AIU 15640

Find out how you could save 20% on your electricity bills with Power Smart Pricing

Thousands of Illinois households are saving on electricity with Power Smart Pricing.
Go to **www.powersmartpricing.org** or call **1-877-655-6028** to learn more.

Ameren
Illinois Utilities

CNTenergy

$240 yearly savings

for a household paying $100 per month on the standard rate*

*Power Smart Pricing is an hourly electricity pricing option offered by the Ameren Illinois Utililties and administered by CNT Energy. The 20% savings estimate is based on average customer savings for Dec. 2007 though Dec. 2009. Actual savings vary depending on customer usage and market conditions. Past performance does not guarantee future results.

Start saving on electricity with Power Smart Pricing

Power Smart Pricing is a rate option from the Ameren Illinois Utilities that lets you pay the hourly, wholesale price of electricity. Here's how it could help you reduce your household electricity costs:

- During the fall, winter, and spring, the hourly price of electricity is often lower than the standard rate throughout the day. That makes now the perfect time to start saving with Power Smart Pricing.
- To manage your costs during the summer, use electricity wisely on weekday afternoons and shift some of your electricity use to off-peak times such as nights and weekends.
- You'll get personalized information and customer support to help you save.

Go to www.powersmartpricing.org or call 1-877-655-6028 for details.

Feb. 2010

AIU 17955

Find out how Power Smart Pricing could help you take charge of your electricity costs.

Learn more at **www.powersmartpricing.org**
or call **1-877-655-6028** for details.

Ameren ILLINOIS

CNTenergy

Learn how you can use hourly prices to manage your electricity costs.

Go to **www.powersmartpricing.org** or call **1-877-655-6028** for details.

Power Smart Pricing is a rate option from Ameren Illinois that lets you pay the hourly, wholesale price of electricity. Since the program started in 2007, **participants have taken control of their electricity usage, with many of them significantly reducing their costs**.*

How Power Smart Pricing could help you reduce your electricity costs:

- During the fall, winter, and spring, the hourly price of electricity is often lower than the standard rate throughout the day.
- To manage your costs during the summer, use electricity wisely on weekday afternoons and shift some of your electricity use to off-peak times such as nights and weekends.
- You'll get personalized information and customer support to help you save.

*Power Smart Pricing participants saved an average of 19% on electricity from May 2007 though June 2010. Savings vary depending on customer usage and market conditions. Past performance does not guarantee future results.

Sept. 2010

It's time to save on electricity with your 2010 Power Smart Pricing Summer Readiness Kit

Dear Power Smart Pricing participant,

We are entering summer, the season when hourly electricity prices tend to fluctuate most. **Being smart about your electricity use – especially your air conditioning use – will help you manage your summer electricity costs with Power Smart Pricing.**

The tips on the enclosed cards can help you cut costs throughout the season. Post the cards around your home to help everyone in your household remember to pitch in to save energy and money.

To help you save, **you will receive an alert in advance by phone or e-mail any time prices will reach 13¢** per kilowatt hour or higher. Please contact us if you need to update your phone number or e-mail address for these alerts.

In addition, you can check prices in advance several ways:

- Call **1-877-655-6028**
- Visit **www.powersmartpricing.org**
- Sign up for daily Twitter updates at **twitter.com/PowerSmart**

As always, if you have any questions about Power Smart Pricing, we are happy to help.

Happy savings!

Sincerely,
The Power Smart Pricing team
Reach us at info@powersmartpricing.org or 1-877-655-6028

Top Summer Tips

Reduce electricity usage between the hours of 2 p.m. and 5 p.m. (especially on hot summer days).

Limit air conditioning usage during higher priced hours and try pre-cooling to take advantage of lower priced hours.

Learn more online

Power Smart Pricing
Check prices and learn more about managing household energy costs at **www.powersmartpricing.org**.

Find more tips at these websites:

Energy Star
www.energystar.gov

U.S. Department of Energy
www.doe.gov
www.energysavers.gov

Ameren Illinois Utilities
www.ameren.com
www.actonenergy.com

Ameren Illinois Utilities

CNTenergy

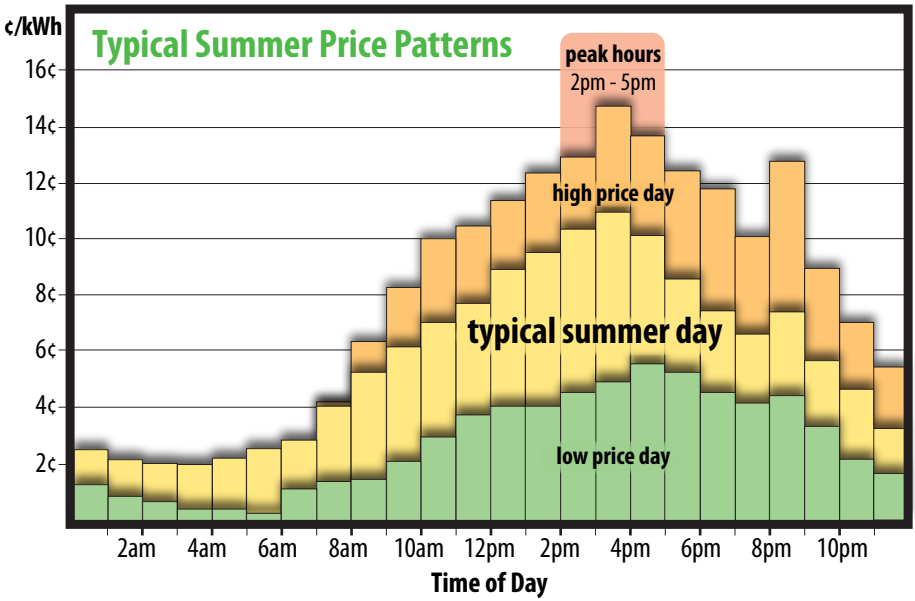
Power Smart Pricing is an hourly pricing program from the Ameren Illinois Utilities, administered by CNT Energy

Summer Price Patterns

During the summer, air conditioning usage has a big impact on demand for electricity. As a result the **highest prices of the day typically occur in the afternoon.** Depending on the weather and other factors, some days will have higher price than others. The graph shows the typical price patterns for cool, average and hot days. Note that:

- **Low price** days can occur on weekends and when the weather is cool.
- **Higher price** days tend to occur when the weather is particularly hot.
- The **highest prices** of the day tend to occur between 2 p.m. and 5 p.m.

Keep the price pattern in mind and shift some of your electricity use from higher priced hours to times when prices are low. You can also check prices in advance at **www.powersmaertpricing.org** or by calling **1-877-655-6028**.



Top Summer Tips

Reduce electricity usage between the hours of 2 p.m. and 5 p.m. (especially on weekdays and when the weather is very hot).

Limit air conditioning usage during higher priced hours and try pre-cooling to take advantage of lower priced hours.

Cut Cooling Costs

Air conditioner use accounts for as much as 40% of a typical household's summer energy consumption. Being smart about how you use your air conditioner will help you save on electricity this summer.

Check your temperatures

Set your thermostat to the warmest comfortable temperature.

Save automatically

Use a programmable thermostat to conserve energy automatically during the afternoon, while you are sleeping or away from home.

Stay cool in the shade

Shade sunny windows on hot days.

Get more fan appeal

Use fans along with (or instead of) your air conditioner. Fans use far less electricity than air conditioners.

Time is Money

Change your thermostat to a warmer temperature setting when electricity prices are high or you are away from home.

For window air conditioners, adjust the setting to the low or "energy-saver" setting or turn the air conditioner off.

According to the U.S. Department of Energy, you can save around 10 percent a year on your heating and cooling bills by turning your thermostat back 10° to 15° for eight hours.

Fans could allow you to raise the thermostat setting about 4° with no reduction in comfort.

Pre-Cool for Savings

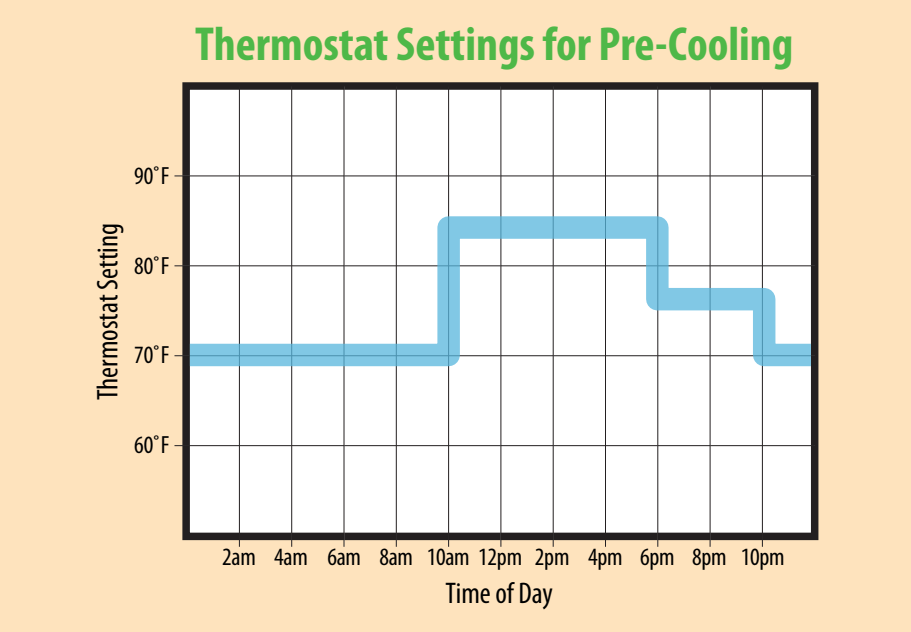
You can manage your cooling costs by pre-cooling your home during hours when the price of electricity is low, and using less air conditioning during higher priced hours.

- Run the air conditioner in the evening, overnight and during the morning hours when electricity is cheaper.
- Increase your thermostat temperature setting or turn off your air conditioner during the afternoon.

The goal is for your air conditioner to idle during the highest priced times, especially between 2 p.m. and 5 p.m. Try the recommended temperature settings in the table and adjust as needed to find what works best for your home and your comfort level.

Recommended Temperature Settings

Time	Phase	Temperature Setting
10 p.m. - 10 a.m.	Pre-cooling	69°F - 72°F
10 a.m. - 6 p.m.	Idle	82°F - 85°F
6 p.m. - 10 p.m.	Comfort	75°F - 78°F



Use Less Electricity for Electronics

Save on stand-by power

Many electronics and appliances use "stand-by" power even when they are turned off. This can account for as much as 10 percent of home energy use. It is easy to cut stand-by power and save money:

- Unplug electronics when they are not in use.
- Use a power strip to shut off power to multiple electronic devices with one switch.

Cut computing costs

- Turn off your computer if you are not going to use it for more than two hours. Turn off the monitor if you are not going to use it for more than 20 minutes.
- Check your computer's settings and choose power-saving options.

Get charged less for charging

Unplug cell phone chargers and power adapters for other rechargeable electronics when not in use. The power adapter itself draws a small amount of power even when the rechargeable device is not connected.

Time is Money

Wait to charge devices such as cell phones and cordless tools at night when electricity prices are low.

Clean Up on Laundry

Fill it up

Wash full loads of laundry rather than multiple small loads. You'll save time and spend less on electricity.

Chill out

Wash in cold water when possible to save on water heating costs. Most laundry detergents available today work well even in cold water.

Don't over dry it

Make sure the dryer stops once your clothes are dry, or hang clothes on a rack or clothesline.

Time is Money

Do laundry during evening, morning, or weekend hours when electricity prices tend to be low.

Avoid running the washer and dryer on hot weekday afternoons, particularly between 2 p.m. and 5 p.m.

Cook Up Some Savings

Cool it in the kitchen

Avoid heating up the kitchen on hot days. Use the microwave, enjoy no-cook meals, or grill outside.

Clean the Coils

Vacuum your refrigerator's coils and, of course, don't leave the fridge door open longer than necessary.

Clean up efficiently

Dishwashers use electricity and produce heat. Only wash full loads so you won't have to run the dishwasher as often. Wait until the hottest time of day has passed before running your dishwasher, and use the more efficient "energy-saving" or "no-heat-dry" option.

Time is money

Run the dishwasher when electricity prices are low, and try to avoid higher priced, hot afternoon hours.

If your dishwasher has a timer or "delay start" function, you can use it to automatically start the cycle during lower priced hours.

Avoid using electric ovens and stoves during high price periods. A microwave will heat small portions more efficiently.

Herald & Review.com
CENTRAL ILLINOIS' No. 1 NEWS SOURCE

Power Smart Pricing helps homeowners save on electricity costs by going to market

By TONY REID - H&R Staff Writer | Posted: Sunday, May 2, 2010 4:01

Decatur resident Joe Green is smiling a lot these days after taking advantage of the Power Smart Pricing system for his home's electrical needs. He cut his winter power bill in half and by more than 20 percent for the year.

DECATUR - Joe Bob Green does what everybody else does when it gets hot outside: He cranks up the air conditioning.

"When it's hot, I don't care what the price of power is," said Green, 73, who lives in Decatur. "It's kind of like running out of gas in the middle of nowhere; you don't care how much if somebody will sell you a gallon."

And yet in the last year, Green saved an average of more than 20 percent on his power bill compared to what he paid before, even with his devil-may-care thermostat attitude. And in the winter, those savings jumped even higher: "My house was on budget billing (with AmerenIP)," he said. "I was paying $240 a month but, after I switched to Power Smart Pricing, it dropped to $136 a month and stayed there for six months."

The Power Smart Pricing program is available to Ameren utility customers and allows them essentially to drop out of the standard system for paying for electricity. Instead of getting power at a fixed price set by contracts the utilities negotiate with their suppliers, Power Smart customers take their chances by paying the ever-changing price for electricity on the open market.

This can spike beyond the utilities' fixed price contracts at peak times, such as the summer air conditioning season, but it also can fall way below those prices at other times and stay way down, especially in the slacker winter months.

Power Smart customers get phone or e-mail warnings when prices are trending upwards and can also track them online. By adjusting their power usage to dodge around the peak times, the potential to boost their savings even higher is huge. But Green said he's more than happy with the price break he's getting without making any effort at all.

Power Smart Pricing

CNT Energy will conduct a workshop explaining the Power Smart Pricing program while offering general tips on how to cut your power bills at 6:30 p.m. Tuesday at the Decatur Public Library. Space is limited, and CNT would like those planning to attend to let them know by going to www.PowerSmartPricing.org/rsvp2010, or contact CNT at info@powersmartpricing.org or call 1-877-655-6028.

To find out more about the E-Smart programmable thermostat, call 1-866-838-6918

"I was shocked when I first saw my savings," he said. "I am a very satisfied customer."

The Power Smart Pricing program is administered by CNT Energy, a Chicago-based not-for-profit group. They will be in Decatur on Tuesday evening at the Decatur Public Library to explain the program while offering general tips on how to cut your power bills.

CNT spokeswoman Stephanie Folk said some 9,000 households in Illinois have enrolled in Power Smart Pricing since its Illinois launch in 2007, and that number is soon expected to hit 10,000.

"Average savings on power bills have been 20 percent overall, but during 2009, the average saving was closer to 24 percent," she said. "The highest percentage saved we've seen is 40 percent and the largest dollar amount was $4,500 in the period from February 2008 to present. The highest saver in Decatur has cut $3,300 off their bills."

And now there's another way to access savings, only this one is proving more controversial. Ameren utility customers can get a free "E-Smart" programmable thermostat installed for free in a deal worth $250. It can be programmed to carefully control your home's temperature throughout the day and can even be accessed remotely via the Internet so you can adjust the settings even when you're not there.

The catch is that the deal to get the thermostat allows the utility to wirelessly use a signal to keep your air conditioning offline for certain set periods. This helps ease strain on the power grid during times of peak usage.

The "cycling events," as the offline periods are called, are limited to a maximum of 12 per summer season (June 1 to Sept. 30) and can only occur on weekdays at times between 1 and 5 p.m. A company called Conservation Services Group runs the thermostat program for the utilities and says customers are fearful of the new thermostat because they don't understand it.

"They think it's a 'Big Brother' kind of thing," said program manager Larry Brown. "They believe Ameren kind of takes over the temperature setting in their house on a 24-hour basis or is just going to shut it down and not let them have any air conditioning at all."

He said the percentage of remote control by the utility is so limited, however, a typical family might barely notice it. "In an average house on a warm day, there will probably be no more than a 2 to 4 degree rise in temperature during the whole four-hour daily period," added Brown. "Unless you're really watching for it, you won't know it's happened."

The program to install the meters began in the fall, and 2,400 have been installed for Ameren utility customers so far. Brown believes the pace will pick up as word about how the meters really operate spreads and customers grow in appreciation of their Internet-control ability. "Once installed, we've not had anyone call to complain," he said.

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CNT ENERGY

SCHEDULE OF DIRECT EXPENSES
FOR THE AMEREN PROJECT
AND SUPPLEMENTARY INFORMATION

For the Year Ended
December 31, 2010

CNT Energy

Ameren Project Report

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Schedule of Revenue and Expenses for the Ameren Project 4

D&A
Desmond &Ahern, Ltd.
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

Independent Auditor's Report

To the Board of Directors of
CNT Energy
Chicago, IL

We have audited the accompanying schedule of direct expenses for the Ameren project of CNT Energy for the year ended December 31, 2010. This schedule is the responsibility of the Organization's management. Our responsibility is to express an opinion on this schedule based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of direct expenses for the Ameren project are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the schedule. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall schedule presentation. We believe that our audit provides a reasonable basis for our opinion.

As discussed in Note 1, the schedule of direct expenses for the Ameren project of CNT Energy is intended to present the expenditures of that project's portion of the financial reporting entity of CNT Energy that is attributable to the expenditure transactions of the Ameren project.

In our opinion, the schedule of direct expenses for the Ameren project referred to above presents fairly, in all material respects, the direct expenses charged to Ameren for CNT Energy for the year ended December 31, 2010 in conformity with Generally Accepted Accounting Principles.

The supplementary schedule of revenue and expenses for the Ameren project of CNT Energy is presented for purposes of additional analysis. Such information, except for that portion marked "unaudited," on which we express no opinion, has been subjected to the auditing procedures applied to the schedule of direct expenses for the Ameren project, and, in our opinion, the information is fairly stated in all material respects in relation to the schedule of direct expenses for the Ameren Project.

This report is intended solely for the information and use of Ameren and is not intended to be and should not be used by anyone other than the specified party.

Desmond & Ahern, Ltd.

March 30, 2011
Chicago, IL

10827 S. WESTERN AVENUE, CHICAGO, IL 60643-3206 • PHONE 773-779-4720 • FAX 773-779-8310
www.desmondcpa.com

CNT ENERGY
SCHEDULE OF DIRECT EXPENSES FOR THE AMEREN PROJECT
For the Year Ended December 31, 2010

Salaries	$	148,352
Payroll taxes and employee benefits		30,649
Professional and contractual fees		139,532
Workshops and meetings		1,402
Travel		1,578
Supplies		634
Postage and mailings		70,472
Printing and publications		16,881
Amortization on capitalized software		25,000
Dues and subscriptions		2,462
Total Direct Expenses	$	436,962

See independent auditor's report and notes to financial statements.

CNT ENERGY
NOTES TO THE SCHEDULE OF DIRECT EXPENSES FOR THE AMEREN PROJECT
December 31, 2010

Note 1 - Nature of Operations and Summary of Significant Accounting Policies

Organization

CNT Energy (formerly known as Community Energy Cooperative) was founded by The Center for Neighborhood Technology (CNT), and incorporated in April 2001 as an Illinois not-for-profit corporation. CNT Energy is a membership organization helping consumers and communities obtain needed information and services to control energy costs. It is exempt from income taxes under Section 501(c)(4) of the Internal Revenue Code.

Basis of Presentation - Ameren Project

The Ameren Project is accounted for as a project in CNT Energy's annual financial statement. The CNT Energy's annual financial statement audit is scheduled to occur after the Ameren reporting deadline. The Ameren Project is a portion of that annual financial statement. This report was prepared solely to meet the request of Ameren.

SUPPLEMENTARY INFORMATION

CNT ENERGY
SCHEDULE OF REVENUE AND EXPENSES FOR THE AMEREN PROJECT
For the Year Ended December 31, 2010

	Unaudited	Audited	Total
Revenue			
Ameren contract	$ 493,354	$ -	$ 493,354
Expenses			
Direct Expenses			
Salaries	$ -	$ 148,352	$ 148,352
Payroll taxes and employee benefits	-	30,649	30,649
Professional and contractual fees	-	139,532	139,532
Workshops and meetings	-	1,402	1,402
Travel	-	1,578	1,578
Supplies	-	634	634
Postage and mailings	-	70,472	70,472
Printing and publications	-	16,881	16,881
Amortization on capitalized software	-	25,000	25,000
Dues and subscriptions	-	2,462	2,462
Total Direct Expenses	-	436,962	436,962
Indirect Expenses			
Internal contracts	3,376	-	3,376
Occupancy fee	15,399	-	15,399
Management and general allocation	66,428	-	66,428
Total Indirect Expenses	85,203	-	85,203
Total Expenses	$ 85,203	$ 436,962	$ 522,165

See independent auditor's report and notes to financial statements.

Appendix B Parameter Estimates—DLC Impact Estimation

The parameter estimates and standard errors for the eight models estimated are shown below. For reasons of space, parameter estimates and standard errors are not shown for individual fixed effects or for hour of day dummies. All models were estimated in SAS using the PROC GLM procedure. Cells highlighted in red indicate parameter estimates that are not significant at the 95percent level.

A1		Parameter Estimate	Standard Errors
Dependent:	kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	THI	0.104771609	0.00030791
	HDH	0.008403156	0.00077524
	WKND	0.077104189	0.00232052
	DLC_Event (4 hours)	-0.58092164	0.02458212
	DLC_Snapback (5 hours)	0.836923842	0.02455167

A2		Parameter Estimate	Standard Errors
Dependent:	Natural log of kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	THI	0.053408049	0.00016094
	HDH	-0.005264149	0.036476255
	WKND	0.036476255	0.00121286
	DLC_Event (4 hours)	-0.191370331	0.01284828
	DLC_Snapback (5 hours)	0.278387723	0.01283237

B1		Parameter Estimate	Standard Errors
Dependent:	kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	THI	0.067941673	0.00078929
	THI^2	0.002217531	0.00004377
	HDH	-0.002298256	0.00080279
	WKND	0.086093389	0.00232512
	DLC_Event (4 hours)	-0.719260312	0.02471034
	DLC_Snapback (5 hours)	0.822876992	0.02453019

B2		Parameter Estimate	Standard Errors
Dependent:	Natural log of kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	THI	0.052561671	0.00041293
	THI^2	5.09604E-05	0.0000229
	HDH	-0.005510075	0.00041999
	WKND	0.036682833	0.0012164
	DLC_Event (4 hours)	-0.194549451	0.01292742
	DLC_Snapback (5 hours)	0.278064916	0.01283317

C1		Parameter Estimate	Standard Errors
Dependent:	kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	Hourly dummies *THI (23)	Not shown	3 not signif.
	THI	0.106278188	0.00145854
	HDH	0.000234799	0.00081152
	WKND	0.075003088	0.00231565
	DLC_Event (4 hours)	-0.661375648	0.02467645
	DLC_Snapback (5 hours)	0.765111247	0.02455044

C2		Parameter Estimate	Standard Errors
Dependent:	Natural log of kWh		
Independents:	Hourly dummies (23)	Not shown	All significant
	Hourly dummies *THI (23)	Not shown	5 not signif.
	THI	0.054791706	0.00076363
	HDH	-0.003588732	0.00042488
	WKND	0.036165416	0.00121238
	DLC_Event (4 hours)	-0.210800326	0.01291958
	DLC_Snapback (5 hours)	0.272594814	0.0128536

D1		Parameter Estimate	Standard Errors
Dependent:	kWh		
Independents:	Hourly dummies (23)	Not shown	1 not signif.
	Hourly dummies *THI (23)	Not shown	3 not signif.
	THI	0.08847756	0.00167652
	THI^2	0.001541466	0.00007162
	HDH	-0.001968242	0.00081781
	WKND	0.082099802	0.00233862
	DLC_Event (4 hours)	-0.709536936	0.02477356
	DLC_Snapback (5 hours)	0.765440907	0.02454629

D2		Parameter Estimate	Standard Errors
Dependent:	Natural log of kWh		
Independents:	Hourly dummies (23)	Not shown	1 not signif.
	Hourly dummies *THI (23)	Not shown	2 not signif.
	THI	0.056496606	0.0008779
	THI^2	-0.000147638	0.00003751
	HDH	-0.00337773	0.00042824
	WKND	0.035485711	0.00122461
	DLC_Event (4 hours)	-0.206187558	0.01297254
	DLC_Snapback (5 hours)	0.27256324	0.01285353

Source: Navigant analysis

To interpret the parameter estimates of the semi-log models correctly, readers are referred to *Section 3.2.3 Impact of the August 10, 2010, Direct Load Control Event.*

Appendix C Hourly Price Correlation

Below are the hourly price correlation matrices used in determining the appropriate scheme to group similar hours into blocks, for use in the Generalized Almost Ideal (GAI) demand system. The correlation coefficient is bounded between -1 and 1, where a value of 0 corresponds to no correlation between the two prices, a value of 1 corresponds to perfect positive correlation between the two prices, and a value of -1 corresponds to perfect negative correlation between the two prices. The reader should note that the values found along the diagonal correspond to the price correlation between a given hour and itself, which is by definition equal to 1. The shaded cells represent groups of hours that form a block in the GAI demand system.

Figure 37. Price Correlation Coefficients, Summer 2008 High Price Alert Days

hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	0.97	0.96	0.94	0.91	0.8	0.67	0.68	0.72	0.58	0.51	0.38	0.34	0.21	0.15	0	0.16	0.11	0.33	0.54	0.51	0.44	0.77	0.74
2	0.97	1	0.99	0.97	0.94	0.82	0.71	0.68	0.7	0.55	0.5	0.39	0.35	0.21	0.16	-0	0.17	0.1	0.3	0.52	0.48	0.41	0.73	0.72
3	0.96	0.99	1	0.99	0.92	0.77	0.66	0.62	0.69	0.58	0.53	0.4	0.36	0.23	0.17	-0	0.21	0.14	0.33	0.57	0.51	0.45	0.75	0.7
4	0.94	0.97	0.99	1	0.93	0.79	0.69	0.65	0.69	0.57	0.54	0.4	0.38	0.23	0.18	0.02	0.21	0.14	0.32	0.57	0.49	0.42	0.72	0.68
5	0.91	0.94	0.92	0.93	1	0.95	0.82	0.72	0.71	0.48	0.45	0.26	0.27	0.12	0.08	-0.1	0.03	-0.1	0.17	0.47	0.37	0.25	0.7	0.71
6	0.8	0.82	0.77	0.79	0.95	1	0.88	0.77	0.71	0.4	0.37	0.14	0.17	0.01	0	-0.1	-0.1	-0.2	0.06	0.35	0.24	0.12	0.63	0.66
7	0.67	0.71	0.66	0.69	0.82	0.88	1	0.84	0.77	0.51	0.55	0.42	0.43	0.28	0.31	0.18	0.15	0	0.18	0.41	0.18	0.16	0.43	0.47
8	0.68	0.68	0.62	0.65	0.72	0.77	0.84	1	0.9	0.66	0.64	0.49	0.53	0.38	0.38	0.28	0.16	0.02	0.18	0.25	0.17	0.17	0.39	0.47
9	0.72	0.7	0.69	0.69	0.71	0.71	0.77	0.9	1	0.87	0.82	0.61	0.62	0.5	0.48	0.4	0.32	0.24	0.43	0.53	0.46	0.49	0.58	0.57
10	0.58	0.55	0.58	0.57	0.48	0.4	0.51	0.66	0.87	1	0.94	0.81	0.78	0.72	0.7	0.65	0.58	0.57	0.66	0.61	0.55	0.68	0.46	0.4
11	0.51	0.5	0.53	0.54	0.45	0.37	0.55	0.64	0.82	0.94	1	0.88	0.86	0.82	0.82	0.76	0.71	0.66	0.71	0.67	0.5	0.67	0.38	0.32
12	0.38	0.39	0.4	0.4	0.26	0.14	0.42	0.49	0.61	0.81	0.88	1	0.97	0.93	0.93	0.84	0.86	0.74	0.7	0.57	0.45	0.62	0.14	0.11
13	0.34	0.35	0.36	0.38	0.27	0.17	0.43	0.53	0.62	0.78	0.86	0.97	1	0.96	0.95	0.85	0.81	0.63	0.58	0.47	0.4	0.51	0.08	0.09
14	0.21	0.21	0.23	0.23	0.12	0.01	0.28	0.38	0.5	0.72	0.82	0.93	0.96	1	0.97	0.89	0.85	0.69	0.62	0.47	0.42	0.54	0.01	0.01
15	0.15	0.16	0.17	0.18	0.08	0	0.31	0.38	0.48	0.7	0.82	0.93	0.95	0.97	1	0.93	0.87	0.7	0.61	0.43	0.31	0.47	-0.1	-0
16	0	-0	-0	0.02	-0.1	-0.1	0.18	0.28	0.4	0.65	0.76	0.84	0.85	0.89	0.93	1	0.87	0.78	0.7	0.44	0.32	0.5	-0	-0
17	0.16	0.17	0.21	0.21	0.03	-0.1	0.15	0.16	0.32	0.58	0.71	0.86	0.81	0.85	0.87	0.87	1	0.9	0.8	0.61	0.44	0.63	0.1	0.05
18	0.11	0.1	0.14	0.14	-0.1	-0.2	0	0.02	0.24	0.57	0.66	0.74	0.63	0.69	0.7	0.78	0.9	1	0.91	0.68	0.47	0.73	0.16	0.05
19	0.33	0.3	0.33	0.32	0.17	0.06	0.18	0.18	0.43	0.66	0.71	0.7	0.58	0.62	0.61	0.7	0.8	0.91	1	0.83	0.67	0.85	0.46	0.33
20	0.54	0.52	0.57	0.57	0.47	0.35	0.41	0.25	0.53	0.61	0.67	0.57	0.47	0.47	0.43	0.44	0.61	0.68	0.83	1	0.75	0.84	0.68	0.52
21	0.51	0.48	0.51	0.49	0.37	0.24	0.18	0.17	0.46	0.55	0.5	0.45	0.4	0.42	0.31	0.32	0.44	0.47	0.67	0.75	1	0.87	0.75	0.69
22	0.44	0.41	0.45	0.42	0.25	0.12	0.16	0.17	0.49	0.68	0.67	0.62	0.51	0.54	0.47	0.5	0.63	0.73	0.85	0.84	0.87	1	0.66	0.51
23	0.77	0.73	0.75	0.72	0.7	0.63	0.43	0.39	0.58	0.46	0.38	0.14	0.08	0.01	-0.1	-0	0.1	0.16	0.46	0.68	0.75	0.66	1	0.91
24	0.74	0.72	0.7	0.68	0.71	0.66	0.47	0.47	0.57	0.4	0.32	0.11	0.09	0.01	-0	-0	0.05	0.05	0.33	0.52	0.69	0.51	0.91	1

Source: Navigant analysis

Appendix D GAI Demand System Price Elasticity Formulas

The Marshallian price elasticity is given by:

$$\eta_{ij} = -\Delta_{ij} + \frac{1}{w_i x}\left[\Delta_{ij} s_i p_i - s_j p_j \left[\alpha_i + \sum_j \gamma_{ji} \log(p_j) + \beta_i \log\left(\frac{\tilde{x}}{P}\right)\right]\right.$$
$$\left. + (x - \sum s_k p_k)\left[\gamma_{ij} + \beta_i \left(\frac{-s_j p_j}{x - \sum s_k p_k}\right) - \beta_i \left(\alpha_j + \sum_k \gamma_{kj} \log(\mathrm{p_k})\right)\right]\right]$$

where Δ_{ij} is the Kronecker delta, defined by $\Delta_{ij} = \begin{cases} 1 & i = j \\ 0 & i \neq j \end{cases}$.

Given the nonlinear nature of the elasticity formulas, all elasticities were evaluated at the mean of the data unless noted otherwise.

Appendix E Distributions of Summer Hourly Prices

The following series of tables and graphs show the distribution of real-time prices during summer 2007, and the day-ahead prices during the summers of 2008, 2009, and 2010 using non-holiday weekdays. The tables demonstrate that not only do prices change by time of day, but the variance (or spread) of the prices also changes by time of day. The first series demonstrates the changes in price levels and spread across seasons. Prices are given in $/kWh. Hours with a larger variance are shaded more deeply. The second series shows the actual price distributions across hours and seasons. Prices are given in cents/kilowatt-hour, and the histograms show the percentage of observations for a given hour that fall within each price category.

Table 56. Summer Hourly Price Distributions, by Year

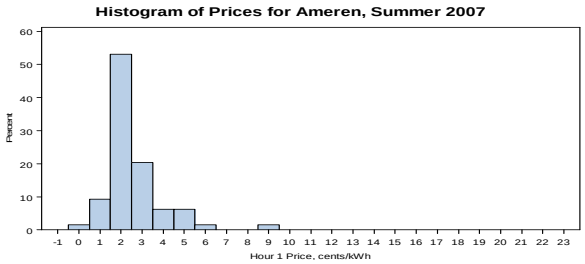
Ameren Hourly Prices, Summer 2007 non-holiday weekdays					
Name	N	Mean	StDev	Min	Max
Hour 1	65	0.025	0.013	0.005	0.088
Hour 2	65	0.021	0.008	0.003	0.051
Hour 3	65	0.018	0.005	-0.001	0.026
Hour 4	65	0.018	0.004	0.001	0.031
Hour 5	65	0.024	0.016	0.007	0.123
Hour 6	65	0.025	0.012	0.003	0.075
Hour 7	65	0.030	0.021	0.011	0.143
Hour 8	65	0.035	0.025	0.001	0.143
Hour 9	65	0.039	0.021	0.011	0.110
Hour 10	65	0.055	0.040	0.020	0.310
Hour 11	65	0.057	0.025	0.018	0.158
Hour 12	65	0.065	0.031	0.024	0.181
Hour 13	65	0.070	0.031	0.025	0.164
Hour 14	65	0.079	0.040	0.024	0.199
Hour 15	65	0.085	0.042	0.026	0.232
Hour 16	65	0.096	0.047	0.030	0.217
Hour 17	65	0.075	0.030	0.021	0.146
Hour 18	65	0.066	0.032	0.024	0.191
Hour 19	65	0.062	0.028	0.022	0.134
Hour 20	65	0.054	0.029	0.013	0.144
Hour 21	65	0.063	0.035	0.019	0.183
Hour 22	65	0.043	0.019	0.020	0.085
Hour 23	65	0.031	0.016	-0.010	0.088
Hour 24	65	0.031	0.021	0.003	0.107

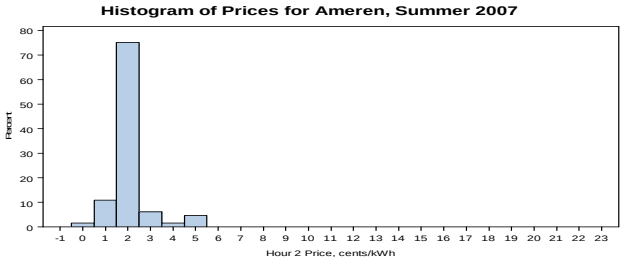
Ameren Hourly Prices, Summer 2008 non-holiday weekdays					
Name	N	Mean	StDev	Min	Max
Hour 1	64	0.023	0.006	0.009	0.040
Hour 2	64	0.020	0.005	0.005	0.035
Hour 3	64	0.018	0.005	0.003	0.030
Hour 4	64	0.018	0.005	0.002	0.030
Hour 5	64	0.020	0.005	0.006	0.034
Hour 6	64	0.024	0.006	0.012	0.041
Hour 7	64	0.027	0.006	0.017	0.052
Hour 8	64	0.039	0.011	0.023	0.077
Hour 9	64	0.054	0.015	0.027	0.095
Hour 10	64	0.073	0.017	0.033	0.108
Hour 11	64	0.087	0.022	0.040	0.145
Hour 12	64	0.099	0.028	0.046	0.173
Hour 13	64	0.108	0.029	0.056	0.195
Hour 14	64	0.115	0.031	0.052	0.208
Hour 15	64	0.120	0.031	0.054	0.203
Hour 16	64	0.127	0.034	0.060	0.189
Hour 17	64	0.117	0.033	0.051	0.180
Hour 18	64	0.104	0.030	0.043	0.164
Hour 19	64	0.091	0.029	0.036	0.160
Hour 20	64	0.077	0.023	0.031	0.151
Hour 21	64	0.087	0.025	0.037	0.147
Hour 22	64	0.063	0.021	0.028	0.121
Hour 23	64	0.041	0.015	0.021	0.078
Hour 24	64	0.029	0.009	0.016	0.059

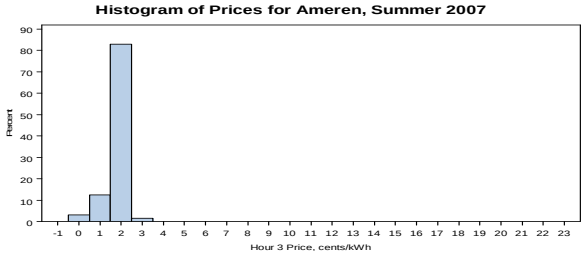
Ameren Hourly Prices, Summer 2009 weekdays					
Name	N	Mean	StDev	Min	Max
Hour 1	66	0.015	0.004	0.004	0.025
Hour 2	66	0.013	0.004	0.001	0.023
Hour 3	66	0.011	0.005	0.000	0.020
Hour 4	66	0.012	0.004	-0.001	0.019
Hour 5	66	0.014	0.003	0.004	0.020
Hour 6	66	0.017	0.002	0.008	0.023
Hour 7	66	0.020	0.003	0.013	0.029
Hour 8	66	0.023	0.003	0.016	0.035
Hour 9	66	0.025	0.004	0.017	0.039
Hour 10	66	0.029	0.005	0.020	0.049
Hour 11	66	0.032	0.006	0.023	0.057
Hour 12	66	0.034	0.007	0.025	0.063
Hour 13	66	0.036	0.008	0.025	0.068
Hour 14	66	0.038	0.009	0.025	0.072
Hour 15	66	0.039	0.010	0.025	0.076
Hour 16	66	0.040	0.011	0.024	0.080
Hour 17	66	0.038	0.010	0.023	0.075
Hour 18	66	0.035	0.009	0.023	0.074
Hour 19	66	0.031	0.008	0.020	0.065
Hour 20	66	0.030	0.007	0.021	0.062
Hour 21	66	0.031	0.007	0.022	0.058
Hour 22	66	0.025	0.005	0.018	0.047
Hour 23	66	0.020	0.003	0.014	0.032
Hour 24	66	0.017	0.003	0.008	0.028

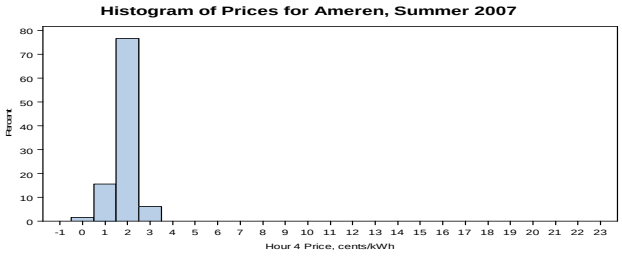
Ameren Hourly Prices, Summer 2010 weekdays					
Name	N	Mean	StDev	Min	Max
Hour 1	66	0.024	0.004	0.017	0.034
Hour 2	66	0.022	0.003	0.014	0.029
Hour 3	66	0.021	0.003	0.013	0.027
Hour 4	66	0.021	0.003	0.013	0.027
Hour 5	66	0.022	0.002	0.016	0.027
Hour 6	66	0.024	0.003	0.016	0.033
Hour 7	66	0.027	0.003	0.020	0.033
Hour 8	66	0.033	0.005	0.024	0.046
Hour 9	66	0.037	0.006	0.026	0.052
Hour 10	66	0.045	0.008	0.028	0.062
Hour 11	66	0.052	0.010	0.028	0.074
Hour 12	66	0.057	0.012	0.030	0.081
Hour 13	66	0.063	0.014	0.033	0.090
Hour 14	66	0.069	0.016	0.033	0.097
Hour 15	66	0.073	0.018	0.033	0.113
Hour 16	66	0.077	0.021	0.034	0.116
Hour 17	66	0.072	0.018	0.033	0.101
Hour 18	66	0.065	0.015	0.032	0.089
Hour 19	66	0.057	0.013	0.028	0.086
Hour 20	66	0.053	0.012	0.029	0.077
Hour 21	66	0.053	0.012	0.029	0.076
Hour 22	66	0.043	0.010	0.025	0.064
Hour 23	66	0.032	0.006	0.022	0.044
Hour 24	66	0.027	0.004	0.020	0.039

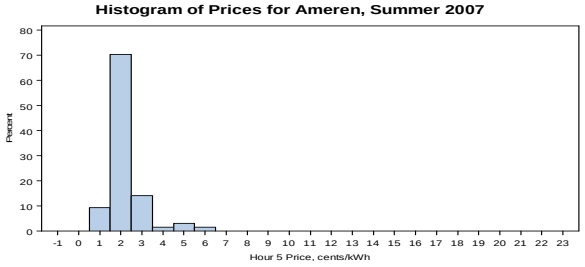
Source: Navigant analysis

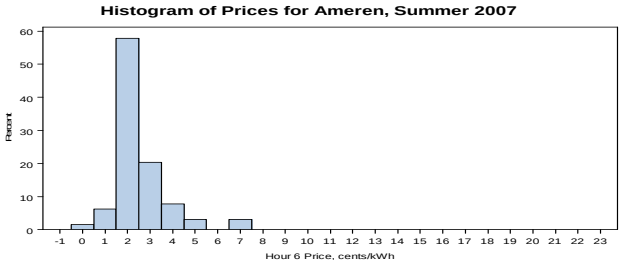

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 1 Price, cents/kWh

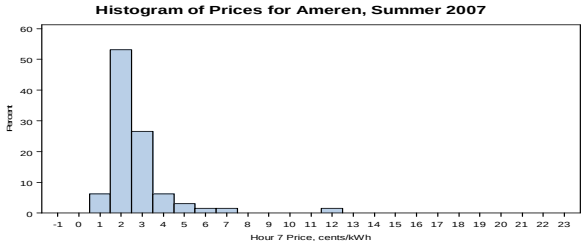

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 2 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 3 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 4 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 5 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 6 Price, cents/kWh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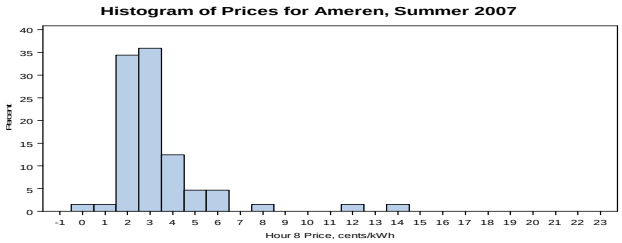
Percent
Hour 7 Price, cents/kWh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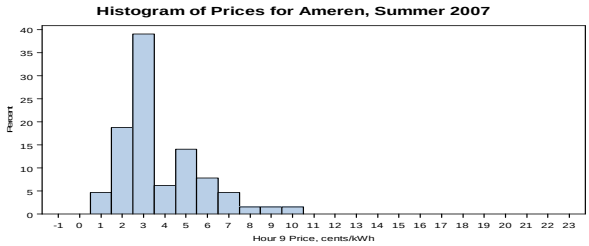
Percent
Hour 8 Price, cents/kWh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Percent
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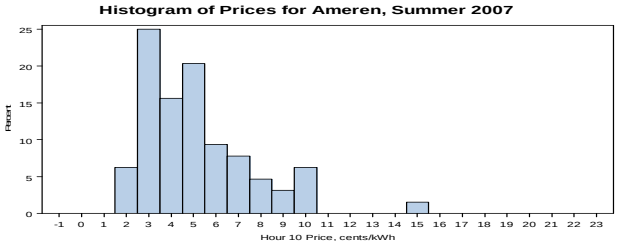
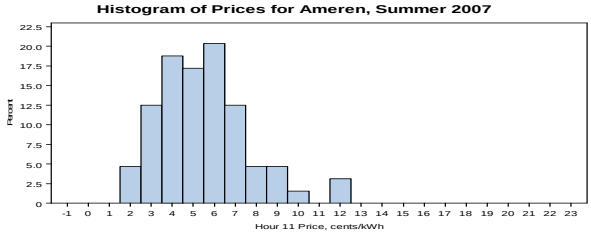
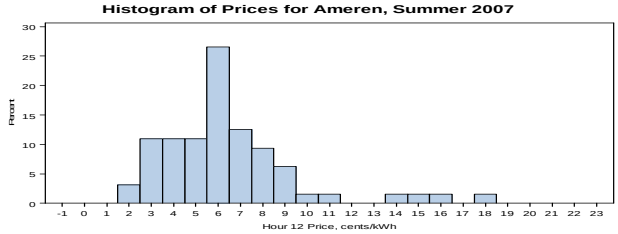
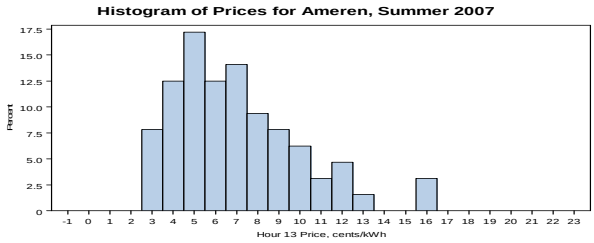
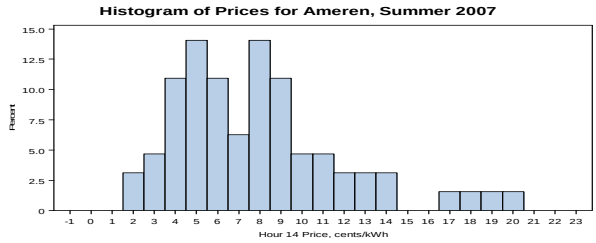
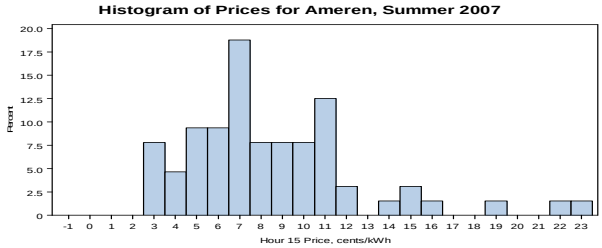

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 10 Price, cents/kWh

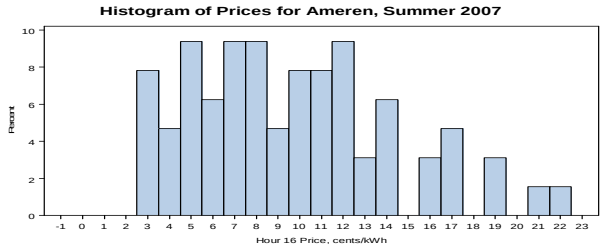

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 11 Price, cents/kWh

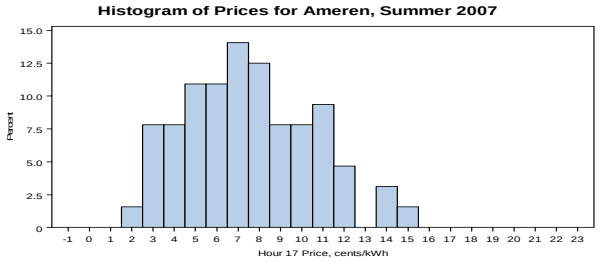

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 12 Price, cents/kWh

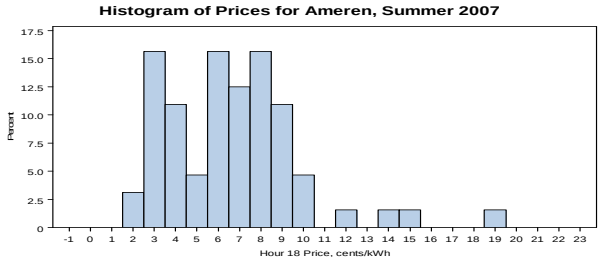

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 13 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 14 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 15 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 16 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 17 Price, cents/kWh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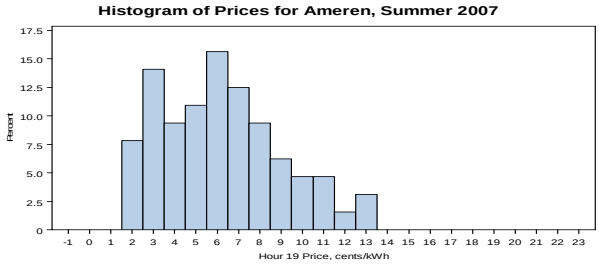
Percent
Hour 18 Price, cents/kWh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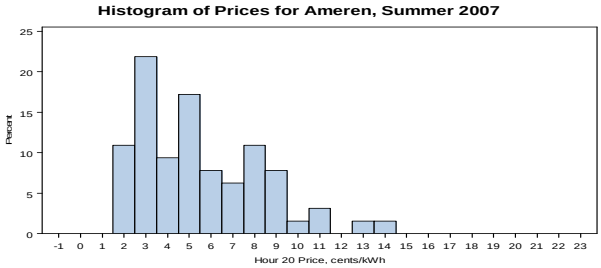
Percent
Hour 19 Price, cents/kWh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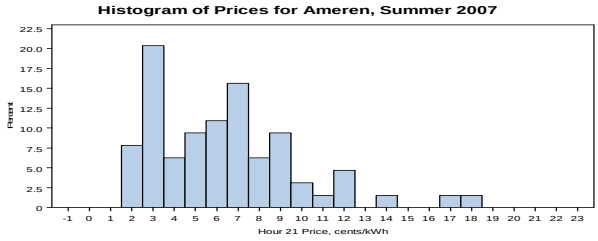
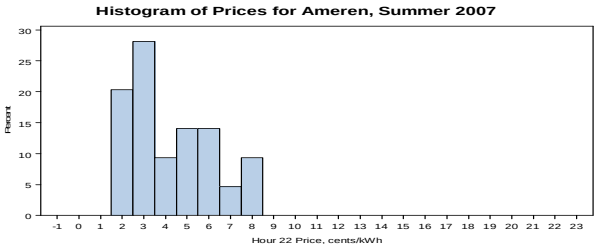
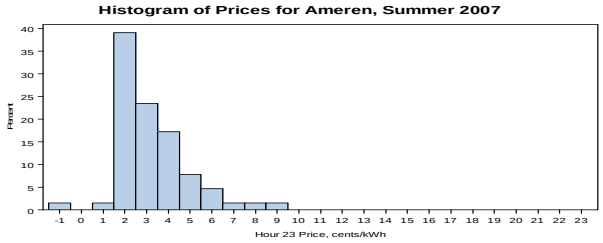
Percent
Hour 20 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 21 Price, cents/kWh


Histogram of Prices for Ameren, Summer 2007
Percent
Hour 22 Price, cents/kWh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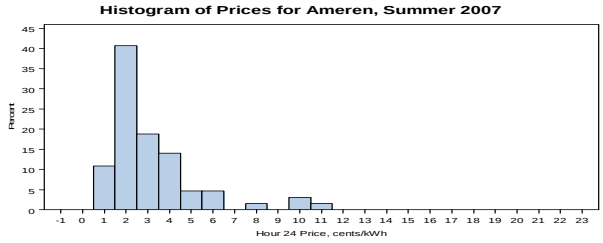
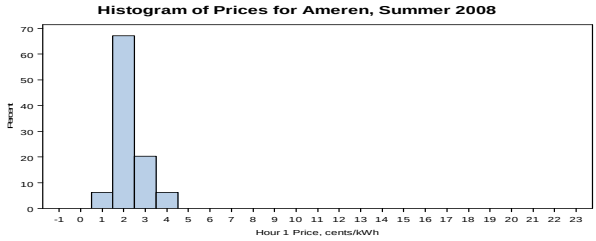
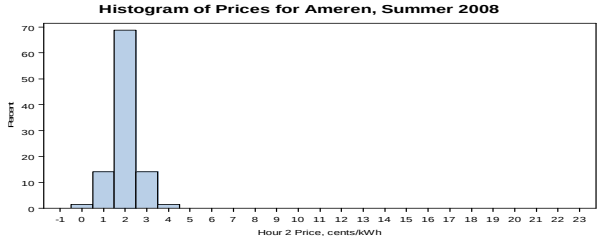
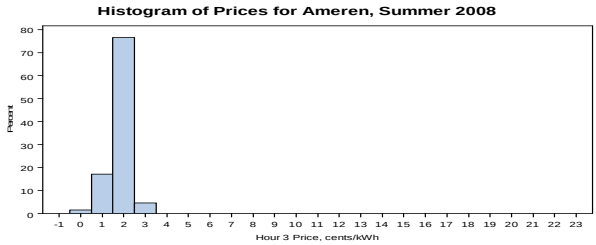
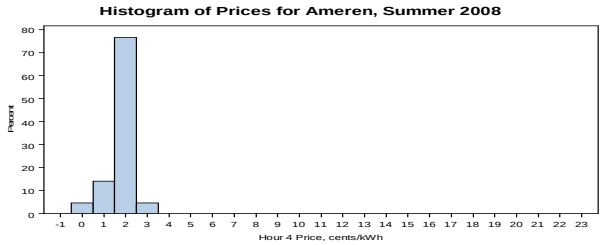
Percent
Hour 23 Price, cents/kWh

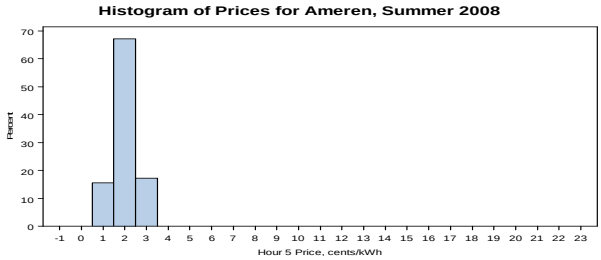

Histogram of Prices for Ameren, Summer 2007
Percent
Hour 24 Price, cents/kWh

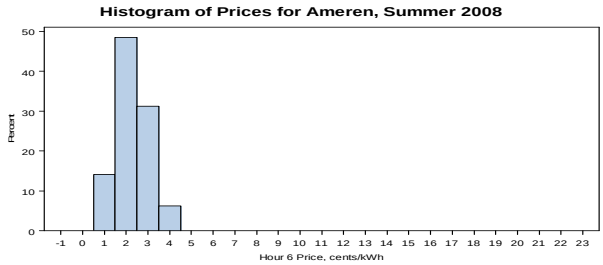

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 1 Price, cents/kWh

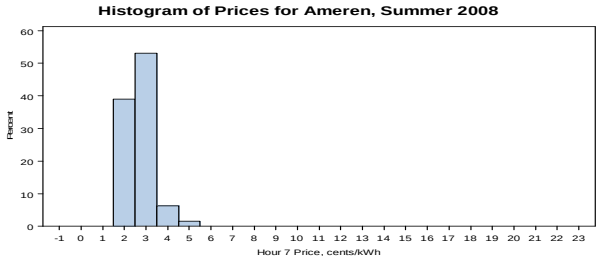

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 2 Price, cents/kWh

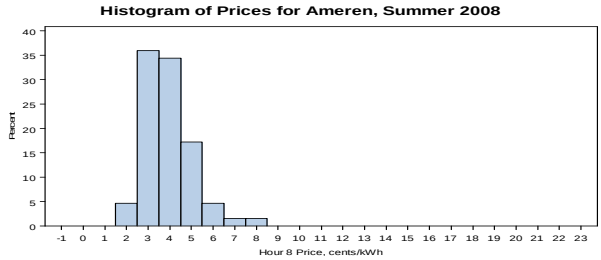

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 3 Price, cents/kWh

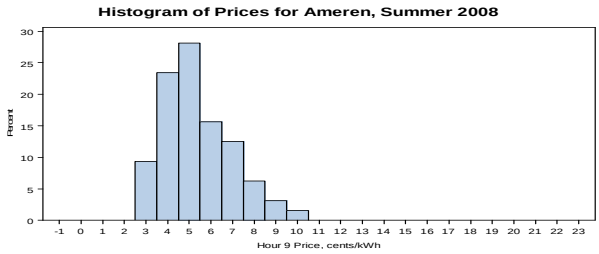

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 4 Price, cents/kWh

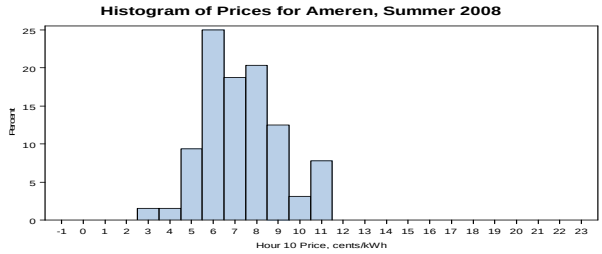

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 5 Price, cents/kWh

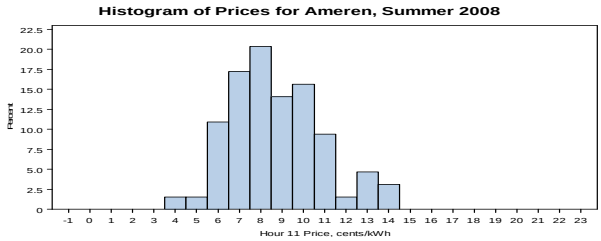

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 6 Price, cents/kWh

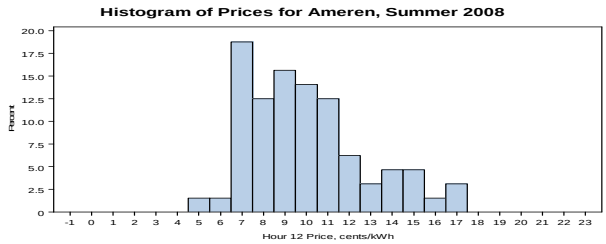

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 7 Price, cents/kWh

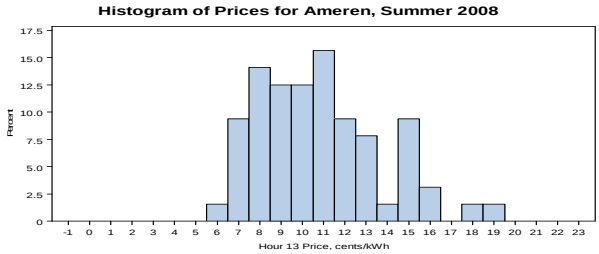

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 8 Price, cents/kWh

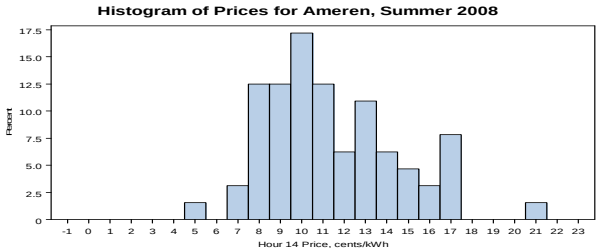

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 9 Price, cents/kWh

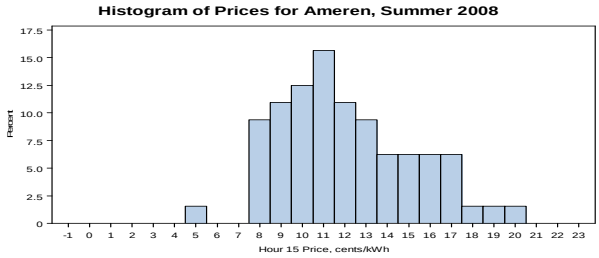

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 10 Price, cents/kWh

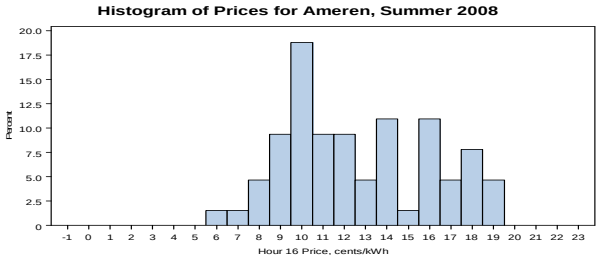

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 11 Price, cents/kWh

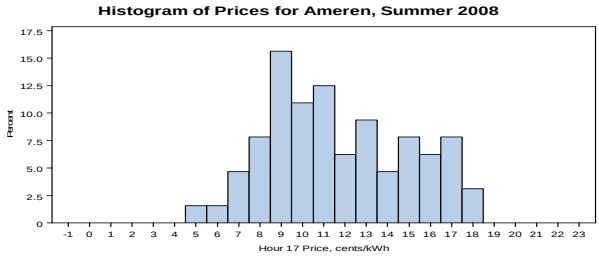

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 12 Price, cents/kWh

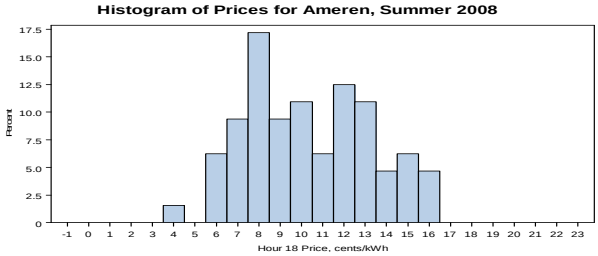

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 13 Price, cents/kWh

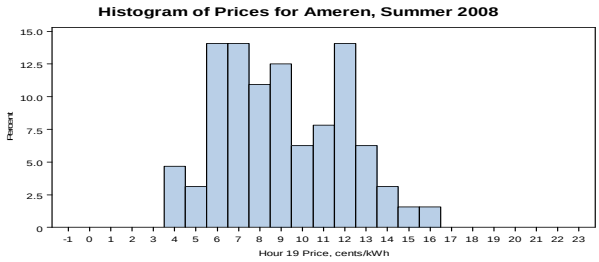

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 14 Price, cents/kWh

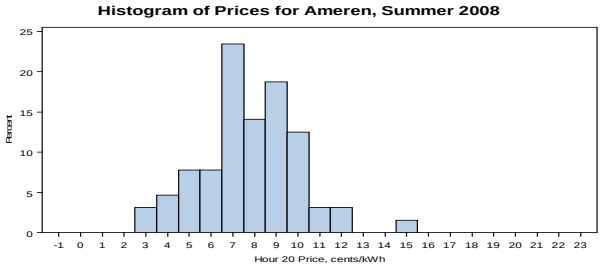

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 15 Price, cents/kWh

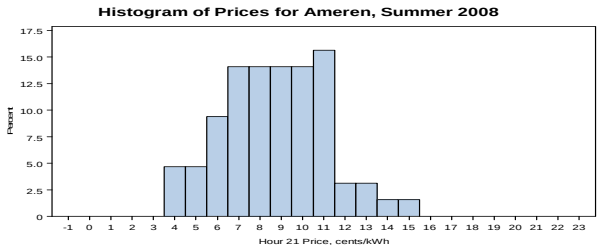

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 16 Price, cents/kWh

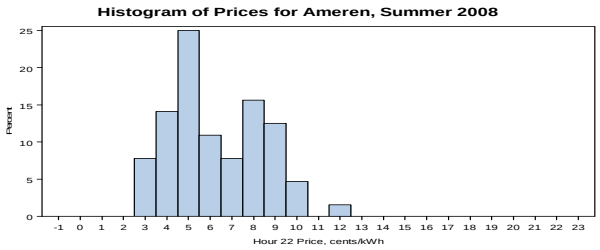

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 17 Price, cents/kWh

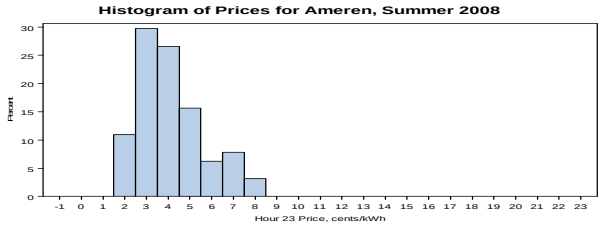

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 18 Price, cents/kWh

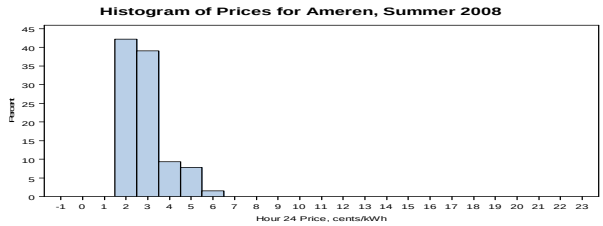

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 19 Price, cents/kWh

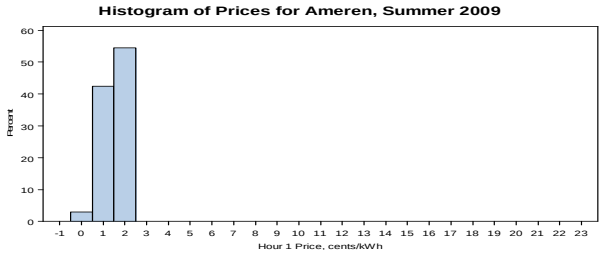

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 20 Price, cents/kWh

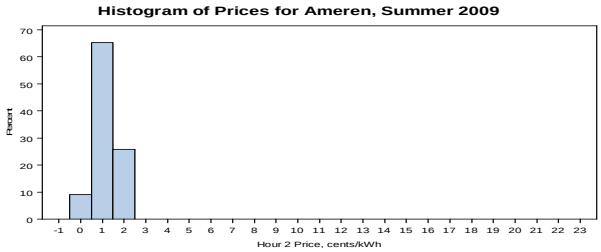

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 21 Price, cents/kWh

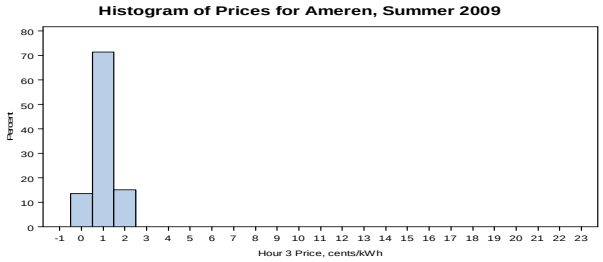

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 22 Price, cents/kWh

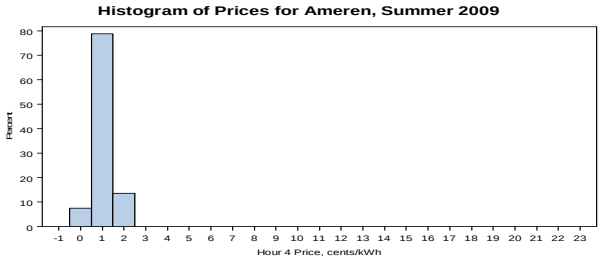

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 23 Price, cents/kWh

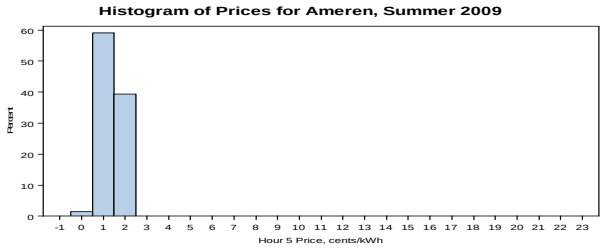

Histogram of Prices for Ameren, Summer 2008
Percent
Hour 24 Price, cents/kWh

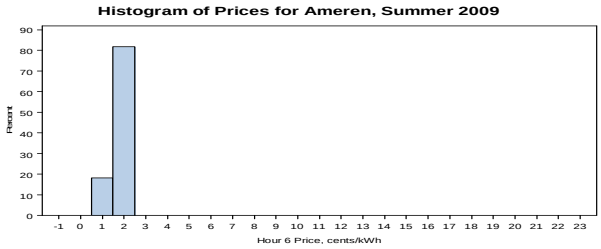

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 1 Price, cents/kWh

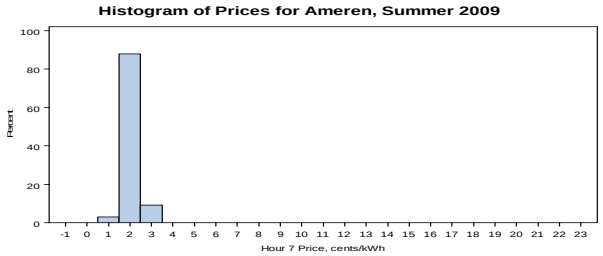

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 2 Price, cents/kWh

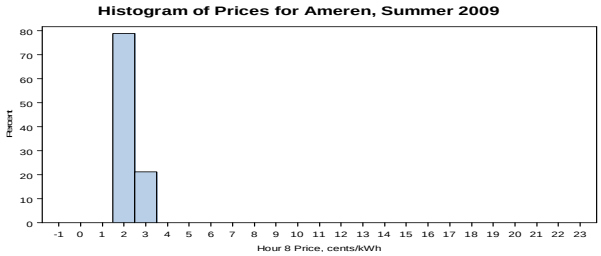

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 3 Price, cents/kWh

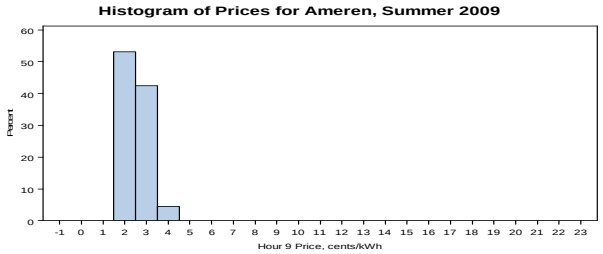

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 4 Price, cents/kWh

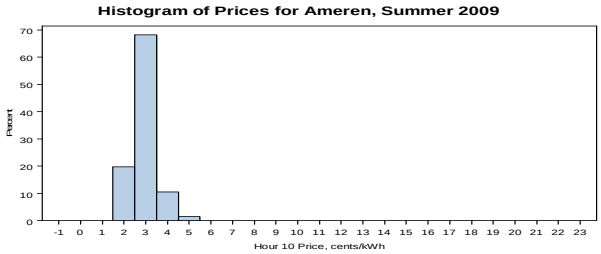

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 5 Price, cents/kWh

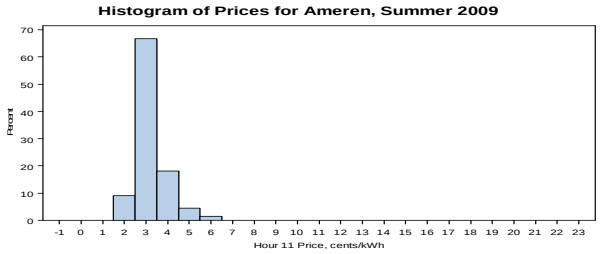

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 6 Price, cents/kWh

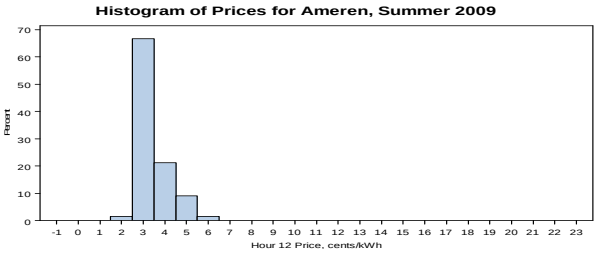

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 7 Price, cents/kWh

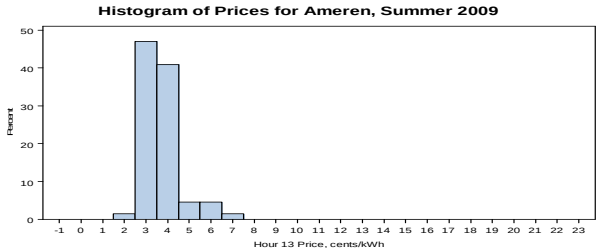

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 8 Price, cents/kWh

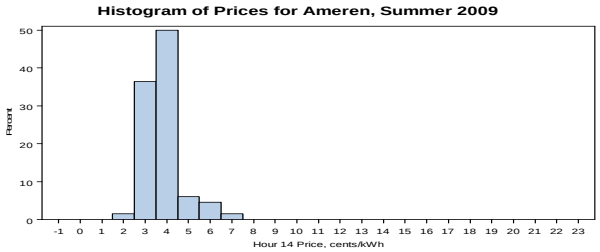

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 9 Price, cents/kWh

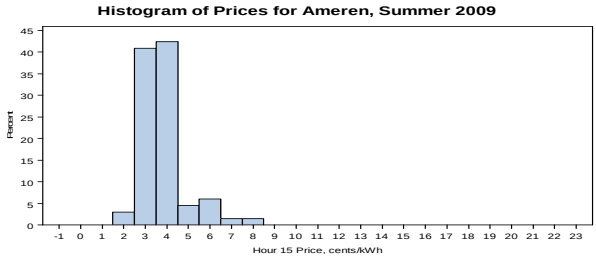

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 10 Price, cents/kWh

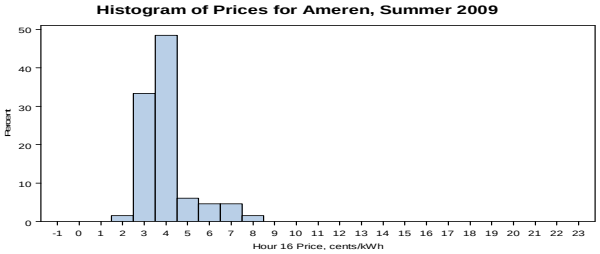

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 11 Price, cents/kWh

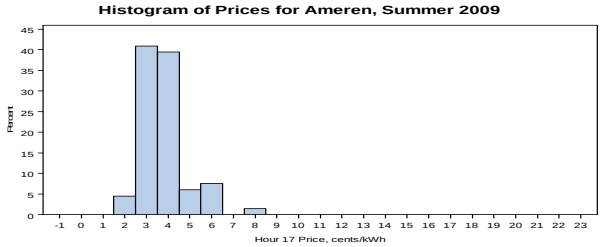

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 12 Price, cents/kWh

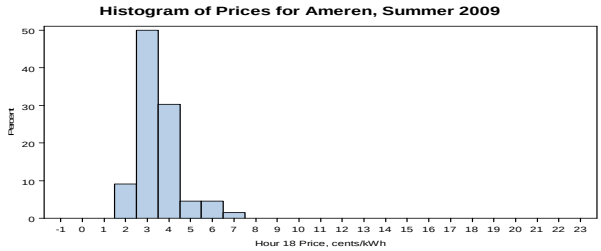

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 13 Price, cents/kWh

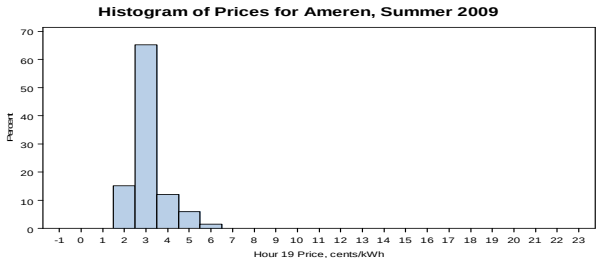

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 14 Price, cents/kWh

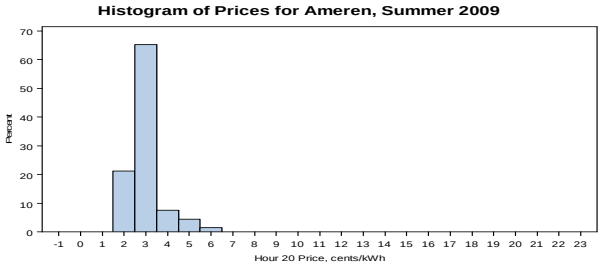

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 15 Price, cents/kWh

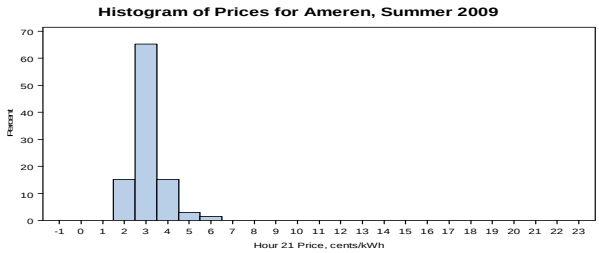

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 16 Price, cents/kWh

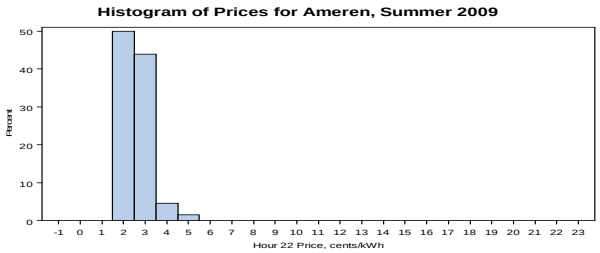

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 17 Price, cents/kWh

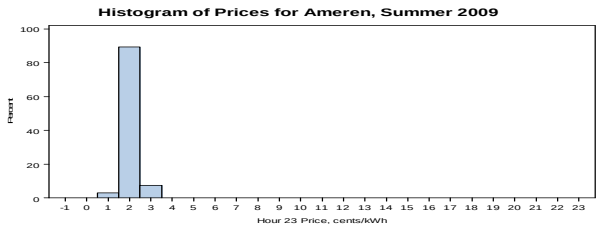

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 18 Price, cents/kWh

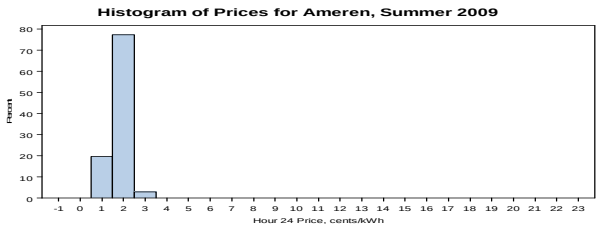

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 19 Price, cents/kWh

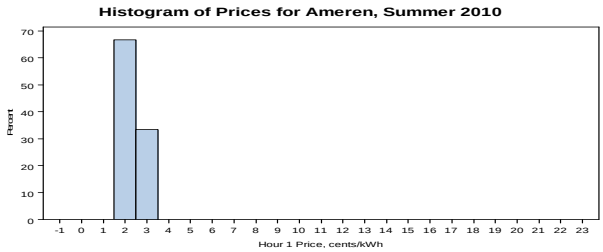

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 20 Price, cents/kWh

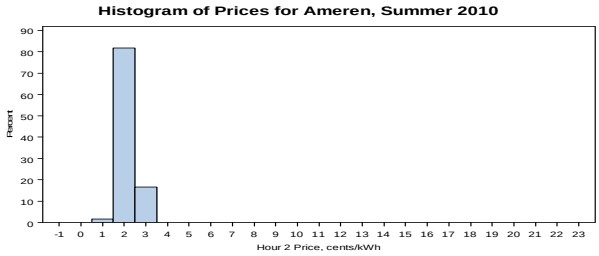

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 21 Price, cents/kWh

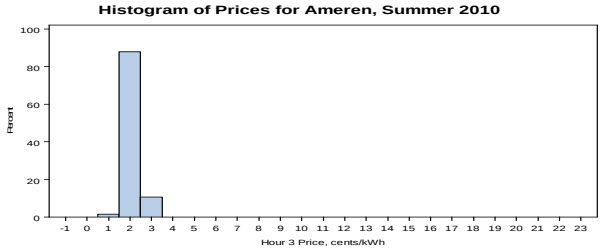

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 22 Price, cents/kWh

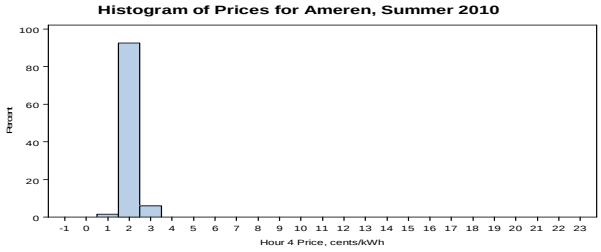

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 23 Price, cents/kWh

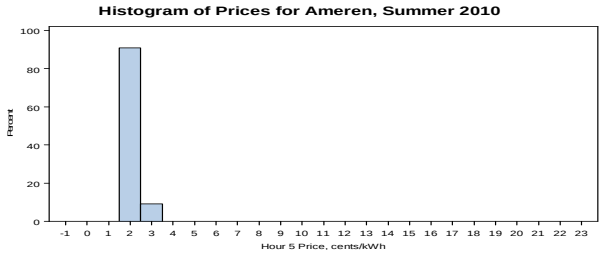

Histogram of Prices for Ameren, Summer 2009
Percent
Hour 24 Price, cents/kWh

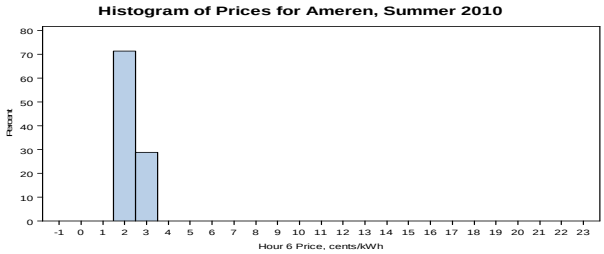

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 1 Price, cents/kWh

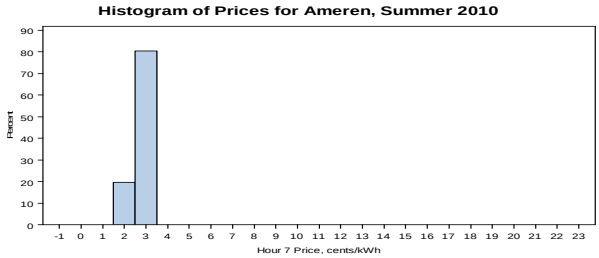

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 2 Price, cents/kWh

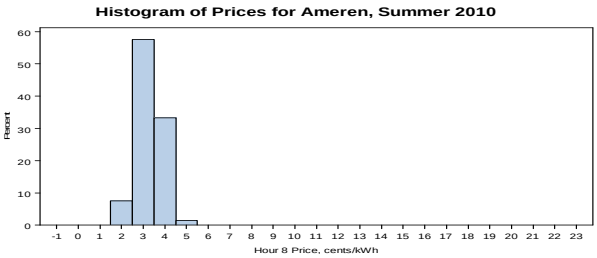

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 3 Price, cents/kWh

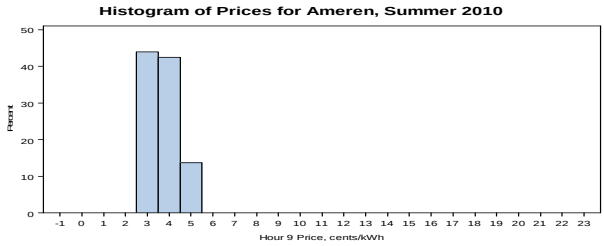

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 4 Price, cents/kWh

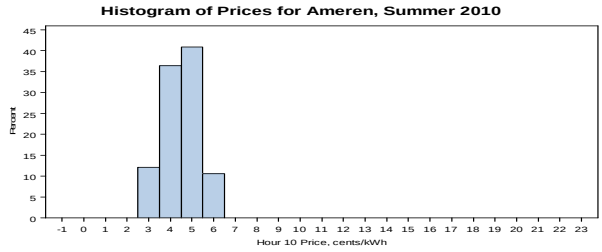

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 5 Price, cents/kWh

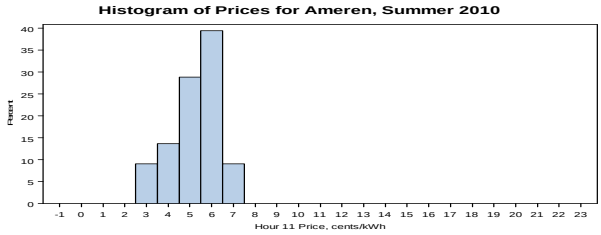

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 6 Price, cents/kWh

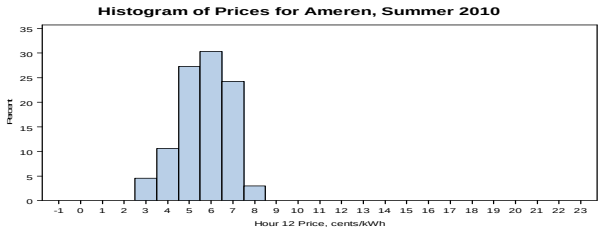

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 7 Price, cents/kWh

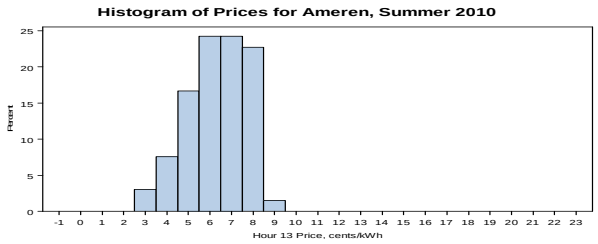

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 8 Price, cents/kWh

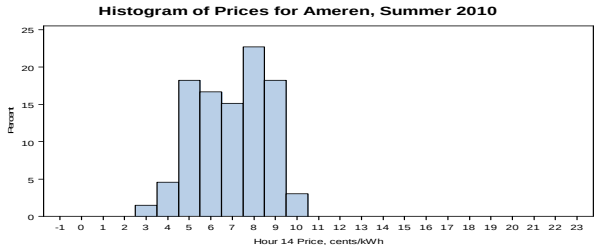

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 9 Price, cents/kWh

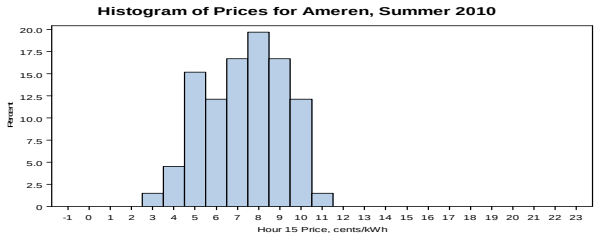

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 10 Price, cents/kWh

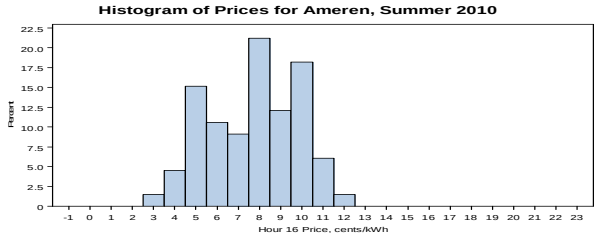

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 11 Price, cents/kWh

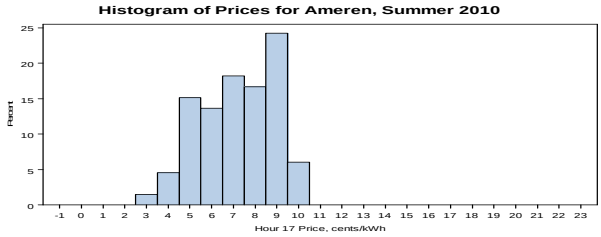

Histogram of Prices for Ameren, Summer 2010
Percent
Hour 12 Price, cents/kWh

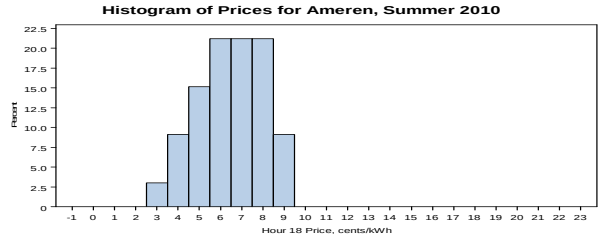


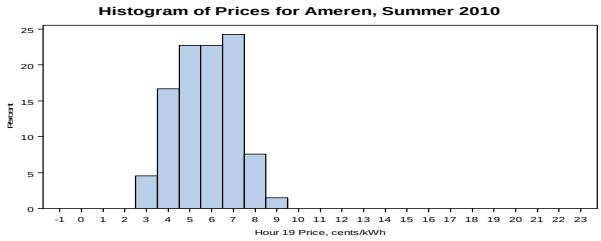


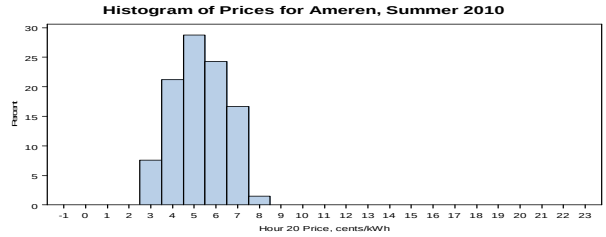


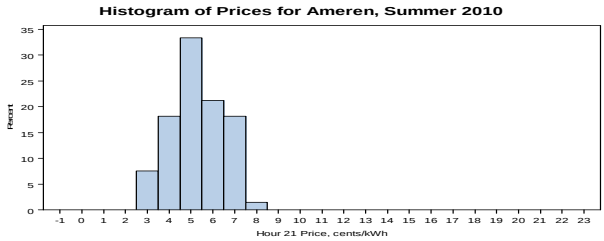


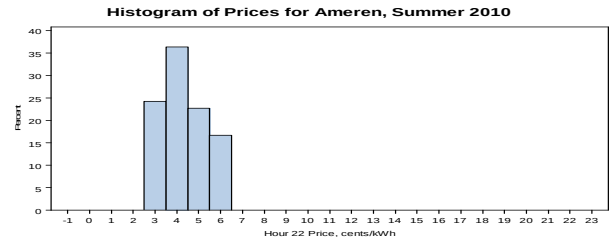


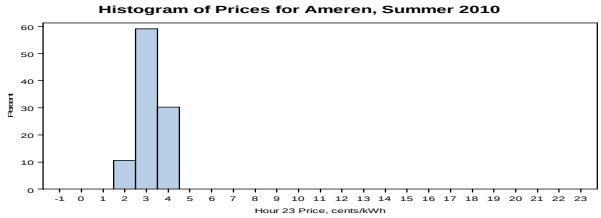


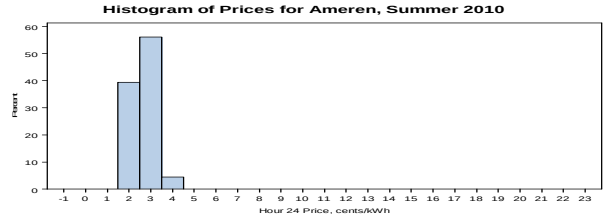












Source: Navigant analysis

Appendix F GAI Demand System Parameter Estimates

The parameter estimates, standard errors, and significance levels are shown in Table 57 and continue on the following page. The reader should note that 80 out of the 90 parameters are statistically significant at the 0.05 level.

Table 57. Parameter Estimates from the GAI Demand System

Name	Estimate	Std Error	t-stat	Pr > |t|	Name	Estimate	Std Error	t-stat	Pr > |t|
g0101	0.324789	0.0333	9.76	<.0001	a1	-6.30492	0.869	-7.26	<.0001
g0102	0.055432	0.00309	17.96	<.0001	a2	-0.07311	7.61E-02	-0.96	0.3365
g0103	-0.09382	0.0117	-8.03	<.0001	a3	2.322514	3.04E-01	7.65	<.0001
g0104	-0.07398	0.00931	-7.94	<.0001	a4	1.867411	0.2426	7.70	<.0001
g0105	-0.08948	0.0111	-8.06	<.0001	a5	2.266306	0.2903	7.81	<.0001
g0106	-0.08297	0.0102	-8.12	<.0001	a6	2.066794	0.2663	7.76	<.0001
g0107	-0.10552	0.0113	-9.37	<.0001	a7	2.283859	0.297	7.69	<.0001
g0108	-0.03116	0.00296	-10.53	<.0001	a8	-0.06519	0.0715	-0.91	0.3617
g0109	0.096717	0.0176	5.48	<.0001	a9	-3.36366	0.4626	-7.27	<.0001
g0202	0.029111	0.00275	10.59	<.0001	a0	187.603	24.6944	7.60	<.0001
g0203	0.068058	0.00248	27.41	<.0001	b2	-0.00133	0.000384	-3.48	0.0005
g0204	-0.00785	0.00193	-4.07	<.0001	b3	0.01215	0.000345	35.23	<.0001
g0205	-0.02763	0.00208	-13.26	<.0001	b4	0.0099	0.000225	43.97	<.0001
g0206	-0.0324	0.00221	-14.68	<.0001	b5	0.012062	0.000249	48.48	<.0001
g0207	-0.00461	0.00261	-1.77	0.0772	b6	0.011084	0.000246	45.04	<.0001
g0208	-0.06112	0.00195	-31.27	<.0001	b7	0.011758	0.000415	28.36	<.0001
g0209	-0.01898	0.00218	-8.72	<.0001	b8	-0.00108	0.000375	-2.89	0.0039
g0303	0.04359	0.00545	7.99	<.0001	b9	-0.01893	0.000392	-48.34	<.0001
g0304	0.028319	0.00433	6.54	<.0001	s1_0	-2.11011	0.3763	-5.61	<.0001
g0305	0.028615	0.00463	6.18	<.0001	d1cdh1	0.000506	0.000206	2.46	0.0139
g0306	0.054916	0.00478	11.48	<.0001	d1max	0.024218	0.0044	5.50	<.0001
g0307	-0.05452	0.00464	-11.75	<.0001	s2_0	-0.25427	6.64E-02	-3.83	0.0001
g0308	0.004092	0.00234	1.75	0.08	d2cdh2	0.000427	0.000088	4.83	<.0001
g0309	-0.07925	0.00635	-12.48	<.0001	d2max	0.00288	0.000782	3.68	0.0002
g0404	0.065292	0.0049	13.32	<.0001	s3_0	-0.06734	0.0303	-2.22	0.0264
g0405	0.023901	0.00414	5.77	<.0001	d3cdh3	0.000301	9.10E-05	3.29	0.001
g0406	0.00174	0.00482	0.36	0.7181	d3max	0.000776	0.000348	2.23	0.0258

Source: Navigant analysis

Name	Estimate	Std Error	t-stat	Pr > |t|	Name	Estimate	Std Error	t-stat	Pr > |t|
g0407	0.010971	0.00354	3.10	0.0019	s4_0	-0.01932	0.0153	-1.27	0.2052
g0408	0.002348	0.00186	1.26	0.2073	d4cdh4	0.00025	0.000093	2.68	0.0074
g0409	-0.05074	0.00508	-9.98	<.0001	d4max	0.000251	1.73E-04	1.45	0.1473
g0505	0.095658	0.00459	20.86	<.0001	s5_0	-0.06001	0.0152	-3.94	<.0001
g0506	-0.01674	0.00483	-3.47	0.0005	d5cdh5	0.000135	0.000098	1.38	0.169
g0507	0.041215	0.00469	8.79	<.0001	d5max	0.000742	0.000173	4.28	<.0001
g0508	0.004589	0.00192	2.39	0.0168	s6_0	-0.05743	0.0174	-3.30	0.001
g0509	-0.06013	0.00603	-9.97	<.0001	d6cdh6	0.000324	0.000095	3.41	0.0006
g0606	0.061057	0.00502	12.16	<.0001	d6max	0.00066	0.000198	3.33	0.0009
g0607	0.072513	0.00508	14.28	<.0001	s7_0	-0.17279	0.0461	-3.75	0.0002
g0608	-0.01054	0.00182	-5.80	<.0001	d7cdh7	0.000224	0.000116	1.94	0.053
g0609	-0.04757	0.00556	-8.56	<.0001	d7max	0.002037	0.000534	3.81	0.0001
g0707	0.104201	0.00548	19.00	<.0001	s8_0	-0.26053	0.0655	-3.98	<.0001
g0708	-0.02679	0.00171	-15.67	<.0001	d8cdh8	0.000039	0.000147	0.27	0.7889
g0709	-0.03746	0.00637	-5.88	<.0001	d8max	0.003041	0.000761	4.00	<.0001
g0808	0.032808	0.00282	11.63	<.0001	s9_0	-0.51424	0.1526	-3.37	0.0008
g0809	0.085775	0.0022	38.96	<.0001	d9cdh9	-0.0003	0.000164	-1.84	0.0654
g0909	0.111642	0.00976	11.44	<.0001	d9max	0.005932	0.00178	3.32	0.0009

Source: Navigant analysis

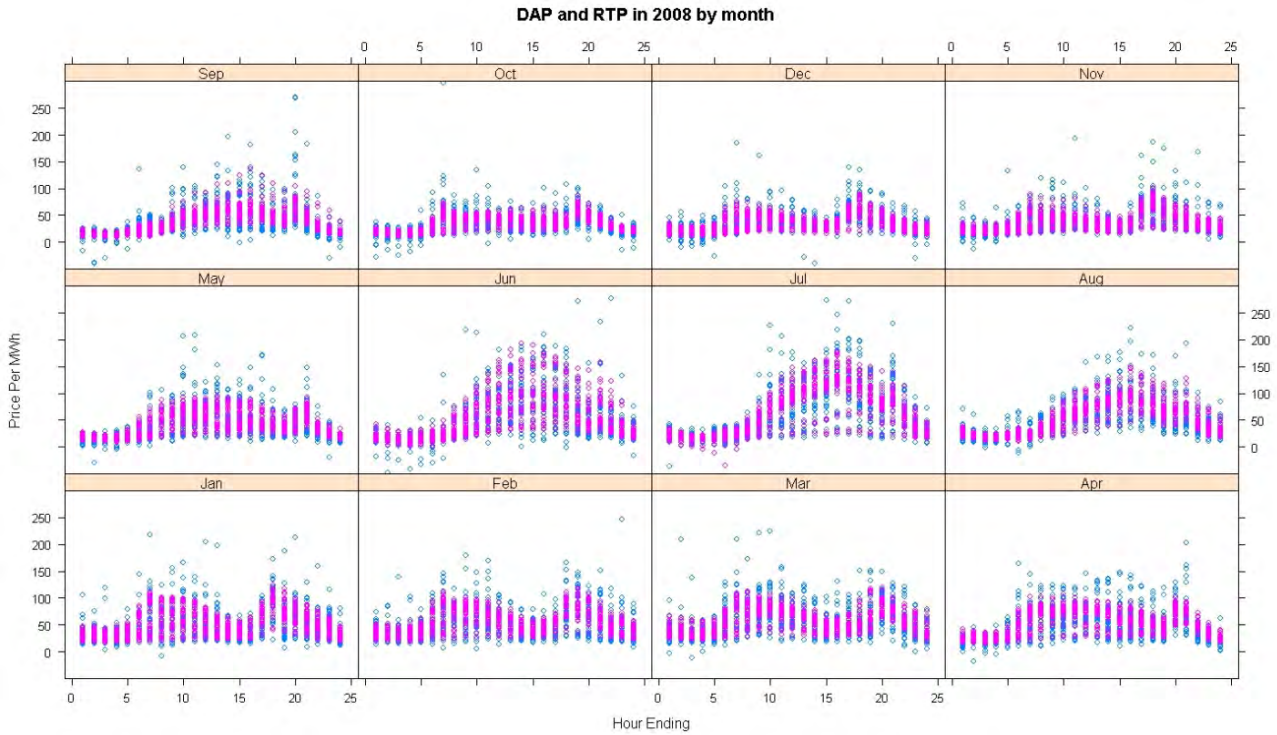
Table 58. GAI Demand System Performance Statistics

Equation	SSE	MSE	Root MSE	R-Square	Adj. R-Sq
w2	164.1	0.00323	0.0569	0.0759	0.0758
w3	132.6	0.00261	0.0511	0.0684	0.0683
w4	56.2213	0.00111	0.0333	0.0474	0.0472
w5	68.3937	0.00135	0.0367	0.0569	0.0568
w6	66.9698	0.00132	0.0363	0.0669	0.0667
w7	193.3	0.00381	0.0617	0.0605	0.0604
w8	156.5	0.00308	0.0555	0.0946	0.0944
w9	174.8	0.00344	0.0587	0.1026	0.1025

Source: Navigant analysis

Appendix G Detail on Day Ahead Prices, Real Time Prices and System Loads

The following chart illustrates that the summer months are the months with the highest prices. In non-summer months, the prices show a bi-peak distribution pattern and spike in the morning (around 7 am) and evening (7 pm). However, during summer months there is only one peak (around 5 pm). The winter peak prices are reflecting increased demand for lighting and space heating at those hours, whereas the summer peak prices reflect the demand for air-conditioning.



Source: Navigant analysis

Tables 59 through 64 present detailed information on the ability of the top hours or days in one series (DAP, RTP or System Loads) to predict the top hours or days in another series.

Table 59. Probability that the Top 200 DAP Hours will Predict the Top 200 RTP Hours

Hourly Prediction from 2008 to 2010
(Top 200 hours out of 1,586 Summer hours)

Year: 2008	RTP Low	RTP High	Probability
DAP Low	1263	123	.612
DAP High	122	78	.388

Year: 2009	RTP Low	RTP High	Probability
DAP Low	1263	123	.615
DAP High	123	77	.385

Year: 2010	RTP Low	RTP High	Probability
DAP Low	1257	129	.645
DAP High	129	71	.355

Source: Navigant analysis

Table 60. Probability that the Top 20 DAP Days will Predict the Top 20 RTP Days

Daily Prediction from 2008 to 2010
(Top 20 days out of 122 Summer days)

Year: 2008	RTP Low	RTP High	Probability
DAP Low	89	13	.65
DAP High	13	7	.35

Year: 2009	RTP Low	RTP High	Probability
DAP Low	92	10	.50
DAP High	10	10	.50

Year: 2010	RTP Low	RTP High	Probability
DAP Low	90	12	.60
DAP High	12	8	.40

Source: Navigant analysis

Table 61. Probability that the Top 200 DAP Hours will Predict the Top 200 System Load Hours

Hourly Prediction from 2008 to 2010
(Top 200 hours out of 1,586 Summer hours)

Year: 2008	Load Low	Load High	Probability
DAP Low	1303	83	.415
DAP High	83	117	.585

Year: 2009	Load Low	Load High	Probability
DAP Low	1315	71	.355
DAP High	71	129	.645

Year: 2010	Load Low	Load High	Probability
DAP Low	1311	75	.375
DAP High	75	125	.625

Source: Navigant analysis

Table 62. Probability that the Top 20 DAP Days will Predict the Top 20 System Load Days

Daily Prediction from 2008 to 2010
(Top 20 days out of 122 Summer days)

Year: 2008	Load Low	Load High	Probability
DAP Low	95	7	.35
DAP High	7	13	.65

Year: 2009	Load Low	Load High	Probability
DAP Low	94	8	.40
DAP High	8	12	.60

Year: 2010	Load Low	Load High	Probability
DAP Low	95	7	.35
DAP High	7	13	.65

Source: Navigant analysis

Table 63. Probability that the Top 200 System Load Hours will Predict the Top 200 RTP Hours

Hourly Prediction from 2008 to 2010
(Top 200 hours out of 1,586 Summer hours)

Year: 2008	RTP Low	RTP High	Probability
Load Low	1275	111	.552
Load High	110	90	.448

Year: 2009	RTP Low	RTP High	Probability
Load Low	1278	108	.54
Load High	108	92	.46

Year: 2010	RTP Low	RTP High	Probability
Load Low	1256	130	.65
Load High	130	70	.35

Source: Navigant analysis

Table 64. Probability that the Top 20 System Load Days will Predict the Top 20 RTP Days

Daily Prediction from 2008 to 2010
(Top 20 days out of 122 Summer days)

Year: 2008	RTP Low	RTP High	Probability
Load Low	92	10	.50
Load High	10	10	.50

Year: 2009	RTP Low	RTP High	Probability
Load Low	94	8	.40
Load High	8	12	.60

Year: 2010	RTP Low	RTP High	Probability
Load Low	.89	13	.65
Load High	13	7	.35

Source: Navigant analysis