

Benjamin J. Otto (ISB No. 8292)
710 N 6th Street
Boise, ID 83701
Ph: (208) 345-6933 x 12
Fax: (208) 344-0344
botto@idahoconservation.org

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IDAHO PUBLIC UTILITIES COMMISSION

Attorney for the Idaho Conservation League

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF PACIFICORP DBA)	CASE NO. PAC-E-15-04
ROCKY MOUNTAIN POWER'S 2015)	IDAHO CONSERVATION LEAGUE
INTEGRATED RESOURCE PLAN)	COMMENTS
)	

The Idaho Conservation League (ICL) submits the following comments on PacifiCorp's Integrated Resource Plan. Due to the geographic scope across the western United States, resource stack covering most western coal plants, the vast scale of the transmission system, and the wholesale market activities PacifiCorp's actions stemming from this resource plan will have more impact on Idaho than any other utility. Accordingly, the Commission must take a hard look at the plan's process and results to serve the best interest of all Idahoans.

ICL's comments cover three main topics. ICL supports PacifiCorp's treatment of demand side resources because it truly gives equal and balanced treatment to demand and supply side. We note the wind integration study shows the growing ease and lowering costs of integrating wind resources. However, PacifiCorp's modeling of potential Clean Power Plan and other coal pollution costs is fundamentally flawed. Due to these flaws, ICL recommends the Commission direct PacifiCorp to produce an IRP update that analyzes a mass based power plan compliance strategy and allows the model to discover, rather than planners to assume, the least cost and least risk path to deal with forthcoming coal pollution controls.

1. PacifiCorp Properly Models Demand Side Resources in the IRP

Idaho's IRP development guidelines require utilities to give equal and balanced treatment to supply-side resources, demand-side measures, and transmission resources. PacifiCorp's methodology for considering demand-side measures is more equal and more balanced than Idaho Power's or Avista's. ICL recommends the Commission specifically acknowledge that PacifiCorp's method as the preferred method for all Idaho utilities.

According to the Regulatory Assistance Project: “PacifiCorp is one of the only utilities in the country that models energy efficiency resources as supply-side resources, rather than as load modifiers.”¹ This expert report explains that this method “provides the model with specific quantities of energy efficiency at given costs, and allows those efficiency resources to compete against other resources from which the model is able to select.”² According to the State & Local Energy Efficiency Action Network, this methodology is a best practice for encouraging investment in cost-effective energy efficiency.³ This report compares three possible methodologies: adjusting load forecasts with specific efficiency savings; comparing alternate load forecasts resulting from different savings levels; and developing efficiency supply curves that can compete against other supply-side options. The supply curve method is best because “this approach will not only result in a true least-cost plan and (in most cases) high levels of energy efficiency investment, it will also provide useful information about the true value of demand side resources as an alternative to supply side resources.”⁴

The efficiency supply curve methodology begins with a demand side resource potential study.⁵ The study identifies the types of efficiency measures by customer class and end use, the amount of each type, and the cost for each type technically available in the service territory. From this data, planners are able to develop efficiency supply curves consisting of bundles of efficiency measures at various price points. These bundles have a load shape reflecting the timing, scale, and durability of energy savings, and a cost range expressed in dollars per mwh. These load curves are then directly comparable to supply side resources, which are also represented by a load shape and the cost per mwh to acquire and deliver the resource. Based on this equally described and comparable data the planning process can then compare efficiency resources to supply side resources and “allow the model to choose and optimum level of investment.”⁶

¹ Regulatory Assistance Project, *Best Practices in Electric Utility Integrated Resource Planning* at p. 24, (June 2013).

² *Id* at 24 – 25.

³ State & Local Energy Efficiency Action Network, *Using Resource Planning to Encourage Investment in Cost-Effective Energy Efficiency Measures*, at Table 1 p. vii (September 2011). Available at:

https://www4.eere.energy.gov/seeaction/sites/default/files/pdfs/ratepayer_efficiency_irpportfolio_management.pdf

⁴ *Id* at 4.

⁵ *Id* at 6.

⁶ *Id*.

This method stands in stark contrast to treating efficiency as a load modifier where by the utility selects a specific amount of efficiency and reduces the load forecast prior to the resource selection process. This method also starts with an efficiency potential study. But instead of finding the optimum level of energy savings, the planner pre-selects a level of savings deemed “achievable”. Achievable savings levels are based on assumptions about program performance and public acceptance that reduce the level of cost-effective efficiency potential even considered in the planning process. In this method, supply-side resources do not get the same limiting assumptions. Instead, once the planner identifies a supply-side need, the plan assumes the ability to finance and procure that resource. PacifiCorp’s supply curve method for identifying optimal levels of efficiency achievements applies equal and balanced assumptions for the achievability of supply-side and demand-side resources. If the plan identifies more efficiency than current being acquired, then the utility devises a plan to acquire that level, as PacifiCorp does in the Action Plan on page 216 and more specifically in Appendix D of the 2015 IRP. By adopting the supply curve methodology regulators will benefit customers by ensuring the utility will devise methods to overcome assumed hurdles and actually pursue all cost-effective energy efficiency.

2. The 2014 Wind Integration Study Reflects Falling Costs to Integrate Wind

ICL includes the following comments filed by Renewable Northwest with the WUTC regarding PacifiCorp’s 2015 IRP because they accurately and clearly explain the issue—PacifiCorp’s modeling shows that adding 417 MW of wind caused regulating margins to increase by only 1 MW.⁷

PacifiCorp’s 2014 Wind Integration Study⁸ (“WIS”) calculated wind integration costs used for IRP modeling, incorporating the additional 417 MW of wind projects on the Company’s system since the 2012 WIS.⁹ A comparison of the wind regulating margin—the incremental amount of reserves anticipated to accommodate deviations in wind from forecasts—required in the 2012 WIS to the level required in the 2014 WIS reveals PacifiCorp’s increasing ability to integrate variable resources into its system. The

⁷ Available at:

http://www.utc.wa.gov/_layouts/CasesPublicWebsite/CaseItem.aspx?item=document&id=38&year=2014&docketNumber=140546

⁸ ICL notes this study is included as Appendix H to PacifiCorp’s 2015 IRP.

⁹ PacifiCorp, 2015 IRP, Public Input Meeting 3, August 7–8, 2015, slide 70
www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2015IRP/PacifiCorp_2015IRP_PIM03_8-7-8-2014.pdf

wind regulating margin remained relatively flat, increasing from 185 MW in 2011 (2012 WIS) to 186 MW in 2013 (2014 WIS), while the wind capacity increased 417 MW from 2,135 MW in 2011 to 2,552 MW in 2013.¹⁰ Looking to the next IRP, Renewable Northwest welcomes PacifiCorp's intention to use data from the Energy Imbalance Market to inform future wind integration studies.

3. Modeling Errors in the 2015 IRP

The following comments regarding modeling errors for the Clean Power Plan and coal unit retirement were developed by the Sierra Club with the technical assistance of Synapse Energy Economics and filed before the Washington UTC regarding PacifiCorp's 2015 IRP.¹¹ Because they accurately and clearly explain the issue, ICL is including the relevant portions here with some alterations and notes regarding changes to the final Clean Power Plan.

I. The Clean Power Plan

a. Background

PacifiCorp's 2015 IRP models a version of the Clean Power Plan (CPP), EPA's proposed rule to reduce carbon dioxide (CO₂) emissions from existing power plants. The CPP is EPA's 2014 proposal to meet CO₂ emissions limitations from existing sources using a Best System of Emissions Reductions (BSER). A version of the CPP is expected to be finalized in mid-summer 2015, after EPA received over 8 million comments on the proposal.¹² As PacifiCorp has pointed out numerous times, the proposed CPP is exactly that — a proposal, subject to change in mechanism, assumptions, and stringency. Yet PacifiCorp has oriented around one specific interpretation of the CPP, using one specific compliance mechanism. This narrowness of focus leaves PacifiCorp in the position of structuring many of its assumptions and operational restrictions around a single expectation of the regulation, and does not comport with reasonable

¹⁰ PacifiCorp, 2015 IRP, Public Input Meeting 3, August 7–8, 2015, slide 73
www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2015IRP/PacifiCorp_2015IRP_PIM03_8-7-8-2014.pdf

¹¹ Available here:
http://www.utc.wa.gov/_layouts/CasesPublicWebsite/GetDocument.ashx?docID=42&year=2014&docketNumber=140546

¹² ICL notes that EPA released the final CPP on August 3, 2015, which made several changes from the draft. These changes reinforce the main point of these comments--PacifiCorp unreasonably constrained the evaluation of compliance options and the modeling tools used to assess these options.

least cost planning in the face of uncertainty. In this section, we describe how PacifiCorp's review of a single interpretation of the CPP may [produce]¹³ poor planning results.

EPA has structured the CPP around four fundamental "building blocks" that represent possible means for achieving the established emissions standard: (1) increasing existing coal plant efficiency, (2) displacing coal generation with existing natural gas, (3) increasing renewable energy acquisitions, and (4) implementing energy efficiency programs.¹⁴ Taken together, EPA estimates that these programs will reduce emissions by a certain amount in each state. By default, EPA's targets for each state are set as a rate, measured in pounds of CO₂ per megawatt-hour (lbs/MWh).¹⁵ The rate has been a source of confusion to many parties: it represents both projected emissions from existing sources and generation from covered sources, as well as new renewable energy []. The CPP sets forth two basic routes for reducing state CO₂ emissions from existing sources: states can either meet the rate-based target using a combination of the building blocks or other programs, or meet an alternate mass-based target, measured in total tons of CO₂. EPA's proposal allows states to choose the metric by which they measure compliance.

The rate-based mechanism is a fairly unique measure of compliance, while the mass-based system is similar to the result of a cap-and-trade scheme, currently employed for national sulfur dioxide (SO₂) emissions under the Acid Rain Program, regionally for nitrogen oxides (NOX) budget trading program, and for CO₂ in California and Regional Greenhouse Gas Initiative (RGGI) states. The rate-based approach, at least as used in EPA's target-setting, assigns credit for renewable energy [] implemented by entities in the state, apparently regardless of their impact. The mass-based approach assigns credit for stack-based emissions reductions.

From the perspective of resource planning, the rate mechanism is a far more difficult measure to use in planning. It is also the mechanism that PacifiCorp has chosen to utilize in almost every one of the core cases.

b. Rate-Based Compliance is Not Optimal in PacifiCorp Modeling

¹³ ICL changed this word from "result" to "produce" for clarity.

¹⁴ ICL notes the final CPP removes building block four when calculating state emission targets, but allows efficiency to be used for compliance. In the remainder of these comments, ICL removed references to building block 4 or energy efficiency in reference to setting the state targets that appeared in Sierra Club's WUTC comments filed before the final CPP was released. The removals are indicated with empty brackets: to wit [].

¹⁵ ICL notes the final CPP establishes both a rate-based and equivalent mass-based target.

The rate-based compliance approach is, by all measures, far harder to model when optimizing for least cost on a net present value basis. The mass-based approach is far simpler. Since at least the mid-1990s with the advent of SO₂ (acid rain) and NO_x trading programs, energy planners have understood that it was appropriate to model mass emissions caps using an opportunity cost for generators, regardless of whether emissions allowances were tradable. Every ton of emissions avoided by reducing generation eases compliance and thus has monetary value. In "hard cap" mass-emissions reduction modeling, emissions have a shadow price —i.e. the cost of incrementally shifting production to lower emissions sources, on a per ton basis. In a tradable credit program, the emissions have a direct monetary value, but the meaning is the same. In both cases, the cost of emissions is typically considered a variable cost — i.e. higher costs should result in lower production for high emissions resources.¹⁶

The rate-based trading mechanism is much more confounding from a forward modeling perspective, requiring some form of rate-based credits, wherein resources that are higher emissions than a target rate pay an incremental amount, and resources that are below the target rate receive an incremental financial incentive.¹⁷ While this type of trading can be constructed within a model setup, most off-the-shelf dispatch and capacity expansion models are not set up for this mechanism.

PacifiCorp's System Optimizer model is not configured to determine a least cost plan for rate-based compliance. It is readily configured to determine a least cost plan for mass-based compliance.

To overcome the barrier that System Optimizer cannot search for a least cost rate-compliant plan, PacifiCorp fundamentally misuses the tool, manually choosing and excluding resources in order to meet targets in different states. PacifiCorp developed the "111(d)" tool specifically to develop user-specified portfolios that meet rate-based compliance. By developing each individual portfolio manually, PacifiCorp undermines System Optimizer's ability to find least cost plans.

¹⁶ This mechanism is described in fair detail in a paper from Resources for the Future from 2008: Burtraw, D and D. Evans. 2008. Tradable Rights to Emit Air Pollution. Resources for the Future Discussion Paper. RFF DP 08-08

¹⁷ A version of which is described by Western Resource Advocates in 2014: Michael, S and J. Nielson. 2014. Carbon Reduction Credit Program: A State Compliance Tool for EPA's Clean Power Plan Proposal. Western Resource Advocates.

As far as Sierra Club is aware, PacifiCorp is the first (and still only) utility to model rate-based compliance with the CPP. From the perspective of national policy, we can thank PacifiCorp for forging down this path and pointing out the difficulties of finding optimal compliance on a rate basis. However, from the perspective of ratepayers and concerned groups who rely on PacifiCorp's planning to evaluate real risk, we do not support PacifiCorp's exclusion of mass-based compliance.

c. PacifiCorp's CPP Modeling Is Narrowly Defined

PacifiCorp's failure to model mass-based CPP compliance (i.e. "cap-and-trade") and the narrow definition of rate-based compliance used by the Company leaves PacifiCorp's customers vulnerable to contrary state and federal decisions. PacifiCorp, despite being one of the most expansive utilities in the Western Interconnect, will not (and should not) determine the form of 111(d) compliance that will ultimately be used by Oregon, Utah, Washington, California, or Idaho, much less Arizona, Colorado, or Montana. PacifiCorp cannot know today if those states will pursue rate or mass-based compliance, and while the utility can hope for consistent (and possibly cooperative) treatment by those states, it is just as likely (if not more likely) that a mass-based compliance scheme based on California's trading mechanism will be employed as a rate-based scheme.

Having chosen a rate-based scheme for compliance, PacifiCorp further narrowed its treatment by pre-determining its specific path to compliance rather than modeling a least cost plan. Within the construct of the proposed CPP, states could either be required to use energy efficiency and renewable energy (EE/RE) from in-state sources or allowed to procure EE/RE from other states through rate or mass-based trading.¹⁸ Both of these outcomes are equally likely. Parties have proposed interstate trading mechanisms that would credit (or penalize) resources relative to their respective state targets, and EPA's proposal certainly doesn't exclude such mechanisms.

¹⁸ ICL notes the final CPP retains energy efficiency as a compliance option, allows states to choose a rate or mass based system, and increases the options, while reducing the barriers, to engage in interstate trading. See this compliance option chart produced by EPA: http://www2.epa.gov/sites/production/files/2015-08/documents/flow_chart_v6_aug5.pdf

To be clear, PacifiCorp's treatment of 111(d) and the Clean Power Plan isn't necessary wrong— it is just so narrowly defined that it fails to allow for other options that could leave PacifiCorp in a very different space after states find their best compliance outcomes.

d. PacifiCorp's Deterministic Rate-Based Approach Undervalues Coal Conversion and Retirement

PacifiCorp today stands at a crossroads. Ongoing regional haze compliance, increasing coal costs, low gas prices (and forecasts), and rapidly falling renewable energy prices all suggest that PacifiCorp should be proactively reviewing all possible opportunities to reduce its dependency on coal when such actions are cost-effective. In modeling the Clean Power Plan, PacifiCorp specifically excluded mechanisms that would provide consumer benefits for the retirement or conversion of coal.

Under a mass-based approach, each ton of CO₂ emitted has a cost — either a direct trading price or a shadow price (i.e. opportunity cost). By extension, each ton of CO₂ that is not emitted has a monetary benefit, either as an allowance that is not retired or not purchased. Therefore, under a mass-based trading approach, avoiding emissions from coal-fired resources has clear monetary benefit. To fully secure this benefit, PacifiCorp would have to allow its fossil units to both ramp down (i.e. re-dispatch) and even retire in the face of high emissions costs. PacifiCorp neither modeled a mass-based approach, nor allowed units to retire economically, and thus captured none of this outcome.

Under a rate-based approach, resources that emit less than states' rate targets have value, while resources that emit more than states' rate targets incur penalties. The degree to which a resource emits less than state targets determines its value — if the rate commensurate with a gas-fired emissions rate (e.g. near 1,100 lbs/MWh), gas-fired units have no value to helping the state meet its rate goals, and coal-fired units should be penalized. If the rate is between gas and coal (e.g. 1,700 lbs/MWh) then gas-fired units have a moderate value, and coal units are penalized less. In some states, a target below gas-fired emissions rates (e.g. 700 lbs/MWh) incurs penalties for both coal and gas-fired resources, while crediting EE/RE measures.¹⁹ This differential crediting can be modeled as a specific penalty towards high emissions resources and credit towards low emissions resources. To capture this process may have required significant modifications to the

¹⁹ ICL notes the final CPP allows states to use energy efficiency towards compliance.

System Optimizer framework, or workarounds by PacifiCorp, but would have resulted in more cost effective outcomes. Instead, PacifiCorp did all of its rate-based modeling outside of System Optimizer, realizing no incremental benefits for EE/RE programs and no incremental penalties for the dispatch of existing coal units.

e. PacifiCorp's Modeling of 111(d) is a Detriment to Ratepayers

PacifiCorp should be one of many stakeholders when Washington, Oregon, California, Idaho, Utah, Wyoming, Montana, Arizona, and Colorado design their respective 111(d) plans. If any of those states chose to pursue a mass-based compliance route with tradable allowances (e.g. RGGI-styled cap and trade), PacifiCorp's fossil-fired units will (or should) incur incremental operational costs (i.e. a dispatch adder for CO2 costs). Depending on which states engage in such a process, and how trading is structured, PacifiCorp's coal-fired units could see a substantial incremental variable cost — a cost that renders some of those units non-economic in the face of ongoing capital expenditures. The retirement of existing resources can change which resources PacifiCorp chooses to pursue today and the shape of PacifiCorp's action plan. By excluding reasonable modeling of mass-based 111(d) compliance, PacifiCorp has excluded consideration of cost-effective outcomes under a mass-based approach, and endangers ratepayers should PacifiCorp states choose to pursue a mass-based compliance approach.

PacifiCorp's exclusive choice of a rate-based approach could be read as the utility's bid to control and structure 111(d) compliance for their states, with an outcome that may neither favor ratepayers nor state environmental policies. It is not reasonable that a single monolithic company be granted the power to shape state environmental policy simply via fiat.

[]²⁰

g. Modeling Mass-Based 111(d) Compliance is Consistent with Past IRPs

Ten months ago, while the IRP modeling was still in its infancy, Sierra Club openly requested that PacifiCorp also model mass-based compliance with 111(d).²¹ The request, before the Oregon PUC, detailed many of the concerns in these comments, and noted that mass-based compliance is readily modeled by PacifiCorp.

²⁰ ICL removed subsection “f” from Sierra Club’s comments filed with the Washington UTC. That section dealt with RECs under the CPP and compliance with Oregon and Washington law. The Final CPP includes a non-REC emission reduction credit system. ICL is still reviewing this portion of the final plan.

²¹ Technical Workshop. August 6, 2014. Oregon Public Utilities Commission

Mass-based compliance is built into the System Optimizer framework, and can be executed by either applying a system-wide cap, or using a proxy cost for CO2 emissions allowances. Both mechanisms had been used by PacifiCorp in past IRPs and are still available in the current implementation of the Company's model. PacifiCorp simply elected to disable this functionality in System Optimizer, no reason given.

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II. Removal of Endogenous Power Plant Retirements

a. Background

PacifiCorp's coal fleet has faced, and continues to face, a variety of new environmental regulations that impose costs and operating restrictions. Since 2008, PacifiCorp has engaged in significant capital and operating expenditures to comply with regional haze obligations and the mercury and air toxics standards (MATS) rule. Going forward, PacifiCorp's coal units will likely see costs for additional regional haze obligations, and may see impacts of National Ambient Air Quality Standards (NAAQS), as well as coal combustion residual (CCR) rule, and CO2 emissions costs for 111(d).

In the 2011 IRP (March 2011), PacifiCorp effectively ignored impending environmental regulations for the purposes of the IRP, assuming that existing coal units would continue operations unabated. This IRP conducted a "proof-of-concept modeling of coal unit replacements,"²³ but disclosed little about the study or its specific results. The study was not used to inform the action plan or concurrent capital expenditures.

Around 2011, Ventyx (now ABB), the model vendor for System Optimizer, upgraded the ability of the capacity expansion model to allow for "endogenous" coal retirements. In other words, the model became capable of choosing if existing thermal units should be operated, retired, or changed (i.e. converted to natural gas), independent of user choice. This capacity had not been-used by PacifiCorp in the 2011 IRP, but under regulatory pressure, PacifiCorp expanded the study in the 2011 IRP Update (March 2012) to review investments at Naughton, Jim Bridger, Hunter, Craig, and Hayden.²⁴ In this study, PacifiCorp reviewed the economics of retiring or retrofitting individual units. In addition, PacifiCorp began testing the model's ability to endogenously retire coal units.

²² ICL removed the final paragraph in this subsection because it deals with Washington state law.

²³ Termed the "coal plant utilization study." 2011 IRP, p180

²⁴ 2011 IRP Update, p67.

In the 2013 IRP, PacifiCorp expanded the endogenous retirement capability of System Optimizer. Each unit was allowed to continue operation, or retire or convert to natural gas.²⁵ Sierra Club filed comments in response to this IRP commending the significant improvement in modeling capability, and the disclosure of important results, and recommending refinements to the process. The same endogenous retirement capacity was then used by PacifiCorp to examine investments in individual coal units for the purposes of Certificates of Public Convenience and Necessity in Wyoming and Pre-Approvals in Utah.

In the current 2015 IRP, PacifiCorp has completely eliminated the endogenous retirement capacity of System Optimizer in all but one core case (C 14a). In the remainder of the IRP, PacifiCorp simply chooses a "Regional Haze Scenario" in which some units are retrofit and others are converted or retired early. In every case, PacifiCorp simply programs in the retirement schedule, denying the opportunity for the model to choose an optimal path under environmental constraints. This complete turnaround is a massive shortfall in the 2015 IRP, and represents a significant step backwards by the utility in finding a least cost plan to meet environmental compliance requirements.

b. PacifiCorp's has not Justified Eliminating Endogenous Retirement

PacifiCorp announced during early stakeholder meetings that it would eliminate endogenous retirement from the current IRP. Sierra Club suggested that this change would undermine the core meaning of the IRP, and would prevent PacifiCorp from finding anything close to a least cost plan. PacifiCorp did not disagree that the process was non-optimal, but suggested that the endogenous retirements posed more difficulties than they understood how to deal with. PacifiCorp indicated that long term coal contracts with liquidated damages were

²⁵ 2013 IRP, p161 "Building upon modeling techniques developed in the 2011 IRP and 2011 IRP Update, environmental investments required to achieve compliance with known and prospective regulations at existing coal resources have been integrated into the portfolio modeling process for the 2013 IRP. Potential alternatives to environmental investments associated with known and prospective compliance obligations are considered in the development of all resource portfolios. Integrating potential environmental investment decisions into the portfolio development process allows each portfolio to reflect potential early retirement and resource replacement and/or natural gas conversion as alternatives to incremental environmental investment projects on a unit-by-unit basis. This advancement in analytical approach marks a significant evolution of the IRP process as it requires consideration of potential resource contraction while simultaneously analyzing alternative resource expansion plans."

difficult to model in an endogenous retirement framework, and that some units might be able to trade off against each other in alternative regional haze scenarios.

PacifiCorp's justifications do not hold water. While regional haze scenarios involving multi-plant compliance could be more difficult to model, (a) these tradeoffs are relatively limited to plants in near proximity, and (b) total, multi-unit emissions caps could be captured through mechanisms within the System Optimizer framework.²⁶ With regards to coal contracts, PacifiCorp has sufficient information to know their expected damages for early withdrawal from take-or-pay contracts on an annual basis, and this information is readily modeled.

c. Endogenous Retirements Allow for Lower Resource Costs

Allowing the model to choose to retire units optimally results in a lower cost plan than when retirements are guessed by planners. PacifiCorp confirms this outcome for the case in which a CO2 cost is also imposed: "When allowing endogenous coal unit retirements beyond those assumed for Regional Haze scenarios (core case C 14a), costs are lower than the C14 portfolios developed with specific timing for assumed coal unit retirements."²⁷ Since PacifiCorp did not test any scenarios in which coal units were allowed to retire endogenously even without their "high CO2 cost," we are unable to determine how much more cost effective such a portfolio would have been.

d. Coal Resources Are Artificially Constrained to Operate

In the IRP, there is a small note indicating that "for coal resources, PacifiCorp assumes that annual generation levels cannot fall below an equivalent 70% annual average capacity factor."²⁸ No explanation for this constraint is provided. In our experience, this is the first time that we have seen such a constraint explicitly applied in any utility. In some cases, utilities believe that their coal units are equivalent to "must run," even if there is no specific reliability constraint on the unit. In no case have we seen a constraint that requires a unit to operate at an elevated capacity factor regardless of its economic dispatch requirements.

²⁶ System Optimizer allows units to be clustered into "technology groups," where one unit may occupy multiple groups simultaneously. Emissions caps and other constraints may be applied to technology groups. The same rough estimation that PacifiCorp used to evaluate unit tradeoffs can be replicated in a total technology group emissions cap.

²⁷ ICL notes this statement is on page 210 of PacifiCorp's 2015 IRP.

²⁸ ICL notes this statement is on page 145 of PacifiCorp's 2015 IRP.

The 70% capacity factor limit is belied by PacifiCorp's coal units' actual operations. In 2014 alone, Dave Johnston 2, Hunter 1, Jim Bridger 1 & 4, Huntington 1, and Craig 1 all operated below the 70% threshold. In 2012, when gas prices were particularly low, about half of PacifiCorp's coal fleet violated this threshold (Dave Johnston 1, 2 & 3, Naughton 1, Hunter 2, Jim Bridger 2 & 4, and Hayden 1 & 2).

Implementing an artificial capacity factor limit on units that may, in fact, be economically constrained in the future would certainly result in a higher cost plan than required.

4. Conclusion

PacifiCorp is among the largest utility systems in the western interconnect. By virtue of their geographic spread, resource stack, transmission system, and coordination with other utilities, PacifiCorp's future resource plans will have more impact on Idaho than any other utility. They control most of the coal fleet serving the west, which faces growing pollution control costs. They plan to greatly expand the regional bulk transmission system. And they plan to both sell and buy vast quantities of energy into wholesale markets, both traditional as well as newly forming markets for energy imbalance and links to NVEnergy and the California ISO. These plans will directly impact PacifiCorp customers in Idaho as well as utility customers throughout the state. The Commission must take a hard look at PacifiCorp's planning practices and results to ensure a low cost least risk future for all Idahoans.

Respectfully submitted this 7th day of August 2015,


Benjamin J. Otto
Idaho Conservation League

CERTIFICATE OF SERVICE

I hereby certify that on this 7th day of August 2015, I delivered true and correct copies of the foregoing COMMENTS to the following persons via the method of service noted:

Hand delivery:

Jean Jewell
Commission Secretary
Idaho Public Utilities Commission
427 W. Washington St.
Boise, ID 83702-5983

Electronic Mail:

Ted Weston
Yvonne Hogle
Rocky Mountain Power
201 S. Main St., One Utah Center, 23rd Fl
Salt Lake City, UT 84111
Ted.Weston@pacificorp.com
Yvonne.Hogle@pacificorp.com