BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Wisconsin Electric Power Company for Authority to Increase Electric Rates due to Extraordinary Increase In the Cost of Fuel

Docket No. 6630-FR-102

DIRECT TESTIMONY OF PAUL D. SCHUMACHER
ON BEHALF OF WISCONSIN ELECTRIC POWER COMPANY

Q. Please state your name and business address.

A. My name is Paul D. Schumacher and my business address is 333 West Everett Street, Milwaukee, Wisconsin 53203.

Q. By whom are you employed and in what capacity?

A. I am employed by Wisconsin Electric Power Company ("Company") as Manager of Planning in Wholesale Energy and Fuel.

Q. Have you previously testified in fuel cost recovery or rate case dockets?

A. Yes I have, most recently in Docket 05-UR-104.

Q. What is the purpose of your testimony in this proceeding?

A. The most recent fuel report filed by the Company indicates that the fuel rules tolerance band of 8% monthly has been breached for the month of January. We currently project that monitored fuel costs for 2010 will exceed by more than 2% the level of fuel costs authorized by the Commission in its Final Decision dated December 18, 2009 in Docket 05-UR-104 (“2010 Final Order”). The purpose of my testimony is to address the causes of that projected increase.

Overview Of Fuel Cost Changes From The 2010 Final Order

Q. What are the primary reasons why the current projection of 2010 monitored fuel costs is above the costs established in the 2010 Final Order by an amount sufficient to seek an increase in the rate of fuel cost recovery under the PSCW's "fuel rules"?

A. Fuel costs in 2010 are projected to be higher than those included in the 2010 Final Order primarily due to the following factors:

(1) increased natural gas and fuel oil costs;

(2) updated MISO energy market-related costs:

(3) updated forced and planned outages;

(4) decreased ASM net revenue; and

(5) other changes in monitored fuel costs since the 2010 Final Order.

Q. By how much does your current projection of 2010 monitored fuel costs exceed the amount authorized in the 2010 Final Order?

A. Monitored fuel costs on a total system basis included in the 2010 Final Order were about $815M, or $27.36/MWh. Actual fuel costs for January, 2010, adjusted to 2010 "as-ordered" sales, were above authorized fuel costs by about $10.7 M. These higher than forecast monitored fuel costs were primarily driven by higher than forecast locational marginal prices (LMPs) and associated higher-than-forecast cost to purchase energy from MISO. We currently project 2010 monitored fuel costs, including January, 2010 actual fuel costs, at $886.8 M, an increase of about $71.8 M above the amount in the 2010 Final Order. The Company is requesting a monitored fuel cost recovery rate of $29.76/MWh, which is an increase of $2.40/MWh from the $27.36/MWh rate approved

in Docket No. 05-UR-104. I will break down the increased costs based on the five factors identified above.

Q. How were your current projections for 2010 monitored fuel cost developed?

A. The Company used the PROMOD security-constrained production cost model to project how its generating resources would be utilized in February- December, 2010 under MISO dispatch. The PROMOD simulation is in turn used to estimate coal, gas and fuel oil commodity costs, energy costs from Power Purchase Agreements, generator revenue and associated margin, projected LMPs, cost of energy purchases from MISO, and the hourly and annual net energy purchase and sale position. The LMP calculated by PROMOD is made up of marginal energy, congestion and loss components. The Company believes PROMOD provides a reasonable projection of unit utilization by MISO.

Q. Did the Company use the same PROMOD model which was used to project 2010 Final Order fuel costs?

A. Yes, with three updates to PROMOD to simulate recent actual market conditions. These include:

- Incorporation of the “bid-up” logic in PROMOD to better project marginal unit operation,
- Increase the number of non-WE coal units operating under “must-run” conditions to match 2007/2008 hours on-line for these units,
- Incorporate recent transmission upgrades and modify the geographic footprint modeled.

Q. What was the net impact on projected 2010 monitored fuel costs of these updates to PROMOD?

A. The net impact of these PROMOD updates was to increase monitored fuel costs from the 2010 Final Order by about $1.4 M.

Q. Other than the minor updates you previously described, were the methods used in establishing assumptions and modeling system fuel costs similar to those methods found to be acceptable by the Commission in the past?

A. We employed the same methods used by staff and approved by the Commission in the 2010 Final Order, with one exception. The one exception is that the Company projected future 2010 natural gas prices (on unhedged volumes) using the more-traditional 12 month NYMEX strip method rather than the method suggested and approved by the Commission in the 2010 Final Order. Other PROMOD inputs were updated to reflect the most recent data available. Some of the updates had the effect of increasing projected fuel costs; others had the effect of reducing projected fuel costs. In addition, the Company used the 2010 Commission-approved forecast of customer demand (retail and wholesale), which was included in the Commission's December 18, 2009 Final Decision in Docket 05-UR-104. Accordingly, the net output (MWh) from the 2010 PROMOD fuel run is equal to the output incorporated in the Final Order.

<u>Factor No.1: Increased Natural Gas And Fuel Oil Costs.</u>

Q. You have identified general factors as driving the change between fuel costs authorized in the 2010 Final Order and your current estimate of fuel costs for 2010. How much of the change in projected 2010 monitored fuel costs is accounted for by your first factor,

natural gas and fuel oil commodity costs for fuels used at the Company's facilities and natural gas and fuel oil commodity costs projected across the MISO footprint?

A. Natural gas and fuel oil commodity costs result in an increase of about $28.7 M from the levels established in the 2010 Final Order.

Q. Please describe the reasons for this increase in monitored fuel costs.

A. The 2010 Final Order used natural gas and fuel oil NYMEX futures prices as of October 15, 2009 for dispatch in PROMOD. To establish a forecast of the cost of gas purchased in 2010, the 2010 Final Order used an estimate of natural gas prices which was the average of certain 2009 actual costs and the October 15, 2009, NYMEX futures prices. The current forecast for 2010 used the February 9, 2010 NYMEX futures, adjusted to reflect our February 9, 2010 natural gas hedge position, and yields an increase in projected natural gas and fuel oil costs for 2010 of about $ 28.7 M compared to the 2010 Final Order.

Q. Please describe the relative impacts of using the February 9, 2010 NYMEX futures prices for both PROMOD dispatch and for pricing gas purchased during 2010 versus the forecast for 2010 contained in the 2010 final order.

A. The method used in the Final Order yielded an estimate of 2010 natural gas costs $21.5 M below what would have been estimated using the NYMEX futures only. Using the updated NYMEX futures prices as of February 9, 2010 in PROMOD for both the dispatch of units across the MISO footprint and for pricing natural gas consumed increases monitored fuel costs by an additional $7.2 M. The total impact of using the February 9, 2010 NYMEX gas price forecast is an increase in monitored fuel costs of

$28.7 M compared to the 2010 Final Order. The Company continues to believe that the NYMEX gas price forecast is the best predictor of future gas prices.

Factor No. 2: Updated MISO Energy Market-Related Costs

Q. How much of the change in projected 2010 fuel costs is accounted for by the second factor, updated MISO energy market-related costs?

A. The updated MISO energy market-related costs result in an increase in monitored fuel costs of $8.3M from those levels established in the 2010 Final Order. The February-December, 2010 impact on monitored fuel costs is projected at $7.5M.

Q. What are the MISO market-related costs included in this adjustment?

A. They include the following:

- Real Time Uninstructed Amount
- Real Time Net Inadvertent Amount
- Real Time Revenue Sufficiency First Pass Uplift
- Financial Transmission Rights (FTR) and Auction Revenue Rights (ARR)
- Real-Time Distribution of Loss Amounts ends April 1, 2010, with return of comparable amounts of excess loss costs through Revenue Neutrality Uplift (RNU)
- Day-Ahead Revenue Sufficiency Guarantee (RSG) Make Whole credits
- Day Ahead RSG Distribution Amount
- Real Time Revenue Neutrality Uplift, and
- Incremental congestion and loss amounts under the “MISO Day 2 Agreement” as part of Docket 5-DR-106.

Q. How did you update the estimate for the 2010 MISO market costs to reflect more current information?

A. Since PROMOD does not project all the relevant MISO charges and credits, and because of recent changes to MISO charge types, the Company used 12 months of actual 2009 MISO charges and credit amounts for the preceding MISO charges and credits to establish monthly and annual amounts for these items for 2010.

The use of updated actual (2009) MISO charge and credit amounts for these MISO charge types results in an $3.3 M increase in projected 2010 monitored fuel costs from amounts included in the 2010 Final Order.

Q. Are there other adjustments in this area?

A. In the 2010 Final Order, revenues of $5.1M stemming from Edison Sault (ESE) reimbursements to the Company for net non-PROMOD MISO costs attributed to ESE are accounted for in our projection of "other operating revenues" in FERC Account 456. However, the payment by the Company to MISO for these costs was not accounted for as monitored fuel, as it should have been. Correctly accounting for this item adds $5.1 M to 2010 monitored fuel costs, which offsets the projected "other operating revenues" which were incorporated into the 2010 Final Order. The February-December, 2010 impact on monitored fuel costs is $4.2M.

<u>Factor No.3: Updated Five-Year Historic Forced Outage Rates And Planned Outage Schedule</u>

Q. How much of the change in projected 2010 fuel costs is accounted for by updated forced outage rates and the updated planned outage schedule?

A. The third factor, updated five-year historic forced outage rates and updated planned outage schedule for Company facilities, results in an increase of about $13.9 M from the levels established in the 2010 Final Order.

Q. Please describe how this adjustment was determined.

A. The standard accepted practice by the Commission in projecting unit forced outage rates is the use of the five-year historic forced outage rates experienced by the Company on its units. As such, the Company used the 2004-2008 five year period as the basis for its 2010 rate case filing and this estimate was used to establish the levels set in the 2010 Final Order. Based on actual experience in just ended 2009, the Company updated its historic forced outage rates to reflect the five year historic period of 2005 – 2009. The impact of the updated five year historic average forced outage rates will be to increase the projected 2010 monitored fuel costs by about $6.5 M.

Q. Please explain how the updated planned maintenance outage schedule impacts projected 2010 monitored fuel costs.

A. The then-current 2010 planned maintenance outage schedule was incorporated into the 2010 final order. The Company recently updated its 2010 planned outage schedule to reflect the 2010 maintenance plan at its facilities.

The net impact on projected 2010 monitored fuel costs of updating the planned outage schedule is an increase in projected 2010 monitored fuel costs of about $7.4M over levels in the 2010 Final Order.

<u>Factor No. 4: ASM Net Revenues</u>

Q. How much of the change in projected 2010 fuel costs is accounted for by the fourth factor, updated Ancillary Services Market (ASM) net revenues?

A. MISO launched the ASM on January 6, 2009. As of the date of the 2010 rate case filing (March, 2009), the Company had no basis on which to change the assumed level of monitored fuel cost reduction attributed to the ASM by the Commission in the 2008 Final Order. Accordingly, the Commission projected ASM revenues for 2010 monitored fuel costs in the 2010 Final Order at about $6.5 M, based on MISO projections of ASM benefit.

The Company now has 2009 actual MISO ASM data with which to project the net benefit of MISO ASM on monitored fuel costs. Based on 2009 actual MISO charges, the Company projects net ASM benefits -- generator ASM revenue from MISO minus load cost to purchase ASM products from MISO -- at about $3.6 M. This represents a reduction of about $2.9 M from the $6.5M estimate of ASM net benefits included in the 2010 Final Order. Accordingly, the annual impact of this reduced projected ASM revenue is to increase projected 2010 monitored fuel costs by about $2.9 M.

Factor No. 5: Other Changes To Monitored Fuel Costs Since The 2010 Final Order

Q. How much of the change in projected 2010 fuel costs is accounted for by the fifth factor, other changes in monitored fuel costs?

A. This factor, other changes to monitored fuel costs, amounts to an increase of about $6.1 M in monitored fuel costs for the period February-December, 2010 from the levels established in the 2010 Final Order. This factor includes the following items:

- Updated PROMOD inputs for Company facilities
- Updated Resource Supply Plan
- Coal inventory management efforts

- Net changes in coal costs
- Gas use in power plant auxiliary boilers
- Risk Management costs
- updated PJM ancillary services market costs
- PJM Auction Revenue Rights
- PWGS Make Whole Adjustment

Q. How much of the change in projected 2010 fuel costs is accounted for by the first item, updated PROMOD inputs for Company facilities?

A. Updated unit heat rates and minimum preferred ratings on the new Elm Road units to reflect guaranteed performance levels result in an increase of about $1.4 M from monitored fuel costs established in the 2010 Final Order.

Q. How does the second item, the updated resource supply plan for 2010, affect monitored fuel costs?

A. In the updated resource supply plan, the planned capacity uprate for Point Beach Unit 1 has been delayed from the spring, 2010 outage to an outage in 2011. Accordingly, the Company will not have available to it the increased capacity and corresponding energy from the uprate until 2011. In addition, the Final Order assumed the Elm Road Unit 2 in-service date was August 29, 2010. Based on construction and start-up progress to-date, the Company expects the unit to be in-service starting September 29, 2010.

These changes in resource supply plan reduce net proceeds from making sales into MISO and increase 2010 monitored fuel costs by about $1 M.

Q. How else does the updated resource supply plan affect monitored fuel costs?

A. The 2010 Final Order assumed capacity sales of $6.6 million in 2010. The updated supply plan indicates capacity sales revenue of $6.1 million based on executed sales of 775 MW as of February. The difference results in a $0.5 M annual increase in monitored fuel cost, and $0.1M on a February-December, 2010 basis.

Q. What is the total impact of the updated resource supply plan on projected 2010 monitored fuel costs?

A. The total impact of changes in resource supply plan is an annual increase from the 2010 Final Order of about $1.5 M.

Q. How much of the change in projected fuel costs is accounted for by the third item, coal-inventory management efforts?

A. Changes in the coal-inventory management efforts at the Pleasant Prairie, Oak Creek, Presque Isle units 5 and 6, and the Valley Power Plants result in a decrease of about $4 M in monitored fuel costs from the levels in the approved 2010 Final Order.

Specifically, when we filed the 2010 rate case it appeared that projected MISO dispatch and corresponding coal burns at Presque Isle 5 and 6 and Valley were insufficient to keep up with projected coal deliveries and maintain an acceptable coal inventory.

Accordingly, the generation offers in PROMOD were decreased to simulate higher dispatch levels by MISO, and corresponding higher levels of coal burn. At Oak Creek and Pleasant Prairie, PROMOD was projecting coal burns in excess of projected deliveries. At these facilities, the Company increased the offer price in PROMOD to better balance coal burns with delivery. These actions were reflected in the fuel costs authorized by the 2010 Final Order. However, based on recent unit dispatch in MISO and on other coal inventory management efforts the Company reinstated projected actual

dispatch offers to MISO for all of these units, allowing the projected coal burns to reflect MISO actual utilization of these units.

Q. Please describe the fourth item, projected net changes in the delivered cost of coal to the Company's facilities.

A. The net change due to this item is an increase of $2.9 M in monitored fuel costs compared to the 2010 Final Order. This net change, for the period February through December, 2010 is the result of a $5.1 M increase due to higher coal prices and a $2.2 M reduction in transportation costs, including reduced diesel oil surcharges.

Q. Please describe the fifth item, natural gas use in power plant auxiliary boilers, and the impact of changes to this item on projected 2010 monitored fuel costs.

A. The Elm Road and Port Washington generating facilities use auxiliary boilers for unit startup. Based on updated projections of unit operation at these facilities, this item increases projected 2010 monitored fuel costs by about $0.3 M compared to the 2010 Final Order.

Q. Please discuss the integrated risk management plan and its potential impact on 2010 monitored fuel costs.

A. The Company has an integrated risk management program ("Wisconsin Electric Power Company Integrated Risk Management Plan" (Plan)) approved by the Commission on December 23, 2008. The Plan includes risk management efforts for hedging oil surcharge costs associated with coal transportation, electric purchases and sales and natural gas.

Transaction costs associated with hedging are monitored fuel costs. Based on the updated levels of gas purchases, rail transportation and electric sales contained in this

filing, the Company now projects its 2010 hedging-related transaction costs at about $3.6 M, an increase of about $120,000 over the costs included in the 2010 Final Order. Projected 2010 monitored fuel costs have been correspondingly increased by that amount.

Q. Please discuss the change in costs associated with the seventh item, participation in the PJM ancillary services market.

A. The PJM ancillary services market began operation in April, 2007. Since that time, PJM has modified its approach for calculating revenue and the relative value of ASM services in the PJM market has decreased. The 2010 Final Order projected ASM revenue of about $558,000. At this time, based on projections of operation of the Zion units and an ASM rate of $2.23/MWh, the Company projects net ASM revenue of about $87,000. The net impact of this change in projected PJM ASM revenue is to increase the projected 2010 monitored fuel costs by about $471,000.

Q. Please discuss the change in costs associated with the eighth item, participation in the PJM Auction Revenue Rights (ARR) auction.

A. The Company has point-to-point transmission (PTP) reservations on the PJM transmission system for the Zion Power Plant. The PTP reservations entitle the Company to ARR. When we filed the 2010 rate case, we anticipated that participation in the May, 2009 ARR auction with our Zion ARRs would result in positive value. However, the ARRs ended up with a negative value. This outcome was not included in the 2010 Final Order since the auction occurred after the 2010 rate case filing. The cost associated with the ARRs has been allocated to monitored fuel, and will continue through May, 2010.

The projected ARR cost is about $521,000 for February through May, 2010. This cost will increase projected 2010 monitored fuel costs by that amount.

Q. Please discuss the change in costs associated with the ninth item, Elimination of the Port Washington Make Whole Payment Adjustment.

A. In the 2010 rate case, the PROMOD model appeared to understate the level of make-whole payment from MISO for Port Washington. The 2010 Final Order reduced monitored fuel costs by about $3.8M to compensate for what appeared to be lower than anticipated make-whole payments.

Q. Is that adjustment still appropriate in light of the company's use of the "bid-up" logic in PROMOD?

A. No it is not. The bid-up logic in PROMOD fully compensates PWGS fuel cost with energy revenue and make-whole payments from MISO. Therefore, the $3.8M reduction in 2010 monitored fuel cost is no longer necessary. Removal of this adjustment increases February-December, 2010 monitored fuel cost by $3.5M.

Q. Does this complete your testimony?

A. Yes.