# STITES & HARBISON PLLC

ATTORNEYS

RECEIVED

APR 1 2 2007 PUBLIC SERVICE COMMISSION 421 West Main Street Post Office Box 634 Frankfort, KY 40602-0634 15021 223-3477 15021 223-4124 Fax www.stites.com

Mark R . 0 vers tree t (502) 209-1219 (502) 223-4387 FAX movers tree @ stites.com

Beth O' Donnell Executive Director Public Service Commission of Kentucky P.O. Box 615 Frankfort, KY 40602-0615

RE: Administrative Case No. 387

Dear Ms. O'Donnell:

April 12, 2007

Please find enclosed and accept for filing Kentucky Power Company's Responses to the Commission's December 20, 2001 Order.

If you have any questions, please do not hesitate to contact me.

Sincerely yours, & HARBISON PLLC STITES

cc: Errol K. Wagner Parties of Record

KE057:00KE4:12126:3:FRANKFORT

### PSC ADMINISTRATIVE CASE NO. 387 SERVICE LIST

I hereby certify that a true and accurate copy of the foregoing was served by United States First Class Mail, postage prepaid, upon the following:

Kendrick R. Riggs Allyson K. Sturgeon Ogden Newell & Welch PLLC 1700 PNC Plaza 500 West Jefferson Street Louisville, Kentucky 40202-2874

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Patrick D. Pace Kamuf, Yewell & Pace 221 West Second Street Owensboro, Kentucky 42303

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William H. Jones, Jr. Kimberly S. McCann VanAntwerp Monge Jones & Edwards, LLP 1544 Winchester Avenue P.O. Box 1111 Ashland, Kentucky 41105-1111 Dean Stanley President/CEO Kenergy Corp. P.O. Box 18 Henderson, Kentucky 42419

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Joe Darguzas Vice President for Engineering and Project Management EnviroPower 2810 Lexington Financial Center 250 West Main Street Lexington, Kentucky 40507

Peter C. Brown Director of Contract Administration EnviroPower 762 Nine Greenway Plaza Houston, Texas 77057

James R. Dalrymple Program Support Manager Transmission/Power Supply Group Tennessee Valley Authority 1101 Market Street Chattanooga, Tennessee 37402-2801 Winfrey P. Blackburn, Jr. R. Douglas Burchett Blackburn, Hundley & Domene, LLP 350 Starks Building 455 South Fourth Avenue Louisville, Kentucky 40202

John N. Hughes 124 West Todd Street Frankfort, Kentucky 40601

On this the 12th day of April, 2007.

Mark R. Overstreet

### COMMONWEALTH OF KENTUCKY

### **BEFORE THE PUBLIC SERVICE COMMISSION**

APR 122007 PUBLIC SERVICE COMMISSION

IN THE MATTER OF :

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

ADMINISTRATIVE CASE NO. 387

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RESPONSE OF KENTUCKY POWER COMPANY D/B/A AMERICAN ELECTRIC POWER

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### **COMMISSION ORDER DATED DECEMBER 20, 2001**

April 13, 2007

KPSC Administrative Case No. 387 Annual Resource Assessment Calendar Year 2006 Order Dated December 20, 2001 Item No. 1 Page 1 of 3

# Kentucky Power Company

### REQUEST

Actual and weather-normalized monthly 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). Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).

### RESPONSE

Page 2 of this response provides actual and weather normalized 2006 monthly peak internal demands for Kentucky Power Company and AEP System-East. Kentucky Power Company and AEP System-East had 0 and 936 MW of contractual interruptible capacity, respectively.

Page 3 of this response provides actual 2006 monthly system demands for Kentucky Power and AEP System-East. The system demands include internal load and off-system sales. Weathernormalized monthly peak system demands for Kentucky Power Company and AEP System-East have not been developed and therefore, are not available.

WITNESS: Errol K Wagner

Kentucky Power Company and AEP System-East Actual and Weather Normalized Peak Internal Demand (MW) 2006

|           |       | Kentucky Pow | itucky Power Company |            |        | AEP System-East | em-East |            |
|-----------|-------|--------------|----------------------|------------|--------|-----------------|---------|------------|
|           |       | Peak         | Peak                 | Normalized |        | Peak            | Peak    | Normalized |
| Month     | Peak  | Day          | Hour                 | Peak       | Peak   | Day             | Hour    | Peak       |
| January   | 1,441 | 1/27/2006    | 0                    | 1,620      | 18,066 | 1/27/2006       | 8       | 19,577     |
| February  | 1,468 | 2/7/2006     | 6                    | 1,490      | 18,113 | 2/9/2006        | 8       | 18,927     |
| March     | 1,342 | 3/23/2006    | ω                    | 1,368      | 17,278 | 3/21/2006       | 20      | 17,773     |
| April     | 1,153 | 4/10/2006    | 7                    | 1,123      | 15,405 | 4/10/2006       | 7       | 14,973     |
| May       | 1,256 | 5/30/2006    | 16                   | 1,085      | 19,379 | 5/30/2006       | 16      | 17,072     |
| June      | 1,293 | 6/22/2006    | 17                   | 1,211      | 19,349 | 6/22/2006       | 13      | 19,137     |
| July      | 1,362 | 7/31/2006    | 15                   | 1,334      | 21,521 | 7/31/2006       | 14      | 21,113     |
| August    | 1,388 | 8/2/2006     | 15                   | 1,303      | 21,898 | 8/2/2006        | 16      | 20,478     |
| September | 1,087 | 9/18/2006    | 15                   | 1,150      | 16,193 | 9/8/2006        | 14      | 17,740     |
| October   | 1,242 | 10/25/2006   | ω                    | 1,119      | 16,602 | 10/25/2006      | 7       | 15,196     |
| November  | 1,310 | 11/21/2006   | 6                    | 1,290      | 16,926 | 11/21/2006      | 8       | 16,951     |
| December  | 1,636 | 12/8/2006    | 8                    | 1,496      | 19,343 | 12/8/2006       | 8       | 18,901     |

KSPC Adm. Case No. 387 Order Dated December 20, 2001 For Calendar Year 2006 Item No. 1 Page 2 of 3 Kentucky Power Company and AEP System-East Actual Peak System Demand (MW) 2006

|           | Kent  | Kentucky Power Company | pany |        | AEP System-East |      |
|-----------|-------|------------------------|------|--------|-----------------|------|
|           |       | Peak                   | Peak |        | Peak            | Peak |
| Month     | Peak  | Day                    | Hour | Peak   | Day             | Hour |
| Januarv   | 1.640 | 1/27/2006              | 6    | 20,906 | 1/27/2006       | 8    |
| February  | 1,709 | 2/7/2006               | 6    | 21,429 | 2/13/2006       | 20   |
| March     | 1,515 | 3/27/2006              | æ    | 19,469 | 3/23/2006       | ß    |
| April     | 1,325 | 4/10/2006              | 7    | 17,895 | 4/10/2006       | 7    |
| Mav       | 1,424 | 5/30/2006              | 16   | 21,809 | 5/30/2006       | 16   |
| June      | 1,522 | 6/22/2006              | 17   | 22,894 | 6/22/2006       | 13   |
| July      | 1.626 | 7/18/2006              | 14   | 25,196 | 7/31/2006       | 14   |
| August    | 1,630 | 8/2/2006               | 15   | 25,511 | 8/2/2006        | 17   |
| September | 1,304 | 9/18/2006              | 15   | 19,888 | 9/11/2006       | 17   |
| October   | 1,380 | 10/25/2006             | 8    | 18,771 | 10/25/2006      | 7    |
| November  | 1,513 | 11/21/2006             | 6    | 19,753 | 11/21/2006      | 6    |
| December  | 1,784 | 12/8/2006              | 6    | 21,652 | 12/8/2006       | 6    |

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KPSC Administrative Case No. 387 Annual Resource Assessment Calendar Year 2006 Order Dated December 20, 2001 Item No. 2 Page 1 of 49

# Kentucky Power Company

### REQUEST

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 competed calendar year. Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).

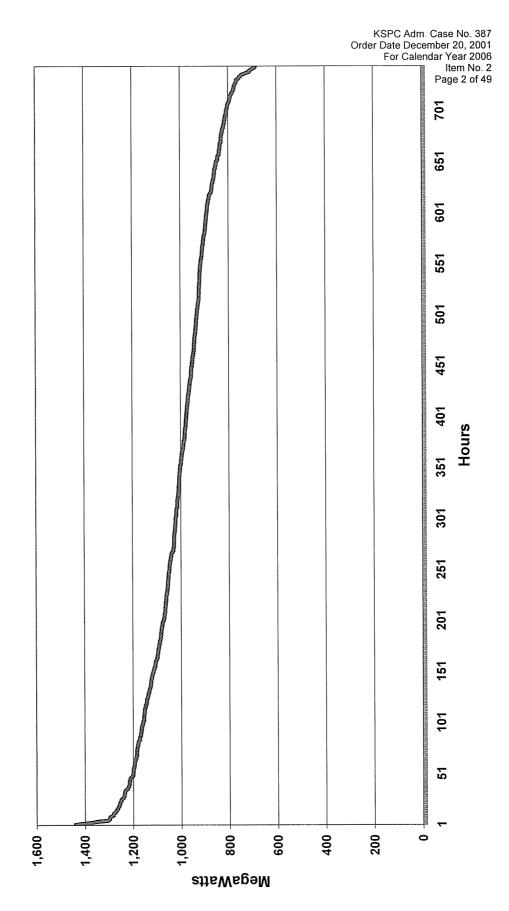
### RESPONSE

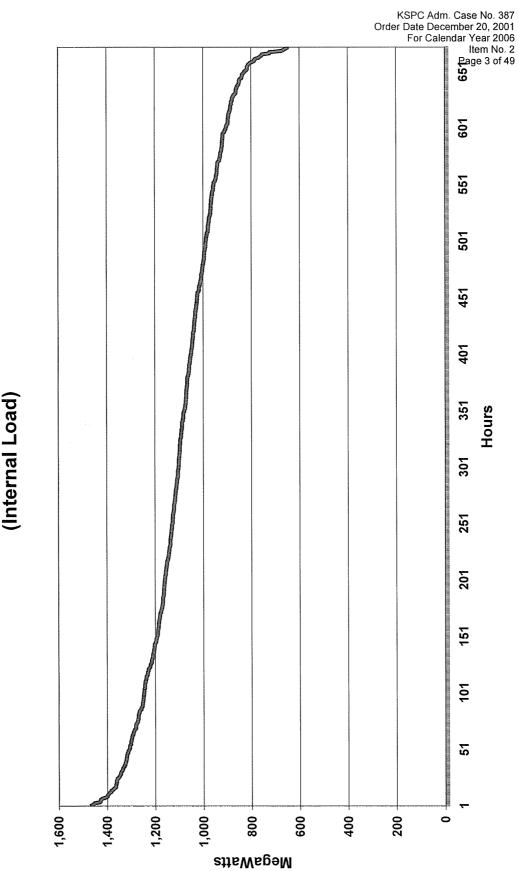
Pages 2 through 13 provide 2006 monthly load duration curves for Kentucky Power Company's internal load. Pages 14 through 25 provide 2006 monthly load duration curves for Kentucky Power Company's system load. Pages 26 through 37 provide 2006 monthly load duration curves for AEP System-East's internal load. Pages 38 through 49 provide 2006 monthly load duration curves for AEP System-East's system load. The system load, for both Kentucky Power Company and AEP System-East, includes internal load and off-system sales.

Weather-normalized monthly internal peaks for Kentucky Power Company and AEP System-East are provided on Page 2 of Item Number 1. Weather normalized system peaks have not been developed and therefore, are not available.

WITNESS: Errol K Wagner

Kentucky Power Company January 2006 Load Duration Curve (Internal Load)

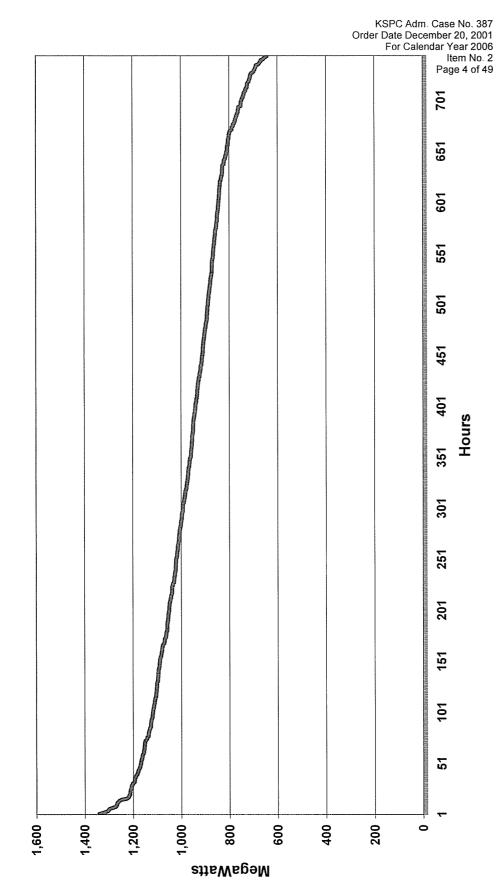


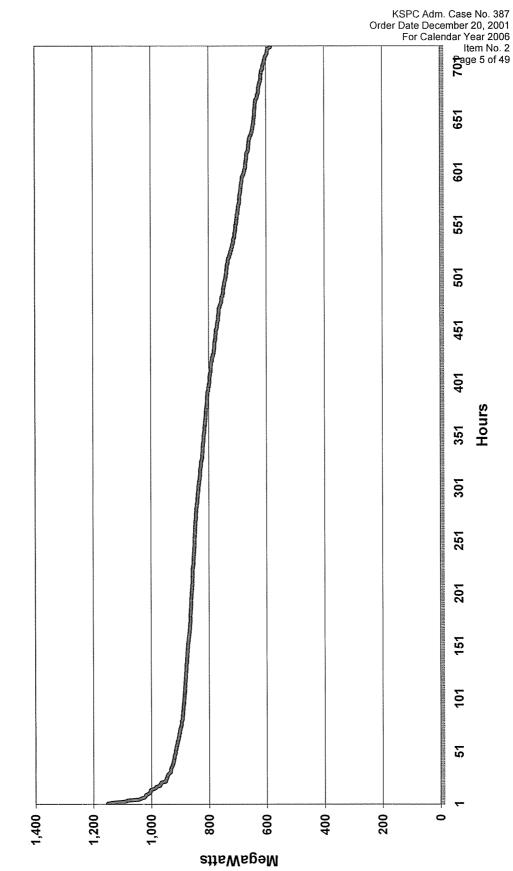


Hours

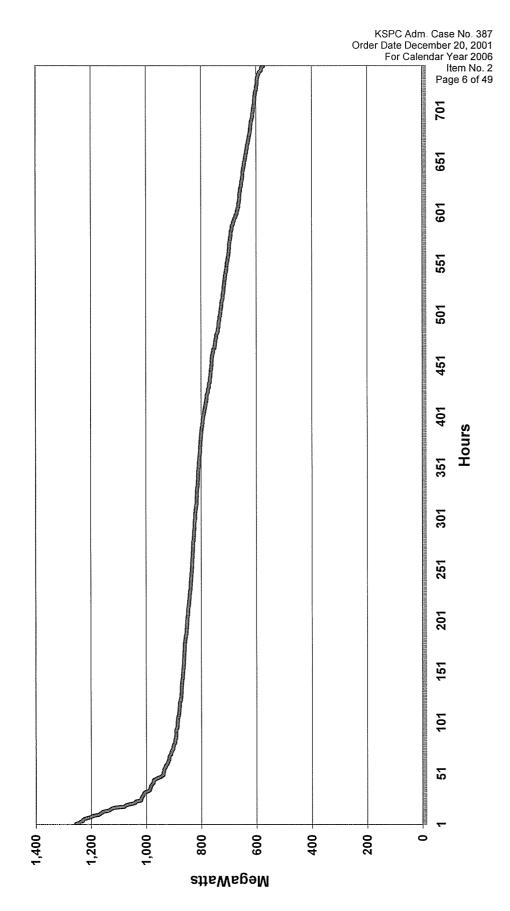
# February 2006 Load Duration Curve (Internal Load) Kentucky Power Company

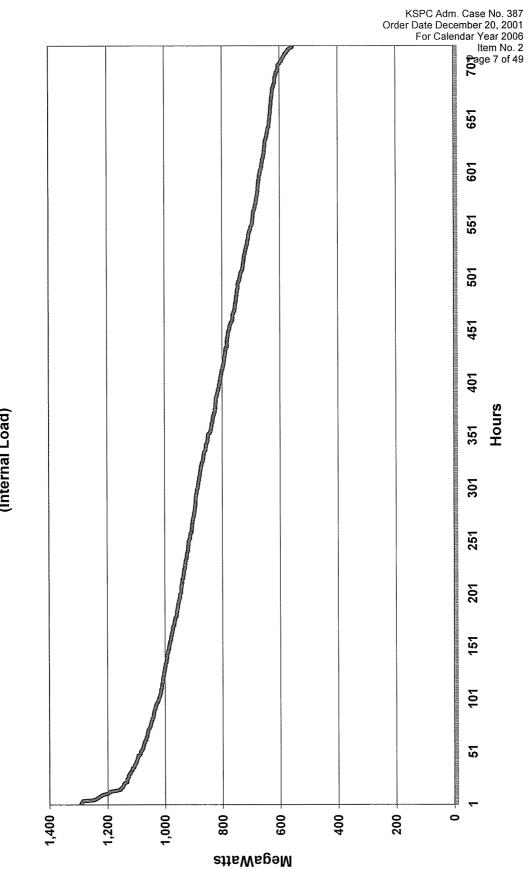
Kentucky Power Company March 2006 Load Duration Curve (Internal Load)



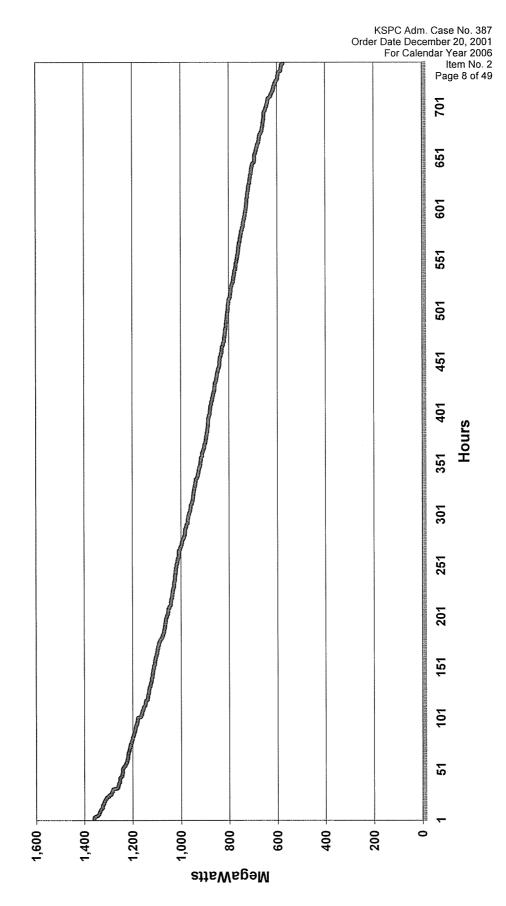


Kentucky Power Company April 2006 Load Duration Curve (Internal Load) Kentucky Power Company May 2006 Load Duration Curve (Internal Load)

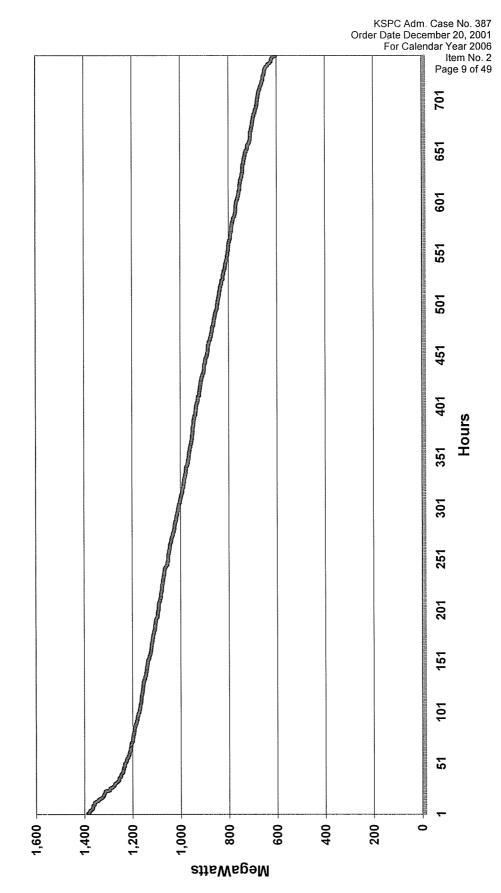


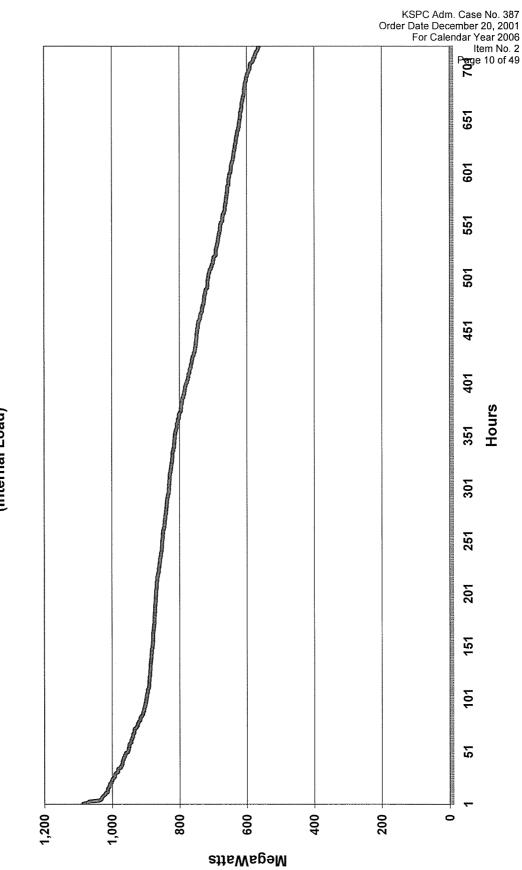


Kentucky Power Company June 2006 Load Duration Curve (Internal Load) Kentucky Power Company July 2006 Load Duration Curve (Internal Load)

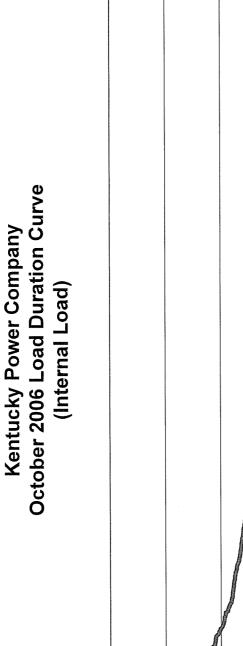


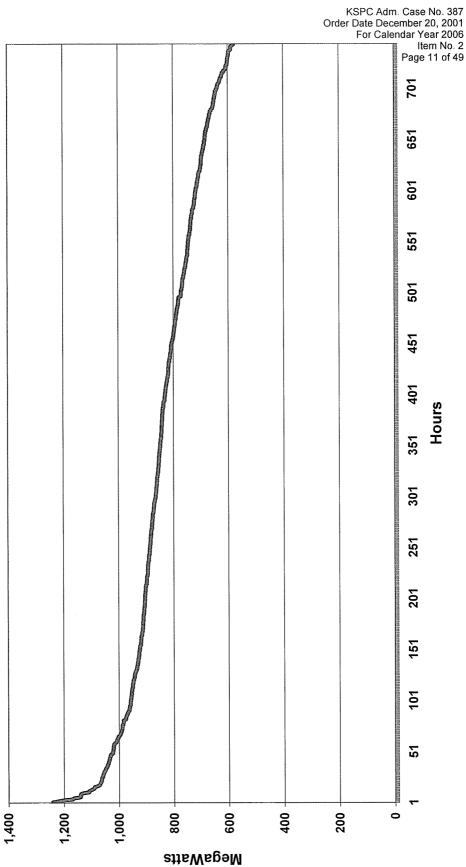
Kentucky Power Company August 2006 Load Duration Curve (Internal Load)

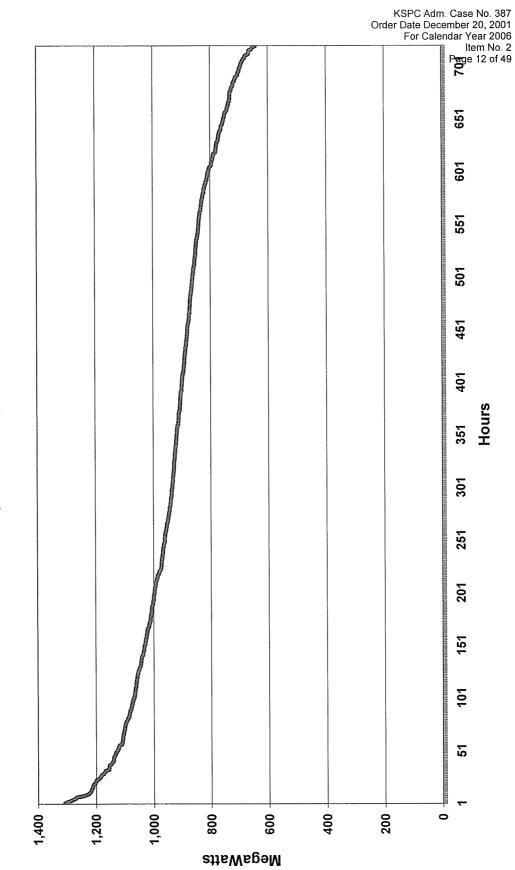




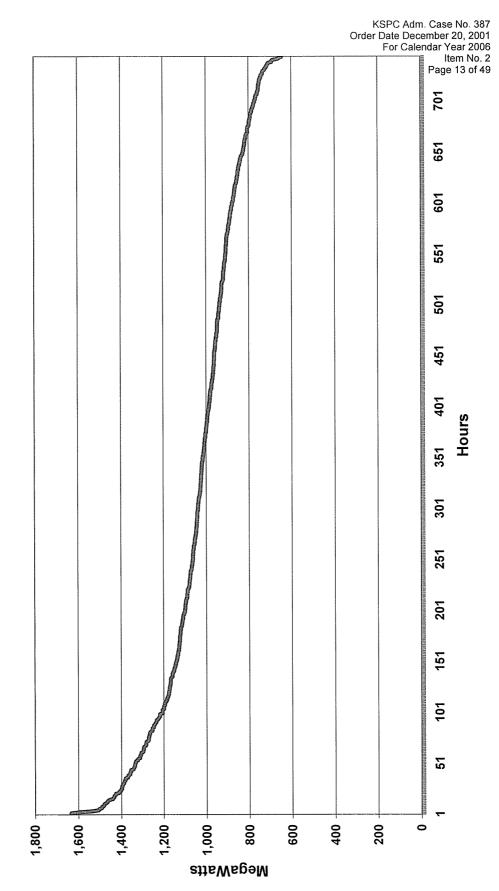
Kentucky Power Company September 2006 Load Duration Curve (Internal Load)



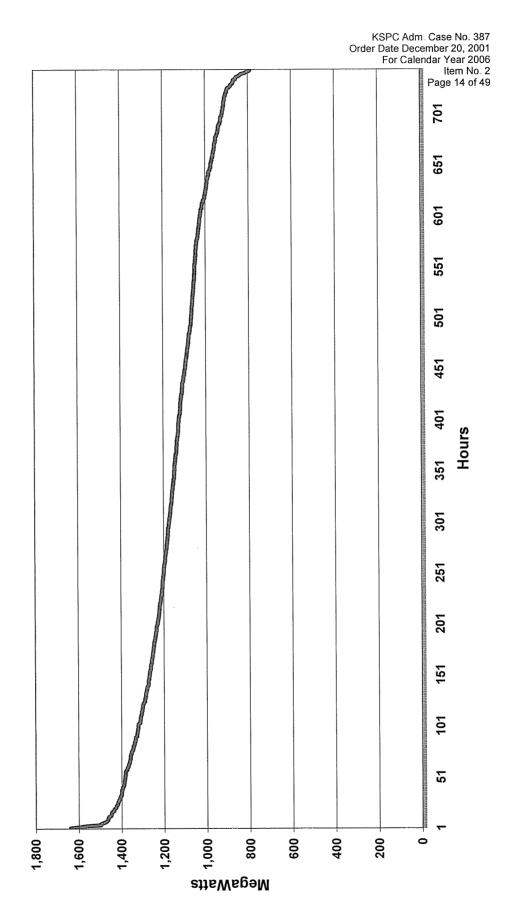




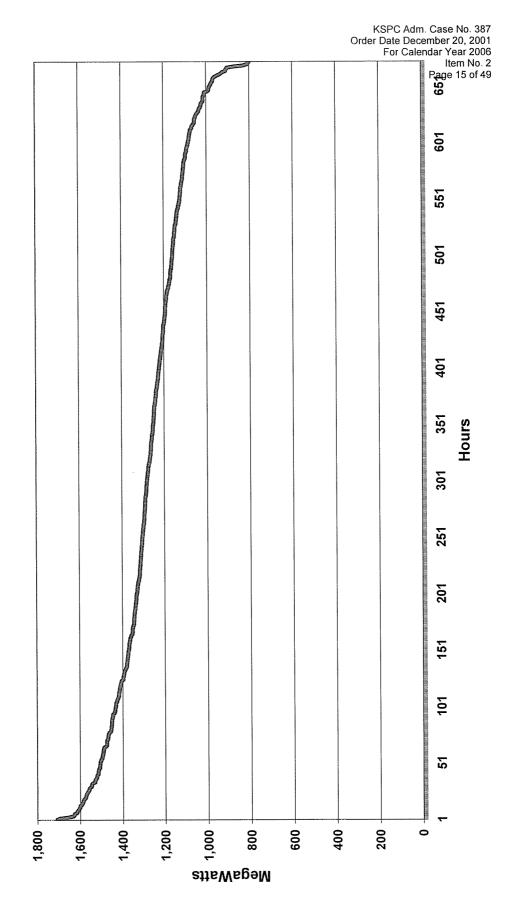
Kentucky Power Company November 2006 Load Duration Curve (Internal Load) Kentucky Power Company December 2006 Load Duration Curve (Internal Load)



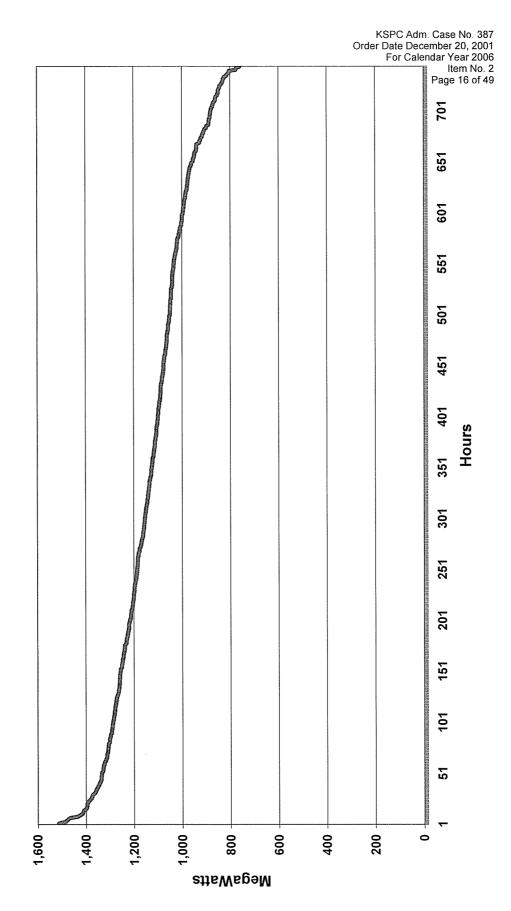
Kentucky Power Company January 2006 Load Duration Curve (System Load)



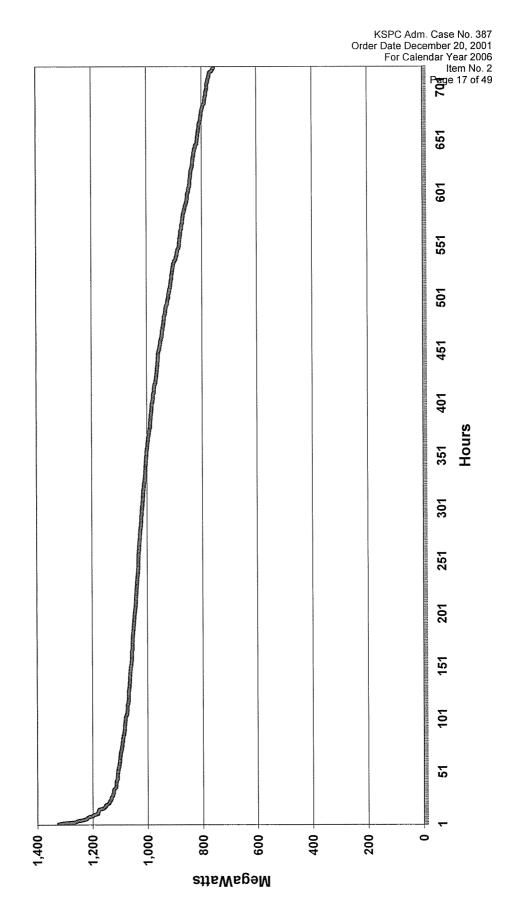
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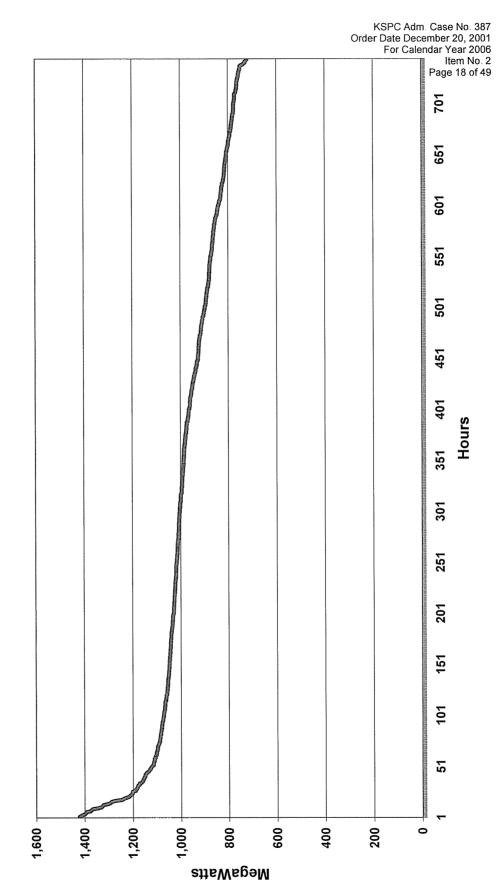
Kentucky Power Company March 2006 Load Duration Curve (System Load)



Kentucky Power Company April 2006 Load Duration Curve (System Load)

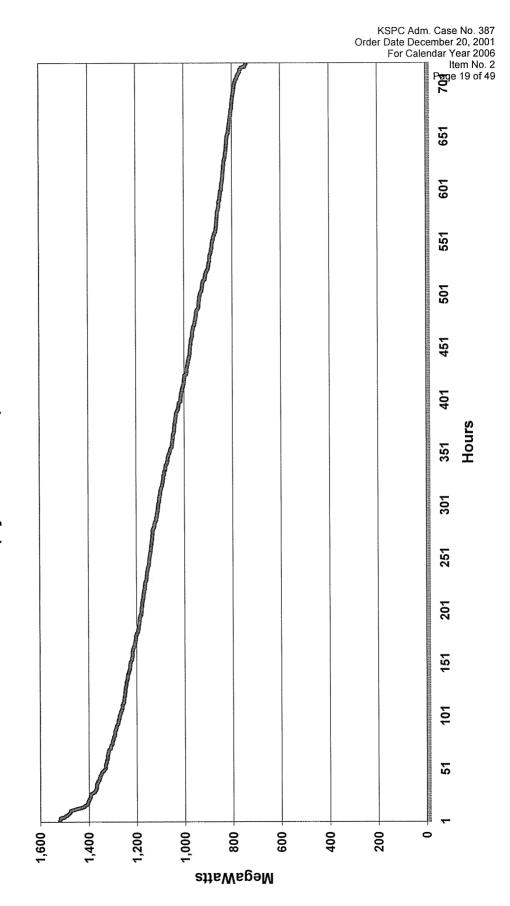


Kentucky Power Company May 2006 Load Duration Curve (System Load)

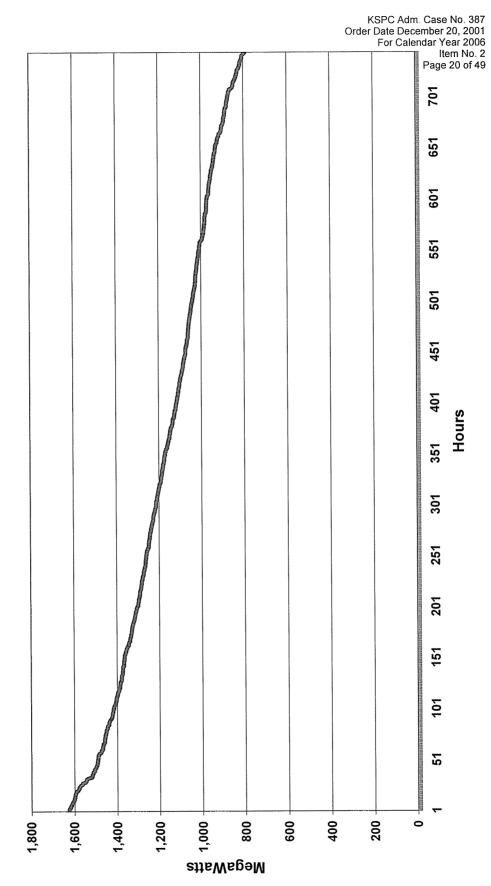


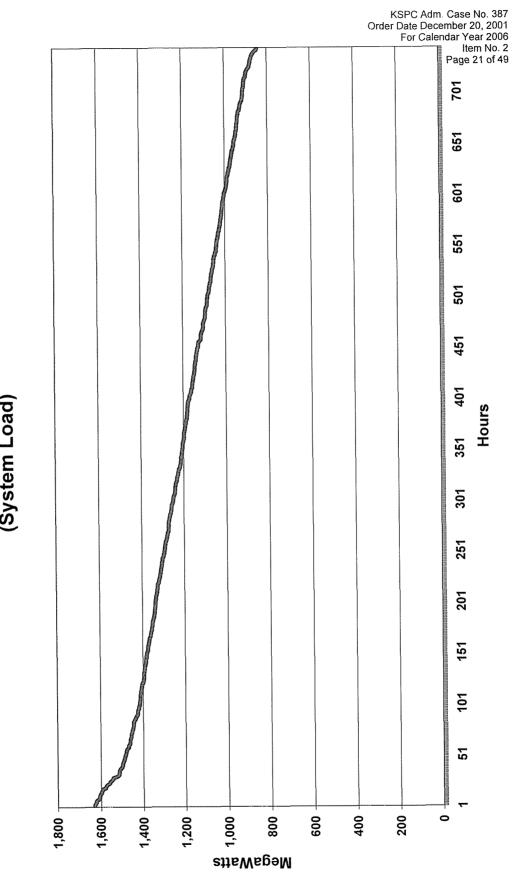
Kentucky Power Company June 2006 Load Duration Curve (System Load)

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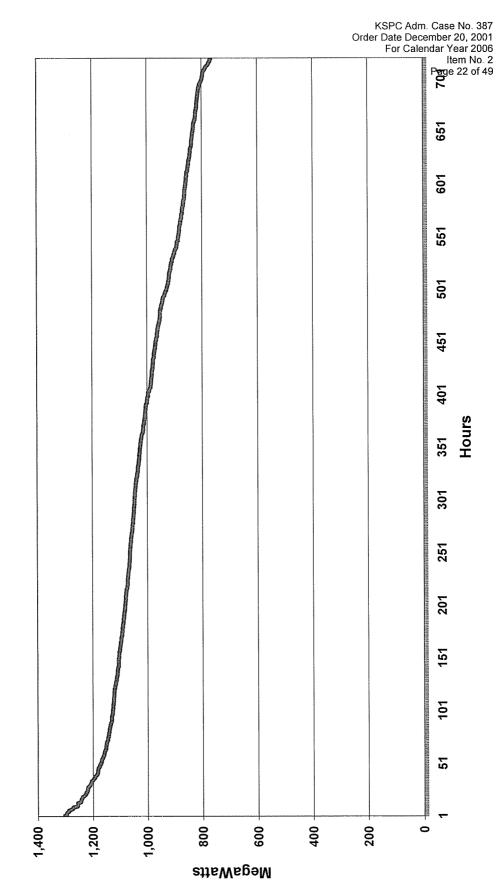


Kentucky Power Company July 2006 Load Duration Curve (System Load)

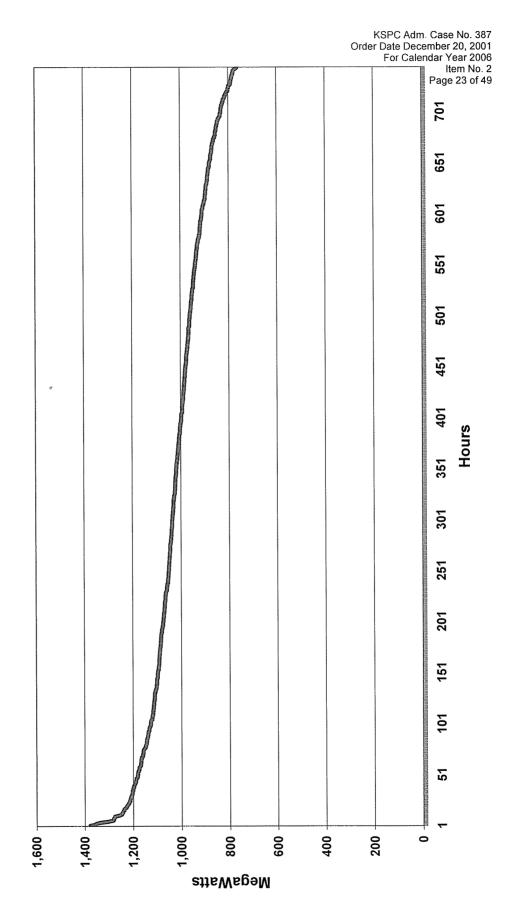




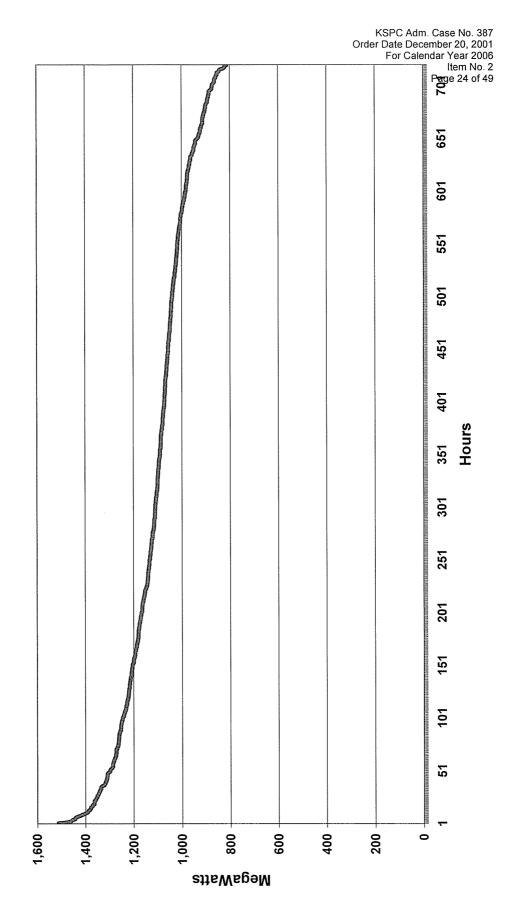
Kentucky Power Company August 2006 Load Duration Curve (System Load) Kentucky Power Company September 2006 Load Duration Curve (System Load)



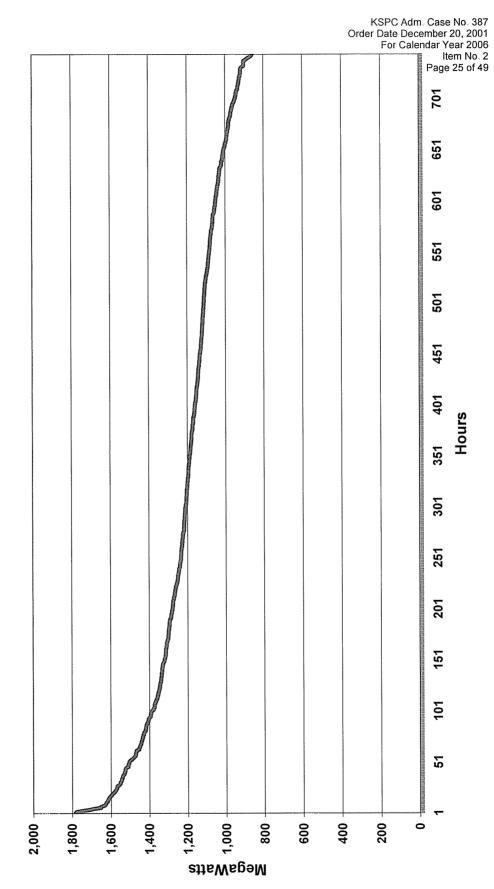
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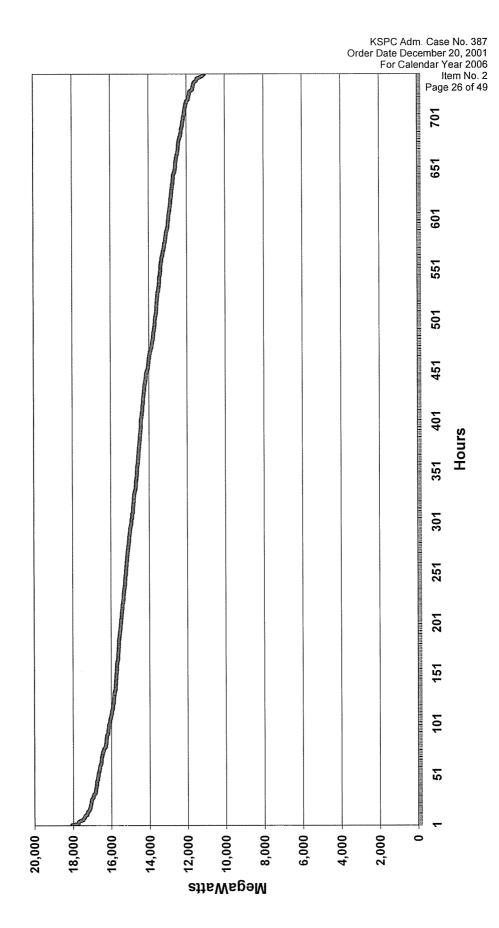
Kentucky Power Company November 2006 Load Duration Curve (System Load)



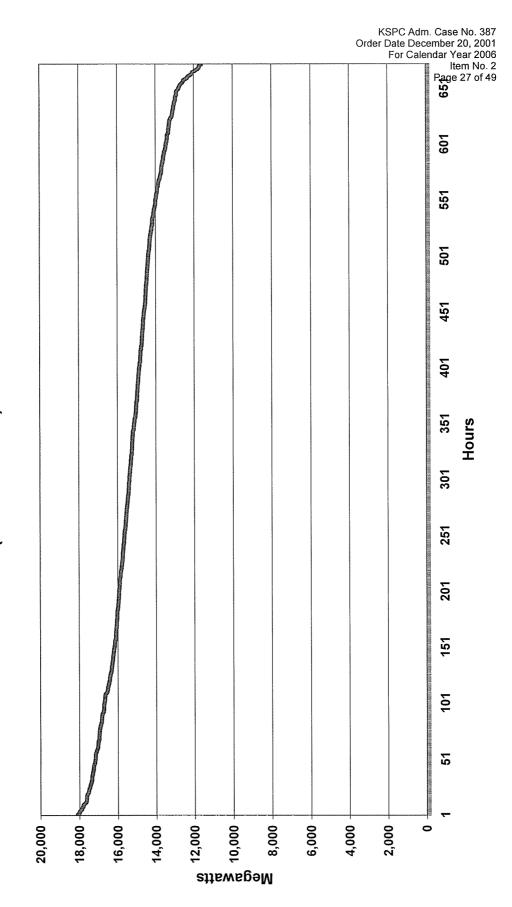
Kentucky Power Company December 2006 Load Duration Curve (System Load)



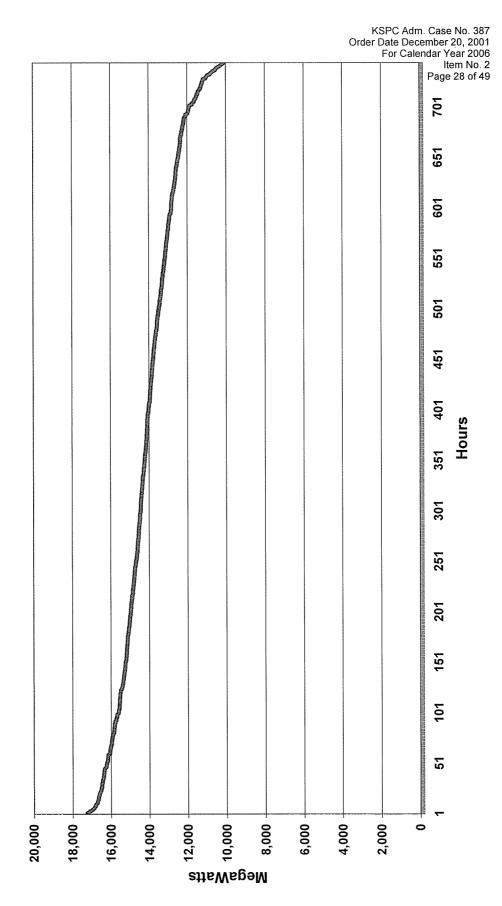
American Electric Power System - East Zone January 2006 Load Duration Curve (Internal Load)



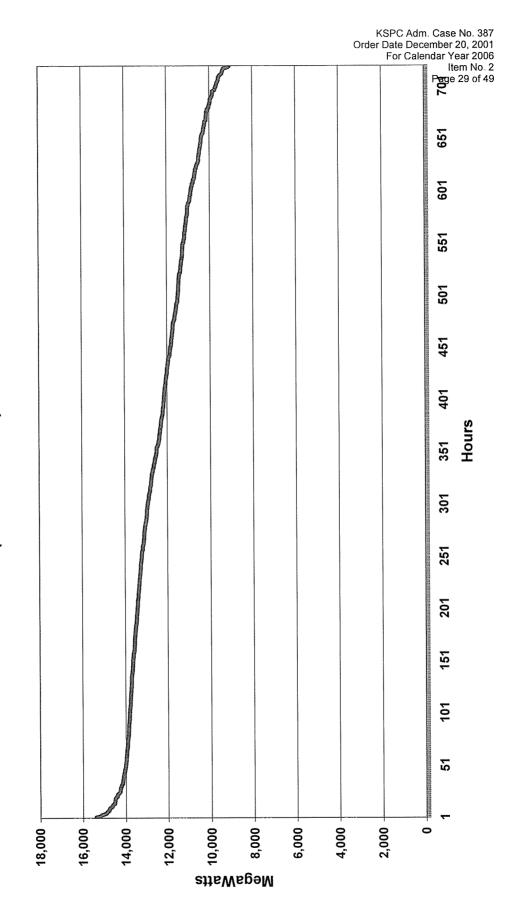
American Electric Power System - East Zone February 2006 Load Duration Curve (Internal Load)



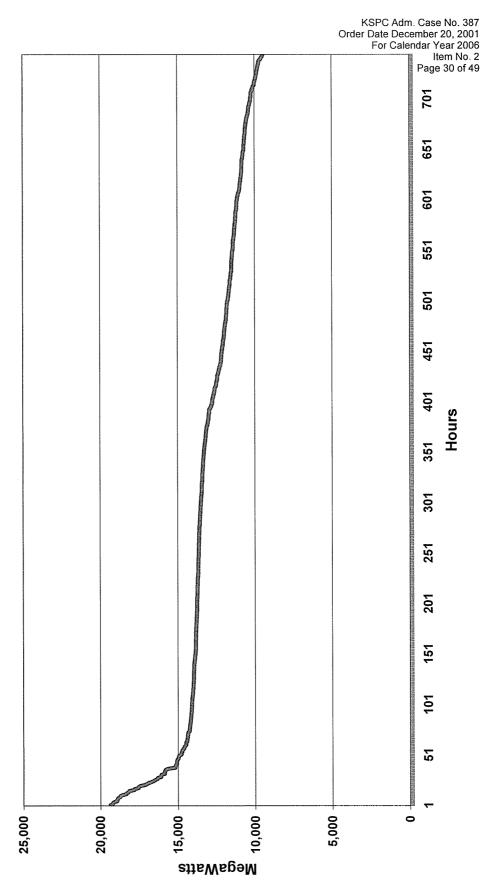


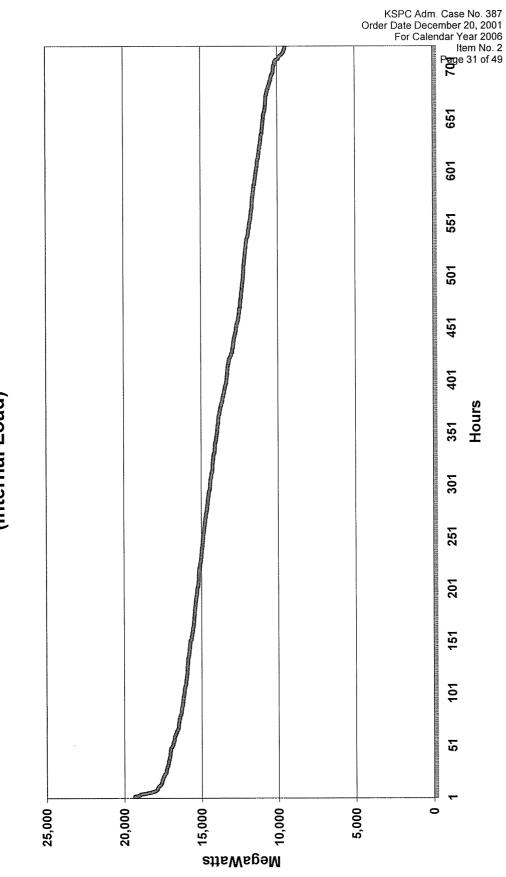


American Electric Power System - East Zone April 2006 Load Duration Curve (Internal Load)

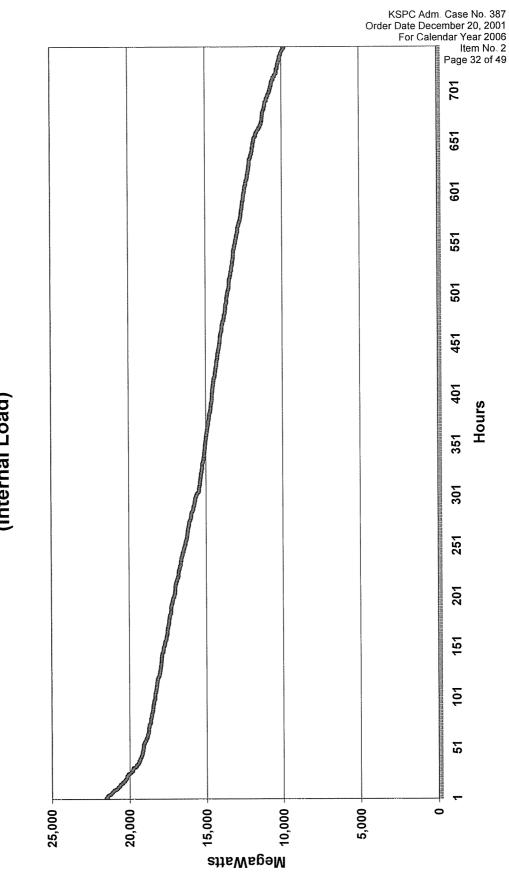




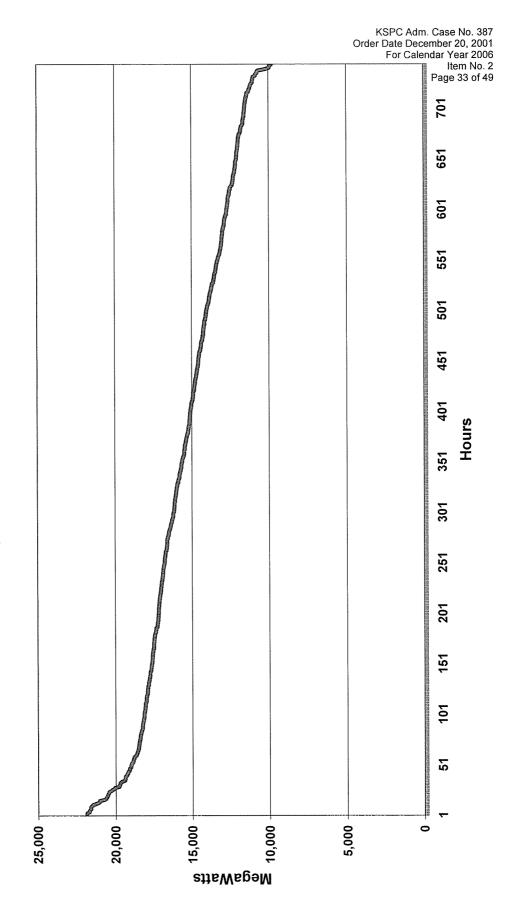




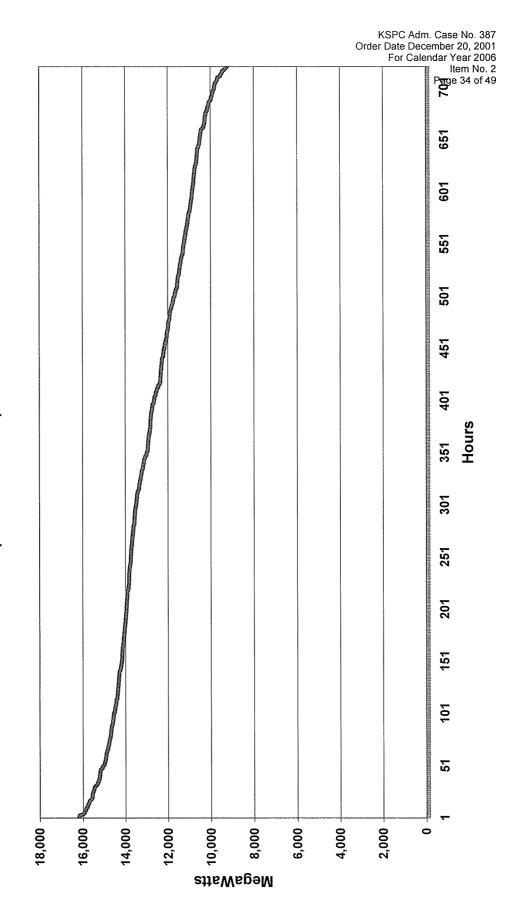
# American Electric Power System - East Zone June 2006 Load Duration Curve (Internal Load)



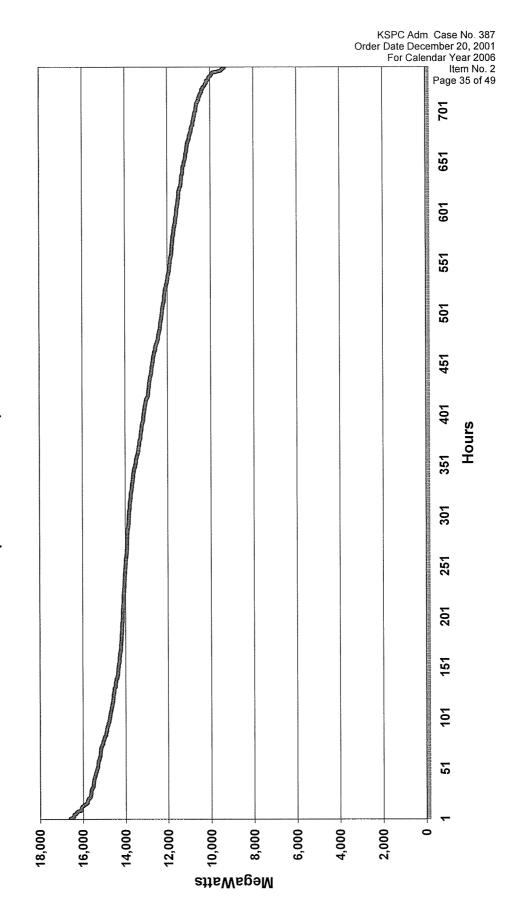
American Electric Power System - East Zone July 2006 Load Duration Curve (Internal Load) American Electric Power System - East Zone August 2006 Load Duration Curve (Internal Load)



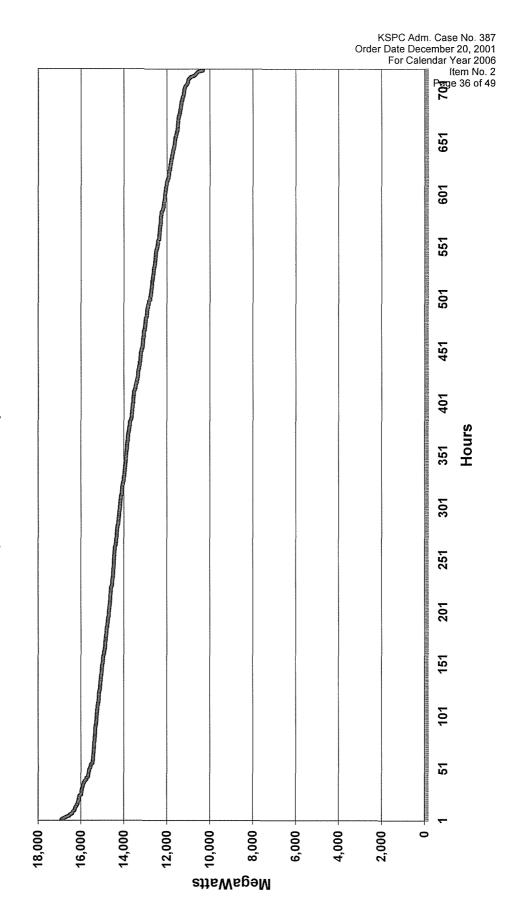
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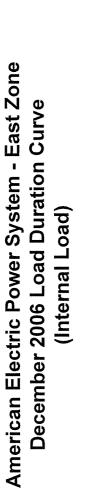


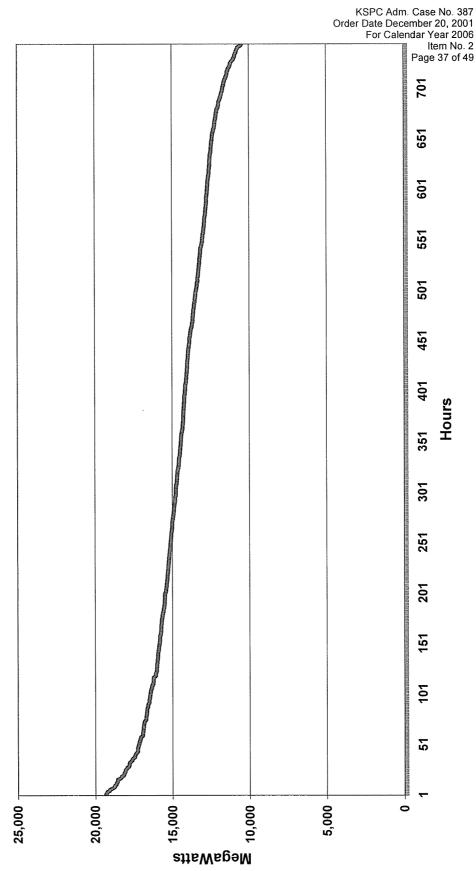
American Electric Power System - East Zone October 2006 Load Duration Curve (Internal Load)



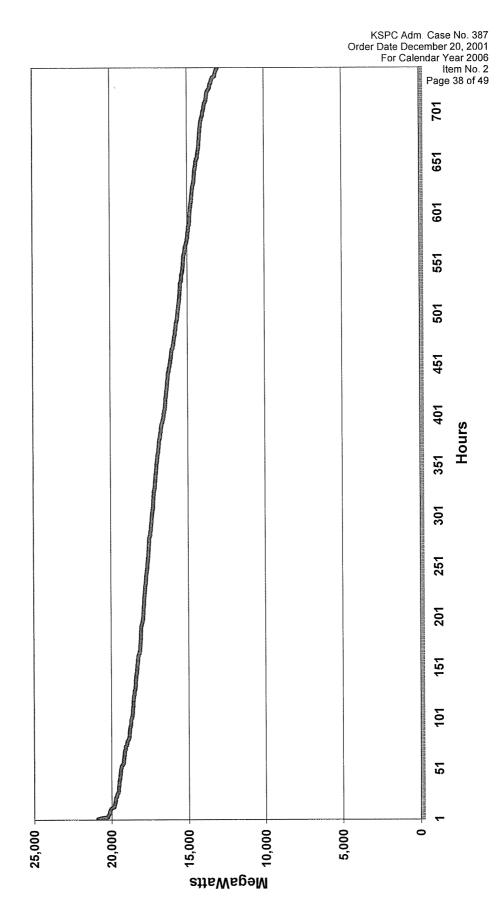
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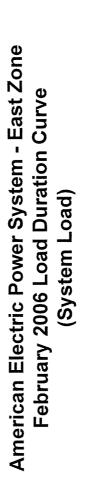


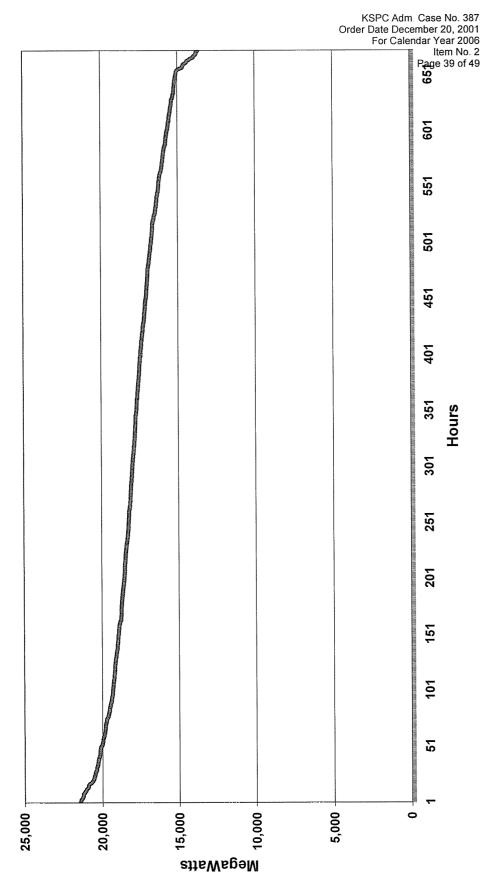




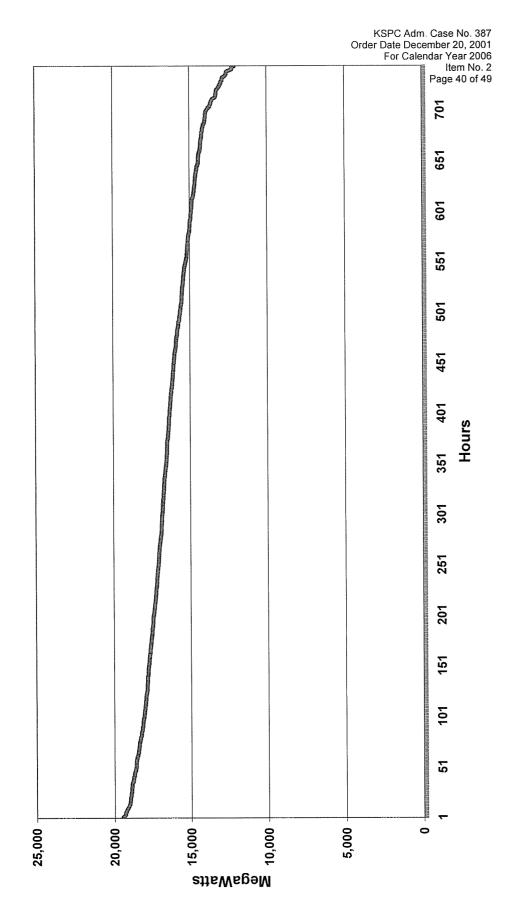
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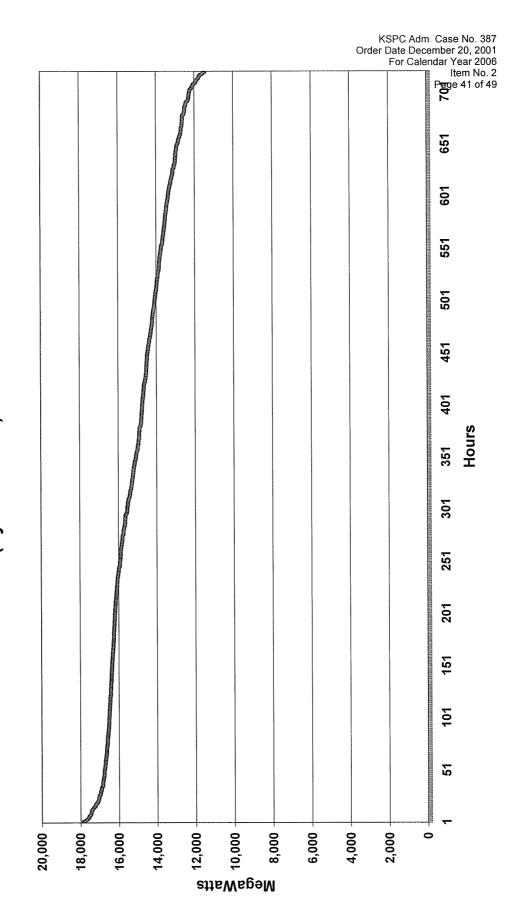




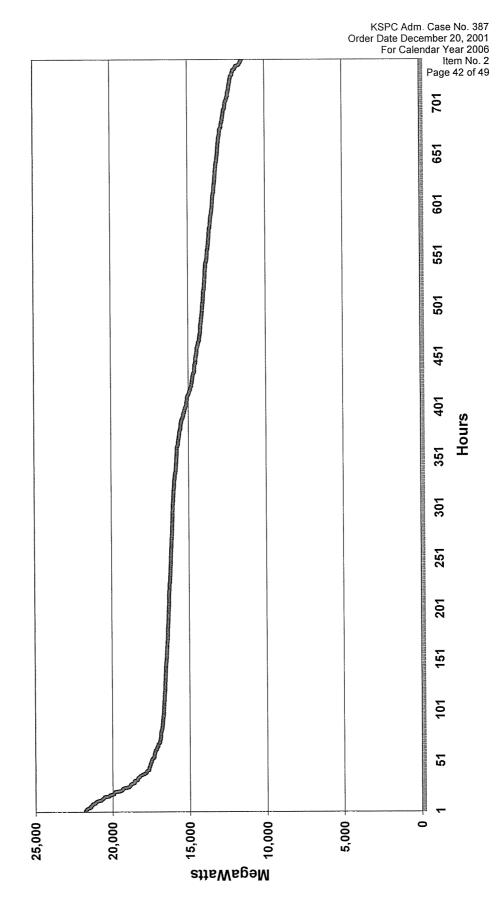
American Electric Power System - East Zone March 2006 Load Duration Curve (System Load)



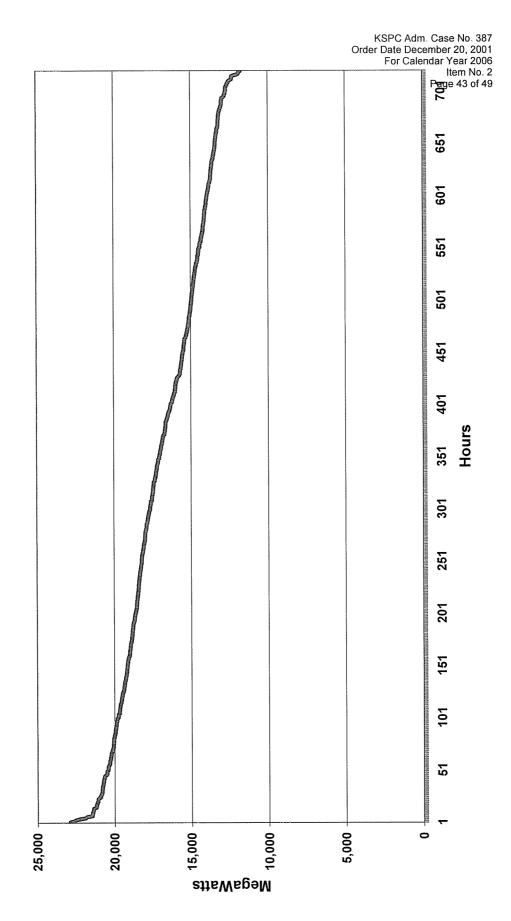
American Electric Power System - East Zone April 2006 Load Duration Curve (System Load)

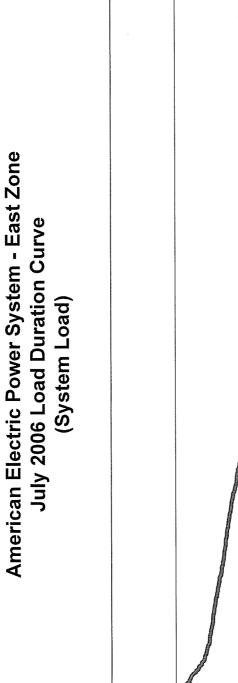


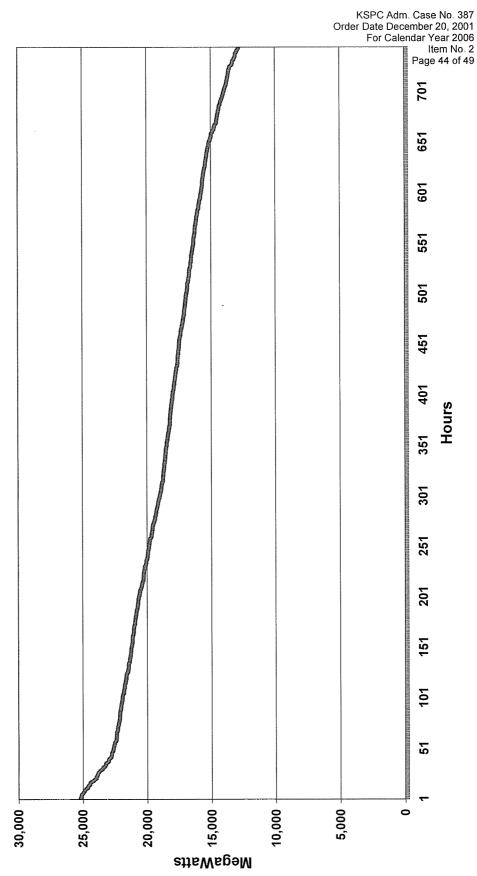
American Electric Power System - East Zone May 2006 Load Duration Curve (System Load)



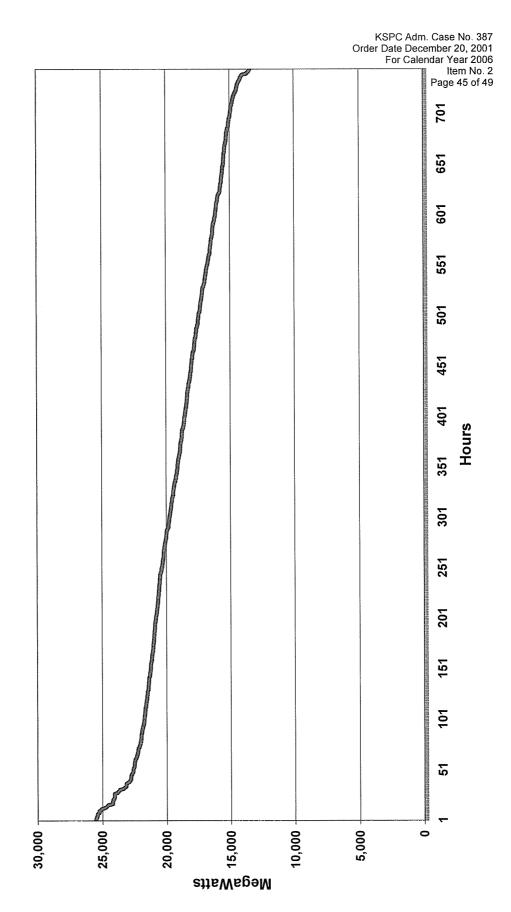
American Electric Power System - East Zone June 2006 Load Duration Curve (System Load)



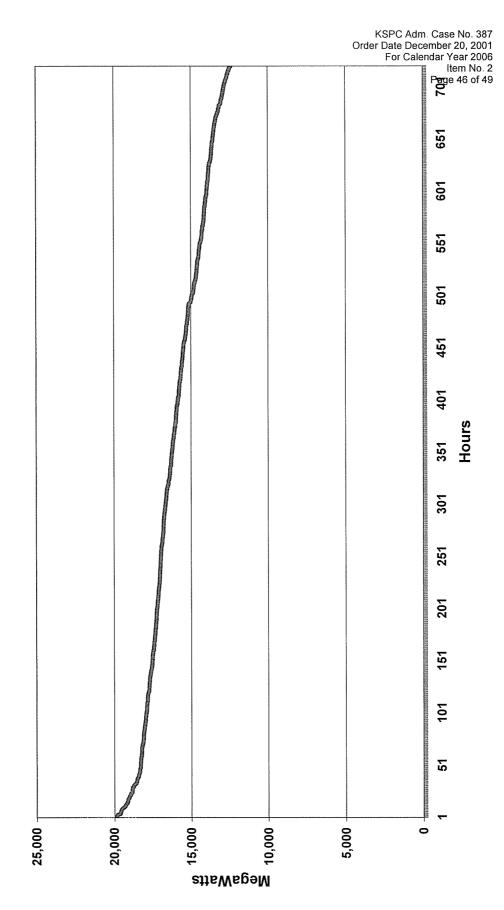




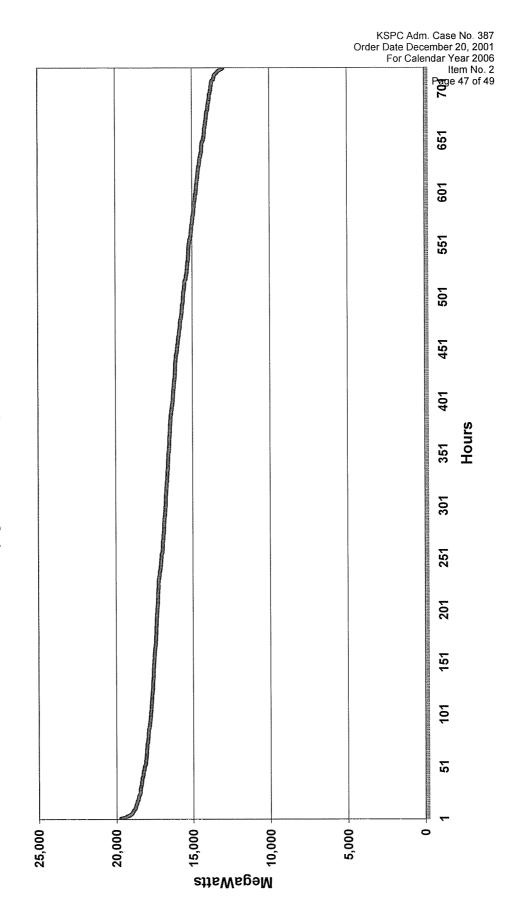
American Electric Power System - East Zone August 2006 Load Duration Curve (System Load)



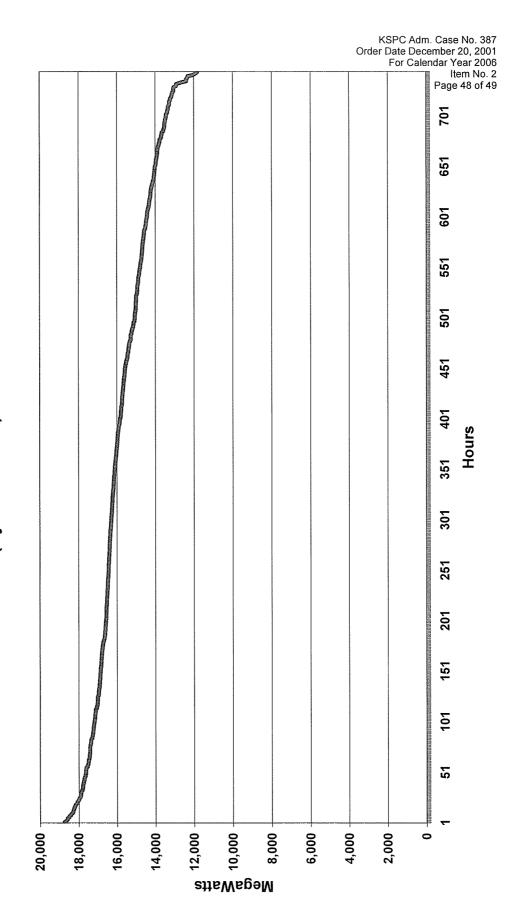
American Electric Power System - East Zone September 2006 Load Duration Curve (System Load)

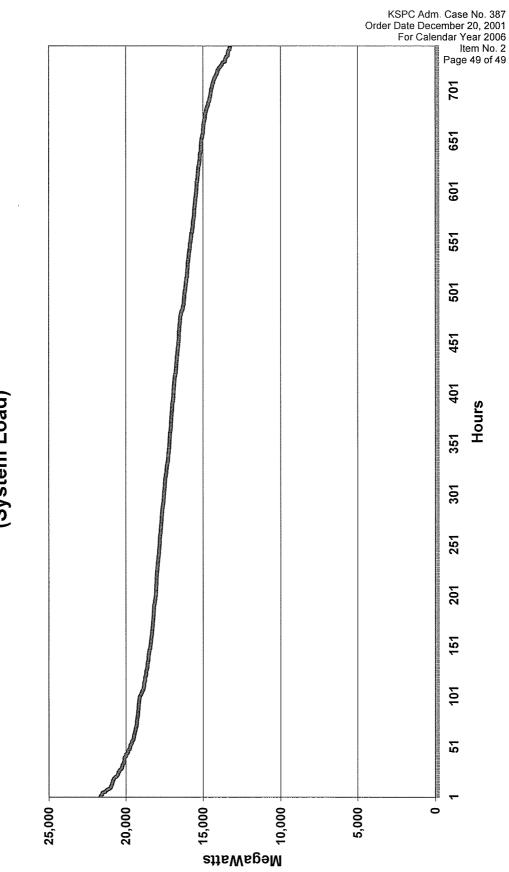


American Electric Power System - East Zone November 2006 Load Duration Curve (System Load)



American Electric Power System - East Zone October 2006 Load Duration Curve (System Load)





American Electric Power System - East Zone December 2006 Load Duration Curve (System Load)

KPSC Administrative Case No. 387 Annual Resource Assessment Calendar Year 2006 Order Dated December 20, 2001 Item No. 3 Page 1 of 4

# Kentucky Power Company

# REQUEST

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). Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).

### RESPONSE

Page 2 provides Kentucky Power Company's forecast of seasonal peak internal demands and annual internal energy requirements. In addition, the associated high forecast for seasonal peak internal demands and internal energy requirements are provided on this page.

Page 3 provides AEP System-East's forecast of seasonal peak internal demands and annual internal energy requirements. In addition, the associated high forecast for seasonal peak internal demands and internal energy requirements are provided on this page.

The off-system energy sales forecasts for Kentucky Power Company and AEP System-East are provided on Page 4 of this response. Forecasts of off-system peak demand for Kentucky Power Company and AEP System-East have not been developed and therefore, such forecasts are not available. In addition, high forecasts for off-system energy sales and peak demand have not been developed and therefore, such forecasts are not available

# Kentucky Power Company Base and High Forecast Energy Sales (GWH) and Seasonal Peak Demand (MW) 2007 - 2011

|      |                |       | Summer      | mer   | Precedin    | Preceding Winter |
|------|----------------|-------|-------------|-------|-------------|------------------|
|      | Energy Sales   | Sales | Peak Demand | emand | Peak Demand | emana            |
| Year | Base           | High  | Base        | High  | Base        | High             |
| 2005 | R 140          | 8 388 | 1.347       | 1.388 | 1,615       | 1,664            |
| 2006 | 0,170<br>8 358 | 8 715 | 1 373       | 1.432 | 1,644       | 1,714            |
| 2000 | 0,330<br>8 409 | 8 839 | 1.387       | 1.459 | 1,646       | 1,731            |
| 2010 | 8,450          | 8,939 | 1,393       | 1,474 | 1,660       | 1,756            |
| 2011 | 8,499          | 9,075 | 1,401       | 1,496 | 1,667       | 1,780            |

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# AEP System-East Zone Base and High Forecast Energy Sales (GWH) and Seasonal Peak Demand (MW) 2007 - 2011

|      |         |              | Sun    | Summer   | Precedit | Preceding Winter |
|------|---------|--------------|--------|----------|----------|------------------|
|      | Energy  | Energy Sales | Peak [ | Demand   | Реак L   | Jemand           |
| Year | Base    | High         | Base   | ase High | Base     | High             |
| 2006 | CVV 151 | 136 437      | 22 355 | 23.034   | 20.390   | 21,010           |
| 2002 | 7++-    |              | 000144 |          |          |                  |
| 2008 | 134,854 | 140.621      | 22,588 | 23,554   | 21,194   | 22,100           |
| 2002 | 136 005 | 142 970      | 22.838 | 24.008   | 21,388   | 22,484           |
| 0007 | 900'00' | 1 AE 072     | 23 083 | 74 419   | 21.645   | 22,897           |
| 2010 | 070'101 | 140,410      | 2000   |          |          |                  |
| 2011 | 138.641 | 148,043      | 23,331 | 24,913   | 21,848   | 23,329           |

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| <u>Year</u><br>2007 | KPCo<br>Off-System<br><u>Sales</u><br>2.045 | AEP-East<br>Off-System<br><u>Sales</u><br>29,743 |
|---------------------|---|--|
| 2008                | 1,880                                       | 27,300   |
| 2009                | 1,654                                       | 24,864   |
| 2010                | 1,525                                       | 23,113   |
| 2011                | 1,518                                       | 23,098   |

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# Kentucky Power Company

### REQUEST

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 for the change. Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).

### RESPONSE

Due to the October 1, 2004 integration of AEP's Eastern System into the PJM Interconnection, AEP is now required to comply with the PJM mandated reserve margin.

PJM uses a probabilistic model of load levels and generating unit availability to set generation reserve requirements. Its target is a one-day-in-ten-years Loss of Load Expectation, taking import capability into account. The installed reserve margin is recalculated each year, depending on five-year average generation reliability, PJM load shape, and assistance available from neighboring regions. In addition, AEP's responsibility to PJM depends on its twelve-month history of generator reliability and its peak demand diversity in relation to the PJM total load.

For the June 2007 through May 2008 planning period, PJM has set the Installed Reserve Margin at 15.0% and the PJM Pool EFORd at 6.17%. Assuming that these factors remain constant, and using current AEP reliability, this translates into an annual AEP-PJM reserve requirement ranging from 9.7% to 15.5%, as shown in Item No. 5, Page 3. (This compares with 12% that AEP has used, based on our own determinations, since the late 1990s, and 15% prior to that.) Note that the reserve requirement appears low for 2007 and 2008. This is due to the fact that the demand forecast by PJM is considerably lower than the forecast by AEP.

The attachment to this response provides an example PJM reserve requirement calculation.

Currently, Kentucky Power Company is capacity deficient on a stand-alone basis. The basis of the AEP Intereconnection Agreement is that, over time, each member, including Kentucky Power Company, is responsible for installing its share of the System capacity. However, other members of the AEP Interconnection Agreement are more deficient at this time and it is the members with the highest capacity deficiencies that are expected to add capacity first.

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# PJM Reserve Margin Example For 2007/08 Planning Year

| Line |                                      |        | Comment  |
|------|--------------------------------------|--------|--|
| 1    | Factors                              |        |  |
| 2    | PJM Installed Reserve Margin (IRM) = | 15.00% |  |
| 3    | ÷ · ·                                | 6.17%  | Based on 5-year average PJM EFORd                        |
| 4    | Forecast Pool Requirement (FPR) =    |        | · -  |
| 5    |                                      |        |  |
|      | Obligations                          |        |  |
| 7    | -                                    | 20 202 | Coincident peak forecasted by PIM                        |
|      | Total Load Obligation =              |        | Coincident peak forecasted by PJM                        |
| 8    | UCAP Obligation =                    |        | Line 4 " Line 7  |
| 9    | UCAP Market Obligations =            |        |  |
| 10   | Total UCAP Obligation =              | 23,423 | Line 8 + Line 9  |
| 11   |                                      |        |  |
| 12   | Resources                            |        |  |
| 13   | Net ICAP =                           | 26,999 |  |
| 14   | AEP EFORd =                          | 7.50%  | MW-weighted average of Unit EFORds                       |
| 15   |                                      |        | Line 13 * (1- Line 14)                                   |
| 16   | , (tallable e e) li                  | ,•     |  |
|      | Position                             |        |  |
|      |                                      | 1 551  | Line 15 Line 10  |
| 18   | Net UCAP Position =                  | ,      |  |
| 19   | Net ICAP Position =                  | 1,677  | Line 187 (1- Line 14)                                    |
| 20   |                                      |        |  |
| 21   | Reserve Margin Percent =             | 16.9   | Question 5 Page 2, Column (17)                           |
| 22   | Reserve Percent Required By PJM =    | 9.7    | Line 21 - (Line 19 / Question 5 Page 2 Column (7)) * 100 |

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# **Kentucky Power Company**

# REQUEST

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. Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420)

# RESPONSE

Please see Page 2 of this response, which provides projected winter peak demands, capabilities, and margins for KPCo for the period 2006/07 through 2010/11.

Please see Page 3 of this response, which provides projected summer peak demands, capabilities, and margins for the AEP System - East for the period 2007 through 2011.

KENTUCKY POWER COMPANY Projected Winter Peak Demands, Generating Capabilities, and Margins

|          |         | 1        |             |           |             |          |           | 5            | friendere          |             |                         |               |                     |
|----------|---------|----------|-------------|-----------|-------------|----------|-----------|--------------|--------------------|-------------|-------------------------|---------------|---------------------|
|          |         | -        |             |           |             | Existing | Sales     | Capacity .   | Capacity Additions | Purchases   |                         |               |                     |
|          | lototal |          |             | Inter-    |             | Capacity |           |              |                    | Annual      | Total                   |               | ;                   |
| 181-4-1  |         | Mac      | Total       | runtihle  | Total       | & Chnas  | Net Sales | New Build    | New Build          | Mkt. Purch. | Equivalent              |               | % of                |
| winter   | Demanu  | MC I     | Demand      | Domand    | Domand      | - E      | (d)       | Additions    | MM                 | (e)         | Capacity                | MM            | Demand              |
| Season   | (e)     | (0)      | nellalia    | nelliarin |             | 121      | 121       |              |                    | 10,         | (1)+(8)+(2) (3)-(01)    | (11)=(10)-(5) | (17)=[(11)/(5)]•100 |
|          | (1)     | (2)      | (3)=(1)-(2) | (4)       | (5)=(3)-(4) | (9)      | (2)       |              | (8)                | (e)         | (e). (n). ( i).(n)-(n)) |               |                     |
|          | ,       |          |             | c         | 770 7       | 1 166    | 38        | No New Build | C                  | 0           | 1,418                   | (196)         | (12.1)              |
| 2006/07  | 1.615   | •        | 1,614       | 0         | 1,014       | 004.1    | 00        |              |                    |             | 7117                    | 10001         | (12 8               |
| 0012000  | 1044    | Ŧ        | 1 6/3       | C         | 1 643       | 1.456    | 99<br>9   | No New Build | 0                  | 2           | 1,41/                   | 1022)         | 1.0.1               |
| 00///00Z | 1,044   | _        |             |           |             | 101      | 52        | No New Build | c                  | 0           | 1.429                   | (216)         | (13.1)              |
| 2008/09  | 1,646   | <b>*</b> | 1,645       | þ         | 1,040       | 107.1    | 20        |              |                    |             | 1 166                   | (PUC)         | (12.3               |
| 2000/10  | 1 660   | <b>~</b> | 1 659       | 0         | 1,659       | 1,467    |           | No New Build | o                  | 5           |                         | (103)         |                     |
| 11/01/02 | 1 667   |          | 1 666       | 0         | 1.666       | 1,467    | (3)       | No New Build | 0                  | 0           | 1,470                   | (197)         | 2.11.5              |

Notes: (a) Based on 2007 Load Forecast.

(b) Includes expanded DSM.

(c) Reflects the following winter capability assumptions:
6.6% MLR share (2005/07) of total Mone purchase of 94 MW (Winter).
EFFICIENCY IMPROVEMENTS:
2008/09: Rockport 1: 5 MW (valve)
2009/10: Rockport 2: 5 MW (valve)

(d) MLR share of Committed Sales

(e) Actual purchases will be UCAP purchases from PJM Market

KPSC Adm Case 387 Order Dated December 20, 2001 For Calendar Year 2006 Item No. 5 Page 2 of 3 AEP SYSTEM - EAST ZONE Projected Summer 2007 Peak Demands, Generating Capabilities, and Margins

Notes:

(a) Based on 2007 Load Forecast that is not coincident with PJM's peak. Includes Monongahela Power, and Ormet ongoing beyond two years.

(b) Load forecasting view of interruptible Demand.

(c) Includes expanded DSM.

(d) Includes Buckeye Cardinal entitlement and East-West transfer through 2011. City of Lebanon, OH removed since supplied through MISO.

(e) Reflects the following summer capability assumptions: OVEC purchase: 951 MW (Summer). Mone purchase: 75 MW (Summer). Summersville purchase: 80 MW (Summer)

FGD DERATES:

2007: Mitchell 1&2: 43 MW each; Mountaineer 1: 55 MW (141 MW Total) 2008: Amos 3: 41 MW. Cardinal 1&2: 19 MW each; Stuart 1,2.3&4: 2 MW each (87 MW Total) 2009: Amos 1&2: 25 MW each; Conesville 4: 18 MW; Kyger Creek 1,2.3,4&5: 4 MW each (98 MW Total) 2010: Cardinal 3: 15 MW. Clifty Creek 1,2.3,4.5&5: 4 MW each (39 MW Total)

(e) continued ASSUMED RETIREMENTS FOR PLANNING PURPOSES: 2010: 605 MW 2012: 790 MW 2012: 70 MW 2008: 90 MW 2008: 91 MW 2009: 47 MW 2011: 105 MW

(f) Includes: Constellation purchase (2009-2011), CP&L Rockport sale, purchase for CSP/Monongahela Power, and Wisconsin Public Service & Wolverine sales. UNIT RE-RATES: 2008: 25 MW

(g) Reflects the stater company of I&M, Columbus Southern Power's agreement to acquire the existing 438 MWD Darby generating station from Dayton Power and Light. This capacity is expected to be available to the East Zone by the summer of 2007.

Also reflects AEP Generating Co.'s agreement to acquire the existing 1,096 MW Lawrenceburg generating station from Public Service Enterprise Group. This capacity is expected to be available to the East Zone by the summer of 2008.

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# Kentucky Power Company

# REQUEST

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

### RESPONSE

Listed below is the outages scheduled for Big Sandy units as of this date.

| YEAR | UNIT 1            | UNIT 2            |
|------|-------------------|-------------------|
| 2007 | Less than 4 weeks | Less than 4 weeks |
| 2008 | More than 4 weeks | More than 4 weeks |
| 2009 | Less than 4 weeks | Less than 4 weeks |
| 2010 | More than 4 weeks | Less than 4 weeks |
| 2011 | Less than 4 weeks | More than 4 weeks |

There is no retirement of generating capacity planned for the current year or following four years.

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# **Kentucky Power Company**

# REQUEST

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. Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).

### RESPONSE

In November 2006, AEP announced an agreement for its CSP affiliate in the East Zone to purchase the Darby Generating Station with a summer rating of 438MW. Also, in January of 2007, AEP announced an agreement to purchase the Lawrenceburg Generating Station with a summer rating of 1,096MW. Both purchases are pending the regulatory approval process, which should be completed by mid-2007. At the present time, the AEP System-East is evaluating a mix of generation resources to meet its projected capacity needs through 2017. In the near term, the AEP System-East Zone plans to meet any additional capacity needs through purchases from the market on an as-needed basis. Prior to 2017, the AEP System-East Zone also expects to construct and/or acquire generation facilities, but the precise timing, mix of technology, location and size of such additions remain under review.

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# Kentucky Power Company

# REQUEST

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

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

Total energy delivered to all interconnections on the transmission system.

# RESPONSE

Please see attachment.

#### (a) All quantities represent metered values.

| Received from (MWh):       | <u>2003</u><br>(Actual) | <u>2004</u><br>(Actual) | <u>2005</u><br>(Actual) | <u>2006</u><br>(Actual) | <u>2007</u> | <u>2008</u> |
|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------|-------------|
| Appalachian Power (1)      | 11,353,842              | 11,066,166              | 11,871,456              | 9,485,862               | (4)         | (4)         |
| Ohio Power (1)             | 8,224,235               | 9,766,209               | 8,687,031               | 9,470,141               | (4)         | (4)         |
| East Ky Power Coop         | 277,577                 | 279,973                 | 362,963                 | 398,269                 | (4)         | (4)         |
| LGE(Kentucky Utilities)    | 91,767                  | 95,146                  | 137,523                 | 330,912                 | (4)         | (4)         |
| TVA                        | 585,205                 | 700,836                 | 649,374                 | 501,071                 | (4)         | (4)         |
| Illinois Power Co. (2)     | 8,866                   | 0                       | 34,647                  | 13,555                  | (5)         | (5)         |
| Illinois Power Co. (3)     | 10,190                  | 752                     | 30,508                  | 11,908                  | (5)         | (5)         |
| Big Sandy Generating Plant | 6,170,931               | 6,550,509               | 7,345,624               | 7,171,505               | 7,464,300   | 6,624,800   |

#### 8(b) All quantities represent metered values.

| Delivered to (MWh) :                    | 2003                  | <u>2004</u>           | <u>2005</u>           | 2006                  | <u>2007</u> | <u>2008</u> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------|-------------|
| Appalachian Power (1)<br>Ohio Power (1) | 18,721,045<br>235,326 | 20,152,403<br>205,829 | 20,485,009<br>303,310 | 18,982,168<br>215,747 | (4)<br>(4)  | (4)<br>(4)  |
| East Ky Power Coop                      | 275,826               | 314,621<br>1.205      | 263,853<br>476        | 218,005<br>97         | (4)         | (4)         |
| LGE(Kentucky Utilities)<br>TVA          | 1,268<br>13           | 116                   | 86                    | 97<br>70              | (4)<br>(4)  | (4)<br>(4)  |
| Illinois Power Co. (2)                  | 0                     | 1,267                 | 0                     | 0                     | (5)         | (5)         |
| Illinois Power Co. (3)                  | 0                     | 308                   | 0                     | 0                     | (5)         | (5)         |

lotes: (1) An AEP System company.

(2) At the Riverside independent power producing plant (IPP) in Lawrence County, KY.

(3) At the Foothills independent power producing plant (IPP) in Lawrence County, KY.

(4) The Company does not forecast metered interchange; however, the future years' energy flows are not expected to be materially different from the year 2006 actuals.

(5) The Company does not, and can not, forecast energy production output from an IPP.

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# **Kentucky Power Company**

#### REQUEST

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

c. Peak load capacity of the transmission system.

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

#### RESPONSE

c. The maximum amount of electric energy that can be transmitted through a transmission network is a function of the level of the load and generation connected to the transmission system as well as the level and direction of transmission service into, out of, and through the network. Therefore the 'Peak Load Capacity' of the transmission system cannot be quantified as a single value.

The Kentucky Power transmission system capacity is designed to serve the existing and projected load. It is also designed to reliably serve the load for any single contingency outage of a line, transformer or generator. The existing transmission system together with the capacity additions listed in response to Question 9 will provide adequate capacity to serve the existing and projected loads shown in the table below.

d. The actual summer and winter peak demands for 2006 and the forecasted summer and winter peak demands for 2007 through 2011 are noted in the table below.

|      | Kentucky Power Co   | mpany            |  |  |  |  |  |  |
|------|---------------------|------------------|--|--|--|--|--|--|
|      | Seasonal Peak Der   | nand             |  |  |  |  |  |  |
| Actu | al 2006 and Forecas | t 2007-2011      |  |  |  |  |  |  |
|      |                     |                  |  |  |  |  |  |  |
|      | Summer              | Preceding Winter |  |  |  |  |  |  |
| Year | Peak Demand         | Peak Demand      |  |  |  |  |  |  |
|      | (MW)                | (MW)             |  |  |  |  |  |  |
| 2006 | 1388                | 1665             |  |  |  |  |  |  |
|      |                     |                  |  |  |  |  |  |  |
| 2007 | 1322                | 1615             |  |  |  |  |  |  |
| 2008 | 1355                | 1644             |  |  |  |  |  |  |
| 2009 | 1387                | 1646             |  |  |  |  |  |  |
| 2010 | 1393                | 1660             |  |  |  |  |  |  |
| 2011 | 1401                | 1667             |  |  |  |  |  |  |

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# **Kentucky Power Company**

#### REQUEST

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

The following projects are planned for the Kentucky Power Company transmission system:

Coalton Area Network Improvement - Tap the Chadwick-KES 138 kV circuit and install a new 138/69 kV 200 MVA transformer at the Coalton station. This project will alleviate thermal overload and heavy loading conditions, improve reliability, and provide margin for future growth in the South Neal-Coalton-Bellefonte area. Current projected in service date is 2009.

Thelma-Paintsville Area Project - Add a 138/69 kV, 90 MVA transformer at Thelma Station and construct 1.8 miles of 69 kV line from West Paintsville Station to Paintsville Station. Convert Thelma-Paintsville 46 kV line to 69 kV to close the 69 kV loop. This project will provide single contingency reliability to the Paintsville area. Current projected in service date is December 2008.

Kentucky Hydrocarbon Project – Construct a 138 kV switching station between Betsy Lane Station and Beaver Creek Station. Construct an 8 mile 138 kV line extension to serve Equitable Gatherings Gas Compressor Plant. This project will provide 138 kV service to the new industrial load as well as transmission capacity for future area load growth. Current projected in service date is June 2008.