

TESTIMONY OF CHARLES F. WEST
ON BEHALF OF
INDIANA MICHIGAN POWER COMPANY
IURC CAUSE NO. 38702-FAC77

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1 **Q. Please state your name, position, and business address.**

2 A. My name is Charles F. West. I am employed by the American Electric Power
3 Service Corporation (AEPSC), a subsidiary of American Electric Power
4 Company, Inc. (AEP), in the regulated Commercial Operations organization
5 as Manager, Coal Procurement. My business address is 1 Riverside Plaza,
6 Columbus, Ohio 43215.

7 **Q. Please briefly state your educational background.**

8 A. I graduated from Queen's University in Kingston, Ontario, Canada in 1978
9 with a degree in Mining Engineering and I later obtained my Professional
10 Engineer license in the State of Washington.

11 **Q. Please briefly describe your professional background.**

12 A. After graduating in 1978, I was employed in the mining industry by Cleveland
13 Cliffs Iron Company in Michigan and later by Quintette Coal Company in
14 British Columbia. I was then employed for over seven years by PacifiCorp in
15 various engineering and management positions at coal mining operations in
16 Washington state and Wyoming and at their headquarters in Salt Lake City,
17 Utah. In 1995, I accepted a position as Coal Buyer for Central and
18 Southwest Corporation (CSW), a utility holding company in Dallas, Texas. I
19 transferred to Columbus, Ohio as a Coal Buyer after CSW's merger with AEP
20 in 2000. In 2003, I joined Reliant Energy Inc. in Canonsburg, PA as a Senior
21 Fuels Specialist. In 2005, I returned to AEP as a Coordinator in the Fuels,

1 Emissions and Logistics department. I was promoted to Manager of Cook
2 Coal Terminal in Metropolis, IL in 2007 and accepted my current position in
3 January of 2009.

4 **Q. What are your primary areas of responsibility as Manager, Coal**
5 **Procurement for AEPSC?**

6 A. I am responsible for managing coal procurement, contract oversight, and
7 inventory management activities for AEP operating companies, including
8 Indiana & Michigan Power Company (I&M), Kentucky Power Company
9 (KPCo), Southwestern Electric Power Company (SWEPCO), Public Service
10 Company of Oklahoma (PSO), and Appalachian Power Company (APCo)
11 and Wheeling Power Company (WPCo) and, as an agent for Ohio Valley
12 Electric Corporation and Indiana Kentucky Electric Corporation.

13 **Q. Have you previously submitted testimony or testified before any**
14 **regulatory agencies?**

15 A. Yes. I have submitted testimony to the Indiana Utility Regulatory
16 Commission and the Michigan Public Service Commission on behalf of I&M,
17 the Public Utility Commission of Texas on behalf of SWEPCO, and the
18 Oklahoma Corporation Commission on behalf of PSO. I have testified before
19 the Kentucky Public Service Commission on behalf of KPCo, the Public
20 Service Commission of West Virginia on behalf of APCo and WPCo, and the
21 Virginia State Corporation Commission on behalf of APCo.

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

1 A. The purpose of my testimony in this proceeding is to provide a comparison of
2 the forecasted December 2015 through May 2016 (Reconciliation Period)
3 delivered coal costs to actual deliveries, comment on current coal market and
4 energy market conditions and the corresponding impact of each on coal
5 procurement and consumption at the Rockport Plant, address I&M's coal
6 delivery forecast for the period covering October 2016 through March 2017
7 (Forecast Period), to summarize I&M's long-term coal supply agreements,
8 and to describe I&M's coal purchasing strategy. In addition, I will describe
9 I&M's use of coal decrement pricing.

10 **Rockport's Coal Requirements and Incurred Fuel Cost**

11 **Q. Please identify and describe I&M's coal generating station.**

12 A. I&M's Rockport coal generating station operated throughout the
13 Reconciliation Period and is projected to receive coal deliveries during the
14 entire Forecast Period. The station is located in Spencer County, Indiana,
15 and consists of two 1300-megawatt coal-fired generating units. Sulfur
16 dioxide (SO₂) emissions at Rockport are limited by the New Source
17 Performance Standard to 1.2 lbs. SO₂ per Million British Thermal Unit
18 (MMBtu). Compliance with the emission limit is achieved by using a blend
19 consisting primarily of Powder River Basin (PRB) low-sulfur sub-bituminous
20 coal from Wyoming and low-sulfur bituminous coal from various Central
21 Appalachian sources.

22 In order to comply with more stringent U.S. Environmental Protection

1 Agency (EPA) emissions standards, Dry Sorbent Injection (DSI) technology
2 is being used at both Rockport units. The DSI technology began operating
3 on Rockport Unit 2 in December 2014 and on Rockport Unit 1 in April 2015.
4 The DSI technology and Activated Carbon Injection (ACI) are being utilized
5 to achieve compliance with the Mercury and Air Toxics Standards (MATS
6 Rule), which places emissions limits on the two units at the Rockport Plant
7 for mercury, acid gases, and other hazardous air pollutants. The DSI system
8 uses sodium bicarbonate to reduce emissions of acid gases; the ACI system
9 uses brominated activated carbon to reduce emissions of mercury; and
10 electrostatic precipitator upgrades including new transformers and controls,
11 will ensure compliance with hazardous air pollutant limits that are measured
12 via particulate matter emission limits. The use of DSI and ACI technology did
13 not change the current coal blend at Rockport.

14 **Q. How did the total actual delivered costs compare to what was**
15 **forecasted for Rockport during the Reconciliation Period?**

16 A. During the Reconciliation Period, the overall weighted average delivered cost
17 of coal for the Rockport plant from all sources was forecasted to be
18 \$44.97/ton or 244.32 cents/MMBtu. The actual delivered cost was
19 \$43.30/ton or 233.12 cents/MMBtu. The actual weighted average delivered
20 cost of coal was approximately 4% lower than expected due mainly to no fuel
21 adjustment on the rail transportation price and lower barge rates.

1 **Coal Market Conditions and Environmental Compliance**

2 **Q. How have market conditions affected I&M's cost of purchasing coal?**

3 A. During 2015, low NYMEX (New York Mercantile Exchange) and CSX¹ coal
4 pricing and reduced demand continued to apply downward pressure on the
5 market, which led to the closure of a significant portion of the Central
6 Appalachian (CAPP) coal production in Kentucky and West Virginia. The
7 cost of NYMEX coal for Rockport remained moderately stable throughout the
8 Reconciliation Period. While PRB coal pricing was relatively strong in the
9 beginning of 2015, the market began experiencing the same downward
10 pressure that other basins were experiencing throughout the year and the
11 remainder of the Reconciliation Period.

12 **Q. What is the status of the MATS and the Cross-State Air Pollution Rule**
13 **(CSAPR) regulations, and what impact is expected on the forecasted**
14 **cost of coal for I&M?**

15 A. After significant litigation, on June 13, 2016, the Supreme Court denied a
16 multiple-state request, led by the state of Michigan, to reconsider whether
17 MATS should remain in effect while the authority of the EPA to issue the
18 regulation is considered. Therefore, even if the court ultimately concludes
19 that the EPA does not have the authority, MATS impact to the plants will
20 have occurred and the closures and investments made to those plants to
21 become compliant would then effectively be non-reversible.

22 In addition to the MATS Rule, the EPA, on July 6, 2011, released

¹ CSX is the over-the-counter (OTC) broker index for coal loaded on CSX rail.

1 CSAPR. Under CSAPR, reductions in SO₂ and nitrogen oxide (NO_x)
2 emissions were to begin as early as January 1, 2012. Due to extensive
3 litigation, Phase I of CSAPR's annual SO₂ and NO_x reductions began on
4 January 1, 2015. Phase I of CSAPR's seasonal ozone NO_x reductions went
5 into effect on May 1, 2015. Phase II of CSAPR is scheduled to begin in
6 2017. On November 16, 2015, the EPA proposed the CSAPR Update Rule,
7 which would reduce the NO_x emissions for 23 states under the CSAPR,
8 including Indiana. These revisions to ozone season budgets are intended to
9 address the required 2008 revisions to ozone National Ambient Air Quality
10 Standards. AEP, on behalf of I&M and its other operating companies, filed
11 comments to the proposed updates to CSAPR on February 1, 2016,
12 identifying certain flaws with the EPA's proposal. At this time, I&M cannot
13 reasonably determine what effect this new proposal will ultimately have, but
14 the Company will continue to monitor this proposal and any anticipated
15 impacts when it is practical to do so. Both the MATS Rule and CSAPR
16 continue to contribute to, or impact, the price differential for the ultra-low
17 sulfur PRB (0.55 lbs. SO₂/MMBtu).

18 **Forecasted Fuel Cost and Methodology**

19 **Q. Please provide a summary of I&M's long-term coal supply agreements**
20 **and their anticipated costs for the Forecast Period.**

21 A. Rockport's scheduled tonnages of sub-bituminous coal during the Forecast
22 Period will be supplied primarily by an agreement with Peabody

1 COALSALES, LLC, which has been in place for several years. The overall
2 forecasted weighted average delivered cost of coal for Rockport from all
3 sources during the Forecast Period is projected to be \$43.72/ton or 241.43
4 cents/MMBtu. Additional coal requirements that are not already committed
5 will be purchased, as necessary, to fulfill any remaining supply requirements
6 at Rockport. Projected coal deliveries and costs for the Forecast Period
7 were provided to Witness Heimberger for use in preparing I&M's forecast.

8 **Q. How were the forecasted deliveries and prices, as provided above,**
9 **determined for the Forecast Period?**

10 A. The amount of coal projected to be consumed was based on a load forecast
11 covering the Forecast Period. Coal delivery requirements were then
12 determined by taking into account coal inventory, the forecast of coal
13 consumption, and adjustments for any contingencies that would necessitate
14 an increase or decrease in coal inventory levels. Next, the sources of the
15 coal were determined taking into account environmental and boiler
16 constraints, as well as contractual obligations and existing sources of supply.
17 The price of contract coal and committed spot market purchases are based
18 on contractual agreements. Uncommitted coal, when necessary, is priced
19 from the forecast of future coal market prices or forward curve. Finally,
20 transportation costs were forecasted based on the existing railroad
21 transportation agreements and projected barging, railcar, and transloading
22 rates.

1 Purchasing Strategy

2 **Q. Please describe I&M's coal purchasing strategy.**

3 A. I&M's coal purchasing strategy is based on continuous market monitoring
4 and evaluation along with periodic competitive bids. I&M frequently
5 calculates the future needs for uncommitted coal, at which time coal
6 producers may be contacted and given the parameters for the amount and
7 quality of coal that is sought. From competitive bid results and/or existing
8 opportunities, if reasonable, I&M then selects the coals needed to meet its
9 requirements based primarily on price and coal quality considerations.

10 **Q. Is risk assessment of potential suppliers an important factor in I&M's**
11 **coal purchasing decisions?**

12 A. Yes. The Company considers a vendor's financial status, ability to deliver
13 and past performance when evaluating its decision to do business with that
14 supplier. Purchases from reliable vendors serve to enhance I&M's supply
15 security.

16 Coal Industry and Energy Market Conditions

17 **Q. How are recent changes in the coal industry impacting coal**
18 **procurement for I&M?**

19 A. While the coal industry continues to deal with bankruptcies as well as
20 mergers and acquisitions, I&M continues receiving coal deliveries as
21 contracted and expects to continue doing so into the future. The fuel
22 procurement team monitors all coal industry news and will continue to

1 consider a vendor's financial situation when procuring coal.

2 **Q. How are recent changes in the energy market impacting generation for**
3 **I&M?**

4 A. Beginning in late 2015, as a result of an unusually warm winter and
5 continuing low natural gas prices, power prices in PJM began liquidating
6 below Rockport's cost of generation. This resulted in the Rockport Plant
7 generating units either being placed in a Down Not Required (DNR) status or
8 operating at minimum load most of the time they were online, which reduced
9 coal consumption to the point that I&M became concerned about meeting the
10 minimum rail obligation and coal contractual commitments.

11 **Q. Please provide a summary of I&M's current coal inventory situation.**

12 A. As described above, I&M has experienced a decrease in coal burn that has
13 led to an increase in coal inventory. Rockport maintains two separate coal
14 piles, bituminous and sub-bituminous, each with their own inventory. Both of
15 these coal piles were expected to exceed their maximum physical capacity if
16 I&M received all of its contractual obligations given the reduced burn.

17 **Q. What options has I&M explored to mitigate the reduced coal**
18 **consumption?**

19 A. When I&M recognized a potential issue relative to reduced burn, coal storage
20 pile limitations, and its contractual obligations, I&M began negotiating with
21 suppliers to defer a portion of the tonnage delivery into 2017. Ultimately, I&M
22 was able to successfully renegotiate the contracts with the largest suppliers

1 of both bituminous and sub-bituminous coals by extending the term and
2 delaying a portion of the tonnage into 2017 at no additional cost to I&M's
3 customers. After deferring delivery of those tons, I&M evaluated multiple
4 alternatives to further manage Rockport's inventory. Offsite storage of coal,
5 selling coal into the market, buying out of agreements, paying liquidated
6 damages on a contract, and decrement pricing were all evaluated to find the
7 lowest cost solution to address the critical issue of a growing inventory that
8 was quickly approaching the physical capacity limits of Rockport's coal piles.
9 The offsite storage space that was available would have resulted in fees for
10 storage as well as for extra transportation, handling, and transloading to
11 move coal from mines to storage then ultimately to Rockport. Since the
12 market was oversupplied, selling coal back into the market would not have
13 been cost effective as the current market price was less than the contract
14 prices. Buying out of agreements was potentially another way to manage a
15 quickly growing inventory, but sellers are not always agreeable to this,
16 particularly in the current climate where they need to sell as much coal as
17 possible to keep their mines open. In addition, I&M's reliability of coal supply
18 could be adversely affected by this practice. Finally, paying liquidated
19 damages on coal contracts was another option evaluated. I&M's coal
20 contracts allow for situations where the buyer cannot, for whatever reason,
21 fulfill their obligation to take all of the contracted tons for a specific period.
22 Rather than take the contracted tonnage, I&M could pay liquidated damages

1 to the supplier. Liquidated damages would have needed to be paid on both
2 rail and coal supply agreements and no coal would have been delivered for
3 future use. Thus, simply paying liquidated damages was not the lowest cost
4 option for I&M's customers in this case. After evaluating all of these
5 alternatives, I&M determined that applying a decrement price was the most
6 cost effective solution. I&M began applying decrement pricing to its market
7 offer for the Rockport plant beginning in the second quarter of 2016.

8 **Q. What is decrement pricing?**

9 A. Decrement pricing involves reducing the market offer provided to PJM for the
10 Rockport plant by an amount equal to or less than the liquidated damages
11 that would be applicable should I&M not meet the minimum volume
12 requirements under the rail and coal supply contracts. In other words, the
13 decrement pricing represents the avoided cost associated with implementing
14 a more expensive option to avoid or reduce surplus coal inventories.

15 **Q. Please describe the Company's decrement pricing strategy.**

16 A, I&M chose to use the cost of liquidated damages as the basis for decrement
17 pricing because it was the least cost option of all of the available alternatives
18 to reduce inventory, as described above. In the second quarter of 2016, coal
19 burn had decreased, inventory continued to increase, and rail and coal
20 agreements had contractual minimum volume obligations that had to be met.
21 At some point, there would physically be no room left to store coal at
22 Rockport. If that happened and no other action was taken, I&M would have

1 been forced to stop taking delivery of coal and would have incurred liquidated
2 damages as defined in the coal and transportation agreements. The
3 decrement pricing helped to avoid those charges while still ensuring that I&M
4 received all of the coal it contracted for to use at a later time.

5 **Q. What are the inputs into the calculation of the decrement pricing?**

6 A. The decrement price is calculated through market modeling to equal a
7 discount to the variable generation costs that would facilitate the plant's
8 ability to meet its contractual minimums and avoid liquidated damage costs.
9 If the required decrement price was determined to be greater than the
10 potential liquidated damage costs that would apply, then the decrement price
11 would be limited to equal the potential liquidated damage costs.

12 **Q. Does I&M continue to evaluate the need for and appropriate level of**
13 **decrement pricing?**

14 A. Yes. I&M updates the market model used to evaluate decrement pricing on
15 an as-needed basis to ensure the decrement price results in the lowest cost
16 to the customer over the long run. As coal burn increases and coal piles are
17 not nearing their maximum physical capacities, it is not necessary to run the
18 market model to evaluate decrement pricing on a regular basis. In other
19 words, the market model will be run only when needed.

20 **Q. Has decrement pricing benefited I&M's customers?**

21 A. Yes. Decrement pricing benefits the customers by optimizing generation from
22 the Rockport plant to avoid off-site storage fees, excessive handling costs,

1 and/or limit liquidated damages. To the extent that the price decrement
2 results in the Rockport units being dispatched when they otherwise would not
3 be, coal is consumed, the other potential costs are avoided, and customers
4 ultimately benefit because higher cost alternatives to manage the inventory
5 are avoided.

6 **Q. Has decrement pricing been approved by the Commission in other**
7 **proceedings?**

8 A. Yes. The most recent FAC orders for all four of the other investor-owned
9 electric utilities operating in Indiana show that they have engaged in
10 decrement pricing.²

11 **Q. Does I&M know how long decrement pricing will be utilized?**

12 A. No. As described above, there are options available to I&M to manage coal
13 inventories. All of those options will continue to be evaluated as needed in
14 the event that Rockport's coal inventories are above target and are reaching
15 the physical capacities of the coal piles. Decrement pricing will be
16 considered and evaluated as a viable approach to reduce high inventories in
17 times of reduced coal burn.

18 **Q. Does the forecast reflect the use of decrement pricing, as discussed**
19 **above?**

20 A. No. I&M's coal forecast includes the variable costs related to contractual

² See *Southern Ind. Gas & Elec. Co.*, Cause No. 38708 FAC 111 at 2 (IURC 7/18/2016); *Northern Ind. Pub. Serv. Co.*, Cause No. 38706 FAC 111 at 4-6 (IURC 7/18/2016); *Duke Energy Indiana, LLC*, Cause No. 38707 FAC 108 at 6-7 (IURC 6/29/2016); *Indianapolis Power & Light Co.*, Cause No. 38703 FAC 111 at 5-6 (IURC 5/25/2016).

1 costs for committed coal and transportation agreements, market prices for
2 uncommitted open positions, any contractual escalations, and any
3 transloading or handling costs that the Company is projected to incur. After
4 the coal forecast has been run, decrement pricing is evaluated as needed as
5 an option to reduce surplus inventories, and any necessary adjustment would
6 be made to the market offer after such evaluation is complete. Simply
7 stated, decrement pricing is a tool that incents a generating unit to dispatch
8 in the market rather than not generating and incurring additional costs for
9 failure to take delivery of minimum contractual volume requirements.

10 **Q. Will I&M update its testimony regarding the use of decrement pricing in**
11 **future FAC proceedings?**

12 A. Yes.

13 **Conclusion**

14 **Q. Do you have an opinion regarding the reasonableness of I&M's coal**
15 **costs?**

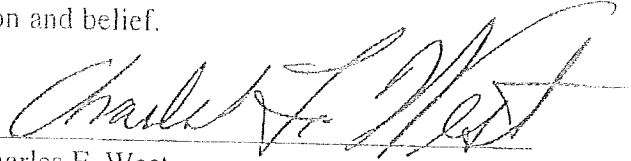
16 A. Yes. I&M has and continues to pursue and manage its coal supplies and
17 transportation costs, recognizing and addressing opportunities to provide a
18 reliable supply of coal at the lowest reasonable cost.

19 **Q. Does this conclude your direct testimony?**

20 A. Yes.

VERIFICATION

I, Charles F. West, Manager, Coal Procurement of American Electric Power Service Corporation, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

A handwritten signature in cursive script, appearing to read "Charles F. West", written over a horizontal line.

Charles F. West

Date: July 27, 2016