August 26, 2014

MEMORANDUM

TO: Commissioners (cc: Legal Division staff)
FROM: Regulatory Division staff members of Docket D2013.12.85 work team
RE: D2013.12.85 – NorthWestern hydro docket - Decision guide/memo

The purpose of this memo is to provide a decision guide for the Commission as it considers whether or not to approve NorthWestern Energy's application to acquire the PPLM hydro assets in Montana for $870 million (exclusive of the Kerr facility). The memo provides the statutory requirements for preapproval, then identifies questions and issues to be discussed and resolved by the Commission as it makes its decision(s) and provides direction to staff for the final order. Summaries of the parties' positions and evidence in the record accompany each question/issue in the memo. There are undoubtedly issues and evidence that staff missed in its review of the voluminous record in this docket that commissioners will raise and consider at the September 4 work session.

Statutory requirements for preapproval

The PSC's consideration of NorthWestern's application to purchase the hydros is subject to the following pertinent provisions of § 69-8-421(6), MCA, which establishes the criteria for PSC approval of an electricity supply resource:

> (6)(a) The commission may approve or deny, in whole or in part, an application for approval of an electricity supply resource.
> (b) The commission may consider all relevant information known up to the time that the administrative record in the proceeding is closed in the evaluation of an application for approval.
> **(c) A commission order granting approval of an application must include the following findings:**
> **(i) approval, in whole or in part, is in the public interest; and**
> **(ii) procurement of the electricity supply resource is consistent with the requirements in 69-3-201, the objectives in 69-8-419, and commission rules.**
> (d) The commission order may include a provision for allowable generation assets cost of service when the utility has filed an application for the lease or acquisition of an equity interest in a plant or equipment used to generate electricity.
> ...
> (f) The commission order may include other findings that the commission determines are necessary.
>
> (g) A commission order that denies approval must describe why the findings required in subsection (6)(c) could not be reached.

DECISION GUIDE

I. **Is approval of NorthWestern's application to purchase the hydros for $870 million in the public interest?**

- **A.** **How does NorthWestern's negotiated purchase price for the PPLM hydro resource compare to a range of alternative energy supply sources?**
- **B.** **Is NorthWestern's CapEx forecast sufficient for the proposed hydro acquisition?**
- **C.** **Is NorthWestern's valuation of the hydros valid?**
- **D.** **Do the benefits of the acquisition outweigh the risks?**

II. **Is NorthWestern's application consistent with the requirements in § 69-3-201, MCA (requires utilities to provide reasonably adequate service at just and reasonable rates)?**

- **A.** **What is the condition of the hydros? Was NorthWestern's due diligence effort sufficient to determine their condition?**
- **B.** **Will rate-basing the hydros result in just and reasonable rates? What are the issues related to revenue requirement/cost of service?**
  1. **What is a reasonable revenue requirement? What is the bill impact?**
  2. **What is a reasonable return on equity (ROE)?**
  3. **What is a reasonable capital structure?**
  4. **Debt cost**
  5. **Rate of return (ROR)**

III. **Is NorthWestern's request to purchase the hydros for $870 million consistent with the objectives in § 69-8-419, MCA?**

1) To provide adequate and reliable electricity supply service at the lowest long-term total cost;
2) To conduct an efficient electricity supply resource planning and procurement process that evaluates the full range of cost-effective electricity supply and demand-side management options;
3) To manage and mitigate risks;
4) To use open, fair, and competitive procurement processes whenever possible; and
5) To provide adequate electricity supply service at just and reasonable rates.

IV. **Is NorthWestern's application consistent with the applicable Commission rules?**

V. **If the Commission approves the application, in whole or in part, does the Commission support conditioning its approval as MCC proposed?**

VI. **Other considerations**

I. Is approval of NorthWestern's application to purchase the hydros for $870 million in the public interest?

A. How does NorthWestern's negotiated purchase price for the PPLM hydro resource compare to a range of alternative energy supply sources?

Section 69-8-419, MCA, requires NorthWestern to plan for future resource needs, evaluate the full range of cost effective resource alternatives, and manage and mitigate risks related to its obligation to provide adequate and reliable electricity service at the lowest long-term total cost. Before preapproving a resource acquisition pursuant to § 69-8-421, MCA, the Commission must find that acquiring the resource is consistent with the requirements in § 69-8-419, MCA, and administrative rules pertaining to resource planning and preapproval. Admin. R. Mont. 38.5.8212 directs NorthWestern to plan for future resource needs and evaluate the economic costs, risks, and benefits of available resource alternatives when choosing which resources to acquire. In addition, Admin. R. Mont. 38.5.8228 requires preapproval applications to demonstrate the cost of the proposed resource compared to the cost of each alternative considered, including functional differences between resource alternatives, and how acquiring the proposed resource is consistent with the above statutory requirements and the utility's most recent resource plan.

To properly implement Montana law and administrative rules, a Commission preapproval decision must evaluate the record evidence comparing the proposed resource to the available alternatives. Relevant issues include how to measure resource cost-effectiveness, whether the methods and models NorthWestern used to evaluate the cost of the hydro purchase compared to alternative resources are reasonable, and whether the input assumptions that NorthWestern used within its models are reasonable. Key model inputs include future wholesale electricity market prices, natural gas prices, CO_2 emissions costs, hydro production, hydro CapEx and O&M, capital and fixed and variable O&M costs for alternative resources, new resource online dates, resource terminal values, inflation rates, and discount rates.

<u>NorthWestern's position:</u>

Hines testified that NorthWestern's 2011 resource plan provided the framework for acquiring new resources and identified market purchases, opportunity resources, and a combined cycle combustion turbine (CCCT) as likely alternatives. Ex. NWE-1 pp. 3, 10-14. He asserted that the 2011 plan identified market and fuel price volatility and uncertainty and greenhouse gas regulation as key sources of risk. *Id.* at pp. 17, 39.

Hines testified that NorthWestern initially evaluated the economic merit of the hydros in two ways: First, by comparing the long-term total costs of the following three portfolios: 1) existing resources plus market purchases to meet load; 2) existing resources plus a CCCT plus market purchases to meet load; 3) existing resources plus the hydros plus market purchases to meet load; and second, by comparing the stand-alone cost of market purchases, a CCCT, and the hydros. NorthWestern performed only deterministic comparative cost analyses in preparing its June 2013 purchase offer. *Id.;* July 8 Tr. p. 141. After it had made its purchase offer to PPLM,

NorthWestern hired Ascend Analytics to perform stochastic analyses of the three resource portfolio alternatives using the PowerSimm model.[1] Ex. NWE-1 p. 28-29.

NorthWestern asserted that the hydros portfolio has the lowest long-term total cost on a risk-adjusted basis compared to alternative portfolios evaluated in the 2011 and 2013 plans. Hines testified that the hydro portfolio mitigates risks related to uncertain future market prices, fuel prices, and environmental regulation, and enhances portfolio diversity. *Id.* at p. 12.

Stimatz testified that the deterministic analyses show that acquiring the hydros is preferable to acquiring a CCCT, as shown in the table below. Ex. NWE-7 p. 38. The 30-year levelized price for the market-only portfolio is slightly less than the hydro portfolio. However, he and Hines both testified that NorthWestern does not consider a portfolio that relies on market purchases for all future needs to be a viable alternative. Ex. NWE-1 p. 31; Ex. NWE-7 pp. 29, 42. Hines asserted that relying on market purchases to supply 50% of the Company's load would disregard current public energy policy. Ex. NWE-3 pp. 4-5. NorthWestern witness Dorris, from Ascend Analytics, concurred, stating that the real alternatives to the hydro acquisition are other physical resources. Ex. NWE-4 p. 19; July 9 Tr. p. 121.

Deterministic Modeling Results (30-yr levelized $/MWh)		
Resource/Portfolio	Standalone Basis	With Market Purchases and Sales to Meet Load
Hydro Facilities	$56.27	$64.92
270 MW Nominal CCCT	$87.76	$71.66
Market Only	$64.17	$64.17

Ascend Analytics performed stochastic portfolio analyses using PowerSimm to evaluate the net present value (NPV) of total portfolio costs for three alternative portfolio structures for the period 2015-2043: 1) existing supply resources plus market purchases to meet load; 2) existing resources plus a 239 MW CCCT in 2018 plus market purchases to meet load; and 3) existing resources plus the hydros plus market purchases to meet load. Ex. NWE-7 p. 41. The NPV portfolio costs reflect expected terminal values for the hydro and CCCT resources at the end of the study horizon. The NPV terminal values of the CCCT and hydro resources were $9 million and $212 million, respectively. App. Attach. 4, p. 6-5. The hydros portfolio had a lower NPV cost than the other two portfolios before and after accounting for risk. On a risk-adjusted basis, the hydros portfolio NPV cost was $376 million less than the current portfolio and $386 million less than the CCCT portfolio. Dorris testified that even if the terminal value of the hydros were assumed to be zero in 2043, the hydros portfolio remains the least-cost and least-risk portfolio compared to the other modeled supply options. Ex. NWE-4 p. 23.

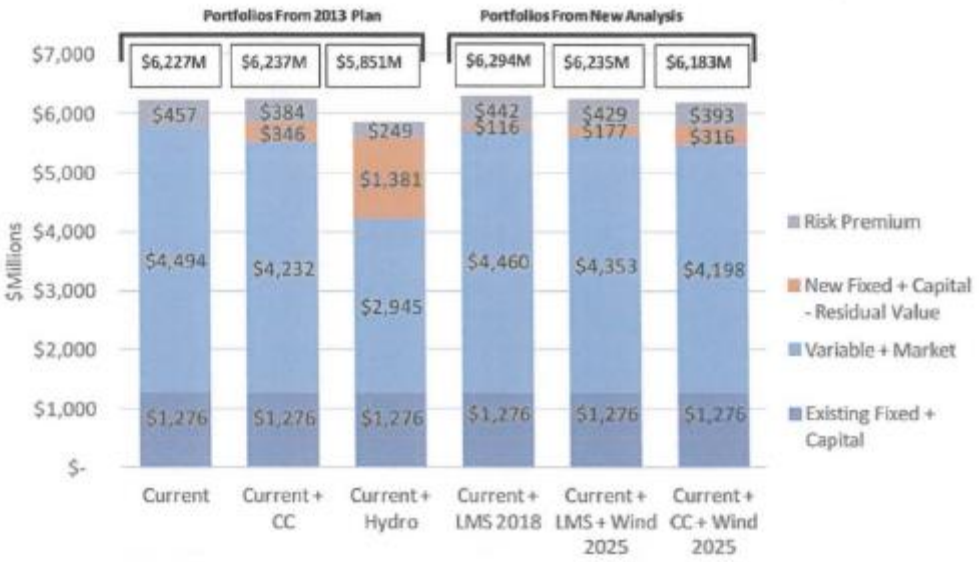
Ascend Analytics later analyzed three additional portfolios in PowerSimm. These included: 4) existing resources plus a 100 MW combustion turbine (CT) added in 2018, plus market purchases; 5) existing resources plus a 100 MW CT in 2025, plus 100 MW of wind in 2025, plus market purchases; and 6) existing resources plus a 239 MW CCCT in 2025, plus 100

[1] Stochastic analysis is used to project outcomes under conditions of uncertainty where expected future values of the unknown variables can be estimated using historical values or other reasonable expectations. The expected values are estimated using defined probability distributions rather than determined values.

MW of wind in 2025, plus market purchases. The hydros portfolio outperformed all of the additional portfolios, as shown in the table below. Ex. NWE-8 p. 5.

Stochastic Modeling Results ($Billions)		
Portfolio	NPV of costs	NPV vs. Current + Hydro
Current + Hydro	$5.851	
Current + CC + Wind 2025	$6.183	$0.332
Current	$6.227	$0.376
Current + LMS + Wind 2025	$6.235	$0.384
Current + CC 2018	$6.237	$0.386
Current + LMS 2018	$6.294	$0.443

The constituents of the alternative resource portfolios are shown in the chart below. Ex. NWE-4 p. 10.



Hines testified that NorthWestern did not test its hydros valuation through a competitive solicitation for alternatives because: 1) There was no time; 2) there is no way to build new hydro generation of this capacity in Montana; and 3) a solicitation for theoretical generation results in bids with limited validity. NorthWestern also stated that it was not in charge of the sales process. Ex. NWE-1 p. 49.

NorthWestern projected lower hydro CapEx in the future relative to recent PPLM CapEx in part because PPLM has invested heavily in these assets over the last decade. Ex. NWE-10 pp. 10-11. It evaluated the sensitivity of the hydros portfolio's costs to alternative CapEx projections. Ex. NWE-9 p. 4; Ex. NWE-16 pp. 3-5. The sensitivities evaluated CapEx cost streams that were 30% higher and 15% lower than original projections. The hydros portfolio had a lower NPV cost than all alternative portfolios under both scenarios, as shown in the tables below. Ex. NWE-9 p. 5. Dorris asserted that the treatment of risks related to CapEx projections in the comparative cost analyses followed standard industry practice. Ex. NWE-4 p. 22. Based

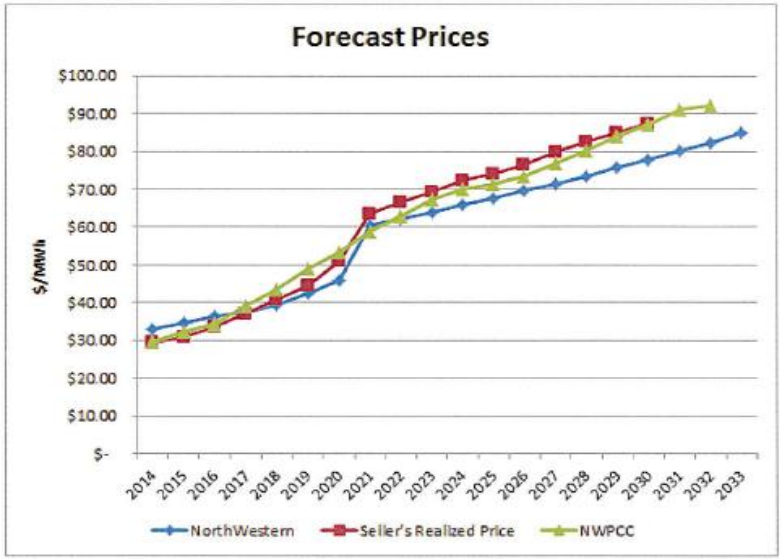
on a review of various Northwest regional utilities' resource plans, he found that it is not standard practice to explicitly incorporate risk associated with capital maintenance costs when comparing the costs of different resources. *Id.* at (GD-1).

Stochastic Modeling Results ($Billions)		
Portfolio	NPV of costs	NPV vs. Current + Hydro
Current + Hydro, 30% Higher CapEx	$5.884	
Current + CC + Wind 2025	$6.183	$0.299
Current	$6.227	$0.343
Current + LMS + Wind 2025	$6.235	$0.351
Current + CC 2018	$6.237	$0.353
Current + LMS 2018	$6.294	$0.410

Stochastic Modeling Results ($Billions)		
Portfolio	NPV of costs	NPV vs. Current + Hydro
Current + Hydro, 15% Lower CapEx	$5.828	
Current + CC + Wind 2025	$6.183	$0.355
Current	$6.227	$0.399
Current + LMS + Wind 2025	$6.235	$0.407
Current + CC 2018	$6.237	$0.409
Current + LMS 2018	$6.294	$0.466

Hines asserted that carbon regulation risk is real and that Montana law and Commission rules require NorthWestern to consider that risk. He listed a variety of ways in which carbon regulation could increase electricity costs, including accelerated plant retirements, higher operating costs, emissions limits (cap and trade), or emissions taxes. Ex. NWE-3 p. 11. He asserted that the carbon costs NorthWestern used in its comparative cost analyses are significantly lower than an average of carbon costs used by several other Pacific Northwest utilities. *Id.* at p. 17. The carbon costs NorthWestern incorporated into its market price projections and generation resource costs were based on the EIA 2013 Annual Energy Outlook GHG15 case. Ex. NWE-7 p. 25; App. Attach. 4, p. 5-6. NorthWestern assumed that carbon costs are internalized in 2021 at a price of $21.11 per tonne, escalating at 5% per year thereafter. App. Attach. 4 p. 5-6. For purposes of stochastic modeling in PowerSimm, NorthWestern established a triangular carbon cost distribution centered on its $21.11 per tonne initial carbon cost. *Id.* at p. 6-13. The lower limit of the carbon cost distribution is $0.00 per tonne and the upper limit is $42.22 per tonne. *Id.* at p. 6-26. NorthWestern characterized its modeled carbon costs as conservative, lower than many regional utilities' projections. *Id.* at p. 6-13; Ex. NWE-3 p. 17; July 9 Tr. p. 67. In comparing its modeled carbon costs to those modeled by other utilities, NorthWestern took an average of each utility's carbon cost cases, excluding zero cost cases. DR PSC-139b.

Stimatz testified that NorthWestern's projection of Mid-C market prices is conservative relative to those of its peers. He compared NorthWestern's projection with the Northwest Power and Conservation Council's and PPLM's forecasts in the chart below. Ex. NWE-10 p. 6.



MCC's position:

Wilson cautioned that if NorthWestern's modeling assumptions regarding carbon costs and future CapEx do not occur, the hydros will cost ratepayers more than a market purchase alternative. Ex. MCC-1 pp. 8-9.

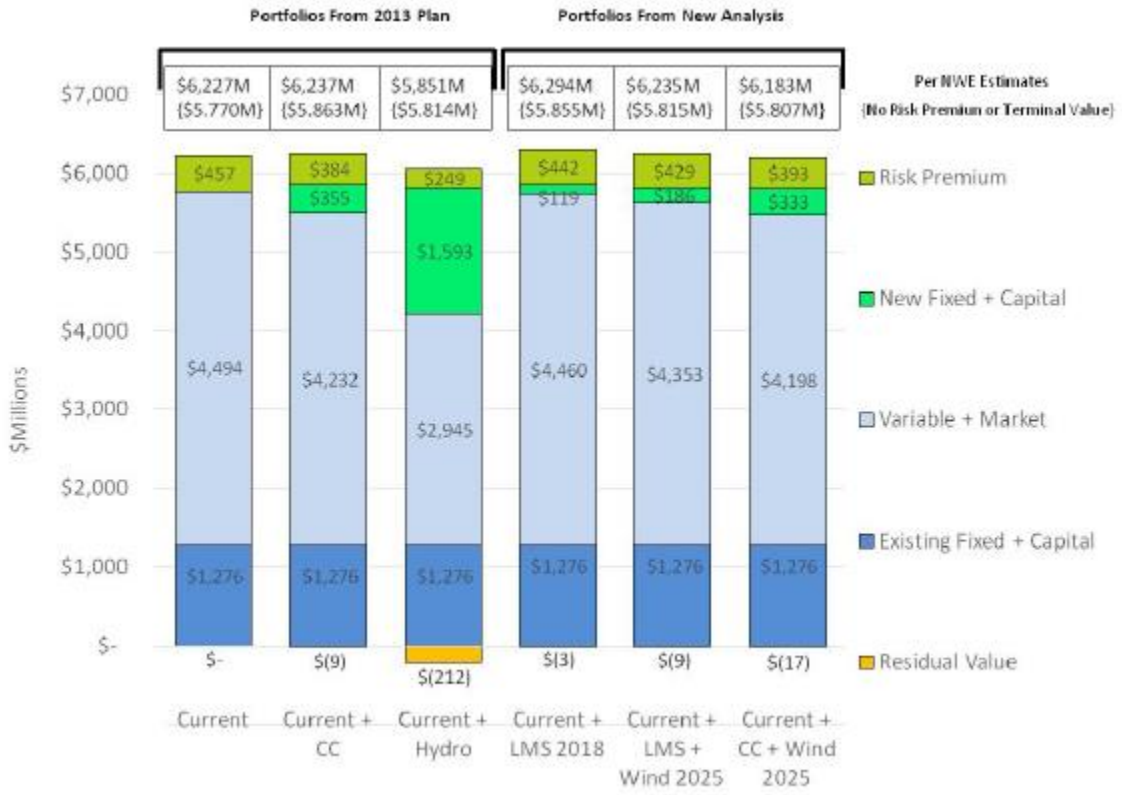
Wilson testified that, based on NorthWestern's own analysis (Ex. NWE-15 (TEM-2)), ratepayers will pay over $400 million more for electricity over the next eight years if the hydros are acquired than they would pay for market purchases in the same time period, as shown in the table below. Ex. MCC-1 p. 39; July 15 Tr. p. 39.

Year	Hydros' Costs (Thousands)	Competitive Market Costs (Thousands)
2014	$131,056	$61,826
2015	$128,686	$65,044
2016	$139,434	$76,003
2017	$139,158	$77,657
2018	$137,868	$82,177
2019	$137,242	$89,495
2020	$136,020	$97,672
2021	$136,043	$133,683
Total	**$1,085,507**	**$683,557**

According to Wilson, market electricity costs have declined and become more stable since 2009 due to the substantial natural gas supply change that has occurred in Montana and the region. Ex. MCC-2 p. 12. He testified that a competitive power market has evolved in Montana

since 2008 that has functioned well and produced low prices. July 15 Tr. p. 50. He expects that market to continue to provide prices below the cost of the hydros well into the future. *Id.*

Wilson found NorthWestern's PowerSimm modeling results flawed because: 1) they reflect a high terminal value for the hydros based on assumed appreciation over the next 30 years; and 2) the model accounts for market risks, especially related to carbon and fuel cost uncertainties, while omitting hydro-related risks, such as long-term O&M and CapEx costs. Without those advantages, Wilson contended that the hydros portfolio cost would exceed or be close to the cost of alternative portfolios as shown in the table below. Ex. MCC-1 pp. 6-7, 28; Ex. MCC-2 p. 10.



Wilson acknowledged that there is long-term future market price risk. However, he stated that there is also risk associated with future capital expenditure levels that are omitted from NorthWestern's stochastic analysis, biasing the resulting cost comparisons. Ex. MCC-2 p. 11.

Wilson testified that excluding NorthWestern's carbon cost adder makes the projected cost of power purchased in the competitive market less expensive than power from the hydros. According to Wilson, NorthWestern's carbon cost assumption creates a cost advantage for the hydros in future years and drives the long-term cost comparison. Ex. MCC-1 p. 17; July 15 Tr. pp. 37-38, 89. He stated that despite considerable political disagreement surrounding the amount and timing of an actual price on carbon emissions, NorthWestern's hydro cost proposal would permanently embed assumed carbon costs in customer rates. *Id.* However, he agreed that carbon costs are not zero and stated that there is going to be some carbon cost. July 15 Tr. p. 124.

Wilson contended that NorthWestern's hydro CapEx projections are too low. Although PPLM's historical hydro CapEx increased substantially as the plants have aged, NorthWestern

assumed that after currently ongoing CapEx projects are completed in 2017, no additional large expenditures would be required. Ex. MCC-1 p. 22. He testified that the concern is not so much whether CapEx will vary a few million dollars per year, but the risk that a several hundred million dollar expenditure will be necessary in the future. July 15 Tr. p. 115.

Wilson prepared two exhibits that modify NorthWestern's carbon cost and CapEx assumptions. His alternative carbon cost assumption delays the timing of a carbon cost from 2021 to 2031 and applies a 2.5% escalation rate thereafter. His alternative CapEx assumption imposes a Rainbow upgrade-like expenditure in the 2024-2026 time period. The exhibits show that if NorthWestern's carbon cost or CapEx projections turn out to be significantly different, acquiring the hydros would cost ratepayers more than the alternative cost of market purchases as shown in the table below. Ex. MCC-1 (JW-3) and (JW-4).

Wilson stated that for the foreseeable future merchant generators will not construct the resources needed to maintain current system reliability standards and that electric utilities, their regulators, and publicly-owned utilities will remain important elements of the Northwest wholesale electricity market. DR PSC-228. He also clarified that he does not advocate that NorthWestern should rely solely on purchases from wholesale spot markets to provide its future needs.

Deterministic Modeling Results ($Billions)		
Resource (equal hydro MWh)	NPV of costs	NPV vs. Market
Market with CO_2 delayed 10 yrs and 2.5% esc.	$1.378	
Hydros as proposed	$1.661	$0.283
Hydros with $313M additional capex 2024-2026	$1.802	$0.424

Wilson stated that a projection of market purchase costs provides a reasonable cost-effectiveness benchmark because such purchases are an actual source of NorthWestern's supply and market purchases have been used successfully in the past. In addition, there is an established futures market for market purchases. DR PSC-229. He also agreed that avoidable supply portfolio costs for a preferred resource plan and the PURPA avoided cost method adopted by the Commission in recent dockets could both offer reasonable cost-effectiveness benchmarks. *Id.* He indicated that when applying the PURPA avoided cost method in a preapproval case the Commission should recognize that NorthWestern's profit motives conflict with the goal of minimizing long-term costs and risks, that moral hazard issues exist, and that the potential customer impacts are much larger. He stated that a least-cost portfolio that includes CCCT, SCCT, and market purchases could be a viable alternative to acquiring the hydros. DR PSC-230. He considers NorthWestern's preferred CCCT portfolio to be a lower-cost, lower-risk option compared to acquiring the hydros. *Id.*

<u>HRC/NRDC's position</u>:

HRC/NRDC witness Power supported NorthWestern's comparative economic evaluation of the hydros. He testified that the carbon cost assumptions in NorthWestern's economic

evaluation are consistent with prior resource plans, the Commission's responses to those plans, and the Commission's resource planning guidelines. Ex. HRC-1 pp. 2, 4-5.

According to Power the carbon cost estimates NorthWestern incorporated into its comparative economic analyses are toward the lower end of the range of cost estimates used by other Western electric utilities, and in the middle to lower end of the range of cost estimates for a set of U.S. utilities analyzed by Synapse Energy Economics. *Id.* at pp. 9, 11.

Power asserted that accounting for uncertainties related to the future operation of electricity generators, including fuel costs, market prices, maintenance costs, and environmental regulation, is standard practice. The regulatory risks associated with carbon emissions are not zero and it would be imprudent to ignore potentially significant future costs when comparing resource alternatives, according to Power. *Id.* at p. 15.

Power found NorthWestern's deterministic portfolio cost analyses reasonable. He observed that NorthWestern's resource plans have consistently concluded that acquiring natural gas-fueled generation is preferred to market purchases when risk costs are considered. He testified that even if carbon costs are assumed to be zero, NorthWestern's analysis indicates that the levelized portfolio cost with the hydros is slightly less than with a CCCT ($57.12 per MWh vs. 57.62 per MWh). *Id.* at p. 20. He estimated that each $1.00 per tonne increase in the assumed initial carbon price increases the levelized cost advantage of the hydro-based portfolio by about 50 cents per MWh.

Power testified that a balanced resource portfolio would not expose 50% of NorthWestern's resource requirements to market prices. For that reason, he opposed using market purchase costs to measure the cost-effectiveness of the hydro purchase. He asserted that utilities must manage market risk and, although doing so may lead to costs that at times exceed market prices, those costs are neither irrational nor imprudent. *Id.* at p. 21.

Power supported the PowerSimm model's approach to measuring portfolio risk. He testified that that the modeled risk premiums reflect uncertainty related to customer load, weather, hydroelectric and wind generation, natural gas prices and market electricity prices, in addition to carbon costs. *Id.* at p. 30. He stated that even if the risk premiums were excluded, the hydro purchase portfolio is still $168 to $252 million less expensive than alternative portfolios. However, he questioned the legitimacy of that comparison because the point of stochastic analysis is to incorporate risk into the comparative portfolio cost analysis.

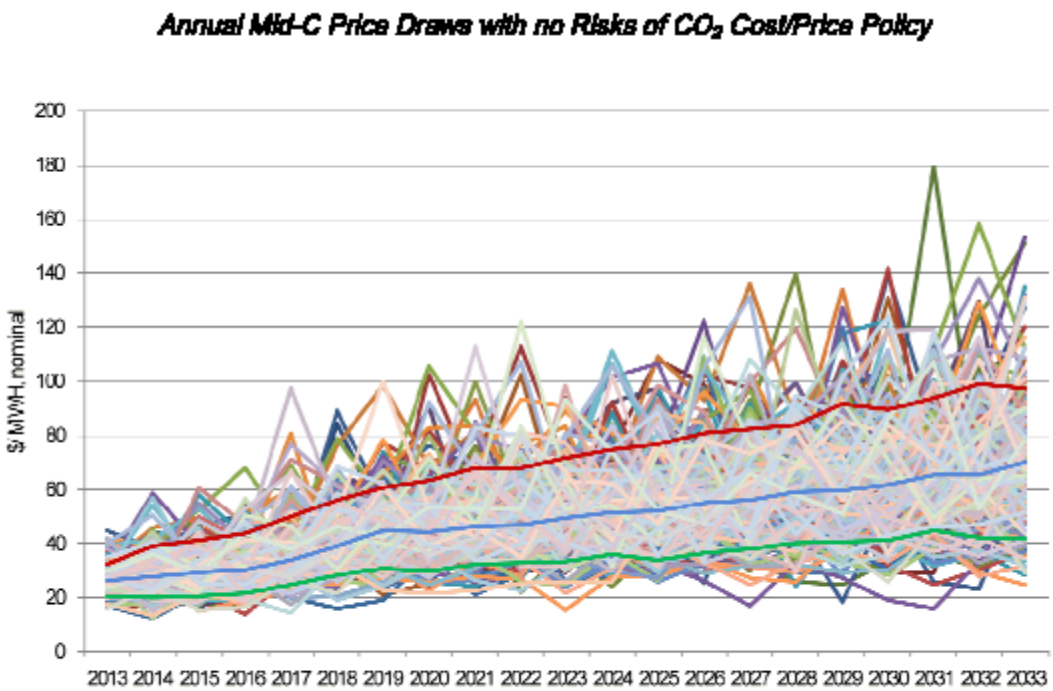
He testified that all utility resource decisions involve assumptions or projections of future prices, costs, technological changes, regulations, engineering reliability, etc. Ex. HRC-2 p. 17. Utilities must make capital investment decisions based on those assumptions, which unavoidably results in embedded rates that reflect the fixed costs needed to carry the investment cost.

Power also observed that the hydro purchase portfolio remains less expensive than the alternatives by $137 to $234 million even if NorthWestern's resource terminal value assumptions are excluded. Ex. HRC-1 p. 31. However, he questioned the legitimacy of that comparison because hydroelectric generators have longer lives than other resources.

He testified that if both the risk premiums and the terminal values are excluded from the PowerSimm portfolio costs, the cost of the hydro purchase portfolio is roughly the same as the cost of the alternative portfolios – $49 million less expensive than the highest-cost alternative and $44 million more expensive than the least-cost alternative. (Dr. Power's conclusion here is consistent with Dr. Wilson's conclusion as shown in the chart in Ex. MCC-2, p. 10, provided on p. 8 of this memo.) Power concluded that the PowerSimm results are robust, even with unrealistic and unsupportable assumptions.

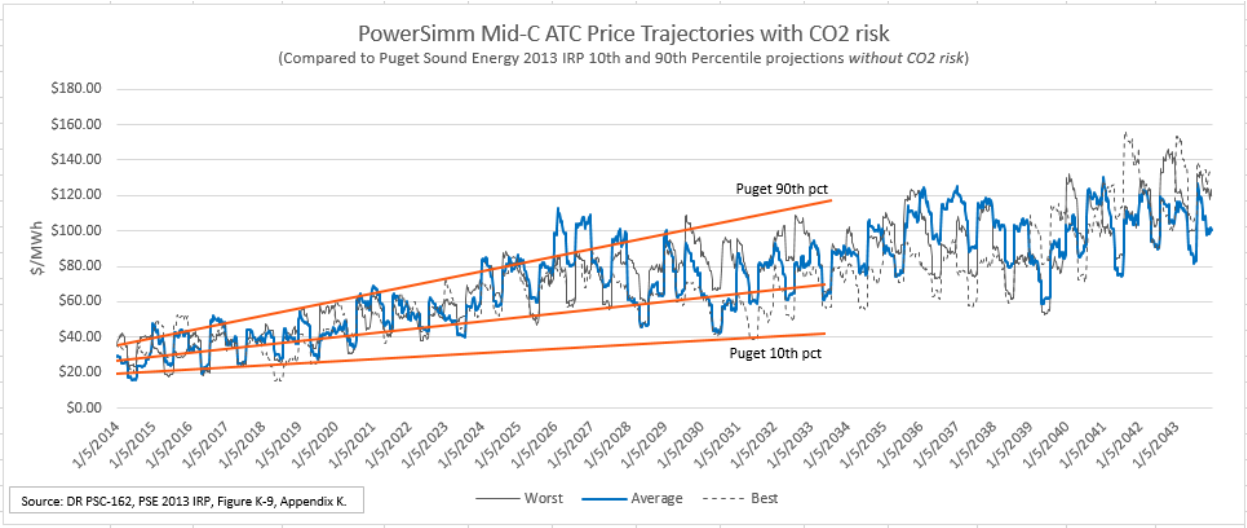
In response to Wilson, Power asserted that customers are not necessarily harmed just because projected hydro revenue requirements exceed projected market purchase costs. Ex. HRC-2 pp. 2-4. He testified that Wilson's analysis over-simplified the resource decision NorthWestern faces by assuming future prices are known and ignoring the company's obligation to evaluate and minimize risk as well as cost. *Id.* at p. 7. He noted that while NorthWestern compared the hydros to a range of alternative portfolio structures, Wilson made market purchases the benchmark in his analysis. *Id.* at p. 10. Power testified that the appropriate comparison is not to short-run regional spot market prices, but alternatives that provide some protection against the volatility of those market prices. July 17 Tr. p. 82. He asserted that the electricity generation market encompasses more than the forward market strip Wilson relied on. *Id.* at p. 84. He further testified that the Mid-C forward market is not what signals expansion of electricity generating capacity, whether merchant- or utility-owned. *Id.* at p. 122.

To illustrate the uncertainty in Pacific Northwest market prices anticipated by regional utilities in their IRP processes, Power provided the simulated electricity prices, without carbon costs, generated by Puget Sound Energy's (Puget) planning model for its 2013 IRP, shown in the chart below. Ex. HRC-2 pp. 8-9.



Source: Puget Sound Energy, 2013 IRP, Figure K-9, Appendix K, p. K-16

NorthWestern did not provide all electricity price trajectories simulated in PowerSimm. However, it did provide the simulated price trajectories for the best performing, worst performing and an average performing hydro portfolio. The following chart compares those PowerSimm simulations, which include carbon costs, with Puget's approximate 10th and 90th percentile annual price draws, without carbon cost risk. Ex. HRC-2 p. 8; DR PSC-162, July 8 Tr. p. 228.



Power advocated applying a long-term perspective with regard to minimizing costs and risks. He also recommended considering hard-to-quantify benefits of the hydro purchase, such as: 1) the value of rate/bill stability, especially for low- and fixed-income customers; 2) a balanced, environmentally responsible resource portfolio that minimizes regulatory risks; and, 3) repatriating basic infrastructure that has served Montana residents and business for a century and rededicating that infrastructure to public service. Ex. HRC-1 pp. 33-34.

B. Is NorthWestern's CapEx forecast sufficient for the proposed hydro acquisition?

A cost is categorized as a capital expenditure (CapEx) if a unit of replacement can be retired or identified as a "retireable unit," or the replacement is an upgrade to the item being replaced. Ex. NWE-21 p. 8.

A table of NorthWestern's projected CapEx budgets, "Hydro Electric System – Capital Forecast Summary," is included in its response to DR PSC-066. NorthWestern witness Stimatz, who provided the table, explained that the CapEx summary projects expenditures for the period 2014-2036. DR PSC-066. Major projects are specified for individual facilities for the years 2014-2026; no specific projects are identified for subsequent years. For the years 2014-2017, CapEx amounts vary, with the average being $10.99 million per year. Beginning in 2018, a CapEx total of $8.5 million is projected; in subsequent years, that total is escalated annually by a 2.5% inflation factor, producing a CapEx total in 2036 of $13.26 million. *Id.*

NorthWestern's CapEx team projected CapEx expenses by evaluating and integrating the PPLM five-year forecast for 2013 through 2017 into a 20-year plan. Ex. NWE-25 p. 5. The 20-year plan includes the remaining major investment upgrades needed on the system that had not been addressed in the PPLM CapEx investments prior to 2013 and specifically planned from 2013 through 2017. *Id*. The balance of the unspecified capital budget for the 20-year plan was determined to be sufficient to sustain minor generation and non-operational capital projects. *Id*. The PPLM actual capital investments for 2008-2012 provided further justification that major

CapEx equipment and structural projects for strategic system reliability had been completed or were near completion. *Id*.

MCC witness Wilson testified that NorthWestern's stochastic modeling results are unreasonably biased in favor of the hydro purchase, as they incorporate substantial risks for market purchases but no risks for very low assumed CapEx levels, such as optimistic but uncertain long-term renovation, retirement, and rehabilitation expenditures for the aging hydro plants. Ex. MCC-1 p. 28. In the five-year period 2008-2012, CapEx on the hydros averaged $59.6 million per year, with a substantial amount for the rebuilding of Rainbow and structural repairs at Hebgen. *Id.* at p. 29. NorthWestern forecasts no major renovation or repair needs for any of the dams going forward over the next 30 years, but assumes that annual CapEx will be only $8.5 million per year, escalated at 2.5% for inflation. *Id.* Even PPLM's CapEx budget for 2013-2017 averaged $11.6 million per year – above NorthWestern's corresponding assumption from 2018 forward. *Id.* It would be extremely good fortune, given the age and history of the facilities, to achieve that result, i.e., $8.5 million annually adjusted by inflation, year-in and year-out. *Id*. If the dams experience refurbishment costs that are in line with past experience, the risk of incurring the costs will be the burden of Montana ratepayers. *Id.* at p. 30.

Wilson suggested that NorthWestern, because it proposes approval of the hydros acquisition based on the assumption that future CapEx requirements will not exceed $8.5 million per year (beginning in 2018 and escalated at 2.5%), agree to forego any recovery of return on any future capital expenditures exceeding an annual average of $10 million (escalated at 2.5%). *Id.* at p. 47. In the event that the average in any year exceeds $10 million, any excess could be banked for future recovery if and when the annual average drops below $10 million. *Id*.

The Essex Partnership, an engineering consulting firm hired by the Commission to review the due diligence work and findings in NorthWestern's proposal, concluded that the information in the docket at the time of their review did not contain sufficient information to confirm NorthWestern's projections of CapEx or operations and maintenance (O&M) expenditures through the 20-year study period of the DCF analysis. Ex. PSC-2 p. 1. Major uncertainties include projected CapEx for the civil works, environmental liabilities, the timing and costs of equipment overhauls and upgrades, and regulatory compliance costs. *Id*.; Ex. PSC-1. As a check on NorthWestern's approach of using PPLM historic cost data with minor adjustments, Essex deducted the CapEx for major projects from the total historic expenditures for the years 2008-2011 to estimate historic base CapEx values. Ex. PSC-2 p. 3. A similar exercise was performed for NorthWestern's projected CapEx in the year 2021. *Id.* Essex calculated that $4.1 million for base CapEx of the entire hydro system was available in 2021, a value representing 60% of the historic base CapEx. *Id*. at p. 3.

According to NorthWestern, the Essex analysis of 2021 is a selective number manipulation that does not represent a comprehensive capital evaluation due diligence effort. Ex. NWE-25 p. 6. NorthWestern's proposed CapEx budget can absorb unplanned items by reprioritization of projects in a specific year. Ex. NWE-21 p. 8. Regarding regulatory compliance costs, NorthWestern did not include any CapEx funds specifically for FERC relicensing. July 16 Tr. p. 184. NorthWestern witness Wiseman, an engineer for CB&I, which was contracted by NorthWestern for due diligence work, said that, in the light of the notable effort that's been put into the facilities in the last 15 to 20 years, not only by PPLM, but by the Montana Power Company, he anticipates no specific major project in the future that couldn't be handled, budgeted, and managed within NorthWestern's projected CapEx budget. July 15 Tr. p. 245. NorthWestern witness Miller, engineer for HDR Engineering, developed a 20-year forecast

of CapEx investments that incorporated the information provided in the Shaw/CB&I due diligence reports and interviews with NorthWestern staff. Ex. NWE-29 p. 7. The already implemented and planned investments are consistent with HDR's experience for the level of expenditures generally required to maintain similar hydro assets in reliable operation condition. *Id*. at p. 8. HDR's 20-year CapEx forecast recommends an average annual budget of $7.1 million (2014 dollars). *Id*.

NorthWestern applied its Long-Term Revenue Requirement Model to evaluate the impacts that increased and decreased levels of annual CapEx would have on the annual revenue requirement. Ex. NWE-16 p. 3. The increased CapEx scenario includes annual CapEx that is 30% greater than NorthWestern's submitted projection; it would increase the revenue requirement by $1 million in 2015 to $8 million in 2043. *Id.* at pp. 3-6. The decreased CapEx scenario includes CapEx that is 15% less than NorthWestern's submitted projection; it would decrease the revenue requirement by $0.3 million in 2015 to $4 million in 2043. *Id*.

Essex raised questions about the adequacy and possible need for future replacement of infrastructural elements such as anchor bolts and flashboard-stanchion systems, both of which are present on several of the hydro facilities. *See* Ex. PSC-1 and Ex. PSC-2. NorthWestern argued that there is very limited potential to incur significant cost to replace either existing flashboard-stanchion systems or existing post-tensioned rock anchors. Ex. NWE-23, pp. 9, 12. NorthWestern witness Miller testified there is very little evidence that the corrosion of rock anchors is an ongoing issue. July 16 Tr. p. 207.

The record contains significant discussion about how risk (of unanticipated equipment or structural failures) was evaluated and quantified within NorthWestern's CapEx projections. The discussion was generated by Essex's observations about the long-term integrity of infrastructural features such as anchor bolts and flashboard-stanchion systems, together with MCC witness Wilson's broadly stated concern about the adequacy of NorthWestern's CapEx projections to accommodate unforeseen events on aging hydro facilities and the apparent imbalance between NorthWestern's market and CapEx assessments with regard to risk. Ex. PSC-1; Ex. PSC-2; Ex. MCC-1 pp. 22-24. According to MCC, it's not realistic to assume that there are going to be no major CapEx projects in the future. July 15 Tr. p. 53. Wilson does not believe that the risk of uncertainty ought to be something imposed upon ratepayers; rather, it's the kind of risk that business enterprises would sustain in order to get the kind of profit rates that NorthWestern is seeking. July 15 Tr. p. 53.

NorthWestern witness Rhoads said that, when dealing with construction projects, typically there are contingency dollars to address unforeseen expenditures, but that once a project was built, contingencies are not budgeted. July 14 Tr. p. 169. Wiseman said that NorthWestern evaluated risk in due diligence, but quantifying risk was not something he normally did. July 15 Tr. p. 245. Miller said that, in the absence of any defined reason or evidence of a problem, HDR does not put contingency dollars into CapEx forecasts. July 16 Tr. p. 206.

Regarding future regulatory treatment of unforeseen CapEx and O&M expenses, response to DR PSC-192, NorthWestern witness Hines said that, if the hydros' capital or operational actual needs exceed NorthWestern's projected amounts, it would not be appropriate for the Commission to expect that the difference would be paid by shareholders as a risk associated with the investment. If there are unanticipated expenses, NorthWestern expects to make its case before the Commission at that time.

C. Is NorthWestern's valuation of the hydros valid?

Description of the evaluation models and NorthWestern's position:

NorthWestern developed three models to establish a bid price for the hydros: a discounted cash flow (DCF) model to estimate market value and establish price, and revenue requirement and rate impact models to estimate how the price would affect customers. Ex. NWE-11 pp. 14-15; July 11 Tr. pp. 6-7. Credit Suisse developed DCF models to evaluate the hydros, along with alternative valuation methods including precedent transactions and comparable companies analyses. Ex. NWE-13 pp. 4-5.

Masud testified that the nine comparable hydro acquisition transactions were selected based on their relevance to the NorthWestern transaction and the availability of public information as to purchase price and asset characteristics, primarily generation capacity. *Id*. at p. 7. The comparable hydro assets have more similarities than differences, such as cost structure, no fuel cost, and they run when the river flows. July 11 Tr. p. 182. Masud also testified that in the absence of genuinely comparable transactions, DCF analysis is the appropriate remaining tool for asset valuation. *Id*. at p. 166.

NorthWestern sought and received a fairness opinion on the purchase price from Blackstone Advisory Partners (Blackstone). Ex. NWE-11 p. 18. Blackstone used similar analyses and found in general that $900 million was a fair price. *Id*. at p. 21; Ex. NWE-19, Exhibit_AO-01.

Stimatz sponsored the NorthWestern DCF model, Masud sponsored the Credit Suisse models. Stimatz developed a single DCF model to evaluate the hydros from the perspective of a third party merchant. Ex. NWE-7 p. 5. Masud developed two basic DCF models to evaluate the hydros from the perspective of regulated and unregulated entities. Ex. NWE-13 p. 3. Masud used cost and revenue forecasts provided by NorthWestern. Consequently, his electricity market price and CapEx forecasts are equivalent to those of Stimatz.

Exhibit_(JMS-2) provides the streams of expected Mid-C and NorthWestern system prices that were used to estimate revenues. The price forecast begins with forward market quotes at Mid-C. Market quotes were available through 2020, and were extended through the forecast period at an escalation rate of 2.10%. Ex. NWE-7 p. 21. Stimatz adjusted this stream of prices for projected carbon taxes, beginning in 2021 at $21.11 per metric ton, and escalated at 5% per year. *Id.* at pp. 25-26.

Stimatz used a market heat rate method to determine the effect of carbon taxes on market prices. The market heat rate is the ratio of the Mid-C market price over the AECO natural gas price. It is used as a proxy for the actual heat rate of the price setting generating resource at the margin. The actual heat rate of a thermal resource equals its output in MWh divided by the energy content of the fuel consumed, usually measured in British Thermal Units (Btu). Stimatz used the market heat rate proxy, and the estimated heat rate and carbon production of a combined cycle plant to estimate the impact of a projected carbon tax on the price of electricity at Mid-C beginning in 2021. *Id*. at pp. 26-27.

Stimatz applied basis adjustments to the carbon-adjusted stream of prices in order to compensate for the cost of transmission and losses to Mid-C, and to convert the Mid-C prices to NorthWestern system prices. Stimatz testified that the approach used to estimate forward prices in his model is similar to methods used to estimate carbon prices and electricity prices in the 2011 Plan and in the Spion Kop preapproval proceeding. *Id*. at pp. 27-28.

PPLM provided a capital expenditure forecast in its *Confidential Information Memorandum* (CIM). Stimatz testified that NorthWestern verified recent historical capital investment expenditures by PPLM at the facilities and developed future CapEx estimates through due diligence. *Id*. at p. 14.

Other expenses included fixed O&M expense, property taxes, Kerr Dam rent expense (through 2015), generation taxes, G&A expense, depreciation expense, and income tax expense. The PPLM CIM provided estimates of O&M and G&A expenses. *Id.* at pp. 11-13. Although Stimatz used these estimates in his model, NorthWestern expects much lower G&A costs than PPLM forecasted. *Id*. at p. 13.

In general, a DCF model evaluates an enterprise, or collection of assets, as the sum of expected future cash flows discounted to the present using a weighted average cost of capital (WACC). Future cash flows are typically split into an initial forecast period and a terminal period. In this case, the Stimatz and Masud models both used a forecast period of 20 years (2014-2033). Cash flows in the forecast period are estimated annually and discounted back to a present value in 2014. Expected cash flows in the terminal period are aggregated into a single value at 2033 before discounting to 2014.

Stimatz testified that he used a twenty year forecast period because most of the forecast information provided by PPLM in the data room was for a 20-year period, and other bidders would be using that information. DR PSC-074(a). Masud testified that Credit Suisse always uses the same forecast period that its clients use. July 11 Tr. pp. 130-131. He also testified that for standard valuation of public company transactions, five years is a normal length of forecast period. *Id*. at p. 130. When asked at hearing whether he would find the hydros' purchase price reasonable if he used a shorter forecast period, Masud responded that he would "have to do the math", but that "the answer is most likely yes", because the terminal value would be discounted less and hence would capture the value in the excluded years. *Id*. at pp. 131-132.

The Stimatz model used a WACC of 7.14% to discount future cash flows to present value. The Masud unregulated model used a range of WACC values from 6.5% to 7.5% to discount cash flows, and his regulated model WACC values ranged from 5.5% to 6.5%. The WACC values used by Stimatz and Masud are not directly comparable. Stimatz used a weighted average of pre-tax debt costs and after-tax equity costs. Masud used after-tax debt and after-tax equity costs. July 11 Tr. pp. 222-223.

Although Masud's unregulated WACC values generally exceed his regulated WACC values, Bird expressed concern that unregulated entities would be able to bid on the hydros using lower costs of capital than NorthWestern. Bird stated:

> Hedge funds and infrastructure funds would likely carry a much higher level of debt in their capital structures than NorthWestern. They will carry higher debt in order to keep their overall cost of capital down and their returns on equity up. It is those entities' resulting lower costs of capital, willingness to be non-investment grade, and indifference to what customers pay (as long as it is a market price), that gave NorthWestern concern that it might be outbid in a competitive Hydros-only sales process.
>
> Ex. NWE-11 at p. 16.

Masud testified that although in general the cost of capital is higher for merchants than for regulated utilities, in today's market the respective costs of capital have converged, meaning that the high end of the discount rate for regulated utilities is very close to the low end of the discount rate for merchants. July 11 Tr. pp. 176-177.

The Stimatz model used an "EBITDA" multiple of 7.5 to estimate terminal value. That is, the ongoing value of the hydros is estimated as the product of 7.5 and the 2033 value of the financial statistic Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA). The Masud unregulated model employed a range of EBITDA multiples from 7.5x to 8.5x to estimate terminal values. Alternatively, the Masud unregulated model also used a range of $/kW values to estimate terminal value. The $/kW values ranged from $1,650/kW to $2,150/kW.

Masud provided comparable unregulated company enterprise value (EV) examples to support his unregulated range of terminal value EBITDA multiples. These included 2014E EV/EBITDA multiples ranging from 8.2x to 14.9x for ten market entities including Canadian and American IPPs and YieldCo's. The mean 2014E EV/EBITDA multiple for the group is 10.5x and the median is 10.1x. The mean multiple from a subsample of five clean generation comparables is 11.9, and the median multiple is 10.9x. Ex. NWE-13, AM Exhibit 1, p. 15.

The Masud regulated model used EBITDA multiples that ranged from 8.0 to 9.0 to estimate terminal value. Alternatively, this model used a range of price to earnings (P/E) multiples to estimate terminal value. The P/E multiples included 14x, 15.5x, and 17x. Masud provided comparable regulated company EV/EBITDA examples to support his estimates. The mean 2014E EV/EBITDA multiple from a list of eleven regulated utilities is 7.9x and the median is 7.9x. The 2014E EV/EBITDA multiple for NorthWestern is 9.0x. For a list of 18 comparable regulated utility acquisitions, the transaction value (TV) over "last twelve months" EBITDA multiples ranged from 6.8x to 10.8x, with a mean of 8.9x and a median of 9.0x. *Id*. at pp. 21-22.

Since Masud used a 2014E value of EBITDA equaling $45 million in his analysis, the implied TV/EBITDA multiple is 20x ($900 million / $45 million). Masud was asked in DR PSC-345(c) if he could provide examples of transactions with multiples of this magnitude. In response, Masud provided two examples in which generation assets were purchased at multiples of 19x and 17.6x, and two examples where EBITDA was negative and hence the TV/EBITDA multiples were indeterminate. In all of these examples the buyers were regulated and the sellers were unregulated. July 11 Tr. p. 154.

The Stimatz model initially predicted a value of $826 million for the hydros. Bird testified that this value was understated due to overly conservative assumptions that were identified by Credit Suisse and modified accordingly. The identified assumptions were end-of-year rather than mid-year discounting and a December 31, 2013 closing rather than the more likely closing date of September 30, 2014. Credit Suisse also suggested estimating value using a range of discount factors and terminal EBITDA multiples. The pursuant modifications increased NorthWestern's estimate of the hydros' value to $883 million, within a range of $848 million to $994 million. Ex. NWE-11 pp. 17-18.

Masud testified that realistic estimates of value of the hydros as unregulated generation assets ranged from $750 million to $1 billion. He estimated their value as regulated assets to be in the $800 million to $1.25 billion range. Ex. NWE-13 p. 12. Masud testified that the Colstrip and Corette thermal assets had a significant negative value even after the lease was removed. July 11 Tr. p. 212.

<u>MCC's position</u>:

Wilson contested NorthWestern's valuation of the hydros. He used the Stimatz DCF model to inform his general argument that the purchase price of $900 million exposes ratepayers to excessive risk. Specifically, he addressed the carbon cost, capital expenditure, and terminal value assumptions embedded in the model.

Wilson stated that NorthWestern's DCF analysis included $247.4 million of capitalized carbon costs in the $826 million net present value of the hydros. He argued that since these were projected future costs that competitive merchant buyers could not pass through to customers until the costs were realized, it is not likely that these buyers would be willing to fund the $247 million up front. Ex. MCC-1 p. 13.

MCC found Credit Suisse's comparable hydro transactions analysis to be flawed. MCC Response Br. p. 8. Masud identified nine comparable hydro transactions for his Selected Precedent Transactions Analysis, but five of them cannot be directly compared to the Montana hydros because they were "portfolio" assets, not transactions involving an individual facility. *Id.* at pp. 8-9; July 11 Tr. pp. 126-127. The remaining four transactions differ significantly from the Montana hydros and are not really comparable. MCC Response Br. p. 9; July 11 Tr. pp. 112-127.

Wilson criticized NorthWestern's bid development in Mustang II. He testified:

> I don't know why, having been told no, at 740, and then the party that you're dealing with comes back and says, 'No, well, we've thought about it. We would like to have you make an offer again.' Why wouldn't you start at 740? That's where you were. Why bump it up to 900?
>
> Obviously something changed in PPL's mind, and they were now interested in talking to you, having sent you away. Then they come back and all of a sudden, it's 900. It doesn't make any sense to me.
>
> July 15 Tr. pp. 136-137.

When asked at hearing whether MCC would regard a value of $740 million to be in the public interest to approve, he responded:

> Well, that's certainly a lot better than – it's a lot better than 900. I also think that 740 is fairly high, based upon the analysis that I've done. None of the computation[s], that I made, really justifies 740. They tend to justify something in the 600 range as opposed to the 700 range. Of course, one of the options the Commission has is to issue an order that says 900 is too much. We'd be inclined to approve this, if it were at 700.
>
> *Id.* at p. 154.

<u>HRC/NRDC's position</u>:

NorthWestern's analysis appropriately accounted for the risks associated with carbon emissions and other existing and pending environmental regulation. Ex. HRC-1 p. 2. Because Wilson relied heavily on NorthWestern's DCF model to inform his testimony, his analysis did not account for uncertainty and volatility in regional electric prices. Ex. HRC-2 p. 5. HRC witness Power stated:

> This reliance solely on the more primitive valuing technique is useful to Dr. Wilson because it allows him to continue to act as if future electric market prices and natural gas prices are known with certainty, as are all the other economic variables that combine to make up the uncertain and risky future economic context in which the chosen electric supply portfolio must function.
>
> *Id.* at p. 22; DR PSC-356.

The forecast market prices used by Wilson don't accurately reflect what market prices will be, and short-run or spot market prices are not viable alternatives that would provide adequate protection. July 17 Tr. p. 82. Power defined the competitive market as the complete set of opportunities available to NorthWestern and others interested in obtaining electric generation. *Id.* at pp 83-84. Power testified at hearing that current Mid-C future strips represent prices that would not support new generating capacity to serve projected load growth and plant retirements. *Id.* at p. 92.

NorthWestern's rebuttal position:

Wilson overstated the role that the Stimatz model valuation of $826 million played in NorthWestern's decision to bid $900 million for the hydros. Ex. NWE-10 p. 5. If NorthWestern's DCF value was overstated, then Credit Suisse should not have found the $900 million price to be in line with comparable asset sales prices. *Id*. at p. 7. Masud testified that the 7.5x EBITDA multiple that Stimatz used to determine a terminal value was not an unreasonable assumption. Ex. NWE-14 p. 3. A $1.1 billion terminal value in 2033 equates to approximately $660 million or $1,500/kW in today's dollars, and Masud considered this to be reasonable. *Id.* at p. 3.

Regarding one of Wilson's criticisms of NorthWestern's bid of $900 million, Bird testified that after PPL rejected the $740 million bid, a PPL advisor indicated to NorthWestern that PPL expected the purchase price for the hydros to be over $1 billion. July 11 Tr. p. 70.

D. Do the benefits of the acquisition outweigh the risks?

In previous preapproval orders, the Commission has determined that **acquisition of a resource under § 69-8-421, MCA, is in the public interest if the benefits outweigh the risks to ratepayers**. (See Docket D2008.6.69 (Colstrip 4), Order 6925f, ¶ 217; Docket D2008.8.95 (Dave Gates Generating Station), Order 6943a, ¶ 211; Docket D2011.5.41 (Spion Kop case), Order 7159l, ¶ 95.)

NorthWestern's position

Rowe provided the following list of the benefits of hydro ownership:

- Improved sustainability of NorthWestern's electric supply portfolio with long-term reliable power and stable costs;
- Customer prices that are less affected by the market because purchasing the assets now, during a relatively low market price curve, is preferable to a purchase made when the market price curve is high;

- Site diversity and generation dispersion, as the facilities include multiple units and span river basins on both sides of the Continental Divide;
- Supply diversity;
- Allowing NorthWestern to minimize a range of risks associated with energy supply;
- Giving NorthWestern an environmentally responsible resource that does not emit carbon;
- Providing customers with reliable baseload power;
- Managing fuel price risk;
- Allowing NorthWestern to operate a locally controlled integrated system;
- Supporting NorthWestern's goal of providing customers with a long-term portfolio; and
- Allowing NorthWestern to execute its strategy of providing reasonably and stably priced energy supply to customers while earning a reasonable return on investment.

Ex. NWE-35 pp. 7-8

Hines said the hydro acquisition benefits fall into four general categories: (1) reduces reliance on market purchases, thereby lowering the amount of market risk in the supply portfolio; (2) increases the certainty of resource adequacy and reliability; (3) provides more stable, reasonable rates compared to a CCCT plant or market purchases; and (4) contributes to a diversified portfolio of environmentally responsible resources. Ex. NWE-1 pp. 13-20.

MCC's position:

The ratepayer benefits of the hydro acquisition depend on realization in the future of NorthWestern's assumptions regarding carbon costs, CapEx, and terminal value. MCC Br. pp. 12-13. (These issues are all discussed earlier in this memo.) It is more likely that ratepayers will see benefits if the Commission approves MCC's proposed conditions. *Id.* p. 12.

HRC/NRDC's position:

"No decision is without risk. Here, however, NWE's effort to reduce reliance on the regional electricity market and to provide its customers with a reasonably priced and stable source of supply, which once again will be regulated by this Commission, calls out for a finding that the benefits of the acquisition outweigh its cost and risk." HRC Br. p. 12.

II. Is NorthWestern's application consistent with the requirements in § 69-3-201, MCA (requires utilities to provide reasonably adequate service at just and reasonable rates)?

A. What is the condition of the hydros? Was NorthWestern's due diligence effort sufficient to determine their condition?

NorthWestern's position:

The hydros are in satisfactory condition and PPLM has maintained them appropriately and also has made significant improvements to them. Ex. NWE-20 pp. 8-10. Due diligence by CB&I (formerly Shaw) and NorthWestern included a review of PPLM and publicly available information concerning the hydros, voluminous FERC dam safety program reports, site visits, interviews with key PPLM personnel, review of PPLM's historical and projected CapEx and

O&M costs, and water data. *Id.* at pp. 7-8. PPLM has complied with the requirements of its FERC licenses. *Id.*, Exhibit WTR-2.1 (Shaw "Independent Engineer's Report," Jan. 3, 2003), p. 4; DR PSC-304a (memo from Skadden, Arps law firm to Heather Grahame, "Review of PPLM"s List of License Articles with Compliance Requirements and Current Project Status," Aug. 26, 2013). PPLM has strategically upgraded the system's generating units and equipment. DR PSC-064(a). The capital plan includes project upgrades to modernize the system. *Id.* Many of PPLM's upgrades replaced original equipment and the new components will provide for an extended, more reliable operational life. *Id.*

MCC's position:

The hydros are old, aging plants that will need repairs in the future. July 15 Tr. p. 51. At hearing, Wilson said he was not critical of NorthWestern's due diligence effort, but he went on to say it was "essentially a paper exercise." July 15 Tr. p. 56. He recalled that NorthWestern's consultant from CB&I, Gary Wiseman, had spent just one day visiting some of the dams prior to submitting his main due diligence report in January 2013. *Id.* at p. 57. Wilson testified that the fact that Rhoads and VanDaveer had worked on the dams when Montana Power Co. (MPC) owned them was "positive," but that these employees' institutional knowledge from years past could not substitute for physical examination of the facilities. *Id.* at p. 58. Wilson acknowledged the thoroughness of the FERC dam safety inspection program as regards the condition of the dams. *Id.* at p. 61. However, he testified that NorthWestern would still need to focus on the power generation aspects of the facilities. *Id.*

Essex findings:

Regarding the condition and structural integrity of the dams, Essex concluded that the record evidence indicates that the hydros are aging structures that are "generally in satisfactory condition." Ex. PSC-2 p. 1. Essex identified numerous specific concerns, including that several of the hydros have outdated, unreliable spillway flashboard/stanchion systems and old post-tensioned rock anchors installed for stability that do not meet current industry standards for corrosion protection. *Id.*; Ex. PSC-1a. Essex also found that, as of the April 2014 date of its memo, NorthWestern had not provided sufficient information on the condition, performance, or reliability of the turbine/generators, governors, interconnected transmission system, and other equipment. Ex. PSC-2 p. 1. At hearing, Fred Szufnarowski of Essex testified, "... we haven't seen a complete record involving the inspections, test results, the record of overhauls, the scopes of work, what work was done and so forth." July 10 Tr. p. 53.

Regarding flashboard systems, Szufnarowski said at hearing that over the next 25 years, "... it's reasonable to expect that some of these facilities, for a variety of reasons, would have to replace this old technology, stanchions and flashboards, with modern technology that is safer, more reliable, more environmental friendly." July 10 Tr. p. 45.

Szufnarowski testified that NorthWestern's witnesses had addressed some of Essex's concerns in additional issue and rebuttal testimony. July 10 Tr. p. 55. NorthWestern had submitted documents "... that were detailed and analytically were more complete than we had previously seen. And ... we were encouraged by that." *Id.* at p. 67. He specifically mentioned that NorthWestern's consultant from HDR, Rick Miller, had included more detail about specific civil infrastructure projects on the hydros in an attachment to his additional issue testimony (Ex. NWE-29), and that VanDaveer's rebuttal testimony (Ex. NWE-26) was helpful because it included a summary of the overhaul history of the generating units. *Id.* at pp. 68-70.

NorthWestern's responses to Essex & MCC:

NorthWestern's due diligence consultant Wiseman testified at hearing that when it came to the hydro site visits that were part of the due diligence activities, "it's not a question of so many hours, it's a question of knowing what you're looking at and ... addressing the issues that are in mind." July 15 Tr. p. 259.

NorthWestern consultant Miller concluded that the Shaw/CB&I due diligence reports provided sufficient detail for the material issues related to each of the individual hydros. Ex. NWE-29 p. 7. He did not find that the specific issues raised by Essex were material or supported by evidence in this case. *Id.* at pp. 10-16.

Regarding post-tensioned rock anchors installed at the hydros, there are no current Part 12 recommendations related to them. *Id.* at p. 11. It is very unlikely that either corrosion or anchor relaxation will occur to such an extent that they impact structural stability. Ex. NWE-23. p. 9. If an isolated anchor deteriorated, there would not be a catastrophic failure of multiple anchors endangering a structure. *Id.* at p. 10. FERC requires regular monitoring and assessment of a structure and its anchors to ensure structural stability; this process avoids deterioration to the point that it affects structural stability. *Id.* at p. 11. FERC regulations establish structural evaluation engineering criteria for various load cases that hydro projects are required to meet, including load case factors of safety under worst-case scenarios that have little chance of occurring. Ex. NWE-26 pp. 9-10. MPC installed post-tensioned anchors in the 1970s and 1980s because the regulatory focus then was to improve the stability of dam structures for extreme theoretical loading conditions, and rock anchors were the predominant technology for that purpose. *Id.* at p. 10. Information was compiled by MPC at the time of the installations regarding concrete strengths and foundation rock conditions which has been used to substantiate the current project stability. *Id.* The exterior concrete surfaces show some minor deterioration, but the bodies of the structures are sound. *Id.* at p. 11.

Regarding flashboard-stanchion systems, there are no Part 12 recommendations for replacing or modifying the remaining flashboard-stanchion systems or any of the other flashboard operating systems at the hydros. Ex. NWE-29 p. 12. These systems function safely, similar systems are in place any many U.S. dams, and the number of annual operation cycles is low at the PPLM hydro facilities. *Id.* Replacing viable flashboards with gates or rubber dams would result in incurring unjustifiable and significant costs. Ex. NWE-23 p. 7. The actual use/tripping of flashboards is infrequent, occurring only in an extreme event and the acceptable operation of the stanchion release mechanism has been demonstrated in dry testing using the standard operating procedure. *Id.* Debris inflow is not a significant issue at the hydro plants, except for Thompson Falls, which has radial gates to pass debris. *Id.* at p. 8.

Regarding Essex's concern about rock falls damaging flowlines at Mystic and Madison, rock falls occur infrequently and have minimum impact on public safety. *Id.* at p. 12.

NorthWestern disagreed with Essex's assertions that it is industry practice to replace dam equipment such as flashboard/stanchion systems and single-corrosion-protected rock anchors; maintaining currently functioning equipment is an equally valid choice. Ex. NWE-21 p. 7.

NorthWestern disagreed with Essex's finding that the case record lacks sufficient information on the condition of the turbine generators, governors and other equipment. *Id.* at p. 10. NorthWestern's due diligence team reviewed these items and did not find any material concerns. *Id.* The turbines, generators and associated equipment are subject to a planned maintenance and inspection regime that extends equipment life. *Id.* at p. 11.

Regarding the hydros' mechanical and electrical systems, HDR's experience does not support Essex's suggestion that, due to age, metal fatigue can cause cracking in the rotor components leading to catastrophic failure prompting the preventive measure of replacing the rotor components. Ex. NWE-29 p. 15. Rotor component replacements are not necessary on these types of units after 80-100 years of service. *Id.* Electrical elements need periodic refurbishment, which is the point of generator rewinds. *Id.*

B. Will rate-basing the hydros result in just and reasonable rates? What are the issues related to revenue requirement/cost of service?

1. What is a reasonable revenue requirement? What is the bill impact?

NorthWestern's position:

In its rebuttal case, NorthWestern reduced its first-year revenue requirement request to $120,963,690 by extending the depreciation period from 40 to 50 years and by eliminating any return on its Kerr Dam investment. Ex. NWE-36 p. 14. NorthWestern calculated the cost difference between a 40- and 50-year depreciation life to be a net present value of $16.1 million, using the capital structure and rate of return in the rebuttal filing. Hearing Provide Request No. 1. With NorthWestern's rebuttal adjustments, the typical residential electric customer's total bill would increase from the May 2014 amount of $78.59 to $82.41, or 4.86%. Ex. NWE-32, Exhibit PJD-7.[2]

At hearing, NorthWestern offered adjustments to debt cost and property taxes that would further reduce the hydros revenue requirement to $117,149,256. The typical residential bill impact would be an increase of 5.63%. Ex. NWE-33. The average monthly electric bill as of July 2014 was $82.77; NorthWestern projects the average monthly bill in October 2014 with the hydros and taking into account the additional adjustments to be $87.43. *Id.*

In response to MCC's criticism of NorthWestern's proposed property tax adjustment as temporary and insignificant, NorthWestern stated that its offer to accept the PPLM current property tax amount in 2015 rather than the actual tax amount will mean that NorthWestern will forego $1.7 million if its estimate of 2015 property tax is correct. NWE Reply Br. pp. 40-41.

MCC's position:

MCC witness Clark calculated a first-year revenue requirement of $114,5979,373, using Wilson's recommended ROE and capital structure, but not taking into account Wilson's carbon cost modifications. Ex. MCC-3 p.18; MCC Br. p. 27. He also suggested a further adjustment that he said would recognize the appreciating nature of the hydros and ease "intergenerational ratepayer inequity." Ex. MCC-3 p. 19. That adjustment would further reduce the initial revenue requirement to $105,171,964. *Id*.

As discussed earlier in this memo, MCC witness Wilson proposed conditions that would reduce the revenue requirement. The rate increase if MCC's conditions and recommendations are not imposed is significant. MCC Br. p. 30. The bill impact cannot be minimized by considering it in isolation. *Id*. at p. 29. The commodity portion of the bill will increase by 10% for the typical residential customer, significant rate increases for other reasons are imminent, and rate impacts will vary among all classes of customers. *Id*.

[2] In response to DR PSC-351 NorthWestern revised this exhibit to show estimated supply rates without the hydros in July 2014, January 2015 and July 2015.

Regarding NorthWestern's offer at hearing to further reduce the revenue requirement to $117 million, the two proposed adjustments are unreliable and have little permanent effect. *Id*. at p. 26. First, the debt cost adjustment is not an adjustment to fix the debt cost for the hydros at 4%; NorthWestern will reflect its actual cost of debt in a later compliance filing. *Id*. Second, because NorthWestern's actual property tax expense will eventually be recovered from ratepayers, the proposal to reduce the property tax amount to the current level paid by PPLM would result in a temporary and questionable benefit. *Id*. at pp. 26-27.

2. What is a reasonable return on equity (ROE)?

NorthWestern's position:

NorthWestern proposes a 10% ROE. Ex. NWE-11 p. 35. The ROE recommendation was determined by reviewing recently approved ROEs for NorthWestern's Montana operations and national data that show that average annual authorized electric ROEs have not fallen below 10.09% for the period 2010-2013, and the average for that period was 10.22%. *Id*. at pp. 35-36. Bird acknowledged that NorthWestern's gas utility's currently authorized ROE is 9.8%, but he noted that the RRA report showed that recent electric ROEs exceed natural gas ROEs by 36 to 58 basis points. *Id.* at pp. 36-37. The equity risk associated with the hydros acquisition is not different from that of the electric assets in Montana, which all have ROEs of at least 10%. *Id*. at p. 38. The FINCAP analysis of the appropriate ROE range for the hydro transaction concluded the current ROE range for NorthWestern is 9.64% to 11.14% with a midpoint ROE of 10.39%. *Id*. at p. 38 and Exhibit BBB-5. RRA reports that average ROEs for electric utilities from 2010 through March 2014 range from 10.02% to 10.34% and current authorized ROEs for the electric utilities in the proxy group reported by AUS Utility Reports average 10.34%. Ex. NWE-34 p. 5 and Exhibit AMM-2. Investors will not supply capital on reasonable terms to a utility that cannot offer a return similar to the returns available from other opportunities of comparable risk and could develop the view that the Commission's regulatory outlook is unsupportive, which could, in turn, result in an increase in the cost of capital to electric utilities in Montana. *Id*. at pp. 6-7.

Preapproval does not make the hydro transaction risk free. Ex. NWE-12 p. 4. Preapproval allows NorthWestern to manage risk to an acceptable level for investment by investors, which benefits NorthWestern's customers by lowering the cost of capital of the transaction; conversely, if preapproval was not utilized, investors would take more risk and thus raise the financing costs that NorthWestern would recover from customers. *Id*. at pp. 4, 6. Once NorthWestern owns the hydros, they will have the same risk as any of its other generation assets. July 10 Tr. p. 194. Other utilities that acquire assets of this size seek and obtain preapproval from their regulatory commissions. July 11 Tr. p. 43. Regarding whether trackers reduce risk compared to other utilities, McKenzie testified that all but one of the utilities in the proxy group benefit from fuel or power cost recovery mechanisms or purchased gas adjustments. July 17 Tr. p. 72. He could not conclude that the trackers that are in use by NorthWestern reduce the company's risk as compared to its industry group. *Id.* at p. 69.

MCC's position:

MCC proposes an ROE in the 8 to 9% range, with 9% being the maximum. Ex. MCC-1 p. 64. The ROE should recognize that preapproval shifts risks from shareholders and investors to ratepayers. MCC Br. p. 16.

NorthWestern's DCF analysis for ROE purposes is distorted by the arbitrary exclusion of the 36 lowest comparable company values. *Id.* at pp. 49-50. When those values are included, and even when Wilson excluded 2 high-end and 11 low-end outliers, the calculated DCF results imply an ROE in the 8 to 9% range. *Id*. at p. 50. NorthWestern's CAPM analysis overstated the ROE because it used long-term bond rates as a measure of risk-free return, rather than the very short-term Treasury rate that Wilson prefers. *Id*. at p. 51. NorthWestern's expected earnings analysis failed to adjust for the difference between return on market value and return on book value of an alternative investment. *Id*. at pp. 54-57. Wilson's revised analysis implied an ROE of 7.4 percent for comparable companies. *Id*. at p. 56.

HRC/NRDC's position:

HRC/NRDC did not file testimony on the ROE issue, but indicated support for NorthWestern's proposed 10% ROE in its brief. HRC Br. pp. 2-3, fn 1.

3. What is a reasonable capital structure?

NorthWestern's position:

NorthWestern proposes a capital structure for the acquisition of 52% debt and 48% equity. Ex. NWE-11 p. 28. This is the same capital structure that was approved recently by the Commission for Spion Kop (pursuant to a NorthWestern-MCC stipulation) and for the electric and gas T&D operations in the 2009 rate case, and it is similar to the 52.35%/47.65% capital structure authorized in NorthWestern's most recent gas case filed in 2012. *Id.* at pp. 28-29. NorthWestern plans on financing the $870 million hydro purchase with $400 million in equity, $20 million in cash from operations, and $450 million from debt. Ex. NWE-12 p. 9. Thus, the proposed capital structure reflects the financing plan. *Id*.

MCC's position:

MCC proposes a 55% debt/45% equity capital structure. Ex. MCC-1 pp. 57, 64. MCC's proposed capital structure reflects how NorthWestern planned to finance the transaction when it submitted its application. *Id*. at p. 57. In addition, a lower equity ratio will provide ratepayers with a small cost reduction, it would be more in line with the specific risk conditions in the case, and would recognize that ratings agencies view a utility's power purchase agreements as quasi-debt. *Id*. at pp. 58-59; July 15 Tr. p. 68. A 55% debt component would keep the debt ratio in NorthWestern's preferred range. MCC Br. p. 22.

4. Debt cost

NorthWestern used a 4.5% cost of debt to develop its revenue requirement analysis. MCC witness Clark used the same debt cost in his analysis. At hearing, NorthWestern offered to reduce its estimated cost of debt to 4%, which enabled part of the reduction in the first-year revenue requirement. NorthWestern will make a compliance filing after the final order (if the acquisition is approved) to reflect its actual cost of debt for the transaction.

At hearing, NorthWestern witnesses Bird and Rowe discussed with questioners the idea of issuing 10-year long-term debt to finance a portion of the hydros purchase in an effort to reduce costs in the early years. July 11 Tr. p. 24; July 18 Tr. pp. 34-35. Rowe said NorthWestern's debt cost could be locked in at 4% if NorthWestern blended its debt maturities.

July 18 Tr. p. 34. Rowe sought Commission direction on this point: "... We could lock in a blending at 4 percent. We could go longer. We could go out a full 30 years. I'll look for direction from the Commission." *Id*.

5. Rate of return (ROR)

Rate of return is purely a function of weighting the cost of debt and equity against the capital structure and is the overall return used for computing revenue requirements. NorthWestern used a 7.14% ROR to develop its original and rebuttal revenue requirement analysis. Ex. NWE-32, Exhibit PJD-5 p. 1. MCC arrived at an ROR of 6.53% using Wilson's recommendations. Ex. MCC-3, Exhibit AEC-1 p. 5.

The table below illustrates the RORs that would result from NorthWestern's and MCC's positions if the cost of debt is either 4% (10-year financing option) or 4.25% (30-year financing option).

NWE - 10 Year Financing Option

	Cost of Debt	Capital Structure	Weighted Cost
Debt	4.00%	52.00%	2.08%
Equity	10.00%	48.00%	4.80%
			6.88%

MCC - NWE 10 Year Financing Option

	Cost of Debt	Capital Structure	Weighted Cost
Debt	4.00%	55.00%	2.20%
Equity	9.00%	45.00%	4.05%
			6.25%

NWE - 30 Year Financing Option

	Cost of Debt	Capital Structure	Weighted Cost
Debt	4.25%	52.00%	2.21%
Equity	10.00%	48.00%	4.80%
			7.01%

MCC - NWE 30 Year Financing Option

	Cost of Debt	Capital Structure	Weighted Cost
Debt	4.25%	55.00%	2.34%
Equity	9.00%	45.00%	4.05%
			6.39%

III. Is NorthWestern's request to purchase the hydros for $870 million consistent with the objectives in § 69-8-419, MCA?

§ 69-8-419(2), MCA, lists these objectives for NorthWestern's electricity supply planning and procurement efforts:

1) To provide adequate and reliable electricity supply service at the lowest long-term total cost;
2) To conduct an efficient electricity supply resource planning and procurement process that evaluates the full range of cost-effective electricity supply and demand-side management options;
3) To manage and mitigate risks;
4) To use open, fair, and competitive procurement processes whenever possible; and
5) To provide adequate electricity supply service at just and reasonable rates. (Note: duplicates 69-3-201, MCA.)

NorthWestern's position:

The acquisition of the hydros is consistent with the resource planning objectives. Ex. NWE-1 pp. 46-49. Section I.A. of this memo discusses the record evidence concerning objectives #1 and #2. Regarding objective #3, NorthWestern testified the hydros could be used to manage and mitigate risk through alleviating market and environmental uncertainty and providing more portfolio diversity. *Id*. at pp. 47-48. In addition, the hydro assets are located at multiple facilities and are not exposed to fuel price risk. *Id*. at p. 48. Objective #4 regarding competitive solicitations is not relevant because NorthWestern was responding to PPLM's process, there was no time to run a competitive solicitation, there is no way to build new hydro generation of this capacity in Montana, and a solicitation for theoretical generation results in bids with very limited validity. *Id*. at p. 49. Objective #5 duplicates § 69-3-201, MCA (requires utilities to provide reasonably adequate service at just and reasonable rates).

MCC's position:

MCC did not specifically state its position on NorthWestern's compliance with each of the objectives. However, MCC's testimony on various issues relates to the objectives. MCC's testimony as discussed elsewhere in this memo implied concerns with whether NorthWestern's application was consistent with the following objectives: objective #1 (provide adequate electricity supply service at the lowest long-term total cost), objective #3 (manage and mitigate risks), and objective #5 (provide adequate electricity supply service at just and reasonable rates).

HRC/NRDC's position:

HRC/NRDC did not specifically take a position on whether NorthWestern complied with each of the objectives. However, its advocacy in support of NorthWestern's application implies HRC/NRDC believes the hydro acquisition is consistent with the resource planning objectives.

IV. Is NorthWestern's application consistent with the applicable Commission rules?

In previous preapproval dockets, the Commission found the following administrative rules to be applicable when deciding whether to approve acquisition of an electricity supply resource:

38.5.8204 (procurement objectives);
38.5.8210 (resource needs assessment);
38.5.8212 (resource acquisition);
38.5.8213 (modeling and analysis);
38.5.8219 (risk management and mitigation); and
38.5.8220 (transparency and documentation).

NorthWestern's position:

Hines addressed NorthWestern's efforts to satisfy the Commission's procurement rules in prefiled direct testimony. Regarding Admin. R. Mont. 38.5.8204, Hines testified that the hydros would provide adequate and reliable service, that analysis conducted pursuant to the 2013 Plan assures that the output will be reasonably priced at lowest long term total cost, that supply rates will be appropriately adjusted as part of a consolidated proceeding, and that the portfolio will be balanced and efficient. Ex. NWE-1 p. 45-51.

Regarding Admin. R. Mont. 38.5.8210, he testified that the 2011 and 2013 Plans include detailed description and assessment of portfolio needs and plausible resources, and include discussion of risks, resource diversity, and market conditions. *Id*. at p. 51.

Admin. R. Mont. 38.5.8212 describes preferred procurement practices. Hines testified that NorthWestern generally followed this rule except for the employment of a competitive solicitation process, which he asserted is not applicable in this case. *Id*. at p. 51-54.

Admin. R. Mont. 38.5.8213 describes preferred portfolio modeling and evaluation practices. Hines referred to NorthWestern's use of various spreadsheet models and its stochastic analysis to support its adherence to this rule. *Id*. at p. 54.

Hines testified that acquisition of the hydros satisfies the requirements of Admin. R. Mont. 38.5.8219 because the assets mitigate risk associated with fuel costs, environmental regulations, market prices, transmission constraints, suppliers, and construction costs. *Id*. at p. 55.

Hines asserted that NorthWestern met the transparency and documentation requirements of Admin. R. Mont. 38.5.8220 through preparing the 2011 and 2013 Plans, submitting testimony, and public communications. *Id*. at p. 55.

<u>MCC's position</u>:

MCC did not specifically take a position on whether NorthWestern complied with the above rules. However, MCC's testimony on various issues relates to the rules. For example, Wilson testified that NorthWestern's application was remiss in not more candidly advising the Commission on the sensitivity of its analysis to carbon cost assumptions. Ex. MCC-1 p. 18 fn11. That position implies concerns related to full compliance with 38.5.8213, 38.5.8219, and 38.5.8220. Wilson also testified that NorthWestern's stochastic modeling results are biased because they incorporate market purchase risks but exclude hydro CapEx risk. *Id.* at pp. 28-29. That position implies concerns about compliance with 38.5.8213 and 38.5.8219. Similarly, Wilson questioned the reasonableness of NorthWestern's terminal value assumptions, which relates to 38.5.8213. Wilson also addressed issues associated with preapproval, and MCC observed in its post-hearing brief that NorthWestern agreed to the proposed purchase price based on assumptions that create risks that ratepayers will bear although they had no role in making those assumptions. That position relates to 38.5.8212 and 38.5.8219. Ultimately, MCC concludes that the Commission must impose conditions as part of any decision approving the hydros, which implies that MCC questions whether the application complies with 38.5.8204.

<u>HRC/NRDC's position</u>:

HRC/NRDC did not specifically take a position on whether NorthWestern complied with each of the above rules. Its prefiled direct testimony focused on two issues related to the above rules: risks related to carbon emissions regulation and risks related to owning and operating coal-fired electric generators. These issues are related to 38.5.8213 and 38.5.8219. Power specifically referred to 38.5.8213 when describing his support of NorthWestern's carbon cost analysis. Ex. HRC-1 p. 7. Power found NorthWestern's portfolio modeling analysis using PowerSimm robust. *Id*. at p. 32. He also testified that NorthWestern complied with Commission rules in taking a long-term view of costs and benefits. *Id.* at 4. Those positions imply that HRC/NRDC found NorthWestern's compliance with 38.5.8213, 38.5.8219, and 38.5.8204 acceptable. During cross examination Power appeared to express some concerns regarding the

procurement process (38.5.8212) and absence of an RFP or PPA alternative, but did not say NorthWestern violated the rule. July 17 Tr. p. 98.

V. If the Commission approves the application, in whole or in part, does the Commission support conditioning its approval as MCC proposed?

MCC's proposed conditions:

1. Do not include hypothetical carbon tax amounts in rates until CO2 taxes are actually implemented. To do this, deduct the present value of CO2 taxes reflected in Exhibit TEM-2 from the authorized rate base amount. Treat the revenue reduction as a deferral that can be added back to rate base if and when carbon taxes equal to the amount assumed in TEM-2 are actually implemented. If actual CO2 taxes are less than the TEM-2 assumption, the deferred add-back (and original deduction) would be adjusted accordingly to ensure the present value of CO2 tax recovery does not exceed the present value of CO2 taxes actually implemented. Ex. MCC-1 pp. 62-63. Later, Wilson proposed two alternatives: (1) In the same way that deferred taxes are treated, allow NorthWestern to recover the full amount of carbon-related revenues, but treat them as customer-contributed capital until actual carbon-related costs are incurred; and, (2) allow NorthWestern to recover the carbon-related revenues, subject to refund if carbon costs are not implemented within a specified timeframe. Ex. MCC-2 p. 47.

NorthWestern's response:

Regarding MCC's three conditions generally, NorthWestern argued they are "so commercially unreasonable that NorthWestern would be required to walk away from the transaction." NWE Reply Br. p. 19.

There are no CO2 tax costs in the proposed rates as MCC asserts; NorthWestern seeks to recover the revenue requirement associated with the purchase price. Ex. NWE-10 pp. 7-8. NorthWestern will terminate the hydro acquisition if the carbon tax rate-base deduction originally proposed by MCC is approved. Ex. NWE-36 p. 3. NorthWestern cannot accept any rate base value below $870 million. NWE Initial Br. p. 25. According to NorthWestern's Initial Brief, "A lower rate base value will probably require an immediate write down of asset values or recognition of a potential impairment."

2. NorthWestern should forego any return of or return on any future hydro CapEx above the purchase price exceeding an annual average of $10 million, escalated at 2.5%. If CapEx average exceeds $10 million (escalated), any excess could be banked for future recovery if the annual average drops below $10 million (escalated). *Id.* at pp. 61-62. Later, Wilson proposed alternatively that the Commission establish a range of 15% below $8.5 million to 30% above it. CapEx amounts exceeding the upper limit would be disallowed while NorthWestern could retain savings below the lower limit. Ex. MCC-2 pp. 3-4.

NorthWestern's response:

NorthWestern's CapEx forecast is sound, but even if its actual future CapEx is 30% higher than projected in this filing, the impact on customers' rates amounts to

$1.32/MWh, or 2.3%. Ex. NWE-10 pp. 11-12. The Commission should address recovery of future CapEx in future general rate cases. Ex. NWE-36 p. 16.

At hearing, NorthWestern offered a proposal that, from 2015 through 2020, it receive no return on its hydro CapEx investments that exceed the $58.1 million amount it projected in CapEx for the period (except when CapEx was due to extraordinary conditions). July 17 Tr. p. 254; NWE Reply Br. p. 22.

MCC response to NorthWestern's CapEx proposal: "The limitations and stated exceptions make the efficacy of this proposal questionable. ... [I]t does not address the fundamental capital expenditure concern; that is, ratepayers would still be asked to pay the rate base value built upon lower expectations while also returning excess amounts to the Company, and this problem is most likely to arise in later years, not the first six." MCC Br. p. 28.

3. Because NorthWestern has assumed zero decommissioning costs in its modeling as the result of a large terminal value, do not allow NorthWestern to collect net negative salvage for the hydros in the future. Ex. MCC-1 pp. 47, 61. In addition, adjust the test year revenue requirement to reflect NorthWestern's assumption of the terminal value of the hydros. *Id*.

NorthWestern's response:

NorthWestern's estimate of the terminal value is appropriate. It is based on a market multiple methodology and NorthWestern used the low end of Credit Suisse's market multiple range. Ex. NWE-10 p. 9. Wilson did not support his assertion that decommissioning costs should have been included or when or what the costs might be. *Id*. If NorthWestern decides to decommission any of the hydros in the future, a future PSC will consider whether it is prudent. *Id.* at pp. 9-10.

VI. Other considerations

Beyond the requirements of the preapproval statute, NorthWestern requests a Commission order that:

1) Authorizes NorthWestern to make a compliance filing following the final order in this docket to adjust the purchase price to reflect the actual cost of debt;
2) Authorizes NorthWestern to recover the estimated total revenue requirement of $117,149,256, as adjusted in the compliance filing, in electric supply rates;
3) Authorizes NorthWestern to make a final compliance filing in approximately December 2015 to reflect post-closing adjustments, the conveyance of the Kerr Project to the Confederated Salish and Kootenai Tribes, and the actual property tax expense for the hydros;
4) Authorizes NorthWestern to track revenue credits on a portfolio basis through the electricity supply cost tracker;
5) Approves the request and authorizing financing transactions proposed in the application; and,

6) Authorizes NorthWestern to utilize the proceeds from the financing transactions as proposed in the application.

LIST OF EXHIBITS	
NWE-1	Hines direct testimony
NWE-2	Hines supplemental testimony
NWE-3	Hines rebuttal testimony
NWE-4	Dorris rebuttal testimony
NWE-5	WUTC's ruling in Puget case (2/7/2014)
NWE-6	WUTC letter to Avista
NWE-7	Stimatz direct testimony
NWE-8	Stimatz supplemental testimony
NWE-9	Stimatz additional issue testimony
NWE-10	Stimatz rebuttal testimony
NWE-11	Bird direct testimony
NWE-12	Bird rebuttal testimony
NWE-13	Masud direct testimony (public)
NWE-13a	Masud direct testimony (protected version)
NWE-14	Masud rebuttal testimony
NWE-15	Meyer direct testimony
NWE-16	Meyer additional issue testimony
NWE-17	Kliewer direct testimony
NWE-18	Kliewer rebuttal testimony
NWE-19	Otto direct testimony
NWE-19a	Otto direct testimony (protected version)
NWE-20	Rhoads direct testimony (as corrected)
NWE-20a	Rhoads direct testimony (protected)
NWE-21	Rhoads additional issue testimony
NWE-21a	Rhoads additional issue testimony (protected)
NWE-22	Rhoads rebuttal testimony
NWE-23	Wiseman additional issue testimony
NWE-24	Wiseman rebuttal testimony
NWE-25	VanDaveer additional issue testimony
NWE-26	VanDaveer rebuttal testimony
NWE-27	Sullivan additional issue testimony
NWE-28	Sullivan rebuttal testimony
NWE-29	Miller additional issue testimony
NWE-30	Miller rebuttal testimony
NWE-31	DiFronzo direct testimony
NWE-32	DiFronzo rebuttal testimony
NWE-33	DiFronzo revised Exh. PJD-5 to show effect of adjustments on rev req
NWE-34	McKenzie rebuttal testimony
NWE-35	Rowe direct testimony
NWE-36	Rowe rebuttal testimony
PSC-1	Essex checklist (protected version)
PSC-1a	Essex checklist (public)
PSC-2	Essex memo
PSC-3	Evergreen memo 2
PSC-4	Evergreen memo 1
MCC-1	Wilson direct testimony
MCC-2	Wilson additional issue response testimony
MCC-3	Clark direct testimony
MCC-6	electric supply tracker transcript
MCC-15-19	NWE's 2009-2013 annual report schedules showing payments to HDR
HRC-1	Power direct testimony
HRC-2	Power response testimony