

Ameren Illinois Company
Section 285.5120
Schedule E-7: Load Research Results and Supporting Materials

The load research was based on a new load research sample which was fully implemented in January 2015. The sample was designed for the post 2006 delivery service rates.

Schedule E-7(a): Load Research Results

- 1) *Monthly class and Illinois jurisdictional loads at the time of the system coincident peaks, along with the date and time of such peak;*

Please see schedule E-7(a)(1)

- 2) *The monthly maximum non-coincident peak demands for each customer class, along with the date and time of each peak for each customer class.*

Please see schedule E-7(a)(2)

- 3) *Class and Jurisdictional Load Factors; and*

Please see schedule E-7(a)(3)

- 4) *The statistical confidence level achieved for each set of load data developed.*

The original samples were designed for an accuracy of +/- 10% at the 90% confidence level at the time of the annual system peak. Due to over sampling and near census analysis for several classes, the resulting precisions in many classes were well below the accuracy design.

Schedule E-7(b): Supporting Materials

- 1) *The time period over which the data was collected:*

The data were collected for calendar year 2015.

- 2) *A full description of the statistical methods used by the Utility to derive load research results, including accuracies and confidence levels its load research samples were designed to achieve; and*

The goal of the load research sample design is to design a sample of customers from each applicable customer class that:

- 1) Provides an accurate representation of the load characteristics of each customer class.
- 2) Provide estimated customer loads with a relative accuracy of +/- 10% at a 90% confidence level.

To achieve these goals, the following sample design steps are followed for each applicable customer class:

- 1) Selection of stratification variable(s)
- 2) Determination of number of strata required for each class
- 3) Computation of strata boundaries
- 4) Calculation of sample size

Step 1- Selection of Stratification variable

Stratified sampling is a technique used to reduce variance when two or more different subgroups of a population exhibit different characteristics. The population is separated into non-overlapping groups called strata. The first step in the stratification procedure involves selection of stratification variable on which to divide the population. The stratification variable must be one which shows a high correlation to the variable of interest (usually system or class peak demand).

The most common stratification variables in use include either non-coincident demands or energy usage for a selected historic time period, usually ranging from one month to a year.

Step 2 – Determination of number of strata required for each class

The number of strata is determined by calculating the coefficient of variation of the sampling distribution for test designs with different number of strata. The coefficient of variation is equal to the standard error of the estimate divided by the mean. The coefficient of variation declines as the number of strata increases, but at a diminishing rate. The point at which the coefficient of variation decreases very little as another stratum is added indicates the number of strata needed.

Step 3 – Computation of Stratum Boundaries

Strata boundaries are designed such that the overall population weighted variance is minimized. The strata boundaries are calculated using a statistical technique called Dalenius-Hodges.

Step 4 – Calculation of sample size

The accuracy of a sample result depends upon the sample size and the degree of variability of in the population itself. Sample size is:

1. Directly proportional to an estimate of the variance of the population,
2. Inversely proportional to the tolerable error (e.g. 10% relative accuracy at the annual system peak), and
3. Directly proportional to the square of the degree of confidence desired.

In most cases Ameren's sample sizes were calculated to yield a relative accuracy of +/- 10% at confidence level of 90%. As previously mentioned the samples are primarily stratified random samples based on the Dalenius-Hodges variance procedure and the Neyman allocation was used to distribute the meters among the strata.

- 3) *A full explanation of the usage strata into which customers in the utility's load research sample is distributed.*

A combined ratio estimator was used to expand the sample data to the population. The combined ratio estimator utilizes the strata weights as defined in the sample design in conjunction with the kw/kwh ratio to calculate total parameter estimates. This technique produces demand estimates for the class; it does not produce stratum-level demand estimates. However, the total demands are calculated based on the weighed strata kw/kwh ratio and the total energy for the month.

Residential Delivery Service (DS1) - Rate Zone I:

The residential delivery service sample is a stratified two dimensional random sample based on Summer kWh and Winter/Shoulder Ratio. The sample has four strata as follows:

- Strata 1: 0-1300 kwh summer*, 0-1.6 winter/shoulder ratio*
- Strata 2: 0-1300 kwh summer*, over 1.6 winter/shoulder ratio*
- Strata 3: over 1300 kwh summer*, 0-1.6 winter/shoulder ratio*
- Strata 4: over 1300 kwh summer*, over 1.6 winter/shoulder ratio*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

Winter/Shoulder Ratio = (Winter Use Per Day)/(Shoulder* Use Per Day)

*Winter = December 05, January 06, February 06

*Shoulder = April 05, May 05, October 05, November 05

Residential Delivery Service (DS1) - Rate Zone II:

The residential delivery service sample is a stratified two dimensional random sample based on Summer kWh and Winter/Shoulder Ratio. The sample has four strata as follows:

- Strata 1: 0-1300 kwh summer*, 0-1.8 winter/shoulder ratio*
- Strata 2: 0-1300 kwh summer*, over 1.8 winter/shoulder ratio*
- Strata 3: over 1300 kwh summer*, 0-1.8 winter/shoulder ratio*
- Strata 4: over 1300 kwh summer*, over 1.8 winter/shoulder ratio*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

Winter/Shoulder Ratio = (Winter Use Per Day)/(Shoulder* Use Per Day)

*Winter = December 05, January 06, February 06

*Shoulder = April 05, May 05, October 05, November 05

Residential Delivery Service (DS1) - Rate Zone III:

The residential delivery service sample is a stratified two dimensional random sample based on Summer kWh and Winter/Shoulder Ratio. The sample has four strata as follows:

- Strata 1: 0-1300 kwh summer*, 0-1.6 winter/shoulder ratio*
- Strata 2: 0-1300 kwh summer*, over 1.6 winter/shoulder ratio*
- Strata 3: over 1300 kwh summer*, 0-1.6 winter/shoulder ratio*
- Strata 4: over 1300 kwh summer*, over 1.6 winter/shoulder ratio*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

Winter/Shoulder Ratio = (Winter Use Per Day)/(Shoulder* Use Per Day)

*Winter = December 05, January 06, February 06

*Shoulder = April 05, May 05, October 05, November 05

Small General Delivery Service (DS2) - Rate Zone I:

The small general delivery service sample is a two dimensional random sample based on Summer and Winter kWh. The sample contains four strata as follows:

- Strata 1: 0-5300 kwh summer*, 0-4500 kwh winter*
- Strata 2: 0-5300 kwh summer*, over 4500 kwh winter*
- Strata 3: over 5300 kwh summer*, 0-4500 kwh winter*
- Strata 4: over 5300 kwh summer*, over 4500 kwh winter*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

*Winter = December 05, January 06, February 06

Small General Delivery Service (DS2) - Rate Zone II:

The small general delivery service sample is a two dimensional random sample based on Summer and Winter kWh. The sample contains four strata as follows:

- Strata 1: 0-5200 kwh summer*, 0-4300 kwh winter*
- Strata 2: 0-5200 kwh summer*, over 4300 kwh winter*
- Strata 3: over 5200 kwh summer*, 0-4300 kwh winter*
- Strata 4: over 5200 kwh summer*, over 4300 kwh winter*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

*Winter = December 05, January 06, February 06

Small General Delivery Service (DS2) - Rate Zone III:

The small general delivery service sample is a two dimensional random sample based on Summer and Winter kWh. The sample contains four strata as follows:

- Strata 1: 0-5700 kwh summer*, 0-5000 kwh winter*
- Strata 2: 0-5700 kwh summer*, over 5000 kwh winter*
- Strata 3: over 5700 kwh summer*, 0-5000 kwh winter*
- Strata 4: over 5700 kwh summer*, over 5000 kwh winter*

*Summer = Average Monthly Usage (June 05, July 05, August 05, September 05)

*Winter = December 05, January 06, February 06

General Delivery Service (DS3) < 400 kW:

The general delivery service sample for each Rate Zone is a stratified one dimensional random sample based on load factor. The sample has three strata as follows:

- Strata 1: 0-0.4 Load Factor*
- Strata 2: 0.4-0.6 Load Factor*
- Strata 3: over 0.6 Load Factor*

*Load Factor = Average of Monthly Load Factors for March 05-February 06

General Delivery Service (DS3) \geq 400 kW:

This sample is nearly 100% stratified by supply voltage:

Strata 1 - Primary
Strata 2 - Sub-Transmission
Strata 3 – Transmission

Large General Delivery Service (DS4):

This sample is nearly 100% stratified by supply voltage:

Strata 1 - Primary
Strata 2 - Sub-Transmission
Strata 3 – Transmission

A) Identify the number of customers and the customer types (by class) in that particular stratum;

Please see schedule E-7(b)(3)(A)

B) Average monthly usage;

Please see schedule E-7(b)(3)(B)

C) Average demand in kW at the time of system peak; and

Please see schedule E-7(b)(3)(C)

D) Average non-coincident peak demand.

Please see schedule E-7(b)(3)(D)

4) An explanation of how the load research sample was derived and justification provided for the appropriateness of the sample used.

The sample design was derived based on standard load research procedure using stratified random sample which minimizes estimation error and reduces sampling cost.

Ameren Illinois Rate Zone I								
Section 285.5120								
Schedule E-7(a)(1): Load Research								
Class Coincident Peak								
Including Distribution Losses								
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
1/7/15 7:00 PM	923,422	329,733	236,938	14,265	665,016	416	26,747	2,196,537
2/18/15 7:00 PM	879,644	306,401	227,641	11,173	632,130	415	26,747	2,084,151
3/4/15 7:00 PM	728,714	295,634	212,162	10,262	695,424	251	26,747	1,969,193
4/23/15 8:00 AM	394,512	246,498	212,722	8,368	646,217	1,396	-	1,509,714
5/28/15 4:00 PM	548,407	284,539	236,812	3,386	690,840	103	-	1,764,086
6/10/15 4:00 PM	884,753	360,326	260,287	3,945	644,091	490	-	2,153,893
7/13/15 4:00 PM	926,680	402,201	273,902	4,023	700,631	245	-	2,307,683
8/3/15 3:00 PM	859,651	359,829	276,440	4,229	675,248	760	-	2,176,157
9/4/15 3:00 PM	855,920	344,152	284,667	6,264	683,489	2,178	-	2,176,670
10/8/15 3:00 PM	366,637	294,352	273,396	19,998	582,742	2,458	-	1,539,583
11/30/15 6:00 PM	565,495	219,722	198,254	6,852	579,968	538	26,747	1,597,577
12/2/15 6:00 PM	609,172	246,308	210,396	9,844	629,148	1,000	26,747	1,732,615

Ameren Illinois Rate Zone II								
Section 285.5120								
Schedule E-7(a)(1): Load Research								
Class Coincident Peak								
Including Distribution Losses								
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
1/7/15 7:00 PM	447,832	128,363	104,048	3,878	249,331	24	8,389	941,866
2/18/15 7:00 PM	399,501	135,450	99,747	2,573	232,386	137	8,389	878,184
3/4/15 7:00 PM	356,674	129,127	96,234	2,093	276,308	20	8,389	868,845
4/23/15 8:00 AM	189,550	113,223	108,047	3,906	330,083	3	-	744,812
5/28/15 4:00 PM	329,249	162,384	124,183	1,005	298,554	4	-	915,379
6/10/15 4:00 PM	491,750	191,850	140,243	743	258,053	4	-	1,082,644
7/13/15 4:00 PM	540,081	214,382	142,730	1,119	252,325	3	-	1,150,640
8/3/15 3:00 PM	460,829	190,648	138,134	1,203	334,630	10	-	1,125,454
9/4/15 3:00 PM	586,189	212,134	153,678	3,406	256,150	5	-	1,211,561
10/8/15 3:00 PM	203,310	150,801	142,560	10,687	276,987	1,161	-	785,506
11/30/15 6:00 PM	294,347	111,067	93,837	2,902	265,804	23	8,389	776,369
12/2/15 6:00 PM	324,395	125,659	98,276	3,255	265,882	26	8,389	825,882

Ameren Illinois Rate Zone III								
Section 285.5120								
Schedule E-7(a)(1): Load Research								
Class Coincident Peak								
Including Distribution Losses								
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
1/7/15 7:00 PM	1,283,393	398,012	281,006	9,919	925,160	1,552	47,569	2,935,139
2/18/15 7:00 PM	1,200,952	400,449	279,477	7,797	891,271	1,278	47,569	2,819,717
3/4/15 7:00 PM	1,040,539	395,724	266,644	6,014	928,612	1,336	47,569	2,679,087
4/23/15 8:00 AM	541,251	302,711	264,784	7,290	1,107,142	1,356	-	2,215,888
5/28/15 4:00 PM	868,738	427,631	360,451	3,740	1,083,010	478	-	2,739,830
6/10/15 4:00 PM	1,315,356	548,537	393,418	3,987	981,463	820	-	3,238,774
7/13/15 4:00 PM	1,518,020	597,766	409,154	3,431	1,050,918	741	-	3,575,859
8/3/15 3:00 PM	1,415,556	582,797	400,805	3,990	1,081,030	675	-	3,480,187
9/4/15 3:00 PM	1,472,899	556,313	423,306	6,333	980,277	2,337	-	3,432,796
10/8/15 3:00 PM	521,122	446,028	369,002	24,341	1,081,383	5,564	-	2,417,535
11/30/15 6:00 PM	818,096	333,324	271,255	5,412	855,837	1,689	47,569	2,326,081
12/2/15 6:00 PM	892,923	343,539	278,490	8,289	945,134	1,943	47,569	2,507,655

Ameren Illinois Rate Zone I												
Section 285.5120												
Schedule E-7(a)(2): Load Research												
Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	944,701	1/8/15 9:00 AM	396,286	1/8/15 9:00 AM	272,269	1/7/15 3:00 PM	16,444	1/7/15 10:00 AM	687,238	1/23/15 9:00 AM	1,913	26,747
2/23/15 7:00 AM	922,207	2/23/15 10:00 AM	362,522	2/23/15 8:00 AM	262,463	2/12/15 10:00 AM	14,114	2/26/15 8:00 AM	694,224	2/4/15 11:00 AM	2,013	26,747
3/6/15 6:00 AM	778,068	3/4/15 10:00 AM	351,191	3/4/15 10:00 AM	249,681	3/5/15 8:00 AM	12,772	3/5/15 8:00 AM	699,596	3/13/15 1:00 PM	1,599	26,747
4/4/15 8:00 AM	484,106	4/29/15 1:00 PM	292,094	4/9/15 1:00 PM	227,865	4/23/15 7:00 AM	8,934	4/16/15 1:00 PM	688,633	4/15/15 3:00 PM	1,718	26,747
5/25/15 7:00 PM	608,829	5/6/15 11:00 AM	344,491	5/28/15 1:00 PM	264,419	4/30/15 8:00 AM	7,941	5/5/15 12:00 PM	692,445	4/30/15 11:00 AM	1,736	26,747
6/10/15 5:00 PM	892,306	6/11/15 1:00 PM	391,808	6/22/15 1:00 PM	284,858	6/10/15 1:00 PM	5,753	6/23/15 8:00 AM	707,715	6/18/15 8:00 AM	1,321	26,747
7/17/15 4:00 PM	977,669	7/28/15 11:00 AM	428,802	7/28/15 1:00 PM	294,979	7/15/15 1:00 PM	6,146	7/17/15 7:00 AM	722,962	7/28/15 8:00 AM	1,680	26,747
8/2/15 4:00 PM	991,470	8/6/15 10:00 AM	399,408	8/18/15 1:00 PM	293,745	8/20/15 9:00 AM	5,930	8/5/15 6:00 AM	693,381	8/28/15 11:00 AM	2,351	26,747
9/6/15 2:00 PM	940,488	9/23/15 10:00 AM	391,941	9/17/15 1:00 PM	310,524	9/21/15 3:00 PM	22,193	9/3/15 9:00 PM	701,750	9/22/15 5:00 PM	4,564	26,747
10/29/15 7:00 AM	467,194	10/8/15 11:00 AM	322,286	10/8/15 1:00 PM	279,625	9/30/15 10:00 AM	25,799	10/21/15 1:00 PM	698,615	9/30/15 3:00 PM	3,633	26,747
11/22/15 7:00 PM	604,022	11/30/15 10:00 AM	273,765	11/23/15 9:00 AM	244,973	11/9/15 6:00 AM	18,023	11/10/15 9:00 AM	699,930	11/10/15 8:00 AM	2,266	26,747
12/31/15 5:00 PM	660,289	12/29/15 9:00 AM	304,375	12/17/15 9:00 AM	254,198	12/18/15 6:00 AM	18,785	12/16/15 9:00 AM	676,054	12/17/15 2:00 PM	2,049	26,747

Ameren Illinois Rate Zone II												
Section 285.5120												
Schedule E-7(a)(2): Load Research												
Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	454,274	1/8/15 9:00 AM	158,538	1/9/15 10:00 AM	122,698	1/2/15 10:00 AM	5,707	1/27/15 1:00 PM	314,023	1/1/15 1:00 AM	118	8,389
2/18/15 6:00 PM	403,787	2/19/15 11:00 AM	151,568	2/19/15 10:00 AM	120,021	2/25/15 9:00 AM	4,624	2/9/15 2:00 PM	310,799	2/19/15 9:00 AM	144	8,389
3/4/15 6:00 PM	377,548	3/4/15 11:00 AM	147,670	3/4/15 10:00 AM	117,503	3/18/15 11:00 AM	3,575	3/16/15 1:00 PM	340,486	3/24/15 7:00 AM	61	8,389
4/18/15 5:00 PM	288,504	4/17/15 1:00 PM	161,780	4/17/15 1:00 PM	120,291	4/23/15 8:00 AM	3,906	4/13/15 8:00 AM	330,747	4/20/15 12:00 PM	35	8,389
5/25/15 5:00 PM	410,789	5/6/15 1:00 PM	179,629	5/28/15 2:00 PM	139,860	5/14/15 9:00 AM	2,247	5/27/15 12:00 PM	353,814	5/23/15 4:00 AM	392	8,389
6/22/15 5:00 PM	537,127	6/10/15 3:00 PM	201,583	6/10/15 2:00 PM	153,120	6/23/15 11:00 AM	2,004	6/12/15 1:00 PM	360,711	6/17/15 9:00 AM	438	8,389
7/18/15 4:00 PM	618,665	7/13/15 4:00 PM	214,382	7/13/15 1:00 PM	155,800	7/2/15 9:00 AM	2,113	7/22/15 10:00 AM	366,213	6/28/15 12:00 AM	394	8,389
8/2/15 4:00 PM	613,345	8/17/15 11:00 AM	202,942	8/31/15 1:00 PM	159,647	8/20/15 8:00 AM	2,519	8/12/15 9:00 AM	358,656	8/7/15 5:00 AM	396	8,389
9/6/15 3:00 PM	604,782	9/4/15 11:00 AM	223,653	9/17/15 2:00 PM	172,759	9/21/15 5:00 PM	17,129	9/30/15 10:00 AM	353,747	9/30/15 9:00 AM	2,736	8,389
10/18/15 11:00 AM	267,191	10/7/15 1:00 PM	165,201	10/8/15 1:00 PM	148,581	10/1/15 1:00 AM	16,677	10/1/15 8:00 AM	348,125	10/10/15 7:00 AM	2,326	8,389
11/1/15 1:00 AM	337,823	11/4/15 10:00 AM	146,419	11/5/15 10:00 AM	125,667	11/10/15 4:00 AM	7,660	11/10/15 8:00 AM	345,852	11/22/15 5:00 AM	857	8,389
12/29/15 5:00 PM	375,699	12/16/15 11:00 AM	136,134	12/3/15 10:00 AM	121,447	12/18/15 2:00 AM	6,785	12/18/15 9:00 AM	309,624	12/31/15 6:00 PM	665	8,389

Schedule E-7 – Electric
Sponsored by: K.R. Althoff
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Ameren Illinois Rate Zone III												
Section 285.5120												
Schedule E-7(a)(2): Load Research												
Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	1,217,251	1/8/15 12:00 PM	447,073	1/8/15 10:00 AM	339,430	1/7/15 10:00 AM	11,190	1/14/15 1:00 PM	965,386	1/29/15 9:00 AM	4,004	47,569
2/18/15 8:00 PM	1,120,801	2/20/15 11:00 AM	420,742	2/20/15 9:00 AM	333,495	2/12/15 11:00 AM	9,534	2/12/15 10:00 AM	907,262	2/6/15 8:00 AM	4,281	47,569
3/5/15 7:00 PM	969,393	3/6/15 10:00 AM	429,605	3/5/15 9:00 AM	324,603	3/18/15 10:00 AM	8,261	3/10/15 1:00 PM	953,039	3/20/15 9:00 AM	4,310	47,569
4/9/15 7:00 PM	669,671	4/9/15 2:00 PM	392,744	4/9/15 2:00 PM	332,950	4/22/15 11:00 AM	8,381	4/16/15 4:00 PM	1,023,682	4/1/15 7:00 AM	3,995	47,569
5/25/15 4:00 PM	892,313	5/7/15 12:00 PM	462,094	5/18/15 2:00 PM	381,486	5/19/15 11:00 AM	6,370	5/18/15 1:00 PM	1,058,058	5/1/15 9:00 AM	1,388	47,569
6/10/15 5:00 PM	1,264,407	6/10/15 3:00 PM	541,352	6/11/15 2:00 PM	405,802	6/1/15 2:00 PM	5,644	6/22/15 2:00 PM	1,041,223	6/23/15 3:00 PM	1,442	47,569
7/13/15 5:00 PM	1,486,437	7/13/15 4:00 PM	554,343	7/28/15 2:00 PM	426,793	7/23/15 9:00 AM	5,037	7/28/15 1:00 PM	1,094,540	7/22/15 10:00 AM	1,316	47,569
8/2/15 3:00 PM	1,444,050	8/3/15 12:00 PM	576,894	8/17/15 2:00 PM	425,197	8/27/15 3:00 PM	5,661	8/5/15 1:00 PM	1,058,072	8/31/15 1:00 PM	1,696	47,569
9/6/15 3:00 PM	1,456,356	9/4/15 1:00 PM	554,575	9/3/15 2:00 PM	441,754	9/29/15 3:00 PM	25,428	9/2/15 11:00 AM	1,042,370	9/17/15 12:00 PM	7,905	47,569
10/7/15 6:00 PM	678,596	10/7/15 1:00 PM	453,636	10/8/15 2:00 PM	391,080	10/1/15 2:00 PM	28,621	10/22/15 12:00 PM	1,016,598	10/1/15 2:00 PM	7,274	47,569
11/22/15 7:00 PM	869,756	11/1/15 1:00 AM	419,690	11/5/15 11:00 AM	337,361	11/9/15 11:00 PM	15,863	11/9/15 10:00 AM	970,201	11/9/15 5:00 AM	3,342	47,569
12/29/15 5:00 PM	889,267	12/18/15 10:00 AM	403,250	12/17/15 10:00 AM	331,506	12/18/15 7:00 AM	17,652	12/8/15 1:00 PM	906,122	12/19/15 8:00 AM	3,657	47,569

Ameren Illinois Rate Zone I								
Section 285.5120								
Schedule E-7(a)(3): Load Research								
Class Load Factors								
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
January-15	64%	64%	65%	67%	84%	55%	59%	75%
February-15	70%	70%	71%	67%	84%	29%	55%	81%
March-15	59%	64%	66%	56%	84%	36%	50%	74%
April-15	65%	66%	67%	61%	84%	24%	44%	83%
May-15	57%	58%	64%	44%	83%	31%	40%	74%
June-15	54%	60%	69%	49%	87%	24%	38%	72%
July-15	57%	58%	68%	49%	87%	30%	39%	72%
August-15	51%	60%	67%	55%	88%	20%	43%	72%
September-15	46%	58%	66%	19%	83%	14%	48%	68%
October-15	67%	60%	63%	58%	82%	60%	53%	84%
November-15	63%	69%	67%	66%	83%	78%	57%	84%
December-15	69%	68%	67%	58%	83%	43%	60%	82%

Ameren Illinois Rate Zone II								
Section 285.5120								
Schedule E-7(a)(3): Load Research								
Class Load Factors								
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
January-15	60%	68%	69%	52%	75%	21%	12%	75%
February-15	67%	71%	71%	53%	77%	30%	11%	81%
March-15	56%	67%	68%	54%	76%	33%	10%	76%
April-15	58%	56%	66%	34%	76%	26%	9%	80%
May-15	46%	54%	62%	42%	71%	11%	8%	69%
June-15	47%	57%	64%	39%	76%	9%	8%	69%
July-15	48%	54%	65%	41%	70%	12%	8%	67%
August-15	43%	59%	63%	37%	77%	12%	8%	68%
September-15	41%	50%	60%	43%	72%	31%	9%	60%
October-15	62%	57%	58%	47%	68%	40%	10%	76%
November-15	57%	62%	64%	44%	66%	22%	11%	77%
December-15	60%	70%	66%	38%	66%	8%	12%	74%

Ameren Illinois Rate Zone III								
Section 285.5120								
Schedule E-7(a)(3): Load Research								
Class Load Factors								
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System
January-15	65%	73%	68%	61%	85%	49%	59%	75%
February-15	77%	81%	72%	65%	87%	45%	55%	80%
March-15	63%	71%	68%	52%	88%	40%	50%	75%
April-15	72%	69%	66%	38%	84%	18%	44%	84%
May-15	61%	62%	64%	38%	85%	25%	40%	73%
June-15	59%	64%	68%	43%	82%	35%	38%	69%
July-15	58%	63%	66%	50%	81%	40%	39%	67%
August-15	53%	61%	66%	49%	87%	28%	43%	67%
September-15	47%	59%	62%	42%	86%	51%	48%	64%
October-15	69%	64%	58%	53%	84%	46%	53%	78%
November-15	64%	66%	66%	45%	81%	49%	57%	81%
December-15	72%	72%	69%	34%	81%	43%	60%	77%

Ameren Illinois Rate Zone I										
Section 285.5120										
Schedule E-7(b)(3)(A): Load Research										
Customers										
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System		
January-15	327,244	55,195	1,358	136	195	6	31,157	415,291		
February-15	323,166	54,383	1,355	136	192	6	30,695	409,933		
March-15	334,808	56,548	1,361	135	198	6	31,871	424,927		
April-15	325,963	55,133	1,379	134	200	6	31,049	413,864		
May-15	325,925	55,170	1,358	134	192	5	30,992	413,776		
June-15	324,246	54,849	1,427	134	185	6	31,012	411,859		
July-15	325,087	54,996	1,433	134	186	5	30,985	412,826		
August-15	325,144	55,160	1,457	132	197	5	30,983	413,078		
September-15	325,541	55,012	1,510	163	182	4	30,865	413,277		
October-15	327,221	55,654	1,511	134	196	5	30,156	414,877		
November-15	326,981	55,223	1,392	125	183	5	29,790	413,698		
December-15	324,004	55,687	1,508	139	193	5	29,708	411,243		

Ameren Illinois Rate Zone II										
Section 285.5120										
Schedule E-7(b)(3)(A): Load Research										
Customers										
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System		
January-15	192,374	25,213	699	64	84	1	6,794	225,229		
February-15	188,908	24,820	711	62	84	1	6,618	221,204		
March-15	192,787	25,329	701	62	89	1	6,798	225,767		
April-15	189,984	25,017	728	65	84	1	6,666	222,545		
May-15	188,918	24,866	706	64	84	1	6,616	221,255		
June-15	189,612	24,995	715	60	81	2	6,659	222,124		
July-15	190,722	25,038	713	60	79	3	6,715	223,330		
August-15	189,795	25,016	727	63	81	3	6,683	222,368		
September-15	189,852	25,018	768	83	92	3	6,638	222,454		
October-15	190,662	25,054	722	61	81	3	7,650	224,234		
November-15	189,590	24,898	641	53	81	3	7,532	222,799		
December-15	189,595	25,402	761	67	81	3	7,584	223,493		

Ameren Illinois Rate Zone III									
Section 285.5120									
Schedule E-7(b)(3)(A): Load Research									
Customers									
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5	System	
January-15	542,986	73,886	1,358	136	195	6	41,149	659,716	
February-15	539,109	72,519	1,355	136	192	6	40,273	653,590	
March-15	552,268	75,019	1,361	135	198	6	41,593	670,580	
April-15	545,901	74,084	1,379	134	200	6	41,018	662,722	
May-15	542,247	74,013	1,358	134	192	5	40,529	658,478	
June-15	542,325	73,952	1,427	134	185	6	40,757	658,786	
July-15	544,261	74,350	1,433	134	186	5	40,961	661,330	
August-15	546,297	74,640	1,457	132	197	5	40,903	663,631	
September-15	542,280	74,054	1,510	163	182	4	40,402	658,595	
October-15	540,066	74,265	1,511	134	196	5	41,768	657,945	
November-15	542,742	74,214	1,392	125	183	5	41,066	659,727	
December-15	545,295	76,169	1,508	139	193	5	41,370	664,679	

Ameren Illinois Rate Zone I							
Section 285.5120							
Schedule E-7(b)(3)(B): Load Research							
Average Usage per Customer							
Including Distribution Losses							
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
January-15	1,383	3,397	97,445	60,051	2,209,318	129,788	374
February-15	1,346	3,144	91,979	46,914	2,045,764	65,479	321
March-15	1,012	2,943	89,713	39,322	2,196,856	72,058	310
April-15	697	2,507	80,059	29,256	2,092,895	50,145	276
May-15	792	2,685	93,108	19,434	2,238,247	79,648	258
June-15	1,079	3,079	99,180	15,054	2,404,282	38,450	236
July-15	1,278	3,393	104,832	16,745	2,508,766	76,211	250
August-15	1,156	3,207	99,977	18,242	2,308,029	69,408	273
September-15	964	2,989	97,883	18,485	2,315,916	117,348	297
October-15	711	2,587	86,281	82,737	2,186,024	321,850	348
November-15	831	2,473	85,522	68,418	2,272,109	253,489	370
December-15	1,051	2,761	84,119	58,096	2,174,394	131,743	399

Ameren Illinois Rate Zone II							
Section 285.5120							
Schedule E-7(b)(3)(B): Load Research							
Average Usage per Customer							
Including Distribution Losses							
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
January-15	1,049	3,191	89,698	34,715	2,085,116	18,298	43,486
February-15	961	2,929	80,394	26,498	1,903,582	28,665	36,756
March-15	823	2,924	84,617	23,049	2,153,874	14,961	34,809
April-15	635	2,613	78,160	14,594	2,168,745	6,517	31,996
May-15	743	2,903	92,060	10,942	2,216,183	33,371	29,818
June-15	955	3,294	99,072	9,421	2,434,631	13,646	28,304
July-15	1,159	3,430	105,029	10,809	2,426,043	11,262	30,730
August-15	1,033	3,585	102,735	11,094	2,539,186	12,286	32,802
September-15	932	3,235	96,959	64,405	1,982,300	205,066	31,209
October-15	649	2,801	89,313	96,169	2,170,714	228,427	40,675
November-15	725	2,644	90,475	45,797	2,031,270	45,564	42,729
December-15	878	2,798	78,901	28,384	1,887,290	13,776	45,941

Ameren Illinois Rate Zone III							
Section 285.5120							
Schedule E-7(b)(3)(B): Load Research							
Average Usage per Customer							
Including Distribution Losses							
Month	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
January-15	1,085	3,304	126,679	37,108	3,124,902	242,921	503
February-15	1,069	3,154	118,462	30,439	2,766,033	217,456	435
March-15	820	3,028	121,236	23,733	3,168,168	214,595	423
April-15	635	2,623	114,403	17,306	3,100,569	87,926	372
May-15	751	2,891	134,719	13,585	3,486,555	52,342	350
June-15	984	3,355	139,476	12,959	3,336,298	60,069	319
July-15	1,188	3,469	147,176	13,972	3,560,374	78,066	336
August-15	1,043	3,494	143,689	15,620	3,492,681	71,714	368
September-15	907	3,195	129,671	47,216	3,527,688	731,987	403
October-15	646	2,892	112,279	84,336	3,233,683	501,928	447
November-15	741	2,693	115,755	40,958	3,086,058	235,848	478
December-15	876	2,829	112,959	31,989	2,826,317	232,142	510

Ameren Illinois Rate Zone I							
Section 285.5120							
Schedule E-7(b)(3)(C): Load Research							
Average Demand per Customer: Class Coincident Peak							
Including Distribution Losses							
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
1/7/15 7:00 PM	2.8	6.0	174	105	3,410	69	0.9
2/18/15 7:00 PM	2.7	5.6	168	82	3,292	69	0.9
3/4/15 7:00 PM	2.2	5.2	156	76	3,512	42	0.8
4/23/15 8:00 AM	1.2	4.5	154	62	3,231	233	-
5/28/15 4:00 PM	1.7	5.2	174	25	3,598	21	-
6/10/15 4:00 PM	2.7	6.6	182	29	3,482	82	-
7/13/15 4:00 PM	2.9	7.3	191	30	3,767	49	-
8/3/15 3:00 PM	2.6	6.5	190	32	3,428	152	-
9/4/15 3:00 PM	2.6	6.3	189	38	3,755	545	-
10/8/15 3:00 PM	1.1	5.3	181	149	2,973	492	-
11/30/15 6:00 PM	1.7	4.0	142	55	3,169	108	0.9
12/2/15 6:00 PM	1.9	4.4	140	71	3,260	200	0.9

Ameren Illinois Rate Zone II							
Section 285.5120							
Schedule E-7(b)(3)(C): Load Research							
Average Demand per Customer: Class Coincident Peak							
Including Distribution Losses							
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
1/7/15 7:00 PM	2.3	5.1	149	61	2,968	24	1.2
2/18/15 7:00 PM	2.1	5.5	140	41	2,766	137	1.3
3/4/15 7:00 PM	1.9	5.1	137	34	3,105	20	1.2
4/23/15 8:00 AM	1.0	4.5	148	60	3,930	3	-
5/28/15 4:00 PM	1.7	6.5	176	16	3,554	4	-
6/10/15 4:00 PM	2.6	7.7	196	12	3,186	2	-
7/13/15 4:00 PM	2.8	8.6	200	19	3,194	1	-
8/3/15 3:00 PM	2.4	7.6	190	19	4,131	3	-
9/4/15 3:00 PM	3.1	8.5	200	41	2,784	2	-
10/8/15 3:00 PM	1.1	6.0	197	175	3,420	387	-
11/30/15 6:00 PM	1.6	4.5	146	55	3,282	8	1.1
12/2/15 6:00 PM	1.7	4.9	129	49	3,282	9	1.1

Ameren Illinois Rate Zone III							
Section 285.5120							
Schedule E-7(b)(3)(C): Load Research							
Average Demand per Customer: Class Coincident Peak							
Including Distribution Losses							
Hour Beginning	DS1	DS2	DS3	DS3S	DS4	DS4S	DS5
1/7/15 7:00 PM	2.4	5.4	212.0	72.9	4,708.9	258.7	1.2
2/18/15 7:00 PM	2.2	5.5	209.8	57.3	4,616.9	213.1	1.2
3/4/15 7:00 PM	1.9	5.3	198.3	44.5	4,673.8	222.7	1.1
4/23/15 8:00 AM	1.0	4.1	195.3	54.4	5,513.3	226.0	-
5/28/15 4:00 PM	1.6	5.8	265.4	27.9	5,640.9	95.6	-
6/10/15 4:00 PM	2.4	7.4	275.6	29.8	5,305.9	136.7	-
7/13/15 4:00 PM	2.8	8.0	284.9	25.6	5,654.7	148.3	-
8/3/15 3:00 PM	2.6	7.8	274.9	30.2	5,488.5	135.0	-
9/4/15 3:00 PM	2.7	7.5	281.6	38.9	5,375.9	584.4	-
10/8/15 3:00 PM	1.0	6.0	257.6	181.6	5,413.9	1,112.9	-
11/30/15 6:00 PM	1.5	4.5	196.7	43.3	4,662.8	337.7	1.2
12/2/15 6:00 PM	1.6	4.5	188.2	59.6	4,869.5	388.6	1.1

Ameren Illinois Rate Zone I												
Section 285.5120												
Schedule E-7(b)(3)(D): Load Research												
Average Demand per Customer: Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	2.9	1/8/15 9:00 AM	7.2	1/8/15 9:00 AM	200.5	1/7/15 3:00 PM	84.3	1/7/15 10:00 AM	3,524.3	1/23/15 9:00 AM	318.9	0.9
2/23/15 7:00 AM	2.9	2/23/15 10:00 AM	6.7	2/23/15 8:00 AM	193.7	2/12/15 10:00 AM	73.5	2/26/15 8:00 AM	3,615.8	2/4/15 11:00 AM	335.5	0.9
3/6/15 6:00 AM	2.3	3/4/15 10:00 AM	6.2	3/4/15 10:00 AM	183.5	3/5/15 8:00 AM	64.5	3/5/15 8:00 AM	3,533.3	3/13/15 1:00 PM	266.6	0.8
4/4/15 8:00 AM	1.5	4/29/15 1:00 PM	5.3	4/9/15 1:00 PM	165.2	4/23/15 7:00 AM	44.7	4/16/15 1:00 PM	3,443.2	4/15/15 3:00 PM	286.3	0.9
5/25/15 7:00 PM	1.9	5/6/15 11:00 AM	6.2	5/28/15 1:00 PM	194.7	4/30/15 8:00 AM	41.4	5/5/15 12:00 PM	3,606.5	4/30/15 11:00 AM	347.2	0.9
6/10/15 5:00 PM	2.8	6/11/15 1:00 PM	7.1	6/22/15 1:00 PM	199.6	6/10/15 1:00 PM	31.1	6/23/15 8:00 AM	3,825.5	6/18/15 8:00 AM	220.2	0.9
7/17/15 4:00 PM	3.0	7/28/15 11:00 AM	7.8	7/28/15 1:00 PM	205.8	7/15/15 1:00 PM	33.0	7/17/15 7:00 AM	3,886.9	7/28/15 8:00 AM	336.1	0.9
8/2/15 4:00 PM	3.0	8/6/15 10:00 AM	7.2	8/18/15 1:00 PM	201.6	8/20/15 9:00 AM	30.1	8/5/15 6:00 AM	3,519.7	8/28/15 11:00 AM	470.1	0.9
9/6/15 2:00 PM	2.9	9/23/15 10:00 AM	7.1	9/17/15 1:00 PM	205.6	9/21/15 3:00 PM	121.9	9/3/15 9:00 PM	3,855.8	9/22/15 5:00 PM	1,141.1	0.9
10/29/15 7:00 AM	1.4	10/8/15 11:00 AM	5.8	10/8/15 1:00 PM	185.1	9/30/15 10:00 AM	131.6	10/21/15 1:00 PM	3,564.4	9/30/15 3:00 PM	726.6	0.9
11/22/15 7:00 PM	1.8	11/30/15 10:00 AM	5.0	11/23/15 9:00 AM	176.0	11/9/15 6:00 AM	98.5	11/10/15 9:00 AM	3,824.8	11/10/15 8:00 AM	453.2	0.9
12/31/15 5:00 PM	2.0	12/29/15 9:00 AM	5.5	12/17/15 9:00 AM	168.6	12/18/15 6:00 AM	97.3	12/16/15 9:00 AM	3,502.9	12/17/15 2:00 PM	409.9	0.9

Ameren Illinois Rate Zone II												
Section 285.5120												
Schedule E-7(b)(3)(D): Load Research												
Average Demand per Customer: Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	2.4	1/8/15 9:00 AM	6.3	1/9/15 10:00 AM	175.5	1/2/15 10:00 AM	89.2	1/27/15 1:00 PM	3,738.4	1/1/15 1:00 AM	117.6	1.2
2/18/15 6:00 PM	2.1	2/19/15 11:00 AM	6.1	2/19/15 10:00 AM	168.8	2/25/15 9:00 AM	74.6	2/9/15 2:00 PM	3,700.0	2/19/15 9:00 AM	144.5	1.3
3/4/15 6:00 PM	2.0	3/4/15 11:00 AM	5.8	3/4/15 10:00 AM	167.6	3/18/15 11:00 AM	57.7	3/16/15 1:00 PM	3,825.7	3/24/15 7:00 AM	61.5	1.2
4/18/15 5:00 PM	1.5	4/17/15 1:00 PM	6.5	4/17/15 1:00 PM	165.2	4/23/15 8:00 AM	60.1	4/13/15 8:00 AM	3,937.5	4/20/15 12:00 PM	35.4	1.3
5/25/15 5:00 PM	2.2	5/6/15 1:00 PM	7.2	5/28/15 2:00 PM	198.1	5/14/15 9:00 AM	35.1	5/27/15 12:00 PM	4,212.1	5/23/15 4:00 AM	391.9	1.3
6/22/15 5:00 PM	2.8	6/10/15 3:00 PM	8.1	6/10/15 2:00 PM	214.2	6/23/15 11:00 AM	33.4	6/12/15 1:00 PM	4,453.2	6/17/15 9:00 AM	219.0	1.3
7/18/15 4:00 PM	3.2	7/13/15 4:00 PM	8.6	7/13/15 1:00 PM	218.5	7/2/15 9:00 AM	35.2	7/22/15 10:00 AM	4,635.6	6/28/15 12:00 AM	131.4	1.2
8/2/15 4:00 PM	3.2	8/17/15 11:00 AM	8.1	8/31/15 1:00 PM	219.6	8/20/15 8:00 AM	40.0	8/12/15 9:00 AM	4,427.8	8/7/15 5:00 AM	132.1	1.3
9/6/15 3:00 PM	3.2	9/4/15 11:00 AM	8.9	9/17/15 2:00 PM	224.9	9/21/15 5:00 PM	206.4	9/30/15 10:00 AM	3,845.1	9/30/15 9:00 AM	912.0	1.3
10/18/15 11:00 AM	1.4	10/7/15 1:00 PM	6.6	10/8/15 1:00 PM	205.8	10/1/15 1:00 AM	273.4	10/1/15 8:00 AM	4,297.8	10/10/15 7:00 AM	775.3	1.1
11/1/15 1:00 AM	1.8	11/4/15 10:00 AM	5.9	11/5/15 10:00 AM	196.0	11/10/15 4:00 AM	144.5	11/10/15 8:00 AM	4,269.8	11/22/15 5:00 AM	285.6	1.1
12/29/15 5:00 PM	2.0	12/16/15 11:00 AM	5.4	12/3/15 10:00 AM	159.6	12/18/15 2:00 AM	101.3	12/18/15 9:00 AM	3,822.5	12/31/15 6:00 PM	221.6	1.1

Ameren Illinois Rate Zone III												
Section 285.5120												
Schedule E-7(b)(3)(D): Load Research												
Average Demand per Customer: Class Non-Coincident Peak												
Including Distribution Losses												
Hour Beginning	DS1	Hour Beginning	DS2	Hour Beginning	DS3	Hour Beginning	DS3S	Hour Beginning	DS4	Hour Beginning	DS4S	DS5
1/7/15 6:00 PM	2.2	1/8/15 12:00 PM	6.1	1/8/15 10:00 AM	249.9	1/7/15 10:00 AM	82.3	1/7/15 10:00 AM	4,950.7	1/29/15 9:00 AM	667.4	1.2
2/18/15 8:00 PM	2.1	2/20/15 11:00 AM	5.8	2/20/15 9:00 AM	246.1	2/12/15 11:00 AM	70.1	2/12/15 11:00 AM	4,725.3	2/6/15 8:00 AM	713.5	1.2
3/5/15 7:00 PM	1.8	3/6/15 10:00 AM	5.7	3/5/15 9:00 AM	238.5	3/18/15 10:00 AM	61.2	3/18/15 10:00 AM	4,813.3	3/20/15 9:00 AM	718.4	1.1
4/9/15 7:00 PM	1.2	4/9/15 2:00 PM	5.3	4/9/15 2:00 PM	241.4	4/22/15 11:00 AM	62.5	4/22/15 11:00 AM	5,118.4	4/1/15 7:00 AM	665.8	1.2
5/25/15 4:00 PM	1.6	5/7/15 12:00 PM	6.2	5/18/15 2:00 PM	280.9	5/19/15 11:00 AM	47.5	5/19/15 11:00 AM	5,510.7	5/1/15 9:00 AM	277.6	1.2
6/10/15 5:00 PM	2.3	6/10/15 3:00 PM	7.3	6/11/15 2:00 PM	284.4	6/1/15 2:00 PM	42.1	6/1/15 2:00 PM	5,628.2	6/23/15 3:00 PM	240.4	1.2
7/13/15 5:00 PM	2.7	7/13/15 4:00 PM	7.5	7/28/15 2:00 PM	297.8	7/23/15 9:00 AM	37.6	7/23/15 9:00 AM	5,884.6	7/22/15 10:00 AM	263.3	1.2
8/2/15 3:00 PM	2.6	8/3/15 12:00 PM	7.7	8/17/15 2:00 PM	291.8	8/27/15 3:00 PM	42.9	8/27/15 3:00 PM	5,370.9	8/31/15 1:00 PM	339.2	1.2
9/6/15 3:00 PM	2.7	9/4/15 1:00 PM	7.5	9/3/15 2:00 PM	292.6	9/29/15 3:00 PM	156.0	9/29/15 3:00 PM	5,727.3	9/17/15 12:00 PM	1,976.3	1.2
10/7/15 6:00 PM	1.3	10/7/15 1:00 PM	6.1	10/8/15 2:00 PM	258.8	10/1/15 2:00 PM	213.6	10/1/15 2:00 PM	5,186.7	10/1/15 2:00 PM	1,454.9	1.1
11/22/15 7:00 PM	1.6	11/1/15 1:00 AM	5.7	11/5/15 11:00 AM	242.4	11/9/15 11:00 PM	126.9	11/9/15 11:00 PM	5,301.6	11/9/15 5:00 AM	668.4	1.2
12/29/15 5:00 PM	1.6	12/18/15 10:00 AM	5.3	12/17/15 10:00 AM	219.8	12/18/15 7:00 AM	127.0	12/18/15 7:00 AM	4,694.9	12/19/15 8:00 AM	731.5	1.1