



EAST KENTUCKY POWER COOPERATIVE

RECEIVED

MAR 01 2005

PUBLIC SERVICE  
COMMISSION

March 1, 2005

HAND DELIVERED

Ms. Elizabeth O'Donnell  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40601

Re: PSC Administrative Case No. 387

Dear Ms. O'Donnell:

Please find enclosed for filing with the Commission in the above-referenced case ten copies of the Annual Resource Assessment filing of East Kentucky Power Cooperative, Inc., in response to Appendix G of the Commission's Order dated December 20, 2001.

Very truly yours,

Charles A. Lile  
Senior Corporate Counsel

Enclosures

Cc: Parties of Record

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

**In the Matter of:**

**A REVIEW OF THE ADEQUACY OF  
KENTUCKY'S GENERATION  
CAPACITY AND TRANSMISSION  
SYSTEM**

**) ADMINISTRATIVE  
) CASE NO. 387**

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC ADMINISTRATIVE CASE 387**

**PUBLIC SERVICE COMMISSION'S REQUEST DATED 12/20/01**

East Kentucky Power Cooperative, Inc. (EKPC) hereby submits responses to the information requests contained in Appendix G to the Order of the Public Service Commission ("PSC") in this case dated December 20, 2001, as subsequently revised by Order dated March 29, 2004. Each response with its associated supportive reference materials is individually tabbed.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 1**

**RESPONSIBLE PERSON: David G. Eames**

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

**Request 1.** This request has been eliminated as a result of the Order issued by the Commission in March 2004 pertaining to this case.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01  
REQUEST 2**

**RESPONSIBLE PERSON: David G. Eames**

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

**Request 2.** This request has been eliminated as a result of the Order issued by the Commission in March 2004 pertaining to this case.





**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 3**

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

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

**Request 3.** Actual and weather-normalized coincident peak demands for the just completed calendar year. Demands should be disaggregated into (a) native load demand (firm and non-firm) and (b) off-system demand (firm and non-firm).

**Response 3a.**

**Monthly Native Load Peak Demands for 2004**

	<b>Actual (Firm and Non-Firm) (MW)</b>	<b>Weather Adjusted (Firm and Non-Firm) (MW)</b>
January	2,610	2,562
February	2,216	2,359
March	2,022	2,091
April	1,795	1,803
May	1,770	1,772
June	1,876	2,028
July	2,052	2,179
August	2,019	2,151
September	1,852	1,888
October	1,449	1,488
November	1,810	1,931
December	2,611	2,589

**Response 3b.**

year 2004.

EKPC had no off-system demand obligations during the calendar



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 4**

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

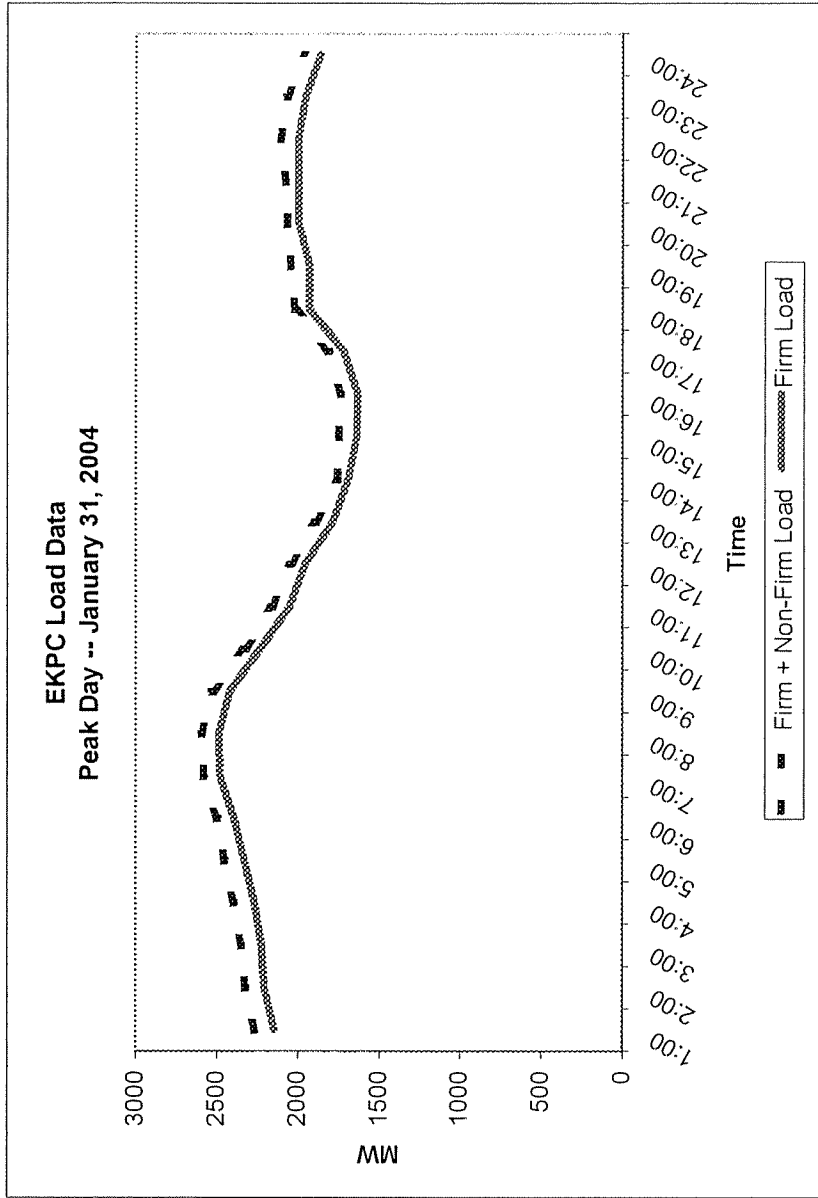
**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 4.** Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

**Response 4.** Actual monthly peak day load shapes are presented on the attached pages. EKPC makes an analysis to weather normalize the peak hour, but EKPC does not weather adjust the peak day load shapes.

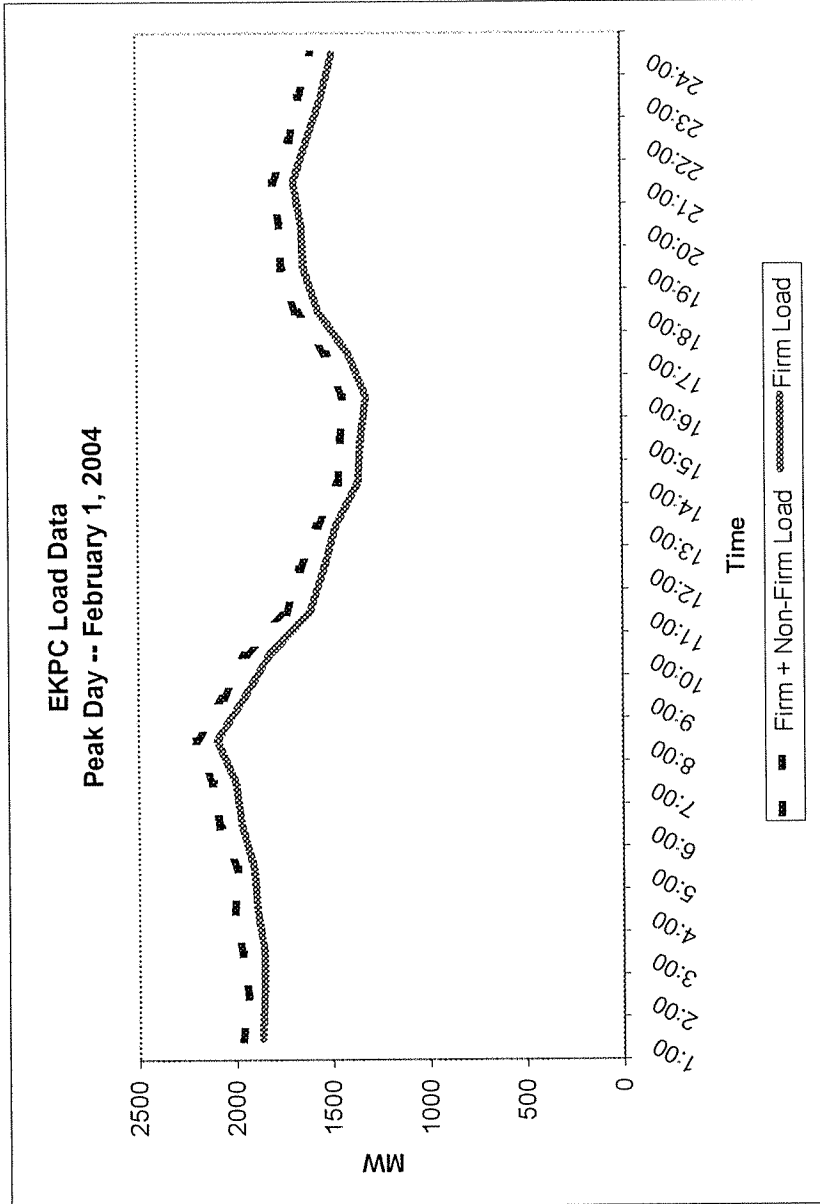
**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	2262	2145
2:00	2323	2206
3:00	2344	2222
4:00	2392	2268
5:00	2451	2331
6:00	2497	2393
7:00	2584	2480
8:00	2596	2487
9:00	2530	2422
10:00	2330	2230
11:00	2159	2049
12:00	2046	1954
13:00	1894	1784
14:00	1754	1690
15:00	1752	1640
16:00	1736	1632
17:00	1811	1718
18:00	2017	1931
19:00	2041	1926
20:00	2066	1994
21:00	2072	1995
22:00	2111	1999
23:00	2071	1957
24:00	1955	1862



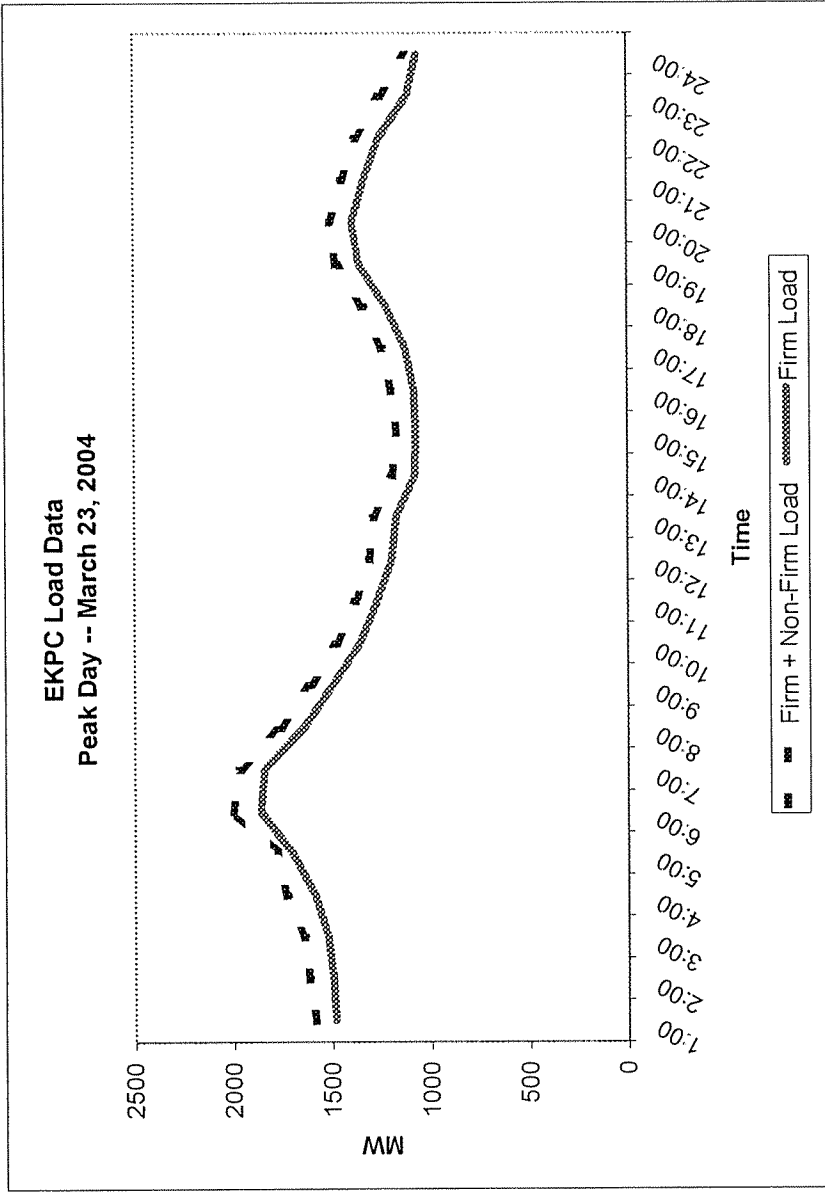
System Load Summary

Hour	Firm + Non-Firm Load	Firm Load
1:00	1970	1868
2:00	1937	1857
3:00	1966	1855
4:00	2007	1889
5:00	1990	1907
6:00	2081	1970
7:00	2113	1998
8:00	2207	2094
9:00	2061	1953
10:00	1950	1822
11:00	1735	1614
12:00	1665	1540
13:00	1573	1478
14:00	1463	1362
15:00	1453	1350
16:00	1437	1320
17:00	1528	1412
18:00	1680	1568
19:00	1754	1640
20:00	1760	1649
21:00	1798	1690
22:00	1709	1619
23:00	1661	1542
24:00	1595	1486



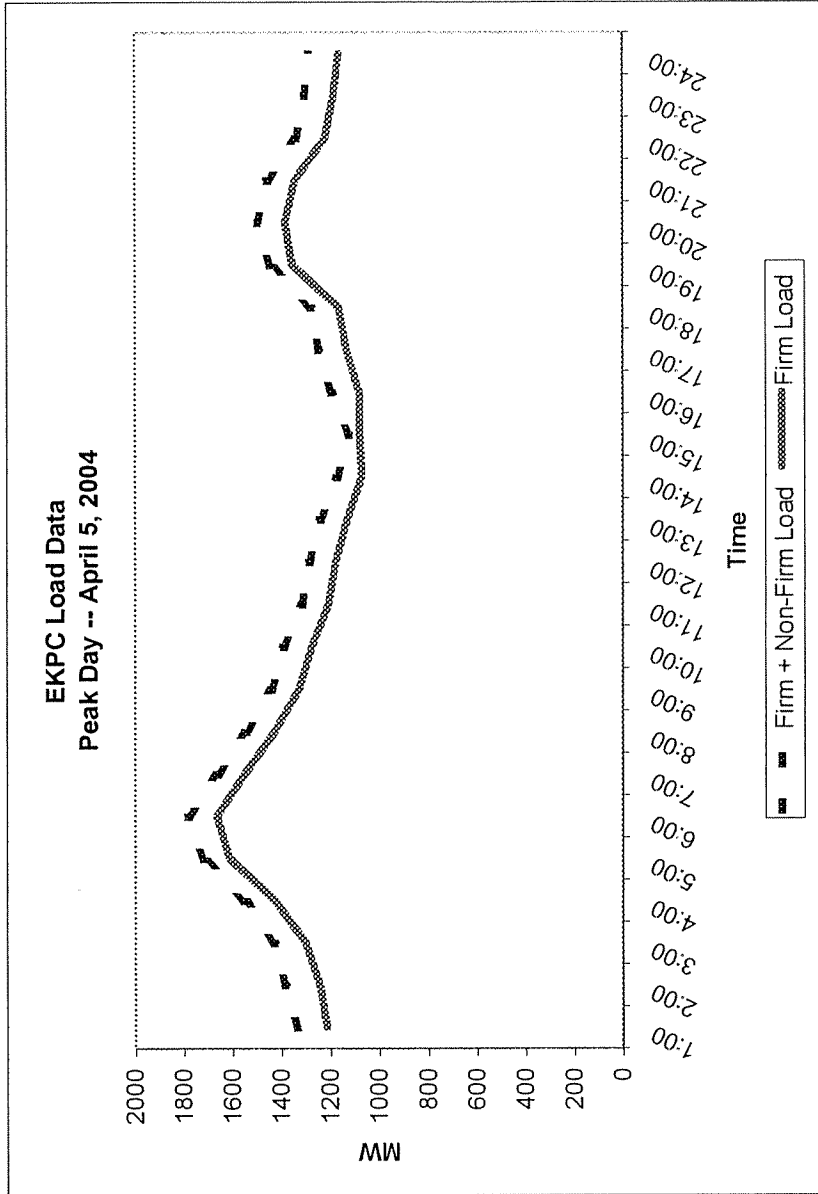
**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	1587	1484
2:00	1617	1498
3:00	1640	1525
4:00	1731	1588
5:00	1780	1702
6:00	2003	1866
7:00	1973	1844
8:00	1768	1643
9:00	1614	1497
10:00	1478	1360
11:00	1380	1272
12:00	1311	1197
13:00	1291	1174
14:00	1192	1079
15:00	1172	1073
16:00	1197	1083
17:00	1243	1125
18:00	1340	1223
19:00	1475	1359
20:00	1509	1394
21:00	1446	1332
22:00	1378	1257
23:00	1255	1116
24:00	1122	1066



**System Load Summary**

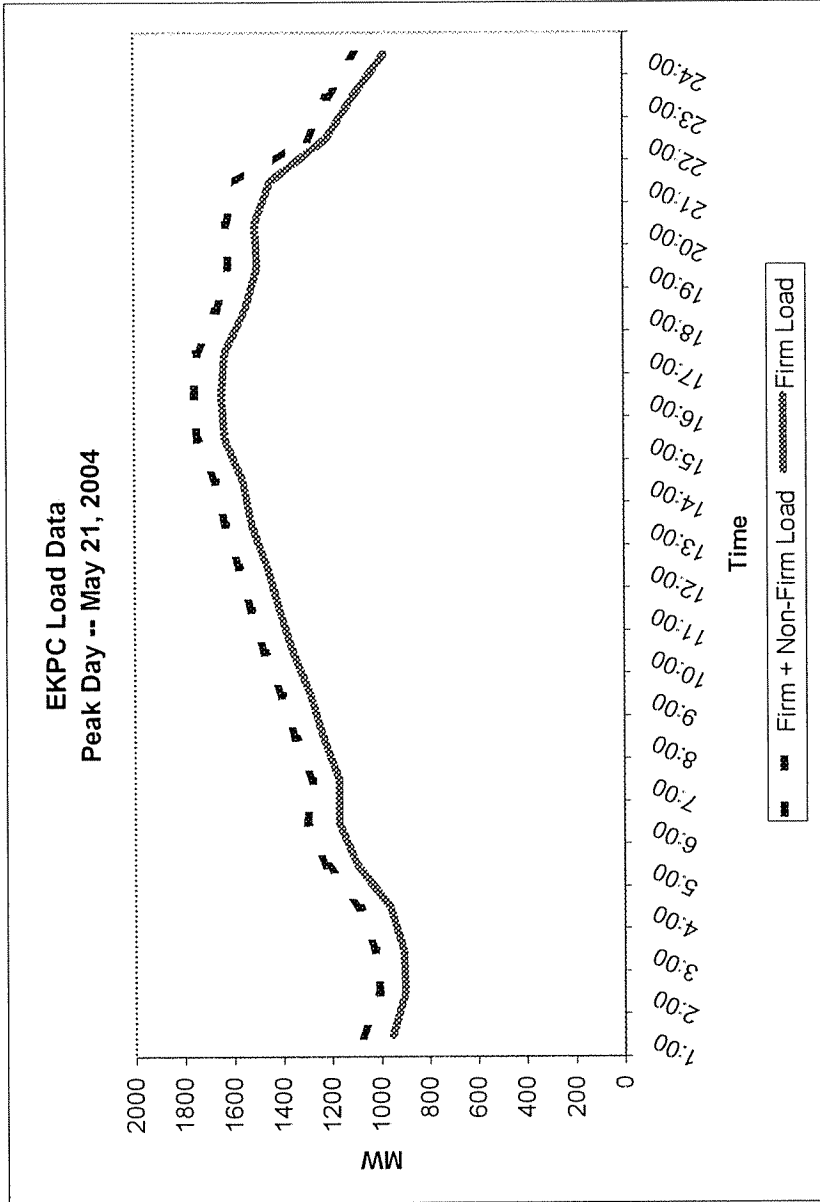
Hour	Firm + Non-Firm Load	Firm Load
1:00	1336	1217
2:00	1384	1245
3:00	1429	1303
4:00	1550	1426
5:00	1719	1614
6:00	1786	1666
7:00	1665	1553
8:00	1548	1431
9:00	1443	1330
10:00	1394	1277
11:00	1318	1209
12:00	1289	1179
13:00	1242	1132
14:00	1174	1073
15:00	1123	1080
16:00	1195	1082
17:00	1249	1135
18:00	1278	1167
19:00	1446	1357
20:00	1501	1384
21:00	1462	1345
22:00	1340	1223
23:00	1305	1187
24:00	1289	1167





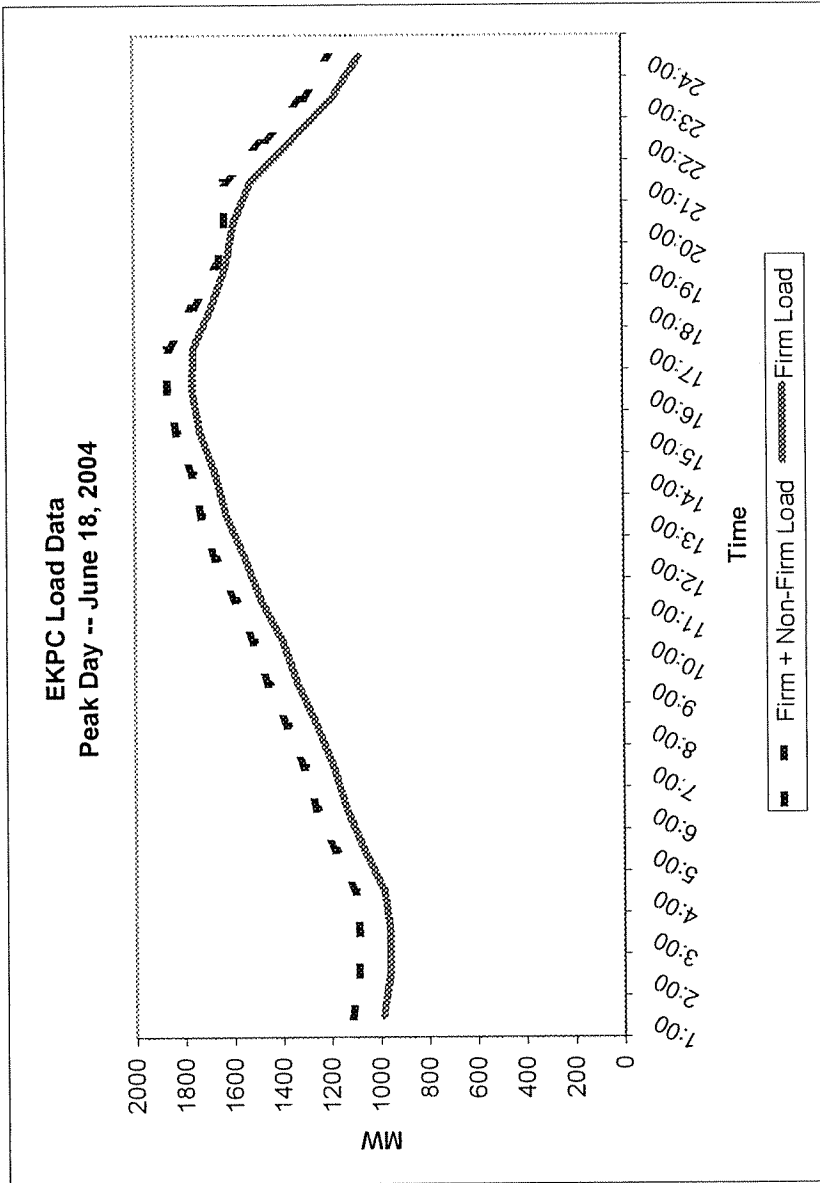
**System Load Summary**

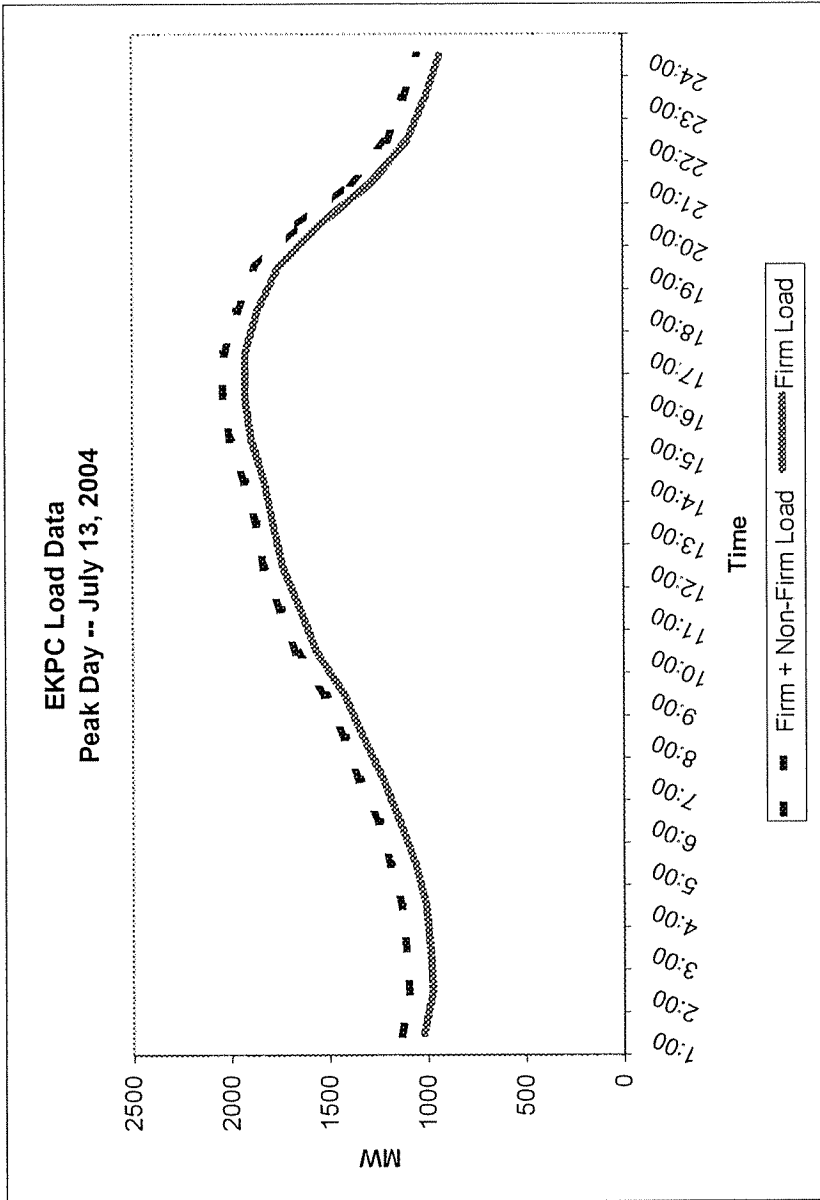
Hour	Firm + Non-Firm Load	Firm Load
1:00	1078	955
2:00	1005	901
3:00	1023	910
4:00	1085	962
5:00	1221	1095
6:00	1303	1173
7:00	1277	1168
8:00	1347	1235
9:00	1403	1288
10:00	1474	1359
11:00	1525	1412
12:00	1575	1462
13:00	1631	1526
14:00	1669	1559
15:00	1747	1632
16:00	1760	1645
17:00	1749	1632
18:00	1667	1549
19:00	1616	1499
20:00	1628	1511
21:00	1582	1446
22:00	1294	1215
23:00	1213	1107
24:00	1095	978



System Load Summary

Hour	Firm + Non-Firm Load	Firm Load
1:00	1117	989
2:00	1087	962
3:00	1085	960
4:00	1097	982
5:00	1183	1066
6:00	1261	1138
7:00	1308	1189
8:00	1378	1258
9:00	1454	1336
10:00	1515	1396
11:00	1591	1487
12:00	1672	1552
13:00	1729	1628
14:00	1764	1673
15:00	1830	1734
16:00	1867	1768
17:00	1867	1761
18:00	1765	1685
19:00	1658	1626
20:00	1631	1593
21:00	1632	1520
22:00	1466	1350
23:00	1308	1184
24:00	1195	1074



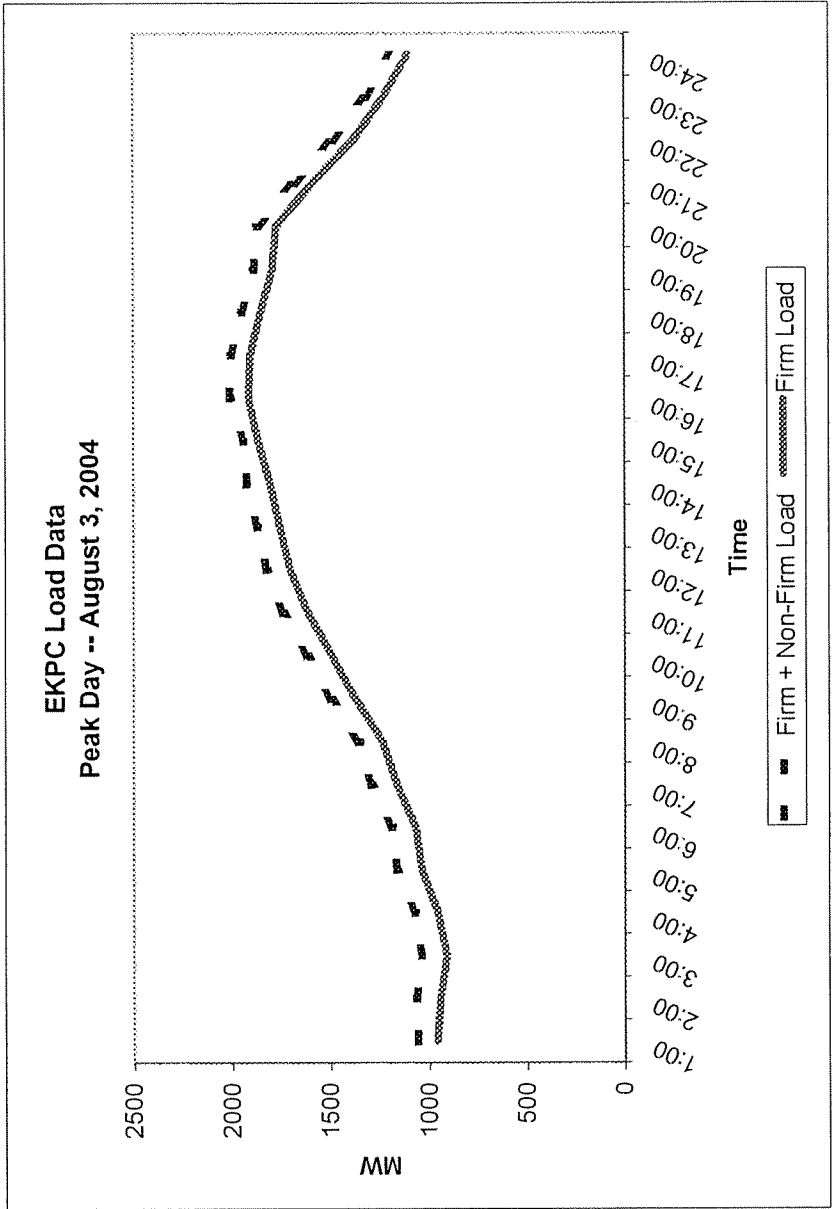


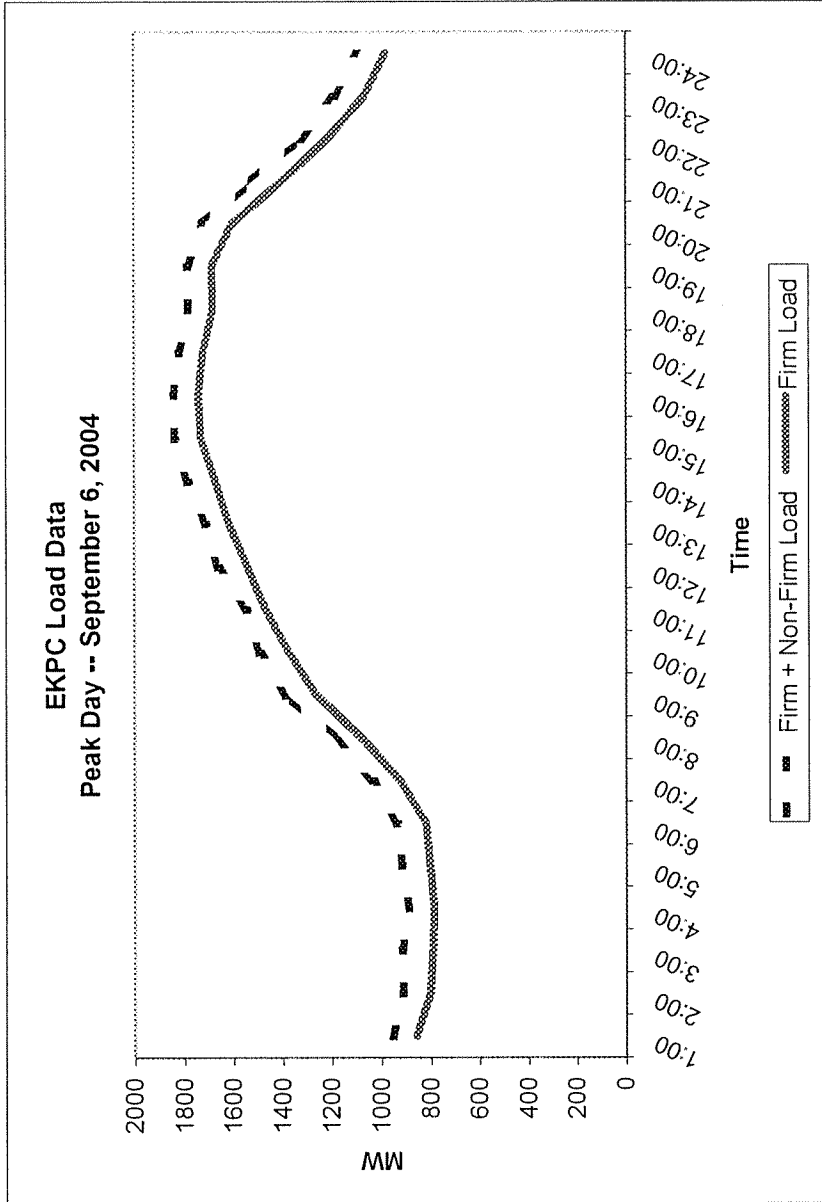
**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	1140	1023
2:00	1098	976
3:00	1113	988
4:00	1132	1008
5:00	1192	1063
6:00	1250	1147
7:00	1352	1229
8:00	1424	1330
9:00	1521	1425
10:00	1669	1565
11:00	1745	1648
12:00	1833	1736
13:00	1870	1785
14:00	1930	1832
15:00	2004	1896
16:00	2039	1930
17:00	2036	1927
18:00	1967	1864
19:00	1875	1758
20:00	1649	1547
21:00	1395	1284
22:00	1204	1101
23:00	1123	1004
24:00	1046	935

**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	1056	958
2:00	1066	942
3:00	1038	909
4:00	1069	956
5:00	1164	1038
6:00	1188	1072
7:00	1291	1166
8:00	1355	1238
9:00	1497	1375
10:00	1615	1495
11:00	1738	1617
12:00	1826	1706
13:00	1871	1758
14:00	1924	1807
15:00	1939	1866
16:00	2011	1916
17:00	2006	1905
18:00	1952	1853
19:00	1891	1796
20:00	1872	1774
21:00	1686	1590
22:00	1491	1381
23:00	1321	1232
24:00	1195	1105



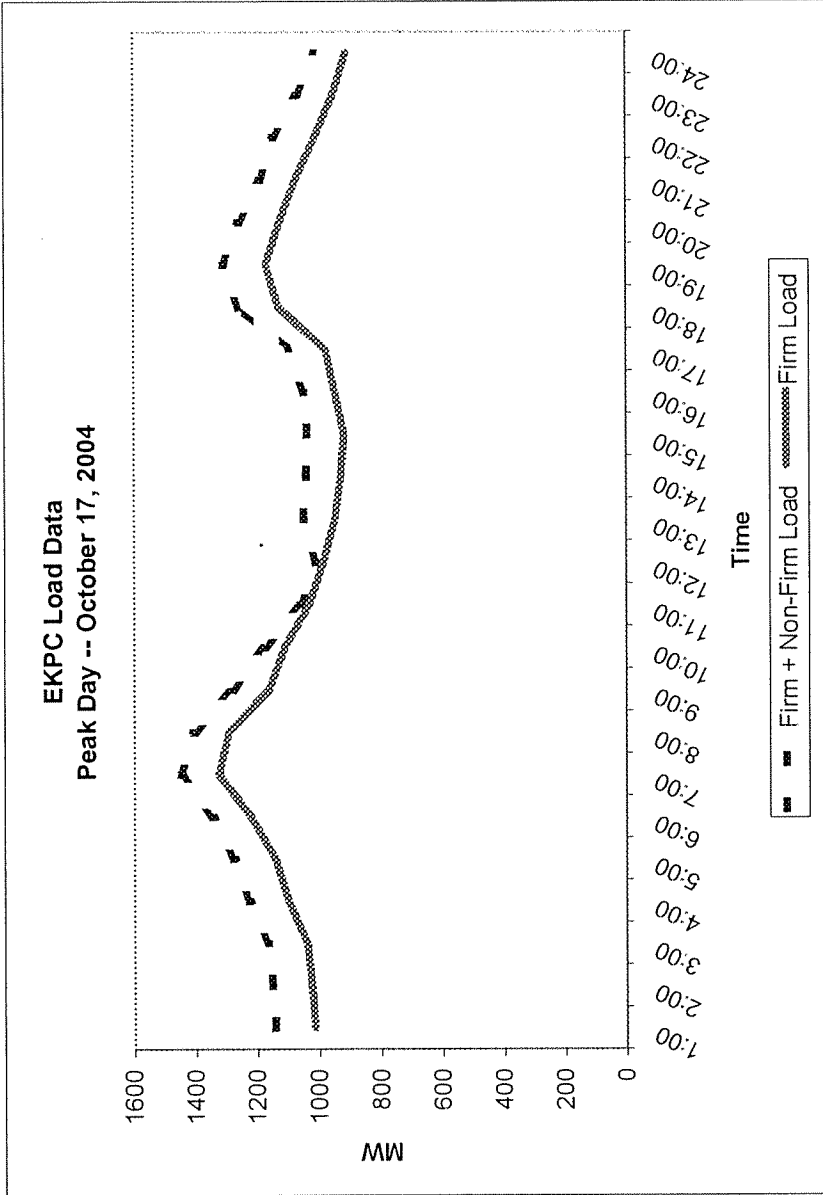


**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	957	859
2:00	914	803
3:00	919	795
4:00	890	788
5:00	920	803
6:00	938	821
7:00	1034	927
8:00	1194	1081
9:00	1386	1265
10:00	1494	1376
11:00	1545	1470
12:00	1664	1543
13:00	1714	1620
14:00	1785	1674
15:00	1837	1733
16:00	1843	1745
17:00	1822	1726
18:00	1782	1683
19:00	1789	1689
20:00	1725	1607
21:00	1520	1402
22:00	1330	1217
23:00	1188	1069
24:00	1094	981

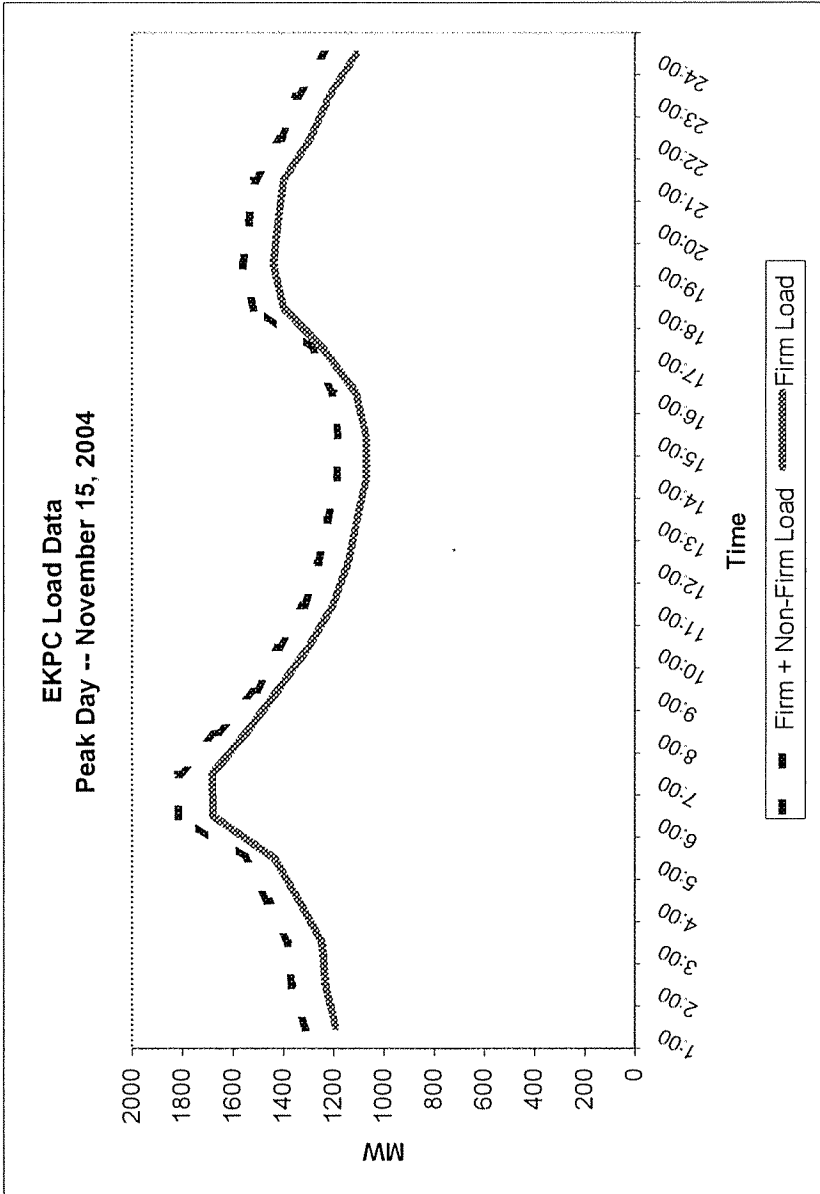
**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	1141	1014
2:00	1150	1026
3:00	1162	1039
4:00	1225	1099
5:00	1274	1142
6:00	1344	1221
7:00	1451	1325
8:00	1409	1292
9:00	1284	1161
10:00	1177	1111
11:00	1058	1032
12:00	1009	986
13:00	1049	948
14:00	1041	930
15:00	1037	918
16:00	1046	947
17:00	1099	978
18:00	1256	1130
19:00	1311	1169
20:00	1259	1125
21:00	1187	1072
22:00	1146	1011
23:00	1069	952
24:00	1011	910



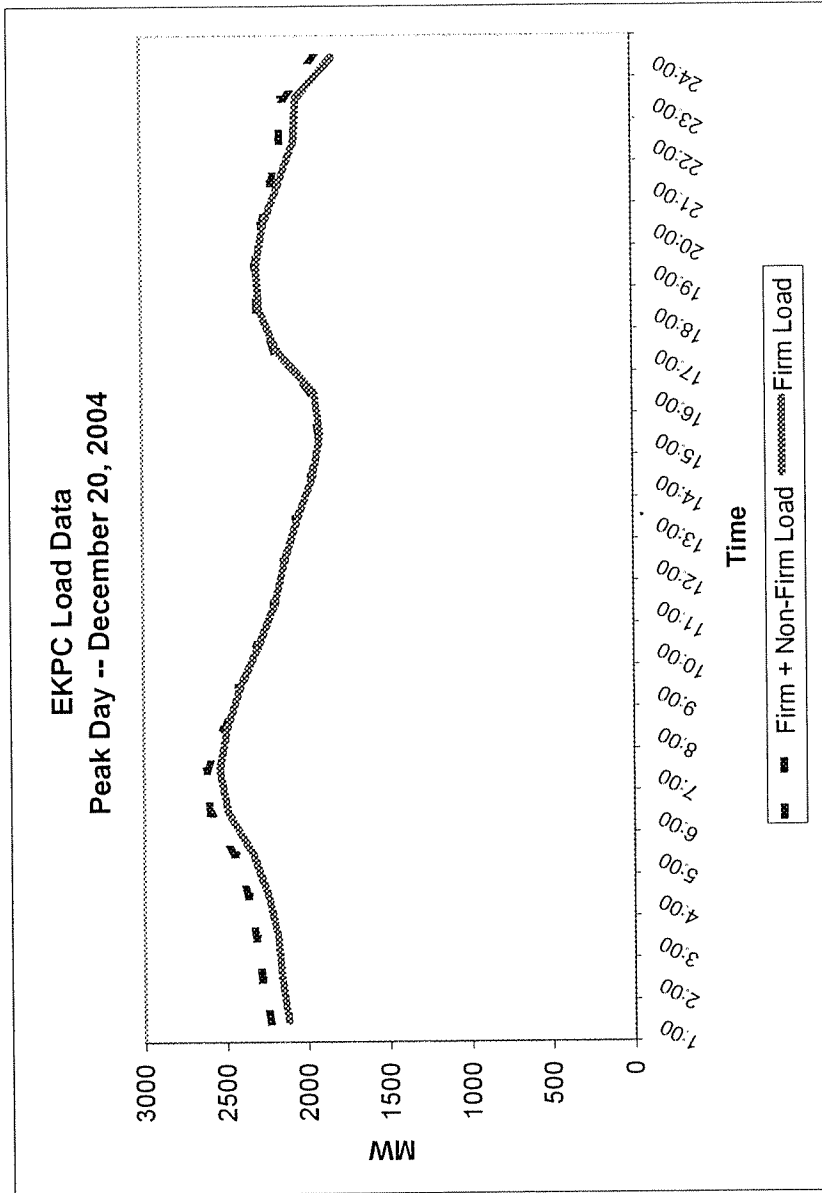
**System Load Summary**

Hour	Firm + Non-Firm Load	Firm Load
1:00	1310	1193
2:00	1366	1233
3:00	1379	1247
4:00	1462	1338
5:00	1554	1435
6:00	1815	1679
7:00	1818	1684
8:00	1666	1545
9:00	1508	1421
10:00	1421	1300
11:00	1319	1204
12:00	1263	1141
13:00	1226	1108
14:00	1189	1069
15:00	1182	1073
16:00	1204	1114
17:00	1288	1240
18:00	1518	1399
19:00	1562	1441
20:00	1537	1422
21:00	1516	1400
22:00	1409	1293
23:00	1349	1219
24:00	1235	1110



System Load Summary

Hour	Firm + Non-Firm Load	Firm Load
1:00	2233	2123
2:00	2282	2160
3:00	2315	2187
4:00	2361	2246
5:00	2444	2335
6:00	2596	2486
7:00	2619	2536
8:00	2509	2491
9:00	2417	2406
10:00	2298	2290
11:00	2199	2192
12:00	2139	2132
13:00	2060	2054
14:00	1966	1960
15:00	1920	1911
16:00	1958	1948
17:00	2182	2172
18:00	2291	2280
19:00	2304	2294
20:00	2262	2251
21:00	2204	2153
22:00	2152	2059
23:00	2133	2048
24:00	1925	1826







**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 5**

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

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

**Request 5.** This request has been eliminated as a result of the Order issued by the Commission in March 2004 pertaining to this case.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 6**

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

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

**Request 6.** Based on the most recent demand forecast, the base case demand and energy forecasts and high case demand and energy forecasts for the current year and the following four years. The information should be disaggregated into (a) native load (firm and non-firm demand) and (b) off-system load (both firm and non-firm demand).

**Response 6a.** EKPC prepares a high case and low case forecast to bracket its base case load forecast. The ranges are shown on the attached sheet. These numbers are firm native load only. EKPC does not prepare range forecasts for non-firm native load. Please note that effective April 1, 2008, EKPC will be serving Warren RECC.

Season	Net Winter			Year	Net Summer			Year	Total Requirements		
	Low Case	Base Case	High Case		Low Case	Base Case	High Case		Low Case	Base Case	High Case
2004 - 05	2,264	2,633	3,028	2005	1,790	2,133	2,551	2005	9,692,775	11,545,503	13,473,268
2005 - 06	2,346	2,732	3,131	2006	1,868	2,216	2,636	2006	10,088,389	12,013,722	13,930,741
2006 - 07	2,439	2,838	3,247	2007	1,949	2,300	2,726	2007	10,516,520	12,503,421	14,431,396
2007 - 08	2,861	2,924	3,738	2008	2,365	2,769	3,169	2008	12,613,559	14,548,392	16,772,533
2008 - 09	2,989	3,462	3,893	2009	2,504	2,856	3,316	2009	13,238,891	15,580,086	17,472,822

**Response 6b.** EKPC is projecting no off-system demands.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
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**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01  
REQUEST 7**

**RESPONSIBLE PERSON: David G. Eames**

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

**Request 7.** The target reserve margin currently used for planning purposes, stated as a percentage of demand. If changed from what was in use in 2001, include a detailed explanation of the change.

**Response 7.** The target reserve margin currently used for planning purposes is 12%.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
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**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 8**

**RESPONSIBLE PERSON:** David G. Eames

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

**Request 8.** Projected reserve margins stated in megawatts and as a percentage of demand for the current year and the following 4 years. Identify projected deficits and current plans for addressing these. For each year identify the level of firm capacity purchases projected to meet native load demand.

**Response 8.** The tables below and associated notes show the projected reserve margins, capacity needs, and plans to address the needs.

Year	Reserve Margin <sup>1</sup> (%)		Reserve Margin <sup>1</sup> (MW)		Committed Firm Purchases (MW)		Additional Purchases Needed to Meet Reserve Margin (MW)	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2005	1.3%	15.4%	35	322	250	0	276	0
2006	-1.6%	11.1%	-43	242	0	0	366	20
2007	-5.3%	10.7%	-149	241	0	0	485	30
2008	1.7%	13.7%	48	374	0	0	298	0
2009	-0.5%	20.1%	-18	565	0	0	429	0



Year	Total Firm Purchases (Committed + Needed) Used to Meet Reserve Margin (MW)	
	WIN	SUM
2005	526	0
2006	366	20
2007	485	30
2008	298	0
2009	429	0

Notes:

1. Reserve margins include existing and committed resources, and planned resources listed in Response 12. Existing and committed landfill gas generation projects are included.

EKPC issued an RFP on April 2, 2004, for 550 MW of baseload capacity and 600 MW of peaking capacity to meet capacity requirements through 2009. The evaluation of the proposals was completed in 2004 and recommendations made to EKPC’s Board of Directors. The Board approved capacity additions at the September, November, and December 2004 Board Meetings. EKPC filed an Application for a Certificate of Convenience and Necessity and Site Compatibility on October 28, 2004, for construction of Spurlock 4 (PSC Case 2004-00423). EKPC filed an Application for a Certificate of Convenience and Necessity and Site Compatibility on January 31, 2005, for construction of Smith CFB 1 and Smith CTs 8-12 (PSC Case 2005-00053). These capacity additions are shown in Response 12. Decisions on seasonal purchases are made prior to each peak season. Seasonal purchases are expected to be needed primarily for the winter peak season.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01  
REQUEST 9**

**RESPONSIBLE PERSON: Paul C. Atchison**

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

**Request 9.** This request has been eliminated as a result of the Order issued by the Commission in March 2004 pertaining to this case.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/2001**

**REQUEST 10**

**RESPONSIBLE PERSON: Randy Dials**

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

**Request 10.** This request has been eliminated as a result of the Order issued by the Commission in March 2004 pertaining to this case.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/2001**

**REQUEST 11**

**RESPONSIBLE PERSON: Randy Dials**

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

**Request 11.** A list that identifies scheduled outages or retirements of generating capacity during the current year and the following four years.

**Response 11.**

**Dale Unit 1**

2005	4 weeks or less
2006	4 weeks or less
2007	4 weeks or less
2008	More than 4 weeks
2009	4 weeks or less

**Dale Unit 2**

2005	4 weeks or less
2006	4 weeks or less
2007	4 weeks or less
2008	More than 4 weeks
2009	4 weeks or less

**Dale Unit 3**

2005	4 weeks or less
2006	More than 4 weeks
2007	4 weeks or less
2008	4 weeks or less
2009	4 weeks or less

**Dale Unit 4**

2005	More than 4 weeks
2006	4 weeks or less
2007	4 weeks or less
2008	4 weeks or less
2009	4 weeks or less

**J.K. Smith 1**

2005	4 weeks or less
2006	More than 4 weeks
2007	4 weeks or less
2008	4 weeks or less
2009	4 weeks or less

**J.K. Smith 2**

More than 4 weeks
More than 4 weeks
4 weeks or less
4 weeks or less
4 weeks or less

**J.K. Smith 3**

2005	More than 4 weeks
2006	4 weeks or less
2007	4 weeks or less
2008	More than 4 weeks
2009	4 weeks or less



**J.K. Smith 4, 5**

2005 4 weeks or less  
2006 4 weeks or less  
2007 4 weeks or less  
2008 4 weeks or less  
2009 4 weeks or less

**J.K. Smith 6, 7**

2005 4 weeks or less  
2006 4 weeks or less  
2007 4 weeks or less  
2008 4 weeks or less  
2009 4 weeks or less

**J.K. Smith 8, 9, 10**

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4 weeks or less  
4 weeks or less  
4 weeks or less

**J.K. Smith 11, 12**

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4 weeks or less  
4 weeks or less

**Cooper 1**

2005 4 weeks or less  
2006 4 weeks or less  
2007 4 weeks or less  
2008 4 weeks or less  
2009 4 weeks or less

**Cooper 2**

2005 4 weeks or less  
2006 4 weeks or less  
2007 4 weeks or less  
2008 4 weeks or less  
2009 4 weeks or less

**Spurlock 1**

2005	4 weeks or less
2006	4 weeks or less
2007	More than 4 weeks
2008	4 weeks or less
2009	4 weeks or less

**Spurlock 2**

2005	4 weeks or less
2006	4 weeks or less
2007	More than 4 weeks
2008	4 weeks or less
2009	4 weeks or less

**Gilbert**

2005	4 weeks or less
2006	4 weeks or less
2007	4 weeks or less
2008	4 weeks or less
2009	4 weeks or less

**Spurlock 4**

2005	---
2006	---
2007	---
2008	4 weeks or less
2009	4 weeks or less

**Smith CFB 1**

2005	---
2006	---
2007	---
2008	---
2009	4 weeks or less

There are no retirements of generating capacity anticipated through 2008.



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC ADMINISTRATIVE CASE NO. 387**  
**ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 12**

**RESPONSIBLE PERSON:** David G. Eames

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

**Request 12.** Identify all planned base load or peaking capacity additions to meet native load requirements over the next 10 years. Show the expected in-service date, size and site for all planned additions. Include additions planned by the utility, as well as those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

**Response 12.** The following table shows planned baseload and peaking additions to meet native load for the next 10 years.

<b>Project</b>	<b>Capacity Type</b>	<b>In Service Date</b>	<b>Capacity (MW)</b>	<b>Location</b>
Landfill Gas Projects <sup>1</sup>	Baseload	2005 - 2014	up to 40 additional	Various
Gilbert Unit	Baseload	Mar 2005	268	Spurlock Site Maysville, KY
Smith CT 8	Peaking	Apr 2007	97 (Winter Rating)	J. K. Smith Site Trapp, KY
Smith CT 9-10	Peaking	Nov 2007	97 Each (Winter Rating)	J. K. Smith Site Trapp, KY
Smith CT 11-12	Peaking	Apr 2008	97 Each (Winter Rating)	J. K. Smith Site Trapp, KY
Spurlock 4	Baseload	Apr 2008	278	Spurlock Site Maysville, KY
Smith CFB 1	Baseload	Apr 2009	278	J. K. Smith Site Trapp, KY
New CT 1	Peaking	Apr 2011	98 (Winter Rating)	Undetermined
New CT 2	Peaking	Apr 2012	98 (Winter Rating)	Undetermined
New CT 3-4	Peaking	Apr 2013	98 Each (Winter Rating)	Undetermined
New CT 5	Peaking	Apr 2014	98 (Winter Rating)	Undetermined

Notes:

1. Three landfill gas projects with a combined capacity of approximately 9 MW came online during September 2003. An additional landfill gas project was approved by the EKPC Board and is planned to come on-line in late 2005. There are other landfill gas projects under consideration or in the development stages. These projects have a capacity of a few megawatts each and are expected to be installed over a period of years for a total capacity of approximately 40 MW, in addition to the 9 MW already in operation.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
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**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 13**

**RESPONSIBLE PERSON: Paul C. Atchison**

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

**Request 13.** The following transmission energy data for the just completed calendar year and the forecast for the current year and the following four years:

**Request 13a.** Total energy received from all interconnections and generation sources connected to the transmission system.

**Request 13b.** Total energy delivered to all interconnections on the transmission system.

**Response 13a & 13b.**

Forecast of Net Receipts and Deliveries reflect resources in addition to generation required to serve EKPC native load. EKPC does not have forecasted receipts and deliveries resulting from transfers over its transmission system. (See Next Page).

	<b>Actual MWh <u>2004</u></b>	<b>Forecast MWh <u>2005</u></b>	<b>Forecast MWh <u>2006</u></b>	<b>Forecast MWh <u>2007</u></b>	<b>Forecast MWh <u>2008</u></b>	<b>Forecast MWh <u>2009</u></b>
<b>Receipts</b>	9,565,216					
<b>Deliveries</b>	6,953,320					
<b>Net Rec. &amp; Deliveries</b>	2,611,896	1,178,884	959,373	780,962	509,588	293,683
<b>Generation</b>	<u>9,071,692</u>	<u>11,327,400</u>	<u>12,015,300</u>	<u>12,682,894</u>	<u>14,999,860</u>	<u>16,248,779</u>
<b>Load</b>	<u>11,683,588</u>	<u>12,506,284</u>	<u>12,974,673</u>	<u>13,463,856</u>	<u>15,509,448</u>	<u>16,542,462</u>

**Request 13c.** Peak load capacity of the transmission system.

**Response 13c.** The transmission capacity of a grid system changes constantly based on factors like generation dispatch, ambient temperature, load characteristics, contingencies, transfers, etc. EKPC's transmission system is planned and constructed to deliver all of its generation resources to its native load delivery points during forecasted summer and winter peak load conditions. The transmission system is designed to accommodate an outage of a single transmission facility and/or generating unit. Other than simulation of imports into EKPC to replace an outage of a single generating unit, the transfers used in the EKPC transmission planning process are those modeled in the NERC MMWG models.

ECAR cited in its 2004 Summer and 2004/05 Winter Seasonal Assessments of Transmission System Performance transfer limits for north to south transfers from ECAR to TVA that range from 0 MW to 3150 MW. The reports also anticipate "that the ECAR transmission systems could become constrained as a result of unit unavailability and/or economic transactions that have historically resulted in large unanticipated power flows within and through the ECAR systems." These studies cite the following facilities among the limiting facilities when large transfers occur:



- The Blue Lick 345-161 kV Transformer (LGEE)
- The Blue Lick-Bullitt County 161 kV Circuit (LGEE-EKPC)
- The Lebanon-Marion County 138 kV Circuit (LGEE-EKPC)
- The Marion County 138-161 kV Transformer (EKPC)

Scheduled north-south transactions routinely exceed the limitations identified in ECAR’s Seasonal Assessments. These transactions have periodically overloaded EKPC transmission facilities, and moreover often have the potential to result in overloads in the event of a subsequent contingency.

**Request 13d.** Peak demand for summer and winter seasons on the transmission system.

**Response 13d.**

	Summer	2004	2005	2006	2007	2008	2009
<b>Date</b>		07/13/04					
<b>Hr.</b>		1700					
<b>Peak Demand (MW)</b>		2,052	2,294	2,377	2,461	2,930	3,017
	Winter	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
<b>Date</b>		01/18/05					
<b>Hr.</b>		0800					
<b>Peak Demand (MW)</b>		2,719	2,893	2,999	3,085	3,623	3,726



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC ADMINISTRATIVE CASE NO. 387**  
**ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**  
**REQUEST 14**

**RESPONSIBLE PERSON:** Paul C. Atchison

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

**Request 14.** Identify all planned transmission capacity additions for the next 10 years. Include the expected in-service date, size and site for all planned additions and identify the transmission need each addition is intended to address.

**Response 14.** During the period 2001-2010, EKPC expects to make the following transmission improvements for normal system development and load growth to serve native load customers and not to provide for large wholesale power transfers.

- 316 miles of new transmission line (161 kV, 138 kV, and 69 kV)
- 67 miles of new distribution substation taps (161 kV, 138 kV and 69 kV)
- 433 miles of transmission line reconductor (138 kV and 69 kV)
- 32 new transmission substations or upgrades (4200 MVA)
- 100 new distribution substations (900 MVA)
- 34 new transmission capacitor banks (492 MVAR)

Also, as a result of signing a power agreement with Warren RECC, effective April 1, 2008, EKPC is planning the following projects to be completed by that time:

- 62.5 miles of new transmission line (161 kV, 69 kV)
- 44.8 miles of transmission line rebuild/reconductor (161 kV, 69 kV)

- 12 new 161 kV circuit breakers
- 4 new transmission capacitor banks (41 MVAR)
- 1 transmission substation upgrade (150 MVA)

As a result of planned generation capacity to be added to the EKPC system for native load, EKPC expects to add the following new transmission facilities within the period 2001-2010. Although the additions could have significant effects on transmission capacity, none are required for existing constraints, bottlenecks, or other transmission system problems. The new facilities are listed below, along with the justification of each facility:

#	Facility	Justification
1	Build a 2.6 mile double circuit 345 kV line to loop the Stuart-Zimmer Line into Spurlock Substation. Completed 12/12/04.	Outlet for additional generation at Spurlock; Provides an EKPC interconnection with three companies (AEP, CIN, DPL).
2	Build a 7.3 mile 138 kV line to connect Cranston and Rowan County substations.	Outlet for additional generation at Spurlock; Provides local support to the EKPC-KU system in the Rowan County-Farmers Substation vicinities.
3.	Add a 3 <sup>rd</sup> 345-138 kV transformer at Spurlock Substation. Completed May 2004.	Outlet for additional generation at Spurlock.
4.	Build a 17 mile 138 kV line to connect the JK Smith and Spencer Road (KU) Substations.	Outlet for additional generation at JK Smith site. Provides local support to the KU-EKPC system in the Spencer Road-Rowan County Substation vicinities.
5.	Build a 345-138 kV substation at the JK Smith site and a 17 mile 345 kV line to connect the JK Smith and Avon Substations.	Outlet for additional generation at JK Smith site.
6.	Build a 345-161 kV substation at Tyner and a 43 mile 345 kV line to connect J.K. Smith-Tyner. Add a 161-69 kV transformer at the Tyner Substation site.	Outlet for additional generation at J.K. Smith site.

A detailed list of EKPC's expected transmission facility additions for the short-term planning horizon through the end of 2006, as well as recent completions, is shown beginning on the next page:

TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
<b><u>NEW TRANSMISSION LINES</u></b>			
Pulaski County - Floyd 69 kV - 4.8 miles 556.5 MCM	Complete	Pulaski	B, C
South Floyd Tap 69 kV - 0.04 miles 556.5 MCM	Complete	Pulaski	B, C
Pulaski County - Norwood 69 kV - 5.2 miles 556.5 MCM	Complete	Pulaski	B, C
Pulaski Co. Tap 161 kV - 6.8 miles 556.5 MCM	Complete	Pulaski	B, C
Keavy - Laurel County 69 kV( Circuit #2) - 0.40 miles 266.8 MCM	Dec-2005	Laurel	C, E
Garrard County - Lancaster/Brodhead (KU) 69 kV -- 0.23 miles 556.5 MCM DC (loop in KU 69 kV line)	April-2005	Garrard	C
Spurlock - Stuart/Zimmer (CIN/DPL) 345 kV -- 3 miles 2-954 MCM DC (loop in 345 kV line)	Complete	Mason, State of Ohio	A, F
Cranston - Rowan County 138 kV - 7.50 miles 795 MCM	Dec-2005	Rowan	B, C, D
Oneida - Arnold/Delvinta (KU) 161 kV - 7.90 miles 795 MCM	On Hold	Clay, Owsley	C, D
Inland Container -- Inland Tap 138 kV - 0.50 miles 954 MCM	Deleted	Mason	A, F
Flemingsburg -- Goddard Rebuild 138 kV 9.20 miles	Mar-2005	Fleming	B, C, D
Keavy-Laurel County (Circuit #2) 69 kV New Line & Sw. .40 mi.	Dec-2005	Laurel	B, C
Garrard Co. DC Loop (KU Lanc.-Brodhead) Trans. Line, 69 kV	April-2005	Garrard	B, C
Spurlock -- Flemingsburg Trans. Line 138 kV 18 mi. (Carryover)	Jan-2005	Fleming	B, C
WRECC's Bristow - GM 161 kV Trans. Line Eng. Only	June-2005	Barren	B, C
Smith -- Avon 345 kV Transmission Line 17 miles	May-2006	Madison, Clark	B, C
<b><u>NEW TRANSMISSION SUBSTATIONS</u></b>			
Pulaski County 161-69 kV Substation 100 MVA	Complete	Pulaski	B, C
Casey County 161-69 kV Substation 100 MVA	Complete	Casey	C
Inland Tap (EKPC-KU) 138 kV Switching Station	Deleted	Mason	A, F
Goddard 138 kV Switching Station	April-2005	Fleming	B, C, D
East Bernstadt 69 kV Switching Substation (EKPC - KU)	May-2005	Laurel	C, E
Oneida 161-69 kV Substation 100 MVA	On Hold	Clay	C, D
<b><u>TRANSMISSION SUBSTATION MODIFICATIONS</u></b>			
Liberty Jct. Substation add 2-161 kV breakers	Complete	Casey	B, C
Rowan County Substation add 3 -138 kV breakers	Complete	Rowan	B, C, D
Spurlock substation terminal facility additions & relaying upgrades	Complete	Mason	A
Stuart (DPL) and Zimmer (CIN) relaying upgrades & substation modifications	Complete	State of Ohio	A
Garrard County Substation add 3-69 kV breakers and 2 line exits	April 2005	Garrard	C
Fall Rock 69 kV Add 3-69 kV Breakers	Dec-2005	Clay	C
Dale Station -- Rebuild 138 & 69 kV Switchyard	Dec-2005	Clark	C
East Bardstown Rebuild 69 kV Switchyard	Dec-2005	Nelson	C
Beattyville Distr. -- Beattyville Sw. Sta. 69 kV Trans. Line	Dec-2006	Lee	C
Dale Station -- Install New General SVC #2 Feeder	Dec-2006	Clark	C
J.K. Smith 450 mVA Station Modifications	May-2006	Clark	C
J.K. Smith 345-138 kV Transformer -- Station Modifications	May-2006	Clark	C
J.K. Smith #8 and #9 Sub Modifications	May-2006	Clark	C
Beattyville Substation Switching -- 69 kV	Dec-2006	Lee	C

TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
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**TRANSMISSION LINE RECONDUCTOR OR REBUILD****(69 kV, 556.5 MCM ACSR, reconductor unless otherwise noted)**

Denny - Whitley City - 14 miles	Complete	McCreary, Wayne	B, C
Frenchburg-Maytown Jct. - 10.79 miles	Complete	Menifee, Morgan	C
West Berea - West Berea Jct. - 1.95 miles	Complete	Madison	B
Burkesville Jct. - Summer Shade - 18.89 miles	Complete	Cumberland, Metcalfe	C
Nancy - W. Somerset Jct. - 5.52 miles	Complete	Pulaski	B, C
Summer Shade - W. Columbia Jct. - 23.27 miles	Complete	Adair, Metcalfe	C
Campton - Helechawa - 11.08 miles	Complete	Wolfe	C, G
Colemansville - Four Oaks Jct. - 7.92 miles	Complete	Harrison, Pendleton	B
Colemansville - Renaker - 6.18 miles	June-2005	Harrison, Pendleton	B
Grants Lick - Stanley Parker Jct. - 9.94 miles	June-2005	Campbell, Kenton	B
Nancy - Windsor - 9.27 miles	Complete	Casey, Pulaski	C
Beckton - Parkway - 5.40 miles	Complete	Barren	C
Bonnieville - Munfordville - 8.18 miles	June-2005	Hart	C, G
Bowen - High Rock - 6.2 miles	Complete	Powell	G
Avon - Loudon Avenue (KU) 138 kV reconductor or rebuild - 8.72 miles	Deleted	Fayette	A
Inland Container - Spurlock 138 kV - 0.46 miles, 954 MCM ACSS	Deleted	Mason	A, F
KU Kenton - KU Goddard 138 kV rebuild - 22.13 miles, 795 MCM ACSR	Deleted	Fleming, Mason	A
Fayette-Davis-Nicholasville - 7.12 miles	May-2005	Fayette, Jessamine	A
KU Clark County - KU Sylvania 69 kV rebuild - 0.54 miles, 795 MCM ACSR	Hold	Clark	B
High Rock - Zachariah - 4.25 miles	Dec-2005	Powell	G
Avon-Boonesboro North Tap Recond. 138 kV 8.82 mi.	April-2005	Clark, Fayette	B, C
Baker Lane-Holloway Jct. Reconductor, 69 kV, 1.28 miles	May-2006	Fayette, Jessamine	B, C
Fort Knox Jct.-Smithersville Jct. Reconductor - 69 kV, 3.11 miles	May-2006	Hardin	B, C
Lees Lick - Renaker Reconductor - 69 kV, 12.7 mi.	Dec-2006	Harrison	B, C

**TRANSMISSION LINE UPGRADES (69 kV Unless Otherwise Noted)**

Annville Jct. - East Bernstadt Upgrade to 212F - 14.54 miles	Complete	Jackson, Laurel	B
Bloomfield - Sinai Upgrade to 167F - 13.4 miles	Complete	Anderson, Nelson	B
Boone Co. - Renaker 138 kV Upgrade to 167F - 41.17 miles	Complete	Boone, Grant, Pendleton, Harrison	B
Bristow Jct. - Turkey Foot Upgrade to 167F - 2.05 miles	Complete	Kenton	B
Creston - Phil Upgrade to 167F - 5.79 miles	Complete	Casey	B
Four Oaks - Four Oaks Jct Upgrade to 167F - 0.37 miles	Complete	Pendleton	B
Hunt - Sideview Upgrade to 167F - 15.5 miles	Complete	Clark	B
Liberty Jct. - Liberty KU Tap Upgrade to 167F - 3.47 miles	Complete	Casey	B
Norwood Jct. - Norwood Jct. Upgrade to 167F - 5.28 miles	Complete	Pulaski	B
Pittsburg - Tyner 161 kV Upgrade to 167F - 16.49 miles	Complete	Jackson, Laurel	B
Bass - Creston Upgrade to 167F - 7.38 miles	Complete	Casey	B
Boone Dist. - Bullittsville Upgrade to 167F - 6.4 miles	Complete	Boone	B
New Liberty Jct. - Owen Co Upgrade to 167F - .01 miles	May-2005	Owen	B
Russell Springs Tap Upgrade to 167F - 1.2 miles	May-2005	Russell	B
Tunnel Hill Tap Upgrade to 167F - 0.54 miles	May-2005	Hardin	B

TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
<b><u>TRANSMISSION LINE UPGRADES (69 kV Unless Otherwise Noted)</u></b>			
Ballard-Hunt Farm Jct. Upgrade to 212 69 kV 8.34 miles	April-2005	Clark, Jessamine	B
Stephensburg-Upton Jct. Line Upgrade, 69 kV, 0.54 mile	Oct-2005	Hardin	B
Hunters Bottom – Milton 69 kV Line Upgrade	May-2005	Carroll, Trimble	B
Owens Illinois Jct. – Woodlawn 69 kV Line Upgrade	May-2005	Nelson	B
Helechawa-Magoffin County Line Upgrade 69 kV 20.33 mile	May-2005	Magoffin	B
Knob Lick-McKinney's Corner Jct. Line Upgrade, 69 kV, 12.53 miles	May-2005	Metcalfe, Green	B
Clay Lick Jct.-Van Arsdell Line Upgrade, 69 kV, 2.46 miles	Dec-2006	Mercer	B
<b><u>TERMINAL FACILITY UPGRADES (69 kV Unless Otherwise Noted)</u></b>			
East Bardstown substation upgrade terminal facilities	Complete	Nelson	B
Goodnight substation upgrade 4/0 Bus terminal facilities	Complete	Barren	B
Crooksville Jct. Line Switch Upgrade (S70-615)	Dec-2005	Madison	B
Dale Line Terminal Upgrade (N35-804)	Dec-2005	Clark	B
Dale Line Switches Upgrade	Dec-2005	Clark	B
Davis Line Switch Upgrade	Dec-2005	Jessamine	B
Duro-Turkey Foot Jct. Line Switch Upgrade (N55-615)	Dec-2005	Kenton	B
Fayette Line Switch Upgrade	Dec-2005	Fayette	B
Hickory Plains Line Switch Upgrade	Dec-2005	Madison	B
Newby Line Switch Upgrade	Dec-2005	Madison	B
Pine Grove Jct. Line Switch Upgrade (E86-605)	Dec-2005	Laurel	B
West Berea Jct. Line Switch Upgrade	Dec-2005	Madison	B
West London Line Switch Upgrade	Dec-2005	Laurel	B
Boone County Line Switch Upgrade	Dec-2006	Boone	B
Devon Line Switch Upgrade	Dec-2006	Boone	B
Duro-Turkey Foot Jct. Line Switch Upgrade (N55-625)	Dec-2006	Boone	B
<b><u>SUBSTATION CAPACITOR BANK ADDITIONS (69 kV)</u></b>			
Loretto 13.78 MVAR	Complete	Marion	C
Magnolia 12.24 MVAR	Complete	Larue	C
Pelfrey 7.14 MVAR	Complete	Carter	C
Russell Springs 18.37 MVAR	Complete	Russell	C
Shelby County 25.51 MVAR	Complete	Shelby	C
Shepherdsville 13.78 MVAR	Complete	Bullitt	C
Van Meter 13.78 MVAR	Complete	Clark	C
Bedford 6.12 MVAR	Dec-2005	Trimble	C
East Bernstadt 28.06 MVAR	April-2005	Laurel	C
Four Oaks 13.78 MVAR	Complete	Harrison	C
Blevins Valley 10.2 MVAR	Dec-2005	Bath	C
Boone County 30.61 MVAR	Dec-2005	Boone	C
Maggard 12.24 MVAR	Dec-2005	Magoffin	C
Millersburg (EKPC) 6.12 MVAR	Complete	Nicholas	C
Sideview 6.12 MVAR	Dec-2005	Bourbon	C
Sinai 13.78 MVAR	Dec-2005	Anderson	C
Slat 21.6 MVAR	Complete	Wayne	C
Mount Olive (Re-size to 10.20 MVAR)	Dec-2005	Casey	C
East Pine Knot 13.78 MVAR	Dec-2005	McCreary	C



TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
<b><u>SUBSTATION CAPACITOR BANK ADDITIONS (69 kV)</u></b>			
Norwood 25.51 MVAR	Dec-2005	Pulaski	C
Tyner 20.41 MVAR	Dec-2005	Jackson	C
Knob Lick 14.29 MVAR	May-2005	Metcalfe	C
Clay Village 10.2 MVAR	Dec-2005	Shelby	C
Tommy Gooch 12.25 MVAR	April-2005	Garrard	C
Griffin 9.18 MVAR	May-2005	Pendleton	C
Milton 10.20 MVAR	May-2006	Trimble	C
Maytown 10.2 MVAR	Dec-2006	Morgan	C
Shelby County #2 25.51 MVAR	May-2006	Shelby	C
<b><u>NEW DISTRIBUTION SUBSTATION TAP LINES</u></b>			
Jamestown Tap, 161 kV 0.5 miles	Complete	Russell	H
Wiborg 69 Tap 4.31 miles	Complete	McCreary	H
West Bardstown #2 69 kV 0.02 miles	Deferred	Nelson	H
Nelson Valley Tap, 69 kV 1.4 miles	Complete	Pulaski	H
Rineyville 69 kV Tap 6.0 miles	May-2005	Hardin	H
Hinkston Tap from KU 0.01 miles	Complete	Montgomery	H
Loretto Tap 69kV 0.02 miles	Complete	Marion	H
W. Mt. Washington #2 Tap 69 kV 0.02 miles	May-2005	Bullitt	H
Big Creek Tap 69 kV 9.3 miles	Dec-2006	Clay	H
Banklick #2 Tap 69 kV 0.02 miles	Deferred	Kenton	H
Columbia #2 Tap 69 kV 0.02 miles	Deferred	Adair	H
Fort Knox #2 Tap 69 kV 0.02 miles	Deleted	Hardin	H
Middle Creek #2 Tap 69 kV 0.02 miles	Deferred	Floyd	H
Radcliff #2 Tap 69 kV 0.02 miles	Deferred	Hardin	H
Sinai #2 Tap 69 kV 0.02 miles (Powell-Taylor)	June-2006	Anderson	H
Turkey Foot #2 Tap 69kV 0.02 miles (Richardson #2)	Dec-2005	Kenton	H
Cynthiana #2 Tap, 69 kV 0.02 miles	Deferred	Harrison	H
Fayette #3 Tap, 69 kV 0.02 miles	Deferred	Fayette	H
Balltown #2 Tap 69 kV 0.02 miles	Deferred	Nelson	H
Boone County #2 Tap 69 kV 0.02 miles	Deferred	Boone	H
Munfordville #2 Tap 69 kV 0.02 miles	Deferred	Hart	H
Taylorsville #2 Tap, 69 kV 0.02 miles	Deleted	Spencer	H
Tharp #2 Tap 69 kV 0.02 miles	Deleted	Hardin	H
Vine Grove #2 Tap 69 kV 0.02 miles	Deleted	Hardin	H
Holloway #2 Tap 69 kV 0.02 miles	Deleted	Jessamine	H
Clay City #2 Tap 69 kV 0.02 miles	Deleted	Powell	H
Williamstown #2 Tap, 69 kV 0.02 miles	Deleted	Grant	H
Grants Lick #2 Tap	May-2005	Campbell	H
Oxford Tap, 0.08 mi.	June-2005	Scott	H
Plummers Mill Tap, 0.02 mi.	Complete	Fleming	H
Richardson #2 Tap	June-2005	Kenton	H
South Point Tap	May-2005	Jessamine	H
Southville Tap	May-2005	Shelby	H
Upchurch 69 kV Tap, 1.75 mi.	May-2005	Clinton	H
Little Mount 161 kV Tap (Carryover)	Feb-2005	Spencer	H
Bull Run 0.5 mile 69 kV Tap	May-2006	Adair	H

TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
<b><u>NEW DISTRIBUTION SUBSTATION TAP LINES</u></b>			
Conway 69 kV Tap, 0.25 mile	May-2006	Rockcastle	H
Corinth 69 kV Tap, .2 mi.	May-2006	Grant	H
Deatsville 69 kV Tap, 2.30 miles	May-2006	Nelson	H
Defoe 69 kV Tap, 5 miles	May-2006	Henry	H
Gap of the Ridge 69 kV Tap, 4.5 miles	Dec-2006	Wayne	H
Headquarters .02 miles 69 kV Tap	May-2006	Harrison	H
Oak Ridge Tap .2 mile 69 kV Tap	May-2006	Lewis	H
West Berea Tap	May-2006	Madison	H
<b><u>NEW DISTRIBUTION SUBSTATIONS</u></b>			
Jamestown 161-12.47 kV, 12 mVA	Complete	Russell	H
Wiborg 69-25 kV, 11.2 mVA	Complete	McCreary	H
Nelson Valley 69-12.47 kV, 11.2 mVA	Complete	Pulaski	H
Berlin Substation Upgrade/Rebuild to 11.2 mVA	Complete	Bracken	H
Rineyville 69-12.47 kV, 11.2 mVA	Complete	Hardin	H
Hinkston Substation Upgrade/Rebuild to 11.2 mVA	Complete	Montgomery	H
Pleasant Grove Substation Upgrade to 15/20/25 mVA	May-2005	Bullitt	H
W. Mt. Washington #2 New Substation Addition 11.2/14 mVA	May-2005	Bullitt	H
West Bardstown #2 69-12.47 kV, 11.2 mVA	Deferred	Nelson	H
Headquarters Substation Upgrade/Rebuild to 11.2 mVA	May-2006	Bourbon	H
Big Creek 69-12.47 kV, 11.2 mVA	Dec-2005	Clay	H
Banklick #2 New Substation Addition 11.2/14 mVA	Deferred	Kenton	H
Columbia #2 #2 New Substation Addition 11.2/14 mVA	Deferred	Adair	H
Fort Knox #2 New Substation Addition 11.2/14 mVA	Deleted	Hardin	H
Middle Creek #2 New Substation Addition 11.2/14 mVA	Deferred	Floyd	H
Radcliff #2 New Substation Addition 11.2/14 mVA	Deferred	Hardin	H
Sinai #2 New Substation Addition 11.2/14 mVA (Powell-Taylor)	June-2006	Anderson	H
Turkey Foot #2 69-12.47 kV, 11.2 mVA (Richardson#2)	Dec-2005	Kenton	H
Balltown #2 New Substation Addition 11.2/14 mVA	Deferred	Nelson	H
Beckton New Substation Addition 11.2/14 mVA	Deferred	Barren	H
Boone County #2 New Substation Addition 11.2/14 mVA	Deferred	Boone	H
Cynthiana #2 New Substation Addition 11.2/14 mVA	Deferred	Harrison	H
Fayette #3 New Substation Addition 11.2/14 mVA	Deferred	Fayette	H
Munfordville #2 New Substation Addition 11.2/14 mVA	Deferred	Hart	H
Taylorsville #2 69-12.47 kV, 11.2 mVA	Deleted	Spencer	H
Holloway #2 New Substation Addition 11.2/14 mVA	Deleted	Jessamine	H
Tharp #2 New Substation Addition 11.2/14 mVA	Deleted	Hardin	H
Vine Grove #2 New Substation Addition 11.2/14 mVA	Deleted	Hardin	H
Clay City #2 New Substation Addition 11.2/14 mVA	Deleted	Powell	H
Williamstown #2 69-12.47 kV, 11.2 mVA	Deleted	Grant	H
Oxford 11.2/14 mVA	June-2005	Scott	H
Plummers Mill	Complete	Fleming	H
Upchurch 11.2/14 mVA	May-2005	Clinton	H
Little Mount 12/16/29 mVA 161-125.5 kV (Carryover)	Feb-2005	Spencer	H
South Point 11.2/13 mVA, 69-12.5 kV	May-2005	Jessamine	H
Bull Run 11.2/14 mVA, 69-25 kV Distr. Substation (NE Columb)	May-2006	Adair	H
Conway 11.2/14 mVA, 69-12.5 kV Distribution Substation	May-2006	Rockcastle	H

TRANSMISSION PROJECTS 2004-2006	TARGET DATE	KENTUCKY COUNTIES	NEED CATEGORY
<b><u>NEW DISTRIBUTION SUBSTATIONS</u></b>			
Corinth 11.2/14 mVA Distribution Substation	May-2006	Grant	H
Deatsville 11.2/14 mVA, 69-12.5 kV Distribution Substation	May-2006	Nelson	H
Defoe 11.2/14 mVA, 69-12.5 kV Distribution Substation	May-2006	Henry	H
Gap of the Ridge 11.2/14 mVA, 69-25 kV & 25-12.5 kV Distri. Sub.	Dec-2006	Wayne	H
Oak Ridge Distri. Sub. 11.2/14 mVA 69-25 kV	May-2006	Lewis	H
<b><u>DISTRIBUTION STATION UPGRADES AND MODIFICATIONS</u></b>			
Cave Run Tap, 2-way, 69 kV switch addition (By KU)	Complete	Rowan	J
Brooks rebuild existing 11.2/14 mVA substation	Complete	Bullitt	J
Loretto conversion to 69-25kV, 11.2 mVA	Complete	Marion	J
Milton Substation Upgrade to 6.44 mVA	Deferred	Trimble	J
South Springfield Substation Upgrade to 11.2 mVA	Deferred	Washington	J
West Berea Substation Upgrade to 15/20/25 mVA	May-2006	Madison	J
Knob Creek Sub station Upgrade to 6.44 mVA	Deferred	Bullitt	J
Southville Upgrade Station to 11.2 mVA	May-2005	Shelby	J
Grants Lick #2 Upgrade to 15/20/25 mVA	May-2005	Grant	J
Hillsboro Convert to 25 kV	Nov-2005	Fleming	J
Headquarters 11.2/14 mVA 69-12.5 kV Distribution Station	May-2006	Harrison	J
Leon Upgrade, 11.2 mVA	May-2006	Carter	J
McKinney Corner Upgrade, 11.2 mVA	May-2006	Green	J
<b><u>MISCELLANEOUS DISTRIBUTION ADDITIONS</u></b>			
Distribution Capacitors	Dec-2005	--	K
Change-Out 10-69 kV Breakers	Dec-2005	--	K
Change-Out 1-138 kV Breaker	Dec-2005	--	K
Change-Out 6-69 kV Breakers	Dec-2006	--	K
Distribution Capacitors-2006	Dec-2006	--	K

**Need Category--Description**

- A Generation outlet or required facility to integrate new generating unit(s).
- B Eliminate potential thermal overload(s) for normal or single contingency outage conditions.
- C Eliminate potential low voltage level(s) for normal or single contingency outage conditions.
- D Provide backfeed for radially fed substation(s).
- E Reduce MW-mile outage exposure to switched circuit.
- F Improve transient stability margin at generating plant or generating unit(s).
- G Reduce losses on line section.
- H New member system delivery point
- J Upgrade member system delivery point
- K Power factor correction.