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Issues: Normalized Off-System Sales Revenues
Witness: Jaime Haro
Sponsoring Party: Union Electric Company
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2011-0028

DIRECT TESTIMONY

OF

JAIME HARO

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
September, 2010

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DIRECT TESTIMONY

OF

JAIME HARO

CASE NO. ER-2011-0028

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Jaime Haro. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

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

A. I am Director, Asset Management and Trading for Union Electric Company d/b/a AmerenUE ("AmerenUE" or "Company").

Q. Please describe your educational background and employment experience.

A. I received a Bachelor's degree in Electro-Mechanical Engineering from Universidad Panamericana (Mexico City, Mexico) in 1995 and a Master of Business Administration degree from Tulane University in 1998. From 1992 to 1998, I held several positions with Grupo Bursatil Mexicano ("GBM"), a leading Mexican financial services and brokerage firm, dealing with money markets, currency exchange, debt placement, and risk management. In 1998, I joined AmerenEnergy Inc. ("AE") and worked as a trader of real time energy products before assuming an analytical support position in the long-term energy market trading area of AE. From 1999 to 2004, I led the group within AE that provided quantitative analysis for AE's trading operations. In 2004, I became responsible for trading operations, including managing the transition to

trading AmerenUE's power (with AE acting as AmerenUE's agent) in the Day 2 energy markets started by the Midwest Independent Transmission System Operator, Inc. ("Midwest ISO") on April 1, 2005. On December 31, 2006, the Joint Dispatch Agreement between AmerenUE and AmerenCIPS terminated and as a result, effective January 1, 2007, AE's activities were solely related to AmerenUE's generation asset management, including the trading and marketing operations. On January 1, 2008, AmerenUE terminated the agency relationship with AE related to generation asset management, including the trading and marketing operations. As a result, AE employees formerly responsible for these activities, including me, became employees of AmerenUE. At that time, I assumed my current title, Director, Asset Management and Trading ("AM&T") and added the responsibilities of marketing and asset management to my existing duties.

Q. What are your responsibilities in your current position?

A. As Director of AM&T I manage two specific areas: (i) Real Time Operations, and (ii) Trading. My main role is providing guidance, oversight and coordination of activities in these areas. I am responsible for staffing, budgeting, goal setting, management reporting and other administrative tasks associated with these functions.

II. PURPOSE AND SUMMARY OF TESTIMONY

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

A. I am providing testimony in support of the level of off-system sales revenues included in the cost of service utilized for the purpose of setting AmerenUE's rates. The level of off-system sales revenues is also a component of the calculation of the

net base fuel costs, or "NBFC," against which net fuel cost changes are tracked through the Company's fuel adjustment clause ("FAC"). The calculation of NBFC is discussed in the direct testimony of AmerenUE witness Gary S. Weiss.

Q. Please summarize your testimony and conclusions.

A. I have determined that at this time the appropriate level of normalized annual off-system sales revenues to use in determining the Company's revenue requirement and to set NBFC in the Company's FAC is $389.3 million. It must be noted that the Company intends to true-up the off-system sales revenues as of the end of the proposed true-up date in this case (February 28, 2011), which means this amount will, in all likelihood, change. Please note that the above off-system sales revenues figure includes revenues that in the past were derived from long-term full or partial requirements contracts, which the Company is now including within the definition of off-system sales in its FAC (see revised Factor OSSR in the FAC tariff attached as Schedule LMB-E3 to the direct testimony of AmerenUE witness Lynn M. Barnes).

The focus of my direct testimony is on the methodology and source data for the calculation used to determine the appropriate level of normalized off-system sales revenues based on information available as of the date this case is being filed. AmerenUE's off-system sales are driven in large part by its load-serving obligations to its retail customers, the availability of its generation resources, and the cost of operating its generating resources relative to the market prices for energy and related services (i.e., capacity and ancillary services). To the extent the level of off-system sales experienced during the test year is not the result of normal conditions or does not properly reflect known and measurable changes, adjustments are necessary, as outlined in more detail

below. AmerenUE incorporated the necessary adjustments in its PROSYM production cost model (the operation of which is addressed in the direct testimony of Company witness Timothy D. Finnell) to determine the normalized level of the energy component of off-system sales to include in the determination of the Company's revenue requirement. Using the results obtained from the operation of this model, and further accounting for the remaining components of off-system sales, which are described in more detail later in my testimony, I determined the appropriate level of normalized off-system sales revenues to use in determining the Company's revenue requirement and to calculate Factor NBFC in the Company's FAC.

Q. What elements are included in your off-system sales revenue recommendation?

A. In the context of this proceeding, I use the term "off-system sales" in reference to transactions resulting from AmerenUE's trading activities. The net revenue from these activities comes from four primary components, as follows: (i) energy sales revenues; (ii) capacity sales revenues; (iii) ancillary services revenues; and (iv) miscellaneous Midwest ISO revenues.[1] As noted, the energy sales component is the product of modeling using the Company's PROSYM model, which is run by Mr. Finnell. The remaining components are based upon AmerenUE's historical capacity sales revenues, ancillary services revenues, and miscellaneous Midwest ISO revenues, taking into account known and measurable changes.

[1] For example, miscellaneous Midwest ISO revenues result from inadvertent payments received from the Midwest ISO.

Q. Please address your determination of the appropriate level of off-system sales revenues to include in AmerenUE's revenue requirement and to set the NBFC in the FAC.

A. I determined that the level of AmerenUE off-system sales revenues that should be included in AmerenUE's revenue requirement and used to set NBFC in the FAC is $389.3 million per year. This total is comprised of the following components:

1) $374.3 million of energy sales revenues;

2) $8.6 million of capacity sales revenues;

3) $6.6 million of ancillary services revenues; and

5) ($135,000) of miscellaneous Midwest ISO revenues.

III. ENERGY SALES REVENUES

Q. How is the PROSYM model used to determine the normalized energy sales revenues?

A. Mr. Finnell runs the Company's PROSYM production cost model using inputs adjusted for (i) weather normalization of load (addressed in the direct testimony of AmerenUE witness Steven M. Wills); (ii) normalization of generation outages (addressed by Mr. Finnell in his direct testimony); (iii) fuel costs (i.e., nuclear fuel, coal, natural gas and oil costs), and (iv) normalized energy prices (developed by me, as discussed further below).

Q. Why was the normalized level of off-system sales of energy determined by modeling rather than utilizing actual test year off-system sales?

A. Modeling was used so that off-system sales reflect a normal year, since no particular 12-month period reflects a normal year. The test year is affected by its

particular weather, generation outages, fuel costs, transmission constraints, and energy prices, among many other things. The amount of off-system sales of energy is determined from the amount of generation that is economically available to produce energy reduced by that portion of the generation that is required to serve the Company's load obligations. In any given year, weather, prices, unit availability and load characteristics vary greatly from normal. Utilizing only actual data from one specific year in setting the revenue requirement would fail to account for this volatility. In order to assure that off-system sales revenues utilized to determine the Company's cost of service and NBFC are consistent with normalized conditions, it is necessary to determine the off-system sales based on production cost modeling using normalized loads and generation. Modeling has been used by both the Company and the Staff to determine the energy component of off-system sales revenues in each of the Company's last three general rate proceedings.

Q. How are off-system sales of energy derived from the PROSYM model's output?

A. PROSYM has the ability to simulate AmerenUE's interactions with the market. The model utilizes the inputs described earlier in my testimony to simulate the dispatch of AmerenUE's system by utilizing the lowest cost resources to meet the hourly load requirements. As part of its hourly dispatch, the model identifies opportunities for off-system sales based on the generation that is not being utilized to serve native load that has dispatch costs below the hourly market price for power. The model also identifies opportunities for AmerenUE to buy from the market to reduce the cost to serve its native load and offset generation costs. The simulated off-system sales revenues are determined

based on the hourly market price received for the megawatt-hours ("MWh") that are sold to the market. I would note that the model assumes that the dispatch of AmerenUE's generation is "perfect"; that is, for example, it assumes that there is no congestion between generation and load (when in fact there is often congestion), and it ignores the fact that load and generation differ in real time from the previous day's expectations. In the real world, it is impossible to achieve a perfect dispatch of a generation system considering the weather variations that affect the load, and equipment issues affecting generators' performance.

Q. What market prices were utilized to model the dispatch of AmerenUE's generation?

A. At my direction, Mr. Finnell used an around-the-clock energy price of $32.76 per MWh to dispatch AmerenUE's generation in his PROSYM model. That price is an average based upon energy prices for the 36-month period ending with the anticipated true-up cutoff date in this case, February 28, 2011. The energy prices for the 36-month period are actual market energy prices received at AmerenUE's generating units (i.e., the day-ahead locational marginal prices ("LMPs") in the Midwest ISO energy market actually received by AmerenUE at each "node" applicable to each generating plant) during the 28-month period from March 2008 through June 2010, plus around-the-clock ("ATC") basis-adjusted forward energy prices for the eight-month period from July 2010 through February 2011.[2] I propose to replace these forward energy prices with actual energy prices as part of the true-up in this case.

[2] These forward energy prices are taken from a combination of broker quotes and published data for trading activity at the Cinergy Hub, a well-recognized Midwest energy trading market. The forward energy prices were adjusted for the basis differential that exists between prices at the location of the Cinergy Hub and the prices that are actually realized at the AmerenUE generating units.

Q. Please explain why you chose to utilize day-ahead LMPs ("DA-LMPs") at the generator nodes.

A. As mentioned before, the PROSYM model simulates the dispatch of the Company's generators based on a series of inputs. This dispatching process is similar to the one followed by the Midwest ISO to determine its day-ahead commitment of all of the generators in its footprint. The result of the Midwest ISO process is, among other things, the determination of individual LMPs for each generator. It is most appropriate to use the historic prices at the same node for the day-ahead markets since these are the prices that determined the generation levels that produced the vast majority of AmerenUE's historic off-system sales. In fact, day-ahead prices determine about 97% of AmerenUE's generation commitment and dispatch, whereas real-time prices only apply to the deviations, which are addressed in Mr. Finnell's direct testimony.

Q. Please explain why you chose to utilize three years of energy price data.

A. As addressed in my direct testimony filed in AmerenUE's last rate case (Case No. ER-2010-0036), utilizing more than one year of DA-LMPs – in this case three years – minimizes the impact of warmer than normal or cooler than normal conditions on energy prices within the Midwest ISO footprint. See Schedule JH-E1 for a comparison of monthly energy prices at AmerenUE's generating units from 2008 to 2010, which demonstrates just how variable energy prices for the same month in different years can be.

Q. What is the average sales price for off-system sales of energy resulting from the PROSYM model run?

A. The average sales price for off-system sales of energy resulting from the PROSYM model is $34.11 per MWh, which is higher than the input (dispatch price) of $32.76 because while the model dispatches AmerenUE's generation during each hour of the year, off-system sales are only made in a portion of the hours during the year and the total MWhs of generation to serve load and power purchases are greater than the total MWhs sold off-system. Consequently, the price received for the off-system sales that are made varies from the dispatch price.

Q. You noted the volatility of monthly energy prices depicted in Schedule JH-E1. Please elaborate on what you've seen in recent periods regarding energy prices.

A. Looking further at Schedule JH-E1 and also at Schedule JH-E2, one obvious observation is that power prices are highly volatile. This volatility is an important reason we use normalized power prices when setting rates. But another striking observation that can be made from Schedule JH-E2 is the precipitous drop in power prices from 2008 to 2009.

The 12-month average of around-the-clock power prices through December 2009 dropped approximately 45% compared to the 12-month period ending December 2008. Moreover, the 12-month average around-the-clock price (based on available actual data and forward prices through the end of the proposed true-up period in this case) is expected to be approximately 25% higher than the price level experienced during the 12-month period ending December 2009. Thus, while we currently expect prices in 2010

and early 2011 to have rebounded partially from the precipitous drop seen from 2008 to 2009, they still remain lower than they were during a significant portion of the historical period examined for purposes of this case.

IV. CAPACITY SALES REVENUES

Q. What is the level of capacity sales revenues on an annual basis that you determined was appropriate to include in total off-system sales?

A. I determined that $8.6 million is the appropriate amount to include as capacity sales revenues, using capacity sales for delivery for the period March 2010 – February 2011 (known as of August 1, 2010), which coincides with the end of the true-up period. This total will be updated as part of the true-up in this proceeding.

V. ANCILLARY SERVICES REVENUES

Q. What level of annual ancillary services revenues did you determine was appropriate to include in total off-system sales?

A. I have concluded that the test year level of ancillary services revenues, $6.6 million, to be trued-up through February 2011, is the appropriate level of revenues to include in total off-system sales. The test year level reflects a full year of operation of the Midwest ISO's ancillary services market, which commenced in January 2009.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers In the Company's Missouri Service Area.	)))))	Case No. ER-2011-0028

AFFIDAVIT OF JAIME HARO

STATE OF MISSOURI)
) **ss**
CITY OF ST. LOUIS)

Jaime Haro, being first duly sworn on his oath, states:

1. My name is Jaime Haro. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a AmerenUE as Director, Asset Management and Trading.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 10 pages, and Schedules JH-E1 through JH-E2, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

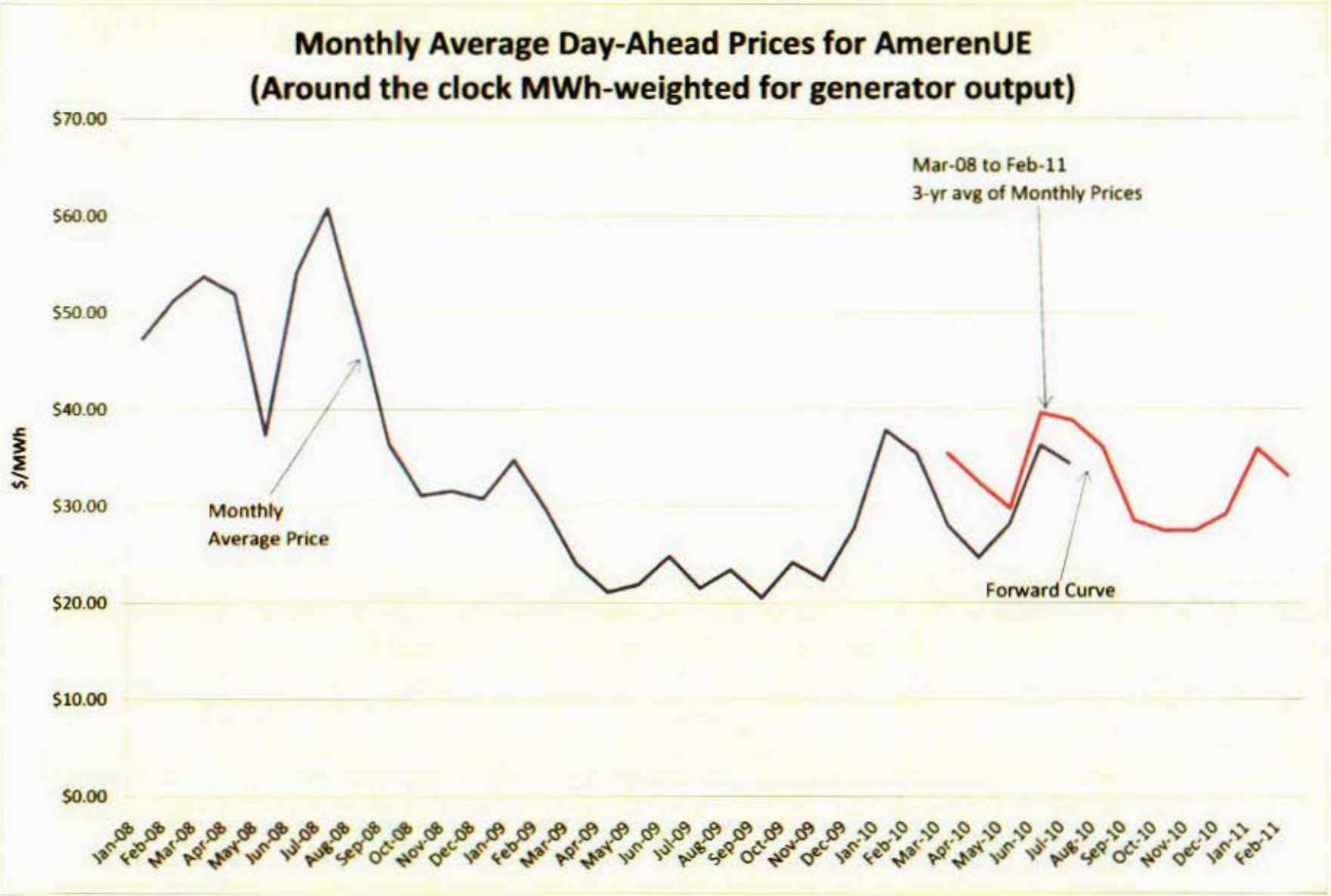
Jaime Haro

Subscribed and sworn to before me this 3 day of September, 2010.

Amanda Tesdall
Notary Public

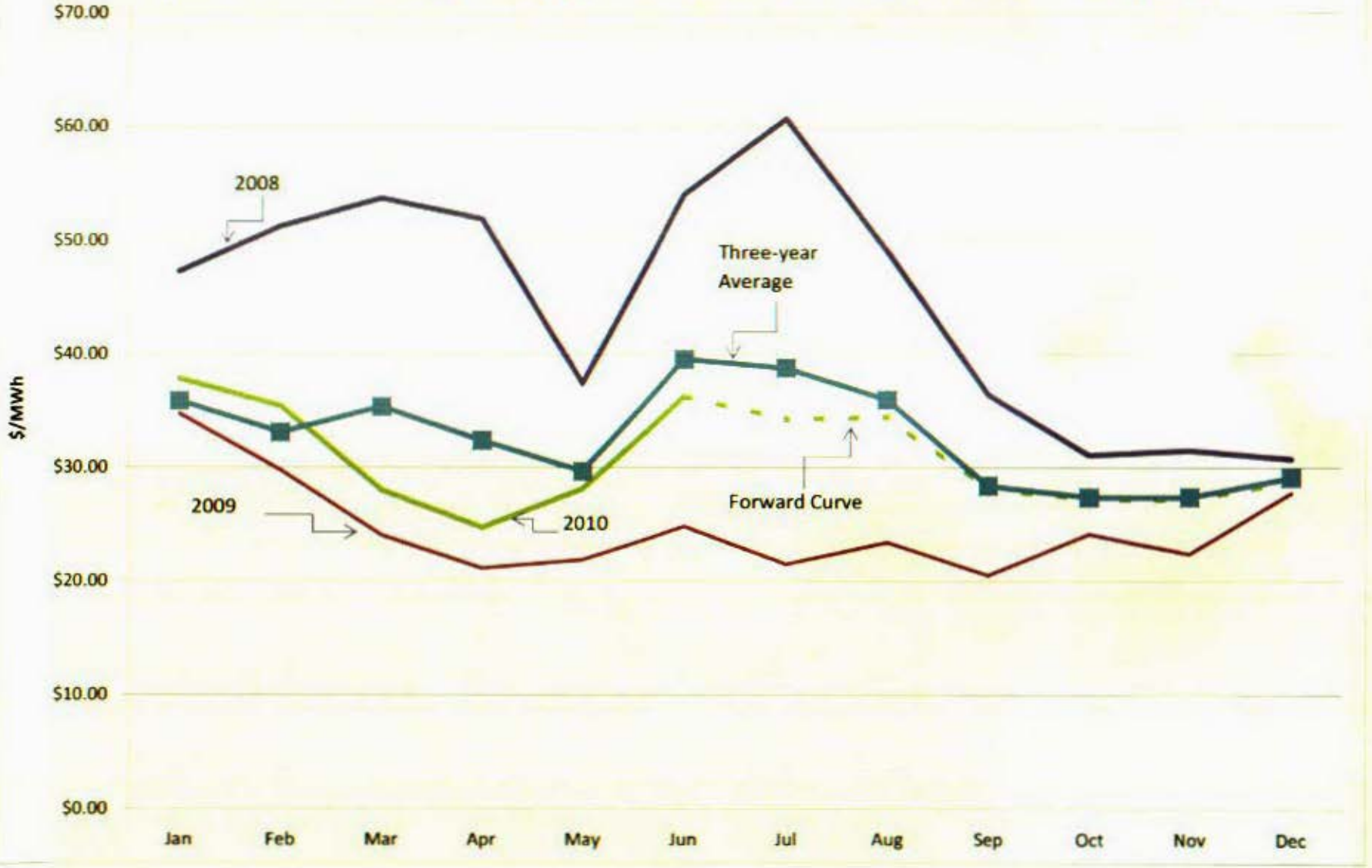
My commission expires:

Amanda Tesdall - Notary Public
Notary Seal, State of
Missouri - St. Louis County
Commission #07158967
My Commission Expires 7/29/2011



Schedule JH-E1

Monthly Average Day-Ahead Prices for AmerenUE
(Around-the-clock prices at generator nodes weighted by unit output)



Schedule JH-E2