technology International, Inc.	WEQ	e	Kevin Burns
Open Access Technology International, Inc.	WEQ	t	Paul R. Sorenson
Otter Tail Power Company	WEQ	t	Daryl Hanson Larry Larson
Pacific Gas & Electric	WGQ	l	John Breen
PacifiCorp	WEQ	g	Greg Maxfield
PacifiCorp	WEQ	m	Edison G. Elizeh
PacifiCorp	WEQ	t	Jim Hicks
Panhandle Eastern Pipe Line	WGQ	pl	Bill (William) Grygar Kim Van Pelt
PECO Energy Co.	WGQ	l	Reed R. Horting Amy Hamilton
Pemex Gas y Petroquimica Basica	WGQ	s	Juan Enrique Gonzalez Azuara
Pennsylvania Office Of Consumer Advocate	REQ	e	Tanya J. McCloskey Sonny A. Popowsky
Pennsylvania Office of Consumer Advocate	RGQ	e	Tanya J. McCloskey
Peoples Gas Light & Coke Co.	WGQ	l	Tom Zack
Peoples Gas System	RGQ	d	Rachel Gebhardt

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
PHI Power Delivery	WEQ	t	Ken Gates
Philadelphia Gas Works (APGA billing: Bert Kalisch)	RGQ	d	Joe Stengel Craig White
Platte River Power Authority	WEQ	t	Terry L. Baker
Platts	WGQ	s	Bill Murphy
Portland General Electric	WEQ	m	Terri Peschka
Portland Natural Gas Transmission System	WGQ	pl	David Haag
Powerex Corp.	WEQ	m	Michael L. McWilliams Sarole Tylor
PPL Electric Utilities Corporation	WEQ	t	Ray Mammarella
PPL EnergyPlus, LLC	WGQ	e	Anne Lovett
PPLSolutions, LLC	REQ	s	James M. Minneman
Progress Energy	WEQ	t	Verne Ingersoll Phillip W. Lewis
Progress Energy **(Regulated)**	WEQ	m	James Eckelkamp
PSEG Energy Resources and Trade LLC	WEQ	m	James D. Hebson
PSEG Power LLC	WEQ	g	Thomas M. Piascik
Public Service Electric & Gas	WGQ	l	David Wohlfarth
Public Service Electric & Gas	REQ	d	Terrence Moran
Public Service Electric & Gas Company	RGQ	d	Terrence Moran
Public Service Electric and Gas Company	WEQ	d	Colin J. Loxley
Public Service Electric and Gas Company	WEQ	t	Jeffrey C. Mueller
Puget Sound Energy, Inc.	WEQ	t	George Marshall Bob Harshbarger
Qualedi, Inc	WEQ	g	Stephen A. Morocco
Questar Pipeline Co.	WGQ	pl	Scott Hansen
Quorum Business Solutions Inc.	WGQ	s	Mark Davis
Reliant Energy Services	WEQ	g	Gary A. Hinners
Sabine Pipe Line LLC	WGQ	pl	Jan Rogers
Sacramento Municipal Utility District	WEQ	d	Robert D. Schwermann
Sacramento Municipal Utility District	WEQ	g	Thomas Ingwers
Salt River Project Agricultural Improvement & Power District	WGQ	e	Diane McVicker
Salt River Project Agricultural Improvement and Power District	WEQ	d	Wendy Weathers Mark B. Bonsall
Salt River Project Agricultural Improvement and Power District	WEQ	t	Steve Cobb
SCANA Corporation	WGQ	pl	Jacquelyn Gettle
Seminole Electric Cooperative, Inc.	WEQ	m	Lane Mahaffey

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
Sempra Energy - Southern California Gas Co.	WGQ	l	Lee Stewart Rodger Schwecke
Sequent Energy Management, L.P.	WGQ	s	Pat Metteauer
Sierra Pacific Resources	WEQ	t	Patricia Englin
South Carolina Electric & Gas Company	WEQ	t	S. Porcher Stoney
South Carolina Electric & Gas Company	WEQ	m	Kevin Spitzform
Southeastern Power Administration	WEQ	g	Bob Goss
Southern California Edison	WEQ	t	Weston Williams
Southern California Edison Company	WGQ	e	Roman Bakke
Southern California Edison Company	WEQ	g	Thomas Watson
Southern Company Services	REQ	s	Mark S. Jarrett Yvette Camp
Southern Company Services, Inc.	WGQ	e	Alan Kilpatrick
Southern Company Services, Inc.	WEQ	d	Gary Rozier Mark Crosswhite Greg Butrus
Southern Company Services, Inc.	WEQ	g	John Ciza
Southern Company Services, Inc.	WEQ	m	Joel Dison
Southern Company Services, Inc.	WEQ	t	R.D. (Dean) Ulch John Lucas James Y. Busbin JT Wood
Southern Natural Gas Co.	WGQ	pl	Renee Hyde Tracey Nicholson
Southern Star Central Gas Pipeline	WGQ	pl	James L. Harder Dale Sanders
Southwest Gas Corporation	WGQ	l	Larry Black
Southwest Power Pool	WEQ	t	Carl Monroe
Southwest Transmission Cooperative, Inc.	WEQ	t	Larry D. Huff
Southwestern Power Administration	WEQ	t	Stanley L. Mason
Sprague Energy Corp.	RGQ	su	Kathy Fudali
Structure Group	REQ	s	Stacey Wood
SUEZ Energy Marketing NA, Inc.	WEQ	m	Ken Lackey Cesar Seymour
SunGard	WGQ	s	Lucia Nail
Systrends USA	RGQ	s	Dave Darnell
Tenaska, Inc.	WEQ	g	Scott Helyer
Tennessee Gas Pipeline Company	WGQ	pl	Larry Smith Mark Gracey
Tennessee Valley Authority	WGQ	e	Valerie Crockett

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
Tennessee Valley Authority	WEQ	d	Cindy Herron CH Asst. (Dawn Arnorld)
Tennessee Valley Authority	WEQ	g	Kathy York
Tennessee Valley Authority	WEQ	m	Clyde Harmon
Tennessee Valley Authority	WEQ	t	Mitchell Needham W. Terry Boston
Texas Gas Transmission, LLC	WGQ	pl	Jeff Bittel
Tiger Natural Gas	WGQ	s	Bob Smith
TransCanada Pipelines	WGQ	pl	Doug Miller
TRANS-ELECT, INC.	WEQ	t	Paul D. McCoy
Trinity Apex Solutions, Inc.	WGQ	s	Richard (Dick) Couron
Tri-State Generation and Transmission Association, Inc.	WEQ	t	Bruce Sembrick
TXU Electric Delivery	WEQ	t	Ellis Rankin Debbie McKeever
TXU Electric Delivery	REQ	d	Tommy Weathersbee Debbie McKeever
TXU Energy	WEQ	m	Elizabeth Howland Mike Grim
TXU Energy Retail	REQ	su	Felecia Lokey
UBS Energy LLC	WEQ	m	Suzanne Calcagno
UBS Energy LLC	WGQ	s	Suzanne Calcagno
UBS Energy LLC	RGQ	su	Suzanne Calcagno
UGI Utilities, Inc.	RGQ	d	Paul Szykman
Vector Pipeline L.P.	WGQ	pl	Amy Bruhn
Vega Energy Partners, Ltd.	WGQ	s	Lori Leeder
Vermont Public Power Supply Authority	WEQ	g	William J. Gallagher
Wal-Mart Stores, Inc.	REQ	e	Angela Beehler
Washington Gas Light Co.	WGQ	l	Adrian Chapman Ken Yagelski
We Energies (Wisconsin Electric)	WEQ	d	Linda Horn
We Energies (Wisconsin Electric)	WEQ	g	James R. Keller
Western Area Power Administration	WEQ	m	Jeffrey Ackerman
Western Area Power Administration	WEQ	t	Mark Fidrych
Western Electricity Coordinating Council (WECC)	WEQ	t	Michael Wells Louise McCarren
Westfield Gas & Electric Light Dept.	WGQ	l	Joyce Bodak
Williams Gas Pipeline	WGQ	pl	Dale Davis
Williams Power Company	WEQ	g	Ron Mucci

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

Attachment 6

North American Energy Standards Board
Membership as of December 8, 2006

Company	Quadrant	Segment	Contacts
Williston Basin Interstate Pipeline	WGQ	pl	Keith Tiggelaar
Wisconsin Public Power Inc.	WEQ	d	Mike Stuart
Wisconsin Public Service Corporation	WGQ	l	Ronald G. Mosnik
Wisconsin Public Service Corporation	REQ	d	William L. Bourbonnais Les Nishida Ken Thiry
Wisconsin Public Service Corporation	RGQ	d	William Bourbonnais Glen R. Schwalbach Les Nishida
Wisconsin Public Service Corporation	WEQ	g	William Bourbonnais Charles W. Severance Neal Balu
Xcel Energy	RGQ	d	Don Basler
Xcel Energy Inc.	WEQ	m	David Lemmons

North American Energy Standards Board

Retail Structure Review Committee -- 2006 Report

BACKGROUND:

Over the past few years, the membership of the Retail Gas and Electric Quadrants of the North American Energy Standard Board (NAESB) have steadily declined, to a level below the NAESB Bylaw requirement of 40 members in each quadrant. At the June 2005 NAESB Board of Directors meeting, the Board requested volunteer board members to form a committee to address the retail quadrant membership issues and make recommendations to Board of directors by the end of 2005.

The Retail Structure Review Committee (RSRC) (current members):

Bill Bourbonnais, WPS Resources
Jim Buccigross, Group 8760
Leonard Haynes, Southern Company Services
Laura Kennedy, NAESB
Ruth Kiselewich, Baltimore Gas and Electric
David Koogler, Dominion Virginia Power
Marcy McCain, Duke Energy
Rae McQuade, NAESB
Mike Novak, National Fuel Gas Distribution
Keith Sappenfield, EnCana Corporation

developed the following mission statement:

> The Retail Structure Review Committee functions solely at the pleasure of the NAESB Board of Directors and reports to the NAESB Board of Directors through the NAESB Board Managing Committee. The Committee will make recommendations to the full board to address the membership levels in the retail electric and retail gas quadrants through possible changes to NAESB By-laws, structural changes to the quadrants or their segments including merger of the two quadrants.

The RSRC made a recommendation to the NAESB Board of Directors at their December 2005 meeting to delay any structural changes to the two Retail Quadrants until their initial work on customer choice market business practices are complete and the Board direction to include development of business practices for the traditional regulated as well as customer choice markets has a chance to develop.

The RSRC has continued to review the reasons for the decline in the two retail quadrant's membership, which can best be summarized as the primary focus of the retail quadrants on business practices for the customer choice retail market coupled with the stalled or even regressive status of the retail customer choice initiatives in the nation.

The RSRC has reviewed its options, which included

1. an increase of retail quadrant membership to bylaw requirement levels,
2. changing the bylaws to reduce the membership requirement,
3. combining the two Retail Quadrants to reach the bylaw membership levels, or
4. delaying any structural changes until the original work plan of developing business practices for the customer choice retail markets is completed.

The RSRC has determined that none of the available options will have any appreciable effect on the finances of the NAESB organization. It is believed that the Retail Quadrants are operating as efficiently as possible and only a major increase in Retail Quadrant membership will have any significant improvement in NAESB finances.

On November 30, 2005 the RSRC presented a proposal to merge the two quadrants (Attachment #1) to the Retail Quadrants Executive Committees to obtain their input. The members of the Retail Executive Committees were concerned that the effort required to combine the two quadrants at that time would be disruptive to completion of the original work plan of retail customer choice business practices. The overall opinion of the Retail Executive Committees was to delay any structural changes until the original work plan of the two quadrants is jointly completed, which was projected to largely be completed in 2006.

In 2005 the board of directors agreed that the governance documents permitted the focus of the retail quadrants to include the development of business practices needed for regulated markets as well as customer choice retail markets. This move to address business practices applicable to traditional regulated retail markets, plus a partnership with the Resources Committee to focus on the increase of retail quadrant memberships, was thought to be the needed synergy to increased interest and membership in the two retail quadrants and elimination of the need for immediate structural remedies. At the December 2005 Board of Directors meeting the RSRC's recommended Option #4 above, delay any structural changes, was approved.

In October 2005, the retail quadrants published their first set of business standards for the electric and natural gas customer choice markets. The retail quadrants also announced the formation of committees to start work on two new initiatives: retail contracts and uniform electronic billing business practices. The results of the retail contracts initiative will go to the NAESB membership for a ratification vote in late 2006 or early 2007. These initiatives are intended to produce business practices for the customer choice markets as well as the traditionally regulated retail markets. It was hoped that the completed customer choice business practices and the new initiatives for the regulated markets, along with a focused initiative to work with the Resources Committee in late 2005 and early 2006 to encourage new retail quadrant members would significantly increase retail quadrant membership going forward.

The RSRC has spent 2006 working on the potential expansion of the retail quadrant focus from the development of business practices for just the customer choice retail markets to also including the development of business practices needed for the traditionally regulated market. This expansion of focus had been driven by a number of requests for standard retail energy

contracts and standard electronic billing (a request from national accounts customers) and a discussion on green energy business practices in both gas and electric markets. Also in 2006 the RSRC members met with AGA, EEI, NARUC, the NAESB Advisory Council, several State Commissioners, and the EEI National Accounts Committee. These meetings have provided the list of potential Business Practice developments in Attachment # 2. It also provided a number of interested National Accounts and State Commission comments and suggestions for the 2007 Retail Plan, Attachment #3.

These initiatives resulted in a proposed 2007 Retail Quadrant Plan (attachment #4) which includes three items which will be developed for both the customer choice and traditionally regulated markets (Items 2, 9 and 10).

DISCUSSION OF OPTIONS

The option of revision of the NAESB bylaws may only be a short-term remedy. The current membership requirement of 40 for each retail quadrant was not scientifically reached but was a reasonable minimum level of membership if the retail quadrants were to be effective at reaching consensus of a critical mass of the market. A membership level of less than 40 could result in concern regarding critical mass for a nation of 48 contiguous states. Current memberships of 26 in the Retail Electric Quadrant and 25 in the Retail Gas Quadrant could continue to decline if (1) companies with more than one retail quadrant membership decide to reduce their memberships since most work is done through cooperative work of both quadrants, (2) the nationwide customer choice initiative remains stalled and (3) the expansion of the focus to provide business practices for both choice and regulated markets does not encourage an increase in the involvement of stakeholders.

The option of merging the NAESB Retail Electric and Retail Gas Quadrants would provide immediate membership levels that satisfy the bylaw membership requirements and would continue the current practice of the two quadrants working together. The current combined level of 51 members could decline to as low as 44 members, if members with both gas and electric quadrant memberships decide they only need one membership, which is still above the bylaw membership requirement of 40, unless there are significant membership terminations due to the merger of the two quadrants. The merger of the two quadrants will also require bylaw revisions to reflect one rather than two quadrants and to resolve bylaw differences between the two quadrants. The merger of the two Retail quadrants would require active participants to focus on structural issues in 2007 rather than working toward completion of the currently planned business practices.

The option of continuing to expand the focus of the retail quadrants to include projects for regulated markets along with customer choice markets may result in an increased interest in retail quadrant memberships, but until recently this has not been the experience. NAESB did experience a number of comments from non-members supporting projects for both markets in the proposed 2007 Retail Quadrant Plan development, Attachment #4. Given the time (estimated at 6 - 9 months) it will take to modify the bylaws and ratify the governance changes, if there is an

unexpected success in increasing membership, the Board could subsequently decide to leave the quadrants as they are. Also, the combining of the two quadrants could be done in a way that permits the easy return to two quadrants in the future. Also, if a decision is made to merge the two retail quadrants, great care should be taken to ensure that representatives of both gas and electric have an equal voice (Attachment 1).

The option of delaying any structural changes at this time would allow the continuation of the work of the combined retail quadrants to complete the original work plan of choice business practices without the disruption of quadrant structural changes (Attachment #2). Based on the current draft of the 2007 plan there is Customer Choice market work well into 2008. It would also allow measurement of the progress on the new business practice initiative being developed in 2006 and the two new initiatives suggested for 2007 for both customer choice and regulated retail markets and determination as to whether that proves to provide adequate industry interest to increase retail quadrant memberships. Finally it would also allow time to develop a strategy for the retail quadrants after the original work plan of customer choice business practices are completed allowing any structural changes to fit the future work of the quadrants.

RECOMMENDATION

Based on the reviews completed by the RSRCthe input from the Retail Quadrants Executive Committees and the recent increased interest in new initiatives, the RSRC recommends that the NAESB Board of Directors continue to delay any structural changes to the Retail Quadrants at this time. This will allow the Retail Quadrants to complete their original work plan of customer choice business practices, continue work on one and develop the two new 2007 business practices for both customer choice and regulated retail markets and continue to attempt to increase retail quadrant memberships through the current outreach and new business practice initiatives.

As the Board considered last year, starting the process of making retail quadrant structural changes will consume many hours of current participants, taking away from the focus on completing the customer choice business practices in the draft 2007 plan. Delaying any structural changes to beyond 2007 will also allow more time to determine if greater interest can be generated for business practices for both markets. As evidenced in the 2007 draft Retail plan process, these initiatives along with the initiatives of the Resources Committee demonstrate that considerable new interest has been developed in 2006,

The RSRC also recommends that the NAESB Board direct the RSRC to continue its work into 2007 to:

1, complete a review of the need for structural changes to the two Retail Quadrants beyond 2007 based on quadrant membership levels, progress and interest in initiatives for business practices for both retail customer choice and regulated markets and

2. complete a strategic plan for the quadrants beyond 2007.

ATTACHMENT 1

November 25, 2006 RSRC Proposal to Combine Retail Quadrants

1) Consolidated the two retail quadrants into one combined retail quadrant called Combined Retail Quadrant (CRQ). Option is Retail Energy Quadrant but that could be confused with the current Retail Electric Quadrant.

2) CRQ would have 4 segments of 7 members each.

   Based on the current Board roster and EC roster, no one would lose a seat, initially the CRQ Board in the transition would include the following:

   Distributors - 7/7 (RGQ:4,REQ:3)
   Suppliers - 3/7 (RGQ:1,REQ:2)
   Services - 6/7 (RGQ:4,REQ:2)
   End Users - 2/7 (RGQ:1,REQ:1)

   Initially the CRQ Executive Committee in transition would include:

   Distributors - 7/7 (RGQ:3,REQ:4)
   Suppliers - 5/7 (RGQ:3,REQ:2)
   Services - 6/7 (RGQ:4,REQ:2)
   End Users - 2/7 (RGQ:1,REQ:1)

3) In the transition, until the next elections a company would be allowed to hold two seats in a segment only if they want to separate their electric interests and gas interests and maintain two NAESB retail memberships. This would avoid displacement of current Board and EC members and subsequent elections would prevent any abuse of having two votes on the Board or EC.

4) Within each segment, one seat (maybe two) could be reserved for sole commodity companies (gas or electric only). Unlike WEQ, these reserve spots should not be left unfilled if no sole commodity company is interested - in such cases a combination company could fill the slot.

5) CRQ should keep two bodies of MBPs - one for electric and one for gas, the vast majority of which would be identical. This avoids the automatically assumption to be applicable to both REQ and RGQ.

6) It may be appropriate to include a reserve clause that says if membership of CRQ reaches 85 or 90 and with 2/3rds vote of the CRQ members, gas and electric quadrants could be separated.

North American Energy Standards Board

Retail Structure Review Committee -- 2006 Report

ATTACHMENT 2

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

FROM: Rae McQuade

RE: Potential Standards Development Efforts for 2007 for the Retail Gas and Electric Quadrants

Dear Retail Gas and Electric Quadrant Members and Interested Parties,

Through the efforts of our Board of Directors, Advisory Council, Executive Committees, Resources Committee and Retail Structure Review Subcommittee, several standards development projects have been identified for possible inclusion in the 2007 annual plan. We hope that this document will be helpful and provide background for you as you determine to provide comments.

The areas identified that may benefit for standards development efforts are:

- Contracts: development of additional retail contracts and addenda that support the base contract already under development
- Customer Choice Activities
- Distributed Generation
- Energy Renewal and Green Energy Programs
- Interruption and Curtailment Procedures
- Load Profiling
- Low Income Strategies
- Model Business Practices between utilities and suppliers in day to day transactions with RTOs (joint initiative with the WEQ)
- Model Business Practices focused on estimating the impact of demand side management (DSM) and energy efficiency (EE) initiatives
- Net Metering
- Renewables/Renewable Portfolio Standards – work with the wholesale quadrant on nationally traded renewable energy credit
- Standard electronic/web billing
- Standardization of EDI billing terms and determinants
- XML Development

We look forward to hearing from you soon and hope you will provide comments to support our annual planning process. Should you have any questions or need additional information, do not hesitate to contact the NAESB office at 713-356-0060 or vthomason@naesb.org.

Best Regards,

Rae

Rae McQuade
President, NAESB

NORTH AMERICAN ENERGY STANDARDS BOARD
RETAIL STRUCTURE REVIEW COMMITTEE
2006 FINAL REPORT

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 1

1. Gas Design Day Forecast

Submitted by Ralph Cleveland, Senior Vice President | Engineering and Operations, AGL Resources

From: Ralph Cleveland [mailto:rcleve@aglresources.com]
Sent: Tuesday, October 10, 2006 5:13 PM
To: naesb@naesb.org
Subject: Gas Design Day Forecasting Standard

The following are the concepts around which it would be helpful to have an industry standard as to reasonable and acceptable modeling or methodology approach. I'm not sure how a proposal is usually structured, but I wanted to get this to NAESB today. This should be a good start. AGA and SGA have done some work through surveys and conferences to identify industry practice. For regulatory reasons, I think they have avoided attempting to say that there are established "best practices". We have some AGA/SGA survey results, if you would like to see them. If this is not what you were looking for, please let me know.

1. Number of years history considered in arriving at the design temperature (coldest in X years)
2. Acceptable independent variable besides same day temperature used in analysis (prior day temp, wind speed, etc)
3. Reasonable historical load / temperature analysis approach used to forecast future design (regression analysis, average load per HDD on cold days, etc)
4. Approach at removing outlier data from historical data sets
5. Acceptable R^2, MAPE or other statistical measure or forecast accuracy
6. Method for accessing potential design day forecast error (capacity reserve margin, forecast adder, etc)
7. Methodology to project design period load shape (multiple design days, historic design period temperatures, statistical approach)
8. Assumptions associated with on-system facility derate or pipeline capacity proration on design day.

RESOLUTION 11-15-06: Added to 2007 Annual Plan-- Reach out to SGA and AGA for subject matter experts will be undertaken.

2. Northeast Regional Best Practices

Submitted by Phil Precht, BG&E

Excerpt from "Restructuring Today": A major effort in that direction is a push to stimulate and activate pro-markets members of the legislature at a two day meeting set for Wilmington Oct 24-25 at the Doubletree Hotel. NEMA is behind the move. It's relying on pro-markets members of legislatures in Delaware, Pennsylvania and possibly Connecticut for a leadership round table and

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 2

regulatory workshop to meet in Wilmington. James Lester of the Delaware PSC is a key speaker along with James Cawley who is the vice chair in Harrisburg. Several state legislators are to speak. Craig Goodman reports that business backers are happy to have marketers coming into Delaware to compete to

supply the market. He's invited commissioners and staff from Delaware, Pennsylvania, New York and Connecticut to point out the best practices in the region. One subject of course will be the successes in New York and how to apply those best practices to other states. A major goal is not just copying New York's success but making the progress regional. Goodman thinks that would drive prices in the region down, lower the acquisition costs and bring economies of scale to the marketplace. Day one right now is best practices and day two is how to get there (implementation).

RESOLUTION 11-15-06: Not added to 2007 Annual Plan at this time – outreach to Craig Goodman first for feasibility.

3. Demand Side Response
Submitted by George Behr, Energy Services Group

PJM is discussing demand side response and metering. They have a 'curtailment service provider' program that might benefit from NAESB standards. There are both wholesale and retail implications.

RESOLUTION 11-15-06: Combined with item 4 below.

4. 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
Submitted by Carl Wilkins, Advanced Energy

LETTER:
Dear Ms. McQuade: Attached is a request for initiation of a NAESB business practice standard as described in your September 11, 2006, memo. We were advised by one of your board members, Mr. David Koogler with Dominion Power, to submit a request. Mr. Koogler was present when we gave our annual report to the N.C. Utilities Commission. He took note that we were challenged by one of the Commissioners to quantify more of the benefits that North Carolina and other states were enjoying as result of the work we do with energy utilization and market transformation. Advanced Energy is an independent non-profit that was chartered by the N.C. Utilities Commission in 1980 to work with electric utilities, in part, to develop and demand side management (DSM) and energy efficiency (EE) programs. Since 1980 Advanced Energy has been doing public

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 3

benefits work to enhance how North Carolina businesses and individuals use energy. Recently we have been asked to assess the statewide potential for DSM and EE. It has been some time since these subjects have been discussed in regulatory and public settings, especially as it pertains to the need for future electricity generation. We have a long-standing relationship with utilities and appreciate their support and collaboration on many issues affecting energy utilization in our state. The Public Staff of the N.C. Utilities Commission is an ally and recently recommended that we advise the N.C. Utilities Commission as to how we would manage a statewide Public Benefits Fund specifically for DSM and EE. Other than the west coast, the northeast or selected mid-western states, the body of knowledge about DSM and EE has grown stale. Furthermore, a lot has changed with respect to the way homes and business and industry use energy

since DSM and EE were in vogue in the 80s and early 90s. Many states and other jurisdictions lack the expertise and experience to evaluate and plan new programs. We heard that NAESB has an excellent reputation in the development of standards and felt that this area might be an area that fit NAESB's mission. Please contact me with any questions regarding our attached request. Sincerely, Carl L. Wilkins, P.E., Director, Utility Services

REQUEST:
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

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 4

engineering calculations. The benefits, costs and energy impacts from either of the aforementioned techniques can vary widely.
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.
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.

RESOLUTION 11-15-06: Combined with item 4 below. Item 3 is underway now in PJM and is both a retail and wholesale electric issue.

5. **Participation**
Submitted by Shay Reed, CostCo

Afternoon,
I recently attended the EEI conference national accounts meeting in Florida, and we were told that October 11th, 2006 is the deadline to be included for comments on several standards issues. After reading the memo I received, it appears that this is the comment deadline rather than inclusion in the comment group? Can you please confirm the requirements for inclusion in regards to NAESB standards? We would like to be involved, and hope we are not too late. Thank you for the information.

Shay Reed -
Thank you for your interest in NAESB standards development. If you would like to submit comments, please send them to NAESB (naesb@naesb.org) by the end of this week. Please let me know if you need any additional information. Best regards,
Veronica Thomason

Submitted by: Denis George, Kroger

While I only saw this today and do not have time to submit substantive comments at this time, as a general matter The Kroger Co. - one of the largest grocery supermarket chains in the US (www.kroger.com) - would be happy to comment upon and participate in any initiative that would help bring uniform standards for retail EDI/XML transactions for

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 5

both gas & electric utilities. Please feel free to direct further correspondence on this matter to me directly.

RESOLUTION 11-15-06: Combined with item 6 below.

6. **Electronic Billing**
Submitted by Suzanne Figy, Director, Operations - Data Services, Advantage IQ, Inc.

Hi Veronica, My name is Suzanne Figy and I am the Director of Operations - Data Services for Advantage IQ. Advantage IQ currently manages more than $9.3 billion in facility bills for more than 375 clients. We currently process and pay more than 500,000 bills/month supporting over 190,000 sites. Advantage IQ maintains a solid relationship with more than 16,000 utilities nationwide. Currently, we receive 21% of our incoming utility bills via EDI. We are of great interest in having NAESB develop some standards in the areas outlined in the annual plan. Given the volumes of electronic bills we are currently managing I would like to request that we be included in the planning discussions. I would like to ask that you add myself as our representative. We have a great amount of excitement around these initiatives and feel we can be a great asset to the discussions. Please contact me if you need any additional information or have any further questions. Thank you, Suzanne Figy

Ms. Figy, Thank you for contacting our office with your request. We will be happy to add your request to the list of NAESB Retail Annual Plan topics for discussion. Best regards, Denise Rager

RESOLUTION 11-15-06: Combined with item 5 above. EDI transactions for electronic billing between utilities and national accounts customers is on the 2007 annual plan now and the business practices have already been developed. XML transactions are not on the 2007 plan. If Kroger and CostCo are interested in pursuing XML, we would need to identify both the sponsors/champions for this development and also the subject matter experts that would participate in XML development. NAESB office will pursue determining if the interest level is high enough to warrant a conference call with applicable parties.

7. **Customer Interval Data**
Under consideration by the Massachusetts EBT

Draft Letter Prepared on 9/12/06 RE: Customer Interval Data
Dear Ms. Cottrell:
We, the undersigned competitive suppliers, third party providers and brokers, hereby request that the Department review a proposed change in the current practice regarding the authorization requirement for provision of customer interval metered usage data

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 6

("interval data") to suppliers. The proposed change would simplify the practice, reduce costs, and allow for improved data security by making suppliers responsible for maintaining customer authorizations and thereby paving the way ultimately for interval data to be requested and provided using standard electronic business transactions.. The proposal has been discussed by the Massachusetts Electronic Business Transactions ("EBT") Working Group, and the EBT has been authorized by the EBT electric distribution company members (EDCs) to represent their lack of objection to the change, provided it is acceptable to the Department.

Background: Increases in competitive market efficiency have revealed the existence of a bottleneck in the day-to-day operation of Massachusetts' deregulated electricity supply marketplace in regards to the provision of interval data. The unnecessarily labor intensive nature of requesting and receiving interval data for both prospective and existing customers, acts as a hindrance to the ability of suppliers to offer accurately derived and timely priced innovative competitive supply products to commercial and industrial customers. The process for provision of interval data to suppliers is governed by the EDCs' interval data tariffs as approved by the MDTE. Those tariffs provide that interval data will be made available to the customer or the customer's "authorized agent." However, the tariffs do not specify how that authorization is to be demonstrated. See, e.g., Massachusetts Electric Company, Optional Interval Data Service, M.D.T.E. No. 1034; Boston Edison Company, Optional Interval Data Service, M.D.T.E. No. 151. The Department's order approving those tariffs is similarly silent on the question of how the authorization is to be demonstrated. Metering and Billing Services, D.T.E. 01-28 (Phase I) (May 18, 2001).

Current Practice: Regardless of the lack of an explicit written statement from the Department that delineates what constitutes authorization, it has been the interpretation of the supplier and EDC communities that the supplier would demonstrate authorization by providing a copy of a signed authorization to the EDC with any interval data request. This is the current procedure; an authorization form must be manually issued to the EDC and the EDC, in turn, must file and manage this paperwork in-house, prior to releasing customer data. This is the perceived requirement and current practice whether the customer is a prospect requesting pricing, or already a fully enrolled customer of the supplier submitting the request. Over time, this practice but has proven to be unnecessarily cumbersome for customers and suppliers, as well as for EDCs. For customers the most obvious impact is a delay in pricing from prospective suppliers in a market where even a day can make a material difference in pricing.

Proposed Practice: We propose changing the current practice by removing the requirement that the customer authorization be provided to the utility. Instead we suggest that suppliers be held responsible for obtaining, holding and maintaining the appropriate customer authorization for any requests they make. With such a change, the supplier

would still obtain a written authorization from the customer, either in the form of a stand alone consent form or a supply contract with an authorization provision. Further, we would propose that suppliers be required to maintain a scanned version of the written authorization on file at the suppliers' premises for the full length of the customer contract or 24 months, whichever is longer, and that such authorizations would be subject to audit by the Department. We also note that when the Supplier is requesting the interval data, it is assumed that they are paying the fee and will be billed accordingly from the utility. Under this proposal, the utility would then be released of the responsibility to obtain the authorization form and the cost of the request and would be liberated to honor the request for interval data without reference to paper files. Suppliers have indicated a willingness to go one step further and incorporate an authorization provision into their customer contracts, should the Department accept this change in practice. In addition to saving time and manual effort, this step would pave the way for full EDI access to interval data in 2008, which is when the EDCs have indicated their systems would be ready to accept these requests electronically like other electronic business transactions sent via EDI. EDI works on a prescribed set of electronic communications between suppliers and distribution companies, and does not include a mechanism for the exchange of documents as part of that data transfer. The proposed change in procedure for authorizations would remove an important barrier to being able to request and receive interval data using the same standard vehicle used for all other utility/supplier data exchanges. In the EDI scenario, the supplier would submit an interval data request to the utility via EDI using the customer's account number as identifier and would represent that it has obtained the necessary customer authorization and is maintaining it on file. The utility would be free to rely on that representation, knowing that that supplier is subject to audit on any authorization by the DTE. This is exactly how EDI transactions work in other contexts, for example, customer enrollments. The supplier is required to obtain a written (or verified telephonic) authorization to enroll the customer, but is not required to file evidence of that authorization with the utility prior to enrollment acceptance, except upon request for audit. Instead, the supplier simply submits an "enroll customer" request using the customer's account number via EDI and the utility accepts that request as the supplier's representation that it has obtained the necessary authorization. The proposed change in practice for interval data requests would simply bring that practice in line with the procedure for customer enrollments and other supplier/utility transactions in Massachusetts, as well as with interval data practice in other regions of the country. The Massachusetts EBT members (both EDCs and suppliers) concur that this course of action is a win-win solution for everyone including the customer. Provision of interval data would take place seamlessly without a need to wait for manual intervention and would mirror the same procedure we currently follow for all historic usage data requests. We propose that this change in procedure apply to both historic interval data requests made for pricing prospective customers, as well as for monthly recurring interval reads used for forecasting and billing of a supplier's actively enrolled customers. The former would

ATTACHMENT 3: Comments Received on 2007 Retail Plan, Page 8

allow prospective customer's access to more timely pricing and product options in the marketplace, critical to making prudent business decisions in an ever-changing supply environment. The latter is necessary for timely billing of any non-fixed price product and is consistent with EPACT 2005's move toward providing customers with price sensitivity – more and more common in today's market.

Benefits of the Change in Practice: The Department has recognized, "historical interval load data are essential to the development of a strong competitive electric generation marketplace." Metering and Billing Services, D.T.E. 01-28 (Phase I) at 14. The availability of interval data improves the accuracy of forecasting and pricing. It also enables the development of innovative products and services for customers, critical to maturation of the competitive marketplace. The proposed change would greatly increase the efficiency of obtaining and receiving interval data and thus increase its availability for not only the EDC and suppliers, but more importantly, for customers. Therefore, we request that the Department review the proposed change in practice to allow suppliers to be the holder of record for customer interval data authorizations, whether they be within the customer's supply contract or in a separate authorization form.

We respectfully request the Department's expedited review of this proposed change in practice and thank you and the Department for your consideration. Sincerely, Constellation NewEnergy, ConEdison Solutions, Direct Energy, Dominion Energy Services Group, Gestalt LLC, Hess, PPL Solutions, Select Energy, TransCanada

RESOLUTION 11-15-06: The interval data is already in the model business practices for pre-enrollment activity. The standards do not specifically require that the utility maintain the information. For the EDI transactions, the 2007 plan already includes the development of EDI transactions. If MA EBT is interested in pursuing standard EDI transactions through NAESB, we would ask that the leaders of the group participate in the NAESB TEIS and EDM subcommittees to further their expectations. NAESB office will pursue determining if the interest level is high enough to warrant a conference call with applicable parties.

NORTH AMERICAN ENERGY STANDARDS BOARD
RETAIL STRUCTURE REVIEW COMMITTEE
2006 FINAL REPORT

ATTACHMENT 4

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

	Item Number & Description	Completion[2]	Assignment
1	Billing & Payment		
	a. Develop additional model business practices for reversal and reissue, transformer loss factors, budget billing and payment plans, and missed bill windows Status: Completed through the BPS process and submitted to IR.	1st Q 2007	IR
2	Electronic Retail Billing.		
	b. Develop Technical Electronic Implementation Standards – Electronic Retail Billing Status: Underway.	1st Q 2007	TEIS
3	Customer Enrollment, Drop and Account Information Change		
	a. Develop practices for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties.	2nd Q 2007	BPS
	i) Customer Enrollment Status: Underway. Customer Enrollment portion of the item is complete through the BPS.	2nd Q 2007	BPS
	ii) Customer Drop Status: Underway	1st Q 2007	BPS
	iii) Account Information Change Status: Not Started.	2nd Q 2007	BPS
	b. Develop information requirements for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties. Status: Not Started. Drops and customer account information should span into 2007.	3rd Q 2007	IR
	c. Develop Technical Electronic Implementation Standards – Customer Enrollment, Drop and Account Information Change, Status: Not Started	4th Q 2007	TEIS
4	Customer Enrollment, Drop and Account Information Change Using a Registration Agent		
	a. Develop practices when using a Registration Agent for submitting and receiving, processing and fulfilling a Customer's request to enroll with or leave a Supplier (including Suppliers dropping Customers) and for maintaining current Customer account information, and for notifying affected parties.		
	i) Customer Enrollment Status: Underway.	3rd Q 2007	Texas Task Force/ BPS
	ii) Customer Drop Status: Not Started	4th Q 2007	Texas Task Force/ BPS

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

	Item Number & Description	Completion[2]	Assignment
	iii) Account Information Change Status: Not Started	1st Q 2008	Texas Task Force/ BPS
5	Customer Inquiries		
	a. Develop procedures for responding to customer inquiries directed to Distributors and/or Suppliers and for notification of the other party. Status: Not Started. Delayed to 2008 for completion because the registration agent model is separate from customer enrollments.	2008	BPS
6	Prepare a joint analysis with the WGQ for AS2 and AS3 protocols as compared to the NAESB IET. Status: Underway.	TBD	TEIS & WGQ EDM
7	Develop NAESB Certification checklist criteria for Retail Quadrants to be used in the NAESB Certification Program. Status: Not Started.	TBD	TEIS
8	Address issues raised in the Department of Energy's Sandia National Laboratories on NAESB technical standards and respond to the surety assessment findings and recommendations. Status: Not Started.	4th Q 2007	BPS/TEIS
9	Consider and develop as needed model business practices to support Gas Design Day Forecast[1] Status: Not Started. A reach out to the SGA and AGA for subject matter experts will be undertaken first, before the group is populated.	TBD	RGQ - New Task Force
10	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: Not Started. A major announcement for an introductory meeting, probably at the DoE, will be sent forward to invite all interested stakeholders.	TBD 1st Q, 2007 for intro meeting	New Task Force

Program of Standards Maintenance & Fully Staffed Standards Work[2]

Business Practice Requests	Ongoing	Assigned by the EC[3]
Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC[4]
Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC[4]
Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[4]
Ongoing Development and Maintenance of Definitions	Ongoing	Glossary

[1] Reach out to SGA and AGA for subject matter experts.

NORTH AMERICAN ENERGY STANDARDS BOARD
RETAIL STRUCTURE REVIEW COMMITTEE
2006 FINAL REPORT

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

Item Number & Description	Completion[2]	Assignment

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).

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.

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

December 8, 2006
For Inclusion in the 12-14-06 board Book

TO: Materials for Board of Directors Meeting 12-14-06

FROM: Rae McQuade

RE: Managing Committee Actions on Board Resolutions for December 14, 2006

Dear Board Members,

The Managing Committee met via conference call and email and determined unanimously to support the following action -- Best Regards, *Rae*

RSRC RECOMMENDATION

WHEREAS, the Retail Structure Review Committee voted to endorse the actions to be taken for the Retail Gas and Retail Electric Quadrants,

BE IT RESOLVED, that the Board of Directors of NAESB approves the Retail Structure Review Committee recommendations for the structure and operation of Retail Gas and Retail Electric Quadrants in 2007.

TAB 5

UPDATES ON SPECIFIC STANDARDS DEVELOPMENT EFFORTS

This section includes:

- Joint NERC –NAESB efforts for TLR (timeline) and ATC Standards Development (summary of recent meetings)
- Retail Contracts – Approval Summary
- OASIS enhancements – Summary of efforts
- WEQ Structure – 6th Segment Consideration
- Sandia Report

The material presented is background information for the discussion of agenda item 3. No action by the Board is expected. Board members may use this opportunity to give guidance to the Executive Committee.

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

TO: Rae McQuade, President, NAESB

FROM: DeDe Kirby, NAESB Meeting and Project Manager

RE: **Update on development of the split Transmission Loading Relief (TLR) NAESB Business Practice Standards and the status of the standards**

DATE: October 6, 2006

August 2-3, 2004: On August 2-3, 2004, team leaders from the NERC Version 0 Standards Drafting Team and the NAESB Business Practices Subcommittee (BPS) met in Chicago, IL to develop a joint recommendation on the division of the NERC Operating Policies into NAESB Business Practice Standards and NERC Reliability Standards. The unanimously endorsed recommendation of the task force for TLR was for NERC and NAESB to adopt a TLR procedure document with the same language and format in their respective Version 0 standards and immediately begin a joint project to develop replacement Version 1 standards distinguishing reliability requirements and business practices by the end of 2005.

August 16, 2004: The final recommendation of the joint task force that meant in Chicago was presented to the Joint Interface Committee on August 16, 2004. The recommendation above for the separation of business practices and reliability standards from the Version 0 TLR standard with commitment to file the Version 1 standards with the FERC by end of year 2005 was unanimously approved by the members of the JIC.

December 31, 2004: NAESB WEQ membership ratified the Version 0 TLR (pre-split) standards.

December 8, 2004: The joint TLR Task Force met 8 times from December of 2004 until June of 2005 to complete the designated split of the business practices from the reliability standards of TLR Version 0. On **June 1-2, 2005** the NAESB members of the task force unanimously supported the division completed by the task force and the NERC members took a straw man vote to show their unanimous support. At this point, the standards moved to their assigned drafting teams at NERC and NAESB for completion.

June 14-15, 2005: The NAESB WEQ BPS met 7 times, from June 14-15, 2005 to October 12, 2005, to complete the NAESB post-split TLR standard. It was voted out of subcommittee on October 12th. Please note the standard was posted for informal comments prior to being voted out of subcommittee.

(NERC) July 14, 2005: NERC Operating Reliability Subcommittee (ORS) submitted a Standards Authorization Request (SAR) for the post-split NERC TLR Standards. Twelve sets of comments were submitted on the SAR: six sets supported the division and six did not.

October 10, 2005: R05009 Recommendation (Modify the NAESB Version 0 TLR business practices to remain consistent with the NERC Version 0 TLR reliability standards [dynamic flows]) was ratified by NAESB WEQ membership.[1]

(NERC) November 18, 2005: NERC ORS sent a letter to NAESB requesting that NAESB cease development of Recommendation R04013A (NAESB post-split TLR standards) based upon the comments received at NERC. This letter was received as comments on Recommendation R04013A. All comments received on the recommendation were reviewed by the NAESB BPS on **November 22nd** in preparation of the NAESB November 29th WEQ Executive Committee (EC) meeting. Although these comments were officially considered by the WEQ EC, the BPS members noted the following reasons that NAESB should move forward with Recommendation R04013A: a separate standard should exist at NAESB to adequately address the commercial needs of the industry; division and maintenance of standards had been addressed previously by NERC and NAESB during other standards drafting activities (Coordinate

[1] Please note that this change to the NAESB pre-split Version 0 standard was completed to correspond with NERC changes to their Version 0 TLR standards to account for dynamic schedules. This change followed up on the commitment of NERC and NAESB to keep the standards in line with the "same language and format." The Urgent Action SAR was approved by the NERC Board of Trustees in June 2005.

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

Interchange); the JIC had previously unanimously supported the assignment of this project and; not moving forward with the standard could effect the standards drafting process at both NERC and NAESB.

November 29, 2005: Recommendation R04013A (post-split TLR standards) was reviewed by the WEQ Executive Committee. The WEQ EC recommended the adoption of the TLR Business Practices with ratification held in abeyance until TLR implementation issues between NERC and NAESB were clearly defined. The WEQ EC recommended the WEQ Board members make this determination.

December 19, 2005: The WEQ EC approved the Recommendation by notational ballot on December 19, 2005.

February 17, 2006: NAESB filed a progress report with the FERC updating them on the state of the NERC-NAESB joint standards development process.[2] The following statement, found in the progress report, reaffirms NAESB's commitment to complete the joint development of the TLR standards and to work with NERC to provide for standards that complement each other:

> NAESB would not immediately file these business practices with the Commission for consideration until NERC and NAESB have had an additional opportunity to determine if further changes are needed, and NERC has completed it process of developing the reliability standards. It is expected that NERC and NAESB will employ the joint development process to ensure that the coordination of the development of the two products is achieved.

February 22, 2006: Joint development template for NERC and NAESB efforts was presented to the Board of Directors via email. The Board unanimously adopted the template and authorized the NAESB office to move forward with ratification of the post-split TLR standards.

(NERC) February 24, 2006: NERC filed a statement with the FERC in support of the progress report on joint standards development filed by NAESB on February 17, 2006.[3]

April 10, 2006: The post-split standard was ratified by 80% of the NAESB WEQ Membership that voted.

(NERC) May 3, 2006: NERC ORS discussed SAR for post-split standards and future action plan.

(NERC) June 22-23, 2006: NERC Standards Authorization Committee (SAC) approved the formation of a TLR SAR Drafting Team and asked for nominations for this team.

(NERC) August 2, 2006: URGENT ACTION: SPP Regional Difference - IRO-006-3 posted for NERC Board of Trustees adoption.

(NERC) August 17, 2006: The NERC TLR SAR Drafting Team began meeting. Its first priority is to answer the comments submitted on the previous NERC TLR SAR.

September 1, 2006: R06002 Recommendation - Modify NAESB pre-split Version 0 TLR business practices to remain consistent with NERC IRO-006-1 pre-split TLR reliability standards (inclusion of market flows). – was ratified by 100% OF THE NAESB WEQ Membership that voted.[4]

---

[2] Progress Report on NAESB Activities impacting Docket No. RM05-5-000, "Standards for Business Practices and Communication Protocols for Public Utilities", filed with the Commission on February 17, 2006, Accession Number 20060217-5041.

[3] Statement of North American Electric Reliability Council In Support of Comments and Report by North American Energy Standards Board, under RM05-5 filed with the Commission on February 21, 2006, Accession Number 20060217-5082.

[4] Please note that Recommendation R06002 also follows up on NERC and NAESB's commitment to keep the Version 0 standards in line with the "same language and format." However, this commitment was made in reference to the standards held in NERC Operating Policy IRO-006-Attachment 1. NERC waivers in the version 0 standards were not contained in Attachment 1. It would not have been appropriate to contain these waivers in the NAESB Version 0 standard, since there originally not part of Attachment 1. However, during the Version 1 effort it was determined that these waivers were commercial in nature (please reference the addition to the NAESB standard of the PJM/MISO regional difference). Therefore, NERC has made the SPP change to IRO-006 (NERC's version 0 standard) and NAESB has made the corresponding change to its version 1 standard (more specifically, regional differences are included in Appendix D of the NAESB post-split standard). When NERC completes its version 1 standard, the SPP waiver should not be

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

(NERC) September 11, 2006[5]: The NERC TLR SAR Drafting Team held its second meeting.

(NERC) September 29, 2006: NERC Filing made on TLR which revised Version 0 (Docket No. ER06-) – and impacts the NAESB Version 0 standards.6

(NERC) October 2, 2006: The NERC TLR SAR Drafting Team held its third meeting in Carmel, Indiana where they continued to work on the SAR. It was not completed in this meeting.

EXPECTED:

(NERC) October 26, 2006: The NERC TLR SAR Drafting Team SAR may be approved by the NERC SAC assuming it is finalized between October 2 and October 25. If it is not complete for the October 26 meeting, the SAR may be complete for the November SAC meeting. Once the SAR is approved by the SAC, the NERC Standard Drafting Team will be assembled to begin review and drafting the standards to support the Version 0 split.

(NERC) 2nd Quarter, 2008: NERC's expected date of completion of TLR Split.

Outstanding (NAESB): See footnote 6.

included.

[5] Please note that more information is not available for this meeting (or the following meeting) on the NERC website at this time.

[6] In review of the filing, it is apparent the Market Level 3b and 4 changes were made to Attachment 1 of IRO-006. The SAR was approved for a 45 day comment period on February 14, 2006. It was asked at that time that the revisions contained in this SAR be "rolled in" with the revisions to be completed under the General Update with NAESB SAR. There was no agreement by SAC to the "roll-in" at the February SAC meting as SAC members and NERC staff noted that the "roll in" would not be completed when needed. The changes were needed by summer of 2006, and it was generally recognized that SAC would not be approving the Version 0 split by that date. Since February, in addition to NAESB BPS discussions, the NAESB SRS also requested updates from NERC on this SAR. NAESB was informed again that the changes for Market Level 3b and 4 would be rolled in with the NAESB General Update SAR and that no changes were required of NAESB for version 0. There is a question outstanding on steps to be taken for NAESB to remain consistent with NERC on TLR Version 0.

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 MATERIALS
JOINT NERC-NAESB EFFORTS: TLR, ATC & THE JOINT INTERCHANGE SCHEDULING WORKING GROUP
DECEMBER 14, 2006

Business Practices Subcommittee

- **April 5, 2006:** The BPS met jointly with the WEQ ESS/ITS and the NERC ATC/AFC Drafting Team in Houston, Texas, hosted by NERC to hold the kickoff meeting for the joint development of Request R05004 and the companion NERC SARs: ATC/TTC/AFC SAR and CBM/TRM SAR. The joint team discussed the timeline for developing the business practice and reliability standards to address the requests. NERC staff provided an overview of the NERC reliability standards development process and the NAESB business practice standards development process. The joint team also conducted a preliminary document review of the SARs and business practice request.
- **April 13, 2006:** The BPS met jointly with the ESS/ITS to discuss the joint standards development of R05004 and the companion NERC SARS with the NERC ATC/AFC drafting team. The team reviewed the schedule of meetings for the BPS and ESS/ITS and split request R05004 into five different parts.
- **May 23, 2005:** The ESS/ITS met jointly with the BPS at NAESB's Offices in Houston, Texas. During this meeting, the ESS/ITS and BPS reviewed the work of the NERC ATC Drafting Team on the NERC ATC/AFC and CBM/TRM standards, discussed the FERC NOPR on the reform of the OATT, and reviewed Request No. R05004. The subcommittee divided **the work on** R05004 into five separate pieces: A) 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 (new requirement**),** B) granting of partial service by capacity requested, both partial period and partial MW (for example WEQ SCP-002-4.2.13.2)**,** C) defining methodology for determining prioritization of competing requests for bumping and matching (for example WEQ BPS-001-4.18 and WEQ SCP-002-4.2.13.6, D) defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers (new requirement, would not apply to Western or ERCOT Interconnection), and E) processing of transmission service requests, which use CBM/TRM – including the amount of CBM to be made available as non-firm transmission service (for example, WEQ SCP-002-4.5.
- **June 12, 2006:** The BPS met jointly with the ESS/ITS to review the NOPR on OATT Reform in relation to R05004. In addition, the BPS and ESS/ITS reviewed draft language for R05004B and identified needed business practices under R05004E.
- **July 11-12, 2006:** The BPS and ESS/ITS met jointly to continue development of R05004, with emphasis on item B (granting of partial service by capacity requested, both partial period and partial MW). Language was developed for this item of the request and the subcommittee made an initial decision to include this in the Technical Implementation Guide currently under development for the OASIS Standards and Communication Protocols.
- **July 19, 2006:** The BPS and ESS/ITS met jointly to continue development of R05004, with emphasis on item B, item A (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), and item D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). Updates were provided on item A and D by representatives of the Midwest ISO. Language developed for item B was voted to an informal comment period, to begin on August 1. This date was chosen to coincide with NERC's first comment posting for their MOD 001.
- **July 20-21, 2006:** The BPS and ESS/ITS met jointly with the NERC ATC Standards Drafting Team in Houston, TX and reviewed progress to date on NERC's MOD draft standard for ATC/AFC and reviewed the timeline for the development of the NERC MOD standard for CBM/TRM. In addition, the group reviewed draft language on item B of NAESB's Request R05004 and reviewed updates on items A, D, E, and C of NAESB's Request R05004.
- **August 16, 2006:** The BPS and ESS/ITS met jointly in Colorado Springs, CO to continue development of R05004. During this meeting, the participants reviewed the draft modified NERC MOD-001 reliability standard drafted by the

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

NERC ATC Drafting Team and drafted an outline of comments to be submitted on MOD-001. The subcommittee also discussed items A (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) and D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers) of Request R05004..

- **September 7, 2006:** The WEQ Business Practices Subcommittee met jointly with the ESS/ITS to continue development of Request R05004. The BPS and ESS/ITS concentrated on item A (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), and item D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). The subcommittees developed a scope for each item that will guide them in drafting standards language for each item.

- **September 27, 2006**: The WEQ BPS and ESS/ITS met jointly to review comments submitted on Item B (granting of partial service by capacity requested, both partial period and partial MW) of R05004. During the review of comments, the group discovered some inconsistencies in the treatment of extended service in their draft language. Action items were taken to redraft the language to address the concerns raised in the comments.

- **October 4-6, 2006**: The WEQ BPS and ESS/ITS will met jointly with the NERC ATC Standards Drafting Team to review progress to date on the development of ATC/AFC/TTC standards. The NERC team brought the NAESB team up to date on their progress on MOD-001 (ATC). The NAESB team reviewed their draft standards language for item B of R05040 and explained that it would go out for another round of informal comments. Future coordination was discussed, including future postings for comments. Future meetings were also scheduled tentatively for December 11-12, 2006 and March 2007.

- **October 10, 2006:** The WEQ BPS and ESS/ITS met jointly to review revised draft language for Item B (granting of partial service by capacity requested, both partial period and partial MW) of R05004 (Develop transmission service request and scheduling standards using TTC/ATC/AFC and CBM/TRM). The joint subcommittees decided to send the language out for a round of informal comments. Team members took action items to draft the introduction language to the request for informal comments.

- **October 27, 2006:** The WEQ ESS/ITS and BPS met jointly via conference call to continue discussions on R05004A Item 1A (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) and Item 1D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). The group also began discussions on Item 3E (business practices for calculation and frequency of posting ATC calculation) (frequency of calculation and frequency of posting). An informal request for comments was developed on questions relating to the above items. The group plans to review these comments during the November 15th meeting in Dallas, TX.

- **November 15, 2006**: The WEQ BPS and ESS/ITS met jointly in Dallas, TX to continue development of R05004A. The subcommittees reviewed the second round of informal comments submitted on Item 1B (granting of partial service by capacity requested, both partial period and partial MW). The language was revised and plans were made to review the language and the comments submitted with the NERC ATC Drafting Team at the next joint meeting of the NERC and NAESB ATC teams. In addition, MOD 001 was reviewed for the second time by the NAESB team. Comments were provided and plans were made to review the comments with the NERC team during their next ATC DT conference call meeting. NERC plans to post MOD 001 for comments on December 1.

- **December 6, 2006:** The WEQ BPS and ESS/ITS met jointly to review informal comments submitted on Item 1D (defining whether Contract Path for systems using flow-based analysis is between control areas or between

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

Transmission Service Providers), Item 1A (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), and item 3E (business practices for calculation and frequency of posting ATC calculation) (frequency of calculation and frequency of posting) of R05004A. The subcommittee plans to begin drafting language for these items, depending on the responses given as a result of the informal request for comments. Updates will be given on the progress of the NERC ATC Drafting Team.

Electronic Scheduling/Information Technology

- **April 4-5, 2006:** The WEQ ESS/ITS also reviewed the activities of the Coordinate Interchange Business Practices Task Force and the Joint Interchange Scheduling Working Group and discussed the timeline for the joint development of the ATC/TTC Request No. R05004 (joint development with the NAESB BPS and the NERC ATC Drafting Team).
- **April 5, 2006:** The WEQ ESS/ITS met jointly with the WEQ BPS and the NERC ATC Drafting Team in Houston, Texas, hosted by NERC to hold the kickoff meeting for the joint development of Request No. R05004 and the companion NERC SARs: ATC/TTC/AFC SAR and CBM/TRM SAR. The joint team discussed the timeline for developing the business practice and reliability standards to address the requests. NERC staff provided an overview of the NERC reliability standards development process and the NAESB business practice standards development process. The joint team also conducted a preliminary document review of the SARs and business practice request.
- **April 13, 2006:** The ESS/ITS met jointly with the BPS via conference call to discuss the joint standards development of R05004. The subcommittees agreed to divide the Request into five separate recommendations and discussed the schedule for future meetings.
- **May 23, 2006:** The ESS/ITS met jointly with the BPS at NAESB's Offices in Houston, Texas. During this meeting, the ESS/ITS and BPS reviewed the work of the NERC ATC Drafting Team on the NERC ATC/AFC and CBM/TRM standards, discussed the FERC NOPR on the reform of the OATT, and reviewed Request No. R05004. The subcommittee divided the work on R05004 into five separate pieces: A) 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 (new requirement), B) granting of partial service by capacity requested, both partial period and partial MW (for example WEQ SCP-002-4.2.13.2), C) defining methodology for determining prioritization of competing requests for bumping and matching (for example WEQ BPS-001-4.18 and WEQ SCP-002-4.2.13.6, D) defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers (new requirement, would not apply to Western or ERCOT Interconnection), and E) processing of transmission service requests, which use CBM/TRM – including the amount of CBM to be made available as non-firm transmission service (for example, WEQ SCP-002-4.5).
- **July 11-12, 2006:** The BPS and ESS/ITS met jointly to continue development of R05004, with emphasis on item B (granting of partial service by capacity requested, both partial period and partial MW). Language was developed for this item of the request and the subcommittee made an initial decision to include this in the Technical Implementation Guide currently under development for the OASIS Standards and Communication Protocols.
- **July 19, 2006:** The BPS and ESS/ITS met jointly to continue development of R05004, with emphasis on item B, item A (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), and item D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). Updates were provided on item A and D by representatives of the Midwest ISO. Language developed for item B was voted to an informal comment period, to begin on August 1. This date was chosen to coincide with NERC's first comment posting for their MOD 001.

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 MATERIALS
JOINT NERC-NAESB EFFORTS: TLR, ATC & THE JOINT INTERCHANGE SCHEDULING WORKING GROUP
DECEMBER 14, 2006

- **July 20-21, 2006:** The BPS and ESS/ITS met jointly with the NERC ATC Standards Drafting Team in Houston, TX and reviewed progress to date on NERC's MOD draft standard for ATC/AFC and reviewed the timeline for the development of the NERC MOD standard for CBM/TRM. In addition, the group reviewed draft language on item B of NAESB's Request R05004 and reviewed updates on items A, D, E, and C of NAESB's Request R05004.

- **August 11, 2006:** The ESS/ITS also reviewed the proposed revised scope of R05004 that will be submitted to the WEQ Executive Committee by the OATT Analysis Task Force. The scope was revised to include additional business practice standards development items that were included in the OATT NOPR but that were not included in the request. The ESS/ITS did not suggest any modifications to the proposed revised R05004.

- **August 16, 2006:** The BPS and ESS/ITS met jointly in Colorado Springs, CO to continue development of R05004. During this meeting, the participants reviewed the draft modified NERC MOD-001 reliability standard drafted by the NERC ATC Drafting Team and drafted an outline of comments to be submitted on MOD-001. The subcommittee also discussed items A (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) and D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers) of Request R05004.

- **September 7, 2006:** The WEQ Business Practices Subcommittee met jointly with the ESS/ITS to continue development of Request R05004. The BPS and ESS/ITS concentrated on item A (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), and item D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). The participants reviewed the definitions for ATC and AFC; adopted the scope of Item A of request R05004 (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); and discussed the scope of Item D of request R05004 (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). The subcommittees developed a scope for each item that will guide them in drafting standards language for each item.

- **September 27, 2006**: The WEQ BPS and ESS/ITS met jointly to review comments submitted on Item B (granting of partial service by capacity requested, both partial period and partial MW) of R05004. During the review of comments, the group discovered some inconsistencies in the treatment of extended service in their draft language. Action items were taken to redraft the language to address the concerns raised in the comments.

- **October 4-6, 2006**: The WEQ BPS and ESS/ITS met jointly with the NERC ATC Standards Drafting Team to review progress to date on the development of ATC/AFC/TTC standards. The NERC team brought the NAESB team up to date on their progress on MOD-001 (ATC). The NAESB team reviewed their draft standards language for item B of R05004 and explained that it would go out for another round of informal comments. Future coordination was discussed, including future postings for comments. Future meetings were also scheduled tentatively for December 11-12, 2006 and March 2007.

- **October 10, 2006:** The WEQ BPS and ESS/ITS met jointly to review revised draft language for Item B (granting of partial service by capacity requested, both partial period and partial MW) of R05004 (Develop transmission service request and scheduling standards using TTC/ATC/AFC and CBM/TRM). The joint subcommittees decided to send the language out for a round of informal comments. Team members took action items to draft the introduction language to the request for informal comments.

- **October 27, 2006:** The WEQ ESS/ITS and BPS met jointly via conference call to continue discussions on R05004A Item 1A (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

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

offerings on OASIS) and Item 1D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers). The group also began discussions on Item 3E (business practices for calculation and frequency of posting ATC calculation) (frequency of calculation and frequency of posting). An informal request for comments was developed on questions relating to the above items. The group plans to review these comments during the November 15th meeting in Dallas, TX.

- **November 15, 2006:** The WEQ BPS and ESS/ITS met jointly in Dallas, TX to continue development of R05004A. The subcommittees reviewed the second round of informal comments submitted on Item 1B (granting of partial service by capacity requested, both partial period and partial MW). The language was revised and plans were made to review the language and the comments submitted with the NERC ATC Drafting Team at the next joint meeting of the NERC and NAESB ATC teams. In addition, MOD 001 was reviewed for the second time by the NAESB team. Comments were provided and plans were made to review the comments with the NERC team during their next ATC DT conference call meeting. NERC plans to post MOD 001 for comments on December 1.

- **December 4, 2006:** The ESS/ITS met via conference call on December 4, 2006 from 10:00 AM to 4:00 PM Central. The agenda included: an update on the joint effort with the WEQ Business Practices Subcommittee and the NERC ATC Drafting Team to draft standards to address Request No. R05004A.

- **December 6, 2006:** The WEQ BPS and ESS/ITS met jointly to review informal comments submitted on Item 1D (defining whether Contract Path for systems using flow-based analysis is between control areas or between Transmission Service Providers), Item 1A (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), and item 3E (business practices for calculation and frequency of posting ATC calculation) (frequency of calculation and frequency of posting) of R05004A. The subcommittee plans to begin drafting language for these items, depending on the responses given as a result of the informal request for comments. Updates will be given on the progress of the NERC ATC Drafting Team.

NERC/NAESB Joint Interchange Scheduling Working Group

- **January 25-26, 2006:** The JISWG reviewed and revised the SRD for the Registry and revised a comment questionnaire for the SRD. The group expects to post the SRD for comments at NERC following their next meeting. In addition, the group developed a plan for the development of Public Key Infrastructure (PKI) standards under Request R03007 (Enhance the current OASIS Standards and Communications Protocols (S&CP) to ensure compliance with the Energy Market Access and Reliability Certificates (e-MARC) Security Initiative, currently being developed by NERC.)

- **February 13, 2006:** The JISWG prepared the SRD for the Registry for a 90 day comment posting period at NERC. The JISWG also completed a request for standards development on Market Operator Adjusts and submitted it to the NAESB office. A complementary NERC Standards Authorization Request (SAR) will also be drafted.

- **February 27-28, 2006:** The JISWG reviewed comments submitted on draft e-Tag Specification 1.7096 and redlined the document accordingly. In addition, an update was given on the status of the development of the draft Public Key Infrastructure (PKI) standards.

- **March 9, 2006:** The JISWG completed responses to comments that were submitted on the draft Public Key Infrastructure (PKI) standards.

- **March 29-30, 2006:** The JISWG continued development on the draft PKI standards. In addition, they continued to review draft e-Tag Specification 1.7096 for needed updates and revisions. The group discussed submitting a request to NAESB for the drafting of the e-Tag Specification as a NAESB business practice standard. No action was taken at this time.

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 MATERIALS
JOINT NERC-NAESB EFFORTS: TLR, ATC & THE JOINT INTERCHANGE SCHEDULING WORKING GROUP
DECEMBER 14, 2006

- **April 25, 2006:** The JISWG reviewed draft PKI standards and declaratory documents for End-Entities and Qualified Reliant Parties. Action items were taken that will be reviewed during the May 24-25 meeting.
- **May 12, 2006:** The JISWG conference call was cancelled at the request of the chairs.
- **May 24-25, 2006:** The JISWG met in Houston, Texas to review comments submitted on the Systems Requirement Document for the Registry. The group provided responses to these comments. In addition, the group reviewed the draft NAESB PKI standards. The subcommittee took an action item to post the draft PKI standards for an informal round of comments, with comments to be reviewed at the July 18-19 meeting.
- **July 18-19, 2006;** The JISWG met in Houston, TX to review informal comments submitted on PKI standards and make appropriate changes to these draft standards. The group discussed the timeline for the submittal of the standards to the WEQ EC. Leadership noted that the group must wait to review the report Sandia National Laboratories will provide on their review of these draft standards. In addition, the group began identifying needed updates to the e-Tag Specification as a result of both the NAESB and the NERC Coordinate Interchange Standards.
- **September 20, 2006:** The JISWG met in Quebec City, Quebec, Canada jointly with the NERC Interchange Subcommittee (IS) to continue their work in the updating the e-Tag Specification as a result of the NAESB and NERC Coordinate Interchange Standards. Several parts of the tool have been identified for discussions related to updating, and can be found in the work paper located at http://www.naesb.org/pdf2/weq_jiswg071806w4.doc. In addition, the JISWG also reviewed the NAESB PKI standards and made revisions and took action items for updating. Plans were made to finalize these standards during the month of October.
- **October 4, 2006:** The JISWG met to update the draft NAESB PKI standards. Action items were taken to make sure correct references from the Internet RFC were included in the drafts standards. The JISWG asked that NAESB General Counsel review the standards to make sure it is within NAESB's scope and ability.
- **October 20, 2006:** The JISWG met to review changes made to the e-Tag Specification. These changes were voted out of subcommittee and to the NERC Interchange Subcommittee. In addition, the JISWG continued their work on the NAESB PKI standards. It is expected that the standards will be completed by the end of the month.
- **November 2, 2006:** The JISWG met via conference call to review updates made to draft Recommendation WEQ 2006 Annual Plan Item 3 b iii/R03007 (PKI Initiative – e-MARC). The subcommittee made the decision to proceed with the less substantive changes recommended by Sandia National Laboratories in their surety assessment and included them in the Recommendation. The Recommendation was voted out of subcommittee to the WEQ Executive Committee for its consideration.
- **Planned, December 15, 2006:** The JISWG will meet via conference call to review any comments submitted on Recommendation WEQ 2006 Annual Plan 3 b iii/R03007: PKI Initiative (e-MARC). The JISWG will prepare for a WEQ Executive Committee conference call to adopt the standards (not yet scheduled). In addition, the JISWG expects to vote out of subcommittee a Recommendation for WEQ 2006 Annual Plan Item 3 (b) (i) (Develop companion business practices to NERC's Cyber Standard (CIP002-009), and specifically review section 1303-Personnel & Training to determine if business practices are needed.) The JISWG will also review additional necessary changes to the NERC INT Version 1 Standards and NAESB's R05001 Coordinate Interchange Standards. A request for standards development has been submitted to NAESB for this change, but the subcommittee expects to develop and review an Urgent Action SAR for the NERC INT standards during the meeting.
- **Planned, late January, 2007:** The JISWG will meet in Houston, TX to continue work to update the NAESB R05001 Coordinate Interchange Standard and the NERC INT Version 1 Standards to align them with changes made to the e-Tag tool and Interchange timing tables. The working group will also review the NAESB 2007 Annual Plan and assignments given to them by the NERC IS for 2007 and the NAESB WEQ EC for 2007.

RECOMMENDATION TO NAESB REQ AND RGQ EXECUTIVE COMMITTEES

Requester: **EnergyWindow, Inc**

Request No.: **R05013; REQ/RGQ Annual Plan Item #6a**

1. RECOMMENDED ACTION:

___Accept as requested
_X_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:

_X_Initiation
___Modification
___Interpretation
___Withdrawal

___Principle
___Definition
_X_Business Practice Standard
___Document
___Data Element
___Code Value
___X12 Implementation Guide
___Business Process Documentation

Per Recommendation:

_X_Initiation
___Modification
___Interpretation
___Withdrawal

___Principle
___Definition
_X_Business Practice Standard
___Document
___Data Element
___Code Value
___X12 Implementation Guide
___Business Process Documentation

3. RECOMMENDATION

Adopt the commodity-neutral model Base Contract for Retail Sale and Purchase of Natural Gas or Electricity ("Model Agreement") and the related User Guide to Base Retail Contract ("User Guide") developed by the Contracts Subcommittees of the NAESB Retail Electric and Retail Gas Quadrants. The Model Agreement is patterned after the Base Contract for Sale and Purchase of Natural Gas developed by the NAESB Wholesale Gas Quadrant. The User Guide is intended to provide users of the Model Agreement with information on the location of the provisions that are included in the Model Agreement, as well as to identify topics that the users may want to consider including in their individual agreements as special provisions.

The proposed Base Contract for Retail Sale and Purchase of Natural Gas or Electricity is attached as Appendix A.

The proposed User Guide to the Base Retail Contract is attached as Appendix B.

RECOMMENDATION TO NAESB REQ AND RGQ EXECUTIVE COMMITTEES

Requester: **EnergyWindow, Inc**

Request No.: **R05013; REQ/RGQ Annual Plan Item #6a**

4. SUPPORTING DOCUMENTATION

a. Description of Request:

Request R05013: Develop a model electric retail contract modeled after the NAESB Base Contract for Sale and Purchase of Natural Gas, NAESB Standard 6.3.1 (NAESB Base Contract for Gas). The contract would be designed for use by large scale aggregators, large single- and multi-site commercial users of electric power, and large industrials in competitive electric power markets.

2006 Annual Plan for the Retail Gas and Electric Quadrants – Item#6a: Develop a model RGQ/REQ contract/outline modeled after the NAESB Base Contract for Sale and Purchase of Natural Gas, NAESB Standard 6.3.1 designated for use by electric power markets or competitive gas markets (R05013).

b. Description of Recommendation:

REQ and RGQ Contracts Subcommittees

See the REQ and RGQ Contracts Subcommittees (SC) meeting minutes and attachments and the filed comments for the supporting documentation under the SC meetings noted below.

October 4, 2005	April 19, 2006
October 12, 2005	May 4, 2006
November 8, 2005	May 17, 2006
December 6, 2005	June 19, 2006
December 15, 2005	July 6, 2006
January 27, 2006	July 27, 2006
February 17, 2006	August 14, 2006
March 6, 2006	August 28, 2006
March 31, 2006	September 18, 2006

Using the proposed agreement attached to Request R05013 as a starting point, the SC developed a draft commodity-neutral agreement. On March 13, 2006, a request for informal comments on the draft agreement was posted on the SC pages of the NAESB web site. Six sets of informal comments containing approximately 110 separate suggestions for modifications to the draft agreement were received. During subsequent conference calls, the SC discussed each suggestion and incorporated certain of those suggestions into the Base Contract for Retail Sale and Purchase of Natural Gas or Electricity. In addition, the SC reviewed the changes to the NAESB Base Contract for Sale and Purchase of Natural Gas, NAESB Standard 6.3.1 that were approved by the membership of the Wholesale Gas Quadrant as of September 5, 2006, and incorporated certain of those changes into the Base Contract for Retail Sale and Purchase of Natural Gas or Electricity. During the review of the suggested changes, the SC considered whether the change would preserve the commodity-neutral nature of the agreement and whether the suggested language would be applicable to a large majority of the potential users of the agreement. The SC also developed a companion User Guide to Base Retail Contract that contains additional information and suggestions related to the use of the Base Contract for Retail Sale and Purchase of Natural Gas or Electricity.

RECOMMENDATION TO NAESB REQ AND RGQ EXECUTIVE COMMITTEES

Requester: **EnergyWindow, Inc**

Request No.: **R05013; REQ/RGQ Annual Plan Item #6a**

Motion on Recommendation:

Motion that the Retail Contracts Subcommittees approve the Retail Model Base Contract for the Sale and Purchase of Natural Gas or Electricity (version as completed 9.18.06) and the User Guide for the Retail Model Base Contract for the Sale and Purchase of Natural Gas or Electricity (version as completed 9.18.06). This motion is subject to the adoption of the definitions included in the Retail Model Base Contract for the Sale and Purchase of Natural Gas or Electricity by the REQ/RGQ Glossary Subcommittees (scheduled for September 27, 2006). This motion moves the draft Recommendation R05013 (Develop a model electric retail contract) out of subcommittee and to the REQ/RGQ Executive Committees.

Discussion on the motion:

The motion was made by Ed Overtree and seconded by Jack Mason at the joint meeting of the REQ and RGQ Contracts Subcommittees held on September 18, 2006.

Vote on the motion:

The vote on the motion was a consensus vote for each quadrant; there was no request for a balanced vote of the participants at the September 18, 2006 meeting. The motion passed unanimously, with no abstentions recorded.

REQ and RGQ Glossary Subcommittees

During a conference call held on September 27, 2006, the REQ and RGQ Glossary Subcommittees determined that no action would be taken to incorporate into the Retail Glossary the definitions included in Section 2 of the Retail Model Base Contract for the Sale and Purchase of Natural Gas or Electricity. This action resolved the conditionality of the action taken during the REQ and RGQ Contracts Subcommittee conference call held on September 18, 2006.

c. Business Purpose:

The business purpose is to create a commodity-neutral agreement that can be used for the purchase and sale of natural gas or electricity by participants in retail markets.

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

The commentary/rationale to support the new agreement and user guide is set forth in the meeting minutes noted for the meetings identified above in Section 4.b.

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 MATERIALS
OASIS EFFORTS
DECEMBER 14, 2006

ELECTRONIC SCHEDULING/INFORMATION TECHNOLOGY SUMMARY OF MEETINGS IMPACTING OASIS BUT NOT INCLUDING ATC (R05004)

- **January 30, 2006:** The WEQ ESS/ITS discussed the recommendation for Request No. R04006D (Resales and Transfers) that was remanded by the WEQ Executive Committee for further development of the proposed modification to Redirect Standard 9.8.1. The subcommittee considered several alternatives to modify the recommendation, but has not reached a consensus on which alternative will become the new proposal.
- **January 30, 2006:** The WEQ ESS/ITS also voted to forward Request No. R05020 (include a guideline for rounding schedules with partial mWhs in the coordinate interchange business practice WEQ BPS-002-000) to the Coordinate Interchange Business Practices Task Force for development.
- **March 6-7, 2006**: The WEQ ESS/ITS met in Houston, Texas on March 6-7. The subcommittee modified the recommendation for Request No. R04006D (Resales and Transfers) as requested by the WEQ Executive Committee. The ESS/ITS voted to send the revised recommendation for R04006D to the Executive Committee for vote at the May 9, 2006 meeting.
- **March 6-7, 2006**: During this meeting, the ESS/ITS also voted to send the recommendation and final report for Request No. R04007 (Develop OASIS Phase II implementing NERC's functional model and other improvements) to the WEQ Executive Committee. The ESS/ITS recommended to the WEQ Executive Committee that no standards be developed to address Request No. R04007. The ESS/ITS also drafted a recommendation for Request No. R04006F (Naming Standardization). The recommendation states "With respect to OASIS naming standardization the ESS/ITS recommends that no additional business practice standards be developed. If specific naming standards are required by the industry, a new standards request should be submitted."
- **March 6-7, 2006**: The ESS/ITS also prioritized the development of model business practices for the items that have been assigned to the WEQ ESS/ITS: R04006C-1 (Develop OASIS 1A capacity release request standards); R04006E (Network Service Transactions); and R04036 (Amend definitions, terms and numbering of WEQ Order 2004 (affiliate) standards).
- **March 6-7, 2006**: At the request of the WEQ Business Practices Subcommittee, the ESS/ITS reviewed the Memorandum and Proposal drafted by the WEQ BPS on the modification to Standards of Conduct per FERC NOPR RM05-5. The ESS/ITS determined that changes to the WEQ Standards & Communications Protocols will be required once the BPS finalizes its recommendation for what items should be included on the standardized Standards of Conduct "button".
- **April 4-5, 2006**: The WEQ ESS/ITS reviewed the draft recommendations for R04006C-1 (Develop OASIS 1A capacity release request standards) including a draft for an implementation guide for the Standards & Communication Protocols; and discussed Request R04006E (Network Service Transactions) and R04036 (Amend definitions, terms and numbering of WEQ Order 2004 (affiliate) standards)
- **April 4-5, 2006:** The ESS/ITS also reviewed the recommendation for 2006 WEQ Annual Plan Item 3(c)(i) (Development of business practice for Standards of Conduct link on OASIS page) submitted to the WEQ Executive Committee and posted for comment by the WEQ Business Practices Subcommittee. The ESS/ITS voted via balanced vote to post formal comments on the recommendation.
- **June 1-2, 2006:** The ESS/ITS met on June 1-2 in Charlotte, North Carolina hosted by Duke Energy. During this meeting, the ESS/ITS began its work to modify NAESB WEQ OASIS Standard 001-9.7 per FERC Order 676; reviewed and responded to the comments submitted by Entergy on Recommendation R04006D (revised) as requested by the WEQ Executive Committee, and voted on a term to replace the term Release for Request No. R04006C1 (Develop OASIS 1A capacity release request standards).

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 MATERIALS
OASIS EFFORTS
DECEMBER 14, 2006

- **June 27-28, 2006:** The ESS/ITS met on June 27-28, 2006 at NAESB's offices in Houston, Texas. During this meting, the ESS/ITS voted to post the draft proposed modification to NAESB WEQ OASIS Standard 001-9.7 (Item 3(a)(x) on the WEQ 2006 Annual Plan) for informal comments; voted to forward the 2nd Revised Recommendation for R04006D (OASIS 1A Enhancements - Sale or Assignment of Transmission Service) to the WEQ Executive Committee for adoption; and approved the Response to Comments document that contains the response of the ESS/ITS to the comments submitted by Entergy on the Revised Recommendation R04006D. The ESS/ITS discussed Request No. R05019 (Modify OASIS standards and S&CP to clearly document the procedures used to implement the displacement/interruption terms of the Pro Forma tariff); and continued drafting the proposed modification to the WEQ Standards of Conduct to address Request No. R04036 (Amend definitions, terms and numbering of WEQ Order 2004 (affiliate) standards) drafted by the OASIS Task Force. The ESS/ITS forwarded further development of the implementation guide for the Standards & Communication Protocols that will be processed under Request No. R04006C-1 (Develop OASIS 1A capacity release request standards) to the OASIS Task Force and also forwarded Request No. R06006 (Develop standards to allow for registered Market Operators to request changes to the Market Level profile of Implemented Interchange) to the JISWG for standards development.

- **July 10-11, 2006:** The ESS/ITS met on July 10-11, 2006 at NAESB's offices in Houston, Texas. During this meeting, the ESS/ITS voted to send the Recommendation for WEQ 2006 Annual Plan Item 3(a)(x) (Respond to issues in FERC Order No. 676 (Docket No. RM05-5-000) – NAESB WEQ Standards 001 9.7, (paragraph 51 of the order)) and the Recommendation for R04036 (Amend definitions, terms and numbering of WEQ Order 2004 (affiliate) standards) to the WEQ Executive Committee for adoption.

- **August 11, 2006**: The ESS/ITS met via conference call on August 11, 2006 to review comments submitted to date on the three recommendations the ESS/ITS submitted for adoption by the WEQ Executive Committee: 2nd Revised Recommendation R04006D (as of the date of the conference call, comments were submitted by Hydro-Quebec TransÉnergie and Southern Company Generation); Recommendation R04036 (as of the date of the conference call, comments were submitted by Southern Company Generation); and Recommendation WEQ 2006 Annual Plan Item 3(a)(x) (as of the date of the conference call, comments were submitted by Hydro-Quebec TransÉnergie; Southern Company Generation; and Bonneville Power Administration).

- **August 11, 2006**: In response to the discussion of the comments, the ESS/ITS drafted a Response to Comments Document for the recommendation for R04006D to be submitted to the WEQ Executive Committee. The ESS/ITS also drafted a revised recommendation for R04036 based on the comments submitted. The revised recommendation was forwarded to the WEQ Executive Committee to be included in its consideration of this recommendation. The recommendation of the ESS/ITS based on the comments submitted on WEQ 2006 Annual Plan Item 3(a)(x) was to recommend that the WEQ Executive Committee adopt the recommendation as drafted**.**

- **September 25-26, 2006:** The ESS/ITS met in Phoenix, Arizona hosted by Salt River Project to conduct its regular business. During this meeting, the ESS/ITS reviewed the scoping document for Request No. R05026 (Thirteen proposed enhancements to incrementally improve OASIS) drafted by the WEQ SRS and provided comments on the document that will be referred to the SRS; assigned Request No. R05020 (Include a guideline for rounding schedules with partial mWhs in the coordinate interchange business practice WEQ BPS-002-000) to the WEQ JISWG; and continued development of the implementation guide for the S & CPs and the recommendation for the RELINQUISH mechanism for Request No. R04006C1 (Develop OASIS 1A capacity release request standards). The ESS/ITS also assigned Request No. R06006 (Develop standards to allow for registered Market Operators to request changes to the Market Level profile of Implemented Interchange) to the JISWG during this meeting..

- **October 4-6, 2006**: The NAESB team reviewed their draft standards language for item B of R05040 and explained that it would go out for another round of informal comments. Future coordination was discussed, including future postings for comments. Future meetings were also scheduled tentatively for December 11-12, 2006 and March 2007.

- **October 23-24, 2006**: The ESS/ITS met in Reno, Nevada, hosted by Sierra Pacific Resources on October 23-24. The agenda included discussion of the next steps due to the direction of the WEQ Executive Committee on August

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

15, 2006 in light of FERC Order 676-A; R04006C1 (Develop OASIS 1A capacity release request standards) – review the draft implementation guide for the S & CPs; the modified S & CPs; and the recommendation for the RELINQUISH mechanism; Request No. R04006E (Network Service Transactions); review Annual Plan Item 3(b)(i) to develop companion business practices to NERC's Cyber Standard (CIP002-009), and specifically review section 1303-Personnel & Training to determine if business practices are needed; and an update on the joint effort with the WEQ Business Practices Subcommittee and the NERC ATC Drafting Team to draft standards to address Request No. R05004A (revised on 08/15/2006 by WEQ Executive Committee). During this meeting the ESS/ITS voted to distribute the latest draft recommendation for R04006C1 for 20 day informal comments.

- **December 4, 2006:** The ESS/ITS met via conference call on December 4, 2006 from 10:00 AM to 4:00 PM Central. The agenda items included: Review the comments submitted during the Informal Comment period for the draft Relinquish standards to address Request No. R04006C1 (Develop OASIS 1A capacity release request standards). During this meeting, these standards may be voted for submission to the WEQ Executive Committee for adoption after being posted for formal comment; determine the Next Steps for the development of the Implementation Guide; Request No. R04006E (Network Service Transactions): review examples to be submitted by subcommittee participants; review Annual Plan Item 3(b)(i) to develop companion business practices to NERC's Cyber Standard (CIP002-009), and specifically review section 1303-Personnel & Training to determine if business practices are needed; an update on the joint effort with the WEQ Business Practices Subcommittee and the NERC ATC Drafting Team to draft standards to address Request No. R05004A.

OASIS Task Force

- **April 21, 2006:** The OASIS Task Force held a conference call on April 21 to draft proposed modifications to definitions for Request No. R04036 and to continue to work on the Standards & Communication Protocols implementation guide. The subcommittee forwarded the work drafted to date to the WEQ ESS/ITS to be reviewed at its June 1-2, 2006 meeting in Charlotte, North Carolina hosted by Duke Energy. The OASIS Task Force began discussing Request No. R05019.
- **May 4, 2006:** The OASIS Task Force reviewed a list of scoping questions drafted by Ms. Weathers for Request No. R05019 to determine the direction the Task Force wants to take in the drafting of the standards for R05019.
- **May 15, 2006:** The OASIS Task Force discussed FERC Order 676 and NAESB WEQ OASIS Standard 001-9.7. The participants supported drafting a modification to standard 9.7 to incorporate the language FERC included in Order 676. The OASIS Task Force will also review the WEQ Standards & Communication Protocols (S&CPs) to determine if modifications should be made to implement the proposed modification of Standard 9.7.
- **May 26, 2006:** The OASIS Task Force met via conference call on May 26 to review the proposed modification to NAESB WEQ OASIS Standard 001-9.7.
- **July 5, 2006:** The OASIS Task Force had scheduled a conference call on July 5, 2006 to continue development of the S&CP Implementation Guide. This call was rescheduled at the request of the chair.
- **August 22, 2006:** The OASIS Task Force met via conference call on August 22, 2006. During this call, the OASIS Task Force continued development of the S&CP Implementation Guide to be processed as part of Request No. R04006C1.
- **August 31, 2006:** The OASIS Task Force continued its work on the OASIS S&CP Implementation Guide and revisions to the OASIS S&CPs as a result of the creation of the Implementation Guide. The subcommittee also reviewed a draft recommendation to establish the business practice standards for RELINQUISH to address Request No. R04006C1.
- **September 15, 2006**: The OASIS Task Force met on September 15 via conference call with web conferencing to review the draft scoping document for R05026 (Thirteen proposed enhancements to incrementally improve OASIS)

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

drafted by the WEQ SRS in anticipation of the review of the scoping document by the entire ESS/ITS during the September 25-26 meeting.

Standards Review Subcommittee

- **February 9, 2006**: The SRS held a conference call to review the NAESB Requests that have been assigned to the WEQ by the Triage Subcommittee, but have not been reviewed by the JIC. The SRS will review these requests to determine if scoping documents are needed prior to review by the JIC. The requests on the agenda to determine if scoping documents should be drafted are: Request No. R05004 (revised) (Develop transmission service request and scheduling standards using TTC/ATC/AFC and CBM/TRM); Request No. R05019 (Modify OASIS standards and S&CP to clearly document the procedures used to implement the displacement/interruption terms of the Pro Forma tariff); Request No. R05020 (Include a guideline for rounding schedules with partial mWhs in the coordinate interchange business practice WEQ BPS-002-000); Request No. R05026 (Thirteen proposed enhancements to incrementally improve OASIS); and Request No. R06002 (Modify NAESB pre-split Version 0 TLR business practices to remain consistent with NERC IRO-006-1 pre-split TLR reliability standards (inclusion of market flows)).
- **February 9, 2006**: The SRS reviewed NERC reliability standards in development to determine if complementary NAESB business practice standards are needed. During this call, the SRS plans to review the SARs currently posted for comment: SPP Regional Difference for IRO-006-1; Revision to EOP-004-0-Disturbance Reporting; Relay Loadability; and Fuel Supply or Delivery Disruption Reporting. The SRS will also review the NERC Ballots currently posted for vote and the January 2006 NERC Standards Development Bulletin. The SRS began a comparison of the NAESB WEQ 2006 Annual Plan with the NERC 2006 SAC Annual Plan.
- **March 9, 2006:** The SRS met to review current WEQ standards development requests to determine if scoping documents were needed prior to submittal of the requests to the Joint Interface Committee (JIC). The group determined that a scoping document was required for R05026 (Thirteen incremental enhancements to OASIS). The subcommittee continued their review of current NERC Standards Authorization Requests (SARs) and determined that for the SARs reviewed, no complementary NAESB business practice standards were needed.
- **April 13, 2006:** The SRS was scheduled to meet to review current WEQ standards development requests to determine if scoping documents are needed prior to submittal of the requests to the Joint Interface Committee (JIC). The group was to review a preliminary draft scoping document for R05026 (Thirteen incremental enhancements to OASIS). The subcommittee was also to continue their review of current NERC Standards Authorization Requests (SARs) to determine if complementary NAESB business practice standards are needed. The conference call meeting was canceled at the request of the chairs.
- **May 18, 2006:** The SRS met to review a preliminary draft scoping document for R05026 (Thirteen incremental enhancements to OASIS) developed by the NAESB office. Action items were assigned to complete sections of this scoping document. The subcommittee will continue their review of current NERC Standards Authorization Requests (SARs) and NERC standards out for ballot to determine if complementary NAESB business practice standards are needed. The subcommittee noted several SARs for monitoring.
- **June 8, 2006:** The SRS met to continue development on the draft scoping document for R05026 (Thirteen incremental enhancements to OASIS). The NAESB office will make noted changes to the functionality section of the scoping document and send it to leaders in the SRS, prior to asking for additional involvement from Calpine representatives. It is the goal of the SRS to have the submitter, Calpine, review the scoping document before it is submitted to the NAESB WEQ Executive Committee and Joint Interface Committee.
- **July 13, 2006:** The SRS met to discuss the draft scoping document for R05026 (Thirteen incremental enhancements to OASIS). Several questions were identified by the team for further clarification. Members of the group noted that some of the items listed could not be determined to be in the scope of NAESB without clarification. The NAESB office took an action item to update the report and to contact the requester for further clarification. The subcommittee continued their review of current NERC Standards Authorization Requests (SARs) and NERC

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

standards out for ballot to determine if complementary NAESB business practice standards are needed. It was noted that NERC's SAR for Revisions to IR0-004 (Require Timely Submission of Data) did not warrant a commercial practice.

- **August 21, 2006:** The WEQ Standards Review Subcommittee met via conference call and decided to meet jointly with the ESS/ITS on September 25th to continue development of the scoping document for R05026 (Thirteen incremental enhancements to OASIS.) In addition, the subcommittee reviewed NERC Standards Authorization Requests and Ballots to determine if corresponding commercial practices are warranted. None were noted during this meeting as requiring development of commercial standards.
- **September 18, 2006:** The WEQ Standards Review Subcommittee met to prepare for the meeting with the ESS/ITS on September 25th, during which the subcommittees will continue work on the draft scoping document for R05026 (Thirteen incremental enhancements to OASIS). In addition, the subcommittee reviewed NERC Standard Authorization Requests and Ballots to determine if corresponding commercial practices were warranted. Several SARs were noted for future review – but none were confirmed as contained commercial implications.
- **October 16, 2006:** The WEQ Standards Review Subcommittee met to review changes made to the draft scoping document for R05026 as a result of the September 25-26 ESS/ITS meeting. Action items were taken by the NAESB office to clean up the formatting and organization of the document. In addition, the subcommittee continued to review NERC Standards Authorization Requests and Ballots to determine if corresponding commercial practices were warranted. Action items were taken by the subcommittees to contact the SAR drafting team leaders for SARs submitted on Area Control Error Equation, Manual Time Error, and Inadvertent Interchange. The SRS expects to receive updates on the status of these SARs at NERC.
- **November 20, 2006:** The WEQ Standards Review Subcommittee met to review the draft scoping document for R05026. The document was finalized during this meeting and posted for the next WEQ EC meeting in February 2007. The subcommittee continued its review of NERC Standards Authorization Requests (SARs) and Ballots to determine if corresponding commercial practices are warranted. .
- **Planned, December 18, 2006:** The subcommittee plans to review NERC Standards Authorization Requests (SARs) and Ballots to determine if corresponding commercial practices are warranted. The subcommittee also expects to receive updates from SAR drafting team leaders on the SARs related to Manual Time Error, Area Control Error Equation, and Inadvertent Interchange

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

November 29, 2006
For Posting

TO:	NAESB Wholesale Electric Quadrant (WEQ) Board Members
FROM:	Rae McQuade
cc:	NAESB Managing Committee, Bill Boswell, Craig Glazer, Phillip Harris
RE:	WEQ Request for Notational Vote on the Drafting Collaborative amendments to the WEQ Procedures for the creation of an Independent Grid Operator/Planner Segment

Dear WEQ Board Members,

The WEQ drafting collaborative met yesterday[1] and agreed to amendments to the WEQ Procedures[2] to support the creation of a sixth segment -- Independent Grid Operator/Planners (see redlined procedures provided as Attachment B). The amendments have been reviewed by Bill Boswell, our General Counsel, and he does not find them to be inconsistent with our existing bylaws or certificate. To effect these changes, Section 18 of the WEQ Procedures will be followed (see Attachment A), and you are asked to review the amendments and vote to either support or oppose them within the next 30 days. The ballots should be returned to the NAESB office either through email in reply to this message (or to emails: vthomason@naesb.org, naesb@naesb.org) or via fax (713-356-0067) by **December 28**. Board members and contact information are provided in Attachment C.

Best Regards,

Rae

Rae McQuade, NAESB President

[1] The notes from the 11-28-06 conference call are posted on the NAESB web site at the following address: http://www.naesb.org/pdf2/weq_bd112806mn.doc.

[2] The redlined amendments proposed by the WEQ Drafting Collaborative are posted on the NAESB web site at the following address: http://www.naesb.org/pdf2/weq_bd112806a1.doc

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

November 29, 2006

NAESB Wholesale Electric Quadrant Board Member Notational Ballot
Due December 28, 2006 (Fax 713-356-0067, email vthomason@naesb.org)

Given that:

(1) The leadership of the ISOs and RTOs fully support the four conditions outlined by the NAESB Board Named Committee on August 24, as shown below:

> *If the following four conditions are met, the Board Committee supports the creation of a sixth segment in the WEQ Quadrant: Independent Grid Operators/Planners, to be composed of ISOs, RTOs and other independent grid operators - with no subsegments defined at this time. The sixth segment will have 7 Board seats and 7 EC seats, as required by the NAESB bylaws. The conditions to be met are: (a)the IRC and NAESB support the dissolution of the JIC and will pursue such action with NERC, (b) the creation of the new segment will comply fully with the WEQ subsegment principles as noted in Section 2.4 on the WEQ Procedure, (c) the "At Large" subsegment in the other five segments will be redefined to exclude the ISOs, RTOs and other independent grid operators and planners, and (d) the nine IRC members will join NAESB as members and commit resources to the development of NAESB business practices.*

And

(2) The organizations that would populate the new segment would not be present in any other segment of the WEQ,

Then:

The WEQ Board members support the amendments proposed by the WEQ Drafting Collaborative to the WEQ Procedures to create a sixth segment "Independent Grid Operators/Planners" defined as "Any entity in North America authorized by an appropriate governmental authority to operate as a regional transmission organization, independent system operator, independent tariff administrator or independent planning entity and which does not have a business or financial interest in any other WEQ segment." The redlined amended procedures are attached (Attachment B).

BOARD MEMBER ACTION REQUESTED:

As a NAESB WEQ Board Member, I support the amendments proposed by the WEQ Drafting Collaborative to the WEQ Procedures as shown in redline format attached.:

☐ YES

☐ NO

Signature: _____

Date: _____

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Attachment A: Section 18 of the WEQ Procedures

To effect changes in the WEQ Procedures, Section 18 governs amendments:

18 Amendments

18.1 Any interested party may request a change to the WEQ Procedures by forwarding a request in writing to the NAESB Office.

18.2 The WEQ Procedures Drafting Collaborative Task Force is charged with drafting amendments to the quadrant procedures. The changes will be reviewed by NAESB Counsel to ensure that the amendments are not inconsistent with the organization's certificate and bylaws. After such assessment, the procedures will be reviewed for adoption by the WEQ membership. The NAESB Office will forward proposed amendments with a notational ballot to all WEQ Board members. The notational balloting period shall be 30 days. For the amendments to be adopted, 75% affirmative vote of the WEQ Board members with a minimum of 40% affirmative vote from each segment will be required. After the WEQ Board vote is taken and passes, the amendments must also be ratified by WEQ membership. For the amendments to be ratified, a minimum of 75% of the WEQ members returning ballots should vote affirmatively.

18.3 The foregoing notwithstanding, any actions taken under Section(s) 2.4, 7.5, or 10.5c of the WEQ Procedures shall be approved only in accordance with the provisions set forth in those Section(s); once so approved, such actions shall not be subject to, or require, any other or additional consideration under Section 18 of the WEQ Procedures.

DOE Sponsored Information Assurance Work for NAESB

The Department of Energy (DOE), Office of Fossil Energy (FE), Office of Oil and Gas sponsored Sandia National Laboratories (SNL) to perform several Information Assurance activities with the North American Energy Standards Board (NAESB), formerly named Gas Industries Standards Board (GISB). Mr. Christopher Freitas of DOE served as the program manager for this effort. These activities consisted of security analyses of e-commerce information technology (IT) standards that NAESB is either proposing for use in the energy sector, or standards that were in current use in the energy sector. This was a pro-active attempt by FE to understand the potential vulnerabilities that exist, or will exist, in various aspects of e-commerce IT within the wholesale energy market and to provide a positive influence to mitigate as many of the vulnerabilities as possible.

The first assessment was performed in 2000 against the Electronic Delivery Mechanism (EDM) for wholesale gas distribution. In that report, a number of critical security issues were discovered in the standard, then at version 1.3, and reported to GISB along with suggested mitigation strategies. Those issues were taken under advisement by GISB and they issued a document addressing all issues in the report. A majority of the identified vulnerabilities were addressed by direct mitigation in subsequent versions of the EDM standard. Another product of the assessment was an increased awareness within the GISB team of information security issues.

The next assessment was initiated in late 2005 and completed in early 2006. It was a follow-on assessment of the EDM standards, then at version 1.8. The standard had progressed with a number of technology updates. Over half of the original SNL recommendations were implemented in version 1.8. Roughly one-quarter of the original vulnerabilities remained, while the almost one-quarter left were mitigated by a change in technology, thus removing them from the standard. It is to NAESB's credit that they have addressed a majority of the vulnerabilities. The addition of new technology to version 1.8 of the EDM standard did however add new vulnerabilities to the standard and those were identified in the report to NAESB. NAESB is in the process of addressing these new vulnerabilities.

FE is also being pro-active and sponsored additional work to examine the proposed Public Key Infrastructure (PKI) standard for the wholesale electric quadrant. Since this is a foundation document on which the electronic security of all wholesale electric transactions would be protected, it is extremely important that it provide a high level of security both when it is initially used and for at least the next decade. Vulnerabilities have been found within this proposed standard and the report outlining these, along with suggested mitigation strategies, was delivered in August of 2006. Since the PKI standard was in the "proposed" state, FE's sponsorship of this work provides a forward-looking opportunity for NAESB to address these issues before the standard is ever implemented, thus making it a more secure standard from day one.

Without the leadership and collaborative approach of DOE FE, these assessments would never have been performed on this important component of the U.S. critical infrastructure and electronic transactions in the energy sector would be considerably more vulnerable.

ASSESSMENT REPORT OF THE NORTH AMERICAN ENERGY STANDARDS BOARD (NAESB) ELECTRONIC DELIVERY MECHANISM RELATED STANDARDS

February 21, 2006

Prepared by
Sandia National Laboratories
Information Design Assurance Red Team
for the Department of Energy

Abstract

This document presents the results of an independent assessment of the EDM/EDI standards (version 1.8) developed by the North American Energy Standards Board (NAESB) related to its electronic delivery mechanisms. The assessment was conducted by Sandia National Laboratories using the Information Design Assurance Red Team (IDART) assessment methodology. The team was tasked not only with performing a thorough assessment and drawing relevant conclusions, but also with suggesting improvements that could be made, and using surety engineering to take into account the risk versus cost tradeoffs of the system being assessed. This document summarizes the assessment results and technical exchange analysis activities of the NAESB EDM standard and provides evaluations based on these results.

This activity is funded by the Department of Energy, Office of Fossil Energy, Office of Oil and Gas. Mr. Christopher Freitas of DOE served as the program manager for DOE with regards to this effort.

Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under Contract DE-AC04-94AL85000.

Acknowledgments

This document was prepared for Department of Energy (DOE), Office of Fossil Energy, Office of Oil and Gas by a working group of the Information Design Assurance Red Team (IDART) at Sandia National Laboratories. The working group has the following members:

David Duggan, Project Leader
Principal Member of the Technical Staff
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-845-8100
dduggan@sandia.gov

Philip Campbell, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-845-8518
plcampb@sandia.gov

Annie McIntyre, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-284-0968
amcinty@sandia.gov

Aura Morris, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-284-1543
almorri@sandia.gov

Charles Morrow, Technical Analyst
Sandia National Laboratories
Experiments and New Programs
505-845-0694
cwmorro@sandia.gov

The working group would like to thank the following individuals from the North American Energy Standards Board (NAESB) for their contributions to this document:

Rae McQuade
North American Energy Standards Board
Executive Director
713-356-0060
DeDe Kirby
North American Energy Standards Board
713-356-0060
Mike Novak
Jim Buccigross
Lou Oberski
Leigh Spangler
Cade Burks

This page intentionally left blank.

Contents

EXECUTIVE SUMMARY **1**
1. Introduction **2**
2. North American Energy Standards Board Description **2**
3. Objective and Purpose of the NAESB Standards **2**
4. Critical Success Factors **3**
5. Metrics of Importance **3**
6. Surety Assessment Research **3**
7. Surety Assessment Analysis and Recommendations **4**
7.1 Security Issues **4**
7.1.1 Versioning of software and protocols 4
7.1.2 General Network and System Security 4
7.1.3 Protection of Sensitive Information 5
7.1.4 Standards Compliance 5
7.1.5 Sharing of Keys 6
7.1.6 Receiver Non-Repudiation 6
7.1.7 Sender Non-Repudiation 6
7.1.8 Receipts, Error Notifications, and Sender Non-Repudiation 7
7.1.9 Abnormal Error Notification Usage 7
7.1.10 Bogus Decryption Errors 7
7.1.11 IET Standard and TPA Conflict on Digital Signatures 8
7.1.12 Exchange Failure 8
7.1.13 Previous Version Acceptance 8
7.1.14 Refnum & Refnum-orig 9
7.1.15 Missing Functional Acknowledgement 9
7.1.16 In-House and Commercially-Available 10
7.1.17 Central Address Repository (CAR) 10
7.1.18 Open Ports 10
7.1.19 Ports in Use 11
7.1.20 Message replay attacks 11
7.2 Recommendations for NAESB Principles **12**
7.2.1 Principle 4.1.15 12
7.3 Other Areas for Improvement **12**
7.3.1 Missing Definitions 12
7.3.2 Strange Numbering 12
7.3.3 Missing Principles 12
7.3.4 Multiple Definitions 12
7.3.5 Definitive References 12
7.3.6 Inconsistent References 13
8. Summary **13**
9. Conclusion **14**
Appendix A – Abbreviations and Acronyms **15**

This page intentionally left blank.

EXECUTIVE SUMMARY

This document provides an independent analysis of the standards developed by the North American Energy Standards Board (NAESB) related to its Electronic Delivery Mechanisms (EDM) described in a document entitled "NAESB WGQ Quadrant Electronic Delivery Mechanism Manual" and related documents. The Sandia assessment team used the Information Design Assurance Red Team (IDART) methodology to conduct the analysis and assessment of the NAESB process.

This assessment was executed by Sandia at the request of program manager, Mr. Christopher Freitas, of the Department of Energy (DOE), Office of Fossil Energy, Office of Oil and Gas. The intent is to provide a surety based analysis of the proposed version 1.8 NAESB standards as they relate to electronic commerce within the gas industry and to provide guidance for addressing specific security issues now and in future documentation. The assessment provides recommendations on the security of the electronic commerce guidelines for conducting business with emphasis on the use of the Internet as a communications medium. The assessment included the five methods of transacting business by market participants, as well addressing issues specific to the Internet Electronic Transport (IET) mechanism.

The cooperation and assistance given to Sandia National Laboratories by NAESB during this part of the assessment was greatly appreciated.

The analysis focused primarily on the security of the EDM protocol that is being defined in the standards document, Version 1.8. Vulnerabilities in the Standard were identified and described, with general recommendations for improvement generated. Strengths and weaknesses were also identified. The following strengths of the NAESB EDM Standard were recognized:

- Idea of principles, standards, and definitions sections is good for creating a viable framework for electronic data interchange
- Well designed layout of the document with good use of common look and feel techniques
- Improvement in the security of the standard by requesting authentication for all transactions.

The following weaknesses in the security of the EDM were identified:

- Not all data in the transaction is protected for confidentiality, because the standard allows older unsecured versions of the standard to be used
- The requirements for the version of the EDM to be used, as well as the requirements for versions of other software and protocols, are insufficient
- The language used to describe requirements of the standard is ambiguous in places and should be more precise
- There is insufficient support to prevent message replay attacks
- The policy on digital signatures is unclear; digital signatures should be required for all transactions
- Not all transaction types are authenticated
- Certain information, such as that contained in the TPA, TEW, and the CAR, are sources for an attacker.

The Standard has improved since version 1.4; however, attackers on the Internet continue to improve their skills and tools and have shown their willingness to use both to cause problems for an industry. Significant weaknesses still exist in the standard, and the Sandia assessment team has made recommendations for mitigating these vulnerabilities.

As more business is conducted over the Internet, the business becomes more reliant on the proper functioning of the software used in conducting that business. By using the Internet, it opens up scrutiny of the software systems to everyone on the Internet, a much broader spectrum of people than previous systems of telephones and fax's. Standards must afford protection from the curious as well as the malicious.

1. Introduction

This document provides an independent analysis of the standards developed by the North American Energy Standards Board (NAESB) related to its Electronic Delivery Mechanisms (EDM) described in a document entitled "NAESB WGQ Quadrant Electronic Delivery Mechanism Manual[1]" and related documents, such as the "Business Practice Standards.[2]" The Sandia assessment team used the Information Design Assurance Red Team (IDART) methodology to conduct the analysis and assessment of the NAESB process.

The Sandia team operated on the principle that an independent analysis should include a comprehensive assessment and suggested improvements, while incorporating surety engineering concepts throughout the study. Surety can be defined as a measure of the assurance of system reliability, safety, security, and control of use, while balancing denial of unauthorized use with assurance of authorized use within the constraints of risk versus cost.

This assessment was executed by Sandia at the request of the program manager, Mr. Christopher Freitas, of the Department of Energy (DOE), Office of Fossil Energy, Office of Oil and Gas. The intent is to provide a surety based analysis of the proposed version 1.8 NAESB standards as they relate to electronic commerce within the gas industry and to provide guidance for addressing specific security issues now and in future documentation. The assessment provides recommendations on the security of the electronic commerce guidelines for conducting business with emphasis on the use of the Internet as a communications medium. The assessment included the five methods of transacting business by market participants, as well addressing issues specific to the Internet Electronic Transport (ET) mechanism.

An assessment of EDM, versions 1.3 and 1.4[3], was completed in March of 2000[4]. Issues from that assessment are also addressed in this document for version 1.8. With the continued evolution of the Internet and its associated uses, creating a secure application becomes more difficult and requires more diligence in its development than before. The nature of many attackers operating on the Internet has also changed and has become a "for-profit" business, thus requiring greater security to fend off attacks. The objective of the NAESB standards, to outline acceptable mechanisms and implementation for accomplishing electronic business, has provided a context when considering secure practices. Requirements within the standards, such as time-sensitivity and accuracy of transaction, provided a baseline when addressing risk. These factors are all major motivators for many of the suggested enhancements presented in this report.

2. North American Energy Standards Board Description

The North American Energy Standards Board (NAESB) is a nonprofit North American industry association whose mission is to "serve as an industry forum for the development and promotion of standards which will lead to a seamless marketplace for wholesale and retail natural gas and electricity, as recognized by its customers, business community, participants, and regulatory entities[5]". These standards exist to assist the natural gas industry in improving customer service, enhancing the reliability of natural gas service and increasing the competitiveness and efficiency of natural gas markets.

3. Objective and Purpose of the NAESB Standards

The evolution of the Internet into the principal medium for electronic communications in worldwide commerce led NAESB to develop standards for the use of the Internet by the gas industry to transact business. Gas transmission companies have established Internet sites, including server sites for electronic interchange of files and World Wide Web pages, to provide information to shippers and other customers. These sites allow Local Distribution Companies (LDCs) and other service requesters to place orders and receive scheduled quantity reports (statements indicating that the gas has been scheduled by the pipeline) electronically.

The standards also allow for third party providers (represented by NAESB's service sector) to provide buyers of natural gas, transportation and other services with a "one-stop shopping" capability that will avoid the necessity of communicating with multiple Internet sites in order to complete a transaction. All NAESB transactions on the Internet are intended to be encrypted to protect their confidentiality and integrity.

4. Critical Success Factors

Factors which are critical to the success of these standards have been identified during analysis of the NAESB Electronic Delivery Mechanism Related Standards. These factors determine whether the NAESB Standards increase security of electronic delivery for the Gas Industry. Critical success factors identified include the following:

- Gas Industry Trading Partners must adopt NAESB Standards for the use of electronic delivery of critical information
- The Internet Delivery Mechanism must move data across the Internet in a secure manner following the prescribed NAESB future technology model
- Web sites, including Customer Activities and Informational Posting, must follow NAESB standards for content and security
- Trading Partner Agreement must be properly completed by involved parties and the paper copy protected to avoid details being disclosed to unauthorized parties
- Data must be transmitted in the accepted standard data format
- The authenticity of all Internet transactions must be verifiable
- The security provided by these standards must be forward-looking to protect against attackers of the future, not just those of today.

5. Metrics of Importance

Metrics should be collected and analyzed to measure how the implementation of NAESB EDM Standards increases the security and reliability of electronic data exchanges between trading partners. The following are some examples of metrics that could be collected for NAESB Standards (possibly by incorporating the statistic collectors within the standards framework):

- Measure the dollar amount of EDM transactions each month or cubic feet of gas
- Measure average response time of EDM transactions each month (how many exceed 15 minutes)
- Measure the level of compliance for each trading partner pair.

Most of these can be self reported on a statistics page maintained by each partner. That page should allow only authenticated access. If possible, NAESB could collect and tabulate the totals annually. This data can assist trading partners and NAESB in quantifying return on investment for utilizing the standard and for implementing security controls. This data is useful in life-cycle decisions and when upgrading and revising the NAESB standards.

6. Surety Assessment Research

Research of the NAESB Standards by Sandia's assessment team began with an analysis of version 1.8 of the EDM Standards. This is a pre-release version with version 1.7 being the current published standard. An assessment team from Sandia previously completed an analysis of version 1.4 of the EDM Standard; only after the team had assessed version 1.8 were they allowed to view the results from the earlier assessment.

Generally the issues noted in this section (6) relate to higher levels of implementation, security, and information management as they were revealed during analysis of the NAESB Standards. These issues do not specify levels of criticality or likelihood, nor are they intended to suggest priority of resource allocation.

1. Several security issues and concerns were identified in the analysis of version 1.4. Some of these were addressed in versions up through 1.8. However, several security concerns about the NAESB Standards have yet to be addressed. These items are included in this document.
2. NAESB Standards allow for the use of unsecured transactions or versions of the standard that are not secure between partners not wishing to be secure. This opens the possibility of third parties gathering information from these transactions and using this information later to plan an attack. Other identified security issues are discussed in detail in section 7.

7. Surety Assessment Analysis and Recommendations

The analysis focused on the North American Energy Standards Board WGQ Quadrant Electronic Delivery Mechanism. The Sandia Assessment Team recommends that NAESB consider the following analysis and recommendations to improve these standards.

7.1 Security Issues

Items listed in the following section deal specifically with areas of opportunity for an attacker within the guidelines set forth by the security standards. The order provided in this section does not imply importance.

7.1.1 Versioning of software and protocols

Recommended versions of software and protocols are addressed in several places in the standard. For example, Standard 4.3.61 states "Data communications for Customer Activities Web sites should utilize 128 bit Secure Sockets Layer (SSL) encryption." There are also specific technical requirements for workstations listed in Appendix B.

Analysis: Specifically requiring versions of software or protocols creates the risk that these versions may become outdated or ineffectual before the standard is revised. It also leaves open the possibility that some necessary applications or protocols may not be addressed. If either of these occurs, vulnerable versions of software or protocols may be allowed by the standard. An attacker could take advantage of these vulnerabilities, or an insider could negotiate using a vulnerable version of an application and then exploit that vulnerability.

Recommendation: Where required versions must be specifically noted, it should be stated that the most current versions of applications and protocols are required, along with the latest patches. Sandia recommends that the NAESB standards not enumerate specifics for client workstations. Rather, it would be beneficial to refer to a well-known standards organization such as SANS[6] or NIST[7] and require that workstations conform to those standards for secure systems at some specific level. See the subsection 7.1.2 for additional information.

7.1.2 General Network and System Security

The NAESB standards state on page 17 that "Though many decisions as to overall security measures are left to each trading partner and their environment, security standards have been created to ensure a minimum level of confidence in conducting business over the Internet and to provide some uniformity in the implementation of security. Additional issues such as firewall security are discussed in the standards, but specific security implementation details should be addressed by each organization." Minimum required security controls are discussed throughout the standards and vary in topic. There is no concise list of minimum network and security controls listed for trading partners.

Analysis: Without minimum required controls, an unsecured system or network at a trading partner site can affect all parties engaged in transactions with that partner and effect transaction outcomes. According

to NAESB standards, most security aspects are left up to the trading partner. However, the standards aim to create a secure process and environment for transactions. To accomplish this, minimum security for trading partners must be defined in a comprehensive manner. Unsecured systems and networks allow for a large variety of negative consequences such as altered or lost data, access to systems, denial of service, and altered transactions. These consequences can have measurable business effects such as loss of business, negative public opinion, loss of strategic partners, downtime, and divulged corporate information.

Recommendation: A standard should be created that requires trading partners to use an accepted set of security guidelines, such as those developed by SANS or NIST, to secure their systems and network. The guidelines chosen for recommendation should include:

- Prevention of mapping, scanning, and enumeration
- Secure router configurations with updated patching
- Secure ACL structure
- Firewall configuration guidance
- Lifecycle management to include upgrades and patching guidance
- IDS or IPS implementation
- Secure user management
- Access control
- Secure web usage and encryption minimums
- Periodic vulnerability assessments
- Configuration management (system)

Currently-stated NAESB security controls offer only minimal protection if basic system and network security are not addressed. Established guidelines exist today and can be used as a reference and recommendation for trading partners in securing their systems. These guidelines are regularly updated and maintained to reflect changing threats found in the Internet. NAESB should require adherence to these guidelines in the security portion of NAESB's standards.

7.1.3 Protection of Sensitive Information

Protection of sensitive information such as PGP private keys, other private keys, the Trading Partner Agreement (TPA), and Technical Exchange Worksheets does not appear to be addressed by the standard.

Analysis: In the Internet Electronic Transport (IET) document (page 194), it is stated that "utmost care" is needed in the protection of private keys. The phrase is not actionable and is interpreted differently at each organization.

Recommendation: Each trading partner should protect these sources of information as company proprietary. Destruction of these documents and electronic information should also be addressed in the standard.

7.1.4 Standards Compliance

Throughout the standard, "should" is currently used as a directive for requirements. For example, Standard 4.3.61 states "Data communications for Customer Activities Web sites *should* utilize 128-bit Secure Sockets Layer (SSL) encryption." and Standard 4.3.4 states "Trading partners *should* retain transactional data for at least 24 months for audit purposes." "Should" implies a recommendation as opposed to a requirement; Cambridge Online Dictionary states that "*should*" is used to indicate "what is the correct or best thing to do."

Analysis: Stating that something "should be done" is comparable to stating that it "is recommended," not that it is required. This allows users to ignore the recommendations if they so choose. A similar item was noted in the previous assessment, regarding SSL, and although wording was changed to remove the 40-bit option, it wasn't changed to require 128-bit (or better) to be used.

The Internet Engineering Task Force (IETF) has published a Request-For-Comments (RFC) that defines keywords used in their standards. These are used for compliance measures with respect to requirement levels. The RFC number is 2119[8] and could be used as a guide for the language within these standards documents. They provide a consistent definition for implementers of standards.

An analysis of the IET shows that the words "must" and "required" do not appear in a context where some standard is to be required. The word "should" is properly used in the Principles, where it is expected to be used. Use of the word "should" in standards suggests that "should" is used as though it denotes "must."

Recommendation: Language throughout the standard should be precise. If a particular action is required to be compliant to the standard, it should be stated that it is required, that a user "must" conform to it. For example, Standard 4.3.61 could be reworded as "Data communication for Customer Activities Web sites must use a minimum of 128-bit Secure Sockets Layer (SSL) encryption." Definitions of the terms "should", "must", "required", "may", and other associated words should be developed, documented, and implemented within the standards documents.

7.1.5 Sharing of Keys

The Internet ET (IET) Standard is ambiguous about the sharing of public keys.

Analysis: The IET Standard states "The Private Key must be known *only* to the company that generated it" (IET page 194, emphasis added), but in the next paragraph the Standard states "Private keys are not typically exchanged with trading partners. In the event that a Private Key *needs to be exchanged*, the exchange should occur in a secure manner such as postal or courier mail" (ibid, emphasis added). These two statements are inconsistent.

Recommendation: These statements should be revised to display consistency. There should never be a reason to compromise a private key by exchanging it with another entity. If, for some business reason it is true that private keys need to be exchanged at some point, then the first statement should be updated to reflect that.

7.1.6 Receiver Non-Repudiation

Non-repudiation for the Receiver is optional.

Analysis: A digital signature for the Sender is optional, according to the Standard (IET page 171 (see also RXQ.0.2.56, part C, page 163)). That is, trading partners may agree for the Sender to send a package *without* including a digital signature. As a result, the Receiver is unable subsequently to prove, based solely on the material provided by adherence to the Standard that a given package was sent by a given Sender.

Recommendation: Require digital signatures on all documents transmitted between trading partners.

7.1.7 Sender Non-Repudiation

Non-repudiation for the Sender appears to be optional.

Analysis: The Standard is not clear on whether or not a digital signature on a receipt and/or on an error notification for the Receiver is optional.

The "Data Dictionary for Internet ET" notes that the value of the "receipt-security-selection" data element is not "Mandatory" but rather "Mutually-Agreed-To" (IET page 173). However, the data element does not appear to include an option *not* to use digital signatures (though page 175 suggests that if the partners agree not to use digital signatures for receipts, they simply do not include the receipt-security-selection" data element "in the posted data"). The "Definition" column states that the data element is "used to request signed receipts"—no mention there of error notifications—but the "Condition" column states that the data element is "used in file transmittal and in posting error notifications—no mention there of receipts. Elsewhere we read "If trading partners agree to implement signed receipts…" (IET page 175 (see also pages 161, 178, and 186)), suggesting that digital signatures are indeed optional for receipts. Meanwhile, we read "Additionally, consenting trading partners can mutually agree to digitally sign error notifications"

(IET page 191 (see also IET page 190), implying that trading partners can agree not to digitally sign error notifications. If the Receiver's use of digital signatures is in fact optional, then, as a result, the Sender is unable subsequently to prove, based solely on the material provided by adherence to the Standard, that a given receipt or a given error notification was sent by a given Receiver.

Recommendation: Require digital signatures on all documents transmitted between trading partners.

7.1.8 Receipts, Error Notifications, and Sender Non-Repudiation

A digital signature for a receipt or an error notification may be insufficient to provide Sender non-repudiation.

Analysis: If a Receiver digitally signs a receipt or an error notification, then the Sender can be assured that the receipt or the error notification did in fact come from the Receiver. However, it is not clear that the Sender can be assured that the Receiver cannot repudiate the particular *payload* that the Sender sent, to which the receipt and the error notification are responses. That assurance for the Sender depends on whether the receipt or error notification itself was in some way a function of the particular payload sent by the Sender. Even if the Receiver generates a digital signature for a receipt (or an error notification), it may be possible in the future for the Receiver to fraudulently claim that the receipt (or error notification) was for a different Sender payload.

The receipt is a "gisb-acknowledgement-receipt" (IET page 173), but the format of that receipt does not appear to be defined in the Standard. The closest the Standard comes to defining the format is in the second, full paragraph on page 186: "…includes the HTTP Response data elements (time-c, time-c-qualifier for REQ/RGQ, request-status, server-id, and trans-id)". There is no mention in that passage of the receipt including a function of the payload. There is even less information on the nature of the error notification.

Recommendation: Require the object upon which digital signatures operate to be a function of the original payload sent from the Sender to the Receiver.

7.1.9 Abnormal Error Notification Usage

The IET Standard does not describe "abnormal" Error Notification usage.

Analysis: The IET Standard states "RXQ.0.2.69 'Error Notification'. Error Notification is a package sent from the Receiver of the original data to the Sender when errors are trapped after the Internet ET receipt is sent. This is *normally* used for decryption errors detected after the Internet ET receipt has been sent" (IET pages 164-5, emphasis added). "Normal" usage is described here but "abnormal" usage is not. The presumption is that abnormal usage is, like normal usage, legitimate. This allows an adversary to claim to be following the Standard and simultaneously to use Error Notifications in any way the adversary chooses.

Recommendation: Remove the word "normally" from the passage. If error notification is used for no other purpose than relaying decryption errors, then modify the phrase "is normally used for decryption errors" to read "is only used for decryption errors". If error notification is used for some purposes in addition to relaying decryption errors, then modify the wording to reflect that.

7.1.10 Bogus Decryption Errors

The Standard allows a Receiver to see the contents of a package while claiming otherwise based on bogus decryption errors.

Analysis: This problem arises when trading partners agree to decrypt after sending a Receipt. There are three aspects to this problem.

First, the Standard does not appear to require a response when decryption succeeds. "Error Notification" (RXQ.0.2.69, IET page 164) appears to be for decryption failure only, not success. There is an Internet ET

Message code that announces decryption failure, namely EEDM699, but there does not appear to be a corresponding Message that announces decryption success.

Second, even a response of decryption failure does not appear to be required within a given time. There is a time limit associated with an exchange failure, for example, but there does not appear to be a time limit associated with decryption failure.

Third, the Standard and the TPA disagree on this matter. The TPA requires a response, even if decryption succeeds:

> If the Document [sent by the Sender] is verified and the decryption is successful, the receiving party shall transmit a Functional Acknowledgement in return. If the Document is verified and the decryption is unsuccessful, the receiving party shall send the applicable error message to the sending party. (RXQ.6.1, Section 2.2, page 2)
>
> Section 2.3.7 (page 3) of the TPA requires that the trading partners agree to a time within which the Receiver is required to send a package to the Sender that informs the Sender of the results of the decryption.

Recommendation: Require that the Receiver notify the Sender, within an agreed-upon time, of the results of decryption. Resolve the discrepancies between the Standard and the TPA.

7.1.11 IET Standard and TPA Conflict on Digital Signatures

The Standard and the Trading Partner Agreement (TPA) do not agree on the optional nature of digital signatures.

Analysis: A digital signature for the Sender is optional, according to the IET Standard (IET page 171 (see also RXQ.0.2.56, part C, page 163)). However, Section 1.5 of the TPA states that 'Each party shall adopt as its signature private keys which shall be applied to *each* document transmitted by such party ("Digital Signature")' (RXQ.6.1, page 2, emphasis added). This contradicts the optional nature of digital signatures as expressed in the IET Standard.

Recommendation: Require digital signatures on all documents transmitted between trading partners. Resolve the discrepancies between the Standard and the TPA.

7.1.12 Exchange Failure

The Standard does not provide an unequivocal definition of "exchange failure."

Analysis: The Standard states "RXQ.0.2.79 'Exchange Failure'. An exchange failure is when a sending party's NAESB Internet ET server has had three or more protocol failures over a period of time *no less* than thirty minutes and no more than two hours" (IET page 165, emphasis added). However, the Standard also states "RXQ.7.3.13 Three protocol failures *within* a 30-minute timeframe is an exchange failure" (IET page 168, emphasis added). This latter definition implies that the third protocol failure must occur *before* 30 minutes have elapsed since the first protocol failure. The two definitions are not in harmony. To add to the confusion, "exchange failure" is defined in at least three other places in the Standard: the relevant paragraph on page 204 agrees with the statement on page 165; the relevant paragraph on page 156 agrees with part of the statement on page 165 but not all of it; and the relevant paragraph on page 154 does not mention time at all.

Recommendation: Revise all definitions to be consistent.

7.1.13 Previous Version Acceptance

The Standard supports any previous version of the standard, even insecure versions.

Analysis: The Standard states "RXQ.7.1.9 Trading Partners should mutually select and use *a* version of the NAESB Internet ET standards under which to operate, unless specified otherwise by government agencies" (IET page 163, emphasis added). This allows for partners to be using *any* version of the Standard, even ones that have always been or have by now become insecure. In addition, the Standard states, "If either

trading party does not agree to the inclusion of additional features, then the partners *must* allow for transmission and receipt of data using the minimum standards" (IET page 158, emphasis added). This could be read to mean that an adversary could insist on a victim agreeing to the use of an insecure version. If the victim refuses, the adversary can claim unfair business practice; if the victim acquiesces, the adversary can collude to make transactions public, subsequently claiming that the victim has leaked confidential information.

There was a similar item in the previous assessment and the wording now reflects the changes suggested at that time. Due to increased threats on the Internet, a more stringent recommendation is being put forth.

Recommendation: Sandia recommends that users be required to conform to the current version of the standard by some reasonable period of time after the publication of each new version. Previous versions of the standard should be deprecated (i.e., unacceptable for use) as soon as they become the third newest version or older. For example, when version 1.8 is published, version 1.7 then becomes the second newest version and thus continues to be acceptable only for some reasonable period of time, while version 1.6 joins older versions in becoming deprecated. It is contradictory to the purpose of a standard to permit users to negotiate use of an older version of the standard, particularly when evolving technology erodes the security value of older versions of the standard.

7.1.14 Refnum & Refnum-orig

The Standard does not check on a Sender's abuse of Refnum & Refnum-orig.

Analysis: An adversary, on a "first send", could set Refnum-orig *not* equal to the current Refnum. The Receiver would then conclude that the Sender this was a resend—either first or second—and that the first send had been lost. Over time the adversary could claim unfair business practice on the part of the Receiver: the Receiver consistently drops the adversary's first send, making the adversary resend and thus lose valuable time, giving other trading partners an unfair advantage.

Alternatively, the adversary could reuse Refnums.[1] For example, the adversary could send payload A, proposing a deal favorable to the adversary, followed, sometime later, with payload B, proposing a deal favorable to the Receiver—both payloads sent with the same Refnum. When the Receiver accepts payload B, the adversary proceeds, fraudulently acting as though the Receiver had accepted payload A. When the Receiver protests, the adversary claims that the Receiver changed the Refnum in payload B in an attempt to cheat the adversary.

There may be other ways the adversary can use Refnum to their advantage. The point is that the Standard requires that the "refnum data element is always unique over time" (IET page 175) but there is no provision for confirming compliance by an implementation. Compliance capability would require some algorithmic way to detect reuse, or a capability to cross reference Refnum fields with prior transactions.

Recommendation: A mechanism should be in place to prevent or detect the abuse and reuse of Refnum and Refnum-orig values.

7.1.15 Missing Functional Acknowledgement

The Standard would support an adversary's fraudulent claim to have sent a package that the adversary had in fact not sent.

Analysis: The Trading Partner Agreement (TPA) states:

> If there has been a proper receipt pursuant to Section 2.1, verification and successful decryption pursuant to Section 2.2, and if the receiving party nevertheless fails to transmit a Functional Acknowledgement, the sending party's records of the Document shall control, unless the sending party has retransmitted a Document pursuant to Section 2.3.7. (RXQ.6.1, Section 2.3.3, page 3)

[1] The EEDM121 error code, "Duplicate refnum received", enables the Receiver to complain, but such an error code presumes that the Receiver can detect refnum reuse.

How is the receiving party to be protected from the sending party fraudulently claiming to have sent a given package when in fact the sending party never did send the package? How can the receiving party substantiate his case that he never received the package? If the sending party's records of the Document shall control, then what is the purpose of the Functional Acknowledgement?

Recommendation: One possibility is for NAESB to consider a more rigid protocol: (1) there are only two types of transmissions: a send of an "original" payload and a Receipt of an original payload; (2) all transmissions must be digitally signed; (3) all digital signatures must be a function of the original payload; (4) decryption must be performed prior to sending a Receipt, and (5) "force or effect" (TPA, Section 1.1) apply only to those original payloads for which the Sender has received an "ok" Receipt from the Receiver. Under this more rigid protocol the sending party has no grounds to make the fraudulent claim described above.

Meanwhile, it seems unlikely that this type of attack is new with the advent of electronic trading. Is it possible for the TPA to incorporate the protection available prior to the advent of electronic trading?

7.1.16 In-House and Commercially-Available

The Standard's position on software development is not clear.

Analysis: The Standard allows "any IT deployment model, including the use of in-house development…" (IET page 159), yet the Standard also states "RXQ.7.3.15 Trading partners should implement *all* security features…via a commercially-available implementation" (IET page 168, emphasis added). Is this a contradiction or does it mean that "in-house development" can provide everything except for "security features"?

Recommendation: Clarify these conflicting passages.

7.1.17 Central Address Repository (CAR)

Standard 4.3.19 states that the CAR should make available a consolidated repository of the Transportation Service Providers' current URLs listed in Standard 4.3.18 in two ways: (1) a vehicle to link to sites and categories, and (2) a downloadable list.

The CAR is available to any Internet user.

Standard 4.3.20 states that a userID or password should not be required to access the Central Address Repository or the Transportation Service Provider's Informational Postings web site.

Analysis: The CAR can be used as a target list for a malicious individual. Leaving the CAR unprotected and available to any Internet user can result in attacks being directed at the customers of a specific site. It is tailor-made for attacking using a denial-of-service type of attack.

There was a similar item in the previous assessment. Due to increased threats on the Internet, the recommendation reiterated here.

Recommendation: Protect the CAR using SSL and basic authentication. It is recommended that the standard be reworded to state that a userID and password be required to access the CAR for security purposes. The access password can be a single userID/password combination created, and changed yearly, by NAESB for the member organizations, but implemented locally by each member. The userID/password can be distributed securely by the NAESB office to members.

7.1.18 Open Ports

In Appendix D of the NAESB WGQ Quadrant Electronic Delivery Mechanism Manual, it is suggested that ports 8001-8020 be left open for load balancing and other implementations such as DCE and IIOP.

Analysis: Any open, unsecured port assists an attacker in gaining access and accomplishing port flooding. Open ports can be identified using readily available portmappers, which provide an attacker with a starting point for malicious activity. Once an attacker has located an open port, he or she can exploit software vulnerabilities to gain access to the system or flood open ports to halt a transaction, application, or the

system as a whole. Since transactions are time-dependent, slowing, or halting system traffic could result in a measurable loss of business.

Recommendation: Keeping unused, unsecured ports open poses a risk. Any ports not in use by an application as part of the transaction should be closed. Open ports should be protected by system and network security controls such as intrusion prevention systems, access control lists, current system patches, and an overall secure configuration. We recommend removing the statement in Appendix D referring to optional ports. Likewise, referencing a secure configuration be applied to the trading partner system would ensure ports cannot be enumerated and mitigations are in place to reduce the number of vulnerable ports.

7.1.19 Ports in Use

Appendix D lists allowable TCP and UDP ports used as part the transaction process and required for specific applications. These include standard ports for HTTP and SMTP. This standard does not directly address the use of open ports, but lists required ports for specific applications.

Analysis:

While use of these required ports is necessary to complete the transaction, it may not be necessary to specify which ports are opened and closed. Moreover, any open port presents a risk. See subsection 7.1.18 for more details. Therefore, ports should be closed unless utilized in the transaction and protection of these open ports is necessary to reduce the chance for disruption. Knowing packet destinations and origins can assist an attacker in learning about the anatomy of a transaction, becoming man-in-the-middle, spoofing packets, sending bogus receipts, and generally altering a transaction.

Recommendation: Do not address specific ports, but rather make a statement in the Appendix that only ports necessary to transaction related traffic should be opened, and they should be protected by network and system security controls. All other ports will be closed. Securing the network and system is addressed in subsection 7.1.2.

7.1.20 Message replay attacks

Message replay is not addressed fully in the standards.

Analysis: Currently there is not a complete mechanism in place that will disallow replay attacks. Both client and server mechanisms need to be in place to keep this from being a viable attack. Timestamps could be spoofed, if not digitally signed, altering the outcome of a transaction.

There are timestamps in the EDI/EDM transfer of files, in the header for example, but it's unclear if that is digitally signed, but we believe it is. That doesn't seem the case for all methods however, such as Batch FF/EDM.

There was a similar item in the previous assessment. The tools are available for mitigation of this vulnerability and are readily available for use.

Recommendation: Ensure that all transaction methods include the timestamp in an area of the transaction that is digitally signed. If the resolution of the timestamp is not fine enough to ensure that only one transaction will be sent with that timestamp, an additional field containing a sequence number will be required such that the combination of the timestamp and sequence number field will always be guaranteed to be unique. This method will only work if the transaction is digitally signed using an accepted cryptographic checksum. An example of such a cryptographic checksum algorithm is the Secure Hash Algorithm defined in FIPS Pub 180-1. PGP uses several accepted cryptographic checksum algorithms, such as IDEA, RSA, DSA, MD5, SHA, and SHA-1. However, there have been demonstrated compromises for all but SHA-1 and as computing power increases, these compromises will become feasible for an attacker to perform within a few years.

7.2 Recommendations for NAESB Principles

7.2.1 Principle 4.1.15

This recommendation references Principle 4.1.15 and provides suggested rewording of this principle.

Analysis: Principle 4.1.15 states: "The NAESB should not set standards for site-level security. Individual organization security standards should be relied upon."

There was a similar item in the previous assessment. However, as system security has matured, we are modifying the recommendation to take advantage of the work of other standards bodies.

Recommendation: Sandia recommends that the NAESB standards have minimum requirements for site security, but that they do not enumerate requirements for clients. Rather, it would be beneficial to refer to a well-known standards organization such as SANS[9] or NIST[10] and require that workstations conform to those standards for secure systems at some specific level. See the subsection 7.1.2 for additional information.

7.3 Other Areas for Improvement

The following recommendations are submitted for consideration in the format and layout of the IET Standard.

7.3.1 Missing Definitions

Many items are left undefined.

- What are the "QEDM standards" referred to on page 154 of the IET Standard?
- What are "open standards" (IET page 155)? (Are open standards the same as non-proprietary standards?)
- What is a "gisb-acknowledgement-receipt" (IET page 164)?
- What is a "transaction set" (IET page 174)?

7.3.2 Strange Numbering

Why are the RXQ items not numbered consecutively? They start with 0.1.1 (IET page 163), proceed to 0.1.2, as expected, but then jump inexplicably to 7.1.1. (Meanwhile, on page 169 there is a paragraph numbered "7.3.50". What is this?)

7.3.3 Missing Principles

Reference is made to "NAESB Internet ET Principle 4.1.x37" and "NAESB Internet ET 4.3.x70" (IET page 160). Presumably this is not one of the numbered paragraphs (IET pages 163-70) since the first digit of those paragraphs is either 0 or 7, but not 4. What, then, are Principles 4.1.x37 and 4.1.x70 and where are they found? Similarly, reference is made to the Internet ET Standard [10].3.3 and other related standards (p. 23). Where are these standards found?

7.3.4 Multiple Definitions

Many items, such as the definition of Exchange Failure (IET pages 154, 156, 165, 168, 204), are presented multiple times, lengthening the Standard and generating confusion when any two of the definitions differ. Information on timestamps, throughout the IET, has similar problems.

7.3.5 Definitive References

The references should be definitive. For example, if the Standard recommends Dwight & Erwin's book on CGI, then the reference should not read "A source on CGI is…" as it does now, using an indefinite article, but rather should use the definite article, as in "The source on CGI is…" or "The recommended source on CGI is…"

7.3.6 Inconsistent References

The references in the Reference Guide are not consistent with those in the body of the Standard. For example, the reference for PGP in the References Guide is different than the URL in RXQ.0.2.89 (IET page 166). The same is true of HTTP (see RXQ.0.2.92 (page 166)). (Please also note that the URL for SSL in RXQ.0.2.88 (page 166), namely http:deverloper.netscape.com/docs/manuals/security/sslin/contents.htm, is not found.)

8. Summary

The Sandia assessment team conducted an analysis of the NAESB prerelease version 1.8 of the EDM Standard and related standards, in particular the Internet Electronic Transport. The cooperation and assistance given to Sandia National Laboratories by NAESB during this part of the assessment was greatly appreciated.

The analysis focused primarily on the security of the EDM protocol that is being defined in the standards document, Version 1.8. Vulnerabilities in the Standard were identified and described, with general recommendations for improvement generated. Strengths and weaknesses were also identified. The following strengths of the NAESB EDM Standard were recognized:

- Idea of principles, standards, and definitions sections is good for creating a viable framework for electronic data interchange
- Well designed layout of the document with good use of common look and feel techniques
- Improvement in the security of the standard by requesting authentication for all transactions.

The following weaknesses in the security of the EDM were identified:

- Not all data in the transaction is protected for confidentiality, because the standard allows older unsecured versions of the standard to be used
- The requirements for the version of the EDM to be used, as well as the requirements for versions of other software and protocols, are insufficient
- The language used to describe requirements of the standard is ambiguous in places and should be more precise
- There is insufficient support to prevent message replay attacks
- The policy on digital signatures is unclear; digital signatures should be required for all transactions
- Not all transaction types are authenticated
- Certain information, such as that contained in the TPA, TEW, and the CAR, are sources for an attacker.

In order to strengthen the standard and to ensure the ability to audit any implementation of the standard easily, there are some steps that could be taken. When adding or rewriting directives, write directives that are sufficiently short, concise, unequivocal, and mutually-independent such that an auditor could consider each one in turn and then produce a rating ("adequate", "marginal," "inadequate") with the evaluation of each directive as support for the rating. Perhaps NAESB could work with some auditors so that they would know what auditors actually need to perform the audit.

The standard has improved since version 1.4; however, attackers on the Internet continue to improve their skills and tools and have shown their willingness to use both to cause problems for an industry. Significant weaknesses still exist in the standard, and the Sandia assessment team has made recommendations for mitigating these vulnerabilities.

As more business is conducted over the Internet, the business becomes more reliant on the proper functioning of the software used in conducting that business. By using the Internet, it opens up scrutiny of the software systems to everyone on the Internet, a much broader spectrum of people than with previous

systems of telephones and fax's. Standards must afford protection from the curious as well as the malicious.

9. Conclusion

This report is intended to contribute to the improvement of NAESB EDM Standards and was developed with the best information available at the time.

The assessment team believes that the NAESB EDM/EDI Standards, version 1.8, provide a valid base mechanism for the use of electronic commerce. The mechanisms provided by the standards, when used in accordance with the standards, afford reasonable, but limited, protection to the trading partners. However, we believe there is opportunity for an adversary to affect the system in a negative way, even to the point of forging transactions. With the addition of incremental security measures and requirements, these standards can become more resistant to malicious activity than they are today.

The Internet can provide industry with better communication than ever before, but also has additional opportunity for problems when security is not the foremost premise for this communication. Potential attackers on the Internet continue to improve their skills and tools and have shown their willingness to use both to cause problems for an industry. These standards must provide protection against the attackers of tomorrow, not today. Keeping ahead of them will be important to NAESB, as it continues to operate over the Internet.

Appendix A – Abbreviations and Acronyms

CAR	Central Address Repository
DOE	Department of Energy
EDI	Electronic Delivery Interface
EDM	Electronic Delivery Mechanism
FTP	File Transfer Protocol
GISB	Gas Industry Standards Board
HTTP	Hyper Text Transfer Protocol
IDART	Information Design Assurance Red Team
IET	Internet Electronic Transport
IETF	Internet Engineering Task Force
NAESB	North American Energy Standards Board
NIST	National Institute of Standards and Technology
PGP	Pretty Good Privacy
S-HTTP	Secure Hyper Text Transfer Protocol
SSL	Secure Socket Layer
TPA	Trading Partner Agreement
WGQ	Wholesale Gas Quadrant

[1] North American Energy Standards Board, *WGQ Quadrant Electronic Delivery Mechanism Manual*, Version 1.8 Pending, 2005

[2] North American Energy Standards Board, "Business Practice Standards," dated September 27, 2005

[3] Gas Industry Standards Board, *Electronic Delivery Mechanism Related Standards*, Version 1.4, November 15, 1999

[4] Gas Industry Standards Board, *Gas Industry Standards Board Response to the Sandia National Laboratories Surety Assessment Report of the GISB Electronic Delivery Mechanism Related Standards*, February 22, 2002

[5] http://www.naesb.org/aboutus.asp

[6] SANS Institute. http://www.sans.org

[7] National Institute of Standards and Technology. http://www.nist.gov

[8] Internet Engineering Task Force, RFC 2119, *Key Words for Use in RFCs to Indicate Requirement Level*, March 1997

[9] SANS Institute. http://www.sans.org

[10] National Institute of Standards and Technology. http://www.nist.gov

ASSESSMENT REPORT OF THE NORTH AMERICAN ENERGY STANDARDS BOARD (NAESB) WHOLESALE ELECTRIC QUADRANT DRAFT TECHNICAL STANDARDS FOR PUBLIC KEY INFRASTRUCTURE

August 8, 2006

Prepared by
Sandia National Laboratories
Information Design Assurance Red Team
for the Department of Energy

Abstract

This document presents the results of an independent assessment by the Sandia National Laboratories Information Design Assurance Red Team of the "NAESB Wholesale Electric Quadrant (WEQ) draft technical standards for Public Key Infrastructure (PKI)," developed by the North American Energy Standards Board (NAESB). The Sandia Team was tasked not only with performing a thorough assessment of the NAESB draft PKI Standards, but also with suggesting improvements that could be made to the standard.

This activity is funded by the Department of Energy, Office of Fossil Energy, Office of Oil and Gas. Mr. Christopher Freitas of DOE served as the program manager for this effort.

Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under Contract DE-AC04-94AL85000.

Acknowledgments

This document was prepared for Department of Energy (DOE), Office of Fossil Energy, Office of Oil and Gas by a working group of the Information Design Assurance Red Team (IDART) at Sandia National Laboratories. The working group has the following members:

David Duggan, Project Leader
Principal Member of the Technical Staff
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-845-8100
dduggan@sandia.gov

Timothy Draelos, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-844-8698
ltjdrael@sandia.gov

Michael Collins, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-284-3017
mjcolli@sandia.gov

Lauren McIver, Technical Analyst
Sandia National Laboratories
Networked Systems Survivability and Assurance
505-284-6962
lmciver@sandia.gov

The working group would like to thank the following individuals from the North American Energy Standards Board (NAESB) for their contributions to this document:

Rae McQuade
North American Energy Standards Board
Executive Director
713-356-0060
DeDe Kirby
North American Energy Standards Board
713-356-0060
Jim Buccigross, Group 8760
Cade Burks, EC Power
Valerie Crockett, Tennessee Valley Authority
Paul Sorenson, Open Access Technology International
Leigh Spangler, Latitude Technologies
Patrick Tronnier, Open Access Technology International
Kathy York, Tennessee Valley Authority
Mike Novak, National Fuel
Lou Oberski, Dominion

This page intentionally left blank.

Contents

EXECUTIVE SUMMARY ..... **vi**
1. Introduction **1**
2. North American Energy Standards Board Description **1**
3. Objective and Purpose of the NAESB Standards **1**
4. Critical Success Factors **1**
5. Surety Assessment References **2**
6. Surety Assessment Analysis and Recommendations **3**
6.1 Security Issues **4**
6.1.1 Deploying the NAESB draft PKI Standard 4
6.1.2 The Certificate Policy for the NAESB PKI 4
6.1.3 Cross-Certification 5
6.1.4 Security of the CA's signing key 5
6.1.5 Certificate Rescission Notices 5
6.1.6 Network Security Controls 6
6.1.7 References to Key Sizes and Cryptographic Algorithms 6
6.1.8 NAESB PKI User Declarations 7
6.1.9 Key Pair Generation 7
6.1.10 Unaffiliated Entities 8
6.1.11 Certificate Classes 8
6.1.12 Certificate Protection 8
6.1.13 CRL Issuance frequency, validity period, and availability 9
6.1.14 Certificate Application Steps 9
6.1.15 Tamper-Evident Hardware 10
6.1.16 Obsolete RFC References 10
6.1.17 Use of the Term End Entity 10
6.1.18 Customer Service Center 10
6.1.19 Reasonable Practices 11
6.1.20 Consistent Naming Convention for NAESB PKI Standards 11
6.1.21 Missing Requirement Level Key Words 11
6.2 Other Areas for Improvement **11**
6.2.1 Missing Definitions 11
6.2.2 Extraneous Definitions 12
6.2.3 Inconsistent Definitions 12
6.2.4 Document Formatting 12
7. Summary **12**
8. Conclusion **13**
Appendix A – Abbreviations and Acronyms **15**

This page intentionally left blank.

EXECUTIVE SUMMARY

This document provides an independent analysis of the draft standards developed by the North American Energy Standards Board (NAESB) related to its PKI Standards described in the document entitled "NAESB Wholesale Electric Quadrant (WEQ) draft technical standards for Public Key Infrastructure (PKI)."

This assessment was performed by Sandia at the request of the program manager, Mr. Christopher Freitas, of the Department of Energy, Office of Fossil Energy, Office of Oil and Gas. The intent is to provide a surety based analysis of the proposed NAESB PKI standards as they relate to electronic commerce within the Energy industry and to provide guidance for addressing specific security issues now and in future documentation. The assessment provides recommendations on the security of the public key infrastructure for the WEQ. The assessment included research into PKI implementations and general PKI standards to be used in comparison with the NAESB draft PKI Standards.

The cooperation and assistance given to Sandia National Laboratories by NAESB during the assessment was greatly appreciated.

The analysis focused primarily on the security of the PKI protocol that is defined in the standards draft document. Vulnerabilities in the standard were identified and described, with general recommendations for improvement generated. Strengths and weaknesses were also identified. The following strengths of the NAESB draft PKI Standard were recognized:

- The NAESB draft PKI Standard was formatted using the outline in RFC 3647, "Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework."
- The document included headings for all sections in the outline in RFC 3647, even those that had no content in the body of the section. This is in direct compliance with RFC 3647.
- The document referenced all necessary PKI Standards: NIST SP 800-32, RFC 3280, RFC 3647, and RFC 4210.

The following weaknesses in the security of the NAESB draft PKI Standard were identified:

- The document should be modified so that it is a complete Certificate Policy.
- The NAESB draft PKI Standard does not ensure interoperability with other Federal PKI Standards.
- References to specific key sizes or cryptographic algorithms should not be included in the NAESB draft PKI Standards.
- The NAESB draft PKI Standard does not include specifics about cross-certification issues with other PKI Standards

In addition to analyzing the NAESB draft PKI Standards, the Sandia Team also reviewed the two related documents, "NAESB End-Entity Declaration for Public Key Infrastructure" and the "NAESB Qualifying Relying Party Declaration for Public Key Infrastructure." Weaknesses and strengths of those documents are identified in the body of this report.

Recommendations for improvement of this standard include:

- Follow the guidelines set forth in the section entitled "Deploying an Agency PKI" in NIST SP 800-32 during the process of developing the NAESB PKI Standard
- Build on the NAESB draft PKI Standard so that it is a complete Certificate Policy
- Ensure interoperability with the Federal PKI Standard to minimize the cost and time spent by Certificate Authorities (CA) wishing to comply with the NAESB draft PKI Standards in order to become Authorized CA's.

In conclusion, the assessment team believes that the NAESB draft PKI Standards can be modified to represent a reliable PKI Standard for transactions within the WEQ.

1. Introduction

This document provides an independent analysis of the draft documents developed by the North American Energy Standards Board (NAESB) related to its PKI Standards described in the document entitled "NAESB Wholesale Electric Quadrant (WEQ) draft technical standards for Public Key Infrastructure (PKI)" and related documents, such as the "NAESB End-Entity Declaration for Public Key Infrastructure" and the "NAESB Qualifying Relying Party Declaration for Public Key Infrastructure".

The Sandia team operated on the principle that an independent analysis should include a comprehensive assessment and suggested improvements, while incorporating surety engineering concepts throughout the study. Surety can be defined as a measure of the assurance of system reliability, safety, security, and control of use, while balancing denial of unauthorized use with assurance of authorized use within the constraints of risk versus cost.

This assessment was performed by Sandia at the request of the program manager, Mr. Christopher Freitas, of the Department of Energy, Office of Fossil Energy, Office of Oil and Gas. The intent is to provide a surety based analysis of the proposed NAESB PKI standards as they relate to electronic commerce within the Energy industry, and to provide guidance for addressing specific security issues now and in future documentation. Recommendations on improving the security of the public key infrastructure for the WEQ are included. Research into PKI implementations and general PKI standards to be used in comparison with the NAESB draft PKI Standards was also performed.

2. North American Energy Standards Board Description

The North American Energy Standards Board (NAESB) is a nonprofit North American industry association whose mission is to "serve as an industry forum for the development and promotion of standards, which will lead to a seamless marketplace for wholesale and retail natural gas and electricity, as recognized by its customers, business community, participants, and regulatory entities[i]". These standards exist to assist the natural Energy industry in improving customer service, enhancing the reliability of natural energy service, and increasing the competitiveness and efficiency of natural energy markets.

3. Objective and Purpose of the NAESB Standards

The evolution of the Internet into the principal medium for electronic communications in worldwide commerce led NAESB to develop standards for the use of the Internet by the Energy industry to transact business. Energy transmission companies have established Internet sites, including server sites for electronic interchange of files and World Wide Web pages to provide information to shippers and other customers. These sites allow service requesters to place orders and receive scheduled quantity reports electronically.

4. Critical Success Factors

Factors, which are critical to the success of these standards, have been identified during analysis of the NAESB PKI Standards. These factors determine whether the NAESB PKI Standards provide a reasonable level of security in electronic commerce for the Wholesale Electric Quadrant. Critical success factors identified include the following:

- All WEQ transactions are completed using the NAESB PKI Standards
- All Certificate Authorities (CA) involved in WEQ transactions become Authorized CA's
- All vendors involved in WEQ transactions own and use a valid certificate issued by a NAESB Authorized CA
- The NAESB PKI Standard is interoperable with the Federal PKI standard allowing cross-certification by the Federal Bridge CA

5. Surety Assessment References

During the investigation phase, the Sandia Assessment Team found the following standards and documents directly relating to the draft NAESB PKI Standard. These documents will be referred to throughout this report. Each document has a link listed as to the online location of the document.

Federal Standards

FIPS PUB 46-3, "Data Encryption Standard (DES)". Oct 1999. This document provides details on the DES and Triple Data Encryption Algorithm, TDEA, encryption standards.
http://csrc.nist.gov/publications/fips/fips46-3/fips46-3.pdf

FIPS PUB 140-2, "Security Requirements for Cryptographic Modules." Dec 2002. This document provides the requirements on encryption software and hardware.
http://csrc.nist.gov/publications/fips/fips140-2/fips1402.pdf

FIPS PUB 197, "Advanced Encryption Standard (AES)". Nov 2001. This document details the current encryption algorithm AES. When this document was released the Triple Data Encryption Algorithm was removed from the list of standards.
http://csrc.nist.gov/publications/fips/fips197/fips-197.pdf

Industry Standards

RFC 2119, "Key Words for use in RFCs to Indicate Requirement Levels." Mar 1997. This document defines common key words such as "MUST", "SHOULD", and "MAY" that appear in most RFCs.
http://www.ietf.org/rfc/rfc2119.txt

RFC 3280, "Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile." Apr 2002. Replaces RFC 2459. This document describes in detail the format for a X.509 v3 certificate and for the X.509 v2 CRL format.
http://www.ietf.org/rfc/rfc3280.txt

RFC 3647, "Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework." Nov 2003. Replaces RFC 2527. This document contains a description and template for those writing CP and CPS. The template can also apply to subscriber and relying party agreements.
http://www.ietf.org/rfc/rfc3647.txt

RFC 4210, "Internet X.509 Public Key Infrastructure Certificate Management Protocol (CMP)." Sept 2005. Replaces RFC 2510. This standard describes the PKI protocol and data structures required for PKI management messages. It also includes a small section about PKI security considerations.
http://www.ietf.org/rfc/rfc4210.txt

NIST Special Publications

NIST SP 800-32, "Introduction to Public Key Technology and the Federal PKI." Feb 2001. This document includes a general overview of cryptography and PKI concepts. It also includes a description of the Federal PKI. Most importantly it includes all the necessary steps for an agency to develop its own PKI Standard.
http://csrc.nist.gov/publications/nistpubs/800-32/sp800-32.pdf

PKI Standards Examples

"European PKI (EuroPKI) Certificate Policy." Jan 2004. This document defines the pan-European public-key infrastructure. This document was created to be consistent with the structure provided in RFC 2527. RFC 3647 replaced RFC 2527 in November 2003 as the standard framework for Certificate Policies and Certification Practice Statements.
http://www.europki.org/ca/root/cps/en_cp.pdf

FAA-STD-045A, "National Airspace System (NAS) Communications Security Protocols and Mechanisms." Mar 2005. This document contains all requirements for the NAS Communications Protocol. Also included in this document is the NAS PKI.
http://nasdocs.faa.gov/nasiHTML/FAAStandards/faa-std-045A/faa-std-045A.pdf

"Higher Education Certificate Policy Statement (HEPKI) Common Policy Framework." Jul 2000. This document provides a comparison between the HEPKI CP and other commercial CP's in order to maintain interoperability with other PKI Standards.
http://middleware.internet2.edu/certpolicies/CPFv005.doc_1.doc

"U.S. Patent and Trademark Office (USPTO) Certificate Policy." This CP states the PKI Standard that the USPTO uses for transactions with patient and trademark applicants. This document explains the USPTO policy regarding use of Electronic Business Center Certificates and identifies pertinent facts concerning the life cycle and attributes of those certificates.
http://www.uspto.gov/ebc/policy_certificate.html

"U.S. Patent and Trademark Office (USPTO) Subscriber's Agreement." This agreement describes the responsibilities of USPTO Electronic Business Center users and should be reviewed before registration. This agreement is unique in that subscribers will only use their USPTO certificate to perform business transactions with the USPTO.
http://www.uspto.gov/ebc/documents/subscribersagreement.pdf

"X.509 Certificate Policy for the Federal Bridge Certification Authority." Jan 2006. This Certificate Policy (CP) defines seven certificate policies for use by the Federal Bridge Certification Authority (FBCA) to facilitate interoperability between the FBCA and other Entity PKI domains.
http://www.cio.gov/fpkipa/documents/FBCA_CP_RFC3647.doc

"X.509 Certificate Policy for the U.S. Federal PKI Common Policy Framework." Feb 2006. This document is the policy framework for the PKI component of the Federal Enterprise Architecture. This document describes six specific certificate policies. This document was created to be consistent with RFC 2527. RFC 3647 replaced RFC 2527 in November 2003 as the standard framework for Certificate Policies and Certification Practice Statements.
http://www.cio.gov/ficc/documents/CommonPolicy.doc

6. Surety Assessment Analysis and Recommendations

The analysis focused on the North American Energy Standards Board draft PKI Standard. The Sandia Assessment Team recommends that NAESB consider the following modifications to improve this standard.

6.1 Security Issues

Items listed in the following section deal specifically with areas of opportunity for an adversary, someone who has malicious intentions, within the guidelines set forth by the PKI standard. These issues are in order of importance with the highest ranking security issues listed first.

6.1.1 Deploying the NAESB draft PKI Standard

The guidelines set forth in the section entitled "Deploying an Agency PKI" in NIST SP 800-32 should be reviewed and followed in the process of developing the NAESB draft PKI Standard.

Level: High

Analysis: NIST SP 800-32 devotes an entire chapter to explaining the steps an agency should take to deploy its own PKI. A good overview is found on page 38 of NIST SP 800-32 that outlines how an agency should follow the example of the FBCA Certificate Policy and use the standard formats in RFC 3280 which call for a X.509 v3 certificate and a X.509 v2 Certificate Revocation List, (CRL). "In particular, NIST recommends following the FBCA policy and adhering to the federal certificate profile and CRL extensions profile. It would be best if agencies assume that at some point their PKI will cross-certify with the federal bridge CA, therefore coordinating the development of an agency PKI with the FPKISC is highly recommended."

A general guideline to the major steps include; analyze data and application for your organization, collect sample policies and base standards, draft certificate policies, select PKI product or service provider, develop CPS (Certification Practice Statement), do a pilot, and apply for cross-certification with the FBCA. For more details on these steps, review NIST SP 800-32, chapter 6, entitled "Deploying an Agency PKI."

Recommendation: The guidelines set forth in the section entitled "Deploying an Agency PKI" in NIST SP 800-32 should be reviewed and followed in the process of developing the NAESB draft PKI Standard.

6.1.2 The Certificate Policy for the NAESB PKI

The NAESB draft PKI Standard should be modified so that it is a complete CP. This document will then be referred to as the "Certificate Policy for the NAESB PKI."

Level: High

Analysis: The NAESB draft PKI Standard should be a complete CP. Examples of other PKI standards and implementations include the EuroPKI CP, FPKI CP, FBCA CP, USPTO CP, and HEPKI. All these CP's illustrate the fact that in order to create a PKI Standard, it is necessary to first formalize a CP. This is also explained in NIST SP 800-32 section 6.3, "Draft Certificate Policy(s)." "The first requirement for an agency developing a PKI is to establish appropriate certificate policy(s). An effective strategy is to adapt and reuse existing policies (especially FBCA) to create policy(s) for the agency. Certificate policies should be at sufficiently high level that the policies will not change too frequently."

RFC 3647, page 16, provides another example of a CP being created to define a PKI. "For example, the Federal Government might define a government-wide CP for handling confidential human resources information. The CP will be a broad statement of the general requirements for participants within the Government's PKI, and an indication of the types of applications for which it is suitable for use. Each department of agency wishing to operate a certification authority in this PKI may be required to write its own certification practice statement to support this CP by explaining how it meets the requirements of the CP. At the same time, a department's or agency's CPS may support other certificate policies." RFC 3647 goes on to explain the difference between a CP and CPS. "A PKI uses a CP to establish requirements that state what participants within it must do. A single CA or organization can use a CPS to disclose how it meets the requirements of a CP or how it implements its practices and controls. A CP facilitates interoperation through cross-certification unilateral certification, or other means. Therefore, it is intended to cover multiple CA's. By contrast, a CPS is a statement of a single CA or organization." RFC 3647 concludes the section entitled "Relationship Between Certificate Policy and Certification Practice

Statement," by stating "CP's and CPS's play a central role in documenting the requirements and practices of a PKI."

It is strongly recommended that the NAESB draft PKI Standard be rewritten as a CP that refers to the FBCA CP for most of its standard PKI policies. Thus the NAESB draft PKI will only need to include information specific to the NAESB draft PKI policy. This will ensure that the NAESB draft PKI Standard is interoperable with other Federal PKI's. This will comply with one of the goals of the document as it states in its "Commitment to Open Standards" section, page 4, "NAESB's long-standing support for open standards has served to create a competitive marketplace of interoperable E-commerce products to serve the Energy industry." Interoperability with the Federal PKI Standard will reduce the cost and time spent by CA's wishing to comply with the NAESB draft PKI Standards in order to become Authorized CA's.

Recommendation: The NAESB draft PKI Standard should be modified to be the "Certificate Policy for the NAESB PKI." This CP should rely on the FBCA CP for all general PKI Standard details. Only PKI details that are unique to the NAESB draft PKI Standard should be included in its CP. This will ensure interoperability with the most common CA's CP's, thus keeping the cost and time spend by CA's who wish to comply with the NAESB draft PKI Standards in order to become Authorized CA's down to a minimum.

6.1.3 Cross-Certification

The NAESB draft PKI Standard does not address the issues of cross-certification.

Level: High

Analysis: The NAESB draft PKI Standard will need to include specifics about cross-certification with other PKI Standards to ensure that those applying to become Authorized CA's will not have to adopt this new CP if their current CP is found, through equivalency mapping, to be on par with the NAESB PKI CP. This will reduce the cost and time spent for CA's to comply with the NAESB draft PKI Standards. Tailoring the NAESB draft PKI Standard to the outline found in RFC 3647 will ensure that cross-certification will be covered in detail. RFC 3647, page 52, ensures that using this outline will facilitate "Comparison of two certificate policies during cross-certification or other forms of interoperation (for the purpose of equivalency mapping)."

Recommendation: The NAESB draft PKI Standard should include cross-certification to reduce the cost and time spent by CA's that are only changing their CPS to comply with the NAESB draft PKI Standards.

6.1.4 Security of the CA's signing key

It is extremely important that the CA impose access controls on its signing key. Anyone that has control of the CA's signing key is able to issue certificates in the CA's name.

Level: High

Analysis: Section 2.6, entitled "Publication and Repository", states "The Authorized CA shall not impose any access controls its signing key, CRL's, and CPS." Without access controls on the CA's signing key, any adversary can obtain the key and create certificates in the CA's name. This would lead to serious dispute on any transactions that have been conducted using any certificate that was issued by the CA. The CA's certificate would have to be revoked along with any certificates it has issued. The statement could be corrected by substituting "verifying key" for "signing key" as the CA should make its verifying key public. If the CA's signing key is compromised, all certificates that are issued in the CA's name must be revoked because one can not prove who issued the certificates.

Recommendation: Wording should be changed to state: "CA's should not impose any access controls on their verifying key". Wording should be added to ensure CA's impose access controls on their signing key.

6.1.5 Certificate Rescission Notices

Notification time periods for certificate rescission notices are too long.

Level: High

Analysis: The "Certification" section of the document on page 3 states, "NAESB may rescind a CA's certification for cause at any time by providing 30 days notice in writing to the CA. CA's that receive a rescission notice from NAESB are required to notify all affected certificate holders within 5 days that their NAESB certification bas been rescinded and their certificates will no longer be valid." Considering the extreme case in which the CA's signing key has been compromised, these time constraints would allow an adversary to issue invalid certificates for up to 30 days. This is approximately a whole month in which many new end entities can be given invalid certificates. These new end entities could then participate in unsecured transactions in the WEQ during this month time-frame. The end entities that hold certificates that were originally issued by the CA will have up to five days of insecure transactions.

Recommendation: In order to protect WEQ from disputable transactions, the time period for NAESB to rescind a CA's certificate should be changed from 30 days to 24 hours. The FBCA CP, section 4.9.5 entitled "Time within which CA must Process the Revocation Request", states that for the FBCA, "all revocation requests must be processed within six hours of receipt of request." The longest timeframe allowed is 24 hours. It is also advisable to provide this notice in an e-mail to reduce transfer time. Also change the time period for the CA to notify its certificate holders of a rescission notice from 5 days to 24 hours. The CRL should be updated as soon as possible in the instance to avoid transaction disputes. If the CA's signing key has been compromised in this case, the details of the compromise should be protected until the issues have been resolved.

6.1.6 Network Security Controls

Not enough detail in section 6.7 entitled "Network Security Controls" to maintain adequate security of the networks.

Level: High

Analysis: NIST SP 800-32 section 3.2.3, entitled "Physical Architecture", states "It is highly recommended that the major PKI components be implemented on separate systems, that is, the CA on one system, the Registration Authority (RA) on a different system, and the directory servers on other systems." It would be good to add this requirement to the document. NIST SP 800-32 section 3.2.3 also states, "Placing the CA system behind an additional organizational firewall is recommended." This firewall is in addition to the Internet firewall. It will provide protection from both the Internet and from systems in the organization itself. This is another good practice that can be added to the document.

Section 6.7, entitled "Network Security Controls" states "Remote access and connections from remote computers must be limited to only those absolutely necessary, and must be properly authenticated." It is important to indicate which computers that remote sites will be able to access. Remote sites should only be allowed to access a directory where the public keys or public certificates are held. This can be set up as a border directory by situating the directory at that border of the organization, for example outside the firewall. The main directory server, located in the organizations protected network will periodically update the certificates in the border directory. Those in the organization will use the main directory server and those at remote sites will use the border directory. The border directory is NOT linked in anyway to the CA or the RA, only to the main directory server. For more information on this topic, refer to NIST SP 800-32.

Recommendation: NIST SP 800-32 section 3.2.3 should be reviewed and additional requirements should be added to the section entitled "Network Security Controls."

6.1.7 References to Key Sizes and Cryptographic Algorithms

The NAESB draft PKI Standard should not include specifics such as key sizes and cryptographic algorithms as these can change frequently and use of an out-of-date algorithm or key size will severely compromise the security of the transactions.

Level: High

Analysis: Sections 6.1.1 and 6.1.5 mention specific algorithms and key sizes. "3DES" is called out in the document as an acceptable encryption algorithm, however this is not the current standard. The standard to replace DES is formally referred to as TDEA, Triple Data Encryption Algorithm, in FIPS PUB 46-3.

However, this was replaced by AES in November 2001. So it is suggested that AES be used for encryption in the PKI Standard.

The document also requires the use of RSA with 1024-bit keys. This is the current acceptable key size. However, the Federal PKI, in the forward of its CP entitled "X.509 Certificate Policy for the U.S. Federal PKI Common Policy Framework", specifically requires the use of at least a 2048-bit key with RSA. So it is strongly suggested that at least a 2048-bit key is used with RSA. However, in the case of the cryptographic algorithm and the key sizes it would be better to not include specifics and to require the CA to be up-to-date with current standards.

Recommendation: All references to specific key sizes and cryptographic algorithms should be removed from the document. Instead the document should require all CA's use the current standard key sizes and current cryptographic standards and point to where those standards may be identified.

6.1.8 NAESB PKI User Declarations

The NAESB Declarations, "NAESB End-Entity Declaration for Public Key Infrastructure" and the "NAESB Qualifying Relying Party Declaration for Public Key Infrastructure," lack a section where the PKI user acknowledges that the identity information provided is complete and accurate. The documents do not ensure that important information is not left out.

Level: High

Analysis: The agreements lack a section in which the PKI user acknowledges that the identity information provided is complete and accurate. This section is important because the PKI user needs to be legally bound to their given identity to prevent identity fraud. The declaration also lacks a section in which the PKI user ensures to provide updates to their information if it should change. Without this section there is no legal responsibility for the PKI user to alert NAESB of any change in identity. The USPTO has a good example of a subscriber agreement though the NAESB PKI would need an agreement that is more detailed because this PKI is more involved than the USPTO PKI.

Since an end entity can either be a subscriber or a relying party, by definition in NIST SP 800-32, it is redundant to have both an agreement for an end entity and a relying party. It is suggested that the documents be renamed the "NAESB PKI Subscriber Agreement" and the "NAESB PKI Relying Party Agreement." This naming convention would be more consistent with industry standards such as the USPTO PKI and RFC 3647.

The agreements should also be expanded to include more details. They should also follow the outline set forth in RFC 3647, section 3.7, "Set of Provisions" so that they thoroughly cover every necessary topic.

Recommendation: The NAESB PKI Declarations need to be modified so that they are consistent with the USPTO PKI and RFC 3647.

6.1.9 Key Pair Generation

References to specific requirements for FIPS PUB 140-2 Level 3 hardware devices will cause this PKI standard to become out-of-date with other standards.

Level: High

Analysis: Section 6.1.1, entitled "Key Pair Generation", states specific requirements for FIPS PUB 140-2 Level 3 hardware devices. However, the requirements listed are not found in FIPS PUB 140-2. Therefore to remain consistent with the standards, only a reference to FIPS PUB 140-2 Level 3 is needed. The specific requirements can be removed.

Recommendation: All references to specific requirements for FIPS PUB 140-2 Level 3 hardware devices should be removed to remain consistent with the current standard and to sustain this consistency.

6.1.10 Unaffiliated Entities

The NAESB draft PKI Standard refers to unaffiliated entities but does not list the restrictions on their applications or interactions in the WEQ.

Level: High

Analysis: Section 1.3.3, entitled "End Entities" states "Entities or organizations that may require access to applications secured under the WEQ PKI standards, but do not qualify as a wholesale electricity market participant (e.g., regulatory agencies, universities, consulting firms, etc.) must register under the sponsorship of a qualified wholesale electricity market participant as an Unaffiliated Entity." It is not a secure practice to allow WEQ access to an entity who does not qualify as a WEQ participant unless restrictions are made on the entities interactions within the WEQ. It would be best to not allow unaffiliated entities in the PKI Standard. However, if they are necessary, then a list of restrictions on their privileges in the WEQ should be included in this section. A document should also be created named a "NAESB PKI Unaffiliated Entity Agreement" that legally binds the sponsor to the actions of the unaffiliated entity. This agreement must also list the acceptable and prohibited actions an unaffiliated entity can perform in the WEQ.

Recommendation: Unaffiliated entities should be removed from the NAESB draft PKI Standard, or the section referring to them should include restrictions on their interactions in the WEQ. If unaffiliated entities are accepted in this PKI Standard a document entitled a "NAESB PKI Unaffiliated Entity Agreement" should be created to legally bind the sponsor to its entity's actions.

6.1.11 Certificate Classes

The number of certificate classes is variable and the description of each certificate does not require it to be consistent with the current certificate standards, X.509 v3, as listed in RFC 3280.

Level: High

Analysis: The Sandia Team was told that NAESB would like to change the number of certificate classes from three to one. If this is the final decision, then section 1.2 entitled "Identification" should be modified to be consistent with this decision. One certificate class is currently sufficient for this version of the document. The smaller the number of certificate classes, the less complex this PKI. However, the next version of the document could include another certificate type if need be.

The "Identification" section of the document does not require the certificates to be of the standard certificate type X.509 v3. It is important that this document require standardized certificates, like those found in RFC 3280, so this PKI Standard will be interoperable with global PKI Standards. Interoperability will ensure simpler cross-certification between CA's.

Recommendation: Modify the document to only allow one certificate class. The document should also state that certificates will be of the type X.509 v3, to ensure interoperability with other Federal PKI standards.

6.1.12 Certificate Protection

End entities are required to protect the privacy of their certificates to a greater degree than necessary to do business.

Level: High

Analysis: Section 1.3.3, entitled "End Entities" states that end entities must have "established a security policy and procedures to protect the privacy and use of all Certificates issued in the name of the end entity." The end entities' certificate will be viewed by relying party to prove the end entities identity in a transaction. In this case, the end entity does not need to protect the privacy of the certificate from the relying party because it would then have no way to prove its identity and therefore no transactions would be done. It is possible that the end entity might want to protect its certificate from any entity that has not completed the "End Entity Certification Authority Declaration Agreement." However, this protection is not necessary considering the certificate does not contain any information that could not be made public.

The end entity is responsible for establishing "a security policy and procedures to protect the privacy and use" of its private key. As would be expected, the integrity of the certificates an end entity owns should always be protected**.**

Recommendation: Modify the requirement that the end entity needs to protect the privacy and use of all certificates issued in its name and instead indicate the end entity must protect all private keys issued in its name by an Authorized CA and protect the integrity of its certificates.

6.1.13 CRL Issuance frequency, validity period, and availability

The allotted time frames for the CRL updates and validity period are too long. The CRL availability period is too constraining. The CRL will be maintained on a machine that will have to undergo occasional maintenance at which time the machine will have to be off-line.

Level: Medium

Analysis: Sections 4.4.9 through 4.4.11, describe time constraints for CRLs. They state, "An Authorized Ca must ensure that it issues an up-to-date CRL at least every twelve (12) hours. Additionally, the validity period of a CRL shall not exceed 24 hours. An Authorized CA must ensure up-to-date CRL's are available 24x7x365 and can be downloaded via the HTTP protocol." NIST SP 800-32, section 4.4.5 "Certificate Revocation", states "More frequent generation of CRLs will reduce a CA's transaction and reputation risk exposure." Therefore, the CA's should be requested to maintain a CRL that is updated every six hours and the period of a CRL should not exceed twelve hours. As mentioned in FBCA CP, section 4.9.7 "CRL Issuance Frequency", an emergency CRL should be issued in under six hours in the case of a revoked certificate. This time constraints are generous considering NIST SP 800-32, page 32, states "several technology firms have developed software that allows a repository to search its records for the validity of a single certificate in real time."

The CRL should not be required to be available "24x7x365". This is an unreasonable expectation for a CRL that will be stored on a system that will occasionally have to undergo maintenance which will need to be done off-line. This requirement should be changed to state the CRL should be available "24x7x365", except for occasional, scheduled, time periods for maintenance.

Recommendation: An up-to-date CRL should be issued six hours instead of every 12 hours. The validity period of a CRL should not exceed twelve hours. The CRL should be made available during all business hours and all other times except for the occasional, scheduled, maintenance outages instead of requiring the CRL to be only available "24x7x365".

6.1.14 Certificate Application Steps

Certification Application steps are not ordered in a way that ensures the highest level of security.

Level: Medium

Analysis: Section 4.1, entitled "Certificate Application" lists the steps an Authorized CA must perform when an applicant applies for a certificate. The section later states, "These steps may be performed in any order that is convenient for the Authorized CA, and does not defeat security, but all steps must be completed prior to certificate issuance." It is not advisable to allow CA's to determine the order of the steps that ensures the highest level of security. The steps should be ordered and listed and the CA should follow the approved ordering to prevent security issues. This suggestion is made in light of the following example. Assume the CA initially completed step two and obtained a signed request file. Then the CA stored this file on one of their off-line machines. Next the CA decides to complete step one and establish and record the identity of the applicant. However, before the CA can complete this step, they find that the signed request file they stored contained a virus that destroyed all the files on that machine. Now the CA has no way to know the identity of the adversary that completed the successful attack on their system. This example illustrates the importance of identifying who one is communicating with, before initiating transactions.

Recommendation: The certification application steps should be ordered in a way that the CA establishes the applicant's identity before completing any other steps. These steps should be completed by the CA as ordered in this document.

6.1.15 Tamper-Evident Hardware

References to "tamper-proof" are inconsistent with the terminology in FIPS PUB 140-2.

Level: Medium

Analysis: FIPS PUB 140-2 does not contain any references to "tamper-proof" devices. Therefore, any references to "tamper-proof" should be replaced with "tamper-evident" so as to be consistent with this standard.

Recommendation: All references to "tamper-proof" should be replaced with "tamper-evident" to remain consistent with the terminology in FIPS PUB 140-2.

6.1.16 Obsolete RFC References

RFC references include obsolete standards.

Level: Low

Analysis: RFC 2510 is obsolete with the creation of RFC 4210. RFC 2527 was replaced by RFC 3647. And "NIST 800-32" is formally referred to as "NIST SP 800-32". Making these three changes in the document would greatly improve its readability.

Recommendation: Update the RFC references so they represent the current standards.

6.1.17 Use of the Term End Entity

The term "end entity" is confusing.

Level: Low

Analysis: NIST SP 800-32, section 3.1 defines an end entity as being made up of two subclasses, a certificate holder and a relying party. (For a definition of these terms, see the section of this document entitled "Inconsistent Definitions.") The term "end entity" is only used once in RFC 3647, more common are the terms relying party and subscriber. It is suggested that the term "end entity" be replaced with certificate holder/subscriber or relying party/certificate user where appropriate in the document to avoid confusion. The appropriate definitions should be included for the terms used in the documents "Definition" section.

Recommendation: The term end entity should be replaced with certificate holder/subscriber or relying party/certificate user where appropriate so the document is more consistent with the standards, RFC 3647 and NIST SP 800-32.

6.1.18 Customer Service Center

The NAESB draft PKI Standard demands that the Authorized CA's Customer Service Center be available "24x7x365".

Level: Low

Analysis: Section 4.10, entitled "Customer Service Center", states "Each Authorized CA shall implement and maintain a 24x7x365 Customer Service Center to provide assistance and services to Subscribers and Relying Parties, and a system for receiving, recording, responding to, and reporting certificate problems within its customers." It is unreasonable to expect that any center which relies on computers will be available at all times. There will be times when the systems need to be backed-up or brought down for upgrades. At these times the machines will all have to be off-line. This statement should be reworded to be less rigid.

Recommendation: The Authorized CA's customer service center should be required to be available at all times, except for the occasional, scheduled maintenance times in which it will be off-line for the minimum duration.

6.1.19 Reasonable Practices

References to commercial internet practices are vague.

Level: Low

Analysis: Section 5.2.2 entitled "Number of Persons Required Per Task" refers to "commercially reasonable practices." In the "Summary" section it states "The standards described in this document achieves the level of security commonly used by other industries engaged in commercial activity across the public Internet." It is recommended that the NAESB draft PKI Standard ensure interoperability with other Federal standards. This will ensure that most CA's will have to change as little as possible to comply with the standards if they already comply with the Federal PKI Standards.

Recommendation: All statements referring to commercial practices should be replaced with Federal standards to improve the clarity and ensure maximum interoperability in this PKI Standard.

6.1.20 Consistent Naming Convention for NAESB PKI Standards

Throughout the NAESB draft PKI Standards, the standard is referred to by multiple, different names.

Level: Low

Analysis: In the NAESB draft PKI Standards, the standard is referred to as the NAESB PKI three times and as the WEQ PKI thirteen times. A consistent naming convention should be used.

Recommendation: Replace any references to the WEQ PKI with NAESB PKI to avoid confusion.

6.1.21 Missing Requirement Level Key Words

Common key words in RFC defining requirement levels throughout the PKI Standard are missing.

Level: Low

Analysis: To improve clarity consider including a section at the beginning of the PKI Standard that defines the common RFC requirement levels. The EuroPKI includes this sentence in the beginning of its CP. "Within this document the words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", "OPTIONAL", are to be interpreted as in RFC 2119."

Recommendation: Adding a statement about the requirement level key words at the beginning of the document would improve clarity and be consistent with other PKI Standards and RFCs.

6.2 Other Areas for Improvement

The following recommendations are submitted for consideration in the format and layout of the NAESB draft PKI Standard.

6.2.1 Missing Definitions

Many important PKI terms are used, but left undefined. The following definitions should be added to the document in the "Definitions" section on page 5 to ensure that this section is complete. Also the following standard, NIST SP 800-32, should be referenced just prior to this section as section 3.1 from this document is the source of these definitions.

> ARCHIVE – A database of information to be used in settling future disputes. The archive stores and protects sufficient information to determine if a digital signature on an "old" document should be trusted.

CERTIFICATE – A digital document that typically includes the public key, information about the identity of the party holding the corresponding private key, the operational periods of the certificate, and the CA's own digital signature.

CERTIFICATE REVOCATION LIST (CRL) – A list of certificates that have been revoked. This list is usually signed by the same entity that issued the certificates. The list also documents the historical revocation status of certificates.

REPOSITORY – A database of active digital signatures for a CA system. CA's post certificates and CRLs to repositories. The purpose of a repository is to provide data that allows relying parties to confirm the status of the digital signatures.

6.2.2 Extraneous Definitions

If the NAESB draft PKI Standard will not be implementing cross-certification, then the definitions of a "CA-certificate" and "Issuing/Subject CA", in the "Definitions" section, page 6, should be removed from the document as they are no longer relevant. However, implementing cross-certification is strongly recommended.

6.2.3 Inconsistent Definitions

In the "Definition" section on page 6, the definition of "Relying Party" is not consistent with its definition in NIST SP 800-32. An end entity can be broken into two subclasses, the relying party and the certificate holder. NIST SP 800-32, section 3.1.4, refers to "relying party" and "certificate holder", while RFC 3647, page 7, uses the terms "relying party" or "certificate user" and "subject" or "subscriber". To be consistent with RFC 3647 and NIST SP 800-32, the term should be referred to as "end entity" throughout the document instead of "end-entity" or "End Entity". The following definitions are direct quotes from NIST SP 800-32, section 3.1.

END ENTITY -- An organization or individual that uses the PKI, but does not issue certificates. They rely on the other components of the PKI to obtain certificates, and to verify the certificates of other entities they do business with.

CERTIFICATE USER/RELYING PARTY – One who relies on the certificate to know, with certainty, the public key of another entity.

CERTIFICATE HOLDER/SUBSCRIBER – One that is issued a certificate and can sign digital documents.

6.2.4 Document Formatting

Sections 1 and 2 on the opening page should not be numbered as sections since these are really just front matter and not part of the document itself. Section 3, entitled "Recommendation" should become the currently empty section 1.1 "Overview".

7. Summary

The Sandia assessment team conducted an analysis of the NAESB draft PKI Standard and related documents. The cooperation and assistance given to Sandia National Laboratories by NAESB and its members during this part of the assessment was greatly appreciated.

The analysis focused primarily on the security of the PKI protocol that is defined in the standards draft document. Vulnerabilities in the standard were identified and described, with general recommendations for improvement generated. Strengths and weaknesses were also identified. The following strengths of the NAESB draft PKI Standard were recognized:

- The NAESB draft PKI Standard was formatted using the outline in RFC 3647, "Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework."

- The document included headings for all sections in the outline in RFC 3647, even those that had no content in the body of the section. This is in direct compliance with RFC 3647.
- The document referenced all necessary PKI Standards: NIST SP 800-32, RFC 3280, RFC 3647, and RFC 4210.

The following weaknesses in the security of the NAESB draft PKI Standard were identified:

- The document should be modified so that it is a complete Certificate Policy.
- The NAESB draft PKI Standard does not ensure interoperability with other Federal PKI Standards.
- References to specific key sizes or cryptographic algorithms should not be included in the NAESB draft PKI Standards.
- The NAESB draft PKI Standard does not include specifics about cross-certification issues with other PKI Standards.

In addition to analyzing the NAESB draft PKI Standards, the Sandia Team also reviewed the two related documents, "NAESB End-Entity Declaration for Public Key Infrastructure" and the "NAESB Qualifying Relying Party Declaration for Public Key Infrastructure." The following strengths of these agreements were recognized:

- Both agreements require the PKI user agree to be legally bound to their transactions using the certificate they will be issued by an Authorized CA.

The following weaknesses in the security of the agreements were identified:

- The agreements lack a section in which the PKI user acknowledges that the identity information provided is complete and accurate.
- The agreements also lack a section in which the PKI user ensures to provide updates to their information if it should change.
- An end entity can either be a subscriber or a relying party, by definition in NIST SP 800-32. Therefore, having an agreement for an end entity and a relying party is redundant.
- The agreements do not follow the outline set forth in RFC 3647, section 3.7, "Set of Provisions" so that they thoroughly cover every necessary topic.

General recommendations include following the guidelines set forth in the section entitled "Deploying an Agency PKI" in NIST SP 800-32 during the process of developing the NAESB draft PKI Standard.

It is recommended that the NAESB draft PKI Standard be modified so that it is a complete Certificate Policy. Examples of other PKI Standards are listed above in the analysis section. All these CPs illustrate the fact that in order to create a PKI Standard, it is necessary to formalize a CP. This is also explained in NIST SP 800-32 section 6.3, "Draft Certificate Policy(s)."

It is recommended that the NAESB draft PKI Standard be rewritten as a CP entitled the "Certificate Policy for the NAESB PKI," or some other appropriate name. This CP should refer to the FBCA CP for most of its standard PKI policies.

Once the NAESB draft PKI Standard has been altered to be a CP, using the outline described in RFC 3547, it is recommended that this CP be examined by an independent analysis, which includes a comprehensive assessment with suggested improvements. This analysis will ensure the PKI Standard defined in the CP does not contain any security issues.

8. Conclusion

This report is intended to contribute to the improvement of NAESB draft PKI Standards and was developed with the best information available at the time.

The assessment team believes that the NAESB draft PKI Standards can be modified to represent the beginnings of a viable PKI Standard for transactions within the WEQ. The document is correct in that it follows the outline provided in RFC 3647 for CP's and includes all necessary references to applicable PKI Standards documents. Therefore, headers preceding empty sections in NAESB draft PKI Standard could be filled out to produce a valid CP that would define the NAESB PKI Standard. Another option is for the NAESB PKI CP to reference the FBCA CP for general PKI Standard details, thus allowing the NAESB PKI CP to remove any sections that include this standard information. This would allow the NAESB PKI CP to be a relatively short document that includes only PKI information that is unique to the NAESB PKI and a reference for all remaining material is contained in the FBCA PKI. This option would ensure that the NAESB PKI was always current with the Federal PKI Standards. It would also ensure the NAESB PKI Standard contains the least amount of security issues possible. This allows interoperability with the Federal PKI and any other PKI's that allowed cross-certification with the FBCA.

Appendix A – Abbreviations and Acronyms

AES	Advanced Encryption Standard
CA	Certification Authority
CMP	Certificate Management Protocol
CP	Certificate Policy
CPS	Certification Practice Statement
CRL	Certificate Revocation List
DES	Data Encryption Standard
DOE	Department of Energy
EuroPKI	European Public Key Infrastructure
FBCA	Federal Bridge Certification Authority
FIPS PUB	Federal Information Processing Standard Publication
FPKI	Federal Public Key Infrastructure
HEPKI	Higher Education Public Key Infrastructure
IDART	Information Design Assurance Red Team
NAESB	North American Energy Standards Board
NAS	National Aerospace System
NIST	National Institute of Standards and Technology
NIST SP	National Institute of Standards and Technology Special Publication
PKI	Public Key Infrastructure
RFC	Request For Comment
RSA	Rivest-Shamir-Adleman
TDEA	Triple Data Encryption Algorithm
USPTO	United States Patient and Trademark Office
WEQ	Wholesale Electricity Quadrant

[i] http://www.naesb.org/aboutus.asp

TAB 6

COPYRIGHT UPDATE

This section includes:

- Copyright Report

The material presented is background information for the discussion of agenda item 4. No action by the Board is expected.

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

NAESB COPYRIGHT POLICY AND COMPANIES WITH ACCESS TO NAESB STANDARDS UNDER THE COPYRIGHT POLICY

AS OF DECEMBER 1, 2006

INTRODUCTION:

The NAESB standards are copyrighted and protected by federal copyright law. All NAESB members have access to the standards via the member-only portion of the NAESB web site. In accessing the standards they do so for their specific company use. They are not permitted to reproduce and distribute to third parties, including affiliates, partners or other corporate entities under the same corporate umbrella.

There are several other ways that companies can gain access to NAESB standards; however, the same copyright limitations remain in effect so that persons likewise are not permitted to reproduce and distribute to third parties, including affiliates, partners or other corporate entities under the same corporate umbrella.

As examples of the preceding paragraph, a company that attends a NAESB class may have access to those standards addressed in the class. A company that purchases a version of the standards has access to that version via either a CD or via printed material. Several government agencies have requested and received copies of the standards with waivers so that they and their task forces may evaluate the standards for use. The members of the task force are only to use the standards for evaluation purposes, and the same restrictions as noted above apply. As task force members determine to use the standards for implementation in their own companies and with trading partners, they must obtain the standards separately – either through purchasing, access to the NAESB web site if they are NAESB members, or attendance at classes.

REASON FOR ACCESS TO STANDARDS:

NAESB standards are developed by the industry to improve the transparency and transactional efficiency of the energy markets. From NAESB's perspective, all standards are voluntary.

The retail standards are available to support customer choice programs and other aspects of retail markets not related to customer choice programs. Some of the retail technical standards have been adopted by the states and are mandatory. The majority of the retail standards are voluntary. Access to the standards is necessary for implementation and ultimately, to benefit from the efficiency they introduce.

The Wholesale Gas Standards (WGQ Version 1.7) and the Wholesale Electric Standards (WEQ Version 000) with a few exceptions have been incorporated by reference by the Federal Energy Regulatory Commission into federal regulations and are mandatory for federal jurisdictional entities. The Commission, in adopting the standards, sets requirements for compliance and penalties for non-compliance. NAESB does not monitor for compliance nor does it set standards

that address penalties for non-compliance. Access to the standards is necessary for implementation and ultimately, to benefit from the efficiency they introduce. Access is also needed to ensure compliance.

Standards access is provided 1) through membership in NAESB, 2) by purchase of annual web site access, 3) via attendance at NAESB courses for specific standards, 4) through purchase at a nominal price, or 5) by receipt of a special license. In each instance, access is limited and non-transferable.

WARRANTY DISCLAIMER AND COPYRIGHT WARNING:

Below is the warranty disclaimer and copyright warning for each of the most recent versions of the NAESB standards:

- Wholesale Electric Quadrant Version 000 Standards for OASIS and Standards of Conduct and Complementing NERC Reliability Standards:

  The North American Energy Standards Board (NAESB) disclaims and excludes, and any user of the NAESB standard acknowledges and agrees to NAESB's disclaimer of, any and all warranties, conditions or representations, express or implied, oral or written, with respect to the standard or any part thereof, including any and all implied warranties or conditions of title, non-infringement, merchantability, or fitness or suitability for any particular purpose (whether or not NAESB knows, has reason to know, has been advised, or is otherwise in fact aware of any such purpose), whether alleged to arise by law, by reason of custom or usage in the trade, or by course of dealing. Each user of the standard also agrees that under no circumstances will NAESB be liable for any special, indirect, incidental, exemplary, punitive or consequential damages arising out of any use of, or errors or omissions in, the standard.

  The NAESB Wholesale Electric Quadrant (WEQ) Standards Manuals Relating to Open Access Same-Time Information Systems (OASIS), Coordinate Interchange, Area Control Error (ACE) Equation Special Cases, Manual Time Error Correction, Inadvertent Interchange Payback, Transmission Loading Relief (Eastern Interconnection), Standards of Conduct, and Contracts, and any amendments or errata thereto, are protected by NAESB's federal copyright 2005-2006. NAESB hereby grants the authorized users who are NAESB members in good standing permission to reproduce material therein for internal reference and use and not for use by any unauthorized third parties. Reproduction in any other form, or for any other purpose, is forbidden without express permission of NAESB. Copies are available for purchase from NAESB. This non-exclusive limited license is non-transferable and may be revoked without notice upon violation of the terms contained herein or any applicable law or regulation. Each user grants NAESB the right to audit its use to assure compliance with these terms.

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

- Wholesale Gas Quadrant Version 1.7 Standards for Nominations, Flowing Gas, Invoicing, Electronic Delivery Mechanisms, Capacity Release, Contracts, Interpretations, and Additional Standards:

  The North American Energy Standards Board (NAESB) disclaims and excludes, and any user of the NAESB standard acknowledges and agrees to NAESB's disclaimer of, any and all warranties, conditions or representations, express or implied, oral or written, with respect to the standard or any part thereof, including any and all implied warranties or conditions of title, non-infringement, merchantability, or fitness or suitability for any particular purpose (whether or not NAESB knows, has reason to know, has been advised, or is otherwise in fact aware of any such purpose), whether alleged to arise by law, by reason of custom or usage in the trade, or by course of dealing. Each user of the standard also agrees that under no circumstances will NAESB be liable for any special, indirect, incidental, exemplary, punitive or consequential damages arising out of any use of, or errors or omissions in, the standard.

  The NAESB, Wholesale Gas Quadrant (WGQ) Version 1.7 Standards Manuals Relating to Nominations, Flowing Gas, Invoicing, Electronic Delivery Mechanisms, Capacity Release, and Contracts, and any amendments or errata thereto, are protected by NAESB's federal copyright 1996-2006 NAESB hereby grants the authorized users who are NAESB members in good standing permission to reproduce material therein for internal reference and use not for use by any unauthorized third parties. Reproduction in any other form, or for any other purpose, is forbidden without express permission of NAESB. Copies are available for purchase from NAESB. This non-exclusive limited license is non-transferable and may be revoked without notice upon violation of the terms contained herein or any applicable law or regulation. Each user grants NAESB the right to audit its use to assure compliance with these terms.

- Retail Gas and Electric Model Business Practice Standards for Master List of Defined Terms, Market Participant Interactions, Creditworthiness, Billing and Payments, Electronic Delivery Mechanisms, Distribution Company-Supplier Disputes, Contracts, and Internet Electronic Transport:

  The North American Energy Standards Board (NAESB) disclaims and excludes, and any user of the NAESB standard acknowledges and agrees to NAESB's disclaimer of, any and all warranties, conditions or representations, express or implied, oral or written, with respect to the standard or any part thereof, including any and all implied warranties or conditions of title, non-infringement, merchantability, or fitness or suitability for any particular purpose (whether or not NAESB knows, has reason to know, has been advised, or is otherwise in fact aware of any such purpose), whether alleged to arise by law, by reason of custom or usage in the trade, or by course of dealing. Each user of the standard also agrees that under no circumstances will NAESB be liable for any special, indirect, incidental, exemplary, punitive or consequential damages arising out of any use of, or errors or omissions in, the standard.

  The NAESB, Retail Gas Quadrant (RGQ) and Retail Electric Quadrant (REQ) Model Business Practice Standards relating to defined terms, market participant interactions, creditworthiness, billing and payments, quadrant specific electronic delivery mechanisms, distribution company supplier disputes, contracts and internet electronic transport, and any amendments or errata thereto, are protected by NAESB's federal copyright 2006 NAESB hereby grants the authorized users who are NAESB members in good standing permission to reproduce material therein for internal reference and use and not for use by any unauthorized third parties. Reproduction in any other form, or for any other purpose, is forbidden without express permission of NAESB. Copies are

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

available for purchase from NAESB. This non-exclusive limited license is nontransferable and may be revoked without notice upon violation of the terms contained herein or any applicable law or regulation. Each user grants NAESB the right to audit its use to assure compliance with these terms.

NAESB COPYRIGHT POLICY:

All NAESB Standards are protected under United States Copyright laws. The same copyright protection applies to much of the other materials published by NAESB.

Members of NAESB and persons purchasing NAESB Standards are permitted to make reasonable use of these materials internally for certain limited purposes. However, they may not transfer them outside their own companies nor may they transfer them to affiliates or other third parties without written authorization from the NAESB office.

Duplication of NAESB Standards is not only an infringement of NAESB's copyright but it increases the risk that the duplicated materials may not contain all of the Standards and the like, and may thus be incomplete. Persons in possession of incorrect, incomplete and outdated materials may be under the misconception that they are observing NAESB's Standards even when they are not. This serves no one and only undermines what NAESB is trying to accomplish. Copyright infringement also undermines NAESB's ability to maintain the economic integrity its members expect so that it may continue its work in the future.

Members and purchasers or NAESB Standards and other NAESB copyrighted materials are cautioned to review their policies regarding use and distribution of our materials to assure that they are not intentionally or inadvertently infringing NAESB's copyright and coming into conflict with federal law.

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
8760	✓		✓	✓	✓	✓	✓	✓	✓	✓
Aarrowcast, Inc.		✓							✓	
ABN AMRO Inc.		✓					✓			
ACES Power Marketing LLC	✓			✓	✓	✓	✓	✓	✓	✓
AGL Resources Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Alabama Electric Cooperative, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Alabama Power	✓			✓	✓	✓	✓	✓	✓	✓
Allegheny Energy		✓		✓	✓					
Allegheny Energy, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Allen & Overy		✓							✓	✓
Alliance Pipeline LP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alliance Pipeline Ltd		✓	✓				✓			
Alston & Bird, LLP		✓							✓	
Alterra Healthcare, Inc.		✓							✓	
Amerada Hess Corp		✓				✓				
Ameren Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Ameren Services	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Ameren Services Company	✓			✓	✓	✓	✓	✓	✓	✓
American Crystal Sugar Company		✓							✓	
American Electric Power Service Corp.	✓			✓	✓	✓	✓	✓	✓	✓
American Municipal Power - Ohio, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
American Public Power Association	✓			✓	✓	✓	✓	✓	✓	✓
American Transmission Company LLC	✓			✓	✓	✓	✓	✓	✓	✓
Ameristar Casinos, Inc.		✓							✓	
Anadarko Energy Services			✓						✓	
Anadarko Energy Services Company	✓		✓	✓	✓	✓	✓	✓	✓	✓
Analysis Group		✓							✓	
Andrews Kurth LLP		✓					✓		✓	
ANR Storage Company		✓					✓	✓	✓	✓
ANR Pipeline Company		✓					✓	✓	✓	✓
Apache Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Aquila, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Arent Fox PLLC		✓							✓	
AREVA TGD Corporation		✓		✓						

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Arizona Public Service Company	✓			✓	✓	✓	✓	✓	✓	✓
Ater Waynne LLP of Portland Oregon		✓		✓	✓	✓	✓		✓	
Atmos Energy	✓			✓	✓	✓	✓	✓	✓	✓
Avista Energy, Inc.		✓							✓	
Baker Botts, LLP		✓					✓			
Balch & Bingham LLP			✓							✓
Ballard Natural Gas, LLC	✓			✓	✓	✓	✓	✓	✓	✓
Baltimore Gas & Electric Co.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Baltimore Gas & Electric Company			✓						✓	
Barclays Bank PLC	✓			✓	✓	✓	✓	✓	✓	✓
Basin Electric Power Cooperative	✓			✓	✓	✓	✓	✓	✓	✓
Bear Paw Energy, LOC		✓					✓			
Benjamin Schlesinger & Associates		✓							✓	
Bentley, James		✓							✓	
Berry Petroleum Company		✓							✓	
BG LNG Services, LLC	✓			✓	✓	✓	✓	✓	✓	✓
Biagiotti		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Black Marlin Pipeline		✓					✓	✓	✓	✓
Blake, Cassels, and Graydon, LLP		✓							✓	
Blue Lake Gas Storage Company		✓					✓	✓	✓	✓
Boeing Company, The	✓			✓	✓	✓	✓	✓	✓	✓
John R. Bonica, PC		✓								✓
Bonneville Power Administration	✓			✓	✓	✓	✓	✓	✓	✓
BP America Inc.	✓			✓	✓	✓	✓	✓	✓	✓
BP Energy	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bracewell & Giullani, LLP		✓		✓	✓		✓			✓
Bracewell & Patterson, LLP		✓							✓	
Brickfield Burchette Ritts and Stone		✓							✓	
Bridgeline Gas Distribution LLC		✓							✓	
Bridgeline Gas Marketing	✓			✓	✓	✓	✓	✓	✓	✓
Bridgeline Holdings, LP		✓							✓	
Bridgeline Storage Company LLC		✓							✓	
British Columbia Transmission Corporation		✓		✓	✓					
Brown, Williams, Moorhead & Quinn, Inc.		✓					✓			

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Burlington Resources	✓			✓	✓	✓	✓	✓	✓	✓
California Department of Water Resources	✓			✓	✓	✓	✓	✓	✓	✓
California ISO		✓					✓			
Calpine Energy Services, LP	✓			✓	✓	✓	✓	✓	✓	✓
Caledonia Energy Partners, LOC		✓							✓	
Camterra Resources, Inc.		✓							✓	
Canyon Creek Compression Company		✓					✓	✓	✓	✓
Cargill Incorporated	✓			✓	✓	✓	✓	✓	✓	✓
Cargill Power Markets, LOC		✓		✓	✓					
Cascade Natural Gas Corporation	✓			✓	✓	✓	✓	✓	✓	✓
CenterPoint Energy		✓	✓	✓	✓	✓	✓		✓	✓
Center Point Energy Minnegasco	✓			✓	✓	✓	✓	✓	✓	✓
CenterPoint Energy Gas Services, Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
CenterPoint Energy Gas Transmission Company	✓		✓	✓	✓	✓	✓	✓	✓	✓
CenterPoint Energy Mississippi River Transmission Corp.	✓			✓	✓	✓	✓	✓	✓	✓
Central Electric Power Cooperative	✓			✓	✓	✓	✓	✓	✓	✓
Chadbourne & Parke, LLP		✓								✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Chandeleur Pipe Line Company	✓			✓	✓	✓	✓	✓	✓	✓
Charles River Associates		✓					✓			
Chemtura Corporation		✓								✓
Cheniere LNG Marketing, Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Cheniere Pipeline Company		✓							✓	
Chesapeake Utilities		✓							✓	
Chevron/Bridgeline Holdings, L.P.			✓							✓
Chevron/Texaco	✓			✓	✓	✓	✓	✓	✓	✓
ChevronTexaco Energy Research and Technology	✓			✓	✓	✓	✓	✓	✓	✓
CIMA Energy, Inc.		✓						✓		✓
Cimarex Energy Co.	✓			✓	✓	✓	✓	✓	✓	✓
Citigroup	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Citizens Gas		✓					✓			
City Forest Corporation		✓							✓	
City of Fort Stockton		✓							✓	
City of Redding		✓		✓						
Cleary Gottlieb		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Cleco Power, LLC	✓			✓	✓	✓	✓	✓	✓	✓
Columbia Gas Transmission Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Combine Net, Inc.		✓							✓	
Commerce Energy Group	✓			✓	✓	✓	✓	✓	✓	✓
Compass Energy Services		✓							✓	
Comprehensive Energy Services	✓			✓	✓	✓	✓	✓	✓	✓
ConEdison			✓							✓
Conectiv Energy Supply, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
ConocoPhillips Company			✓							✓
ConocoPhillips Gas and Power	✓			✓	✓	✓	✓	✓	✓	✓
Consolidated Edison Company of New York, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Consolidated Edison Company of NY	✓			✓	✓	✓	✓	✓	✓	✓
Constellation Energy Commodities Group, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Constellation Generation Group	✓		✓	✓	✓	✓	✓	✓	✓	✓
Constellation NewEnergy, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Consumers Energy		✓							✓	
Consumers Energy Company	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
CRA International		✓					✓		✓	
Craig, Brian P.		✓							✓	
Credit Suisse First Boston		✓					✓			
Cross-Sound Cable Co., LLC		✓		✓	✓					
Cullen and Dykman, LLP		✓					✓			
Cypress Natural Gas Marketing, LOC		✓								✓
Dairyland Power Cooperative	✓			✓	✓	✓	✓	✓	✓	✓
Dauphin Island Gathering Partners	✓		✓	✓	✓	✓	✓	✓	✓	✓
Day, Berry & Howard, LLP		✓		✓	✓					
Dean Health System		✓							✓	
Decatur Memorial Hospital		✓							✓	
Defense Energy Support Center	✓			✓	✓	✓	✓	✓	✓	✓
Delta Energy, LLC		✓								✓
Department of Energy	✓			✓	✓	✓	✓	✓	✓	✓
Department of the Interior, US Bureau of Reclamation	✓			✓	✓	✓	✓	✓	✓	✓
Dewey Ballantine, LLP		✓		✓	✓	✓	✓		✓	
Direct Energy		✓								✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Direct Energy Business Services	✓			✓	✓	✓	✓	✓	✓	✓
Discovery Gas Transmission		✓						✓		✓
Dominion Cove Point LNG, LP		✓					✓			
Dominion Energy Marketing, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Dominion Exploration and Production, Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Dominion Resources	✓			✓	✓	✓	✓	✓	✓	✓
Dominion Retail	✓			✓	✓	✓	✓	✓	✓	✓
Dominion Retail, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Dominion South Pipeline Company, LP		✓					✓			
Dominion Transmission, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Dominion Virginia Power	✓			✓	✓	✓	✓	✓	✓	✓
DPC Juniper		✓							✓	
DTE Energy Company	✓		✓	✓	✓	✓	✓	✓	✓	✓
Duke Energy Corp.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Duke Energy Field Services			✓							✓
Duke Energy Gas Transmission - Texas Eastern	✓			✓	✓	✓	✓	✓	✓	✓
Dynegy Power Marketing, Inc.	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Eagle Energy I, LP			✓							✓
East Resources Inc.		✓							✓	
Eastern Shore Natural Gas Company		✓					✓			
EC Power International	✓		✓	✓	✓	✓	✓	✓	✓	✓
Edison Electric Institute	✓			✓	✓	✓	✓	✓	✓	✓
Edison Mission Marketing & Trading, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
EES Consulting		✓		✓	✓					
El Paso E & P, L.P.		✓					✓			
El Paso Exploration & Production Company	✓			✓	✓	✓	✓	✓	✓	✓
El Paso Industrial Energy, L.P.		✓					✓			
El Paso Marketing, L.P.		✓					✓			
El Paso Natural Gas	✓			✓	✓	✓	✓	✓	✓	✓
Electric Reliability Council of Texas (ERCOT)	✓			✓	✓	✓	✓	✓	✓	✓
ElectriCities of North Carolina (North Carolina Eastern Municipal Power Agency)	✓			✓	✓	✓	✓	✓	✓	✓
Electricity Consumers Resource Council (ELCON)	✓			✓	✓	✓	✓	✓	✓	✓
Elizabethtown College		✓							✓	
Empire District Electric Company, The	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
EMS Pipeline Services		✓					✓			
Enbridge Energy			✓						✓	
Enbridge Energy Company, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
EnCana Corporation	✓			✓	✓	✓	✓	✓	✓	✓
EnCana Marketing (USA) Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Enerdynamics LOC		✓							✓	
Energy Advantage		✓							✓	
Energy Corporation of America		✓	✓				✓			✓
Energy East Management Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Energy Gateway		✓							✓	
Energy Services Group, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Energy Solutions Inc.		✓								✓
Energy Today		✓		✓	✓					
Enogex, Inc.		✓					✓			
Enserco Energy		✓						✓		✓
Entergy Services, Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Enterprise Products Partners, L.P.	✓	✓		✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
ENTESSA, LLC		✓					✓		✓	
EOG Resources, Inc.			✓							✓
Equitable Gas Company	✓			✓	✓	✓	✓	✓	✓	✓
Equitrans, L.P.	✓			✓	✓	✓	✓	✓	✓	✓
Exceleron Software		✓					✓			
Exelon Corporation - PECO Energy	✓			✓	✓	✓	✓	✓	✓	✓
Exelon Energy	✓			✓	✓	✓	✓	✓	✓	✓
Exelon Energy Delivery	✓			✓	✓	✓	✓	✓	✓	✓
Exelon Generation - Power Team	✓			✓	✓	✓	✓	✓	✓	✓
Extendicare Health Services		✓							✓	
ExxonMobil		✓					✓	✓	✓	✓
ExxonMobil Gas Marketing	✓			✓	✓	✓	✓	✓	✓	✓
ExxonMobil Power & Gas Marketing			✓							✓
Featherwood Capital		✓					✓			
Federal Express		✓								✓
Federated Dept. Stores		✓							✓	
Fielder, Jerry		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
FirstEnergy Solutions Corp.	✓			✓	✓	✓	✓	✓	✓	✓
Florida Municipal Power Agency	✓			✓	✓	✓	✓	✓	✓	✓
Florida Power & Light Company	✓			✓	✓	✓	✓	✓	✓	✓
Florida Reliability Coordinating Council	✓			✓	✓	✓	✓	✓	✓	✓
Foothills Pipe Lines (SASK) Ltd.		✓					✓			
FPL Energy Power Marketing, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
FPL Energy Services, Inc.		✓							✓	
Frank F Lyman		✓							✓	
Fulbright & Jaworski, LLP		✓					✓		✓	
Fulwood, Michael		✓							✓	
Gas Transmission Northwest Corporation	✓		✓	✓	✓	✓	✓	✓	✓	✓
GDS Associates Inc.		✓		✓	✓					
Georgia Transmission Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Georgia-Pacific Corporation		✓							✓	
Gibbs & Bruns, LLP		✓					✓		✓	
Globeleq		✓							✓	
Great Lakes Gas Transmission	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Greenberg Traurig		✓					✓		✓	
Group 8760	✓		✓	✓	✓	✓	✓	✓	✓	✓
Guardian Pipeline		✓					✓	✓	✓	✓
Gulf Gas Utilities Company		✓							✓	
Gulf Power Company	✓			✓	✓	✓	✓	✓	✓	✓
Gulf South Pipeline	✓			✓	✓	✓	✓	✓	✓	✓
HGI Corporation		✓								✓
H S Resources Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Helis Oil & Gas Company, LOC		✓							✓	
Hess Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Honeye Storage Corp. (Cullen and Dykman, LLP)		✓					✓			
Honeywell International		✓					✓			
Horizon Pipeline Company, LOC		✓					✓	✓	✓	✓
Hydro Gulf of Mexico			✓							✓
Hydro Quebec		✓								✓
Hydro - Quebec Transenergie	✓			✓	✓	✓	✓	✓	✓	✓
Hydro One Networks	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Idaho Power Company	✓			✓	✓	✓	✓	✓	✓	✓
Imperial Irrigation District	✓		✓	✓	✓	✓	✓	✓	✓	✓
Indiana Muncipal Power Agency	✓			✓	✓	✓	✓	✓	✓	✓
Indiana Office of Utility Consumer Counselor	✓			✓	✓	✓	✓	✓	✓	✓
Industrial Gas Resource Corporation		✓							✓	
INOVIS		✓					✓			
International Business Associates		✓							✓	
International LNG Alliance (Sweet Strategies)	✓			✓	✓	✓	✓	✓	✓	✓
International Malting Company - US		✓							✓	
Interstate Gas Supply	✓			✓	✓	✓	✓	✓	✓	✓
Ipsen International, Inc.		✓							✓	
Iroquois Gas Transmission System	✓			✓	✓	✓	✓	✓	✓	✓
IS Anderson & Associates Limited		✓							✓	
ISO New England Inc.		✓		✓	✓					
JCP Procurement LP		✓							✓	
Jackson Walker LLP			✓							✓
Jennings Strouss		✓					✓		✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Jetta Production Co.		✓							✓	
John C. Hilke		✓		✓						
Jones Day		✓			✓		✓		✓	
JP Morgan Chase			✓							✓
JP Morgan Ventures Energy Corp	✓			✓	✓	✓	✓	✓	✓	✓
Kentucky Natural Gas Corporation		✓							✓	
Kern River Gas Transmission Company	✓		✓	✓	✓	✓	✓	✓	✓	✓
Kerr McGee Oil & Gas Corp.			✓						✓	
KeySpan Energy	✓			✓	✓	✓	✓	✓	✓	✓
Keystone Energy Partners, LP		✓							✓	
Kinder Morgan Interstate Transmission, LOC		✓					✓	✓	✓	✓
Kinder Morgan Tejas Pipeline, LP		✓					✓	✓	✓	✓
Kinder Morgan Texas Pipeline		✓					✓	✓	✓	✓
Koch Industries, Inc.		✓					✓			
L-3 Communications		✓							✓	
Laclede Gas Co.	✓			✓	✓	✓	✓	✓	✓	✓
Latham & Watkins, LP		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Latitude Technologies	✓	✓		✓	✓	✓	✓	✓	✓	✓
Law Offices of Robert J. Rieth		✓							✓	
LeClaire Mfg. Company		✓							✓	
Lemle & Kelleher, LLP		✓					✓			
Leonard, Street, and Deinard		✓					✓			
LGI Energy Solutions		✓							✓	
Lincoln Electric System		✓		✓	✓					
Little, Arthur D		✓							✓	
Locke, Liddell & Sapp, LLP		✓								✓
Los Angeles Department of Water & Power		✓	✓	✓	✓				✓	
Louis Dreyfus Energy Services L.P.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Lower Colorado River Authority	✓			✓	✓	✓	✓	✓	✓	✓
Lukens Energy Group		✓							✓	
Mack Services Group, The		✓				✓				
Macquarie Cook Energy, LLC	✓		✓	✓	✓	✓	✓	✓	✓	✓
Madison Gas & Electric		✓							✓	
Madison Metro Sewer District		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
MAPPCOR		✓		✓	✓					
Marathon Oil Company	✓			✓	✓	✓	✓	✓	✓	✓
Marston Law		✓					✓			
Maryland People's Counsel	✓			✓	✓	✓	✓	✓	✓	✓
Materials Processing, Inc.		✓							✓	
McClymond, Ltd.		✓							✓	
McGlone, Denise		✓							✓	
McGuire Woods, LLP		✓			✓		✓			
Medicine Bow Operating Company		✓					✓			
Mercator Energy, LOC		✓					✓			
Merrill Lynch Commodities		✓					✓		✓	✓
Mewbourne Oil Company	✓			✓	✓	✓	✓	✓	✓	✓
Michael Best & Friedrich, LLP		✓							✓	
Michigan Electric Transmission Company LLC	✓			✓	✓	✓	✓	✓	✓	✓
Michigan Public Power Agency	✓			✓	✓	✓	✓	✓	✓	✓
MidAmerican Energy	✓			✓	✓	✓	✓	✓	✓	✓
MidAmerican Energy Company	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Mid-States Energy, LP		✓								✓
Midstream Energy		✓							✓	
Midwest Independent Transmission System Operator	✓			✓	✓	✓	✓	✓	✓	✓
Midwestern Gas Transmission		✓					✓	✓	✓	✓
Miller, Balis & O'Neil, P.C.		✓								✓
Miller Mentzer, PC		✓					✓			
Mirant Energy Trading, LOC	✓			✓	✓	✓	✓	✓	✓	✓
Mission Gas Energy - Gas Supply		✓					✓			
Mississippi Power Company	✓			✓	✓	✓	✓	✓	✓	✓
Missouri River Energy Services	✓			✓	✓	✓	✓	✓	✓	✓
Mitsui & Co (USA) Inc.		✓							✓	
Modesto Irrigation District	✓			✓	✓	✓	✓	✓	✓	✓
Momentum Energy Group, LOC		✓							✓	
Montana Star Pipeline Company, LP		✓							✓	
Morgan Lewis		✓					✓			✓
Morgan Lewis & Bockius, LLP		✓		✓	✓				✓	
Motorola Inc.		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Municipal Gas Authority of Georgia		✓								✓
MxEnergy		✓					✓			
National Association of Regulatory Utility Commissioners	✓			✓	✓	✓	✓	✓	✓	✓
National Bank of Canada		✓						✓		✓
National Fuel Gas Distribution	✓			✓	✓	✓	✓	✓	✓	✓
National Fuel Gas Distribution Corporation	✓			✓	✓	✓	✓	✓	✓	✓
National Fuel Gas Supply Corp.	✓		✓	✓	✓	✓	✓	✓	✓	✓
National Grid USA	✓			✓	✓	✓	✓	✓	✓	✓
National Rural Electric Cooperative Assoc.	✓			✓	✓	✓	✓	✓	✓	✓
Natural Gas Pipeline Co of America	✓			✓	✓	✓	✓	✓	✓	✓
Navigant Consulting, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
NECC		✓							✓	✓
NECC, LLC		✓							✓	
New Jersey Natural Gas Company	✓			✓	✓	✓	✓	✓	✓	✓
New York ISO		✓		✓						
New York State Dept. of Public Service	✓			✓	✓	✓	✓	✓	✓	✓
New York State Reliability Council	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Nexen		✓							✓	
Nexen Marketing		✓							✓	
Niagara Mohawk	✓			✓	✓	✓	✓	✓	✓	✓
Niagara Mohawk Power Corporation	✓			✓	✓	✓	✓	✓	✓	✓
Nicor Enerchange LLC		✓							✓	
Nicor Gas	✓			✓	✓	✓	✓	✓	✓	✓
NiSource Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Nixon Peabody LLP		✓					✓			
North American Electric Reliability Council (NERC)	✓			✓	✓	✓	✓	✓	✓	✓
North Carolina Electric Membership Corporation	✓			✓	✓	✓	✓	✓	✓	✓
North Carolina Electric Municipal Power Agency #1	✓			✓	✓	✓	✓	✓	✓	✓
Northeast Utilities		✓		✓	✓					
Northeast Utilities Service Company	✓			✓	✓	✓	✓	✓	✓	✓
Northern Border Pipeline Company		✓					✓	✓	✓	✓
Northern California Power Agency		✓							✓	
Northern Indiana Public Service Company (NiSource Inc.)	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Northern Natural Gas	✓			✓	✓	✓	✓	✓	✓	✓
Northwest Natural Gas Company	✓			✓	✓	✓	✓	✓	✓	✓
Northwest Pipeline		✓	✓				✓	✓	✓	✓
Northwestern Energy		✓		✓						
NOVA Gas Transmission Ltd.	✓			✓	✓	✓	✓	✓	✓	✓
Novus Energy, LOC		✓							✓	
NrG Information Services, Inc.		✓					✓			
NSTAR Electric and Gas		✓		✓						
Occidental Energy Marketing Inc. (OEMI)	✓		✓	✓	✓	✓	✓	✓	✓	✓
Odyssey Energy Services, LOC		✓						✓	✓	
Office of Public Advocate, State of Maine	✓			✓	✓	✓	✓	✓	✓	✓
OG&E Electric Services		✓		✓						
Ohio Consumers Council	✓			✓	✓	✓	✓	✓	✓	✓
Ohms Energy Company, LLC		✓			✓					
OMV New Zealand Limited		✓							✓	
ONEOK	✓			✓	✓	✓	✓	✓	✓	✓
ONEOK Partners GP, LLC (previously: Northern Plains Natural Gas Company, Inc.)	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Ontario Power Generation	✓			✓	✓	✓	✓	✓	✓	✓
Open Access Technology International, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Otter Tail Power Company	✓			✓	✓	✓	✓	✓	✓	✓
Pacific Gas & Electric	✓		✓	✓	✓	✓	✓	✓	✓	✓
PacifiCorp	✓			✓	✓	✓	✓	✓	✓	✓
Paine, Hamblen, Coffin, Brooke & Miller, LLP		✓		✓	✓					
Pale Global Energy Services, LOC		✓					✓	✓		✓
Panhandle Eastern Pipe Line	✓		✓	✓	✓	✓	✓	✓	✓	✓
Parks, Mike		✓							✓	
PECO Energy Co.	✓			✓	✓	✓	✓	✓	✓	✓
Pemex Gas Y Petroquimica Basica	✓			✓	✓	✓	✓	✓	✓	✓
Pennsylvania Office Of Consumer Advocate	✓			✓	✓	✓	✓	✓	✓	✓
Peoples Gas Light & Coke Co.	✓			✓	✓	✓	✓	✓	✓	✓
Peoples Gas System	✓			✓	✓	✓	✓	✓	✓	✓
Petro-Hunt, LLC		✓					✓			
PG Energy		✓					✓			
PHI Power Delivery	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Philadelphia Gas Works (APGA billing: Bert Kalisch)	✓			✓	✓	✓	✓	✓	✓	✓
Pierce Atwood LLP		✓							✓	
Pine Needle		✓					✓	✓	✓	✓
Pipeline Consulting Corporation of Texas		✓					✓			
PJM Interconnection, LLC		✓		✓						
Platte River Power Authority	✓			✓	✓	✓	✓	✓	✓	✓
Platts	✓			✓	✓	✓	✓	✓	✓	✓
Plymouth Foam Inc.		✓							✓	
Porter & Hedges, LLP		✓					✓		✓	
Portland General Electric	✓			✓	✓	✓	✓	✓	✓	✓
Portland Natural Gas Transmission System	✓		✓	✓	✓	✓	✓	✓	✓	✓
Potomac Economics		✓		✓						
Powerex Corp.	✓			✓	✓	✓	✓	✓	✓	✓
Power Holdings of Illinois		✓					✓		✓	
PPL Electric Utilities Corporation	✓			✓	✓	✓	✓	✓	✓	✓
PPL EnergyPlus, LLC	✓			✓	✓	✓	✓	✓	✓	✓
PPLSolutions, LLC	✓			✓	✓	✓	✓	✓	✓	✓
PPM Energy, Inc.			✓						✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Progress Energy	✓			✓	✓	✓	✓	✓	✓	✓
Progress Energy (Regulated)	✓			✓	✓	✓	✓	✓	✓	✓
Project Consulting Services		✓							✓	
Promet Energy Partners		✓			✓					
PSEG Energy Resources and Trade LLC	✓			✓	✓	✓	✓	✓	✓	✓
PSEG Power LLC	✓			✓	✓	✓	✓	✓	✓	✓
Public Service Company of North Carolina, Inc		✓							✓	
Public Service Electric & Gas	✓		✓	✓	✓	✓	✓	✓	✓	✓
Public Service Electric & Gas Company	✓			✓	✓	✓	✓	✓	✓	✓
Puget Sound Energy, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Qualedi, Inc	✓			✓	✓	✓	✓	✓	✓	✓
Questar Pipeline Co.	✓			✓	✓	✓	✓	✓	✓	✓
Quorum Business Solutions Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Rational Systems		✓					✓			
Regency Gas		✓							✓	
Regency Gas Marketing, LP		✓							✓	
Regency Gas Services Waha, LP		✓							✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Regency Intrastate Gas, LOC		✓							✓	
Regency Midcon Gas		✓							✓	
Reliant Energy	✓	✓		✓	✓	✓	✓	✓	✓	✓
Riley Natural Gas		✓								✓
Rockies Express Pipeline LOC		✓					✓	✓	✓	✓
Rockwell Lime Company		✓							✓	
Sabine Pipe Line LLC	✓		✓	✓	✓	✓	✓	✓	✓	✓
Sacramento Municipal Utility District	✓			✓	✓	✓	✓	✓	✓	✓
Salt River Project Agricultural Improvement and Power District	✓		✓	✓	✓	✓	✓	✓	✓	✓
San Diego Gas & Electric		✓		✓	✓					
Santanna Energy Services		✓								✓
SASKPOWER		✓		✓	✓					
Saul Ewing LLP		✓							✓	
SCANA Corporation	✓		✓	✓	✓	✓	✓	✓	✓	✓
SCANA Energy Marketing Inc.		✓							✓	
Sem Group LP		✓					✓			
Seminole Electric Cooperative, Inc.	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Sempra Energy - Southern California Gas Co.	✓			✓	✓	✓	✓	✓	✓	✓
Sempra Energy Trading Corp.			✓							✓
Sensient Flavors, Inc.		✓							✓	
Sequent Energy			✓						✓	
Sequent Energy Management, L.P.	✓		✓	✓	✓	✓	✓	✓	✓	✓
Shannon, Martin, Finkelstein & Sayre, PC		✓							✓	
Shell Trading Gas & Power										
Sierra Pacific Power Company		✓		✓	✓					
Sierra Pacific Resources	✓			✓	✓	✓	✓	✓	✓	✓
Skadden Acps		✓					✓		✓	
Slawson Exploration Company, Inc.		✓							✓	
Smurfit Stone Container Enterprises, Inc.		✓							✓	
SNL Financial		✓					✓			
South Carolina Electric & Gas Company	✓			✓	✓	✓	✓	✓	✓	✓
Southeastern Power Administration	✓			✓	✓	✓	✓	✓	✓	✓
Southern California Edison	✓			✓	✓	✓	✓	✓	✓	✓
Southern California Edison Company	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Southern Company Services	✓			✓	✓	✓	✓	✓	✓	✓
Southern Company Services, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Southern Natural Gas Co.	✓			✓	✓	✓	✓	✓	✓	✓
Southern Star Central Gas Pipeline	✓		✓	✓	✓	✓	✓	✓	✓	✓
Southwest Energy, L.P.			✓							✓
Southwest Gas Corporation	✓	✓		✓	✓	✓	✓	✓	✓	✓
Southwest Power Pool	✓			✓	✓	✓	✓	✓	✓	✓
Southwest Transmission Cooperative, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Southwestern Power Administration	✓			✓	✓	✓	✓	✓	✓	✓
Spiegel & McDiarmid		✓		✓	✓					
Sprague Energy Corp.	✓			✓	✓	✓	✓	✓	✓	✓
State of Oklahoma/Commissioners of the Land Office		✓							✓	
Sterling Smith		✓					✓			
Steuben-Storage (Cullen and Dykman,LLP)		✓					✓			
Stroock and Stroock and Lavan, LLP		✓					✓		✓	
Structure Group	✓			✓	✓	✓	✓	✓	✓	✓
SUEZ Energy Marketing NA, Inc.	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Sullivan & Cromwell		✓							✓	
Suncor Energy Products Inc.		✓								✓
SunGard	✓		✓	✓	✓	✓	✓	✓	✓	✓
Sunrise Medical		✓							✓	
Superior Natural Gas Corporation		✓							✓	
Superior Water, Light & Power Company		✓					✓			
Sutherland, Asbill and Brennan, LLP		✓					✓		✓	
Systrends USA	✓			✓	✓	✓	✓	✓	✓	✓
Tampa Electric Company		✓		✓						
Target		✓							✓	
Tenaska, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Tennessee Gas Pipeline Company	✓			✓	✓	✓	✓	✓	✓	✓
Tennessee Valley Authority	✓	✓		✓	✓	✓	✓	✓	✓	✓
Texaco Natural Gas, Inc.		✓							✓	
Texas Gas Service		✓					✓			
Texas Gas Transmission, LLC	✓		✓	✓	✓	✓	✓	✓	✓	✓
The Energy Authority		✓		✓	✓	✓	✓		✓	

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
The United Illuminating Company		✓		✓	✓					
Theda Clark Regional Medical Center		✓							✓	
Tiger Natural Gas	✓			✓	✓	✓	✓	✓	✓	✓
Total Gas & Power North America, Inc.		✓					✓			
Trailblazer Pipeline Co.		✓					✓	✓	✓	✓
TransAlta Corporation		✓								✓
TransCanada Pipelines	✓			✓	✓	✓	✓	✓	✓	✓
TransCanada Pipeline Ventures Limited Partnership		✓					✓		✓	
TransColorado Gas Transmission		✓					✓	✓	✓	✓
Transcontinental Gas Pipeline		✓					✓	✓	✓	✓
TRANS-ELECT, INC.	✓			✓	✓	✓	✓	✓	✓	✓
Trans Ocean Energy Services		✓					✓		✓	
Transquebec & Maritimes Pipeline, Inc.		✓					✓		✓	
Travel Centers of America		✓							✓	
Trinity Apex Solutions, Inc.	✓	✓		✓	✓	✓	✓	✓	✓	✓
Tristar Producer Services			✓							✓
Tri-State Generation and Transmission Association,	✓			✓	✓	✓	✓	✓	✓	✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Inc.										
Troutman Sanders, LLP		✓					✓		✓	
Turlock Irrigation District		✓					✓			
Tuscarora Gas Transmission Company		✓					✓			
Tuscson Electric Power Company		✓							✓	
TXU Electric Delivery	✓			✓	✓	✓	✓	✓	✓	✓
TXU Energy	✓			✓	✓	✓	✓	✓	✓	✓
TXU Energy Retail	✓			✓	✓	✓	✓	✓	✓	✓
U.S. Energy Services, Inc.		✓							✓	
UBS Energy LLC	✓		✓	✓	✓	✓	✓	✓	✓	✓
UGI Utilities, Inc.	✓		✓	✓	✓	✓	✓	✓	✓	✓
United Illuminating Company, The		✓		✓	✓					
Union Oil Company of California		✓					✓			
University of Texas Medical Branch		✓					✓			
Urban Energy Source, LLC		✓		✓	✓				✓	
Utility Resource Solutions, L.P.			✓							✓
Van Ness Feldman		✓		✓			✓			✓

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Vector Pipeline L.P.	✓			✓	✓	✓	✓	✓	✓	✓
Vega Energy Partners, Ltd.	✓			✓	✓	✓	✓	✓	✓	✓
Venica Gathering System		✓					✓			
Vermont Public Power Supply Authority	✓			✓	✓	✓	✓	✓	✓	✓
Viking Gas Transmission		✓					✓	✓	✓	✓
Vinson & Elkins		✓					✓		✓	
VMAC		✓							✓	
Walden Energy		✓								✓
Wal-Mart Stores, Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Washington Gas Light Co.	✓			✓	✓	✓	✓	✓	✓	✓
We Energies (Wisconsin Electric)	✓			✓	✓	✓	✓	✓	✓	✓
Wellpoint Systems, Inc.		✓						✓		✓
Western Area Power Administration	✓			✓	✓	✓	✓	✓	✓	✓
Western Electricity Coordinating Council (WECC)	✓			✓	✓	✓	✓	✓	✓	✓
Westfield Gas & Electric Light Dept.	✓			✓	✓	✓	✓	✓	✓	✓
Westfield Group		✓							✓	
White and Case		✓					✓			

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

Companies with Access to NAESB Standards
As of December 1, 2006

	Method of Access			Standards Products						
Company	Member Access	Purchase	Class Attendee	WEQ Version 0	WEQ FTAA	Retail Version 1.0	WGQ Version 1.7	WGQ Version 1.8	WGQ 1.7 Contracts	WGQ 1.8 Contracts
Williams Companies, Inc., The			✓							✓
Williams Gas Pipeline	✓			✓	✓	✓	✓	✓	✓	✓
Williams Power Company	✓			✓	✓	✓	✓	✓	✓	✓
Williston Basin Interstate Pipeline	✓			✓	✓	✓	✓	✓	✓	✓
Wisconsin Public Power Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Wisconsin Public Service Corporation	✓			✓	✓	✓	✓	✓	✓	✓
World Energy		✓								✓
WPS Energy Services Inc.			✓							✓
Xcel Energy	✓	✓		✓	✓	✓	✓	✓	✓	✓
Xcel Energy Inc.	✓			✓	✓	✓	✓	✓	✓	✓
Yankee Gas		✓					✓			

TAB 7

EXECUTIVE COMMITTEE REPORTS

This section includes:

- Standards Adopted since the September Board Report
- Requests Received in 2006
- Filings with the FERC since the September Board Meeting
- The 2006 Annual Plans for each of the quadrants (redlined with changes from the November EC meetings)
- The 2007 Annual Plans for each of the quadrants & WEQ comments from Midwest ISO
- Motion to adopt the 2007 Plans

The material presented is background information for the discussion of agenda item 5.

The Executive Committee leadership of each quadrant will discuss its progress towards completion of its 2006 annual plan and respond to questions from the Board. Action is required of the Board, to approve changes suggested by Executive Committees and to approve any changes suggested by the Board to the 2006 plans. To approve changes to the plans, the Board will be asked to vote to endorse those changes via a simple majority vote.

Similarly, the Executive Committee leadership of each quadrant will discuss its proposals for the 2007 annual plans, note comments that have been received and respond to questions from the Board. Action is required of the Board to approve the proposed plans and to approve any changes suggested by the Board to the 2007 plans. To approve changes to the plans, the Board will be asked to vote to endorse those changes via a simple majority vote.

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 MATERIALS
STANDARDS ADOPTED TO DATE IN 2006
DECEMBER 14, 2006

STANDARDS ADOPTED IN 2006

FOR THE WHOLESALE GAS QUADRANT

- **Clarification C05002:** Clarification to NAESB WGQ Standard 4.3.88 – add proposed WGQ Interpretation 7.3x regarding a clarification for usage of 128-bit Secure Socket layer encryption under NAESB WGQ Standard 4.3.88. *(Ratified on 1/9/06.)*.
- **Recommendation R98037** (Add a non-textual data element that will tie the offers of a Not-Stand-Alone Offer together to the existing UPPD data set and the Non-Prearranged Deals data set under development(*Ratified on 4/17/06*).
- **Recommendation R00012/R00013** (Add Bidder Notice Address and Bidder Notice Contact data elements to the Bid Upload and the Offer Upload Bidder Confirmation with corresponding validation codes added to the Bid Upload Quick Response and Offer Upload Bidder Confirmation Quick Response/ Add Bidder Invoice Contact and Bidder Invoice Address data elements to the Bid Upload and the Offer Upload Bidder Confirmation with corresponding validation codes added to the Bid Upload Quick Response and Offer Upload Bidder Confirmation Quick Response). (*Ratified on 4/17/06*).
- **Recommendation R00014** (Add Signatory Name and Signatory Title data elements to the Bid Upload and the Offer Upload Bidder Confirmation, with corresponding validation codes added to the Bid Upload Quick Response and Offer Upload Bidder Confirmation Quick Response (*Ratified on 4/17/06*).
- **Recommendation R00019** (Change the usage of Releaser Company Code from Mandatory to Conditional in the Bid Upload). (*Ratified on 4/17/06*).
- **Recommendation R00027** (Add a Status data element to the Offer Download, Bid Download and the Award Download. (GISB Interpretation No. 7.3.43)). (*Ratified on 4/17/06*).
- **Recommendation R01017** (Add a Date Time Period Format Qualifier for seasonal Start Date and Seasonal End Date)). (*Ratified on 4/17/06*).
- **Recommendation R03035B** (Standardize methodologies for calculating gas quality parameters). (*Ratified on 6/23/06)*.
- **Recommendation R98081/R98082** (Define a means of requesting and sending a dataset that communicates RTU Alarms/Define a means of requesting and sending a dataset to communicate RTU Events). (*Ratified on 6/23/06*).
- **Recommendation R99013** (Define a means of requesting and providing pre-approved bidders list used in capacity release). (*Ratified on 6/23/06*).
- **Recommendation R00022/R00023** (Add Right of First Refusal Indicator and Right of First Refusal Terms data elements to the Offer Download, Offer Upload and Offer Upload Notification, with corresponding validation codes added to the Offer Upload Quick Response/Add Rollover Rights Indicator and Rollover Rights Terms data elements to the header level of the Offer Download (5.4.1), Offer Upload (5.4.7) and Offer Upload Notification (5.4.9), with corresponding validation codes added to the Offer Upload Quick Response (5.4.8)). (*Ratified on 6/23/06*).

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 MATERIALS
STANDARDS ADOPTED TO DATE IN 2006
DECEMBER 14, 2006

- **Recommendation R02003/R02004** (Add a new Capacity Release data element - Discount Indicator/Add new code values for the discount indicator in the Capacity Release Data Sets). (*Ratified on 6/23/06*).
- **Recommendation R00006** (Add twelve new code values for the Transaction Type data element in the nomination, flowing gas and invoicing related data sets). (*Ratified on 9/4/06*).
- **Recommendation R05014** (Review the current NAESB WGQ's "Base Contract for Purchase and Sale of Natural Gas" for possible update and revisions to reflect current industry practices and applicable general terms and conditions). (*Ratified on 9/4/06*).
- **Recommendation R05015** (Add language to the NAESB WGQ Implementation Guide(s) discussing the use of discretionary verbs). (*Ratified on 9/4/06*).
- **Recommendation R02008** (Add new transaction types in the Nomination (1.4.1) and Scheduled Quantity (1.4.5) data sets). (*Ratification ballots due on 12/28/06*).
- **Recommendation R03005** (Add code values for the Service Code data element in the Transportation /Sales Invoice (3.4.1). (*Ratification ballots due on 12/28/06*).
- **Recommendation R03009** (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). (*Ratification ballots due on 12/28/06*).

FOR THE RETAIL QUADRANTS

- **Recommendation R05013:** Develop a model electric retail contract. (*Distribution of ratification ballots for this recommendation is pending completion of the notational ballot period post Executive Committee meeting. Notational ballots are due on December 4, 2006*).
- **Retail 2006 Annual Plan Item 4(i):** Customer Enrollment model business practices. (*Distribution of ratification ballots for this recommendation is pending completion of the notational ballot period post Executive Committee meeting. Notational ballots are due on December 4, 2006*).

FOR THE WHOLESALE ELECTRIC QUADRANT

- **Recommendation R04035/R05002:** Clarify OASIS 1A nomenclature and amend WEQ standard 4.19/Amend sections 9.5 and 10.5 of OASIS 1A redirect standards. (*Ratified on 1/9/06).*
- **Recommendation R04013A:** WEQ Annual Plan Item 1 - Develop Version 0 business practice standards that complement NERC's Version 0 reliability standards – TLR. (*Ratified on 4/10/06*).
- **Recommendation R04006F**: Naming Standards for PORs/PODs, PATHs, Sources/Sinks, etc. on OASIS. (*Adopted by WEQ Executive Committee on 5/9/06; Does not need to be ratified as it is a recommendation to maintain the status quo*).
- **Recommendation R04007:** Develop OASIS Phase II implementing NERC's functional model and other improvements; (*Adopted by WEQ Executive Committee on 5/9/06; Does not need to be ratified as it is a recommendation to maintain the status quo*).
- **Recommendation R05001:** Amend WEQ R03013 to align coordinate interchange transactions with Version 0. (*Ratified on 6/22/06*).
- **Recommendation R05007:** Removal of ERCOT references to WEQ Version 0 Standards. (*Ratified on 6/22/06*).

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 MATERIALS
STANDARDS ADOPTED TO DATE IN 2006
DECEMBER 14, 2006

- **Recommendation R06002 (Revised):** Modify the NAESB pre-split Version 0 TLR BP to remain consistent with NERC IRO-006-1 pre-split TLR reliability standards (SPP regional difference for the inclusion of market flows); (*Ratified on 9/1/06*).
- **Recommendation for WEQ 2006 Annual Plan Item (3)(c)(i) as revised by the WEQ Executive Committee:** Development of business practice for Standards of Conduct link on OASIS page; (*Ratified on 10/2/06).*
- **Recommendation R04036 as revised by the WEQ Executive Committee:** Amend definitions, terms and numbering of WEQ Order 2004 (affiliate) standards; (*Ratified on 10/2/06).*
- **Recommendation R04006D as revised by the WEQ Executive Committee:** OASIS 1A Enhancements - Sale or Assignment of Transmission Service; (*Ratified on 10/2/06*).

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 MATERIALS
REQUESTS RECEIVED FOR STANDARDS DEVELOPMENT IN 2006
DECEMBER 14, 2006

REQUESTS RECEIVED IN 2006

FOR THE RETAIL QUADRANTS

- **R06004** – Received January 16, 2006, Submitted by Columbia Gas Transmission, Minor revisions to EDI Trading Partner Agreement Standard 6.3.3, Assigned to both the WGQ Contracts Subcommittee and the Retail Contracts Subcommittee**.**
- **R06024 –** Received October 6, Submitted by Advanced Energy, Standardize 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.

FOR THE WHOLESALE GAS QUADRANT

- **R06001 –** Received November 1, 2005, Submitted by Kinder Morgan 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, Assigned to the WGQ Information Requirements Subcommittee
- **R06003** – Received January 13, 2006, Submitted by Northern Plains Natural Gas, Add "Compression Use Surcharge" code value for "Surcharge Identification Code" data element, Assigned to the WGQ Information Requirements Subcommittee
- **R06004** – Received January 16, 2006, Submitted by Columbia Gas Transmission, Minor revisions to EDI Trading Partner Agreement Standard 6.3.3, Assigned to both the WGQ Contracts Subcommittee and the Retail Contracts Subcommittee.
- **R06005** – Received February 10, 2006, Submitted by El Paso Eastern Pipeline, Add "Special terms and Miscellaneous notes" as SO data element to the Transactional Reporting - Interruptible Transportation data set (5.4.22).
- **R06007** – Received April 14, 2006, Submitted by Northern Natural Gas, Add Reduction Reason code to Scheduled Quantity, Operator Scheduled Quantity and Confirmation Response.
- **R06008** – Received on May 12, 2006, Submitted by National Fuel Gas Distribution, 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.
- **R06009 –** Received on May 15, 2006, Submitted by Tennessee Gas Pipeline Company, Develop a standard that would enhance the communications between Transportation Service Providers (TSP) and their customers pertaining to nominations related deadlines.
- **R06011 –** Received on July 26, 2006, Submitted by Northern Natural Gas, Add 3 detail (contract) level and 1 sub detail (nomination) level code values to Validation Code and Message elements in Nomination Quick Response dataset.
- **R06012 –** Received on July 12, 2006, Submitted by Williams Gas Pipeline, Add two (2) new code values for the data element “Transaction Type” into Transaction Datasets.

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 MATERIALS
REQUESTS RECEIVED FOR STANDARDS DEVELOPMENT IN 2006
DECEMBER 14, 2006

- **R06013** – Received on August 7, 2006, Submitted by Duke Energy Gas Transmission, Add code values for the Charge Type data element in the Transportation/Sales Invoice dataset.
- **R06014** – Received on August 7, 2006, Submitted by Duke Energy Gas Transmission, Add code values for the Rate Identification Code data element in the Transactional Reporting datasets.
- **R06015 –** Received on August 7, 2006, Submitted by Duke Energy Gas Transmission, Add code values for the Rate Identification Code data element in the Offer Download, Bid Download, Award Download, Offer Upload, Offer Upload Quick Response, Offer Upload Notification, Bid Upload and Bid Upload Quick Response datasets.
- **R06016 –** Received on August 29, 2006, Submitted by Texas Gas Transmission, LLC, Expand the processing definition for "Submit" (found in standard 4.3.69) to include the sending of records to the TSP for processing from the Form as well as the Matrix.
- **R06017 –** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new code values for Nomination Quick Response, standard 1.4.2, at the sub-detail level.
- **R06018 –** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new code values for Confirmation Response Quick Response, standard 1.4.2, at the detail level.
- **R06019 –** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new code values for Pre-determined Allocation Quick Response, standard 2.4.2, at the sub-detail level.
- **R06020 –** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new code values for Pre-determined Allocation Quick Response, standard 2.4.2, at the detail level.
- **R06021 –** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new code values for Transaction Type in Nomination, Scheduled Quantity, Transportation/Sales Invoice and any other applicable NAESB datasets.
- **R06022–** Received on August 30, 2006, Submitted by Texas Gas Transmission, LLC, Add new Location Quantity Type Indicator code values for Offer Download, Bid Download, Award Download, Replacement Capacity, Offer Upload, Offer Upload Notification, Operationally Available, Unsubscribed Capacity, Bid Upload, Transactional Reporting – Capacity Release, Firm Transportation, and Interruptible Transportation.
- **R06023 –** Received on August 31, 2006, Submitted by Texas Gas Transmission, LLC, Add new Reduction Reason code values for Scheduled Quantity, Scheduled Quantity for Operator and any other applicable NAESB datasets.

FOR THE WHOLESALE ELECTRIC QUADRANT

- **R06002** – Received January 9, 2006, Submitted by North American Electric Reliability Council (NERC), Modify NAESB pre-split Version 0 TLR business practices to remain consistent with NERC IRO-006-1 pre-split TLR reliability standards (inclusion of market flows), Assigned to the WEQ Business Practices Subcommittee.
- **R06006** – Received February 23, 2006, Submitted by the NERC/NAESB Joint Interchange Scheduling Working Group (JISWG), Develop standards to allow for registered Market Operators to request changes to the Market Level profile of Implemented Interchange.
- **R06010** – Received May 31, 2006, Submitted by Western Electricity Coordinating Council (WECC), Modify the timing chart for the Western Interconnection in WEQ BPS-006 to an initiation of manual time error at +/-5 seconds.
- **R06025** – Received November 15, 2006, Submitted by Puget Sound Energy, Enhance WEQ 004-D, Appendix D, part A., to add an explanation for the terms “required” and “correctable”. Add a statement similar to “that unless

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

otherwise indicated, tag data elements are not correctable and not required". Lastly, for 1.2.1.1. Energy Product Type, make this element "required".

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 MATERIALS
FERC FILINGS AND SCHEDULES
DECEMBER 14, 2006

FERC FILINGS

- **February 17, 2006**: An update was filed with the FERC which addressed 4 issues: (1) the comments filed by NERC that asked that three sets of business practices in Version 0 be remanded back to NERC, (2) the TLR process and the plans for ensuring that the business practices and the reliability standards stay closely coordinated, (3) the Inadvertent Interchange Payback report which noted that the Inadvertent Interchange business practices standards for Version 0 are to remain unchanged, and (4) a joint standards development process for NERC and NAESB. The update related to Docket No. RM05-5-000.
- **February 24, 2006**: The Board of Directors unanimously approved the GEIC report on February 17 which was subsequently filed with the FERC on February 24, 2006.
- **April 25, 2006:** FERC Order 676 issued along with a NAESB press release and NAESB summary of the order. The utilities are to adopt and implement standards by July 1 with waivers to be requested by June 1.
- **June 28, 2006**: Docket No. RM05-28-000: Standards for the Coordination of Business Practices between Public Utilities and Interstate Natural Gas Pipelines: Permanent numbers were assigned to the NAESB WGQ and WEQ standards to implement uniform gas/electric coordination communications that were previously provided to the Commission on June 27, 2005. The renumbered standards were provided to the FERC for the Commission's reference.
- **August 7, 2006**: NAESB Comments on Docket Nos. RM05-25-000 and RM05-17-000: Preventing Undue Discrimination and Preference in Transmission Services. NAESB reviewed the NOPR issued in Docket Nos. RM05-25-000 and RM05-17-000 and identified potential NAESB standards development efforts. The analysis includes identification of possible NAESB standards development tasks, estimates of the level of effort for each task, and identifies possible task interdependencies.
- **September 21, 2006:** FERC issued Order 676A (Docket No. RM05-5-000) Order Denying Rehearing on several NAESB WEQ business practices.
- **October 19, 2006**: FERC issued notices of proposed rulemakings for Docket Nos. RM96-1-027 and RM05-5-001 as well as an order instituting inquiries for ISOs and RTOs regarding gas-electric coordination issues. The NOPRs outline the expectation that the FERC will adopt NAESB gas-electric coordination standards. The NOPRs appeared in the Federal Register on November 3, which began the clock for commenting.
- **October 30, 2006**: NAESB WEQ Filing with FERC on Minor Correction to Manual Time Error Correction Standards (Docket No. RM05-5).
- **November 2, 2006:** NAESB provided comments to the FERC regarding the October 12 Technical Conference on OATT Reform.
- **November 16, 2006:** NAESB WEQ Filing with FERC an Update to Coordinate Interchange business practice standards in Docket No. RM05-5.
- **November 17, 2006:** The U.S. Court of Appeals, District of Columbia Circuit, in Decision No. 04-1183 vacated FERC Order Nos. 2004, 2004-A, 2004-B, 2004-C and 2004-D as applied to natural gas pipelines. Depending on FERC action, NAESB WGQ standards may be affected.

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 MATERIALS
FERC FILINGS AND SCHEDULES
DECEMBER 14, 2006

FERC FILING PROPOSED SCHEDULE

- NAESB has submitted two filings to the FERC to date in 2006 as noted below.

Filed in the 1st Quarter 2006

(1) WEQ: Version 0 split of transmission loading relief (RM05-5-000) –Filed 2-17-06

(2) WEQ: Inadvertent Interchange Payback report and comments (RM05-5-000) – Filed 2-17-06

(3) WEQ and WGQ: Follow up report from the Gas-Electric Interdependency Committee (RM05-28-000) – Filed 2-24-06

Filed in the 3rd Quarter 2006

(4) WEQ: A report was provided to the Commission on August 7 related to Docket Nos. RM05-25-000 and RM05-17-000. The report included a list of items that may require NAESB attention and standards development dependent on the final order and proposed staging of development and industry implementation. – Filed August 7, 2006.

Planned by 4th Quarter 2006

(5) WEQ: A minor correction on WECC timing, Docket No. RM05-5-000 – Filed 10-30-06

(6) WEQ: A set of speaker points and addendum answering Commission questions on the OATT Reform NOPR as part of the October 12 FERC Technical Conference – Filed 11-2-06.

(7) WEQ: NAESB filed a coordinate interchange version 1 modification to ensure consistency with NERC filings on coordinate interchange for reliability standards, Docket No. RM05-5-000 – Filed 11-16-06.

(8) WGQ: Gas Quality Part 2 – Part B of the request R03035, reporting of assumptions and calculations used in measurement of gas quality specifications (RM96 et al)

(9) WGQ: Version 1.8 WGQ standards (published September 30, 2006) (RM96 et al). Should be filed once minor corrections are processed and NAESB determines if changes are needed to support the FERC actions on the court-vacated Order 2004.

Planned by 1st Quarter 2007

(10) WEQ: Several enhancements to OASIS including redirect modifications, resales and transfers, and changes to 10.6 (clarification of "all other types" – see our July 1 comments on RM05-5-000)

(11) WEQ: Release mechanisms on the S&CP (RM05-5-000)

(12) WEQ: TLR Version 0 split to be filed after it ratified and verified against the NERC reliability standards using the joint standards development template. (RM05-5-000) – It is questionable whether NERC will have its portion of TLR prepared in time to remain in sync with NAESB.

(13) WEQ: Possible Version 1 changes to the standards including Coordinate Interchange Business Practices, TLR.

Planned by 2nd Quarter 2007

(13) WEQ: Business Practices for the ATC/TTC functions should be filed with the FERC by summer 2007 as requested by the Commission on May 18 in Docket No. RM05-25-000.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WEQ Annual Plan
Revisions ~~Adopted by the Board of Directors on September 21, 2006~~Proposed by the WEQ EC on November 14, 2006

	Item Description	Completion[1]	Assignment[2]
1	**Develop business practices standards as needed to complement reliability standards.**		
	Develop business practice standards to support and complement NERC reliability standards, NERC policies and NERC standards authorization requests (SARs). Current NAESB activities underway to develop business practice standards that are supportive of this annual plan item are:		
a)	Make version 1 changes to business practices as requested.	Ongoing	BPS
i)	Make changes to business practices as related to inclusion of functional model entities as NERC undertakes the same efforts. Status: No requests.	As requested	BPS
ii)	Review the NAESB WEQ "Version 0" business practice standards and remove any references to ERCOT (R05007). Status: Completed, approved by the EC at 5-9-06. Ratified on 6-22-06.	2nd Q, 2006	BPS
b)	Develop business practices to support Coordinate Interchange – update already adopted version 1 to reflect version 1 NERC CI (R03013, R05001~~, R05020~~). Status: Complete for R03013 and R05001 – R05020 is still outstanding and assigned to JISWG.	2nd Q, 2006 2nd Q, 1007 for R05020.	BPS JISWG
c)	Develop business practice standards to support Operate Within Limits (R03017). Status: Not Started	** ~~2006~~2007, waiting on NERC	BPS
d)	Develop business practices to support the reliability components of TLR.		
i)	Version 0 Split of TLR business practices from reliability components. Status: Completed ratification and delayed publication and filing with FERC until NERC has had the opportunity to complete its split.	2nd Q, 2006 **2007 related to NERC progress underway.	BPS
ii)	Continuous support of TLR Procedure in alignment with NERC efforts including version 1 development. Status: Underway. R06002 completed and approved by the WEQ EC on 5-9-06.	Ongoing **2007 related to NERC progress underway.	BPS
f)	Determine any needed NAESB action in support of the Interchange Distribution Calculator (IDC). Status: Not Started.	~~2006~~2007	BPS
g)	Develop jointly with NERC a Joint NERC/NAESB Operating training manual. Status: Not Started. To be tied to the completion of NERC split of TLR reliability standards and NAESB business practice standards (1(d)(i)).	**2007 related to NERC progress underway.	BPS

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WEQ Annual Plan
Revisions ~~Adopted by the Board of Directors on September 21, 2006~~Proposed by the WEQ EC on November 14, 2006

	Item Description	Completion[1]	Assignment[2]
2	**Develop business practice standards for Version 1 to support ATC calculations.**		
	Develop version 1 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 for coordination between neighboring transmission providers and/or amendments to existing TLR procedures. (R05004) Status: Under way using joint standards development process with NERC. Request R050004 was expanded to include the OATT NOPR items.	2007	BPS and ESS
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)	Business Practices for the resale or reassignment of transmission service (R04006D). Status: Complete, ~~voted out of the EC on 8-15-06 with notational ballots outstanding,~~adopted by the WEQ EC on 8-15-06, ratified by membership 10-2-06.	~~2nd~~ 3rd Q, 2006	ESS/ITS
ii)	Implementation of "~~release~~relinquish" mechanism in the OASIS S&CP to complement non-firm redirects (R04006C1) Status: Underway, to be packaged with other S&CP changes to avoid the cost of piecemeal implementation of S&CP changes.	~~3rd~~ 2nd Q, ~~Q, 2006~~2007	ESS/ITS
iii)	Network Services: determine if business practice standards or other support is needed to support use of OASIS for Network Service transactions (R04006E). Status: Not Started	~~3rd Q, 2006~~2007	~~JISWG~~ESS/ITS
iv)	Registry: determine if business practice standards are needed to support the registry functions currently supported by NERC (R04037). Status: ~~Underway~~Underway.	~~3rd~~ 2nd Q, ~~2006~~2007	JISWG
v)	Adoption/maintenance of ESC use cases (R04007). Status: Completed.	2nd Q, 2006	ESS/ITS
vi)	Adoption/maintenance of Functional Requirements Document (R04007). Status: Completed.	2nd Q, 2006	ESS/ITS

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WEQ Annual Plan
Revisions ~~Adopted by the Board of Directors on September 21, 2006~~Proposed by the WEQ EC on November 14, 2006

		Item Description	Completion[1]	Assignment[2]
	vii)	e-Tag enhancements (including e-Tag specification changes) (R05018) Status: Underway. Coordinate Interchange standards are complete and enhancements such as market operator adjustments are in progress. ~~Underway~~	~~3rd Q, 2006~~3rd Q, 2007	~~ESS/ITS~~JISWG
	viii)	Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff (R05019) Status: Not Started. To be coordinated with ATC/TTC and OATT NOPR efforts.	~~4th Q, 2006~~4th Q, 2007	ESS/ITS
	ix)	Incremental enhancements to OASIS as an outgrowth of the NAESB March 29, 2005 conference on the future of OASIS (R05026) Status: Scoping statement being prepared by SRS – expected to be completed by end of November 2006. Until the scoping statement is completed, the completion date and assignment cannot be determined.	TBD	Not Assigned
	x)	Respond to issues in FERC Order No. 676 (Docket No. RM05-5-000) – NAESB WEQ Standards 001 9.7, (paragraph 51 of the order) Status: Underway – see item 7 in provisional items. Delayed awaiting ~~order on rehearing by action taken on 8-15-06~~rulemaking on OATT NOPR (.~~.~~	Delayed	ESS/ITS
b)		Develop and/or maintain standard communication protocols and cyber-security business practices as needed		
	i)	Develop companion business practices to NERC's Cyber Standard (CIP002-009), and specifically review section 1303-Personnel & Training to determine if business practices are needed. Status: ~~Not Started~~Underway. Expected that the recommendation will state that no business practices are needed.	4th Q, ~~3rd Q, 2006~~2006	ESS/ITS (JISWG)
	ii)	Partner with the Department of Energy to perform a surety assessment on NAESB technical standards and respond to the surety assessment findings and recommendations. Status: ~~Not Started~~Completed. Report presented at the Novmbe rEC meetings	4th Q, 2006	EC Officers
	iii)	PKI Initiative (e-MARC) (R03007) Status: Underway	~~3rd~~ 4th Q, 2006	ESS/ITS (JISWG)
c)		Develop business practices as needed for clarification of definitions and terminology in the Standards of Conduct[3] Status: Completed. Voted out of the EC on 8-15-06.	2nd Q, 2006	BPS
d)		Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Status: ~~Not Started~~Underway	~~4th Q, 2006~~2007	NAESB Staff with WEQ support

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WEQ Annual Plan
Revisions ~~Adopted by the Board of Directors on September 21, 2006~~Proposed by the WEQ EC on November 14, 2006

Item Description	Completion[1]	Assignment[2]

PROVISIONAL ITEMS

1 Develop business practice standards as requested by the regional and state advisory groups.

2 Using the NERC Interconnected Operations Services reference document (March 2002, version 1.1) as a guide and starting point, develop business practices as necessary for ancillary services and/or interconnected operating services transactions.

3 Develop and or modify business practices related to OATT reform resulting from the NOPR, Docket Nos. RM05-25-000 and RM05-17-000,~~Notice of Inquiry, Docket No. RM05-25-000, FERC Notice Requesting Comments,~~ "Preventing Undue Discrimination and Preference in Transmission Services", issued ~~September 16, 2005~~May 19, 2006.

4 Evaluate the entries on the seams catalog, determine the need for business practice standards and draft the standards requests to develop business practice standards to complement or assist specific seams mitigation efforts as noted in the seams catalog.

5 Develop business practice standards according to approved and assigned standards requests that complement or assist specific seams mitigation efforts as noted in the seams catalog.

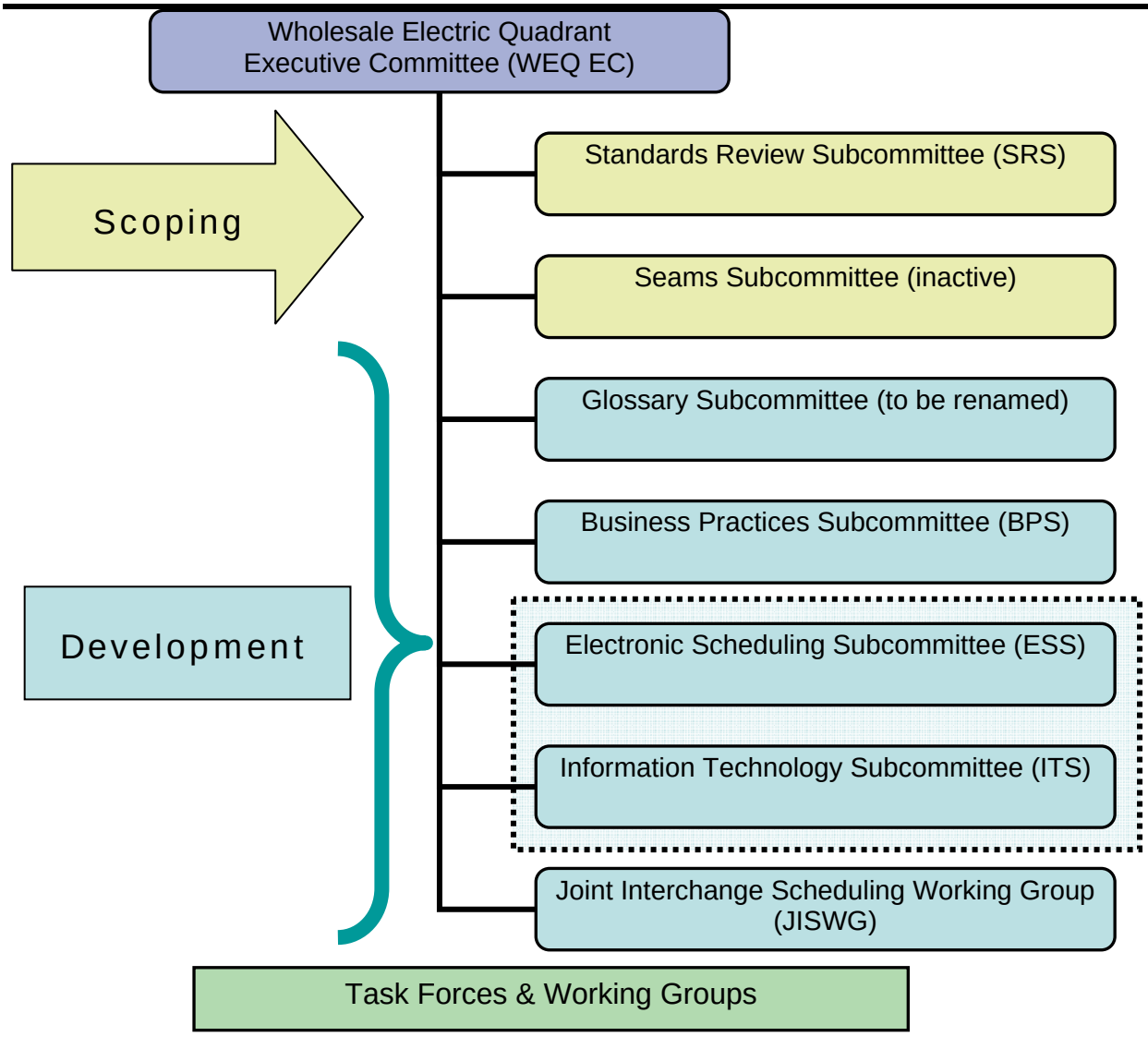
6 Develop business practice standards as related to the Effectiveness Study of Competitive Wholesale Markets (Congressional Mandate), Electric Energy Market Competition Task Force, Docket No. AD05-17-000, issued by the FERC on October 13, 2005.

7 Upon the issuance of the final order by FERC, develop and or modify business practices as requested by FERC related to OASIS or Version 0 business practices as filed by NAESB with the FERC on January 18, 2005, in Docket No. RM05-5-000. The FERC Notice of Proposed Rulemaking, RM05-5-000, "Standards for Business Practices and Communication Protocols for Public Utilities," was issued May 9, 2005. The final order was issued on April 25, 2006.

8 Develop and/or maintain business practice standards to support gas-electric interdependencies

- Respond to requests as received that are related to Docket No. RM05-28-000.
- Respond directives related to the conclusions of the NAESB reports submitted in Docket No. RM05-28-000.
- Evaluate and develop business practice standards for Energy Day (R04016) – request has been withdrawn.
- Evaluate and develop business practice standards for electric scheduling timelines (R04020) – request has been withdrawn.

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 WEQ EC and Subcommittee Leadership:

Executive Committee: Kathy York (WEQ EC Chair) and Lou Oberski (WEQ EC Vice Chair)

Standards Review Subcommittee: Raj Rana, Narinder Saini

Seams Subcommittee: Inactive

Business Practices Subcommittee & Task Forces: Kathy York & Joel Dison

Electronic Scheduling Subcommittee/Information Technology Subcommittee & Task Forces: Paul Sorenson, J.T. Wood

- Coordinate Interchange: Roman Carter
- OASIS: J.T. Wood and Wendy Weathers

Joint Interchange Scheduling Working Group (JISWG): Bob Harshbarger

Glossary Subcommittee (to be renamed): Vacancy

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

End Notes:

[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 so as 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 changes to the Standards of Conduct requested by the Commission in NOPR Docket No. RM05-5-000 are underway and should conclude shortly.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
~~**Revisions Adopted by the Board on September 21, 2006**~~**Changes Proposed by the Retail ECs**

	Item Number & Description	Completion[2]	Assignment
1	Billing & Payment		
	a. Develop Technical Electronic Implementation Standards – Billing & Payments Status: Underway	~~3rd~~ 4th Qtr~~.~~ 2006	TEIS
	b. Develop additional model business practices for reversal and reissue, transformer loss factors, budget billing and payment plans, and missed bill windows Status: Completed through the BPS process and submitted to IR.	~~4th~~ 1st Qtr ~~2006~~2007	IR
2	Pre-Enrollment Customer Information		
	a. Develop technical transaction processes for exchanging customer information necessary for interactions prior to enrollment and billing, i.e., customer authorization procedures, identifying types of customer information necessary for pre-enrollment activities, and methodologies for exchanging information. Status: Underway. To be presented at the November EC meeting.	~~3rd~~ 4t~~h~~ Qtr. 2006	TEIS
3	Electronic Retail Billing.		
	a. Develop information requirements for electronic retail billing transactions and bill payment transactions between customers, suppliers, and utilities pursuant to Request No. R05016. Status: Completed.	1st Qtr. 2006	IR
	b. Develop Technical Electronic Implementation Standards – Electronic Retail Billing Status: Underway.~~ To be presented at the November EC meeting~~.	~~3rd~~ 1st Qtr. ~~2006~~2007	TEIS
4	Customer Enrollment, Drop and Account Maintenance		
	a. Develop practices for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties. Status: Underway. ~~To be presented at the November EC meeting for enrollment part.~~Customer Enrollment portion of the item is complete through the BPS.	2nd Qtr. 2007	BPS
	b. Develop information requirements for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties. Status: Not Started. Customer enrollment ~~should be complete by~~was completed 4th Qtr 2006, but drops and customer account information should span into 2007.	3rd Qtr. 2007	IR

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
~~Revisions Adopted by the Board on September 21, 2006~~Changes Proposed by the Retail ECs

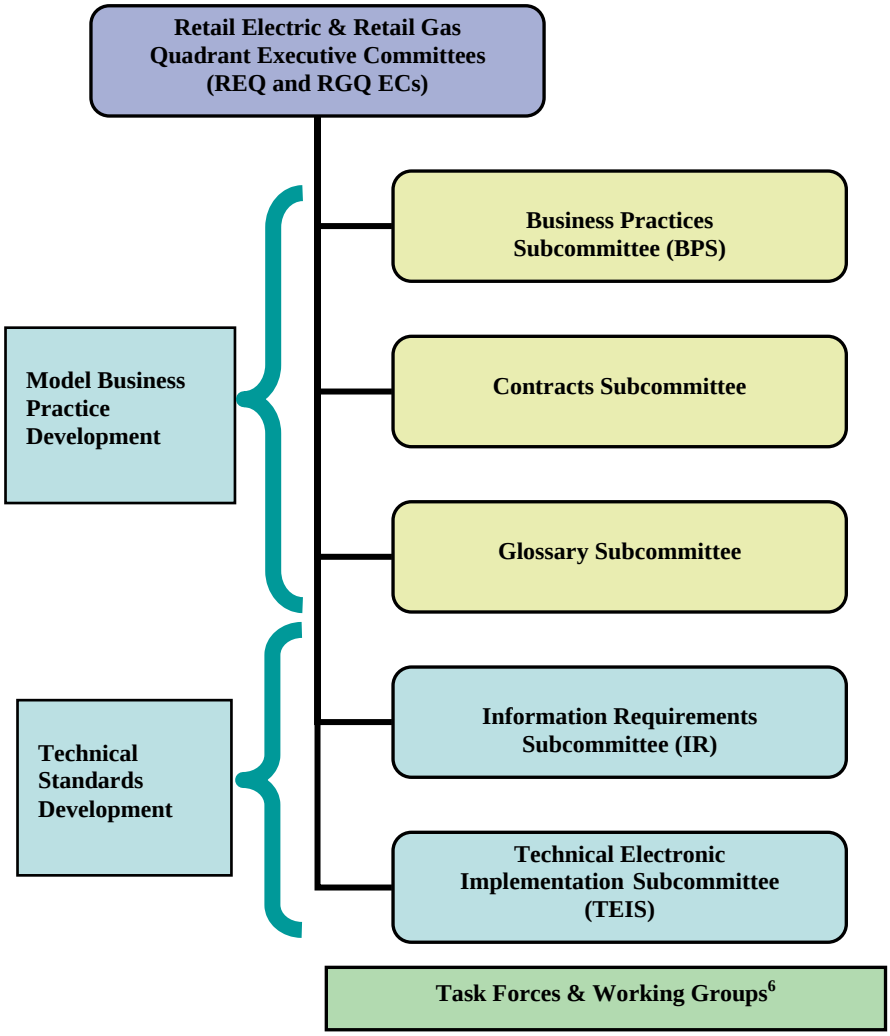
	Item Number & Description	Completion[2]	Assignment
	c. Develop Technical Electronic Implementation Standards – Customer Enrollment, Switching & Dropping. Status: Not Started	4th Qtr 2007	TEIS
5	Customer Inquiries		
	a. Develop procedures for responding to customer inquiries directed to Distributors and/or Suppliers and for notification of the other party. Status: Not Started. Delayed to 2008 for completion because the registration agent model is separate from customer enrollments.	~~4th Qtr. 2007~~2008	BPS
6	Contracts		
	a. Develop a model RGQ/REQ contract/outline modeled after the NAESB Base Contract for Sale and Purchase of Natural Gas, NAESB Standard 6.3.1 (NAESB Base Contract for Gas) designated for use by electric power markets or competitive gas markets. (R05013). Status: ~~Underway. To be presented at the November EC meeting~~Completed.	4th Qtr. 2006	Contracts
7	Prepare a joint analysis with the WGQ for AS2 and AS3 protocols as compared to the NAESB IET. Status: ~~Not Started~~Underway.	~~4th Qtr. 2006~~TBD	TEIS & WGQ EDM
8	Develop NAESB Certification checklist criteria for Retail Quadrants to be used in the NAESB Certification Program. Status: Not Started.	~~4th Qtr. 2006~~TBD	TEIS
9	Partner with the Department of Energy's Sandia National Laboratories on NAESB technical standards and respond to the surety assessment findings and recommendations. Status: ~~Underway~~Complete.	4th Qtr. 2006	EC Officers[3]
Program of Standards Maintenance & Fully Staffed Standards Work[4]			
	Business Practice Requests	Ongoing	Assigned by the EC[5]
	Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC[5]
	Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC[5]
	Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[5]
	Ongoing Development and Maintenance of Definitions	Ongoing	Glossary

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
~~**Revisions Adopted by the Board on September 21, 2006**~~**Changes Proposed by the Retail ECs**

Item Number & Description	Completion[2]	Assignment
Provisional Activities		
Review security standards as may be deemed necessary, such as Public Key Infrastructure (PKI).		
Future 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.		
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.		
Load Profiling: Develop practices for using statistical methods to estimate interval consumption by customers who do not have interval meters.		
Settlement Process: Reconcile energy schedules and energy delivered by suppliers within a given market. Note: will need to be coordinated with the WEQ.		
Retail Gas Quadrant Effort Only:		
Examine Wholesale Gas Quadrant Non-EDM Standards for applicability to retail business practices.		

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 RGQ EC and Subcommittee Leadership:

Executive Committee: Mike Novak, Chair and Suzanne Calcagno, Vice-Chair
Business Practices Subcommittee: Phil Precht
Information Requirements Subcommittee: George Behr
Technical Electronic Implementation Subcommittee: George Behr & Dan Rothfuss
Contracts Subcommittee: Marcy McCain and Suzanne Calcagno
Glossary Subcommittee: Don Sytsma

NAESB REQ EC and Subcommittee Leadership:

Executive Committee: Ruth Kiselewich, Chair and Ed Overtree, Vice-Chair
Business Practices Subcommittee: Mary Edwards and Dan Jones
Information Requirements Subcommittee: Ed Overtree
Technical Electronic Implementation Subcommittee: Jennifer Teel
Contracts Subcommittee: Ed Overtree
Glossary Subcommittee: Mary Edwards and Patrick Eynon

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

End Notes:

[1] As outlined in the NAESB Bylaws, the REQ and RGQ will also address requests submitted by members and assigned to the REQ and RGQ through the Triage Process.

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

[3] The project with SNL is a four quadrant effort, with all EC officers providing support to the SNL representatives.

[4] This work is considered routine maintenance and thus the items are not separately numbered.

[5] The REQ and RGQ ECs will assign maintenance efforts on a request by request basis.

[6] 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.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WGQ Annual Plan
~~**Revisions Adopted by the Board of Directors on September 21, 2006**~~**Changes Proposed by the WGQ EC on 11-16-06**

	Item Description	Completion[1]	Assignment[2]
Gas-Electric Activities			
1	Development of standards regarding an Energy Day (R04016) Status: Withdrawn by requestors on 2-28-06.	Withdrawn[3]	WGQ BPS (with WEQ BPS)
Electronic Delivery Mechanisms and Related Activities			
2	Review security standards as may be deemed necessary, e.g. Public Key Infrastructure (PKI). Status: Pending Activities of the WEQ EC.	Pending WEQ PKI activities	EDM
3	Partner with the Department of Energy's Sandia National Laboratories on NAESB technical standards and respond to the surety assessment findings and recommendations. Status: ~~Underway~~Complete.	4th Q, 2006	EC Officers
4	Review of minimum technical characteristics in Appendices B, C, and D of the WGQ QEDM Manual Status: Completed.	2nd Q, 2006	EDM
5	Prepare a joint analysis with the Retail Quadrants for AS2 and AS3 protocols as compared to the NAESB IET. Status: ~~Not Started~~Underway.	4th Qtr. 2006	EDM & Retail TEIS
Contracts Activities			
6	Review and update NAESB Base Contract for Sale and Purchase of Natural Gas to reflect current industry practices and applicable terms and conditions. (R05014) Status: Completed.	2nd Q, 2006	Contracts
6A	Develop FAQ for Updated NAESB Base Contract for Sale and Purchase of Sale of Natural Gas. (R05014) Status: ~~Not Started~~Underway.	~~4th~~ 1st Q, ~~2006~~2007	Contracts
Gas Quality			
7	Part B of R03035: Develop a uniform process for reporting the underlying assumptions and methodologies for determining gas quality specifications from measured data. Status: Completed.	1st Q, 2006	BPS
8	Part C of R03035: Examine the need to establish gas quality specification standards taking into consideration, (i) the specification needs of end users and providers of service to end users, and (ii) sources of supply (e.g. land-based, the Gulf, LNG). Draft such standards as appropriate. Status: Tabled on Board of Directors instructions.	Tabled[4]	Not assigned at this time.

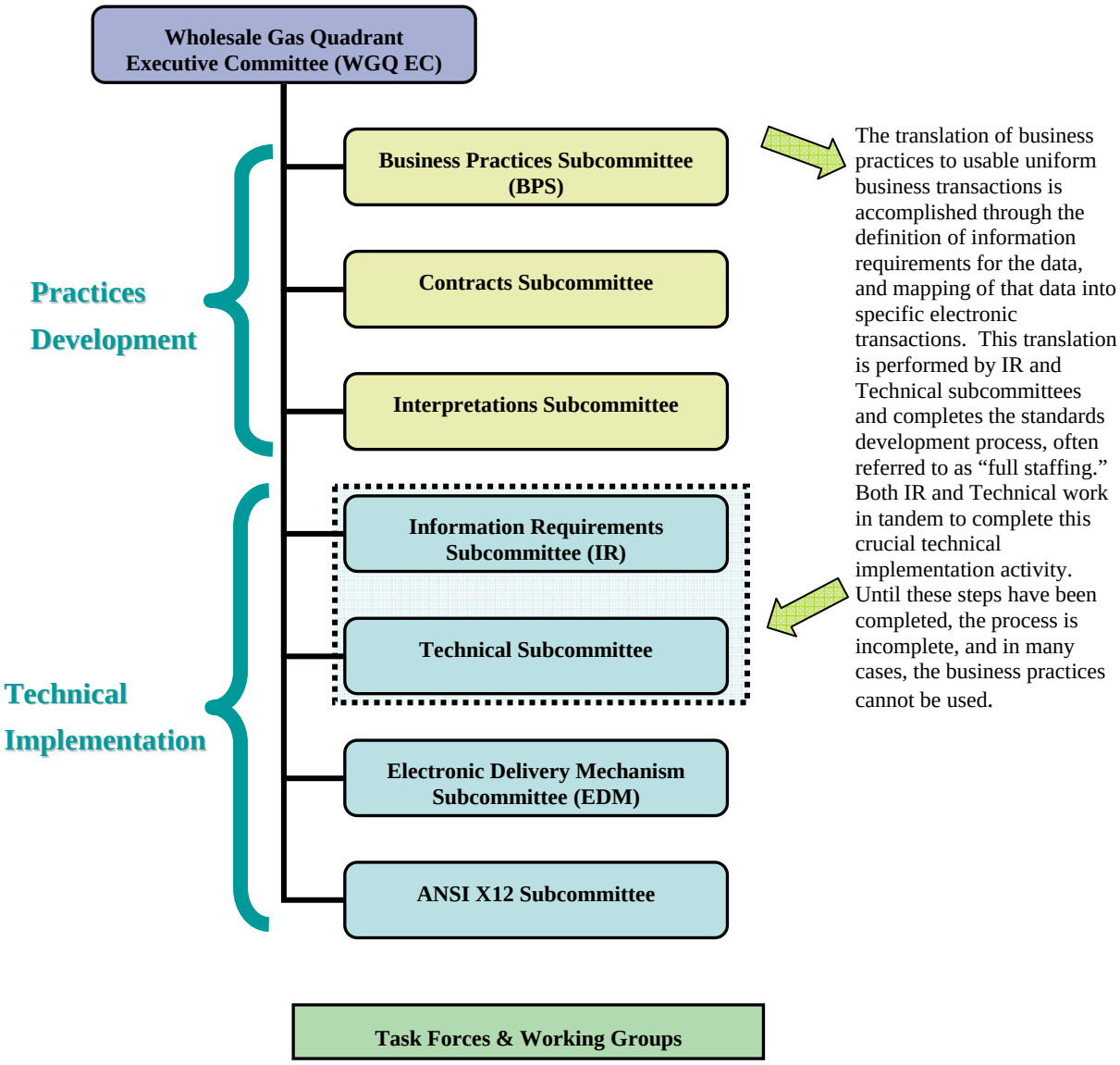
North American Energy Standards Board
1301 Fannin, Suite 2350, Houston, Texas 77002
Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

NORTH AMERICAN ENERGY STANDARDS BOARD
2006 WGQ Annual Plan
~~**Revisions Adopted by the Board of Directors on September 21, 2006**~~**Changes Proposed by the WGQ EC on 11-16-06**

Item Description	Completion[1]	Assignment[2]
Program of Standards Maintenance & Fully Staffed Standards Work[5]		
Business Practice Requests	Ongoing	Assigned by the EC[6]
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[6]
Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC[6]
Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[6]
Provisional Activities[7]		
Respond to requests as received that are related to Docket No. RM05-28-000 (Gas-Electric Interdependency)		
Respond to directives related to the conclusions of the NAESB reports submitted in Docket No. RM05-28-000		
Respond to requests as received that are related to Docket No RM05-1-000 (e-Tariff)		
Update the Canadian Addendum to the NAESB Base Contract for Sale and Purchase of Natural Gas		
Update the ISDA Gas Annex		
Review and develop a Canadian Supplement to the ISDA Gas Annex		

Notes: (a) Priority is given to action items that are carry-overs from the 2005 Annual Plan.
(b) Any new activity should be preceded by a request from the submitter after which the annual plan will be revisited. The provisional items would only be addressed after a request is submitted or an order is issued by the FERC.

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 WGQ EC and Subcommittee Leadership:

Executive Committee: Jim Buccigross, Chair and Mike Novak, Vice-Chair

Business Practices Subcommittee: Kim Van Pelt, Tina Burnett, Dolores Chezar ~~and Richard Smith~~

Information Requirements Subcommittee: Dale Davis

Technical Subcommittee: Kim Van Pelt

Contracts Subcommittee: Suzanne Calcagno, Keith Sappenfield

Electronic Delivery Mechanism Subcommittee: Leigh Spangler, Christopher Burden

Interpretations Subcommittee: Paul Love

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

End Notes:

[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 so as 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 Board of Directors determined to table standards development efforts on item 1 at the June 22, 2005 meeting. As a result of the notational ballots received from the Board of Directors on February 17, 2006 endorsing the Gas-Electric Interdependency Report, and the subsequent filing with the FERC on February 24, 2006, both Request Nos. R04016 and R04020 were withdrawn by the submitters.

[4] At its meeting on June 21, 2005, the Board of Directors unanimously voted to keep Part C of Request R03035 in abeyance, and to instruct the WGQ Executive Committee to add Part B to the Annual Plan for 2006 with the understanding that work related to the reporting of gas quality specifications is associated with the development of reporting procedures and not the standardization of the measurement itself.

[5] This work is considered routine maintenance and thus the items are not separately numbered.

[6] The EC assigns maintenance of existing standards on a request by request basis.

[7] To the extent that it is determined that any of the provisional activities should be worked upon during the year as a result of a specific request for standards development or a FERC action, the Board has the discretion to modify the annual plan. Additionally, provisional activities will remain on the Annual Plan for one year pending the filing of a formal request or a decision to add them to the plan as active items.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

	Item Number & Description	Completion[2]	Assignment
1	Billing & Payment		
	a. Develop additional model business practices for reversal and reissue, transformer loss factors, budget billing and payment plans, and missed bill windows	1st Q 2007	IR
	Status: Completed through the BPS process and submitted to IR.		
2	Electronic Retail Billing.		
	b. Develop Technical Electronic Implementation Standards – Electronic Retail Billing	1st Q 2007	TEIS
	Status: Underway.		
3	Customer Enrollment, Drop and Account Information Change		
	a. Develop practices for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties.	2nd Q 2007	BPS
	i) Customer Enrollment	2nd Q 2007	BPS
	Status: Underway. Customer Enrollment portion of the item is complete through the BPS.		
	ii) Customer Drop	1st Q 2007	BPS
	Status: Underway		
	iii) Account Information Change	2nd Q 2007	BPS
	Status: Not Started.		
	b. Develop information requirements for submitting and receiving, processing and fulfilling a customer's request to enroll with or leave a supplier (including suppliers dropping customers) and for maintaining current customer account information, and for notifying affected parties.	3rd Q 2007	IR
	Status: Not Started. Drops and customer account information should span into 2007.		
	c. Develop Technical Electronic Implementation Standards – Customer Enrollment, Drop and Account Information Change,	4th Q 2007	TEIS
	Status: Not Started		
4	Customer Enrollment, Drop and Account Information Change Using a Registration Agent		
	a. Develop practices when using a Registration Agent for submitting and receiving, processing and fulfilling a Customer's request to enroll with or leave a Supplier (including Suppliers dropping Customers) and for maintaining current Customer account information, and for notifying affected parties.		
	i) Customer Enrollment	3rd Q 2007	Texas Task Force/ BPS
	Status: Underway.		
	ii) Customer Drop	4th Q 2007	Texas Task Force/ BPS

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

NORTH AMERICAN ENERGY STANDARDS BOARD
Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

	Item Number & Description	Completion[2]	Assignment
	Status: Not Started		
	iii) Account Information Change	1st Q 2008	Texas Task Force/ BPS
	Status: Not Started		
5	Customer Inquiries		
	a. Develop procedures for responding to customer inquiries directed to Distributors and/or Suppliers and for notification of the other party.	2008	BPS
	Status: Not Started. Delayed to 2008 for completion because the registration agent model is separate from customer enrollments.		
6	Prepare a joint analysis with the WGQ for AS2 and AS3 protocols as compared to the NAESB IET.	TBD	TEIS & WGQ EDM
	Status: Underway.		
7	Develop NAESB Certification checklist criteria for Retail Quadrants to be used in the NAESB Certification Program.	TBD	TEIS
	Status: Not Started.		
8	Address issues raised in the Department of Energy's Sandia National Laboratories on NAESB technical standards and respond to the surety assessment findings and recommendations.	4th Q 2007	BPS/TEIS
	Status: Not Started.		
9	Consider and develop as needed model business practices to support Gas Design Day Forecast[1]	TBD	RGQ - New Task Force
	Status: Not Started. A reach out to the SGA and AGA for subject matter experts will be undertaken first, before the group is populated.		
10	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.	TBD 1st Q, 2007 for intro meeting	New Task Force
	Status: Not Started. A major announcement for an introductory meeting, probably at the DoE, will be sent forward to invite all interested stakeholders.		

Program of Standards Maintenance & Fully Staffed Standards Work[2]

Business Practice Requests	Ongoing	Assigned by the EC[3]
Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC[4]
Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by

[1] Reach out to SGA and AGA for subject matter experts.

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

NORTH AMERICAN ENERGY STANDARDS BOARD
Proposed 2007 ANNUAL PLAN for the RETAIL GAS and ELECTRIC QUADRANTS[1]
Proposed by the Retail ECs on 11-15-06

Item Number & Description	Completion[2]	Assignment
		the EC[4]
Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[4]
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).

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.

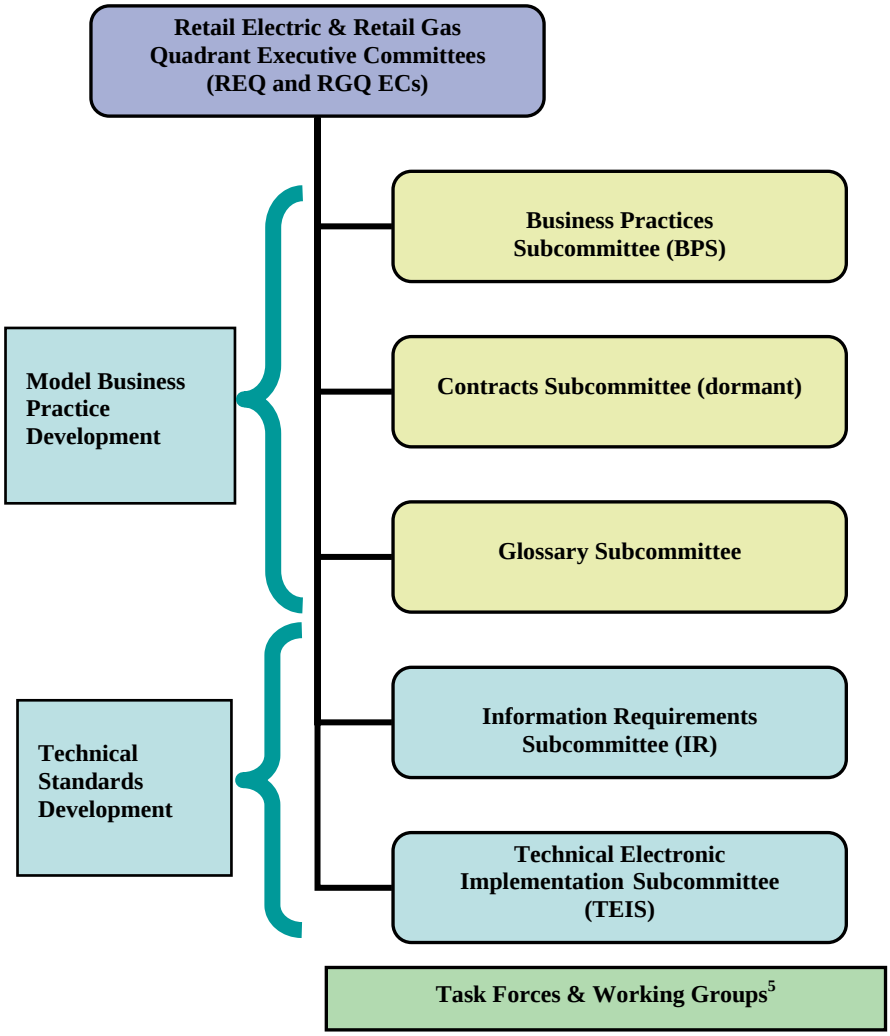
Settlement Process: Reconcile energy schedules and energy delivered by suppliers within a given market. Note: will need to be coordinated with the WEQ for the REQ.

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.

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 RGQ EC and Subcommittee Leadership:

Executive Committee: Mike Novak, Chair and Suzanne Calcagno, Vice-Chair
Business Practices Subcommittee: Phil Precht
Information Requirements Subcommittee: George Behr
Technical Electronic Implementation Subcommittee: George Behr & Dan Rothfuss
Glossary Subcommittee: Don Sytsma

NAESB REQ EC and Subcommittee Leadership:

Executive Committee: Ruth Kiselewich, Chair and Ed Overtree, Vice-Chair
Business Practices Subcommittee: Mary Edwards and Dan Jones
Information Requirements Subcommittee: Ed Overtree
Technical Electronic Implementation Subcommittee: Jennifer Teel
Glossary Subcommittee: Mary Edwards and Patrick Eynon

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

End Notes:

[1] As outlined in the NAESB Bylaws, the REQ and RGQ will also address requests submitted by members and assigned to the REQ and RGQ through the Triage Process.

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

[3] This work is considered routine maintenance and thus the items are not separately numbered.

[4] The REQ and RGQ ECs will assign maintenance efforts on a request by request basis.

[5] 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.

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

Attachment 1: Comments Received on 2007 Plan

1. Gas Design Day Forecast

Submitted by Ralph Cleveland, Senior Vice President | Engineering and Operations, AGL Resources

From: Ralph Cleveland [mailto:rcleve@aglresources.com]

Sent: Tuesday, October 10, 2006 5:13 PM

To: naesb@naesb.org

Subject: Gas Design Day Forecasting Standard

The following are the concepts around which it would be helpful to have an industry standard as to reasonable and acceptable modeling or methodology approach. I'm not sure how a proposal is usually structured, but I wanted to get this to NAESB today. This should be a good start. AGA and SGA have done some work through surveys and conferences to identify industry practice. For regulatory reasons, I think they have avoided attempting to say that there are established "best practices". We have some AGA/SGA survey results, if you would like to see them. If this is not what you were looking for, please let me know.

1. Number of years history considered in arriving at the design temperature (coldest in X years)
2. Acceptable independent variable besides same day temperature used in analysis (prior day temp, wind speed, etc)
3. Reasonable historical load / temperature analysis approach used to forecast future design (regression analysis, average load per HDD on cold days, etc)
4. Approach at removing outlier data from historical data sets
5. Acceptable R^2, MAPE or other statistical measure or forecast accuracy
6. Method for accessing potential design day forecast error (capacity reserve margin, forecast adder, etc)
7. Methodology to project design period load shape (multiple design days, historic design period temperatures, statistical approach)
8. Assumptions associated with on-system facility derate or pipeline capacity proration on design day.

RESOLUTION 11-15-06: Added to 2007 Annual Plan-- Reach out to SGA and AGA for subject matter experts will be undertaken.

2. Northeast Regional Best Practices

Submitted by Phil Precht, BG&E

Excerpt from "Restructuring Today": A major effort in that direction is a push to stimulate and activate pro-markets members of the legislature at a two day meeting set for Wilmington Oct 24-25 at the Doubletree Hotel. NEMA is behind the move. It's relying on pro-markets members of legislatures in Delaware, Pennsylvania and possibly Connecticut for a leadership round table and regulatory workshop to meet in Wilmington. James Lester of the Delaware PSC is a key speaker along with James Cawley who is the vice chair in Harrisburg. Several state legislators are to speak. Craig Goodman reports that business backers are happy to have marketers coming into Delaware to compete to supply the market. He's invited commissioners and staff from Delaware, Pennsylvania, New York and Connecticut to point out the best practices in the region. One subject of course will be the successes in New York and how to apply those best practices to other states. A major goal is not just copying New York's success but making the progress regional. Goodman thinks that would drive prices in the region down, lower the acquisition costs and bring economies of scale to the marketplace. Day one right now is best practices and day two is how to get there (implementation).

RESOLUTION 11-15-06: Not added to 2007 Annual Plan at this time – outreach to Craig Goodman first for feasibility.

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

Attachment 1: Comments Received on 2007 Plan

3. Demand Side Response

Submitted by George Behr, Energy Services Group

PJM is discussing demand side response and metering. They have a 'curtailment service provider' program that might benefit from NAESB standards. There are both wholesale and retail implications.

RESOLUTION 11-15-06: Combined with item 4 below.

4. 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

Submitted by Carl Wilkins, Advanced Energy

LETTER:

Dear Ms. McQuade: Attached is a request for initiation of a NAESB business practice standard as described in your September 11, 2006, memo. We were advised by one of your board members, Mr. David Koogler with Dominion Power, to submit a request. Mr. Koogler was present when we gave our annual report to the N.C. Utilities Commission. He took note that we were challenged by one of the Commissioners to quantify more of the benefits that North Carolina and other states were enjoying as result of the work we do with energy utilization and market transformation. Advanced Energy is an independent non-profit that was chartered by the N.C. Utilities Commission in 1980 to work with electric utilities, in part, to develop and demand side management (DSM) and energy efficiency (EE) programs. Since 1980 Advanced Energy has been doing public benefits work to enhance how North Carolina businesses and individuals use energy. Recently we have been asked to assess the statewide potential for DSM and EE. It has been some time since these subjects have been discussed in regulatory and public settings, especially as it pertains to the need for future electricity generation. We have a long-standing relationship with utilities and appreciate their support and collaboration on many issues affecting energy utilization in our state. The Public Staff of the N.C. Utilities Commission is an ally and recently recommended that we advise the N.C. Utilities Commission as to how we would manage a statewide Public Benefits Fund specifically for DSM and EE. Other than the west coast, the northeast or selected mid-western states, the body of knowledge about DSM and EE has grown stale. Furthermore, a lot has changed with respect to the way homes and business and industry use energy since DSM and EE were in vogue in the 80s and early 90s. Many states and other jurisdictions lack the expertise and experience to evaluate and plan new programs. We heard that NAESB has an excellent reputation in the development of standards and felt that this area might be an area that fit NAESB's mission. Please contact me with any questions regarding our attached request. Sincerely, Carl L. Wilkins, P.E., Director, Utility Services

REQUEST:

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

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

the aforementioned techniques can vary widely.

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.

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.

RESOLUTION 11-15-06: Combined with item 4 below. Item 3 is underway now in PJM and is both a retail and wholesale electric issue.

5. Participation

Submitted by Shay Reed, CostCo

Afternoon,

I recently attended the EEI conference national accounts meeting in Florida, and we were told that October 11th, 2006 is the deadline to be included for comments on several standards issues. After reading the memo I received, it appears that this is the comment deadline rather than inclusion in the comment group? Can you please confirm the requirements for inclusion in regards to NAESB standards? We would like to be involved, and hope we are not too late. Thank you for the information.

Shay Reed -

Thank you for your interest in NAESB standards development. If you would like to submit comments, please send them to NAESB (naesb@naesb.org) by the end of this week. Please let me know if you need any additional information. Best regards, Veronica Thomason

Submitted by:Denis George, Kroger

While I only saw this today and do not have time to submit substantive comments at this time, as a general matter The Kroger Co. - one of the largest grocery supermarket chains in the US (www.kroger.com) - would be happy to comment upon and participate in any initiative that would help bring uniform standards for retail EDI/XML transactions for both gas & electric utilities. Please feel free to direct further correspondence on this matter to me directly.

RESOLUTION 11-15-06: Combined with item 6 below.

6. Electronic Billing

Submitted by Suzanne Figy, Director, Operations - Data Services, Advantage IQ, Inc.

Hi Veronica, My name is Suzanne Figy and I am the Director of Operations - Data Services for Advantage IQ. Advantage IQ currently manages more than $9.3 billion in facility bills for more than 375 clients. We currently process and pay more than 500,000 bills/month supporting over 190,000 sites. Advantage IQ maintains a solid relationship with more than 16,000 utilities nationwide. Currently, we receive 21% of our incoming utility bills via EDI. We are of great interest in having NAESB develop some standards in the areas outlined in the annual plan. Given the volumes of electronic bills we are currently managing I would like to request that we be included in the planning discussions. I would like to ask that you add myself as our representative. We have a great amount of excitement around these initiatives and feel we can be a great asset to the discussions. Please contact me if you need any additional information or have any further questions. Thank you, Suzanne Figy

Ms. Figy, Thank you for contacting our office with your request. We will be happy to add your request to the list of NAESB Retail Annual Plan topics for discussion. Best regards, Denise Rager

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

RESOLUTION 11-15-06: Combined with item 5 above. EDI transactions for electronic billing between utilities and national accounts customers is on the 2007 annual plan now and the business practices have already been developed. XML transactions are not on the 2007 plan. If Kroger and CostCo are interested in pursuing XML, we would need to identify both the sponsors/champions for this development and also the subject matter experts that would participate in XML development. NAESB office will pursue determining if the interest level is high enough to warrant a conference call with applicable parties.

7. Customer Interval Data

Under consideration by the Massachusetts EBT

Draft Letter Prepared on 9/12/06 RE: Customer Interval Data

Dear Ms. Cottrell:

We, the undersigned competitive suppliers, third party providers and brokers, hereby request that the Department review a proposed change in the current practice regarding the authorization requirement for provision of customer interval metered usage data ("interval data") to suppliers. The proposed change would simplify the practice, reduce costs, and allow for improved data security by making suppliers responsible for maintaining customer authorizations and thereby paving the way ultimately for interval data to be requested and provided using standard electronic business transactions.. The proposal has been discussed by the Massachusetts Electronic Business Transactions ("EBT") Working Group, and the EBT has been authorized by the EBT electric distribution company members (EDCs) to represent their lack of objection to the change, provided it is acceptable to the Department.

Background: Increases in competitive market efficiency have revealed the existence of a bottleneck in the day-to-day operation of Massachusetts' deregulated electricity supply marketplace in regards to the provision of interval data. The unnecessarily labor intensive nature of requesting and receiving interval data for both prospective and existing customers, acts as a hindrance to the ability of suppliers to offer accurately derived and timely priced innovative competitive supply products to commercial and industrial customers. The process for provision of interval data to suppliers is governed by the EDCs' interval data tariffs as approved by the MDTE. Those tariffs provide that interval data will be made available to the customer or the customer's "authorized agent." However, the tariffs do not specify how that authorization is to be demonstrated. See, e.g., Massachusetts Electric Company, Optional Interval Data Service, M.D.T.E. No. 1034; Boston Edison Company, Optional Interval Data Service, M.D.T.E. No. 151. The Department's order approving those tariffs is similarly silent on the question of how the authorization is to be demonstrated. Metering and Billing Services, D.T.E. 01-28 (Phase I) (May 18, 2001).

Current Practice: Regardless of the lack of an explicit written statement from the Department that delineates what constitutes authorization, it has been the interpretation of the supplier and EDC communities that the supplier would demonstrate authorization by providing a copy of a signed authorization to the EDC with any interval data request. This is the current procedure; an authorization form must be manually issued to the EDC and the EDC, in turn, must file and manage this paperwork in-house, prior to releasing customer data. This is the perceived requirement and current practice whether the customer is a prospect requesting pricing, or already a fully enrolled customer of the supplier submitting the request. Over time, this practice but has proven to be unnecessarily cumbersome for customers and suppliers, as well as for EDCs. For customers the most obvious impact is a delay in pricing from prospective suppliers in a market where even a day can make a material difference in pricing.

Proposed Practice: We propose changing the current practice by removing the requirement that the customer authorization be provided to the utility. Instead we suggest that suppliers be held responsible for obtaining, holding and maintaining the appropriate customer authorization for any requests they make. With such a change, the supplier would still obtain a written authorization from the customer, either in the form of a stand alone consent form or a supply contract with an authorization provision. Further, we would propose that suppliers be required to maintain a scanned version of the written authorization on file at the suppliers' premises for the full length of the customer contract or 24 months, whichever is longer, and that such authorizations would be subject to audit by the Department. We also note that when the Supplier is requesting the interval data, it is assumed that they are paying the fee and will be billed accordingly from the utility. Under this proposal, the utility would then be released of the responsibility to obtain the authorization form and the cost of the request and would be liberated to honor the request for interval data without reference to paper files. Suppliers have indicated a willingness to go one step further and incorporate an authorization

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

provision into their customer contracts, should the Department accept this change in practice. In addition to saving time and manual effort, this step would pave the way for full EDI access to interval data in 2008, which is when the EDCs have indicated their systems would be ready to accept these requests electronically like other electronic business transactions sent via EDI. EDI works on a prescribed set of electronic communications between suppliers and distribution companies, and does not include a mechanism for the exchange of documents as part of that data transfer. The proposed change in procedure for authorizations would remove an important barrier to being able to request and receive interval data using the same standard vehicle used for all other utility/supplier data exchanges. In the EDI scenario, the supplier would submit an interval data request to the utility via EDI using the customer's account number as identifier and would represent that it has obtained the necessary customer authorization and is maintaining it on file. The utility would be free to rely on that representation, knowing that that supplier is subject to audit on any authorization by the DTE. This is exactly how EDI transactions work in other contexts, for example, customer enrollments. The supplier is required to obtain a written (or verified telephonic) authorization to enroll the customer, but is not required to file evidence of that authorization with the utility prior to enrollment acceptance, except upon request for audit. Instead, the supplier simply submits an "enroll customer" request using the customer's account number via EDI and the utility accepts that request as the supplier's representation that it has obtained the necessary authorization. The proposed change in practice for interval data requests would simply bring that practice in line with the procedure for customer enrollments and other supplier/utility transactions in Massachusetts, as well as with interval data practice in other regions of the country. The Massachusetts EBT members (both EDCs and suppliers) concur that this course of action is a win-win solution for everyone including the customer. Provision of interval data would take place seamlessly without a need to wait for manual intervention and would mirror the same procedure we currently follow for all historic usage data requests. We propose that this change in procedure apply to both historic interval data requests made for pricing prospective customers, as well as for monthly recurring interval reads used for forecasting and billing of a supplier's actively enrolled customers. The former would allow prospective customer's access to more timely pricing and product options in the marketplace, critical to making prudent business decisions in an ever-changing supply environment. The latter is necessary for timely billing of any non-fixed price product and is consistent with EPACT 2005's move toward providing customers with price sensitivity – more and more common in today's market.

Benefits of the Change in Practice: The Department has recognized, "historical interval load data are essential to the development of a strong competitive electric generation marketplace." Metering and Billing Services, D.T.E. 01-28 (Phase I) at 14. The availability of interval data improves the accuracy of forecasting and pricing. It also enables the development of innovative products and services for customers, critical to maturation of the competitive marketplace. The proposed change would greatly increase the efficiency of obtaining and receiving interval data and thus increase its availability for not only the EDC and suppliers, but more importantly, for customers. Therefore, we request that the Department review the proposed change in practice to allow suppliers to be the holder of record for customer interval data authorizations, whether they be within the customer's supply contract or in a separate authorization form.

We respectfully request the Department's expedited review of this proposed change in practice and thank you and the Department for your consideration. Sincerely, Constellation NewEnergy, ConEdison Solutions, Direct Energy, Dominion Energy Services Group, Gestalt LLC, Hess, PPL Solutions, Select Energy, TransCanada

RESOLUTION 11-15-06: The interval data is already in the model business practices for pre-enrollment activity. The standards do not specifically require that the utility maintain the information. For the EDI transactions, the 2007 plan already includes the development of EDI transactions. If MA EBT is interested in pursuing standard EDI transactions through NAESB, we would ask that the leaders of the group participate in the NAESB TEIS and EDM subcommittees to further their expectations. NAESB office will pursue determining if the interest level is high enough to warrant a conference call with applicable parties.

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

Attachment 2: Potential Standards Development Efforts for 2007 and subsequent Retail Annual Plans

Projects that have been discussed but are not reflected on the 2007 plan nor have had requests prepared and submitted to NAESB are:

- Contracts: development of additional retail contracts and addenda that support the base contract already under development
- Customer Choice Activities
- Distributed Generation
- Energy Renewal and Green Energy Programs
- Interruption and Curtailment Procedures
- Load Profiling – gas and electric requirements
- Review security standards as may be deemed necessary, such as Public Key Infrastructure (PKI).
- Low Income Strategies
- Model Business Practices between utilities and suppliers in day to day transactions with RTOs (joint initiative with the WEQ)
- Net Metering
- Renewables/Renewable Portfolio Standards – work with the wholesale quadrant on nationally traded renewable energy credit
- Distribution Company/Supplier communications of gas supply requirements
- Model Business Practices for communications between suppliers and customers

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

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 WEQ Annual Plan – Proposed by the WEQ EC on November 14, 2007

	Item Description	Completion[1]	Assignment[2]
1	**Develop business practices standards as needed to complement reliability standards** Develop business practice standards to support and complement NERC reliability standards, NERC policies and NERC standards authorization requests (SARs) using the NERC/NAESB Coordination Joint Standards Development Process as appropriate. Current NAESB activities underway to develop business practice standards that are supportive of this annual plan item are:		
a)	Make version 1 changes to business practices as requested.	Ongoing	BPS
i)	Make changes to business practices as related to inclusion of the NERC Reliability Functional Model functional model entities as NERC undertakes the same efforts. Status: No requests.	As requested	BPS
b)	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" Status: Not Started.	2nd Q, 2007	BPS JISWG
c)	Develop business practice standards to support Operate Within Limits (R03017). Status: Not Started. Coordination of NAESB timeline with NERC timeline is required.	2007	BPS
d)	Develop business practices to support the reliability components of TLR.		
i)	Version 0 Split of TLR business practices from reliability components. Status: Completed ratification and delayed publication and filing with FERC until NERC has had the opportunity to complete its split. *[This date may change to the 1st Q 2007 depending on outcome of November SAC meeting.]*	2nd Q, 2007	BPS
ii)	Continuous support of TLR Procedure in alignment with NERC efforts including version 1 development. Status: Ongoing as NERC makes changes. R06002 completed and approved by the WEQ EC on 5-9-06.	Ongoing	BPS
iii)	Complete version 1 TLR business practices. Status: Dependent on successful completion of NERC efforts – 1(d)(i).	2nd Q, 2007	BPS
e)	Determine any needed NAESB action in support of the Interchange Distribution Calculator (IDC) and develop any necessary standards. Status: Not Started.	4th Q, 2007	BPS
f)	Develop jointly with NERC a Joint NERC/NAESB Operating training manual. Status: Not Started. Dependent on completion of version 1 TLR BPs, 1(d)(i).	2nd Q, 2007	BPS

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

NORTH AMERICAN ENERGY STANDARDS BOARD
Proposed 2007 WEQ Annual Plan – Proposed by the WEQ EC on November 14, 2007

	Item Description	Completion[1]	Assignment[2]
2	**Develop business practice standards in support of the FERC RM05-25-000 and RM05-17-000 (OATT Reform)**		
a)	Develop version 1 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 using joint standards development process with NERC. Request R050004 was expanded to include the OATT NOPR items (NOPR, Docket Nos. RM05-25-000 and RM05-17-000, "Preventing Undue Discrimination and Preference in Transmission Services", issued May 19, 2006).	2007	BPS/ESS
b)	Develop the needed business practices as companion to the NERC standards for ATC related efforts. Status: Not Started.	TBD	BPS/ESS
i)	Develop standards to support existing Request No. R05004.	TBD	BPS/ESS
ii)	Develop the needed business practices to support NERC efforts (MOD 001-MOD 009, FAC 12/13).	TBD	BPS/ESS
c)	Develop version 1 business practice standards to support transparency reporting and related functions that may be required as a result of the final order. Status: Not Started.	TBD	BPS/ESS
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)	Develop OASIS S&CP changes to support OASIS business practices:		
1)	Implementation of S&CP changes to support "relinquish" mechanism to complement non-firm redirects (R04006C1). Status: Underway, to be packaged with other S&CP changes to avoid the cost of piecemeal implementation of S&CP changes.	1st Q, 2007	ESS/ITS
2)	Implementation of S&CP changes to support Standards of Conduct business practices. Status: Not Started.	1st Q, 2007	ESS/ITS

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

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 WEQ Annual Plan – Proposed by the WEQ EC on November 14, 2007

		Item Description	Completion[1]	Assignment[2]
	ii)	Network Services: Determine and develop needed business practice standards or other support is needed to support use of OASIS for Network Service transactions (R04006E). Status: Not Started.	3rd Q, 2007	ESS/ITS
	iii)	Registry: Determine and develop needed business practice standards to support the registry functions currently supported by NERC (R04037). Status: Underway.	2nd Q, 2007	JISWG
	iv)	Identify e-Tag enhancements to support business practices (including e-Tag specification changes) (R05018). Status: Underway.	3rd Q, 2007	JISWG
	v)	Document procedures used to implement the displacement/interruption terms of the Pro Forma tariff (R05019). Status: Not Started.	4th Q, 2007	ESS/ITS
	vi)	Make incremental enhancements to OASIS as an outgrowth of the NAESB March 29, 2005 conference on the future of OASIS (R05026). Status: Scoping statement being prepared by SRS.	TBD	Not Assigned
	vii)	Respond to issues in FERC Order No. 676 (Docket No. RM05-5-000) – NAESB WEQ Standards 001 9.7, (paragraph 51 of the order). Status: Underway – see item 7 in provisional items. Delayed awaiting rulemaking on OATT NOPR.	Delayed	ESS/ITS
b)		Develop and/or maintain standard communication protocols and cyber-security business practices as needed.		
	i)	Address the surety assessment findings on NAESB PKI standards. Status: Not Started.	1st Q, 2007	JISWG
	ii)	Develop PKI standards for OASIS. Status: Not Started.	2nd Q, 2007	ESS
	iii)	Develop PKI Standards for e-tagging. Status: Not Started.	2nd Q, 2007	JISWG
c)		Develop needed business practice standards for organization/company codes for NAESB standards – and address current issues on the use of DUNs numbers. Status: Not Started.	3rd Q, 2007	NAESB Staff with WEQ support

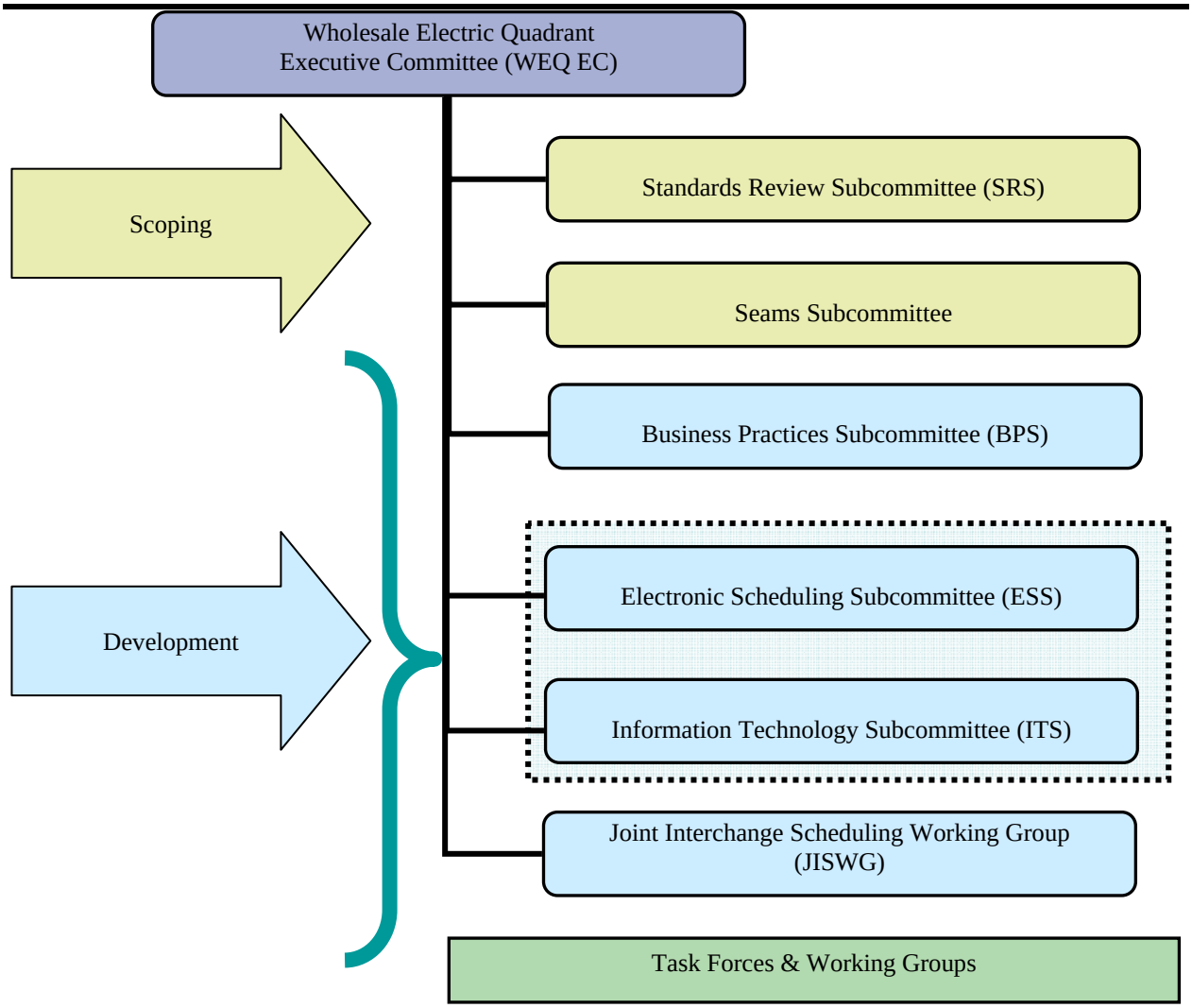
North American Energy Standards Board
1301 Fannin, Suite 2350, Houston, Texas 77002
Phone: (713) 356-0060, Fax: (713) 356-0067, E-mail: naesb@naesb.org
Home Page: www.naesb.org

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 WEQ Annual Plan – Proposed by the WEQ EC on November 14, 2007

	Item Description	Completion[1]	Assignment[2]
PROVISIONAL ITEMS			
1	Develop and or modify business practices related to support of NERC effort on the NERC Resources and Transmission Adequacy and Inadvertent Interchange Data Standards BAL-006 revisions.		
2	Develop business practice standards as requested by the regional and state advisory groups.		
3	Using the NERC Interconnected Operations Services reference document (March 2002, version 1.1) as a guide and starting point, develop business practices as necessary for ancillary services and/or interconnected operating services transactions.		
4	Evaluate the entries on the seams catalog, determine the need for business practice standards and draft the standards requests to develop business practice standards to complement or assist specific seams mitigation efforts as noted in the seams catalog.		
5	Develop business practice standards according to approved and assigned standards requests that complement or assist specific seams mitigation efforts as noted in the seams catalog.		
6	Develop business practice standards as related to the Effectiveness Study of Competitive Wholesale Markets (Congressional Mandate), Electric Energy Market Competition Task Force, Docket No. AD05-17-000, issued by the FERC on October 13, 2005.		
7	Develop and or modify business practices as requested by FERC related to gas-electric coordination issues in Docket No. RM05-5-001, "Standards for business practices for Interstate Natural Gas Pipelines", "Standards for Business Practices for Public Utilities," issued October 25, 2006 and related order on inquiry, "Order Instituting Inquiries into Gas-Electric Coordination Issues," also issued on October 25, 2006.		
8	Develop and/or maintain business practice standards to support gas-electric interdependencies • Respond to requests as received that are related to Docket No. RM05-28-000. • Respond directives related to the conclusions of the NAESB reports submitted in Docket No. RM05-28-000.		
9	Develop business practices as needed to support NAESB Retail Electric Quadrant efforts on demand side management and energy efficiency programs.		

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 WEQ EC and Subcommittee Leadership:

Executive Committee: Kathy York (WEQ EC Chair) and Lou Oberski (WEQ EC Vice Chair)

Standards Review Subcommittee: Raj Rana, Narinder Saini

Seams Subcommittee: Robert Schwermann

Business Practices Subcommittee & Task Forces: Kathy York & Jim Busbin

Electronic Scheduling Subcommittee/Information Technology Subcommittee & Task Forces: Paul Sorenson, J.T. Wood

- Coordinate Interchange: Roman Carter
- OASIS: J.T. Wood and Wendy Weathers

Joint Interchange Scheduling Working Group (JISWG): Bob Harshbarger

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

End Notes:

[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 so as 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.

RE Comments on WEQ annual Plan.txt

From: Rae Mcquade
Sent: Thursday, December 07, 2006 10:04 AM
To: tbilke@midwestiso.org
Cc: weq_board@naesb.org; weq_ec@naesb.org; weq_ec_alt@naesb.org; Veronica Thomason; William P. Boswell; office@naesb.org; Rager,Denise
Subject: RE: Comments on WEQ annual Plan

Terry -

Thank you for sending these comments in and we have forwarded them to our Board members, and they will be posted for the Board meeting on 12-14-06. I would urge you to try to participate in that meeting either in person or by phone, or have a representative from MISO do so. All Board and EC meetings are open and also accessible by phone. Regardless of your ability to participate though, the Board will consider your comments as it determines whether to approve the plan as proposed or amend the plan prior to approval.

For your background, the plan was drafted in late October and sent out for review and comment on November 1 so that comments could be addressed at the November 14 WEQ EC meeting. At the November 14 meeting, the plan was modified and unanimously approved by the WEQ EC to be forwarded to the board for approval. The minutes of that meeting are also posted, and the meeting was transcribed. This does not mean that your comments cannot be considered. Particularly as the plan has not yet been approved by the Board, your comments will be considered as the Board considers it at its upcoming meeting. Moreover, on a quarterly basis, both the Board and the EC consider the annual plans for additional changes and updates. Industry input at any of these meetings is welcome and encouraged.

For process, if the as items are undertaken by the subcommittee to which it is assigned, the subcommittee not only can develop standards for consideration by the organization, but it can also recommend that standards are not needed or are being addressed in other venues -- which can be seen in the recommendation form that a subcommittee prepares for EC consideration.

Best Regards, Rae

Rae McQuade, President, NAESB
1301 Fannin, Suite 2350, Houston, Texas 77002
713-356-0060 (phone), 713-356-0067 (fax),
281-830-7406 (cell), www.naesb.org (web)

From: Terry Bilke [mailto:TBilke@midwestiso.org]
Sent: Thursday, December 07, 2006 8:09 AM
To: naesb@naesb.org
Subject: Comments on WEQ annual Plan

The Midwest ISO stakeholders standards collaboration group reviewed the WEQ annual plan and had the comments below.

Thanks,

Terry Bilke
Midwest ISO
701 City Center Drive
Carmel, IN 46032
317/249-5463

RE Comments on WEQ annual Plan.txt

Item 1c. We question the need for NAESB Business Practice on Operate Within Limits. This is strictly an operational reliability matter where the market should not be involved.

Item 1f. We are uncertain of the value for an all-inclusive joint NERC/NAESB Training Manual. Just as Generator Operators don't need to understand all the NERC standards, we are uncertain how useful information on business practices will be provided to Reliability Coordinators, Balancing Authorities and Transmission Operators.

Item 3aiii. We're uncertain of the need to determine and develop needed business practice standards to support the registry functions currently supported by NERC. Regional Entities are charged with this responsibility and have the Functional Model as an adequate guiding document.

Looking at past annual plans it would appear this plan should be focused on those things that have been specifically requested and NAESB feels it can achieve with available industry resources.

WEQ Annual Plan Additional Comments from MISO.txt

From: weq_ec_alt-owner@mail.naesb.org on behalf of Rae Mcquade [rmcquade@naesb.org]
Sent: Friday, December 08, 2006 10:13 AM
To: weq_board@naesb.org; weq_ec@naesb.org; weq_ec_alt@naesb.org
Subject: WEQ Annual Plan Additional Comments from MISO

Dear All - here are additional comments that were received from MISO on the WEQ Annual Plan for 2007. They will be considered at the upcoming Board meeting. Rae

_____

From: Terry Bilke [mailto:TBilke@midwestiso.org]
Sent: Friday, December 08, 2006 6:18 AM
To: naesb@naesb.org
Subject: WEQ annual Plan

We received additional comments from our members had have a few additional clarifying comments we hope you still consider.

Regarding item 1c.

This item should be reviewed under the new agreement between NERC/NAESB to reaffirm if it is joint or best dealt with by NERC.

Regarding 1f.

If the training manual is just for TLR, it is less problematic than an all encompassing reference. It is a good idea to put information in one reference. However, if the intent is to provide information for operators in one location, it begs the question on the logic to split a process between two organizations as there will now be three references.
Still, we won't prejudge the usefulness of the reference.

Thanks,

Terry Bilke

Midwest ISO

701 City Center Drive

Carmel, IN 46032

317/249-5463

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

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 WGQ Annual Plan

Proposed by the WGQ EC on November 16, 2006

	Item Description	Completion[1]	Assignment[2]
Damage Reporting for Natural Gas Pipeline Facilities			
1	Review and develop standards as appropriate to support posting of information as noted in Docket No. RM06-18-000, Order No. 682. Status: Not Started.	1st Q, 2006	BPS
a.	Review transmission line damage reporting to identify commonality and apply to item 1 above as appropriate. Status: Not Started.	1st Q, 2006	BPS
Electronic Delivery Mechanisms and Related Activities			
2	Review security standards as may be deemed necessary, e.g. Public Key Infrastructure (PKI). Status: Pending Activities of the WEQ EC.	Pending WEQ PKI activities	EDM
3	Develop or amend WGQ technical standards, as appropriate, to address to the DoE Sandia National Laboratories 2006 surety assessment findings and recommendations. Status: Underway.	4th Q, 2007	BPS/EDM
4	Prepare a joint analysis with the retail quadrants for AS2 and AS3 protocols as compared to the NAESB IET. Status: Underway.	TBD	WGQ EDM & Retail TEIS
Contracts Activities			
5	Develop FAQ for Updated NAESB Base Contract for Sale and Purchase of Sale of Natural Gas. Status: Not Started.	1st Q, 2007	Contracts
6	Review and update NAESB Canadian Addendum to the NAESB Base Contract for Sale and Purchase of Sale of Natural Gas to incorporate the recent NAESB Base Contract revisions (Initial Draft prepared by Chair of Contracts SC). Status: Not Started.	2nd Q, 2007	Contracts
Gas-Electric Interdependency			
7	Respond to directives of Docket Nos. RM05-5-001 and RM96-1-027 as related to the NAESB reports submitted in Docket No. RM05-28-000. Status: Not Started.	TBD	TBD
Program of Standards Maintenance & Fully Staffed Standards Work[3]			
	Business Practice Requests	Ongoing	Assigned by the EC[4]
	Continue review against plan for migration to ANSI ASC X12 new versions as needed and coordinate such activities with DISA.	Ongoing	ANSI X12 Subcommittee

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

NORTH AMERICAN ENERGY STANDARDS BOARD

Proposed 2007 WGQ Annual Plan

Proposed by the WGQ EC on November 16, 2006

Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC[4]
Ongoing Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC[4]
Ongoing Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC[4]

Provisional Activities[5]

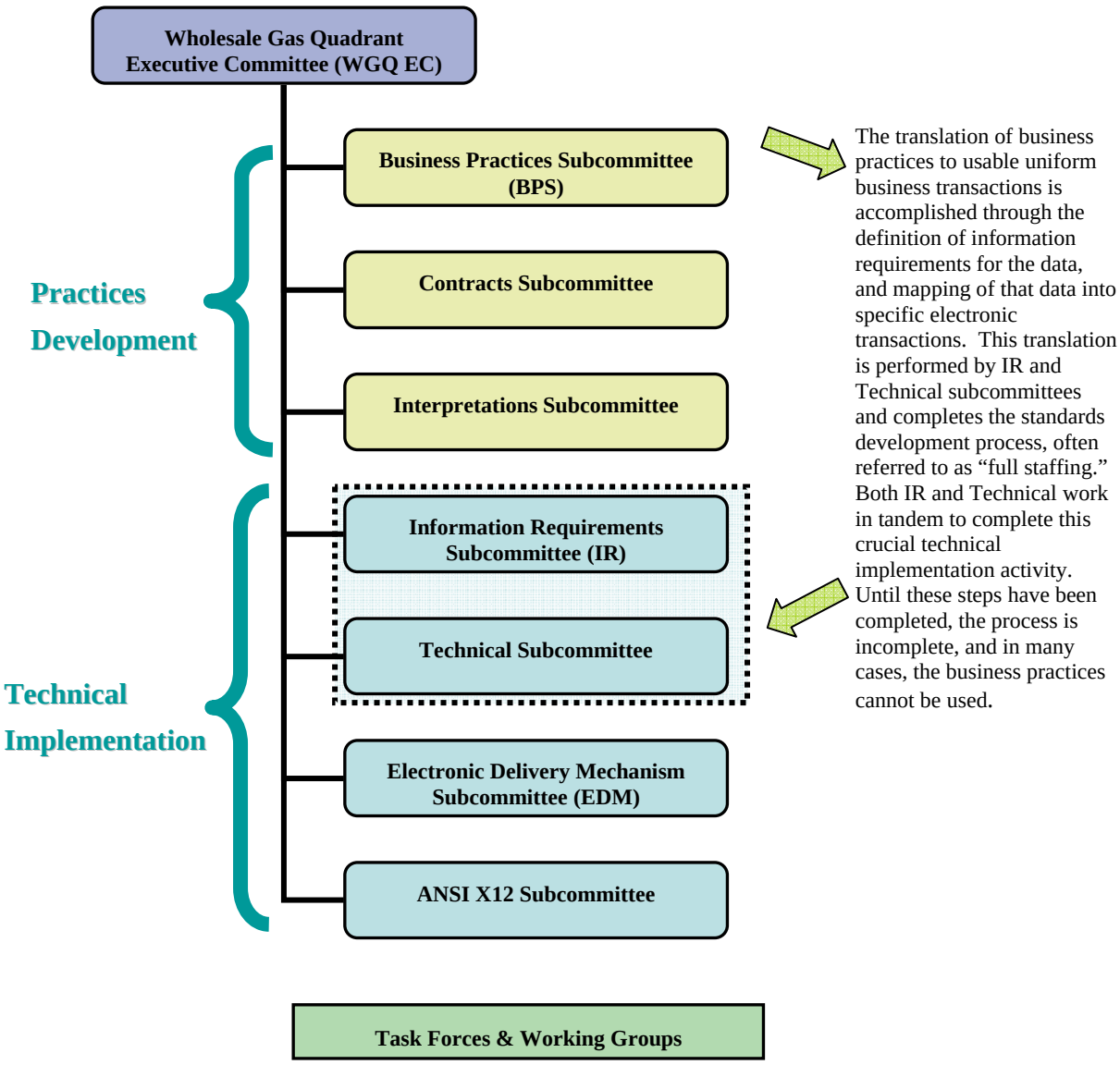
Respond to requests as received that are related to Docket No RM05-1-000 (e-Tariff)

Respond to requests as received that are related to Docket No. AD06-11-000 (Market Transparency Reporting).

Respond to changes as needed to support decisions from the D.C. Court of Appeals decision, No. 04-1183, decided on 11-17-06 vacating FERC Order Nos. 2004, 2004-A, 2004-B, 2004-C and 2004-D as applied to natural gas pipelines.

Notes: (a) Priority is given to action items that are carry-overs from the 2006 Annual Plan.
(b) Any new activity should be preceded by a request from the submitter after which the annual plan will be revisited. The provisional items would only be addressed after a request is submitted or an order is issued by the FERC.

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 WGQ EC and Subcommittee Leadership:

Executive Committee: Jim Buccigross, Chair and Mike Novak, Vice-Chair

Business Practices Subcommittee: Kim Van Pelt, Tina Burnett, Dolores Chezar and Richard Smith

Information Requirements Subcommittee: Dale Davis

Technical Subcommittee: Kim Van Pelt

Contracts Subcommittee: Keith Sappenfield

Electronic Delivery Mechanism Subcommittee: Leigh Spangler, Christopher Burden

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

Interpretations Subcommittee: Paul Love

End Notes:

[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 so as 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] This work is considered routine maintenance and thus the items are not separately numbered.

[4] The EC assigns maintenance of existing standards on a request by request basis.

[5] To the extent that it is determined that any of the provisional activities should be worked upon during the year as a result of a specific request for standards development or a FERC action, the Board has the discretion to modify the annual plan. Additionally, provisional activities will remain on the Annual Plan for one year pending the filing of a formal request or a decision to add them to the plan as active items.

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

December 8, 2006
For Inclusion in the 12-14-06 board Book

TO: Materials for Board of Directors Meeting 12-14-06

FROM: Rae McQuade

RE: Managing Committee Actions on Board Resolutions for December 14, 2006

Dear Board Members,

The Managing Committee met via conference call and email and determined unanimously to support the following action -- Best Regards, *Rae*

2007 ANNUAL PLANS

WHEREAS, under the guidance of each Quadrant Executive Committee the proposed 2007 Annual Plans were developed,

WHEREAS, each Quadrant Executive Committee approved its annual plan for 2007 and presents them to the Board for approval, and

WHEREAS, under Article III, Section 4 of the Certificate of Incorporation of NAESB requires that the Annual Plan(s) of the organization be approved by the Board of Directors through a simple majority vote;

BE IT RESOLVED, that the Board of Directors of NAESB approves the Annual Plans of each of the four Quadrants for 2007.

TAB 8

FINANCIAL REPORT & MEMBERSHIP REPORTS

This section includes:

- Membership Report and Statistics
- Financial Reports YTD for 2006
- 2007 Proposed Budget
- Motion to adopt the proposed budget
- Motion to extend promotional dues program

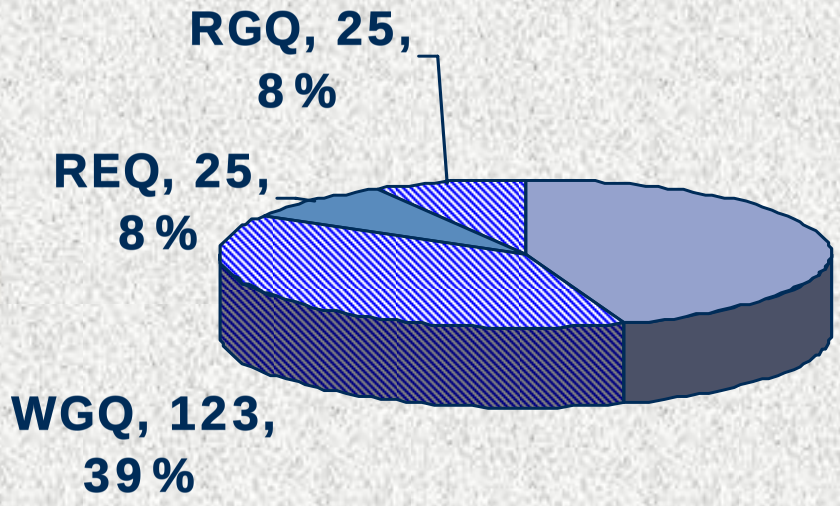
The material presented is background information for the discussion of agenda item 6.

For the membership report and the 2006 financial report, the material presented is for informational and discussion purposes with the no action expected of the board.

For the 2007 proposed budget, the budget was approved by the Managing Committee, and the Board will be asked to support the Managing Committee's direction on the 2007 proposed budget through a simple majority vote.

For the promotional dues program, a motion is presented that the Managing Committee also unanimously endorsed. The Board will be asked to vote via a supermajority vote to support continuing the promotional dues program.

North American Energy Standards Board
10/30/06



Membership Profile

November 30, 2006

Total Membership

313

Quadrant Statistics	WEQ	WGQ	REQ	RGQ	Total
Membership YE 2005	140	123	28	28	319
Net Change	0	0	-3	-3	-6
Change in Quadrant	0	0	0	0	0
Membership YTD	140	123	25	25	313

North American Energy Standards Board Membership List
As of November 30, 2006

NAESB Membership Statistics – Changes by Quadrant for 2006 as of November 30, 2006

NAESB Membership Report - Quadrant/Segment Membership Analysis		Number of Members
WGQ Segments	**Total**	**123**
	End Users	18
	Distributors	26
	Pipelines	38
	Producers	13
	Services	28
REQ Segments	**TOTAL**	**25**
	End Users	4
	Distributors	12
	Services	5
	Suppliers	4
RGQ Segments	**TOTAL**	**25**
	End Users	3
	Distributors	11
	Services	5
	Suppliers	6
WEQ Segments	**TOTAL**	**140**
	End Users	10
	Distributors	23
	Transmission	45
	Generation	31
	Marketers	28
	None Specified	3

North American Energy Standards Board Membership List
As of November 30, 2006

WEQ	New Members:	11
	South Carolina Electric & Gas Company, SUEZ Energy Marketing NA, Inc., Hydro One Networks, Powerex Corp., Deseret Generation & Transmission Co-operative, MidAmerican Energy Company, South Carolina Electric & Gas Company, California Department of Water Resources, Allegheny Energy, Inc., Reliant Energy Services, Sierra Pacific Resources	
	Member Resignations:	11
	DTE Energy, The Boeing Company, Cinergy, Calpine Corporation, Entergy Services, Inc., Oglethorpe Power Corporation, Minneapolis Consulting Group, Consumers Energy Company, Sunflower Electric Power Corporation, Duke Energy Americas, LLC (DEA), ITC Transmission	
WGQ	New Members:	12
	Cheniere LNG Marketing, Inc., DTE Energy Trading, Inc., Maquarie Cook Energy, LLC, Mirant Energy Trading, LLC, ONEOK, Pemex Gas Y Petroquimica Basia, Vega Energy Partners, Ltd., FPL Energy Power Marketing, Inc., J.P. Morgan Ventures Energy Corp., Citigroup Energy, Inc., American Public Gas Association, Hess Corporation	
	Member Resignations:	12
	Cinergy-regulated, Enbridge Offshore Pipelines, LLC, Oxadel Consulting, LLC, Pemex Gas Y Petroquimica Basia, Cinergy, Kerr-McGee Oil and Gas Company, Powerex Corp., Portland General Electric, SolArc Inc., Cinergy Marketing and Trading, Telvent, NJR Energy Services Company	
REQ	New Members:	1
	TXU Electric Delivery	
	Member Resignations:	4
	Savannah Electric and Power Company, Calpine Energy Services, LP, Cinergy Services, Inc., Defense Energy Support Center	
RGQ	New Members:	1
	Interstate Gas Supply	
	Member Resignations:	4
	R.J. Rudden Associates, Inc., SunGard EnForm Consulting, Duke Energy Gas Transmission, Union Gas	
TOTAL	New Members	25
	Member Resignations:	31

Quadrant		Organization	Segment	Contact	Sub-Segment
Retail Electric Quadrant:	1	Alabama Power	d	Judy W. Ray, Yvette Camp	
	2	Ameren Services Company	d	Patrick Eynon	
	3	Baltimore Gas & Electric Co.	d	Ruth Kiselewich	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	4	Consolidated Edison Company of NY	d	Hollis Krieger	
	5	Constellation NewEnergy, Inc.	d	Sara O'Neill, Peter Kelly-Detwiler, 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	EC Power International	s	Judy Bailey, J. Cade Burks, Jennifer Teel	
	10	Electric Reliability Council of Texas (ERCOT)	s	Sam R. Jones, Rob Connell, Ray Giuliani	
	11	Exelon Energy Delivery	d	Toni Garza	
	12	Gulf Power Company	d	Joel Thomas Kilgore	
	13	MidAmerican Energy	d	James E. Wilson	
	14	Mississippi Power Company	d	Dorman Davis	
	15	Office of Public Advocate, State of Maine	e	Barbara Alexander	
	16	Ohio Consumers Council	e	Randy Corbin	
	17	Pennsylvania Office Of Consumer Advocate	e	Tanya J. McCloskey, Sonny A. Popowsky	
	18	PPL Solutions, LLC	s	James M. Minneman	
	19	Public Service Electric & Gas	d	Terrence Moran	
	20	Southern Company Services	s	Mark S. Jarrett, Yvette Camp	
	21	Structure Group	s	Stacey Wood	
	22	TXU Electric Delivery	d	Tommy Weathersbee, Debbie McKeever	
	23	TXU Energy Retail	su	Felecia Lokey	
	24	Wal-Mart Stores, Inc.	e	Angela Beehler	
	25	Wisconsin Public Service Corporation	d	William L. Bourbonnais, Les Nishida, Ken Thiry	
Wholesale Gas Quadrant:	1	8760	s	Jim Buccigross	
	2	American Electric Power Service Corporation	s	Cathy Szasz	
	3	American Public Gas Association	l	Alonzo Weaver	
	4	Alliance Pipeline LP	pl	Neil Coghlan	
	5	Ameren Corporation	l	Scott Glaeser	
	6	Anadarko Energy Services Company	s	John Bretz, Steve Abbey	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	7	Apache Corporation	pr	Kelley Powell	
	8	Arizona Public Service Company	e	Ken Nordlander, Kelly Daly, Curt Brechtel	
	9	Atmos Energy	pl	Steve Easley	
	10	Ballard Natural Gas, LLC	s	Susan Thibodeaux	
	11	Baltimore Gas & Electric Co.	l	Phil Precht	
	12	Barclays Bank PLC	s	Guy Kern-Martin	
	13	BG LNG Services, LLC	s	Martha Braddy	
	14	Boeing Co., The	e	Tina Burnett	
	15	BP Energy	pr	Bill Benham, Lauren Kaestner	
	16	Bridgeline Gas Marketing	pl	Georgia Blanchard	
	17	Burlington Resources	pr	Paul Keeler	
	18	Calpine Energy Services, LP	e	Janet Dixon, Craig Chancellor	
	19	Cargill Incorporated	s	Kathy Gerken	
	20	Cascade Natural Gas Corporation	l	Mark Sellers-Vaughn	
	21	CenterPoint Energy Gas Resources Corp.	s	James G. Beste	
	22	CenterPoint Energy Gas Transmission Company	pl	Larry Thomas	
	23	CenterPoint Energy Mississippi River Transmission Corporation	pl	Robert Trost	
	24	Chandeleur Pipe Line Company	pl	Janice E. Rogers	
	25	Cheniere LNG Marketing, Inc.	s	Mark Stubbe, Tammy Miller	
	26	Chevron/Texaco	pr	Randy Mills	
	27	Cimarex Energy Co.	pr	Charlotte Baker	
	28	Citigroup Energy Inc.	s	Carrie Southard, Angela Davis	
	29	Columbia Gas Transmission	pl	Carl Levander	
	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 Commodities Group Inc.	s	Lisa Simpkins	
	34	Dauphin Island Gathering Partners	pl	Katie Rice	
	35	Defense Energy Support Center	e	Veronica Jones, Kevin Ahern	
	36	Department of Energy	e	Christopher Freitas	
	37	Dominion Exploration and Production, Inc.	pr	David Ogden, Gary Weaver, Sheri Heslington	
	38	Dominion Resources	l	Craig Columbo	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	39	Dominion Transmission, Inc.	pl	Gary Sypolt, Iris King	
	40	DTE Energy Trading, Inc.	s	Miki Kolobara	
	41	Duke Energy Gas Transmission - Texas Eastern	pl	Richard Kruse	
	42	El Paso Natural Gas	pl	William Griffith	
	43	El Paso Production Company	pr	Susan Lum	
	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	Marjorie Perlman	
	48	Entergy Services, Inc.	e	Laura Berryman, Terry Shields	
	49	Enterprise Products Partners L.P.	pl	Richard W. Porter	
	50	Equitable Gas Company	l	Steve Rafferty	
	51	Equitrans, L.P.	pl	Mina Speicher	
	52	ExxonMobil Gas Marketing	pr	Richard Smith	
	53	Florida Power & Light Company	e	Dona Gussow	
	54	Florida Reliability Coordinating Council	e	Ken Wiley	
	55	FPL Energy Power Marketing, Inc.	e	Michael Jessop	
	56	Gas Transmission Northwest Corp.	pl	Jay Story	
	57	Great Lakes Gas Transmission	pl	Gene Fava	
	58	Group 8760	S	Jim Buccigross	
	59	Gulf South Pipeline	pl	Randy Young	
	60	Hess Corporation	s	Rebecca Batchelder	
	61	H S Resources Inc.	pl	Carol Hall	
	62	Imperial Irrigation District	e	William Rapp	
	63	Iroquois Gas Transmission System	pl	Tom Gwilliam	
	64	J.P. Morgan Ventures Energy Corp.	s	Ike Gibbs	
	65	Kern River Gas Transmission Company	pl	Brenda Horton	
	66	Key Span Energy	l	Dolores Chezar	
	67	Laclede Gas Co.	l	Kenneth Neises	
	68	Latitude Technologies	s	Leigh Spangler	
	69	Louis Dreyfus Energy Services	s	Mary Ellen Bell, Ruby H.Melton	
	70	Lower Colorado River Authority	e	Mickey Bell	
	71	Macquarie Cook Energy, LLC	s	Angela Jones	
	72	Marathon Oil Company	pr	Robin Perrine	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	73	Mewbourne Oil Company	pr	Michael F. Shepard	
	74	Mirant Energy Trading, LLC	e	Laura Trautman, Nicole Daggs	
	75	National Fuel Gas Distribution	l	Michael Novak	
	76	National Fuel Gas Supply Corp.	pl	Joseph Kardas	
	77	Natural Gas Pipeline Co of America	pl	Paul Love	
	78	National Grid USA	l	Bruce Garcy	
	79	New Jersey Natural Gas Company	l	Douglas C. Rudd	
	80	Nicor Gas	l	Mary Wolosek, Shirley Holmes	
	81	NiSource Inc.	l	George Simmons	
	82	Northern Natural Gas	pl	Mary Darveaux	
	83	Northwest Natural Gas Company	l	Randolph Friedman	
	84	NOVA Gas Transmission Ltd.	pl	Doug Miller	
	85	Occidental Energy Marketing Inc. (OEMI)	pr	Melinda Duncan	
	86	ONEOK	l	Patricia Anderson	
	87	ONEOK Partners GP, LLC	pl	Scott Coburn	
	88	Pacific Gas & Electric	l	John Breen	
	89	Panhandle Eastern Pipe Line	pl	William Grygar, Kim Van Pelt	
	90	PECO Energy Co.	l	Reed R. Horting, Amy Hamilton	
	91	Pemex Gas Y Petroquimica Basica	s	Juan Enrique Gonzalez Azuara	
	92	Peoples Gas Light & Coke Co.	l	Tom Zack	
	93	Platts	s	Bill Murphy	
	94	Portland Natural Gas Transmission System	pl	David Haag	
	95	PPL EnergyPlus, LLC	e	Anne Lovett	
	96	Public Service Electric & Gas	l	David Wohlfarth	
	97	Questar Pipeline Co.	pl	Scott Hansen	
	98	Quorum Business Solutions Inc.	s	Mark Davis	
	99	Sabine Pipe Line LLC	pl	Jan Rogers	
	100	Salt River Project Agricultural Improvement & Power District	e	Diane McVicker	
	101	SCANA Corporation	pl	Jacquelyn Gettle	
	102	Sempra Energy - Southern California Gas Co.	l	Lee Stewart, Rodger Schwecke	
	103	Sequent Energy Management, L.P.	s	Pat Metteauer	
	104	Southern California Edison Company	e	Roman Bakke	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	105	Southern Company Services, Inc.	e	Alan Kilpatrick	
	106	Southern Natural Gas Co.	pl	Renee Hyde, Tracey Nicholson	
	107	Southern Star Central Gas Pipeline	pl	James L. Harder, Dale Sanders	
	108	Southwest Gas Corporation	l	Larry Black	
	109	SunGard	s	Deborah Feliciano, Lucia Nail	
	110	Tennessee Gas Pipeline Company	pl	Larry Smith, Mark Gracey	
	111	Tennessee Valley Authority	e	Valerie Crockett	
	112	Texas Gas Transmission, LLC	pl	Jeff Bittel	
	113	Tiger Natural Gas	s	Bob Smith	
	114	TransCanada Pipelines	pl	Doug Miller	
	115	Trinity Apex Systems	s	Richard (Dick) Couron	
	116	UBS Energy LLC	s	Suzanne Calcagno	
	117	Vector Pipeline L.P.	pl	Amy Bruhn	
	118	Vega Energy Partners, Ltd.	s	Lori Leeder	
	119	Washington Gas Light Co.	l	Adrian Chapman, Ken Yagelski	
	120	Westfield Gas & Electric Light Dept.	l	Joyce Bodak	
	121	Williams Gas Pipeline	pl	Dale Davis, Ron Mucci	
	122	Williston Basin Interstate Pipeline	pl	Keith Tiggelaar	
	123	Wisconsin Public Service Corporation	l	Ronald G. Mosnik	
Wholesale Electric Quadrant:	1	ACES Power Marketing LLC	m	Roy J. True	muni
	2	Alabama Electric Cooperative, Inc.	d	William Ronald Graham	muni
	3	Allegheny Energy, Inc.	g	Terri Grabiak	iou
	4	Ameren Services	m	Shawn Schukar	iou
	5	American Electric Power Service Corp.	m	Barbara Radous, Joseph Hartsoe, Phil Cox	iou
	6	American Electric Power Service Corp.	t	John Stough	iou
	7	American Municipal Power - Ohio, Inc.	d	Pat Frazier, Chris Norton	muni
	8	American Public Power Association	d	Allen Mosher	muni
	9	American Transmission Company LLC	t	Julie Voeck	itc

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	10	Aquila, Inc.	g	Tom Saitta	iou
	11	Arizona Public Service Company	t	Mark W. Hackney	iou
	12	Basin Electric Power Cooperative	t	Dan Klempel	muni
	13	Basin Electric Power Cooperative	m	David Raatz	nd
	14	Basin Electric Power Cooperative	g	Jason Doerr	muni
	15	Bonneville Power Administration	d	Sydney D. Berwager	other
	16	Bonneville Power Administration	g	Francis Halpin	fed
	17	Bonneville Power Administration	m	Brenda Anderson	fed
	18	Bonneville Power Administration	t	Barbara Rehman	fed
	19	BP America Inc.	e	Jeanne Zaiontz	lind
	20	California Department of Water Resources	g	William (Bill) Forsythe	fed
	21	Central Electric Power Cooperative	d	Arthur Fusco	muni
	22	ChevronTexaco Energy Research and Technology	e	Carol Guthrie	sgen
	23	Cleco Power, LLC	t	Keith Comeaux	iou
	24	Comprehensive Energy Services	e	Jim Templeton	enduse
	25	Conectiv Energy Supply, Inc.	g	Gloria Ogenyi, Paul Dwyer	merc
	26	Conectiv Energy Supply, Inc.	m	Gloria Ogenyi, Paul Dwyer	iou
	27	Consolidated Edison Company of New York, Inc.	t	Scott Butler	iou
	28	Constellation Generation Group	g	Michael Gildea	merc
	29	Consumers Energy Company	d	Andrew C. Dotterweich, Frank Johnson	iou
	30	Dairyland Power Cooperative	t	Chuck Callies	muni
	31	Department of the Interior, Bureau of Reclamation	g	Deborah M. Linke	fed
	32	Deseret Power Electric Co-op	g	Curt Winterfeld	muni
	33	Dominion Energy Marketing, Inc.	g	Lou Oberski	iou
	34	Duke Energy Americas, LLC (DEA)	g	Walt Yeager	iou
	35	Duke Energy Corp.	d	Ollie Frazier	iou
	36	Dynegy Power Marketing, Inc.	g	Barry Huddleston	merc
	37	Edison Electric Institute	n	David Owens, Dave Dworzak	N
	38	Edison Mission Marketing & Trading,Inc.	g	William Roberts	merc
	39	Electric Reliability Council of Texas (ERCOT)	n	Sam R. Jones, Ray Giuliani	n
	40	ElectriCities of North Carolina (North Carolina Eastern Municipal Power Agency)	g	Gregory Locke	muni

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	41	Electricity Consumers Resource Council (ELCON)	e	John Anderson, John Hughes	lind
	42	Empire District Electric Company, The	t	Bary K. Warren	iou
	43	Energy East Management Corporation	t	Marjorie Perlman	iou
	44	Entergy Services, Inc.	t	Edward J. Davis	iou
	45	Exelon Corporation - PECO Energy	d	John McCawley	iou
	46	Exelon Generation - Power Team	m	Jack Crowley	iou
	47	ExxonMobil Gas Marketing	e	Steve Sayuk, Mark Scheel, Mark Ulrich	sgen
	48	FirstEnergy Solutions Corp.	m	Edward C. Stein	iou
	49	Florida Municipal Power Agency	g	Robert C. Williams	muni
	50	Florida Municipal Power Agency	d	Steven H. McElhaney	muni
	51	Florida Power & Light Company	m	Gerry Yupp, Raleigh Nobles	iou
	52	Florida Power & Light Company	t	Marty Mennes	iou
	53	Florida Reliability Coordinating Council	t	Linda D. Campbell	at large
	54	Georgia Transmission Corporation	t	Patrick McGovern, Mark Temple	muni
	55	Hydro One Networks	t	Mark Graham	itc
	56	Hydro – Quebec Transenergie	t	Victor Bissonnette	fed
	57	Idaho Power Company	t	Tessia Park	iou
	58	Imperial Irrigation District	m	Kim M. Kiener, Frank M. Barbera	muni
	59	Imperial Irrigation District	t	Juan Carlos Sandoval, Javier Esparza	muni
	60	Indiana Muncipal Power Agency	g	Dick Foltz	muni
	61	Maryland Peoples Counsel	e	Mike Tomczak	
	62	Michigan Electric Transmission Company LLC	t	Charles V. Waits	itc
	63	Michigan Public Power Agency	d	James R. Nickel, Daniel E. Cooper	muni
	64	MidAmerican Energy Company	m	Norman B. Stratton	iou
	65	Midwest Independent Transmission System Operator	n	William (Bill) Phillips	n
	66	Missouri River Energy Services	d	Brian Zavesky	muni
	67	Modesto Irrigation District	t	Roger Van Hoy	muni
	68	National Association of Regulatory Utility Commissioners	e	Lou Ann Westerfield	reg
	69	National Grid USA	t	Herbert Schrayshuen, Peter Flynn, Mary Ellen Paravalos	itc

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	70	National Rural Electric Cooperative Assoc.	d	Barry Lawson	muni/coop
	71	Navigant Consulting, Inc.	m	Richard G. Smead	at large
	72	New York State Dept. of Public Service	e	William Heinrich	reg
	73	New York State Reliability Council	d	P. Donald Raymond	at large
	74	North American Electric Reliability Council	d	Donald M. Benjamin, Larry Kezele, Tom Vandervort, Bill Blevins	at large
	75	North Carolina Electric Membership Corporation	d	David Beam	muni
	76	North Carolina Electric Municipal Power Agency #1	m	Clay A. Norris	muni
	77	North Carolina Electric Municipal Power Agency #1	d	Andrew Fusco	muni
	78	Northeast Utilities Service Company	t	David Boguslawski, Calvin A. Bowie	iou
	79	Ohio Consumers' Counsel	e	Randy Corbin	comres
	80	Ontario Power Generation	g	Barry Green	merc
	81	Ontario Power Generation	m	Renzo Marcuzzi	niou
	82	Open Access Technology International, Inc.	e	Kevin Burns	at large
	83	Open Access Technology International, Inc.	t	Paul R. Sorenson	at large
	84	Otter Tail Power Company	t	Daryl Hanson, Larry Larson	iou
	85	PacifiCorp	m	Edison G. Elizeh	iou
	86	PacifiCorp	g	Greg Maxfield	iou
	87	PacifiCorp	t	Jim Hicks, Mark Maher	iou
	88	PHI Power Delivery	t	Ken Gates	iou
	89	Platte River Power Authority	t	Terry L. Baker	muni
	90	Portland General Electric	m	Terri Peschka	iou
	91	Powerex Corp	m	Michael L McWilliams	fed
	92	PPL Electric Utilities Corporation	t	Ray Mammarella	iou
	93	Progress Energy (Regulated)	m	James Eckelkamp	iou
	94	Progress Energy	t	Verne Ingersoll, Phillip W. Lewis	iou
	95	PSEG Power LLC	g	Thomas M. Piascik	merc
	96	PSEG Energy Resources and Trade LLC	m	James D. Hebson	io
	97	Public Service Electric and Gas Company	d	Colin J. Loxley	iou
	98	Public Service Electric and Gas Company	t	Jeffrey C. Mueller	iou

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	99	Puget Sound Energy, Inc.	t	George Marshall, Bob Harshbarger	niou
	100	Qualedi, Inc.	g	Stephen A. Morocco	at large
	101	Reliant Energy Services	g	Gary A. Hinners	merc
	102	Sacramento Municipal Utility District	d	Robert D. Schwermann	muni
	103	Sacramento Municipal Utility District	g	Thomas Ingwers	muni
	104	Salt River Project Agricultural Improvement and Power District	d	Wendy Weathers, Mark B. Bonsall	other
	105	Salt River Project Agricultural Improvement and Power District	t	Steve Cobb	fed
	106	Seminole Electric Cooperative, Inc.	m	Lane Mahaffey	muni
	107	Sierra Pacific Resources	t	Patricia Englin	iou
	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	Thomas Watson	iou
	113	Southern Company Services, Inc.	d	Garey Rozier, Mark Crosswhite, 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	iou
	117	Southwest Transmission Cooperative, Inc.	t	Larry D. Huff	muni
	118	Southwest Power Pool	t	Carl Monroe	iou
	119	Southwestern Power Administration	t	Stanley L. Mason	fed
	120	SUEZ Energy Marketing NA, Inc.	m	Ken Lackey, Cesar Seymour	niou
	121	Tenaska, Inc.	g	Scott Helyer	merc
	122	Tennessee Valley Authority	d	Cindy Herron	other
	123	Tennessee Valley Authority	g	Kathy York	fed
	124	Tennessee Valley Authority	m	Clyde Harmon	fed
	125	Tennessee Valley Authority	t	Mitchell Needham, W. Terry Boston	fed
	126	TRANS-ELECT, INC.	t	Paul D. McCoy	itc
	127	Tri-State Generation and Transmission Association, Inc.	t	Bruce Sembrick	muni
	128	TXU Energy	m	Elizabeth Howland, Mike	nio

North American Energy Standards Board Membership List
As of November 30, 2006

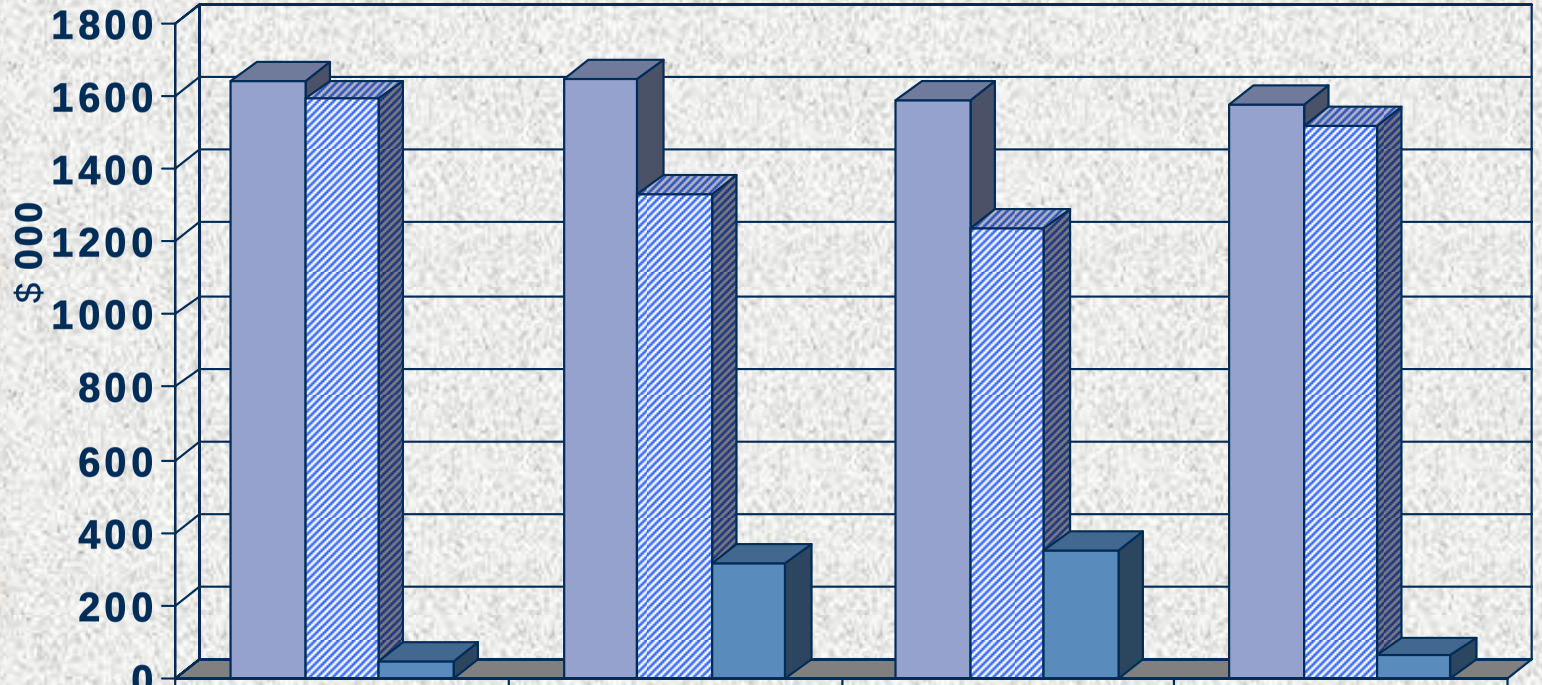
Quadrant		Organization	Segment	Contact	Sub-Segment
				Grim	
	129	TXU Electric Delivery	t	Ellis Rankin, Deborah McKeever	iou
	130	UBS Energy LLC	m	Suzanne Calcagno	niou
	131	Vermont Public Power Supply Authority	g	William J. Gallagher	muni
	132	Western Area Power Administration	t	Mark Fidrych	fed
	133	Western Area Power Administration	m	Jeffrey Ackerman	fed
	134	Western Electricity Coordinating Council	t	Michael Wells, Louise McCarren	at large
	135	We Energies (Wisconsin Electric)	d	Linda Horn	iou
	136	We Energies (Wisconsin Electric)	g	James R. Keller	iou
	137	Williams Power Company	g	Ron Mucci	at large
	138	Wisconsin Public Power Inc.	d	Mike Stuart	muni
	139	Wisconsin Public Service Corporation	g	William Bourbonnais, Charles W. Severance, Neal Balu	iou
	140	Xcel Energy Inc.	m	David Lemmons	iou
Retail Gas Quadrant:	1	AGL Resources Inc.	d	Katrina Bond	
	2	Baltimore Gas & Electric Company	d	Phil Precht	
	3	Center Point Energy Minnegasco	su	Andrea Newman	
	4	Commerce Energy Group	s	Greg Lander	
	5	Dominion Retail, Inc.	su	Richard A. Zollars	
	6	Energy Services Group, Inc.	s	George Behr	
	7	Exelon Energy	su	Sheree M. Petrone	
	8	Indiana Office of Utility Consumer Counselor	e	Matthew Parsell	
	9	International LNG Alliance	s	David Sweet	
	10	Interstate Gas Supply	su	Elizabeth Clothier	
	11	Latitude Technologies	s	Leigh Spangler	
	12	National Fuel Gas Distribution Corporation	d	Mike Novak	
	13	Niagara Mohawk	d	James Dillon	
	14	Northern Indiana Public Service Company (NiSource, Inc.)	d	Mark T. Maassel	
	15	Ohio Consumer's Counsel	e	Bruce M. Hayes	
	16	Pennsylvania Office of Consumer Advocate	e	Tanya J. McCloskey	
	17	Peoples Gas System	d	Rachel Gebhardt	

North American Energy Standards Board Membership List
As of November 30, 2006

Quadrant		Organization	Segment	Contact	Sub-Segment
	18	Philadelphia Gas Works	d	Joe Stengel, Craig White	
	19	Public Service Electric & Gas Company	d	Terrence Moran	
	20	Sprague Energy Corp.	su	Kathy Fudali	
	21	Systrends USA	s	Dave Darnell	
	22	UBS Energy LLC	su	Suzanne Calcagno	
	23	UGI Utilities, Inc.	d	Paul Szykman	
	24	Wisconsin Public Service Corporation	d	William Bourbonnais, Glen R. Schwalbach, Les Nishida	
	25	Xcel Energy	d	Don Basler	

North American Energy Standards Board
Board of Directors Meeting – 12-14-06

As of October 2006 Accrual Based Income and Expenses



	2006 Budget	YTD Oct Budget	YTD Oct Actuals	YE Est. 2006
Income	1639	1648	1588	1578
Expense	1591	1330	1236	1516
Net Income	48	318	352	62

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

December 8, 2006

TO: NAESB Board of Directors

FROM: Rae McQuade, Darla Wishart

RE: NAESB Financial Report as of October 31, 2006

Key financial highlights:

- **December 13, 2005:** The Board of Directors approved the 2006 budget: $1,639,100 for revenues to be collected in 2006 based primarily on 2005 dues collections, and $1,591,015.23 for expenses expected in 2006, with an expected net income of $48,084.77.
- **December 31, 2005**: Total assets and total liabilities and equity for yearend 2005 were $780,413.45. Accounts Receivables related to outstanding membership dues were $211,000. Our net income at yearend was $-40368.15 (Expenses $1,584,919.62 and net revenue of $1,544,511.47). The budget for 2005 was $ 1,858,120 – so while we clearly came under in expenses by $273,201, we did not realize expected revenues of $313,609, with a resulting negative retained earnings for 2005 of -$40,368. On a cash basis, we had an ending balance as of December 31 of $521,905.
- **January 31, 2006:** Total assets and total liabilities and equity for the month of January were $610,066.26. Accounts Receivables related to outstanding membership dues were $124,500. Our net income in January is $951,879.94 (Expenses $187,671.95 and net revenue of $1,139,551.89). Compared to this period last year, we have increased revenue by $61,832. Our expenses are $1,082 less than budgeted for the month. On a cash basis, we have an ending balance as of January 31 of $443,319.
- **February 28, 2006:** Total assets and total liabilities and equity for the month of February were $493,303.77. Accounts Receivables related to outstanding membership dues were $74,000.00. Our net income year to date as of February is $826,049 (Expenses $322,884 and net revenue of $1,148,934). Compared to this period last year, we have a net income decrease of $-81,961 (expenses were $11,701 higher in 2006 YTD and revenues were $70,261 lower YTD. Our expenses are $8,461.06 higher than budgeted year to date and revenues are $17,199.44 lower than expected YTD – yielding a net income within 3% of expected ($826,049 actual versus $851,709.9 budgeted. On a cash basis, we have an ending balance as of February 28 of $374,493.
- **March 31, 2006**: Total assets and total liabilities and equity for the month of March were $552,945.61. Accounts Receivables related to outstanding membership dues were $180,500.00, of which $91,000 is still outstanding at the end of April, and $15,000 is more than 90 days in arrears. Our net income year to date as of March is $821,746.60 (Expenses $446,909.80 and net revenue of $1,148,934). Compared to this period last year, we have a net income increase of $55,136 (expenses were $13,419 lower in 2006 YTD and revenues were $41,717 higher YTD). Our expenses are 1.5% higher than budgeted for YTD ($446,909.80 actual compared to $440,092.56 budgeted), which is offset by revenues being 0.2% higher ($1,268,656.40 actual to $1,265,699.97 budgeted). As such, the net income is within 0.5% of the budget – $821,746 actual compared to $825,607 budgeted. On a cash basis, we have an ending balance as of March 31 of $329,942.
- **April 30, 2006:** Total assets and total liabilities and equity for the month of April were $507,831.91. Accounts Receivables related to outstanding membership dues were $146,000.00, of which $91,000 is still outstanding at the end of April, and $25,000 is more than 90 days in arrears, of which 3 credit memos have been written and the other two memberships have indicated that they are going to process the membership invoice through their accounting systems. Our net income year to date as of April is $750,380.29 (Expenses $556,602.61 and net revenue of $1,306,982.90). Compared to this period last year, we have a net income increase of $100,690 (expenses were $32,921 lower in 2006 YTD and revenues were $67,769 higher YTD). Our expenses are 3.3% lower than budgeted for YTD ($556,602.61 actual compared to $575,761.72 budgeted), which is augmented by revenues being 0.8% higher ($1,306,982.90 actual to $1,296,516.64 budgeted). As such, the net income is 4.1% higher than budgeted – $750,380.29 actual compared to $720,754.92 budgeted. On a cash basis, we have an ending balance as of April 30 of $320,465.

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

- **May 15, 2006**: Dishongh, Jankowski and Eubank PC filed an extension to provide the 2005 federal tax report to the IRS in November 2006 after we have completed the financial review of the 2005 statements. Without an extension, the 2005 federal tax return is due May 15.
- **May 31, 2006:** Total assets and total liabilities and equity for the month of May were $928,647. Accounts Receivables related to outstanding membership dues were $615,000, of which $15,000 is 90 days or more in arrears, $50,500 is 60 days in arrears, $50,000 is 30 days in arrears, and $499,500 is less than 30 days in arrears. Our net income year to date as of May is $827,542 (Expenses $666,301 and net revenue of $1,493,844). Compared to this period last year, we have a net income increase of $141,880 (expenses were $57,077 lower in 2006 YTD and revenues were $84,803 higher YTD). Our expenses are 5% lower than budgeted for YTD ($666,301 actual compared to $701,430 budgeted), which is augmented by revenues being 12% higher ($1,493,844 actual to $1,330,833 budgeted). As such, the net income is 31% higher than budgeted – $827,542 actual compared to $629,402 budgeted. On a cash basis, we have an ending balance as of May 31, of $274,138.
- **June 30, 2006:** Total assets and total liabilities and equity for the month of June were $896,778.59. Accounts Receivables related to outstanding membership dues were $379,500, of which $10,000 is 90 days or more in arrears, $50,500 is 60 days in arrears, $23,500 is 30 days in arrears, and $295,500 is 30 days or less in arrears. Our net income year to date as of June is $757,186.21 (Expenses $785,505.22 and net revenue of $1,542,691.43). Compared to this period last year, we have a net income increase of $194,584 (expenses were $84,360 lower in 2006 YTD and revenues were $110,224 higher YTD). Our expenses are 5% lower than budgeted for YTD ($785,505 actual compared to $827,100 budgeted), which is augmented by revenues being 0.8% higher ($1,542,691 actual to $1,530,699 budgeted). As such, the net income is 7.6% higher than budgeted – $757,186 actual compared to $703,599 budgeted. On a cash basis, we have an ending balance as of April 30 of $480,354.
- **July 31, 2006:** Total assets and total liabilities and equity for the month of July were $792,509.05. Accounts Receivables related to outstanding membership dues were $299,500, of which $15,500 is 90 days or more in arrears, $45,000 is 60 days in arrears, $13,500 is 30 days in arrears, and $225,500 is 30 days or less in arrears. Our net income year to date as of July is $620,525.84 (Expenses $914,879.05 and net revenue of $1,535,404.40). Compared to this period last year, we have a net income increase of $121,105 (expenses were $74,639 lower in 2006 YTD and revenues were $46,466 higher YTD). Our expenses are 4% lower than budgeted for YTD ($914,879.05 actual compared to $952,769.20 budgeted), which is offset by revenues being 4.9% lower ($1,535,404.89 actual to $1,615,016.65 budgeted). As such, the net income is 6.3% lower than budgeted – $620,525.84 actual compared to $662,247.45 budgeted. On a cash basis, we have an ending balance as of July 31 of $458,357.
- **August 31, 2006:** Total assets and total liabilities and equity for the month of August were $721,780.47. Accounts Receivables related to outstanding membership dues were $270,000, of which $40,000 is 90 days or more in arrears, $105,500 is 60 days in arrears, $25,000 is 30 days in arrears, and $99,500 is 30 days or less in arrears. Our net income year to date as of August is $545,525.79 (Expenses $1,017,010.46 and net revenue of $1,562,536.25). Compared to this period last year, we have a net income increase of $123,430 (expenses were $97,505 lower in 2006 YTD and revenues were $25,925 higher YTD). Our expenses are 5.7% lower than budgeted for YTD ($1,017,010.46 actual compared to $1,078,438.36 budgeted), which is offset by revenues being 4.6% lower ($1,562,536.25 actual to $1,638,083.32 budgeted). As such, the net income is 2.5% lower than budgeted – $545,525.79 actual compared to $559,644.96 budgeted. On a cash basis, we have an ending balance as of August 31 of $453,944.
- **September 12, 2006**: Dishongh, Jankowski and Eubank PC began the financial review of the 2005 statements.
- **September 30, 2006:** Total assets and total liabilities and equity for the month of September were $721,780.47. Accounts Receivables related to outstanding membership dues were $240,500, of which $35,000 is 90 days or more in arrears, $109,000 is 60 days in arrears, $51,000 is 30 days in arrears, and $45,500 is 30 days or less in arrears. Our net income year to date as of September is $449,597.77 (Expenses $1,131,591.36 and net revenue of $1,581,189.13). Compared to this period last year, we have a net income increase of $135,716 (expenses were $101,275 lower in 2006 YTD and revenues were $34,441 higher YTD). Our

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

expenses are 6% lower than budgeted for YTD ($1,131,591.36 actual compared to $1,204,107.52 budgeted), which is offset by revenues being 4% lower ($1,581,189.13 actual to $1,647,649.99 budgeted). As such, the net income is 1.4% higher than budgeted – $449,597.77 actual compared to $443,542.47 budgeted. On a cash basis, we have an ending balance as of September 30 of $447,560.

- **October 31, 2006:** Total assets and total liabilities and equity for the month of October were $1,035,732.31. Accounts Receivables related to outstanding membership dues were $574,500, of which $60,500 is 90 days or more in arrears, $35,000 is 60 days in arrears, $20,500 is 30 days in arrears, and $70,000 is 30 days or less in arrears. $388,500 of AR is for dues billed but not due until January 1, 2007. Our net income year to date as of October is $352,028.45 (Expenses $1,236,205.56 and net revenue of $1,588,234.01). Compared to this period last year, we have a net income increase of $146,857 (expenses were $101,205 lower in 2006 YTD and revenues were $45,651 higher YTD). Our expenses are 7% lower than budgeted for YTD ($1,236,205.56 actual compared to $1,329,776.68 budgeted), which is offset by revenues being 4% lower ($1,588,234.01 actual to $1,648,466.66 budgeted). As such, the net income is 10.5% higher than budgeted – $352,028.45 actual compared to $318,689.98 budgeted. On a cash basis, we have an ending balance as of October 31 of $429,619.
- **November 15, 2006**: Dishongh, Jankowski and Eubank PC completed the financial review of the 2005 statements. There were no adverse findings nor any recommendations to change the accounting procedures followed by NAESB in preparing financial statements.

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

MEETING STATISTICS

Month	Event	WEQ	WGQ	Retail	Joint	Board
January	7 meetings/35.5 hours	2/10	3/16.5	2/9		
	21 conf. calls/37 hours	5/9	3/4	8/17	1/2	4/5
February	11 meetings/50.5 hours	4/18	5/25.5	2/7		
	12 conf. calls/25.5 hours	5/12.5	1/2	3/7	1/1.5	2/2.5
March	15 meetings/68.5 hours	7/29.5	5/27	2/8		1/4
	17 conf. calls/42 hours	5/13	4/7.5	7/20.5		1/1
April	13 meetings/62 hours	3/11	8/44	2/7		
	15 conf. calls/29 hours	6/13	2/3	5/11		2/2
May	10 meetings/51 hours	4/21	5/25	1/5		
	24 conf. calls/39.5 hours	11/15.5	9/20	3/3		1/1
June	17 meetings/65.5 hours	7/29	5/21.5	3/9		2/6
	10 conf. calls/23 hours	5/12	0/0	4/9.5		1/1.5
July	13 meetings/55.5 hours	8/32	5/23.5	0/0		
	10 conf. calls/17.5 hours	3/4	3/5	4/8.5		
August	9 meetings/38 hours	2/11	4/14	3/13		
	13 conf. calls/29 hours	6/12	3/6	3/10		1/1
September	15 meetings/51 hours	6/23.5	4/15.5	3/7.5		2/4.5
	10 conf. calls/24.5 hours	5/8	1/1	4/15.5		
October	9 meetings/40.5 hours	4/16	3/15	2/9.5		
	10 conf. calls/16 hours	5/7	2/2	2/6		1/1
November	7 meetings/35.5 hours	1/5	5/25/5	1/5		
	9 conf. calls/24 hours	5/13		4/11		
Total	**126 meetings/553.5 hours**	**48/206**	**52/263**	**21/80**		**5/14.5**
	151 calls/307 hours	**65/120**	**28/50.5**	**48/120**	**2/3.5**	**13/15**

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

PRODUCT ACCESS

- **May 17, 2006:** The copyright policy and list of companies with authorized access to our standards is prepared monthly and was sent to all members and interested trade associations. It is updated monthly.
- **November 30, 2006:** Purchases of standards is maintained monthly and can be seen below as of November 30, 2006.
- **December 1, 2006:** The copyright report as of December 1, 2006 is posted on the web site.

Purchases of NAESB Products as of November 30, 2006

Product	J	F	M	A	M	J	J	A	S	O	N	TOTAL
NAESB Home Page Access for Password Protected Area ($3500)					1		1					**2**
NAESB WGQ / REQ / RGQ Internet Electronic Transport Manual, Version 1.0 ($300)										1	1	**2**
WGQ Printed NAESB Business Practice Standards Booklet (1 of 2 or 2 of 2) (Version 1.7) ($100)			3		4	6	2		4			**19**
WGQ Printed NAESB Business Practice Standards Booklet (1 of 2 or 2 of 2) (Version 1.8) ($100)										1	2	**3**
WGQ Base Contract for Sales/Purchases of Natural Gas/FTAA/OBA (Version 1.7) ($50 ea)	3	2		3	7	8	6	7	7			**43**
WGQ Base Contract for Sales/Purchases of Natural Gas/FTAA/OBA (Version 1.8) ($50 ea)									9	16	17	**42**
WGQ Electronic CD-Rom of Standards Manuals (Versions other than 1.7) ($200)	1			1				1				**3**
WGQ Electronic CD-Rom of Standards Manuals (Version 1.7) ($150/$300)	14			1	19[1]	3	3	2		11	2	**55**
WGQ Electronic CD-Rom of Standards Manuals (Version 1.8) ($150/$300)										20	6	**26**
WEQ Printed NAESB Business Practice Standards Booklet ($100)					2	2					1	**5**
WEQ Electronic CD-Rom of Standards Manuals ($150/$300)					11	2		1		1		**15**
NAESB WGQ Contracts Course CD-Rom				9						47	17	**73**
NAESB WGQ Version 1.8 (Advanced Release of Final Actions) ($50)			1									**1**
Printed REQ/RGQ Model Business Practices Booklet ($100)					2							**2**
NAESB REQ/RGQ Model Business Practices CD-Rom ($150/$300)												**0**
Total	**18**	**2**	**4**	**14**	**46**	**21**	**12**	**11**	**20**	**97**	**46**	**291**

[1] 18 copies issued to course participants at May 24-25, 2006 WGQ Business Practice Standards: Updates and Changes (cost covered in registration fees).

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

Financial Report October 2006 – Accrual Based

Balance Sheet

Assets	
Current Assets	$434,477.33
Accounts Receivable	$574,500.00
Fixed Assets	$16,061.70
Other Assets	$10,693.28
Total Assets	$1,035,732.31
Liability & Equity	
Deferred Revenue	$1,029,375.05
Accounts Payable	$26,155.26
Retained Earnings	($371,826.45)
Net Income	$352,028.45
Total Liability and Equity	$1,035,732.31

Income and Expense

Income	$1,588,234.01
Expense	$1,236,205.56
Net Income	$352,028.45

Income and Expenses to Budget - YTD

2006 YTD Budget for Income	$1,648,466.66
Income Variance	($60,232.65)
2006 YTD Budget for Expenses	$1,329,776.68
Expenses Variance	($93,571.12)
Net Income Variance	$33,338.47

Year End Analysis

2006 Budget	$1,639,100.00
Revenue YTD	$1,588,234.01
Expected Revenue November-December	($10,000.00)
Estimated Year End Revenue	$1,578,234.01
Expenses YTD	$1,236,205.56
Expected Expenses November-December	$280,000.00
Estimated Year End Expenses	$1,516,205.56
Difference - Revenue - Expenses	$62,028.45

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

CASH BASIS ANALYSIS

Beginning Balance 1-1-06	$521,905
Total Cash Income	$1,157,618
Total Costs	$1,249,905
Ending Balance	$429,619

ACCOUNTS RECEIVABLE ANALYSIS

Accounts Receivable as of October 2006	$574,500
Items 90 Days or more Outstanding	$60,500
Items 60 Days Outstanding	$35,000
Items 30 Days Outstanding	$20,500
Items Less than 30 Days Outstanding	$70,000
Items Related to 2007 Dues	$388,500

North American Energy Standards Board
2007 Proposed Budget

	YTD Actuals as of Oct	Est YE Actuals	2006 Budget	2006 YE - Budget Difference	2007 Budget	2006 - 2007 Budget Difference
Revenue (Income - Cost of Sales)						
Membership Based	$1,518,249.96		$1,585,000.00		$1,558,000.00	
Non-Dues Revenue	$69,984.05		$54,100.00		$58,920.00	
Total Revenue	$1,588,234.01	$1,578,234.01	$1,639,100.00	($60,865.99)	$1,616,920.00	$22,180.00
Expense						
Total Salaries, Benefits, Taxes	$635,553.50		$808,985.00		$812,000.00	
Office Rents & Parking	$103,487.58		$124,000.00		$126,000.00	
Office Expenses	$39,029.84		$56,500.00		$49,200.00	
Telecommunications	$45,967.98		$60,000.00		$60,000.00	
Travel and Meetings	$242,531.34		$295,000.00		$300,000.00	
Publications/Mailings/Printing	$52,843.52		$79,500.00		$73,500.00	
Outside Services	$109,296.48		$148,000.00		$155,000.00	
Insurance, Taxes, Fees	$7,495.32		$9,030.00		$8,947.00	
Capital Expenditures	$1,292.51		$0.00		$15,000.00	
Total Expense	$1,236,205.56	$1,516,205.56	$1,581,015.00	($64,809.44)	$1,599,647.00	($18,632.00)
Net Income	**$352,028.45**	**$62,028.45**	**$58,085.00**	**$3,943.45**	**$17,273.00**	**$40,812.00**

Expenses YTD October	$1,236,205.56
Expected Expenses for Nov-Dec	$280,000.00
YE 2006 Est Expenses	**$1,516,205.56**
Revenue YTD October	$1,588,234.01
Expected Revenue for Nov-Dec	($10,000.00)
YE 2006 Est Revenue	**$1,578,234.01**
Retained Earnings from 2005	**($371,826.45)**
Expected Retained Earnings 2006	**($309,798.00)**
Estimated Retained Earnings 2007	**($292,525.00)**

NORTH AMERICAN ENERGY STANDARDS BOARD
1301 Fannin, Suite 2350 • Houston, Texas 77002 • **Phone:** (713) 356-0060 • **Fax:** (713) 356-0067
email: naesb@naesb.org • **Web Site Address:** www.naesb.org

December 8, 2006
For Inclusion in the 12-14-06 board Book

TO: Materials for Board of Directors Meeting 12-14-06

FROM: Rae McQuade

RE: Managing Committee Actions on Board Resolutions for December 14, 2006

Dear Board Members,

The Managing Committee met via conference call and email and determined unanimously to support the following actions -- Best Regards, *Rae*

PROMOTIONAL DUES

WHEREAS, the current provision for the promotional dues program will end on December 31, 2006,

WHEREAS, under Article V, Section 6 of the Certificate of Incorporation of NAESB, the Board of Directors is given the responsibility to approve promotional dues programs through a vote of at least seventy-five percent (75%) from the Board, including an affirmative vote of at least forty percent (40%) from the Directors representing each Segment within each Quadrant,

BE IT RESOLVED, that the Board of Directors of NAESB approves the continuation of a special promotional dues program that will permit three representatives from recognized consumer advocacy groups and an unlimited number of regulators and their staff (with the provision that any given state is only represented once per quadrant) to join the End-User Segments of the RGQ, the REQ, and the WEQ of NAESB at a reduced annual membership of $500 each. The program will be reviewed to determine if it should be continued no later than December 31, 2010.

2007 BUDGET

WHEREAS, the NAESB office working with Ms. Wishart drafted the 2007 budget based on income and expenses YTD October augmented by expectations for revenue and expenses through year-end 2006,

WHEREAS, the 2007 budget estimates for a slight positive net income to offset previous years negative retained earnings,

WHEREAS, under Article III, Section 4 of the Certificate of Incorporation of NAESB, the Board of Directors is given the responsibility for approving the budget of the organization through a simple majority vote;

BE IT RESOLVED, that the Board of Directors of NAESB approves the 2007 budget.

TAB 9

OLD & NEW BUSINESS

This section includes:

- Report on Liaisons with other groups
- 2007 Calendar of Meetings

The material presented is background information for the discussion of agenda item 8, and the material presented is for informational and discussion purposes with the no action expected of the board.

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 MATERIALS
REPORT ON LIAISONS WITH EXTERNAL GROUPS
DECEMBER 14, 2006

NAESB MEETINGS WITH EXTERNAL ENTITIES

- **March 6, 2006:** Michael Desselle and Rae McQuade met with Commissioner Brownell to provide a NAESB update.
- **March 7, 2006:** Rae McQuade met with Jim Slutz and Christopher Freitas of the DoE to discuss the GEIC report.
- **March 8, 2006:** Rae McQuade and Laura Kennedy met with several of the drafters of the GEIC report (Rick Smead, Jim Templeton, Richard Kruse, Valerie Crockett and Kathy York) and representatives of the National Regulatory Research Institute (NRRI) (Commissioner Keating, Ken Costello, Vivian Davis, Partha Chaudhuri) to provide an overview of the report for possible NRRI action.
- **March 15, 2006:** Rae McQuade addressed the EASEE group (the European counterpart to NAESB) and reviewed the organization, our rules, how we develop standards and our relationships with regulatory agencies. They have made significant headway on gas quality standards,
- **April 10, 2006:** Rae McQuade, Kathy York and Paul Sorenson met with FERC staff to review progress made on OASIS related efforts, specifically how it related to the ANOPR and the existing OASIS standards in the OATT.
- **April 18, 2006:** Rae McQuade, Bill Boswell and Michael Desselle met with Chairman Kelliher to provide a NAESB update.
- **April 27, 2006:** We received confirmation from Charles Yeung of SPP that the ISO-RTO Council legal representative has reviewed the joint development process template between NERC and NAESB and finds no inconsistency between it and the existing MOU of NAESB, NERC and the IRC. They also support the template.
- **April 28, 2006**: A letter was sent to each of the presidents of the ISOs and RTOs explaining the maturation of our organization and requesting their support, leadership within NAESB and participation. We have received positive responses for Ercot, CAISO and IESO. Commission staff is aware of this letter.
- **April 30, 2006**: Bill Boswell and Jim Cargas completed the drafting of the article to be published in the Energy Bar Journal's April 2006 issue. It is entitled, "North American Energy Standards Board: Legal and Administrative Underpinnings of a Consensus Based Organization."
- **May 31, 2006:** The first part of the report from Sandia National Laboratories and the Department of Energy was forwarded to NAESB office for review. It addressed retail and WGQ use of electronic communications as a surety assessment profile. The second part of the assessment is underway and will be complete in the September timeframe, coincident with the WEQ efforts to develop PKI standards.
- **June 7, 2006:** Phil Harris of PJM forwarded a response to the April 28 NAESB letter referenced above on behalf of the ISOs and RTOs. NAESB discussed it at the upcoming WEQ leadership meeting on June 22 and also at the board meting on June 23. The plan is to create a named committee chaired by Michael Desselle with inclusion of ISOs and RTOs. The committee will be charged with determining how best to provide for a strong platform for participation by ISOs and RTOs.
- **June 22, 2006:** A primer from Jimmy Glotfelty of ICF regarding the GEIC report should be forwarded to the DoE for its review and ultimate presentation at the NARUC summer session on July 30 in San Francisco.
- **July 30, 2006:** A primer from Ken Costello of NRRI regarding the GEIC report and gas-electric interdependency was presented at the NARUC summer session on July 30 in San Francisco.
- **July 31, 2006:** NAESB participated as part of a panel on gas-electric interdependency at the summer NARUC meetings in San Francisco. On the panel were Rick Smead, Steve Whitley, Valerie Crockett, Commissioner Keating, Commissioner Mason and Commissioner Ervin.

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 MATERIALS
REPORT ON LIAISONS WITH EXTERNAL GROUPS
DECEMBER 14, 2006

- **August 24, 2006**: A meeting was set up to discuss the response of the IRC and to discuss the feasibility of a segment created for ISOs and independent transmission planners. It was held in Washington D.C. and facilitated by Mr. Miles of FERC. A recommendation was drafted and we awaiting the review by ISOs and RTOs. The recommendation has the following: If the following four conditions are met, the Board Committee supports the creation of a sixth segment in the WEQ Quadrant: Independent Grid Operators/Planners, to be composed of ISOs, RTOs and other independent grid operators – with no subsegments defined at this time. The sixth segment will have 7 Board seats and 7 EC seats, as required by the NAESB bylaws. The conditions to be met are: (1) The IRC and NAESB support the dissolution of the JIC and will pursue such action with NERC, (2) The creation of the new segment will comply fully with the WEQ subsegment principles as noted in Section 2.4 on the WEQ Procedures, (3) The "At Large" subsegment in the other five segments will be redefined to exclude the ISOs, RTOs and other independent grid operators and planners, and (4) The nine IRC members will join NAESB as members and commit resources to the development of NAESB business practices.
- **September 11, 2006:** Ms. McQuade participated as part of the US contingent on the International Gas Union PGC-B committee conference call. The committee is charged with developing a report on regulatory constructs, harmonization and globalization, which will be presented at the World Gas Congress meeting in 2009.
- **October 12, 2006:** Ron Mucci represented NAESB and participated on a panel at the OATT Reform NOPR Technical Conference and provided follow-up comments on **November 2, 2006.**
- **October 17, 2006:** Ms. McQuade reviewed the NAESB process and status at the OATI Annual Meeting.
- **October 19, 2006:** Ms. McQuade reviewed the NAESB process and status at the NERC Dallas Standards Workshop.
- **October 23, 2006:** The Department of Energy released the Sandia Surety Assessment Report to NAESB for analysis and response**.** Changes are reflected in the 2007 plans.
- **October 27, 2006:** Ms. McQuade reviewed and reported on the status of NAESB at the Salt Lake City WECC meeting.
- **November 8-9, 2006:** Rae McQuade, Bill Boswell and Ron Mucci met with Chairman Kelliher, Commissioner Kelly, and Commissioner Wellinghoff to discuss 2006 annual plan progress and 2007 annual plan expectations.
- **November 18, 2006:** Ms. McQuade attended an International Gas Union meeting representing the US and specifically representing standards in the future global gas market.
- **November 29, 2006:** Grace Soderberg of NARUC will work with NAESB on the demand side management or energy efficiency programs.
- **December 1, 2006:** Rae McQuade continued dialogs with EASEE gas discussing the structure for standards organizations in Europe.
- **December 4, 2006:** Rae McQuade met with Commissioner Moeller on December 4 to discuss 2006 annual plan progress and 2007 annual plan expectations.
- **Planned, February 17, 2007:** The NAESB Advisory Council meeting is scheduled to take place in conjunction with the NARUC winter session. The meeting is scheduled from 4:00 PM to 6:00 PM Eastern at the Renaissance Washington Hotel in Washington, DC.

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

November 6, 2006

TO: NAESB Executive Committee and Interested Industry Participants

FROM: Rae McQuade, NAESB Executive Director

RE: Schedule of 2007 Meetings

Below is the schedule for 2007 meetings for the Executive Committee, Board of Directors and Advisory Council. Unless sponsors are noted for the meetings or the location has already been set as noted below, they will be held in Houston. Should other sponsors volunteer in the next few weeks, these locations may change:

Date	Meeting	Location
February 6-8	Executive Committee (WEQ. Retail, WGQ)	
February 17	Advisory Council	Washington D.C. in conjunction with the NARUC Winter meetings
March 22	Board of Directors	Houston
May 8-10	Executive Committee (WEQ, Retail, WGQ)	
June 28	Board of Directors & Strategic Planning Session	
August 14-16	Executive Committee (WEQ, Retail, WGQ)	
September 27	Board of Directors	Houston
November 6-8	Executive Committee (WEQ, Retail, WGQ)	
December 13	Board of Directors	Houston