Exhibit No.:	13NP
Issue:	Fuel, Purchased Power, Wholesale Sales, FAC Support, Crossroads Transmission
Witness:	Burton L. Crawford
Type of Exhibit:	Direct Testimony
Sponsoring Party:	KCP&L Greater Missouri Operations Company
Case No.:	ER-2016-0156
Date Testimony Prepared:	February 23, 2016

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2016-0156

DIRECT TESTIMONY

OF

BURTON L. CRAWFORD

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
February 2016

Certain Schedules Attached To This Testimony Designated "(HC)" Contain Highly Confidential Information And Have Been Removed Pursuant To 4 CSR 240-2.135.

DIRECT TESTIMONY

OF

BURTON L. CRAWFORD

Case No. ER-2016-0156

Q: Please state your name and business address.

A: My name is Burton L. Crawford. My business address is 1200 Main, Kansas City, Missouri 64105.

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

A: I am employed by Kansas City Power & Light Company ("KCP&L") as Director, Energy Resource Management.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of KCP&L Greater Missouri Operations Company ("GMO" or the "Company").

Q: What are your responsibilities?

A: My responsibilities include managing the Energy Resource Management ("ERM") department. Activities of ERM include integrated resource planning, wholesale energy purchase and sales evaluations, fuel budgeting, renewable energy standards compliance, and capital project evaluations.

Q: Please describe your education, experience and employment history.

A: I hold a Master of Business Administration from Rockhurst College and a Bachelor of Science in Mechanical Engineering from the University of Missouri. Within KCP&L, I have served in various areas including regulatory, economic research, and power engineering starting in 1988.

Q: Have you previously testified in a proceeding at the Missouri Public Service Commission ("MPSC" or "Commission") or before any other utility regulatory agency?

A: Yes, I have. I provided testimony to the Commission in prior GMO rate cases and in a variety of other proceedings. I have also appeared before the Kansas Corporation Commission ("KCC") on behalf of KCP&L.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to describe the level of fuel expense, purchased power expense and the wholesale sales revenues filed in the Direct Testimony of Company witness Ronald A. Klote. In addition, I will provide information regarding the requirements necessary to support the request for continuation of GMO's Fuel Adjustment Clause ("FAC"). I specifically address all or a portion of the requirements of 4 CSR 240-3.161(3) (P), (Q), (R) and (S).

In addition, this testimony supports the Company's request for the inclusion of certain transmission service related costs associated with the Crossroads Energy Center ("Crossroads").

I. ENERGY PRICE FORECASTS

Q: Please describe how GMO forecasts electricity prices?

A: GMO utilizes the MIDAS™ model, which is similar to other fundamental price forecasting models that are commonly used in the industry. MIDAS™ is provided by Ventyx (formerly Global Energy). The Transact Analyst™ component of MIDAS™ generates regional prices by modeling power flows within and between various energy markets, transaction areas, North American Electric Reliability Corporation ("NERC")

Sub-Regions, and NERC Regions. Power flows are determined based on the relative loads, resources, marginal costs, transactions costs, and intertie limits between the areas or regions. Transactions occur on an hourly basis for 8,760 hours per year.

Q: What are the primary inputs to the model?

A: The model utilizes a sizeable input dataset, referred to as the National Database. It is populated with assumptions about market supply, demand, and transmission. The bulk of the input assumptions use Federal Energy Regulatory Commission Form 1 data, Energy Information Administration 411 reports, and Continuous Emissions Monitoring system data compiled by the Environmental Protection Agency ("EPA"), as their sources. The demand data includes projected hourly demand for virtually every utility in the Eastern Interconnect. The supply data contains a representation of all generating units within those utilities: capacity, heat rate, fuel type, variable operations and maintenance costs, outage rates, emissions rates, start-up costs, etc. Fuel costs may also be tied to individual units based on reported costs. This applies primarily in the case of nuclear and coal units, whose fuel costs would not be tied to a national commodity price such as is the case with natural gas or fuel oil. The other primary inputs are: natural gas prices, natural gas basis adders, fuel oil prices, and emission allowance prices. These inputs are more "global" in nature, meaning they are not tied to specific units. The dataset also includes transmission constraints between the areas. Ventyx, the provider of the National Database, arrives at the constraints through their analyses of regional assessments from the various regional entities affiliated with the NERC.

Q: How does the model use this data to forecast power prices?

A: The model performs an hourly chronological dispatch of all generation resources to meet projected hourly demand in each region, as defined in the model's geographic topology. For each hour, the last generator needed to meet demand is identified as the marginal unit. All of the costs associated with dispatching the marginal unit become the basis for the price in that hour in that region.

Q: Is this done for only one region?

A: No. Our market simulations model most of the Eastern Interconnect. As a result, the unit identified as marginal may be dispatched in order to serve load in a neighboring region. The model will perform transactions between regions, as long as adequate transmission capacity still exists. If transmission becomes constrained between regions before all of the economical transactions have been completed, the model's bidding logic will arrive at an appropriate price spread between the two regions.

Q: What is your opinion of the resulting forecasts?

A: The fundamental supply and demand data are relatively good. That is, the demand forecast from utilities and the existing public data on installed generation capacity are sufficiently reliable, so that identifying a reasonable unit to base an hourly price on is something that can be done with a reasonable degree of confidence. The input assumption that creates a larger challenge is fuel price. In GMO's market area, the market price is almost always set by one of two fuels: coal or natural gas. Primarily, it is natural gas. Fuel oil might set the price of power in a very small number of hours in some years in the North region of the Southwest Power Pool ("SPP"), the FERC-approved regional transmission organization that GMO was authorized by the Commission to join in 2009.

Q: How difficult is it to predict the price of coal and natural gas?

A: Coal prices are relatively less volatile and the model inputs are based on actual reported fuel costs, so the impact of coal on power prices can be forecast with relative accuracy when coal is the marginal fuel. Natural gas prices are much more volatile and difficult to predict.

Q: How accurate are the power price forecasts?

A: The power price forecasts are relatively accurate when the fuel price forecasts are accurate, more specifically, when the natural gas price forecast is accurate. Natural gas is the marginal fuel in North SPP more than 50% of the hours in a year, so there is a strong correlation between natural gas and power in those hours. Schedule BLC-1 (HC) shows how closely GMO's power price forecast tracked prices that we observed in the SPP market. It is a backcast of January 2015 through November 2015 using the average spot gas price for each month. It is worth noting that in the modeling GMO uses one gas price for each month of the forecast period, although, in reality, the gas price can change every day. To the extent that gas prices were more volatile intra-month, that would affect our ability to track actual market prices with our backcast. Schedule BLC-2 illustrates the monthly volatility of natural gas from December 2014 through November 2015. In addition to intra-month gas prices, hourly demand would influence our backcast versus the actual market.

Q: How are these market prices used in this case?

A: These market prices are used to normalize fuel expense, purchased power and wholesale sales.

II. FUEL, PURCHASED POWER AND OFF-SYSTEM SALES NORMALIZATION

Q: What method for normalizing the test year fuel cost, purchased power cost and off-system sales did you use in this case?

A: The proper method for normalizing the test year fuel, purchased power and off-system sales is to normalize and annualize the system peak and energy, wholesale market prices, the prices paid for fuel, generating system maintenance and forced outages, and available generating resources. After determining the appropriate normalized and annualized values, a production cost computer modeling tool is used to develop the appropriate generation and purchased power levels, and resulting fuel cost, purchased power cost and off-system sales revenues. GMO used the MIDAS™ model for its production cost model.

Q: Please describe the MIDAS™ model used in this normalization.

A: This is the same modeling software used to generate the market price forecasts described previously. For purposes of running the production cost modeling used in this normalization, the model was run in "Price Mode" which means that the user inputs the market prices into the model, rather than using the model to generate the prices. The prices input into the model were the prices generated by the previously described price forecasting process. The model performs an economic dispatch of the Company's generating units and available market purchases in order to serve load in a least cost manner and make off-system sales when economic. The Company uses this model for various purposes, such as generating market price forecasts, long-term resource planning decisions, fuel and interchange budgeting, purchase and sales analysis, and other purposes.

Q: Please describe the normalization of the system requirements for this rate case.

A: GMO's native load was adjusted to reflect weather normalized and annualized customer growth by the Company's load forecasting personnel. This process is described in more detail in the Direct Testimony of Company witness Albert R. Bass. This resulted in revised monthly peak demands and energy requirements, which were input into the MIDAS™ program. The program distributed the monthly energy requirements on an hourly basis. The software uses the normalized monthly energy and peaks, and the actual historical hourly system loads to shape the normalized loads on an hourly basis. The resulting load shape was then used in the normalized production cost modeling.

The Company's wholesale contract customer load was added to the native load to arrive at the total system requirements.

Q: Please describe these wholesale contract customers.

A: These are capacity and energy sales to WAPA. The revenue for this transaction and the associated fuel expense is included in Schedule BLC-4 (HC).

Q: Please describe the fuel price normalization.

A: The normalized fuel prices used in the modeling were developed by Company witness Wm. Edward Blunk and are described in detail in his Direct Testimony. These fuel prices were input into the model on a plant-specific basis and then were used in the normalized production cost modeling. The natural gas prices provided by Mr. Blunk were also used in the process of generating wholesale energy market prices.

Q: Please describe the maintenance outages normalization.

A: The Company performs scheduled maintenance on the base load generating units on a cyclical basis over a number of years. That is to say, a specific unit in any given year may have an extended turbine generator outage, a shorter boiler outage, a short inspection outage or no outage at all. Consequently, in any specific year, there may be higher or lower scheduled maintenance outages than the long-term average maintenance outages. In order to normalize the availability of the generating resources for the test year, we computed the total number of weeks that a unit would be scheduled for maintenance over the cycle and averaged this amount by the number of years in the maintenance cycle. These normalized maintenance outage assumptions were then spread over the test year to develop a test year maintenance schedule. These outages were scheduled so that no two units would be out at the same time and that all the base load generating resources would be available during the peak load periods of June through September. Schedule BLC-3 (HC) contains the maintenance schedule that was used for the normalization.

Q: Please describe the generating resources available capacity normalization.

A: The generating resources available in the rate case modeling are the same as the Company's existing resources with adjustments made to normalize the capacity to the levels that are expected to be in place and operational as of the true-up date in this case.

Q: Where there any other adjustments to the test year generating resources?

A: Yes. Lake Road Unit 4/6 was modeled as a natural gas-fired generator instead of a coal-fired generator.

Q: Why was this change to Lake Road Unit 4/6 made?

A: As a result of current and projected environmental regulations, the Company's IRP determined that it was more economic to convert the unit from coal to natural gas. In order to remain compliant with current environmental regulations, after April 15, 2016 the unit will burn natural gas instead of coal.

Q: How was the generation from renewable resources modeled in this rate case?

A: Wind generation has been included in the modeling as purchased power agreements from resources that are operating and under contract (Gray County and Ensign). The generation levels and energy prices are based upon signed contracts and operating history. Generation from the St. Joseph Landfill Gas facility has also been included based on operating history. This is a Company-owned resource.

Q: How accurate are the results of this modeling?

A: After making the normalization adjustments described previously, we believe that the results of this modeling should likewise result in reasonably accurate results.

Q: What is the SPP Integrated Marketplace ("IM")?

A: The SPP IM is a relatively new marketplace that is comprised of the day-ahead market, real-time balancing market, and congesting hedging markets, and allows SPP to decide which generators should operate one day ahead of time. By allowing SPP to monitor energy costs from multiple sources, the SPP IM is intended to improve grid reliability, regional balancing of supply and demand, and cost-effectiveness. The SPP IM replaced SPP's Energy Imbalance Service Market, which was in operation since 2007.

Q: How does the new SPP IM impact GMO's fuel and purchased power modeling?

A: Prior to the SPP IM, GMO generation was first dispatched to meet GMO native load obligations with any excess economic generation going to off-system sales. When wholesale market prices were such that it was economic to purchase power to meet a portion of GMO's native load obligations instead of using GMO generating resources, wholesale purchases were made.

Under the SPP IM, GMO now sells all energy generated to the SPP market and purchases all native load requirements from the SPP market. This significantly increases the amount of both wholesale sales and purchases.

Q: For the test period, what revenue and expense items, if any, were adjusted as a result of normalizing fuel cost, purchased power costs and off-system sales?

A: Adjustments were made to the fuel costs to reflect both the normalized fuel market and normalized generation levels. Also, purchased power expense was adjusted to reflect the changes in the quantity of energy purchased and the price of such purchases. Finally, bulk power sales were adjusted to reflect the changes in the quantity of capacity and energy sold and the price of such sales. Schedule BLC-4 (HC) shows the generation levels by resource type and the purchased power levels, the costs of each, and the revenues from the wholesale contract customers. The adjustments are reflected in Schedule RAK-4, attached to the Direct Testimony of Company witness Ronald A. Klote (adjustments CS-24 and 25).

III. ADJUSTMENTS TO THE NORMALIZED FUEL, PURCHASED POWER and WHOLESALE SALES RESULTS

Q: Does GMO propose any adjustments to the MIDAS™ model results?

A: Yes. Adjustments are made for ancillary services purchases/sales and SPP Revenue Neutrality Uplift ("RNU").

Q: What are ancillary services purchases and sales?

A: As a participant in the SPP IM, GMO is obligated to provide or procure certain ancillary services. These services include spinning, supplemental and regulating reserves. GMO purchases its SPP-specified ancillary service from the SPP-operated ancillary service market.

In addition, GMO has the opportunity to sell these ancillary services in the SPP-operated market.

Q: What amount of ancillary services purchases and sales has GMO included in this case?

A: The amount of ancillary service purchases and sales included in this case is based on the 12-months ending October 2015 actual costs and revenues incurred by GMO. These values will be updated to actual amounts for the most recent 12 months at the time of true-up.

Q: What are SPP's RNU charges?

A: As a participant in the SPP IM, there are a number of miscellaneous charges and credits incurred in order for SPP to remain revenue neutral. These charges and credits include items such as rounding errors and inadvertent interchange costs or revenue, and make up the RNU charges. RNU is distributed among the market participants as either a debit (if

SPP is short of funds to balance payments between participants) or a credit (if SPP has collected more than needed to balance payments between participants).

Q: Why is it appropriate that GMO include net RNU charges in its calculation of revenue requirements?

A: As a participant in the SPP IM, GMO is exposed to RNU charges and credits. These charges and credits are not included in the model used by the Company to calculate fuel and purchased power costs. As such, the net SPP RNU charges have been included as an adjustment to GMO's model results. Absent this adjustment, RNU-related charges and credits would not otherwise be reflected in the Company's retail cost of service.

Q: What is the basis of the net SPP RNU charge amount included in this case?

A: The RNU charges included in this case are based on the actual 12-months ending October 2015 net SPP RNU charges. This adjustment is shown in Schedule BLC-4 (HC). This RNU amount will be updated at the true-up in this case.

IV. ELECTRIC UTILITY FUEL AND PURCHASED POWER COST RECOVERY MECHANISM

Q: In regard to GMO's request for continued use of an FAC, which portions of the Electric Utility Fuel and Purchased Power Cost Recovery Mechanism filing requirements are you addressing in your testimony?

A: I will address all or portions of 4 CSR 240-3.161(3) (P), (Q), (R) and (S). Requirement (P) addresses the projected generation and Demand Side Management ("DSM") dispatch over the next four years, requirement (Q) addresses heat rate test results, requirement (R) addresses the long-term resource planning process, and requirement (S) addresses forecasted environmental investments.

Q: Please describe your support for compliance with 4 CSR 240-3.161(3) (P).

A: 4 CSR-3.161(3) (P) requires the Company to provide:

> The supply-side and demand-side resources that the electric utility expects to use to meet its loads in the next four (4) true-up years, the expected dispatch of those resources, the reasons why these resources are appropriate for dispatch and the heat rates and fuel types for each supply-side resource; in submitting this information, it is recognized that supply- and demand-side resources and dispatch may change during the next four (4) true-up years based upon changing circumstances and parties will have the opportunity to comment on this information after it is filed by the electric utility;

The expected resource dispatch levels for the next four true up years and fuel types can be found in Schedule BLC-5 (HC).

Q: Why are these resources appropriate for dispatch?

A: The resources shown in Schedule BLC-5 (HC) include those resources owned or under contract. These resources are dispatched on an economic basis. This means the lowest cost resources are generally dispatched before higher cost resources. The expected resource dispatch levels shown in Schedule BLC-5 (HC) are based on an economic dispatch.

Q: Has GMO supplied the heat rate test results for its generating units required per 4 CSR 240-3.161(3) (Q)?

A: Yes. Heat rate test results conducted within the previous 24 months are provided in Schedule BLC-6 (HC).

Q: Please provide your support for 4 CSR-3.161(3) (R).

A: 4 CSR-3.161(3) (R) requires the Company to provide:

> Information that shows that the electric utility has in place a long-term resource planning process, important objectives of which are to minimize overall delivered energy costs and provide reliable service; ....

GMO has a long-term resource planning process in place. The electric utility resource plan produced by the process is also known as an integrated resource plan ("IRP"). An objective of this planning process is to identify the least cost and preferred resource plans while maintaining adequate capacity reserves for reliability.

Q: When was GMO's last IRP prepared?

A: GMO prepared and filed its latest IRP update report in April 2015 in Case No. EO-2015-0252. The Commission found on December 16, 2015 that GMO's IRP demonstrates compliance with the requirements of 4 CSR 240-22.

Q: When will the next GMO IRP be prepared?

A: Under the current IRP rule, the next GMO IRP is to be filed in March 2016. This filing will be an annual update.

Q: Please provide your support for 4 CSR 3.161(3) (S).

A: 4 CSR 3.161(3) (S) states:

> If emission allowance costs or sales margins are included in the RAM request and not in the electric utility's environmental cost recovery surcharge, a complete explanation of forecasted environmental investments and allowance purchase and sales;

In order to continue plant operations, GMO may need to make the following investments in environmental controls at the Sibley and Iatan Generating Stations. These investments include:

Sibley

- Cooling Tower
- Coal Combustion Residual Rule Compliance
  - Plug Mill
  - Slag Stackout Area

- Pond Liner Retrofit
- Waste Ash Silo
- Landfill Expansion
- Flyash Pond and Slag Pond Closure

Iatan

- Cooling Tower
- Coal Combustion Residual Rule Compliance
  - Holding Basin Liner
  - Monitoring Well
  - Landfill Cell Expansion
  - Ash Pond Closure

Cooling towers may be needed for future compliance with EPA water regulations. The other investments are required to meet EPA regulations concerning coal combustion residuals. GMO's estimated share of these environmental investments is approximately $94 million. The final costs at Iatan would be split with the joint owners. The forecasted emission allowance purchases required by 4 CSR 3.161(3) (S) can be found in the Direct Testimony of Company witness Wm. Edward Blunk.

V. CROSSROADS TRANSMISSION COSTS

Q: Please summarize your testimony concerning Crossroads.

A: Crossroads is an important part of GMO's supply portfolio. In 2007 when the decision to add this asset to GMO's supply portfolio was evaluated, it was the lowest cost supply option for GMO customers. As a result of prior MPSC decisions, GMO does not recover FERC-approved transmission rates associated with Crossroads. While GMO is not seeking recovery of transmission costs previously disallowed by the MPSC, GMO is seeking recovery of the increase in transmission costs above the amount of the original $4.9 million disallowance. Additional detail on the unrecovered expense is included in the Direct Testimony of Company Witness John Carlson. Entergy's move to MISO occurred subsequent to the MPSC disallowance of Crossroads transmission service related costs. Even with this increase in transmission expense, Crossroads remains the low cost option for GMO customers.

Q: Please briefly describe Crossroads.

A: The Crossroads Energy Center is a 300 MW natural gas-fired peaking facility that is part of GMO's regulated supply portfolio. It is comprised of four General Electric 7EA combustion turbines located in Clarksdale Mississippi. The facility was constructed in 2002 and added to the GMO supply portfolio in 2008.

Crossroads generates electricity from natural gas that is supplied by pipelines that are geographically remote from the resources that supply gas to GMO's other gas-fired generators and provides capacity equivalent to 16% of GMO's 2015 peak load. Transmission service is currently provided by MISO and SPP. Prior to Entergy joining MISO, transmission service was provided by Entergy and SPP.

When GMO capacity needs were evaluated in 2007, Crossroads was found to be the lowest cost option for GMO customers, even when the cost of transmission was considered.

Q: Is Crossroads included as part of GMO's regulated rate base in Missouri?

A: Yes, however the cost of transmission service on the MISO transmission system is not. This transmission service is required for GMO to count the 300 MWs of Crossroads capacity towards meeting GMO's capacity obligations. Without this service, GMO would be required to build or purchase 300 MWs of additional generating capacity and obtain firm transmission service.

Q: Why does GMO not recover any of the cost of MISO transmission service for Crossroads?

A: The MPSC disallowed transmission cost recovery in ER-2010-0356. GMO received a partial rate base disallowance for the cost of Crossroads as well as the disallowance of transmission service costs.

Q: What was the value of the transmission disallowance?

A: At the time of the MPSC decision in 2010 to disallow transmission cost recovery, the transmission disallowance was approximately $4.9 million per year. This was the cost of transmission on the Entergy system.

Q: What is the current impact of the MPSC's decision to disallow transmission?

A: Approximately $13 million per year in FERC-approved MISO transmission costs are not recovered by GMO. Additional detail on this unrecovered expense is included in the Direct Testimony of Company witness John Carlson.

Q: In 2007 when the capacity needs of GMO were evaluated and Crossroads was identified as the lowest cost option, what was the assumption on transmission costs?

A: In the 2007 evaluation, the Company included $12 million per year in transmission costs for the Crossroads option. Even at $12 million per year, Crossroads was the lowest cost option for GMO customers.

Q: So what is GMO's request in this case regarding Crossroads?

A: GMO is requesting cost recovery for the increase in transmission costs for Crossroads above the amount of the original $4.9 million disallowance. GMO is not asking to recover the transmission costs previously disallowed by the Commission nor the Crossroads capital costs previously disallowed by the Commission.

Q: Is the recovery of transmission costs related to an out-of-state generating facility unprecedented in Missouri?

A: No. Like GMO, Empire District Electric has a generating asset (Plum Point) within the MISO region. Also like GMO, Empire is in SPP so Empire must pay MISO for transmission service for their generation within MISO. Empire pays the same exact MISO rate for transmission service as GMO pays to MISO. However, unlike GMO, Empire has been allowed to recover these transmission service costs.

Q: Has GMO taken any action to mitigate the Crossroads transmission service costs?

A: Yes, it has.

Q: Please explain.

A: A cross-functional team of employees under the direction of Scott Heidtbrink identified and evaluated several options for maximizing the value of Crossroads for both customers and shareholders. Of the 15 possible options considered, the only possibly feasible option that could offset a significant portion of the transmission expense is to move a portion of GMO's retail load and the Crossroads facility to MISO. As discussed in the Direct Testimony of John Carlson, this option would be cumbersome and difficult to achieve as GMO retail load and generation would be split between MISO and SPP.

In addition to the option evaluation, GMO continues to try to minimize the financial impact related to the price of transmission service through various FERC and court proceedings. If GMO realizes transmission cost savings as a result of these proceedings such savings would flow through to the benefit of customers depending on the rate treatment in effect for such costs at the time.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement A General Rate Increase for Electric Service	)))	Case No. ER-2016-0156

AFFIDAVIT OF BURTON L. CRAWFORD

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Burton L. Crawford, being first duly sworn on his oath, states:

1. My name is Burton L. Crawford. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Energy Resource Management.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of KCP&L Greater Missouri Operations Company consisting of nineteen (19) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Burton L. Crawford

Subscribed and sworn before me this 23rd day of February, 2016.

Notary Public

My commission expires: Feb 4 2019

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2019
Commission Number: 14391200

SCHEDULE BLC-1

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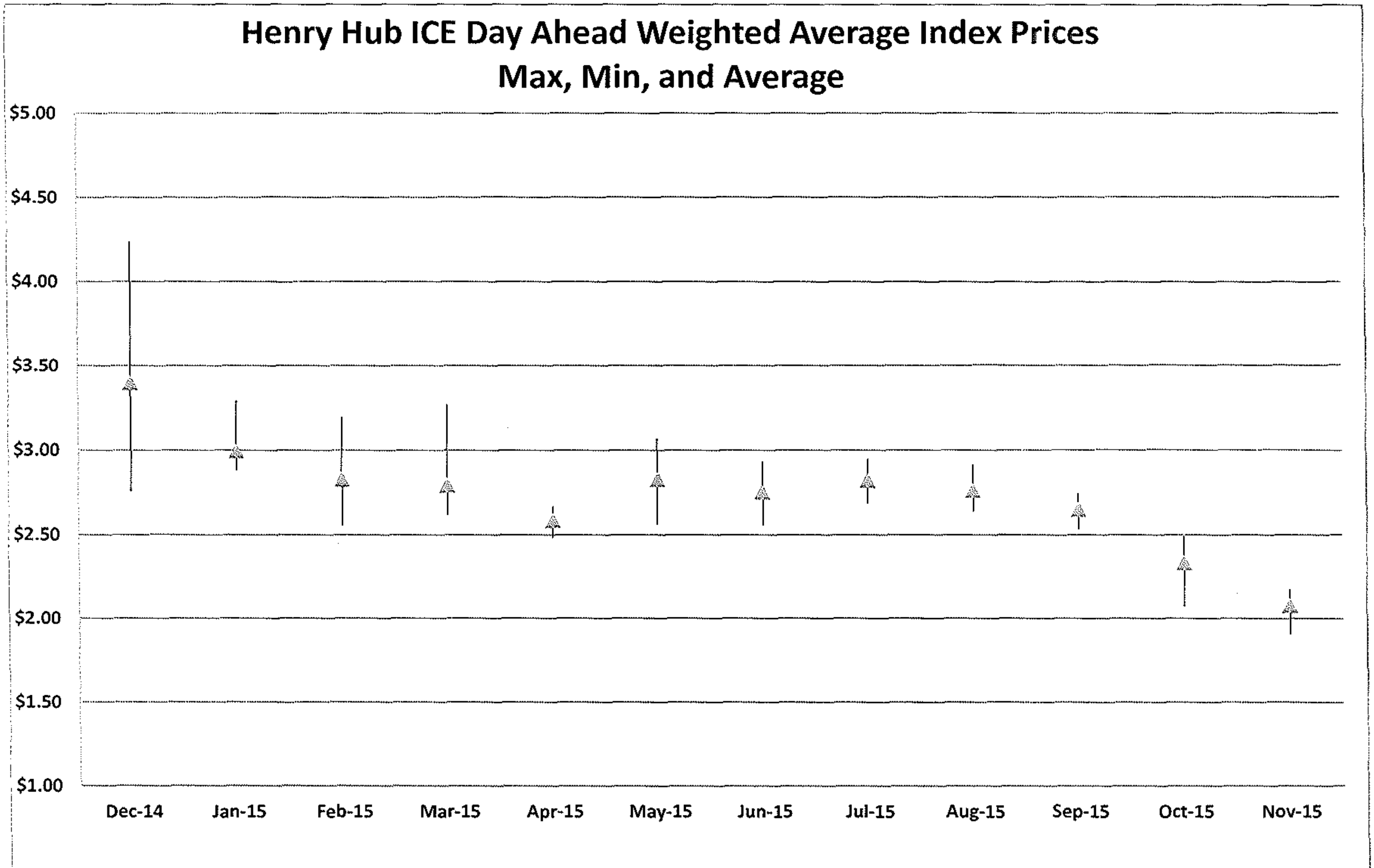

Schedule BLC-2

SCHEDULES BLC-3 THROUGH BLC-6

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