

Bonneville Power Administration  
Customer Service Load Forecast  
Support for WECC compliance

October 21, 2008

# Agenda

- Agency Support to customers
- WECC requirements & Agency Response
- Annual Process

# Agency Support

- Customer less than 25 MW do not need to complete WECC requirements, others Agency will support with information that should meet compliance.
- Agency does not guarantee compliance by following process outlined
- Customer has the right at anytime to supply other data to WECC as evidence of compliance

# Agency Support -continued

- Agency stands ready to provide customers with documents that should be in compliance with standards
  - Data to meet requirements of MODs 17 & 18 provided annually to customers through CSE
    - Agency will use existing meter readings to provide actual data required by WECC
    - Agency forecasting staff will supply an annual loads forecasts that will me requirements
  - Agency will support customer with documentation on MODs 19-21 to provide as required
  - Agency will support customer in discussions with WECC

# WECC requirements –MOD-016

- R1 The [entities] shall have **documentation** identifying **the scope** and **details** of the actual and forecast **(a) Demand data**, **(b) Net Energy for Load data**, and **(c) controllable DSM** data to be reported for system modeling and reliability analyses.
  - **R1.1.** The aggregated and dispersed data submittal requirements shall ensure that consistent data is supplied for Reliability Standards [several]. The data submittal requirements shall stipulate that each Load-Serving Entity count its customer Demand once and only once, on an aggregated and dispersed basis, in developing its actual and forecast customer Demand values.
- Key points:
  - **NOT REQUIRED BY LOAD SERVING ENTITY**
  - Documentation on the scope and details of actual and forecasted demand, net energy, and controllable DSM. Might be nice for LSE to have as back-up
  - Make sure that aggregated and dispersed submitted data is consistent for several standards
  - Count customer Demands only once

# Agency response –MOD-016

- Agency Support:

- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

***Proposed response:***

Actual load data is compiled from hourly meter readings and aggregated into customer level hourly data. .... To ensure no double counting LSE forecasts or double counting loads, BPA will monitor and aggregate on customer/LSE basis. In order to ensure transparency, BPA will indicate which customer/LSE forecasts have been used in aggregations and which customers/LSEs are responsible for reporting directly to WECC.

Sample

# WECC requirements –MOD-017

- R1 The [entities] shall each provide the following information annually on [several] basis to NERC, the RRO others in documentation on MOD-016-1\_R1.
  - R1.1 Integrated hourly demands in megawatts (MW) for the prior year
  - R1.2 Monthly and annual peak hour actual demands in MW and Net Energy for Load in gigawatthours (GWh) for the prior year
  - R1.3 Monthly peak hour forecast demands in MW and Net Energy for Load in GWh for the next two years
  - R1.4 Annual Peak hour forecast demands (summer and winter) in MW and annual Net Energy for Load in GWh for at least five years and up to ten years into the future as requested.
- Key points:
  - **LSE must verify compliance with MOD 17**
    - We suggest including self on email sent to WECC as proof of compliance
  - Provide information annually.
  - Must give actual and forecast data
  - Forecasts prepare by Agency will work for compliance
  - Forecast for 5 yrs to 10 yrs of summer & winter peak MW and GWh

# Agency response –MOD-017

- Agency Support:

- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

DRAFT - Template for WECC Reporting Requirements

Customer Name	Name #1
Customer BES Number	444444
WECC Type (LSE, PA, RP)	LSE

Historical Period Start Date 1/1/2006  
 Historical Period End Date 12/31/2006

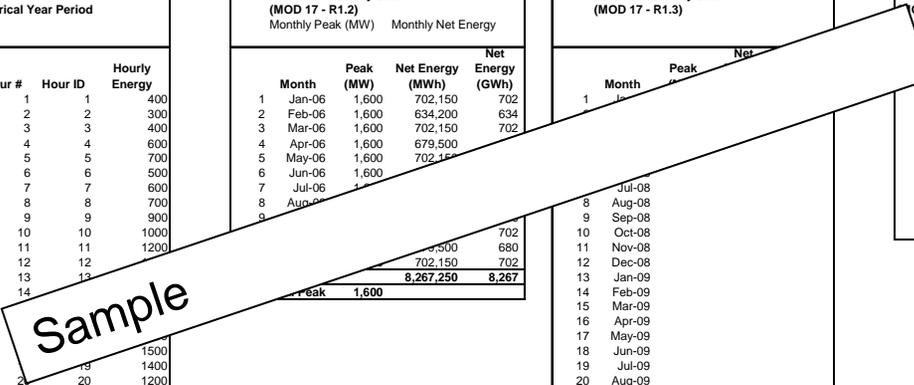
Forecast Period Start Date 1/1/2008  
 Forecast Period End Date 12/31/2013

Date	Hour #	Hour ID	Hourly Energy
1/1/2006	1	1	400
1/1/2006	2	2	300
1/1/2006	3	3	400
1/1/2006	4	4	600
1/1/2006	5	5	700
1/1/2006	6	6	500
1/1/2006	7	7	600
1/1/2006	8	8	700
1/1/2006	9	9	900
1/1/2006	10	10	1000
1/1/2006	11	11	1200
1/1/2006	12	12	
1/1/2006	13	13	
1/1/2006	14	14	
1/1/2006			1500
1/1/2006		19	1400
1/1/2006	20	20	1200
1/1/2006	21	21	1000
1/1/2006	22	22	700
1/1/2006	23	23	600
1/1/2006	24	24	400
1/2/2006	1	25	400

Month	Peak (MW)	Net Energy (MWh)	Net Energy (GWh)
1 Jan-06	1,600	702,150	702
2 Feb-06	1,600	634,200	634
3 Mar-06	1,600	702,150	702
4 Apr-06	1,600	679,500	
5 May-06	1,600	702,150	
6 Jun-06	1,600		
7 Jul-06			
8 Aug-06			
9 Sep-06			
10 Oct-06		702	
11 Nov-06		680	
12 Dec-06		702,150	702
13 Jan-07		8,267,250	8,267
14 Feb-07	1,600		

Month	Peak	Net
1 Jan-08		
2 Feb-08		
3 Mar-08		
4 Apr-08		
5 May-08		
6 Jun-08		
7 Jul-08		
8 Aug-08		
9 Sep-08		
10 Oct-08		
11 Nov-08		
12 Dec-08		
13 Jan-09		
14 Feb-09		
15 Mar-09		
16 Apr-09		
17 May-09		
18 Jun-09		
19 Jul-09		
20 Aug-09		
21 Sep-09		
22 Oct-09		
23 Nov-09		
24 Dec-09		

Year	Summer Peak (MW)	Winter Peak (MW)	Net Energy (MWh)	Net Energy (GWh)
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				



# WECC requirements –MOD-018

- R1 The [entities] report of actual and forecast demand data shall
  - R1.1 Indicate whether the demand data of nonmember entities within an area or RRO are included
  - R1.2 Address assumptions, methods, and the manner in which uncertainties are treated in the forecasts of aggregated peak demands and Net Energy for Load.
  - R1.3 Items shall be addressed as described in MOD-016-0\_R1
- R2 The [entities] shall each report data associated with MOD-018-0\_R1 to [entities] on request (within 30 calendars)
- Key points:
  - LSE should be prepared in any given year to provide as requested and verify compliance.
  - Should be updated annually as it ties to MOD-017\_R1 forecast
  - Information in MOD-017-0\_R1 should include
    - Identification of nonmember entities
    - Assumptions, method and manner for treating uncertainties
  - Available within 30 days upon request

# Agency response –MOD-018

- Agency Support:

- Response prepared for delivery to customer to give to WECC upon request.

- Customer develop own response if desired

- Full document in attachments

Historical Period Start Date 1/1/2006  
Historical Period End Date 12/31/2006  
  
Forecast Period Start Date 1/1/2008  
Forecast Period End Date 12/31/2013

**MOD-018-0 - Requirements:**

**R1.1. Indicate whether the demand data of nonmember entities within an area or Regional Reliability Organization are included**

Answer Below  
Forecasts are developed at the LSE/Customer level. Any aggregation of LSE/Customer will indicate which LSEs are included in the aggregated forecast.

This forecast is for the individual LSE/Customer listed

**R1.2. Address assumptions and uncertainties in which uncertainties are treated in the forecasts of aggregated peak demands and Net Energy for Load**

**Sample**

...ed on 10 years of historical data with an average load growth of \_\_\_\_%.  
...n analysis of the historical trends indicated load growth of \_\_\_\_% and demand growth of \_\_\_\_% over the next 10 years.  
...e regression estimate was adjusted to reflect the addition of a two subdivisions in years 3 and 4 of the forecast and the addition of a small industrial facility in year 2. These adjustments were based on discussions with the customer entity.

Uncertainties are not explicitly addressed in the forecast aside from the known adjustments reflected above.

# WECC requirements –MOD-019

- R1 The [entities] shall each provide annually its forecast of interruptible demands and Direct Control Load Management (DCLM) data for at least five years and up to ten years into the future, as requested for summer and winter system conditions to [entities] as specified by documentation on MOD-016-1\_R1.
- Key points:
  - LSE must verify compliance with MOD 19 annually
  - Provide forecast for 5 to 10 years of
    - Interruptible demands
    - Direct control load management
    - Summer and winter impacts

# Agency response –MOD-019

- Agency Support:

- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

**[Customer Name] has no Interruptible Demands or any Direct Control Load Management. The forecast for any interruptible Demands and Direct Control Load Management for the next five years is zero. That will be reported as [Customer Name's] normal compliance reporting channels.**

Sample

# WECC requirements –MOD-020

- R1 The [entities] shall each make known its amount of interruptible demands and Direct Control Load Management (DCLM) to on request within 30 calendar days
- Key points:
  - LSE should be prepared in any given year to provide as requested and verify compliance.
  - Provide actual
    - Interruptible demands
    - Direct control load management
    - As requested within 30 days

# Agency response –MOD-020

- Agency Support:

- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

**[Customer Name] has no Interruptible Demands or any Direct Control Load Management. The forecast for any interruptible Demands and Direct Control Load Man for the next five years is zero. That will be through [Customer Name's] normal compliance reporting channels. [Customer Name] will respond to requests pertaining to Interruptible Demands or Control Load Management from Transmission Operators, Balancing Authorities, and Reliability Coordinators within 30 days of receipt.**

Sample

# WECC requirements –MOD-021

- R1 The [entities] shall each clearly document how the Demand and energy effects of DSM programs (such as conservation, time-of-use rates, interruptible Demands and Direct Control Load Management (DCLM) are addressed.
- R2 The [entities] shall each include information clearly detailing how Demand Side Management measures are addressed in the forecasts of its peak Demand and annual Net Energy in the data reporting procedures of MOD-016-1\_R1
- R3 The [entities] shall each make documentation on the treatment of its DSM programs available to NERC on request (within 30 calendar days).
- Key points:
  - LSE should be prepared in any given year to provide as requested and verify compliance.
  - Provide documentation
    - Detailing DSM
    - As requested within 30 days

# Agency response –MOD 021 (version 1)

- Agency Support:

- Version 1 is for customer **who have no** time of use rates, or other demand management practices
- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

**[Customer Name] has no Time of Use Rates, Interruptible Demands, or any Direct Control Load Management. Those are forecast to be zero. Energy conservation is embedded in existing and future energy forecasts. The paper appended to the end of this document, describes in greater detail how that is done. Fore Sample pertaining to MODs 16 – 18 include energy conservation resulting from customer programs.**

# Agency response –MOD 021 (version 2)

- Agency Support:

- Version 2 is for customer **with** time of use rates, or other demand management practices
- Response prepared for delivery to customer to give to WECC upon request.
- Customer develop own response if desired
- Full document in attachments

**[Customer Name] has no Interruptible Demands, or any Direct Control Load Management. Those are forecasts to be zero. Energy conservation activity and time-of-use pricing is embedded in existing and future energy forecasts. The paper appended to the end of MOD 021 describes in greater detail how that activity is embedded in forecasts pertaining to MODs 16 – 18 include energy conservation resulting from customer programs.**

Sample

# Agency Process

- Responses to MODs 016, 019, 020, 021 can be obtained at any time from the CSE via email
- Responses to MODs 017, 018 available once per year delivered by CSE according to schedule outlined later in presentation
- Information will be made available in electronic format for distribution to WECC
- Customer responsible to provide information to all required entities and keeping documentation verifying compliance

# Process -continued

- **Proposed Load Forecast Delivery Process for 2009:**

*The data is to be delivered to the LSE through the BPA transmission organization customer service engineer (CSE) for each customer.*

<i>Responsible Party</i>	<i>Date</i>	<i>Deliverable</i>
<i>BPA (KSL Organization)</i>	<i>June</i>	<i>Identify customers who have grown over 25 MW in the year</i>
<i>BPA (KSL Organization)</i>	<i>August</i>	<i>Provide the approved, completed electronic file to the appropriate CSE for each customer</i>
<i>BPA (CSE Organization)</i>	<i>August</i>	<i>Deliver the approved, completed electronic file to the appropriate customer. Additionally copy the Customer's transmission and power Account Executive (AE) on the submittal.</i>
<i>Customer</i>	<i>September</i>	<i>Incorporate any changes into the document they wish to make.</i>
<i>Customer</i>	<i>November</i>	<i>Transmit completed electronic file to the WECC (e-mail address pending) and send copy of file to the BPA at the following email address <a href="mailto:KSLF@bpa.gov">KSLF@bpa.gov</a></i>

# Summary of customer responsibilities for Delivery

- MOD 016 - **Not required by LSE**
- MODs 017, 019 – **Required by LSE annually**
- MODs 018, 020, 021- **Required by LSE within 30 days after being requested**
- Help is available from BPA please contact your CSE or email [KSLF@bpa.gov](mailto:KSLF@bpa.gov) with questions.