

**SUPPLEMENTAL TESTIMONY OF JOHN D. SWEZ  
DIRECTOR, BULK POWER MARKETING AND TRADING  
DUKE ENERGY BUSINESS SERVICES LLC  
ON BEHALF OF DUKE ENERGY INDIANA, INC.  
CAUSE NO. 38707-FAC91 BEFORE THE  
INDIANA UTILITY REGULATORY COMMISSION**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is John D. Swez, and my business address is 526 South Church Street,  
3 Charlotte, NC 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (“Duke Energy Business  
6 Services”) as Director, Regulated Portfolio Optimization. Duke Energy Business  
7 Services provides various administrative services to Duke Energy Indiana, Inc.  
8 (“Company,” or “Duke Energy Indiana”) and other affiliated companies of Duke  
9 Energy Corporation (collectively “Duke Energy”).

10 **Q. ARE YOU THE SAME JOHN D. SWEZ THAT PREVIOUSLY PROVIDED**  
11 **TESTIMONY IN THIS PROCEEDING?**

12 A. Yes, I am.

13 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?**

14 A. I will describe an adjustment to the coal pricing inputs used to formulate supply  
15 offers to the MISO for the purpose of dispatch and commitment of Duke Energy  
16 Indiana’s coal generating stations, with the exception of Gallagher Station,  
17 beginning in the near future.

1 **Q. WHAT ARE THE CURRENT CIRCUMSTANCES IMPACTING THE**  
2 **DISPATCH AND COMMITMENT OF THE COMPANY'S COAL**  
3 **GENERATING UNITS?**

4 A. Uncharacteristically low natural gas prices and unseasonably mild weather,  
5 among other factors, have caused power prices in the MISO market to drop,  
6 causing the Company's coal generating facilities to experience lower dispatch  
7 levels as well as periods of economic shutdown. In addition, Petitioner's  
8 Supplemental Exhibit A shows how the projected prices of natural gas and power  
9 have dropped recently, contributing to lower forecasted levels of coal  
10 consumption. As discussed by Mr. Elliott Baston in his supplemental testimony  
11 in this proceeding, our contracted deliveries of coal are much greater than our  
12 projected consumption. As a result, coal inventories are projected to be well  
13 beyond our coal storage inventory capability in the near future. The Company is  
14 projecting inventory levels will exceed maximum storage levels until at least the  
15 end of 2013, absent the implementation of a price decrement to the Company's  
16 dispatch and commitment price of its units.

17 **Q. WHAT FACTORS DETERMINE THE DISPATCH AND COMMITMENT**  
18 **OF THE COMPANY'S GENERATING UNITS?**

19 A. Although there are other factors, many related to reliability, that influence the  
20 decision to run the Company's generating units, the main economic factor is  
21 determined by whether the revenue received from the Locational Marginal Price  
22 ("LMP") of the generator node, along with revenue received from the sale of  
23 ancillary services at the Market Clearing Price ("MCP"), is greater than the

1 variable costs to run the unit. If the variable cost of a generating unit is  
2 unchanged, as the LMP of the energy market drops, generating units tend to be  
3 committed less and be dispatched at a lower level than with higher market prices.  
4 Starting in December of 2011 and continuing into 2012, the variable costs to run  
5 many of the Company's generating units were greater than the revenues received  
6 at the generator LMP and, thus, these units were operated at a reduced output or  
7 taken off-line.

8 **Q. HOW IS THE PRICE OF POWER DETERMINED IN THE MISO**  
9 **MARKET?**

10 A. For the Day-Ahead market, the price is determined by MISO after using the offers  
11 and bids it receives for the sale and purchase of power from market participants to  
12 arrange a security-constrained, economic dispatch for the entire MISO region.  
13 Thus, both supply offers and demand bids determine the price of power in  
14 addition to congestion and loss impacts associated with the transmission of power.  
15 Between September 2011 and January 2012, the Day-Ahead on-peak LMP has  
16 decreased to where January 2012 INDIANA.HUB<sup>1</sup> averaged \$30.63/MWhr. As a  
17 comparison, between January 2011 and August 2011, the monthly average Day-  
18 Ahead on-peak LMP for CINERGY.HUB was between \$38.17/MWhr and  
19 \$59.74/MWhr.

20 **Q. WHAT FACTORS INFLUENCE THE DEMAND BIDS MADE TO MISO?**

21 A. The amount of demand that is bid into MISO for the Day-Ahead market as well as  
22 the actual demand metered in the Real-Time market is strongly influenced by  
23 weather. After an above normal July 2011, temperatures were unseasonably mild

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<sup>1</sup> On January 1, 2012, CINERGY.HUB was replaced with INDIANA.HUB.

1 in November and December 2011, as well as January 2012. For Indianapolis,  
2 Indiana, November 2011 averaged 5.1 degrees Fahrenheit above normal,  
3 December 2011 averaged 6.2 degrees Fahrenheit above normal, and January 2012  
4 averaged 5.6 degrees Fahrenheit above normal. In addition, the region that  
5 comprises MISO was experiencing similar unseasonably mild weather that led to  
6 a regional decrease in the demand bids for the MISO.

7 **Q. WHAT FACTORS DETERMINE THE SUPPLY OFFERS MADE TO**  
8 **MISO?**

9 A. Supply offers are determined by both the amount and availability of generation as  
10 well as the generator's offer price. The offer price of a generator is largely  
11 determined by the input price of the commodity used to produce power, such as  
12 the price of fuel, emission allowances, and variable O&M. At traditional gas  
13 prices, (*i.e.*, gas prices of about \$5/MMBtu), natural gas units are frequently the  
14 marginal unit, meaning the last unit committed or dispatched and can be  
15 correlated to MISO energy prices. As natural gas prices dropped at the end of  
16 2011 and into 2012 from almost \$5/MMBtu to under \$3/MMBtu, the price of  
17 power in MISO has dropped to the point now where most combined cycle natural  
18 gas units are running and displacing generation from coal units. As a result, the  
19 fuel component of an offer for a combined cycle unit operating at an incremental  
20 heat rate of 7,000 Btu/kWhr went from approximately \$35/MWhr to \$21/MWhr.

21 Another contributing factor that has arisen in the past 5 years is that the  
22 amount of wind generation in MISO market has gone from approximately 1,000  
23 MW to over 10,000 MW, representing approximately an 8% share of MISO

1 capacity. Absent an increase in demand, because wind generators will run to the  
2 extent the wind blows and transmission is available (and typically regardless of  
3 the MISO energy price), this will have a downward impact on prices as well.

4 **Q. WHY DOES THE COMPANY PROPOSE TO ADJUST ITS COAL UNITS’**  
5 **DISPATCH AND COMMITMENT PRICES WITH A PRICE**  
6 **DECREMENT?**

7 A. The price decrement represents the avoided cost associated with implementing a  
8 more expensive option to avoid or reduce surplus coal inventories, such as buying  
9 out of a coal contract, reselling the coal, or taking some other form of action. The  
10 dispatch and commitment costs of the appropriate coal units are reduced by the  
11 costs that would be avoided if the unit would be cleared and dispatched by MISO.  
12 Given the additional costs associated with avoiding or reducing surplus coal  
13 inventories, the Company believes it makes sense to try to avoid some of these  
14 costs by offering the units with the decremental price subtracted from the current  
15 offer cost. To the extent the units are dispatched, coal coming to the station is  
16 consumed, other potential costs are avoided, and customers ultimately benefit.  
17 This is very similar to the manner in which the Company successfully  
18 economically dealt with a surplus coal inventory situation at Gallagher Station in  
19 2009.<sup>2</sup>

20 As an example, consider a generator that is on-line and has a \$32/MWhr  
21 variable cost offer. If the LMP at the generator node is \$30/MWhr, the generator

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<sup>2</sup> As approved in Cause No. 38707 FAC82 (12/22/2009) (the Commission found that the Company’s bidding of its units, specifically the taking into account of incremental storage costs, is a reasonable response to the Company’s rising inventory levels, is consistent with economic dispatch and is in the best interests of customers.) p. 10.

1 will be dispatched down by MISO until the unit reaches minimum load. Now add  
2 the fact that if this generator doesn't burn additional coal, an additional expense of  
3 \$5/MWhr will be experienced through an additional storage expense. In this  
4 example, \$5/MWhr becomes the decrement price. By subtracting \$5/MWhr from  
5 the original dispatch price offer of the unit, the new dispatch price offer becomes  
6 \$27/MWhr. When the unit is offered in this case, because the offer of \$27/MWhr  
7 is now below the LMP of \$30/MWhr, the unit is increased in output until it  
8 reaches full output. Note that even though a decrement of \$5/MWhr is used,  
9 because the generator is paid the LMP, the company actually saves \$3/MWhr by  
10 use of the decrement. The company receives revenue of \$30/MWhr, has coal  
11 expenses of \$32/MWhr, but avoids the \$5/MWhr incremental coal storage cost for  
12 a net savings of \$3/MWhr. The decrement reflects the correct unit economics of  
13 avoided additional costs to the customer.

14 Note that for dispatch purposes, the decrement is only meaningful between  
15 the decremented price and the original variable cost offer. Said in another way,  
16 when using a decremented offer price, if LMP's are below the decremented unit  
17 offer there is no change in the dispatch of the unit as it is still at minimum load.  
18 Likewise, when using a decremented offer price, if the LMP is above the original  
19 offer, there is no change in the dispatch of the unit as it is still at maximum load.

20 **Q. PLEASE EXPLAIN HOW THE PRICE DECREMENT WOULD BE**  
21 **APPLIED TO THE COMPANY'S SUPPLY OFFERS?**

22 A. For all coal generating stations with the exception of Gallagher station (Gallagher  
23 station burns a different quality of coal than the rest of our portfolio and is

1 currently not in an oversupply position) the supply offer would be calculated just  
2 as it would normally, except that the price of coal would be reduced by the price  
3 decrement. Supply offers would continue to be calculated and updated each day  
4 for each hour of the day-ahead and real-time markets.

5 **Q. HOW DID THE COMPANY DETERMINE THE AMOUNT OF**  
6 **DECREMENT TO USE INITIALLY?**

7 A. In order to determine the appropriate amount to decrease the cost of the coal, all  
8 available options for dealing with surplus tons were assigned a cost and volume.  
9 The decrement is determined by stacking the options from least cost to highest  
10 cost and using the option at the level of volume in the stack that is associated with  
11 the total oversupply. These options, described in more detail by Mr. Batson in  
12 supplemental testimony in this proceeding, currently include on-site coal storage,  
13 storing coal at coal supply mines, reselling the coal, and buying out coal contracts.

14 **Q. HOW OFTEN WILL THIS DECREMENT BE UPDATED?**

15 A. All inputs to this calculation will be updated twice per month. This includes  
16 updating the cost and volume for the various options for dealing with the surplus  
17 tons, as well as the model used to project the surplus inventory.

18 **Q. IS THE PRICE DECREMENT EXPECTED TO CHANGE OVER TIME?**

19 A. Yes, in fact, projections show that the decrement price used will drop  
20 substantially over time.

21 **Q. DOES THE FACT THAT A DECREMENT BASED ON THE HIGHEST**  
22 **COST OPTION TO DEAL WITH THE SURPLUS COAL IS USED IN**

1           **FORMULATION OF THE GENERATING UNITS OFFER MEAN THAT**  
2           **THE COMPANY WILL PHYSICALLY IMPLEMENT THIS OPTION?**

3    A.    No. The decrement represents the additional cost that is being avoided when an  
4           additional ton of coal is consumed. Thus, burning more coal will always allow  
5           the Company to avoid the most expensive option. Instead, the Company will  
6           actually physically implement the least expensive options. Thus, the two methods  
7           are working together to address the situation. As inventories begin to increase,  
8           the decrement uses the most expensive option because this option is avoided. In  
9           addition, the Company also starts with implementation of the least expensive  
10          options, *i.e.*, storing more coal in inventory and other lower cost options when  
11          necessary.

12   **Q.    IS THE USE OF A PRICE DECREMENT TO FORMULATE THE**  
13          **OFFERS WITHIN THE RULES OF THE MISO MARKET?**

14   A.    Yes. The Independent Market Monitor has specific rules related to bids and  
15          offers made to MISO by Market Participants. The use of a decrement will not  
16          affect the Company's adherence with these rules.

17   **Q.    IS THE USE OF A PRICE DECREMENT IN THE BEST INTEREST OF**  
18          **THE COMPANY'S CUSTOMERS?**

19   A.    Yes. Doing nothing will mean that more expensive options will have to be  
20          employed to solve the problem, meaning higher costs than necessary to Duke  
21          Energy Indiana's customers. Using a price decrement means that some of the  
22          coal can be consumed at a cost that is far less expensive than a do nothing  
23          approach.



1 **Q. IS THE COMPANY REQUESTING ANY SPECIFIC APPROVALS FROM**  
2 **THE COMMISSION AT THIS TIME?**

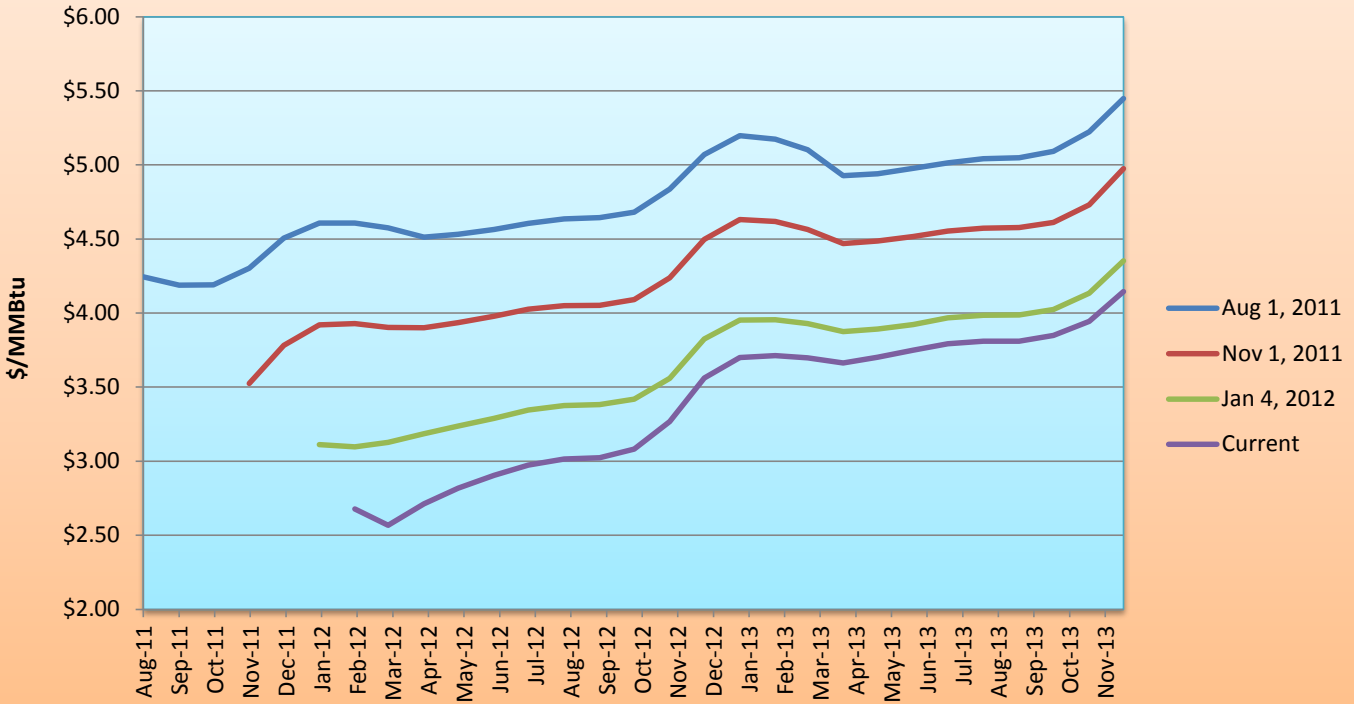
3 A. No, not at this time. The Company wanted to notify the Commission, the OUCC,  
4 and the intervening parties of its growing inventory and its plans to mitigate it,  
5 including its implementation of the avoided cost decrement pricing. The  
6 Company will update the Commission in the next FAC.

7 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?**

8 A. Yes, it does.

### Forecasted Henry Hub Natural Gas Price

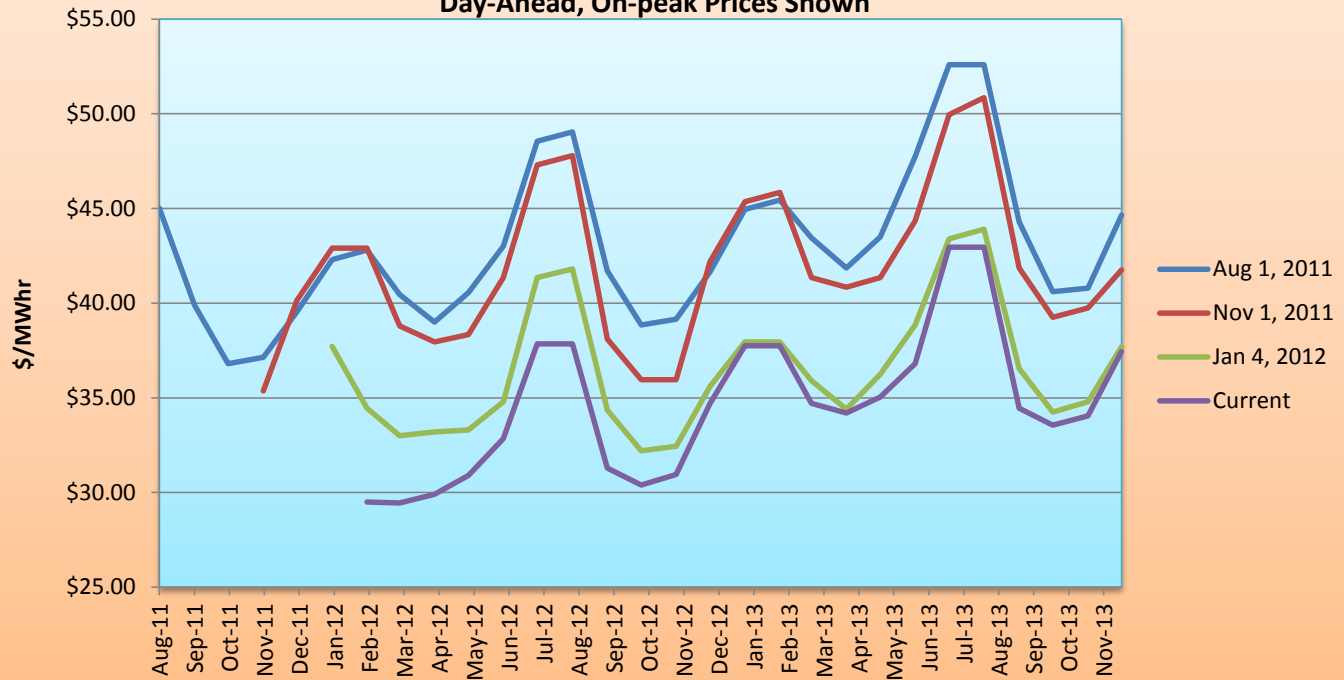
Change between August 2011 and February 2012



### Forecasted CINERGY.HUB-INDIANA.HUB Power Price

Change between August 2011 and February 2012

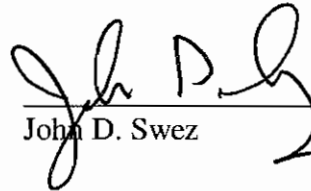
Day-Ahead, On-peak Prices Shown



**VERIFICATION**

I, John D. Swez, affirm under penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

Dated this 22 day of February, 2012.

  
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John D. Swez