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IDAHO PUBLIC  
UTILITIES COMMISSION

Attorney for the Idaho Conservation League

**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF IDAHO POWER )  
COMPANY'S 2013 INTEGRATED )  
RESOURCE PLAN. )  
CASE NO. IPC-E-13-15  
IDAHO CONSERVATION LEAGUE'S  
COMMENTS

The Idaho Conservation League (ICL) actively participated in Idaho Power's Integrated Resource Plan Advisory Committee. While the 2013 IRP process was an improvement from 2011, serious flaws remain in both the structure and results of the IRP. These flaws implicate the four primary goals of the IRP: (1) identify sufficient resources to reliably serve growing energy demands over the 20-year planning period; (2) ensure the selected resource portfolio balances cost, risk, and environmental concerns; (3) give equal and balanced treatment to supply-side resource and demand-side measures; and (4) involve the public in the planning process.<sup>1</sup> Despite these flaws, Idaho Power appears to be marching ahead with capital spending premised on a faulty analysis. Accordingly, ICL recommends the Commission direct Idaho Power to reinstate the IRP process as soon as possible in 2014.

Below ICL highlights three major flaws to the IRP: a stale load and resource balance, unbalanced treatment of demand-side and supply-side resources, and an incomplete assessment of coal costs and alternative options. Then ICL provides comments on six additional issues: the carbon price forecast, delays in Boardman to Hemingway, invalid assumptions about solar generation and costs, the deeply flawed wind integration study, the lack of planning to pursue the identified benefits of an energy imbalance market, and an inadequate assessment of risks and options to mitigate this risk. The three major flaws alone show the 2013 IRP does not meet the four primary goals. The additional issues pile on to establish that renewed planning must begin immediately.

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<sup>1</sup> IRP at 1.

## **Stale load and resource balance**

The most obvious example of the flaws in the IRP is Idaho Power's November 4, 2013 filing to set the capacity deficit for the Surrogate Avoided Cost Methodology.<sup>2</sup> In that application, Idaho Power now claims the first peak hour deficit is not until July 2021--about seven years after the deficient identified in the IRP. And this change in resource needs occurred without building a single additional resource considered in the 2013 IRP, rather largely from including current levels of demand response into the load and resource balance. So already, arguably the most important part of the IRP, the load and resource balance, is stale. Because the alternate portfolios are premised on a stale load and resource balance, this 2013 IRP cannot "identify sufficient resources to reliably serve growing energy demands over the 20-year planning period." Instead, the 2013 IRP will contribute to an already overbuilt system.

## **Hobbled assessment of demand-side resources**

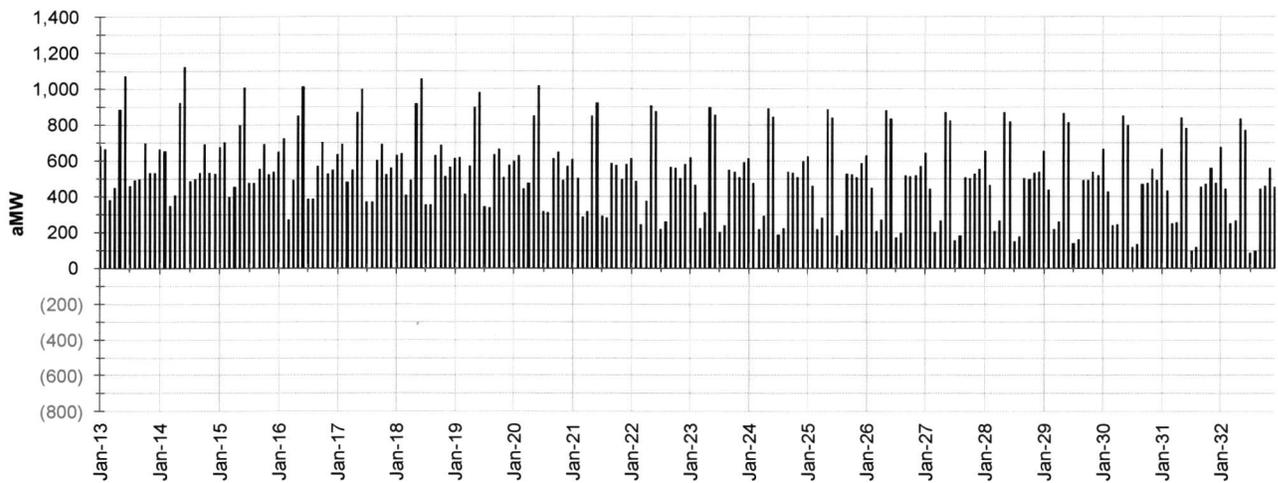
A second critical flaw is in how Idaho Power considers demand-side resources in the IRP. In short, demand-side and supply-side are not given equal and balanced treatment. For demand-side resources, Idaho Power assumes the Company will essentially maintain current levels. During the advisory process, Idaho Power informed the IRPAC, without a discussion about the underlying assumptions, the forecast of energy efficiency levels going forward. As a member of Idaho Power's Energy Efficiency Advisory Group, ICL knows Idaho Power did not run this forecast through this public process either. But for supply-side resources Idaho Power and the IRPAC spent several meetings discussing the relative merits, costs, and capabilities of each. Further, during the portfolio design workshops stakeholders had the opportunity to advocate for various levels of different supply-side resources. This discussion, collaboration, and meaningful public involvement simply did not occur for demand-side resources. By contrast, Rocky Mountain Power properly models demand-side options when developing new resource portfolios. By hobbling the analysis and selection of additional demand-side measures in resource portfolios, Idaho Power's 2013 IRP does not "give equal and balanced treatment to supply-side and demand side resources."

## **Undercounting the cost to continue coal generation**

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<sup>2</sup> IPC-E-13-21

A third critical flaw is Idaho Power’s assessment of the costs and benefits of replacing coal generation. The fundamental flaw is Idaho Power’s insistence that any replacement much match the nameplate capacity of the coal unit. This narrow view ignores the fact that Idaho Power operates an integrated system of various resources designed to adequately and reliably meet demand while keeping costs low. And this system is sufficient to meet Idaho Power’s needs far into the future. As described above, today Idaho Power has sufficient peak hour capacity through 2021 and, as the chart below shows, on an energy basis, never dips below 200 aMW excess through 2023. Despite ICL’s several requests in the IRPAC process, Idaho Power never analyzed how simply removing each coal unit from the resource stack would change the overall resource balance prior to considering replacement generation. By refusing to consider how removing individual coal units affects the overall resource balance, the selected portfolio does not “identify sufficient resources” – instead it plans for resource levels far beyond what is sufficient to meet Idaho’s energy needs.



**Figure 5.4 Monthly average-energy surpluses and deficits with existing and committed resources and existing DSM (70<sup>th</sup>-percentile water and 70<sup>th</sup>-percentile load)**

The IRP does include four portfolios that consider coal replacement, but all are flawed. The Idaho Conservation League, with John Gardner of Boise State University, did provide a coal replacement portfolio as a theoretical exercise. But the company imposed a few arbitrary restraints on this design – namely no new energy efficiency measures and an insistence on MW for MW replacement. By excluding the least cost resource, and locking in resource surpluses, this portfolio was destined to be a higher cost option.

Idaho Power then created three alternate coal retirement portfolios. For each of these, Idaho Power created the replacement generation options without public input. And two of them, portfolios 8 and 9, were late additions after Idaho Power heard in a news story of NV Energy's intention to shutter Valmy in 2021 and 2025. As described above, none of these portfolios considered how retiring individual coal units affected the overall resource balance before developing the alternatives, and energy efficiency was not available as a potential resource.

Along with a narrow focus on nameplate capacity, the IRP excludes environmental compliance costs that will necessarily be incurred through continued operation of the plants. The IRP only considers four pollutants--Nitrogen Oxides, Sulphur Oxides, Mercury, and Carbon Dioxide.<sup>3</sup> This does not cover the range of costs on track to be imposed on Idaho Power's coal units, thereby undercounting the risks of continued coal operations and the benefits of alternate resources. Idaho Power's unit-by-unit coal study does not rectify this flawed analysis. The public coal study describes additional environmental controls for particulate matter, cooling water, and coal ash, but contains no estimate of the costs for these additional controls.<sup>4</sup>

While Idaho Power does apply a "carbon adder" this is not intended to represent the costs of environmental compliance generally, something Idaho Power admits.<sup>5</sup> Rather the carbon adder is focused solely on the additional costs of future carbon regulations. The current regulatory requirements for coal ash, cooling water, and other air pollutants will impose additional costs on Idaho Power during the time horizon of this IRP. While forecasting future regulations is difficult, Idaho Power regularly forecasts other difficult aspects of the system including loads, water flows, gas prices, and future resource development costs. Until Idaho Power includes credible estimates of the future costs of environmental compliance at existing coal plants the IRP does not have the information necessary to "ensure the selected resource balances cost, risk, and environmental concerns."

#### **Idaho Power should use an independent carbon price forecast**

ICL appreciates Idaho Power was receptive to using an independent forecast of future carbon prices authored by *Synapse Energy Economics Inc.* as a starting point in the IRP.<sup>6</sup> But ICL

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<sup>3</sup> IRP at 63 – 64.

<sup>4</sup> Coal study at 9.

<sup>5</sup> IRP at 63 – 64.

<sup>6</sup> The 2011 and 2012 *Synapse Energy Economics Inc. Carbon Price Forecasts* are published online at: <http://www.synapse-energy.com/Downloads/SynapsePaper.2011-02.0.2011-Carbon->

does not endorse the final forecast Idaho Power uses because it arbitrarily and unilaterally adjusts the forecast to meet Idaho Power's internal needs. First, Idaho Power uses a "low" cost of zero dollars. Assuming no future carbon costs over the planning horizon ignores a real and present risk. As the Commission stated just two months ago "it seems more likely than not that the EPA will move forward and enact additional regulations of fossil fuels under the federal Clean Air Act."<sup>7</sup> Assuming zero carbon costs maybe an interesting exercise, but it is an invalid planning criteria.

Despite claiming to use a third-party analysis Idaho Power's "planning" carbon cost was "selected to be consistent with the \$16-per-ton value in 2021 used in the coal study that was part of the Idaho Power 2011 IRP Update".<sup>8</sup> Choosing carbon price forecasts to match an internally generated document does not ensure transparent and rigorous planning. Further, Idaho Power's "planning" case of \$16/ton in 2021 figure is actually the beginning of the "low" estimate by *Synapse*.<sup>9</sup> In later years Idaho Power's "planning" cases increases to \$22-per-ton in 2032, while *Synapse* "low" case rises to \$27-per-ton. Meanwhile, *Synapse* "medium" case, based on a review of all available carbon price forecasts, begins at \$20 in 2020 and rises to \$47 in 2032. Like forecasting natural gas prices, forecasting carbon prices may be fraught with uncertainty. But also like gas prices, relying on independent, third party assessments based on a nationwide surveys of forecasts is more likely to be accurate than Idaho Power's unexplained, unilateral decision to match forecasts to their coal study. By under forecasting the cost of carbon the IRP does not accurately "balance costs, risks, and environmental concerns."

#### **Idaho Power does not believe Boardman to Hemingway will be online in 2018**

Most glaringly, the IRP forecasts Boardman to Hemingway (B2H) to be online in 2018. But Idaho Power does not believe this to be true. On November 5, 2013 IDACORP told analyst they expect an online date of 2020 and beyond.<sup>10</sup> ICL believes B2H is likely to benefit Idaho through increased access to low cost power markets, expanding the footprint to integrate renewables, and increasing capacity for off system sales. ICL is not critical of B2H as a resource,

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Paper.A0029.pdf and <http://www.synapse-energy.com/Downloads/SynapseReport.2012-10.0.2012-CO2-Forecast.A0035.pdf>

<sup>7</sup> Order No 32890 at 12, (September 11, 2013).

<sup>8</sup> IRP at 68.

<sup>9</sup> See Attachment 1 comparing Idaho Power's forecast with Synapse 2011 and 2012 forecasts.

<sup>10</sup> Conference call presentation of IDACORP Third Quarter 2013 earnings at slide 10. Available at: <http://www.idacorpinc.com/pdfs/confcalls/ERWC3QP2013.pdf>

rather raises this point to show the resource portfolios considered in the 2013 IRP are fundamentally flawed.

### **The IRP solar assumptions are invalid**

Idaho Power also continues to use invalid assumptions for solar technologies. First, Idaho Power Despite Idaho Power's peak energy needs occur in the afternoon, when the sun is in the southwestern sky, Idaho Power only considered solar PV panels oriented due south. IRPAC members pointed out that panel orientation is driven by incentives and pricing structures could incent southwest oriented installations. While an analysis of southwest oriented panels does appear in the Technical Appendix, Idaho Power refused to adjust their panel orientation assumptions during the 2013 IRPAC sessions.

Similarly, while Idaho Power considered "distributed" solar, the company refused to consider any level of cost sharing between the company and system owners. Not only does this refusal undercut the public participation, it ignores a potential benefit to Idaho – developing a distributed solar industry with related job growth, spending, and increase tax base. While assuming system owners contribute 100% of the capital costs could skew the planning results, refusing to analyze any level of capital costs misses a viable option to "identify sufficient resources to meet growing energy needs" and does not ensure the "selected portfolio balance cost, risk, and environmental concerns.

### **The wind integration study is irretrievably flawed**

Idaho Power filed their wind integration study as an update to the 2011 IRP, and presented it to the 2013 IRPAC on November 5, 2013. But this wind study continues to have deep flaws that render it essentially useless. As ICL commented to Idaho Power in April of 2012, the integration study ignores the current flexibility to integrate variable resources available in the Federal Energy Regulatory Commissioners Licenses for the Mid Snake River Dams. The study only considers resources with Idaho Power's footprint, when every credible study of wind integration demonstrates that using a larger footprint reduces costs. The study only considers one-hour transmission scheduling when the clear trend is towards 15-minute schedules. And the study does not describe the forecasting improvements that can reduce integration costs. Despite more than one year, Idaho Power did nothing to address these comments and continues to pursue a deeply flawed integration study.

### **The IRP discloses that an Energy Imbalance Market can benefit Idaho ratepayers**

The IRP explains that an Energy Imbalance Market can benefit the entire Northwest Power Pool region and identifies specific benefits to Idaho Power.<sup>11</sup> These benefits include access to balancing energy, reducing dispatch costs, and improved real-time power imbalance pricing. By not pursuing these benefits, Idaho Power is causing customer to pay more for power than may be possible otherwise. Despite recognizing these benefits the IRP makes no effort to explain how Idaho Power will pursue this opportunity, other than participation in some ill defined “discussions.” As a 20 year planning document the IRP is the appropriate forum to discuss these long-term resource strategies.

### **The IRP does not adequately identify or plan for risks**

The IRP also identifies and, ideally, plans for, risk. Idaho Power’s 2013 IRP misses the mark in this regard. Two of the biggest risks facing Idaho Power today are increasing stringent environmental controls at the coal plants and delays in permitting and constructing large power projects. As described above, the IRP undercounts coal risks by not forecasting the cost to comply with forthcoming regulations of particulates, coal ash, cooling water, and ozone, along with tightening standards for sulphur dioxides, and nitrogen oxides. Also, being the minority owner in a coal plant presents its own unique risk. Idaho Power did not know about NV Energy’s plans for Valmy until the public announcement. Meanwhile, PacifiCorp, majority owner of Jim Bridger, continues to negotiate and litigate the timing and extent of pollution controls there. The IRP does not adequately capture the risk to ratepayers of a 20-year commitment to coal from plants Idaho Power does not control.

Delay in completing large-scale generation projects is a real risk that is not captured in the IRP. In general, permitting and construction delays tend to increase inline with the scale of the project. For example, as mentioned above, even Idaho Power does not believe the 2018 timeframe for B2H contained in the IRP. While less explicit, the IRP also does not appear to capture the delay risk for permitting and building gas power plants. The IRP plans only for large generation projects but does not capture this risk of delay.

This inadequate risk assessment affects other resource options in a different way – not capturing their risk mitigation value. Some resource options have the effect of mitigating risks by reducing dependence on single fuel sources, deferring new resource additions into the future to

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<sup>11</sup> IRP at 17.

address delays, and distributing generation sources geographically to reduce the effect of catastrophic events at major resources. The Resource Alternatives Analysis nor Modeling Analysis and Results chapters do not consider how these benefits may offset some of the capital costs of various resources. By missing entire categories of risks and mitigation options, the IRP does not “ensure the selected resource portfolio balances cost, risk, and environmental concerns”.

**Conclusion**

ICL recognizes that the Commission approves the ongoing planning process, not the individual resource decisions. Because the load and resource balance is already stale, the process is flawed. Because the IRP hobbles demand-side resource, the process is flawed. By not accurately and transparently accounting for the risks of coal generation, the process is flawed. And by missing the mark on several important resource and system integration issues, the process is flawed. These flaws prevent the IRP from meeting the four goals. It identifies excessive, not sufficient, resources. It favors supply-side resources. It does not ensure the selected portfolio balances costs, risk, and environmental concerns. And, while better, it does not allow for meaningful public input into the analysis and results. For these reasons, ICL recommends the Commission not acknowledge the 2013 IRP and direct Idaho Power to begin the planning as soon as possible.

Respectfully submitted this 5<sup>th</sup> day of November 2013.

  
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Benjamin Otto  
Idaho Conservation League

## ATTACHMENT 1

Carbon prices from Synapse 2011 Forecast, Synapse 2012 Forecast and Idaho Power 2013 IRP.

**Table 3: 2011 Synapse Low, Mid, and High CO<sub>2</sub> Allowance Price Forecasts (2010\$/short ton)**

Year	Low Case	Mid Case	High Case
2015	N/A	N/A	\$15.00
2016	N/A	N/A	\$19.33
2017	N/A	N/A	\$23.67
2018	N/A	\$15.00	\$28.00
2019	N/A	\$17.92	\$32.33
2020	\$15.00	\$20.83	\$36.67
2021	\$16.50	\$23.75	\$41.00
2022	\$18.00	\$26.67	\$45.33
2023	\$19.50	\$29.58	\$49.67
2024	\$21.00	\$32.50	\$54.00
2025	\$22.50	\$35.42	\$58.33
2026	\$24.00	\$38.33	\$62.67
2027	\$25.50	\$41.25	\$67.00
2028	\$27.00	\$44.17	\$71.33
2029	\$28.50	\$47.08	\$75.67
2030	\$30.00	\$50.00	\$80.00

**Table ES-1: Synapse 2012 CO<sub>2</sub> allowance price projections (2012 dollars per ton CO<sub>2</sub>)**

Year	Low Case	Mid Case	High Case
2020	\$15.00	\$20.00	\$30.00
2021	\$16.00	\$22.25	\$34.00
2022	\$17.00	\$24.50	\$38.00
2023	\$18.00	\$26.75	\$42.00
2024	\$19.00	\$29.00	\$46.00
2025	\$20.00	\$31.25	\$50.00
2026	\$21.00	\$33.50	\$54.00
2027	\$22.00	\$35.75	\$58.00
2028	\$23.00	\$38.00	\$62.00
2029	\$24.00	\$40.25	\$66.00
2030	\$25.00	\$42.50	\$70.00
2031	\$26.00	\$44.75	\$72.00
2032	\$27.00	\$47.00	\$74.00
2033	\$28.00	\$49.25	\$76.00
2034	\$29.00	\$51.50	\$78.00
2035	\$30.00	\$53.75	\$80.00
2036	\$31.00	\$56.00	\$82.00
2037	\$32.00	\$58.25	\$84.00
2038	\$33.00	\$60.50	\$86.00
2039	\$34.00	\$62.75	\$88.00
2040	\$35.00	\$65.00	\$90.00
<b>Levelized</b>	<b>\$23.24</b>	<b>\$38.54</b>	<b>\$59.38</b>

**Table 5.4 Carbon-adder scenarios**

Year	Nominal Dollars			2012 Dollars		
	No Carbon	Planning	Upper	No Carbon	Planning	Upper
2013.....	-	-	-	-	-	-
2014.....	-	-	-	-	-	-
2015.....	-	-	-	-	-	-
2016.....	-	-	-	-	-	-
2017.....	-	-	-	-	-	-
2018.....	\$0.00	\$14.64	\$35.00	\$0.00	\$12.26	\$29.31
2019.....	\$0.00	\$15.08	\$38.15	\$0.00	\$12.26	\$31.02
2020.....	\$0.00	\$15.53	\$41.58	\$0.00	\$12.26	\$32.83
2021.....	\$0.00	\$16.00	\$45.33	\$0.00	\$12.26	\$34.74
2022.....	\$0.00	\$16.48	\$49.41	\$0.00	\$12.26	\$36.76
2023.....	\$0.00	\$16.97	\$53.85	\$0.00	\$12.26	\$38.90
2024.....	\$0.00	\$17.48	\$58.70	\$0.00	\$12.26	\$41.17
2025.....	\$0.00	\$18.01	\$63.98	\$0.00	\$12.26	\$43.57
2026.....	\$0.00	\$18.55	\$69.74	\$0.00	\$12.26	\$46.11
2027.....	\$0.00	\$19.10	\$76.02	\$0.00	\$12.26	\$48.79
2028.....	\$0.00	\$19.68	\$82.86	\$0.00	\$12.26	\$51.63
2029.....	\$0.00	\$20.27	\$90.31	\$0.00	\$12.26	\$54.64
2030.....	\$0.00	\$20.88	\$98.44	\$0.00	\$12.26	\$57.83
2031.....	\$0.00	\$21.50	\$107.30	\$0.00	\$12.26	\$61.19
2032.....	\$0.00	\$22.15	\$116.96	\$0.00	\$12.26	\$64.76

CERTIFICATE OF SERVICE

I hereby certify that on this 5th day of November, 2013, I delivered true and correct copies of the foregoing COMMENTS OF THE IDAHO CONSERVATION LEAGUE to the following persons via the method of service noted:

Hand delivery: (on November 6, 2013)

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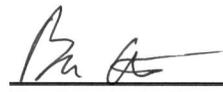
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