

## **Appendix A**

### **PacifiCorp Avoided Cost (GRID and Differential Revenue Requirement) Model Updates through July 2010 Case No. 03-035-14**

#### **GRID Scenario Study Period**

January 1, 2011 through December 31, 2030 (20-year study)  
Avoided Cost prices starting in January 2011

#### **Official Forward Price Curve (Gas and Market Prices)**

Updated to PacifiCorp's June 2010 official forward price curve (0610 OFPC)

#### **Short-Term Firm (STF) Transactions**

STF transactions have been updated to include executed STF contracts as of July 2010;  
Extract 549

#### **Inflation Rates**

The Company updated inflation rates consistent with the Company's most recent  
inflation rate study dated June 2010

#### **Market Capacity**

48 Months ended December 2009

#### **Load Forecast (Retail)**

20-year load forecast dated July 2010

#### **Fuel Prices (Coal)**

2011 through 2020 – 10 Year forecast dated July 2010  
Thereafter escalated at 2.5%  
Incremental coal cost study dated – 2011 July 2010, 2012 March 2010

#### **Potential Environmental Costs**

Costs included in incremental fuel costs for plant commitment and dispatch decisions  
starting in 2013  
Environmental costs starting in 2013 for sulfur dioxide and 2015 carbon dioxide  
Costs are consistent with the company's forecast dated June 2010  
Costs are excluded from fuel costing and are excluded from avoided costs

**Proxy Resource (Next Deferrable Resource)**

2011 No deferrable resources are available

2012 through 2014 - Mona, West Main and COB Third Quarter (Q3) High Load Hour (HLH) Front Office Trade (FOT) - 2008 IRP Update Table ES.1

2015 and thereafter – 607 MW Combined Cycle Combustion Turbine (CCCT)

Wet "F" 2x1 - East Side Resource (4500') - 2008 IRP Update Table ES.1

**IRP Resources**

IRP Resources transmission, thermal, DSM, front office trades and wind resources - 2008 IRP Update Dated March 31, 2010

**IRP Partial Displacements (this filing)**

Thermal and Market Purchase Resources

Base Case - thermal partial displacement was 168.7 MW. The potential thermal resource Scatec Solar has a proposed nameplate capacity of 40.0 MW and was modeled assuming to a 65% capacity contribution. The capacity contribution recognizes that the resource is intermittent in nature. Other QFs that are actively negotiating for power purchase agreements are shown below.

Queue	Thermal Resource	Capacity MW	Energy – Capacity Factor
1	Scatec Solar	26.0	31.0%
2	Ormat Douglas	4.2	80.5
3	Ormat Veyo	7.2	80.5
4	Klamath Falls Biomass	38.5	85.0
5	Tesoro	25.0	85.0
6	Kennecott	31.8	85.0
7	US Magnesium	36.0	85.0
<b>Displacement in Base Case MW</b>		<b>168.7 MW</b>	

<b>Displacement in Base Case - 168.7 MW</b>				
Year	Displaced Resource	IRP Update	Displacement	Remaining MW
2012	Market FOT – Mona 3Q	200	168.7	31.3
2013	Market FOT – Mona 3Q	300	168.7	131.3
2014	Market FOT – Mona 3Q	300	168.7	131.3
2015	Proxy Resource (see above)	607	168.7	438.3

The 2008 IRP Update does not have front office trades in 2011 and as such no deferrable resource is available for partial displacement during this period.

Avoided Cost Case – a 100 MW 85% capacity factor (CF) avoided cost resource is added to the thermal resource queue.

Queue	Thermal Resource	Capacity MW	Energy – Capacity Factor
1	Scatec Solar	26.0	31.0%
2	Ormat Douglas	4.2	80.5
3	Ormat Veyo	7.2	80.5
4	Klamath Falls Biomass	38.5	85.0
5	Tesoro	25.0	85.0
6	Kennecott	31.8	85.0
7	US Magnesium	36.0	85.0
8	Avoided Cost Resource	<u>100.0</u>	85.0%
<b>Displacement in Avoided Cost Case MW</b>		<b>268.7 MW</b>	

In the base case, 2012 front office trades in the Mona bubble are partially displaced. In the avoided cost case these trades are fully displaced and additional displacements are made in the West Main and California Oregon Border (COB) bubbles.

Displacement in Avoided Cost Case - 268.7 MW				
Year	Displaced Resource	IRP Update	Displacement	Remaining MW
2012	Market FOT – Mona 3Q	200	200.0	0.0
	Market FOT – West Main 3Q	15	15.0	0.0
	Market FOT – COB 3Q	389	53.7	335.3
2013	Market FOT – Mona 3Q	300	268.7	31.3
2014	Market FOT – Mona 3Q	300	268.7	31.3
2015	Proxy Resource (see above)	607	268.7	338.3

### Wind Resources

A total of 887 MW of wind is included in the 2008 IRP Update by 2019 of which 427 MW is under construction or contract. The remaining 460 MW of planned wind resources is scheduled to be available starting in 2017 (Table ES.1). The Company has added potential wind QF resources which partially displace 266.3 MW of the 460 MW remaining total.

Potential QF Wind Resource		
Year	Displaced Resource	MW
2011	Windland Power County Wind	53.2
2012	QF - Cedar Creek Wind I through V	126.5
2012	QF - Wasatch Wind Wyo I	48.3
2013	QF - Wasatch Wind Wyo II	<u>48.3</u>
Wind Resource Partial Displacement of IRP Wind		266.3

## IRP Partial Displacements (last filing)

### Thermal and Market Purchase Resources

Base Case - thermal partial displacement was 26.0 MW. As described above, Scatec Solar has a proposed nameplate capacity of 40.0 MW and was modeled assuming to a 65% capacity contribution.

Queue	Thermal Resource	Capacity	Energy
1	Scatec Solar	<u>26.0 MW</u>	31.0%
<b>Displacement in Base Case MW</b>		<b>26.0 MW</b>	

Displacement in Base Case - 26.0 MW				
Year	Displaced Resource	IRP Update	Displacement	Remaining MW
2012	Market FOT – Mona 3Q	200	26.0	174.0
2013	Market FOT – Mona 3Q	300	26.0	274.0
2014	Market FOT – Mona 3Q	300	26.0	274.0
2015	Proxy Resource (see above)	607	26.0	581.0

Avoided Cost Case – a 100 MW 85% capacity factor (CF) avoided cost resource is added to the thermal resource queue.

Queue	Thermal Resource	Capacity	Energy
1	Scatec Solar	<u>26.0 MW</u>	31.0%
2	Avoided Cost Resource	<u>100.0 MW</u>	85.0%
<b>Displacement in Avoided Cost Case MW</b>		<b>126.0 MW</b>	

Displacement in Avoided Cost Case - 126.0 MW				
Year	Displaced Resource	IRP Update	Displacement	Remaining MW
2012	Market FOT – Mona 3Q	200	126.0	74.0
2013	Market FOT – Mona 3Q	300	126.0	174.0
2014	Market FOT – Mona 3Q	300	126.0	174.0
2015	Proxy Resource (see above)	607	126.0	481.0

### Wind Resources

The Company added potential wind QF resources which partially displace 223.1 MW of the 460 MW remaining total described above.

Potential QF Wind Resource		
Year	Displaced Resource	MW
2012	QF - Cedar Creek Wind I through V	126.5
2012	QF - Wasatch Wind Wyo I	48.3
2013	QF - Wasatch Wind Wyo II	<u>48.3</u>
Wind Resource Partial Displacement of IRP Wind		223.1

### **Size of the Avoided Cost Resource**

The avoided cost resource is assumed to be a 100 MW 85% CF thermal resource. The size of the avoided cost resource has not been changed.

**Topology**

This item remain unchanged from the prior filing

**Transmission (Firm Transmission Rights)**

Transmission remains unchanged from the prior filing

**Transmission (Non-Firm and Short Term Firm)**

Unchanged from the prior filing

Non-firm transmission - 48 months ended December 2009

Short term firm transmission – 48 months ended December 2009

**Thermal Resources**

Hermiston and Chehalis commitment assumptions were revised to better simulate the operation of the plants.

**Long-Term Contracts**

Long-term contracts which have prices that are indexed to market were updated to be consistent with the June 2010 Official Forward Price Curve (0610 OFPC).

Modeling updates include Small QFs, Cowlitz Swift, and NV Energy. Small potential QFs are included in the study but were not included in partial displacement because of size or non-firm delivery.

**Hydro Resources**

Modeling updates were made to the Bear River hydro resource to better reflect the reserve capability of the facility.

**Discount Rate**

7.17% which is consistent with the Company's most recent discount rate dated June 2010. This assumption has not changed from the last filing.