ÁTTORNEYS

421 West Main Street Post Office Box 634 Frankfort, KY 40602-0634 [502] 223-3477 [502] 223-4124 Fax

May 1, 2017

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

#### HAND DELIVERED

Dr. Talina R. Mathews
Executive Director
Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

RECEIVED

MAY 1 2017

PUBLIC SERVICE COMMISSION

RE: Administrative Case No. 387

Dear Dr. Mathews:

Enclosed please find and accept for filing the original and ten copies of Kentucky Power Company's annual resource information required by the Commission's March 29, 2004 Order in Administrative Case No. 387.

Also filed is the original and ten copies of the Company's motion for confidential treatment with respect to portions of its response to data request 9.

A copy of Kentucky Power's Company's 2016 FERC Form-1 and a copy of its 2016 Annual Public Service Commission Utility Financial Report is being filed under separate cover.

The Commission's December 13, 2004 Order in Case No. 2004-00420, In the Matter of: Application of Kentucky Power Company For Approval Of A Stipulation And Settlement Agreement Resolving State Regulatory Matters, requires Kentucky Power to furnish certain information concerning the former AEP-East Power Pool in conjunction with the enclosed filing. The AEP Interconnection Agreement, pursuant to which the AEP-East Power Pool operated, terminated January 1, 2014. As a result, the requested information concerning the AEP-East Power Pool no longer exists. The Company respectfully requests that the Commission authorize Kentucky Power to amend its statement of the information requested and being furnished to eliminate any reference to the AEP-East Power Pool.

Please do not hesitate to contact me if you have any questions.

## STITES & HARBISON PLLC

ATTORNEYS

Dr. Talina R. Mathews Executive Director May 1, 2017 Page 2

Very truly yours,

Mark k. Overstreet

MRO

cc:

Michael L. Kurtz (without enclosures) Rebecca Goodman (without enclosures)



MAY 1 2017

### VERIFICATION

PUBLIC SERVICE

The undersigned, Ranie K. Wohnhas, being duly sworn, deposes and says he is the Managing Director Regulatory and Finance for Kentucky Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge, and belief

	tanie K. Wohn
	Ranie K. Wohnhas
COMMONWEALTH OF KENTUCKY COUNTY OF BOYD	) Administrative Case No. 387

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Ranie K. Wohnhas, this the day of May 2017.

Notary Public Lus guist

My Commission **ID** # 571144

Expires July 23, 202

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 1 Page 1 of 1 Witness: Ranie K. Wohnhas

- Q-1 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).
- A-1 Please refer to Page 1 of KPSC 1-1 Attachment1 for actual and weather normalized 2016 monthly peak native load demands for Kentucky Power Company. Kentucky Power Company had two customers with interruptible provisions in their contracts in 2016. Combined, these customers had approximately 1.5 MW of interruptible load available for use in PJM capacity auctions. The interruptible load available for PJM auctions reflects the average load for these customers, less contractually firm load, at the time of the PJM RTO five coincident peaks in the summer of 2015.

Please refer to Page 2 KPSC 1-1 Attachment1 for actual 2016 monthly system demands for Kentucky. The system demands include internal load and off-system sales. Weather-normalized monthly peak system demands for Kentucky Power Company have not been developed and are not available.

The AEP Interconnection Agreement terminated on January 1, 2014 and the AEP-East Power Pool no longer exists. As a result, the request for information regarding the AEP-East Power Pool is no longer applicable.

KPSC Administration Case No. 387 Order Dated December 20, 2001 Calendar Year 2016 Annual Resource Assessment Item No. 1 Attachment 1 Page 1 of 2

## Kentucky Power Company Actual and Weather Normalized Peak Native Demand (MW) 2016

Kentucky Power Company

		Rentucky Pow	ver Company	1
		Peak	Peak	Normalized
Month	Peak	Day	Hour	Peak
January	1,342	1/19/2016	8	1,399
February	1,198	2/10/2016	19	1,265
March	1,018	3/3/2016	8	1,158
April	894	4/10/2016	8	843
May	892	5/31/2016	16	843
June	995	6/16/2016	16	988
July	1,037	7/25/2016	14	1,054
August	1,044	8/9/2016	16	1,043
September	983	9/8/2016	16	938
October	783	10/19/2016	16	705
November	1,030	11/22/2016	8	1,083
December	1,170	12/16/2016	8	1,212

KPSC Administration Case No. 387 Order Dated December 20, 2001 Calendar Year 2016 Annual Resource Assessment Item No. 1 Attachment 1 Page 2 of 2

### Kentucky Power Company Actual Peak System Demand (MW) 2016

	Kentucky Power Company						
Month	Peak	Peak Day	Peak Hour				
January	1,152	1/19/2016	13				
February	1,170	2/14/2016	4				
March	1,017	3/4/2016	10				
April	809	4/29/2016	16				
May	950	5/19/2016	17				
June	1,469	6/28/2016	16				
July	1,471	7/26/2016	13				
August	1,472	8/5/2016	14				
September	1,413	9/9/2016	17				
October	1,123	10/27/2016	13				
November	1,516	11/21/2016	10				
December	1,527	12/15/2016	21				

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 2 Page 1 of 1 Witness: Ranie K. Wohnhas

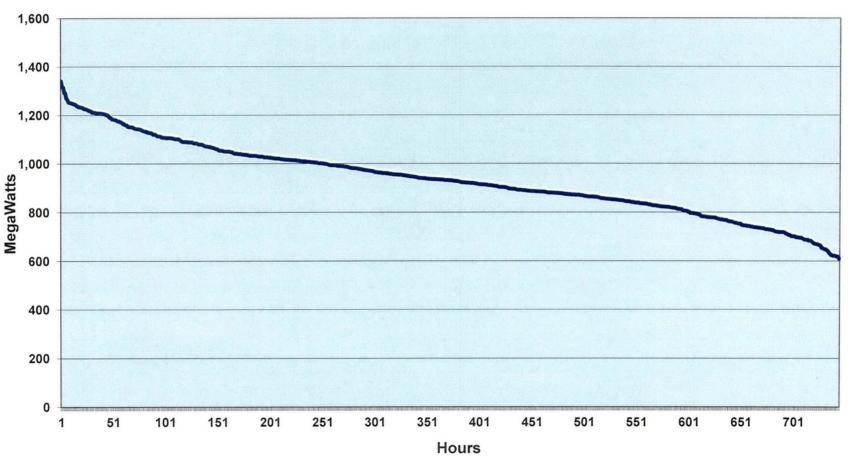
- Q-2 Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just competed calendar year. Please provide the information for both Kentucky Power Company individually and the AEP-East Power Pool (pursuant to the Commission's December 13, 2004 Order in the Rockport UPSA extension, Case No. 2004-00420).
- A-2

  Please refer to Pages 1 through 12 of KPSC 1-2 Attachment1 for 2016 monthly load duration curves for Kentucky Power Company's internal (native) load. Please refer to Pages 13 through 24 of KPSC 1-2 Attachment1 for 2016 monthly load duration curves for Kentucky Power Company's system load. The system load, for Kentucky Power Company, includes internal load and off-system sales.

Weather-normalized monthly internal peaks for Kentucky Power Company are provided on Page 1 of KPSC 1-1 Attachment1. Weather normalized system peaks have not been developed and are not available.

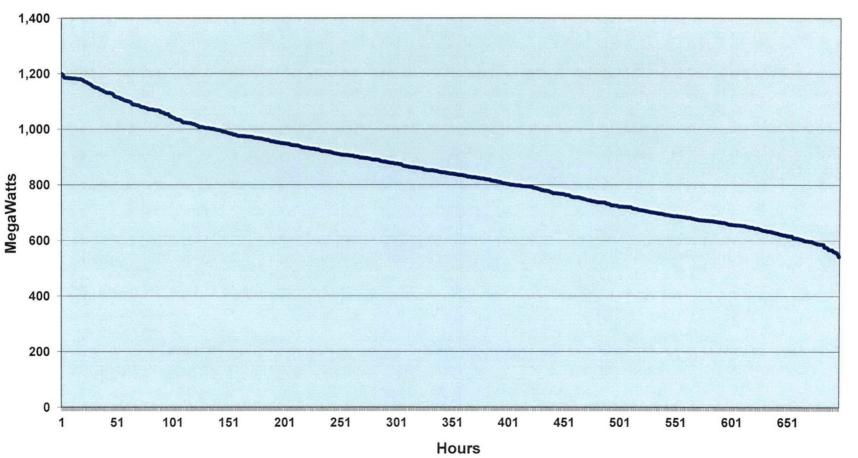
The AEP Interconnection Agreement terminated on January 1, 2014 and the AEP-East Power Pool no longer exists. As a result, the request for information regarding the AEP-East Power Pool is no longer applicable.

## Kentucky Power Company January 2016 Load Duration Curve (Internal Load)



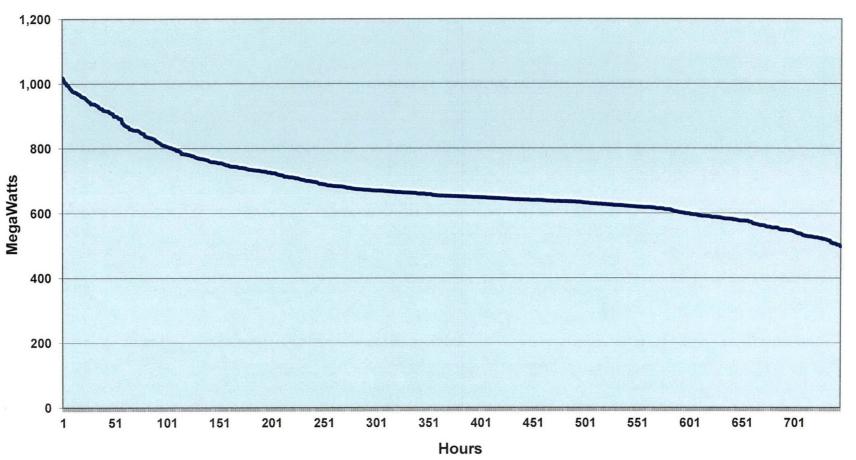
Order Dated December 20, 200
Calendar Year 201
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Item No.

### Kentucky Power Company February 2016 Load Duration Curve (Internal Load)



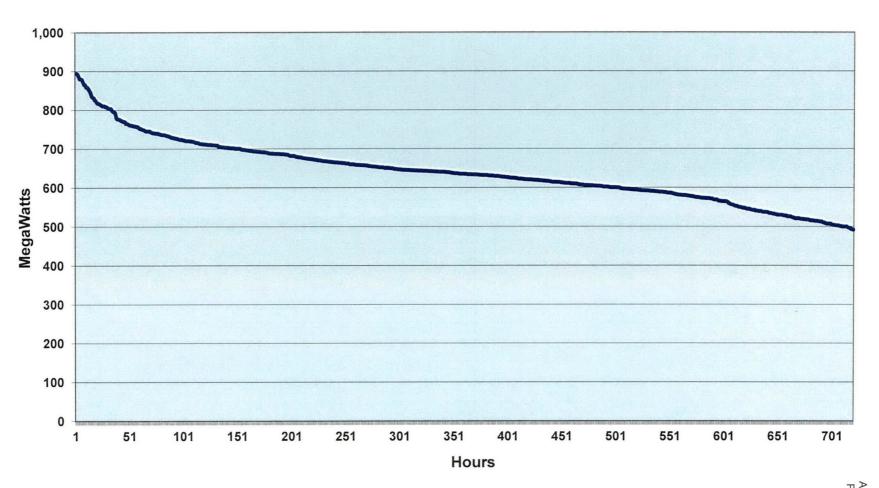
Order Dated December 20, 2001
Calendar Year 2016
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### **Kentucky Power Company** March 2016 Load Duration Curve (Internal Load)



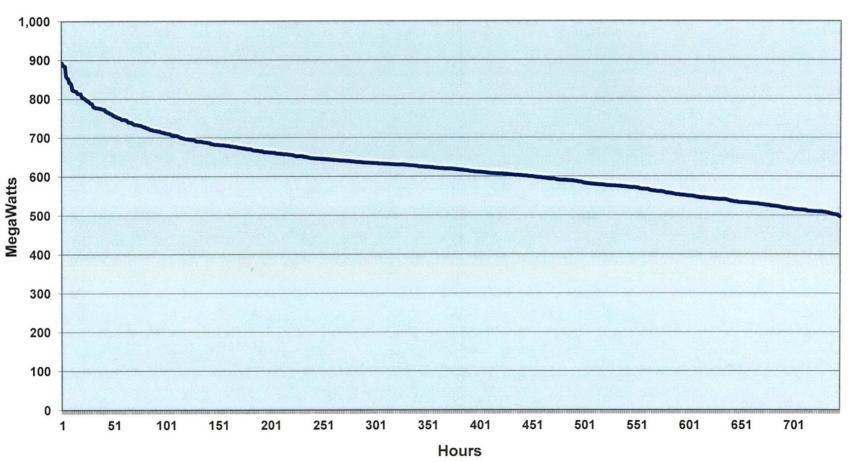
Annual Reseource Assessment Item No. 2
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Page 3 of 24

### Kentucky Power Company April 2016 Load Duration Curve (Internal Load)



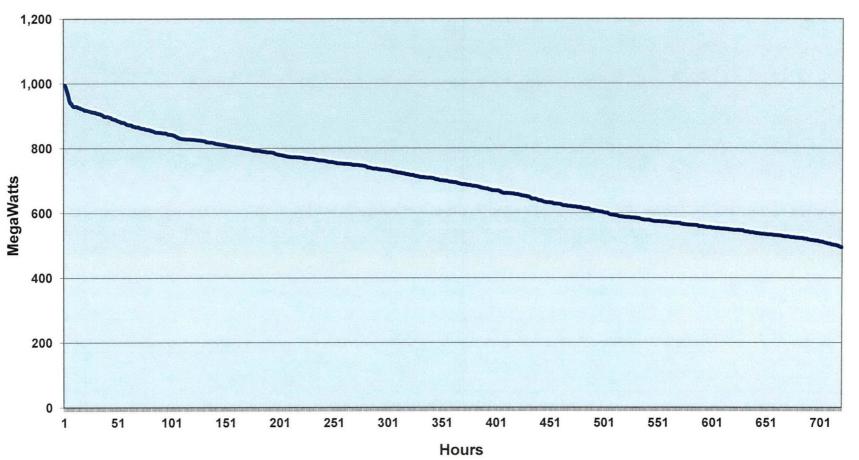
Order Dated December 20, 2001
Calendar Year 2016
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# Kentucky Power Company May 2016 Load Duration Curve (Internal Load)



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Attachment 1

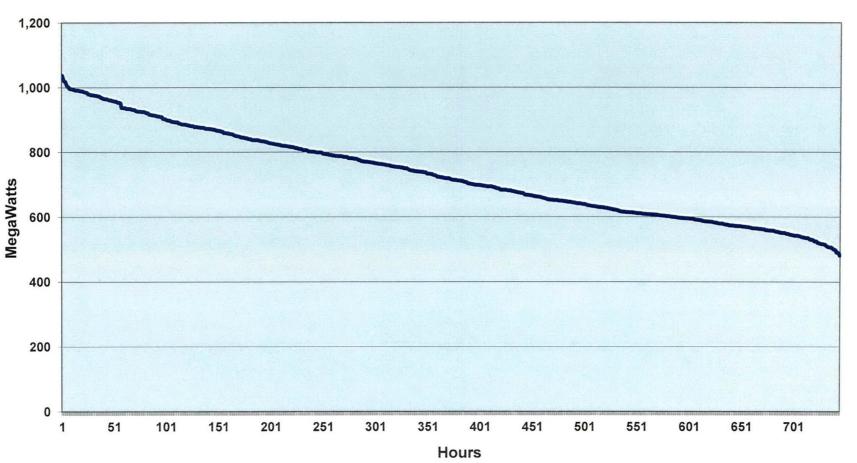
### Kentucky Power Company June 2016 Load Duration Curve (Internal Load)



Calendar Year 2016
Annual Reseource Assessmen

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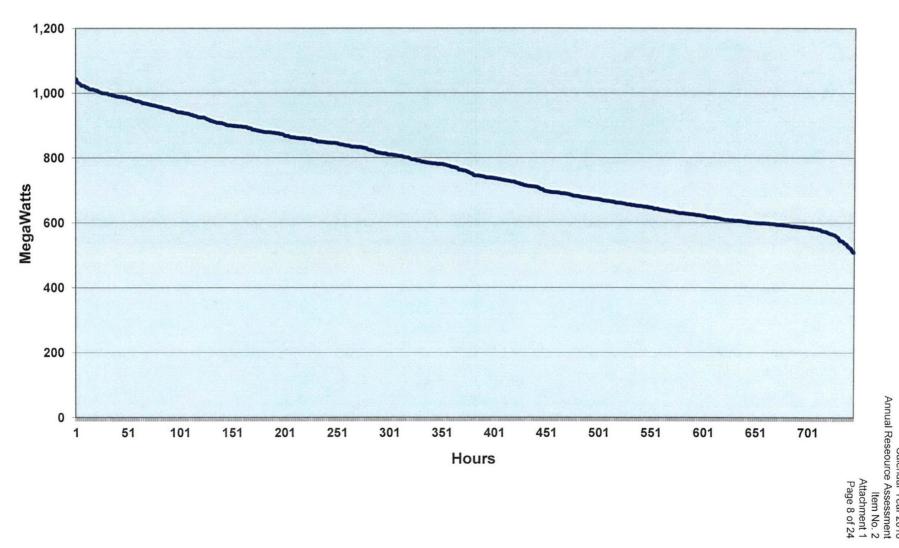
### Kentucky Power Company July 2016 Load Duration Curve (Internal Load)



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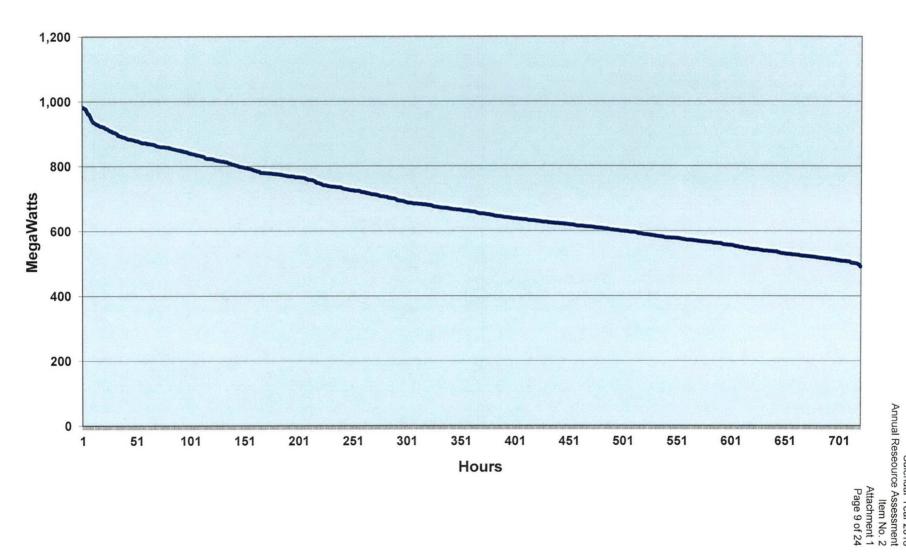
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## Kentucky Power Company August 2016 Load Duration Curve (Internal Load)



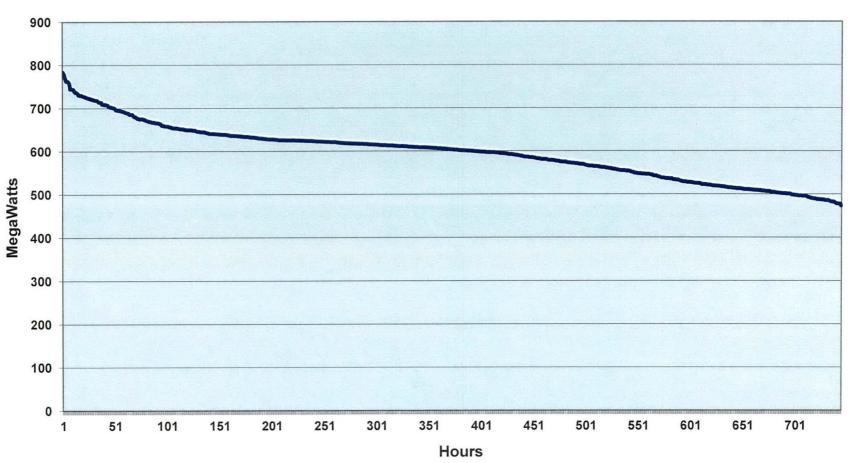
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## Kentucky Power Company September 2016 Load Duration Curve (Internal Load)



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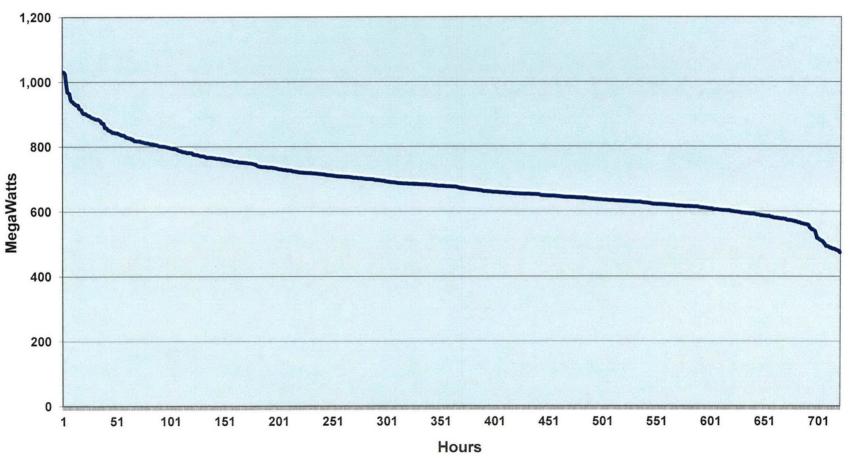
### Kentucky Power Company October 2016 Load Duration Curve (Internal Load)



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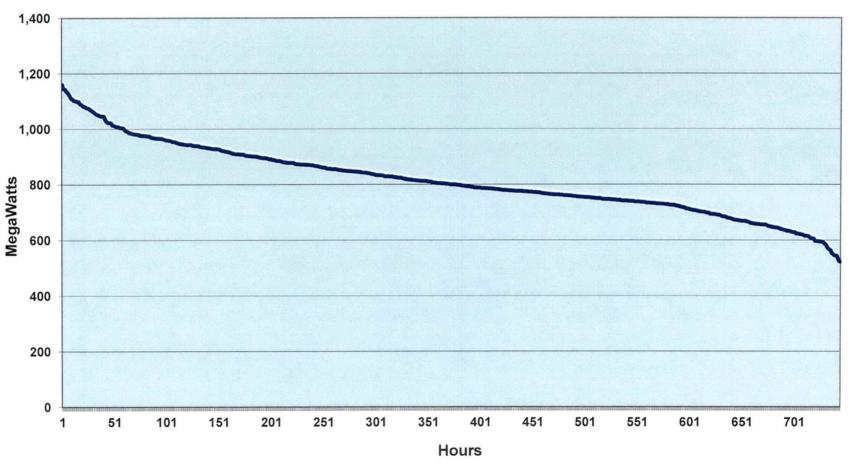
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Item No.
Attachment

### Kentucky Power Company November 2016 Load Duration Curve (Internal Load)



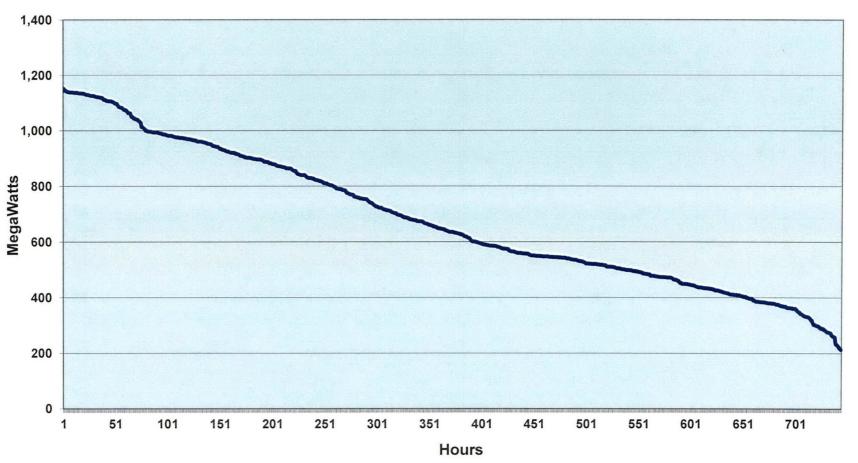
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## Kentucky Power Company December 2016 Load Duration Curve (Internal Load)



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Attachment 1

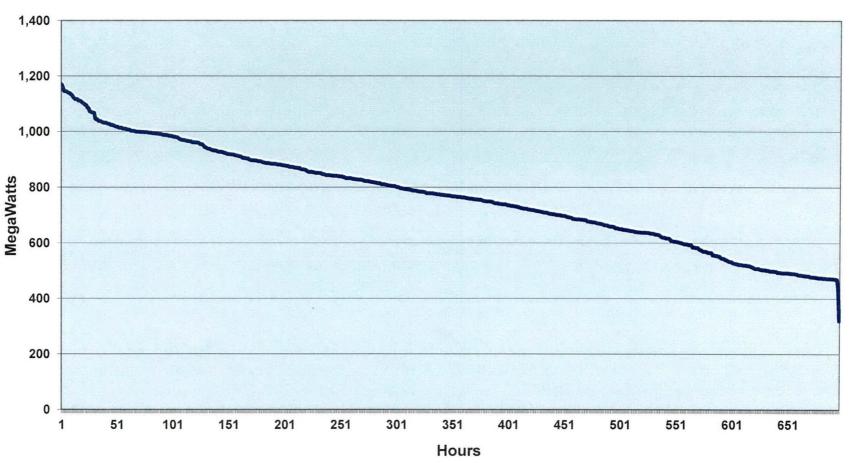
### Kentucky Power Company January 2016 Load Duration Curve (System Load)



KPSC Adminstrative Case No. 387
Order Dated December 20, 2001
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Annual Reseource Assessment

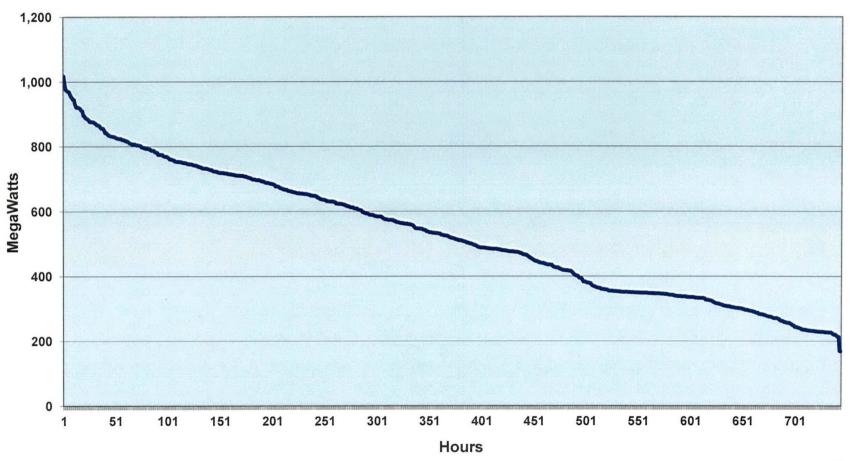
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## **Kentucky Power Company** February 2016 Load Duration Curve (System Load)



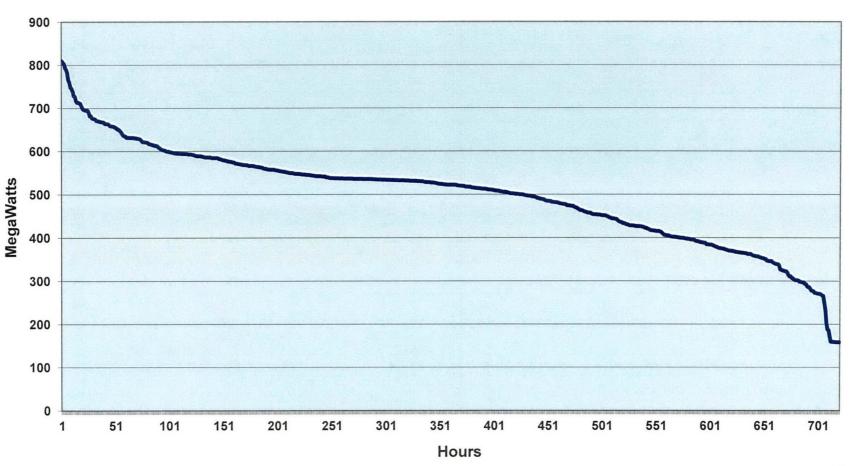
Annual Reseource Assessment
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### Kentucky Power Company March 2016 Load Duration Curve (System Load)



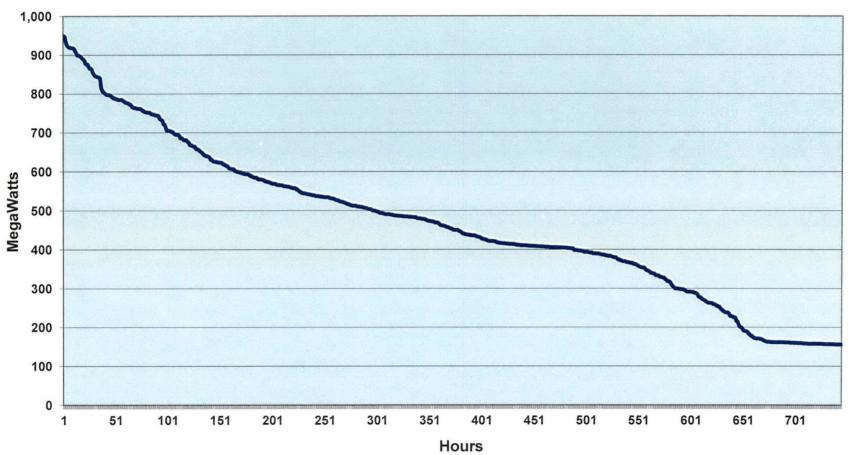
KPSC Administrative Case No. 387
Order Dated December 20, 2001
Calendar Year 2016
Annual Reseource Assessment
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Attachment 1
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## **Kentucky Power Company** April 2016 Load Duration Curve (System Load)



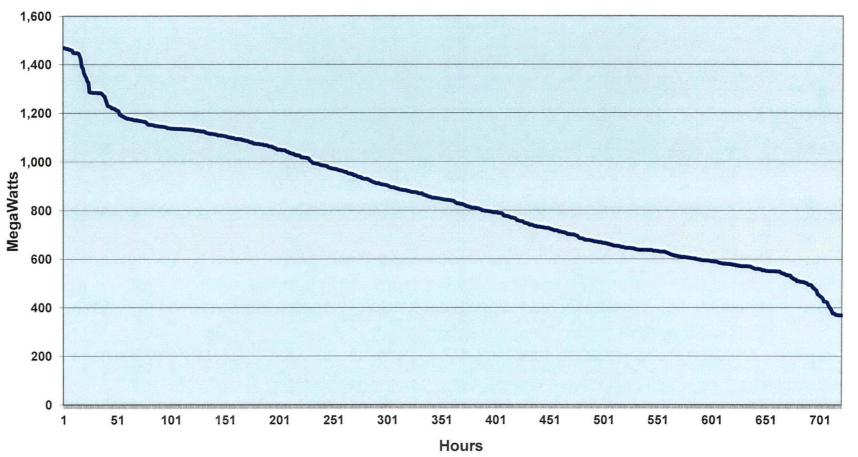
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# Kentucky Power Company May 2016 Load Duration Curve (System Load)



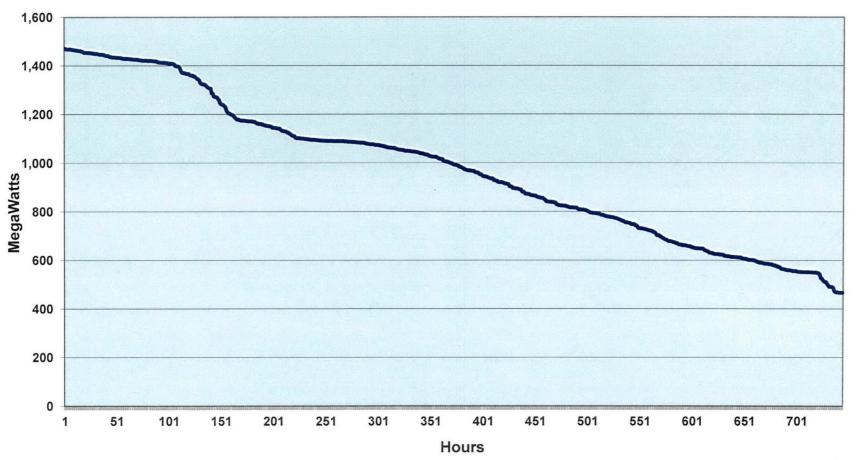
KPSC Adminstrative Case No. 387
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### **Kentucky Power Company** June 2016 Load Duration Curve (System Load)



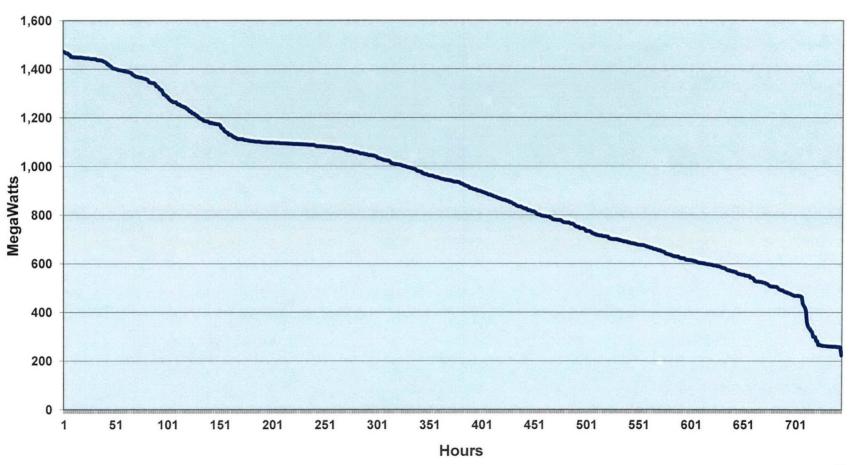
Annual Reseource Assessment Item No. 2 Attachment 1 Page 18 of 24

### Kentucky Power Company July 2016 Load Duration Curve (System Load)



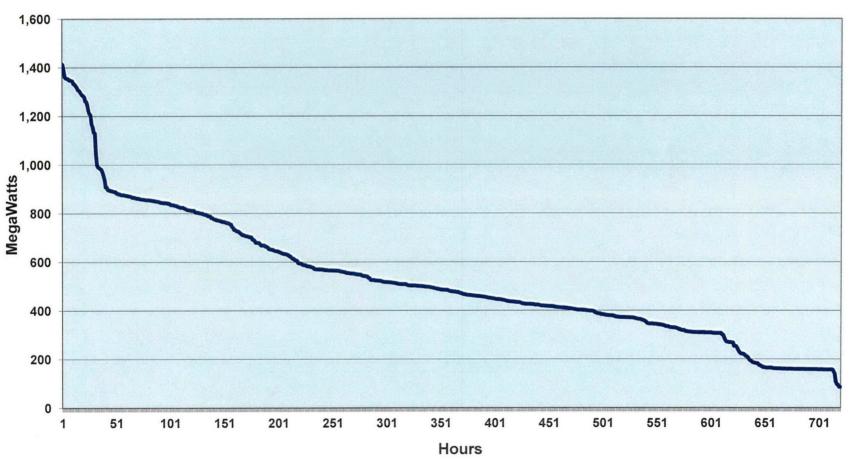
Annual Reseource Assessment Item No. 2
Attachment 1

### Kentucky Power Company August 2016 Load Duration Curve (System Load)



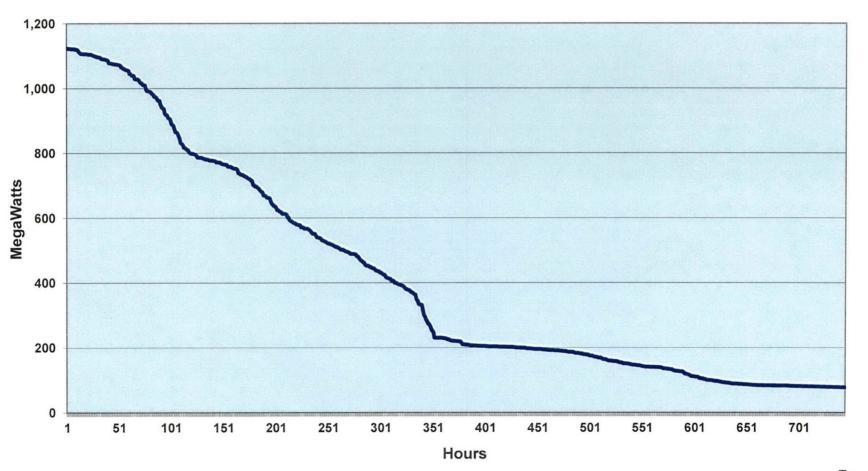
KPSC Adminstrative Case No. 387
Order Dated December 20, 2001
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# Kentucky Power Company September 2016 Load Duration Curve (System Load)



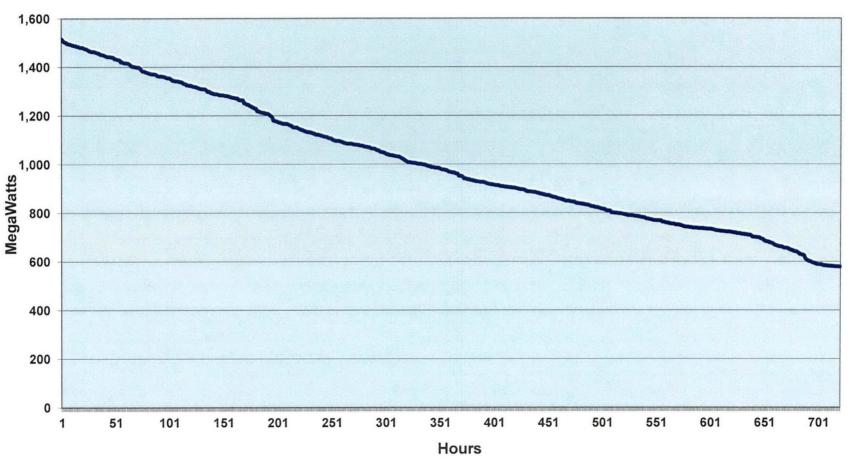
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### Kentucky Power Company October 2016 Load Duration Curve (System Load)



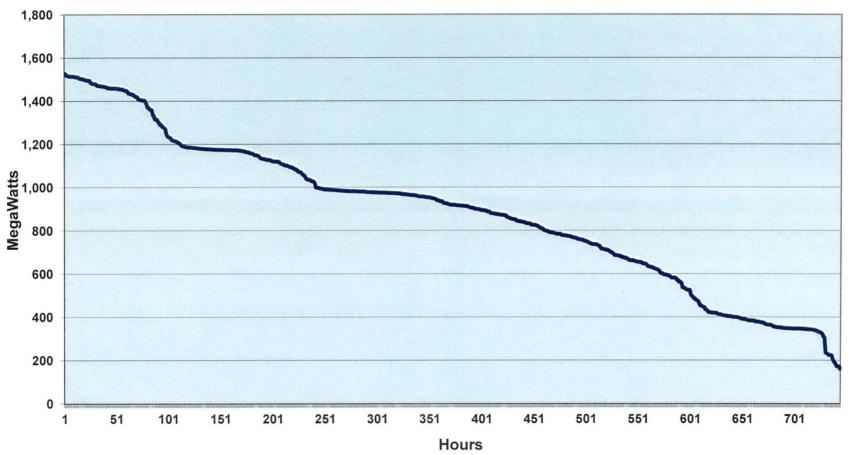
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### **Kentucky Power Company November 2016 Load Duration Curve** (System Load)



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# Kentucky Power Company December 2016 Load Duration Curve (System Load)



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# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 3 Page 1 of 1 Witness: Ranie K. Wohnhas

- Q-3 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) offsystem 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).
- A 3 Please refer to Page 1 of KPSC 1-3 Attachment1 for 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 Page 1.

The off-system energy sales forecasts for Kentucky Power Company are provided on Page 2 of KPSC 1-3 Attachment1. Forecasts of off-system peak demand for Kentucky Power Company have not been developed and are not available. In addition, high case forecasts for off-system energy sales and peak demand have not been developed and are not available.

The AEP Interconnection Agreement terminated on January 1, 2014 and the AEP-East Power Pool no longer exists. As a result, the request for information regarding the AEP-East Power Pool is no longer applicable.

# Kentucky Power Company Base and High Forecast Energy Sales (GWH) and Seasonal Peak Demand (MW) 2017 - 2021

	Energy	Sales		nmer Jemand	Preceding Winter Peak Demand		
Year	Base	High	Base	High	Base	High	
2017	6,199	6,296	1,022	1,038	1,335	1,356	
2018	6,149	6,282	1,014	1,036	1,322	1,351	
2019	6,131	6,290	1,013	1,040	1,318	1,353	
2020	6,103	6,306	1,008	1,041	1,307	1,351	
2021	6.096	6.352	1,012	1,055	1,310	1,365	

### Kentucky Power Company Forecast Off-System Energy Sales (GWh) 2017 - 2021

<u>Year</u>	KPCo Off-System <u>Sales</u>
2017	1,371
2018	1,480
2019	1,376
2020	2,373
2021	2.105

## Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 4

Page 1 of 1
Witness: Ranie K. Wohnhas

- Q-4 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).
- A 4 The AEP-East operating companies are required to comply with the PJM mandated reserve margin following its October 1, 2004 integration of AEP's Eastern System into the PJM Interconnection.

The installed reserve margin requirement (IRM) is recalculated each year, depending on five-year average of PJM generating units reliability, PJM load shape, and assistance available from neighboring regions. In addition, Kentucky Power's responsibility to PJM depends on its twelve-month history of generator reliability or Unforced Capacity value, and its peak demand diversity in relation to the PJM total load.

For the delivery periods 2017/18 through 2021/22 PJM has set the IRM at 16.6% for PJM and for planning purposes Kentucky Power assumed a 16.6% level for future years.

The AEP-East Power Pool no longer exists, and forecasts regarding it are no longer available.

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 5 Page 1 of 1 Witness: Ranie K. Wohnhas

- Q-5 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)
- A-5 KPSC 1-5 Attachment 1 provides projected PJM peak demands, capabilities, and margins for Kentucky Power for PJM Planning Years 2017/18 through 2021/22.

The AEP-East Power Pool no longer exists, and forecasts regarding it are no longer available.

#### KENTUCKY POWER COMPANY Projected PJM Peak Demands, Generating Capabilities, and Margins

	Peak Demand - MW							acity - MW					Reser	ve Margin	Reserve	e Margin	PJM UCAF			
		Inter- ruptible			Net Other	****	Existing Capacity	_	Planned Capacity Additions				KPCo			nterruptible Capacity		erruptible Capacity	After Inte	Capacity
PJM Planning Year	Internal Demand	Response (b)	DSM (c)	Net KPCo Internal Demand	Committed Sales	Total KPCo Demand	& Planned Changes (d)	Committed Net Sales	Name/ Identifier (e)	ww	Annual Purch.	Total ICAP Capacity	Company- wide EFORd	Available UCAP	MW	% of Demand	MW	% of Demand	PJM FPR (%)	Net Position MW
	(t)	(=)	(3)	(4)=sum(1 thru 3)	(5)	(6)*(4)+(5)	(7)	(8)	(9)	(10)	(11)	(12)=(7)-(8)+Suns(10)+(11)	(13)	(14) = (12)*(1-(13))	(15)=(14)-((6)-(2))	(16)=(15)-((6)-(2))*100	(17)+(14)+(6)	(17)*(15)\6)*100	(15)	(14)-((6)*(1+(18)))
2017 /18	1,021	0	0	1,021	0	1,021	1,457					1,457	11.98%	1,282	261	25.6	261	25.6	9.67	163
2018 /19	1.020	0	0	1,020	0	1,020	1,463		75 MW Wind	3.8		1,467	9.99%	1,320	300	29.4	300	29.4	8.92	209
2019 /20	1.025	0	0	1.025	0	1,025	1,463		75 MW Wind + 10 MW Solar	7.6		1,474	9.99%	1,327	302	29.5	302	29.5	8.92	211
2020 /21	1.022	0	0	1.022	0	1,022	1,468		75 MW Wind	3.8		1,483	9.97%	1,335	313	30.6	313	30.6	8.92	222
2021 /22	944	0	(6)	938	0	938	1,468		75 MW Wind + 10 MW Solar	7.6		1,491	9.97%	1,342	404	43.1	404	43.1	8,92	320

(a) Based on Nov update of (June 2016) Load Forecast (with implied PJM diversity factor)

(b) Demand Response approved by PJM in the prior planning year plus forecasted "Active" DR.

(c) For PJM planning purposes, the ultimate impact of new DSM is 'delayed' about 4 years to represent the ultimate recognition of these amounts through the PJM-originated load

(d) Reflects KPCo's share of the following summer capability assumptions: EFFICIENCY IMPROVEMENTS: 2018/19: Rockport 1: 6 MW (turbine) 2020/21: Rockport 2: 5 MW (turbine)

(e) All Planned Capacity Additions are the supply side resources identified as part of KPCo's 2016 IRP Due to the new PJM Capacity Performance rules - wind and solar are given a capacity credit equal to 5% and 38% of their nameplate repectively

(f) Forecast Pool Requirement (FPR) = (1 + IRM) \* (1 - PJM EFORd)

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 6 Page 1 of 1 Witness: Ranie K. Wohnhas

- Q-6 A list that identifies scheduled outages or retirements of generating capacity during the current year and the following four years.
- A 6 Please see the following attachment for this response.

Big Sandy Plant	
Year	Unit 1
2017	5 weeks
2017	1 week
2018	9 weeks
2018	1 week
2019	4 weeks
2019	1 week
2020	4 weeks
2020	1 week
2021	8 weeks
2021	1 week

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Year	Unit 1	Unit 2
2017	3 weeks	
2018	3 weeks	8 weeks
2019	11 weeks	2 weeks
2020	2 weeks	2 weeks
2021	2 weeks	8 weeks

The Company has no plans to retire generating capacity

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 7 Page 1 of 1 Witness: Ranie K. Wohnhas

Q-7 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).

A - 7 Kentucky Power does not plan to add base load or peaking capacity to meet native load requirements over the next 10 years.

Kentucky Power's 2016 Integrated Resource Plan projects the addition of 320 MW of solar and wind resources over the next five years. The timing and size of these resources, as detailed in the 2016 IRP, are identified in columns 9 and 10 of Attachment 1 to KPSC1-5. However, the Company's IRP is not a commitment by Kentucky Power to specific resource additions.

The AEP-East Power Pool no longer exists, and forecasts regarding it are no longer available.

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 8 a & b Page 1 of 1 Witness: Ranie K. Wohnhas

- **Q 8 a & b** 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.
- A 8 a & b Please refer to KPSC 1-8a&b Attachment1.

# Case No. Administrative Case No. 387 Annual Report Annual Resource Assessment Calendar Year 2016 Item No. 8 c & d Page 1 of 1 Witness: Ranie K. Wohnhas

- Q-8 c & d 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.
- A-8 c & d 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 transmission capacity additions described in response to KPSC 1-9, will provide adequate capacity to serve the existing and projected loads shown in the table below.

d. Please refer to KPSC 1-8d Attachment 1 for the requested information.

KPSC Adm. Case No. 387 Order Dated December 20, 2001 For Calendar Year 2016 Item No. 8a & 8b Attachment 1 Page 1 of 1

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

Received from (MWh):	<u>2011</u>	2012	<u>2013</u>	2014	2015	2016	2017	
	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)		
Appalachian Power (1)	4,230,880	4,338,641	4,631,523	5,171,726	4,017,819	4,720,669	(4)	
Ohio Power (1)	11,393,398	10,644,478	10,066,676	9,354,195	9,802,944	9,333,487	(4)	
East Ky Power Coop	510,543	394,193	386,124	294,361	271,558	300,264	(4)	
LGE(Kentucky Utilities)	780,095	730,063	565,818	623,285	533,642	392,126	(4)	
TVA	654,875	551,305	566,823	460,644	431,204	310,003	(4)	
Illinois Power Co. (2)	59,956	136,798	111,628	84,189	380,121	319,112	(5)	
Illinois Power Co. (3)	26,552	101,471	89,276	67,185	193,480	204,194	(5)	
Big Sandy Generating Plant	6,372,925	2,661,344	2,764,447	4,708,473	3,132,143	530,333	1,012,860	
Mitchell 1&2 (KPCo Share 50%)			0	4,096,020	2,688,981	3,814,606	3,116,950	(7)
Rockport (KPCo Share 15%)				2,507,564	1,866,891	1,727,064	1,779,115	(7)

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

Delivered to (MWh):	2011	2012	2013	2014	2015	2016	2017
Appalachian Power (1)	15,816,607	11,673,720	11,550,084	13,038,290	11,369,584	9,073,136	(4)
Ohio Power (1)	494,931	526,005	371,910	433,763	440,883	509,828	(4)
East Ky Power Coop	176,721	206,810	136,118	236,884	240,042	291,229	(4)
I CF/Kentucky Utilities)	1	36	0	0	0	0	(4)
1	1	0	0	0	0	0	(4)
Power Co. (2)	0	0	0	0	0	0	(5)
Illinois Power Co. (3)	0	0	0	0	0	0	(5)
Vanceburg and Olive Hill	95,607	95,525	95,502	96,494	90,532	85,455	(6)

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 2015 actuals.
- (5) The Company does not, and can not, forecast energy production output from an IPP.
- (6) This is a 3rd Party Firm Load that is served by Kentucky Power
- (7) Net Generation less Non-generating auxiliaries shares from Mitchell Power Plant and Rockport are from Plants not directly connected to the KPCo system

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### Kentucky Power Company Seasonal Peak Demand Actual 2016 and Forecast 2017-2021

Summer Peak Demand (MW)	Preceding Winter Peak Demand (IMW)
1,044*	1,342*
1,022	1,335
1,014	1,322
1,013	1,318
1,008	1,307
1,012	1,310
	Peak Demand (MW) 1,044* 1,022 1,014 1,013 1,008

<sup>\*</sup>Based on Actual Data

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- Q 9 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.
- A 9 Please refer to KPSC 1-9, Attachment 1. Confidential treatment is being sought for portions of this response.

### **Kentucky Power Co - Transmission Capacity Additions**

### \*ALL CAPACITIES APPROXIMATE

Hazard – Wooton - Pineville 161 kV Project – This project will replace the single-phase 161/138 kV transformer at Hazard with a higher capacity three phase transformer. The project will also rebuild the 45 mile Wooton - Pineville 161 kV line. The project will address thermal violations identified on the Hazard-Wooton 161 kV line and 161/138 kV transformer. Current projected in-service date for the Hazard – Wooton corridor is December 2019. Current projected in service date for the Wooton – Pineville corridor December 2023.

#### Hazard - Pineville Corridor

Existing Summer Emergency Conductor Capacity: 215 MVA Proposed Summer Emergency Conductor Capacity: 390 MVA

#### **Hazard Transformer**

Existing Nameplate Capacity: 135 MVA Proposed Nameplate Capacity: 350 MVA

Bellefonte Transformer Addition – This project will install a 200 MVA 138/69/34.5 kV transformer at Bellefonte station. This project will solve thermal planning criteria violations on the Bellefonte #5 for the loss of the Bellefonte #2 transformer. Current projected in-service date is December 2017.

### **Bellefonte Transformer**

Existing Nameplate Capacity: 100 MVA Proposed Nameplate Capacity: 200 MVA

Stanville Area Improvements – Due to severe access issues at Betsy Layne, as well as the station being located in a flood plain, this project will retire Betsy Layne station and construct a new greenfield station (Stanville) just north of Betsy Layne station at the corner of Bobcat Blvd and E. Main Street in Stanville, KY. This project is necessary to solve planning criteria violations and address distribution reliability concerns. The Betsy Layne transformer will overload under winter peak conditions for the loss of the Cedar Creek Transformer. As part of the project, a 69kV capacitor bank will be installed at South Pikeville Station to solve voltage drop violations at South Pikeville and Pikeville Stations for the loss of the Cedar Creek Transformer. Current projected in-service date is December 2018.

Betsy Layne / Stanville Transformer

Existing Betsy Layne Nameplate Capacity: 50 MVA

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Proposed Stanville Nameplate Capacity: 130 MVA

The transformer is being replaced due to insulation and short circuit strength breakdown. Additionally recent test reports show oil quality issues, carbon dioxide levels above IEEE thresholds, and moisture readings in the oil that are deteriorating.

Cannonsburg – South Neal 69 kV Line Section Rebuild – This project will rebuild approximately 5 miles of the Cannonsburg – South Neal 69 kV line. The project will address thermal violations identified on the Cannonsburg – South Neal 69 kV line. Current projected in-service date for the project is December 2018.

#### Cannonsburg - South Neal 69 kV Line

Existing Summer Emergency Conductor Capacity: 75 MVA Proposed Summer Emergency Conductor Capacity: 102 MVA