

April 30, 2012

Jeff R. Derouen  
Executive Director  
Public Service Commission of Kentucky  
PO Box 615  
Frankfort, KY 40602-0615

**RECEIVED**

**APR 30 2012**

**PUBLIC SERVICE  
COMMISSION**

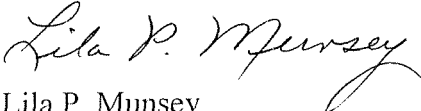
RE: Administrative Case No. 387

Dear Mr. Derouen:

Pursuant to the Commission's October 7, 2005 Order in the above case please find enclosed and accept for filing original and ten copies of the 2011 Annual Resource Assessment for Kentucky Power Company. Also enclosed are one copy of the Kentucky Power Company 2011 FERC Form No. 1 and one copy of the 2011 Annual Public Service Commission Utility Financial Report for Kentucky Power Company.

If you have any questions, please do not hesitate to contact me at (502) 696-7010.

Sincerely yours,



Lila P. Munsey  
Manager Regulatory Services

cc: Mark R. Overstreet



American Electric Power  
1 Riverside Plaza  
Columbus, OH 43215 2373  
AEP.com

Jeff D. Cline  
Annual Report Branch Manager  
Commonwealth of Kentucky  
Public Service Commission  
211 Sower Blvd.  
P. O. Box 615  
Frankfort, KY 40602-615

April 26, 2012

Dear Mr. Cline,

Enclosed is one copy of the 2011 Annual Public Service Commission Utility Financial Report for Kentucky Power Company.

Sincerely,

A handwritten signature in black ink that reads 'Bradley M. Funk' with a long, sweeping horizontal line extending to the right.

Bradley M. Funk  
Manager of Regulated Accounting  
614-716-3162  
[bmfunk@aep.com](mailto:bmfunk@aep.com)

BMF:rfd  
Enclosure



American Electric Power  
1 Riverside Plaza  
Columbus, OH 43215-2373  
AEP.com

Jeff D. Cline  
Annual Report Branch Manager  
Commonwealth of Kentucky  
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Bradley M. Funk  
Manager of Regulated Accounting  
614-716-3162  
[bmfunk@aep.com](mailto:bmfunk@aep.com)

BMF:rfd  
Enclosure

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

**IN THE MATTER OF :**

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

**ADMINISTRATIVE  
CASE NO. 387**

\*\*\*\*\*

**RESPONSE OF KENTUCKY POWER COMPANY**  
**TO**  
**COMMISSION ORDER DATED DECEMBER 20, 2001**

**April 30, 2012**



**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 2011 monthly peak internal demands for Kentucky Power Company and AEP System-East. Kentucky Power Company and AEP System-East had 21 and 1,071 MW of contractual interruptible capacity, respectively.

Page 3 of this response provides actual 2011 monthly system demands for Kentucky Power and AEP System-East. The system demands include internal load and off-system sales. Weather-normalized monthly peak system demands for Kentucky Power Company and AEP System-East have not been developed and therefore are not available.

**WITNESS:** Lila P Munsey

**Kentucky Power Company and AEP System-East Zone  
Actual and Weather Normalized Peak Internal Demand (MW)  
2011**

Month	Kentucky Power Company				AEP System-East Zone			
	Peak	Peak Day	Peak Hour	Normalized Peak	Peak	Peak Day	Peak Hour	Normalized Peak
January	1,445	1/14/2011	9	1,551	19,683	1/24/2011	8	20,192
February	1,522	2/11/2011	9	1,412	20,346	2/11/2011	8	19,323
March	1,171	3/2/2011	8	1,260	17,290	3/3/2011	8	17,860
April	1,114	4/1/2011	7	1,026	16,155	4/1/2011	7	15,225
May	1,208	5/31/2011	14	1,068	20,208	5/31/2011	16	17,282
June	1,189	6/8/2011	15	1,211	20,578	6/8/2011	16	19,733
July	1,240	7/11/2011	15	1,262	22,196	7/21/2011	16	20,996
August	1,230	8/2/2011	15	1,238	20,844	8/2/2011	16	20,383
September	1,087	9/2/2011	16	1,148	20,546	9/2/2011	16	18,500
October	1,002	10/31/2011	9	930	15,484	10/31/2011	8	14,647
November	1,216	11/18/2011	9	1,239	17,309	11/18/2011	8	17,262
December	1,272	12/12/2011	8	1,426	18,348	12/12/2011	8	18,980

**Kentucky Power Company and AEP System-East Zone  
Actual Peak System Demand (MW)  
2011**

Month	Kentucky Power Company			AEP System-East Zone		
	Peak	Peak Day	Peak Hour	Peak	Peak Day	Peak Hour
January	1,521	1/14/2011	9	20,948	1/24/2011	8
February	1,608	2/11/2011	9	21,648	2/11/2011	8
March	1,252	3/8/2011	8	18,483	3/8/2011	8
April	1,184	4/1/2011	7	17,126	4/1/2011	7
May	1,309	5/31/2011	14	21,731	5/31/2011	16
June	1,336	6/8/2011	17	22,641	6/8/2011	16
July	1,386	7/11/2011	15	24,441	7/21/2011	16
August	1,362	8/2/2011	17	22,934	8/2/2011	16
September	1,202	9/2/2011	16	22,373	9/2/2011	16
October	1,095	10/31/2011	9	16,945	10/31/2011	8
November	1,307	11/18/2011	8	18,808	11/18/2011	8
December	1,382	12/12/2011	8	20,079	12/12/2011	8



## **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).

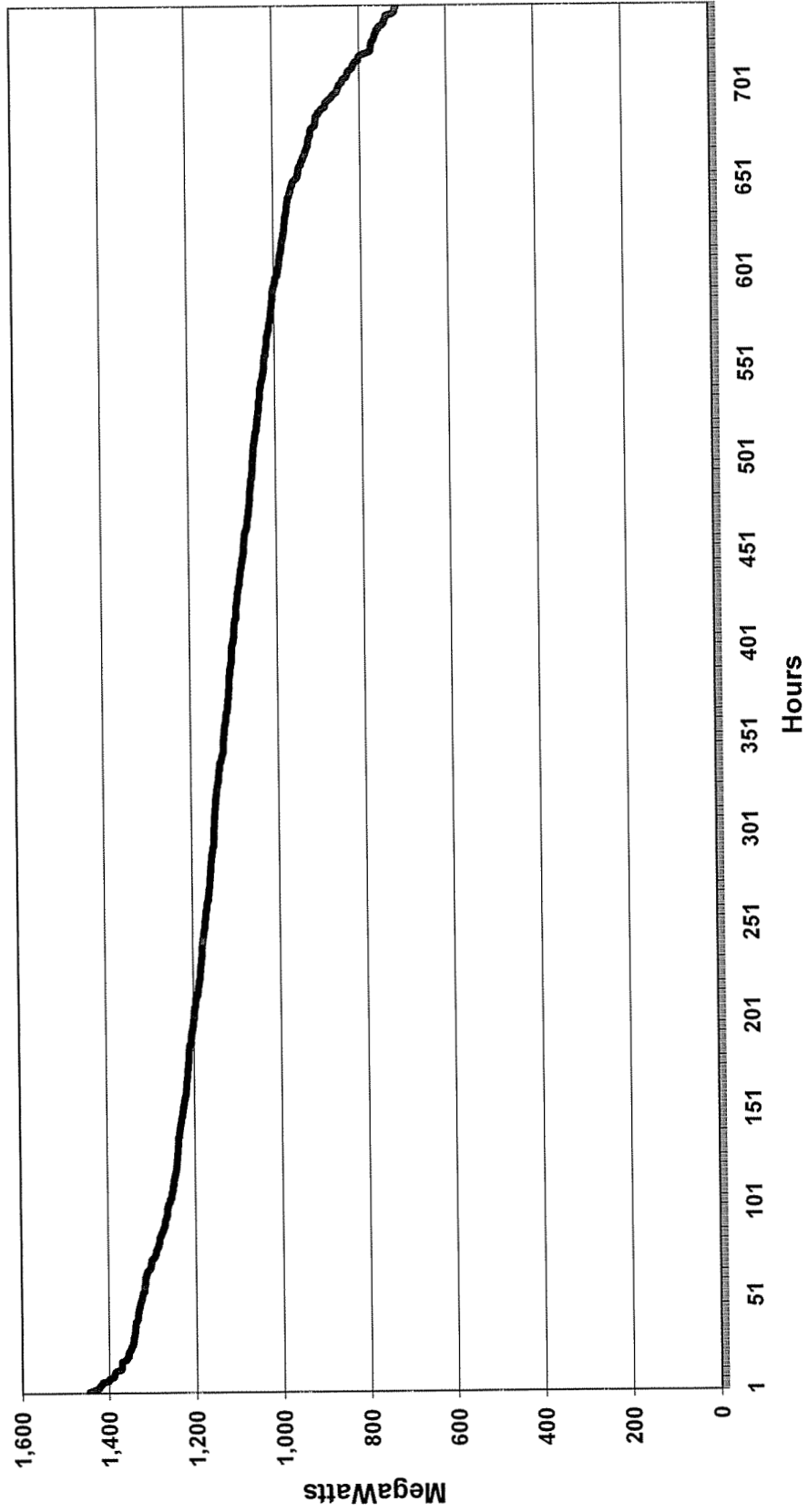
### **RESPONSE**

Pages 2 through 13 provide 2011 monthly load duration curves for Kentucky Power Company's internal load. Pages 14 through 25 provide 2011 monthly load duration curves for Kentucky Power Company's system load. Pages 26 through 37 provide 2011 monthly load duration curves for AEP System-East's internal load. Pages 38 through 49 provide 2011 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.

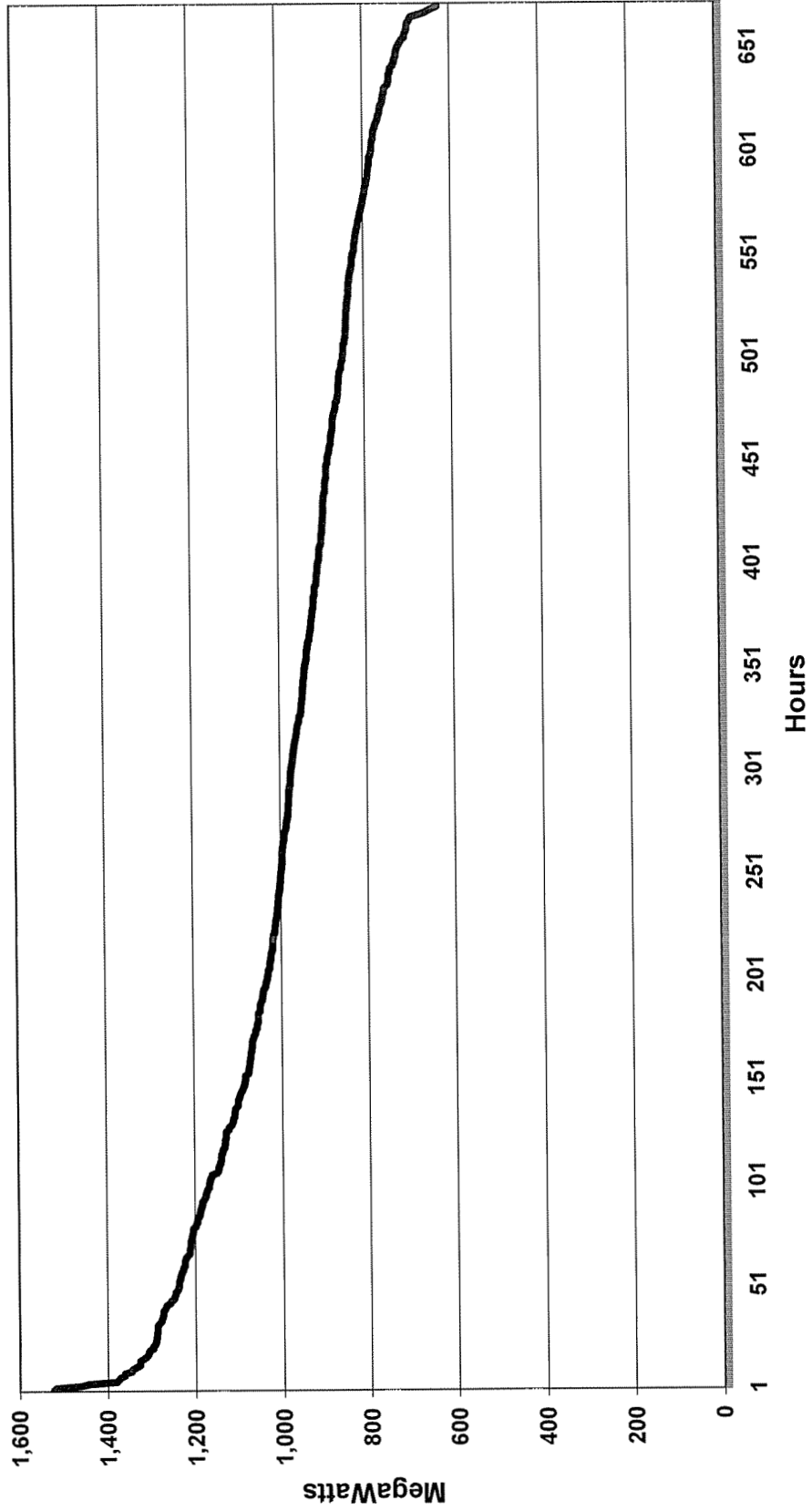
Weather-normalized monthly internal peaks for Kentucky Power Company and AEP System-East are provided on Page 2 of Item Number 1. Weather-normalized system peaks have not been developed and therefore are not available.

**WITNESS:** Lila P Munsey

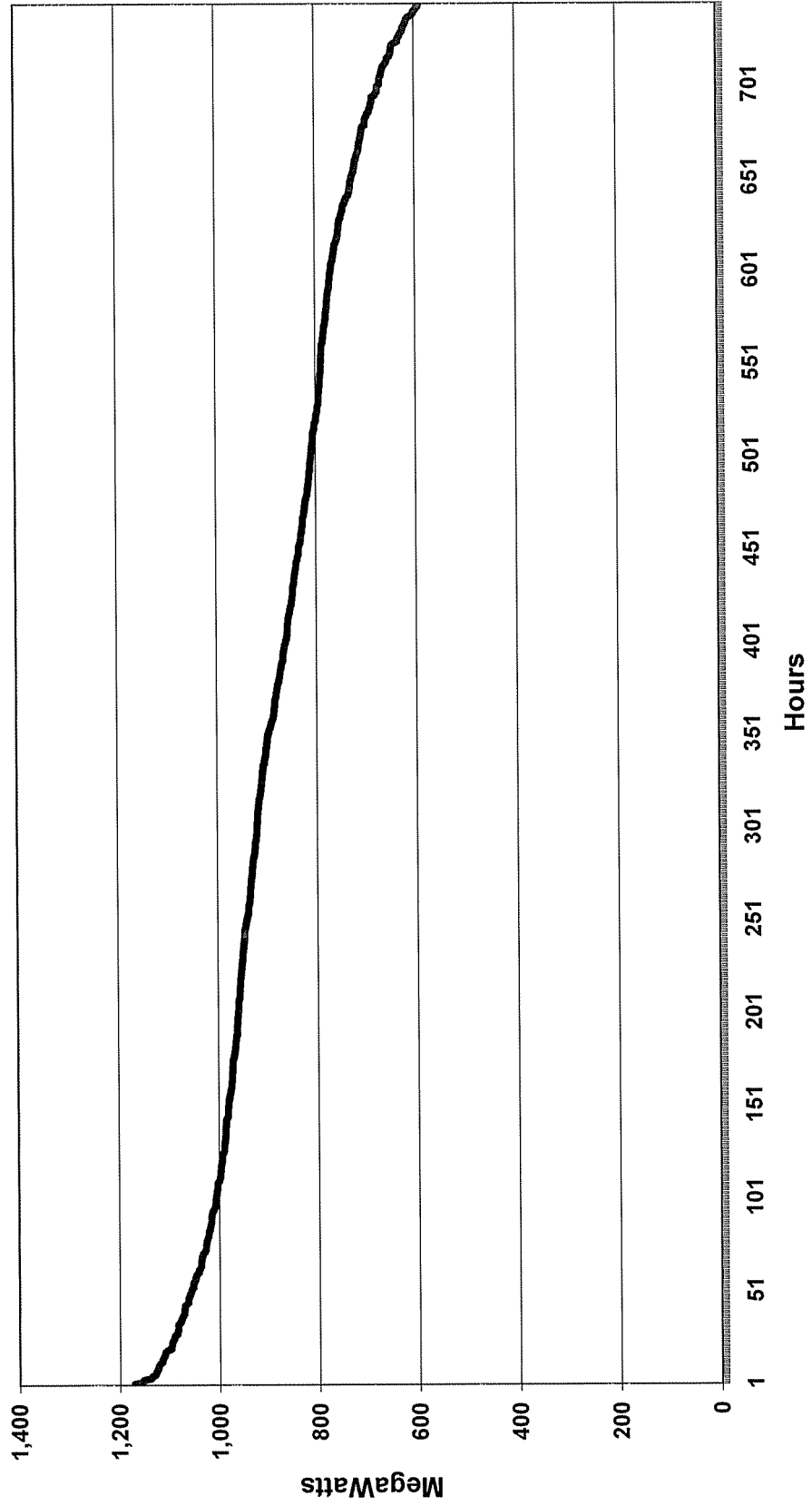
### Kentucky Power Company January 2011 Load Duration Curve (Internal Load)



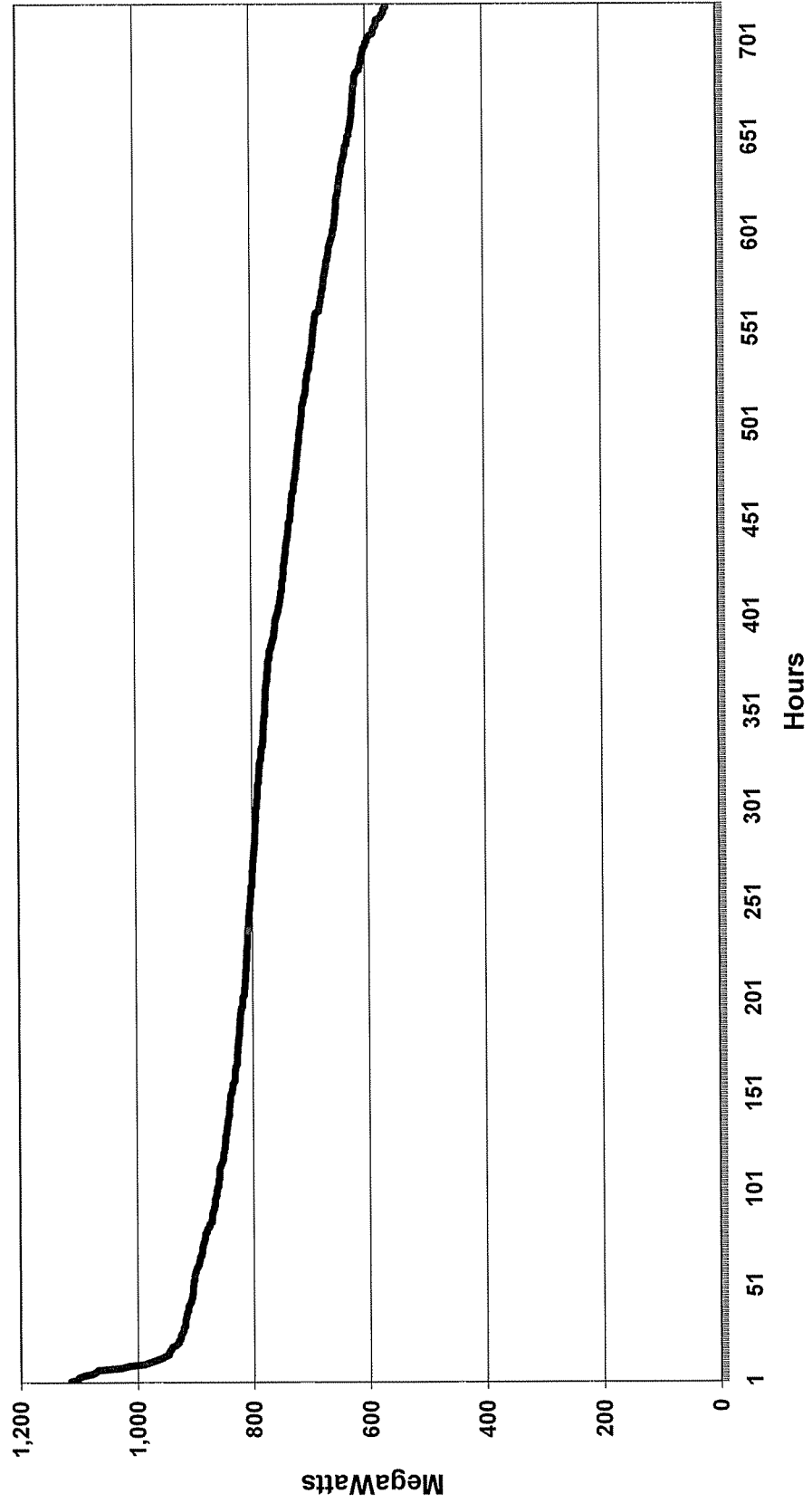
### Kentucky Power Company February 2011 Load Duration Curve (Internal Load)



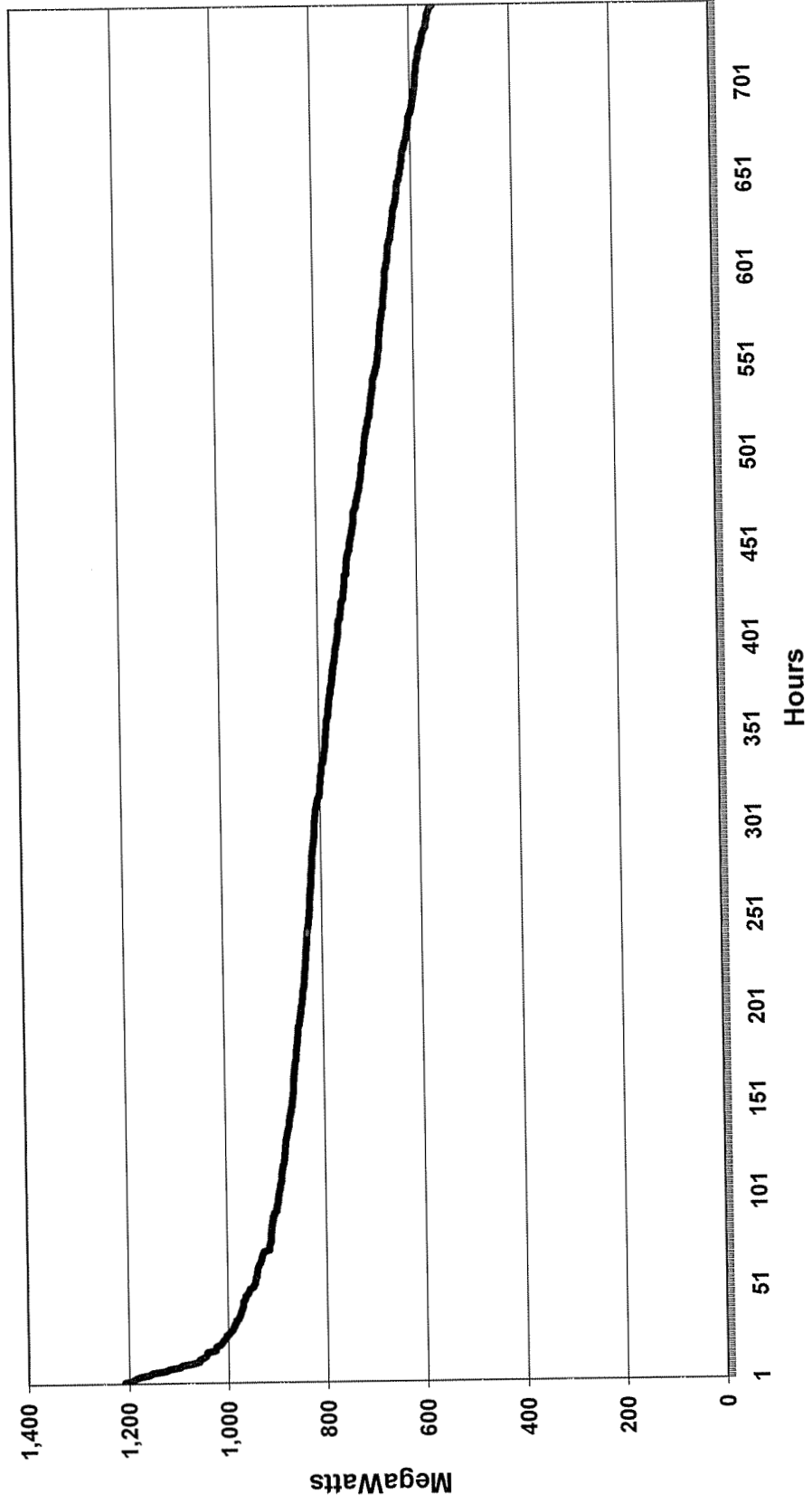
### Kentucky Power Company March 2011 Load Duration Curve (Internal Load)



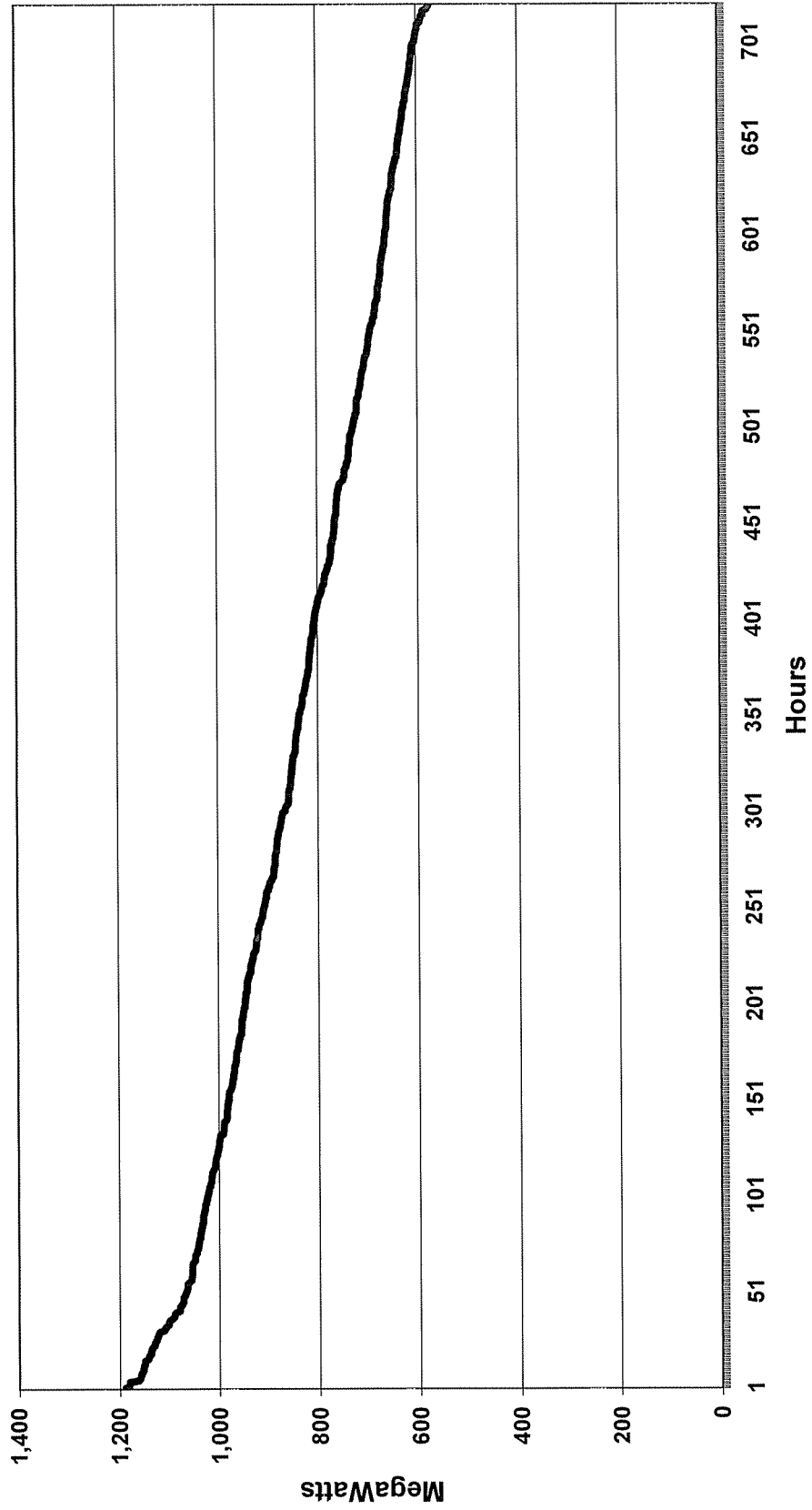
**Kentucky Power Company  
April 2011 Load Duration Curve  
(Internal Load)**



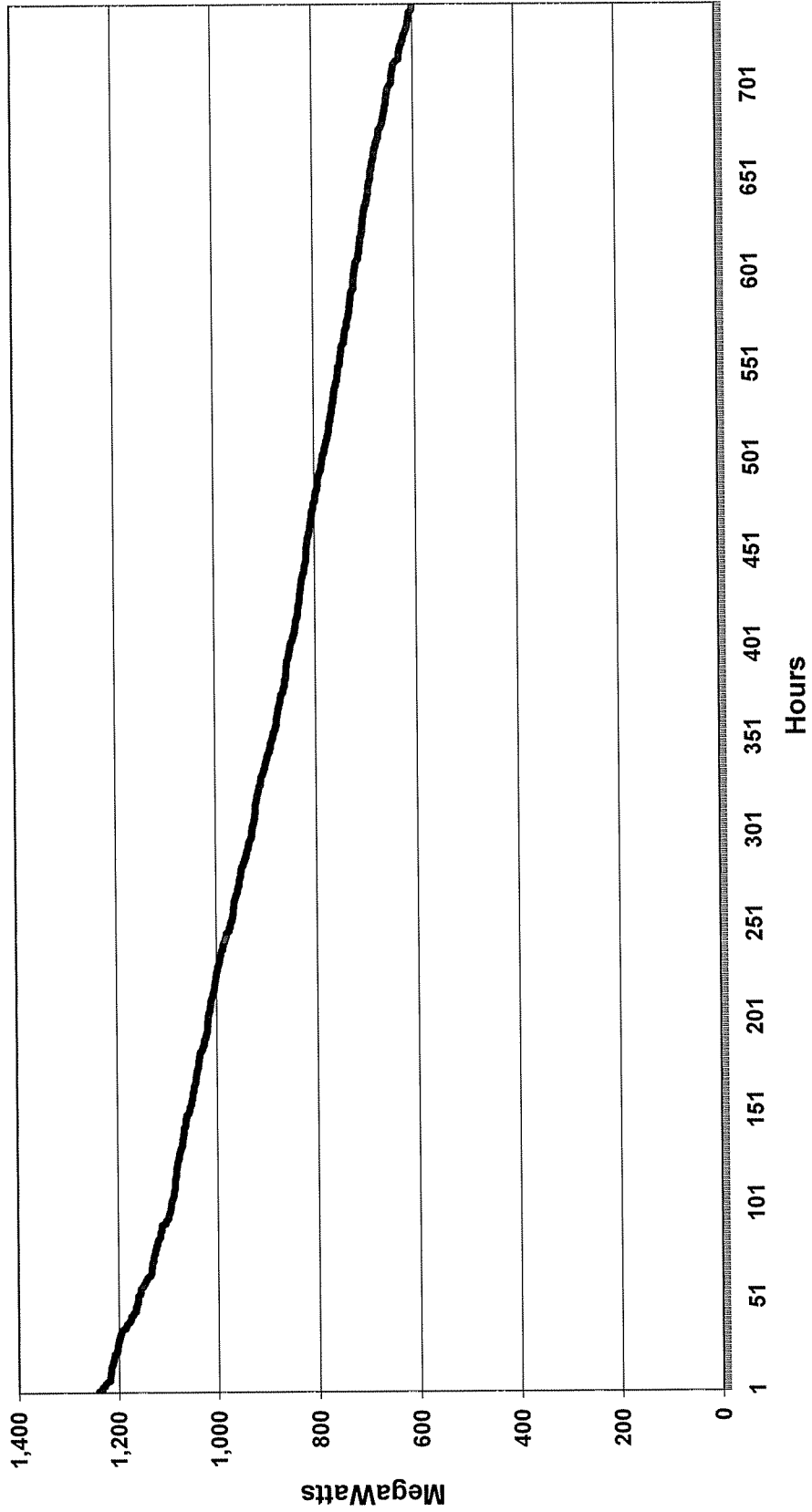
**Kentucky Power Company  
May 2011 Load Duration Curve  
(Internal Load)**



**Kentucky Power Company  
June 2011 Load Duration Curve  
(Internal Load)**

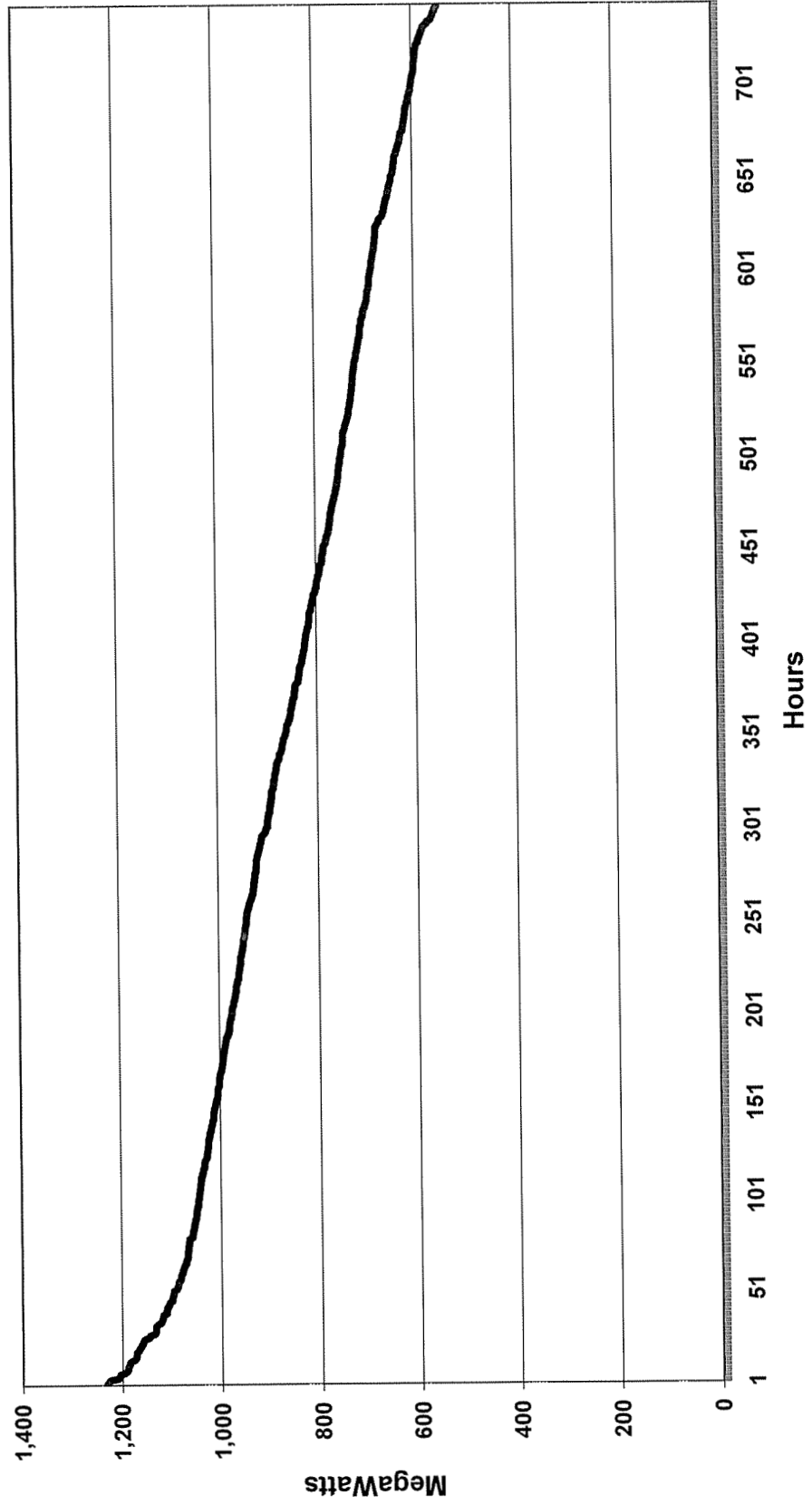


### Kentucky Power Company July 2011 Load Duration Curve (Internal Load)

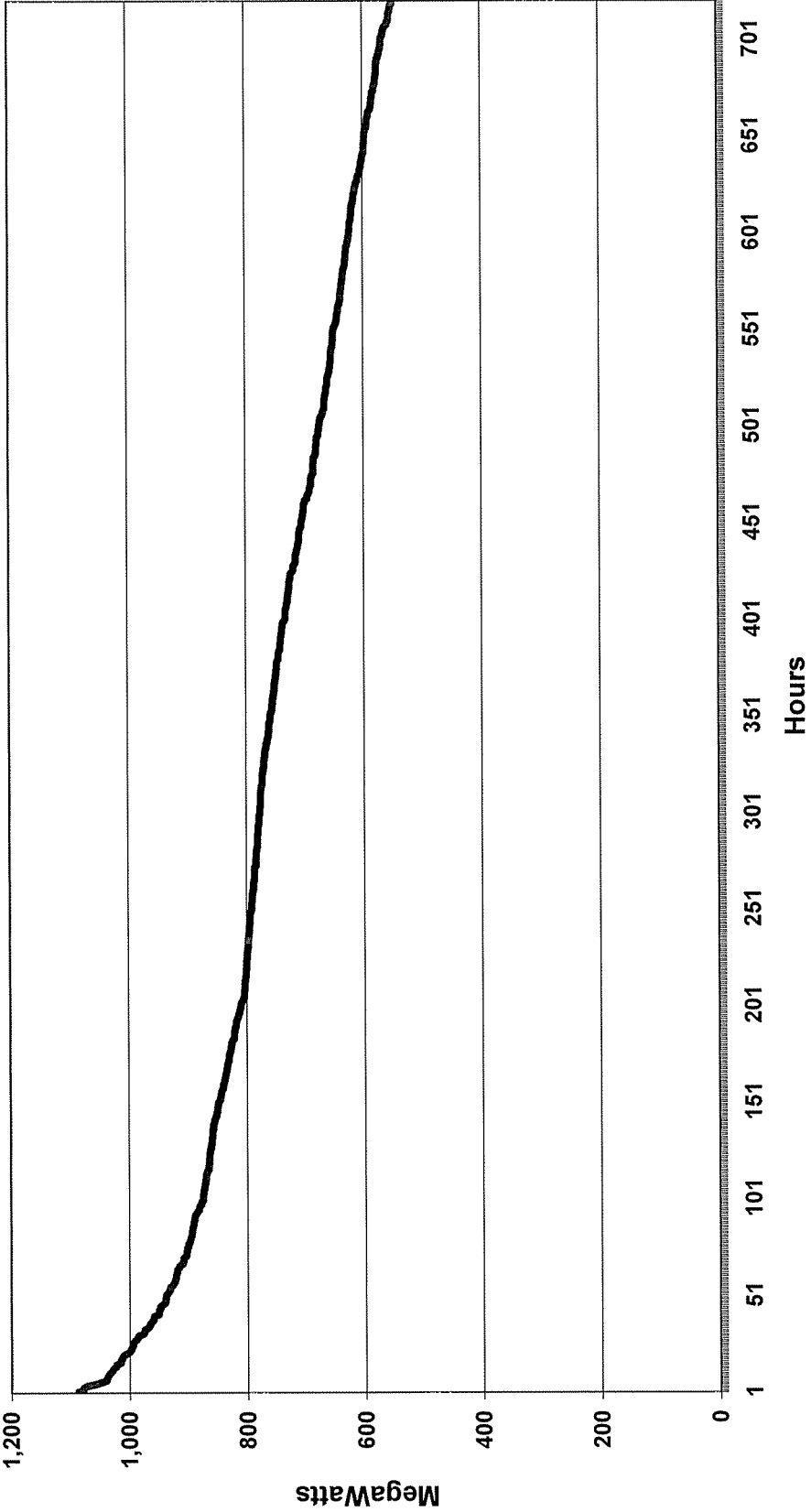




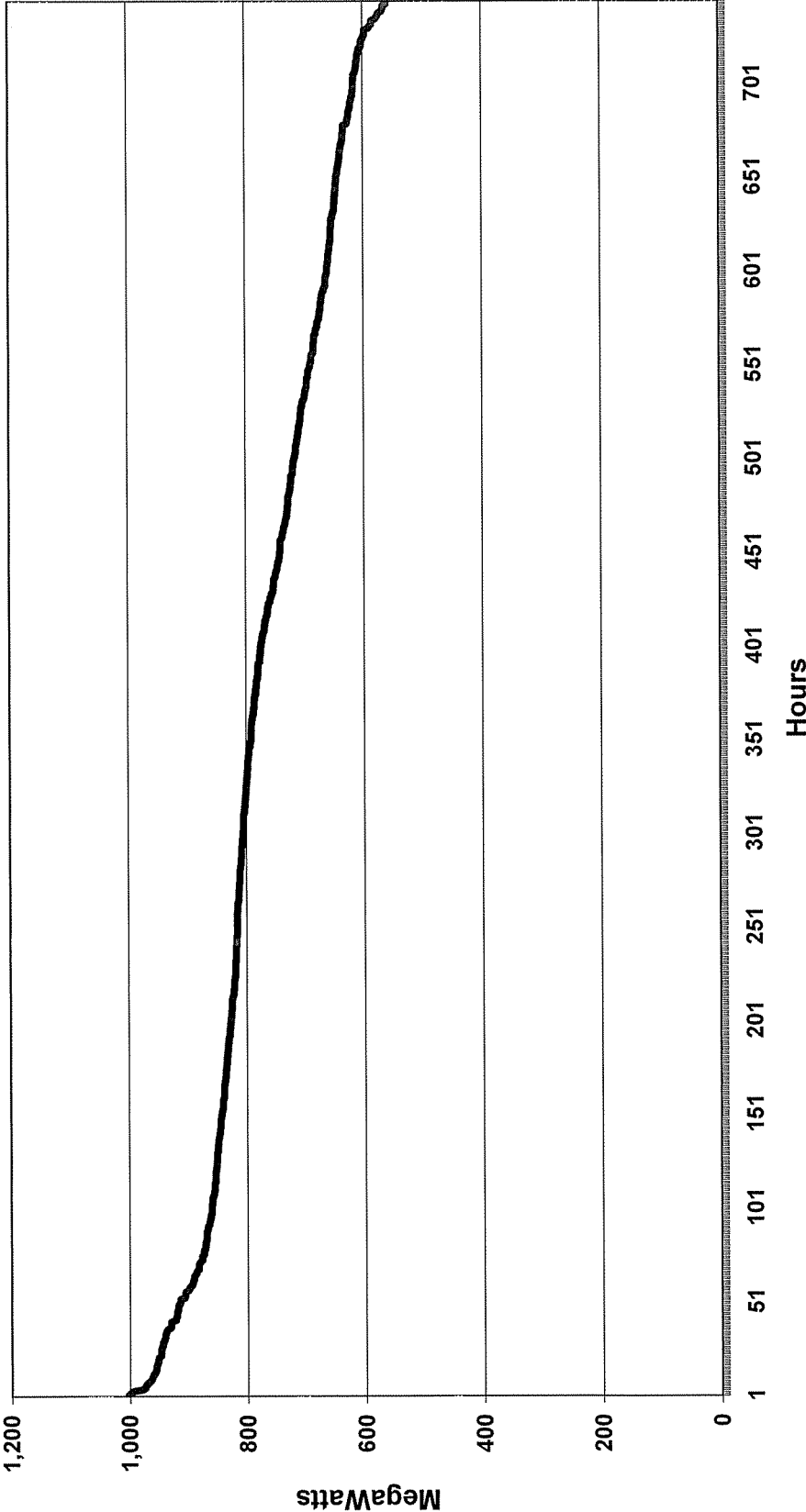
### Kentucky Power Company August 2011 Load Duration Curve (Internal Load)



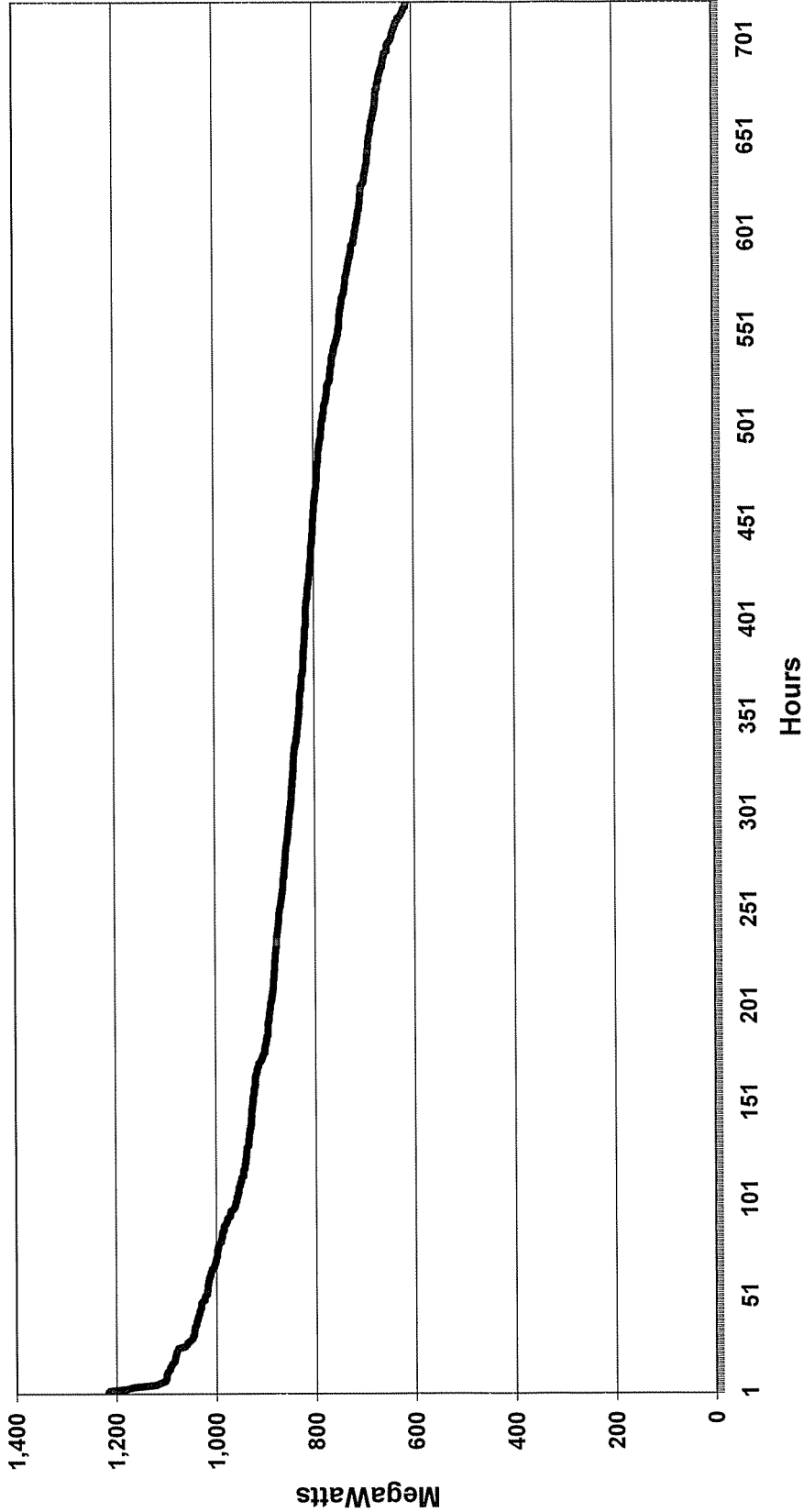
### Kentucky Power Company September 2011 Load Duration Curve (Internal Load)



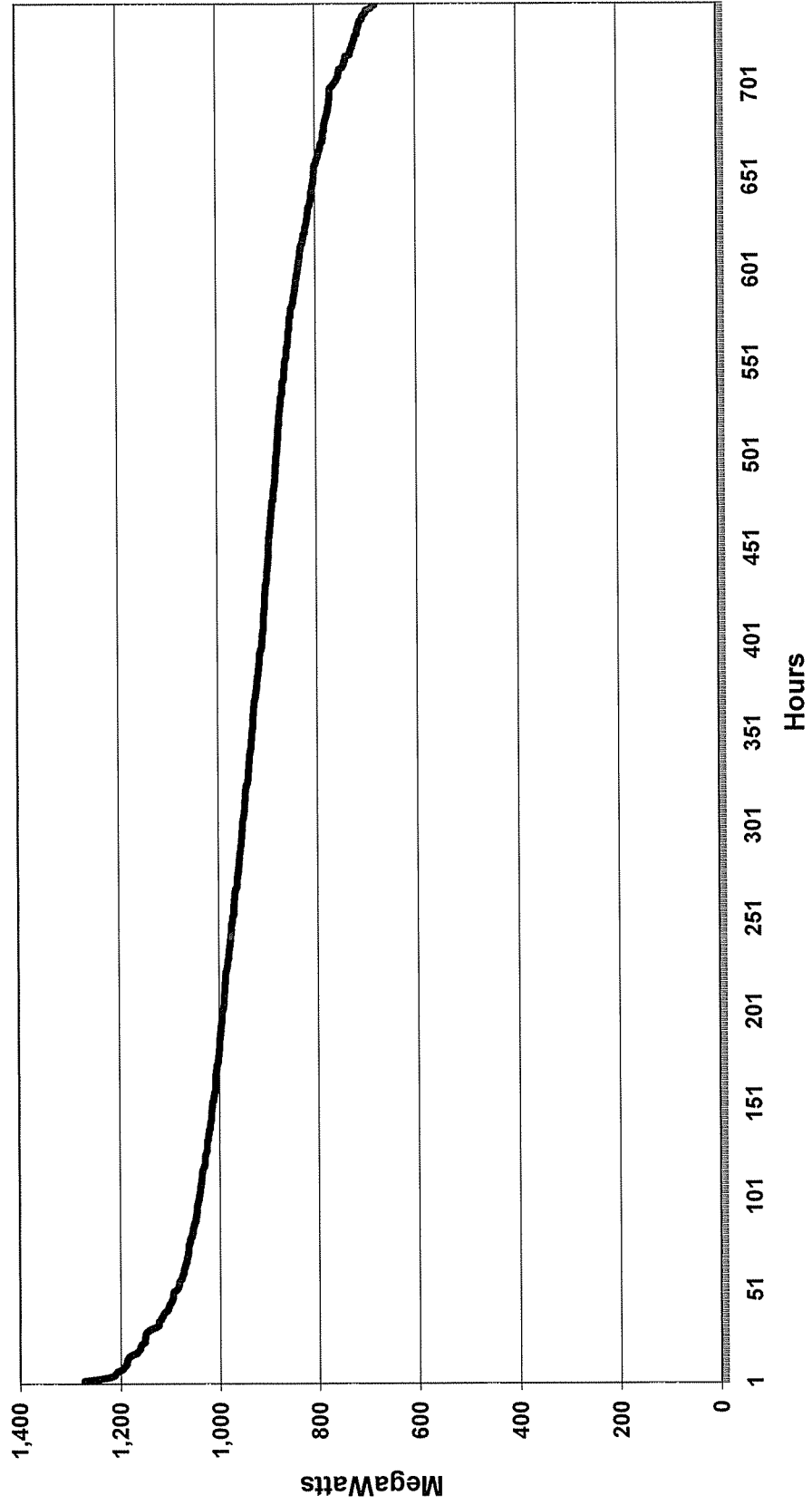
### Kentucky Power Company October 2011 Load Duration Curve (Internal Load)



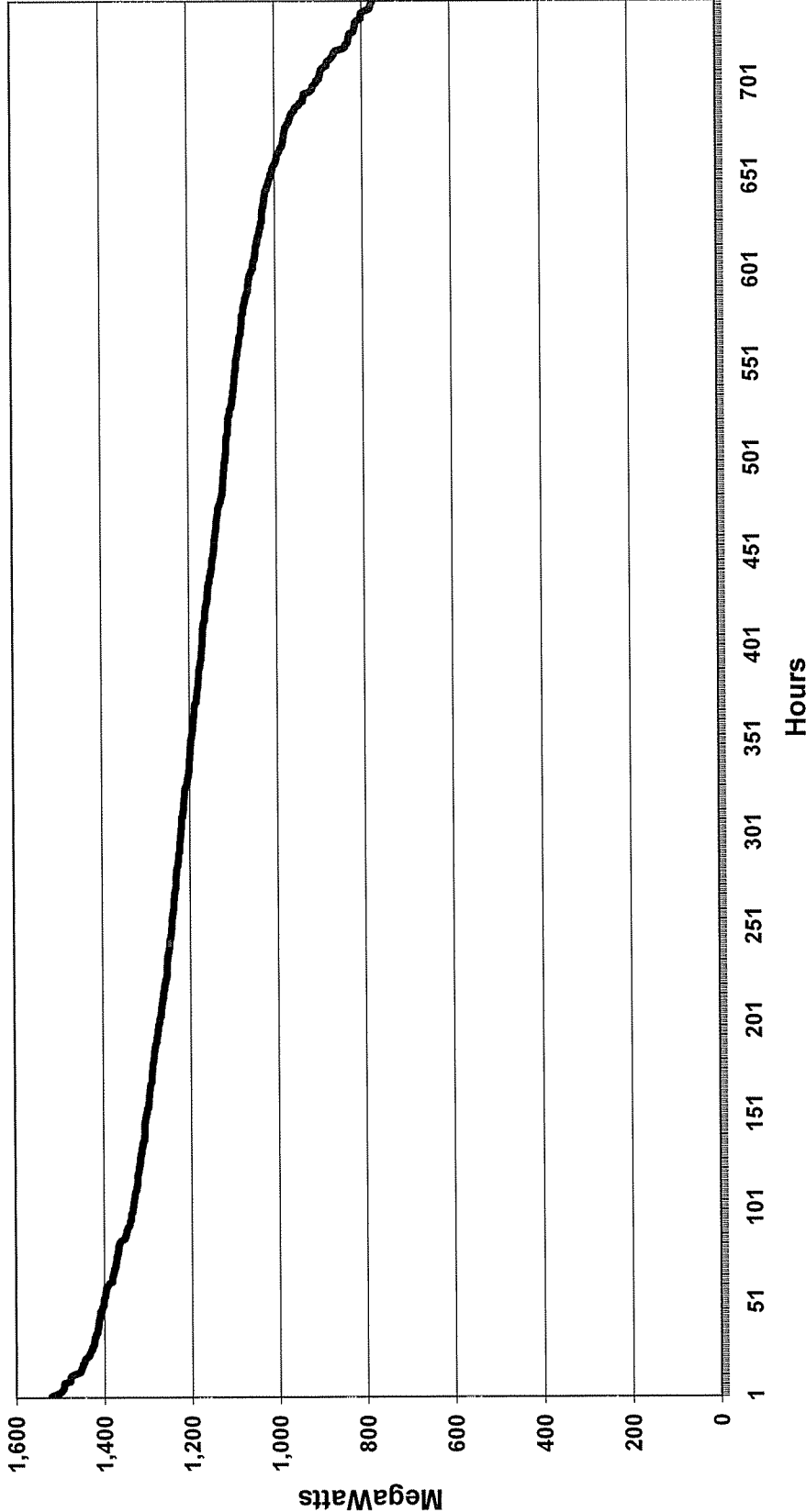
**Kentucky Power Company  
November 2011 Load Duration Curve  
(Internal Load)**



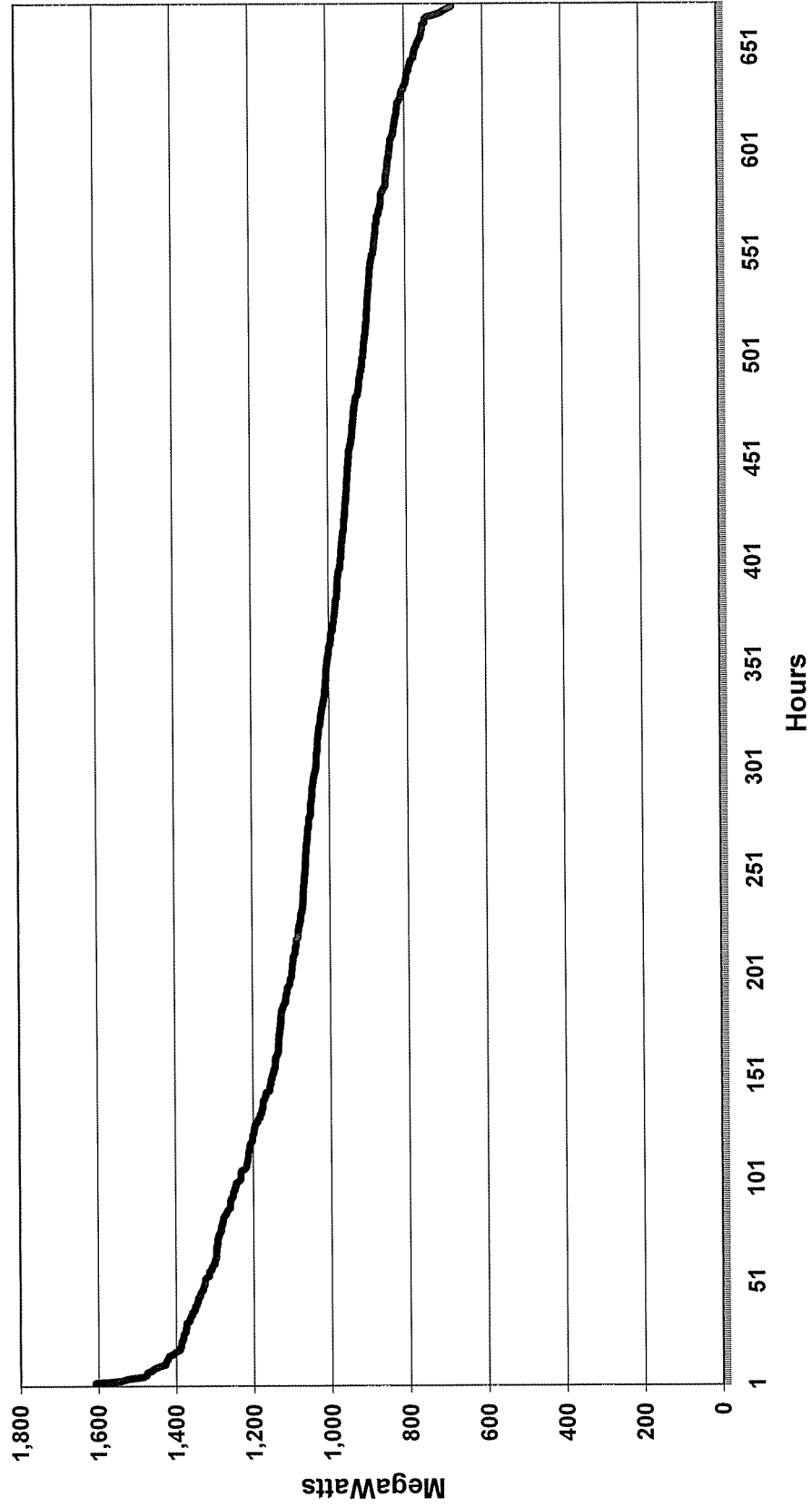
### Kentucky Power Company December 2011 Load Duration Curve (Internal Load)



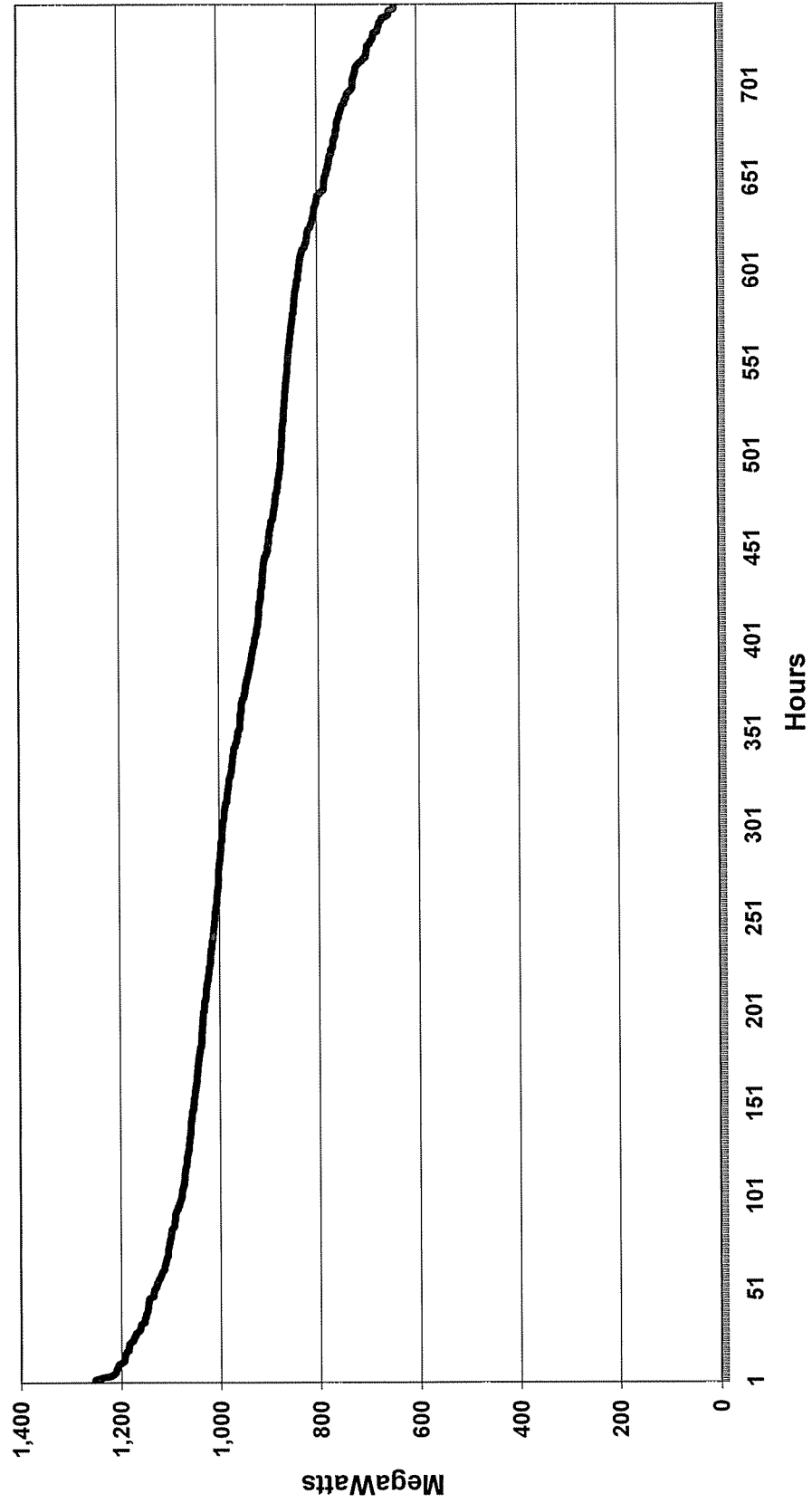
### Kentucky Power Company January 2011 Load Duration Curve (System Load)



### Kentucky Power Company February 2011 Load Duration Curve (System Load)

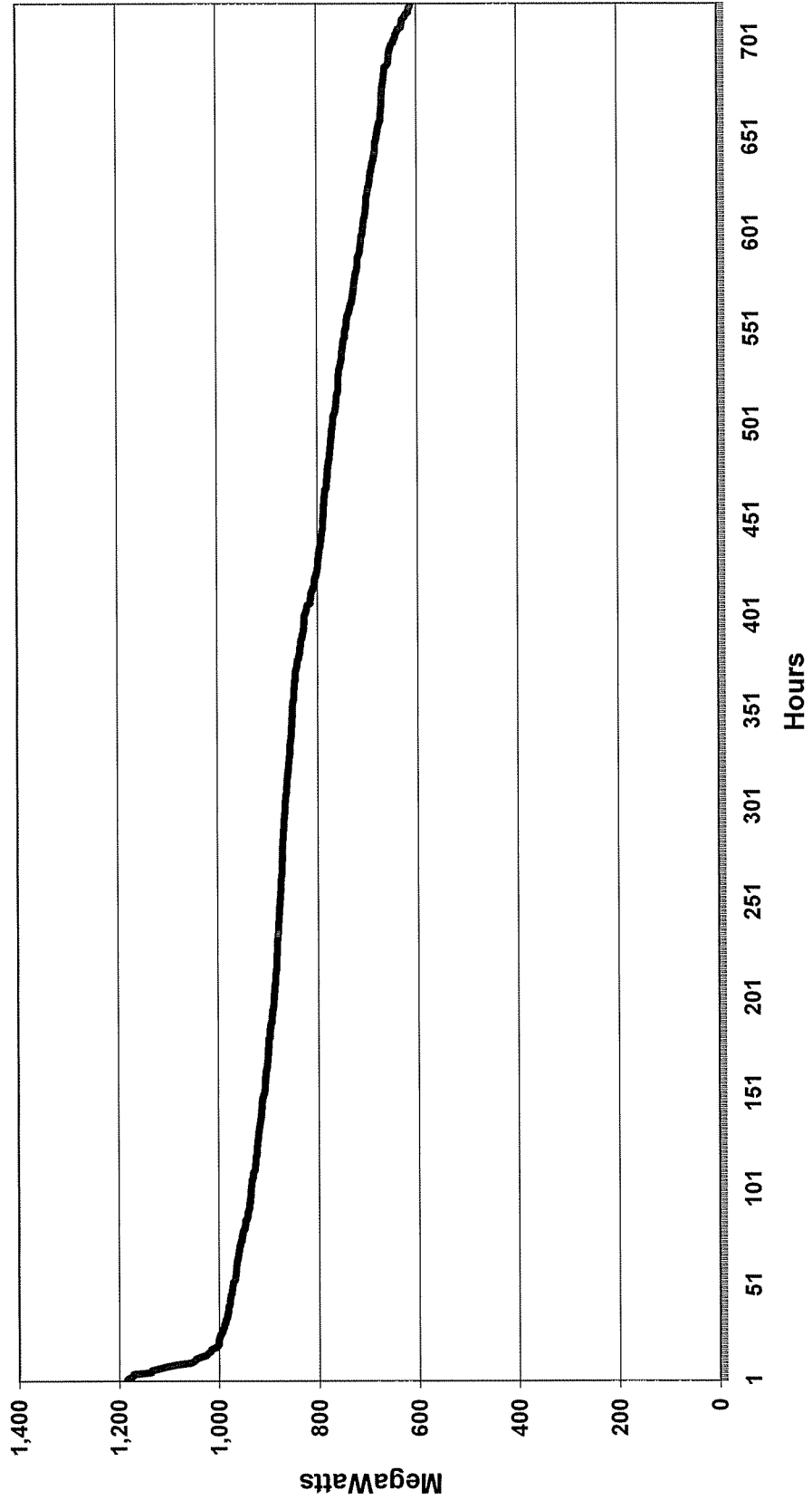


### Kentucky Power Company March 2011 Load Duration Curve (System Load)

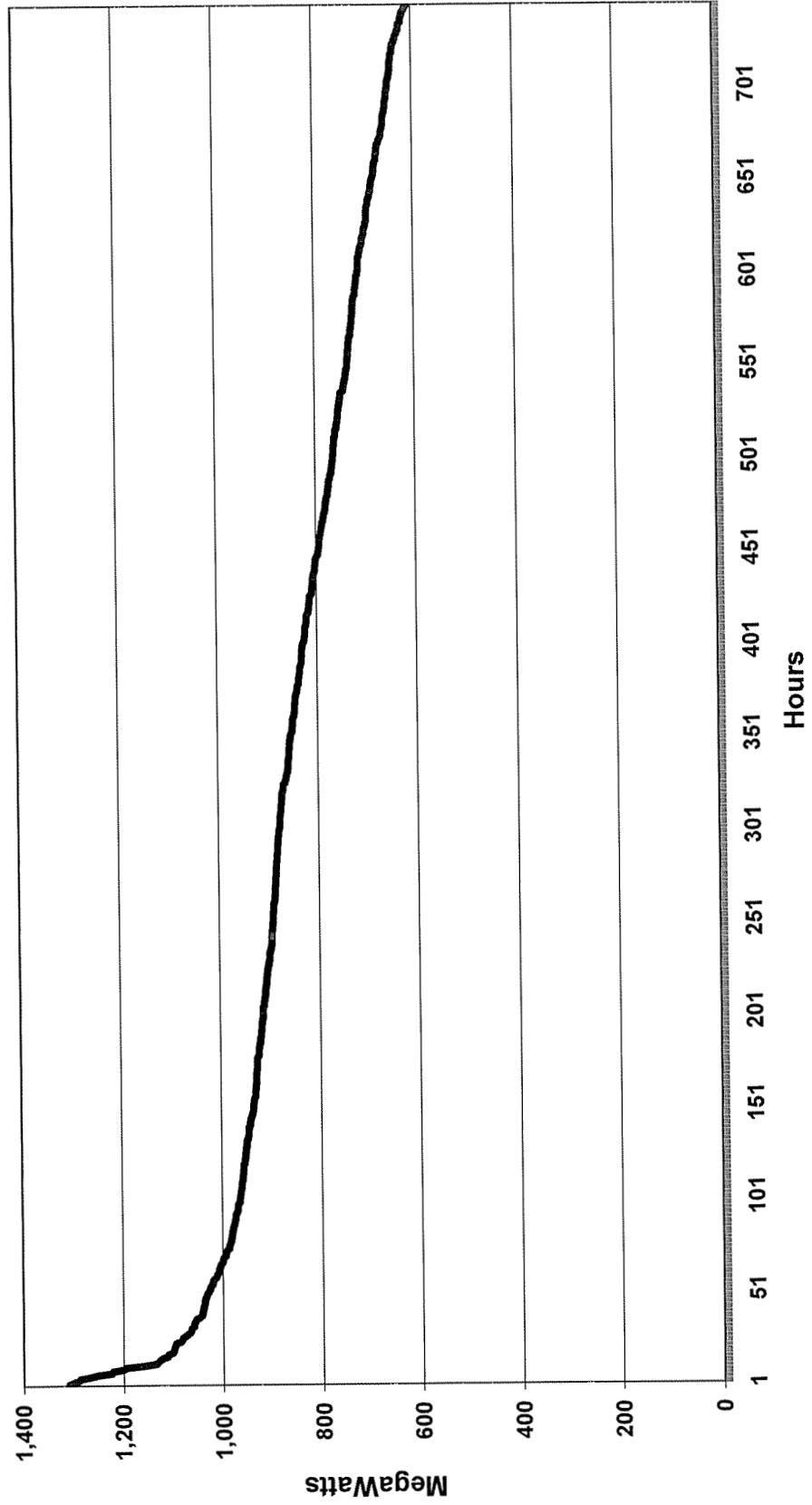




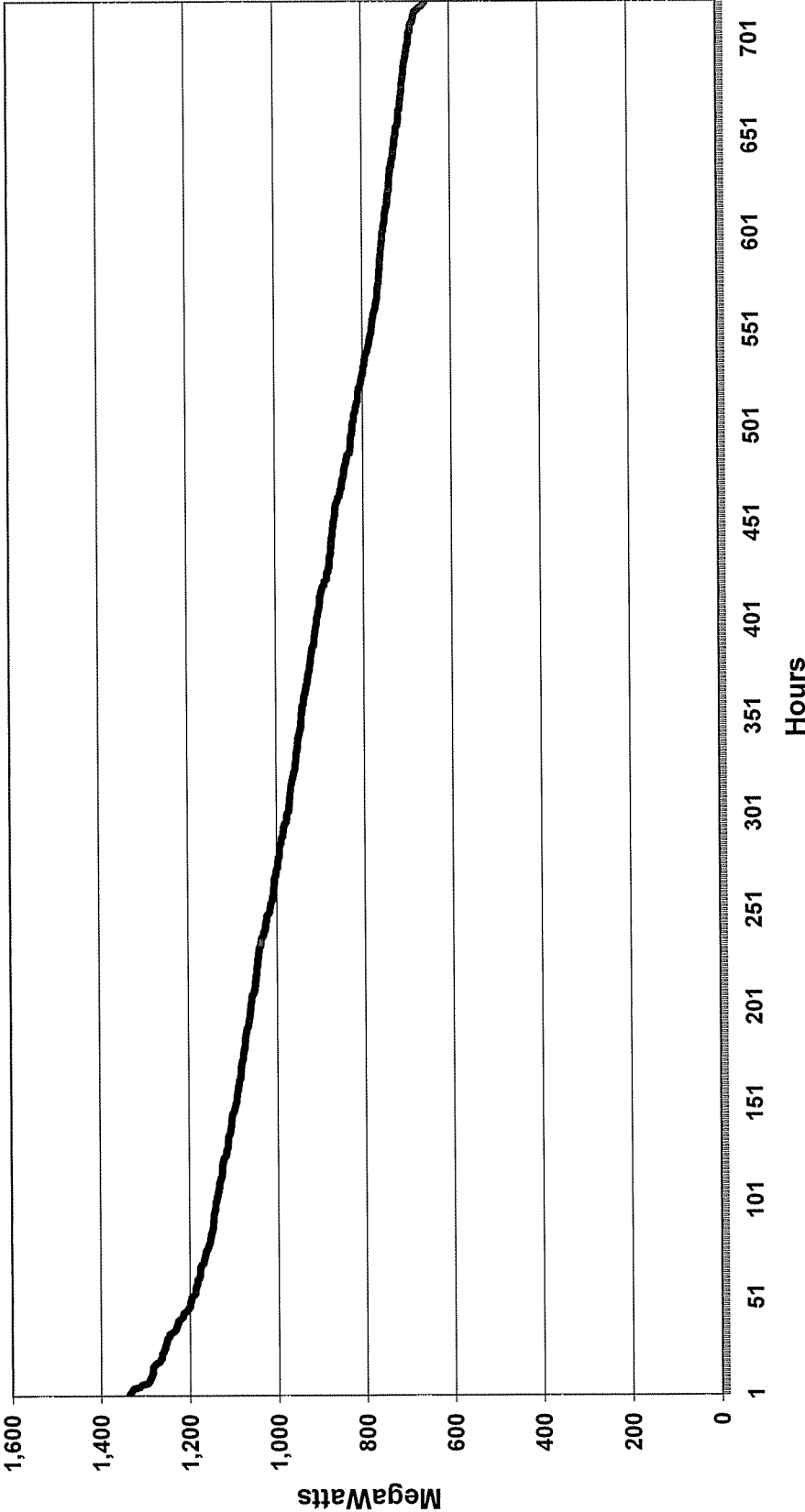
### Kentucky Power Company April 2011 Load Duration Curve (System Load)



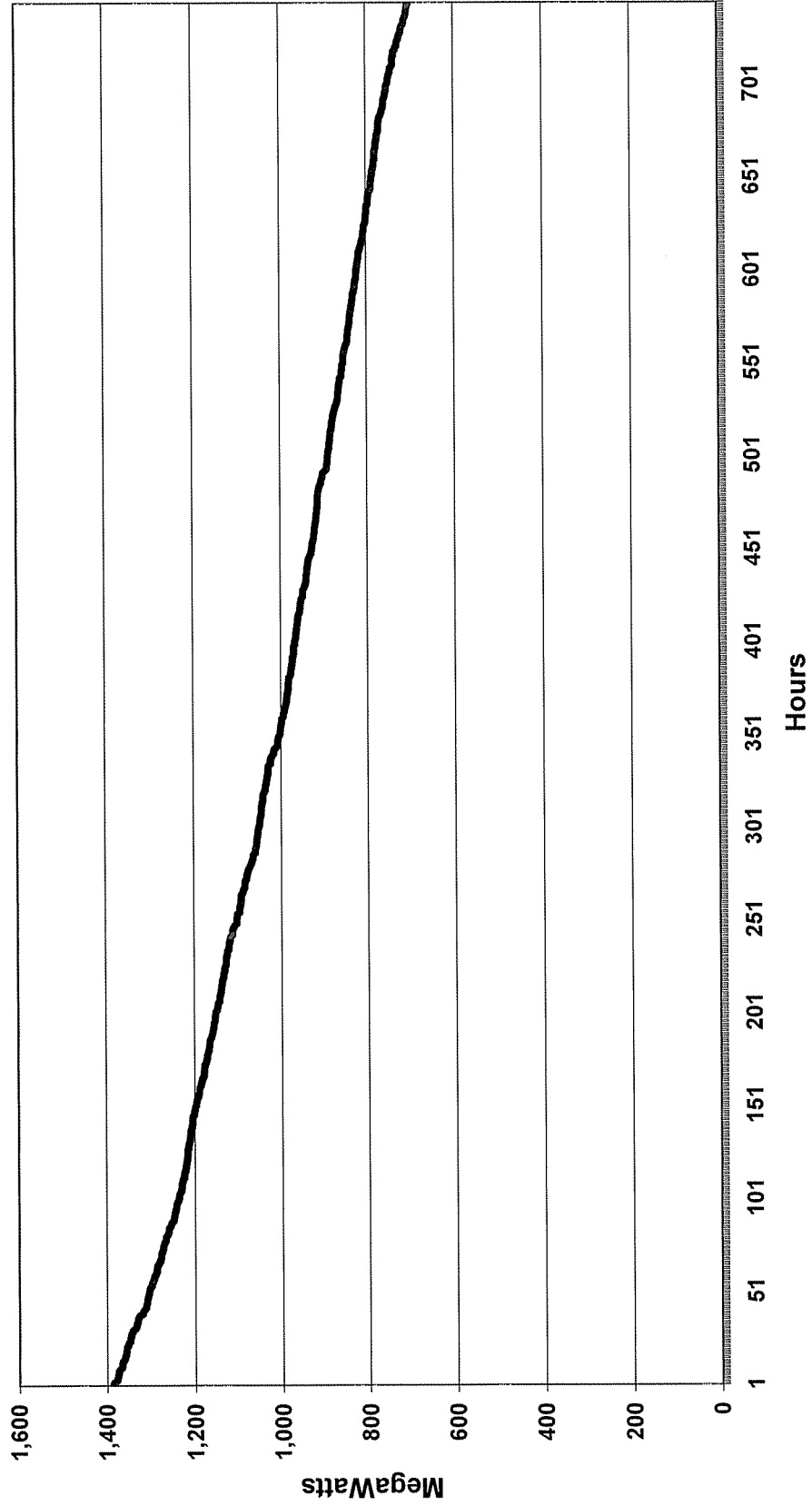
### Kentucky Power Company May 2011 Load Duration Curve (System Load)



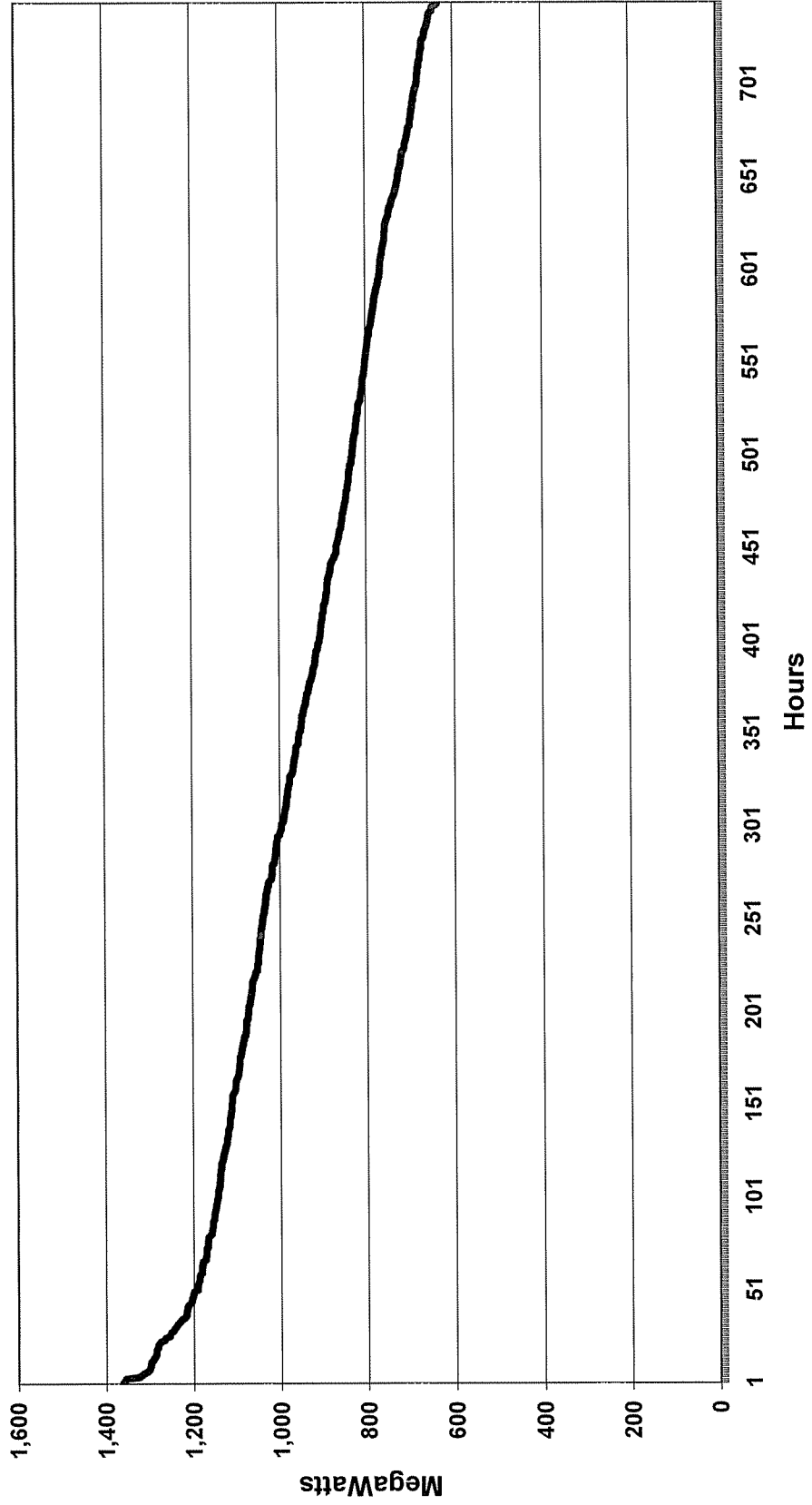
**Kentucky Power Company  
June 2011 Load Duration Curve  
(System Load)**



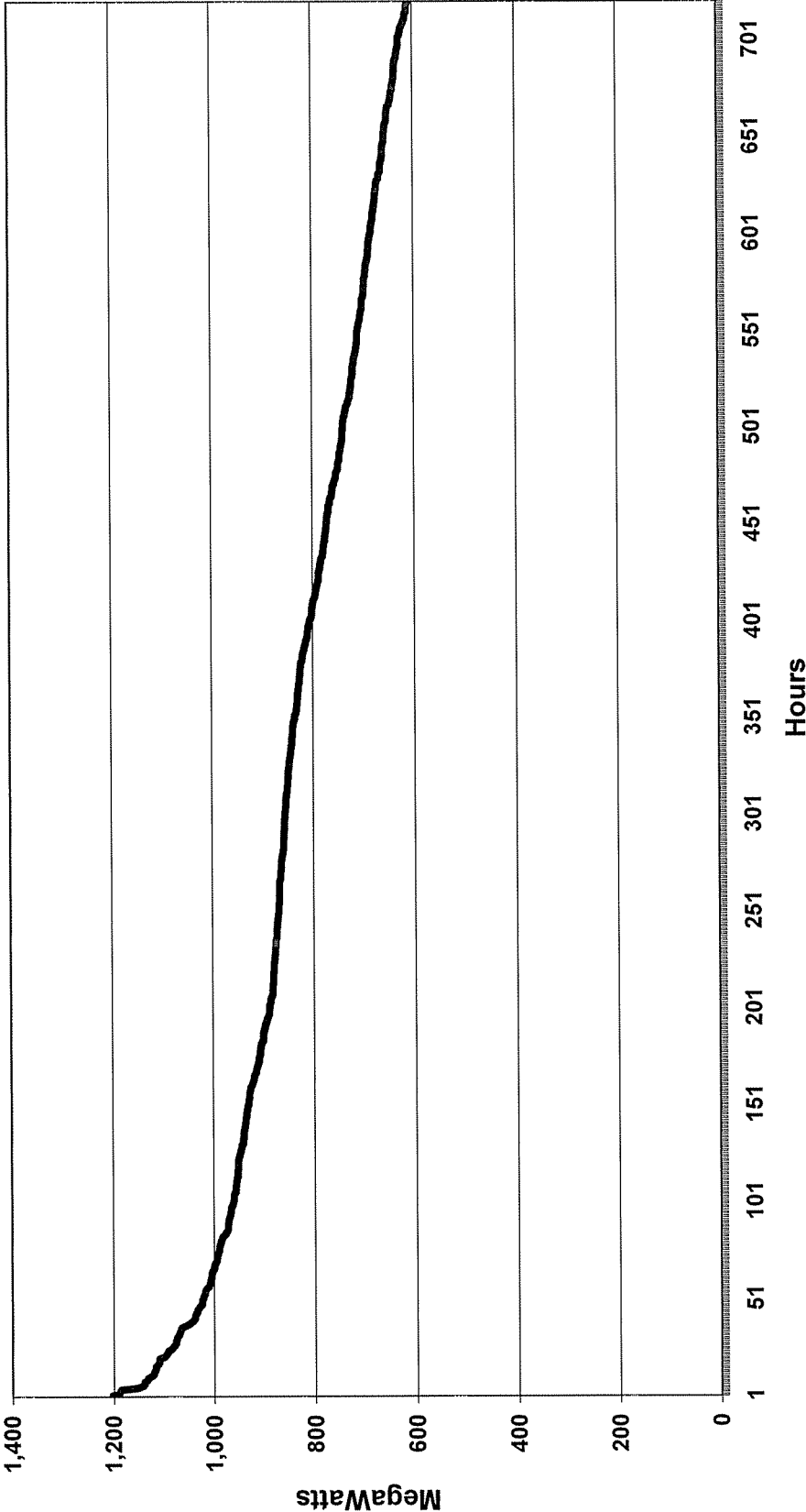
**Kentucky Power Company  
July 2011 Load Duration Curve  
(System Load)**



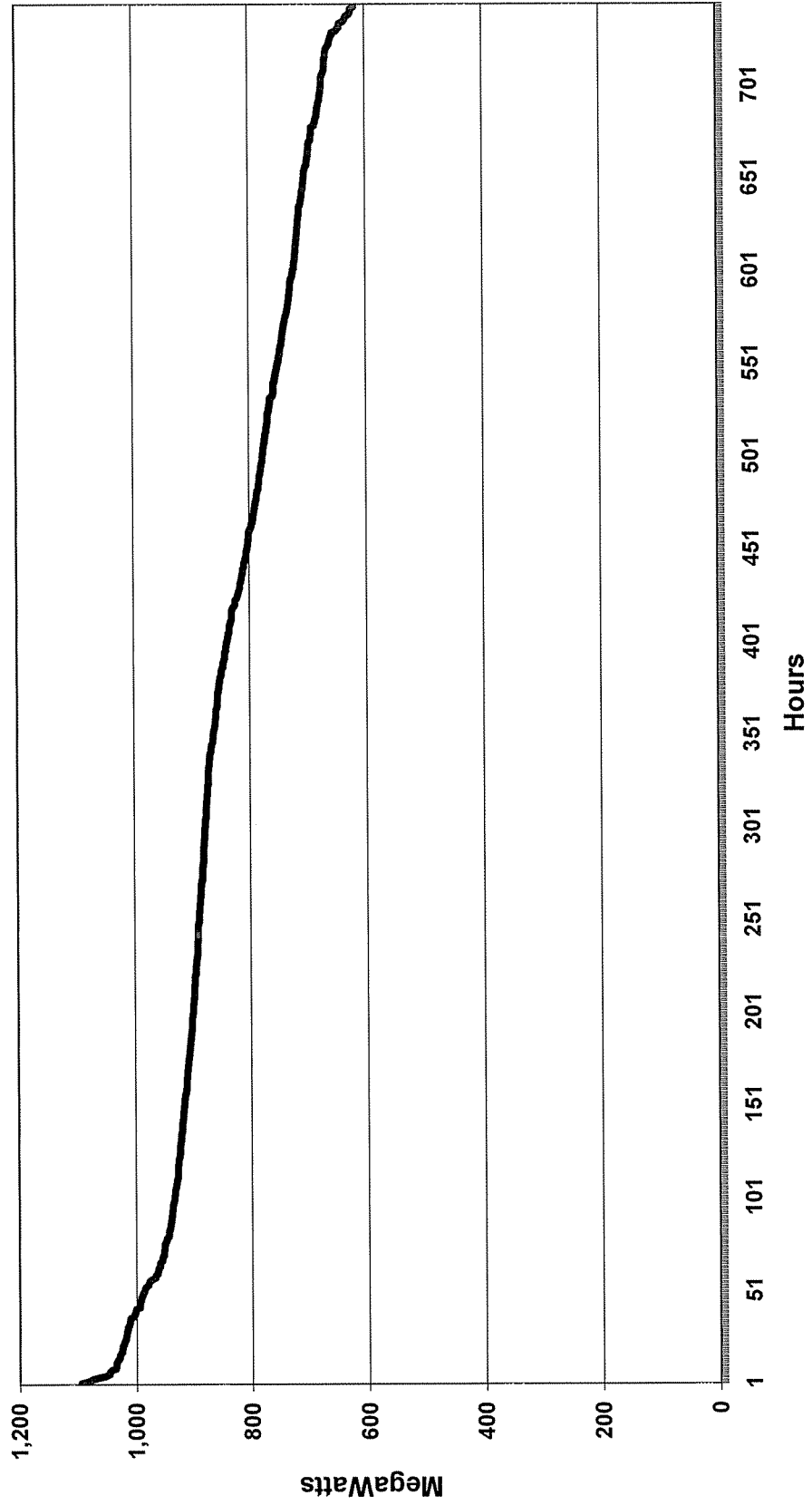
### Kentucky Power Company August 2011 Load Duration Curve (System Load)



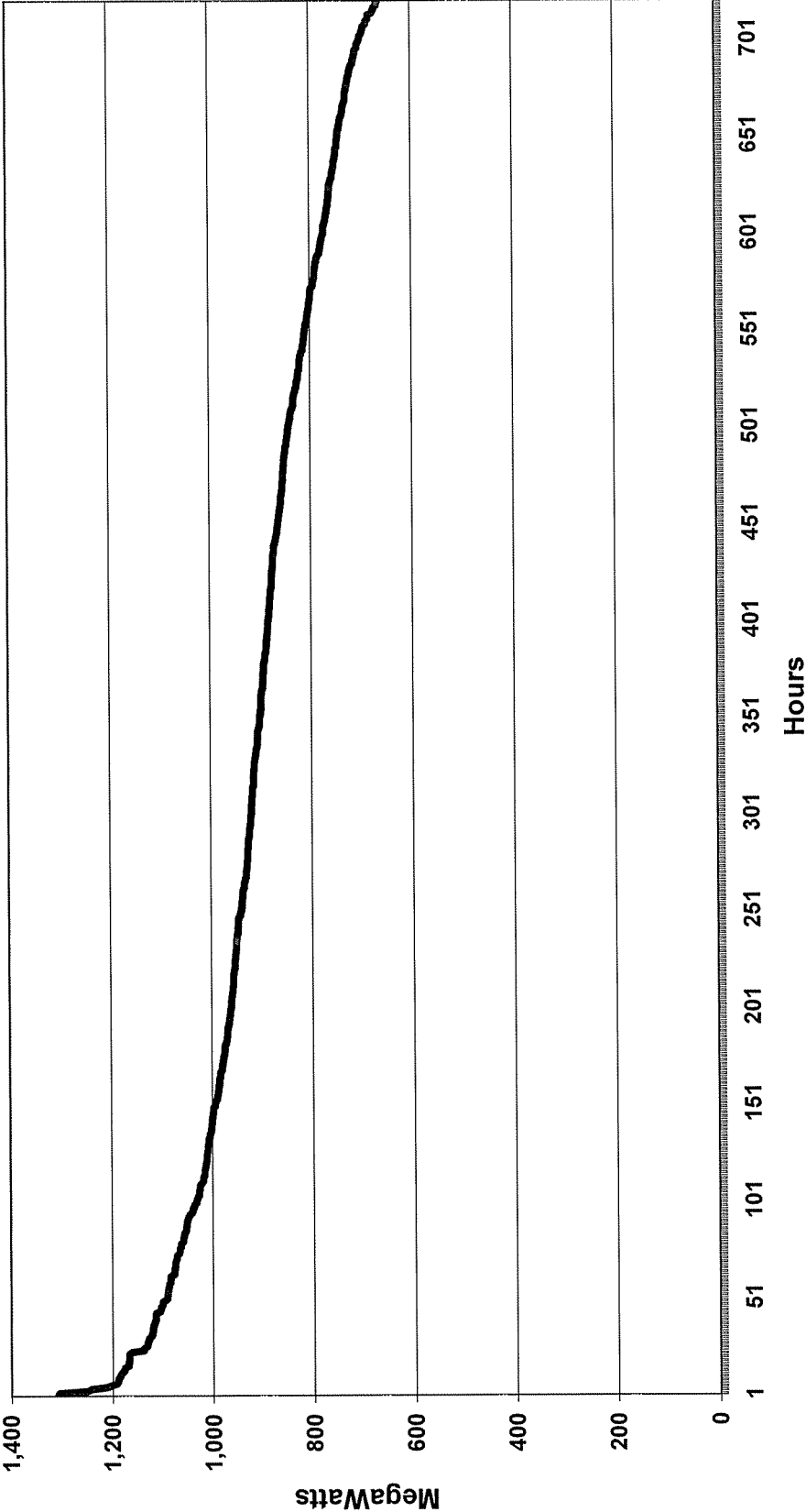
### Kentucky Power Company September 2011 Load Duration Curve (System Load)



### Kentucky Power Company October 2011 Load Duration Curve (System Load)

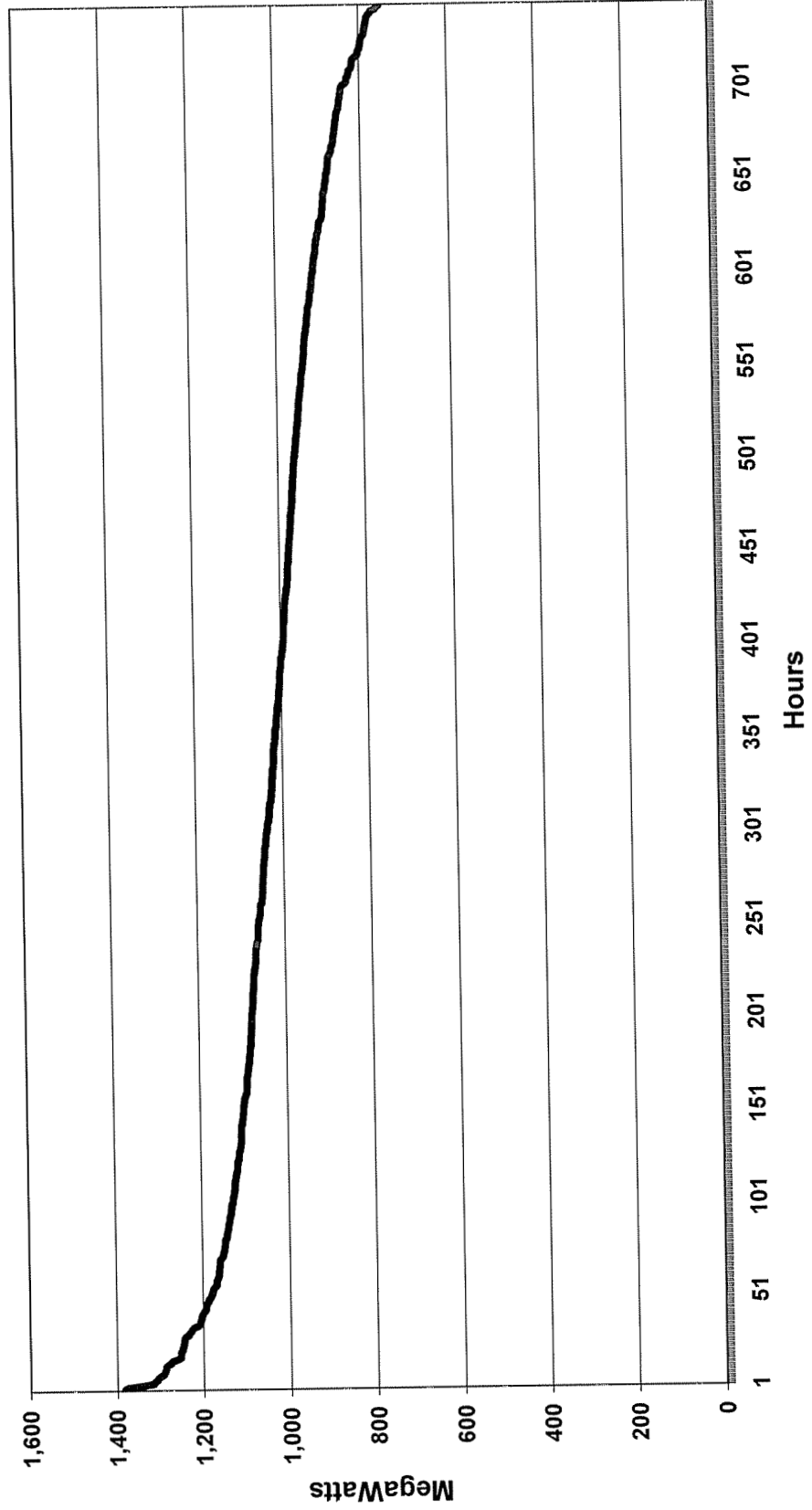


### Kentucky Power Company November 2011 Load Duration Curve (System Load)

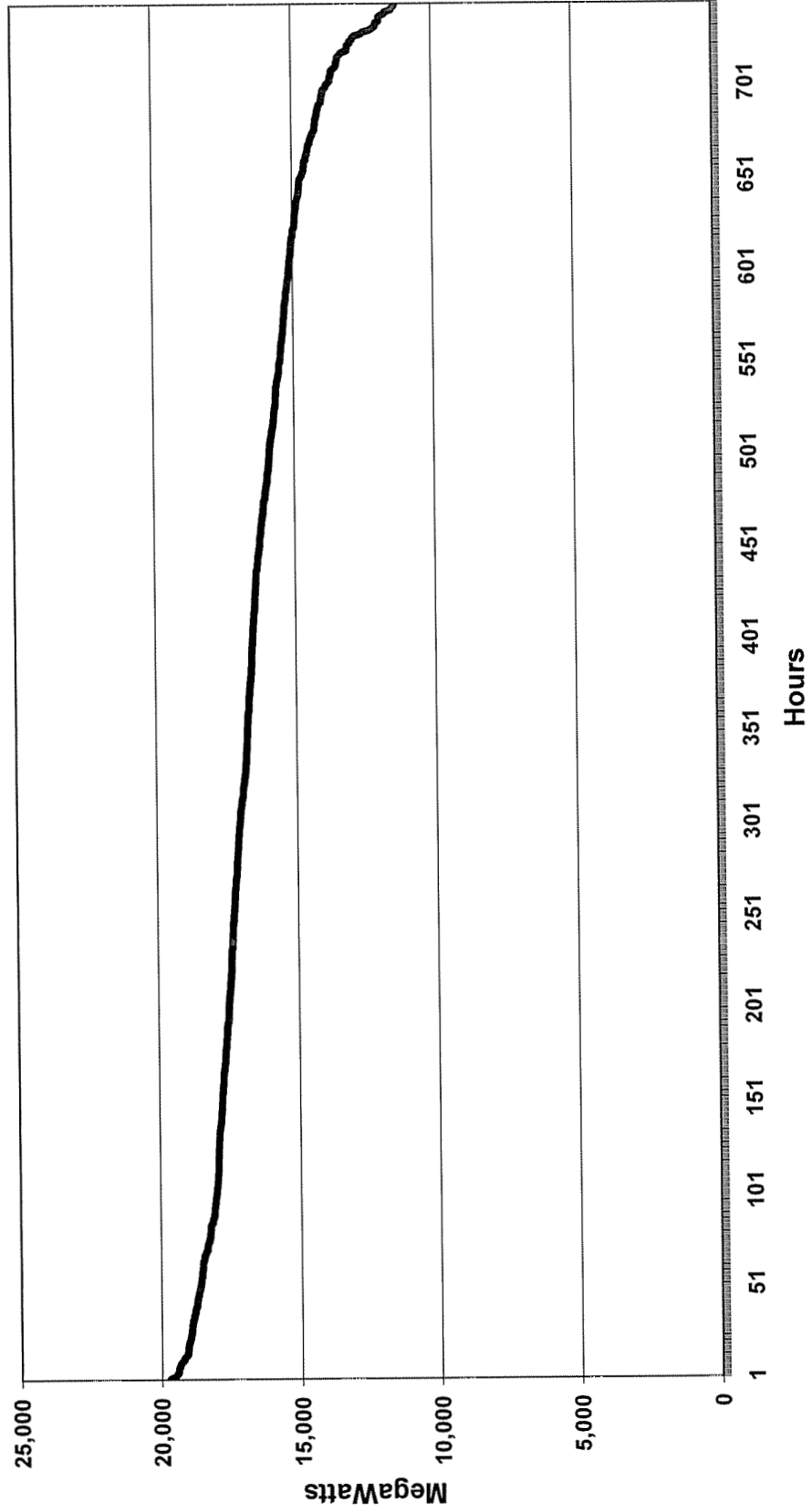




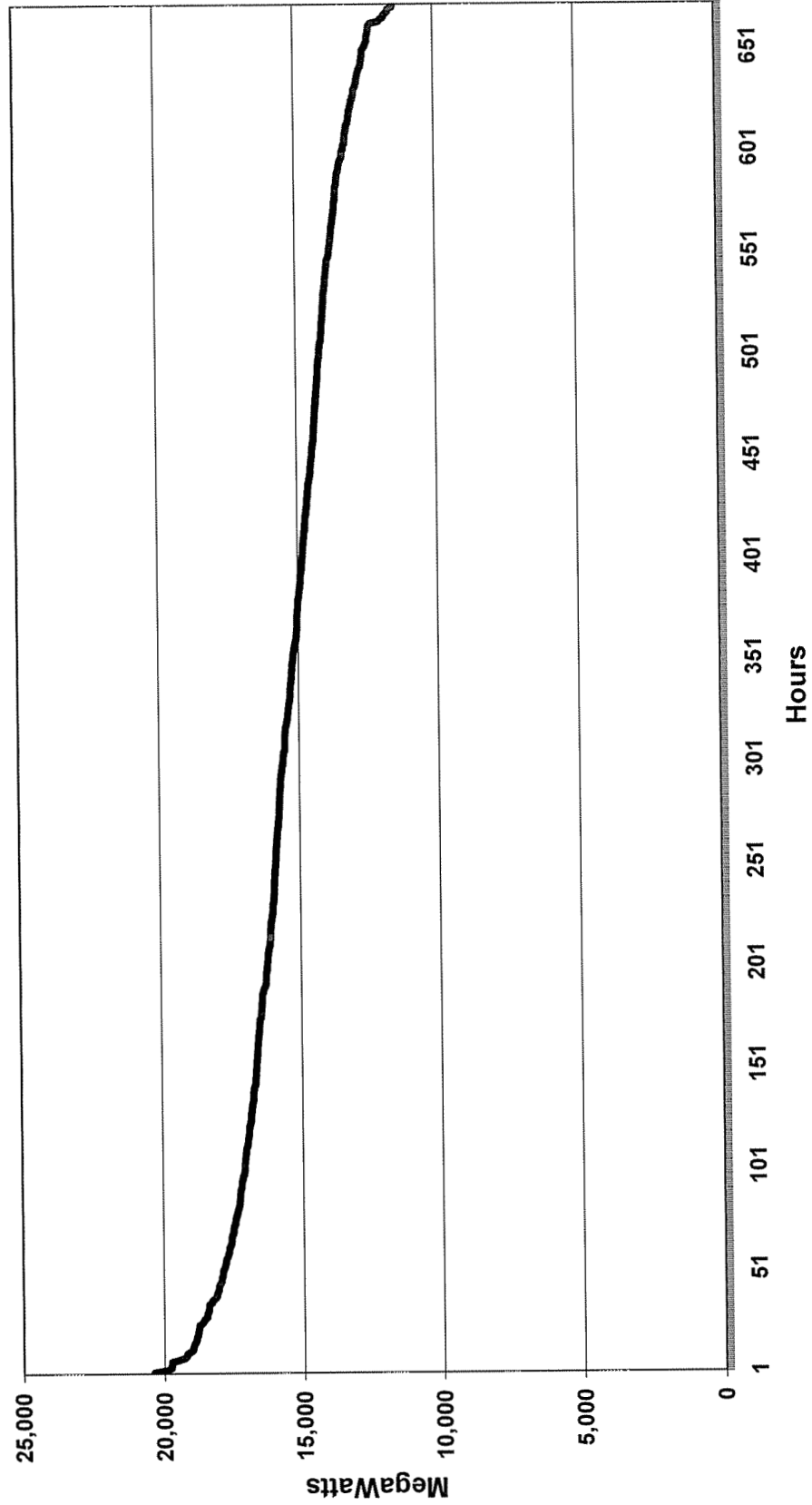
### Kentucky Power Company December 2011 Load Duration Curve (System Load)



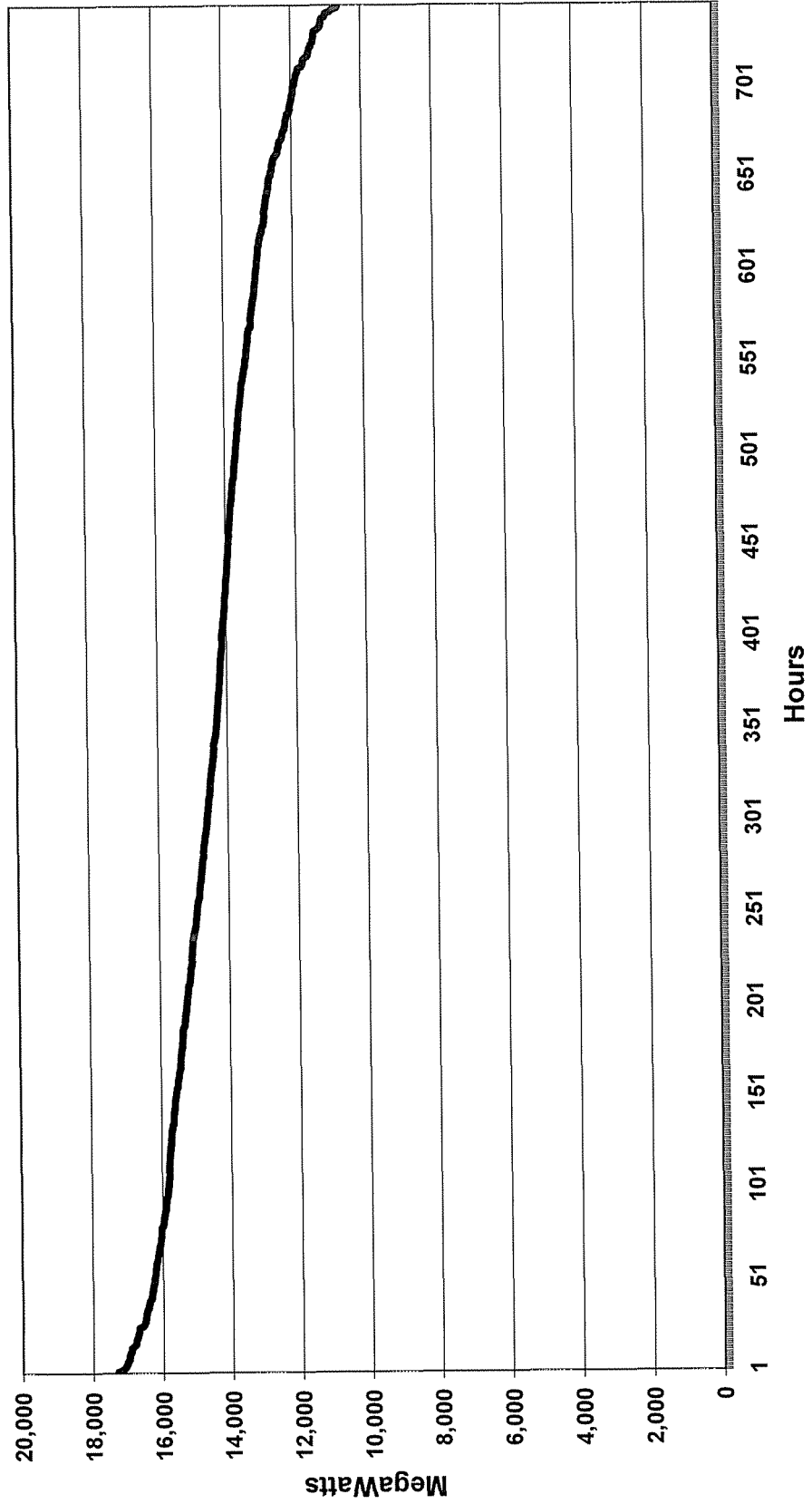
### AEP System-East Zone January 2011 Load Duration Curve (Internal Load)



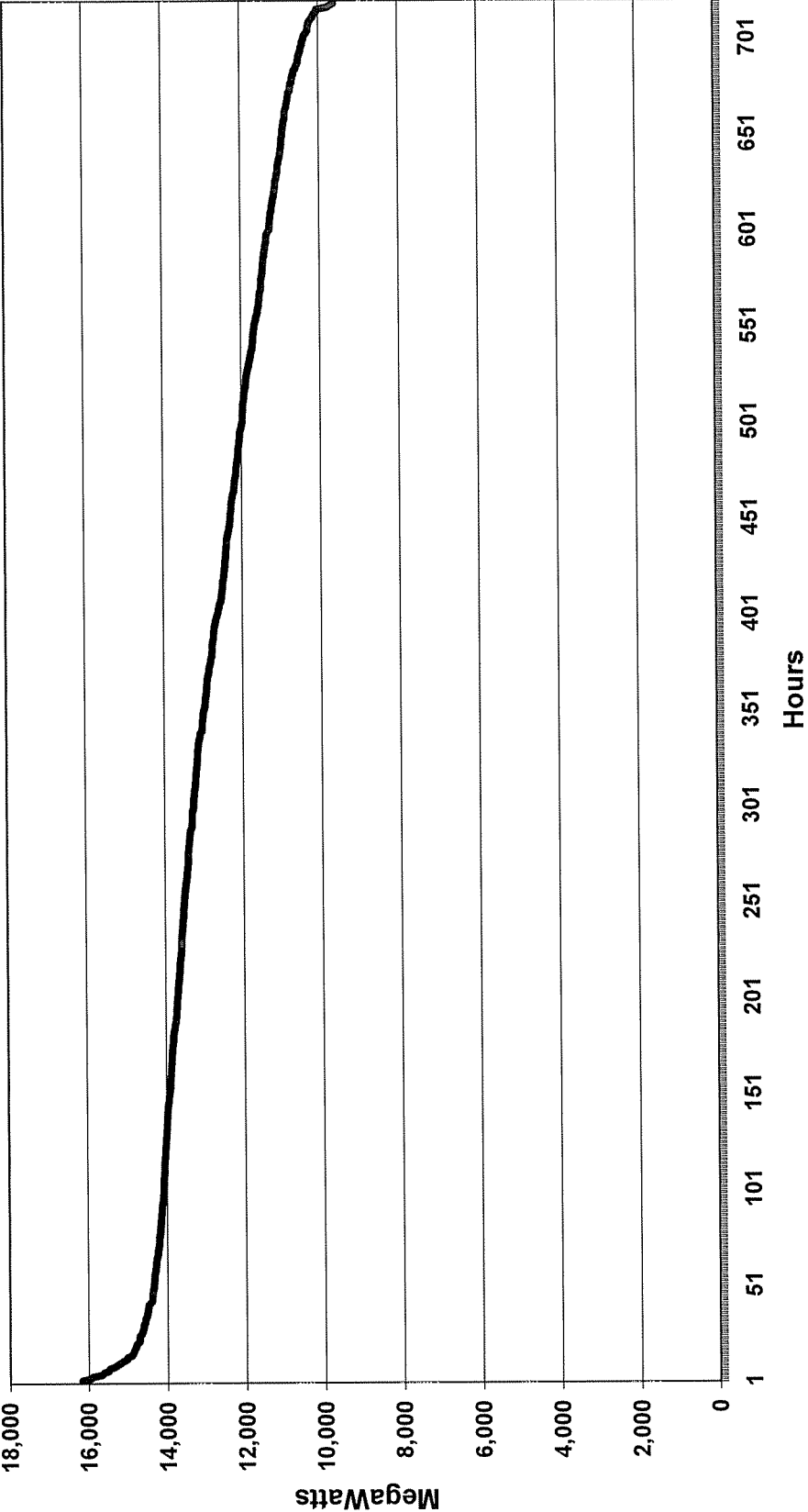
**AEP System-East Zone  
February 2011 Load Duration Curve  
(Internal Load)**



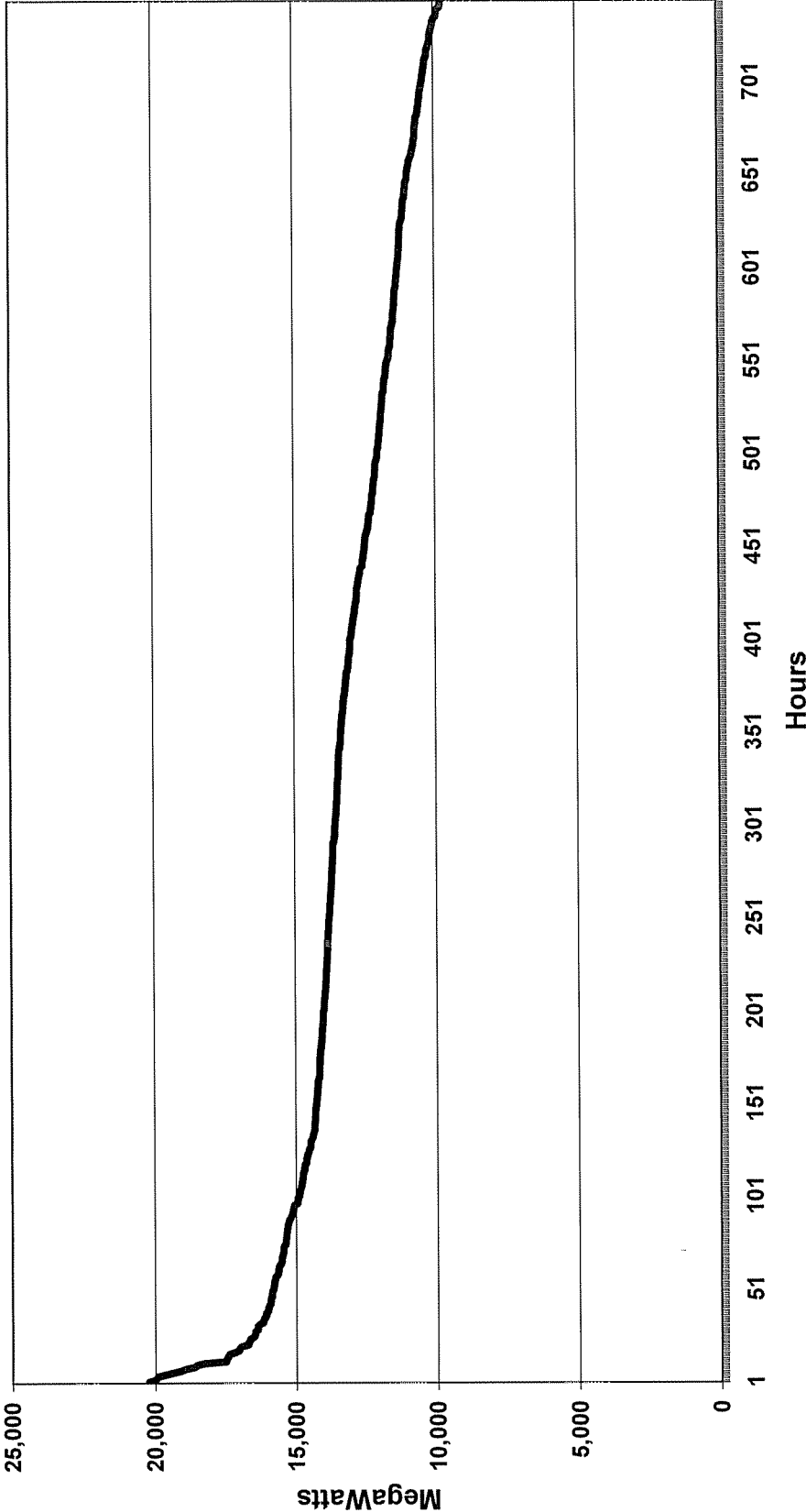
**AEP System-East Zone  
March 2011 Load Duration Curve  
(Internal Load)**



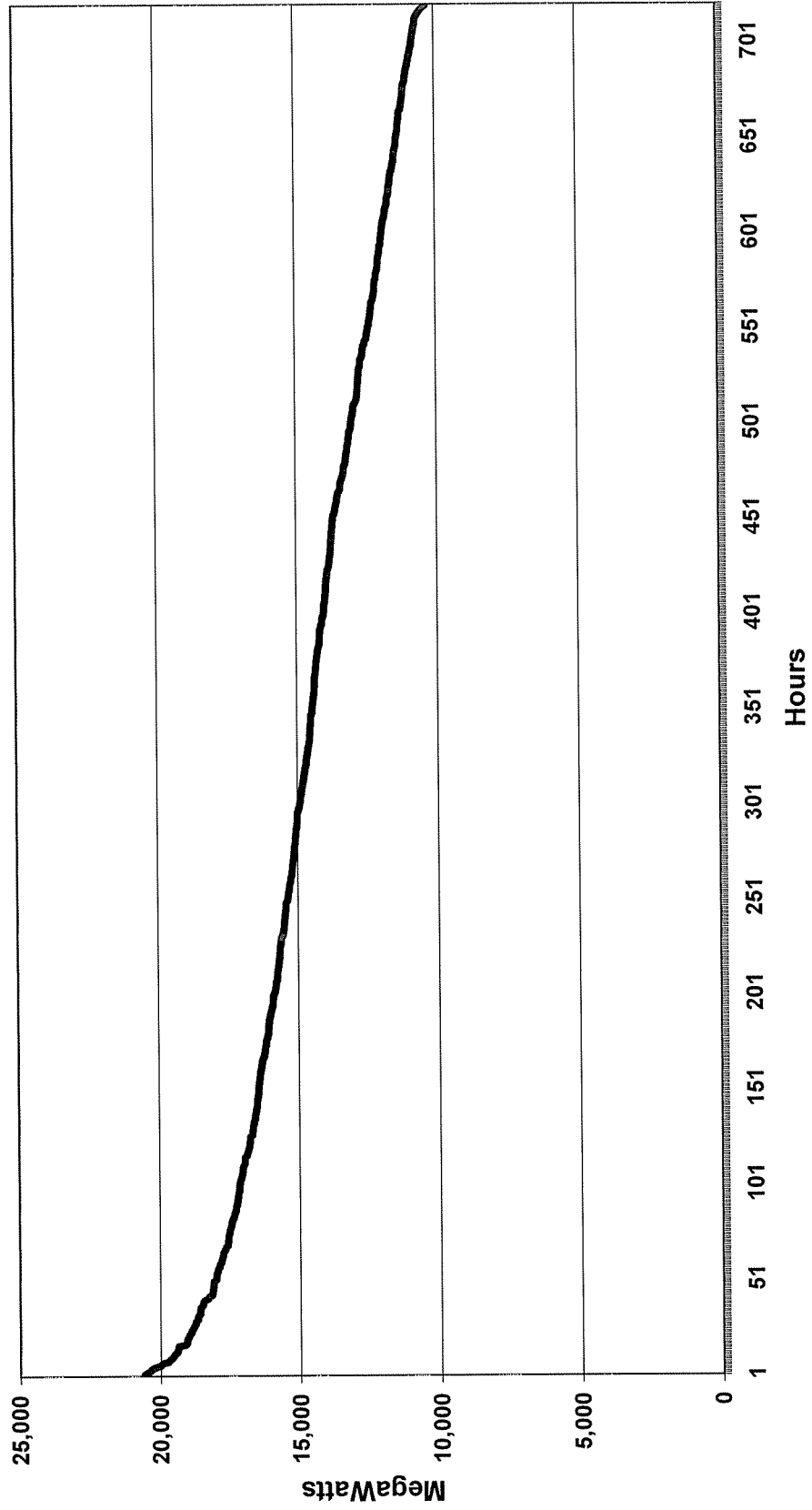
**AEP System-East Zone  
April 2011 Load Duration Curve  
(Internal Load)**



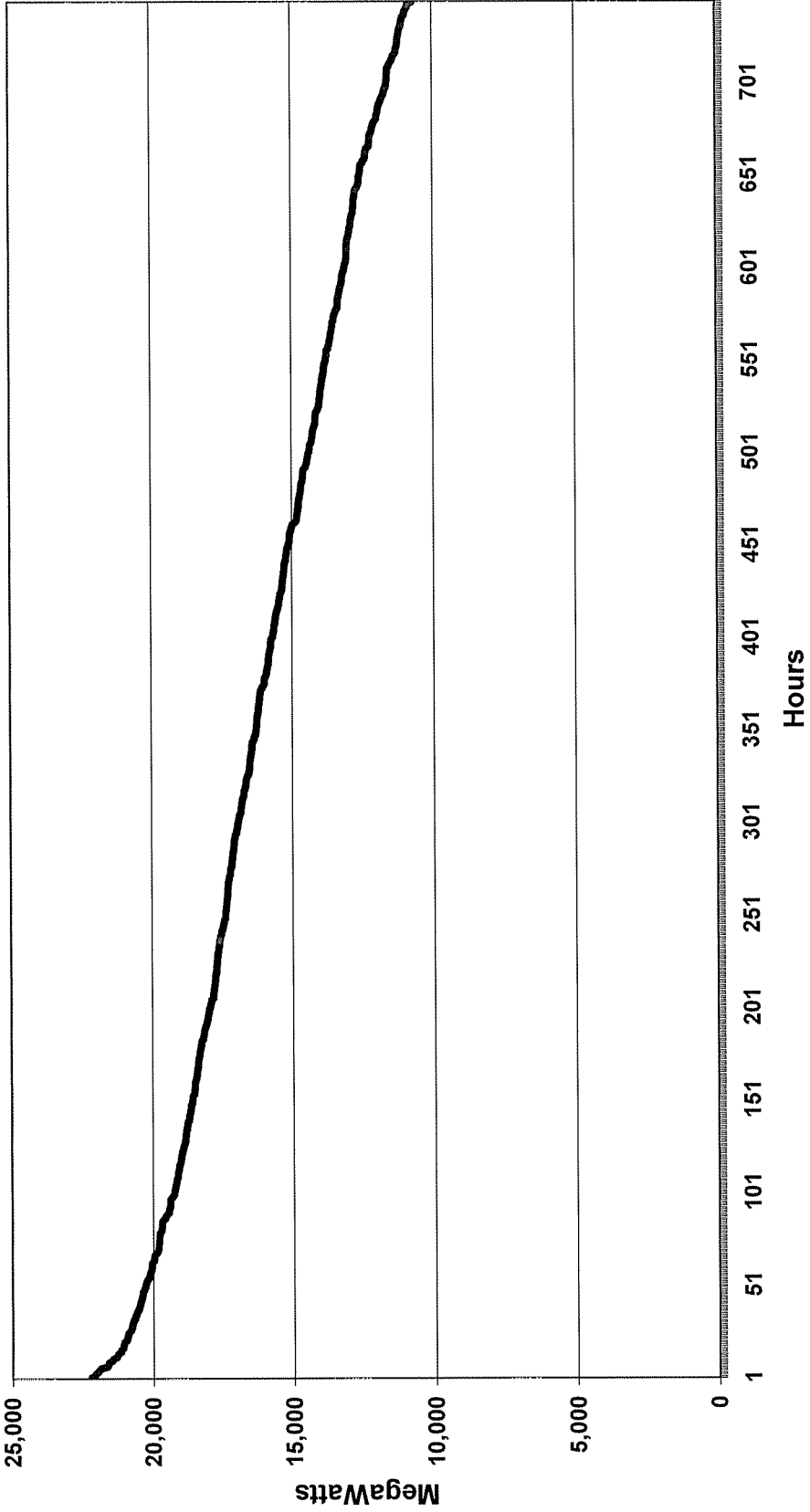
**AEP System-East Zone  
May 2011 Load Duration Curve  
(Internal Load)**



### AEP System-East Zone June 2011 Load Duration Curve (Internal Load)

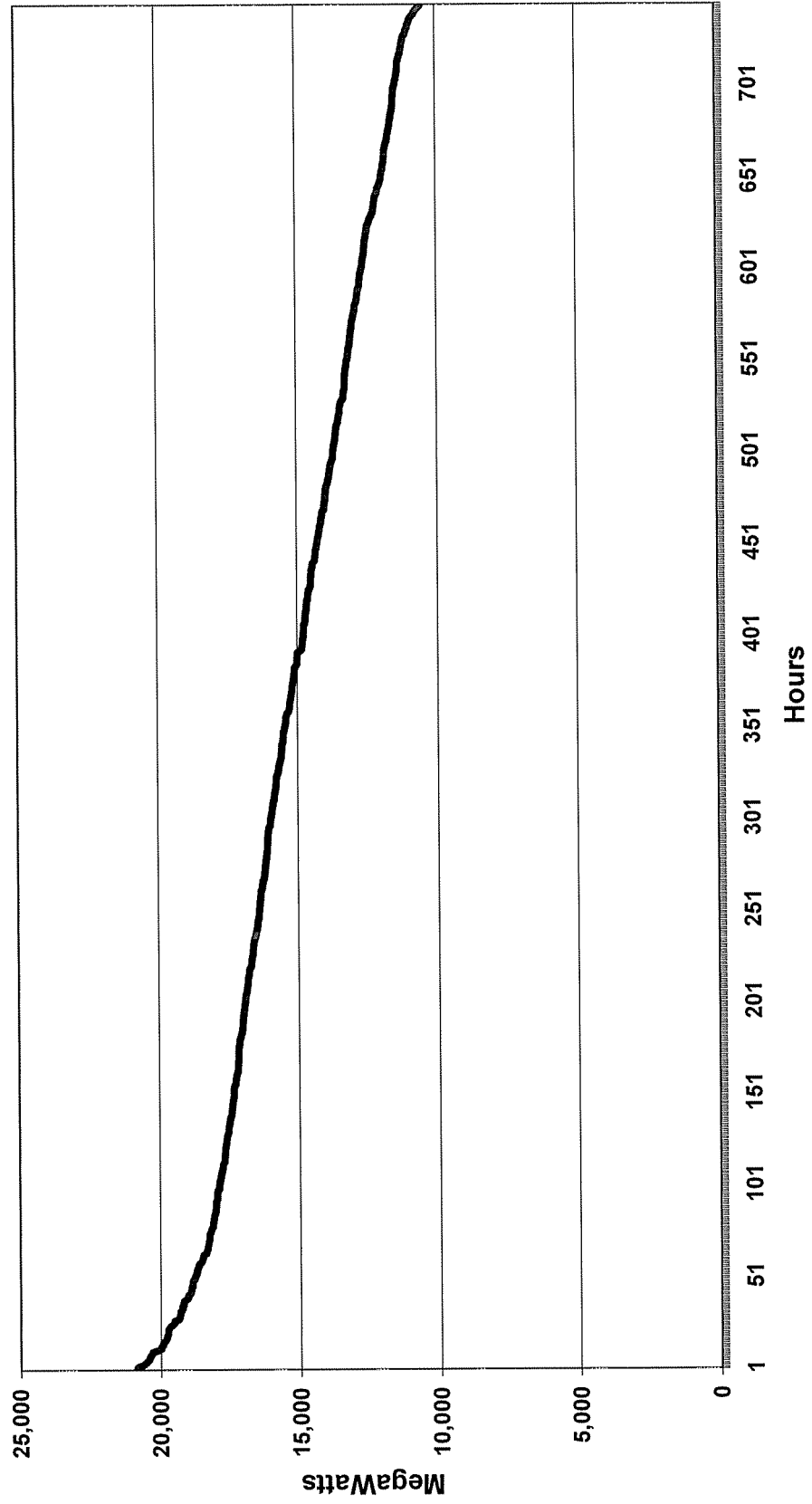


**AEP System-East Zone  
July 2011 Load Duration Curve  
(Internal Load)**

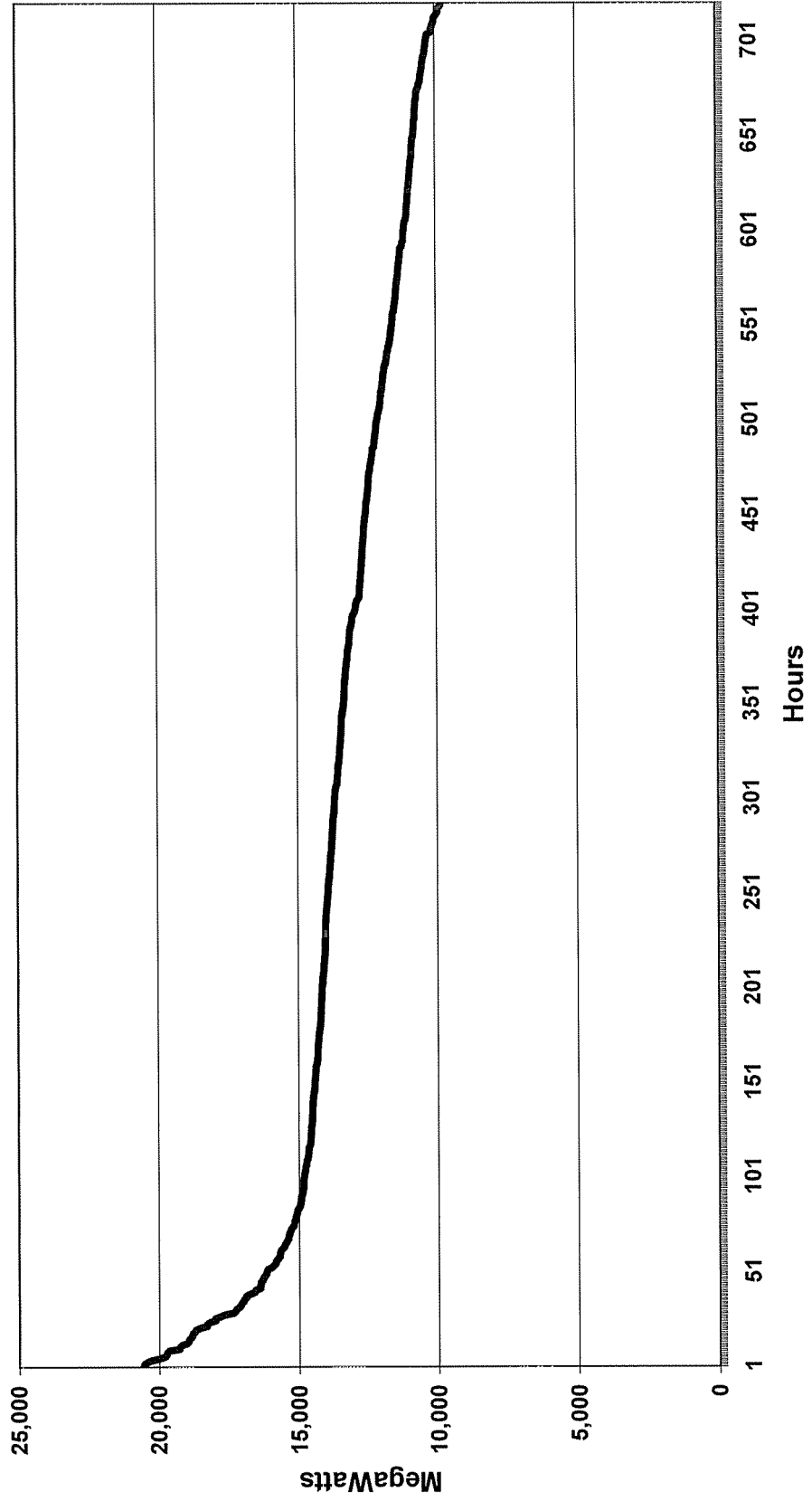




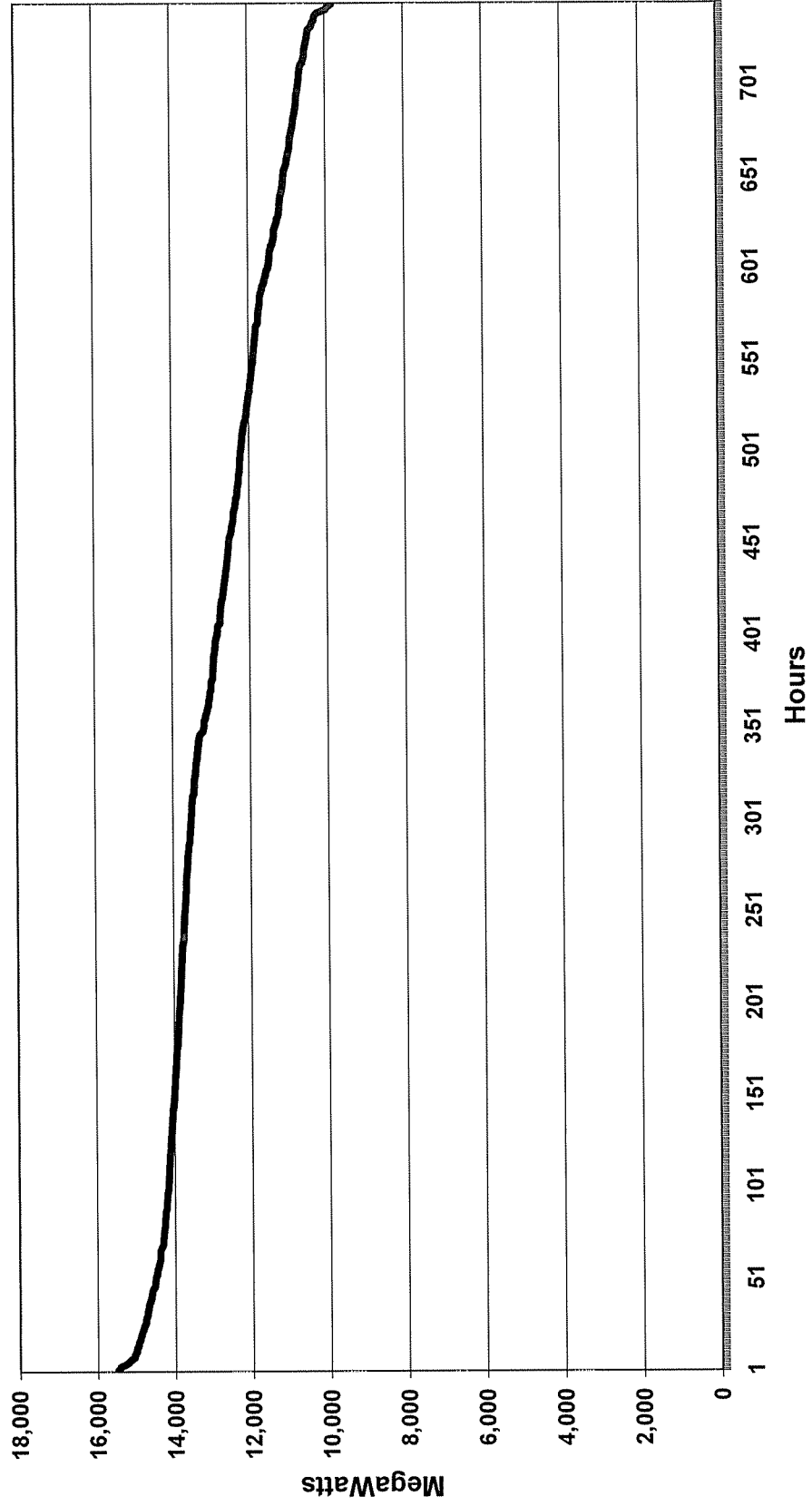
**AEP System-East Zone  
August 2011 Load Duration Curve  
(Internal Load)**



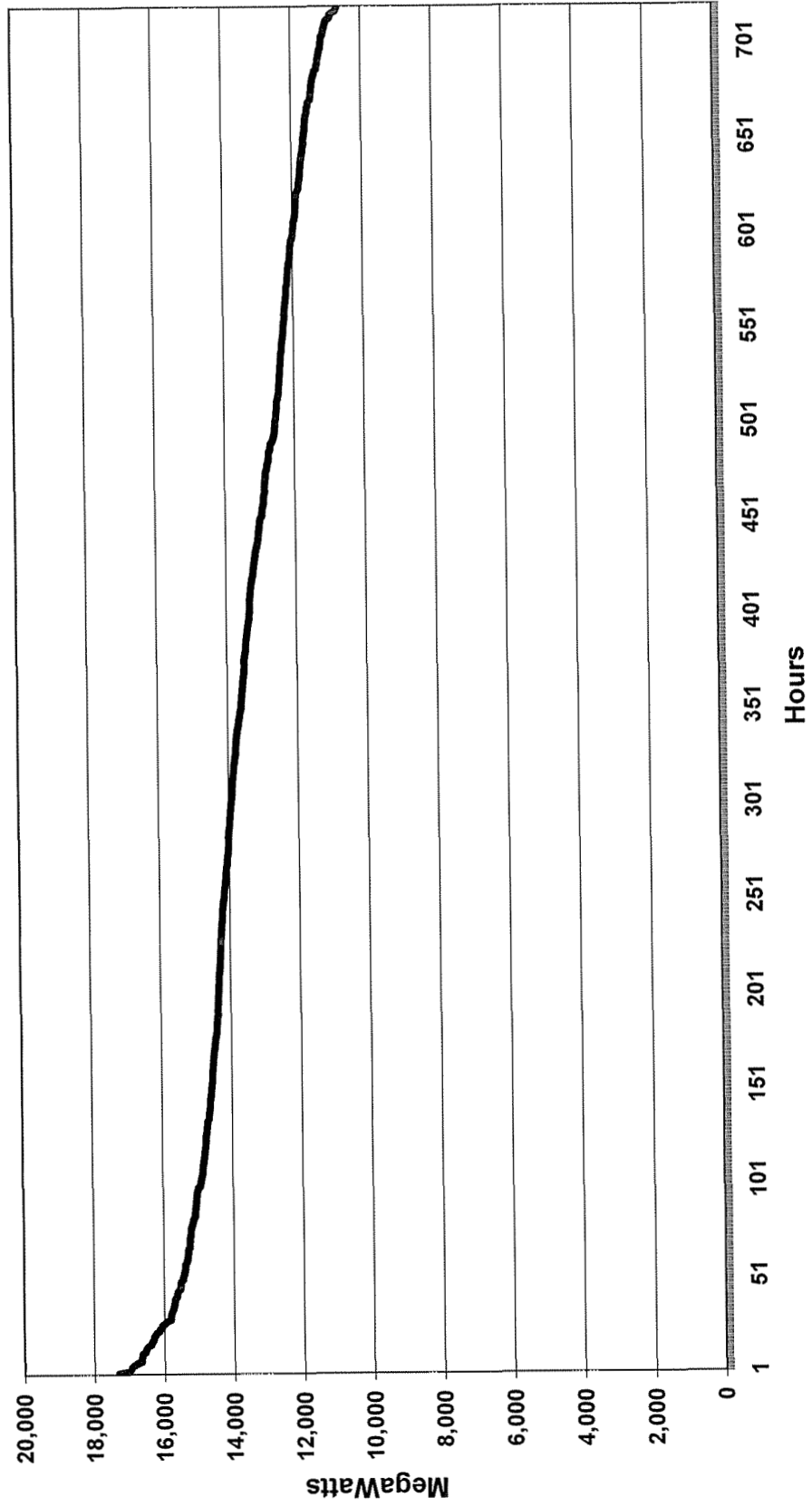
### AEP System-East Zone September 2011 Load Duration Curve (Internal Load)



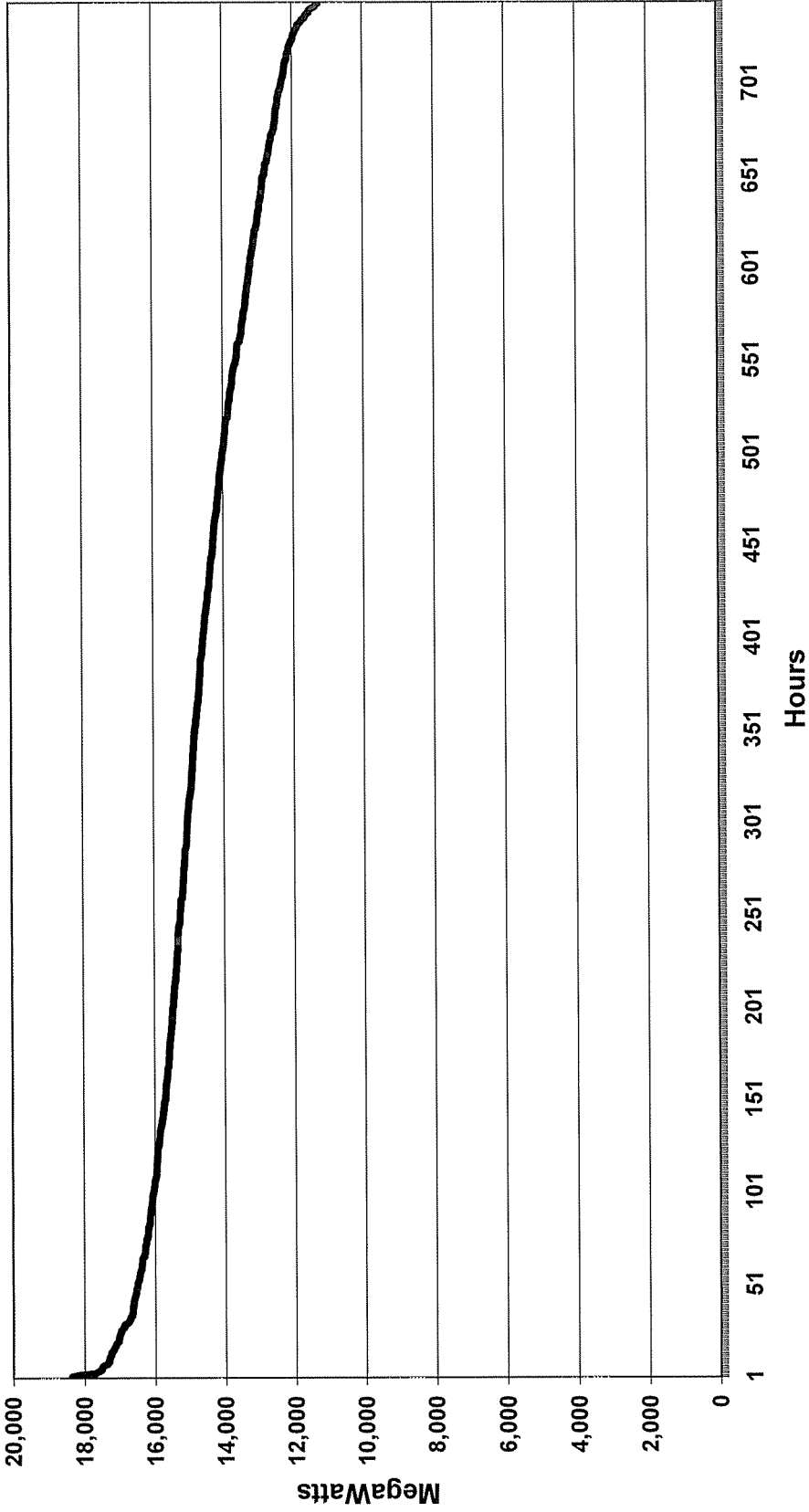
### AEP System-East Zone October 2011 Load Duration Curve (Internal Load)



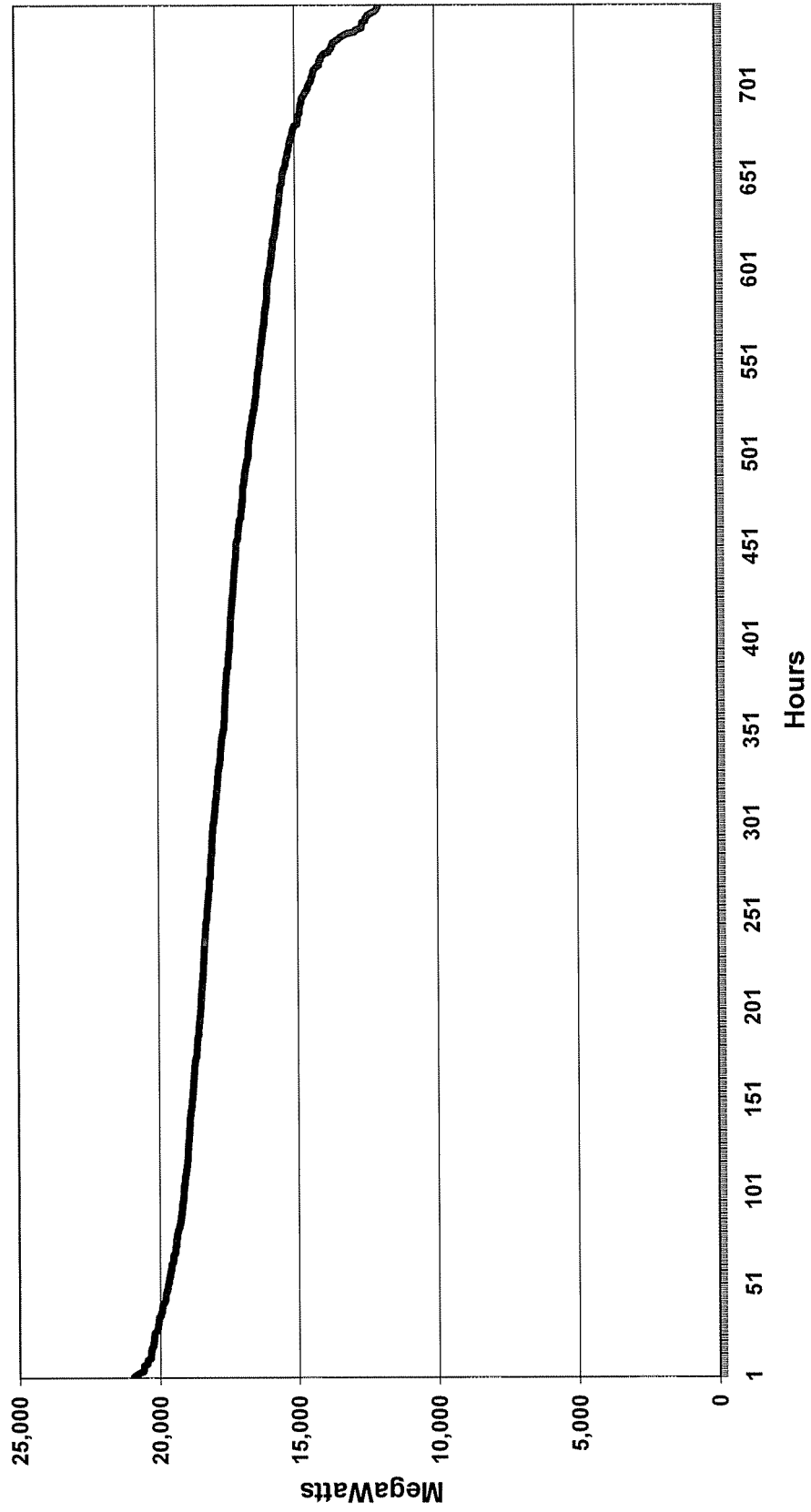
### AEP System-East Zone November 2011 Load Duration Curve (Internal Load)



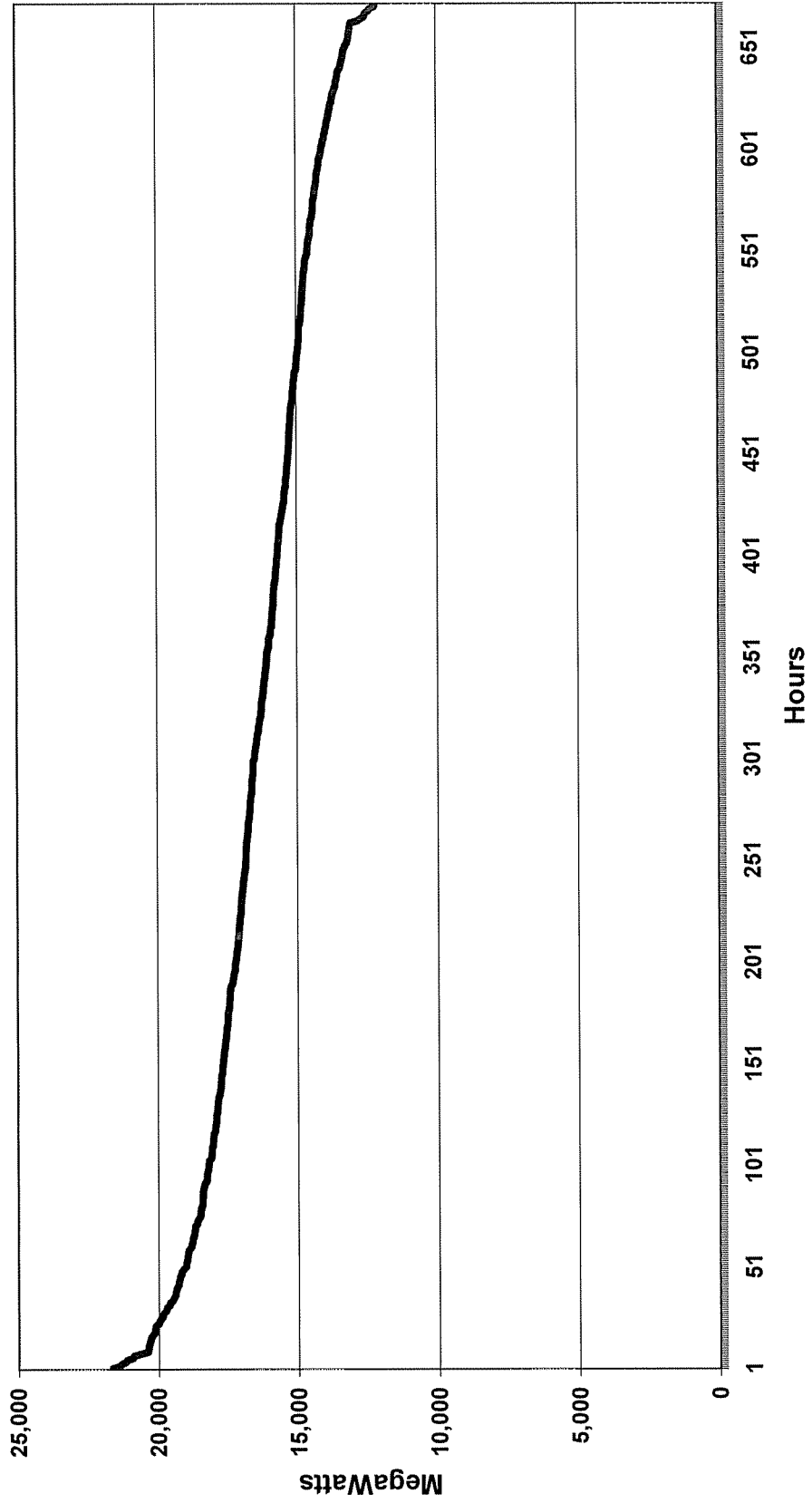
**AEP System-East Zone  
December 2011 Load Duration Curve  
(Internal Load)**



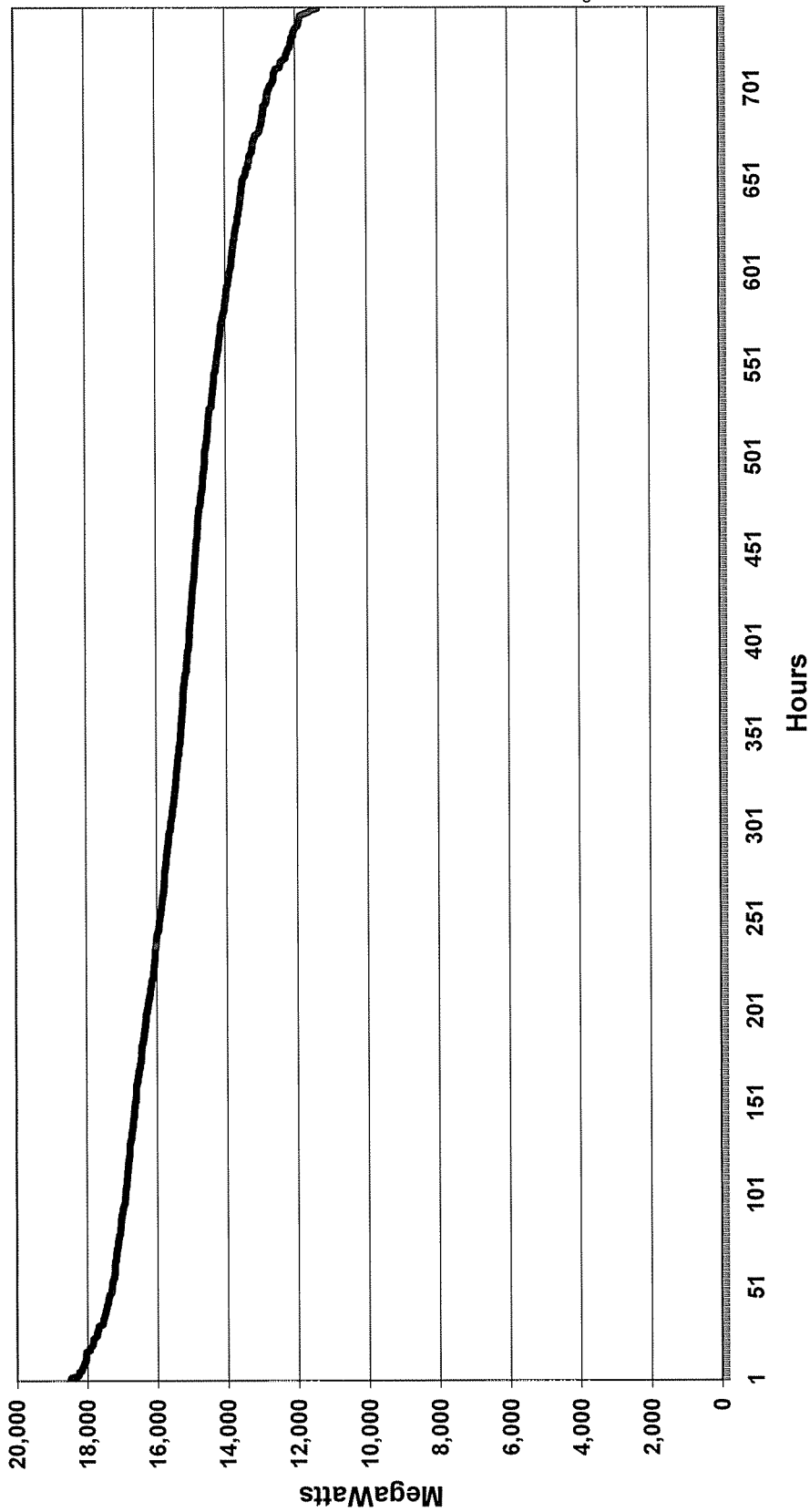
**AEP System-East Zone  
January 2011 Load Duration Curve  
(System Load)**



**AEP System-East Zone  
February 2011 Load Duration Curve  
(System Load)**

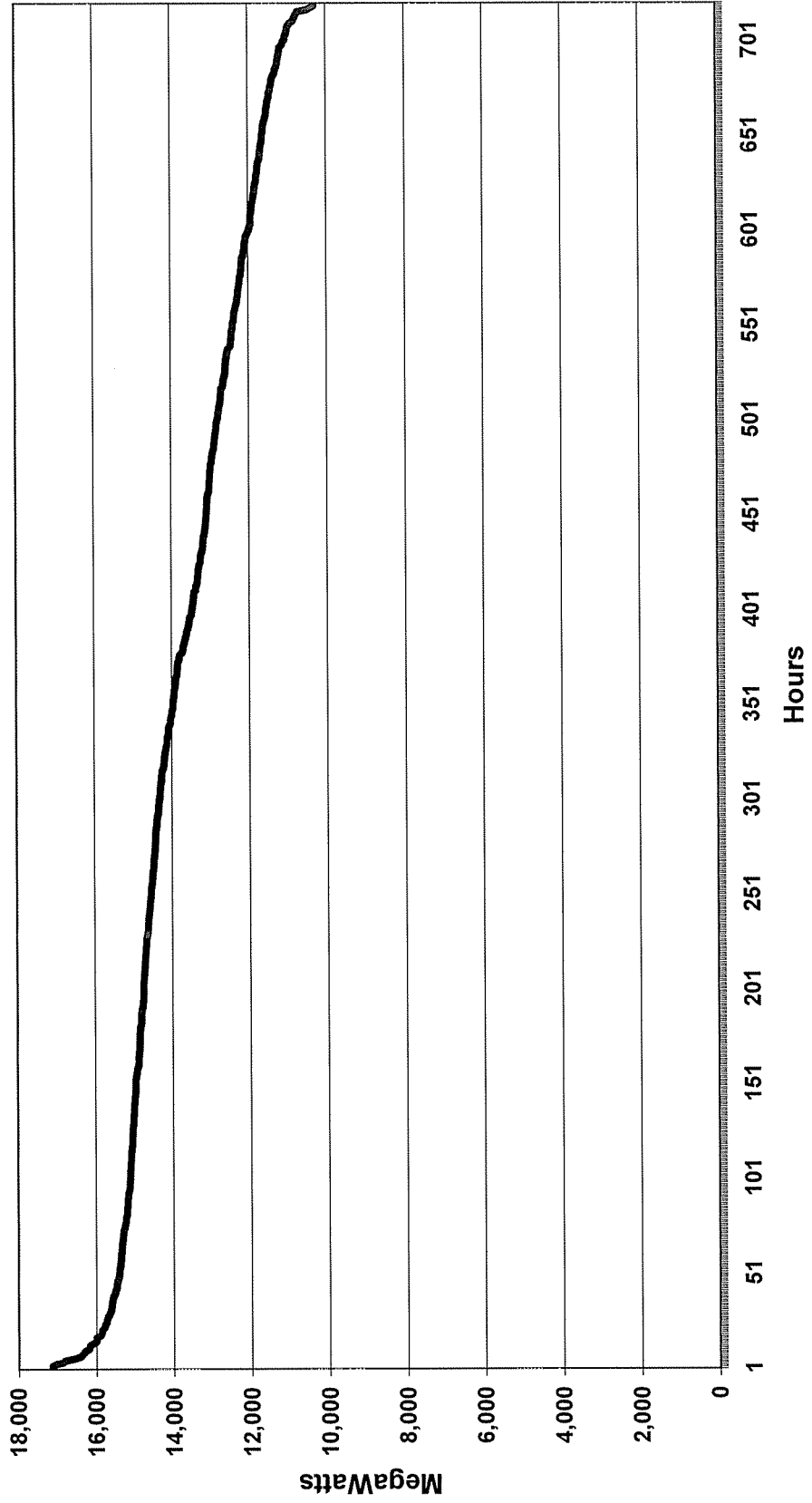


### AEP System-East Zone March 2011 Load Duration Curve (System Load)

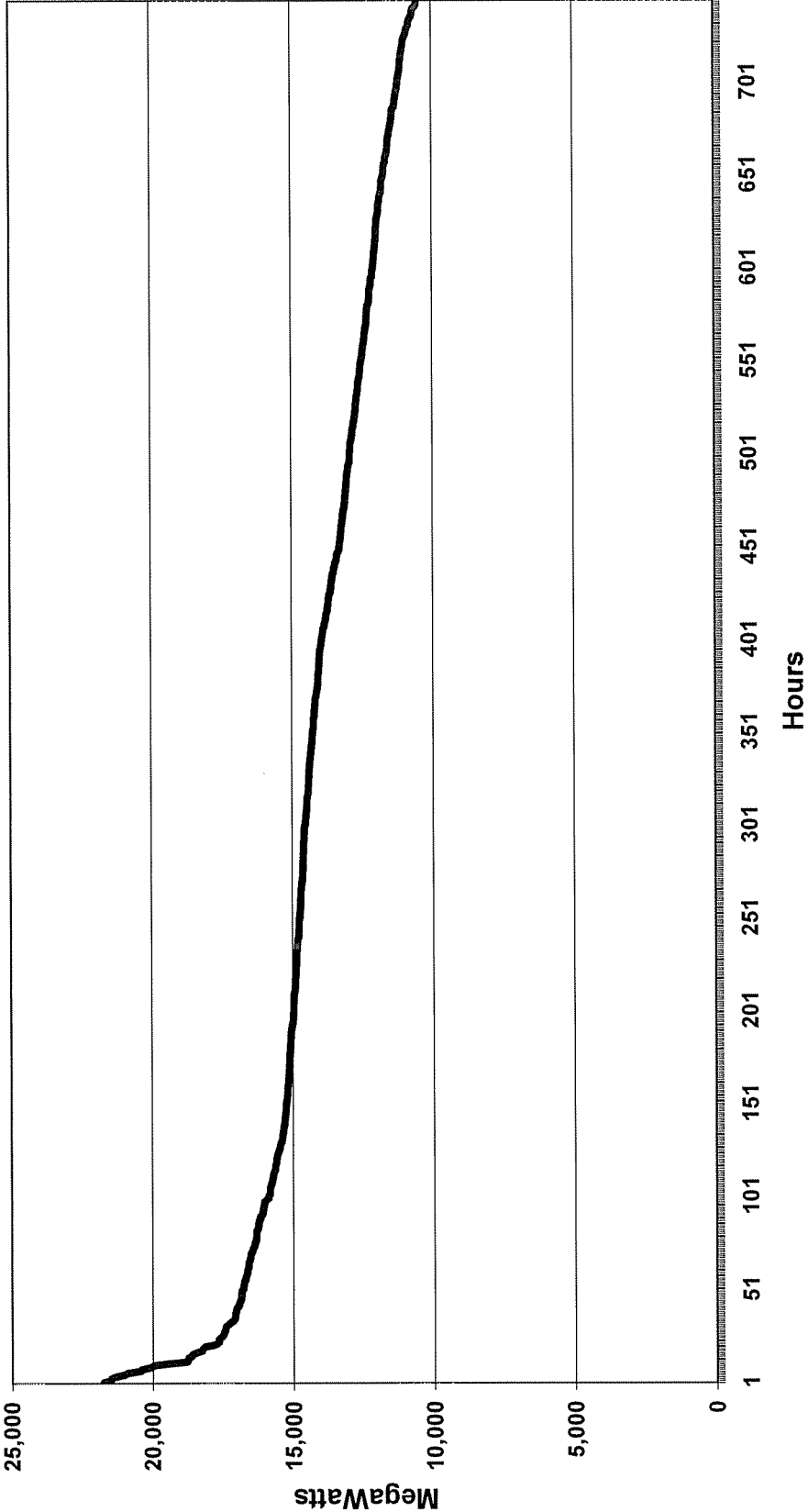




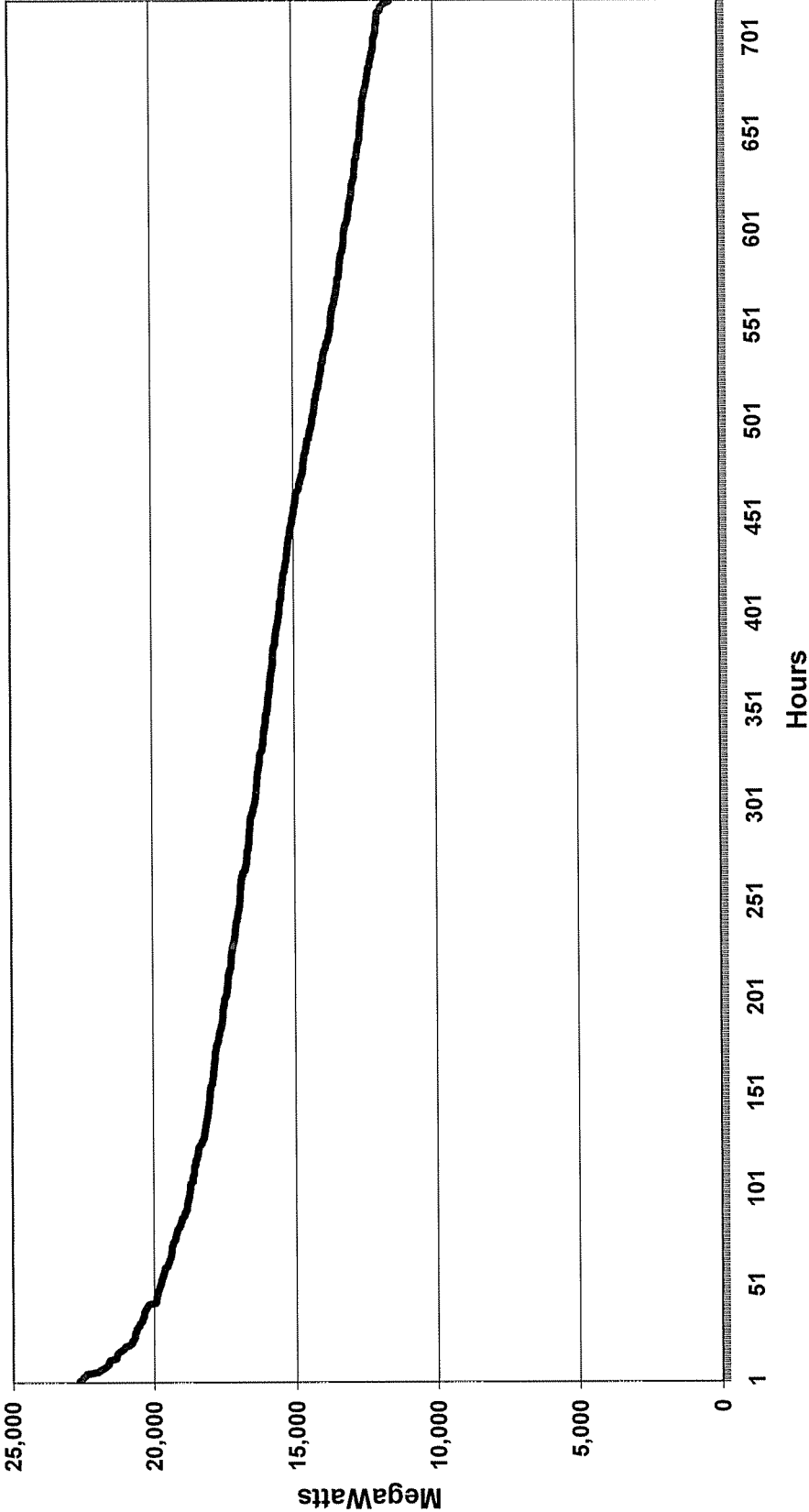
**AEP System-East Zone  
April 2011 Load Duration Curve  
(System Load)**



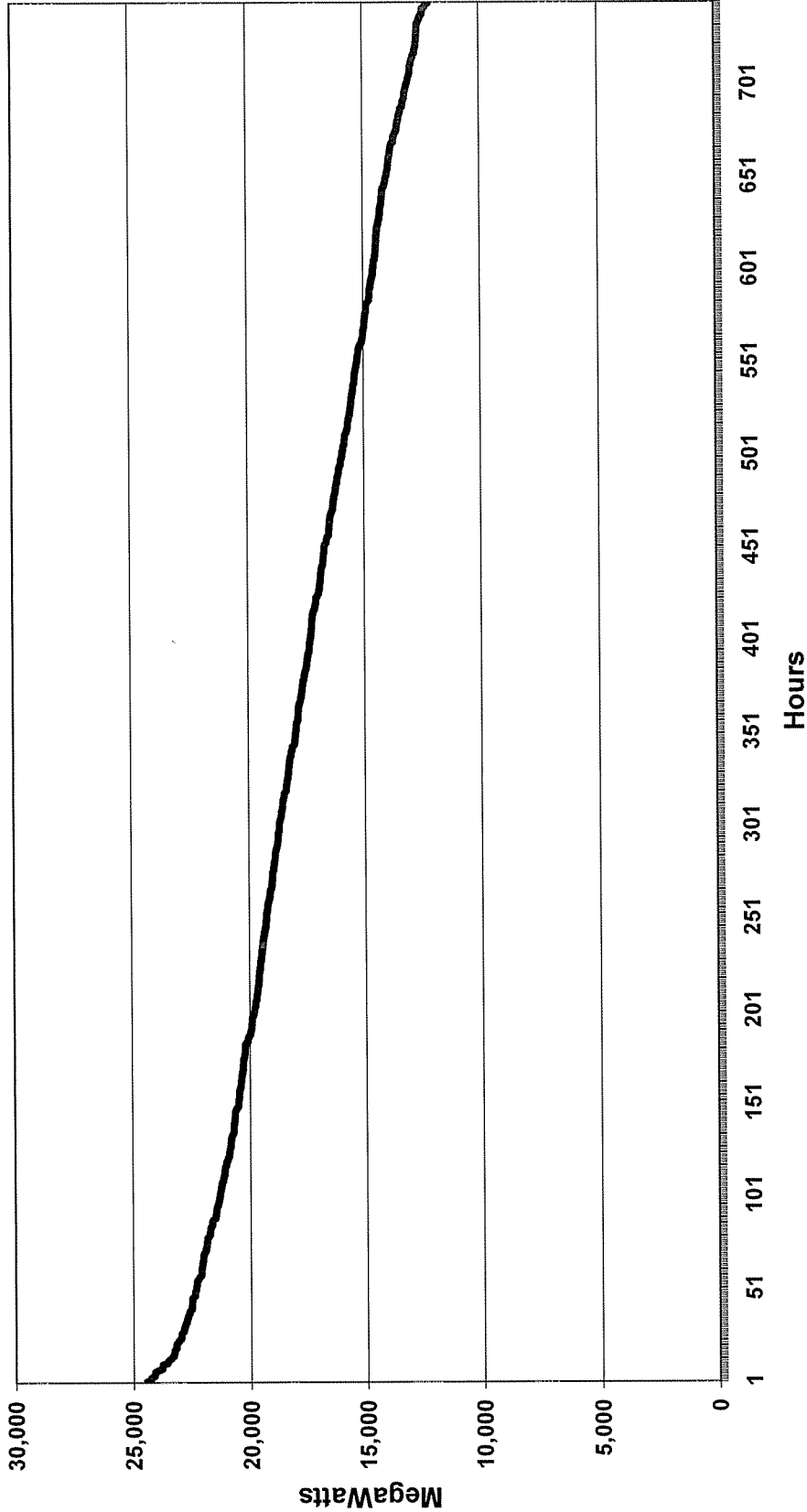
**AEP System-East Zone  
May 2011 Load Duration Curve  
(System Load)**



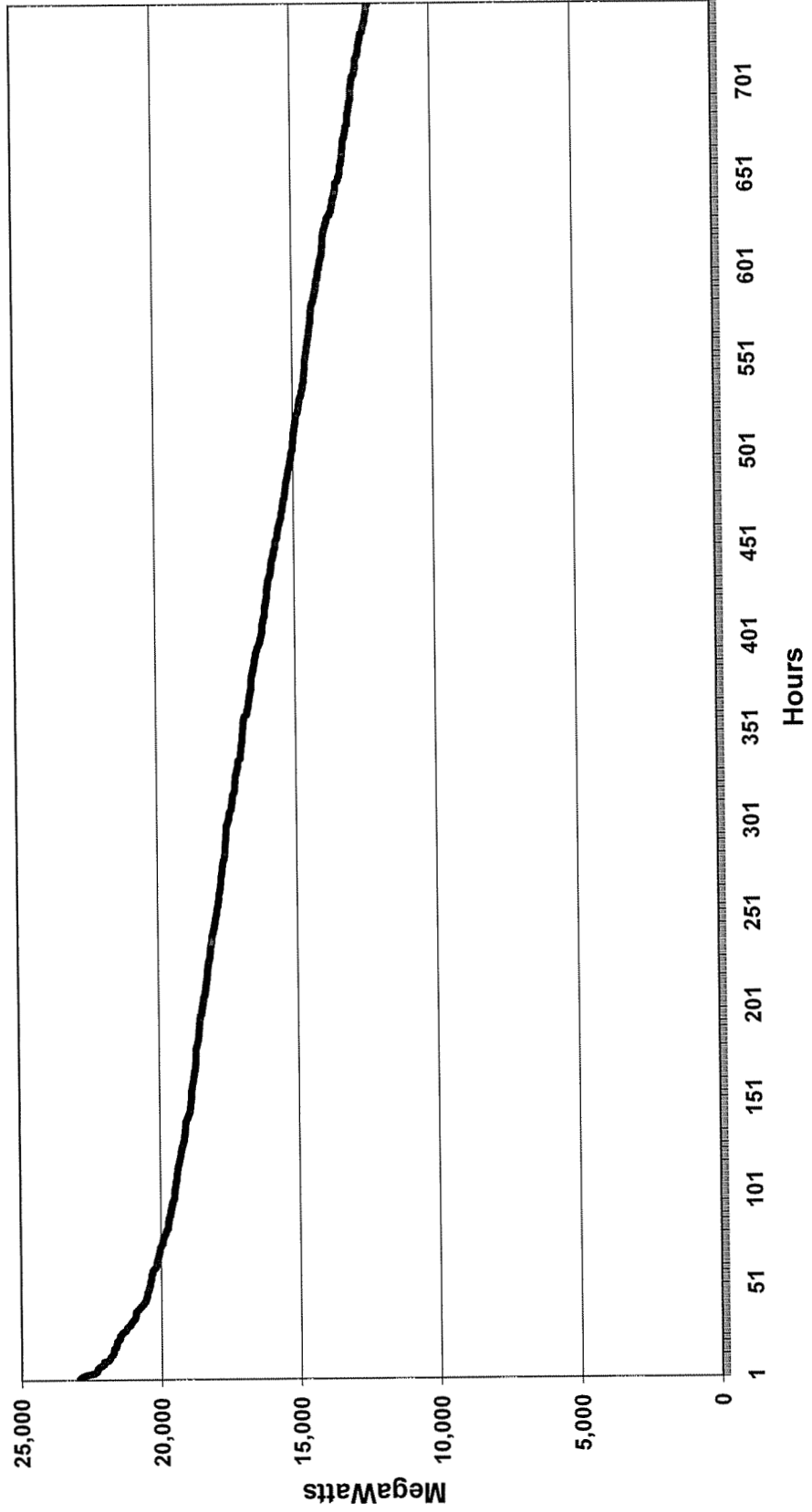
**AEP System-East Zone  
June 2011 Load Duration Curve  
(System Load)**



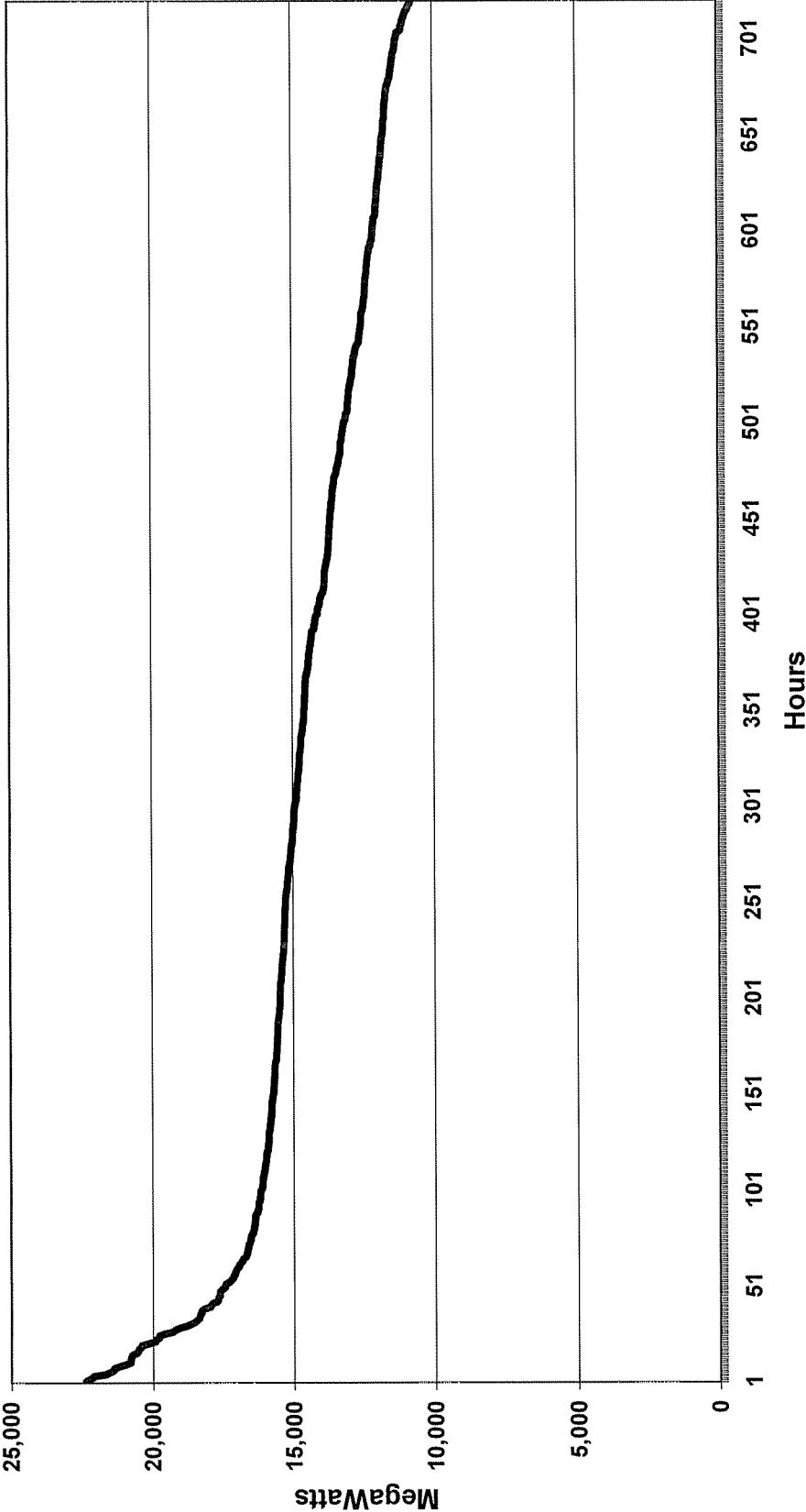
**AEP System-East Zone  
July 2011 Load Duration Curve  
(System Load)**



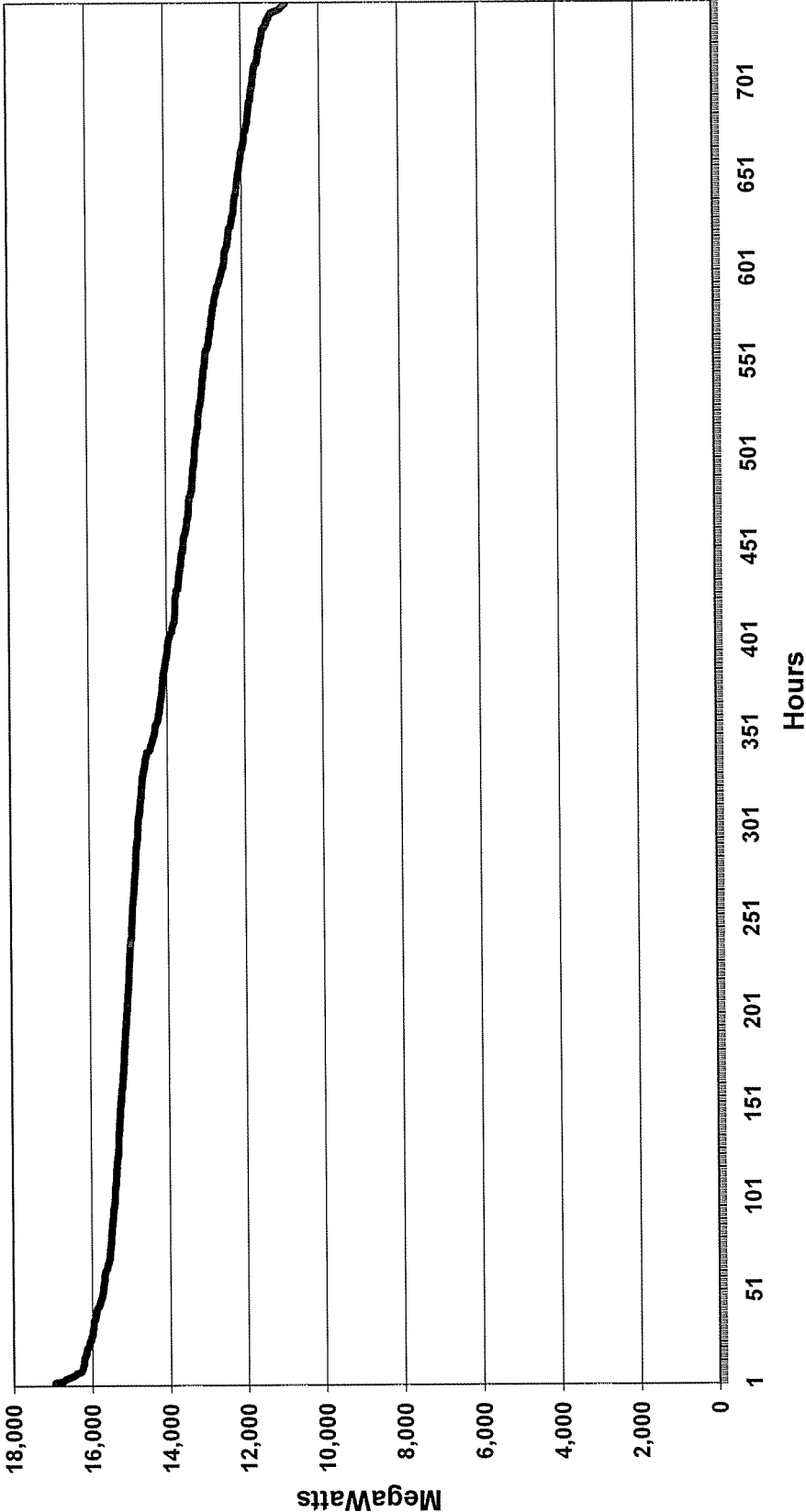
### AEP System-East Zone August 2011 Load Duration Curve (System Load)



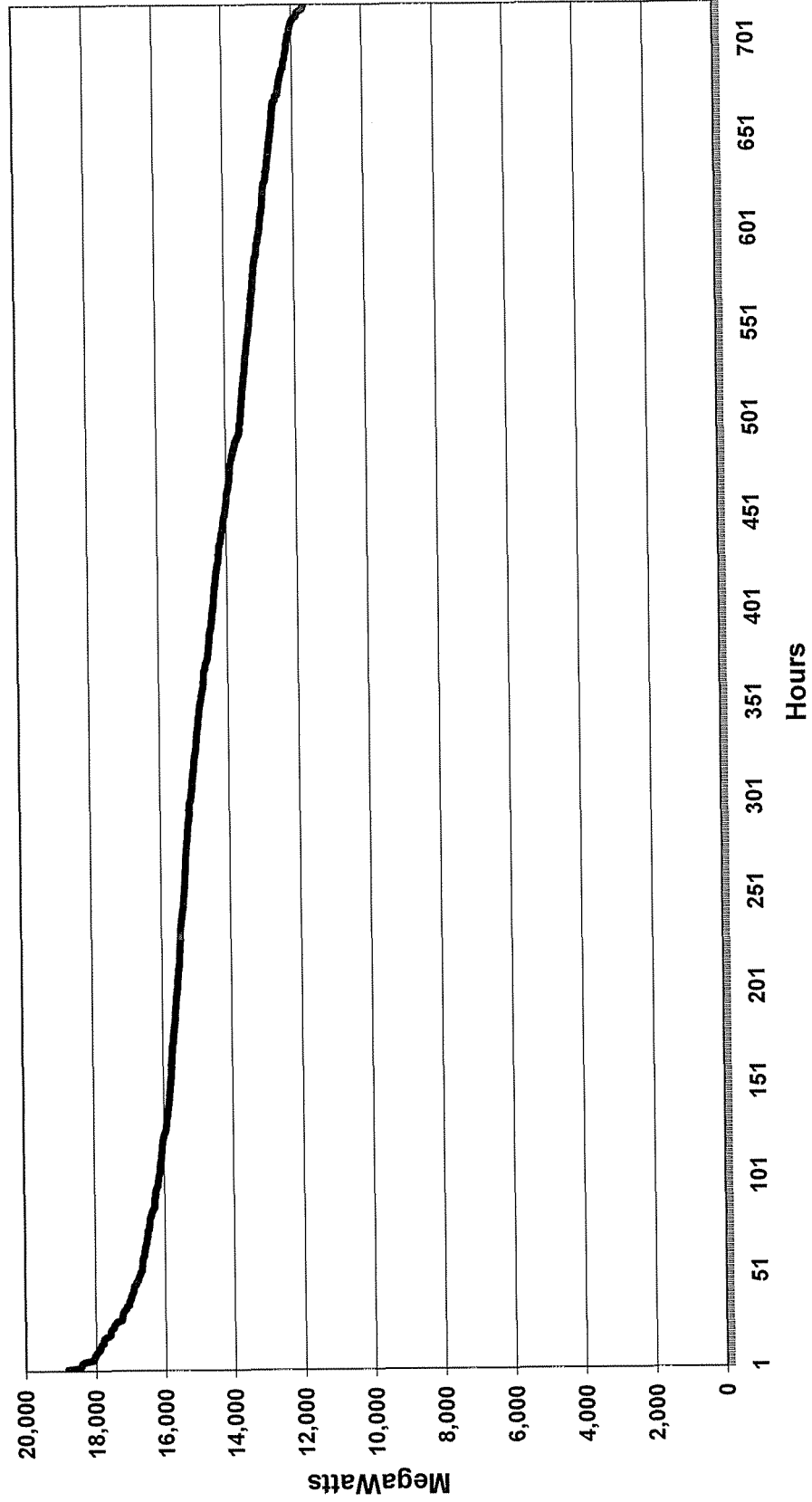
**AEP System-East Zone  
September 2011 Load Duration Curve  
(System Load)**



**AEP System-East Zone  
October 2011 Load Duration Curve  
(System Load)**

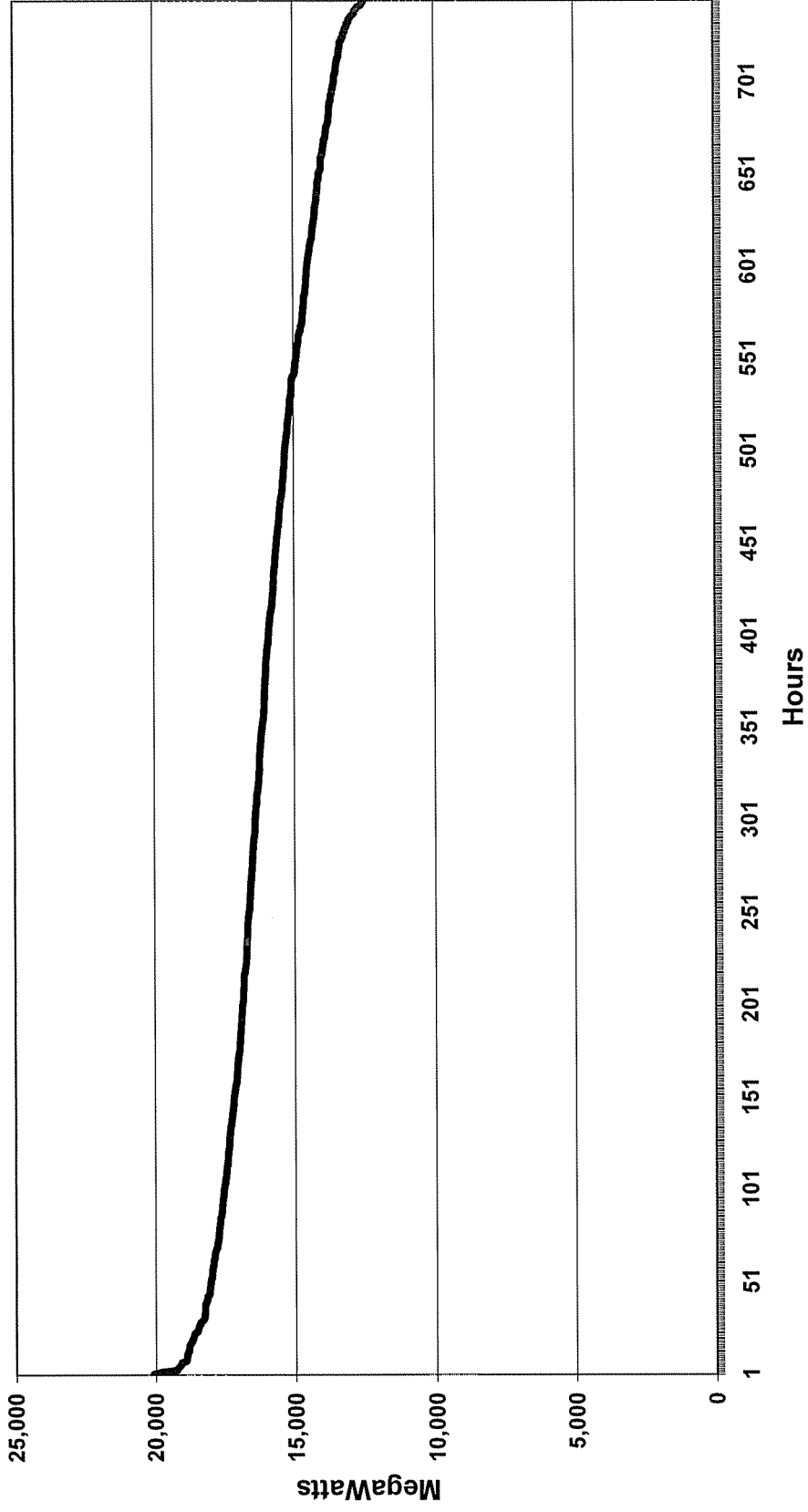


### AEP System-East Zone November 2011 Load Duration Curve (System Load)





**AEP System-East Zone  
December 2011 Load Duration Curve  
(System Load)**



## **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; therefore, such forecasts are not available.

**WITNESS:** Lila P Munsey

**Kentucky Power Company**  
**Base and High Forecast**  
**Energy Sales (GWH) and Seasonal Peak Demand (MW)**  
**2012 - 2016**

Year	Energy Sales		Summer Peak Demand		Preceding Winter Peak Demand	
	Base	High	Base	High	Base	High
2012	7,699	7,807	1,266	1,283	1,560	1,582
2013	7,679	7,834	1,264	1,290	1,558	1,590
2014	7,692	7,877	1,266	1,296	1,559	1,597
2015	7,702	7,915	1,268	1,303	1,559	1,602
2016	7,711	7,964	1,268	1,310	1,555	1,606

**AEP System-East Zone**  
**Base and High Forecast**  
**Energy Sales (GWH) and Seasonal Peak Demand (MW)**  
**2012 - 2016**

Year	Energy Sales		Summer Peak Demand		Preceding Winter Peak Demand	
	Base	High	Base	High	Base	High
2012	126,331	128,106	21,169	21,467	20,843	21,136
2013	127,222	129,786	21,364	21,794	21,076	21,501
2014	127,213	130,272	21,393	21,907	21,080	21,587
2015	127,008	130,514	21,382	21,973	21,043	21,624
2016	126,853	131,010	21,325	22,024	20,946	21,633

**Kentucky Power Company and AEP System-East Zone**  
**Forecast Off-System Energy Sales (GWh)**  
**2012 - 2016**

<u>Year</u>	KPCo Off-System <u>Sales</u>	AEP-East Off-System <u>Sales</u>
2012	1,538	25,061
2013	2,045	30,622
2014	4	6,822
2015	22	9,039
2016	1,495	16,254

## 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.

The installed reserve margin requirement (IRM) 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. Page 2 of this response provides an example of the PJM reserve requirement calculation.

For the 2012/13 delivery period PJM has set the IRM at 15.6%. For the 2013/14 delivery period PJM has set the IRM at 15.4% and for planning purposes AEP assumed a 15.4% level for future years. The resulting AEP reserve margin for 2012/13 is 17.2%, as shown on page 3 of the response to Item No. 5. (This compares with 12% that AEP used, based on our own determinations, from the late 1990s until 2004, and 15% prior to that.)

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

**WITNESS:** Lila P Munsey

**PJM Reserve Margin Example For 2012/13 Planning Year**

Line	Comment
<b>1 Factors</b>	
2	PJM Installed Reserve Margin (IRM) = 15.60%
3	PJM EFORD = 5.98% Based on 5-year average PJM EFORD
4	Forecast Pool Requirement (FPR) = 1.0869 FPR = (1 + Line 2) * (1 - Line 3)
5	
<b>6 Obligations</b>	
7	Total Load Obligation = 20,095 Coincident peak forecasted by PJM
8	UCAP Obligation = 21,840 Line 4 * Line 7
9	UCAP Market Obligations = 1,396
10	Total UCAP Obligation = 23,236 Line 8 + Line 9
11	
<b>12 Resources</b>	
13	Net ICAP = 27,144
14	AEP EFORD = 9.49% MW-weighted average of Unit EFORDs
15	Available UCAP = 24,568 Line 13 * (1 - Line 14)
16	
<b>17 Position</b>	
18	Net UCAP Position = 1,332 Line 15 - Line 10
19	Net ICAP Position = 1,472 Line 18 / (1 - Line 14)
20	
21	Reserve Margin Percent = 24 Question 5 attached Exhibit 5-2, Column (16)
22	Reserve Percent Required By PJM = 17.2 Line 21 - (Line 19 / Question 5 attached Exhibit 5-2, Column (6)) * 100

**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**

Page 2 of this response provides projected winter peak demands, capabilities, and margins for KPCo for the winter seasons 2011/12 through 2015/16.

Page 3 of this response provides projected summer peak demands, capabilities, and margins for the AEP System - East Zone for the period 2012 through 2013 since the AEP System – East Zone view will no longer be applicable after 1/1/2014 as outlined in the response to Question 7.

**WITNESS:** Lila P Munsey



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

Winter Season	Peak Demand - MW					Capacity - MW					Margin			
	Internal Demand (b)	DSM (b)	Committed Sales (3)	Total Demand (4)=(1)+(2)+(3)	Inter-ruptible Demand (5)	Total Demand (6)=(4)+(5)	Existing Capacity & Chngs (e)	Net Sales (d)	Name/Identifier (e)	MW (e)	Purchases Annual Mkt. Purch. (10)	Total Equivalent Capacity (11)=(7)+(8)+Sum(9)+(10)	MW (12)=(11)+(6)	% of Demand (13)=(12)/(6)*100
2011/12	1,566	(6)	0	1,560	1	1,559	1,471	87	No New Build	0	0	1,384	(175)	(11.2)
2012/13	1,568	(10)	0	1,558	2	1,556	1,471	51	No New Build	0	0	1,420	(136)	(8.7)
2013/14	1,572	(13)	0	1,559	2	1,557	1,783	42	No New Build	0	0	1,741	184	11.8
2014/15	1,574	(15)	0	1,559	5	1,554	1,783	(10)	No New Build	0	0	1,793	239	15.4
2015/16	1,576	(21)	0	1,555	9	1,546	1,505	(10)	No New Build	0	0	1,515	(31)	(2.0)

Notes: (a) Based on September 2011 Load Forecast.

(b) Existing plus approved and projected "Passive" EE, and IVV.

(c) Reflects winter capability assumptions.  
 EFFICIENCY IMPROVEMENTS:  
 2015/16: Rockport X: 36 MW (turbine); Rockport X: 35 MW (valve)/offset to FGD derate)  
 (Rockport X is yet to be determined.)  
 FGD DERATES:  
 2015/16: Rockport X: 35 MW  
 ASSUMED RETIREMENTS FOR PLANNING PURPOSES:  
 2014/15: Big Sandy 1: (278 MW)

(d) Includes companies MLR share of:  
 Purchase from Constellation of 315 MW in 2011/12  
 Contractual share of remaining Mone capacity  
 Sale of 22 MW from Tanners Ck. 4 in 2011/12 and 30 MW in 2012/13  
 Ceredo/Darby/Glen Lyn Sale to AMPO, ATSI, and IMEA in 2011/12-2012/13 (387 MW, 160 MW)  
 RPM Auction Sales in 2011/12- 2013/14 (1,288 MW, 646 MW, 700 MW) (MW UCAP)  
 3.6 MW capacity credit from SEPA's Philipot Dam via Blue ridge Contract

(e) New wind and solar capacity value is assumed to be 13% and 6.67% of nameplate

(f) Reflects the ownership transfer of 20% of Mitchell units 1 & 2 effective 1/1/2014 (312 MW)

**AEP SYSTEM - EAST ZONE**  
**Projected Summer Peak Demands, Generating Capabilities, and Margins**

Summer Season	Peak Demand - MW				Capacity - MW				Reserve Margin		Reserve Margin		PJM ICAP Position			
	Inter-ruptible Demand (a)	DSM (b)	Net AEP Internal Demand (c)	Net Other Committed Sales (d)	Existing Capacity & Planned Changes (e)	Committed Net Sales (f)	Planned Capacity Additions Name/Identifier (g)	MW (h)	Annual Purchl. (i)	Total Capacity (j)	Before Interruptible w/ New Capacity (k)	% of Demand (l)	After Interruptible w/ New Capacity (m)	% of Demand (n)	Reserve % Required By PJM (o)	Position (p)
2012	21,315	(615)	20,554	1,048	27,064	849	545 MW D CC & 17 MW Solar & 100 MW Wind	565	0	26,780	4,563	20.5	5,178	24.0	17.2	1,472
2013	21,595	(615)	20,749	1,048	27,052	713	20 MW Solar & 100 MW Wind	21	0	26,924	4,512	20.1	5,127	23.5	#N/A (n)	(1,417)
2014																
2015																
2016																

Notes: (a) Based on September 2011 Load Forecast (not coincident with PJM's peak).

(b) Load forecasting view of Interruptible Demand.

(c) Existing plus approved and projected "Passive" EE, and IVV.

(d) Includes:  
 Buckeye-Cardinal commitment

(e) Reflects the following summer capability assumptions:  
 AEP PPR share of OVEC capacity  
 Hydro plants, including Summersville, are rated at average August output.  
 FGD DERATES:  
 2012: Cardinal 3; 10 MW; Kyger Creek 1-5; 3 MW each  
 2013: Clifty Creek 1-6; 2 MW each

(f) continued  
 ASSUMED RETIREMENTS FOR PLANNING PURPOSES:  
 2012: Conesville 3; Muskingum River 2.4 (650 MW)

(g) Includes:

Contractual share of remaining Mone capacity  
 Sale of 30 MW from Tanners Ck. 4 in 2012  
 Carado/Darby/Glen Lyn Sale to AMPO (ATS) and IMEA in 2012 (160 MW)  
 RPIW Auction Sales in 2012-2013 (646 MW, 700 MW) (MW UCAP)  
 3.6 MW capacity credit from SEPA's Philip Dam via Blue ridge Contract

(h) New wind and solar capacity value is assumed to be 13% and 38% of nameplate

(i) Any capacity deficiencies will be satisfied with short-term capacity purchases

## 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

The updated planned outages for Big Sandy are listed below:

<u>YEAR</u>	<u>UNIT 1</u>	<u>UNIT 2</u>
2012	Less than 4 weeks More than 4 weeks	Less than 4 weeks More than 4 weeks
2013	Less than 4 weeks More than 4 weeks	Less than 4 weeks More than 4 weeks
2014	More than 4 weeks More than 4 weeks	More than 4 weeks More than 4 weeks
2015	Retired	More than 4 weeks More than 4 weeks
2016	Retired	More than 4 weeks

**WITNESS:** Lila P Munsey

## **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**

Currently, the generating facilities of Kentucky Power Company (KPCo) are integrated with the generating facilities of the other AEP System-East operating companies to supply the total electric requirements of all customers of those combined operating companies. Therefore, the evaluation of the adequacy and reliability of generating capability to meet current and projected power demands of KPCo's customers must be based on consideration of the total generating capability of the AEP System-East in relation to the aggregate AEP System-East load. However, under the AEP Interconnection Agreement (which represents the "pool agreement" among the four major eastern AEP operating companies), each member of the pool is responsible for a proportionate share of the aggregate pool generating capacity. Each member must provide – over – time sufficient generating capacity to meet its own internal load requirements plus an adequate reserve margin.

On December 17, 2010, pursuant to Article 13 of the FERC – approved AEP Interconnection Agreement (“Interconnection Agreement”), each of the AEP Pool members gave written notice to the other members, and to American Electric Power Service Corporation (“AEPSC”), the AEP Pool’s agent, of its intent to terminate the Interconnection Agreement, effective January 1, 2014, or such other date as approved by FERC. Because the Interconnection Agreement is a rate schedule on file at FERC, its termination will not be effective until accepted for filing by FERC.

This FERC process will provide interested stakeholders an opportunity to participate in the determination of how the AEP-East operating companies should operate prospectively. Because the Interconnection Agreement is still in effect, it is not known how the AEP-East operating companies, including KPCo, will operate prospectively. On March 30, 2012, AEP Ohio filed a Modified Electric Security Plan with the PUCO. Contained in that filing is a provision for the transfer of 20% of AEP Ohio’s Mitchell Units 1 & 2 (about 312 MW) to KPCo as of January 1, 2014.

The proposed 1/1/2014 pool termination results in the nullification of the AEP System – East Zone view. Currently no additional resources aside from the aforementioned ownership transfer of Mitchell Units 1 & 2, are planned for KPCo to meet its load.

**WITNESS:** Lila P Munsey

**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 page 2 of this response.

**WITNESS:** Lila P Munsey

8(a) All quantities represent metered values.

<u>Received from (MWh):</u>	<u>2006</u> (Actual)	<u>2007</u> (Actual)	<u>2008</u> (Actual)	<u>2009</u> (Actual)	<u>2010</u> (Actual)	<u>2011</u> (Actual)	<u>2012</u>
Appalachian Power (1)	9,485,862	7,280,995	7,826,055	4,637,687	5,042,019	4,230,880	(4)
Ohio Power (1)	9,470,141	7,782,679	8,832,135	10,872,502	11,316,622	11,393,398	(4)
East Ky Power Coop	398,269	324,865	402,847	481,140	412,663	510,543	(4)
LGE(Kentucky Utilities)	330,912	600,592	810,871	933,540	884,267	780,095	(4)
TVA	501,071	390,216	448,365	523,823	604,964	654,875	(4)
Illinois Power Co. (2)	13,555	38,216	33,190	36,408	46,376	59,956	(5)
Illinois Power Co. (3)	11,908	24,485	23,629	16,769	20,742	26,552	(5)
Big Sandy Generating Plant	7,171,505	7,533,223	6,021,182	6,262,165	6,552,258	6,372,925	3,469,000

8(b) All quantities represent metered values.

<u>Delivered to (MWh):</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Appalachian Power (1)	18,982,168	15,501,979	15,917,326	15,589,080	16,340,364	15,816,607	(4)
Ohio Power (1)	215,747	257,462	360,333	465,000	466,832	494,931	(4)
East Ky Power Coop	218,005	277,818	213,189	154,558	154,000	176,721	(4)
LGE(Kentucky Utilities)	97	370	14	11	23	1	(4)
TVA	70	6,050	62	0	0	1	(4)
Illinois 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	98,517	101,705	101,657	95,284	103,058	95,607	(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 2011 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

## 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

- 8c. 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 Item No. 9 will provide adequate capacity to serve the existing and projected loads shown in the table on page 2.



### Kentucky Power Company

8d. The actual summer and winter peak demands are shown below for 2011/2012. In addition, forecasted summer and winter peak demands for 2012 through 2016 are also shown in the table below.

<b>Kentucky Power Company</b>		
<b>Seasonal Peak Demand</b>		
<b>Actual 2011 and Forecast 2012-2016</b>		
Year	Summer	Preceding Winter
	Peak Demand	Peak Demand
	(MW)	(MW)
2011	1,240*	1,596*
2012	1,266	1,378*
2013	1,264	1,558
2014	1,266	1,559
2015	1,268	1,559
2016	1,268	1,555

\*Based on Actual Load Data

**WITNESS:** Lila P Munsey

## 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:

**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 Mayo Trail 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 2012.

**Hazard Area Improvements Project** – This project will provide another 138 kV source into the Hazard area of eastern Kentucky. Station and line work will be required. This project will provide single contingency reliability to the Hazard area sub-transmission system and double contingency reliability to the area 138 kV system. Current projected in service date is December 2014.

**Big Sandy Area Improvements** – This project will install a second 765/345 kV transformer at the Barber 765 kV station. This project will provide double contingency reliability to the critical transmission system. Current projected in service date is April 2015.

**Thelma and Busseyville Station Upgrades** – This project will address thermal overload concerns on the Big Sandy-Thelma 138kV circuit. Station and line work will be required. This project will increase the thermal rating on the Big Sandy-Thelma 138kV line. Current projected in service date is June 2015.

## Kentucky Power Company

**Johns Creek and Stone Station Upgrades** – This project will install two new 138 kV circuit breakers at Johns Creek and one 138kV circuit breaker at Stone Station. This project will provide additional reliability to customers, operational flexibility, and voltage support under contingency conditions. Current projected in service date is June 2015.

**Cedar Creek Station Upgrades** – This project will install two new 138 kV circuit breakers at Cedar Creek Station. This project will provide operational benefits and provide voltage support for single contingency line outages. Current projected in service date is April 2016.

**WITNESS:** Lila P Munsey