

Service Date: September 26, 2014

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER OF the Application of) REGULATORY DIVISION
NorthWestern Energy for Hydro Assets)
Purchase) DOCKET NO. D2013.12.85
) ORDER NO. 7323k

FINAL ORDER

APPEARANCES

FOR THE APPLICANT:

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FOR THE INTERVENORS:

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Before:

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BOB LAKE, Vice Chairman
KIRK BUSHMAN, Commissioner
TRAVIS KAVULLA, Commissioner
ROGER KOOPMAN, Commissioner

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PROCEDURAL HISTORY

1. On September 26, 2013, NorthWestern Corporation, doing business as NorthWestern Energy (NorthWestern), executed a Purchase and Sale Agreement with PPL Montana, LLC (PPLM) to purchase its hydroelectric generating facilities (Hydroelectric Facilities) in Montana. On October 11, 2013, NorthWestern notified the Montana Public Service Commission (Commission or commission) that it would file an application seeking preapproval of the purchase no later than December 24, 2013. *See* Dkt. N2013.10.74. The Commission issued a *Notice of Opportunity for Early Intervention* on December 6, and granted intervention to the Montana Consumer Counsel (MCC) on December 20, 2013.

2. On December 20, 2013, NorthWestern filed its *Application for Hydro Assets Purchase* (Application), as well as *Direct Testimony* from the following individuals: Robert Rowe, Chief Executive Officer; Brian Bird, Chief Financial Officer; John Hines, Vice President of Supply; Travis Meyer, Director of Investor Relations and Corporate Planning; Joseph Stimatz, Manager of Asset Optimization; William Rhoads, General Manager of Generation; Ahmad Masud, Managing Director at Credit Suisse Securities, LLC (Credit Suisse);

Allen Otto, Vice President at Blackstone Advisory Partners, LP (Blackstone); Kendall Kliewer, Vice President and Controller; and Patrick DiFronzo, Manager of Regulatory Affairs.

3. The Commission issued a *Notice of Application and Intervention Deadline and Initial Procedural Schedule* on December 23, 2013, and granted intervention to the following parties on January 14, 2014: Confederated Salish & Kootenai Tribes (CSKT), Montana Large Customer Group, Human Resource Council, District XI (HRC), Natural Resources Defense Council (NRDC), Renewable Northwest Project, and Hydrodynamics, Inc. The Renewable Northwest Project later filed a *Notice of Withdrawal*.

4. On January 16, 2014, the Commission issued *Procedural Order 7323b*.

5. The Commission engaged Evergreen Economics (Evergreen) to help review the analysis conducted by NorthWestern and Ascend Analytics. On January 24, 2014, Evergreen submitted a *Memorandum* (Evergreen Memo) assessing the adequacy of NorthWestern's Application.

6. On February 3, 2014, the Commission determined that NorthWestern's Application was not adequate because it did not model certain portfolios as alternatives to the proposed purchase, but that it would be adequate upon receipt of the additional models. On February 14, 2014, NorthWestern filed the additional models with *Supplemental Testimony* from Mr. Hines and Mr. Stimatz.

7. On March 27, 2014, Evergreen submitted its *Final Assessment* of NorthWestern's Application.

8. On March 28, 2014, the MCC filed the *Direct Testimony of Dr. John W. Wilson and Albert E. Clark*.

9. On March 28, 2014, the HRC and NRDC filed the *Direct Testimony of Dr. Thomas M. Power*.

10. In addition to Evergreen, the Commission also engaged The Essex Partnership (Essex) to review NorthWestern's due diligence efforts. Essex submitted a *Checklist* assessing the documents and projections underlying NorthWestern's due diligence on April 1, and a *Memorandum* (Essex Memo) summarizing its major findings on April 2, 2014.

11. On April 4, 2014, the Commission issued a *Notice of Additional Issues* directing NorthWestern to "address the structural integrity, physical condition, environmental liabilities, and the sufficiency of NorthWestern's due diligence effort for each of the individual facilities,"

and to provide “a fuller understanding of what the range of potential future [capital expenditure] and operation and maintenance (O&M) costs might be and the effect of those potential costs on NorthWestern’s net present value cost estimates.”

12. On April 18, 2014, NorthWestern filed *Additional Issues Testimony* from the following individuals: Mr. Rhoads; John VanDaveer, Manager of the Hydroelectric Acquisition Transition Project; Mary Gail Sullivan, Manager of Environmental Permitting and Compliance; Gary Wiseman, Project Manager in Generation Services at CB&I; Rick Miller, Senior Vice President for Hydropower Services at HDR Engineering, Inc.; Mr. Meyer; and Mr. Stimatz.

13. On May 9, 2014, NorthWestern filed *Rebuttal Testimony* from the following individuals: Mr. Rowe; Mr. Hines; Mr. Stimatz; Dr. Gary Dorris, Chief Executive Officer at Ascend Analytics; Mr. Rhoads; Mr. VanDaveer; Ms. Sullivan; Mr. Wiseman; Mr. Miller; Mr. Bird; Adrien McKenzie, Vice President at FINCAP, Inc.; Mr. Masud; Mr. Kliewer; and Mr. DiFronzo.

14. On May 9, 2014, the HRC and NRDC filed the *Response Testimony of Dr. Power*.

15. On May 30, 2014, the MCC filed the *Additional Issues Response Testimony of Dr. Wilson*.

16. On June 17, 2014, the Commission issued a *Notice of Public Hearing*.

17. On June 20, 2014, NorthWestern, MCC, HRC and NRDC, Montana Large Customer Group, and Hydrodynamics, Inc. filed pre-hearing memoranda. Commission staff submitted a *Prehearing Memorandum* on July 3, 2014.

18. In this Docket, there were 19 witnesses who each filed at least one round of testimony (not counting Essex and Evergreen, the Commission’s own consultants). The Commission submitted 363 Data Requests to NorthWestern, MCC, HRC, and NRDC. The MCC submitted 231 Data Requests to NorthWestern, HRC, and NRDC. NorthWestern submitted 12 Data Requests to the MCC and Essex.

19. The Commission received numerous public comment throughout the nine month proceeding. Beginning on April 9, 2014 and continuing through May 20, 2014, the Commission noticed and conducted 17 meetings throughout the state to receive public comment on the Application. The Commission conducted a nine day public hearing in the Old Supreme Court Chambers at the Montana State Capitol from July 8 through July 18, 2014. That hearing was

broadcast live on TVMT, web streamed online, and archived. Public comment was accepted every day throughout the hearing process.

20. On August 1, 2014, NorthWestern filed its *Initial Post-Hearing Brief*.

21. On August 15, 2014, the MCC filed a *Response Brief*, and the HRC and NRDC filed a *Post-Hearing Brief*.

22. On August 25, 2014, NorthWestern filed a *Post-Hearing Reply Brief*.

FINDINGS OF FACT

23. NorthWestern requests preapproval to acquire certain properties from PPLM. NorthWestern requests a Commission order that authorizes: (1) Preapproval of the purchase of these properties owned by PPLM based on the public interest; (2) NorthWestern to recover the estimated total revenue requirement of \$117,149,256, as adjusted in the compliance filing to reflect the actual cost of debt; (3) 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 Hydroelectric Facilities; (4) NorthWestern to track revenue credits on a portfolio basis through the electricity supply cost tracker; (5) financing transactions proposed in the application; and (6) NorthWestern to utilize the proceeds from the financing transactions as proposed in the Application.

24. Specifically NorthWestern requested approval to purchase the following Hydroelectric Facilities (see next page):

FERC No.	Project Name	Structure Name	Reservoir Type	Capacity (MW)	No. of Units	Service Year	River	Location
1869	Thompson Falls Project							
		Thompson Falls Dam	Run-of-River	.94	7	1915/1995	Clark Fork	Thompson Falls
2301	Mystic Lake Project							
		Mystic Lake Dam	Reservoir	12	2	1925	West Rosebud Creek	75 miles southwest of Billings
5	Kerr Project							
		Kerr	Reservoir	194	3	1938/1954	Flathead	5 miles southwest of Polson
2188	Missouri-Madison Project							
		Hebgen Lake	Reservoir	NA	NA	1914	Madison	25 north of West Yellowstone
		Madison	Run-of-River	8	4	1906	Madison	10 miles north of Ennis
		Hauser Dam	Run-of-River	19	6	1911/1914	Missouri	14 miles northeast of Helena
		Holter	Run-of-River	48	4	1918	Missouri	43 miles northeast of Helena
		Black Eagle	Run-of-River	21	3	1927	Missouri	2 miles northeast of Great Falls
		Rainbow	Run-of-River	60	8	1910/1918	Missouri	6 miles northeast of Great Falls
		Cochrane	Run-of-River	69	2	1958	Missouri	8 miles northeast of Great Falls
		Ryan	Run-of-River	60	6	1915/1916	Missouri	10 miles northeast of Great Falls
		Morony	Run-of-River	48	2	1930	Missouri	15 miles northeast of Great Falls

I. Valuation of the Hydroelectric Facilities

25. To 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 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, carbon emissions costs, hydroelectric production, future capital expenditures 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.

DCF Modeling

Summary of NorthWestern's Arguments

26. NorthWestern evaluated the economic merit of the Hydroelectric Facilities in multiple ways. NorthWestern and its financial advisor, Credit Suisse, estimated the potential market value of the Hydroelectric Facilities using discounted cash flow (DCF) models. Credit Suisse also applied other valuation methods including precedent transactions and comparable companies' analyses. Ex. NWE-13 pp. 4-5. NorthWestern used deterministic and stochastic analysis to compare long-term total portfolio costs with the Hydroelectric Facilities and alternative resources. Ex. NWE-7 pp. 17, 30, 37; July 8 Hrg. Transcr. (Tr.) p. 141. NorthWestern also used spreadsheet models to compare the stand-alone cost of market purchases, a combined cycle combustion turbine (CCCT), and the Hydroelectric Facilities. Finally, NorthWestern used a long-term revenue requirement model and a rate impact model to estimate customer impacts. Ex. NWE-11 pp. 14-15; July 11 Tr. pp. 6-7.

27. Mr. Stimatz sponsored the NorthWestern DCF model to evaluate the Hydroelectric Facilities from the perspective of a third party merchant. Ex. NWE-7 p. 5. Mr. Masud of Credit Suisse developed two basic DCF models to evaluate them from the perspective of regulated and unregulated entities. Ex. NWE-13 p. 3. In developing these models, Mr. Masud imported the cost and revenue forecasts provided by NorthWestern. Consequently, his electricity market price and capital expenditure forecasts are equivalent to those of Mr. Stimatz.

28. 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 twenty years (2014 through 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.

29. Mr. 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 twenty-year period, and other bidders would be using that information. Data Response (DR) PSC-074(a). Mr. Masud testified that Credit Suisse always uses the same forecast period that its clients use. July 11 Tr. pp. 130-132. He also testified that for a standard valuation of public company transactions, five years is a normal length of the forecast period. *Id.* When asked at the hearing whether he would find the purchase price reasonable if he used a shorter forecast period, Mr. 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.*

30. Exhibit NWE-7 provides the streams of expected Mid-Columbia (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 2.1 percent. *Id.* at p. 21. Mr. Stimatz adjusted this stream of prices for projected carbon regulation, beginning in 2021 at \$21.11 per metric ton, and escalated at five percent per year. *Id.* at pp. 25-26.

31. Other expenses in the models include fixed O&M expense, property taxes, Kerr Dam rent expense (through 2015), generation taxes, general and administrative (G&A) expense, depreciation expense, and income tax expense. A Confidential Information Memorandum (CIM) developed by PPLM estimated O&M and G&A expenses. *Id.* at pp. 11-13. Although Mr. Stimatz used these estimates in his model, NorthWestern expects much lower G&A costs than PPLM forecasted. *Id.* at p. 13.

32. The Stimatz model used an “EBITDA” multiple of 7.5x to estimate terminal value. That is, the ongoing value of the Hydroelectric Facilities is estimated as the product of

7.5x and the year 2033 value of the financial statistic Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA). The Stimatz model used a WACC of 7.14 percent to discount future cash flows to present value.

33. The Stimatz model initially predicted a value of \$826 million for the Hydroelectric Facilities. Mr. 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 modifications increased NorthWestern's estimate of the value to \$883 million, within a range of \$848 million to \$994 million. Ex. NWE-11 pp. 17-18.

34. Although Mr. Masud's unregulated WACC values generally exceed his regulated WACC values, Mr. Bird expressed concern that unregulated entities would be able to bid on the Hydroelectric Facilities using lower costs of capital than NorthWestern. Mr. 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 [Hydroelectric Facilities]-only sales process.

Ex. NWE-11 p. 16.

35. Mr. 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.

36. 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 dollars-per-kilowatt (\$/kW) values to estimate terminal value. The \$/kW values ranged from \$1,650/kW to \$2,150/kW.

37. Mr. 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 11.9x, and the median multiple is 10.9x. Ex. NWE-13, Ex. AM-1, p. 15.

38. The Masud regulated model used EBITDA multiples that ranged from 8.0x to 9.0x 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. Mr. 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.

39. Since Mr. Masud used a 2014E value of EBITDA equaling \$45 million in his analysis, the implied TV/EBITDA multiple is 20x (\$900 million / \$45 million). Mr. Masud was asked in DR PSC-345(c) if he could provide examples of transactions with multiples of this magnitude. In response, Mr. 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.

40. Mr. Masud's unregulated model used a range of WACC values from 6.5 percent to 7.5 percent to discount cash flows, and his regulated model WACC values ranged from 5.5 percent to 6.5 percent. The WACC values used by Mr. Stimatz and Mr. Masud are not directly comparable. Mr. Stimatz used a weighted average of pre-tax debt costs and after-tax equity costs. Mr. Masud used after-tax debt and after-tax equity costs. *Id.* at pp. 222-223.

41. Mr. Masud testified that realistic estimates of value of the Hydroelectric Facilities 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.

42. Mr. Masud testified that the nine comparable hydroelectric 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. He testified that the comparable Hydroelectric Facilities have more similarities than differences, such as cost structure, no fuel cost, and they run when the river flows. July 11 Tr. p. 182.

43. NorthWestern's Board of Directors sought and received a fairness opinion on the purchase price from 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, Ex. AO-1. Fairness does not reflect a single price or the lowest price that could be paid by a buyer, but rather a range of values derived from judgment and financial analysis. Ex. NWE-19 p. 3

Summary of MCC's Arguments

44. The MCC through its witness, Dr. Wilson, contested NorthWestern's valuation of the Hydroelectric Facilities. Dr. Wilson used the Stimatz DCF model to form 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.

45. Dr. Wilson stated that NorthWestern's DCF analysis included \$247.4 million of capitalized carbon costs in the \$826 million net present value of the Hydroelectric Facilities. 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.

46. Dr. Wilson criticized NorthWestern's July 2013 purchase offer. He testified:
I don't know why, having been told no, at [\$]740 [million], 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.

47. When asked at hearing whether MCC would regard a \$740 million purchase price to be in the public interest, Dr. Wilson responded:

Well, that's certainly a lot better than – it's a lot better than [\$]900 [million]. 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.

48. The MCC also found Credit Suisse's comparable hydroelectric transactions analysis to be flawed. MCC Response Br. p. 8 (Aug. 15, 2014). The MCC stated that although Mr. Masud identified nine comparable hydroelectric transactions for his Selected Precedent Transactions Analysis, five of them cannot be directly compared to the Hydroelectric Facilities because they were "portfolio" assets, not transactions involving an individual facility. *Id.* at pp. 8-9; July 11 Tr. pp. 126-127. According to the MCC, the remaining four transactions differ significantly from the Hydroelectric Facilities and are not really comparable. MCC Br. at p. 9; July 11 Tr. pp. 112-127.

Summary of HRC and NRDC's Arguments

49. The HRC and NRDC argued that NorthWestern's analysis appropriately accounted for the risks associated with carbon emissions and other existing and pending environmental regulation. Ex. HRC-1 p. 2. According to Dr. Power, because Dr. 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. Dr. 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.

50. Additionally, the HRC and NRDC argued the forecast market prices used by Dr. 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. Dr. 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. He testified that current Mid-C future prices strips represent prices that would not support new generating capacity to serve projected load growth and plant retirements. *Id.* at p. 92.

NorthWestern Rebuttal

51. NorthWestern responded that Dr. Wilson overstated the role that the Stimatz model valuation of \$826 million played in NorthWestern's decision to bid \$900 million for the Hydroelectric Facilities. Ex. NWE-10 p. 5. According to Mr. Stimatz, 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. Mr. Masud testified that the 7.5x EBITDA multiple that Mr. 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 Mr. Masud considered this to be reasonable. *Id.*

52. NorthWestern also responded that in regard to one of Dr. Wilson's criticisms of NorthWestern's bid of \$900 million, Mr. Bird testified that after PPLM rejected the \$740 million bid, a PPLM advisor indicated to NorthWestern that PPLM expected the purchase price to be over \$1 billion. July 11 Tr. p. 70.

Deterministic and Stochastic Portfolio Modeling*Summary of NorthWestern's Arguments*

53. Mr. Hines testified that NorthWestern's 2011 Electricity Supply Resource Procurement Plan (2011 Plan) provided the framework for acquiring new resources and identified market purchases, opportunity resources, and a 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.

54. Mr. Hines indicated that NorthWestern initially evaluated the economic merit of the Hydroelectric Facilities by comparing the long-term total costs of three alternative resource portfolios using deterministic spreadsheet models. *Id.*; July 8 Tr. p. 141. After it had made its purchase offer to PPLM, NorthWestern hired Ascend Analytics to perform stochastic portfolio analyses of the three deterministically modeled resource portfolio alternatives using PowerSimm to evaluate the net present value (NPV) of total portfolio costs (from 2015 through 2043). The three alternative resource portfolios NorthWestern analyzed to meet load were: (1) Existing

resources plus market purchases; (2) existing resources plus a CCCT and market purchases; and (3) existing resources plus the Hydroelectric Facilities and market purchases.

55. Mr. Stimatz testified that the deterministic analysis showed that acquiring the Hydroelectric Facilities at the \$900 million purchase price would produce a thirty-year levelized per megawatt-hour (MWh) portfolio cost of \$64.92 compared to \$71.66 for the CCCT portfolio. Ex. NWE-7 p. 38. He testified that the thirty-year levelized, per MWh price for the market-only portfolio would be slightly less than the hydroelectric portfolio at \$64.17. He and Mr. Hines each 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. Mr. Hines asserted that relying on market purchases to supply 50 percent of NorthWestern's load would disregard current public energy policy. Ex. NWE-3 pp. 4-5. Ascend Analytics' CEO Dr. Dorris concurred, stating that the real alternatives to the hydroelectric acquisition are other physical resources. Ex. NWE-4 p. 19; July 8 Tr. p. 121.

56. NorthWestern asserted that the hydroelectric portfolio has the lowest long-term total cost on a risk-adjusted basis compared to alternative portfolios evaluated in the 2011 Plan and the 2013 Electricity Supply Resource Procurement Plan (2013 Plan). Mr. Hines testified that the hydroelectric portfolio mitigates risks related to uncertain future market prices, fuel prices, and environmental regulation, and enhances portfolio diversity. Ex. NWE-4 p. 12.

57. The NPV portfolio costs reflect expected terminal values for the CCCT and hydroelectric resources at the end of the study horizon. The NPV terminal values of the CCCT and Hydroelectric Facilities were \$9 million and \$212 million, respectively. 2013 Plan pp. 5-6. The portfolio that included the Hydroelectric Facilities had a lower NPV cost than the other two portfolios before and after accounting for risk. On a risk-adjusted basis, the NPV of this portfolio was \$376 million less than the current portfolio and \$386 million less than the CCCT portfolio. Dr. Dorris testified that even if the terminal value of the Hydroelectric Facilities were assumed to be zero in 2043, that portfolio remains the least-cost and least-risk portfolio compared to the other modeled supply options. Ex. NWE-4 p. 23.

58. In response to the Commission's adequacy determination, Ascend Analytics performed stochastic analysis of three additional resource portfolio alternatives involving combinations of either single cycle or combined cycle gas turbines and wind generation. Ex. NWE-8; *supra* ¶ 6. These included: (4) Existing resources plus a 100 MW combustion

turbine (CT) added in 2018 and market purchases; (5) existing resources plus a 100 MW CT in 2025, 100 MW of wind in 2025, and market purchases; and (6) existing resources plus a 239 MW CCCT in 2025, 100 MW of wind in 2025, and market purchases. The hydroelectric portfolio outperformed all of the additional portfolios. Ex. NWE-8 p. 5.

59. Mr. 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. Ex. NWE-10 p. 6.

Summary of MCC's Arguments

60. The MCC's witness Dr. Wilson cautioned that if NorthWestern's modeling assumptions regarding carbon costs and future capital expenditures do not occur, the Hydroelectric Facilities will cost ratepayers more than a market purchase alternative. Ex. MCC-1 pp. 8-9.

61. Dr. Wilson testified that, based on NorthWestern's own analysis, ratepayers will pay over \$400 million more for electricity over the next eight years if the Hydroelectric Facilities are acquired than they would pay for market purchases in the same time period. Ex. MCC-1 p. 39; July 15 Tr. p. 39; *see* Ex. NWE-15 p. 2.

62. According to Dr. 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 Hydroelectric Facilities well into the future. *Id.*

63. Dr. Wilson found Ascend Analytics' PowerSimm modeling results flawed because: (1) They reflect a high terminal value for the Hydroelectric Facilities based on assumed appreciation over the next thirty years; and (2) the model accounts for market risks, especially related to carbon and fuel cost uncertainties, while omitting risks such as long-term O&M and capital expenditure costs. Without those advantages, Dr. Wilson contended that the Hydroelectric Facilities portfolio cost would exceed or be close to the cost of alternative portfolios. Ex. MCC-1 pp. 6-7, 28; Ex. MCC-2 p. 10.

64. Dr. 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. Dr. Wilson prepared two exhibits that modify NorthWestern's carbon cost and capital expenditure assumptions. His alternative carbon cost assumption delays the timing of a carbon cost from 2021 to 2031 and applies a 2.5 percent escalation rate thereafter.

65. Dr. Wilson stated that merchant generators will not construct the resources needed to maintain current system reliability standards for the foreseeable future, and that electric utilities, their regulators, and publicly-owned utilities will remain important elements of the wholesale electricity market in the northwest. 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.

66. Dr. 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 avoided cost methodology adopted by the Commission in recent dockets required by the Public Utility Regulatory Policies Act of 1978 could both offer reasonable cost-effectiveness benchmarks. *Id.*; *see e.g.* Dkt. D2012.1.3. He stated that a least-cost portfolio that includes a CCCT, simply-cycle combustion turbine, and market purchases could be a viable alternative to acquiring the Hydroelectric Facilities. DR PSC-230. He considers NorthWestern's preferred CCCT portfolio to be a lower-cost, lower-risk option compared to acquiring the Hydroelectric Facilities. *Id.*

Summary of Evergreen Economics Reports

67. The Commission hired Evergreen to evaluate the reasonableness of the PowerSimm modeling effort in terms of model validation, completeness, and input assumptions relative to industry best-practices. Ex. PSC-4. Evergreen determined that the PowerSimm model is a reasonable tool for evaluating the costs and benefits of the purchase compared to realistic, available alternatives. *Id.* at i. Evergreen also determined that primary inputs such as

natural gas price forecasts, electricity price forecasts, carbon emissions costs, and cost of capital are reasonable and generally agree with other publicly available estimates. *Id.* at ii.

Summary of HRC and NRDC's Arguments

68. HRC and NRDC's witness Dr. Power supported NorthWestern's comparative economic evaluation of the Hydroelectric Facilities. 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.

69. According to Dr. 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.

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

71. Dr. 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 Hydroelectric Facilities is slightly less than with a CCCT: \$57.12 per MWh versus \$57.62 per MWh. *Id.* at p. 20. He estimated that each \$1.00 per tonne increase in the assumed initial carbon price elevates the levelized cost advantage of the hydroelectric portfolio by about 50 cents per MWh.

72. Dr. Power testified that a balanced resource portfolio would not expose 50 percent of NorthWestern's resource requirements to market prices. For that reason, he opposed using market purchases to measure the cost-effectiveness of the 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.

73. Dr. Power supported the PowerSimm model's approach to measuring portfolio risk. He testified 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 hydroelectric 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.

74. 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 rates that reflect the fixed costs needed to carry the investment cost.

75. Dr. Power also observed that the hydroelectric 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.

76. Dr. Power testified that if both the risk premiums and the terminal values are excluded from the PowerSimm portfolio costs, the cost of the hydroelectric portfolio is roughly the same as the cost of the alternative portfolios (specifically, \$49 million less expensive than the highest-cost alternative and \$44 million more expensive than the least-cost alternative). Dr. Power concluded that the PowerSimm results are robust, even with unrealistic and unsupportable assumptions. Ex. HRC-1 p. 32.

77. In response to Dr. Wilson, Dr. Power asserted that customers are not necessarily harmed just because projected revenue requirements exceed projected market purchase costs. Ex. HRC-2 pp. 2-4. He testified that Dr. Wilson's analysis over-simplified the resource decision NorthWestern faces by assuming future prices are known and ignored NorthWestern's obligation to evaluate and minimize risk as well as cost. *Id.* at p. 7. He noted that while NorthWestern compared the Hydroelectric Facilities to a range of alternative portfolio structures, Dr. Wilson made market purchases the benchmark in his analysis. *Id.* at p. 10. Dr. 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

relied on by Dr. Wilson. *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.

78. To illustrate the uncertainty in market prices anticipated by regional utilities in their planning processes, Dr. Power provided the simulated electricity prices, without carbon costs, generated by Puget Sound Energy's planning model for its 2013 Integrated Resource Plan. Ex. HRC-2 pp. 8-9.

Commission Decision on Modeling

79. The Commission finds that NorthWestern used a variety of models to assess the economic costs and benefits of acquiring the Hydroelectric Facilities and to develop its offer price. NorthWestern's DCF analysis indicated a value for the Hydroelectric Facilities between \$848 million and \$994 million. Ex. NWE-11 pp. 17-18. Credit Suisse estimated that as regulated assets, the Hydroelectric Facilities had a value between \$800 million and \$1.25 billion. Ex. NWE-13 p. 12. The Commission finds that the terminal value used in the modeling is acceptable under the circumstances of this proposal. Both NorthWestern and the MCC have recommended a fifty year depreciation life span for the Hydroelectric Facilities so the facilities should be operational and producing power long past the twenty year DCF model forecast period.

80. NorthWestern's post-offer stochastic analysis determined that on a risk adjusted total cost basis, the hydroelectric portfolio is preferable to the alternatives. Ex. NWE-4 p. 10. Additional models were used to support its Application. The Commission accepts these modeling efforts for purposes of this unique acquisition opportunity, and finds that the \$900 million offer price was within a reasonable range; the \$870 million rate based cost of acquiring the Hydroelectric Facilities compares favorably with alternative energy supply resources, and the acquisition in its totality is in the public interest.

Carbon Assumptions

81. One of the key inputs in NorthWestern's comparative cost modeling and DCF analysis was the future cost of carbon emissions. Although highly uncertain, all parties agreed that future carbon costs should not be considered zero. July 15 Tr. p. 124.

Summary of NorthWestern Arguments

82. Mr. Hines asserted that the risk of utilities incurring additional costs as a result of carbon regulations is real, and that Montana law and Commission rules require NorthWestern to consider that risk. He listed a variety of ways in which government regulation of carbon emissions could increase electricity costs (i.e., create “carbon costs”), including accelerated plant retirements, higher operating costs, emissions limits, or emissions taxes. Ex. NWE-3 p. 11. He asserted that the future carbon costs NorthWestern assumed in its comparative cost analyses were significantly lower than an average of those used by several other Pacific Northwest utilities. *Id.* at p. 17.

83. The carbon costs NorthWestern incorporated into its market price projections and generation resource costs were based on the 2013 Annual Energy Outlook, issued by the Energy Information Administration (specifically, its GHG15 case). Ex. NWE-7 p. 25. NorthWestern assumed that carbon costs are internalized in 2021 at a price of \$21.11 per tonne, escalating at five percent per year thereafter. 2013 Plan pp. 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 pp. 6-13, 6-28 (explaining triangular cost distributions); *see also* July 9 Tr. pp. 21-23. The lower limit of the carbon cost distribution is \$0.00 per tonne and the upper limit is \$42.22 per tonne. *Id.* at pp. 6-26. NorthWestern characterized its modeled carbon costs as conservative, and lower than many regional utilities’ projections. *Id.* at pp. 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-139(b).

Summary of MCC’s Arguments

84. The MCC argues that a key driver of NorthWestern’s DCF analysis is the assumption that significant carbon regulation costs will be imposed by 2021 and increase at a five percent annual rate thereafter. The MCC calculates that this carbon adjustment to market price forecasts adds \$247 million, or roughly 30 percent of the DCF-estimated value. MCC Br. at p. 2.

85. Dr. 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 Hydroelectric Facilities. According to Dr. Wilson, NorthWestern's carbon cost assumption creates a cost advantage for the Hydroelectric Facilities 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 proposal would permanently embed assumed carbon costs in customer rates. Ex. MCC-1 p. 17. However, he agreed that carbon costs are not zero and stated that there will be some carbon cost. July 15 Tr. p. 124.

86. Dr. Wilson advised that it would be prudent regulatory policy to defer the inclusion of uncertain future carbon costs in rates until these costs are actually realized. One of these recommendations would allow NorthWestern to initially collect revenues associated with the full purchase price, but treat revenues as customer contributed capital until the projected carbon costs are reflected in the market. Dr. Wilson also suggested allowing the same initial revenue collection, subject to refund if carbon costs are not implemented by some determined date. MCC Br. at p. 6.

Summary of HRC/NRDC's Arguments

87. Dr. Power testified to the reasonableness of NorthWestern's carbon price projections. HRC Br. p. 8. He compared NorthWestern's modeled carbon costs to the "reference case" carbon cost assumptions used by other U.S. utilities for resource planning and procurement decisions, as reported by Synapse Energy Economics. Ex. HRC-1 p. 11.

Commission Decision on Carbon Assumptions

88. The Commission's rules direct NorthWestern to consider risk costs related to potential carbon emissions regulation when planning for and acquiring new resources. *See* Admin. R. Mont. 38.5.8213 (2014). The Commission's Comments on NorthWestern's 2011 Plan stated that it is correct practice to analyze the planning impacts of carbon regulations. However, it found NorthWestern's assumed 2015 implementation date unrealistic and advised it to revisit the timing of potential regulations in its 2013 Plan. NorthWestern's 2013 Plan assumes regulations are implemented in 2021 and have a twenty-year (2014 through

2033) nominal levelized cost of about \$13.00 per tonne, rather than the twenty-year (2014 through 2033) nominal levelized base case cost of about \$32.00 per tonne in the 2011 Plan.

89. While recognizing the difficulty of establishing firm numbers, the Commission agrees with HRC and NRDC that NorthWestern's carbon cost projections appear to be within a range of reasonableness at this time. As one example, NorthWestern's carbon cost-impacted electricity price forecast tracks reasonably close to Puget Sound Energy's no-carbon risk electricity price forecast. Ex. HRC-1 p. 8; 2013 Plan p. 5-5; DR PSC-162. The Commission's consultant, Evergreen Economics, stated that NorthWestern's forecast of electricity prices appears reasonable when compared with other, publicly available forecasts. Ex. PSC-4 pp. 11-12. Evergreen went on to state that NorthWestern's carbon price assumptions are consistently below the Northwest Power and Conservation Council's forecast from 2021 to the end of the planning period. *Id.*

90. The various deferred carbon accounting mechanisms proposed by the MCC are unnecessary and unmanageable. If the opportunity to acquire the Hydroelectric Facilities were lost due to such conditions, customers would face more expensive alternative energy supply resources. The Commission finds that the risks mitigated by the MCC's proposals are outweighed by the overall benefits of the proposed acquisition and the Commission declines to condition the approval with the proposed accounting mechanisms.

Due Diligence and Future Capital Expenditures

Summary of NorthWestern's Arguments

91. NorthWestern projected capital expenditure budgets for the Hydroelectric Facilities from 2014 through 2036. These budgets were used in the valuation models by NorthWestern to help calculate the cash flows from these facilities and arrive at valuation estimates. NorthWestern presented a table of projected capital expenditure budgets entitled, "Hydro Electric System – Capital Forecast Summary," in its response to DR PSC-066. Mr. Stimatz, who provided the table, explained that the capital expenditure summary projects expenditures for the period 2014 through 2036. DR PSC-066. Major projects are specified for individual facilities for the years 2014 through 2026; no specific projects are identified for subsequent years.

92. PPLM provided a capital expenditure forecast in its CIM. From 2014 through 2017, capital expenditure amounts vary, with the average being \$10.99 million per year. NorthWestern determined its capital expenditure projections by integrating the PPLM five-year forecast for specific projects for the 2013 through 2017 period, incorporating the remaining major investment upgrades needed on the system that had not been addressed by PPLM for 2013 through 2017, and then establishing annual capital expenditure budget amounts that it deemed sufficient to sustain minor generation and non-operational capital projects for the remaining years in the twenty-year plan. Ex. NWE-25 p. 5. Beginning in 2018, a total of \$8.5 million is projected for capital expenditures; in subsequent years, that total is escalated annually by a 2.5 percent annually, producing a capital expenditure total in 2036 of \$13.26 million. DR PSC-066. NorthWestern identified specific turbine-generator, control system, and governor-exciter capital upgrades for individual facilities and scheduled them for completion in specified years from 2014 through 2026. *See* DR PSC-066 (“Hydro Electric System Capital Forecast Summary” worksheet tab).

93. NorthWestern projected lower future capital expenditures relative to recent PPLM capital expenditures 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 portfolio to alternative capital expenditure projections. Ex. NWE-9 p. 4; Ex. NWE-16 pp. 3-5. The sensitivities evaluated capital expenditure cost streams that were 30 percent higher and 15 percent lower than original projections. The hydroelectric portfolio had a lower NPV cost than all alternative portfolios under both scenarios. Ex. NWE-9 p. 5. Dr. Dorris asserted that the treatment of risks related to capital expenditure projections in the comparative cost analyses followed standard industry practice. Ex. NWE-4 p. 22. Based on a review of the resource plans of various utilities in the Northwest, 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 p. 1.

94. NorthWestern proposed the following annual capital expenditures for the Hydroelectric Facilities for the period from 2014 through 2033:

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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Capital Expenditures (\$ million)	\$12.83	\$9.96	\$9.19	\$11.99	\$8.50	\$8.71	\$8.93	\$9.15	\$9.38	\$9.62
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Capital Expenditures (\$ million)	\$9.87	\$10.10	\$10.37	\$10.62	\$10.88	\$11.17	\$11.43	\$11.72	\$12.01	\$12.31

Ex. JMS-1 pp. 1-2

95. NorthWestern found that the Hydroelectric Facilities 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 Hydroelectric Facilities, voluminous Federal Energy Regulatory Commission (FERC) dam safety program reports, site visits, interviews with key PPLM personnel, review of PPLM's historical and projected capital expenditure and O&M costs, and water data. *Id.* at pp. 7-8. NorthWestern found that PPLM has complied with the requirements of its FERC licenses. *Id.* at Ex. WTR-2.1, p. 4 (Shaw "Independent Engineer's Report"); *see also* DR PSC-304(a) (memorandum to Heather Grahame). Additionally, 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.*

96. The issue of an appropriate estimation of future capital expenditures was a contested issue through the proceeding. Besides NorthWestern and the MCC submitting testimony on issues of capital expenditures, the Commission also engaged Essex to review NorthWestern's due diligence efforts.

Summary of MCC's Arguments

97. Dr. Wilson testified that NorthWestern's stochastic modeling results are unreasonably biased in favor of the acquisition, as they incorporate substantial risks for market purchases but no risks for very low assumed capital expenditure levels, such as optimistic but uncertain long-term renovation, retirement, and rehabilitation expenditures for the aging Hydroelectric Facilities. Ex. MCC-1 p. 28. He observed that in the five-year period 2008 through 2012, capital expenditures on the Hydroelectric Facilities averaged \$59.6 million per

year, with a substantial amount for the rebuilding of Rainbow and structural repairs at Hebgen. *Id.* at p. 29. He stated that NorthWestern forecasts no major renovation or repair needs for any of the dams going forward over the next thirty years, but assumes that annual b will be only \$8.5 million per year, escalated at 2.5 percent for inflation. *Id.* He pointed out that PPLM's capital expenditure budget from 2013 through 2017 averaged \$11.6 million per year – above NorthWestern's corresponding assumption from 2018 forward. *Id.*

98. The MCC contends that the Hydroelectric Facilities are old, aging plants that will need repairs in the future. July 15 Tr. p. 51. At hearing, Dr. Wilson said he was not critical of NorthWestern's due diligence effort, but he went on to say it was "essentially a paper exercise." *Id.* at p. 56. He recalled that NorthWestern's consultant from Shaw/CB&I, Mr. 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. Dr. Wilson testified that the fact that Mr. Rhoads and Mr. VanDaveer had worked on the dams when Montana Power Company (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. Dr. Wilson acknowledged the thoroughness of the FERC dam inspection program which reviews the facilities for any safety or failure issues. *Id.* at p. 61. However, he testified that NorthWestern would still need to focus on the power generation aspects of the facilities. *Id.*

99. Dr. Wilson contended that NorthWestern's capital expenditure projections were too low. Although PPLM's historical Capital expenditures increased substantially as the plants have aged, NorthWestern assumed that ongoing capital expenditure projects will be completed in 2017, and no additional large expenditures will be required. Ex. MCC-1 p. 22. He testified that the concern is not that Capital expenditures will vary a few million dollars per year, but rather that large, unexpected expenditures will be necessary in the future. July 15 Tr. p. 115. Dr. Wilson further testified that it is not realistic to assume that no major capital expenditure projects will occur in the future. *Id.* at p. 53. Dr. Wilson stated that the risk of uncertainty should not be imposed upon ratepayers because it is the kind of risk that business enterprises would bear in return for the kind of profit rates that NorthWestern is seeking. *Id.* His alternative capital expenditure assumption imposes a Rainbow upgrade-like expenditure in the 2024 through 2026 time period. The exhibits show that if NorthWestern's carbon cost or capital expenditure

projections turn out to be significantly different, acquiring the Hydroelectric Facilities would cost ratepayers more than the alternative cost of market purchases. Ex. MCC-1 pp. 3-4.

100. Dr. Wilson suggested that NorthWestern should stand behind its assumption that future capital expenditure requirements will not exceed \$8.5 million per year (beginning in 2018 and escalated at 2.5 percent thereafter) and agree to forego any recovery of return on any future capital expenditures exceeding an annual average of \$10 million (escalated at 2.5 percent thereafter). Ex. MCC-1 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.*

Summary of Essex's Findings

101. Essex concluded that the information in the Docket at the time of its review did not contain sufficient information to confirm NorthWestern's projections of capital expenditures or O&M expenditures through the twenty-year study period of the DCF analysis. Ex. PSC-2 p. 1. Major uncertainties include projected capital expenditures 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 capital Expenditures for major projects from the total historic expenditures for the years 2008 through 2011 to estimate historic base capital expenditures values. Ex. PSC-2 p. 3. It performed a similar exercise for NorthWestern's projected capital expenditures in the year 2021. *Id.* Essex calculated that \$4.1 million for base capital expenditures of the entire hydroelectric system was available in 2021, a value representing 60 percent of the historic base capital expenditures. *Id.*

102. Regarding the condition and structural integrity of the dams, Essex concluded that the record evidence indicates that the Hydroelectric Facilities are aging structures that are "generally in satisfactory condition." Ex. PSC-2 p. 1. Essex identified numerous specific concerns, including that several of the Hydroelectric Facilities 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. At hearing, Essex witness Mr. Szufnarowski testified that NorthWestern's witnesses had addressed some of Essex's concerns in additional issue and rebuttal testimony. July 10 Tr. p. 55. According to

Mr. Szufnarowski, NorthWestern submitted documents “that were detailed and analytically were more complete than we had previously seen,” and he was “encouraged by that.” *Id.* at p. 67. He specifically mentioned that NorthWestern’s consultant from HDR, Mr. Miller, had included more detail about specific civil infrastructure projects at the Hydroelectric Facilities in an attachment to his additional issue testimony, and that Mr. VanDaveer’s rebuttal testimony was helpful because it included a summary of the overhaul history of the generating units. *Id.* at pp. 68-70; *see* Ex. NWE-29; Ex. NWE-26.

Summary of NorthWestern’s Rebuttal

103. NorthWestern responded that 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 argued its proposed capital expenditure 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 capital expenditure funds specifically for FERC relicensing. July 16 Tr. p. 184. NorthWestern witness Mr. Wiseman, an engineer for Shaw/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 fifteen-to-twenty years, he anticipates no specific major project in the future that could not be handled, budgeted, and managed within NorthWestern’s projected capital expenditure budget. July 15 Tr. p. 245. NorthWestern witness Mr. Miller, engineer for HDR Engineering, developed a twenty-year forecast of capital expenditure 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 hydroelectric assets in reliable operation condition. *Id.* at p. 8. HDR’s twenty-year capital expenditure forecast recommends an average annual budget of \$7.1 million (in 2014 dollars). *Id.*

104. NorthWestern also applied its Long-Term Revenue Requirement Model to evaluate the impacts that increased and decreased the levels of annual capital expenditures would have on the annual revenue requirement. Ex. NWE-16 p. 3. The increased scenario includes annual capital expenditures that are 30 percent 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 scenario includes capital expenditures that are 15 percent less than NorthWestern's submitted projection; it would decrease the revenue requirement by \$0.3 million in 2015 to \$4 million in 2043. *Id.*

105. In regard to Essex's questions about the adequacy and possible need for future replacement of infrastructural elements such as anchor bolts and flashboard-stanchion systems, NorthWestern argued that there is very limited potential to incur significant costs to replace either existing flashboard-stanchion systems or existing post-tensioned rock anchors.

Ex. NWE-23 pp. 9, 12. Mr. Miller testified there is very little evidence that the corrosion of rock anchors is an ongoing issue. July 16 Tr. p. 207.

106. Mr. Miller concluded that the Shaw/CB&I due diligence reports provided sufficient detail for the material issues related to each of the individual facilities. 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.

107. Regarding post-tensioned rock anchors installed at the Hydroelectric Facilities, there are no current Part 12 recommendations¹ 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. 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. 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. Ex. NWE-26. p. 10.

108. Mr. Miller testified that 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 Hydroelectric Facilities. Ex. NWE-29 p. 12. These systems function safely, similar systems are in place in 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 of flashboards is infrequent; occurring only in an extreme event and the acceptable operation of the

¹ FERC's *Dam Safety Performance Monitoring Program* includes guidance for regular safety inspections of FERC-licensed hydroelectric facilities. "Part 12 recommendations" are made for hydroelectric components or operations that require attention due to safety concerns.

stanchion release mechanism has been demonstrated in dry testing using the standard operating procedure. *Id.* Debris inflow is not a significant issue at the Hydroelectric Facilities, except for Thompson Falls, which has radial gates to pass debris. *Id.* at p. 8. 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.

109. 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. With respect to the mechanical and electrical systems at the Hydroelectric Facilities, 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. Mr. Miller testified that it has not been HDR's experience that the rotor structural component replacements are required after 80- or 100-plus years of service. *Id.*

110. Regarding future regulatory treatment of unforeseen capital expenditures and O&M expenses, Mr. Hines testified that if the future capital or operational costs 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. DR PSC-192.

111. To address concerns about capital expenditure funding levels, NorthWestern offered the following:

- a. Capital expenditures for the hydro system incurred in the normal course of business allowable for cost recovery would be capped at \$58.1 million, through 2020, which is NorthWestern's forecasted hydro-related capital expenditure budget.
- b. Except as noted in Item c., below, hydro capital expenditures greater than \$58.1 million during this period would not be allowed the recovery of a return on, but will be allowed recovery of a return of (depreciation expense).

c. Recovery of a return on and return of hydro capital expenditures that are the result of extraordinary events and/or unknown regulatory or environmental regulations may be requested by NorthWestern as part of future general rate filings.

July 17 Tr. p. 254; NorthWestern Reply Br. p. 22 (Aug. 25, 2014).

Commission Decision on Capital Expenditures and Due Diligence

112. The capital expenditure accounting mechanisms proposed by the MCC are unnecessary and unmanageable. These mechanisms may encourage NorthWestern to under- or over-invest in the Hydroelectric Facilities to meet the cap, which could cause long-term damage or safety concerns. Reply Br. at p. 13. If the opportunity to acquire the Hydroelectric Facilities were lost due to such conditions, customers would face more expensive alternative energy supply resources. The Commission finds that the risks mitigated by the MCC's proposals are outweighed by the overall benefits of the proposed acquisition and the Commission declines to condition the approval with the proposed capital expenditure accounting mechanisms.

113. The Commission finds that the condition of the assets is satisfactory relative to the price of the assets and to the forecast of capital expenditures. However, NorthWestern did not include in its forecast any specific large capital events, nor did it forecast a general contingency amount for uncertainties, which would quantify and account for the risk that such an event could occur. The MCC argued that "should some of these uncertainties materialize, consumers would be asked to pay contingency dollars with real money when they have already been asked to pay a purchase price for the hydro assets predicated on zero contingency dollars." MCC Br. at p. 11. The Commission is concerned that NorthWestern did not attempt to forecast a contingency budget for these expenditures to be used as an input in the modeling of the Hydroelectric Facilities.

114. From 2015 through 2020, future capital expenditures incurred in the normal course of business will be capped at \$57.28 million, which is NorthWestern's exact forecasted capital expenditure budget for that period. Ex. JMS-1, pp. 1-2. The figure of \$58.1 million that was proposed as the cap by NorthWestern in its live hearing testimony was calculated based on a rounding error. The Commission finds the exact forecasted number of \$57.28 million in the capital expenditure budget as the correct number to use for the cap that was agreed to by NorthWestern.

115. The Commission may allow a return *of* capital expenditures greater than \$57.28 million incurred during this period, but will not allow the recovery of a return *on* capital expenditures greater than \$57.28 million during this period. In order to monitor NorthWestern's capital expenditures during the 2015 through 2020 period that is subject to the cap, the Commission directs NorthWestern to submit an informational filing within 60 days of the end of each calendar year 2015 through 2020 that provides each year's annual actual capital expenditure amount related to the Hydroelectric Facilities. Consistent with utility ratemaking requirements, all capital expenditures by NorthWestern will be subject to Commission review in future rate proceedings.

116. Return *of* and *on* capital expenditures that are the result of extraordinary events or unforeseen regulations may be requested by NorthWestern as part of future general rate filings and will be reviewed and considered by the Commission on a case-by-case basis.

117. The Commission's finding that preapproval of this acquisition is in the public interest is predicated on NorthWestern's capital expenditures and O&M forecasts' being a substantially true representation of the future costs of the Hydroelectric Facilities. Mr. Wiseman said that in the light of the notable effort that's been put into the facilities in the last fifteen-to-twenty years, he anticipates no specific major project in the future that couldn't be handled, budgeted, and managed within NorthWestern's projected capital expenditure budget. July 15 Tr. p. 245. In considering the prudence of future expenditures exceeding these forecasts, the Commission may consider – in addition to what NorthWestern knows or should know at the time an investment is made – what expenditures NorthWestern could have reasonably anticipated or expenditures it failed to reasonably anticipate and quantify in this proceeding.

118. The Commission accepts NorthWestern's due diligence with regard to the condition of the Hydroelectric Facilities for purposes of approving the \$870 million purchase price. The Shaw/CB&I due diligence reports provide documentation of a thorough evaluation of the structural integrity of the Hydroelectric Facilities and of the ongoing upgrade of the generating units that PPLM undertook and that NorthWestern plans to continue. The after-the-fact due diligence review conducted by HDR further confirms the Shaw/CB&I conclusions. Essex's criticism that NorthWestern had not provided enough information to determine the condition of the generating units was rebutted by NorthWestern's testimony that provided

additional explanation and materials regarding the due diligence team's review of the generators and associated equipment.

119. The Commission concludes that the record evidence supports Shaw/CB&I's conclusion that the Hydroelectric Facilities are aging structures but they currently appear to be in satisfactory condition. The \$870 million purchase price reflects the current condition of the Hydroelectric Facilities as well as NorthWestern's expectation that they will be reliable generators of electricity for Montana customers for decades to come. By a preponderance of the evidence, and because of the consumer protections offered by subsequent Commission review provided for in paragraph 117 of this Order, the Commission finds that the overall benefits of the acquisition outweigh the risk that the due diligence might have failed to expose any discoverable deficiency in any of the Hydroelectric Facilities.

II. Revenue Requirement

120. In NorthWestern's Application, a first year revenue requirement of \$128,402,190 was proposed. Ex. NWE-31 p. 4. In its rebuttal case, NorthWestern reduced its first-year revenue requirement request to \$120,963,690 by extending the depreciation period from forty to fifty years and by eliminating any return on its Kerr Dam investment. Ex. NWE-36 p. 14. At the hearing, NorthWestern offered adjustments to debt cost and property taxes that would further reduce the revenue requirement to \$117,149,256.

121. The MCC's witness Mr. Clark calculated a first-year revenue requirement of \$114,597,373, using Dr. Wilson's recommended return on equity (ROE) and capital structure, but not taking into account Wilson's carbon cost modifications. Ex. MCC-3 p. 18; MCC Br. at p. 27. He also suggested a further adjustment for "intergenerational ratepayer inequity" which would further reduce the initial revenue requirement to \$105,171,964. Ex. MCC-3 p. 19.

Return on Equity

122. NorthWestern proposed a ROE of 10 percent. Ex. NWE-11 p. 35. NorthWestern's ROE recommendation was determined by reviewing recently approved ROEs for NorthWestern's Montana operations and national data showing the average annual authorized electric ROEs have not fallen below 10.09 percent for the period 2010 through 2013, and the average for that period was 10.22 percent. *Id.* at pp. 35-36.

123. NorthWestern witness Mr. Bird argued that the equity risk associated with the hydroelectric acquisition is not different from that of the electric assets in Montana, which all have ROEs of at least 10 percent. *Id.* at p. 38. Regulatory Research Associates reports that average ROEs for electric utilities from 2010 through March 2014 range from 10.02 percent to 10.34 percent, and that current authorized ROEs for the electric utilities in the proxy group reported by AUS Utility Reports average 10.34 percent. Ex. NWE-34 p. 5, Ex. AMM-2.

124. The MCC proposed an ROE in the 8-to-9 percent range, with 9 percent being the maximum. Ex. MCC-1 p. 64. The ROE should recognize that preapproval shifts risks from shareholders and investors to ratepayers. MCC Br. at p. 16. The MCC argued that 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 Dr. Wilson excluded 2 high-end and 11 low-end outliers, the calculated DCF results imply an ROE in the 8-to-9 percent range. *Id.* at p. 50. NorthWestern's Capital Asset Pricing Model 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 Dr. 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. Dr. Wilson's revised analysis implied an ROE of 7.4 percent for comparable companies. *Id.* at p. 56.

125. HRC and NRDC did not file testimony on the ROE issue, but indicated support for NorthWestern's proposed 10 percent ROE in their Brief. HRC Br. pp. 2-3, n. 1.

126. The record evidence supports NorthWestern's position that an ROE of 9 percent or lower at this time, as recommended by MCC, would be insufficient for NorthWestern to attract capital. Ex. NWE-11 pp. 35-36, 38, Ex. BBB-5; Ex. NWE-34 pp. 5-7, Ex. AMM-2. NorthWestern's proposed 10 percent ROE is the same as the ROE the Commission authorized two-and-a-half years ago for Spion Kop, the most recently approved NorthWestern electric resource; however, the Commission agrees with the MCC that it is too high in this case. NorthWestern's gas utility is currently authorized an ROE of 9.8 percent which was reached through a stipulation by NorthWestern and the MCC in Docket D2012.9.94 and subsequently approved by the Commission in Order 7249e.

127. The MCC pointed out that ratings agency Fitch Ratings has deemed NorthWestern to have "a low-risk credit profile." MCC Br. at p. 17. The availability to

NorthWestern of preapproval of electricity resource acquisitions and supply and tax trackers likely contributes to reducing the utility's risk (although NorthWestern does not agree with that assessment). NorthWestern Reply Br. at p. 26. The FINCAP² analysis of the appropriate ROE range for the hydroelectric transaction concluded the current ROE range for NorthWestern is 9.64 percent to 11.14 percent with a midpoint ROE of 10.39 percent. Ex. NWE-11 p. 38; Ex. BBB-5.

128. As the MCC acknowledged, the Commission has "broad discretion" to set a utility's ROE. MCC Br. at p. 20. Based on the Commission's analysis of the record evidence, the Commission finds that an ROE of 9.8 percent is fair and equitable. An authorized ROE of 9.8 percent recognizes NorthWestern's low risk profile while at the same time allowing NorthWestern to attract capital on reasonable terms. Setting an ROE at 9.8 percent is also at the bottom end of the FINCAP analysis and is fair for the risk level of this preapproval transaction.

129. Furthermore, the Commission directs NorthWestern to include the Hydroelectric Facilities in NorthWestern's next general rate case so that their cost of capital can be determined on a consolidated basis with NorthWestern's Montana electric utility operations.

Cost of Debt

130. NorthWestern used a 4.5 percent cost of debt in its original filing. Mr. Clark used the same debt cost in his analysis. At hearing, NorthWestern offered to reduce its estimated cost of debt to 4 percent, which enabled part of the reduction in the first-year revenue requirement.

131. Mr. Bird and Mr. Rowe discussed the idea of issuing 10-year long-term debt to finance a portion of the purchase in an effort to reduce costs in the early years. July 11 Tr. p. 24; July 18 Tr. pp. 34-35. Mr. Rowe said NorthWestern's debt cost could be locked in at four percent if NorthWestern blended its debt maturities. July 18 Tr. p. 34. Mr. 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.

² NorthWestern engaged FINCAP, Inc., a firm providing financial, economic, and policy consulting services to business and government, to complete an analysis of the appropriate ROE range for the Hydroelectric Facilities purchase.

132. The proposals that include ten year debt and the mixing of thirty-year and ten-year debt to reduce the short term impacts on rates are not worth the risk that the cost of debt and rates will rise beyond the ten year period. These proposals are unacceptable to the Commission.

133. The Commission finds that the debt tenor shall be thirty years and as low as possible based on market conditions but shall not exceed 4.25 percent. NorthWestern is directed to proceed as soon as possible to secure the lowest possible interest rate below 4.25 percent with a thirty-year tenor. NorthWestern shall make a compliance filing after the final order is issued to reflect its actual cost of debt for the transaction.

Capital Structure

134. NorthWestern proposed a capital structure for the acquisition of 52 percent debt and 48 percent equity. Ex. NWE-11 p. 28. NorthWestern plans on financing the \$870 million 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 for the transaction reflects the financing plan. *Id.*

135. MCC proposed a 55/45 debt-to-equity capital structure. Ex. MCC-1 pp. 57, 64. The MCC argues that the 55 percent debt capital structure reflects how NorthWestern planned to finance the transaction when it submitted its application. *Id.* at p. 57. In addition, the MCC argues that 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.

136. The 55/45 debt-to-equity capital structure proposed by the MCC is artificial and may encourage a level of utility debt detrimental to the utility. During the hearing, Commissioner Koopman asked Mr. Bird about cost of capital and the impact on ratepayers. Mr. Bird testified:

That's a fair question. As you noted in my testimony, I think it was also PSC-57, I pointed out that our debt to capital at 52 percent is higher than our peers, and they come along at approximately 50 percent. So we've been able to, I think, because of our all regulated business carry a bit higher leverage than our peers at the same rating. But we are at the high end of our range, even with this 52 percent, because of the short-term debt that we have to use to finance our business on a seasonal

basis. At year end, that number, swings from 53 to 55 percent during the year, on a consolidated basis. But what we've tried to do in our state jurisdiction is to be at 52 percent, so we don't exceed that 50 to 55 percent debt to cap. And we hover, at times, right at the top of that. And that makes me uncomfortable.

July 11 Tr. pp. 29-30.

137. The Commission agrees with Mr. Bird that because seasonal short term borrowings can push NorthWestern to the point of 55 percent debt, long term debt in the capital structure should not be increased at this time. The Commission finds approving a 52 percent long-term debt in the capital structure for this transaction is the highest leverage rate that should be approved to minimize impacts on the overall capital structure. Setting the amount of long-term debt at 55 percent could push the Company's total leverage to 58 percent. July 11 Tr. pp. 29-30. The Commission finds that amount of leverage to be too high. The 52/48 debt-to-equity capital structure proposed by NorthWestern is the actual capital structure that is being used by NorthWestern to finance the transaction. The 52/48 debt-to-equity capital structure is also consistent with other recent Commission orders as discussed above.

Property Taxes

138. The initial revenue requirement shall only include the actual amount of property taxes currently paid by PPLM for the Hydroelectric Facilities. NorthWestern in its original filing based its property tax expense on an estimation of the \$900 million original acquisition price for the purchase. NorthWestern originally proposed a property tax expense of \$14,050,317. In response to Data Request PSC-352, NorthWestern stated that PPLM paid \$12,386,568 for the property taxes for tax year 2013 on the Hydroelectric Facilities. The Commission will only include \$12,386,568 for property taxes in the initial revenue requirement.

Depreciation

139. NorthWestern, in its Application, proposed to depreciate the Hydroelectric Facilities over a forty-year period. Ex. NWE-17 p. 9. The MCC proposed a fifty-year depreciation period in its intervenor testimony and NorthWestern agreed to that change in its rebuttal testimony. Ex. MCC-3 p. 11; Ex. NWE-36 p. 14. The change in book depreciation life from forty to fifty years results in a reduction in the revenue requirement of \$4,401,890. NorthWestern calculated the cost difference between a forty- and fifty-year depreciation life to

be a net present value of \$16.1 million, using the capital structure and rate of return in the *Rebuttal Testimony*. Ex. NWE-36 p. 14; Hrg. Provide (July 22, 2014). The Commission finds that depreciation of the Hydroelectric Facilities shall occur over a fifty-year period.

Ratepayer Impacts

140. The Commission finds that an initial revenue requirement for the Hydroelectric Facilities of \$116,865,355 is just and reasonable. That number is calculated based on a capital structure of 52 percent debt and 48 percent equity. The approved return on equity is 9.8 percent. The estimated cost of debt is 4.25 percent. When the actual debt cost is known, this revenue requirement will be adjusted in a compliance filing to reflect the actual issuance cost of the debt.

141. The Commission finds that acquisition of the Hydroelectric Facilities will meaningfully facilitate NorthWestern's ability to manage and mitigate risks and provide adequate and reliable electricity supply service at the lowest long-term total cost and at just and reasonable rates. Based on the approved revenue requirement figure the typical residential bill impact would be an increase of 5.63 percent. Ex. NWE-33. The average monthly electric bill for a typical residential customer as of July 2014 was \$82.77; NorthWestern projects the average monthly bill in October 2014 with the Hydroelectric Facilities and taking into account the additional adjustments to be \$87.40. *Id.* The estimated monthly bill impact of \$4.63 per month (assuming a debt interest rate of 4.25 percent) on the average residential electricity bill will be offset by the long-term benefits of the transaction. The exact impact will be calculated in NorthWestern's revenue requirement compliance filing once debt costs are confirmed and finalized.

III. Additional Preapproval Conditions

Kerr Dam

142. NorthWestern made no express request for approval of the subsequent transfer of the Kerr facility to the CSKT. Likewise, there was no evidence presented that such a subsequent transfer is in the public interest. As a result, the Commission makes no determination in this proceeding as to whether a subsequent transfer of Kerr to the CSKT is in the public interest.

143. None of the parties should consider the foregoing, or the following "exception" language as an abdication of Commission jurisdiction over Kerr Dam (soon to be an asset of a

Montana regulated utility), or implied approval of its contemplated transfer from a regulated to an unregulated entity. The Commission makes no determination in this order whether or not it has jurisdiction over future Kerr transactions. The Commission has numerous, as yet unanswered questions regarding the contemplated transfer and may yet decide whether or not to assert jurisdiction of its own volition, in response to a complaint, or as a party before FERC or other authorized tribunal.

144. The CSKT appears to acknowledge the possibility of the Commission's jurisdiction over some Kerr related issues by asking for and receiving, status as a Party/Intervener in this Docket; however, their subsequent non-participation in the proceeding has failed to resolve these issues.

145. Public interest concerns range from the impact of a transfer of Kerr Dam from a tax paying entity to a non-tax paying entity on the public school systems and other public services in Lake County where Kerr Dam is located. These, when added to the highly critical importance of Kerr Dam to the Montana balancing area, the grid, and the public receiving electrical services should be answered in some public forum.

146. Satisfactory responses to these and other concerns, may well be readily available. But, fourteen frustrating years of Montana's dams being held beyond Montana's jurisdictional reach; added to public and Commission concern that there will be no opportunity (other than that available in the 1985 FERC relicensing) before FERC, for public or Commission input; coupled with the absence of CSKT participation and evidence in this docket that the contemplated transfer of Kerr Dam is in the public interest. The Commission intends to urge FERC to offer Montanans, tribal, non-tribal, private, and government, a meaningful opportunity and venue to participate in, voice concerns and to get information regarding the pending 2015 Kerr Dam license transfer and its impacts on Montana.

147. However nominal, in keeping with the "transfer agent" description of NorthWestern's role regarding the Kerr facility, customers should be exposed to no risk relative to its temporary ownership of that facility. July 11 Tr. pp. 47-48. The temporary acquisition of Kerr shall create zero risk for NorthWestern's customers, and all financial risk associated with NorthWestern's ownership of Kerr shall be borne by its shareholders.

148. A compliance filing shall be made upon completion of the subsequent transfer of Kerr to demonstrate that the ownership of Kerr by NorthWestern resulted in a zero or net positive financial benefit for NorthWestern customers.

Limitations on Transfer of Hydroelectric Facilities

149. Even in the absence or repeal of statutory requirements, any future sale, transfer, or requests to remove the Hydroelectric Facilities, excluding Kerr, from NorthWestern's rate base shall be subject to Commission review and a determination of whether the sale or transfer is consistent with the public interest. *See infra* ¶ 179 (citing Mont. Code Ann. § 69-8-426)

150. The proper ratemaking treatment of any future gains on any activity involving the Hydroelectric Facilities shall be determined by the Commission, and in making that determination, the Commission should recognize that ratepayers have carried certain risks of loss associated with the acquisition of the Hydroelectric Facilities. The ratepayers will be responsible for a significant above market electricity cost in the early years of the transaction, so the ratepayers are entitled to the long-term benefits that are derived from this transaction.

151. NorthWestern proposed this transaction to provide long-term benefits to ratepayers, therefore any future Commission review of any proposal to remove these assets from rate base should thoroughly scrutinize the benefits and risks of that proposal.

IV. Other Preapproval Findings

152. NorthWestern's witness Mr. Rowe provided the following list of the benefits of Hydroelectric Facility 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. Mr. Hines testified that the benefits of the acquisition fall into four general categories: (1) Reduced reliance on market purchases, lowering the amount of market risk in the supply portfolio; (2) increased certainty of resource adequacy and reliability; (3) more stable, reasonable rates compared to a CCCT plant or market purchases; and (4) a more diversified portfolio of environmentally responsible resources. Ex. NWE-1 pp. 13-20.

153. The MCC argued that the ratepayer benefits of the acquisition depend on future realization of NorthWestern's assumptions regarding carbon costs, capital expenditures, and terminal value, and recommended conditions on the recovery of certain costs. MCC Br. at pp. 12-13. Dr. Wilson specifically recommended "three consumer protection modifications" to "improve" the proposal, and suggested it would "be appropriate to renegotiate a more acceptable price with PPL." Ex. MCC- 1 p. 9.

154. Dr. Power advocated applying a long-term perspective with regard to benefits and risks. He also recommended considering hard-to-quantify benefits of the hydro purchase, such as: (1) The value of rate and 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. The HRC and NRDC took the position that "[n]o decision is without risk," but that here:

[NorthWestern'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.

155. Mr. Hines testified that the Hydroelectric Facilities will provide adequate and reliable service, that the analysis in the 2013 Plan shows that these resources will provide power at the lowest long term total cost, that supply rates will be appropriately adjusted as part of a consolidated proceeding, and that the addition of these resources will make the portfolio more balanced and efficient. Ex. NWE-1 pp. 45-51. Mr. Hines also 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.

156. Mr. Hines testified that NorthWestern generally followed preferred procurement practices, except the preference for a competitive solicitation process, which he asserted is not applicable in this case. *Id.* at pp. 51-54. According to Mr. Hines, NorthWestern did not test its valuation of the Hydroelectric Facilities through a competitive solicitation because PPLM was in charge of the sales process, not NorthWestern. Ex. NWE-1 p. 49. NorthWestern also provided the following reasons for not conducting a competitive solicitation: (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.

Compliance with Administrative Rules

157. The acquisition of the Hydroelectric Facilities via a competitive solicitation process would have been unworkable and possibly lead to the loss of the opportunity to rate base these assets. The Commission agrees with NorthWestern for purposes of this unique acquisition opportunity, that a competitive solicitation was not feasible because NorthWestern was responding to PPLM's process, there was no time to run a competitive solicitation, and there is no way to build new hydroelectric generation of this capacity in Montana. *Id.* at p. 49.

158. The Commission finds that NorthWestern satisfied the Commission's procurement rules in procuring this unique opportunity resource.

Compliance with Statutory Objectives

159. Regarding risk management and mitigation, the Commission agrees that the Hydroelectric Facilities will alleviate market and environmental uncertainty and provide more portfolio diversity and predictability. *Id.* at pp. 47-48. In addition, these assets are geographically diverse and not exposed to traditional fuel price risk. *Id.* at p. 48.

160. The Commission finds that acquisition of the Hydroelectric Facilities will meaningfully facilitate NorthWestern's ability to provide adequate and reliable electricity supply service at the lowest long-term total cost, manage and mitigate risks, and enable NorthWestern to provide adequate electricity supply service at just and reasonable rates.

Public Interest

161. The Commission agrees with NorthWestern, HRC and NRDC that the benefits of the transaction outweigh the risks. Approval of NorthWestern's acquisition of the Hydroelectric Facilities, subject to the conditions set forth in this Order, is in the public interest. The Commission approves the rate base amount of \$870 million, and finds that the addition of the Hydroelectric Facilities to NorthWestern's portfolio will provide benefits to customers with a rate-stable, geographic, watershed, and fuel diversified, sustainable, predictable, and zero fuel cost hydroelectric generation to NorthWestern's electric supply portfolio. The Commission finds that the benefits of the acquisition substantially outweigh the risks.

162. The Commission has the discretion to approve an acquisition adjustment if it finds the acquisition is in the public interest. *Infra* ¶ 168 (citing Mont. Code Ann. § 69-3-109 (2013)). This acquisition was made pursuant to a market purchase from a non-regulated utility, PPLM. This transaction would not be feasible if NorthWestern was limited to acquiring it at the original cost of \$553,078,225. The Commission finds that the acquisition adjustment of \$346,921,775 above the original cost of the Hydroelectric Facilities is in the public interest.

V. Financing and Issuance of Securities

163. NorthWestern entered into a new fully committed \$900 million 364-day Senior Unsecured Bridge Credit Facility (Bridge Facility). According to NorthWestern, the Bridge Facility will only be necessary if for some reason, the capital markets are unavailable or too costly to utilize. Following all regulatory approvals, NorthWestern intends to close the acquisition directly into permanent financing, and not draw on the bridge financing at all. Ex. NWE-11 pp. 29-30. NorthWestern considers it highly unlikely that there will be a need to draw on the Bridge Facility to finance the purchase; rather, it provides important insurance that NorthWestern will be able to close the transaction on a timely basis. The Commission approves the use of the Bridge Facility by NorthWestern in the unlikely event that the capital markets are

unavailable or are too costly to utilize. Any costs associated with the Bridge Facility to-date shall be borne by NorthWestern's shareholders.

164. The total amount of NorthWestern's securities outstanding and proposed to be outstanding will not exceed the fair value of NorthWestern's properties and business.

165. The issuance of securities to finance the transaction as proposed in the Application is consistent with the public interest.

CONCLUSIONS OF LAW

166. The Commission has full power of supervision, regulation, and control of public utilities in Montana. Mont. Code Ann. § 69-3-102. NorthWestern is a public utility subject to the jurisdiction of the Commission. *Id.* at § 69-3-101.

167. The services and facilities furnished by NorthWestern must be "reasonably adequate," and the charges made for service must be "reasonable and just." *Id.* at § 69-3-201 ("every unjust and unreasonable charge is prohibited and declared unlawful.").

168. The Commission may "investigate and ascertain the value of the property of each public utility actually used and useful for the convenience of the public." *Id.* at § 69-3-109.

In determining rates for property acquired by a public utility:

[T]he value may not exceed the original cost of the property, except that the commission may include in the purchasing utility's rate base all or some of an acquisition adjustment for certain property purchased by a public utility if the transfer of the property to the purchasing utility is in the public interest.

Id. In this case, the Commission approves the entire acquisition adjustment amount of \$346,921,775 for inclusion in rate base because the transfer of the Hydroelectric Facilities to NorthWestern is in the public interest. *Supra* ¶ 162.

169. All findings of fact in this Order are entered based on a preponderance of the evidence in the record. Generally, the Commission is "bound by common law and statutory rules of evidence." Mont. Code Ann. § 2-4-612(2). The statutory rules of evidence require findings of fact in a civil matter to be based on a preponderance of the evidence. *Id.* at § 26-1-403(2). Thus, the Commission's role in a contested case proceeding is, in part, to "enter findings of fact based on the preponderance of the evidence presented." *Mont. Evntl. Info. Ctr. v. Mont. Dept. of Evntl. Quality*, 2005 MT 96, ¶ 22, 326 Mont. 502; *see also Clement v. Mont. Dept. of*

Labor & Indus., 2008 MT 388N, ¶¶ 8, 10, 348 Mont. 370 (applying the preponderance standard in a contested case involving the revocation of a professional license).

170. The Commission has afforded due process to all parties and an opportunity to participate to the public throughout this proceeding. Mont. Code Ann. § 2-4-601. The opportunity for public participation was substantial, significant, and meaningful. *Supra* ¶¶ 18-19.

Preapproval

171. Because NorthWestern's predecessor "removed its generation assets from its rate base. . . prior to October 1, 2007," NorthWestern "may apply to the commission for approval of an electricity supply resource that is not yet procured." Mont. Code Ann. § 69-8-421(1). Known as "preapproval," NorthWestern may request this process before procuring any of the following "electricity supply resources":

- (a) contracts for electric capacity and generation;
- (b) plants owned or leased by a utility or equipment used to generate electricity;
- (c) customer load management and energy conservation programs; or
- (d) other means of providing adequate, reliable service to customers, as determined by the commission.

Id. at § 69-8-103(9).

172. The Commission is required to determine whether an application for preapproval "is adequate and in compliance with [its] minimum filing requirements" within 45 days of its submission. *Id.* at § 69-8-421(2); *see* Admin. R. Mont. 38.5.8228 ("Minimum Filing Requirements for Utility Applications for Approval of Electricity Supply Resources"). Unless "extraordinary circumstances require additional time," the Commission is required to "issue an order within 270 days of receipt of an adequate application." Mont. Code Ann. § 69-8-421(4). In this case, the Commission determined the adequacy of NorthWestern's Application within 45 days, and deemed it adequate effective February 14, 2014. *Supra* ¶ 6.

173. In order to evaluate an "electricity supply resource" proposed through preapproval, the Commission may "engage independent engineering, financial, and management consultants or advisory services." Mont. Code Ann. § 69-8-421(10). "The commission may consider all relevant information known up to the time that the administrative record in the proceeding is closed." *Id.* at § 69-8-421(6).

174. “The commission may approve or deny, in whole or in part, an application for [pre]approval of an electricity supply resource.” *Id.*

175. The Commission must either find that preapproval is in the “public interest” and that procurement of the resource is consistent with certain statutes and administrative rules, or describe why these findings could not be reached. *Id.* The Commission has found that preapproval of a resource is in the public interest “if the benefits outweigh the risks to ratepayers.” Or. 7159l, Dkt. D2011.5.41, ¶ 95 (Feb. 14, 2012); *see also* Or. 6925f, Dkt. D2008.6.69, ¶ 217 (Nov. 13, 2008); Or. 6943a, Dkt. D2008.8.95, ¶ 211 (May 19, 2009) (“weigh[ing] the risks and benefits to ratepayers of approving the Application.”).

176. In addition to finding that preapproval is in the public interest, the Commission must reach three specific conclusions in order to grant preapproval. Mont. Code Ann. § 69-8-421(6)(c)(ii). First, it must determine that the resulting rates will be “reasonable and just.” *Id.* at § 69-3-201. Second, it must determine that procurement of the electricity supply resource is consistent with the following statutory objectives:

- (a) provide adequate and reliable electricity supply service at the lowest long-term total cost;
- (b) 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;
- (c) identify and cost-effectively manage and mitigate risks related to its obligation to provide electricity supply service;
- (d) use open, fair, and competitive procurement processes whenever possible; and
- (e) provide electricity supply service and related services at just and reasonable rates.

Id. at § 69-8-419(2) (procurement objectives). Third, the Commission must determine that procurement of the resource is consistent with the following Commission rules:

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

Or. 7159l at ¶ 111; Or. 6943a at ¶ 259; Or. 6925f at ¶ 255.

177. “[I]f the commission has issued an order containing [these] findings,” it “may not subsequently disallow the recovery of costs related to the approved electricity supply resource based on contrary findings.” Mont. Code Ann. § 69-8-421(7). However:

Nothing limits the commission’s ability to subsequently, in any future rate proceeding, inquire into the manner in which the public utility has managed, dispatched, operated, or maintained any resource . . . as part of its overall resource portfolio. The commission may subsequently disallow rate recovery for the costs that result from the failure of a public utility to reasonably manage, dispatch, operate, maintain, or administer electricity supply resources in a manner consistent with 69-3-201, 69-8-419, and commission rules.

Id. at § 69-8-421(9).

178. A Commission order granting preapproval “may include a provision for allowable generation assets cost of service” and “other findings that the commission determines are necessary.” *Id.* “Generation assets cost of service” refers to “return on invested capital and all costs associated with the acquisition, construction, administration, operation, and maintenance of plant or equipment owned or leased by a public utility and used for the production of electricity.” *Id.* at § 69-8-103(13). NorthWestern’s “allowable generation assets cost of service” for the Hydroelectric Facilities shall include a return on equity of 9.8 percent, and costs of \$870 million associated with their acquisition. *Supra* ¶¶ 126-128, 161.

179. The Hydroelectric Facilities must be used “to serve and benefit customers within [NorthWestern’s] Montana service territory,” and “may not be removed from the rate base unless the commission finds that customers . . . will not be adversely affected.” Mont. Code Ann. § 69-8-426.

180. Subject to the conditions set forth in this Order, preapproval of the Hydroelectric Facilities is in the public interest, and NorthWestern’s procurement of the Hydroelectric Facilities “is consistent with the requirements in 69-3-201, the objectives in 69-8-419, and commission rules.” *Id.* at § 69-8-421(6)(c).

Issuance of Securities

181. A public utility’s “right to issue, assume, or guarantee securities and to create liens on its property in the state is subject to the regulation and supervision of the commission.” *Id.* at § 69-3-501(1). Only “when authorized by order of the commission and not otherwise” may a public utility “issue stocks and stock certificates and . . . other securities payable at periods of

more than 12 months,” and then only for certain purposes, including “the acquisition of property” or “any other purpose approved by the commission.” *Id.* at § 69-3-501(2).

182. A public utility must petition the Commission to authorize “the proposed issue, assumption, or guarantee of securities and the application of the proceeds therefrom for the purposes specified.” *Id.* at § 69-3-502. The Commission must approve the petition unless it finds that the proposed “transactions are inconsistent with the public interest,” their purpose is not permitted, or “the aggregate amount of the securities outstanding and proposed to be outstanding would exceed the fair value of the properties and business of the public utility.” *Id.* at § 69-3-504. However, approval does not “obligate the state to pay or guarantee in any manner whatsoever any security authorized, issued, assumed, or guaranteed.” *Id.* at § 69-3-507.

183. Although the Commission must generally act on such a petition within 30 days, it may “continue consideration thereof for a longer period” for good cause. *Id.* at § 69-3-503 (requiring a statement of “the facts requiring continuance for a designated period of time.”). Here, NorthWestern asked the Commission to waive the time limit and to consider the preapproval and issuance of securities simultaneously. Application p. 34 (Dec. 20, 2013). Clearly, the two requests are intertwined, as the request to issue securities to finance the transaction is contingent upon preapproval of the transaction itself; it would have made little sense to act on the former before acting on the latter. Furthermore, no party specifically addressed the issuance of securities or opposed NorthWestern’s request for waiver of the 30-day time limit. For these reasons, the Commission continued consideration of the petition to authorize the issuance of securities until now.

184. Because the proposed issuance of securities is consistent with the public interest for the purpose of acquiring property, and will not exceed the fair value of NorthWestern’s properties and business when added to amount of the securities outstanding, the Commission authorizes the proposed issuance of securities.

ORDER

IT IS HEREBY ORDERED THAT:

185. NorthWestern’s Application for preapproval of its acquisition of the Hydroelectric Facilities is approved in part, subject to the conditions set forth in this Order;

186. The approved rate base amount for the acquisition is \$870,000,000 which includes an acquisition adjustment of \$346,921,775;

187. NorthWestern's Application for authorization to issue securities in order to finance the acquisition of the Hydroelectric Facilities is approved;

188. The Commission approves an initial revenue requirement for the Hydroelectric Facilities of \$116,865,355;

189. Once the actual debt cost is known, Northwestern is required to file a compliance filing to reflect the actual issuance cost of the debt and a calculation of the updated revenue requirement, subject to the conditions set forth in this Order;

190. NorthWestern shall make a final compliance filing in December 2015 to reflect post-closing adjustments, the future conveyance of Kerr to the CSKT, and the actual property tax expense for the Hydroelectric Facilities; and

191. NorthWestern shall track revenue credits on a portfolio basis through the electricity supply cost tracker.

DONE AND DATED this 25th day of September, 2014, by a vote of 4 to 1.
Commissioner Kavulla concurring in part and dissenting in part.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION

W. A. GALLAGHER, Chairman

BOB LAKE, Vice Chairman

KIRK BUSHMAN, Commissioner

TRAVIS KAVULLA, Commissioner
(concurring in part and dissenting in part)

ROGER KOOPMAN, Commissioner

ATTEST:

Aleisha Solem
Commission Secretary

(SEAL)

Service Date: September 30, 2014

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER OF the Application of) REGULATORY DIVISION
NorthWestern Energy for Hydro Assets) DOCKET NO. D2013.12.85
Purchase) ORDER NO. 7323k

CONCURRING OPINION OF COMMISSIONER ROGER KOOPMAN

Looking at the proposed hydro acquisition from a generalized perspective these past nine months, it was quite natural to get excited over the prospects of these 11 dams returning to the ownership of a Montana-regulated utility. All the obvious attributes that were asserted then, remained equally valid at our moment of decision, and were buttressed by a general (albeit not unanimous) public enthusiasm for the purchase, expressed through 17 listening sessions and many hundreds of letters, phone calls, and e-mails.

These advantages include the reliability and price stability offered by 439 MW of hydroelectric power, dedicated exclusively to the needs of NorthWestern Energy (NorthWestern) customers. Hydro power is notoriously dependable, dams are exceedingly long-lived, and fuel costs (water responding to gravity) are non-existent. Moreover, the unknown costs (however misguided) of future carbon-related regulation and taxation are a non-factor where hydroelectric generation is concerned, since no “dreaded” carbon dioxide molecules are produced.

Then too, it’s comforting to know that, with the addition of the hydros, NorthWestern estimates all but 10 percent of the company’s load will now be supplied through utility-owned assets and long-term purchase contracts. While market-based supply (such as from long-term contracts with PPLM) is not necessarily the evil some people portray, reliance on the market does expose consumers to uncertainty. At present, market prices are lower than the costs that will be borne by rate-payers for the hydro

acquisition, and NorthWestern's own projections indicate that this will probably remain the case for at least the next 7 years – possibly longer. Still, both residential and business consumers place great value on rate stability and predictability, and the currently estimated 6 percent rate increase is a price most Montanans seem readily willing to pay.

For these reasons and others, I eventually determined that the benefits of the purchase clearly outweighed the risks, and joined the majority in supporting approval. While judging – from the best information available – that the acquisition was indeed in the public interest, it must be noted that much of this “information” was predicated on an assemblage of projections, assumptions, estimations, and political predictions that have the potential of being wrong. Thus, NorthWestern's valuation of the hydros and eventual purchase price was significantly based on speculation rather than on hard numbers.

This is not meant as a criticism of NorthWestern, for indeed, how can one say for certain how political trends and influences will affect carbon costs and other regulations? How can one know with any degree of certainty, what factors will affect the future market prices of electricity and electricity-generating fuels – let alone what seen and unseen technological advances may one day fundamentally change our entire energy landscape?

So we go with the best information available, recognizing that, given the speculative nature of the purchase, the Commission and commission staff were charged with an especially high degree of responsibility for scrutinizing every aspect of the proposal. This, I believe, we truly did. But concomitantly, it also means that if an approval is forthcoming, the Commission should take an active role in shaping the final outcome – partnering, if you will, with all parties to create a transaction that will be in the long-term best interests of all Montanans. In this second area, I believe the Commission missed some opportunities and could have done a better job. As it is, this Final Order reflects relatively minimal contributions by the Commission in modifying and strengthening NorthWestern's original application.

As I stated during our approval work session, it is not possible to craft “the perfect deal,” given so many questions that could not be fully answered, and we were certainly not requiring this of NorthWestern. However, the Commission did have an obligation to “blend and balance” the interests of the utility and the rate-payer, and to make

adjustments that “bonded” the legitimate interests of all parties into a strong and equitable transaction – while at the same time not jeopardizing the deal itself. A delicate process, to be sure. But to the best of our ability, we needed to “get it right.” Otherwise, there was little purpose to the previous nine months of hard work we, our staff, and the parties had just invested in.

In my view, what worked to somewhat undermine this process was the all-too-familiar mantra of NorthWestern that if the Commission altered things in any substantive way – such as not allowing the full acquisition price into rate base – the utility would be compelled to “walk away from the deal.” This threat of termination was ubiquitous, and was expressed in terms that limited Commission prerogatives and afforded commissioners as little room to maneuver as possible. (NorthWestern’s own later concessions are hereby noted.) As I stated during the work session, I felt NorthWestern’s “all or nothing, take it or leave it” posture was inappropriate, and did not sufficiently communicate the level of respect they needed to show for the job the Commission had to do. While I largely dismissed these threats as calculated histrionics, the Commission as a whole was evidently swayed by them to a greater degree than I believe was justified.

This Commissioner’s questions and concerns spanned a number of areas, leading me to conclude that the assumptions, projections and methodologies used by NorthWestern ultimately produced a valuation and price point for the dams that was at least \$50 to 100 million too high. I pointed to four areas of particular significance in this regard:

- 1) I do not believe NorthWestern did an especially good or exhaustive job in researching likely future carbon costs. Those calculations, in turn, resulted in placing as much as a 25-30 percent premium on the value of the hydro assets themselves.
- 2) I believe NWE’s annual capital expenditure (capex) estimates for the 11 dams was unrealistically low, and did not take into account unknown contingencies that could cause capex to dramatically spike in any given year. This, too, was a major factor in valuation.
- 3) I believe NorthWestern’s negotiation strategy may have led to a significantly higher successful bid than was needed. Moving from a rejected bid of \$740 million directly to a \$900 million offer seemed, at least on its face, unwise and unnecessary – particularly considering that NorthWestern was undoubtedly the most favorably positioned strategic buyer, with other bidders (if any) valuing the assets at lower

numbers. This alone may have resulted in overpaying by something in the range of \$50 to 75 million or more.

- 4) In evaluating the resource alternatives, NorthWestern utterly dismissed the coal assets (Colstrip), assigning them a negative value (based on the belief that the climate change chicken littles will forever rule American politics.) Furthermore, it appears that they made no attempt at a formal analysis of the market as a resource alternative in itself, again, simply dismissing it. It is difficult for the Commission to compare and contrast alternatives, when the utility itself has not satisfactorily done the work.

The Montana Consumer Counsel (MCC), based on its own legitimate concerns, proposed a series of recommended adjustments that this Commissioner found well-intended but not well-conceived. The MCC approach, in my judgment, visited too much uncertainty and potentially high penalties on the utility, and may have indeed rendered the acquisition uneconomic to NorthWestern. Had a risk-sharing approach like they proposed been a common Commission practice with prior pre-approval dockets, I might think differently. Under those circumstances, NorthWestern may have been a tougher negotiator, guided by a somewhat lower valuation. In this case however, with the negotiations completed, NorthWestern could only feel blindsided by the MCC proposals.

Inherently, there is a perversion of incentive when a regulated utility seeks pre-approval of a major capital acquisition such as this, since there is the underlying assumption that the full purchase price will be borne by the customer in regulatory rate base. Under the current “rules of the game,” the higher the purchase amount for which the utility receives Commission approval, the greater its guaranteed profit for the duration of the transaction – in the case of the hydros, 50 years. While I am not suggesting that NorthWestern intentionally inflated their hydros valuation to fatten profits, it is fair to say that the normal market risks and incentives that drive non-monopolistic, non-regulated companies to acquire assets at the lowest possible costs were somewhat blunted by the system under which the Commission, by law, must operate. The MCC, to its credit, tried to address this anomaly with its bold recommendations. Unfortunately, those approaches, in my judgment, were not workable. But that led me to conclude that while, for the purposes of this docket, the Commission must play by the rules it was given, future state lawmakers should consider creative solutions that re-invent those rules to allow for the

interplay of more cost-conscious, market-based incentives, that will in turn produce stronger utility companies, lower power bills and better served consumers.

Two amendments were ultimately offered by this Commissioner and two by Commissioner Kavulla forwarding the belief that some reasonable adjustments to NWE's proposed revenue requirement were in order. These modest reductions were aimed at lightening the load a bit on consumers, by acknowledging that there were areas where the utility's calculations and projections were problematic, thereby making it appropriate to call upon the company to shoulder at least a small measure of the risk otherwise borne by rate-payers alone.

The Commission majority rejected these amendments, primarily on the grounds that any Commission adjustments to NorthWestern's revenues might cause the hydro deal to fall through and NorthWestern to walk away. Respectfully, it is difficult for this Commissioner to envision a scenario where passage of an adjustment that reduces the utility's hydro-related net revenue from \$60 million annually to \$56 or 58 million would cause NorthWestern to disengage from this still extremely profitable deal.

Perhaps, had the back end of this approval process been organized a little differently, these or other modest improvements could have been incorporated into the original 5-page approval motion that formed the four corners of this Order. As it was, at least two commissioners had no hand in writing the motion itself, and were relegated to offering small amendments with little chance of success.

Indeed, this Commissioner had anticipated a more traditional, multi-day work session, where commission staff made presentations and were heavily engaged in the process, and where Commissioners had ample opportunity for vigorous discussion and debate on each pertinent topic. Confining the decision making process to part of one day, and informally limiting Commissioners to 30 total minutes of comment and questions, did not enrich the process, and did not, in my opinion, bring the most appropriate closure to the previous 9 months of robust communication and tireless effort.

While I am not in agreement with all things stated in this Order, I continue to believe that this acquisition is in the public interest, and I have signed it without serious reservation. Since so much in this docket stood on estimations, projections, and judgment calls, how the Commission's decision will ultimately play out is very much

unknown. We live in the present, trying to predict the future from whatever facts we have at hand. Those predictions will already be inaccurate 24 hours from now, based on events over which we have no control. We must rely on the collective wisdom of 5 commissioners and 35 dedicated staff, and on the expressed desires of the people of Montana. It is a process that, while far from perfect, works quite well.

It's my hope that we can say to our fellow Montanans that, at the end of the day, we did the very best job we could. We have now embarked upon an exciting journey, and history will be the final judge of our work.

ROGER KOOPMAN, Commissioner (concurring)

Service Date: September 26, 2014

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER OF the Application of) REGULATORY DIVISION
NorthWestern Energy for Hydro Assets) DOCKET NO. D2013.12.85
Purchase) ORDER NO. 7323k

DISSENTING OPINION OF COMMISSIONER TRAVIS KAVULLA

I dissent from this pre-approval order for two basic reasons.¹

First, I am skeptical of NorthWestern's valuation of the 11 hydroelectric dams and one storage reservoir (the Hydros) it wishes to purchase. A company ordinarily would have a strong incentive not to over-state the value of an asset it wishes to acquire. That is not the case here. The Commission's Order irrevocably places into consumer rates the \$870 million NorthWestern has asked for. The price consumers pay over the next few decades for these assets *should* be rooted in valid estimates of the assets' market value, but it cannot simply be assumed that the purchase price represents a fair market value.

Other businesses earn revenues based on a product's value in the market, not based on what they spent to make a product. NorthWestern plays the latter game, where a perverse economic incentive is at play; namely, the more the utility pays for an asset, the more it earns in profit on that asset. I thus treat the company's valuation skeptically as a matter of course.

Here, my suspicion is further heightened because a number of NorthWestern's assumptions, such as the added value of the Hydros insofar as they avoid carbon emissions, are optimistic and thinly evidenced. Those assumptions have fed a valuation that systematically overstates what a company actually subject to market forces would be willing to pay for the assets. NorthWestern ultimately asks the Commission and ratepayers to vouch for a deal that

¹ I dissent generally from the Order, but concur with respect to ¶¶ 112 through 119 and 170. See discussion *infra* pp. 22-23, 33.

promises large, known costs up front for speculative benefits to be realized only well into the future. I find that unacceptable, and will explore the details of this problem in depth below.

Second, and perhaps more importantly, my skepticism on the nuts-and-bolts of the valuation would be diminished if NorthWestern actually were required to stand by the predictions it is making. Unfortunately, this Order divests the utility of almost all responsibility in this regard. The Commission has cast a die, gambling that NorthWestern is right in its prediction that the cost of electricity resulting from the up-front and ongoing costs of the Hydros will be less over time than the price of power otherwise available on the market. Ironically, only NorthWestern's consumers—and not the company itself—will have to live with the outcome of that gamble. The company's own profit (about \$60 million in the first year alone) is disconnected from the rosy predictions it has made. Revenues will accrue to the company regardless of the asset's performance relative to the market. Regulation exists to balance—and if possible align—the interests of the utility and consumers. The Commission has failed to accomplish this objective.

Socializing NorthWestern's Business Risk

This important decision to absolve the utility of the risk associated with its business decision is something I will address first in this opinion, before moving to the particulars of the deal.

The rhetoric has flowed freely from the applicant in this proceeding about this “unique opportunity” to “secure these facilities for Montana” as “regulated resources” and “only charge consumers what it costs to generate power.”² These are pleasing bromides, but they have a dark side.

The present owner of the Hydros is not price-regulated by this Commission. PPL-Montana is able to charge whatever the market will bear for the facilities' production. Some years may be good, others may be bad—it is a risky business. Market prices today are at nearly an all-time low, and it is no real surprise that this merchant utility wishes to exit the market. The cost to PPL-Montana to run its dams and other power plants has increased slightly, while the price the company receives for the product has fallen dramatically. The buyer of these assets, the

²This type of rhetoric is shot through the written and live testimony, but can be found aplenty at NorthWestern's talking-points memo at DR PSC-312a, Attachment, p. 1, and at July 17 Tr. pp. 226-29, 244, and 266, and July 18 Tr. pp. 14-15, 38, and 52.

price-regulated utility NorthWestern, has a fundamentally different business model. Its revenues originate not from the market for electricity, but from its captive base of customers who will pay rates designed to collect every dollar of the up-front and ongoing costs associated with the Hydros.

The proposition that underlies this business transaction then, is simple: The government (i.e., this Commission) is severing the bond between an asset's performance relative to the market and the revenues the asset's owner will earn. In so doing, the Commission unencumbers the shareholders of the merchant utility from a risk and authorizes a generous payment to them. At the same time, the Commission redistributes that risk (which has never gone away, only moved) by socializing it to the monopolized customer base of the regulated utility.³

Essential consumer protections, such as those described later in this opinion, have been rejected in the Commission's order. So the regulated company's shareholders will bear none of the risk associated with the fundamental question of whether the purchase price the regulated utility has agreed to pay turns out to be a good or bad one in the scope of time. The investors—the property owners—have no skin in the game. Indeed, they have an all-but-guaranteed revenue stream associated with the property for the next several decades.⁴

It is strictly true that NorthWestern will only “charge consumers what it costs to generate power.” This happy claim also happens to be meaningless, because the cost that consumers will pay is largely determined by the purchase price, which is premised on an inflated valuation and which by law may never subsequently be disallowed or questioned after this Order's issuance.⁵ A buyer and seller motivated in opposing directions of a low and high sales price, respectively, would be a check against an inflated (or deflated) value. But that is not what we have here. No one doubts PPL-Montana's desire to obtain a high price for these assets, while NorthWestern is bereft of any motivation other than pride and a fear of a negative regulatory outcome to negotiate

³ By “socializing” the risk I mean that the risk of this business decision is being vested in and spread across NorthWestern's ratepayers; ironically, the plants will be the property not of those people, but of NorthWestern.

⁴ See Or. 7323k ¶¶ 116-119 (Sept. 26, 2014). The only sense in which the utility's revenues related to the Hydros are not guaranteed is if some future commission denies recovery of operating or future capital costs because of imprudence. In practice, this rarely occurs to any significant degree and in any case the cost-recovery of the principal (the \$870 million) and a profit on it are unquestionably guaranteed as a legal matter. It is a credit to the Order in this matter that it has kept the door to a later commission finding that disallows future capital expenditures because the utility failed to anticipate them in the context of this docket.

⁵ “Notwithstanding any provision of this chapter to the contrary, if the commission has issued an order containing the findings [necessary to grant pre-approval of an acquisition], the commission may not subsequently disallow the recovery of costs related to the approved electricity supply resource based on contrary findings.” Mont. Code Ann. § 69-8-421(7).

a low purchase price. If the purchase price for the facilities and its supporting valuation stand on a weak foundation—and they do, as will be explored in detail below—consumers likely will end up overpaying for these assets, even while the company that owns those assets is indifferent to whether they perform poorly against the market and other generating alternatives.

The Commission's Order turns the free market on its head. Nearly every other owner of an investment property—the gasoline refiner, the cattle rancher, the commercial real estate owner—bears the risk that the value of what his property yields in gallons, head, and square feet will be less or more, one year to another, depending on the market. With the fluctuation in the value of the product that a property produces, the underlying property also shifts in value: more when its product is expected to command a high price on the market, and vice versa. Those buying the products take the obverse risk, and while it is occasionally inconvenient for either the buyer or seller to depend on the free market in this way, it is generally accepted that it is better than the alternative, where government intervenes to fix a price, establishing (in the case of monopolies) what is inevitably a false value to an asset and infringing on the free choice of both consumers and sellers.

There are few precedents for a government to do what we are doing. Only a relatively short time after the divestiture of this property to the free market, we are marching back in, removing it and its production from the marketplace, and shackling it to a captive set of customers at a substantial mark-up from its book value (an “acquisition premium” in the phraseology that has been presented to us). To engage in such a government-sponsored social experiment—one fundamentally predicated on a notion of central planning, that a utility commission *knows best*—the evidence must be persuasive indeed. It must especially be persuasive given the raw size of this deal, which increases by two-thirds the fixed costs that consumers are captive to.⁶ The applicant in my view has fallen well short of its burden in convincing me that this is a sound approach.

The Order offers barely a word on the important topic of who takes on the business risk inherent in this transaction—the business or its consumers. This rift of opinion separates me philosophically from the Order's authors, who take as a given that risk in this monopoly setting

⁶ NorthWestern's total electric utility rate base for 2013 is \$1,298,097,493. NorthWestern Energy Corporation, 2013 Annual Report.

should be borne by the customers of the regulated utility. I disagree strongly with this tacit assumption.

The Market Value of the Hydros

The remainder of this opinion departs from the essential question of whether a business should bear risk in making a business decision, and moves to grapple with the details of the acquisition. In particular, this section will evaluate whether adequate support exists to support NorthWestern's request to build into rates for decades to come the \$870 million the company has requested.

Book Value as an Indicator of Market Value

One method of valuing property, used in taxation and elsewhere, is to calculate the property's original cost minus depreciation. Applied here, that method would suggest a value to the Hydros of \$553 million.⁷ NorthWestern has agreed to pay PPL several hundred million dollars in excess of this value.

I agree with NorthWestern that this is not an accurate method of valuing electric generating units. Book value for utility property "means the cost of such property to the person first devoting it to public service."⁸ That is the now-bankrupt Montana Power Company, whose last-updated book value from 1999 was used by NorthWestern and revised upward to account for the substantial capital investments PPL-Montana made in the plants during that company's tenure of ownership. Two factors attenuate the connection between book value and market value: the time elapsed between first placing these assets into service and today, as well as the fact that capital upgrades in the Hydros may be unrelated to the delivery of market value (but instead for compliance with re-licensing, for instance). Therefore, it is not a useful metric, although the fact that such a wide gap between book value and supposed market value exists is cause for greater scrutiny.

⁷ Ex. NWE-17, Ex. KGK-3

⁸ *Id.*, p. 5.

Discounted Cash Flow

Discarding book value, then, how can one decide what a fair market value for the Hydros is? A discounted cash flow analysis (DCF) is “a fundamental valuation methodology broadly used by investment bankers, corporate officers, university professors, investors, and other finance professionals,” and this proceeding is no exception.⁹ It is the central analysis of both NorthWestern and the Montana Consumer Counsel. For the Hydros, the DCF identifies the difference between the present-day value of 20 years of future revenues—derived by multiplying anticipated future production in megawatt-hours by the expected market price—and the same time period’s costs, from operations and maintenance (O&M) to capital expenditures to finance costs. A terminal value is assigned to the assets at the end of the DCF’s lifespan. The cash flow resulting from the difference between revenues and costs, and the terminal value, are discounted back to present-day dollars. This represents the assets’ net present value, and it should resemble the agreed-to purchase price.

There are several variables that are highly influential upon these assets’ net present value—carbon regulation’s effect on the forward market price curve, anticipated future capital expenditures, and the discount rate or cost of capital—and NorthWestern’s assumptions with respect to each of them will be evaluated in turn in this opinion.

However, it is first necessary to underscore the importance of the DCF to NorthWestern’s case. DCF was the only analysis conducted before a bid was submitted that arrived at a specific number—in the first round of bidding, \$740 million; in the second, \$900 million.¹⁰ The DCF analysis submitted by NorthWestern’s employee-witness on this question arrives at an \$826 million valuation.¹¹ Brian Bird, the utility’s chief financial officer, described the DCF as “the primary analysis” the company conducted prior to completing a bid.¹²

Indeed, apart from a so-called “Comparables” analysis undertaken by the company’s outside financial advisor, the DCF analysis was the only substantial work NorthWestern

⁹ Joshua Rosenbaum & Joshua Pearl, *Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions, Second Edition* (Hoboken: John Wiley & Sons, 2013), p. 125.

¹⁰ For ratemaking purposes, \$870 million is being charged to the captive consumer base, after the removal of \$30 million associated with Kerr that NorthWestern expects to be paid next year from the Confederated Salish & Kootenai Tribes and PPL-Montana.

¹¹ Ex. NWE-7, Ex. JMS-1

¹² July 11 Tr. at 7:13.

employees or advisers conducted that pertained to the crucial question of the market value of the assets. That is to say, this analysis asked the following question: What would a bidder subject to the forces of a competitive market, as opposed to a utility like NorthWestern with a guaranteed cost-recovery structure, pay for this asset? If the debate over risk-taking is set to the side—if it is assumed that the Commission will simply bless or reject a price, and foist the result of the former action onto consumers exclusively—this is the central question to be asked. “The single most widely accepted rule for the governance of the regulate industries is to regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible.”¹³ The Commission steps into the shoes of the marketplace, and the validity of the DCF analysis is therefore essential to the question of whether the purchase price is just and reasonable.

NorthWestern has faced scrutiny of the inputs used in the DCF. In response, the company has chosen to de-emphasize the very analysis that is central to its case, instead arguing that the DCF is but one of many analyses.¹⁴ This convenient attempt at re-direction is not persuasive. The Commission should not be forced to play whac-a-mole on the important subject of valuation analysis, where when one critical input is found to be flawed in the DCF, the company is allowed to point to another analysis, either less robust or conducted after NorthWestern agreed to purchase the resources, as an initiative in distraction. The merits of analyses other than DCF nonetheless are addressed below.

In this proceeding, witnesses Joe Stimatz, a company employee, and Ahmad Masud, a Credit Suisse employee and financial advisor to the utility, conducted several iterations of DCF analysis throughout the process that led up to NorthWestern’s bid and afterwards. In most ways their analyses are identical. For instance, no variable associated with the revenues side of the DCF changed between Mr. Stimatz’s and Mr. Masud’s analyses. Thus, many critical inputs—the dams’ expected production and the amount of capital infusions necessary to keep them running, as well as the price of carbon imputed to forward market prices—go unquestioned between one valuation exercise and another. Scenarios that do modify certain inputs were conducted by Mr. Masud, subjecting Mr. Stimatz’s DCF to sensitivities concerning the discount rate (applied to future revenues and costs to arrive at a present-day value) and the terminal value of the plants.

¹³ Alfred Kahn, *The Economics of Regulation: Principles and Institutions*, (Cambridge: MIT Press, 1988), Vol. 1, p. 17.

¹⁴ For example, see Ex. NWE-10, pp. 4-5 and NorthWestern’s opening statement at hearing, July 8 Tr. at pp. 24-26.

NorthWestern's Estimate of Carbon Price

Perhaps the most important variable in the valuation of the Hydros is what effect the anticipated environmental regulation of carbon dioxide emissions will have on the future market prices. Carbon price is relevant to this proceeding, because the dams avoid carbon emissions, but could sell into a market that one day may be higher-priced because of this kind of regulation. NorthWestern has estimated that market prices will rise substantially because of this regulation. Its analysis places the Hydros' extra, carbon-related value at \$247 million.¹⁵ This constitutes nearly three-tenths of the purchase price NorthWestern has agreed to pay for the assets.

Carbon price is inexorably built into the price of the Hydros—a tax paid up front on an environmental externality that presently has only a very small, even non-existent, market price in Montana, but which may someday have a substantial one. NorthWestern forecasts a \$21 per ton price or tax associated with carbon dioxide emissions, starting in 2021, escalating at 5 percent annually. Building this assumption into the market price forecast causes it to rise significantly. Without a carbon price, the 2021 market price forecast is \$42.57 per megawatt-hour; with carbon price built in, it is 31 percent higher, at \$55.95 per megawatt-hour. The effect of the carbon price is even greater in future years, because of its high escalation rate, causing the price estimated for 2033 to be 44 percent higher than it otherwise would be without a carbon assumption.¹⁶ Because the Hydros' value is a measure of the future market prices their production could command, the carbon-related inflation of market prices also inflates the Hydros' present-day market value in NorthWestern's analysis.

If carbon regulation does occur to the degree that NorthWestern argues that it will, the utility's customers will have pre-paid an equivalent amount to avoid exposure to a direct carbon tax later in time; this will have been, in retrospect, largely a neutral proposition. If carbon regulation imposes even greater costs than NorthWestern today predicts, consumers will be insulated from the portion of that tax that exceeds the anticipated cost that NorthWestern has baked into the dams' cost to consumers. And, conversely, if carbon regulation pans out to be less significant than NorthWestern's predictions, then customers will have paid the equivalent of

¹⁵ Ex. MCC-1 p. 12.

¹⁶ Ex. NWE-7 p. 27 and Ex. JMS-2. NorthWestern has escalated carbon price by 5 percent annually, in contrast with its use of a 2.5 percent escalator in its capital-expenditures budget and the company's use of 2.1 percent for annual inflation.

a steep carbon tax, even when one has not been implemented to that degree. It is this last possibility that I believe is most likely to transpire as the result of the flawed assumptions NorthWestern has made and the lack of protections included in this Order.

There is little dispute that it is appropriate to assign some kind of cost to carbon emissions, if only to represent that emitting resources bear risk.¹⁷ This would be unquestionable in a docket involving a coal-fired resource, which would likely have direct costs associated with emissions; here, the question is more attenuated because the impact of carbon is relevant only if it were to impact wholesale market prices that are the yardstick for the non-emitting resource's value, and to which the utility would more often have to resort were it not to own power plants like the Hydros outright. In dockets where the Commission decides what rates small renewable generators should be paid, NorthWestern has argued and the Commission has agreed that no carbon price should be built into their payments.¹⁸ In the pre-approval docket for Spion Kop Wind Farm, the Commission noted that the wind generator performed well even when compared to a market forecast where carbon price inflators were left out.¹⁹

NorthWestern now wants to be treated differently. And in this Order the Commission has given the utility what it wants, arbitrarily reversing its previous approach—that carbon price is too hypothetical a future market cost to be built into consumer rates today.²⁰ Since the Commission insists on a carbon price, it is necessary to ask whether the *specific* price that NorthWestern has estimated for carbon is a reasonable one, and to question its supposed influence on market prices.

Finding a Reasonable Value for Carbon

NorthWestern's selection of a carbon price seems to have been largely arbitrary. The company has offered no good explanation for its particular value, rather than a lower (or a

¹⁷ The Commission has consistently directed NorthWestern to consider them in the planning process, beginning a decade ago, when the concept of assessing the risk of greenhouse gas emissions of coal- and gas-fired generators first appears in the Commission's comments on the utility's resource procurement plan. See Written Comments Identifying Concerns Regarding NorthWestern Energy's Compliance with ARM 38.5.8201-8229 (Aug. 17, 2004), pp. 9-10, 15, 20, in N2004.1.15.

¹⁸ Or. 7199d ¶¶ 42-43 (Dec. 7, 2012).

¹⁹ Or. 71591 ¶¶ 118-19 & Tables 1-3 (Feb. 12, 2012).

It is also noteworthy that the other large Commission-regulated electric utility in the state, Montana-Dakota Utilities, incorporates no carbon price into its expected forecast—and has never had its thinking on the matter challenged by the Commission.

²⁰ Or. 7323k ¶¶ 88-90.

higher) one. The price for carbon selected by NorthWestern for this docket, \$21 per ton in 2021, is based on a *sensitivity* of the Energy Information Administration's (EIA's) energy outlook. In that study, the purpose of the carbon price is to test what happens to the energy industry if and when a \$0, \$10, \$15, or \$25 per ton price on carbon is put into place.²¹ These scenarios are not intended to be predictions of a future carbon market. Rather, they operate as a kind of stress test, exposing the changes that occur in the energy economy when the carbon variable is moved up and down. EIA itself factors in carbon price to its energy outlook merely by estimating that capital costs of emitting resources are 3 percent higher than they would otherwise be; there is no explicit price-per-ton carbon forecast.²² NorthWestern, for its part, did not use this assumption or the more conservative assumptions from EIA, instead opting for the agency's second-highest-price carbon sensitivity. There seems to have been only a cursory discussion of the merits of this selection versus any other in the company's Electricity Technical Advisory Committee, which is tasked with informing the selection of important variables like this for NorthWestern's planning exercise.²³ Worryingly, those leading the planning process—who, for the integrity of that process, must be expected to neutrally select the most plausible values for important inputs like carbon—were aware that the Hydro transaction was ongoing, and must have known that a higher price for carbon would make the resource more justifiable.²⁴ Few if any other utilities in the region use the EIA's carbon price sensitivities as their own best guess of what price tag carbon emissions will have. Forecasters tend to evaluate a range of public policy proposals that would regulate carbon in some way and ascertain a cost to carbon based on what the enactment of those proposals would cause in the market.²⁵ This appears to be an industry standard that NorthWestern ignored.

²¹ See description of Greenhouse Gas Cases in "NEMS Overview and Brief Description of Cases," provided in response to PSC-120. NorthWestern's \$21.11 per ton is the \$15 per ton value, escalated at 5 percent until 2021, when NorthWestern brings the value online in its model.

²² July 17 Tr. at 14:11-19

²³ The 408 pages of minutes and presentations of the ETAC are all but devoid of reasoning to support the specific price selection. See 2013 Resource Procurement Plan, Vol. II (December 2013).

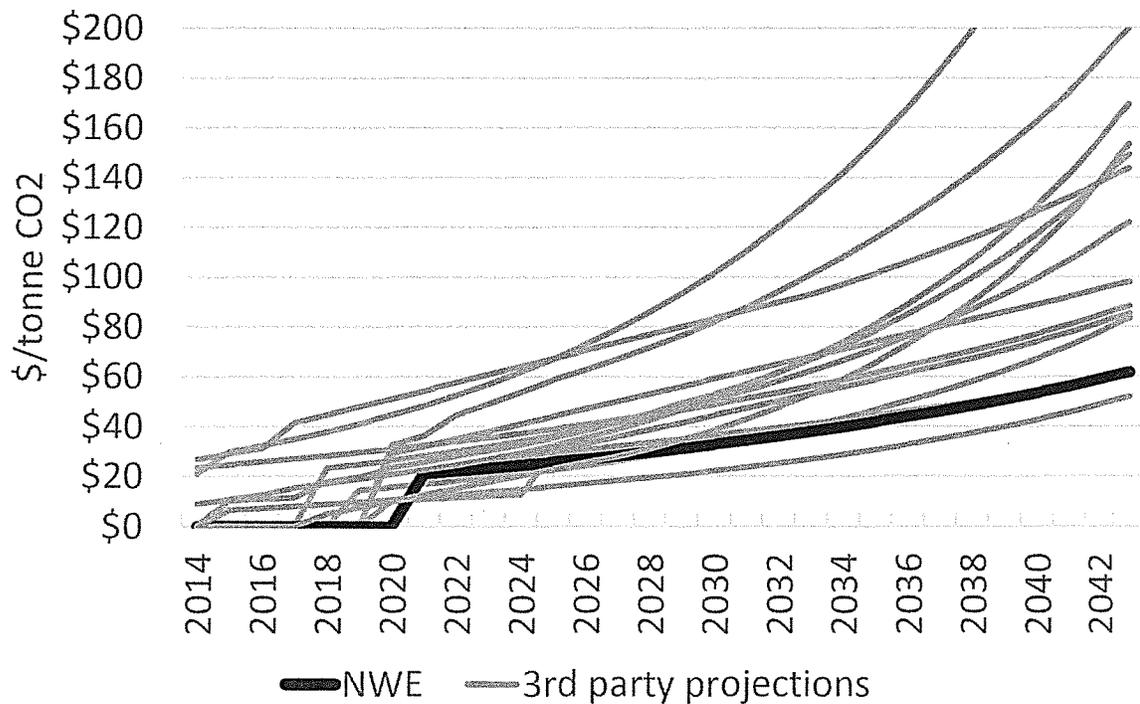
²⁴ July 17 Tr. at 17:24-18:4

²⁵ For instance, Puget Sound Energy's (PSE's) cases derive from several public-policy scenarios: existing law (no carbon price); the EPA's work on the social cost of carbon (both a lower and a higher figure); and the price consequences of a cap-and-trade scheme like the one Congress considered several years ago. See PSE 2013 IRP, p. 4-8. Administratively noticed at July 9 Tr. pp. 48-50.

The work of other utilities in this respect is substantially similar in that it details multiple scenarios based on a variety of public policy approaches; NorthWestern appears to be the only utility in the sample with a single, deterministically selected scenario.

When challenged on the carbon issue, NorthWestern's response largely has been to fall back on the rhetorical posture that it is reasonable to price carbon, without providing a defense of the selected value itself. NorthWestern ignores the crux of the issue: why it has selected the particular price forecast it has, instead of something else. In its one quantitative attempt to show that the actual number NorthWestern is using is reasonable, the company has put forward in its Resource Procurement Plan ("RPP" or "the plan") what is ostensibly a comparison between NorthWestern's forecast carbon price and that of other utilities in the region. In that figure, NorthWestern's carbon-price trajectories compare favorably to those of other utilities.²⁶

NorthWestern's Depiction of Its vs. Other Utilities' Carbon Price Forecasts



The plan is silent as to the methodology behind this analysis, but a reasonable reader might suppose that NorthWestern is comparing its expected carbon price to the other utilities' expected carbon price. This supposition, however, would be wrong.

²⁶ The graph is compiled from RDR PSC-073, where NorthWestern was asked for the source data underlying Figure 6-11 in the 2013 Resource Procurement Plan.

NorthWestern, as was later revealed through discovery and testimony at hearing, uses a methodology that causes it to overstate other utilities' expected carbon prices. Specifically, NorthWestern compares the value for carbon price it has selected from the EIA's work to *averages* of other utilities' various carbon price forecasts, including many which are unlikely to transpire. Every utility has a value for carbon that it expects is more likely than another value; this is often called the "planning case" or "base case" or "expected case."²⁷ In NorthWestern's analysis, these other utilities' expected values are but one data point in an average that includes and accords equal weight to those utilities' other forecasts, even though the other utilities themselves apparently view those outlying forecasts as less likely to occur. In addition to this, NorthWestern further biases its analysis in an upward direction by excluding any forecast from its average if it assigns a zero-dollar value to carbon price.

To use a concrete example, one can look to PacifiCorp, the largest investor-owned utility in the region. That utility establishes a "Base Case" from prices that are "consistent with recent projections from third party forecasters."²⁸ This forecast features a carbon price that comes online in 2022 (near when NorthWestern's does) but at a lower value, \$14.51 per ton versus NorthWestern's \$21.11 per ton, escalating at a lower rate. PacifiCorp also has four other carbon price forecasts: a No Carbon Price, a High Price, a Hard Cap/Base Gas Price, and a Hard Cap/High Gas Price. When NorthWestern depicts what is supposedly PacifiCorp's carbon-price prediction, NorthWestern take an average of all of those forecasts but excludes the No Carbon Price forecast. This results in a \$44.65 per ton cost as the supposed PacifiCorp prediction.²⁹ In other words, NorthWestern's analysis suggests that PacifiCorp's estimated carbon price is three times the amount of what PacifiCorp's own best guess at carbon price actually is. NorthWestern's analysis is simply dishonest. This methodological flaw leads the analysis to consistently overstate what other utilities *actually* predict is the future cost of carbon, making it appear that NorthWestern's own value for carbon is conservative by comparison.³⁰

²⁷ It is noteworthy that NorthWestern has not run this variable through multiple scenarios, but instead has only created a triangular distribution around its pre-determined, single price forecast; this flaw will be discussed below in the section about PowerSimm.

²⁸ PacifiCorp's 2013 Integrated Resource Plan, p. 167. Administratively noticed at July 9 Tr. pp. 48-50.

²⁹ DR PSC-073a. This opinion converts short tons to tonnes (i.e., metric tons) to make for a direct comparison with NorthWestern, which uses the latter, but which this opinion writes as 'tons' to use the familiar spelling.

³⁰ The intervenor HRC/NRDC simply relays this analysis unquestioningly, reproducing it in Dr. Tom Power's testimony. To that it adds another graphical representation—based on research by Synapse Energy Economics—which purports to show NorthWestern's forecast versus "reference cases" of other utilities. This appears to be a more honest methodology than NorthWestern's, but the sample includes utilities far afield from the Pacific

Reality suggests otherwise. NorthWestern's expected carbon price is in fact significantly higher than what most other utilities in the region predict. If one compares apples to apples—NorthWestern's expected price to other utilities' expected price—NorthWestern's levelized price per ton over its planning period is \$18.47 per ton, compared with an average of \$10.66 per ton for the other investor-owned utilities doing business in the region. NorthWestern's estimate is 73 percent higher than the regional average.³¹ In fact, NorthWestern uses one of the highest price forecasts in the entire West: the second-highest of the dozen utilities NorthWestern compares itself to, for a nearly decade-long period when the carbon price first comes online.

NorthWestern's Response in Support of Its Excessive Forecast

Confronted with its misrepresentation of other utilities' carbon price forecasts, NorthWestern argued two points at hearing, and one in post-hearing briefing. First, witness Gary Dorris notes that utilities' estimates of a zero-cost to carbon have been rejected by the Washington Utilities and Transportation Commission (WUTC) as unrealistic.³² Second, Dr. Dorris claimed that the Environmental Protection Agency's (EPA) proposed regulation of carbon dioxide under Section 111(d) of the Clean Air Act bolstered the case for a higher number.³³ And in briefing NorthWestern claims that Evergreen Economics, the Commission's consultant, has essentially ratified the utility's carbon price forecast.³⁴ None of these responses is on point or persuasive.

To Dr. Dorris's point on the EPA's rulemaking, it is reasonable to expect that the various utilities' integrated resource plans anticipated the EPA regulation, because many if not all of them were published after President Barack Obama's executive declaration that the EPA would

Northwest and—given that it is supposedly a representation of “reference cases”—puzzlingly includes forecasts with names like “AK [Arkansas] Entergy Green Growth.” Ex. HRC-1 pp. 9-12.

I have little confidence in basing my judgment on this study, which is several steps removed from the source documents that identify a utility's carbon price forecast. It is this single scrap of evidence the Commission cites to, to find NorthWestern's carbon price forecast reasonable. See Or. 7323k ¶ 89.

³¹ These numbers were derived by PSC Staff using record evidence and the administratively-noticed integrated resource plans of other utilities, using the Payment and Net Present Value functions of Excel. The function is expressed as $-\text{PMT}(\text{Discount Rate}, \text{Number of Periods}, \text{NPV}(\text{Discount Rate}, \text{All Future Payments}))$, where the discount rate is NorthWestern's proposed cost of capital and the timeframe of levelization is NorthWestern's 30-year planning horizon.

³² NWE-5 and NWE-6 are, respectively, the Washington Utilities and Transportation Commission (WUTC) acknowledgement letter to Puget Sound Energy regarding the utility's integrated resource plan (IRP) and WUTC staff's letter to Avista regarding its IRP, respectively.

³³ July 9 Tr. at 108:20-111:24, 115:3-117:21, 139:5-140:11, 150:10-151:8, 169:18-171:6.

³⁴ NorthWestern Energy's Post-Hearing Initial Brief (Aug. 1, 2014), pp. 16-17.

conduct a rulemaking on the subject. There is no reason to think, and no evidence offered, that these utilities more poorly internalized this political reality than NorthWestern did. In fact, as discussed above, those other utilities often consciously arrived at carbon price forecasts based on possible public policy enactments, including previous EPA work on the cost of carbon. NorthWestern did no such thing. Additionally, no witness in this proceeding claims to have read and understood the proposed 111(d) regulation, making it difficult to credit expert testimony's predictions about its possible effects.

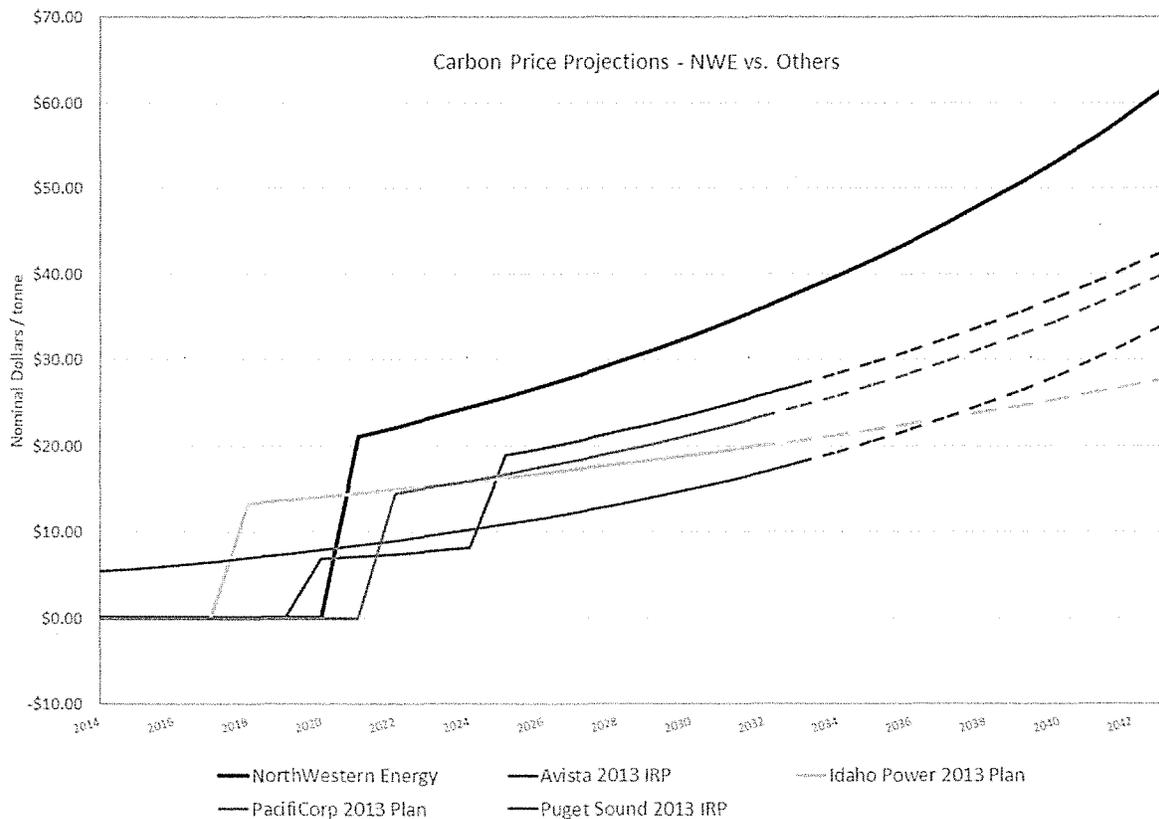
A few things are apparent from the rule, however. Large hydroelectric facilities clearly do not count toward meeting emissions goals in the proposed rule.³⁵ More importantly, the rule on its face calls for the *addition* of generating capacity in the form of renewables and the *reduction* of demand through energy efficiency. For Montana, a doubling in the amount of megawatt-hours generated by renewables and a tripling of energy efficiency savings would occur, according to the EPA's Best System of Emissions Reduction on which the state's standard is based.³⁶ Like other federal and state policies that have mandated or provided tax incentives for the construction of renewable supply resources, even when demand is lagging, the proposed 111(d) regulation may well add supply and reduce demand on the wholesale market. When this occurs, of course, prices will fall. The costs of the 111(d) regulation are certainly real, but they may well be internalized by the emitting resources—built into the revenue requirements of regulated utilities that own coal plants, or absorbed as an operating cost by the handful of independent owners of coal plants—with little effect on a wholesale market that becomes less and less directly related to these embedded or hidden regulatory costs with each new governmental mandate. Dr. Gary Dorris for NorthWestern and Dr. John Wilson for the Montana Consumer Counsel—neither of whom had read the rule by the July hearing in this matter—disagree on the effects of the 111(d) regulation, the former conveniently thinking it supports

³⁵ Carbon Pollution Emissions Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule, 79 Fed. Reg. 34830 (June 18, 2014), p. 200. Administratively noticed at July 9 Tr. p. 107.

³⁶ *Id.*, Goal Computation Technical Supporting Document, Data File: Goal Computation, Appendix 1. Since the hearing on this matter adjourned, the Montana air quality regulator has released a white paper suggesting that to comply with this regulation, no coal plant would close and an even greater amount of renewables and energy efficiency would be added to Montana's energy profile than the EPA's proposed rule anticipates. "Options for Montana's Energy Future: Creating jobs and delivering clean air in a changing economy," Sept. 2014. The prospect of government-induced additions of supply—disconnected from a price signal and affecting the wholesale market in possibly depressive ways—should not be taken lightly. The question of carbon is so important, and NorthWestern's testimony so misleading about what the 111(d) rule may portend, that the administrative record ought to be re-opened to admit this document and other important references to the proposed regulation. Admin. R. Mont. 38.2.4805.

NorthWestern's high price forecast, the latter asserting the opposite. There is, in any case, no evidence to suggest the proposed 111(d) regulation will increase carbon prices beyond the levels that other utilities have predicted, and what available evidence does exist supports a conclusion that the 111(d) regulation imposes costs not easily translated into the wholesale market for electricity.

The second point Dr. Dorris makes is that two utilities in NorthWestern's comparative sample, Puget Sound Energy and Avista Corporation, use forecasts with no carbon price and that this is not a reasonable assumption. He has a point. If one discards those estimates as unreasonable, and instead takes the next-highest value for carbon in those utilities' plans, the regional average increases to \$13.96 per ton. NorthWestern's estimate of future carbon cost remains a full one-third higher than the regional average, even when other utilities' estimates are adjusted to make NorthWestern's look more favorable.



NorthWestern in its brief ignores entirely the evidence surfaced at the hearing about the misrepresentation of other utilities' carbon forecasts. Instead, NorthWestern points to a memorandum from the Commission's consultant which it contends supports its carbon price

forecast. This is simply untrue. The Evergreen Economics memo concludes that the carbon price forecast “may” be reasonable.³⁷ The primary purpose of the memo is to evaluate the Powersimm model, and not necessarily the inputs to the model. The memo’s discussion, much of it favorable, is referenced in the section of this opinion that discusses the Powersimm model. Suffice it to say here, Evergreen Economics did not conclude that NorthWestern’s carbon price forecast was reasonable, the consultants were not asked to double-check or do the work of comparing NorthWestern’s carbon price forecast to other utilities, and the consultants were not present in the proceeding after the early stages when many of the important facts about the methodology of NorthWestern’s carbon price forecast were surfaced, including at the live hearing. The Evergreen Economics memorandum is an important piece of evidence, but not for the purpose of validating the carbon price forecast of NorthWestern.

Finally, putting predictions aside, reality does not bear out NorthWestern’s carbon price forecast either. A utility can today go to the market, buy a block of energy for delivery in a specified month of the year 2021, and yet avoid paying for the carbon price that NorthWestern assumes will be in place, inflating electricity prices, during that year. This is possibly the most persuasive evidence against NorthWestern’s liberal claims about carbon price. Notably, the forward market curve for 2021 is very similar to NorthWestern’s market price forecast—with carbon *removed*.³⁸ When confronted with the choice to believe a price founded on what actually may be purchased in the market versus believing an analysis that is at best random and at worst dishonest, I prefer the former.

NorthWestern has not demonstrated with anything close to substantial evidence that its selection of a value for carbon is sound. Additionally, NorthWestern has overstated the price of carbon every single time it has forecast the variable in its biennial Plans, ever since it began incorporating this prediction into its resource planning process. The Commission seems to think

³⁷ Ex. PSC-4 p. 12.

³⁸ NorthWestern, for instance, forecasts a \$14.63 per megawatt-hour carbon adder for a December 2021 purchase, resulting in a hypothetical \$68.45 per megawatt-hour price. Meanwhile, the most recent market quotations provided before the hearing show that an on-peak trade occurred for that month for \$57.60 per megawatt-hour. If the carbon price is deducted from the hypothetical NorthWestern price, it is \$58.26, much closer to what a purchaser can actually buy energy for in that month. Compare the market quotations available in the response to PSC-156a, fourth update (July 3, 2014) and Ex. NWE-7, Ex. JMS-2.

NorthWestern apparently chose to hypothesize a carbon price’s on-line date as 2021 simply because, when the DCF analysis was first put together, 2020 was the final year for which the forward market price curve, with its transparent and transactional prices, was available. See 2013 Resource Procurement Plan, Vol. II, p. 274. This is yet another way in which NorthWestern’s analysis on the subject is arbitrary and, in the end, unsupported.

that the fact that NorthWestern's prediction today is lower than its previously sky-high predictions, which never came to pass, is a sign that it has now got it right. It is an invalid and bizarre logic that leads one to judge favorably a forecast conducted by a party merely because it is more realistic than a previous forecast that has turned out to be demonstrably untrue.³⁹ Today also, NorthWestern's estimate is significantly higher than the regional average estimate, and it builds in a price for carbon that does not exist in the current forward market curve. NorthWestern's self-justifying assumptions with respect to the likely price of carbon emissions should be rejected.

Regulatory Approaches to Correcting NorthWestern's Overstatement of Carbon Price

There are two regulatory approaches that would ensure that consumers were not obliged to pay a steep carbon tax, when a direct market-price adder of such drastic proportions is unlikely to manifest. The first is to simply disallow from rate base the amount of capitalization that NorthWestern's analysis suggests is linked to carbon, beyond that level which is reasonable to accept as a consensus carbon-price forecast. Discarding NorthWestern's assumption, and replacing it with a carbon price forecast that is more realistic in the view of other utilities in the region, tamps down the inflationary effect that NorthWestern's modeling has wrought on the supposed valuation of the hydroelectric resources. This would result in a rate base adjustment of about \$60 million, out of a total of \$247 million of the Hydros' rate base that is tied to the predicted value of avoided carbon emissions.⁴⁰ Even this approach allows the utility to rate base and begin earning a return *immediately* on a capital outlay whose only value in a competitive market is tied to expected, *future* increases in electricity costs due to carbon regulation. Such an adjustment would merely prevent NorthWestern from earning a return on a value that has not *and is never expected to* materialize in the market, according to more plausible carbon price forecasts.

The second approach is similar to what the Montana Consumer Counsel has proposed. Dr. Wilson has suggested that the entire amount attributable to carbon, \$247 million, take on the profile of risk capital for NorthWestern—that whether the company obtains a return of and on

³⁹ See Or. 7323k ¶¶ 88-89.

⁴⁰ $\$247 \text{ million} - (\$247 \text{ million} * (\$13.96 \text{ per ton consensus forecast} \div \$18.47 \text{ per ton NorthWestern forecast})) = \60.3 million . The resulting amount in rate base would be approximately \$810 million, not the \$870 million proposed.

that amount depends on whether carbon prices come to pass as NorthWestern has predicted. I agree with the principle that NorthWestern ought to have some skin in the game. However, asking a regulated utility to bear the entirety of this amount as a risk is unreasonable. A regulated utility does have an upside limited by an authorized return on equity. Its risk should be commensurate to the limitations on reward. It would be reasonable to permit the pre-approval, which may not by law be subsequently disallowed, of an amount reflecting about three-quarters of the carbon price, along with the *possibility* of earning a return of and on the remaining one-quarter, or \$60 million, of the purchase price that is linked to the future cost of carbon. NorthWestern would be able to be paid this additional amount, including associated deferred returns, if and only if NorthWestern can demonstrate in a future proceeding that the wholesale market prices that are the basis in this docket of the hydroelectric resources' valuation have internalized a carbon price that is at least as large as NorthWestern has predicted.⁴¹ In this scenario, like in the outright rate-base disallowance presented as the first option, NorthWestern would already be earning a profit as if a substantial carbon tax had been enacted, and the risk that inheres to the utility will be associated with the question of whether or not an even higher carbon tax, of the type NorthWestern has predicted, will come to pass. This approach apportions the riskiest aspect of NorthWestern's risk-laden decision properly upon the person (NorthWestern) making that decision, while handing off a more conventional risk that other utilities appear to agree exists in the market to the utility's consumers.

NorthWestern's Estimated Capital Budget

Like carbon price, the likelihood and size of future capital expenditures, or cap-ex, plays an instrumental role in defining the present-day value of the assets. The more cap-ex that is likely, the lower the present value, and *vice versa*. Here, NorthWestern has been criticized by both the Consumer Counsel and the Commission's own engineering consultant, to varying degrees, for understating the likely cap-ex required to keep the assets in good working order over the course of time. The budget itself largely derives from the seller's estimates, verified by NorthWestern's due diligence exercise.⁴² I agree with the Montana Consumer Counsel that it is suspicious that NorthWestern's cap-ex forecast has the future owner of the assets spending only

⁴¹ A variant of this condition was rejected on a 3-2 vote of the Commission, with myself and Commissioner Koopman voting in favor of it. See the Minutes for the Sept. 4, 2014 meeting of the Commission.

⁴² See the Confidential Information Memorandum available at DR PSC-001 pp. 60-62.

one-quarter of what the immediate prior owner did on an annual basis.⁴³ Additionally, NorthWestern's cap-ex budget is highly detailed in the years through 2017, after which it lapses from itemization to a generic annual \$8.5 million figure, escalating at 2.5 percent through the forecast period.⁴⁴ The lack of specificity is another cause for concern, especially when PPL-Montana, in its related attempt to sell its coal-fired generating assets, was able to give a more in-depth, specified capital forecast that avoids lapsing into generics until 2022.⁴⁵

Unlike the company's carbon price forecast, however, the capital budget forecast has been the subject of a highly detailed explanation and defense by NorthWestern.⁴⁶ The company has offered again and again its confident opinion in its due diligence and the cap-ex forecast. This could offer some comfort to the Commission, but this posture of confidence is impossible to square with NorthWestern's allergic reaction to the ratemaking solution the Consumer Counsel has proposed.⁴⁷ That condition would allow NorthWestern to obtain unquestioned recovery of the budget of which it is so confident, with the caveat that the utility itself would be responsible for significant cost overruns of this budget. These postures—a high degree of confidence in a cap-ex budget, and an unwillingness to accept the consequences of that cap-ex budget being dramatically flawed—cannot both be genuine.

The real point of concern with the cap-ex budget is not in the small or middling items that are to be expected. It is the possibility that a large capital infusion would be required to keep one or more dams operating in response to an unforeseen event. Witnesses have responded to this possibility in a variety of ways. Fred Szufnarowski, consultant for the Commission, has said such large expenditures are a commonplace within the context of hydro relicensing and that "if [NorthWestern] was one of our clients... we would have advised them to include money [in their cap-ex budget] for relicensing."⁴⁸ Notably, NorthWestern has budgeted no cap-ex for the next relicensing, of the Thompson Falls facility, in 2025.⁴⁹ Including in the valuation analysis a hypothetical, large capital outlay of the type conducted for the rehabilitation of Rainbow Dam, which was a license requirement, would cause a \$151 million decrease in the present-day value

⁴³ Ex. MCC-1 p. 39.

⁴⁴ DR PSC-018.

⁴⁵ DR PSC-092(b).

⁴⁶ A total of 311 pages of testimony and exhibits have been filed on this subject, not counting responses to data requests.

⁴⁷ Ex. NWE-36, p. 3.

⁴⁸ July 10 Tr. at 41:2-4.

⁴⁹ July 14 Tr. pp. 207-14.

of the dams.⁵⁰ Dr. Wilson posed the right question, when he asked whether another buyer—one without the guarantee of cost recovery of future cap-ex undertaken to keep the dams in good working order—would have ignored the possibility of a large, future expenditure of this nature.

NorthWestern has largely dodged that question. While substantially more credible than the witnesses on the carbon price question, NorthWestern's witnesses here were candid that it was not their job to say that events they view as unlikely should be built into the capital forecast as contingencies.⁵¹ This is a contradictory posture, as the Consumer Counsel points out, to the many other places in this docket, where NorthWestern has incorporated uncertainty into its analysis by placing a risk-based price on the possibility of an outlying event's occurrence.⁵²

Numerous witnesses for the company were asked to either identify a catastrophic event that could occur, but which the cap-ex forecast does not anticipate, or to opine on the likelihood of an event requiring a \$100-million-plus expenditure occurring. Gary Wiseman, after noting that “we don't know what we don't know”—which is the very reason one budgets for contingencies—offered that a “seismic event” could badly damage a facility, but handicapped this as a one-in-2,500-year event.⁵³ John VanDaveer gave the prospect of a high-cost event's unforeseen occurrence a less than one-in-ten probability.⁵⁴ Mary Gail Sullivan undertook a “Probability Analysis” of certain environmental risks, such as costs associated with remediating the Black Eagle Superfund site.⁵⁵ That exercise resulted in values that could be quantified in a cap-ex or O&M budget allowance. NorthWestern did not explain why only certain capital risks, and not others such as re-licensing, warranted this treatment. Previous annual reports from the Montana Power Company, which owned the dams prior to PPL-Montana, make abundantly clear that re-licensing costs were expected to be substantial and planned for well in advance of re-licensing occurring.⁵⁶

⁵⁰ Ex. MCC-1, Ex. JW-4. Dr. Dorris quantified its net-present-value impact at \$150,570,584 in Ex. NWE-4, Ex. GD-2, pp. 1-2.

⁵¹ All the due diligence witnesses appear to have made this point. DR PSC-076 and July 14 Tr. p. 169 (Rhoads); July 15 Tr. p. 245 (Wiseman); July 16 Tr. p. 87 (VanDaveer); July 16 Tr. p. 183-84 (Sullivan); July 16 Tr. p. 206 (Miller).

⁵² Response Brief of the Montana Consumer Counsel, pp. 6-7, 10-12.

⁵³ July 15 Tr. pp. 253-54.

⁵⁴ July 16 Tr. pp. 88-89.

⁵⁵ DR PSC-342 and PSC-031.

⁵⁶ MPC estimated the future costs of the Missouri-Madison relicensing to have a net present value of \$158 million in its 1997 annual report to the Federal Energy Regulatory Commission. Montana Power Company, FERC Form 1: Annual Report of Major Electric Utilities, Licensees, and Others for Year 1997 (Apr. 28, 1998), p. 123.5. Administratively noticed at Tr. 7/14, 220.

Only late in this proceeding—indeed, in the final day of the live hearing—did NorthWestern’s CEO Bob Rowe offer an accommodation in this regard: an agreement that the company, if it blew out the top end of its cap-ex budget in any of the first six years, would only expect consumers to pay for cap-ex in excess of the budget, without a profit on that incremental amount.⁵⁷ (Under this concession, the utility would continue to earn a profit on any plant additions within its budget.) This is an ungenerous and puzzling concession. There was no reason afforded as to why the condition would only be limited to six years, which is longer than the term of the specified cap-ex budget, but significantly shorter than the period of time in which the first relicensing will be undertaken. Mr. Rowe merely speaks vaguely about being “much more comfortable with the budget over the first few years.”⁵⁸ The raw arbitrariness of this proposed condition, sprung on the Commission all of a sudden in the eleventh hour after hundreds of pages of pre-filed testimony, means that it should not be simply accepted with unquestioning gratitude. It suggests that NorthWestern, contrary to its earlier absolutism on the question, can tolerate certain conditions surrounding this question. In any case, the risk in question here is not particularly a risk within the first six years, but a risk either associated with a known occurrence like relicensing beyond the sixth year (but within the known time horizon) or an amorphous risk associated with the knowledge that out of a dozen dams, some large problem is likely to surface within the depreciation lifespan that will require a large capital outlay.

There has been no persuasive argument offered, likewise, that reconciles the utility’s confidence in its forecast with its refusal to stand by that forecast should it turn out to be wrong. Absent a good reason to the contrary, it is proper that NorthWestern—the party *making* this business decision, the only party with such a large team of experts—takes accountability for the business decision it is making, in which it evinces so much confidence. Allowing this business decision not to come home to roost in some way on the business making the decision would be perverse.

Protecting Consumers from Unpredicted Cap-ex Exposure

The Montana Consumer Counsel offered a simple condition to correct NorthWestern’s approach, which would have limited the utility’s ability to recover cap-ex in consumer rates if

⁵⁷ July 17 Tr. pp. 253-54 & July 18 Tr. pp. 45-46.

⁵⁸ July 17 Tr. at 254:6-7.

the company substantially exceeded their own forecast.⁵⁹ I supported this condition, and believe that the flaws inherent to it—the possibility that NorthWestern would not make needed investments because it would violate the cap—could be counteracted by watchful regulation and the possibility of even greater disallowances were those investments not made.

Instead, the Order adopts a watered-down and tentative condition in this respect. Nonetheless, it is probably the passage of the Order that offers the greatest protection to the consuming public. It provides, “[i]n considering the prudence of future expenditures exceeding these forecasts, the Commission may consider – in addition to what NorthWestern knows or should know at the time an investment is made – what expenditures NorthWestern could have reasonably anticipated or expenditures it failed to reasonably anticipate and quantify in this proceeding.”⁶⁰ Although I would have preferred something stronger, I agree with the Order that it is not only fair—but expected—that future commissions be empowered unambiguously to hold NorthWestern to the representations it made to us. There is plenty of evidence in this record which future commissions may rely on—some of which I offered above—that make clear that NorthWestern witnesses knew about potential liabilities but nonetheless chose not to budget for them. This evidence may be crucial to disallowing future costs should those possibilities turn out to be reality, and it is only proper that this Order—after giving so much to the company—opens the door to that regulatory treatment as a condition of pre-approval. I therefore concur with paragraphs 112 through 119 of the Order.

Cost of Capital, Terminal Value, & EBITDA as a Check on Over-Valuation

Another important input to the valuation analysis is the cost of capital. A high cost of money will drive down the market value of an asset, from a lens of a purchaser who can ill-afford to park his money in an investment that only generates revenues well into the future; a low cost of capital works the reverse effect. Interestingly, NorthWestern’s witnesses disagree with the cost of capital that NorthWestern’s rival purchasers could bring to bear on a transaction such as the Hydros acquisition. Brian Bird, NorthWestern’s Chief Financial Officer, testified that these competitors could marshal lower-cost money to outbid NorthWestern; this was something Mr. Bird said he was concerned about as he prepared his bid.⁶¹ Meanwhile, Ahmad Masud, the

⁵⁹ Ex. MCC-1, pp. 44, 47-48.

⁶⁰ Or. 7323k ¶ 117.

⁶¹ Ex. NWE-11 p. 16.

company's outside financial advisor, presents testimony that these merchant utilities' cost of capital is higher than regulated utilities'.⁶² The latter of these propositions makes sense. As has been described throughout this opinion, regulated utilities are almost systematically shielded from risk by their regulators. Their risk profile, and therefore the return that investors and bondholders demand, is lower than a more risky firm whose revenues depend on a volatile market.⁶³ In other words, NorthWestern's bidding behavior may have been predicated on an unfounded belief about the cost-of-capital requirements of their would-be competitors, leading NorthWestern to overbid.

One should use Mr. Masud's cost-of-capital values for unregulated utilities as a starting point, and they range between 6.5 and 7.5 percent, resulting in a range of DCF results that span from \$770 million to \$1,003 million.⁶⁴ These ranges leave untouched the biased assumptions on carbon price and capital expenditures; the substitution of more reasonable assumptions would reduce the valuation substantially, leaving the purchase price above the highest point of the range.

Usually, DCF analyses forecast cash flows only over a shorter period—five years, for instance—and then render a terminal value as a multiple of EBITDA.⁶⁵ Here, the forecast period is much longer: 20 years. As the Order notes, Mr. Masud was asked whether using an industry-standard, shorter forecast period would have permitted him to reach the same conclusion about the reasonableness of the purchase price; he answered he would “have to do the math,” but that “the answer is most likely yes.”⁶⁶ This is not a comforting answer.

⁶² July 11 Tr. pp. 176-77.

⁶³ Even if those merchant firms tend to be more leveraged, the general rule is true, according to Mr. Masud's testimony.

⁶⁴ Ex. NWE-13, Ex. AM-1, p. 16. Mr. Stimatz's DCF, which is the foundation of Mr. Masud's in almost all other respects, uses a cost of capital of 7.14 percent, which represents NorthWestern's weighted average cost of capital employed for regulatory and ratemaking purposes. Mr. Stimatz's DCF result was \$826 million, less than the purchase price.

⁶⁵ July 11 Tr. p. 130. A company's forward revenues, less costs, (or free cash flow) is “typically projected for a period of five years.” Rosenbaum & Pearl, *Investment Banking*, p. 125.

⁶⁶ Or. 7323k ¶ 29. Mr. Masud's claim is predicated on the assumption that, because the terminal value will only have to be discounted back over 5 years and not 20 years, the present-day value of that terminal value will be greater in a 5-year DCF, offsetting the loss of Years 6-20 of cash flow that would be present in a 20-year DCF. In fact, since the Hydros' market earnings are so tied up in assumptions of higher revenues in years well out into the future, driven by a carbon cost, Mr. Masud's assumption turns out not to be true. PSC Staff ran Mr. Stimatz's DCF on an industry-standard 5-year basis, with all other assumptions held constant, and returned a net-present value in the \$400 million range, less than half what ratepayers are being asked to absorb.

Sometimes, companies are valued by a multiplication of the expected EBITDA. Here, the expected EBITDA of the Hydros would have to be multiplied 20x to reach the agreed-to purchase price. Mr. Masud, in his analysis of comparable statistics of would-be competitive bidders for the Hydros, offered nothing close to this range. The mean is 10.5x and the highest of the sample is 14.9x.⁶⁷ Applying that multiple would result in a valuation hundreds of millions of dollars less than what NorthWestern has agreed to pay. Asked in discovery whether there were any examples at all of such a high multiple in a precedent transaction, Mr. Masud provided two examples which are close to the 20x EBITDA multiple but still fall short of that lofty number. In any case, both of the examples are where regulated utilities acquired merchant properties.⁶⁸ There is no reason to believe that those transactions were devoid of the invidious political-economic problem we have in this proceeding. The bottom line is that no evidence has been offered that suggests a competitive firm would have paid a purchase price that is so great a multiple of anticipated annual earnings—paying in the here and now, only for an expectation of gains well into the future. Only a regulated utility, with its government guarantee of cost recovery, could make such a deal work.

Other Alternatives to the Hydros or the Market

Dr. Tom Power, testifying on behalf of the intervening parties Human Resource Council District 11 and the Natural Resources Defense Council, assumes that the forward market price provides an insufficient price signal to build capacity that is nonetheless needed and, he asserts, will be built through the cost-guarantee structure of the regulated utility.⁶⁹ Even assuming that these government interventions are a truer version of the market than forward market price quotes, Dr. Power fails to offer a DCF or other analysis that substitutes part of the market price with an alternative or avoided resource that could be compared against the Hydros.

The primary additional capacity in this regard is likely to be natural-gas-fired plants, both peaking simple-cycle and baseload combined-cycle combustion turbines (SCCTs and CCCTs). In this respect, Dr. Power attempts to impeach the usefulness of NorthWestern's DCF analysis in a certain respect, in that it is based solely on the Hydros' value relative to forward market prices, but offers no real alternative. This is yet another iteration of the whac-a-mole game where,

⁶⁷ Ex. NWE-13, Ex. AM-1, p. 17.

⁶⁸ DR PSC-345(c).

⁶⁹ July 17 Tr. pp. 90-91, 137.

presented with an unconvincing analysis, NorthWestern and its hearing-room allies try to shift the focus to some other, less explored analysis to bootstrap their arguments. The nagging question about the Hydros' supposedly favorable comparison to a CCCT option concerns what NorthWestern has projected a CCCT to cost. Its cost estimates have changed dramatically since the utility's last plan—if the 2011 resource plan numbers were used, a CCCT would in all likelihood out-compete the Hydros—and the 2013 Plan's cost details are well in excess of a similar plant's costs from Montana-Dakota Utilities 2013 Integrated Resource Plan. NorthWestern forecasts a \$1,425 per kilowatt cost of a GE 7-series CCCT, one-third higher than the cost MDU estimates of \$1,069 per kilowatt for a turbine of the same series in its planning exercise. Additionally, both NorthWestern's fixed and variable O&M costs exceed MDU's estimate of the same.⁷⁰ It all begs the question: Is there any major variable in the valuation that NorthWestern has not manipulated so that the Hydros turn out the apparent winner?

Dr. Power and others are right to be concerned with exposure to the power market, but nowhere does any pro-Hydros witness grapple with the fact that the most likely alternative to the Hydros is a medium- or long-term contract of the type PPL-Montana previously entered into with NorthWestern. That contract had a seven-year term, with fixed prices escalating slightly over time. Market price spikes (or sudden depressions) were insulated against. This type of tool substantially hedges the risk of temporary market volatility. No one in this proceeding has explained why this should be dismissed as a viable alternative.

Comparables Analysis

NorthWestern's financial advisor also presented something he labeled a Comparables analysis—a comparison of the capacity cost (in dollars-per-kilowatt) of the Hydros compared with other hydroelectric resources in North America.⁷¹

⁷⁰ NorthWestern RPP 2013, Vol. 1, p. 5-32. Montana-Dakota Utilities Integrated Resource Plan, Vol. IV, Attachment C, p. 15. The Commission has the discretion to take administrative notice of the latter document. NorthWestern attributes the increased cost of its CCCT from the 2011 to 2013 Plan to a belated realization—made only after the CCCT had been selected as the preferred resource in previous Plans—that a CCCT needed to be air-cooled, and not water-cooled. 2013 RPP, p. 5-29. Again, were the CCCT to be held up as the primary alternative for purposes of valuing the Hydros (and not the market, as NorthWestern proposed in its pre-bid analyses), there would have been many questions about this assumption. Why, for instance, would NorthWestern not be a position to acquire the rights for the use of water currently associated with PPL-Montana's Corette Plant, to be mothballed next year?

⁷¹ Ex. NWE-13, Ex. AM-1, p. 18.

These assets only appear comparable insofar as they are all dams. They operate in different markets (meaning they get less or more per megawatt-hour), they generate at different average capacity factors (rendering a dollar-per-kilowatt comparison meaningless), they are of vastly different ages (some brand new, others like the Montana Hydros quite old), and they have different dispatch capabilities (run-of-the-river plants like the Montana Hydros produce only energy, others appear to be capable of providing capacity and ancillary services). None of these differences are in any way accounted for in this simplistic analysis.

Even if it could be accepted that these assets are comparable, the Montana Consumer Counsel has noted inconsistencies between one NorthWestern witness' representation of an asset's purchase price and what another NorthWestern witness has identified as its price.⁷² The testimony on this approach to valuation is simply unreliable.

The only asset in the Comparables analysis that sells into the same market as the Montana Hydros is the 40-megawatt portfolio of hydroelectric assets built in 1976 and 2006 that was sold in 2012 to Innergex Renewable Energy Inc. for a price of \$68 million. These assets are newer than the Hydros, but they nonetheless sold for less money on a dollar-per-kilowatt basis than the Hydros (\$1,700 per kilowatt compared with \$1,980 per kilowatt).⁷³ Applying that comparable asset's value to the Hydros would result in a valuation of about \$750 million, substantially less than what NorthWestern is requesting to rate-base in this proceeding.

The Powersimm Model

Finally, the most complex analytical tool used in this proceeding to value the Hydros is the Powersimm model, a proprietary piece of software owned and (in this matter) entirely operated by Ascend Analytics.

There are several initial flaws with the use of Powersimm for reasoning what a fair market value for the Hydros is. First, Powersimm does not purport to demonstrate what a would-be competitor could or would buy the Hydros for; it is a valuation tool only inasmuch as they are assumed embedded at a particular price in NorthWestern's existing portfolio, serving its existing

⁷² It appears Mr. Masud failed to convert Canadian to U.S. dollars. Compare the Manicouagan River facility in Ex. NWE-13, Ex. AM-1, p. 18 to its depiction in Allen Otto's testimony, Ex. NWE-19, Ex. AO-2, p. 41.

⁷³ *Id.* and July 11 Tr. p. 186. The price for the NorthWestern Hydros is derived by (\$870 million/439 MWs of capacity without Kerr Dam, which will be transferred next year to the Confederated Salish & Kootenai Tribes). The approximately \$750 million valuation derives from (439 MWs * \$1.7 million per MW of capacity).

loads. This hampers its ability to be a meaningful tool to address the question of market value laid out in the introduction to this opinion.

Second, Powersimm was used to assess the value of the Hydros only after NorthWestern agreed to buy the assets. Any after-the-fact justification should arouse skepticism. Here, the planning model requires numerous inputs to be decided upon by the employees or contractors of NorthWestern Energy, before the model operates stochastically to flex those inputs into a range of values in an attempt to grapple with the uncertainty inherent in the selection of such variables. Those employees were aware their company had agreed to buy the Hydros, and they presumably understood that emphasizing certain variables and de-emphasizing others could make the acquisition look better or worse compared to alternatives. There is nothing wrong with that. It is basic human nature. But it is also why resource planning is undertaken *before* a resource selection is made as a matter of course, not after-the-fact as a justificatory effort. After all, could an outcome really be imagined where the company's resource planning exercise ended up selecting a resource other than the one that the planners' superiors had already agreed to purchase for a particular price?

Finally, and most importantly, the principle that applies to all computer modeling software here maintains: Garbage in, garbage out. Powersimm appears capable of grappling with certain variables that have an abundance of historic data, such as natural gas price, in a highly useful way. That is not the case for carbon price. The largely arbitrary selection of a carbon price forecast—described in detail above—was fed into the model which simply triangulated the value, performing model runs with carbon as high as double the input price (about \$42 per ton, beginning in 2021) and as low as zero. Since the triangular distribution distributes other carbon prices symmetrically on either side of the pre-selected price point for carbon, the effect of the modeling is simply to reinforce what has been deterministically selected in advance.

The model's main promise is that it helps utilities, regulators, and others cope with uncertain variables by taking the probability-weighted average of costs exceeding the mean in the runs of the model and placing them into a category of costs it labels "the risk premium."⁷⁴ This is problematic in two ways. First, it does not actually address the accuracy of the pre-selection of a price point in an example like carbon. Second, beyond reinforcing the selection, it

⁷⁴ July 9 Tr. p. 18.

only accounts for *upward* risk—because only costs in excess of the mean are factored into the risk premium. So the points at which carbon price, through the modeling runs, exceed the DCF price forecast are incorporated into the “risk premium” associated with the market alternative to the Hydros, but these are not offset by the possibility that carbon price might be less than what NorthWestern has predicted, which would make the Hydros’ price look less attractive than the market. In all, this method adds another \$135 million of “risk premium” on top of the already \$247 million attributable in the fixed-price DCF to the carbon variable.⁷⁵

In its assessment of risk, Powersimm imputes a great deal of it to the open market. That is not entirely a fair representation, given the possibility of obtaining a risk-hedged long-term market contract. Nonetheless, one can concede it is true that market volatility—driven largely by weather’s effects on energy and demand—is very real and should be encountered in a stochastic modeling exercise like the one Powersimm promises. The problem is that Powersimm treats the Hydros as virtually unencumbered by risk. Powersimm does not subject to its uncertainty stress-tests the possible need for capital for the Hydros, for instance. Nor does it credit markets with the ability to move not only up in a volatile manner, but down in the same way. As with carbon, only the upward trends—the probability of costs exceeding the mean—are lumped into the “risk premium.” Therefore, it is hard to see how Powersimm is not categorically biased in favor of utility-owned resources. It does not meaningfully quantify the uncertainty associated with the scenario we face here: that an asset whose output is weather-dependent with possibly unpredicted capital-cost exposure down the road, may underperform a market with a well-explicated uncertainty profile. The latter is deemed “risky” in the model, and the former’s risks are understated.

Competitive Solicitation

The Order declares that Commission rules that require competitive solicitations should be waived or ignored in order to allow this bilateral acquisition.⁷⁶ These rules exist for good reason. They mitigate the possibility of self-dealing by allowing others to offer their products as a check against the perverse incentive of overstating the value of a utility acquisition. They should only

⁷⁵ DR MCC-160 and July 9 Tr. 99. 34-35.

⁷⁶ Or. 7323k ¶¶ 157-158. The rule in question is Admin. R. Mont. 38.5.8212 “Resource Acquisition.” *Also see* Mont. Code Ann. § 69-8-419(2)(d), The public utility shall “use open, fair, and competitive procurement processes whenever possible.”

be waived in exceptional circumstances, and this process has suffered from the lack of a check against NorthWestern's self-serving claims about the Hydros' market price.

The primary argument that the rule should not apply here is that NorthWestern did not control PPL-Montana's bidding process and that there was no time to conduct a competitive solicitation. I disagree with the premise of this argument. There is only limited available transfer capability on the transmission lines that run out of the State of Montana to serve loads elsewhere in the country. Roughly half of PPL-Montana's generating capacity—about 1,200 megawatts of thermal and hydro assets—must be sold into the Montana market or not at all.⁷⁷ The main purchaser for this is NorthWestern. In this case, the monopsony (the sole buyer of a product) exercises as much or more power than the monopoly seller of power. It helps that the monopsony has a trump card in the form of self-built generation at a cost guaranteed to be recovered in rates, should the monopoly ever attempt to play hard-ball and withhold sales to the largest purchaser.

Given this context, the record is notably devoid of evidence that NorthWestern was not in a position to indicate to PPL-Montana that it would not be playing the game on its terms, but rather—knowing that the assets were for sale—would be holding a competitive solicitation into which PPL-Montana could either offer its assets for sale or offer a long-term contract for the assets' production, under PPL-Montana's continuing ownership. Of course that latter outcome—perhaps the most likely outcome of a competitive solicitation—would have deprived NorthWestern of a profit opportunity, since it only stands to profit off of owned assets and not on power purchase agreements, the costs of which are passed through dollar-for-dollar to consumers. I am not persuaded that in this circumstance the competitive solicitation requirement should have been waived.

The Authorized Return on Investment and Capital Structure

The authorized return on equity allowed by the Order is 9.8 percent.⁷⁸ This is a small reduction from the company's request of 10.0 percent. Regulation has failed to keep up with the

⁷⁷ July 10 Tr. p. 103. Mike Cashell refers to there being 650 MWs available of west-bound transmission capacity, as well as 300 MWs available north-bound on the Montana-Alberta Tie Line. This is not sufficient to move PPL-Montana's production out of state; as well, the MATL line is largely subscribed by a merchant wind farm in northern Montana.

⁷⁸ Or. 7323k ¶ 128.

changing cost of capital. Borrowing costs are at their lowest level perhaps ever, and equity investors seeking to invest their liquid assets somewhere have looked to regulated utilities—almost riskless investments with a guaranteed return. This has increased the availability of capital and reduced its cost to utilities looking for investors. These market trends are real, but the regulator-authorized return on equity (ROE) is established through this kind of quasi-judicial proceeding, where the real world's downward trend of money's cost is often not captured in a commission's order.⁷⁹ That is exactly what is happening here.

There is a lazy tendency in any ROE award to simply replicate the last-authorized reward. That is what we have done.⁸⁰ Little real analysis has been brought to bear on this question. That is unfortunate because every 10 basis points' adjustment in the ROE award (moving it from 9.8 to 9.7 percent, for instance) is worth the better part of a half-million dollars annually to NorthWestern or ratepayers.⁸¹

In this proceeding, NorthWestern has used evidence that measures the expected earnings of a proxy group of utilities, drops low performers, and thereby forces the group's average estimated return upwards. I agree with the Montana Consumer Counsel that these results are systematically biased and distortive of the returns that investors actually expect in the market, which should be a basis for our decision.⁸² Additionally, much of the ROE analysis revolves around a self-referential notion that one should set a regulated utility ROE by looking to the level at which other regulators are setting regulated utility ROEs.⁸³ Step out of the Bizarro World of regulated utilities for a moment, and into the Kantian ethic that what one should do is dictated by that action's ability to be universally replicated and still have a correct outcome, and the logic of this approach falls apart. It is not a valid exercise to ascertain the cost of money by making it equivalent to the ROE awards established by government regulators. This would not be so influential a question were the purchase price not so large, and were the acquisition without

⁷⁹ It is every bit as likely that the reverse trend would occur where regulation fails to keep up with a rising cost of capital, but that is not the circumstance we face today.

⁸⁰ Or. 7323k ¶ 126.

⁸¹ Based on the return on a \$870 million up-front investment, resulting in a ~\$410,000 difference for every 10 basis points' adjustment to ROE.

⁸² Response Brief of the Montana Consumer Counsel, p. 18.

⁸³ Ex. NWE-34 pp. 6-7. July 11 Tr. pp. 56-57.

much in the way of risk inhering to the company's shareholders. In this vein, a lower-than-typical ROE is justified—somewhere in the neighborhood of 9.5 percent.⁸⁴

Another important consideration that affects the company's overall authorized rate of return is its capital structure. The Order authorizes a capital structure of 52 percent debt and 48 percent equity.⁸⁵ I believe this emphasizes equity investment too much.⁸⁶ Equity investors are paid at a higher return than bondholders because their incomes are taxed and they are regarded as a more risk-seeking class, demanding a greater return. Their investments are wiped out in a bankruptcy proceeding before bondholders, for instance. Here, as has been explored thoroughly, the transaction in question has little risk associated with it. It should be expected to be financed with more debt. Ironically, PPL is more heavily leveraged than NorthWestern, with 65.5 percent debt to 34.5 percent equity.⁸⁷ In other words, the present owner of the facility—a risk-taker in that regard, whose revenues depend on the market price of its product and not on a government-guaranteed revenue requirement—nonetheless has an investment profile with fewer equity investors paid for the act of risk-taking. Allowing a higher return by associating more equity with NorthWestern's investment is yet another example, in a deal rife with the syndrome, of NorthWestern's being paid a substantial reward for a risk that does not exist.

The Risk of Competition from Consumer-Generated Power

Although it has lacked the attention that other important topics received in this proceeding, one issue that was raised—when a NorthWestern witness was questioned about what risks the company did face—is that power generation on the part of consumers or associations of consumers may someday erode the demand for power supply from the regulated utility NorthWestern.⁸⁸ I am grateful that the Commission's Order does not confer a guarantee of the

⁸⁴ A motion was offered to adopt a 9.5 percent ROE, and was rejected on a 3-2 vote, with myself and Commissioner Koopman voting in support of it. See the Minutes of the Commission meeting, Sept. 4, 2014.

⁸⁵ Or. 7323k ¶ 137.

⁸⁶ Once more, a motion was offered to rectify this problem, and again failed on a 3-2 vote. See the Minutes of the Commission meeting, Sept. 4, 2014.

⁸⁷ Ex. NWE-13, Ex. AM-1, p. 6.

⁸⁸ As Adrien McKenzie testified, "Placing these hydro assets into rate base is no different than any other utility across the country that completes a construction project and has a rate case and adds those reasonable and necessary costs into their rates. It doesn't mean that NorthWestern is not exposed to risks going forward. I mean, I'm not sure about Montana, but, you know, there's all sort of—there are concerns about other alternatives: Distributed generation, solar panels, those kinds of things." July 17 Tr. at 63:9-19.

company's revenue requirement in the eventuality of declining customer demand for conventional utility services. And in this noteworthy respect, I concur with the Order.

NorthWestern Energy is making a bet on the future of retail consumer demand in this acquisition. Many of its peers have dedicated substantial time and effort in recent years to create a policy front against what has been called "the death spiral" of regulated utilities: where consumer-generated power from on-site installations supplants the central-station service transmitted over transmission and distribution lines to power consumers, causing per-consumer charges to rise (since fixed costs must be spread across fewer subscribers), and inducing more consumers to self-supply as they are faced with higher and higher per-megawatt-hour charges, eventually eroding a monopoly utility's earnings in the process. Myself, I think this risk is unlikely to come home to roost. The advantage of central-station economics is substantial, and consumer-generated power today appears to have an advantage over it only because, in the "net-metering" arrangement common in many states, generator-consumers are given a credit not only for the value of the energy they produce but also, mistakenly, a credit for necessary grid services they in fact do little or nothing to obviate. Notwithstanding that, there may come a day where distributed-generation technology truly is revolutionary in Montana, where it causes a utility like NorthWestern—in its energy supply function—to become uncompetitive or obsolete. I agree with the pre-approval Order inasmuch as it carefully avoids pre-approving these assets with respect to their possible obsolescence in the face of consumer-based competition. If this happens, NorthWestern and other companies (although not utilities which, like NorthWestern *before* this transaction, avoided owning a lot of generation and limited themselves mainly to a transmission-and-distribution function) will face adverse financial consequences. So be it.

Public Participation in this Matter

I agree with the Order. The public outreach undertaken in association with this proceeding has been mammoth, and the Commission has received probably more public comment on this matter than on anything in the past decade if not longer.⁸⁹ There were generally two categories of public comment. The first resembled talking points disseminated by NorthWestern. The second offered unique public comment, either for or against the deal—or, most helpfully, posed questions or concerns that were then raised in the hearing.

⁸⁹ Or. 7323k ¶¶ 19, 170.

I largely dismiss the importance of the first set of public comment, and while I acknowledge every corporation has a right—even a duty—to shape public opinion in ways that are advantageous to its earnings, there is at least something a little distasteful in the ticker-tape parade of emotion and nostalgia that has characterized the utility’s public representations about this transaction. NorthWestern goes so far as to cite the record of public comment supporting the transaction and to attack the Montana Consumer Counsel for being out of touch with consumers.⁹⁰ How much of this public comment really is generated by the company’s public-relations machine? It is hard to tell, but one telling document that surfaced during this proceeding on this count is a set of talking points NorthWestern apparently distributed widely. None of the talking points, it is almost needless to say, actually confront the questions that I raise in this opinion of “who should bear the risk?” They fastidiously ignore the unimpressive details of the company’s request. Instead, NorthWestern’s talking-points memo advises, “It’s not necessary, nor do we recommend, that you use this list in its entirety. Please choose the comments that you feel best represent your personal opinions about this transaction. Comments are more effective and more believable when they are stated with words that you normally use and said with the true emotion that you feel.”⁹¹ Indeed. Without listing them again here, each of the talking points has been dealt with in the course of this opinion, and I find none to be fully truthful or persuasive.

There exists a general perception that the public supports the transaction, and I am under no illusion that this perceived sentiment plays no small role in this transaction’s approval. That being said, I have found in many hundreds of conversations with members of the public that the more Montanans learn about this transaction, the more skeptical they are of it, the more they recoil from the thought that they—and not the utility—should bear the risk of its business decision. In any case, comment from my constituents is a “weighty and respectable opinion,” but it does not dictate my vote on this matter; I owe the public “not [my] industry only, but [my] judgment”⁹² and it would not be a service to anyone were I to set aside the detailed analysis above, in which this elected representative on almost a full-time basis engaged, and simply embrace what may be viscerally popular.

⁹⁰ Ex. NWE-3 p. 9.

⁹¹ DR PSC-312a, Attachment 1.

⁹² Edmund Burke, “Speech to the Electors of Bristol,” Nov. 1774.

Conclusion

There is one overarching impression I am left in the wake of the nine months that this proceeding has consumed, and it is that Montana remains haunted by its decision to divest the Hydros from the Montana Power Company in the first place. This Order does not—cannot—reverse that error. It merely adds to the state’s long history of poor decision-making on energy policy matters.

I DISSENT, except with respect to paragraphs 116 through 119 and 170, in which I CONCUR.

Travis Kavulla, Commissioner (concurring in part and dissenting in part)