

FILED
November 12, 2020
INDIANA UTILITY
REGULATORY COMMISSION

Cause No. 38707 FAC 123 S1

Exhibit 1

Verified Affidavit of Dr. Jeremy Fisher

I, Jeremy Fisher, hereby affirm as follows:

1. My name is Jeremy Fisher. I am employed by Sierra Club with a title of Senior Advisor for Strategic Research and Development. My business address is 2101 Webster Street, Suite 1300, Oakland, California 94612.

2. I have been employed as an energy systems expert for thirteen years, focused on the regulation, planning, and operation of electric utilities in nearly every state in the United States. From 2007 through 2017, I worked as a consultant at Synapse Energy Economics, where I served federal regulators such as the U.S. Environmental Protection Agency (“EPA”), state utility regulators including the commissions of Michigan and Puerto Rico, consumer advocates, and other public interest organizations. In the course of my work, I have served as an expert witness in over thirty state public utility commission dockets across seventeen states, including Indiana. I have experience operating and reviewing the use of utility electric system models. I hold a doctorate in geological sciences from Brown University.

3. Of relevance to this investigatory docket, I am the author of a 2019 study¹ in which I and a team of analysts assessed the commitment practices of utility-owned coal-fired generating units across multiple Regional Transmission Operator (“RTO”) regions, including the Midcontinent Independent System Operator (“MISO”). I have subsequently had discussions with staff of RTOs and market monitors, and reviewed papers and presentations conducted by those entities. The most recent of those studies was conducted by MISO’s Independent Market

¹ Fisher, Jeremy, Al Armendariz, Matthew Miller, Brendan Pierpont, Casey Roberts, Josh Smith, Greg Wannier. 2019. Playing With Other People’s Money: How Non-Economic Coal Operations Distort Energy Markets. Sierra Club. Available online at <https://www.sierraclub.org/sites/www.sierraclub.org/files/Other%20Peoples%20Money%20Non-Economic%20Dispatch%20Paper%20Oct%202019.pdf>

Monitor (“IMM”), which I will refer to as the “IMM Study,” presented to MISO’s markets subcommittee² and published on October 8, 2020.³

4. On October 22, 2020 and November 11, 2020, I talked with the author of the IMM Study, Dr. David Patton, President of Potomac Economics, which serves as the MISO IMM. This affidavit highlights key elements of the methodology as I understood from the author. In sum, especially based on conversations with Dr. Patton, I do not view the IMM Study equivalent to the commitment decisions applied by Duke Energy Indiana for several reasons.

5. As an initial matter, with respect to Duke Energy Indiana, Dr. Patton verified that the Edwardsport Integrated Gasification Combined Cycle (“IGCC”) was not analyzed in the MISO Study. In an email dated November 11, 2020, Dr. Patton states: “I confirmed that Edwardsport IGCC was excluded from our analysis because it is not a conventional coal resource.”

6. In addition to the exclusion of the Edwardsport IGCC, the IMM Study differs substantially from the Profit & Loss commitment mechanism employed by Duke Energy Indiana in multiple respects.

7. As a general matter, the IMM Study does not use or rely upon cost data as used or submitted by the utilities that it reviews. Instead, the IMM Study uses what the IMM refers to as “reference case” data for production cost, or the cost of dispatch at a particular generating unit.

² Patton, David. 2020. A Review of the Commitment and Dispatch of Coal Generators in MISO. Presentation before MISO Markets Subcommittee. Available online at <https://cdn.misoenergy.org/20201008%20MSC%20Item%2004%20Coal%20Dispatch%20Study%20Presentation481767.pdf>

³ Patton, David. 2020. A Review of the Commitment and Dispatch of Coal Generators in MISO. White Paper prepared by Potomac Economics (MISO IMM). Available online at <https://cdn.misoenergy.org/20201008%20MSC%20Item%2004%20IMM%20Coal%20Dispatch%20Study481336.pdf>

Based on my discussions with Dr. Patton, I understand that the “reference case” data are a representation of spot market coal prices and transportation costs, as assessed by the IMM. The IMM does not rely on utility-provided fuel costs, production costs, or offer prices. The IMM stated that offer prices may be inconsistent with the costs incurred by utilities because the offers represent other strategic interests other than market efficiency. The substitution of assumed prices is not consistent with Duke Energy Indiana’s use of internally assessed marginal cost data as used in the Company’s Profit & Loss assessment.

8. The IMM Study did not use the “no load” and “startup cost” offers from utilities, instead replacing those values with the IMM’s own assessment of reasonable startup costs. I understood that the IMM made this substitution to compensate for utilities that underestimate their startup costs and instead force a certain number of starts per year. In an email dated November 11, 2020, the IMM stated that the substitution was “important because the no load and startup offers for units designated must run are not used and can’t be trusted.”

9. The IMM Study uses a backwards looking assessment to determine if a unit should be committed in the next period, an assumption that is not consistent with the commitment process employed by Duke Energy Indiana or any other utility I have encountered to date. Specifically, the IMM Study assesses if the commitment of a unit is “efficient” by if its losses over the prior five days were smaller than its “cycling” costs. In contrast, Duke Energy Indiana employs a forward-looking assessment to determine if a unit’s operation is likely to be profitable relative to market prices.

10. The IMM Study includes in its “cycling cost” an adder for the forgone profits that could be expected if a unit were to operate. The IMM based the assessment of “forgone profits” on the value of profitable hours, as opposed to net revenues, in the prior two days. The use of

forgone profits in cycling cost, the use of a backward-looking profit assessment, and the exclusion of lost revenue from unprofitable operation are not consistent with the commitment evaluation process employed by Duke Energy Indiana, or any other utility I have encountered to date.

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

Dated: November 12, 2020

A handwritten signature in black ink, appearing to read 'J Fisher', written over a horizontal line.

Jeremy Fisher

Attachment 1



Jeremy Fisher <jeremy.fisher@sierraclub.org>

Connect briefly on coal commitment report?

David Patton [REDACTED]
To: Jeremy Fisher <jeremy.fisher@sierraclub.org>

Wed, Nov 11, 2020 at 9:57 AM

Jeremy,

I confirmed that Edwardsport IGCC was excluded from our analysis because it is not a conventional coal resource. Also, I confirmed that we used our reference levels for the coal resources' costs. This is important because the no load and startup offers for units designated must run are not used and can't be trusted.

David

 **David B. Patton, Ph.D.**
President

9990 Fairfax Blvd., Ste 560 | Fairfax, Virginia 22030

ph: [REDACTED] | www.potomaceconomics.com

Improving Markets through Expert Monitoring, Analysis and Advice

From: Jeremy Fisher <jeremy.fisher@sierraclub.org>
Sent: Wednesday, November 11, 2020 11:01 AM
To: David Patton [REDACTED]
Subject: Re: Connect briefly on coal commitment report?

That would be great. Should be short.

On Wed, Nov 11, 2020, 8:00 AM David Patton [REDACTED] > wrote:

Yes, I have a meeting at 11, but can call when it is over at about 11:30

 **David B. Patton, Ph.D.**
President

9990 Fairfax Blvd., Ste 560 | Fairfax, Virginia 22030

ph: [REDACTED] | www.potomaceconomics.com

Improving Markets through Expert Monitoring, Analysis and Advice

From: Jeremy Fisher <jeremy.fisher@sierraclub.org>
Sent: Wednesday, November 11, 2020 10:55 AM
To: David Patton [REDACTED]
Subject: Re: Connect briefly on coal commitment report?

Let me know if this morning works for you?

On Tue, Nov 10, 2020, 8:59 PM Jeremy Fisher <jeremy.fisher@sierraclub.org> wrote:

David, I am working in the morning. My schedule is relatively flexible, but prefer 9am or 11am PT, if either work for you.

If you'd like to connect before 9am PT, let me know.

-Jeremy

On Tue, Nov 10, 2020 at 2:27 PM David Patton [REDACTED] > wrote:

Are you working tomorrow? I could try to catch you in the morning.

David



David B. Patton, Ph.D.
President

9990 Fairfax Blvd., Ste 560 | Fairfax, Virginia 22030

ph: [REDACTED] | www.potomaceconomics.com

Improving Markets through Expert Monitoring, Analysis and Advice

From: Jeremy Fisher <jeremy.fisher@sierraclub.org>
Sent: Tuesday, November 10, 2020 12:00 PM
To: David Patton [REDACTED]
Subject: Connect briefly on coal commitment report?

Hi Dr. Patton,

I just left you a voicemail, but I was hoping that I might be able to ask you a brief followup question on your coal commitment report. As you may know, we're starting to see it in utility dockets.

I have a fairly flexible day today; would you be able to give me a ring at [REDACTED]? Should be no more than 5 minutes.

Thanks so much

-Jeremy

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Jeremy Fisher
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Phone: (415) 977-5536

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