



RECEIVED

JAN 17 2007

PUBLIC SERVICE  
COMMISSION

January 17, 2007

HAND DELIVERED

Ms. Elizabeth O'Donnell  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40602

Re: PSC Case No. 2006-00471

Dear Ms. O'Donnell:

Please find enclosed for filing with the Commission in the above-referenced case an original and eight (8) copies of the responses of East Kentucky Power Cooperative, Inc., to the Staff Data Requests dated December 20, 2006.

Very truly yours,



Charles A. Lile  
Senior Corporate Counsel

Enclosures

Cc: Parties of Record

RECEIVED

JAN 17 2007

PUBLIC SERVICE  
COMMISSION

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE 2006 INTEGRATED RESOURCE PLAN OF ) CASE NO.  
EAST KENTUCKY POWER COOPERATIVE, INC ) 2006-00471

COMMISSION STAFF'S INITIAL DATA REQUEST  
TO EAST KENTUCKY POWER COOPERATIVE, INC.

East Kentucky Power Cooperative, Inc. ("EKPC") is requested, pursuant to 807 KAR 5:001, to file with the Commission the original and 8 copies of the following information, with a copy to all parties of record. The information requested herein is due on January 17, 2007. Each copy of the data requested should be placed in a bound volume with each item tabbed. When a number of sheets are required for an item, each sheet should be appropriately indexed, for example, Item 1(a), Sheet 2 of 6. Include with each response the name of the person who will be responsible for responding to questions relating to the information provided. Careful attention should be given to copied material to ensure that it is legible. Where information requested herein has been provided, in the format requested herein, reference may be made to the specific location of said information in responding to this information request.

1. Published reports indicate that Warren Rural Electric Cooperative Corporation ("Warren RECC") will remain on the Tennessee Valley Authority's system rather than become a part of the EKPC system. Explain how this change will affect EKPC's:

- a. load forecast;

b. generation construction plans and schedules, including the Spurlock and Smith generation sites; and

c. transmission construction plans and schedules.

2. Section 5(5) on page 5-15 of EKPC's October 21, 2006 Integrated Resource Plan ("2006 IRP") states that EKPC anticipates issuing a Request for Proposals ("RFP") for baseload capacity in early 2007.

a. Since Warren RECC will not become part of the EKPC system, explain whether EKPC still anticipates issuing this RFP.

b. Page 8-12 of the 2006 IRP indicates that EKPC considered but did not explicitly model supercritical coal units in this IRP and that it will perform a more detailed evaluation of such units in the future. Explain whether EKPC expects to give serious consideration to supercritical coal units in conjunction with its anticipated 2007 RFP.

3. Refer to page 6-3 of EKPC's 2006 IRP. Item 10 under the heading "Major Enhancements Since Last IRP" states that a resource optimization model was used to develop the current resource plan. Explain how using such a model differs from how EKPC has developed previous resource plans and why this is a major enhancement.

4. Refer to the tables on page 8-18 of the 2006 IRP. Explain how the number of years under "Savings Lifetime" is determined for a given Demand-Side Management ("DSM") program.

5. Refer to the paragraph at the bottom of page DSM-3 of the Technical Appendix to the 2006 IRP ("Technical Appendix"). Provide a schedule that shows, by program, the amounts that make up the "over \$150 million in net benefits" and the

“investment of just under \$50 million” associated with the new DSM programs listed in Table DSM-2.

6. Refer to the discussion on page DSM-6 of the Technical Appendix regarding the qualitative screening process and qualitative screening results for the 93 DSM measures considered by EKPC.

a. Explain how the criteria were developed for screening the measures and whether the criteria differ from what EKPC has used to evaluate DSM measures in previous IRPs.

b. Explain how a score of 15, out of a possible combined score of 20, was chosen as the cut-off point for determining whether measures were passed on to the quantitative evaluation process.

7. Refer to Table DSM-5 on page DSM-10 of the Technical Appendix. Three of the existing programs, Electric Water Heater Retrofit, Air Source Heat Pump New Construction, and Air Source Heat Pump Retrofit, reflect increases in load requirements and total resource test benefit ratios of less than 1.0. Given these demand impacts and test results, identify and describe the factors that support the continuation of these programs.

8. Refer to Table DSM-9 on page DSM-15 of the Technical Appendix. This table reflects how EKPC factored environmental costs into its DSM evaluation. “More explicit factoring of environmental costs” is listed as Item 2 under “Major Enhancements Since Last IRP” on page 6-3 of the 2006 IRP. Describe in detail of how this treatment of environmental costs is more explicit than what EKPC has reflected in previous DSM evaluations.

9. Refer to the Technical Appendix, Exhibit DSM-4, Existing DSM Programs Assumptions Sheets.

a. What criteria, other than the "California" cost-benefit tests used in its quantitative evaluation process, does EKPC rely upon to determine the success of individual DSM programs?

b. What procedures does EKPC use to document the results of individual DSM programs?

c. What procedures has EKPC established to ensure that rebates are paid to program participants or member cooperatives only when program guidelines are met?

10. Refer to the Technical Appendix, Exhibit DSM-9, page 6 of 7, concerning the "Commercial New Construction Program."

a. Explain how EKPC plans to locate participants for this program before construction of a new facility has started.

b. Refer to the last sentence under "Target Market." Explain why, for a commercial program, the primary market is identified as members who are constructing new stick-built homes.

11. Refer to EKPC's 2006 Load Forecast Report. Describe in detail all changes to EKPC's forecasting methodology and procedures that have occurred since the 2003 IRP filing.

12. Refer to EKPC's 2006 Load Forecast Report, pages 25-27. Since Warren RECC is no longer joining EKPC, the final calculations in Tables 3-2, 3-3, and 3-4 may not be accurate. Provide revisions to these tables.

13. Refer to EKPC's 2006 Load Forecast Report, page 33. Provide a description of how the various counties were aggregated into each of the seven economic regions.

14. Refer to EKPC's 2006 Load Forecast Report, page 33. Provide a description of the manner in which the Regional Economic Model is applied to individual member cooperatives.

15. Refer to EKPC's 2006 Load Forecast Report, Figures 4-1 through 4-5, pages 34 – 37. Explain whether "All Regions" refers to the seven economic regions listed in Table 4-2.

16. Refer to EKPC's 2006 Load Forecast Report, page 36 lines 3-5. Describe the two effects that will cause the labor force to grow more slowly than in the past.

17. Refer to EKPC's 2006 Load Forecast Report, Table 4-2, page 38. Provide a map that shows the economic regions by county overlaid with the territories of each of the member systems.

18. Refer to EKPC's 2006 Load Forecast Report, Table 4-3 through Table 4-9. Explain why data for 2004 and 2005 had to be simulated and explain how the simulation was accomplished.

19. Refer to EKPC's 2006 Load Forecast Report, page 49, Section 5.1.2.

a. Provide a more detailed explanation of how "shares" are calculated and forecast.

b. Within each region, the boundaries of the counties and the utility service territories do not match up neatly. In the case where a member's territory may

overlap into more than one region, explain whether the model attempts to keep all of the appropriate customers and, if so, how the adjustments are made.

20. Refer to EKPC's 2006 Load Forecast Report, pages 76-77.

a. Transmission line losses in summer are usually higher than in winter. Provide an explanation, if possible, of why the winter line losses are greater than the summer line losses for the years 1992 - 1993, 1996, 1999, and 2001 – 2003 in Table 8-1.

b. Table 8-1 refers to peak day winter and summer demand. However, the winter and summer peak day figures in Table 8-1, after adjusting for transmission line losses, appear in Table 8-2 as coincident peak demands. Explain how a seasonal system peak day demand is equivalent to the coincident peak demand.

21. Refer to EKPC's 2006 Load Forecast Report, page 78, Section 8.3.2.

a. Explain whether EKPC included estimates of electricity price increases (its own increases from the recent and pending generation and transmission line construction or from rate increases that its member cooperatives might undertake) in forecasting electricity demand, in both Chapters 7 and 8. If so, explain what was assumed and how the price increases were taken into account in the forecasts.

b. Explain and show how the loss of Warren RECC affects the electricity demand forecasts in both Chapters 7 and 8.

c. In taking into account any effects that price increases have on electricity demand, explain whether price increases should be modeled for all rate classes, rather than for just the residential class. If modeled just for the residential

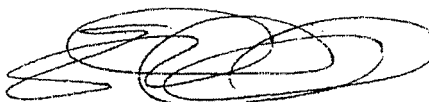
class, explain why the industrial and small commercial classes would not be sensitive to price changes in a long range forecast.

22. Refer to EKPC's 2006 Load Forecast Report, page 78, Section 8.3.5. Explain whether "90%/10% output" means 90 percent of the base case peak demand scenario and 10 percent greater than the base case peak demand scenario?

23. Refer to EKPC's 2006 Load Forecast Report, page 78. Explain how the five assumptions were used to calculate the high and low cases.

24. Refer to EKPC's 2006 Load Forecast Report, page 79, Table 8-3. Explain whether Table 8-3 refers to peak day MW and MWh requirements.

25. Refer to Appendix B-4, Residential Appliance Saturation. Explain whether computers, printers and other related equipment should be included in future surveys.



Beth O'Donnell  
Executive Director  
Public Service Commission  
P. O. Box 615  
Frankfort, KY 40602

DATED: December 20, 2006

cc: All parties



**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**THE 2006 INTEGRATED RESOURCE PLAN OF )      CASE NO.**  
**EAST KENTUCKY POWER COOPERATIVE, INC)      2006-00471**

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE 2006-00471**

**INITIAL DATA REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION'S REQUEST DATED 12/20/06**

In response to an Order of the Public Service Commission's data request, East Kentucky Power Cooperative, Inc. (EKPC) submits its responses to the questions contained therein.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 1**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 1.** Published reports indicate that Warren Rural Electric Cooperative Corporation ("Warren RECC") will remain on the Tennessee Valley Authority's system rather than become a part of the EKPC system. Explain how this change will affect EKPC's:

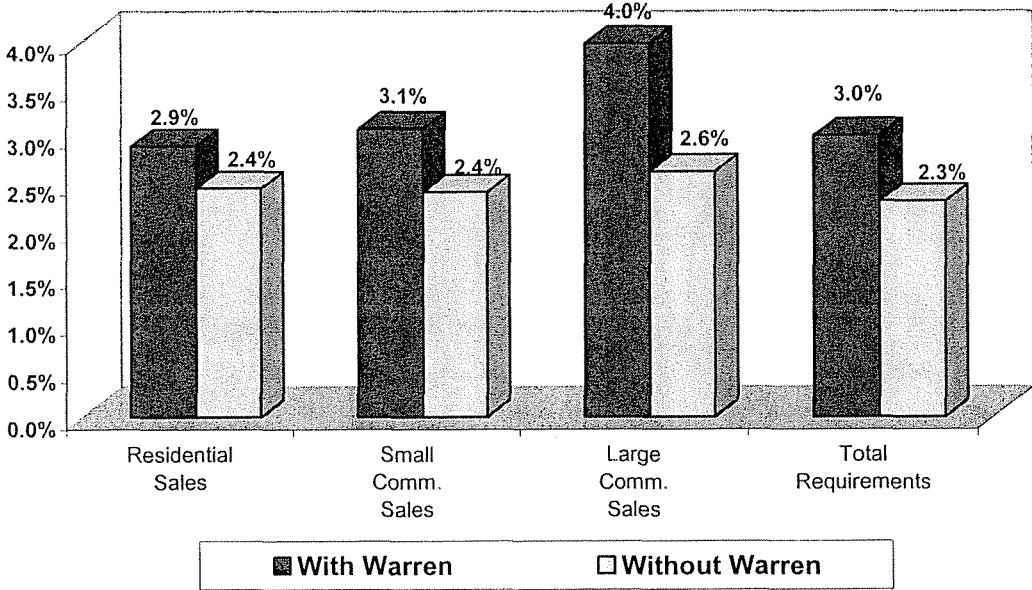
**Request 1a.** load forecast;

**Response 1a.** The following graphs and tables show how the load forecast changes given Warren RECC is not coming to the EKPC system. Data is shown beginning with 2008 since Warren was to become a member beginning April 1, 2008.

As shown on page 21 of the Load Forecast Report, the growth rates with Warren and without are:

	With Warren						Without Warren		
	Historical Growth Rates			2006 Forecast Growth Rates			2006 Forecast Growth Rates		
	2000-2005	1995-2005	1985-2005	2006-2011	2006-2016	2006-2026	2006-2011	2006-2016	2006-2026
Total Energy Requirements	3.6%	6.3%	7.2%	5.6%	3.9%	3.0%	2.8%	2.5%	2.3%
Firm Winter Peak Demand	4.6%	5.3%	4.5%	6.3%	4.2%	3.2%	3.5%	2.9%	2.6%
Firm Summer Peak Demand	2.3%	3.7%	5.3%	5.8%	3.9%	3.0%	2.7%	2.4%	2.3%

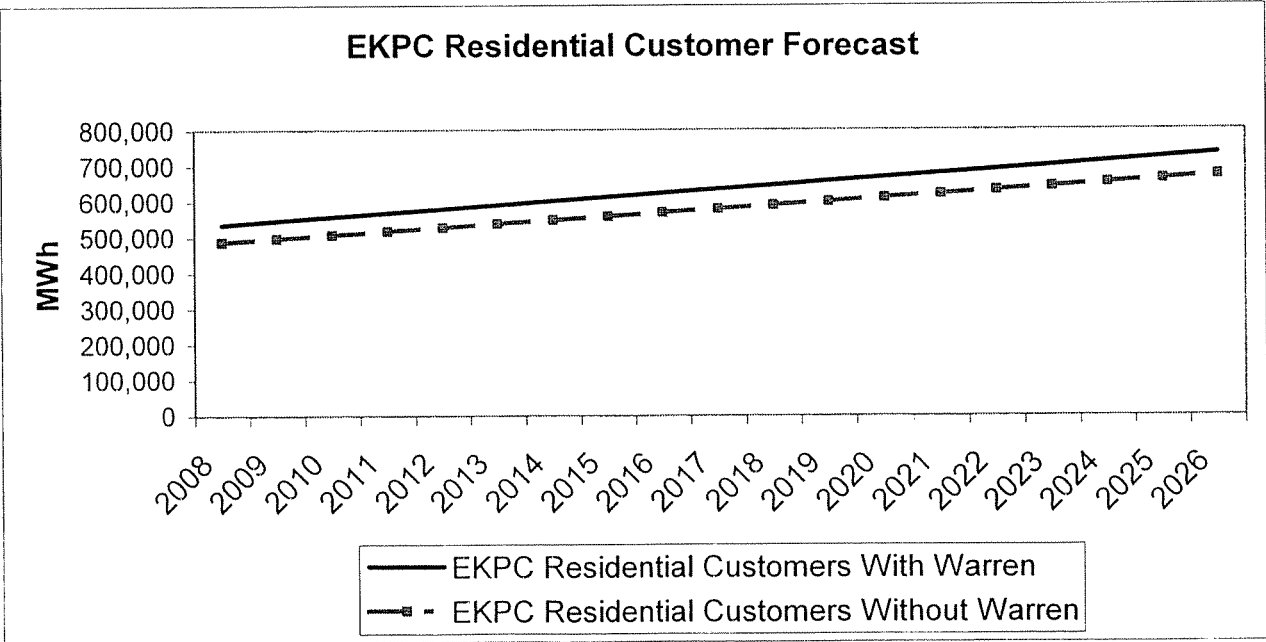
Average Annual Sales Growth  
2006-2026



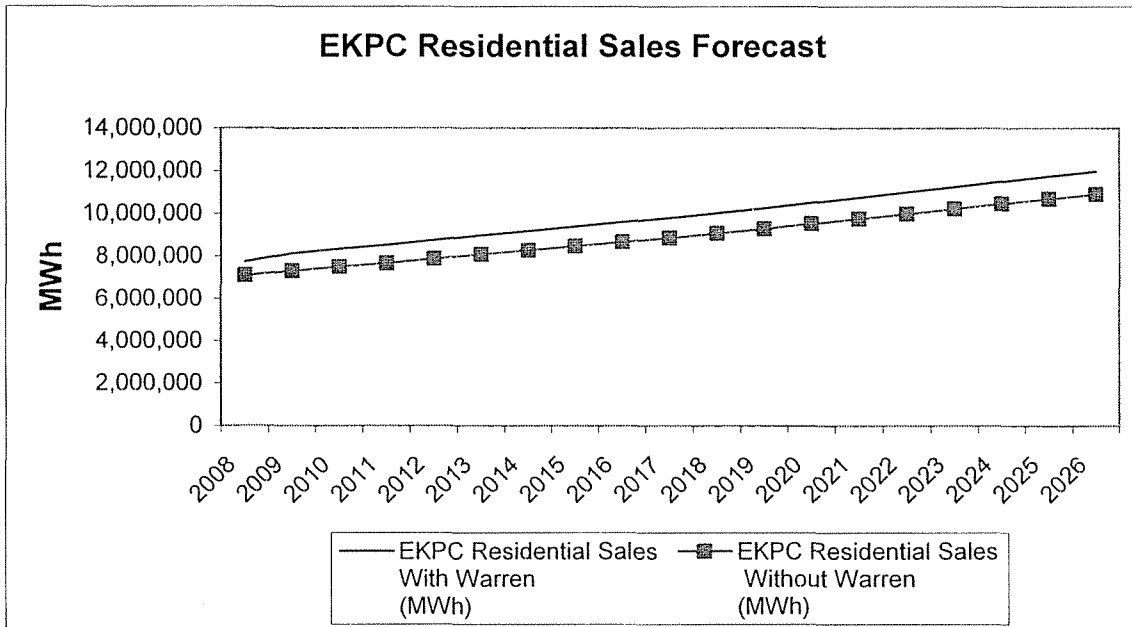
**Residential Customers and Sales**

(Please note: Warren was scheduled to become a member April 1, 2008. Therefore, 2008 data reports April through December.)

	EKPC Residential Customers With Warren	EKPC Residential Customers Without Warren	Delta		EKPC Residential Sales With Warren (MWh)	EKPC Residential Sales Without Warren (MWh)	Delta
2008	536,738	487,370	49,369		7,744,207	7,099,687	644,519
2009	547,663	497,554	50,109		8,142,851	7,305,883	836,968
2010	558,636	507,781	50,855		8,356,457	7,503,684	852,773
2011	569,555	517,987	51,567		8,543,230	7,678,396	864,834
2012	580,588	528,299	52,288		8,765,794	7,884,699	881,095
2013	591,587	538,602	52,985		8,986,519	8,092,806	893,712
2014	602,563	548,902	53,661		9,188,238	8,285,643	902,595
2015	613,560	559,234	54,326		9,391,828	8,477,353	914,475
2016	624,530	569,554	54,976		9,603,528	8,676,828	926,700
2017	635,513	579,872	55,641		9,810,509	8,870,914	939,595
2018	646,509	590,201	56,307		10,032,776	9,078,713	954,063
2019	657,479	600,529	56,949		10,260,990	9,292,474	968,516
2020	668,470	610,879	57,591		10,514,781	9,529,127	985,654
2021	679,451	621,226	58,225		10,764,637	9,762,418	1,002,219
2022	690,431	631,569	58,862		11,012,434	9,994,076	1,018,358
2023	701,403	641,908	59,496		11,260,528	10,226,620	1,033,908
2024	712,339	652,230	60,109		11,521,666	10,472,257	1,049,409
2025	723,242	662,531	60,711		11,756,216	10,694,528	1,061,689
2026	734,145	672,832	61,313		11,993,850	10,918,991	1,074,859



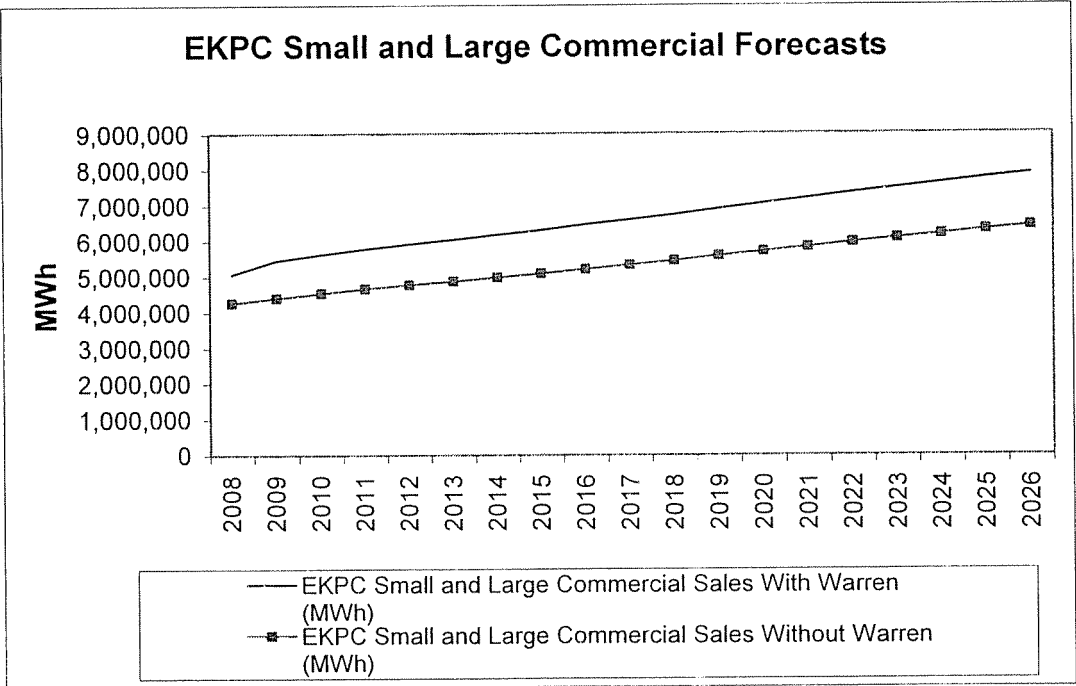
(Please note: Warren was scheduled to become a member April 1, 2008. Therefore, 2008 data reports April through December.)



**Large and Small Commercial Sales**

(Please note: Warren was scheduled to become a member April 1, 2008. Therefore, 2008 data reports April through December.)

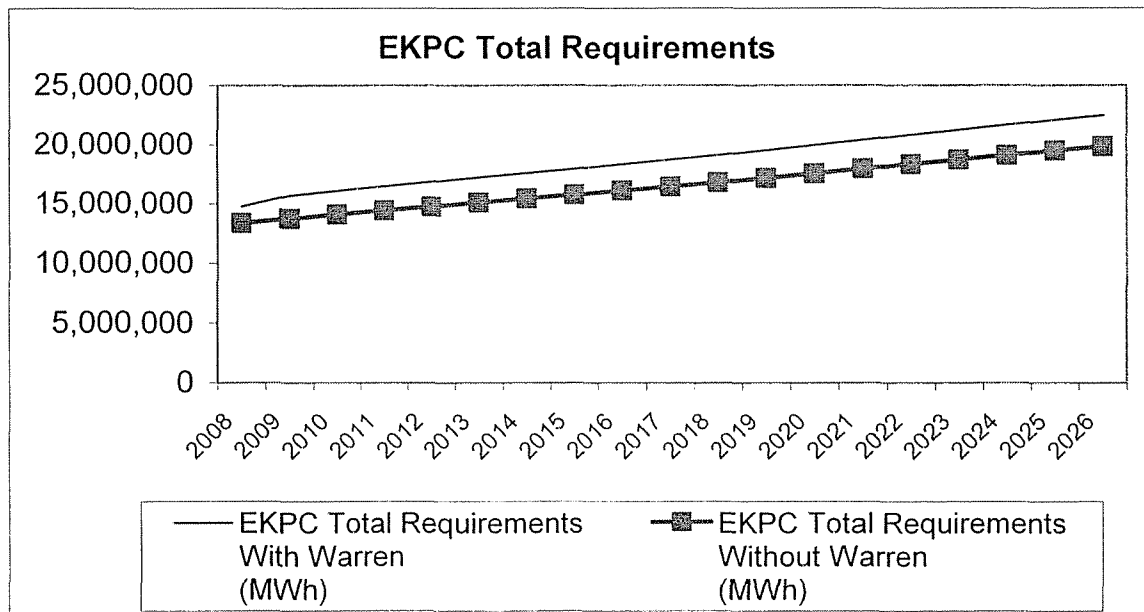
	EKPC Small and Large Commercial Sales With Warren (MWh)	EKPC Small and Large Commercial Sales Without Warren (MWh)
2008	5,070,585	4,265,695
2009	5,458,859	4,401,571
2010	5,631,827	4,543,344
2011	5,783,676	4,665,854
2012	5,917,350	4,771,186
2013	6,050,156	4,876,900
2014	6,181,794	4,982,571
2015	6,313,135	5,088,448
2016	6,461,540	5,212,035
2017	6,603,307	5,329,406
2018	6,738,352	5,440,454
2019	6,898,306	5,576,892
2020	7,049,605	5,705,087
2021	7,192,915	5,825,610
2022	7,343,655	5,954,119
2023	7,485,224	6,073,947
2024	7,617,726	6,185,220
2025	7,757,357	6,304,040
2026	7,879,715	6,405,748



### EKPC Total Requirements Forecast

(Please note: Warren was scheduled to become a member April 1, 2008. Therefore, 2008 data reports April through December.)

	EKPC Total Requirements With Warren (MWh)	EKPC Total Requirements Without Warren (MWh)	Delta
2008	14,793,556	13,399,136	1,394,420
2009	15,716,559	13,769,433	1,947,125
2010	16,133,913	14,138,674	1,995,239
2011	16,499,166	14,461,695	2,037,471
2012	16,879,983	14,799,211	2,080,772
2013	17,261,436	15,140,383	2,121,053
2014	17,621,408	15,465,143	2,156,264
2015	17,981,314	15,787,203	2,194,111
2016	18,370,418	16,138,823	2,231,594
2017	18,744,186	16,477,304	2,266,882
2018	19,129,686	16,823,792	2,305,893
2019	19,539,698	17,204,211	2,335,487
2020	19,977,370	17,601,161	2,376,209
2021	20,408,388	17,985,946	2,422,442
2022	20,837,354	18,377,759	2,459,595
2023	21,258,006	18,760,769	2,497,237
2024	21,683,180	19,148,972	2,534,208
2025	22,086,886	19,519,545	2,567,341
2026	22,475,651	19,874,324	2,601,326





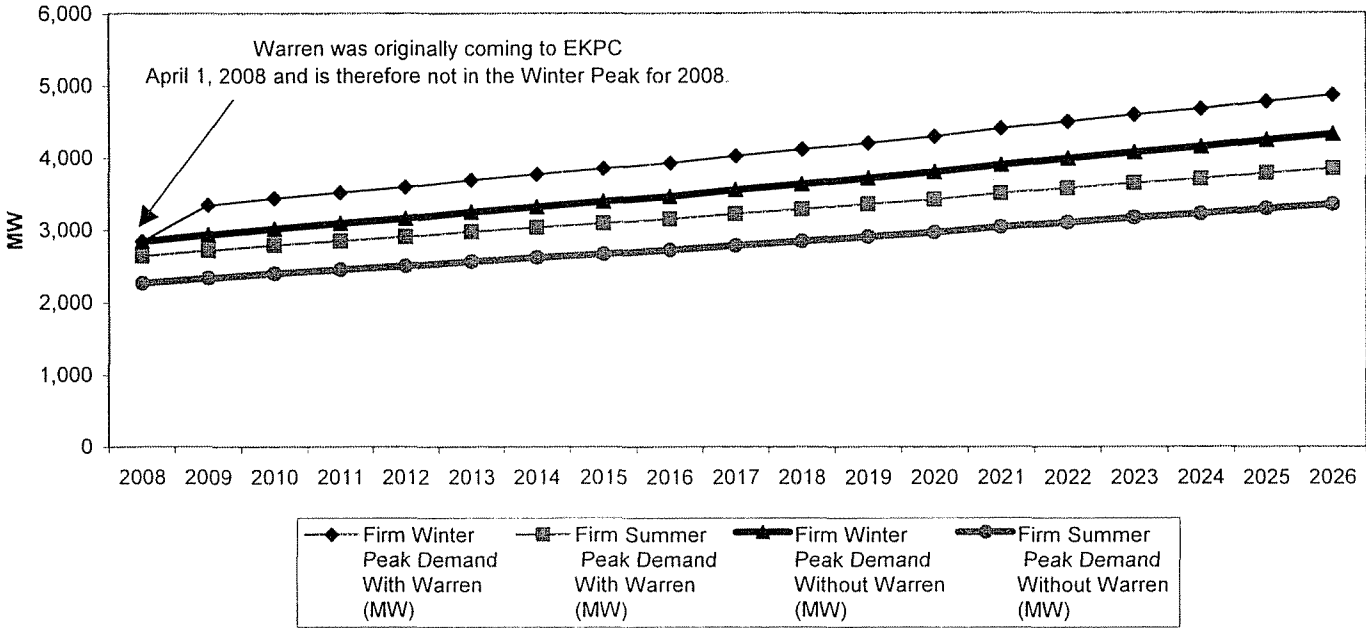
**EKPC Winter and Summer Peak Demand and Load Factor**

(Please note: Warren was scheduled to become a member April 1, 2008. Therefore, 2008 data reports April through December. Specifically, Warren winter peak is not included in the 2007-2008 winter peak.)

Season	Firm Winter Peak Demand With Warren (MW)	Year	Firm Summer Peak Demand With Warren (MW)	Load Factor (%)
2007 - 08	2,848	2008	2,643	59%
2008 - 09	3,346	2009	2,721	54%
2009 - 10	3,439	2010	2,791	54%
2010 - 11	3,520	2011	2,852	54%
2011 - 12	3,595	2012	2,907	53%
2012 - 13	3,694	2013	2,978	53%
2013 - 14	3,775	2014	3,036	53%
2014 - 15	3,856	2015	3,096	53%
2015 - 16	3,931	2016	3,153	53%
2016 - 17	4,031	2017	3,225	53%
2017 - 18	4,118	2018	3,290	53%
2018 - 19	4,209	2019	3,359	53%
2019-2020	4,299	2020	3,423	53%
2020-2021	4,408	2021	3,505	53%
2021-2022	4,503	2022	3,577	53%
2022-2023	4,597	2023	3,648	53%
2023-2024	4,678	2024	3,709	53%
2024-2025	4,781	2025	3,788	53%
2025-2026	4,869	2026	3,853	53%

Season	Firm Winter Peak Demand Without Warren (MW)	Year	Firm Summer Peak Demand Without Warren (MW)	Load Factor (%)
2007 - 08	2,848	2008	2,273	54%
2008 - 09	2,938	2009	2,342	54%
2009 - 10	3,021	2010	2,403	53%
2010 - 11	3,094	2011	2,457	53%
2011 - 12	3,162	2012	2,506	53%
2012 - 13	3,251	2013	2,569	53%
2013 - 14	3,326	2014	2,621	53%
2014 - 15	3,398	2015	2,674	53%
2015 - 16	3,468	2016	2,725	53%
2016 - 17	3,560	2017	2,790	53%
2017 - 18	3,638	2018	2,848	53%
2018 - 19	3,722	2019	2,910	53%
2019-2020	3,804	2020	2,968	53%
2020-2021	3,904	2021	3,042	53%
2021-2022	3,992	2022	3,107	53%
2022-2023	4,078	2023	3,171	53%
2023-2024	4,153	2024	3,227	53%
2024-2025	4,248	2025	3,298	52%
2025-2026	4,329	2026	3,357	52%

EKPC Peak Demand Forecasts



**Request 1b.** generation construction plans and schedules, including the Spurlock and Smith generation sites; and

**Response 1b.** The following table, “EKPC Load Requirements & Resources,” shows EKPC’s load requirements compared to existing capacity based on the 2006 LFR, excluding Warren’s load requirements. The table does not include any future capacity additions, only units currently operating. By 2011 there is a need for 774 MW of new capacity to meet native load requirements and and provide adequate reserves.

**EKPC Load Requirements & Resources**  
**(Without Warren)**

Year	Peak Forecast		Reserves Required*		Capacity Required		Existing Capacity		Capacity Deficit/ (Surplus)	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2007	2,773	2,213	333	266	3,106	2,479	2,754	2,543	352	(64)
2008	2,848	2,274	342	273	3,190	2,547	2,754	2,543	436	4
2009	2,938	2,342	353	281	3,291	2,623	2,726	2,515	565	108
2010	3,021	2,404	362	288	3,383	2,692	2,726	2,515	657	177
2011	3,094	2,457	371	295	3,465	2,752	2,691	2,475	774	277

\*Assumes a 12% reserve margin.

EKPC performed studies with the RTSim Resource Optimizer to evaluate the need for Smith CFB 1 and Smith CTs 8-12. Spurlock 4 is considered a committed resource and construction is well underway. It is currently on target for commercial operation in April 2009 and was not considered as a resource option in the study. The Resource Optimizer selected Smith CFB 1 and two of the Smith CTs 8-12 to continue on schedule. The addition of Spurlock 4, Smith CFB 1, and Smith CTs 8-9 adds 750 MW by 2011. These additions bring EKPC near the 12% target reserve margin.

The current projects involving Spurlock 4, Smith 1, and Smith CTs 8-12 are well documented in PSC Case Nos. 2004-00423 and 2005-00053. Smith CTs 8-9 are still in negotiations due to cost escalation. However, Smith CTs 10-12 have been shifted to the 2012 to 2014 time period due to the loss of the WRECC load. Contract negotiations for Smith CFB 1 have continued since its approval by the PSC on August 29, 2006.

**Request 1c.**                    transmission construction plans and schedules.

**Response 1c.**                To provide service to Warren RECC, EKPC required the construction of transmission lines to connect the EKPC system to the Warren RECC system. EKPC's transmission plan to accomplish this was to construct 161 kV transmission line from EKPC's existing Barren County substation to connect to Warren RECC's existing substations at East Bowling Green/General Motors, Memphis Junction and Aberdeen. Then, a 161 kV connection from Aberdeen to the Big Rivers Electric Corporation's system at the D.B. Wilson Plant was needed to provide system reliability. This transmission line is no longer needed by EKPC due to Warren RECC's decision, nor does this line provide sufficient benefits to the existing EKPC transmission system to outweigh the costs. Therefore, the transmission line as planned for service to Warren RECC will not be built.

Since EKPC planned generator unit additions at the Spurlock and Smith sites in part due to the Warren RECC load addition to the EKPC system, transmission expansion projects have also been identified to provide adequate transmission capacity to accommodate this generation. EKPC has identified one major project that is needed due to generation additions at the Smith site. This is a new 345 kV transmission line from Smith to a location named West Garrard. A new substation would be constructed at West Garrard to connect the new 345 kV line to an existing LG&E/KU 345 kV transmission line that connects the Brown Substation to the Pineville Substation. This project was identified as needed in 2009 due to the planned addition of five Combustion Turbines (CTs) and a new

278 MW baseload unit at Smith in the 2008-2010 timeframe. EKPC has re-evaluated this need based upon EKPC's revised generation plans as detailed in the response to Item 1(b). The Smith-West Garrard Project is still needed in 2009 based upon the schedule for the addition of two CTs at Smith, which creates transmission system overloads, and the subsequent plans to add the baseload unit in 2010. Therefore, the schedule for this 345 kV line project is unchanged.

EKPC had also identified some relatively minor upgrades to existing transmission facilities to accommodate the planned generating unit additions needed by EKPC when Warren RECC was scheduled to become a member. These upgrades are still necessary, but the timing of some of these will change due to the delay in installation of three of the planned CTs at the Smith site.

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2006-00471**

**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**

**REQUEST 2**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 2.** Section 5(5) on page 5-15 of EKPC's October 21, 2006 Integrated Resource Plan ("2006 IRP") states that EKPC anticipates issuing a Request for Proposals ("RFP") for baseload capacity in early 2007.

**Request 2a.** Since Warren RECC will not become part of the EKPC system, explain whether EKPC still anticipates issuing this RFP.

**Response 2a.** The RFP for baseload capacity that EKPC expected to issue in early 2007 will no longer be necessary based on the evaluation of EKPC's resource needs without WRECC. The timing of the next RFP for additional resources has not been determined.

**Request 2b.** Page 8-12 of the 2006 IRP indicates that EKPC considered but did not explicitly model supercritical coal units in this IRP and that it will perform a more detailed evaluation of such units in the future. Explain whether EKPC expects to give serious consideration to supercritical coal units in conjunction with its anticipated 2007 RFP.

**Response 2b.** The RFP process that EKPC has used in the past allowed bidders to propose the technology of their choice. EKPC expects to use the same process in the future to compare alternatives to self-build options. EKPC will perform a detailed evaluation of available technologies, including supercritical coal-fired units and IGCC, in developing its self-build options for the next RFP. As mentioned above, the timing of the next RFP has not been determined.

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2006-00471**

**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**

**REQUEST 3**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 3.** Refer to page 6-3 of EKPC's 2006 IRP. Item 10 under the heading "Major Enhancements Since Last IRP" states that a resource optimization model was used to develop the current resource plan. Explain how using such a model differs from how EKPC has developed previous resource plans and why this is a major enhancement.

**Response 3.** In the 2003 IRP EKPC developed six expansion plans that ranged from a plan with all gas fired combustion turbines to a plan heavy on baseload capacity. Other plans mixed combustion turbines and combined cycle units, or different amounts of baseload capacity and combustion turbines. Those plans were simulated and their costs were compared under several scenarios. While this approach produced a reasonable plan, it is limited in scope and may not produce a robust plan. As discussed in the 2006 IRP, EKPC used the RTSim Resource Optimizer to develop the IRP expansion plan. It was also used to develop the new plan without WRECC. The Resource Optimizer simulated 3500 expansion plans under varied conditions and ranked the plans based on the net present value of cost. The Resource Optimizer developed the plans by varying the startup dates for combinations of baseload and peaking units to meet a 12% reserve margin. The lowest cost plans were analyzed to produce a final plan. This approach is more comprehensive, considers a much larger number of potential plans, and takes into account the risk of loads, fuel prices, and market prices varying from a base forecast.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 4**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 4.** Refer to the tables on page 8-18 of the 2006 IRP. Explain how the number of years under “Savings Lifetime” is determined for a given Demand-Side Management (“DSM”) program.

**Response 4.** The Savings Lifetime for a given DSM program is generally an estimate of the median number of years that the measures installed under a given program are still in place and operable. In general, the Savings Lifetime for a program is determined by using the typical rated lifetime of the equipment being installed. In certain cases, an attrition factor is applied to account for removals and/or degradation of savings. For programs with more than one measure, the Savings Lifetime represents a weighted average across the measures. Wherever possible, EKPC has relied on published savings lifetime data from respected third parties, including the US Department of Energy, the California PUC, the Northeast Energy Efficiency Partnership, EPRI, and ACEEE.



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 5**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 5.** Refer to the paragraph at the bottom of page DSM-3 of the Technical Appendix to the 2006 IRP (“Technical Appendix”). Provide a schedule that shows, by program, the amounts that make up the “over \$150 million in net benefits” and the “investment of just under \$50 million” associated with the new DSM programs listed in Table DSM-2.

**Response 5.** Listed on the next page is the schedule requested by program. Please note that “Net Benefits” refers to the present value net benefit under the Total Resource Cost (TRC) test. “Investment” refers to the sum of Customer Investment, EKPC Administrative, and Cooperative Administrative costs under the TRC test.

All \$ are present value 2006 \$

Program Name	Net Benefits	Investment
Compact Fluorescent Lighting	\$ 13,133,177	\$ 641,505
Touchstone Energy Geothermal Heat Pump Home	\$ 3,696,702	\$ 1,005,636
Touchstone Energy Air Source Heat Pump Home	\$ 1,261,968	\$ 1,945,683
Touchstone Energy Manufactured Home	\$ 545,979	\$ 114,864
Direct Load Control for Air Conditioners and Water Heaters	\$ 67,104,751	\$ 16,133,038
ENERGY STAR Clothes Washer	\$ 845,733	\$ 972,325
ENERGY STAR Room Air Conditioner	\$ 297,725	\$ 405,774
ENERGY STAR Refrigerator	\$ 233,896	\$ 301,268
Programmable Thermostat with Electric Furnace Retrofit	\$ 1,624,259	\$ 430,656
Dual Fuel Air Source Heat Pump with Propane Retrofit	\$ 5,957,904	\$ 2,825,990
Commercial Lighting	\$ 8,953,130	\$ 5,782,656
C&I Demand Response	\$ 25,215,456	\$ 4,979,597
Commercial Efficient HVAC	\$ 1,079,163	\$ 788,578
Commercial Building Performance	\$ 994,075	\$ 2,074,803
Commercial New Construction	\$ 3,246,953	\$ 3,644,306
Commercial Efficient Refrigeration	\$ 1,661,247	\$ 502,240
Industrial Premium Motors	\$ 3,287,688	\$ 875,858
Industrial Variable Speed Drives	\$ 18,411,544	\$ 4,561,737
<b>Totals</b>	<b>\$ 157,551,350</b>	<b>\$ 47,986,514</b>

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 6**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 6.** Refer to the discussion on page DSM-6 of the Technical Appendix regarding the qualitative screening process and qualitative screening results for the 93 DSM measures considered by EKPC.

**Request 6a.** Explain how the criteria were developed for screening the measures and whether the criteria differ from what EKPC has used to evaluate DSM measures in previous IRPs.

**Response 6a.** Qualitative criteria are used in the qualitative screening process to identify the most promising new DSM measures and programs. EKPC used four criteria to screen DSM measures: (1) Customer Acceptance, (2) Measure Applicability, (3) Savings Potential, and (4) Cost-Effectiveness. These criteria were based on EKPC's planning objectives (least cost, reliable electricity service), customer focus, and good practice in the industry. In developing these criteria, EKPC examined the screening processes of other utilities, past feedback from Commission Staff and other interested parties, and its own prior screening process.

These four criteria used in this 2006 IRP do differ from the criteria used to evaluate DSM measures in previous IRPs. The 2003 criteria included (1) Size of market, (2) Diversity of market, (3) Cooperative interest and expertise, and (4) Likely Capital Costs. EKPC analyzed programs with good market potential and high member cooperative interest.

**Request 6b.** Explain how a score of 15, out of a possible combined score of 20, was chosen as the cut-off point for determining whether measures were passed on to the quantitative evaluation process.

**Response 6b.** The particular cut-off point chosen is always at the end of an arbitrary number. In this case, 15 was chosen because it is associated with a program that scored well on three of the four criteria (3 4's and a 3) or one that scored highest on two (2 5's, a 3 and a 2). The criteria chosen are all important, and each one is a threshold that a program needs to cross to be viable. Ideally, a measure would receive at least a 4 on all four criteria. The results validate the use of 15 as the cut-off point. Thirty-four measures passed the qualitative screening.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 7**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 7.** Refer to Table DSM-5 on page DSM-10 of the Technical Appendix. Three of the existing programs, Electric Water Heater Retrofit, Air Source Heat Pump New Construction, and Air Source Heat Pump Retrofit, reflect increases in load requirements and total resource test benefit ratios of less than 1.0. Given these demand impacts and test results, identify and describe the factors that support the continuation of these programs.

**Response 7.** EKPC and its members are aware of the eroding benefit-cost ratios for these programs, and are examining what the best course of action will be.

These programs are mature DSM programs for the EKPC cooperatives. Both the water heater and heat pump programs have been offered since before 1995.

The major variables used to calculate cost-effectiveness have shown increasing volatility in recent years. Natural gas prices have been quite volatile in recent years, and that trend is expected to continue in the future. The economics of these programs hinge on the relationship between natural gas and electricity prices. As a result, volatile natural gas price swings have a significant effect on the benefit cost ratios for these programs.

The ratios for the heat pump programs have been eroding over time as market efficiencies have been improving relative to the program target efficiencies. This effect has been accelerated by the higher new 2007 Federal appliance efficiency standards for heat pumps. Also, the heat pump load is highest during hours of the year when marginal energy and capacity costs are highest.

When the load reduction from the new construction program is subtracted from the load increase from the retrofit program, the net load impact for the combined water heater program is quite small.

Again, EKPC and its members are carefully examining the best course of action to take given these results.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 8**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 8.** Refer to Table DSM-9 on page DSM-15 of the Technical Appendix. This table reflects how EKPC factored environmental costs into its DSM evaluation. “More explicit factoring of environmental costs” is listed as Item 2 under “Major Enhancements Since Last IRP” on page 6-3 of the 2006 IRP. Describe in detail of how this treatment of environmental costs is more explicit than what EKPC has reflected in previous DSM evaluations.

**Response 8.** Previous IRP’s utilized environmental costs, however, these cost categories were not explicitly referred to or discussed.

For the 2006 IRP, the DSM evaluation tasks included explicitly identifying and discussing how the various environmental costs are factored into the DSM analysis work. Three major categories of environmental costs were identified: allowance purchases, capital investments for compliance, and externalities.

EKPC next decided how and where to best account for each of the three categories of environmental cost when doing the DSM cost-effectiveness work. Each environmental cost was explicitly mapped to the corresponding cost category in DSManager. Table DSM-9 shows this mapping. Part of the DSM work this time included verifying that

these environmental costs were explicitly factored into the data preparation work to produce these cost categories.

One of those categories is the externality adder, which is used in the Societal Cost test. In prior DSM evaluations, the externality adder was used, but it was not explicitly tied to any particular environmental cost category. In the 2006 IRP, the externality adder is based on an estimate of projected future compliance or allowance costs related to carbon mitigation



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 9**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 9.** Refer to the Technical Appendix, Exhibit DSM-4, Existing DSM Programs Assumptions Sheets.

**Request 9a.** What criteria, other than the “California” cost-benefit tests used in its quantitative evaluation process, does EKPC rely upon to determine the success of individual DSM programs?

**Response 9a.** Other than the California tests, we let the Member Cooperative determine the success level of the individual DSM programs.

**Request 9b.** What procedures does EKPC use to document the results of individual DSM programs?

**Response 9b.** EKPC periodically reviews the programs and if necessary updates the model assumptions to better fit the reality of the programs development. Member systems report program characteristics to EKPC as needed.

**Request 9c.** What procedures has EKPC established to ensure that rebates are paid to program participants or member cooperatives only when program guidelines are met?

**Response 9c.** We meet with the Member Systems personnel at each cooperative on a quarterly basis to review the programs and assist with program guidelines.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 10**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 10.** Refer to the Technical Appendix, Exhibit DSM-9, page 6 of 7, concerning the “Commercial New Construction Program.”

**Request 10a.** Explain how EKPC plans to locate participants for this program before construction of a new facility has started.

**Response 10a.** Programs included in the IRP are not necessarily offered to the retail customer. EKPC does not have direct access to the retail customer. We promote and provide the cooperatives we serve with program materials that they can use to offer the program, if they choose. We assist the member cooperatives with energy audits for C&I customers and while providing the audit we have the opportunity to share with the customer about other programs offered by their cooperative.

**Request 10b.** Refer to the last sentence under “Target Market.” Explain why, for a commercial program, the primary market is identified as members who are constructing new stick-built homes.

**Response 10b.** The primary market for commercial new construction is the commercial member, not the members who are constructing new stick-built homes, as stated in error, in the Technical Appendix.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 11**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 11.** Refer to EKPC's 2006 Load Forecast Report. Describe in detail all changes to EKPC's forecasting methodology and procedures that have occurred since the 2003 IRP filing.

**Response 11.** There have been no changes to EKPC's forecast methodology or procedures since the 2003 IRP filing.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 12**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 12.** Refer to EKPC's 2006 Load Forecast Report, pages 25-27. Since Warren RECC is no longer joining EKPC, the final calculations in Tables 3-2, 3-3, and 3-4 may not be accurate. Provide revisions to these tables.

**Response 12.** Please see the updated tables on the following pages.

**Table 3-2**  
**Member System Average Annual Energy Growth Rates**  
**2006 – 2011**

<b>Member Cooperative</b>	<b>Residential Sales (%)</b>	<b>Small Commercial Sales (%)</b>	<b>Large Commercial Sales (%)</b>	<b>Total Sales (%)</b>
Big Sandy	1.8%	2.3%	0.0%	1.9%
Blue Grass	2.8%	3.8%	3.7%	3.1%
Clark	2.4%	2.0%	8.7%	2.5%
Cumberland Valley	2.6%	2.1%	6.1%	3.4%
Farmers	2.4%	2.7%	0.8%	2.1%
Fleming-Mason	2.2%	3.5%	3.2%	3.0%
Grayson	2.0%	2.0%	0.7%	1.9%
Inter-County	2.4%	4.4%	12.2%	3.3%
Jackson Energy	1.7%	2.3%	6.4%	2.2%
Licking Valley	2.0%	1.5%	0.6%	1.8%
Nolin	2.7%	3.3%	4.0%	3.1%
Owen	3.3%	3.7%	2.3%	3.2%
Salt River	3.7%	2.3%	15.1%	5.1%
Shelby	3.2%	3.0%	1.8%	2.7%
South Kentucky	2.6%	3.5%	5.2%	3.1%
Taylor County	2.3%	2.7%	1.6%	2.2%
East Kentucky Power (Does NOT Include Warren)	2.6%	3.0%	4.2%	2.8%

**Table 3-3**  
**Member System Average Annual Energy Growth Rates**  
**2006 – 2016**

<b>Member Cooperative</b>	<b>Residential Sales (%)</b>	<b>Small Commercial Sales (%)</b>	<b>Large Commercial Sales (%)</b>	<b>Total Sales (%)</b>
Big Sandy	1.8%	2.1%	0.0%	1.8%
Blue Grass	2.7%	3.2%	2.6%	2.7%
Clark	2.4%	1.9%	8.2%	2.5%
Cumberland Valley	2.5%	1.9%	3.7%	2.7%
Farmers	2.3%	2.2%	0.8%	1.9%
Fleming-Mason	2.1%	3.2%	2.8%	2.6%
Grayson	1.8%	1.6%	0.6%	1.7%
Inter-County	2.3%	3.8%	8.8%	3.0%
Jackson Energy	1.8%	2.1%	5.7%	2.2%
Licking Valley	1.8%	1.4%	0.7%	1.7%
Nolin	2.6%	2.9%	3.7%	2.9%
Owen	3.3%	3.3%	2.0%	3.1%
Salt River	3.4%	2.2%	7.8%	3.8%
Shelby	2.9%	2.8%	1.6%	2.4%
South Kentucky	2.7%	3.1%	4.3%	3.0%
Taylor County	2.0%	2.4%	1.3%	2.0%
East Kentucky Power (Does NOT Include Warren)	2.5%	2.7%	3.2%	2.5%

**Table 3-4**  
**Average Annual Energy Growth Rates**  
**2006 – 2026**

<b>Member Cooperative</b>	<b>Residential Sales (%)</b>	<b>Small Commercial Sales (%)</b>	<b>Large Commercial Sales (%)</b>	<b>Total Sales (%)</b>
Big Sandy	1.8%	1.9%	4.7%	1.9%
Blue Grass	2.5%	2.8%	2.4%	2.5%
Clark	2.4%	1.8%	4.0%	2.3%
Cumberland Valley	2.5%	1.8%	2.6%	2.4%
Farmers	2.1%	1.8%	1.4%	1.9%
Fleming-Mason	1.9%	2.8%	2.4%	2.3%
Grayson	1.8%	1.7%	2.3%	1.8%
Inter-County	2.2%	3.2%	5.6%	2.6%
Jackson Energy	1.8%	1.9%	4.2%	2.1%
Licking Valley	1.8%	1.3%	2.8%	1.8%
Nolin	2.5%	2.7%	3.1%	2.7%
Owen	3.1%	2.9%	2.2%	2.9%
Salt River	3.1%	2.0%	4.1%	3.1%
Shelby	2.6%	2.5%	1.5%	2.2%
South Kentucky	2.7%	2.7%	3.3%	2.7%
Taylor County	1.8%	2.2%	1.4%	1.9%
East Kentucky Power (Does NOT Include Warren)	2.4%	2.4%	2.6%	2.3%



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 13**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 13.** Refer to EKPC's 2006 Load Forecast Report, page 33. Provide a description of how the various counties were aggregated into each of the seven economic regions.

**Response 13.** EKPC used the following two criteria when creating the economic regions for use in its electric load forecast:

- 1) Primary criterion: Each region was constructed to represent an economic area. EKPC used the BEA concepts of "MSA" and "micropolitan" and matched them as closely as possible.
- 2) Secondary criterion: Whenever practical, each member system's major service area geography was contained inside one region.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 14**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 14.** Refer to EKPC's 2006 Load Forecast Report, page 33. Provide a description of the manner in which the Regional Economic Model is applied to individual member cooperatives.

**Response 14.** EKPC's regional economic modeling includes analysis of historical data on population, income, employment levels, and wages. This data is collected at the county level and combined into seven economic regions. As can be seen looking at the map for response to Question 17, some natural regions exist within the EKPC territory. For example, the Central Economic Region defined by EKPC fits closely within the Lexington Standard Metropolitan Statistical Area ("SMSA"). The BEA defines SMSA's as areas of interrelated economic activity that go beyond a single county's boundaries. Data is analyzed on a regional basis rather than a county basis to better reflect the entire service territory's economic state.

Models for these regions provide EKPC with a way of linking the electricity needs of a service area to the rest of the service area's economy in a consistent and reasonable manner. EKPC's regional models produce regional forecasts using ordinary least squares regression. Specific regional results of these regressions are used in the individual member system models, which are assigned to that region. Population forecasts are used

to project residential class customers; regional household income is used to project residential sales; and regional economic activity is used to project small commercial sales.

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2006-00471**

**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**

**REQUEST 15**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 15.** Refer to EKPC's 2006 Load Forecast Report, Figures 4-1 through 4-5, pages 34 – 37. Explain whether "All Regions" refers to the seven economic regions listed in Table 4-2.

**Response 15.** The concept of 'All Regions' refers to the seven economic regions listed.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 16**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 16.** Refer to EKPC's 2006 Load Forecast Report, page 36 lines 3-5.  
Describe the two effects that will cause the labor force to grow more slowly than in the past.

**Response 16.** There are two effects that will act to cause regional labor force to grow more slowly than in the past – namely, population growth and household formation. Population growth is projected to grow at a slower rate than historical rates. Household formation is projected to slow in the long-term. Taken together, the implication is that the growth in labor force will tend to moderate.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 17**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 17.** Refer to EKPC's 2006 Load Forecast Report, Table 4-2, page 38.  
Provide a map that shows the economic regions by county overlaid with the territories of each of the member systems.

**Response 17.** Please see the map on the following page.



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 18**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 18.** Refer to EKPC's 2006 Load Forecast Report, Table 4-3 through Table 4-9. Explain why data for 2004 and 2005 had to be simulated and explain how the simulation was accomplished.

**Response 18.** County specific economic data for 2004 and 2005 was not available at the time the report was prepared. County data of this type generally has a lag time in reporting, relative to MSA, state, and national data. The most current actual data available was 2003. EKPC simulated county data for 2004 and 2005 by developing regression models that used national data.



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 19**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 19.** Refer to EKPC's 2006 Load Forecast Report, page 49, Section 5.1.2.

**Request 19a.** Provide a more detailed explanation of how "shares" are calculated and forecast.

**Response 19a.** Share is calculated with the following formula:

$$\text{Share} = \frac{\text{Homes Served by the Member System}}{\text{Total Homes in the Region}}$$

The number of homes served by the member system is determined using billing data, adjusted for non-households that may exist in a residential rate class.

Share is then forecasted using regression analysis on nearly 20 years of historical data.

**Request 19b.** Within each region, the boundaries of the counties and the utility service territories do not match up neatly. In the case where a member's territory may overlap into more than one region, explain whether the model attempts to keep all of the appropriate customers and, if so, how the adjustments are made.

**Response 19b.** Clark Energy is the only member system whose territory lies in two economic regions. EKPC and Clark Energy utilize the dominant region in preparing the electric load forecast, and then adjust the results based on experience and judgment.

EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC CASE NO. 2006-00471  
INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06  
REQUEST 20

RESPONSIBLE PERSON: James C. Lamb, Jr.

COMPANY: East Kentucky Power Cooperative, Inc.

**Request 20.** Refer to EKPC's 2006 Load Forecast Report, pages 76-77.

**Request 20a.** Transmission line losses in summer are usually higher than in winter. Provide an explanation, if possible, of why the winter line losses are greater than the summer line losses for the years 1992 - 1993, 1996, 1999, and 2001 – 2003 in Table 8-1.

**Response 20a.** EKPC's point in reporting the data on page 76 is to show line loss in general, and not to describe losses at a single point in time. The line loss calculation for the years in question has been affected by measurement error.

**Request 20b.** Table 8-1 refers to peak day winter and summer demand. However, the winter and summer peak day figures in Table 8-1, after adjusting for transmission line losses, appear in Table 8-2 as coincident peak demands. Explain how a seasonal system peak day demand is equivalent to the coincident peak demand.

**Response 20b.** Table 8-1 and Table 8-2 both refer to coincident peak demands. The terms 'system peak demand' and 'coincident peak demand' are often used interchangeably.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 21**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.  
**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 21.** Refer to EKPC's 2006 Load Forecast Report, page 78, Section 8.3.2.

**Request 21a.** Explain whether EKPC included estimates of electricity price increases (its own increases from the recent and pending generation and transmission line construction or from rate increases that its member cooperatives might undertake) in forecasting electricity demand, in both Chapters 7 and 8. If so, explain what was assumed and how the price increases were taken into account in the forecasts.

**Response 21a.** EKPC and its member systems work jointly to prepare retail price forecasts for use in the electric load projections. Retail price forecasts are prepared with the most current EKPC cost projections. EKPC makes long-term cost projections once a year.

Once retail price forecasts are prepared, the impacts on electricity use are made via price elasticity.

**Request 21b.** Explain and show how the loss of Warren RECC affects the electricity demand forecasts in both Chapters 7 and 8.

**Response 21b.** Please see response to Request 1A.

**Request 21c.** In taking into account any effects that price increases have on electricity demand, explain whether price increases should be modeled for all rate classes, rather than for just the residential class. If modeled just for the residential class, explain why the industrial and small commercial classes would not be sensitive to price changes in a long range forecast.

**Response 21c.** EKPC employs price forecasts and price elasticity for all class sales except for large commercial and industrial. However, most member systems have less than 10 industrial or large commercial customers. Therefore, in order to forecast these loads, they are projected on an individual basis. Many times the member system has contact with the larger loads and has insights that are incorporated into the model.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 22**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 22.** Refer to EKPC's 2006 Load Forecast Report, page 78, Section 8.3.5. Explain whether "90%/10% output" means 90 percent of the base case peak demand scenario and 10 percent greater than the base case peak demand scenario?

**Response 22.** Section 8.3.5 refers to the energy scenario. The '90%/10%' output refers to @RISK results of analysis on the small and large commercial class energy. The 90% case indicates that there is a 90% chance that actual energy will be less than the reported value, while the 10% case indicates that there is a 10% chance that actual energy will be less than the reported value.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2006-00471**  
**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**  
**REQUEST 23**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 23.** Refer to EKPC's 2006 Load Forecast Report, page 78. Explain how the five assumptions were used to calculate the high and low cases.

**Response 23.** As noted on page 78, EKPC uses statistical measures for its scenarios. After completing a system model for base case forecast, scenarios are created by varying assumptions concerning weather, electric price, residential customers, residential appliance saturations, and small and large commercial energy growth. As outlined in the report on page 78, these variables are modeled based on the specifics mentioned. After the projections are developed for each variable, the results are used as inputs into the system model, replacing the base case variable projections.

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2006-00471**

**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**

**REQUEST 24**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 24.** Refer to EKPC's 2006 Load Forecast Report, page 79, Table 8-3.  
Explain whether Table 8-3 refers to peak day MW and MWh requirements.

**Response 24.** Table 8-3 reports (a) peak demand for the winter and summer seasons, and (b) annual energy for each forecast year.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2006-00471**

**INFORMATION REQUEST RESPONSE**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/06**

**REQUEST 25**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 25.** Refer to Appendix B-4, Residential Appliance Saturation. Explain whether computers, printers and other related equipment should be included in future surveys.

**Response 25.** The Residential Appliance Saturation is conducted every two years. EKPC works closely with each member system to develop the survey questionnaire. Questions are regularly added and deleted, based on member system interest and relevance. Please note that for the past several years, survey respondents have been asked about computer ownership.