LEGAL REQUIREMENTS AND OTHER REPORTS

Contents

PSE is submitting this IRP pursuant to state regulations regarding electric and natural gas utility resource planning contained in WAC 480-100-238 and WAC 480-90-238, respectively. Section 1 of this appendix outlines the regulatory requirements for electric and gas integrated resource plans and identifies where each of these requirements is addressed within the IRP. Section 2 reports on the electric and gas utility action plans put forward in the previous IRP. Section 3 offers two additional reports. The first illustrates how PSE's electric demand-side resources assessment is consistent with the Northwest Power and Conservation Council's methodology. The second summarizes the load-resource balance information presented in this IRP.

This IRP is the product of robust analysis that considered a wide range of future risks and uncertainties. PSE believes this plan meets applicable statutory requirements, and seeks a letter from the WUTC accepting this filing.

REGULATORY REQUIREMENTS

Figures B-1 and B-2 delineate the regulatory requirements for electric and natural gas integrated resource plans and identify the chapters of this plan that address each requirement.

Figure B-1: Electric Utility Integrated Resource Plan Regulatory Requirements

Statutory or Regulatory Requirement	Chapter and/or Appendix
WAC 480-100-238 (3) (a) A range of forecasts of future demand using methods that examine the effect of economic forces on the consumption of electricity and that address changes in the number, type and efficiency of electrical end-uses.	Chapter 4, Key Analytical Assumptions Chapter 5, Demand Forecasts Appendix E, Demand Forecasting Models
WAC 480-100-238 (3) (b) An assessment of commercially available conservation, including load management, as well as an assessment of currently employed and new policies and programs needed to obtain the conservation improvements.	Chapter 6, Electric Analysis Appendix J, Demand-side Resources
WAC 480-100-238 (3) (c) An assessment of a wide range of conventional and commercially available nonconventional generating technologies.	Chapter 6, Electric Analysis Appendix D, Electric Resources and Alternatives Appendix K, Colstrip Appendix L, Electric Energy Storage Appendix M, Distributed Solar
WAC 480-100-238 (3) (d) An assessment of transmission system capability and reliability, to the extent such information can be provided consistent with applicable laws.	Appendix I, Regional Transmission Resources
WAC 480-100-238 (3) (e) A comparative evaluation of energy supply resources (including transmission and distribution) and improvements in conservation using the criteria specified in WAC 480-100-238 (2) (b), Lowest reasonable cost.	Chapter 2, Resource Plan Decisions Chapter 6, Electric Analysis Appendix I, Regional Transmission Resources Appendix N, Electric Analysis Appendix J, Demand-side Resources
WAC 480-100-238 (3) (f) Integration of the demand forecasts and resource evaluations into a long-range (e.g., at least ten years; longer if appropriate to the life of the resources considered) integrated resource plan describing the mix of resources that is designated to meet current and projected future needs at the lowest reasonable cost to the utility and its ratepayers.	Chapter 2, Resource Plan Decisions
WAC 480-100-238 (3) (g) A short-term plan outlining the specific actions to be taken by the utility in implementing the long-range integrated resource plan during the two years following submission.	Chapter 1, Executive Summary

Statutory or Regulatory Requirement	Chapter and/or Appendix
WAC 480-100-238 (3) (h) A report on the utility's progress towards implementing the recommendations contained in its previously filed plan.	Appendix B, Legal Requirements and Other Reports
WAC 480-100-238 (4) Timing. Unless otherwise ordered by the commission, each electric utility must submit a plan within two years after the date on which the previous plan was filed with the commission. Not later than twelve months prior to the due date of a plan, the utility must provide a work plan for informal commission review. The work plan must outline the content of the integrated resource plan to be developed by the utility and the method for assessing potential resources.	2015 Integrated Resource Plan Work Plan filed with the WUTC May 29, 2014, and Updated Work Plan filed July 31, 2015
WAC 480-100-238 (5) Public participation. Consultations with commission staff and public participation are essential to the development of an effective plan. The work plan must outline the timing and extent of public participation. In addition, the commission will hear comment on the plan at a public hearing scheduled after the utility submits its plan for commission review.	Appendix A, Public Participation
RCW 19.280.030 (e) An assessment of methods, commercially available technologies, or facilities for integrating renewable resources, and addressing overgeneration events, if applicable to the utility's resource portfolio.	Appendix H, Operational Flexibility Overgeneration events are not applicable to PSE.

Figure B-2: Natural Gas Utility Integrated Resource Plan Regulatory Requirements

Statutory or Regulatory Requirement	Chapter and/or Appendix
WAC 480-90-238 (3) (a) A range of forecasts of future natural gas demand in firm and interruptible markets for each customer class that examine the effect of economic forces on the consumption of natural gas and that address changes in the number, type and efficiency of natural gas end-uses.	Chapter 4, Key Analytical Assumptions Chapter 5, Demand Forecasts Appendix E, Demand Forecasting Models
WAC 480-90-238 (3) (b) An assessment of commercially available conservation, including load management, as well as an assessment of currently employed and new policies and programs needed to obtain the conservation improvements.	Chapter 7, Gas Analysis Appendix J, Demand-side Resources
WAC 480-90-238 (3) (c) An assessment of conventional and commercially available nonconventional gas supplies.	Chapter 7, Gas Analysis

Statutory or Regulatory Requirement	Chapter and/or Appendix
WAC 480-90-238 (3) (d) An assessment of opportunities for using company-owned or contracted storage.	Chapter 7, Gas Analysis Appendix O, Gas Analysis
WAC 480-90-238 (3) (e) An assessment of pipeline transmission capability and reliability and opportunities for additional pipeline transmission resources.	Chapter 7, Gas Analysis Appendix O, Gas Analysis
WAC 480-90-238 (3) (f) A comparative evaluation of the cost of natural gas purchasing strategies, storage options, delivery resources, and improvements in conservation using a consistent method to calculate cost-effectiveness.	Chapter 7, Gas Analysis Appendix O, Gas Analysis Appendix J, Demand-side Resources
WAC 480-90-238 (3) (g) The integration of the demand forecasts and resource evaluations into a long-range (e.g., at least ten years; longer if appropriate to the life of the resources considered) integrated resource plan describing the mix of resources that is designated to meet current and future needs at the lowest reasonable cost to the utility and its ratepayers.	Chapter 2, Resource Plan Decisions
WAC 480-90-238 (3) (h) A short-term plan outlining the specific actions to be taken by the utility in implementing the long-range integrated resource plan during the two years following submission.	Chapter 1, Executive Summary
WAC 480-90-238 (3) (i) A report on the utility's progress towards implementing the recommendations contained in its previously filed plan.	Appendix B, Legal Requirements and Other Reports
WAC 480-90-238 (4) Timing. Unless otherwise ordered by the commission, each natural gas utility must submit a plan within two years after the date on which the previous plan was filed with the commission. Not later than twelve months prior to the due date of a plan, the utility must provide a work plan for informal commission review. The work plan must outline the content of the integrated resource plan to be developed by the utility and the method for assessing potential resources.	2015 Integrated Resource Plan Work Plan filed with the WUTC May 29, 2014, and Updated Work Plan filed July 31, 2015
WAC 480-90-238 (5) Public participation. Consultations with commission staff and public participation are essential to the development of an effective plan. The work plan must outline the timing and extent of public participation. In addition, the commission will hear comment on the plan at a public hearing scheduled after the utility submits its plan for commission review.	Appendix A, Public Participation

REPORT ON PREVIOUS ACTION PLANS

2013 Electric Resources Action Plan

Per WAC 480-100-238 (3) (h), each item from the 2013 IRP electric resources action plan is listed below, along with the progress that has been made in implementing those recommendations.

Electric Demand-side Resources. Pursue cost-effective demand-side resources based on IRP guidance. Work with external stakeholders in the CRAG process to establish targets and tariff filings, using this IRP as a starting point. Issue Request for Proposals (RFPs) as appropriate to assist with efficient acquisition of demand-side resources.

PROGRESS

PSE reviewed the 2013 IRP guidance with its Conservation Resource Advisory Group (CRAG) beginning in June 2013. Over the course of the following four months, PSE collaborated with the CRAG to develop its 2014-2015 EIA electric demand-side resource target, which was approved by the Commission on December 19, 2013. PSE issued an "all-comers" Request for Information for possible new energy efficiency programs on or about March 15, 2013. An additional RFP for existing and two new programs was issued in August 2013.

PSE ensures that the CRAG is engaged in its program development by conducting regular CRAG meetings and providing the CRAG with routine updates in its "CRAG Communications" newsletters. Please see Appendix A, Public Participation, for further information regarding the CRAG.

Reduce Market Reliance. Develop a strategy to reduce reliance on market in the intermediate to long-term, including coordination with others in the region as appropriate. File an update or addendum to the 2013 IRP early in the fourth quarter of 2013 to address concerns about relying on market to meet capacity needs.

PROGRESS

PSE filed an Update to the 2013 IRP on December 31, 2013. The 2013 IRP Update noted that at that time, relying on 1,600 megawatts (MW) of short-term wholesale market capacity to meet peak electric need was reasonable because the region was surplus, and generation to back-fill coal plant retirements could be built with a three-year lead time. PSE also noted that it would continue to monitor and evaluate the issue. Detailed discussion of these examinations can be found in the 2015 IRP in Appendix G, Wholesale Market Risk, and Chapter 6, Electric Analysis.

Resource Acquisition Timeline. Ensure that the timeline for resource acquisitions is long enough to accommodate the type of infrastructure development that may be required due to anticipated changes in regional resource adequacy.

PROGRESS

Since energy efficiency and demand-response additions appear sufficient to meet incremental capacity need until 2021 and satisfy WAC 480-107 requirements, it makes sense to wait for further PSE demand and regional resource adequacy studies before issuing a Request for Proposals (RFP). PSE anticipates that when an RFP is issued it will be ahead of the three-year window that would require an RFP based on WAC 480-107-015(3). This should allow adequate time to develop the appropriate infrastructure that may be required. A step-by-step description of PSE's RFP process is included in the Electric Resource Acquisition section of Chapter 3, Planning Environment.

Gas Storage for Electric Generation. Pursue the prudent acquisition of gas storage for generation.

PROGRESS

PSE is in the process of negotiating for the acquisition of firm storage for power generating assets along with related firm transportation, and we expect to complete one or more transactions before the end of 2015.

Improve IRP Process. Develop a robust work plan for the 2015 IRP to clarify the roles and expectations of the public participation process and to provide greater transparency regarding PSE's analytical processes.

PROGRESS

On May 29, 2014, PSE filed a Work Plan for the 2015 Integrated Resource Plan which included a timeline, a summary for assessing resources and an outline of the 2015 IRP content. Throughout the 2015 IRP process, PSE posted meeting notes, handouts and presentations from the IRP Advisory Group (IRPAG) meetings on its website. Please refer to PSE's website for a copy of its 2015 IRP Work Plan and IRPAG information: http://pse.com/aboutpse/EnergySupply/Pages/Resource-Planning.aspx.

2013 Gas Resources Action Plan

Per WAC 480-90-238 (3) (i), each item from the 2013 IRP gas resources action plan is listed below, along with the progress that has been made in implementing those recommendations.

Gas Demand-side Resources. Pursue cost-effective demand-side resources based on IRP guidance. Work with external stakeholders in the CRAG process to establish goals, targets and tariff filings, using this IRP as a starting point. Issue RFPs as appropriate to assist with efficient acquisition of demand-side resources.

PROGRESS

PSE reviewed the 2013 IRP guidance with its CRAG beginning in June 2013. Over the course of the following four months, PSE collaborated with the CRAG to develop its 2014-2015 natural gas goal, which was approved by the Commission on December 19, 2013. PSE issued an "all-comers" Request for Information for possible new energy efficiency programs on or about March 15, 2013. An additional RFP for existing and two new programs was issued in August 2013.

PSE ensures that the CRAG is engaged in its program development by conducting regular CRAG meetings and providing the CRAG with routine updates in its "CRAG Communications" newsletters.

PSE LNG Project. Continue working toward developing the potential PSE LNG Project to support gas utility peaking and transportation sector needs. Update and refine cost/resource estimates on expanding the facility's potential to provide peaking capabilities for the gas utility portfolio as the project proceeds.

PROGRESS

PSE is in the development phase of the PSE LNG project in Tacoma. A major transportation sector customer has executed long-term agreements. PSE expects to have the project in service by late 2018. Please see Chapter 7, Gas Analysis, for additional information.

Swarr. Further analyze the costs and resource issues associated with investing in the Swarr facility to restore its original 30 MDth per day capability. Decide whether such investments will provide a safe, cost-effective resource for meeting the needs of customers.

PROGRESS

PSE has designed and scheduled an upgrade project that will restore the Swarr facility to safe, reliable service by the fourth quarter of 2016.

Pipeline Expansions. Continue working with Northwest Natural Gas and Northwest Pipeline (NWP) on the possibility of participating in an expansion of the Mist storage facility and transportation to PSE's service territory.

PROGRESS

PSE has continued dialogue with these and other parties in the region. It has become clear that acquisition of cost-effective firm pipeline capacity from Mist to the PSE gas service area or power plant sites (north-bound) is dependent on the expansion of NWP facilities in the south-bound direction. Such expansion would only be triggered by firm commitments to NWP by other large new customers. PSE is also aware that once an expansion is triggered, other options, including peak-period gas diversions from new customers, may be possible and will be considered. Please see Chapter 7, Gas Analysis, for additional information.

Pipeline Capacity Acquisition. Remain active in the market to ensure PSE can acquire existing surplus firm pipeline capacity in case the PSE LNG Peaking Project or Swarr opportunities do not move forward.

PROGRESS

PSE continues to monitor the market to be aware of any opportunities for both short- and long-term pipeline capacity.

Gas Planning Analytics. Complete analysis of whether the gas planning standard should include additional aspects, such as sustained peaking or cold snap metrics.

PROGRESS

PSE used the peak day design temperature standard in this IRP – as it has in past IRPs. Also, included in this IRP is the impact on available pipeline transportation capacity under various extreme weather conditions. PSE continues to study the costs and benefits of using a sustained peaking metric and its impact on available gas supply-side resources including storage to serve gas sales customers.

Improve IRP Process. Develop a robust work plan for the 2015 IRP to clarify the roles and expectations of the public participation process and to provide greater transparency regarding PSE's analytical processes.

PROGRESS

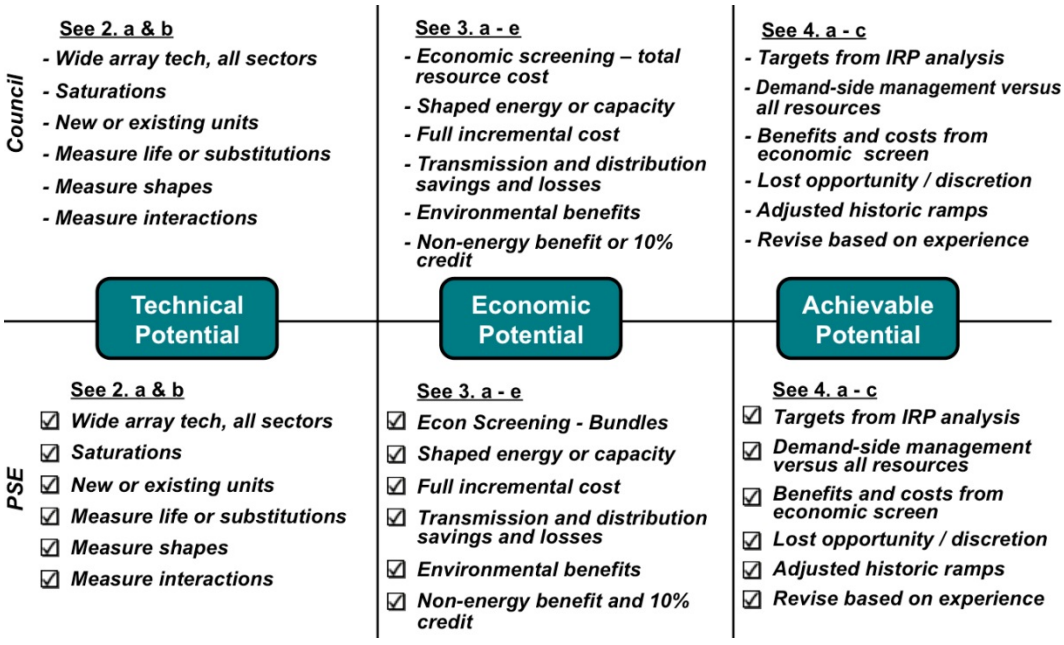
On May 29, 2014, PSE filed a Work Plan for the 2015 Integrated Resource Plan which included a timeline, a summary for assessing resources and an outline of the 2015 IRP content. Throughout the 2015 IRP process, PSE posted meeting notes, handouts and presentations from the IRP Advisory Group meetings on its website. Please refer to PSE's website for a copy of its 2015 IRP Work Plan and IRPAG information: http://pse.com/aboutpse/EnergySupply/Pages/Resource-Planning.aspx.

OTHER REPORTS

Electric Demand-side Resource Assessment: Consistency with Northwest Power and Conservation Council Methodology

There are no legal requirements for the IRP to address the Northwest Power and Conservation Council (Council) methodology for assessing demand-side resources. Such comparison, however, may be useful for PSE and stakeholders in implementing sections of WAC 480-109. PSE has worked closely with Council staff on several aspects of our analytical process, including approaches to modeling demand-side resources. We're most grateful for the dialogue, and very much appreciate the opportunity to work with Council staff. WAC 480-109 does not define "methodology." PSE developed the detailed checklist below to demonstrate that our IRP process is consistent with the Council's methodology.[1] This checklist was presented and discussed during the March 18, 2014 IRP Advisory Group meeting. Additional information on consistency with Council methodology can be found in the Cadmus report attached as Appendix J, Demand-side Resources.

Figure B-3: Comparison of Demand-side Resource Assessment Methodologies, PSE and the Northwest Power and Conservation Council



1 / References in Figure B-3 refer to the Council's assessment of its methodology, found at: http://www.nwcouncil.org/energy/powerplan/6/supplycurves/I937/default.htm

Department of Commerce
Integrated Resource Plan Cover Sheet

The WUTC is required to provide summary information about the IRPs of investor-owned utilities to the Department of Commerce. Information for the cover sheet is included in Figure B-4, below.

Figure B-4: Load-resource Balance Summary

Resource Plan Year:	2016
Base Year Start:	01/01/2016
Base Year End:	12/31/2016
Five-year Report Year:	2021
Ten-year Report Year:	2026

Report Years	*Base Year = 2016*			*2021*			*2026*		
Period	**Winter**	**Summer**	**Annual**	**Winter**	**Summer**	**Annual**	**Winter**	**Summer**	**Annual**
Units	**(MW)**	**(MW)**	**(aMW)**	**(MW)**	**(MW)**	**(aMW)**	**(MW)**	**(MW)**	**(aMW)**
Loads	4,929	3,170	2,636	5,364	3,577	2,888	5,784	3,989	3,136
Exports	34	334	69	20	320	59	0	300	47
Resources									
Conservation/Efficiency	75	28	27	411	245	275	669	431	470
Demand Response	18			121			130		
Cogeneration									
Hydro	897	781	521	897	777	516	897	777	500
Wind	74	74	251	74	74	251	74	74	251
Other Renewables									
Thermal - Gas	2,008	1,852	1,155	2,028	1,852	1,155	2,028	1,852	1,155
Thermal - Coal	592	592	575	592	592	575	592	592	575
Long Term: BPA Base Year or Tier 1									
Net Long Term Contracts: Other	492	300	358	405	395	408	15	4	5
Net Short Term Contracts	1,686	1,762		1,201	1,398		1,190	1,384	
Other									
Imports	308	8	50	308	8	47	308	8	47
Total Resources, net of Exports	6,115	5,061	2,868	6,016	5,020	3,169	5,903	4,822	2,957
Load Resource Balance (Surplus) / Deficit	(1,186)	(1,891)	(231)	(653)	(1,443)	(281)	(118)	(833)	179