BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of PacifiCorp's 2011 Integrated Resource Plan	Docket No. 11-2035-01

COMMENTS OF WESTERN RESOURCE ADVOCATES

June 8, 2012

Western Resource Advocates (WRA) appreciates the opportunity to provide input to the Public Service Commission of Utah (Commission) regarding PacifiCorp's 2012 Business Plan filed with the Commission March 30, 2012 as the 2011 Integrated Resource Plan Update. We respectfully submit the following comments and recommendation.

WRA recommends that the Commission consider the 2012 Business Plan informational only. Given that the filing lacks most of the required components of an IRP as set forth in the 1992 Order on IRP Standards and Guidelines,[1] including supporting analysis and scenario and risk assessment, the 2012 Business Plan and updated Action Plan cannot be acknowledged nor should it be used as the basis for the current IRP or a future IRP acknowledgement.

I. 2012 BUSINESS PLAN

The 2011 IRP Update represents PacifiCorp's 2012 Business Plan which was approved by the MidAmerican Energy Holdings Company's (MEHC) Board of Directors in December

[1]Public Service Commission of Utah, In the Matter of Analysis of an Integrated Resource Plan for PacifiCorp, Report and Order on Standards and Guidelines, Docket No. 90-2035-01, June 18, 1992.

2011. The 2012 Business Plan was developed by MEHC's corporate management with input from PacifiCorp's three business units: PacifiCorp Energy, Pacific Power, and Rocky Mountain Power.[2] PacifiCorp indicates that "the resource portfolio reflects the outcome of the Company's 10-year business planning process for 2012-2021, culminating in the '2012 Business Plan.'"[3]

As compared to the resource acquisition plan included in the 2011 IRP, the Business Plan makes the following changes.

It delays transmission additions by 1-3 years. It removes 550 MW of planned nameplate wind additions and eliminates the full 30 MW of Micro Solar Water Heating Program identified as cost effective by the 2011 IRP. It retires two coal units—Carbon Units 1 and 2—at the end of 2014, removes 20 MW of planned turbine upgrades at the Hunter and Huntington coal plants and moves forward, from 2018 to 2013, an 8 MW turbine upgrade identified as a west-side resource. Finally, it downsizes a planned 2019 combined cycle combustion turbine gas plant (CCCT) by 87 MW. It meets the growing resource need in the latter years of the planning period with increased short-term market purchases. The planned DSM and 2016 gas plant are unchanged from the 2011 IRP Preferred Portfolio.

The decisions to defer transmission, remove the wind resources, eliminate the solar water heating program, retire Carbon Units 1 and 2 and forgo the turbine upgrades at Hunter and Huntington, and to not reexamine the 2016 gas plant were determined by Company management in the business planning process and do not reflect outcomes determined through optimization modeling. System Optimizer, the Company's capacity expansion model, was used to optimize

[2] PacifiCorp, 2011 Integrated Resource Plan Update, March 30, 2012, p. 11.
[3] Ibid., p. 1.

short-term market purchases and natural gas additions given the exogenously determined resource decisions and updated forecasts, but stochastic modeling was not undertaken.

Overall, the new resource acquisition plan reduces gas-fired capacity by 87 MW, reduces coal-fired capacity by 147 MW, reduces renewable capacity by 580 MW and increases the use of short-term market purchases, particularly in the latter half of the ten-year planning period. The resource acquisition plan appears, therefore, to increase market risk compared to the plan developed in the unacknowledged 2011 IRP.[4] The effect on CO2 risk is less certain, but it appears likely CO2 risk has also increased. While 127 MW of coal-fired generation is removed from PacifiCorp's existing coal fleet and 20 MW of planned turbine upgrades is foregone, 580 MW of carbon free resources were removed. Overall, this corporate strategy appears more risky than the previous plan. Given the regulatory mechanisms PacifiCorp has in place across its states (e.g. EBA), if PacifiCorp were to proceed with this plan up to increase its market transactions and recover those costs through automatic rate adjusters, customers would bear a disproportionately higher share of the increased risk than shareholders.

II. REGULATORY TREATMENT AND SIGNIFICANCE OF FILING

The cover letter PacifiCorp filed March 30, 2012 with the Business Plan and 2011 IRP Update indicates the Company considers the filing for "informational purposes only" with no action required by the Commission. The filing included an "IRP Action Plan Update," so, pursuant to Utah Administrative Code R746-430-1, the Commission noticed a scheduling

[4] Prices in the wholesale electricity and natural gas markets are volatile. The full cost of a strategy that includes these resources is unknown at the time it is entered into. The cost may be higher or lower than expected when the decision to acquire the resource was determined. On the other hand, the major cost component for renewable resources is their capital cost which is for the most part known, with the fuel component virtually free.

conference and set a schedule for comments.[5] Action by the Commission is not required by R746-430-1.[6]

WRA agrees with PacifiCorp that the Commission consider the filing for informational purposes only. Given that the filing lacks most of the required components of an IRP as set forth in the 1992 Order on IRP Standards and Guidelines, including supporting analysis and scenario and risk assessment, the 2012 Business Plan and updated Action Plan cannot be acknowledged.[7] Despite these shortcomings, we find the information valuable, and we appreciate the opportunity the Company has provided to its state commissions and interested stakeholders to preview its strategic business plan. It is helpful for the Commission and parties to understand the Company's perception of the current planning environment and to preview the Company's preferred approach to meeting its regulatory obligations while protecting its shareholders' interests.

WRA's primary interest in this information, however, is its relationship to the newly launched IRP process. Our desire is to ensure that the current IRP process produces comprehensive, comparable, and transparent results that can be relied upon to evaluate the cost/risk tradeoffs of various resource options including the resource portfolio identified in the 2012 Business Planning process. Our hope is that PacifiCorp's corporate view as expressed in the assumptions, limitations, and constraints put on the ten-year business plan does not limit the body of information developed as part of the current IRP, particularly with respect to the

[5] Utah Admin. Code R746-430-1 (2) (a)
[6] Utah Admin. Code R746-430-1 (3)
[7] Whether the Action Plan Update filed with the Business Plan meets the definition of an Action Plan as provided in the Utah Administrative Code is not clear. Utah Administrative Code appears to contemplate that an Action Plan will be filed in conjunction with integrated resource planning activity including cost and risk analysis. Utah Admin. Code 746-430-1 (1) (c) states: "The Affected Utility shall include with the Action Plan the following: Identification of all data, models, and information used to develop the Action Plan, including, but not limited to, the Affected Utility's costs, risk and scenario analysis, methodologies and assumptions used to develop the Action Plan."

acquisition of renewable resources, the size, type and timing of the resource currently identified as a 2016 CCCT, and the conduct of the coal retirement analysis. Understanding the risks associated with the Company's resource strategy and the costs to mitigate those risks is important, particularly given the potential that shareholder interests and customer interests may diverge and/or that the future may develop differently than the Company anticipates.

The remainder of our comments is organized as follows. Section 3 reviews pertinent Commission orders that address the linkage between strategic business planning and integrated resource planning. These orders provide the Commission's view regarding the linkage between integrated resource planning and strategic business planning. Section 4 identifies issues to be further examined in the current IRP process.

III. STRATEGIC BUSINESS PLANNING AND INTEGRATED RESOURCE PLANNING

The Commission has addressed the linkage between strategic business planning and integrated resource planning and addressed the need for transparent and comparable analysis through its past orders beginning with the 1992 Report and Order on Standards and Guidelines. Three orders provide specific guidance regarding the linkage between strategic business planning and integrated resource planning—the Report and Order on Standards and Guidelines, the Report and Order on the 2007 Integrated Resource Plan, and the Report and Order on the 2008 Integrated Resource Plan. These orders clarify that the purpose of conducting integrated resource planning is to benefit customers; in order to achieve that purpose, the costs and risks of alternative strategies for meeting customers' needs must be documented. The most recent IRP Order, issued in this docket March 22, 2012 addresses the need for transparent, comprehensive analysis.

A. Docket No. 90-2035-01, Report and Order on Standards and Guidelines

Procedural Issue Number Nine of the Report and Order on Standards and Guidelines requires the following: "The Company's Strategic Business Plan must be directly related to its Integrated Resource Plan." In discussing this issue, the Commission found that "consistency between the Company's strategic business plan and its IRP is necessary to ensure that ratepayers receive the benefits from IRP."[8]

B. Docket No. 07-2035-01, Report and Order on 2007 Integrated Resource Plan

The Report and Order on PacifiCorp's 2007 Integrated Resource Plan, issued February 6, 2008 contains an extensive discussion of this issue. The Commissions provides clear guidance regarding its expectation of how the two processes are intended to be linked such that "ratepayers receive the benefits from IRP."

> The reason for this guideline is to ensure ratepayers receive the benefits of IRP. To the extent the Company makes business or corporate decisions affecting its view of the optimal resource plan given its expected combination of costs, risk, and uncertainty, it must also provide the necessary analysis in the IRP to enable us to determine its conclusions are consistent with the public interest. This is what it means to link the two processes together.
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> The IRP must serve as an analytical document of the costs and risks to ratepayers of alternative means of providing for adequate future service. Clearly, many considerations play a part in the Company's decisions. However, our Guidelines require not only an assessment of risks and uncertainties, but also requires the Company identify who is expected to bear the cost to mitigate this risk. If the Company believes it faces a financial risk due to an IRP failing to be acknowledged in one jurisdiction or another, it has the obligation in the IRP to identify the potential cost consequences of this event and the cost to ratepayers to mitigate the risk….It is critically important the IRP process produces credible results upon which state commissions can rely prior to the use of constraining assumptions based on asserted corporate financial risks.
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> Therefore, we instruct the Company to ensure the IRP explicitly produces the quantitative analysis necessary for regulators to understand the cost

[8] Public Service Commission, Guidelines, Docket No. 90-2035-01, p. 17.

consequences of mitigating any risk or uncertain event including any Company corporate resource planning decisions. The Company bears the risk for any unreasonable costs to ratepayers associated with its decisions to change the quantity and type of resources it procures based on asserted but unexamined risks.[9]

C. Docket No. 09-2035-01, Report and Order on 2008 Integrated Resource Plan

The Commission continues its discussion of the linkage between strategic business planning and integrated resource planning in its April 1, 2010 Order on PacifiCorp's 2008 Integrated Resource Plan.

> The IRP is designed to identify the optimal plan to serve the long-run public interest and invite interaction and information exchange between the Company, regulators, and other interested parties…The business plan is directed by Company management and reflects the Company's financial interests to a greater extent than the IRP.[10]
>
> While we concur with the Company the planning processes should inform each other, we also concur with the Office, the Company must fully support all of the assumptions used in the IRP and demonstrate their appropriateness for serving the public interest, including the use of any business planning assumptions.
>
> The objective of the guidelines addressing the link between the Company's strategic business plan and the IRP is to ensure transparency between the two plans such that any differences are easily understood and the benefits of IRP are brought to customers…
>
> …While we conclude the information flow between the two processes should be bidirectional, the attempt at alignment must not compromise the IRP process. For example, initial cases or optimized portfolios should not be dropped from the evaluation process solely on the basis of business plan considerations. We support the approach used by the Company in IRP 2008 wherein the Company included business plan reference cases and evaluated these cases in comparison to the other broadly defined cases. This approach provides transparency between the two planning processes and allows cost-risk tradeoff analysis of the business plan and other alternative portfolios…[11]

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[9]Public Service Commission of Utah, In the Matter of the PacifiCorp 2006 Integrated Resource Plan, Report and Order, Docket No. 07-2035-01, February 6, 2008, pp. 33-34.
[10]Public Service Commission of Utah, In the Matter of the Acknowledgment of PacifiCorp's Integrated Resource Plan, Report and Order, Docket No. 09-2035-01, April 1, 2010, p. 47.
[11] Ibid., pp. 48-49.

> …the Company must fully support all of the assumptions used in the IRP and demonstrate their appropriateness for serving the public interest, including the use of any business planning assumptions. Further, the alignment process must not compromise the IRP process.[12]

D. Docket No. 11-2035-01, Report and Order on PacifiCorp 2011 Resource Plan

In sharp contrast to the Commission's view of the transparency of the 2008 IRP, an apparently significant reason for the Commission's decision to not acknowledge the 2011 IRP was the Company's lack of transparency in the 2011 IRP planning cycle.

> We find IRP 2011 IRP deficient in providing sufficient analysis of the tradeoffs between costs, risks, customer rate impact, supply reliability, resources diversity, and the future uncertainty of greenhouse gas and RPS policies, particularly for the Preferred Portfolio. For acknowledgment in the future, the Company should provide all stochastic performance measures for the Preferred Portfolio and identify the additional costs associated with addressing the non-modeled objectives cited by the Company, e.g., social concerns, and cost recovery risk…the Company should identify who will bear this financial risk, shareholders or customers.[13]
>
> We conclude additional consistent and comparable metrics are necessary to reach general or meaningful conclusions about the benefits of the full Energy Gateway expansion.[14]
>
> We find the Company has provided insufficient information in IRP 2011 regarding the cost impacts to customers associated with the change from geothermal to wind resources in its Preferred Portfolio.[15]
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> Going forward, the Company, in its next IRP, should spend more effort developing comparable cases and ensuring consistent and comparable evaluation of alternative resources.[16]
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> While the IRP is adding complexity, it is also losing transparency.[17]

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[12] Ibid., pp. 57-58.
[13] Public Service Commission of Utah, In the Matter of PacifiCorp's 2011 Integrated Resource Plan, Report and Order, Docket No. 11-2035-01, March 22, 2012, pp. 7-8.
[14] Ibid., p. 10.
[15] Ibid., p. 11.
[16] Ibid., p. 13.
[17] Ibid., p. 22.

IV. AREAS TO BE ADDRESSED IN CURRENT IRP

A. Planning Assumptions and Reference Point

Given that business planning assumptions reflect the Company's financial interest and not necessarily the long-run public interest, business planning assumptions should be tested as options rather than being applied to all cases developed through System Optimizer modeling runs. In addition, WRA recommends that for the biennial IRP, tables such as Table 3.7 and Table 5.4 of this Update[18] reflect changes between the biennial IRPs as well as reflect changes between a Business Plan and an IRP or an IRP and a Business Plan. This information could be included in an appendix or in the document body.

B. Treatment of Renewable Resources

Renewable resources mitigate the most significant known risks facing the electric industry and its customers: the risks of volatile market and fossil fuel prices and the cost of complying with the potential regulation of carbon dioxide emissions. This hedging value of renewable resources has been well demonstrated in multiple IRP studies. However, corporate management does not appear to considering the hedging value to customers of these resources in the near-term in undertaking its recent resource planning.

While acknowledging the risk mitigation benefits of renewable resources, the Company appears to doubt its ability to recover the cost without the support of state and federal policies and consequently has significantly reduced and deferred its plans to acquire additional renewable resources over what it previously acquired to meet its merger obligations and meet state renewable portfolio standard requirements. Says the Company:

[18] PacifiCorp, 2011 Integrated Resource Plan Update, March 30, 2012, p. 35 and p. 54.

> "The revised wind schedule reflects an updated analysis of annual RPS compliance requirements and strategy, a change in the planned in-service date for Energy Gateway West, and lower forecasted loads, while at the same time maintaining the long-term regulatory compliance/incentive uncertainty, long-run public policy goals, and risk mitigation benefits of zero carbon, zero fuel cost renewable resources as identified in the 2011 IRP. In particular, the additional wind resources included past 2024 provide fuel diversification benefits, and are consistent with the 2011 IRP decision to require additional wind based on the belief that state and federal policies, in the long term, will support expansion of renewable energy."[19]

The change in corporate strategy with respect to the acquisition of renewable resources appeared in the 2010 Business Plan, limited the modeling runs in the 2011 IRP, and is apparent in the current 2012 Business Plan.

Beginning with the 2010 Business Plan (2008 IRP Update), PacifiCorp began applying additional limiting assumptions to its ability to acquire renewable resources which it carried over to the 2011 IRP. The 2008 IRP had included 550 MW of wind to be acquired between 2012 and 2016 and 35 MW of geothermal to be acquired in 2016. Corporate management removed all wind and geothermal additions from these time periods in its 2010 Business Plan, [20] claiming lack of transmission availability to the Wyoming wind resource as its justification. It linked the ability to acquire additional wind to the completion of Gateway West.

Except for 200 MW of wind allowed on the west side of the system, PacifiCorp continued to assume for the 2011 IRP that the only wind available to it is Wyoming wind tied to the completion of the Gateway expansion. It also limited wind additions to 200 MW per year.

As discussed in Section 1, the 2012 Business Plan delays the Gateway expansion 1-3 years and reduces the planned wind acquisition by 550 MW from the 2011 IRP. Significantly,

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[19] 2011 IRP Update, p. 45.

[20] In the 2010 Business Plan, PacifiCorp cut 482 MW of wind, 121 MW of Class 1 and 2 DSM, 46 MW of distributed standby generation, 43 MW of CHP and 35 MW of geothermal generation.

both the 2010 Business Plan and the 2012 Business Plan identify roughly 450 MW of wind to be added late in the ten-year planning period. Both Business Plans cut wind significantly from the amount identified in the previous IRP.

Given the hedging value of these resources to customers, this corporate perspective does not appear to be in the public interest and the cost consequence of this should be evaluated in the current IRP process. [21] Renewable resources located in areas with access to transmission should be modeled as well as Wyoming wind and annual limits on wind additions should be lifted.

C. Reevaluation of 2016 CCCT

WRA finds it curious given the significant decline in system load that the 2016 CCCT was not reevaluated in the business planning process. [22] This is particularly true, given that System Optimizer was used to optimize short-term market purchases and natural-gas resources after 2014, other than the 2016 plant.[23]

PacifiCorp provides Table 3.5 to justify the continued need for the facility.[24] Table 3.5 shows a decline of 275 MW of thermal generation, a decline of 378 MW of purchases and a decline of 168 MW from Qualifying Facilities. The 275 MW decline in thermal generation is comprised of the following components: 172 MW due to the retirement of Carbon units 1 & 2; 20 MW due to a turbine upgrade not undertaken; and 83 MW due to a decline in unit capacity, apparently from unspecified environmental upgrades that were not modeled in the 2011 IRP.

[21] In the ECAM proceeding, WRA opposed an ECAM because of the planning bias introduced by an ECAM to favor market purchases and natural gas fired resources and discourage the acquisition of renewable resources. The decisions that the Company has made since the 2008 IRP appear to bear out this perspective.
[22] Table 3.4 indicates that PacifiCorp has reduced its 2016 system peak load forecast by 858 MW and system energy requirement by 3,745,944 MWh. 2011 Integrated Resource Plan Update, p. 31.
[23]PacifiCorp states on page 14: “For the 2012 Business Plan, the Company assumed the 2016 acquisition of the generic CCCT included in the 2011 IRP preferred portfolio.” PacifiCorp states on page 45: “…the System Optimizer model was used to balance capacity and energy with gas-fired resources (after 2014) and front office transactions. 2011 Integrated Resource Plan Update, p. 45 and 14.
[24] 2011 IRP Update, p. 31.

The 378 MW decline in purchases is linked to the Southeast Idaho Exchange Agreement with BPA and is apparently matched with a 356 MW decline in load.[25] Whether this load loss is included in the 858 MW decline in PacifiCorp's system load or is in addition to the 858 MW decline is not clear. Generally, however, an exchange is a method of bypassing transmission constraints and has little effect on the load and resource balance. If the 356 MW decline in load matches the 378 MW decline in purchases, resource availability is reduced by 22 MW rather than 378 MW.

Finally, the reason PacifiCorp changed its assumption regarding QF power is unclear. However the decision to assume that industrial customers and QFs will now self-generate rather than sell their output to PacifiCorp increases PacifiCorp's need by an additional 168 MW.

For the current IRP cycle, the 2016 CCCT should be removed prior to performing optimizing runs.

D. Coal Retirement Study

The 2011 IRP Update filing included an updated Coal Replacement Study as Appendix A. WRA appreciates PacifiCorp's significant improvements to the coal retirement study. Our primary criticism of the previous study has been addressed. This study evaluates the costs of ongoing environmental compliance against avoiding that cost through earlier retirement or gas conversion which the previous study did not. It is a good first step. However, we think the study should be expanded to undertake a detailed analysis of all PacifiCorp coal facilities.

The coal replacement study limited the detailed analysis to eight units through the use of a screening tool. For those units subject to the Regional Haze Rule, the study compared the costs

[25] Footnote 2 of Table 3.5.

of ongoing investment against the cost of a new CCCT. Eight units were identified for further analysis. Whether a larger number would have been identified if compliance costs were compared to refueling costs is not known, but likely.

Based on recent events, it appears that all of PacifiCorp's units should be subjected to the more complete analysis. Given the decision to repower Naughton, which as not a part of the study, and retire Carbon Units 1 & 2, which are not subject to the Regional Haze Rule, it appears that the net was not spread widely enough. Because of the Mercury and Air Toxics Standards, PacifiCorp has determined that it will be more cost effective to retire Carbon Units 1 & 2 than to meet the MATS standard. While we appreciate that PacifiCorp undertook this analysis separate from the coal retirement study, we would like to see all coal-fired facilities evaluated. Recent actions by EPA suggest that the costs PacifiCorp estimated were necessary to comply with state implementation plans for the Regional Haze Rule may be too low. We expect that PacifiCorp will update this information for all affected units.

The coal retirement results are sensitive to natural gas prices and CO2 costs. We note that in the event of high natural gas prices, PacifiCorp's high CO2 cost may be too low. Table 1 is reproduced from WRA's comments on the 2011 IRP. The last four columns show the incremental cost of carbon regulation if emissions are capped to comply with differing carbon regulations.[26] The high CO2 case used in the coal retirement study is very close to the prices shown in the last column. These prices were generated assuming a hard emissions cap of 10 percent below 1990 levels by 2020 and 80% below by 2050, with a medium natural gas price.

[26] Cases 15-17 were created using a CO2 cap of 15% below 2005 emissions levels by 2020 and 80% by 2050, with three different natural gas prices: low, medium, and high. The fourth set of shadow prices was developed using Case 18. Case 18 was created with the assumption of a hard emissions cap of 10 percent below 1990 levels by 2020 and 80% below by 2050 with a medium natural gas price.

The second to the last column was generated using high natural gas prices. In the case of high natural gas prices, CO_2 prices would exceed the high used in the study.

Table 1. CO_2 Emissions Cost and Emission Shadow Costs ($ / Short Ton)

Year	None	Medium	Low to Very High	Average Used for Cost/Risk Tradeoff	High	Base Cap Low Gas Case15 Shadow Price	Base Cap Med Gas Case16 Shadow Price	Base Cap High Gas Case17 Shadow Price	HB 3543 Med Gas Case18 Shadow Price
2015	-	19	12	10	25	-	-	-	37
2016	-	20	13	11	27	10	8	1	39
2017	-	21	13	11	29	11	4	16	35
2018	-	22	14	12	31	14	30	34	37
2019	-	23	15	13	33	15	34	39	40
2020	-	24	15	13	35	17	36	50	43
2021	-	25	18	15	37	21	40	64	47
2022	-	27	22	16	40	24	43	71	55
2023	-	28	26	18	43	28	50	78	70
2024	-	29	31	20	45	34	57	85	75
2025	-	31	38	23	49	38	60	91	75
2026	-	32	54	29	52	47	64	94	77
2027	-	34	54	29	55	47	62	95	73
2028	-	35	65	33	59	51	71	108	83
2029	-	37	78	38	63	63	75	114	101
2030	-	39	93	44	68	47	61	78	78

V. CONCLUSION

The Commission makes clear in the Standards and Guidelines and in later orders that the purpose of the directive linking strategic business planning with integrated resource planning is to assure the public benefits from integrated resource planning—in other words that IRP is not just a regulatory exercise with no real application to resource acquisition.

The benefit to the public of conducting integrated resource planning is to examine how robust a resource acquisition strategy will be in protecting customers from the cost consequences if the future does not unfold as expected at the time planning is conducted. Imposing a business planning view of the future on case development in the newly launched IRP would be a mistake. While it may provide supporting results for what the Company believes will be the way forward, the evaluation of the cost consequence if the Company is incorrect will under estimate the cost, undermining the value of the exercise. Therefore, WRA makes the following recommendations for the current planning cycle:

- Renewable resources located in areas with access to transmission be modeled as well as Wyoming wind and annual limits on wind additions lifted; geothermal resources should not be artificially removed from consideration.
- The 2016 CCCT be removed prior to performing optimizing runs.
- The coal retirement study be expanded to consider all coal-fired facilities; Regional Haze Rule compliance costs be updated, and the high CO2 cost increased.

Dated this 8th day of June 2012.

Respectfully submitted,

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