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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 APPLICATION FOR A)
CERTIFICATE OF PUBLIC)
CONVIENCE AND NECESSITY FOR)
THE INVESTMENT IN SELECTIVE)
CATALYTIC REDUCTION CONTROLS)
ON JIM BRIDGER UNITS 3 AND 4.)

CASE NO. IPC-E-13-16

Idaho Conservation League

Direct Testimony

Courtney White

October 11, 2013

1 Q: Please state your name, address, and business affiliation.

2 A: Courtney White, Management Department, Boise State University, 1910 University
3 Drive, Boise, ID, 83725.

4

5 Q: Please describe your experience and qualifications.

6 A: I have a B.E. in Mechanical Engineering from Vanderbilt University and an MBA from
7 Stanford Graduate School of Business. I have been employed in various business fields, including
8 roles as a management consultant, operations manager, and strategic planning manager. I have
9 held profit-center accountable for operations in five countries. I currently work as adjunct
10 professor at Boise State University. My work throughout each role has focused on making better
11 business decisions through the ability to gather observations, analyze data, and interpret the
12 implications.

13

14 Q: On whose behalf are you testifying in this proceeding?

15 A: I am appearing on behalf of the Idaho Conservation League (ICL).

16

17 Q: Have you previously testified or appeared as a witness before the Idaho Public Utility
18 Commission?

19 A: Yes. I previously appeared as a witness in case IPC-E-12-27, Idaho Power's request to
20 modify the net metering tariffs.

21

22 Q: Do you have any exhibits?

23 A: No.

1 Q: Please summarize your testimony.

2 A: My testimony demonstrates that Idaho Power's process for evaluating investments in
3 Bridger 3 and Bridger 4 did not adequately consider risks, uncertainties, and viable alternatives.

4
5 Q: Do you agree or disagree that firms, whether serving shareholders or ratepayers, must
6 assess issues of risk and uncertainty in the decision making process?

7 A: I agree. In the fields of financial analysis and decision analysis, the need to consider risk is
8 a well-established principle. One aspect of this analysis is to consider the risk tolerance of the
9 constituents funding the investment or decision. For example, the Securities and Exchange
10 Commission (SEC) requires Registered Investment Advisers to consider the risk tolerance of
11 clients in making investments on their behalf; a Registered Investment Adviser who ignores the
12 client's view toward risk can face punitive measures from the SEC. For public utilities, the PUC
13 serves a similar roll - ensuring that risks are identified and managed.

14 Beyond financial investing, the need to assess risk is routinely considered in business
15 decisions. When I served as a materials manager, for example, my department could negotiate
16 lower prices per unit by purchasing higher volumes. However, purchasing large bulk buys
17 impedes our ability to roll in improved versions of the part and could be extremely costly if we
18 over forecasted demand. To find the "best" solution my department had to consider both the
19 costs of a purchase and the risks that course of action presented to the firm.

20 This is just one example. The main point is that people who spend other people's money
21 are obligated to rigorously assess the risks and uncertainties of any proposed action.

22 //

1 Q. How would you characterize the types of options firms consider when dealing with risks
2 and uncertainty, and how would those options relate to this case?

3 A. McKinsey & Company is widely recognized for its expertise in strategic decision making.
4 They coined the following language for the types of actions firms consider in the face of
5 uncertainty:

6 **Big bets:** Big commitments that could yield big payoffs under some possible futures but
7 risk big losses under others.

8 **Options:** Actions that build a platform for future moves, keep options open.

9 **No-Regret Moves:** Actions that are wise under any of the possible futures predicted.

10

11 With regard to energy sourcing, Conservation and Energy Efficiency are No-Regret
12 Moves. These are more resilient to changes in market conditions, thus they are very low risk.

13 Lumpy investments are usually Big Bets. When the range of risks and uncertainties are
14 not factored into the analysis, lumpy investments can appear on paper to be the lowest cost.
15 However, these carry much higher risk and in reality can result in much higher costs relative to
16 incremental investments that allow the firm to keep options open. There are future scenarios, for
17 example, in which the cost of sourcing from coal could be less favorable than sourcing from
18 renewables. Likewise, natural gas prices are highly volatile exposing customers to the risk of rising
19 fuel costs. The bigger the investment in coal and gas infrastructure, the less Idaho Power is able to
20 adapt to lower cost alternatives.

21 Actions that keep options open are lower risk. Alternatives that give a firm more
22 flexibility to pay-as-you-go as supply-side and demand-side factors change can allow the firm to
23 minimize risk and cost over time.

1 The case before the PUC only presented “Big Bets”. The PUC and the public should be
2 given the opportunity to compare these Big Bets to alternatives that combine various demand-
3 side and supply-side options to optimize the cost and risk of meeting current and future needs.
4

5 **Q: In your assessment is Idaho Power operating in the face of uncertainty?**

6 **A:** Yes. I believe Idaho Power has always operated in the face of uncertainty, such as the
7 challenge of forecasting the magnitude and behavior of demand. Today, Idaho Power is facing a
8 new level of uncertainty as disruptive forces are projected to transform the cost effectiveness and
9 risks associated with the diverse array of resources for managing supply and demand. The Edison
10 Electric Institute (EEI), which is the association that represents U.S. investor-owned electric
11 companies, describes the uncertainties facing utilities in its January 2013 report, *Disruptive*
12 *Challenges: Financial Implications and Strategic Responses to a Changing Retail Electric Business,*
13 *page 3:*¹

14 As a result of a confluence of factors (i.e., technological innovation, public policy support
15 for sustainability and efficiency, declining trends in electricity demand growth, rising
16 price pressures to maintain and upgrade the U.S. distribution grid, and enhancement of
17 the generation fleet), the threat of disruptive forces (i.e., new products/markets that
18 replace existing products/markets) impacting the utility industry is increasing and is
19 adding to the effects of other types of disruptive forces like declining sales and end-use
20 efficiency.

21 //

¹ Available online at: <http://www.eei.org/ourissues/finance/Documents/disruptivechallenges.pdf>
(accessed October 11, 2013).

1 In addition, the McKinsey Global Institute (MGI), which is the business and economics
2 research arm of McKinsey & Company, published in May 2013 its study of *Disruptive*
3 *technologies: Advances that will transform life, business, and the global economy.*² Two of the twelve
4 technologies identified were Energy Storage and Renewable Energy. In its advice to leaders,
5 McKinsey recommends that leaders facing disruptive forces in their sector must plan for a wide
6 range of scenarios, to abandon assumptions, and to look beyond long-established models.

7 Other utilities are adapting, as described by CEO Lynn Good of Duke Energy in its second
8 quarter earnings call:³

9 "New technologies, new regulations and ongoing cost pressures are just some of the forces
10 that require new thinking and action. As we position the company in the industry for the
11 future, we must innovate every part of the business to address these challenges."
12

13 In sum, Idaho Power is facing new levels of uncertainty, which increase the importance of
14 following a decision-making process that gives objective, open-minded, and diligent
15 consideration to a diverse range of scenarios and alternatives.
16

17 **Q:** As a Professor of Business and Management can you summarize the process you find
18 most exemplary of firms that effectively manage decisions in the face of uncertainty?

² Available online at:

http://www.mckinsey.com/insights/business_technology/disruptive_technologies (accessed October 11, 2013).

³ At page 12. Available online at: duke-energy.com/pdfs/2Q13_Earnings_Call_Transcript.pdf (Accessed October 11, 2013).

1 A: There are four steps that consistently appear as part of the process. When teaching
2 business students an exemplary decision-making process, I have described these phases as
3 follows:

- 4 1. Clarify the Purpose. This includes the goal, criteria, and any constraints.
- 5 2. Evaluate the Situation. Before specific solutions are designed, the root needs and
6 variables must be assessed. This phase focuses on assessing current needs & capabilities,
7 identifying risks & uncertainties, and projecting the possible futures that may unfold.
- 8 3. Formulate Alternatives. The need to adapt to a more rapidly changing world has
9 increased the need for firms to identify a diverse range of options.
- 10 4. Evaluate Alternatives. This phase synthesizes all issues to weigh the value and risks
11 associated with alternatives relative to the goal and criteria.

12
13 Q: Can you describe how this decision making process relates to this case before the PUC?

14 A: I will describe how each of the four phases in the decision making process would relate to
15 this application and will highlight issues where the process followed by this application has been
16 inadequate.

17 Clarify the Purpose. The goals, constraints, and criteria by which this case is evaluated
18 are specified in the legal obligations of the PUC and through public policy, which I will not
19 review in detail here. In my own words, the goal of the process should be to determine the best
20 option that serves future customer energy needs. The PUC is obligated to minimize cost and risk
21 as key criteria, to allow the utility the opportunity to earn a fair return, and to meet the criteria
22 defined by public policy. The 2012 Idaho Energy Plan specifies that, when acquiring resources,
23 Idaho and Idaho utilities should give priority to conservation, energy efficiency, demand

1 response, and to renewable resources (page 9). Public policy generally also gives favor toward
2 options that promote local economic development.

3 A constraint would include the need for environmental compliance in the continued
4 operation of Bridger. However, neither the PUC nor public policy constrain the Company to
5 only consider continued operation of Bridger plants or turning to natural gas to meet future
6 customer needs. In fact, public policy emphasizes the need to consider other resources. For the
7 application before the PUC, the process went awry at the outset when the Company 1) focused its
8 analysis on how to maintain nameplate capacity when the goal should be to how to best serve
9 future customer energy needs, and 2) constrained the process from considering alternative
10 resources. These decisions to foreclose other alternatives bypassed the regulatory process and
11 denied stakeholders a fair opportunity to participate in its review.

12 Evaluate the Situation. The case before the PUC proposes solutions without adequately
13 assessing the situation. I will address a few examples of issues that should have been addressed
14 before formulating and evaluating the proposed investments:

15 The risks associated with investing in coal generation have not been adequately
16 characterized or compared relative to the risks associated with other options. For example, a
17 commitment to continue running Bridger exposes ratepayers to pollution control obligations
18 and a wide range of associated costs over the life of the plant. Incorporating a carbon adder into
19 the quantitative analysis does not adequately characterize the nature and range of pollution
20 control costs to which the ratepayer is exposed. The application cannot credibly claim to present
21 the lowest risk alternative when it does not capture the entire range of future coal pollution
22 control costs.

1 The purpose of the current proposal should not focus on replacing nameplate capacity
2 but to consider how best to keep the lights on, an objective which requires a better assessment of
3 the situation. First, the evaluation should consider how to optimize the entire system. Secondly,
4 the evaluation should consider shape of the units output relative to demand rather than assume
5 that existing nameplate capacity is the best fit to serve current and future needs.

6 As described earlier, the association representing investor-owned electric companies has
7 projected that disruptive forces will transform the industry. Fuel costs, regulatory changes,
8 public policy changes, technology changes, and other factors affect the risk and expected value of
9 various options. While these are difficult to predict, the evaluation process should have addressed
10 under what conditions other options could become more cost effective than the one proposed so
11 that the probability and timing of those conditions could be considered

12 IPC's minority ownership over the coal plants in which it is investing exposes ratepayers
13 to risk. In acquisition analysis, firms explicitly value control over a company because it
14 diminishes risk, and a lack of control correlates with higher risk. In the case before the PUC, the
15 majority owner of the Bridger plants could make decisions counter to the interests of Idaho
16 Power ratepayers. The process did not compare the risk of investing in these minority-owned
17 facilities relative to the risk of investing in other resources. Because the application does not
18 compare this material risk relative to the risk level associated with other alternatives, the process
19 failed to demonstrate that investing in these minority-owned facilities is the "least risk option of
20 serving future customer demands", as stated on page 12 of the application.

21 The best solutions emerge from a process that better understands the situation. In
22 business school classes, we emphasize the importance of deeply understanding current and future
23 needs before designing solutions. This application did not characterize the current and future

1 behavior of demand nor consider demand-side alternatives that could shape that demand. The
2 application presumed that replacing a MW for a MW is the ideal solution for future needs. And
3 the application does not assess the risk of Idaho Power's minority ownership position. The PUC
4 is unable to confirm that the proposal is the least cost, least risk option if current and future
5 needs have not been adequately characterized.

6 Formulate Alternatives. The documents before the PUC do not identify an adequate
7 range of alternatives. The 2012 Idaho Energy Plan specifies that, when acquiring resources, Idaho
8 and Idaho utilities should give priority to conservation, energy efficiency, demand response, and
9 to renewable resources (page 9). The Company's decision to exclude these alternatives from the
10 evaluation process directly contradicts the guidance provided by public policy as articulated in
11 the Idaho Energy Plan. The PUC cannot fulfill its obligation to ensure Idaho Power selects the
12 best alternative when the options prioritized by public policy have been excluded from the
13 process.

14 A diverse range of alternatives is essential to evaluate the best compliance option. These
15 alternatives may include supply-side options, demand-side options, or a portfolio of approaches
16 designed to minimize both risk and cost given current and future needs. The coal study presented
17 in the application did not address an adequate range of alternatives. A process that does not
18 identify the viable alternatives cannot verify which option best meets the criteria.

19 Evaluate Alternatives. The PUC cannot evaluate which option best addresses current and
20 future needs because these have not been adequately assessed and a sufficient range of
21 alternatives has not been presented. Are there scenarios under which other alternatives would
22 better serve customers than the proposed investment in coal generation? The process has failed
23 to answer this essential question.

1 Q: The 2013 IRP evaluates a range of resources. Why does this not meet your
2 recommendation that the evaluation process consider alternatives?

3 A: The IRP did not adequately consider the risks of alternatives, it did not specifically assess
4 the current and future needs if operation of just Bridger units 3 and 4 were discontinued, and it
5 did not assess alternatives to address those specific needs. As previously described, energy is
6 facing new levels of change which will shift the cost effectiveness of various alternatives. The IRP
7 only identified four risks in its section on "Risk Analysis and Results," page 86: natural gas prices,
8 customer load, hydroelectric conditions, and a carbon adder. These four risks do not capture the
9 range of uncertainties affecting the viability of alternative resources. The carbon adder does not
10 represent the full range of pollution costs associated with coal. Other changes in the industry are
11 widely published and have substantial impact on the cost effectiveness of various alternatives. The
12 possibility of transformative changes in the cost of renewables was not included. Storage
13 technology is projected to be one of the twelve most disruptive technologies impacting energy
14 economics, yet this is not mentioned in the IRP section on risk analysis.

15 In the face of uncertainty, an objective process considers the conditions under which an
16 alternative path forward would be favorable. The IRP concludes in its section on Risk Analysis
17 that, for example, solar PV is the highest cost alternative under all scenarios identified. This
18 indicates a failure in the objectivity of the process. The probability of a scenario in which solar is
19 more cost effective than coal is not zero. There is debate over the probability and timing of that
20 scenario, and the public has a right to participate in that debate. In a free market, the plausibility
21 of such a scenario would be weighed in the decision making process. The process followed by
22 this application has failed to do that.

1 The IRP's cursory overview of four risks is insufficient to eliminate alternatives from
2 consideration in this specific proposal before the PUC, particularly alternatives which may be
3 lower risk and which have been strongly advocated by stakeholders and public policy.

4

5 **Q:** Please explain how Idaho Power's faulty decision making process exposes ratepayers to
6 unnecessary risks.

7 **A:** Ratepayers are exposed to a cascade of additional costs triggered by prolonging the life of
8 the plant because the risk and magnitude of future costs have not been adequately considered.
9 The process has focused only on "big bets" and denied the public the opportunity to consider
10 lower risk, "no regret" and "option preserving" moves, such as conservation, energy efficiency,
11 demand response, and renewable resources, which public policy specifies should be given
12 priority. The process has not identified under what conditions alternative resources would
13 become more cost effective than continued operation of Bridger units 3 and 4, thus the process
14 has failed to give the PUC and the public an opportunity to consider the probability and risks
15 associated with the various scenarios that may unfold.

16 By not considering an adequate range of viable alternatives and by not adequately
17 assessing the risk of the proposed investment relative to the risks associated with alternatives, the
18 process has failed to determine the lowest cost, lowest risk option to serve customer energy needs.

19

20 **Q:** Does this conclude your direct testimony?

21 **A:** Yes.

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of October, 2013, I delivered true and correct copies of the foregoing DIRECT TESTIMONY OF COURTNEY WHITE ON BEHALF OF THE IDAHO CONSERVATION LEAGUE to the following persons via the method of service noted:

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