

## State-Adjusted Load Forecast: Oregon

Reviewed by	Date
Galen Barbose (revised)	08/02/10

This document presents the 2020 State-Adjusted Load Forecast recommended by the SPSC DSM Working Group, and describes the underlying analysis. The State-Adjusted Load Forecast will be used in the SPSC Reference Case, and will be the starting point in developing alternate load forecasts for the other scenarios in the SPSC study request. The State-Adjusted Load Forecast recommended by the DSM Working Group is intended to reflect the expected energy savings and peak demand savings from current energy efficiency policies and utility resource plans, based on the methodology and assumptions described in the Reference Case proposal from the DSM Working Group to the SPSC, and incorporating any subsequent guidance from each state/province's designated DSM technical contact.<sup>1</sup>

**We seek approval from SPSC members of the State-Adjusted Load Forecasts shown in Column D of Tables 1 and 2. Please respond to Michael Wheeler ([michael.wheeler@cpuc.ca.gov](mailto:michael.wheeler@cpuc.ca.gov)) by August 4<sup>th</sup> indicating whether the proposed forecast is acceptable, and if not, what specific changes are needed.**

Given the limited time available for making revisions to this analysis, we request that revisions to the analysis be made only if they are likely to have a material impact on the load forecasts at the balancing authority level. Any questions about how the State-Adjusted Load Forecasts were developed that are not addressed within this document should be directed to Galen Barbose ([galbarbose@lbl.gov](mailto:galbarbose@lbl.gov), 510-495-2593).

### A. Recommended State-Adjusted Load Forecast

Tables 1 and 2 present the SPSC DSM Working Group's recommended State-Adjusted Load Forecast for each balancing authority in the state/province (Column D), compared to the forecasts that were submitted by the balancing authorities to WECC. The difference between these two sets of load forecasts reflects the difference between the estimated reference case energy efficiency savings (Column B) and the amount of savings already embedded in the WECC load forecast (Column C). The remainder of this document provides details on the analysis underlying the values shown in Columns B and C.

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<sup>1</sup> See: "Proposed TEPPC Reference Case DSM Assumptions: Request for Review and Input from SPSC Members," dated April 3, 2010.

Table 1. State-Adjusted Load Forecasts for 2020: Annual Electricity Consumption (GWh)

Balancing Authority (In-State Portion)	A	B	C	D = A - (B - C)	E = (D/A - 1)
	Load Forecast Submitted to WECC	Reference Case Efficiency Savings	Savings Embedded in WECC Load Forecast	State-Adjusted Load Forecast	Percent Change from BA Forecast
	(GWh)	(GWh)	(GWh)	(GWh)	(%)
PGE	23,569	3,784	2,813	22,598	-4%
PACW	15,048	2,416	2,084	14,716	-2%
IPC	973	157	136	952	-2%
BPA <sup>1</sup>	<del>17,289</del>	1,881	904	<del>16,311</del>	-6%

Deleted: 16,870

Deleted: 15,893

<sup>1</sup> The data for BPA in column A was revised to reflect the updated BPA load forecast that WECC provided to LBNL on 07/30/10. The change in the value in Column A resulted in an equivalent change in the value in Column D.

Table 2. State-Adjusted Load Forecasts for 2020: Peak Demand (MW)

Balancing Authority (In-State Portion)	A	B	C	D=A-(B-C)	E = (D/A - 1)
	Load Forecast Submitted to WECC	Reference Case Efficiency Savings	Savings Embedded in WECC Load Forecast	State-Adjusted Load Forecast	Percent Change from BA Forecast
	(MW)	(MW)	(MW)	(MW)	(%)
PGE	4,294	655	472	4,111	-4%
PACW	2,757	418	344	2,683	-3%
IPC	210	23	18	205	-2%
BPA <sup>1</sup>	<del>3,103</del>	250	120	<del>2,973</del>	-4%

Deleted: 3,008

Deleted: 2,878

<sup>1</sup> The data for BPA in column A was revised to reflect the updated BPA load forecast that WECC provided to LBNL on 07/30/10. The change in the value in Column A resulted in an equivalent change in the value in Column D.

## B. Reference Case Energy Efficiency Savings

The DSM Working Group developed reference case energy efficiency savings projections for each balancing authority, based on the best available information (see Table 3). These projections represent the cumulative impact in 2020 from programs and policies implemented over the 2010-2020 time period; that is, they are incremental to impacts from programs or policies implemented prior to 2010.

Table 3. Reference Case Energy Efficiency Savings in 2020

Balancing Authority (In-State Portion)	Ratepayer-Funded Energy Efficiency		New Federal Lighting/ Appliance Standards		Total	
	GWh	MW	GWh	MW	GWh	MW
PGE	2,813	472	971	183	3,784	655
PACW	1,796	301	620	117	2,416	418
IPC	117	15	40	8	157	23
BPA	n/a	n/a	n/a	n/a	1,881	250

For Oregon, the approach used to develop the reference case energy efficiency savings projection differed depending on the balancing authority. For PGE, PACW, and IPC, the reference case savings

projection was developed by separately estimating the expected impact from: (1) ratepayer-funded energy efficiency programs and (2) new federal appliance and lighting standards. This is the standard approach that the DSM Working Group used throughout its analysis of all western states and provinces.

For BPA, the reference case energy efficiency savings projections is equal to its pro-rated share of the cumulative 2020 conservation target identified in the Northwest Power and Conservation Council's 6<sup>th</sup> Power Plan. The primary rationale for this approach is that it would not be practical to develop estimates of the savings from ratepayer-funded energy efficiency programs for each individual public utility served by BPA in Oregon. Furthermore, given BPA's energy efficiency commitments, the Council's conservation targets represent a reasonable approximation for the total reference case energy savings – including the effects of both ratepayer-funded programs and new federal lighting and appliance standards. Thus, although the analysis for BPA does not itemize the contribution from ratepayer-funded programs and new federal lighting and appliance standards, we believe that the approach is largely consistent with the approach taken for the other balancing authorities, in terms of the scope of policy mechanisms covered and the “aggressiveness” of the underlying policy assumptions.<sup>2</sup> As an aside, it is important to note that the Council's conservation targets are measured against a “frozen efficiency” baseline. Thus, the magnitude of the reference case savings for BPA (as shown in Tables 1 and 2) cannot necessarily be directly compared to the savings projections for the other balancing authorities, as those savings targets are likely measured relative to a different baseline definition.

In the remainder of this section, we describe more specifically how each component of the reference case energy efficiency savings projection was developed for each balancing authority.

#### Ratepayer-Funded Energy Efficiency Program Savings

The DSM Working Group's estimate of savings from ratepayer-funded energy efficiency programs for the three IOUs is summarized in Table 4. For PGE and PacifiCorp, the reference case projection of savings from ratepayer-funded energy efficiency programs is based on the Energy Trust of Oregon's *2010-2014 Strategic Plan*. That plan establishes annual savings targets through 2014; we assume that the annual rate of acquisition remains constant (at 56 aMW/yr) from 2014-2020. In addition, we assume that an additional savings of 10% per year occurs as a result of non-ETO programs (weatherization and self-direct customers) within the PGE and PacifiCorp service territories.<sup>3</sup> For Idaho Power, the savings projection is based on the level of savings proposed in its 2009 IRP. Additional technical details and references are provided in the notes section of Table 4.

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<sup>2</sup> It is possible that the NPCC conservation targets may not *fully* capture the savings from the set of new federal lighting and appliance standards included in our analysis. However, at this point in time, it is not possible to quantify the residual savings.

<sup>3</sup> This assumption was adopted on the recommendation of Maury Gaulbraith, the designated SPSC DSM Technical Contact for Oregon.

Table 4. Cumulative Savings from Ratepayer-Funded Energy Efficiency Programs

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Energy Savings (GWh)</b>											
PGE <sup>1</sup>	259	542	820	1,116	1,398	1,666	1,922	2,165	2,394	2,610	2,813
PacifiCorp <sup>1</sup>	165	346	524	712	892	1,064	1,227	1,382	1,529	1,667	1,796
Idaho Power <sup>2</sup>	9	20	30	41	52	62	73	84	95	106	117
<b>Peak Demand (MW)</b>											
PGE <sup>3</sup>	43	91	138	187	235	280	323	363	402	438	472
PacifiCorp <sup>3</sup>	28	58	88	120	150	179	206	232	257	280	301
Idaho Power <sup>4</sup>	1	3	4	6	7	8	10	11	12	14	15

<sup>1</sup> These values are equal to the sum of the projected savings from ETO and non-ETO programs. The savings projection for the ETO programs is based on the "IRP funding" scenario in ETO's 2010-2014 Strategic Plan (Figure 3). Two operations are performed on that data. First, we extrapolate from 2014 to 2020, assuming a constant annual rate of savings acquisition of 56 aMW (or 491 GWh) per year. Second, in order to calculate cumulative savings, we assume a modest measure decay rate of 4% per year. This rate of measure decay reduces the total cumulative savings by about 20% in 2020 relative to an assumption of no measure decay. This measure decay assumption is based on an analysis of savings achieved by the California investor-owned utilities, and is a default assumption used throughout the DSM Working Group's analysis.

<sup>2</sup> Data Source: Idaho Power's 2009 IRP (December 2009). The savings projection shown in Table 4 includes both savings from programs administered directly by Idaho Power (Table DSM-7 in Appendix C of the 2009 IRP) and savings from regional market transformation programs administered by Northwest Energy Efficiency Alliance (NEEA). For the purpose of this projection, we assume that savings from NEEA programs will continue to accrue at the 2008 savings level (see Idaho Power's 2008 DSM Report, Table 2). The historical NEEA program savings are reported at the customer-meter; we therefore grossed up those savings to the generator by applying an 11% T&D loss factor (see Table DSM-1 in Appendix C of the 2009 IRP). The IRP reports savings only for the entirety of Idaho Power's service territory. We assume that the portion of the savings occurring within Idaho is proportional to the historical distribution in Idaho Power's energy efficiency program budget between Idaho and Oregon, where Idaho represented 95% of the total utility budget in 2008.

<sup>3</sup> Peak demand savings for PGE and PacifiCorp programs are estimated from the energy savings, by applying the peak-to-energy savings ratio cited on p. 61 of PGE's 2009 IRP (1.47 MW/aMW).

<sup>4</sup> Idaho Power's 2009 IRP provides peak demand savings estimates only for its existing programs (Appendix A, pp. 59 and 61), but not for the new programs proposed within its IRP. We estimate the peak demand savings for new programs by applying the peak-to-energy savings ratio for its existing programs, which varies somewhat from year to year.

### New Federal Lighting and Appliance Standards

In developing its projection of savings from federal lighting and appliance standards, the DSM Working Group focused exclusively on the impact of *new* (or relatively recent) standards<sup>4</sup>, including:

- Standards established directly by Congress through the Energy Independence and Security Act of 2007 (EISA), the most significant of which being the lighting standard;
- Standards established by DOE since 2009 through its normal rulemaking process, or scheduled to be established by January 2013.

<sup>4</sup> The DSM Working Group's decision to focus exclusively on the impact of *new* standards was predicated on the assumption that, in general, the load forecasts submitted by balancing authorities to WECC will already adequately account for the future impact of *existing* standards, by virtue of the econometric load forecasting methods commonly used.

The projected state-level energy and peak demand savings from those new standards are summarized in Table 5. These projections derive largely from secondary data sources, as described in the notes section of the table. For some standards, the data sources directly provided state-level savings estimates, based on state-specific demographic and end-use data. For other standards, the data sources provided only national estimates, and the DSM Working Group estimated the state-level impacts, based on the projected savings from standards for similar standards for which both state and national savings estimates were available. Within each state, savings were allocated to individual balancing authorities in proportion to their projected 2020 load.

Table 5. Projected Savings from New Federal Appliance and Lighting Standards in 2020

Balancing Authority (In-State Portion)	EISA <sup>1</sup>		DOE <sup>2</sup>		Total	
	GWh	MW	GWh	MW	GWh	MW
PGE	450	67	521	116	971	183
PACW	287	43	332	74	620	117
IPC	19	3	21	5	40	8

<sup>1</sup> Data Source: Andrew deLaski, executive director of the Appliance Standards Awareness Project (ASAP), provided a spreadsheet with his analysis of the expected savings from each EISA standard. This is an updated version of an analysis previously published jointly by ASAP and ACEEE, and includes only the savings from those standards directly established by EISA. This data source provided only national impacts.

<sup>2</sup> Data Sources: For new standards that DOE has *scheduled* but not yet established, we rely on the savings projections estimated in Neubauer et al. (2009).<sup>5</sup> That report provides estimates of the expected national savings from each individual standard for which DOE expects to complete its rulemaking by January 2013. State-level estimates are not contained within the report, but are published on ASAP's website, at the following URL: [http://www.standardsasap.org/state/2009%20federal%20analysis/ka-BOOM\\_overview.html](http://www.standardsasap.org/state/2009%20federal%20analysis/ka-BOOM_overview.html). For new standards that DOE has *already* established, since July 2009, we rely on the DOE technical support documentation associated with the final rule, rather than on the projections in Neubauer et al. (2009).

#### NPCC 6<sup>th</sup> Power Plan Conservation Targets for BPA

For load within the BPA balancing authority, the reference case energy efficiency savings is equal to BPA's pro-rated share of the cumulative 2020 conservation target identified in the Northwest Power and Conservation Council's 6<sup>th</sup> Power Plan (see Table 6). Those savings are allocated among the states in the BPA footprint in proportion to historical retail sales.

Table 6. NPCC 6<sup>th</sup> Plan Conservation Targets for the BPA Balancing Authority

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Energy Savings (GWh)</b>											
Washington <sup>2</sup>	222	482	780	1,114	1,480	1,810	2,190	2,588	3,001	3,428	3,779
Oregon <sup>2</sup>	111	240	388	554	737	901	1,090	1,288	1,494	1,706	1,881
Idaho <sup>2</sup>	16	35	57	81	108	132	160	189	219	250	276

<sup>5</sup> Max Neubauer, Andrew deLaski, Marianne DiMascio & Steven Nadel . 2009. *Ka-BOOM! The Power of Appliance Standards Opportunities for New Federal Appliance and Equipment Standards*. Washington, DC: American Council for an Energy-Efficient Economy (ACEEE) and the Appliance Standards Awareness Project (ASAP). Report Number ASAP-7/ACEEE-A091.

Montana <sup>2</sup>	21	45	73	105	139	170	206	243	282	322	355
<b>Total BPA<sup>1</sup></b>	<b>370</b>	<b>803</b>	<b>1,298</b>	<b>1,854</b>	<b>2,464</b>	<b>3,013</b>	<b>3,646</b>	<b>4,308</b>	<b>4,996</b>	<b>5,707</b>	<b>6,290</b>
<b>Peak Demand (MW)</b>											
Washington <sup>2</sup>	30	65	105	150	199	243	293	346	401	457	501
Oregon <sup>2</sup>	15	32	52	75	99	121	146	172	199	227	250
Idaho <sup>2</sup>	2	5	8	11	15	18	21	25	29	33	37
Montana <sup>2</sup>	3	6	10	14	19	23	28	33	38	43	47
<b>Total BPA<sup>1</sup></b>	<b>50</b>	<b>108</b>	<b>175</b>	<b>250</b>	<b>331</b>	<b>404</b>	<b>488</b>	<b>577</b>	<b>667</b>	<b>761</b>	<b>834</b>

<sup>1</sup> Data Source: Ottie Nabors (BPA). BPA's share of the total regional conservation target was calculated as follows: BPA share = Total regional conservation target x 42% (public utility share of regional retail sales) x 56% (portion of public utility retail sales within the BPA balancing authority).

<sup>2</sup> The total BPA conservation target was allocated across states according to following distribution, based data provided by NPCC: Washington (60.1%), Oregon (29.9%), Idaho (4.4%), and Montana (5.6%).

### C. Energy Efficiency Savings Embedded in the WECC Load Forecasts

The State-Adjusted Load Forecasts were developed by deducting from the load forecast that each balancing authority submitted to WECC the *incremental* reference case savings not already embedded within that forecast. The incremental reference case savings is equal to the difference between the total reference case savings (as described in the previous section) and the energy savings from the same programs/policies that are already embedded within the load forecast. Table 7 presents the DSM Working Group's estimates of the energy efficiency program/policy savings already embedded in the balancing authority load forecasts. For BPA, where the reference case savings projection is based on the Council's conservation targets, we show only the total embedded energy efficiency savings and do not differentiate between embedded savings associated with ratepayer-funded programs and new federal standards.

Table 7. Energy Efficiency Savings Embedded in the WECC Load Forecasts (2020)

Balancing Authority (In-State Portion)	Ratepayer-Funded Energy Efficiency		New Federal Lighting/ Appliance Standards		Total	
	GWh	MW	GWh	MW	GWh	MW
PGE	2,813	472	0	0	2,813	472
PACW	1,796	301	287	43	2,084	344
IPC	117	15	19	3	136	18
BPA	n/a	n/a	n/a	n/a	904	120

Members of the SPSC DSM Working Group and the TEPPC DSM Task Force developed a survey instrument to collect information from load serving entities (LSEs) regarding the energy efficiency and DSM assumptions incorporated into the load forecasts provided to WECC. WECC distributed this survey to LSEs on June 8<sup>th</sup>, requesting that they complete the survey by June 30<sup>th</sup>. To date, survey responses have been received from PacifiCorp and BPA. To supplement these survey responses, the DSM Working Group also reviewed each utility's most-recent IRP and contacted individuals within some utilities, in order to identify additional information that could be useful in estimating the amount of energy efficiency embedded in the balancing authority load forecasts. Key findings from the survey responses and supplementary data analysis follow, for each balancing authority.

## PGE

Table 8 compares the load forecast that PGE submitted to WECC to PGE's 2009 IRP load forecasts. The table shows three variants of PGE's load forecast contained within its IRP: the forecast "without embedded EE" represents the load growth if no future energy efficiency programs were implemented; the "unadjusted" forecast is an econometric forecast that implicitly assumes a continuation of historical energy efficiency acquisition levels; and the forecast "net of ETO savings" represents the load growth after accounting for the impact of ETO's planned program savings.

For the purpose of inferring the underlying assumptions about future conservation in the PGE balancing authority forecast, the forecasts can be compared in terms of the *compound annual growth rate (CAGR)*.<sup>6</sup> As shown, the PGE balancing authority forecast has a similar growth rate to the IRP forecast "net of ETO savings." This suggests that the balancing authority forecast has fully accounted for the future impact of ETO programs in PGE's service territory.

PGE's IRP does not provide any indication that the load forecast has accounted for the impact of either the EISA lighting/appliance standards or any new DOE lighting/appliance standards. The DSM Working Group established as a default rule that, in the absence of any specific evidence that a load forecast accounts for the energy savings from new federal lighting and appliance standards, the load forecast is assumed to not account for those impacts.<sup>7</sup>

Table 8. Comparison of PGE Balancing Authority Forecast and PGE 2009 IRP Forecasts

	Annual Energy (GWh)		
	2013	2020	CAGR
PGE Balancing Authority Forecast	21,365	23,569	1.4%
PGE IRP Forecast: Without Embedded EE <sup>1</sup>	22,951	26,981	2.3%
PGE IRP Forecast: Unadjusted <sup>1</sup>	22,075	25,404	2.0%
PGE IRP Forecast: Net of ETO Savings <sup>1</sup>	21,725	24,090	1.5%

<sup>1</sup> Source: PGE 2009 IRP, Figure 4-2. The values were read visually off of the chart, and converted from units of aMW to GWh.

## PACW

<sup>6</sup> The IRP forecasts with and without conservation both differ substantially from the AVA balancing authority forecast in terms of the absolute magnitude of the load. WECC documentation does not indicate that there are any utilities within the AVA balancing authority other than Avista; thus it is unclear why the forecasts would differ.

<sup>7</sup> Load forecasts that are developed through econometric methods and calibrated to historical data may implicitly assume that savings from federal lighting appliance standards will continue to accrue at the same rate as in the past. The analysis in Neubauer et al. (2009) suggests that existing federal standards generated savings at a rate of 0.5% of U.S. retail sales per year over the 2000-2010 period, and will continue to generate additional savings at the same rate over the 2010-2020 period. Thus, the savings from new federal standards represent an increase in the rate at which federal standards will accrue energy savings, and this effect is unlikely to be captured by load forecasts that do not explicitly model the savings from these new standards.

PacifiCorp's response to the WECC DSM Survey indicates that the load forecasts that PacifiCorp submitted to WECC do account for the impact of planned energy efficiency programs, but do not account for new federal lighting and appliance standards that have not yet been established by DOE. PacifiCorp's 2008 IRP (dated May 29, 2009) indicates that the utility's load forecast does, however, account for the impact of new federal lighting standard established directly by EISA; we therefore assume that the PACW load forecast submitted to WECC also accounts for those standards. Thus, the only portion of the reference case savings that is not already captured in the PACW balancing area forecast is the savings from new DOE lighting and appliance standards.

### IPC

Following the same logic as above for PGE, Table 9 compares the load forecast that IPC submitted to WECC to Idaho Power's 2009 IRP load forecast. Idaho Power's IRP forecast does include the effect of current and committed energy efficiency programs, but it does not include the impact of new programs that Idaho Power proposes within its IRP. Thus, for comparison, Table 9 also shows Idaho Power's IRP load forecast *net of the proposed new conservation programs*. Note that the data in this table applies to the entire IPC/Idaho Power footprint, not just the Oregon portion.

As shown, the IPC balancing authority forecast has a similar growth rate to the Idaho Power IRP forecast prior to accounting for the impact of the proposed new conservation programs (i.e., annual energy growth rates of 0.7% and 0.6%, respectively). We therefore assume that the balancing authority forecast has similarly accounted for the impact of current and committed efficiency programs, but does not account for the impact of new programs that Idaho Power proposed in its IRP (and which are part of the reference case energy efficiency savings).

Idaho Power's IRP does not provide any indication that the load forecast has accounted for the impact of either the EISA lighting/appliance standards or any new DOE lighting/appliance standards. Thus, following the default rule identified earlier, the DSM Working Group assumes that the balancing authority load forecast does not account for the impacts from new federal standards.<sup>8</sup>

Table 9. Comparison of IPC Balancing Authority Forecast and Idaho Power 2009 IRP Forecast

	Annual Energy (GWh)			Peak Demand (MW)		
	2013	2020	CAGR	2013	2020	CAGR
IPC Forecast Submitted to WECC	18,728	19,615	0.7%	3,861	4,229	1.3%

<sup>8</sup> Load forecasts that are developed through econometric methods and calibrated to historical data may implicitly assume that savings from federal lighting appliance standards will continue to accrue at the same rate as in the past. The analysis in Neubauer et al. (2009) suggests that existing federal standards generated savings at a rate of 0.5% of U.S. retail sales per year over the 2000-2010 period, and will continue to generate additional savings at the same rate over the 2010-2020 period. Thus, the savings from new federal standards represent an increase in the rate at which federal standards will accrue energy savings, and this effect is unlikely to be captured by load forecasts that do not explicitly model the savings from these new standards.

Idaho Power 2009 IRP Forecast <sup>1</sup>	16,872	17,634	0.6%	3,533	3,895	1.4%
<i>Proposed new conservation</i> <sup>2</sup>	159	576		21	75	
Idaho Power 2009 IRP Forecast (net of new conservation)	16,712	17,058	0.3%	3,512	3,820	1.2%

<sup>1</sup> Source: Idaho Power 2009 IRP (December 2009), Tables 5.1 and 5.2. This is Idaho Power's median load forecast, and it includes the impact of existing and committed EE programs, but not new/proposed programs.

<sup>2</sup> Source: Idaho Power 2009 IRP (December 2009), Appendix C, Table DSM-6

## BPA

BPA completed the WECC DSM survey, and key BPA staff (Ottie Nabors) were also in direct communication with members of the DSM Working Group. Through these communications, BPA indicated that, in virtue of the econometric methods that BPA uses, the load forecast submitted to WECC implicitly assumes a continued rate of conservation acquisition approximately equal to BPA's share of the conservation target level in the Council's 5<sup>th</sup> Power Plan. Thus, the incremental reference case energy efficiency savings for BPA is equal to the difference between the conservation target levels in the 6<sup>th</sup> Plan and the 5<sup>th</sup> Plan. This data is presented in Table 10, and allocated to each state in BPA's footprint based on the portion of BPA's BA load occurring within that state.

Table 10. Conservation Savings Embedded in BPA Forecast

State	% of BPA BA Load <sup>1</sup>	Embedded in BPA Load Forecast (5 <sup>th</sup> Plan Target) <sup>2</sup>		Total (6 <sup>th</sup> Plan Target) <sup>2</sup>	
		GWh	MW	GWh	MW
WA	60%	1,815	241	3,779	501
OR	30%	904	120	1,881	250
ID	4%	132	18	276	37
MT	6%	170	23	355	47
<b>BPA Total</b>		<b>3,022</b>	<b>401</b>	<b>6,290</b>	<b>834</b>

<sup>1</sup> Source: Based on analysis provided by NPCC staff (Massoud Jourabchi).

<sup>2</sup> Source: Ottie Nabors (BPA) provided the totals for the entire BPA BA footprint