

North American Energy Standards Board Demand Response and Energy Efficiency Standards

The North American Energy Standards Board Demand Response and Energy Efficiency Standards

“National EM&V Protocols - Connecting the Dots on Emerging Fronts”

Northeast Energy Efficiency Partnerships 2012 Annual Public Meeting - Washington D.C.

December 12, 2012

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NAESB Profile

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Organization by Quadrant and Segment

Wholesale Gas - 5 Segments

1. End Users
2. Local Distribution
3. Pipelines
4. Producers
5. Services

Wholesale Electric - 7 Segments

1. End Users
2. Distribution/LSE
3. Transmission
4. Generation
5. Marketers/Brokers
6. Independent Grid Operators/Planners
7. Technology and Services

Retail Gas - 3 Segments

1. End Users/Public Agencies
2. Utilities
3. Service Providers/Suppliers

Retail Electric - 3 Segments

1. End Users/Public Agencies
2. Distributors
3. Service Providers/Suppliers

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Voluntary Standards

- ❖ From the organization's perspective, all standards are voluntary and may be provided to regulatory agencies as status reports as they are published.
- ❖ The standards and model business practices may incorporate regional or operational differences
- ❖ Regulatory agencies may choose to adopt standards or model business practices, but NAESB will not advocate such action.
- ❖ The organization will not monitor for compliance, provide performance measures for compliance, nor will it define sanctions for non-compliance.
- ❖ The organization will not advocate before any regulatory body.

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Relationship of NAESB Standards and Model Business Practices to Policy

- ❖ NAESB does not set policy.
- ❖ We defer to state and federal agencies in determining policy.
- ❖ Our work products are intended to focus on the implementation of policy decisions by providing a road map for the interactions between the various parties.
- ❖ Our standards and model business practices recommend practices for alternative regulatory models but leave the decision as to the appropriate policy or model to the regulators.

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Characteristics of NAESB Standards Development Process:

- ❖ Transparency
- ❖ Inclusion
- ❖ Balance of Interests
- ❖ Documented and Accessible Process
- ❖ Support of the Regulatory Process
- ❖ Accountability

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NAESB Wholesale & Retail Electric Market DR Measurement and Verification Standards

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Driving Factors:

- ❖ Standards development is not typically cited as one of a set of driving factors for why a market embraces a direction
- ❖ Standards can though bring the industry together in how regulatory policy is implemented
- ❖ They can also bring efficiencies and cost savings to a market which would make a direction such as expansion of DR and EE more attractive to the administrators and participants
- ❖ M&V Standards for DR and EE can simplify how the programs are planned, implemented and evaluated by having more uniform metrics.

Purpose:

- ❖ Transparency: accessible and understandable M&V protocols for DR programs and services
- ❖ Accountability: Criteria that will enable program administrators to accurately measure the performance of demand resources
- ❖ Consistency: Business Practice Standards applicable across all the wholesale markets

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Wholesale Electric Demand Response Services:

- ❖ Energy Service
- ❖ Capacity Service
- ❖ Reserve Service
- ❖ Regulation Service

The five performance evaluation methodologies:

- ❖ Maximum Base Load
- ❖ Meter Before / Meter After
- ❖ Baseline Type-I
- ❖ Baseline Type-II
- ❖ Metering Generator Output

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What do the wholesale DR M&V standards cover:

- ❖ Categorizing demand response products and services
- ❖ Providing support for the measurement and verification of these products and services
- ❖ Meter data reporting deadlines
- ❖ Advanced notification
- ❖ Telemetry intervals
- ❖ Meter accuracy for after the fact metering
- ❖ Meter data reporting intervals
- ❖ Adjustment windows

- ❖ There are 141 WEQ DR standards (WEQ-015 set of standards)

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What don't they cover:

- ❖ Duplicating processes undertaken in the ISO-RTO stakeholder community
- ❖ Where there were difficulties achieving uniformity because of differences in the programs offered by the ISOs and RTOs, transparency was provided instead of introducing more specificity or granularity
- ❖ Wholesale programs administered by groups other than ISOs and RTOs

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What do the retail DR standards cover:

- ❖ Establish the criteria for the use of equipment, technology and procedures to quantify the Demand Reduction Value
- ❖ General: Advance Notification, Deployment Time, Reduction Deadlines, Release/Recall, Normal Operations, DR Availability Measurement, Aggregation, Transparency of Requirements
- ❖ Telemetry: Telemetry Requirements, Accuracy, Intervals, Measurements, Communication Protocols, Governor Control Equivalents, On Site Generation Requirements
- ❖ After the Fact Metering: Requirements, Accuracy, Equipment Details, Reporting Deadlines, Reporting Intervals, lock Accuracy, VEE Methods, On Site Generation Requirements

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What do the retail DR standards cover:

- ❖ Performance Evaluation: acceptable baselines and alternative performance measurements for each type of DR product
- ❖ For baseline information: baseline window, calculation types, sampling precision, exclusion rules, baseline adjustments, adjustment windows
- ❖ For Event Information: use of real-time telemetry, use of after the fact telemetry, performance window, measurement type
- ❖ For Special Processing: highly variable load logic, on site generation requirements
- ❖ 114 Retail DR Standards (REQ-013)

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NAESB Wholesale & Retail Electric Market EE Measurement and Verification Standards

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What do the wholesale EE standards cover (WEQ-021):

- ❖ Designed to create an standard method for quantifying the energy reductions from energy efficiency measures
- ❖ Based on services and products administered by PJM and ISO-NE, several state protocols, federal energy management program M&V standards and the International Performance Measurement and Verification Protocol
- ❖ 69 standards and definitions including energy efficiency baseline and demand reduction value.
- ❖ Criteria for the use of energy efficiency products in organized wholesale electricity markets, general measurement and verification plan requirements, and detailed criteria of acceptable measurement and verification methodologies

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What do the Retail EE Standards Cover (REQ-019):

- ❖ Designed to create a standard method for quantifying the energy reductions from energy efficiency measures
- ❖ Applicable to the M&V of electrical energy (kWh) and demand (kW) impacts referred to as reductions or savings of EE programs offered to retail customers
- ❖ Several different M&V methodologies defined including calibrated simulation, partially measured retrofits, retrofits, regression analysis, deemed savings and large scale billing analysis
- ❖ Verification components for projects that verify EE baseline conditions
- ❖ EE baselines, statistical significance, savings calculations, demand reduction calculations, monitoring parameters, data validation,
- ❖ 51 standards and definitions

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Relationship with Government Agencies

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NAESB Access to Standards by State Commissions

- ❖ All retail electric and retail gas standards that are state jurisdictional are provided to the National Association of Regulatory Utility Commissioners for distribution to interested state commission staff
- ❖ The NAESB record of minutes, work papers, voting, comments related to the standards are available for review, including all minority positions noted in comments
- ❖ Related transcripts from EC, Board and other subcommittee or task force meetings are also made upon request to any state commission and can be purchased by any other interested party
- ❖ Any state commission can join NAESB with membership fees paid by NARUC

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NAESB Filing of Standards with FERC

- ❖ All wholesale electric and wholesale gas standards that are federally jurisdictional are filed with the FERC
- ❖ The NAESB record of minutes, work papers, voting, comments related to the standards are forwarded, including all minority positions noted in comments
- ❖ Related transcripts from EC, Board and other subcommittee or task force meetings are made available to FERC and can be purchased by any other interested party
- ❖ Any regulatory agency can request access to or copies of NAESB standards

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FERC Actions Related to NAESB DR and EE Standards:

- ❖ April 2010 -- FERC adopted wholesale electric quadrant DR M&V standards in Order No. 676-F and suggested additional specificity would be helpful
- ❖ May 2011 -- NAESB submitted report with additional granularity in the DR M&V standards in May 2011
- ❖ April 2012 -- FERC issued a NOPR on the NAESB Phase 2 DR and EE M&V standards on April 2012
- ❖ July 2012 -- Comments were due to the FERC on the NOPR