

All Source Request for Proposal for 2016 Resource

**Bidders Conference
October 20, 2011**



Pacific Power | Rocky Mountain Power | PacifiCorp Energy

Agenda

- Role of the Independent Evaluator (IEs)
- Request for Proposal (RFP) for 2016 resource schedule
- Regulatory Overview
- Load and Resource Balance
- Overview of the RFP
 - » Credit Requirements
 - » Credit Security Methodology
 - ▶ Structure of RFP
 - ▶ Pricing Input Sheet
 - ▶ Evaluation Process
 - Initial shortlist
 - Final shortlist
 - Selection

Role of the Independent Evaluators (IEs)

- Two Independent Evaluators will be involved in the RFP
 - ▶ The Oregon IE - Boston Pacific
 - ▶ The Utah IE - Merrimack Energy
- In the RFP Attachment 18 outlines the Role of the Independent Evaluator
- Merrimack will be managing the overall Q&A process and maintain all documentation, amendments and or announcements starting January 5, 2012 for the term of the process on their interactive web site at <http://www.merrimackenergy.com/>
- Merrimack will coordinate all correspondence and interaction with the Bidders, Boston Pacific and the company.
- All RFP material prior to January 5 can be located on PacifiCorp web site. <http://www.pacificorp.com/sup/rfps/asrfp2016.html>

Schedule for the All Source Request for Proposal

Event	Anticipated Date
Pre-Draft RFP Conference	September 1, 2011
Company filed Draft RFP in Utah and Oregon	October 5, 2011
RFP approval in Utah and Oregon	December /January
RFP target issued date	January 5, 2012
RFP bid conference	January 17, 2012
Intent to Bid Forms due	February 14, 2012
Bidders submit proposals (Bid Due Date)	May 24, 2012
Evaluation of Initial Shortlist completed	July 8, 2012
Only Initial Shortlist submits best and final updated proposals	August 8, 2012
Final evaluation of Best and Final Bids completed Final	September 10, 2012
Oregon Commission acknowledgement of Final Shortlist	October 2012
Negotiation of bids on Final Shortlist completed	December 22, 2012
PacifiCorp decision	January 7, 2013
File Application for approval proceeding in Utah	January 16, 2013
File application in Utah Commission approval proceeding (120 days)	May 16, 2013

Regulatory Overview

- A regulatory out clause will not be included in any of the terms and conditions in any of the underlying contracts or in the RFP

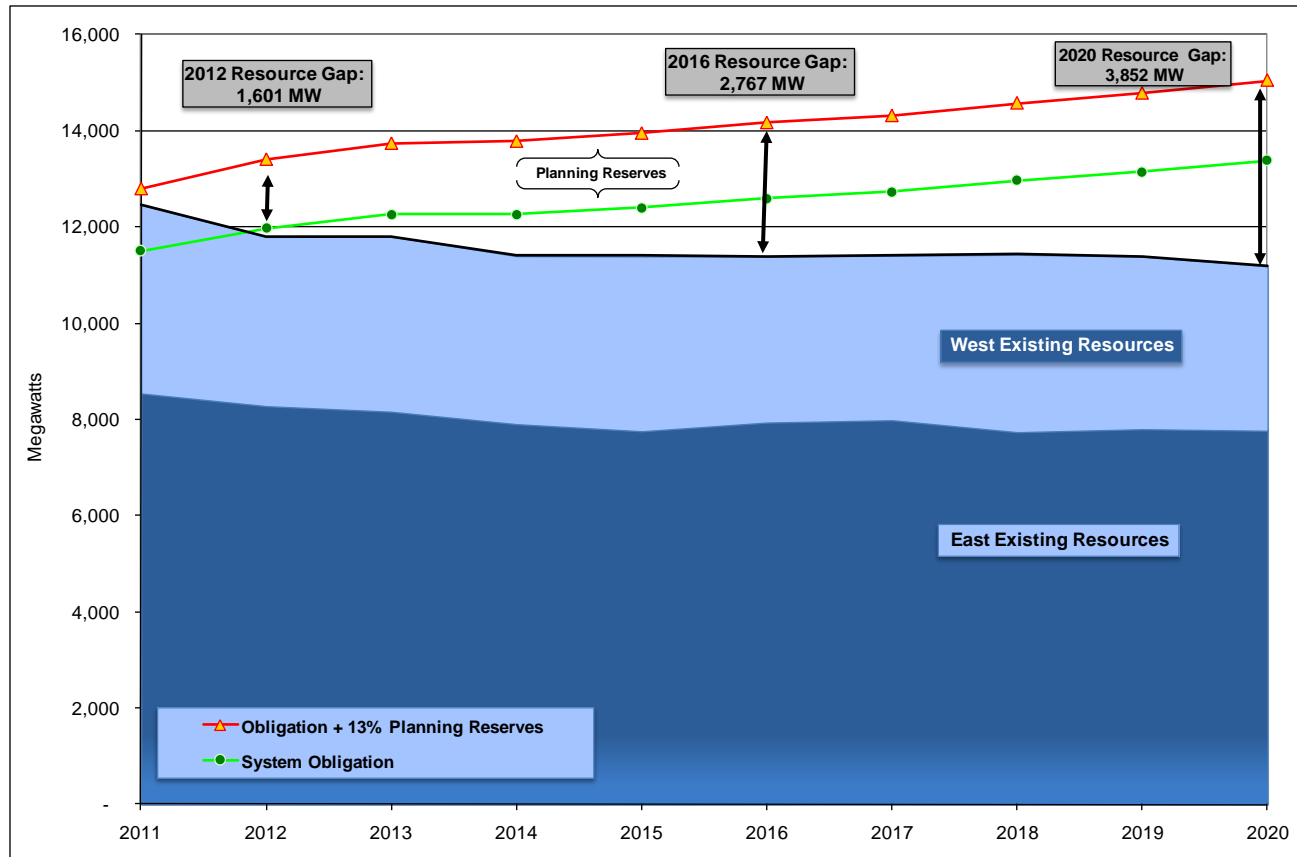
- State Overview
 - ▶ Utah
 - The Utah Commission approved the RFP
 - Senate Bill 26 will require all resources that result from the RFP to be approved by the Utah Commission
 - » SB26 requires that the capital costs or the power purchase agreements be approved by the Utah Commission prior to the execution of any contracts.
 - ▶ Oregon
 - » The commission allows the company
 - » To take the resources which are short listed to the Commission for acknowledgement and or
 - » Seek prudence through a rate case

2011 Preferred Portfolio

Resource	Capacity (MW)									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CCCT F Class	-	-	-	625	-	597	-	-	-	-
CCCT H Class	-	-	-	-	-	-	-	-	475	-
Coal Plant Turbine Upgrades	12	19	6	-	-	18	-	8	-	-
Wind, Wyoming	-	-	-	-	-	-	-	300	300	200
CHP - Biomass	5	5	5	5	5	5	5	5	5	5
DSM, Class 1	6	70	57	20	97	-	-	-	-	-
DSM, Class 2	108	114	110	118	122	124	126	120	122	125
Oregon Solar Programs	4	4	4	3	3	-	-	-	-	-
Micro Solar - Water Heating	-	4	4	4	4	4	4	4	-	-
Front Office Transactions	350	1,240	1,429	1,190	1,149	775	822	967	695	995
Growth Resources	-	-	-	-	-	-	-	-	-	-

Note: Front office transaction (firm market purchases) and growth resources reflect one-year transaction periods, and are not additive.

System Capacity Chart



Calendar Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
System										
Total Resources	12,468	11,802	11,810	11,404	11,399	11,397	11,412	11,433	11,395	11,192
System Obligation	11,497	11,973	12,264	12,256	12,403	12,595	12,728	12,961	13,145	13,376
Reserves	1,297	1,430	1,470	1,522	1,542	1,569	1,582	1,611	1,633	1,668
Obligation + 13% Planning Reserves	12,794	13,403	13,735	13,778	13,945	14,164	14,310	14,572	14,777	15,044
System Position	(326)	(1,601)	(1,925)	(2,373)	(2,546)	(2,767)	(2,898)	(3,139)	(3,383)	(3,852)
Reserve Margin	10%	(0%)	(3%)	(6%)	(8%)	(9%)	(10%)	(11%)	(13%)	(16%)

Overview of the Request for Proposal

All Eligible Resources in the 2016 RFP **must** be a minimum of 100 MW and for a term not less than 5 years.

- ▶ Eligible Resources may include the following:
 1. Power Purchase Agreements
 - » Fixed price – capacity and or energy
 - » Base load resource may include geothermal, biomass, hydro based resource.
 2. Tolling Agreement
 3. Engineering Procurement Contract for Currant Creek site only
 4. Asset Purchase and Sale Agreement (APSA) at Bidders site

Overview of Request for Proposal (Cont)

5. Purchase of an existing facility (subject to due diligence requirements).
6. Purchase of a portion of an existing facility, jointly owned or operated by PacifiCorp (subject to due diligence requirements).
7. Restructure of an existing Power Purchase Agreement (PPA) or an existing Exchange Agreement.
8. Resource Exceptions - exceptions to 100 MW minimum are (however term of not less than 5 years still applies):
 - Physical Load Curtailment – 25 MW minimum
 - Qualified Facilities 10MW or greater

Credit Requirements

- Credit Requirements will be determined by
 - ▶ Credit quality of the Bidder or the entity providing credit assurances on behalf of the Bidder, as applicable
 - ▶ Type of Eligible Resource
 - Power Purchase Agreement, Tolling Service Agreement, Asset Purchase and Sale Agreement, EPC Contract, etc.
 - Asset backed vs. Non-asset backed
 - ▶ Size of Eligible Resource

- The Credit Matrix displays the maximum amount of credit assurances required based on the factors above
 - ▶ Credit assurances may be in the form of one or more of the following:
 - Parental Guaranty
 - Letter of Credit
 - Other (as determined by PacifiCorp in its reasonable discretion)
 - Commitment letters to provide credit assurances on behalf of the Bidder are required 20 business days after Bidder is selected for final shortlist

Credit Security Requirements Methodology

- Methodology for the Credit Matrix and the Credit Security Requirements is based on the following:
 - ▶ Potential Credit Exposure
 - Potential replacement energy cost to PacifiCorp in the event resource fails to come on-line when expected
 - ▶ Asset-Backed Resource with Step-In Rights
 - Potential credit exposure is 12 months of replacement power costs
 - Summer (Jun-Sep) on peak hours are of most concern, so these four months of replacement value are the measurement
 - For the 2016 Resource, this equates to \$56,673/MW
 - ▶ Non-Asset-Backed Agreements
 - Potential credit exposure is the potential cost to replace contract at any point during the term of the contract
 - Requires simulation of future price distribution
 - For the 2016 Resource, this equates to \$240,928/MW

Credit Security Requirements Methodology (cont.)

- Forward Price Uncertainty
 - ▶ Future price distributions are simulated using current forward price curves and price volatility curves
 - ▶ Statistical and stochastic analysis utilized
 - ▶ Future price levels are estimated using an 84% confidence level
- PacifiCorp's Credit Risk Tolerance
 - ▶ Level of credit risk tolerance is determined for each credit rating and each category of Eligible Resource for 2016 resource
 - ▶ Amount of credit assurances to be provided is the difference between the potential credit exposure and the level of credit risk tolerance
- Types of Credit Assurances
 - ▶ Security amounts required in the credit matrix may be provided by a combination of letters of credit, parental guaranties, cash deposits, or other forms of credit security deemed acceptable by PacifiCorp.
 - ▶ Additional credit security may be required as provided in each of the Standard Pro-forma contracts.

East Side Point (s) of Delivery

East system Points of Delivery

- Salt Lake Valley
 - ▶ Connected to a major 138 kV or 345 kV substation in the Wasatch Front load area south of the Ben Lomond substation and north of the Camp Williams substation.
- PacifiCorp Sites
 - ▶ Currant Creek
- Mona 345 kV
- Glen Canyon 230 kV
- Nevada/Utah Border:
 - ▶ Gonder-Pavant 230 kV line known as “Gonder 230 kV”
 - ▶ Red Butte – Harry Allen 345 line known as “NUB” or Red Butte 345 kV
- Crystal 500 kV
- West of Naughton
 - ▶ Connected to a major 230 kV or 345 kV substation west of Naughton substation to the Utah border.
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East Side Point(s) of Delivery (cont)

- Although the Company will consider resources delivered to the following areas these areas have been identified as having potential transmission constraint implications and as such, will need to be evaluated accordingly:
 - ▶ Wyoming, unless the resource(s) electrically reside south of the Naughton Monument 230kV line. If, resources in Wyoming are not electrically west of Naughton such resources may be useful in supporting the increased load and wind resources in Wyoming; however, such resources may be negatively affected by transmission constraints.
 - ▶ All points of receipt which require transmission line construction will require 4-7 years and in some scenarios even longer in order to allow time for environmental work, route selection, permitting, and construction. Resources located at one of these POR's may require cost adjustment for some period of time to accommodate re-dispatch of existing resources or other means of managing transmission congestion in the interim period between completion of plant construction and before new transmission is commissioned.
 - ▶ PacifiCorp is willing to consider purchasing capacity and associated energy that is sourced from Desert Southwest (Nevada, California, Arizona, New Mexico); provided, the selling entity is able to purchase firm transmission from the resource to either Gonder or Nevada Utah Border.

West Side Point(s) of Delivery (cont)

West Side Points of Delivery

- Mid Columbia – Yakima Area
 - ▶ Midway 230 kV
 - ▶ Wanapum 230 kV
- California Oregon Border
- Portland
 - ▶ Troutdale 230 kV
- Willamette Valley
 - ▶ Alvey 500 kV
 - ▶ Fry 230 kV
- Southern Oregon
 - ▶ Chiloquin 230 kV
 - ▶ Dixonville 230 kV
 - ▶ Meridian 230 kV
 - ▶ Reston 230 kV
- Central Oregon
 - ▶ Bend 69 kV
 - ▶ Pilot Butte 69/230 kV
 - ▶ Ponderosa 230 kV
 - ▶ Redmond 69 kV

West Side Point(s) of Delivery (cont)

- Oregon Coast
 - ▶ Astoria to Tillamook 115 kV
 - ▶ Boyer (Lincoln City) 115 kV
- Within the Western Control Area – The point of interconnection is the point between the resource, or the electrical system to which the resource is connected, and PacifiCorp’s transmission system.
- Scheduled to the point(s) of interconnection between PacifiCorp’s western control area and the Bonneville Power Administration or Portland General Electric such that transfer limitations are not exceeded. If the resource is located within the Bonneville control area the Bidder must show they have control area service from the resource to the delivery point.
- All points of receipt that require transmission line construction will require 4-7 years and in some scenarios even longer in order to allow time for environmental work, route selection, permitting, and construction. Resources located at one of these POR’s may require cost adjustment for some period of time to accommodate re-dispatch (if possible) of existing resources or other means of managing transmission congestion in the interim period between completion of plant construction and before new transmission is commissioned.

Pricing Input Sheet (Form 1)

- The Form 1 Pricing Input Sheet is an interactive Excel spreadsheet.
 - ▶ Provides critical inputs that will be used for the financial evaluation of each bid.
 - ▶ It is critical that bidders enter inputs by order of Field ID.
 - ▶ A Form 1 can be used for all Resource Categories.
 - Selection made in Field ID 0 (Bid Category; e.g. Base Load, Intermediate, Summer Peak), Field ID 1 (Resource Alternative; e.g. Power Purchase Agreement, Tolling Service Agreement, etc.) and Field ID 2 (Resource Type; e.g. Combined Cycle, Simple Cycle) turn subsequent input fields "on" and "off".
 - ▶ The Pricing Input Sheet contains definitions which are cross-referenced by Field ID.
- An electronic version (Excel) of the Pricing Input Sheet must be submitted for each bid or bid will be rejected and returned to the IE.
 - ▶ To the extent that information does not conform to the Pricing Input Sheet, bidders are to use the Additional Data worksheet within Form 1.

Evaluation Overview

– Evaluation will be completed in a four step process:

▶ Step 1: Initial Short List Analysis

- By Eligible Resource Category, an initial short list will be determined based on Price and Non-Price factors.

▶ Step 2: Portfolio Development/Optimization

- Resource portfolios among a range of market price/CO₂ scenarios are developed from bids selected to the initial shortlist.
- Initial shortlist bids will be evaluated in Step 2 using best and final pricing.

▶ Step 3: Risk Analysis

- Portfolios developed in Step 2 will undergo further risk analysis.
- Step 3a stochastic risk analysis.
- Step 3b deterministic scenario risk analysis.

▶ Step 4: Final Selection, Other Factors

- Steps 1-3 constitute the formal evaluation process culminating in a final shortlist for resources that will be eligible for negotiation.
- In consultation with the IEs, the Company will take into consideration factors that are not expressly or adequately factored into the formal evaluation process.
- Consistent with Utah Energy Resource Procurement Act and Oregon Guideline 10(d).

Initial Shortlist Screening

– Step 1: Initial Shortlist Bid Evaluation - RFP Base Model

▶ Price - 70% weighting

- ▶ The price score will be calculated for each proposal (and each alternative as applicable) using a market ratio metric.
- ▶ The market ratio will be expressed as a percentage and calculated by dividing the PVRR of expected energy value into the PVRR of proposal costs.
- ▶ A market ratio less than 100% indicates that the PVRR of proposal costs are lower than the equivalent market alternative, and therefore favorable to customers.
- ▶ The market ratio will be used to assign a price score of between zero and 70% to each proposal (and each alternative as applicable) as set forth in the table below

Market Ratio	Price Factor Weighting
Less than or equal to 60%	70%
Greater than 60% but less than 140%	Linearly interpolated
Equal to or greater than 140%	0%

- Includes transmission costs to integrate the resource and/or third party transmission if applicable.
- Transmission and or transportation costs currently available will be disclosed to bidders.

▶ Non-price - 30% weighting

- Development, feasibility/Risk (up to 10%)
- Site Control and Permitting (up to 10%)
- Operational Viability / Risk Impacts (up to 10%)

Portfolio Development/Optimization

– Step 2: Portfolio Development/Optimization – System Optimizer Model

- ▶ Using best and final pricing for bids selected to the Initial Shortlist, the Ventyx Energy LLC System Optimizer will be used to develop optimized portfolios under various assumptions for future emission costs and market prices.
- ▶ The starting point for System Optimizer portfolio is a baseline preferred portfolio.
 - Resources will be removed to create a deficit through 2016 that the model must fill with one or more bid resources.
 - The model will also be allowed to select a variable quantity of firm market purchases, or “front office transactions” to ensure that a specified annual planning reserve margin is maintained
- ▶ The System Optimizer will produce an optimized portfolio for each combination of carbon dioxide (CO₂) and natural gas price assumptions input into the model (“price scenarios”).
- ▶ In addition to a base case price scenario, additional price scenarios will be modeled. The price scenarios will be locked down by the IEs prior to receipt of market bids.
- ▶ Each System Optimizer portfolio will be a candidate for the optimum combination of resources to be selected through the RFP process and will therefore be advanced to the stochastic analysis step described below.
- ▶ Resources bid into the RFP that are not included in any of the portfolios resulting from this step will no longer be considered candidates for acquisition by the Company.

Risk Analysis – Stochastic

– Step 3a: Stochastic Analysis – Planning and Risk (PaR)

- ▶ Ventyx Energy LLC’s Planning and Risk (PaR) model will be used in stochastic mode to develop expected PVRR and PVRR risk measures for each optimized portfolio.
- ▶ The unique portfolios from Step 2 will be simulated using PaR in stochastic mode. The PaR simulation produces a dispatch solution that accounts for chronological unit commitment, dispatch, and transmission constraints.
- ▶ Stochastic risk is captured in PaR production cost results by using Monte Carlo random sampling of five variables: loads, commodity natural gas prices, wholesale electricity prices, hydro energy availability, and thermal unit availability for new resource options.
- ▶ The simulation is conducted for 100 model iterations using the sampled variable values. To capture CO₂ emission costs and associated dispatch impacts, simulations will be conducted using the CO₂ tax values modeled for Step 2 above.

Risk Analysis – Deterministic & Final Selection

– Step 3b: Deterministic Scenario Analysis – System Optimizer

- ▶ As an additional risk analysis step, the optimal portfolios will be subjected to a more in-depth deterministic scenario analysis using the System Optimizer, with each portfolio being assessed for each of the future scenarios described in Step 2 above.
- ▶ For example, Portfolio 1 will have been optimized for Scenario 1, but in this step Portfolio 1 will be reevaluated under the other scenarios in order to assess the consequences of choosing a portfolio if other futures are realized.
- ▶ This step is intended to identify portfolios with especially poor performance under certain future scenarios and used to inform the selection of final resource options.

– Step 4: Final Selection

- ▶ Steps 1-3 constitute the formal evaluation process culminating in a final shortlist for resources that will be eligible for negotiation.
- ▶ In consultation with the IEs, the Company will take into consideration factors that are not expressly or adequately factored into the formal evaluation process.
- ▶ Consistent with Utah Energy Resource Procurement Act and Oregon Guideline 10(d).

– Analysis Conclusion

- ▶ The resources in the highest performing (least cost, adjusted for risk) portfolio will advance to contract negotiations

Questions/Comments & Information Sources

RFP Questions and Answers

Merrimack

<http://www.merrimackenergy.com/>

PacifiCorp Transmission

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Please visit the PacifiCorp OASIS site for more transmission information:

<http://www.oasis.pacificorp.com/oasis/ppw/main.htmlx>