

Utah Clean Energy
1014 2nd Ave.
Salt Lake City, UT 84103
801-363-4046

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

**In the Matter of PacifiCorp’s 2015
Integrated Resource Plan**

DOCKET NO. 15-035-04

Initial Comments of Utah Clean Energy

I. INTRODUCTION

Utah Clean Energy is grateful for opportunity to participate in the Integrated Resource Plan (IRP) public process and to submit comments in response to PacifiCorp’s 2015 IRP. Utah Clean Energy has attended public input meetings, submitted comments to PacifiCorp in response to its public input meetings, and filed data requests in the above-captioned matter regarding IRP inputs and assumptions.

II. COMMENTS ON THE 2015 IRP

Utah Clean Energy’s comments on the 2015 IRP are submitted in three parts:

- 1) Synapse Energy Economics conducted analysis on PacifiCorp’s 2015 System Optimizer model. Their analysis and their report, entitled *Review of the Use of the*

System Optimizer Model in PacifiCorp's 2015 IRP, was conducted for a number of groups and it is submitted by the Sierra Club and other groups in this docket. Please consider the Synapse Report as part of Utah Clean Energy's comments.

- 2) Utah Clean Energy submits separate comments on the demand side management (DSM) potential study and DSM in the 2015 IRP jointly with the Southwest Energy Efficiency Project (SWEET).
- 3) Finally, Utah Clean Energy submits the comments and recommendations provided herein.

A. Coal Investment Strategy

In addition to the significant issues that Synapse identifies in their report, Utah Clean Energy has additional concerns regarding PacifiCorp's coal investment strategy. The 2015 IRP preferred portfolio includes a reduced reliance on PacifiCorp's coal fleet for meeting their growing demand in next 20 years.¹ However, the preferred portfolio includes litigation strategies to avoid installation of Selective Catalytic Reduction (SCR) emission control equipment at Wyodak, Dave Johnston Unit 3 and Cholla Unit 4.² If the litigation strategy fails, ratepayers will be required to pay for either additional costly SCRs, or if these plants are retired early, replacement power.

Aside from the litigated SCRs, the preferred portfolio includes 13 additional costly SCR upgrades³ (assuming SCR costs between \$90- \$130 million for each plant, these upgrades would cost between approximately \$1.2 and \$1.7 billion).

¹ PacifiCorp 2015 IRP Vol. I, Executive Summary, Page 188

² PacifiCorp 2015 IRP Vol. I, Executive Summary, Pages 5-6

³ PacifiCorp 2015 IRP Vol. II, Appendix M – Case Study Factsheets, C05a-3Q, Pages 298-99

Utah Clean Energy has serious concerns with the significant costs associated with coal plant upgrades. In addition to the total cost of SCR’s on these plants likely totaling over \$1 billion, there are ongoing carbon cost risks associated with the Clean Power Plan rule, *and* the depreciable life of some of these plants is significantly shorter in Oregon in comparison to other states (Oregon’s depreciable life ends within a span of 3-5 years after the SCR is scheduled to be installed). Therefore, Utah Clean Energy is extremely concerned about risk associated with these very expensive investments in SCRs. Please see Table 1, below, showing the difference in Oregon’s depreciable life as compared to other PacifiCorp states.

Table 1: Regional Haze compliance assumptions under the preferred portfolio

Unit	Investment	Investment year	Remaining depreciable life in Oregon after the investment	Remaining depreciable life in other states after the investment
Craig 1	SCR	2021	5 years	13 years
Bridger 2	SCR	2021	4 years	16 years
Bridger 1	SCR	2022	3 years	15 years
Hunter 3	SCR	2024	5 years	18 years

Source: PacifiCorp 2015 IRP Vol. II, Appendix M – Case Study Factsheets, C05a-3Q, Pages 298-99

Utah Clean Energy filed a data request asking PacifiCorp to explain the rationale for modeling assumptions based on the unsupported premise that Oregon regulators/ratepayers will agree to major capital investments that, at currently approved schedules, must be paid off in five or fewer years.⁴

PacifiCorp acknowledged that they are not committed to these SCR investments and that the IRP did not assess the cost allocation issue, but rather assumes these costs are collected over the depreciable life in non-Oregon states.⁵ This is a significant oversight given that the

⁴ Docket No. 15-035-04, UCE data requests to PacifiCorp 2.10 and 2.11

⁵ Docket No. 15-035-04, PacifiCorp’s Response to UCE data requests 2.10 and 2.11

preferred portfolio is assuming these SCR installations even though it is uncertain whether Oregon will “opt in” to pay for these investments in the future. This may have serious impacts on other states and ratepayers in the non-Oregon region. Thus, the assumptions regarding SCR investments in the preferred portfolio are extremely risky and Utah Clean Energy finds it concerning that PacifiCorp has not taken into account risk of Oregon’s shorter depreciation schedules in their decision making, nor the impact of this decision on all other ratepayers.

B. Acquisition Path Analysis

As a part of its acquisition path analysis, PacifiCorp provides a table that outlines different trigger events and corresponding near- and long-term resource acquisition strategies. However, similar to the 2013 IRP, there is no information about attendant costs and who bears the risk of having to pursue these different acquisition paths.

The Company explains its acquisition path analysis:

PacifiCorp’s decision mechanism is centered on the business planning and IRP processes, which together constitute the decision framework for making resource investment decisions. The IRP models are used on a macro-level to evaluate alternative portfolios and futures as part of the IRP process, and then on a micro-level to evaluate the economics and system benefits of individual resources as part of the supply-side resource procurement and DSM target-setting/valuation processes.⁶

Table number 9.3 in the IRP lists different trigger events and provides information on PacifiCorp’s near-term (2015 – 2024) and long-term (2025-2034) acquisition strategy. Acquisition of class 2 DSM and front office transactions (FOT) is the most common near-term acquisition strategy for PacifiCorp. Utah Clean Energy is surprised to see that the

⁶ PacifiCorp 2015 IRP Vol. I, Action Plan, Page 236

resource acquisition strategy does not include acquisition of new renewable resources, except for the long-term strategy on New CO2 policy incremental to EPA's proposed 111(d).⁷

PacifiCorp's strategy of converting their existing thermal power plants from coal to natural gas is not a risk free strategy. With prices of renewables declining on an annual basis, Utah Clean Energy is concerned about the fact that acquisition of these resources is not considered a cost-effective strategy until 2024.⁸ In addition to the accelerated acquisition of DSM (which is a least cost resource under any scenario) the acquisition path analysis should include continued analysis of renewable energy, storage and demand response. Costs are declining rapidly and technology is also evolving rapidly. Therefore, prior to investments in more risky fossil fuel resources, cleaner low-risk resources should be analyzed and considered.

C. Load Forecasting

Load forecasting under the 2015 IRP, similar to the 2013 IRP, is based on historic data and does not anticipate the impacts of climate change on weather or on load.⁹ Though the company indicates that peak producing weather does not change significantly when looking at the long term (10 – 20 years), it is still important to consider the impacts of increasing temperatures, especially on the electricity demand for cooling on a yearly basis.¹⁰

PacifiCorp's historic look at temperatures cannot provide an accurate picture of future climate and weather trends.

⁷ PacifiCorp 2015 IRP Vol. I, Action Plan, Table 9.3, Pages 237 – 238

⁸ PacifiCorp 2015 IRP Vol. I, Action Plan, Table 9.3, Pages 237 – 238

⁹ PacifiCorp 2015 IRP Vol. II, Appendix A – Load Forecast, Page 9

¹⁰ U.S. Department of Energy, *U.S. Energy Sector Vulnerabilities to Climate Change and Extreme Weather* (July 2013), note 1, page 15. Available at: <http://energy.gov/sites/prod/files/2013/07/f2/20130716-Energy%20Sector%20Vulnerabilities%20Report.pdf> ("DOE report")

PacifiCorp forecasts an average 2 percent increase for both peak load and annual load growth for the next 10 years. This corresponds with an average 2 percent increase in Utah's peak load and system retail sales from 2000 to 2014.¹¹ However, looking at historic yearly data, there have been years when the peak load increase 8 percent (such as in 2013) and the overall system retail sales remained constant in comparison to the previous year. Please refer to Table 2, below. The high peak load in 2013 can be attributed to the highest summer temperatures on record in Utah.¹² Therefore, it is important that PacifiCorp take into account the impacts of changing climate rather than simply assuming average increase in peak load and load growth based on historic data.¹³ Preparing for extreme weather events, such as the summer of 2013, may change resource acquisition strategies, including peak focused DSM and demand response.

¹¹ PacifiCorp 2015 IRP Vol. II, Appendix A – Load Forecast, Page 3 and 11

¹² <http://www.sltrib.com/sltrib/news/56649691-78/summer-average-degree-degrees.html.csp>.

¹³ http://www.nytimes.com/2013/08/20/science/earth/extremely-likely-that-human-activity-is-driving-climate-change-panel-finds.html?pagewanted=all&_r=0.

Table 2: Peak Load and Load Growth for Utah (historic vs forecasted)

Historic Peak Load (MW)	2000	2001	2002	2003	2004	2005	2006	2007
	3684	3480	3773	4004	3862	4081	4314	4571
		-6%	8%	6%	-4%	6%	6%	6%
	2008	2009	2010	2011	2012	2013	2014	
	4479	4404	4448	4596	4732	5091	5024	
	-2%	-2%	1%	3%	3%	8%	-1%	
Forecasted Peak Load (MW)	2015	2016	2017	2018	2019	2020	2021	2022
	4770	4881	4985	5076	5153	5234	5313	5389
		2%	2%	2%	2%	2%	2%	1%
	2023	2024						
	5462	5540						
	1%	1%						
Historic Retail sales (MWh)	2000	2001	2002	2003	2004	2005	2006	2007
	18803000	18478000	18620000	19248000	19829000	20214000	21081000	21973000
		-2%	1%	3%	3%	2%	4%	4%
	2008	2009	2010	2011	2012	2013	2014	
	22626000	22082000	22561000	23343000	23825000	23834000	24371000	
	3%	-2%	2%	3%	2%	0%	2%	
Forecasted Load Growth (MWh)	2015	2016	2017	2018	2019	2020	2021	2022
	26470940	27119080	27727030	28297970	28789180	29245590	29595670	30038620
		2%	2%	2%	2%	2%	1%	1%
	2023	2024						
	30491320	31023270						
	2%	2%						

Source: PacifiCorp 2015 IRP Vol. II, Appendix A – Load Forecast, Page 3 and 11

D. Loss of Load Probability Study and Associated Capacity Value

As discussed in detail by our witness in Docket 14-135-140, Utah Clean Energy points out that there are significant limitations in the use of the Loss of Load Probability Analysis for the capacity value analysis. The majority of the loss of load events in the Loss of Load

Probability Study occurred in two limited areas in Wyoming.¹⁴ This indicates a high probability that the loss of load events are the result of transmission constraints in these two areas of Wyoming. If this is the case, no resource located outside of the transmission constrained areas in Wyoming would provide any capacity value to meet those loss of load events. Utah Clean Energy again strongly advocates that the use of those loss of load events in determining capacity value for renewables is incorrect. Further, it not only impacts qualifying facility (QF) avoided cost values, but it undervalues the capacity value of renewables in the IRP, which could negatively influence the selection of renewables. Further, undervaluing renewable capacity value will result in an undervaluing of the solar QFs included in the IRP, which could result in unnecessary gas capacity additions.

E. Emissions from the preferred portfolio

It must be noted that all four C05-3 cases, including the preferred portfolio, CO5a-3Q, are in the top five CO2 emitting portfolios evaluated in the IRP.¹⁵ The only case with higher CO2 emissions is Case CO1-R, which assumes *no requirements* to control CO2 emissions! With the ever increasing evidence that the impacts of climate change are accelerating, and will be extremely costly to address and adapt to, Utah Clean Energy argues that selecting a portfolio such as the preferred portfolio, with such high CO2 emissions, is risky for all ratepayers in the future.

F. Overall Integrated Resource Planning approach

Although the IRP is a 20 year projection, throughout this public process, PacifiCorp has acknowledged the speculative nature of this document and has indicated that the first two to

¹⁴ Docket No. 14-035-140, Utah Clean Energy Surebuttal comments

¹⁵ PacifiCorp 2015 IRP Vol II, Appendix – Detailed Capacity Expansion Results, Table K.5, Page 157

four years in the action plan is all that really matters. Unfortunately, this is not the case because the planned resource decisions in the out years have a profound impact on avoided cost pricing and the selection of risk-free renewable resources that can be obtained through QFs. Further, putting QF resources aside, Utah Clean Energy has consistently advocated for *least regrets* planning.

In previous IRP's, and again here, Utah Clean Energy advocates for a planning approach that acknowledges the impacts and tremendous costs of climate change to society and ratepayers and one that evaluates the cost of compliance with current (Clean Power Plan) greenhouse gas regulations and future regulations, while selecting least cost portfolios that lead to an orderly and economic transition to a cleaner, lower carbon and less risky portfolio. As explained in the Synapse comments, PacifiCorp analyzed a very narrow and questionable compliance pathway for the EPA Clean Power Plan and only conducted one sensitivity analysis looking at more stringent future greenhouse gas reduction requirements.

While we appreciate that PacifiCorp initiated an IRP Process Improvement input process after the 2013 IRP, this process did not result in meaningful dialogue or changes to the IRP process. In fact, as the Synapse report illustrates, the 2015 process was less transparent than past IRP planning processes and PacifiCorp hard coded more resource decisions into the preferred portfolio.

III. Conclusion and Recommendations

Our overarching concern with the 2015 IRP is that, even with EPA recognizing climate change as a real threat¹⁶ with its impacts amassing more rapidly than previously thought,

¹⁶ U.S. EPA. *Factsheet: Overview of the Clean Power Plan*. Available at: <http://www2.epa.gov/cleanpowerplan/factsheet-overview-clean-power-plan>

PacifiCorp's resource planning needs still don't respond to the changing conditions. The preferred portfolio is one of the highest emitting portfolios evaluated and it includes hard coded coal plant investments. Further, the preferred portfolio did not consider whether cost recovery for costly coal plant upgrades from states that have shorter coal plant depreciation schedules was feasible. Finally, the preferred portfolio does not mitigate risk, but rather places ratepayers at significant risk going forward.

In this section Utah Clean Energy presents its recommendations regarding Commission acknowledgement and recommendations for future work and an action plan prior acknowledgment,¹⁷ for future IRPs or the IRP update.

1. While Utah Clean Energy recognizes the difficulties of planning in these uncertain times, given the shortfalls explained in the Synapse Report, and the significant changes that will be necessary to model compliance with the final Clean Power Plan Rule, Utah Clean Energy recommends that the Commission not acknowledge PacifiCorp's 2015 IRP.
2. Utah Clean Energy recommends PacifiCorp model compliance with the Clean Power Plan based on the final rules released on Aug 3, 2015 in their IRP Update. Rather than hard code their compliance assumptions into the model, we recommend that PacifiCorp utilize the capabilities of the System Optimizer Model. Further we recommend that the 2017 IRP evaluate and solve for least cost portfolios to meet future carbon reductions.

¹⁷ See IRP Standards and Guidelines, guideline number 6: "IF the Plan needs further work the Commission will return it to the Company with comments and suggestions for change. This process should lead more quickly to the Commission's acknowledgement of an acceptable Integrated Resource Plan."

3. Given that Synapse was unable to determine why the System Optimizer does not select renewable energy, even at significantly lower prices, Utah Clean Energy would like to see sensitivity runs around renewable energy in the IRP Update. It is extremely important to understand the constraints that PacifiCorp added to the System Optimizer Model to determine whether they negatively impact the model's ability to select renewable energy resources.
4. Utah Clean Energy continues to advocate for *risk aware* and *least regrets* planning, and would therefore like to see that the Commission and Company support further investigation into specific vulnerabilities of PacifiCorp's system to climate impacts and risk to ratepayers from future carbon costs and potential stranded assets.
5. Utah Clean Energy recommends that PacifiCorp conduct a more meaningful acquisition path analysis which includes analysis about who bears the risk of having to pursue different acquisition paths. It is extremely important to consider uncertainty as part of a risk management approach for the energy sector in the face of a changing climate.¹⁸ Further, because renewable energy and storage costs continue to decline and technologies are evolving rapidly, the acquisition path analysis should continually evaluate the economics of these resources.

¹⁸ DOE Report, *supra*, note 1, page 42