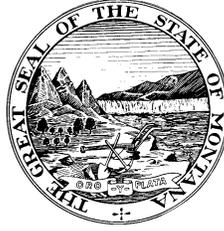


PUBLIC SERVICE COMMISSION  
STATE OF MONTANA



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May 23, 2014

Mr. Patrick R. Corcoran, Vice President  
Government and Regulatory Affairs  
NorthWestern Energy  
40 East Broadway  
Butte, MT 59701

RE: Data requests in Docket D2013.12.85

Dear Mr. Corcoran,

Enclosed please find data requests of the Montana Public Service Commission to NorthWestern Energy (NWE) numbered PSC-305 through PSC-354 in the above-referenced Docket. Please begin the response to each new numbered data request on a new page. Please provide responses by June 6, 2014. If you have any questions, please contact me at (406) 444-6191.

Sincerely,

Neil Templeton  
Regulatory Division  
Montana Public Service Commission

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

\* \* \* \* \*

IN THE MATTER OF NorthWestern Energy’s ) REGULATORY DIVISION  
Application for Approval to Purchase and )  
Operate PPL Montana’s Hydroelectric Facilities, ) DOCKET NO. D2013.12.85  
for Approval of Inclusion of Generation Asset )  
Cost of Service in Electricity Supply Rates, for  
Approval of Issuance of Securities to Complete  
the Purchase, and for Related Relief

**DATA REQUESTS PSC-305 THROUGH PSC-354 OF THE  
MONTANA PUBLIC SERVICE COMMISSION  
TO  
NORTHWESTERN ENERGY**

PSC-305

Regarding: Future Cap-Ex Reviews  
Witness: Rowe

In recommending the Commission reject Dr. Wilson’s ceiling on annual capital spending, you argue, “The Commission already has the means by which to properly address these as part of future general rate case prudence reviews,” and you then cite to MCA 69-8-421(9), which discusses the Commission’s ability to “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.”

- a. Suppose that NWE in the future is faced with a large capital expenditure necessary to keep a Hydro running, but which had not been anticipated or budgeted for in this pre-approval docket. In the context of the future prudence review in another rate case which you allude to, would it be reasonable of the Commission to take as evidence of imprudence (or of a failure to “reasonably manage...electricity supply resources”) that NWE had failed to anticipate a significant cap-ex event in this docket?
- b. If the answer to sub-part (a) is negative, how then does the cited law address Dr. Wilson’s concern that capital expenditures which may be prudent and necessary in the future may nonetheless be unbudgeted in this pre-approval docket, thus costing ratepayers unexpectedly more money absent an “imprudence” finding?

## PSC-306

Regarding: Fiduciary Duties to NorthWestern's Shareholders  
Witness: Rowe

At 4:12-14 you state you have legal fiduciary duty to your shareholders and the MCC's proposal would not allow you to honor this duty. Staff's understanding is that asset acquisitions of this nature implicate the Business Judgment Rule and that absent waste, bad faith, or gross negligence the purchase of the hydroelectric assets would be considered a business decision generally immune from liability. *See generally* Del. Code Ann. tit. 8, § 141(a); *see also* Smith v. Van Gorkom, 488 A.2d 858, 872 (Del. 1985) ("The business judgment rule exists to protect and promote the full and free exercise of the managerial power granted to Delaware directors").

Please explain the nature of NorthWestern's fiduciary duty to shareholders in this transaction and why NorthWestern does not believe it can meet this duty under the MCC's proposal.

## PSC-307

Regarding: Recovery of the Acquisition Premium in Wholesale Rates  
Witness: Rowe

In light of an anticipated oversupply of energy during NorthWestern's temporary ownership of Kerr Dam, which will need to be sold on the wholesale market, why didn't NorthWestern seek FERC approval for recovery of the acquisition premium associated with the generation facilities acquired in the proposed transaction in wholesale rates?

## PSC-308

Regarding: Preapproval  
Witness: Rowe

- a. Would it be fair to say that as a Montana Public Service Commissioner, you had significant concerns when in 2003 the Montana Legislature considered SB 247, which, in its initial form, would have mandated that the Commission make preapproval decisions regarding default supply power purchase agreements? If not, please explain.
- b. Would it be fair to say that as a Montana Public Service Commissioner your concerns with preapproving default supply power purchase agreements included shifting risk from the utility to the Commission and consumers, inappropriately placing the Commission in a utility management role, and moral hazard effects? If not, please explain.
- c. During your term as a Montana Public Service Commissioner, did the Commission develop default supplier resource planning and procurement guidelines, which persist

- in substantially the same form today in Admin. R. Mont. 38.5.8201-8229, in order to articulate the Commission's expectations regarding reasonable planning and procurement processes? If so, did you substantially support the rules the Commission adopted?
- d. As a Montana Public Service Commissioner, did you vote with the majority in finding that the Commission would not likely have approved 400 MW in default supply contracts NorthWestern presented to the Commission for approval (the Commission found that the Company had not actually acquired the resources because of regulatory out language in the contracts) because NorthWestern failed to apply industry accepted procurement practices, including the use of competitive procurement methods, which the Commission found (agreeing with Dr. Wilson) are the most verifiable way for a utility to identify resource alternatives and acquire competitively priced resources? (See Order 6382d).
  - e. Other than for purposes of complying with the community renewable energy project requirements of the renewable energy standard, when was the last time NorthWestern issued an all-source competitive solicitation in which it specifically sought offers for long-term (20 years or more) energy and or capacity resources?

PSC-309

Regarding: Preapproval

Witness: Rowe

- a. Would you acknowledge that NorthWestern's application in this case, much like the Company's application in Docket D2001.10.144 (which resulted in Order 6382d), is substantially about regulatory process, specifically whether it is good regulatory practice for the Commission to preapprove an \$870 million, 439 MW capital investment that resulted from a bilateral negotiation that the Commission was not part of and apparently has no ability to shape, given the asymmetric information and moral hazard effects that you previously worried about as a Montana Public Service Commissioner? If not, please explain.
- b. Your concurring opinion attached to Order 6382d characterized the majority's decision in that case as "farsighted and courageous." You stated: "Fundamentally, the Commission declined to shift undue risk to default supply customers...." Why wouldn't a decision by the current Commission not to preapprove the Hydro purchase be similarly farsighted and courageous, particularly given that the potential for moral hazard effects may be greater in this case given a profit opportunity that did not exist for the default supplier?

## PSC-310

Regarding: Renewable Generation and Economic Development  
Witness: Hines

At 10:1-5 you testify regarding the listening sessions: “Also, many people expressed strong support in having an electric supply portfolio that is comprised of over 50 percent wind and water. People noted that this quantity of renewable generation can provide an immediate inducement for economic development.”

Please describe how transferring ownership of PPLM’s hydro assets to NorthWestern Energy will induce economic development due to increasing the proportion of renewable energy in NorthWestern’s portfolio.

## PSC-311

Regarding: Governor Inslee’s Executive Order  
Witness: Hines

- a. At 16:4-12 you reference Inslee’s Executive Order 14-04 that “...specifically calls on Washington utilities to reduce and eliminate over time the use of electrical power produced from coal, even from those facilities located outside their state.” Will this order reduce demand for Colstrip power and provide NorthWestern opportunities to acquire Colstrip energy from Puget, PacifiCorp, and Avista at low market prices?
- b. If the Commission rejects NorthWestern’s application to preapprove the hydro assets, will NorthWestern inquire into purchasing some of the Colstrip interests of Puget, PacifiCorp, and Avista at low prices to serve a portion of baseload requirements?
- c. In offering the state of Washington as an example for the issue of carbon regulation, has NWE considered the full political climate of the state, and whether there are branches of that state’s government (e.g., the legislature) which may have countervailing views on this particular issue? Describe NorthWestern’s analysis, if it exists, in this respect.

## PSC-312

Regarding: Role of NWE in Encouraging Public Comment  
Witness: Hines

You rely on public representations in listening sessions to support your application, and to demonstrate that, in your view, “the MCC is out-of-touch with what Montana consumers want” (9:19-20)

- a. Has NWE provided talking points, fact sheets, or other documents about the proposed Hydros acquisition in advance to persons who have then provided public comment at PSC listening sessions? If so, provide all such documents.

- b. Please describe NWE's efforts to encourage members of the public or representatives of organizations to attend listening sessions and offer supportive comments.

## PSC-313

Regarding: Misrepresentation of Response to MCC-004

Witness: Hines

At 22:2-23:13 you argue that Wilson mischaracterized your response to MCC-004 through emphasizing the value of Colstrip Unit 4 to the utility while you maintain that your response is "clearly focused on the value of the resource to the supply portfolio."

- a. Do you agree that Colstrip Unit 4 and other preapproved assets are relevant to this case because these facilities provide opportunities to review the actual performance and portfolio benefits of Commission preapproved assets? Why or why not?
- b. Please describe in full the observed benefits that Colstrip Unit 4 has provided to the portfolio since it was rate based in January 2009.
- c. Do you agree that electricity provided by Colstrip Unit 4 since January 2009 has been very expensive for NorthWestern's customers when compared to short term market products, including the Mid-C spot market? Why or why not?
- d. Regarding the difference in supply cost referred to in part (c), does NorthWestern consider the additional expenditure to be the "price" of rate stability?

## PSC-314

Regarding: Misrepresentation of Response to MCC-004

Witness: Hines

- a. Should the Commission be concerned that although it preapproved NorthWestern's 222 MW share of Colstrip Unit 4 at more than \$400 million in 2008, in 2013 NorthWestern valued PPLM's 222 MW share at Colstrip Unit 3 at \$100 million? (See spreadsheet response to PSC-066). Why or why not?
- b. Please provide NorthWestern's supply customers share of the total production at Colstrip Unit 4 that has been lost in unplanned outages since January 1, 2009. How was the potential loss mitigated by the reciprocal sharing agreement with PPLM?
- c. Assuming PPLM is successful in selling its 222 MW share in Colstrip Unit 3, will this affect the reciprocal sharing agreement? If so, how will this affect the dependability of the Colstrip Unit 4 resource?

## PSC-315

Regarding: Chart 2  
Witness: Hines, p. 8

- a. If NWE has prepared a chart similar to Chart 2 that shows residential customer electricity costs for the period 1999 through 2013, please provide it.
- b. Please provide the residential customer data used to create Chart 2, in Microsoft Excel format if possible.
- c. If NWE provided the chart requested in part (a) of this data request, please provide the residential customer data used to create that chart, in Microsoft Excel if possible. Otherwise, if NWE has residential customer data of the type used to create Chart 2 for time periods after 2008, please provide those data through the most recent time period available, in Microsoft Excel format if possible.
- d. If NWE has projections of residential customer data of the type used to create Chart 2 for future time periods, please provide those projections, in Microsoft Excel format if possible.

## PSC-316

Regarding: Carbon risk  
Witness: Hines, pp. 14-15

- a. Please provide the carbon cost scenarios NWE modeled in its 2005 and 2009 resource plans (the plans typically provide these scenarios in tables that show the annual cost of carbon emissions that are used to develop market price and resource cost adjustments). Please provide this information in Microsoft Excel, if possible.
- b. Please provide documentation to support the examples of Pacific Northwest thermal plants expected to shut down over the next decade.

## PSC-317

Regarding: Comparison of Northwest IOU carbon values  
Witness: Hines, pp. 17-18

- a. Please provide the data underlying Chart 3.
- b. Please fully explain, in detail, and demonstrate through workpapers, how NWE calculated the average CO<sub>2</sub> cost per MWh for Avista, Idaho Power, Portland General Electric, Puget Sound Energy, and PacifiCorp.
- c. Provide citations, including at what page of utilities' IRP the information can be found, for these other utilities' carbon price estimates

- d. The vertical axis in Chart 3 is labeled in terms of dollars per MWh. However, the value shown for NWE in 2021 is \$21.11, which corresponds to the cost per metric ton in the 2013 plan (see Volume 1, Chapter 5, Table 5-2). Please clarify whether the values in Chart 3 should be labeled in terms of dollars per ton.
- e. How, if at all, is the calculation of utility averages for the purpose of presenting a multi-utility average in this chart different from the calculation of utility averages as presented in the line graph comparing NWE's carbon forecast to other utilities in the 2013 Resource Procurement Plan.

## PSC-318

Regarding: Rigor of Comparative Carbon Analysis

Witness: Hines

- a. Describe how the Pacific Northwest utilities' IRPs arrived at various scenarios for carbon price. Were they based on specific possible policy outcomes, or were they based on something else?
- b. Do these utilities' IRPs comment on the likelihood of various scenarios coming to pass?
- c. Is it reasonable for NWE to give the same weight in calculating a supposed "average" of a utility's carbon price forecast that gives equal weight to that utility's "high" or "very high" scenario as it does that utility's "base case." Please explain.

## PSC-319

Regarding: Exposure to Market

Witness: Hines

You state "Absent the acquisition of the Hydros, NorthWestern will be purchasing approximately 50 percent of the portfolio's needs from the short to intermediate term market." (4:15-18)

- a. Define the time period you mean to indicate by "short to intermediate term market."
- b. How much actual exposure does NorthWestern have presently, as a percentage of total supply as well as in MWhs purchased annually, to the spot market that is represented on your Chart 5?
- c. What was the average cost of the purchases referred to in sub-part (b) for the 2012-2013 and, if available, 2013-2014 tracker years?
- d. In what percentage of hours would NWE have *excess* electricity were the Hydros acquired (after the disposal of Kerr Dam)?

- e. NWE states it is concerned about rate stability, but in its last RFP for market contracts, it limited itself to relatively short-term contracts as opposed to trying to negotiate another seven-year or longer contract that would extend into a period when NWE represents there would be more certainty on issues like carbon price. Why did NWE adopt this approach, which seems to have exposed it to the very problem (greater and supposedly unacceptable exposure to the market) that this filing ostensibly seeks to avoid?

## PSC-320

Regarding: Bill comparison

Witness: Hines

At the May 20, 2014 listening session you stated that with the adjustments NorthWestern proposed in its rebuttal testimony, bills in October 2014, with the hydro purchase, would be lower than bills in October 2013. Please provide the bill calculations that support that statement.

## PSC-321

Regarding: Deregulation Two

Witness: Hines

Throughout your rebuttal testimony you warn of a 'Deregulation Two' scenario if the hydros are not purchased by NWE. Deregulation was a condition imposed by the Montana Legislature that has since been repealed. Please explain why 'Deregulation Two' is an appropriate description when NWE still has the capability to purchase another generating asset or PPA to meet its supply obligations, even if NWE does not purchase the hydro assets.

## PSC-322

Regarding: Comparable Acquisition Analysis

Witness: Stimatz

On 7:4-9 of your rebuttal you state: "If, as Dr. Wilson asserts, NorthWestern's estimate of the effect of future carbon prices on electricity prices were inflated and the resulting DCF value overstated, Credit Suisse would have found comparable asset sale prices to be much lower than the price of this transaction. In fact, Credit Suisse found the price of this transaction to be in line with comparable asset sales prices."

- a. Please provide a citation to testimony where Dr. Wilson asserts that NorthWestern's estimate of the effect of future carbon prices on electricity prices is inflated.

- b. Do you have evidence of the electricity price forecasts relied upon by the parties that purchased Masud's comparable assets and whether the forecasts include a carbon component? If so, please provide.

## PSC-323

Regarding: Residential bill impact

Witness: Stimatz, pp. 2-3, DiFronzo, Exhibit\_(PJD-7)

- a. On p. 3 you state that Mr. Clark assumes that, absent the Hydro purchase, NorthWestern would have done nothing to address the portfolio's intermediate to long-term baseload needs and would have relied on the spot market. Please explain whether the market products NWE acquired through its May 2013 RFP are examples of the type of resources NWE would have acquired absent the Hydro purchase?
- b. Please provide: 1) historical, monthly Mid-C "around-the-clock" electricity prices on NWE's system for the period July 2007 through May 2014, 2) the quarterly prices associated with the seven-year, July 2007 through June 2014, PPA with PPL, and 3) NWE's electricity price forecast (used for resource planning purposes) on or about July 2006.
- c. Are the products NWE acquired through its May 2013 RFP included in the portfolio costs underlying the bill impacts NWE estimated in data response PSC-034?
- d. Are the products NWE acquired through its May 2013 RFP included in the portfolio costs underlying the bill impacts NWE estimated in Mr. DiFronzo's Exhibit\_(PJD-7)?
- e. Please provide a copy of NWE's response to data request PSC-002a in Docket D2013.5.33 (that data request asked for copies of contracts signed as a result of the May 2013 RFP). Alternatively, if NWE has prepared a summary of the total annual volumes and costs of the products it acquired through its May 2013 RFP, please provide that summary.

## PSC-324

Regarding: Residential bill impact

Witness: Stimatz, p. 4

You state that the exact terms and prices of the potential three- to five-year PPAs NorthWestern likely would have acquired absent the Hydro opportunity cannot be known, but certainly would have been higher than the short-term prices reflected in Mr. Clark's comparisons. Please clarify whether the prices would have been higher because current spot prices are higher than June 2013 spot prices, because the three- to five-year PPAs would have been priced higher than spot purchases, or because of some other reason.

## PSC-325

Regarding: Lack of Direct Expert Testimony on Stochastic Modeling  
Witness: Dorris

No expert witness testified in NWE's initial application in support of Ascend's work with the PowerSimm model (i.e., it was presented by a NWE witness who, in discovery, said that he was not an expert in PowerSimm). Please explain why you did not present direct testimony in this matter, and explain why the Commission should not in the context of this proceeding discount the work of your firm, and instead favor tools such as the DCF that were supported by experts in DCF.

## PSC-326

Regarding: PowerSimm modeling  
Witness: Dorris

On page 7 you identify the resource alternatives that were combined with NorthWestern's existing resources and modeled in PowerSimm to evaluate the portfolio costs and risks (three resource alternatives were initially modeled for the 2013 plan and three others were modeled later for a supplement to the 2013 plan). In the course of assessing the adequacy of NorthWestern's application, Evergreen Economics and Ascend Analytics participated in a series of discussions regarding the PowerSimm model. On February 26, 2014, Evergreen Economics submitted a memo to Commission staff summarizing these discussions. One point of discussion concerned PowerSimm's capability for optimal capacity expansion planning.

- a. Please confirm that, although PowerSimm is capable of supporting optimal capacity expansion planning, that capability was not used for the portfolio analyses included in NorthWestern's 2013 plan. If you cannot confirm, please explain.
- b. If PowerSimm's optimal capacity expansion planning capability was not used to analyze portfolios for NorthWestern's 2013 plan, please explain whether Ascend Analytics and NorthWestern discussed the pros and cons of applying that capability to the 2013 plan analysis and, if so, describe those discussions fully and in detail.
- c. To the extent not already discussed in your response to part (b) of this data request, what are the pros and cons of applying PowerSimm's optimal capacity expansion capability to a resource planning analysis?
- d. Please clarify and explain whether you believe that the nature of NorthWestern's short position over the planning horizon warrants ignoring current and projected regional load-resource conditions, whatever those conditions may be?

- e. If you believe expected regional load-resource conditions should be considered in a resource planning analysis, please explain whether NorthWestern adequately considered regional load-resource conditions and how applying PowerSimm's optimal capacity expansion planning capability would have accounted for regional load-resource conditions.

## PSC-327

Regarding: integrated resource planning  
Witness: Dorris

Once Ascend had modeled the 3 original portfolios NWE had chosen for the 2013 plan, what was the marginal effort and/or tasks that were necessary for Ascend to model additional portfolios? Please explain in detail.

## PSC-328

Regarding: PowerSimm modeling  
Witness: Dorris

- a. If a utility expects regional load-resource conditions to tighten (i.e., reduced reserve capacity, greater probability of loads exceeding available resources) due to, for example, scheduled shut-down of existing generating capacity and/or increasing demand, would you expect the utility's forecast of market prices to reflect the effects of tighter load-resource conditions?
- b. Does PowerSimm have the capability to distinguish between periods of general regional load-resource sufficiency, when market price volatility might tend to be lower, and periods of general load-resource insufficiency, when volatility might tend to be higher? That is, can the user do anything to define those periods in the model?
- c. When using its optimal capacity expansion planning capability, what criteria does PowerSimm use to decide the best time to add new capacity and how much capacity to add?
- d. The Regulatory Assistance Project states that probabilistic resource planning techniques:

...force explicit recognition of probabilities associated with future states of the world and allow an examination of how multiple, small uncertainties can combine to create big risks. The tools are important in their ability to capture the relationship between variables, their requirements to specify the probabilities of all outcomes and their ability to provide an apparently definitive answer.

The same ability to give a definitive answer is also one of the tool's most serious drawbacks. In reality, the analysis is "data free" because it is made in the absence of actual information. The subjective assumptions made early on in the analysis are submerged, so that the final outcome's appearance of objectivity is false.

*(Integrated Resource Planning for State Utility Regulators, June 1994, p. 42.)*

Please explain whether this characterization of probabilistic analysis applies to the PowerSimm modeling in NorthWestern's 2013 plan.

- e. With regard to Figure 2, on p. 10 of your testimony, please explain whether the total NPVs for each portfolio relate to the annual mean total costs shown in the Supply Cost Report included in the 2013 plan supplement. For example, if one were to calculate the NPV of the annual costs for 2014 - 2043 shown in the "Total Cost \$M, Mean" row for the Current + Hydro portfolio, should the result be approximately the sum of the Existing Fixed + Capital, Variable + Market, and New Fixed + Capital – Residual Value shown in Figure 2 *if the residual value is added back in*? If not, please explain.

PSC-329

Regarding: Hydros vs. market purchases in Table 1

Witness: Dorris

- a. In Table 1, the annual cost of market purchases for 2017 and 2018 appear to correspond to the historic period of market infirmity in the 2000 – 2001 period. Given changes in wholesale market regulations and market structures following that historic period of market infirmity, please explain whether an analysis of this sort should assess the likelihood of a similar event occurring in the near future or over the planning horizon?
- b. If an analysis of the sort shown in Table 1 should assess the future likelihood of events similar to the market infirmity of 2000 – 2001, what is your assessment of that likelihood?
- c. Is the "annual cost of market" price based on short-term market (i.e., spot or day-ahead market price) data? Why is this a reasonable yardstick when even those utilities that rely on the market often contract for longer terms which insulate them from momentary price spikes?
- d. Provide the underlying data as well as any workbooks used to create Table 1.

## PSC-330

Regarding: Selection of Portfolios Modeled  
Witness: Dorris

- a. The second-least-expensive portfolio modeled by Ascend in PowerSimm surfaced only after the PSC asked NWE to study that scenario. Why should the Commission have confidence in a Resource Procurement Plan that did not even manage to surface the second-least-cost/least-risk option in its first iteration?
- b. In your experience how many portfolios does a typical utility IRP model?

## PSC-331

Regarding: Appropriate Number of Carbon Price Scenarios  
Witness: Dorris

- a. The record in this case seems to suggest that most, if not all, utilities have multiple carbon-price scenarios, and do not simply use a triangular distribution around a deterministic central price. Why is NWE's approach to this important variable advisable?
- b. Please provide any examples of utilities who stochastically model carbon price by using a triangular distribution of a single, deterministic price point.

## PSC-332

Regarding: Figure 1, Cost Distributions by Portfolio  
Witness: Dorris

- a. Provide this figure's underlying data set.
- b. Provide the figure with the other 3 portfolios represented.
- c. Regarding the Y axis, are total simulations the same for each portfolio? If so, please provide the figure with frequencies on the Y axis, including total simulations for reference. If not, please provide the figure with probabilities in 5% intervals.

## PSC-333

Regarding: Concept of 'Secure' Supply  
Witness: Dorris

- a. You argue that a "short position of over 50%" exists, meaning that this is "the amount of supply that has not been secured" (11:11-15). By "secure," do you mean, exclusively, resources that the utility owns? Explain.

- b. Why should a long-term PPA for a particular unit (such as Judith Gap) not be considered a “secure” source of supply?
- c. Why should a long- or medium-term PPA for networked resources (such as the PPL-M plants) not be considered a “secure” source of supply?
- d. Don't most gas local distribution companies, as well as many electric transmission-and-distribution companies, throughout the United States and the world rely mainly on “market” exposure—whether it be the spot market or medium- or long-term markets? Please explain why, in Montana, it should be unacceptable to be in a market position that appears to be routine practice elsewhere?

## PSC-334

Regarding: Post-Hoc Analysis  
Witness: Dorris

Please provide any other examples of which you are aware of a utility which first agreed to purchase a resource, and only afterwards modeled it using stochastic modeling in an IRP to justify its acquisition.

## PSC-335

Regarding: Residual Value vs. Salvage Costs  
Witness: Dorris

Does your Table 3: “Comparative Cost Analysis Without Residual Value” assume a \$0 terminal value (i.e., no negative salvage value)?

## PSC-336

Regarding: California Carbon Prices  
Witness: Dorris

- a. Does California's cap-and-trade system impose price increases on wholesale electric markets outside of California, or does it decrease prices on such markets (because more resources are priced out of California market), or is it neutral on prices in such markets? Please explain.
- b. What is the prevailing \$/ton price for carbon in California?

## PSC-337

Regarding: Effect of Carbon Forward Market Prices  
Witness: Dorris

What, if any, carbon price is already incorporated in the multi-year forward market price strip (before 2021) relied on by NorthWestern for its electricity market price forecast? Please explain.

## PSC-338

Regarding: Washington Commission Carbon Policy  
Witness: Dorris

- a. You use the term “disallowed” to describe what the Washington UTC did in respect to a recent Puget Sound Energy filing that proposed a \$0/ton base case. In what sense did the WUTC “disallow” costs from rates? Or do you have another meaning for this term? Please explain.
- b. Has the WUTC actually settled on a carbon price for the PSE IRP? If so, what is it? If not, describe the process and methodology which will be pursued to arrive at a reasonable carbon price in the PSE base case.
- c. On 27:10-11 you state: “In doing so, the UTC effectively increased the value of low-carbon resources relative to that of the resource in question (Colstrip).” Please explain why a decision by the Washington Commission that may inflate the value of PPLM’s hydro assets for Puget Sound Energy’s Washington customers should make these assets more valuable to NorthWestern’s Montana customers.
- d. If the WUTC decision increased the value (and therefore the purchase price) of the hydro assets relative to the Colstrip assets, wouldn’t this increase the value per dollar for NorthWestern of a Colstrip assets purchase relative to a hydro assets purchase?
- e. If demand drops for Colstrip electricity due to the WUTC decision, won’t this make Colstrip electricity more available and affordable for NorthWestern?

## PSC-339

Regarding: Value of Low-Emissions Resources  
Witness: Dorris

In 26:10 – 28:4 you explain that a third-party competitive bidder would be able to obtain the value of unrealized CO<sub>2</sub> costs by selling the power from the hydros to markets and/or utilities in California, Washington, and Oregon. Please describe what costs, such as wheeling, would be incurred by a third-party competitive bidder who sold power from the hydros into those aforementioned markets that will not be incurred by NWE when it sells power from the hydros to local customers on its own distribution system.

## PSC-340

Regarding: Carbon Price when Marginal Unit is Non-Thermal  
Witness: Dorris and/or Stimatz

Periodically in the Pacific Northwest, non-thermal units (hydro and wind) are sufficient to meet load, and since thermal resources such as coal and natural gas are not dispatched, a thermal resource is not the marginal unit. What adjustments, if any, have Ascend and NorthWestern made in both PowerSimm and the DCF models to ensure that these hours (when the market presumably would have no imputed CO2 cost because the marginal unit is not emitting CO2) are properly modeled?

## PSC-341

Regarding: Rainbow Redevelopment Project  
Witness: Rhoads

You contend that the Rainbow Redevelopment Project was a voluntary, economic project in which efficiencies were gained.

- a. What efficiency savings resulted in the fixed O&M budget, on a \$/kw-year and on a total annual basis, from the investment?
- b. What capacity gains, on a \$/MW basis, were achieved by expanding the generating capacity at Rainbow and because of the expanded generating capability at another dam (Cochrane)?
- c. How many additional megawatt-hours do the capacity gains referenced in sub-part (b) achieve? What is the total dollar value of those additional megawatt-hours based on current market prices?
- d. How long would it take for the investment in the Rainbow Redevelopment Upgrade to be recovered from the O&M savings identified in sub-part a and from the additional energy output identified in sub-part c?
- e. Please provide comparable examples of where Hydro owners have made investments of this nature, in line with the value proposition revealed in sub-part d of this question.

## PSC-342

Regarding: Materiality/Unknown Cost of Environmental Liabilities  
Witness: Rhoads

- a. You write on 21:18-20, "These potential issues [various environmental liabilities] were identified, thoroughly examined, and their future potential impacts to the Hydros are not material and/or cannot be defined at this time." Which of the liabilities

- listed in this question are considered immaterial, and which are undefinable at this time, and which fall into both categories?
- b. In response to a question at a public listening session in Great Falls, you said that the owner of the dam behind which contaminated sediment had built up would attempt to assign the cost of remediating that problem to the party responsible for it. Is this a correct understanding of NWE's position?
  - c. Assuming that liability cannot be assigned to that company because it is bankrupt or otherwise unable to remediate the damage it caused, would it then be NWE's responsibility under law to remediate this pollution?
  - d. Has NWE evaluated the cost of remediating this pollution?

## PSC-343

Regarding: Amended Conditions

Witness: Bird

- a. At 15:2-12 you describe amended amortization and investment return conditions. Please provide an electronic copy of the revenue requirements model (Meyer) that is updated for these conditions.
- b. If the Commission approves the transaction, is NorthWestern planning to return for a general rate case in order to meet the expected increase in revenue requirement shown in the Meyer model following the transfer of Kerr in 2016?

## PSC-344

Regarding: First Energy-LS Power Hydro Transaction

Witness: Masud

Your testimony mentions one LS Power transaction (that of Safe Harbor) but appears to overlook another significant transaction that has occurred since you last testified, in which First Energy sold 527 MWs of hydro capacity for \$395 million to LS Power.

- a. Are you aware of this transaction?
- b. If you are aware but excluded it from your testimony for some reason, please explain that reason.

## PSC-345

Regarding: AM Exhibit 1 – Unregulated Valuation  
Witness: Masud

- a. It appears that you are mixing models and using discounted cash flows to evaluate the hydro assets in the first twenty years, but using an EBITDA multiple methodology to evaluate the assets in the following years. Please explain why a sample of EBITDA multiples used to estimate the current values of companies or acquisitions should be used to derive a terminal value EBITDA multiple without significant discounting to remove the first twenty years of value from the multiple.
- b. It appears that you assumed base case EBITDA of \$45 million annually for the hydro assets in 2014 and 2015 (see Footnote 1 on p. 10 of AM Exhibit 1). Applying this EBITDA to a multiple of 10, a multiple that is larger than any of the median multiples for Canadian and US IPP's seen on p. 15 of AM Exhibit 1, gives a valuation of \$450 million. Do you believe this to be a fair estimate of the current value of the hydro assets to an IPP? Please explain why or why not.
- c. A purchase price of \$900 million divided by \$45 million gives an implied EBITDA multiple of 20. Are EBITDA multiples of this magnitude commonly observed in the valuation or acquisition of resources or enterprises? Please provide examples.
- d. Rows 100-131 of the "Hydro DCF" tab of the unregulated spreadsheet analysis you provided in response to MCC-093 show proportions of present terminal value to total enterprise value of 30% to 32%, using a terminal EBITDA multiple of 7.5 and discount rates of 7.5%, 7.0%, and 6.5%. Is it typical for an IPP or other unregulated entity to estimate a reasonable purchase price for an acquisition where 30% or more of the price is not covered by the present value of the first twenty years of expected cash flows? Could you provide examples of this nature?

## PSC-346

Regarding: Unregulated Value Compared to Purchase Price  
Witness: Masud

- a. Applying EBITDA of \$60 million – a 33% increase from base case EBITDA – to an apparently generous EBITDA multiple of 10, produces a \$600 million estimate of acquisition value. NorthWestern's proposed purchase price is \$900 million, a 50% increase over the EBITDA based estimate. Should the Commission consider this \$300 million difference to be a premium assessed to buyers who demonstrate extreme risk aversion, absence of time preference, and attraction to resources in excess of their commercial value? Please explain.
- b. Is a 50% premium over the competitive price a standard outcome when regulated utilities with captive customers are purchasing assets from IPP's? Please provide examples if you have them.

- c. Should the Commission be concerned about the impact on Montana's economic development that may result from a purchase price in excess of market value that transfers capital from NorthWestern's customers to out-of-state shareholders?

PSC-347

Regarding: AM Exhibit 1 – Regulated Valuation

Witness: Masud

Regarding the implied 2014-2015 EV/EBITDA multiples of 7.8 to 9.1 found in the “DCF (EBITDA multiple driven)” regulated valuation summary on p. 11 of AM Exhibit 1; since EBITDA for a regulated entity is directly related to the value in rate base, it appears that a narrow range of implied EBITDA multiples is consistent with a broad range of initial purchase prices. For instance, in the NorthWestern revenue requirements model (Meyer); an initial purchase price of \$469 million implies a 2014 EBITDA multiple of about 8.6, a purchase price of \$689 million gives a multiple of 8.4, \$900 million a multiple of 8.3, and \$1.128 billion a multiple of 8.2. Do you agree with this general pattern? Please explain how the implied EBITDA multiples are useful when a range of purchase prices from \$470 million to \$1.1 billion implies multiples from 8.2 to 8.6.

PSC-348

Regarding: Current Valuation

Witness: Masud

On 3:17-19 of your rebuttal testimony you state that you believe \$1,500 per kW is a reasonable valuation for an on-going hydroelectric generation business. Do you believe that \$659 million ( $439 * \$1,500 = \$658,500$ ) would be a reasonable amount to enter into rate base for the acquisition of the hydro assets sans Kerr? Please explain.

PSC-349

Regarding: Comparable Acquisition Analysis

Witness: Masud

On p. 16 of AM Exhibit 1 you have listed select precedent hydro transactions and a few relevant variables, including total price and price per kilowatt but not EBITDA. Since price per kilowatt does not provide insight into the expected cost and revenue streams relevant to these assets, how can the Commission compare their perceived market value to the value of PPLM's hydro assets without access to EBITDA or other references to expected financial performance? Please provide EBITDA multiples or other performance references if you have any.

## PSC-350

Regarding: Exhibit (PJD\_7)  
Witness: DiFronzo

In the rebuttal testimony of Patrick DiFronzo the Exhibit\_(PJD-7) provides a typical customer bill calculation to reflect the new revenue requirement which removes any return on Kerr and changes the depreciation schedule of the hydro assets from a 40 year life to a 50 year life. Please update the Exhibit\_(PJD\_7) with a projected rate column as of 07/01/2014.

## PSC-351

Regarding: Update to Residential Bill Impact Worksheet  
Witness: DiFronzo

NWE representatives at a recent listening session postulated that in January 2015 the difference between a typical residential customer's bill without the Hydros vs. one with the Hydros would be substantially less than the 8.9% calculated in response to DR PSC-034, because of the modifications made in NWE's rebuttal testimony. Please provide an updated answer to PSC-034.

## PSC-352

Regarding: Property Taxes  
Witness: DiFronzo

In Docket D2008.6.69, the CU4 docket; NWE proposed to use the purchase price for CU4 as the basis for its property tax estimate. NWE later adjusted its revenue requirements in Docket D2009.12.155 to reflect the actual DOR assessment and value. NWE proposes to do the same in this docket.

- a. Please explain why NWE chose to use an estimate rather than the last known and measurable property tax assessment.
- b. Please provide supporting documentation from DOR supporting the hydro valuation used for your property tax estimation.
- c. What was DOR's most current year's assessed value of the hydros?
- d. What was the most current year's property taxes paid or incurred by PPL for the hydros that are being purchased?
- e. What is the most current year's property taxes paid or incurred by PPL for Kerr Dam?

## PSC-353

Regarding: Choice Customers

Witness: Unknown

At a listening session in Great Falls, one choice customer expressed concern about the ability to receive energy supply from PPLM if the Hydro transaction were consummated, because of limited transmission availability from Colstrip (PPLM's remaining facilities) to Great Falls.

- a. With respect to energy supply, is there an option for these customers to be served by NWE, instead of PPLM, at a rate that retains these customers' access to low, market-based prices?
- b. With respect to transmission, please explain the difficulties of transmitting energy supply from PPLM's remaining assets at Colstrip to Great Falls. Would these choice customers have transmission access available to them?
- c. How many choice customers remain in Great Falls who would be affected by this issue, and (if it is known to you) what is the total load in question?

## PSC-354

Regarding: Water Rights

Witness: Unknown

At various public meetings, water rights have surfaced as an issue of public comment and concern.

- a. Would all water rights currently held by PPLM transfer to NWE as a result of this transaction? Please identify where in the PPL-NWE agreement this matter is addressed.
- b. Are there any concerns that there are rival, potentially precedent claims on those water rights that would undermine NWE's ability in the future to use the water for the purpose of electric generation? Explain, and provide supporting documents or memoranda if they exist.