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April 12, 2006

RECEIVED

Mark R. Overstreet (502) 209-1219 (502) 223-4387 FAX moverstreet@stites.com

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

APR 1 2 2006

PUBLIC SERVICE COMMISSION

RE: Administrative Case No. 387

Dear Ms. O'Donnell:

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,

STITES & HARBISON PLAC

Mark R. Overstreet

cc: Errol K. Wagner
Parties of Record

KE057:00KE4:12126:2:FRANKFORT

Atlanta, GA Frankfort, KY Hyden, KY Jeffersonville, IN Lexington, KY Louisville, KY Nashville, TN Washington, DC

## COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

PECEIVED

APR 1 2 2006

PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

A REVIEW OF THE ADEQUACY O	<b>F</b> )	
KENTUCKY'S GENERATION	)	
CAPACITY AND TRANSMISSION	)	ADMINISTRATIVE
SYSTEM	)	<b>CASE NO. 387</b>

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RESPONSE OF KENTUCKY POWER COMPANY

TO

**COMMISSION ORDER DATED DECEMBER 20, 2001** 

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Administrative Case No. 387 Annual Resource Assessment
Calendar Year 2005
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 2005 monthly peak internal demands for Kentucky Power Company and AEP System-East. Kentucky Power Company and AEP System-East had 0 and 852 MW of contractual interruptible capacity, respectively.

Page 3 of this response provides actual 2005 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 Wagner

#### Kentucky Power Company and AEP System-East Actual and Weather Normalized Peak Internal Demand (MW) 2005

	Kentucky Power Company				AEP System-East			
		Peak	Peak	Normalized		Peak	Peak	Normalized
Month	Peak	Day	Hour	Peak	Peak	Day	Hour	Peak
January	1,685	1/24/2005	8	1,573	19,796	1/18/2005	8	19,085
February	1,319	2/2/2005	8	1,408	17,970	2/2/2005	8	18,070
March	1,429	3/3/2005	8	1,365	17,883	3/1/2005	20	17,126
April	1,075	4/2/2005	20	1,118	14,334	4/4/2005	7	14,675
May	1,112	5/3/2005	8	1,068	15,394	5/11/2005	16	15,783
June	1,236	6/14/2005	15	1,190	19,540	6/27/2005	15	18,934
July	1,358	7/26/2005	. 14	1,237	20,774	7/26/2005	15	20,342
August	1,310	8/12/2005	17	1,278	20,625	8/3/2005	16	19,813
September	1,181	9/22/2005	16	1,166	18,111	9/13/2005	16	17,680
October	1,125	10/27/2005	8	1,078	16,198	10/4/2005	16	14,819
November	1,370	11/18/2005	8	1,277	17,232	11/18/2005	8	16,489
December	1,665	12/20/2005	9	1,463	19,604	12/20/2004	8	18,649

#### Kentucky Power Company and AEP System-East Actual Peak System Demand (MW) 2005

	Kent	ucky Power Com	pany	AEP System-East			
		Peak	Peak		Peak	Peak	
Month	Peak	Day	Hour	Peak	Day	Hour	
January	2,079	1/24/2005	8	25,122	1/24/2005	8	
February	1,652	2/11/2005	9	22,340	2/17/2005	20	
March	1,758	3/4/2005	8	22,614	3/4/2005	8	
April	1,227	5/2/2005	20	16,743	5/4/2005	7	
May	1,264	5/3/2005	8	17,839	5/11/2005	16	
June	1,369	6/14/2005	15	22,225	6/27/2005	15	
July	1,541	7/25/2005	15	23,276	7/25/2005	14	
August	1,460	8/3/2005	14	22,715	8/2/2005	16	
September	1,350	9/22/2005	16	20,432	9/13/2005	16	
October	1,313	10/5/2005	16	19,439	10/5/2005	16	
November	1,560	11/18/2005	8	20,703	11/30/2005	21	
December	1,826	12/20/2005	9	22,034	12/20/2005	8	



Administrative Case No. 387 Annual Resource Assessment
Calendar Year 2005
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#### **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).

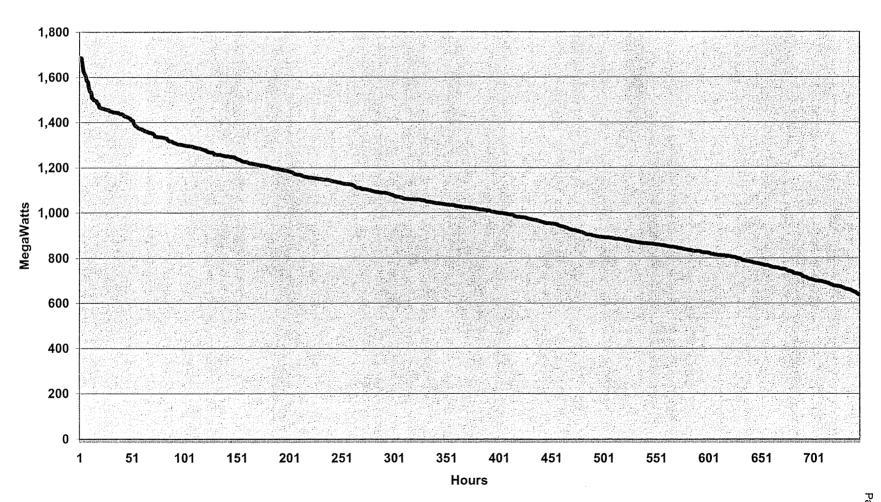
#### RESPONSE

Pages 2 through 13 provide 2005 monthly load duration curves for Kentucky Power Company's internal load. Pages 14 through 25 provide 2005 monthly load duration curves for Kentucky Power Company's system load. Pages 26 through 37 provide 2005 monthly load duration curves for AEP System-East's internal load. Pages 38 through 49 provide 2005 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.

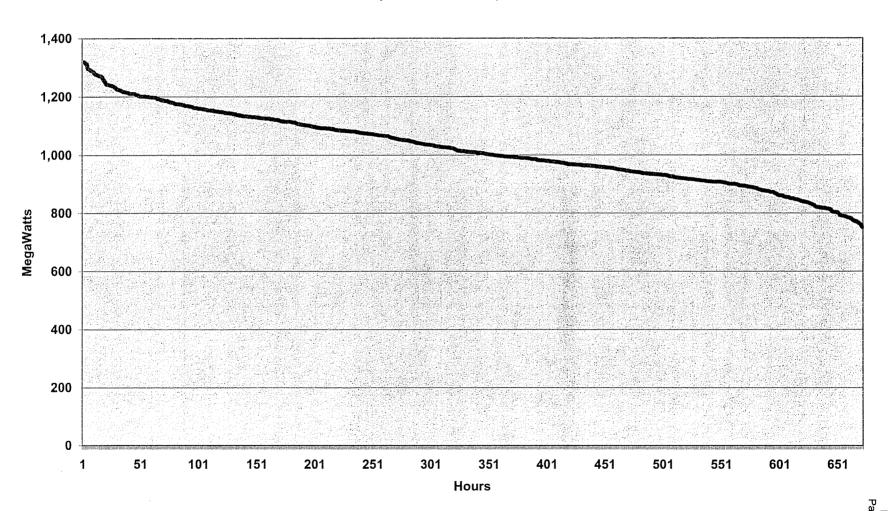
Weather-normalized monthly internal peaks for Kentucky Power Company and AEP System-East are provided on Page 2 of Item Number 1. Weather normalized system peaks have not been developed and therefore, are not available.

WITNESS: Errol Wagner

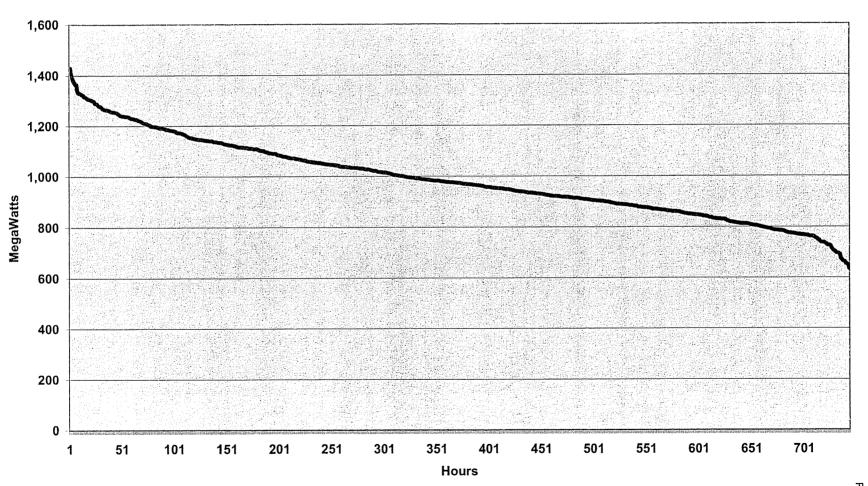
#### Kentucky Power Company January 2005 Load Durartion Curve (Internal Load)



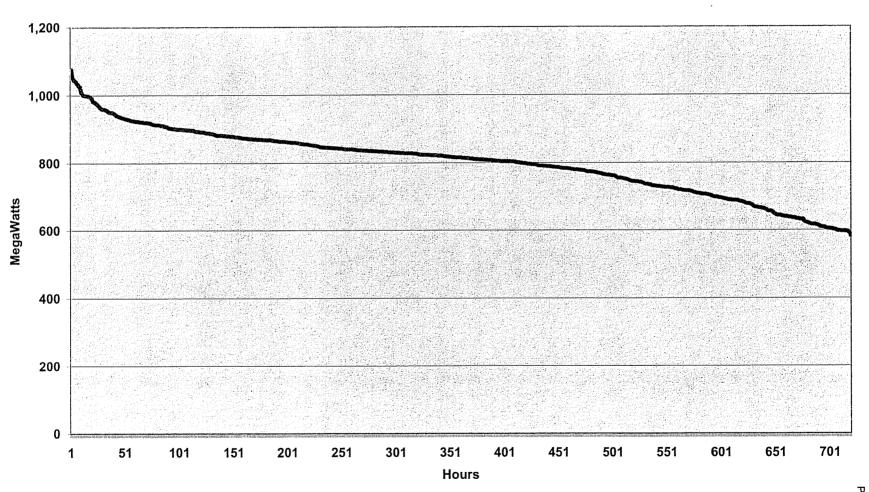
## Kentucky Power Company February 2005 Load Durartion Curve (Internal Load)



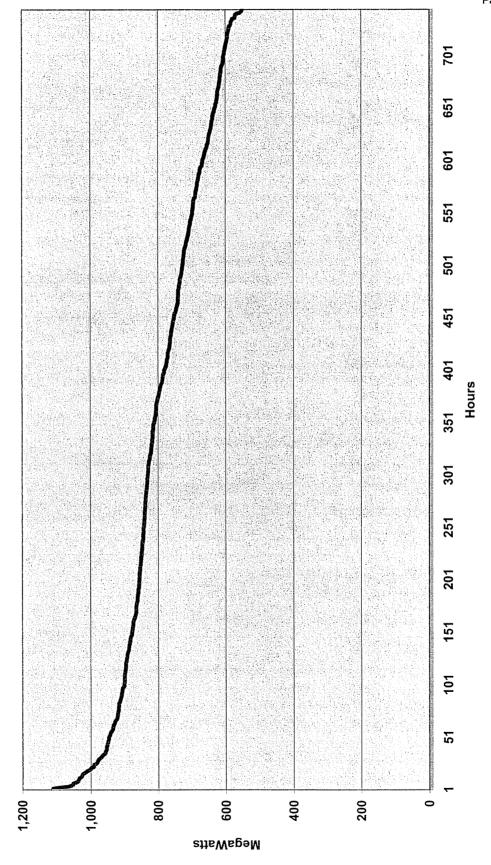
#### Kentucky Power Company March 2005 Load Durartion Curve (Internal Load)



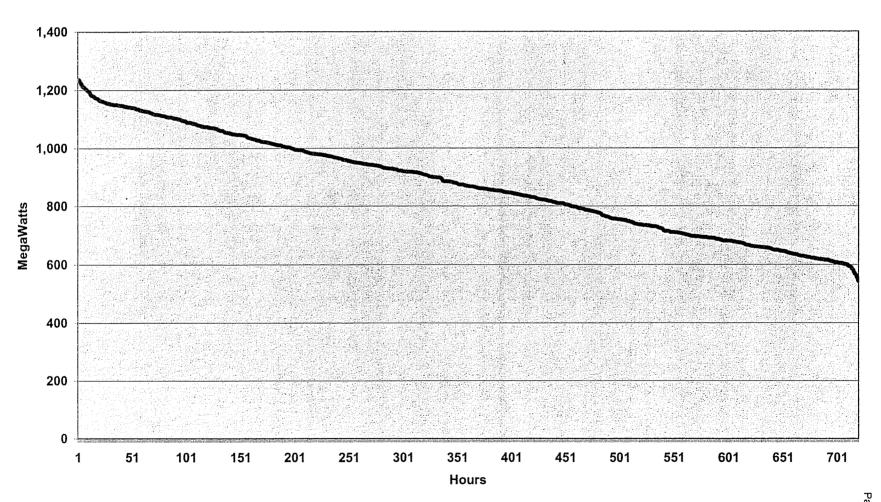
## Kentucky Power Company April 2005 Load Durartion Curve (Internal Load)



Kentucky Power Company May 2005 Load Durartion Curve (Internal Load)

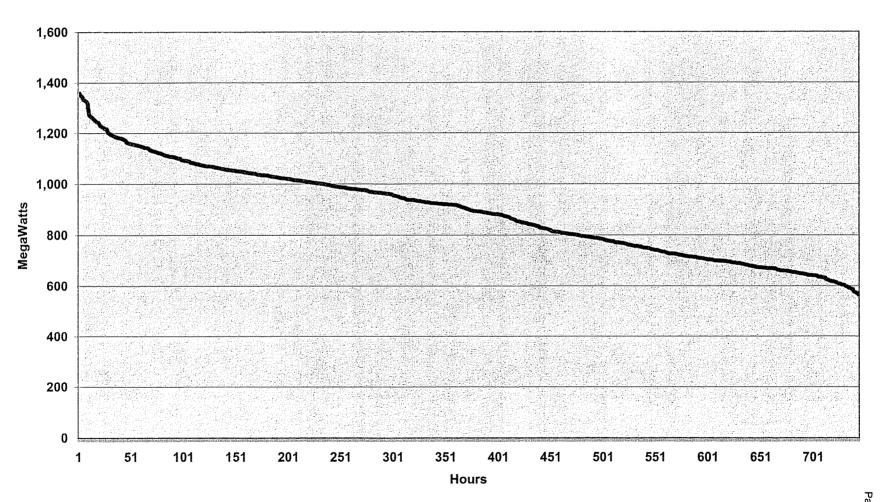


#### Kentucky Power Company June 2005 Load Durartion Curve (Internal Load)



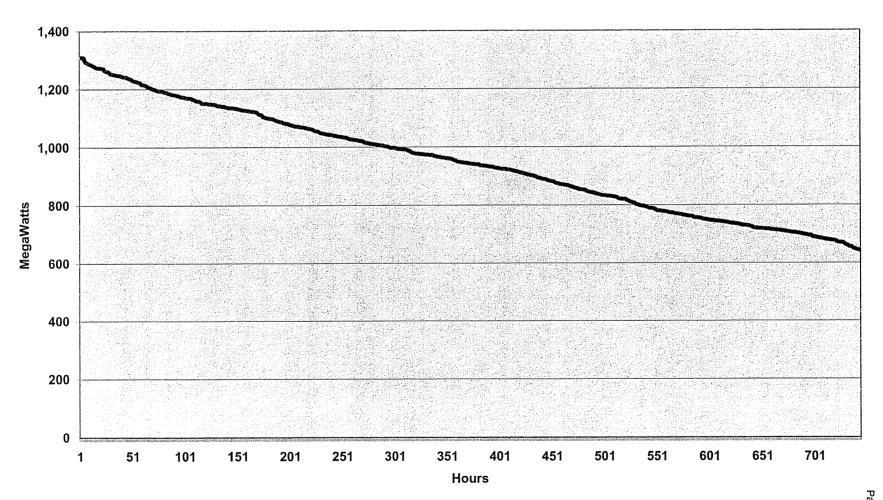
KPSC Adm. Case No. Order Dated December 20, 2 For Calendar Year 2

## Kentucky Power Company July 2005 Load Durartion Curve (Internal Load)



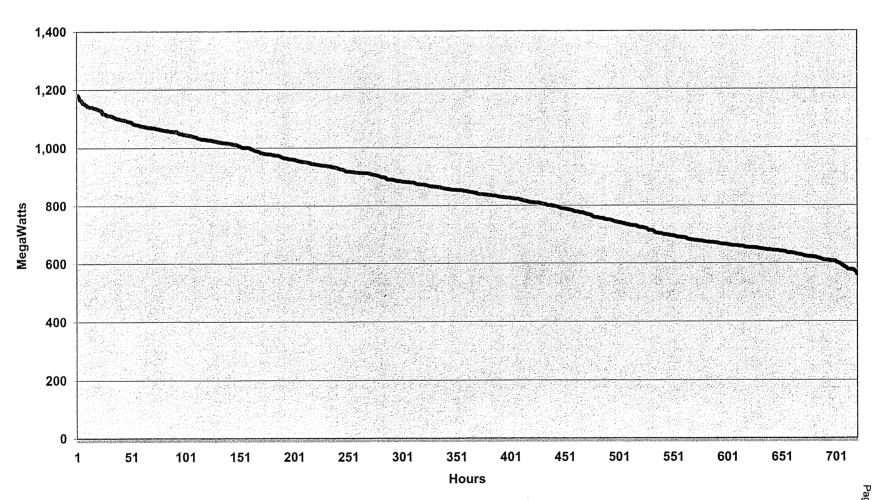
KPSC Adm. Case No. 387
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## Kentucky Power Company August 2005 Load Durartion Curve (Internal Load)



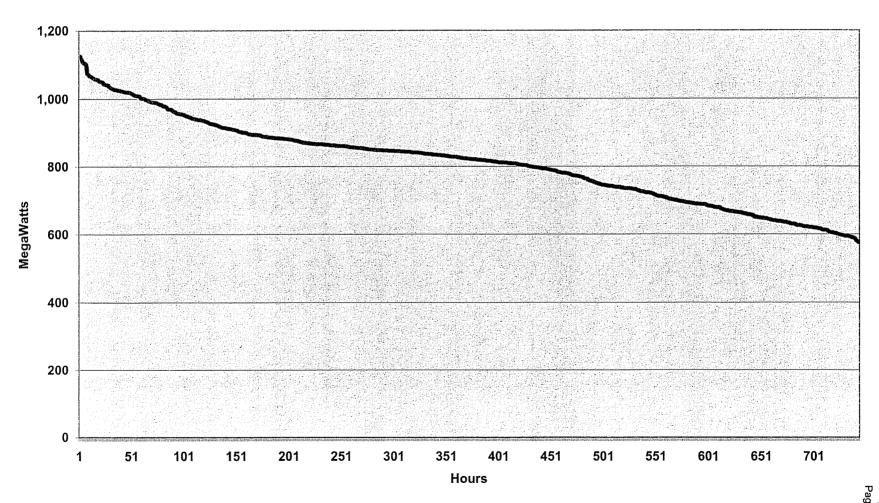
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## Kentucky Power Company September 2005 Load Durartion Curve (Internal Load)

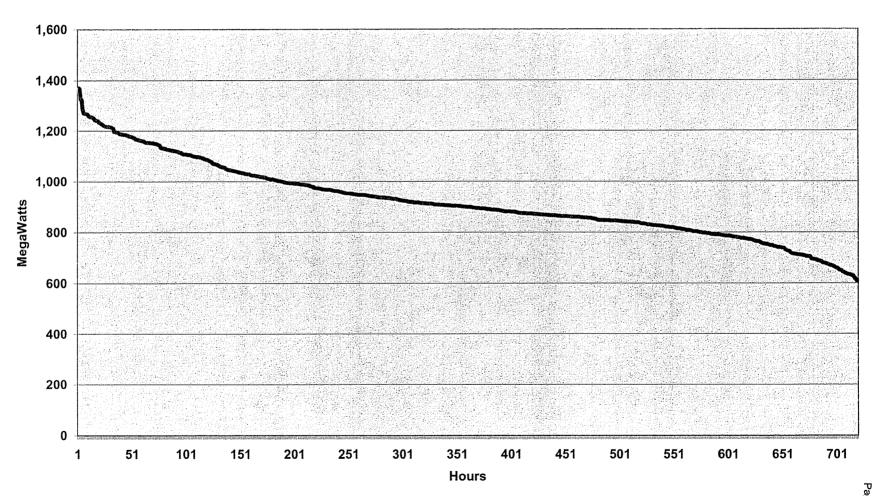


KPSC Adm. Case No.
Order Dated December 20, 2
For Calendar Year 2

## Kentucky Power Company October 2005 Load Durartion Curve (Internal Load)

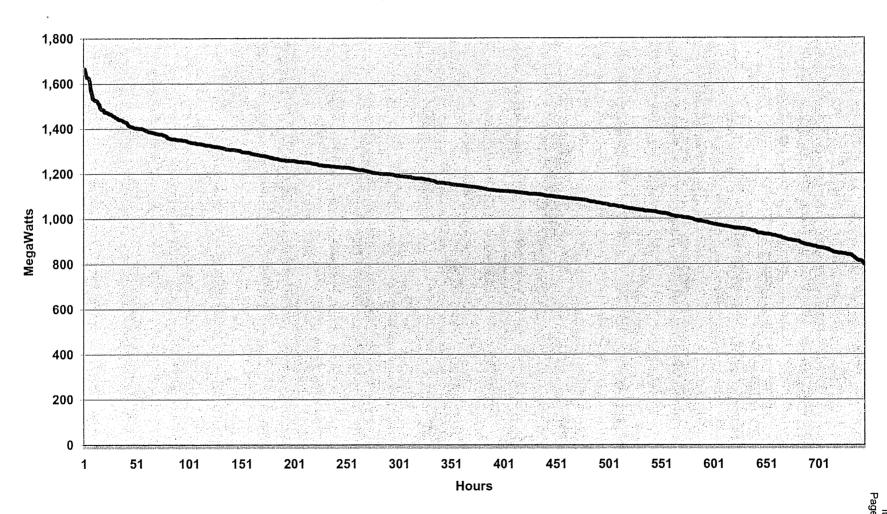


## Kentucky Power Company November 2005 Load Durartion Curve (Internal Load)



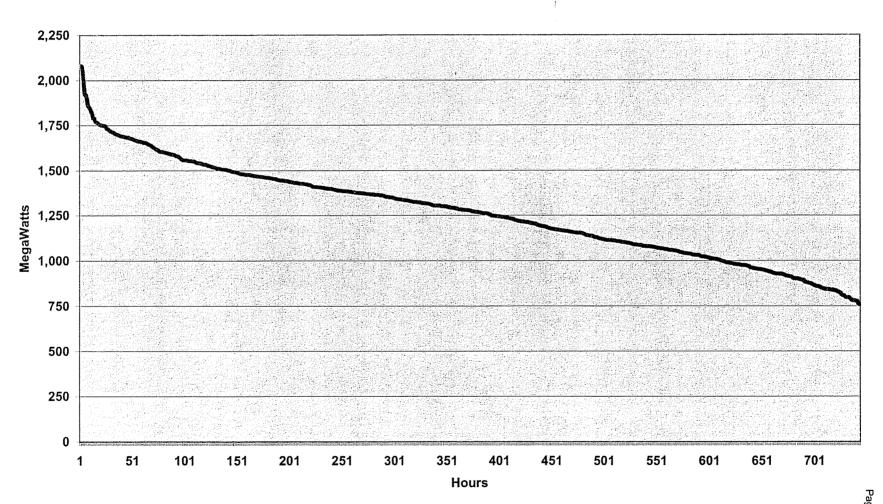
KPSC Adm. Case No.:
Order Dated December 20, 20
For Calendar Year 20

## Kentucky Power Company December 2005 Load Durartion Curve (Internal Load)



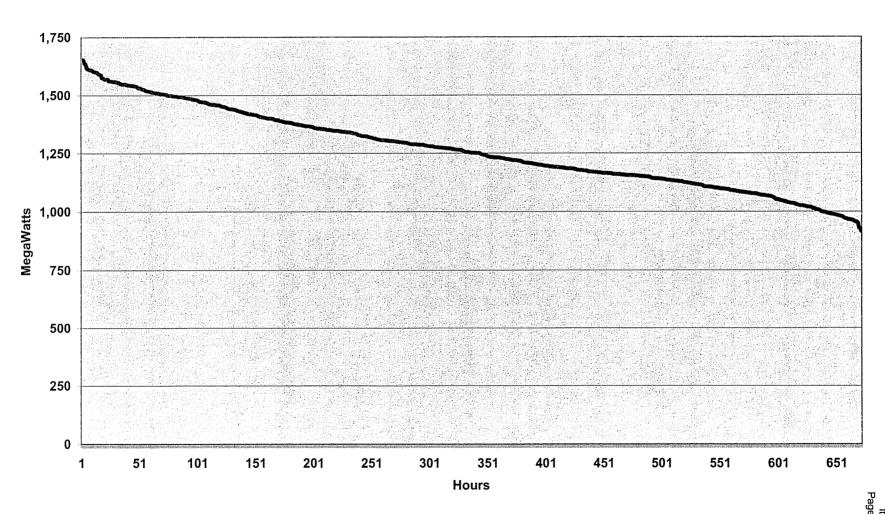
Order Dated December 20,
For Calendar Year

## Kentucky Power Company January 2005 Load Duration Curve (System Load)



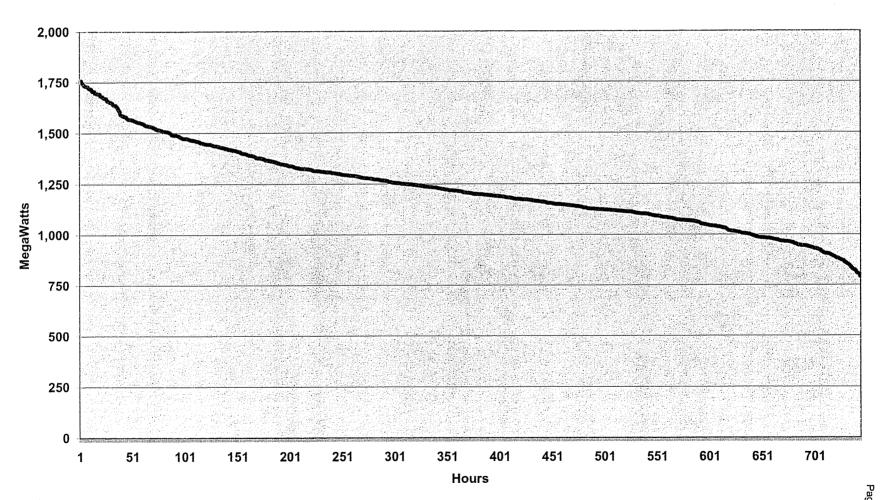
KPSC Adm. Case No. 387
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## Kentucky Power Company February 2005 Load Duration Curve (System Load)



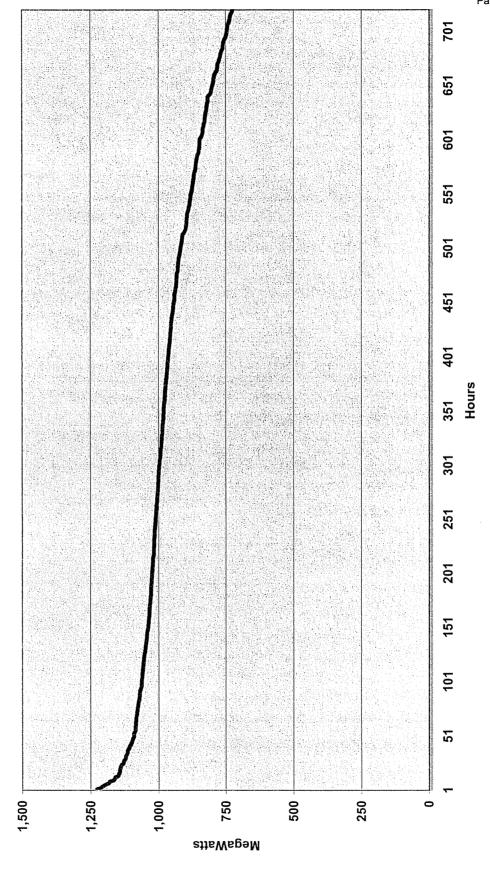
KPSC Adm. Case No. Order Dated December 20, 2 For Calendar Year 2

## Kentucky Power Company March 2005 Load Duration Curve (System Load)

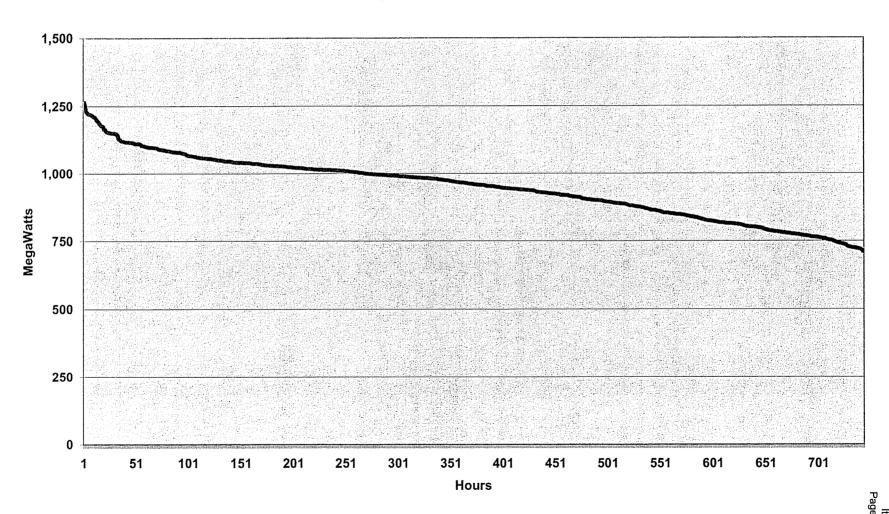


KPSC Adm. Case No. 3 order Dated December 20, 20 For Calendar Year 20

Kentucky Power Company April 2005 Load Duration Curve (System Load)

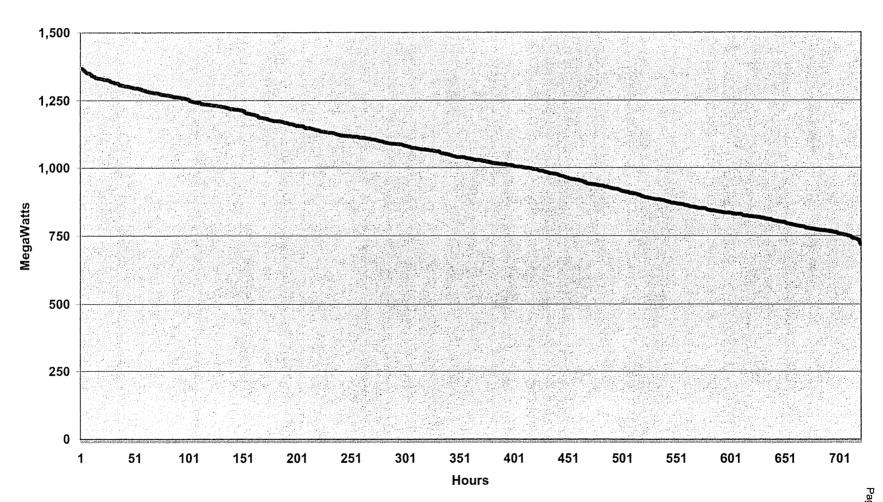


## Kentucky Power Company May 2005 Load Duration Curve (System Load)



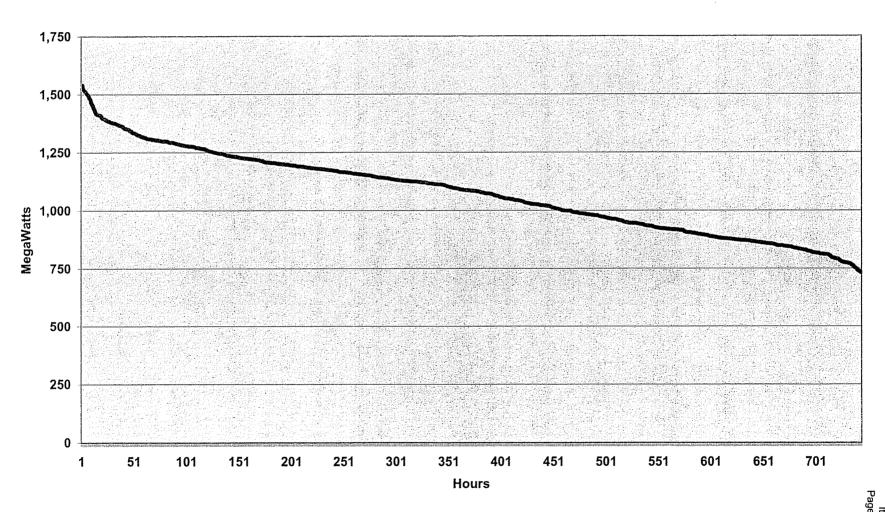
KPSC Adm. Case No. 38 Order Dated December 20, 200 For Calendar Year 200

## Kentucky Power Company June 2005 Load Duration Curve (System Load)



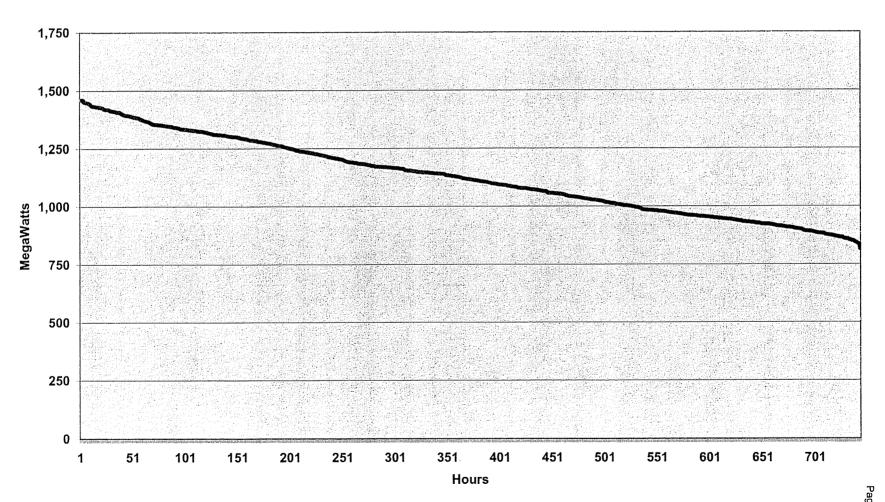
KPSC Adm. Case No. 3:
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For Calendar Year 20

## Kentucky Power Company July 2005 Load Duration Curve (System Load)



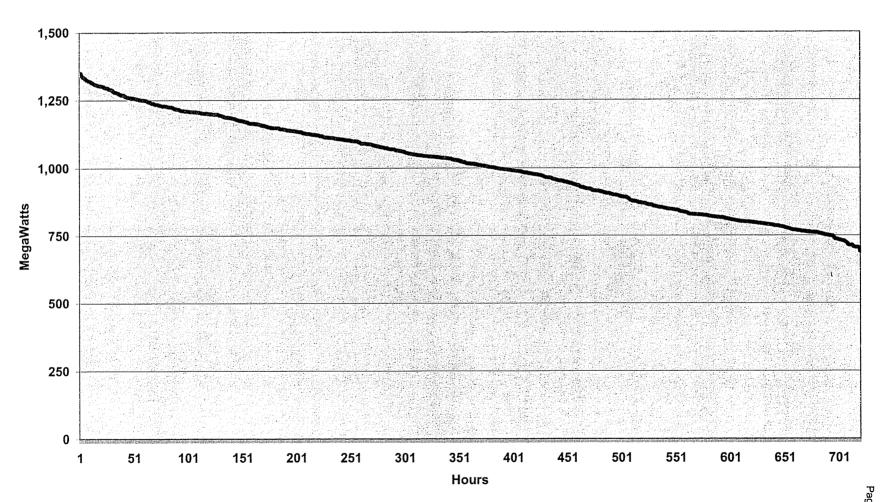
KPSC Adm. Case No. 38
Order Dated December 20, 200
For Calendar Year 200

## Kentucky Power Company August 2005 Load Duration Curve (System Load)



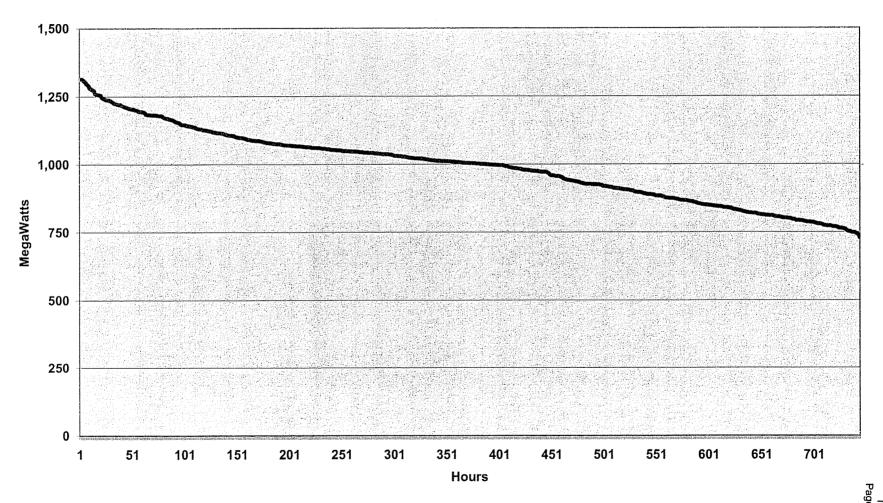
KPSC Adm. Case No. 387
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## Kentucky Power Company September 2005 Load Duration Curve (System Load)



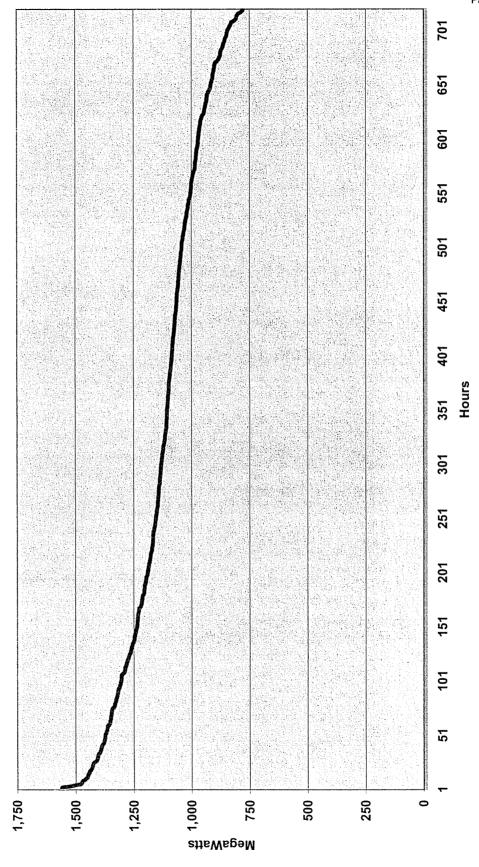
KPSC Adm. Case No. 3 Order Dated December 20, 20 For Calendar Year 20

## Kentucky Power Company October 2005 Load Duration Curve (System Load)

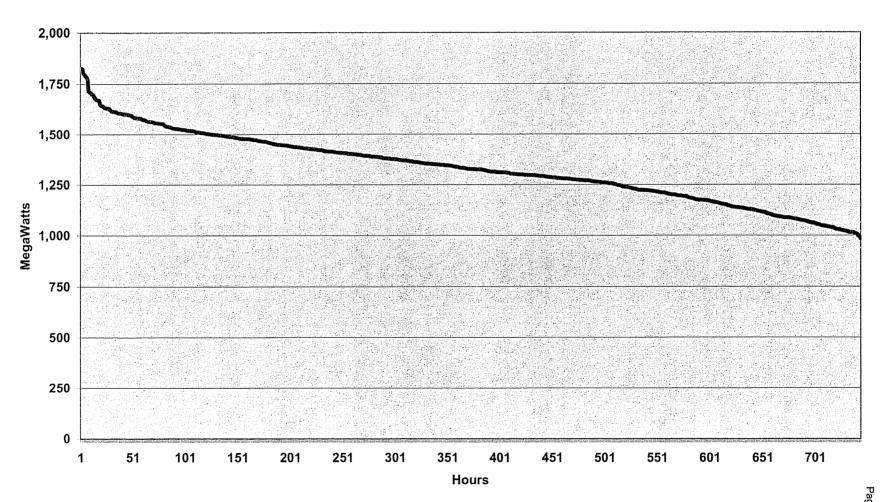


KPSC Adm. Case No. 38
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For Calendar Year 200

Kentucky Power Company November 2005 Load Duration Curve (System Load)

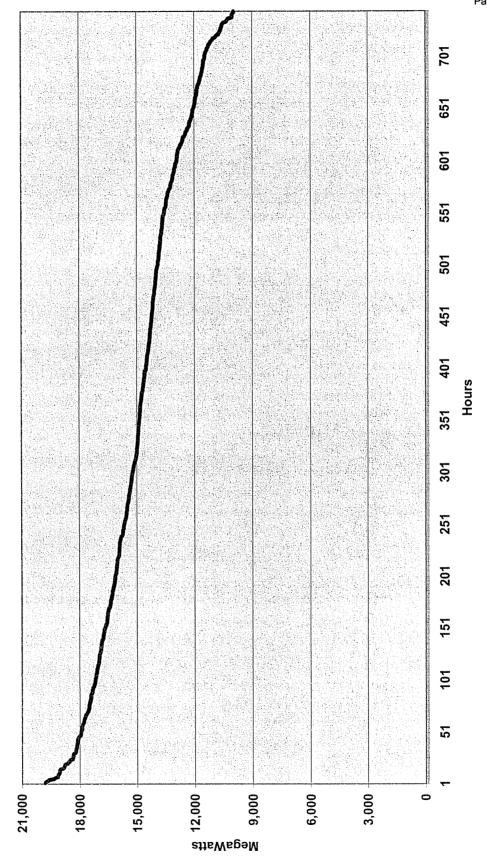


# Kentucky Power Company December 2005 Load Duration Curve (System Load)

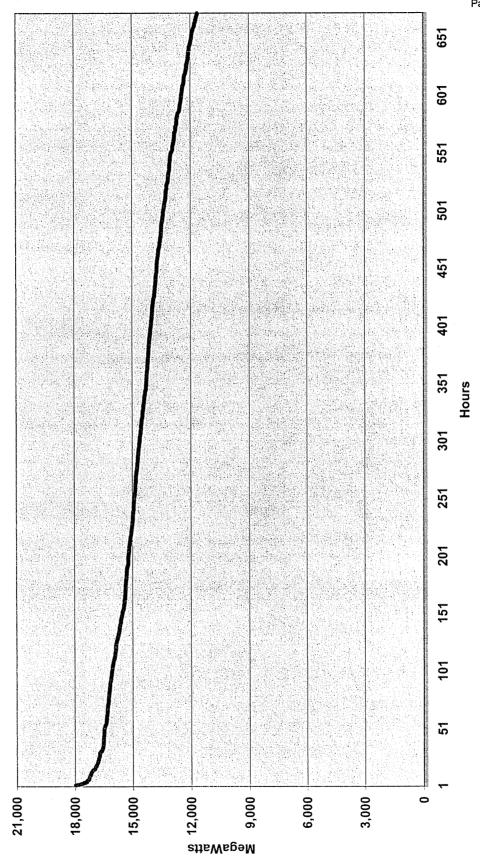


KPSC Adm. Case No. 3 Order Dated December 20, 20 For Calendar Year 20

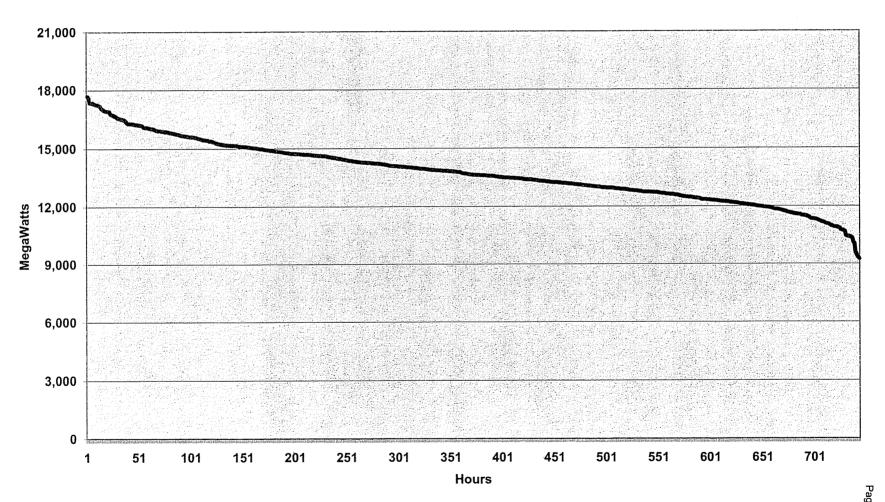
AEP System - East Zone January 2005 Load Duration Curve (Internal Load)



AEP System - East Zone February 2005 Load Duration Curve (Internal Load)

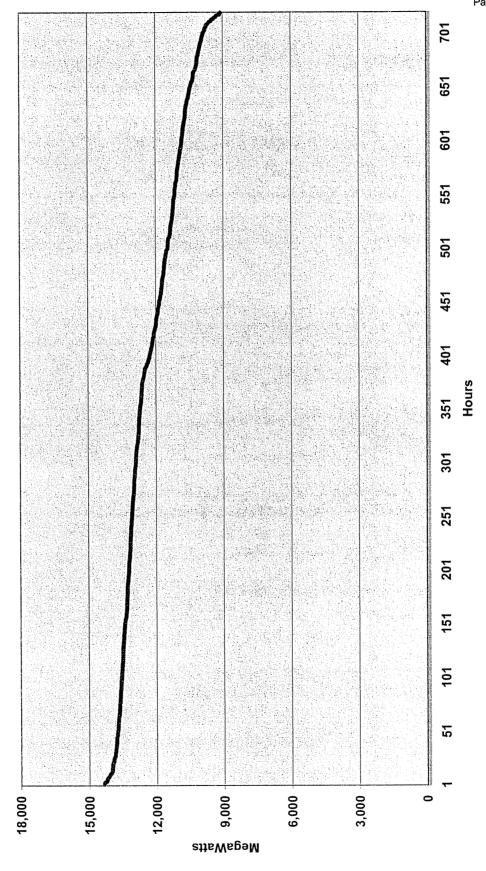


## AEP System - East Zone March 2005 Load Duration Curve (Internal Load)

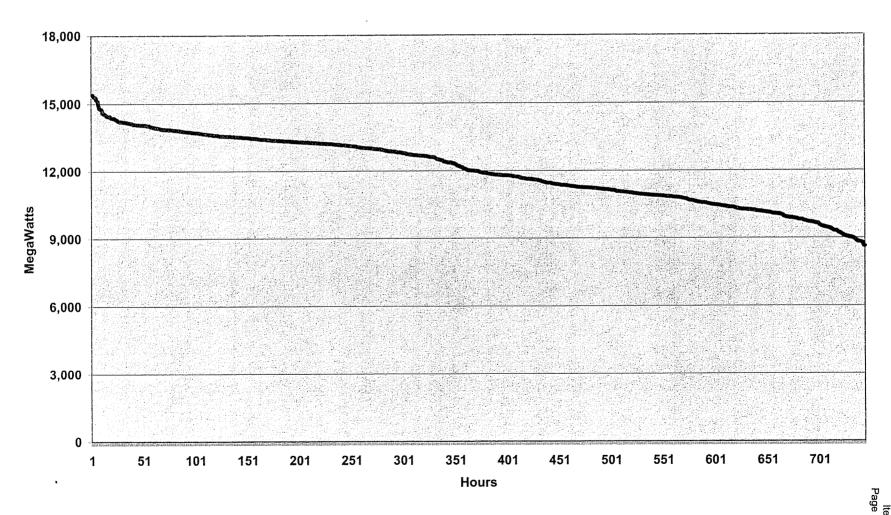


KPSC Adm. Case No. Order Dated December 20, 2 For Calendar Year 2

AEP System - East Zone April 2005 Load Duration Curve (Internal Load)

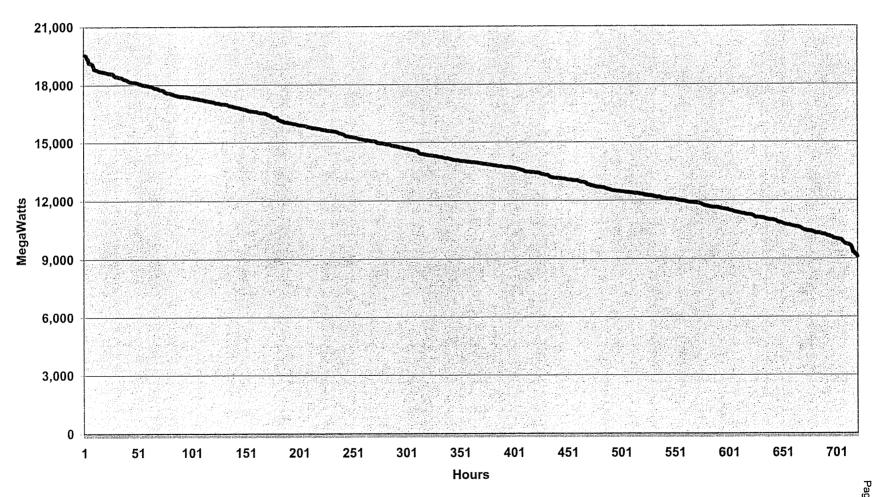


# AEP System - East Zone May 2005 Load Duration Curve (Internal Load)



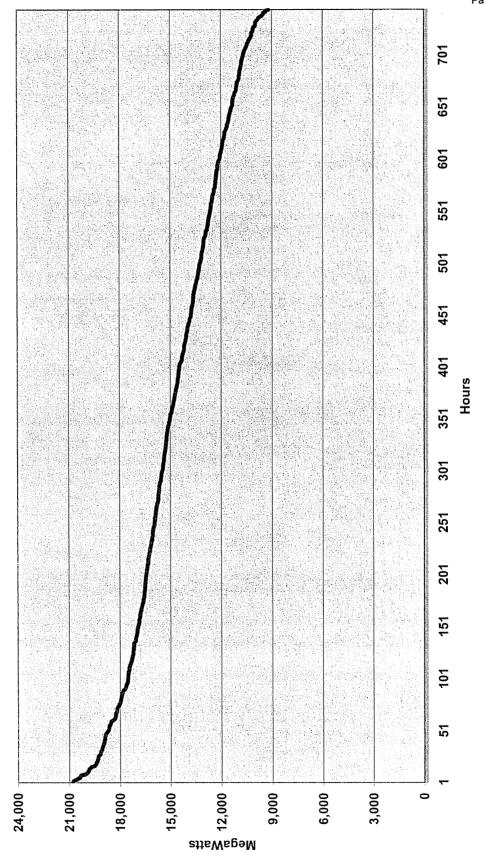
KPSC Adm. Case No. 3 Order Dated December 20, 20 For Calendar Year 20

# AEP System - East Zone June 2005 Load Duration Curve (Internal Load)

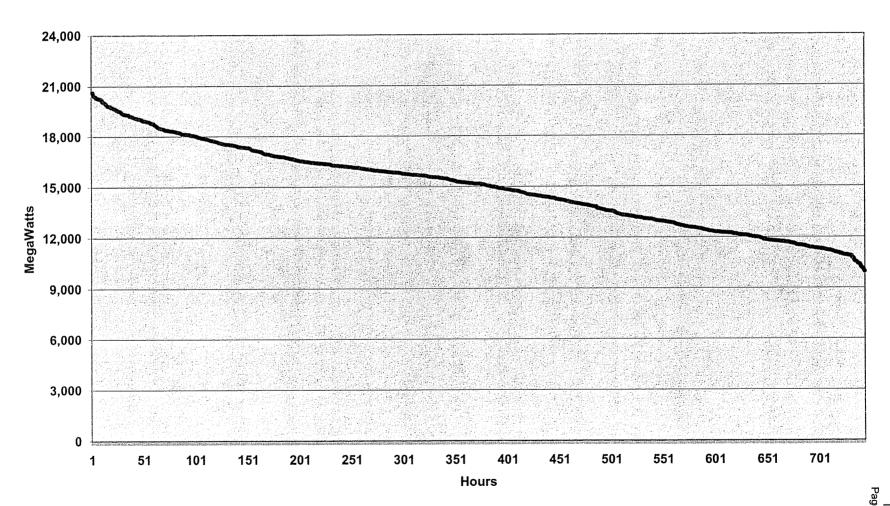


KPSC Adm. Case No. 389 Order Dated December 20, 2000 For Calendar Year 2005

AEP System - East Zone July 2005 Load Duration Curve (Internal Load)

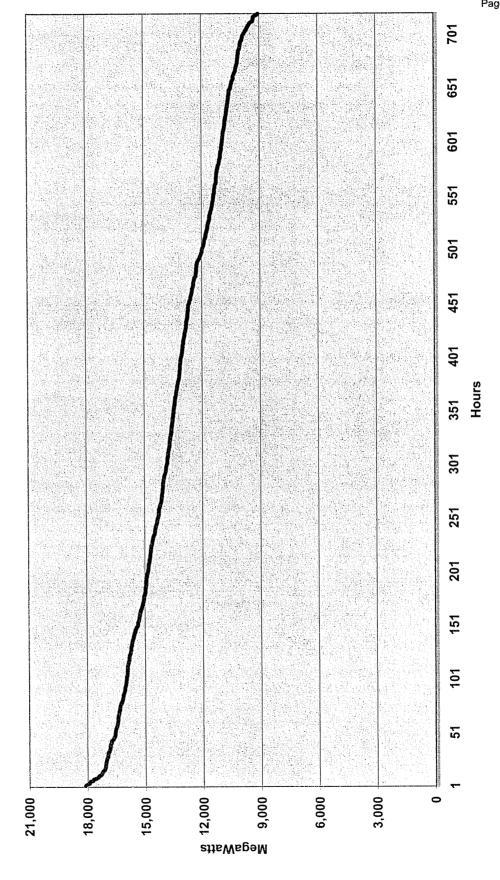


# AEP System - East Zone August 2005 Load Duration Curve (Internal Load)

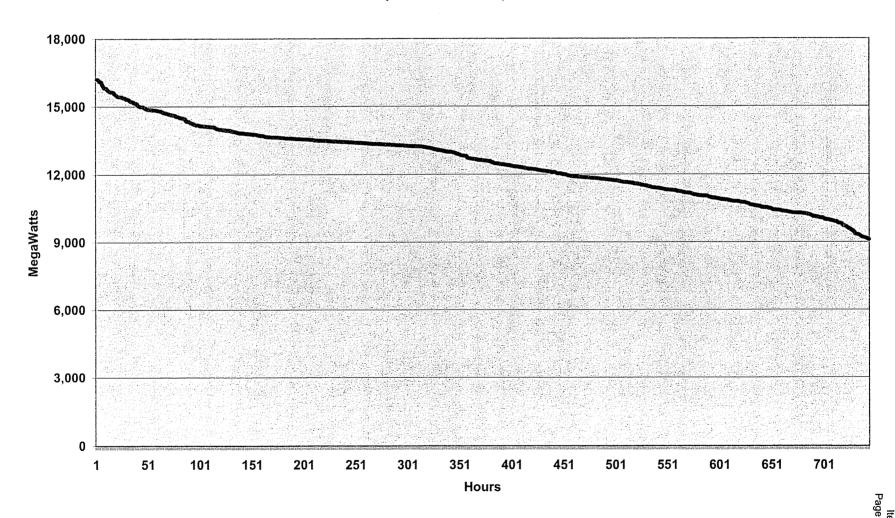


KPSC Adm. Case No. 3 Order Dated December 20, 20 For Calendar Year 20

AEP System - East Zone September 2005 Load Duration Curve (Internal Load)

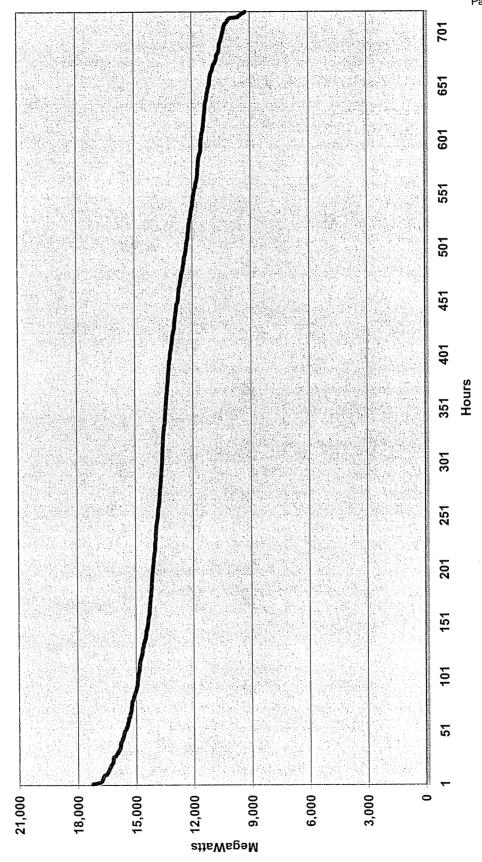


# AEP System - East Zone October 2005 Load Duration Curve (Internal Load)

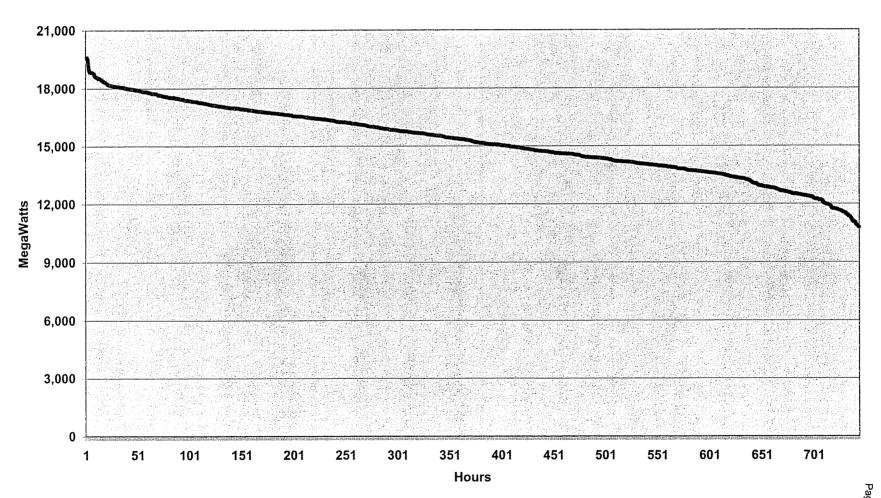


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AEP System - East Zone November 2005 Load Duration Curve (Internal Load)



# AEP System - East Zone December 2005 Load Duration Curve (Internal Load)

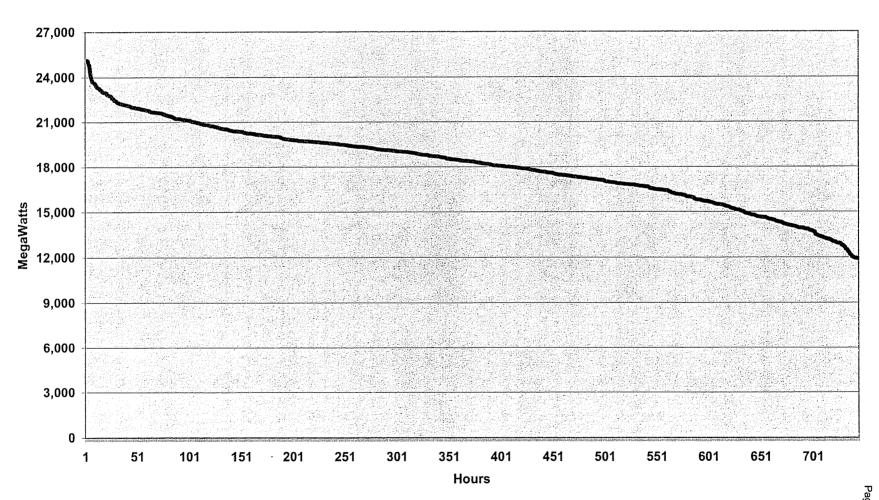


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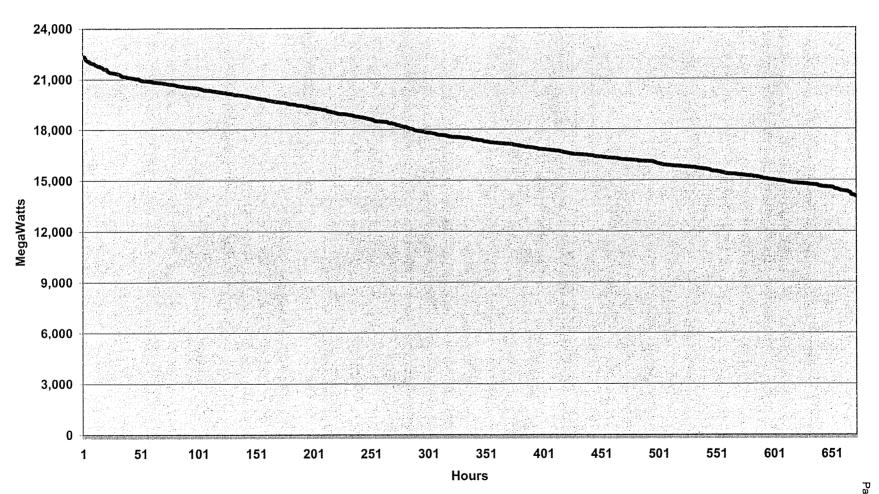
For Salendar Year 200

# AEP System - East Zone January 2005 Load Duration Curve (System Load)



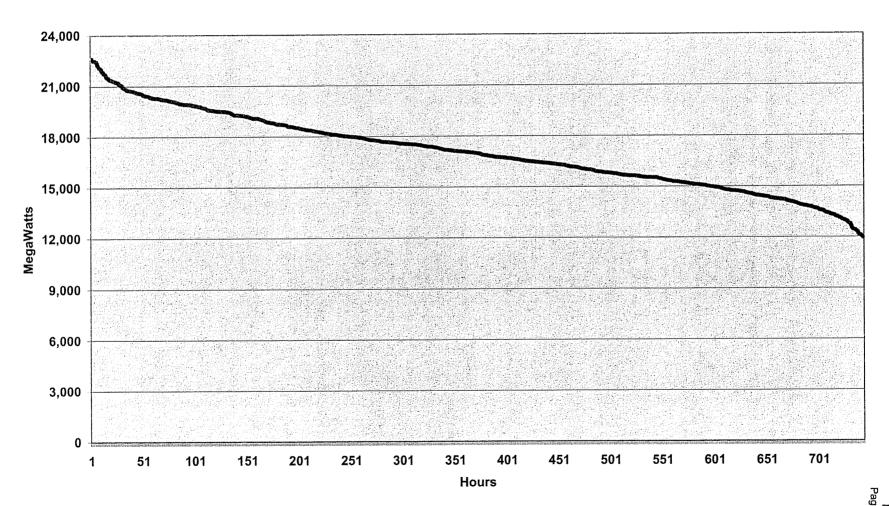
Order Dated December 20, 20
For Calendar Year 20

# AEP System - East Zone February 2005 Load Duration Curve (System Load)



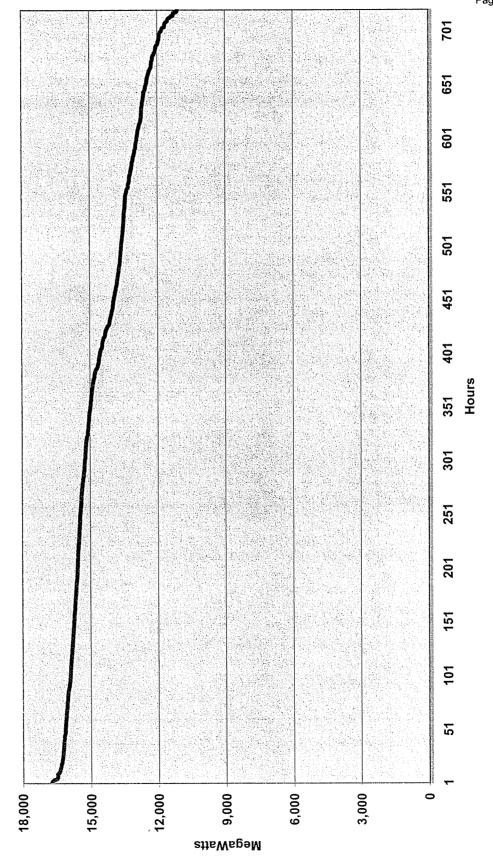
KPSC Adm. Case No. 387 Order Dated December 20, 2001 For Calendar Year 2005

# AEP System - East Zone March 2005 Load Duration Curve (System Load)

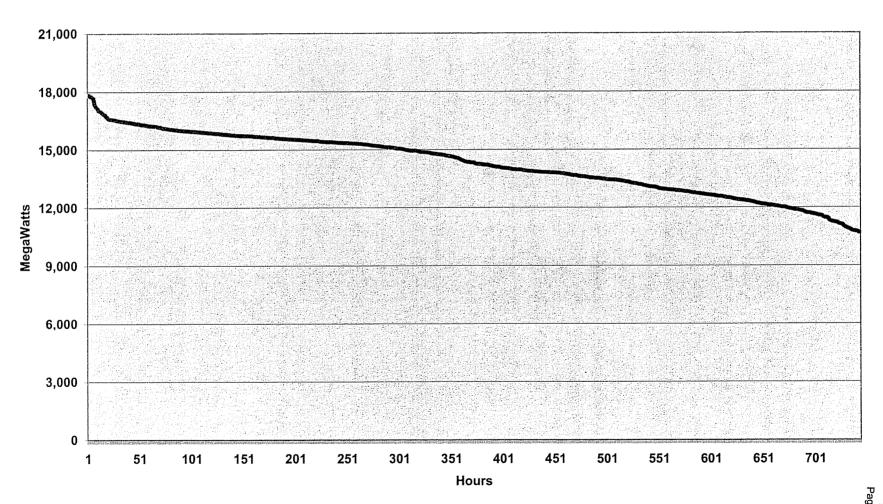


KPSC Adm. Case No. 387 Order Dated December 20, 2001 For Calendar Year 2005

AEP System - East Zone April 2005 Load Duration Curve (System Load)

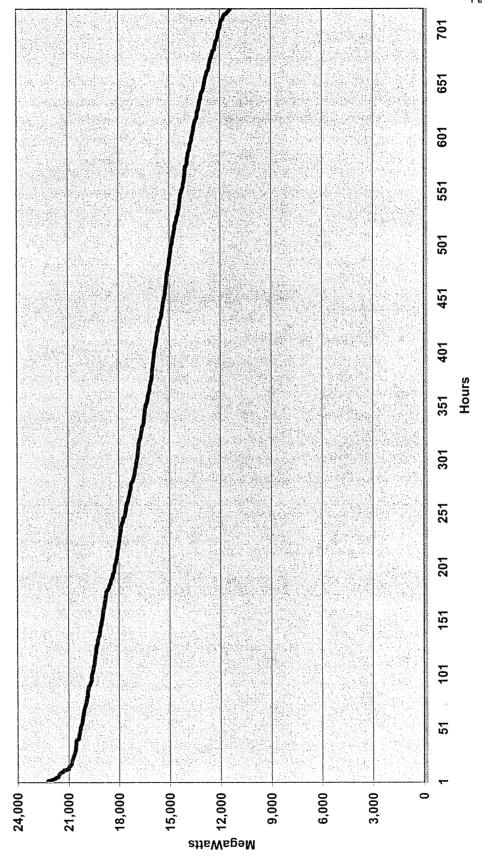


# AEP System - East Zone May 2005 Load Duration Curve (System Load)

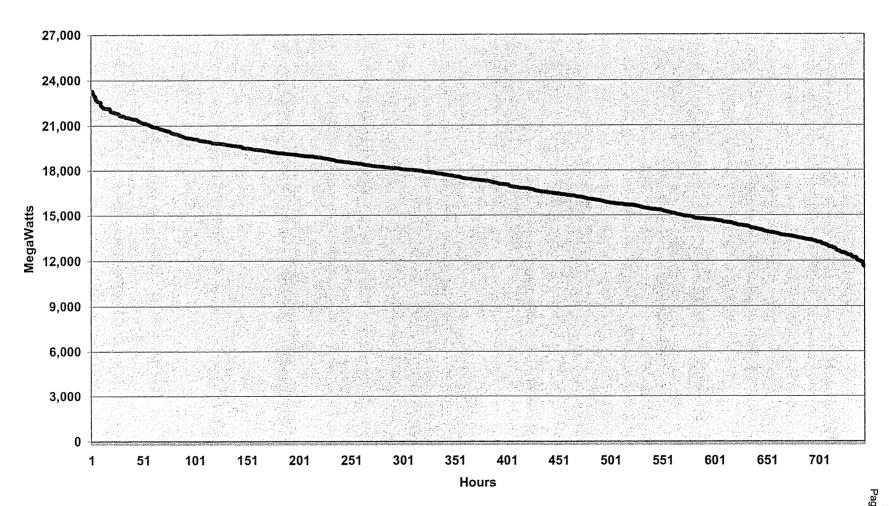


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AEP System - East Zone June 2005 Load Duration Curve (System Load)

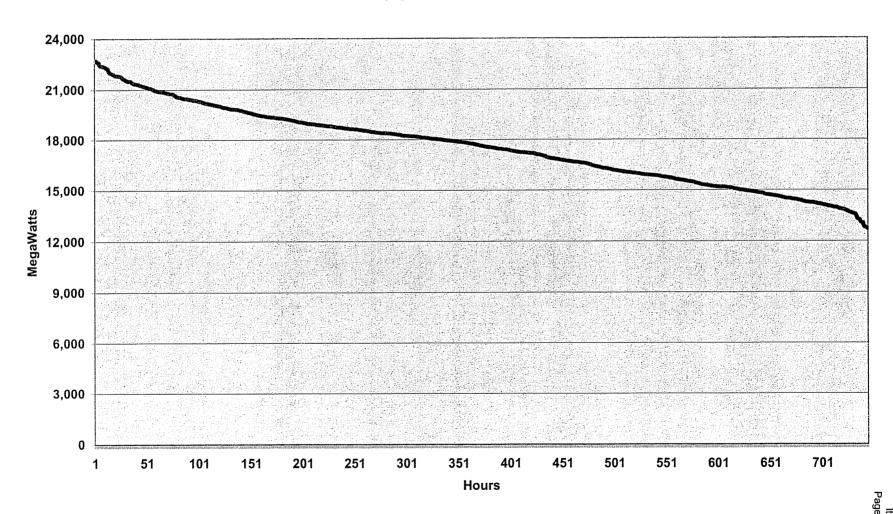


# AEP System - East Zone July 2005 Load Duration Curve (System Load)



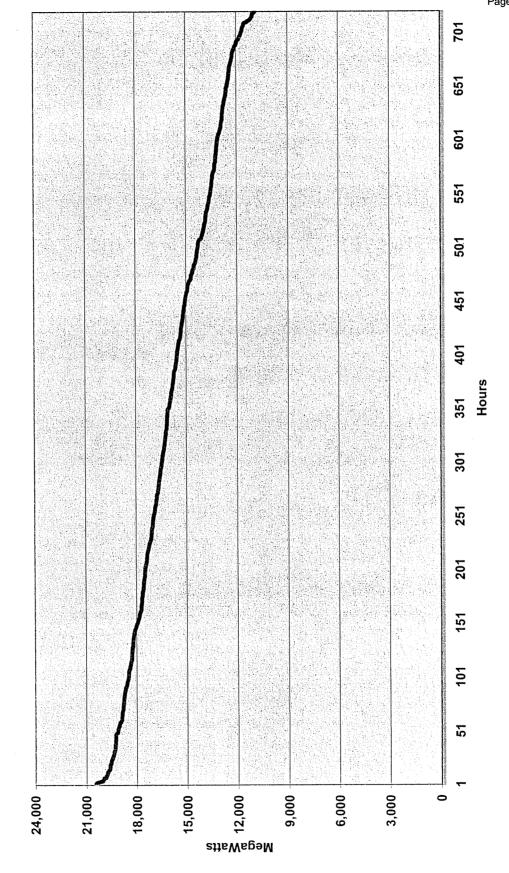
KPSC Adm. Case No. 38 Order Dated December 20, 200 For Calendar Year 200

# AEP System - East Zone August 2005 Load Duration Curve (System Load)

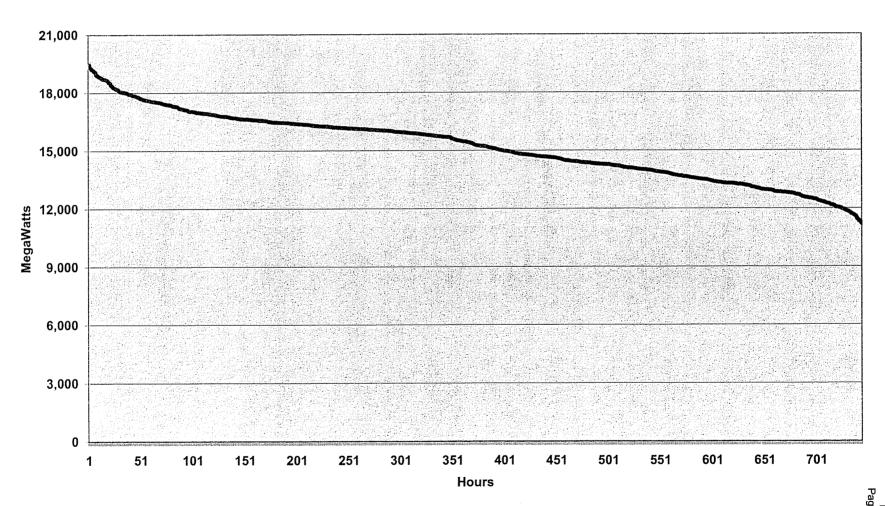


KPSC Adm. Case No. 38' rder Dated December 20, 200' For Calendar Year 200'

AEP System - East Zone September 2005 Load Duration Curve (System Load)

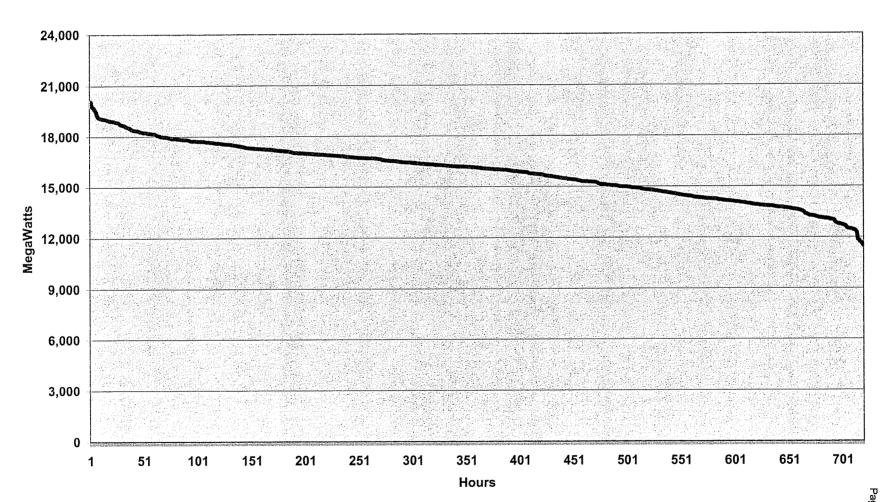


# AEP System - East Zone October 2005 Load Duration Curve (System Load)



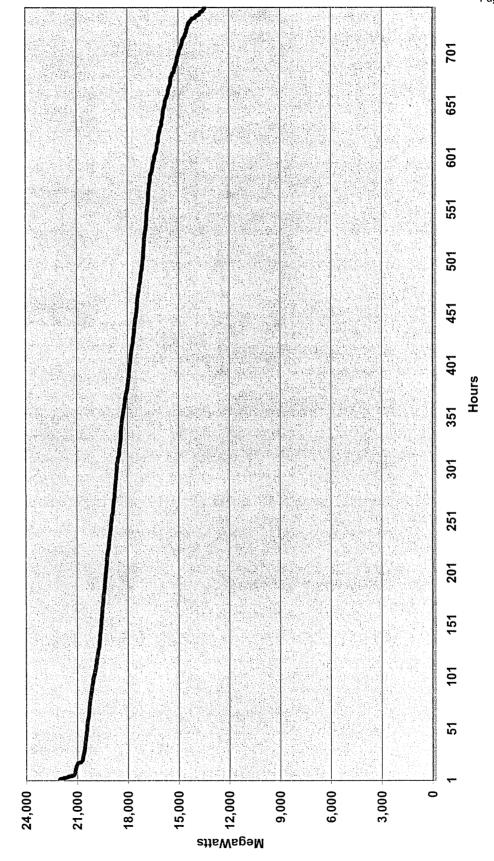
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## AEP System - East Zone November 2005 Load Duration Curve (System Load)



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AEP System - East Zone December 2005 Load Duration Curve (System Load)



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Calendar Year 2005
Order Dated December 20, 2001
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## **Kentucky Power Company**

### REOUEST

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) 2006 - 2010

			Sum	ımer	Precedin	a Winter
	Energy	Sales	Peak D	emand	Peak D	emand
Year	Base	sse High	Base	Base High	Base High	High
2006	8,078	8,158	1,323	1,336	1,603	1.618
2007	8,228	8,364	1,364	1,386	1,622	1,649
2008	8,371	8,558	1,382	1,413	1,640	1.677
2009	8,431	8,663	1,394	1,432	1,665	1.711
2010	8,502	8,794	1,403	1,451	1,686	1,744

## AEP System-East Base and High Forecast Energy Sales (GWH) and Seasonal Peak Demand (MW) 2006 - 2010

	Energ	y Sales		nmer Demand		ng Winter Demand
Year	Base	High	Base	High	Base	High
2006	124,065	125,302	21,317	21,529	20,046	20,246
2007	125,649	127,727	21,634	21,992	20,337	20,674
2008	127,903	130,756	21,904	22,393	20,678	21,139
2009	129,340	132,901	22,178	22,789	21,032	21,611
2010	130,957	135,458	22,461	23,234	21,351	22,085

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Kentucky Power Company and AEP-System-East Forecast Off-System Energy Sales (GWh) 2006 - 2010

Year	KPCo Off-System <u>Sales</u>	AEP-East Off-System <u>Sales</u>
2006	1,973	27.369
2007	1,661	23,773
2008	2,180	32,986
2009	2,120	32,062
2010	1,619	24,554

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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 changed from year to 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.

PJM has set the Installed Reserve Margin for the June 2006 through May 2007 planning period at 15.0%. Using current AEP reliability and diversity factors, this translates into an installed reserve margin for AEP of 13.02%. (This compares with 12% that AEP has used, based on our own determinations, since the late 1990s, and 15% prior to that.) For purposes of long-term planning, AEP's reserve responsibility varies from a high of 13.20% to a low of 12.80% based on assumptions of capacity changes to the units. These assumptions use data as of February 2005.

Sheet 2 of this response provides an example PJM Reserve Margin Calculation.

Currently, Kentucky Power Company is capacity deficient on a stand-alone basis. The basis of the 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

PJM Installed Reserve Margin (IRM)	=	15.00%	
PJM EFORd	=	6.53%	Based on 5-year average PJM EFORd
Forecast Pool Requirement (FPR)	=	1.0749	FPR = (1 + IRM) * (1 - PJM EFORd)
Average Diversity (DF)	=	2.20%	
Accounted For Obligation (AFO) Factor	=	1.0513	AFO Factor = (1 - DF) * FPR, represents UCAP requirement
AEP EFORd	=	6.98%	Based on 12-month average AEP EFORd
ICAP Reserve Margin	=	13.02%	Installed Reserve Margin = (AFO Factor / (1 - AEP EFORd)) - 1

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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

Sheet 2 of this response provides projected winter peak demands, capabilities, and margins for KPCo for the period 2005/06 through 2009/10.

Sheet 3 of this response provides projected summer peak demands, capabilities, and margins for the AEP System - East for the period 2006 through 2010.

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#### KENTUCKY POWER COMPANY Projected Winter Peak Demands, Generating Capabilities, and Margins Based on 2006 (August 2005) Load Forecast (2005/06 - 2009/10) BASE PLAN

		Pi	eak Demand - I	MW	
	Internal			Inter-	<b></b>
Winter	Demand	DSM	Total	ruptible	Total
Season	(a)	(b)	Demand	Demand	Demand
	11)	(2)	(3)=(1)-(2)	(4)	(5)=(3)+4)
2005/06	1,603	1	1,602	0	1,602
2006/07	1,622	1	1,621	0	1,621
2007/08	1,640	1	1,639	0	1,639
2008/09	1,665	1	1,664	0	1,664
2009/10	1,686	1	1,685	0	1,685

		acity - MW	Cap		
	Purchases	dditions	Capacity A	Sales	Existing
Tota Equivalen Capacit	Annual Mkt. Purch. (e)	New Build MW	New Build Additions	Net Sales	Capacity & Chngs
110]=(6)-(7)+(6)-(1	19]	(6)		17:	(6)
1,324	0	0	No New Build	134	1,458
1,375	0	0	No New Build	83	1,458
1,424	0	0	No New Build	34	1,458
1,432	0	0	No New Build	28	1,460
1,398	0	0	No New Build	22	1,420

	M	argin
į		
		% of
	MW	Demand
	(11)=(10)-(5)	(12)={(11)/(5)}:100
	(270)	(17.4)
ĺ	(278)	(17.4)
į	(246)	(15.2)
	(215)	(13.1)
	(232)	(13.9)
	(287)	(17.0)

Notes: (a) Based on 2006 Load Forecast.

- (b) Includes expanded DSM.
- (c) Reflects the following winter capability assumptions:

7.5% MLR share (2005/06) of total Mone purchase of 108 MW (Winter).

FGD DERATES:

2009/10: Big Sandy 2: 50 MW 2010/11: Big Sandy 1: 4 MW

EFFICIENCY IMPROVEMENTS: 2008/09: Rockport 1: 3 MW (turbine) 2009/10: Rockport 2: 9 MW (valve)

2010/11: Rockport 1: 9 MW (valve)

- (d) MLR share of Committed Sales
- (e) Actual purchases will be UCAP purchases from PJM Market

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#### AEP SYSTEM - EASTERN ZONE (Including Buckeye Power) Projected Summer Peak Demands, Generating Capabilities, and Margins Based on 2006 (August 2005) Load Forecast (2006 - 2010) BASE PLAN

		Peak	Demand - i	vivv		ΙL
		Other				
	1	Internal	Inter-		Net AEP	
Summer	Internal	Demand	ruptible	DSM	& Buckeye	1
Season	Demand	(a)	Demand	(b)	Demand	L
2005	21,317	0	(469)	(1)	20,847	
2007	21,985	0	(469)	(1)	21,515	
2008	22,371	0	(469)	(1)	21,901	Н
2009	22,646	0	(469)	(1)	22,176	
2010	23,177	0	(469)	(1)	22,707	L

	PJM Oblig	ations	
Accounted		Required	
For	AEP	ICAP	
Obligation	<b>EFORd</b>	Margin	Required
(c)	(d)	(0)	ICAP MW
21,916	6.98%	13.02%	23,561
22,618	6.98%	13.01%	24,315
23,024	7.13%	13,20%	24,791
23,313	7.11%	13.17%	25,097
23.871	6.92%	12.94%	25,546

			Cap	acity - MW					
Existing			Capacity Additions		Annual		Equivalent		
ICAP			JCAP Sales		ICAP		ICAP Total		ICAP Margin
& Chngs ~	UCAP	EQUIV ICAP	ICAP	ICAP	ICAP	Purch.	Equiv		% 0
(f)	(g)	(h)	(g)	Additions	MW	(i)	ICAP	MW	Deman
27,001	2,276	2,412	350	No New Build	0	0	24,239	3,392	16.3
26,988	1,892	1,997	300	No New Build	0	0	24,691	3,176	14.8
26,928	1,141	1,191	250	No New Build	0	0	25,487	3,586	16.4
26,881	1,467	1,541	250	No New Build	0	50	25,140	2,964	13.4
26,279	1,367	1,429	0	11 CT & 1 IGCC	1,503	0	26,353	3,645	16.1

#### Notes:

(a) Through 2005, based on the Buckeye Power (BP) most likely peak load forecast submitted to ECAR (as part of EIA-411) and adjusted to be conscident with AEP. Reflects Buckeye Bank depletion by July 2006 and extension of Buckeye Power contract through 2026.

- (b) Includes expanded DSM.
- (c) Accounted for Obigation (AFO) = Peak \* (1 DF) \* FPR \* ZSF, represents UCAP requirement. Forecast Pool Requirement (FPR) = (1 + IRM) \* (1 - PJM EFORd) Installed Reserve Margin (IRM) = 15.0% Diversity Factor (DF) = 2.2% Zonal Scaling Factor (ZSF) = 1.000 AFO = Peak \* 1.0513 \* 1.000 PJM EFORd = 6.53%
- (d) Based on 12-month avg. AEP EFORd as of 03/31/05.
- (e) Installed Reserve Margin = (AFO Factor/(1 AEP EFORd)) 1

(f) Reflects the following summer capability assumptions:

OVEC purchase: 951 MW (Summer). Mone purchase: 90 MW (Summer).

Includes Ceredo and Waterford in 2006.

FGD DERATES:

2007: Mitchell 1&2: 50 MW each; Mountaineer 1: 64 MW

2008: Amos 3: 60 MW; Cardinal 1&2: 31 MW each; Muskingum River 5: 31 MW; Stuart 1,2,3&4: 2 MW each

2009: Amos 1&2: 40 MW each; Conesville 4: 20 MW; Kyger Creek 1,2,3,4&5: 4 MW each

2010: Big Sandy 1; 4 MW; Big Sandy 2: 50 MW; Clifty Creek 1,2,3,4,5&6: 4 MW each

ASSUMED RETIREMENTS FOR PLANNING PURPOSES: 2006: Conesville 1&2; - (230 MW)

2010: Conesville 3; Sporn 5; - (605 MW)

EFFICIENCY IMPROVEMENTS:

2006: Gavin 1: 61 MW (valve); Mitchell 2: 12 MW (turbine)

2007: Cook 1: 29 MW (rotor); Gavin 2: 61 MW (valve); Mountaineer 1: 61 MW (valve)

2008: Amos 1: 12 MW (turbine); Amos 3: 61 MW (valve); Cardinal 2: 8 MW (turbine); Rockport 1: 20 MW (turbine)

2009: Amos 2: 12 MW (turbine); Rockport 2: 61 MW (valve)

2010: Gavin 1: 20 MW (turbine): Rockport 1: 61 MW (valve) (g) Includes Buckeye Cardinal commitment and sale to West through 2007.

- (h) EQUIV. ICAP Sales = UCAP Sales / (1-AEP EFORd) (i) Actual purchase would be denominated in UCAP

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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
2006	Less than 4 weeks	Less than 4 weeks
2007	Less than 4 weeks	Less than 4 weeks
2008	More than 4 weeks	More than 4 weeks
2009	Less than 4 weeks	More than 4 weeks
2010	More than 4 weeks	Less 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

AEP System-East added the capacity resources of Ceredo and Waterford with an in-service date of January 2006. Ceredo has a summer rating of 464 MW and is located in Ceredo, W.Va. Waterford has a summer rating of 810 MW and is located in Waterford, Ohio. At the present time, the AEP System-East is evaluating a mix of generation resources to meet its projected capacity needs through 2016. In the near term, the AEP System-East plans to meet its capacity needs through purchases from the market on an as-needed basis. Prior to 2016, the AEP System-East 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.
- b. Total energy delivered to all interconnections on the transmission system.

### RESPONSE

Please see attachment.

### ) All quantities represent metered values.

Received from (MWh):	<u>2003</u> (Actual)	<u>2004</u> (Actual)	<u>2005</u> (Actual)	2006	<u>2007</u>	<u>2008</u>
Appalachian Power (1)	11,353,842	11,066,166	11,871,456	(4)	(4)	(4)
Ohio Power (1)	8,224,235	9,766,209	8,687,031	(4)	(4)	(4)
East Ky Power Coop	277,577	279,973	362,963	(4)	(4)	(4)
LGE(Kentucky Utilities)	91,767	95,146	137,523	(4)	(4)	(4)
TVA	585,205	700,836	649,374	(4)	(4)	(4)
Illinois Power Co. (2)	8,866	0 '	34,647	(5)	(5)	(5)
Illinois Power Co. (3)	10,190	752	30,508	(5)	(5)	(5)
Big Sandy Generating Plant	6,170,931	6,550,509	7,345,624	7,210,300	6,811,700	6,384,800

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

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

Notes: (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 2004 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 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 as listed in response to "Question #9" will provide capacity to serve existing and projected loads indicated in the response to part "d" of this Question.
- d. The actual summer and winter peak demands for 2005 and the forecast summer and winter peak demands for 2006 through 2010 are noted in the table below.

Kentucky Power Company								
	Seasonal Peak Demand (MW)							
Actu	al 2005 and Foreca	st 2006 - 2010						
	Summer Preceding Winter							
Year	Peak Demand	Peak Demand						
	(MW)	(MW)						
2005	1,358	1,685						
2006	1,323	1,603						
2007	1,364	1,622						
2008	1,382	1,640						
2009	1,394 1,403	1,665						
2010	1,686							

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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 identifies the transmission projects that have been approved by management for implementation in Kentucky:

- Wooten 161 kV Station Project: A new switching station to interconnect KPCo and KU 161 kV facilities in the Hazard area. KPCo is scheduled to complete the station and associated 161 kV line work on May 7, 2006. The new KPCo/KU interconnection is being constructed to provide single-contingency reliability to the Hazard and surrounding areas.
- Baker Station: Move a 765/345 kV, 500 MVA single-phase transformer from the South Canton Station (in Ohio) and install it at the Baker Station (in Kentucky). This unit is expected to be in service by June 2006.