

# STITES & HARBISON PLLC

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RECEIVED

April 29, 2009

APR 29 2009

PUBLIC SERVICE  
COMMISSION

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

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

**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 2008 Annual Resource Assessment for Kentucky Power Company. Also enclosed are one copy of the Kentucky Power Company 2008 FERC Form No. 1 and one copy of the 2008 Annual Public Service Commission Utility Financial Report for Kentucky Power Company.

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

Sincerely yours,

STITES & HARBISON PLLC

  
Mark R. Overstreet

cc: Errol K. Wagner  
Parties of Record

KE057.00KE4.12126.3.FRANKFORT

**RECEIVED**

**APR 29 2009**

**PUBLIC SERVICE  
COMMISSION**

**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**

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

**April 29, 2009**



## 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 2008 monthly peak internal demands for Kentucky Power Company and AEP System-East. Kentucky Power Company and AEP System-East had 0 and 1,019 MW of contractual interruptible capacity, respectively.

Page 3 of this response provides actual 2008 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: Errol K Wagner

Kentucky Power Company and AEP System-East Zone  
Actual and Weather Normalized Peak Internal Demand (MW)  
2008

Month	Kentucky Power Company				AEP System-East Zone			
	Peak	Peak Day	Peak Hour	Normalized Peak	Peak	Peak Day	Peak Hour	Normalized Peak
January	1,678	1/25/2008	9	1,568	21,977	1/25/2008	8	20,848
February	1,437	2/11/2008	8	1,419	20,533	2/11/2008	8	20,258
March	1,304	3/9/2008	8	1,333	18,390	3/10/2008	7	18,996
April	1,100	4/15/2008	7	1,087	16,962	4/15/2008	7	15,973
May	986	5/31/2008	17	1,057	16,187	5/30/2008	14	17,088
June	1,249	6/9/2008	14	1,210	21,608	6/9/2008	14	20,406
July	1,247	7/21/2008	16	1,286	21,078	7/17/2008	16	21,798
August	1,170	8/21/2008	15	1,243	20,728	8/1/2008	15	20,877
September	1,204	9/2/2008	16	1,121	20,667	9/3/2008	16	18,768
October	1,212	10/30/2008	8	1,077	17,775	10/30/2008	7	16,432
November	1,392	11/22/2008	9	1,261	18,960	11/19/2008	8	17,973
December	1,527	12/22/2008	9	1,398	20,612	12/22/2008	9	19,938

Kentucky Power Company and AEP System-East Zone  
Actual Peak System Demand (MW)  
2008

Month	Kentucky Power Company			AEP System-East Zone		
	Peak	Peak Day	Peak Hour	Peak	Peak Day	Peak Hour
January	1,830	1/25/2008	9	24,361	1/25/2008	7
February	1,578	2/11/2008	8	22,796	2/11/2008	7
March	1,438	3/9/2008	8	20,390	3/25/2008	7
April	1,202	4/15/2008	7	18,693	4/15/2008	7
May	1,136	5/30/2008	16	18,653	5/30/2008	16
June	1,409	6/9/2008	14	24,136	6/9/2008	14
July	1,514	7/21/2008	16	25,086	7/21/2008	16
August	1,379	8/1/2008	15	23,992	8/1/2008	15
September	1,376	9/2/2008	16	23,439	9/3/2008	16
October	1,321	10/30/2008	7	19,530	10/30/2008	7
November	1,490	11/22/2008	9	21,130	11/19/2008	8
December	1,687	12/22/2008	9	23,070	12/22/2008	9



## **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 completed 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**

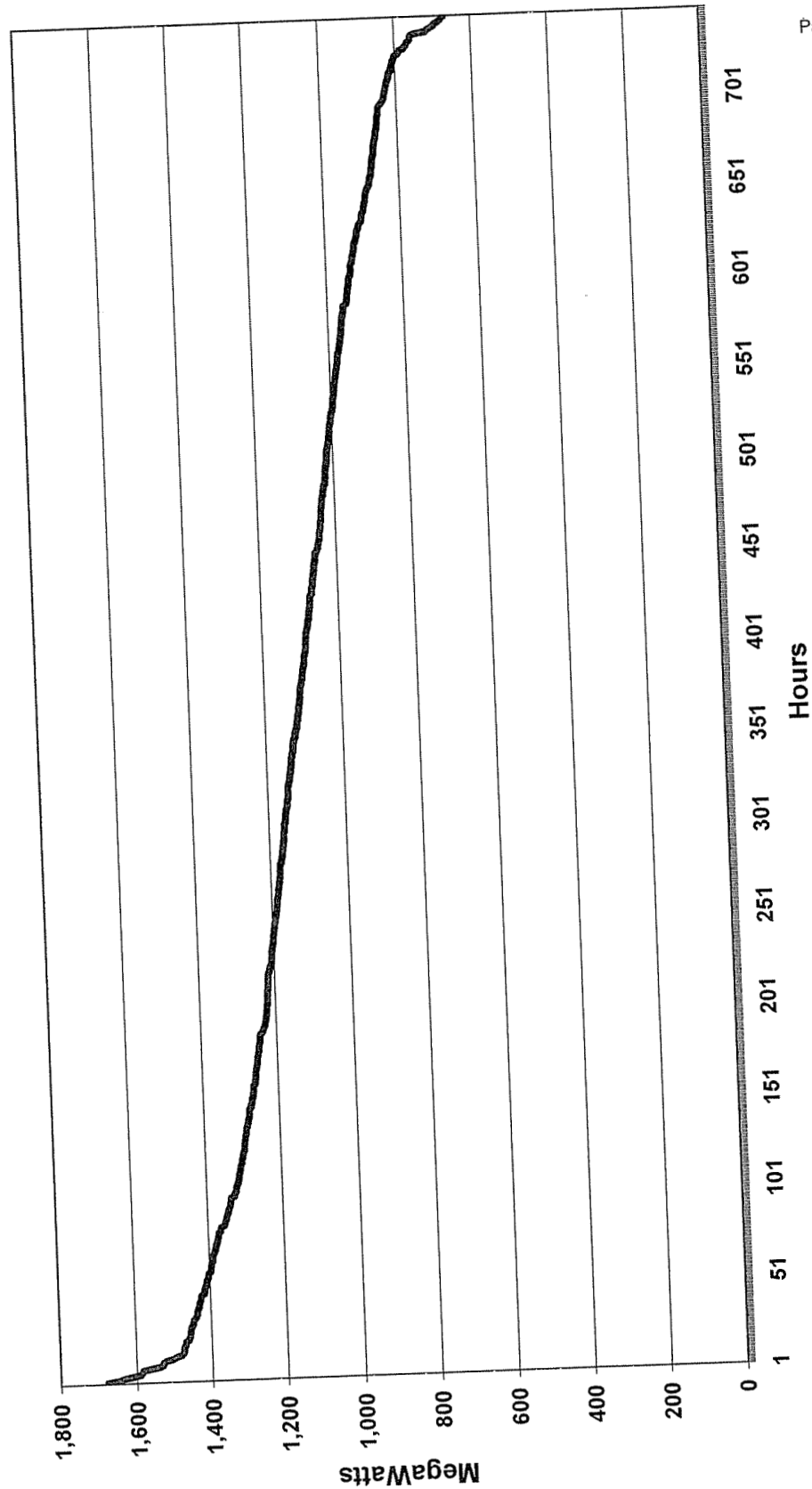
Pages 2 through 13 provide 2008 monthly load duration curves for Kentucky Power Company's internal load. Pages 14 through 25 provide 2008 monthly load duration curves for Kentucky Power Company's system load. Pages 26 through 37 provide 2008 monthly load duration curves for AEP System-East's internal load. Pages 38 through 49 provide 2008 monthly load duration curves for AEP System-East's system load. The system load, for both Kentucky Power Company and AEP System-East, includes internal load and off-system sales.

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

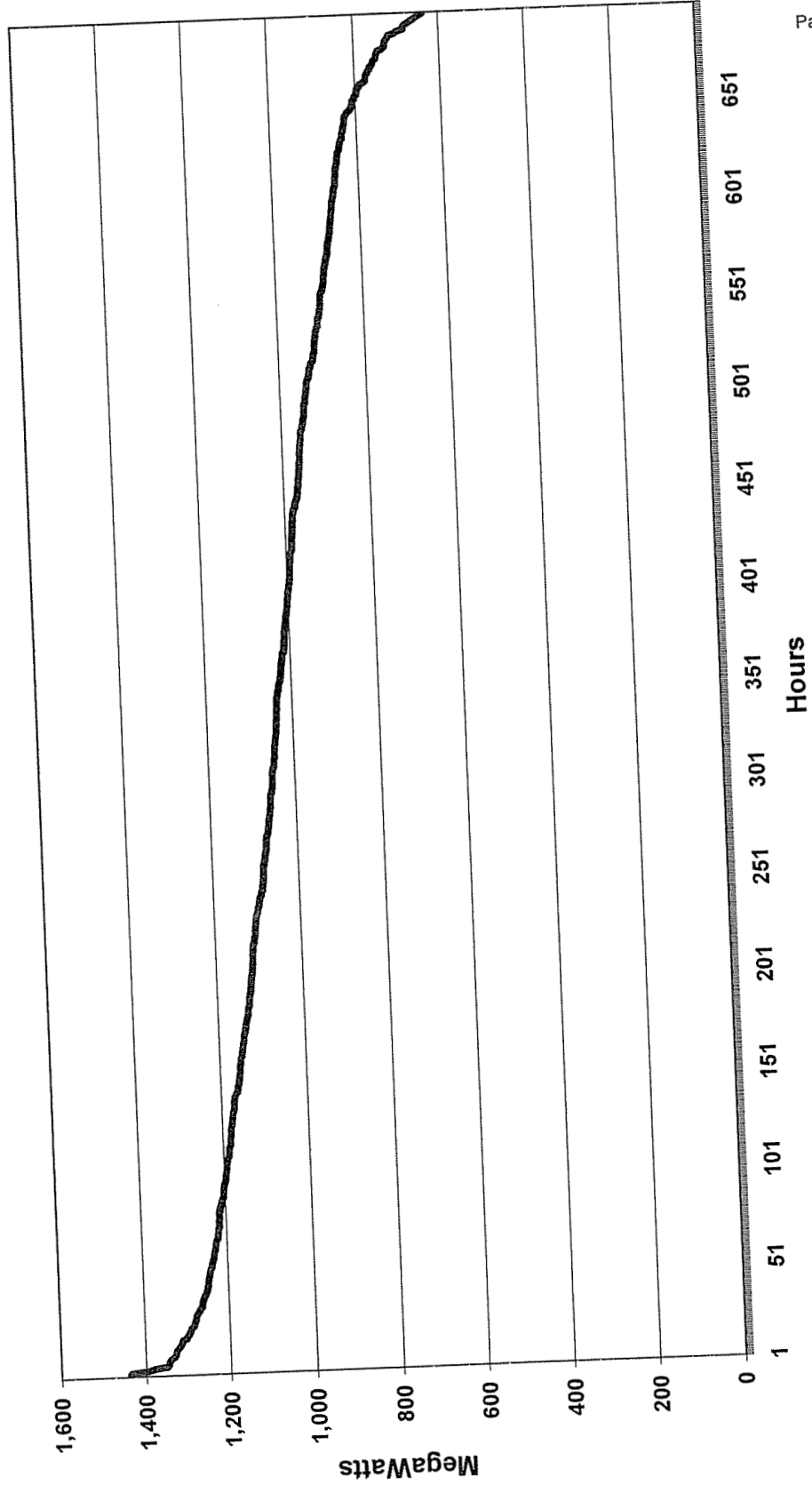
**WITNESS:** Errol K Wagner



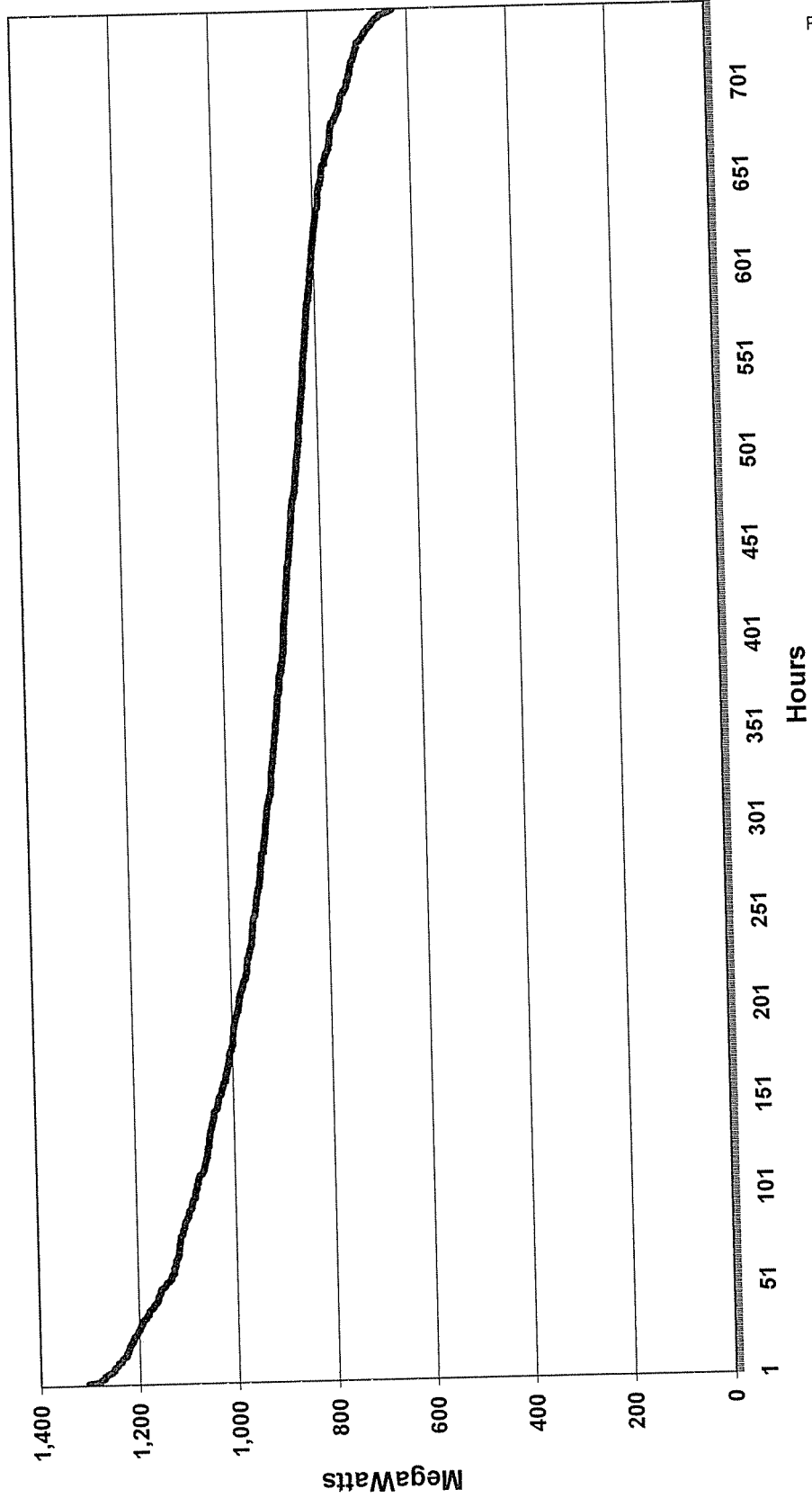
**Kentucky Power Company  
January 2008 Load Duration Curve  
(Internal Load)**



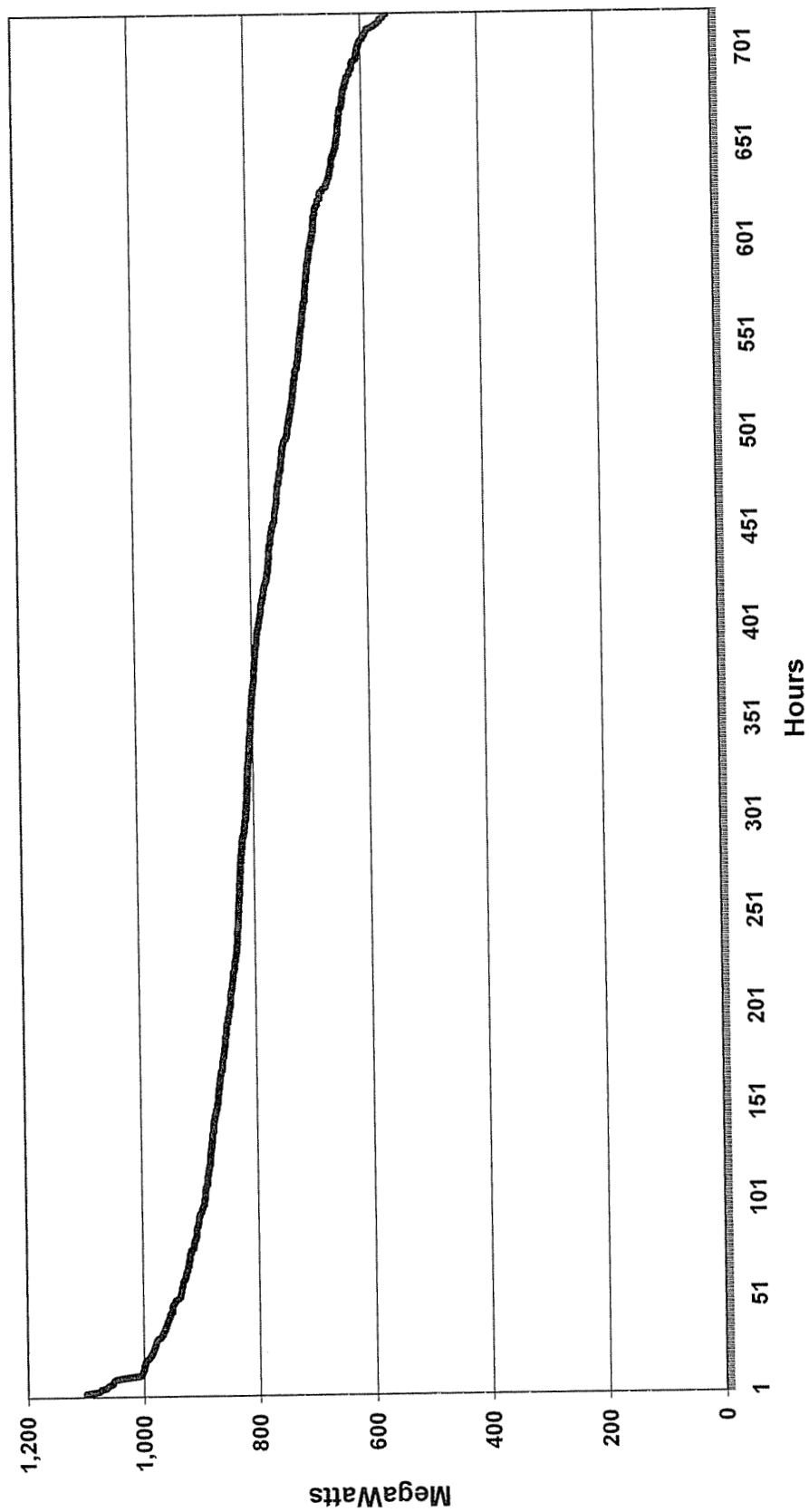
**Kentucky Power Company  
February 2008 Load Duration Curve  
(Internal Load)**



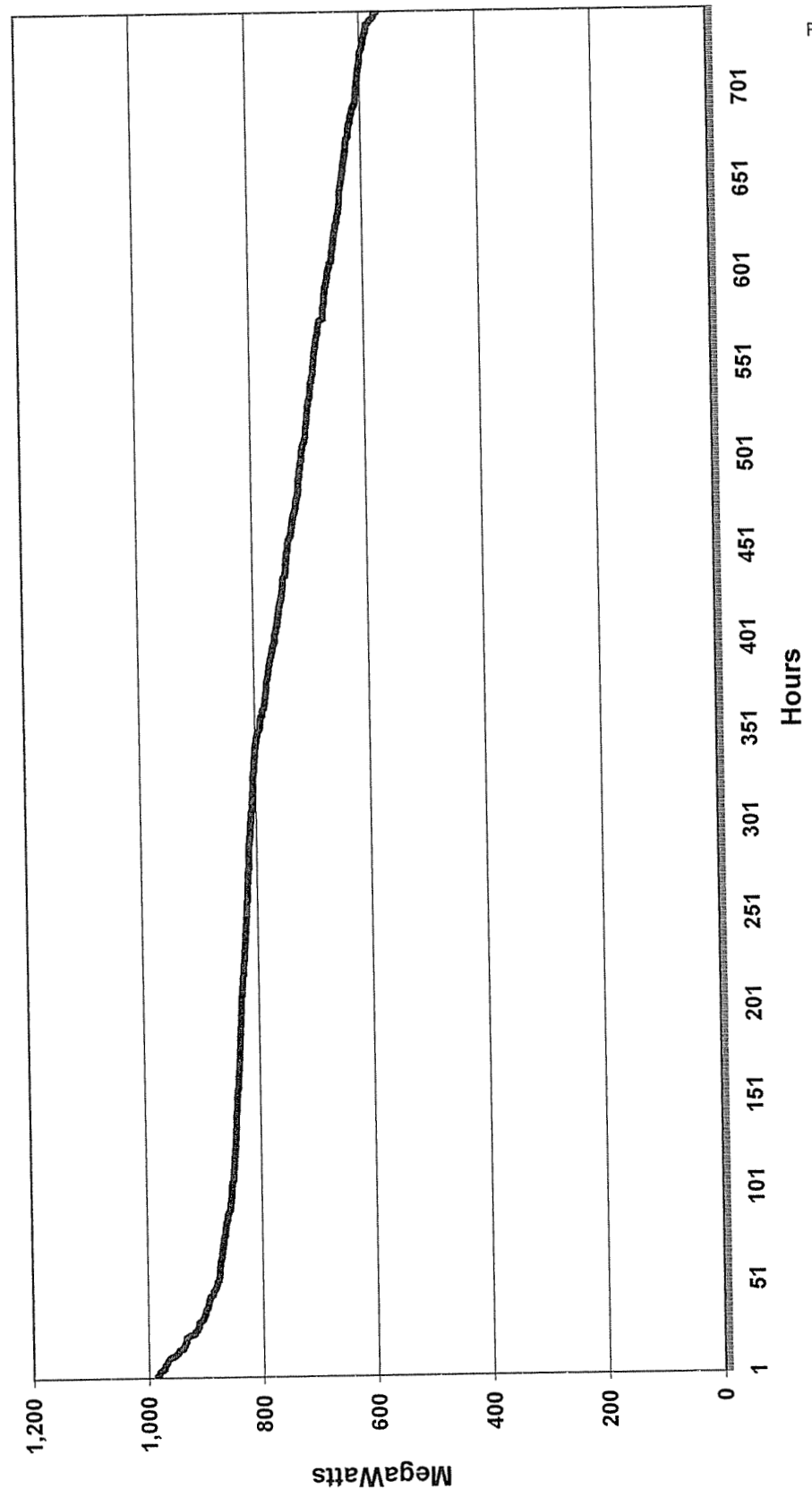
**Kentucky Power Company  
March 2008 Load Duration Curve  
(Internal Load)**



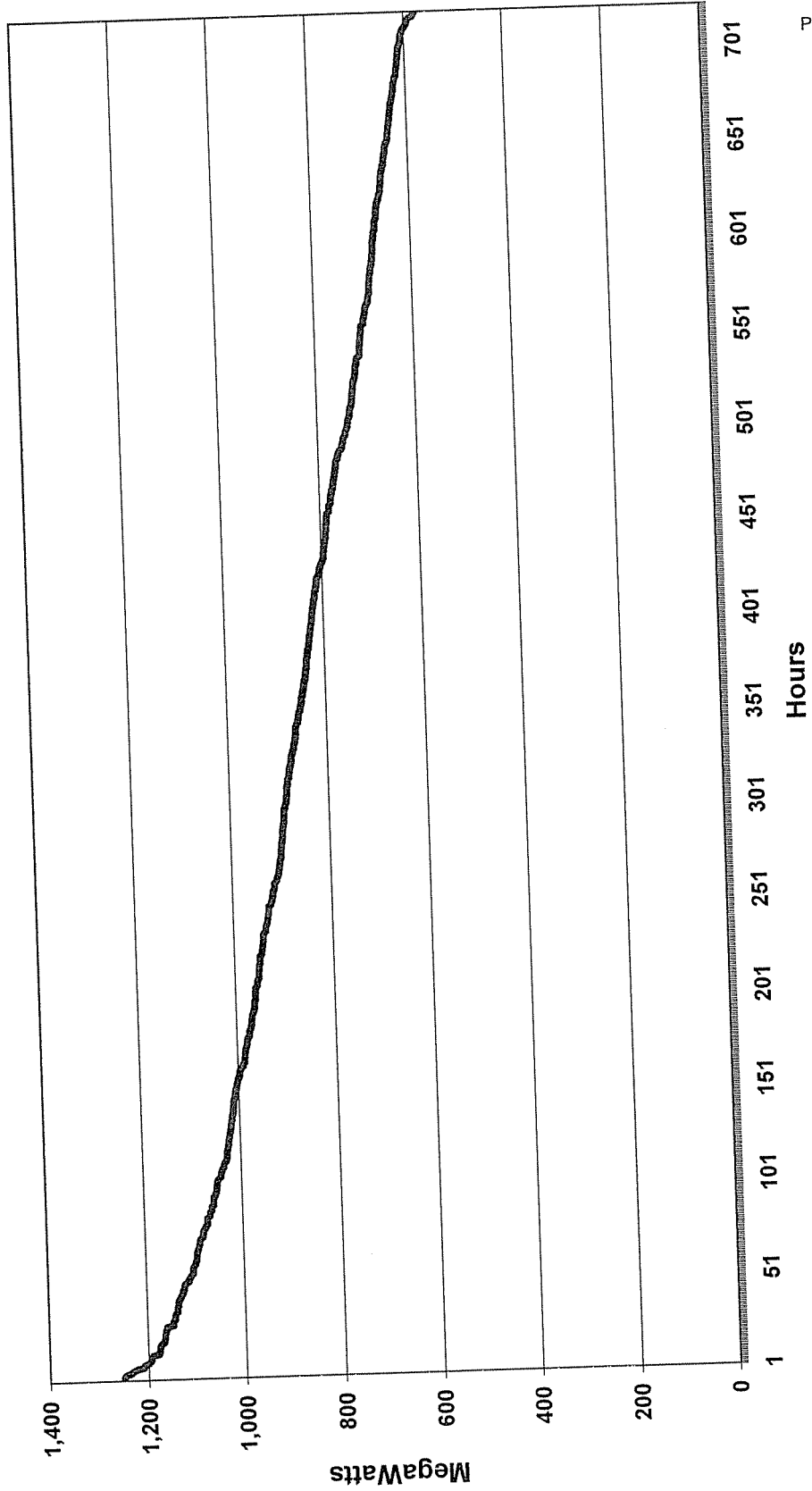
**Kentucky Power Company  
April 2008 Load Duration Curve  
(Internal Load)**



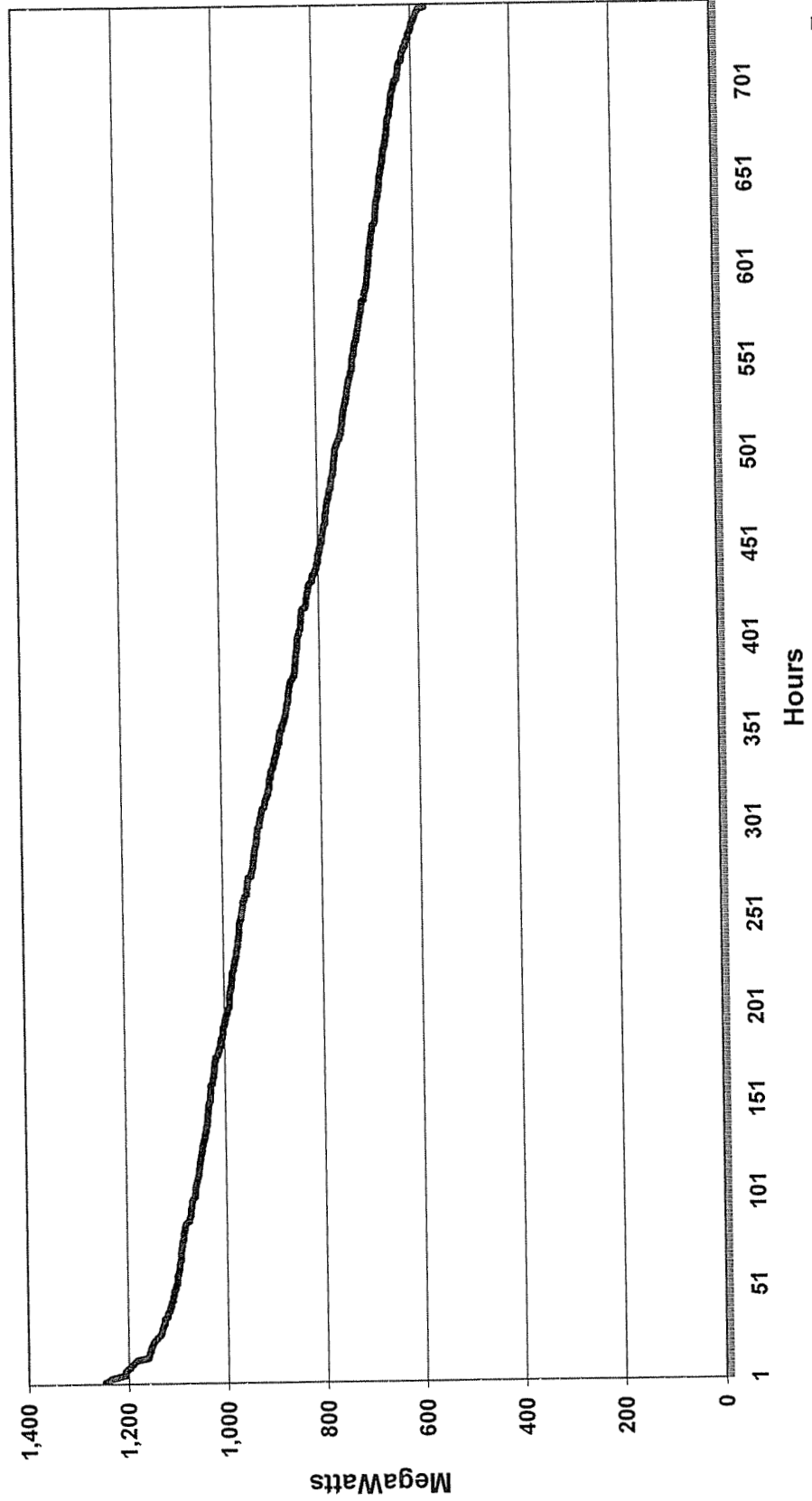
**Kentucky Power Company  
May 2008 Load Duration Curve  
(Internal Load)**



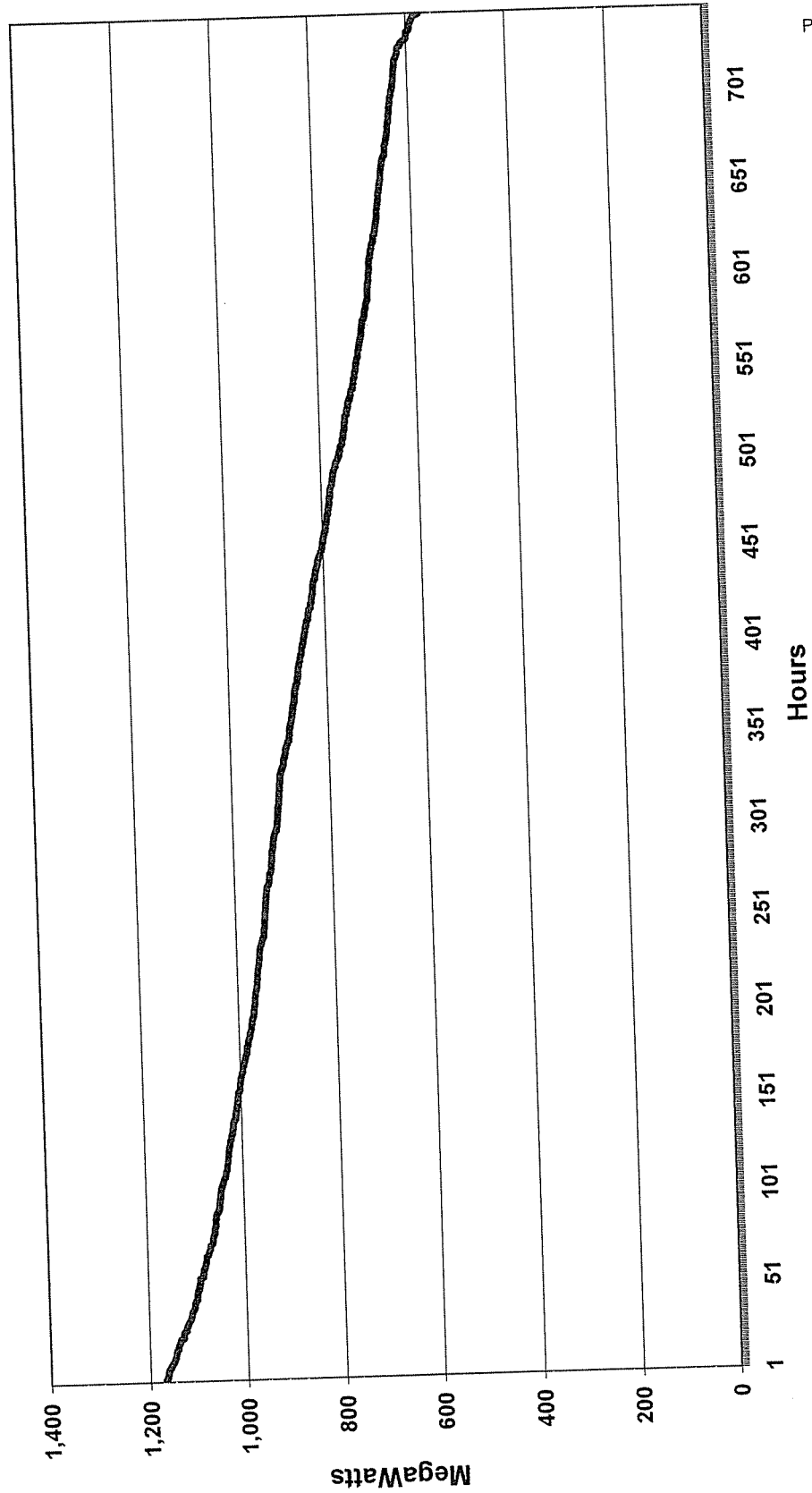
**Kentucky Power Company  
June 2008 Load Duration Curve  
(Internal Load)**



### Kentucky Power Company July 2008 Load Duration Curve (Internal Load)

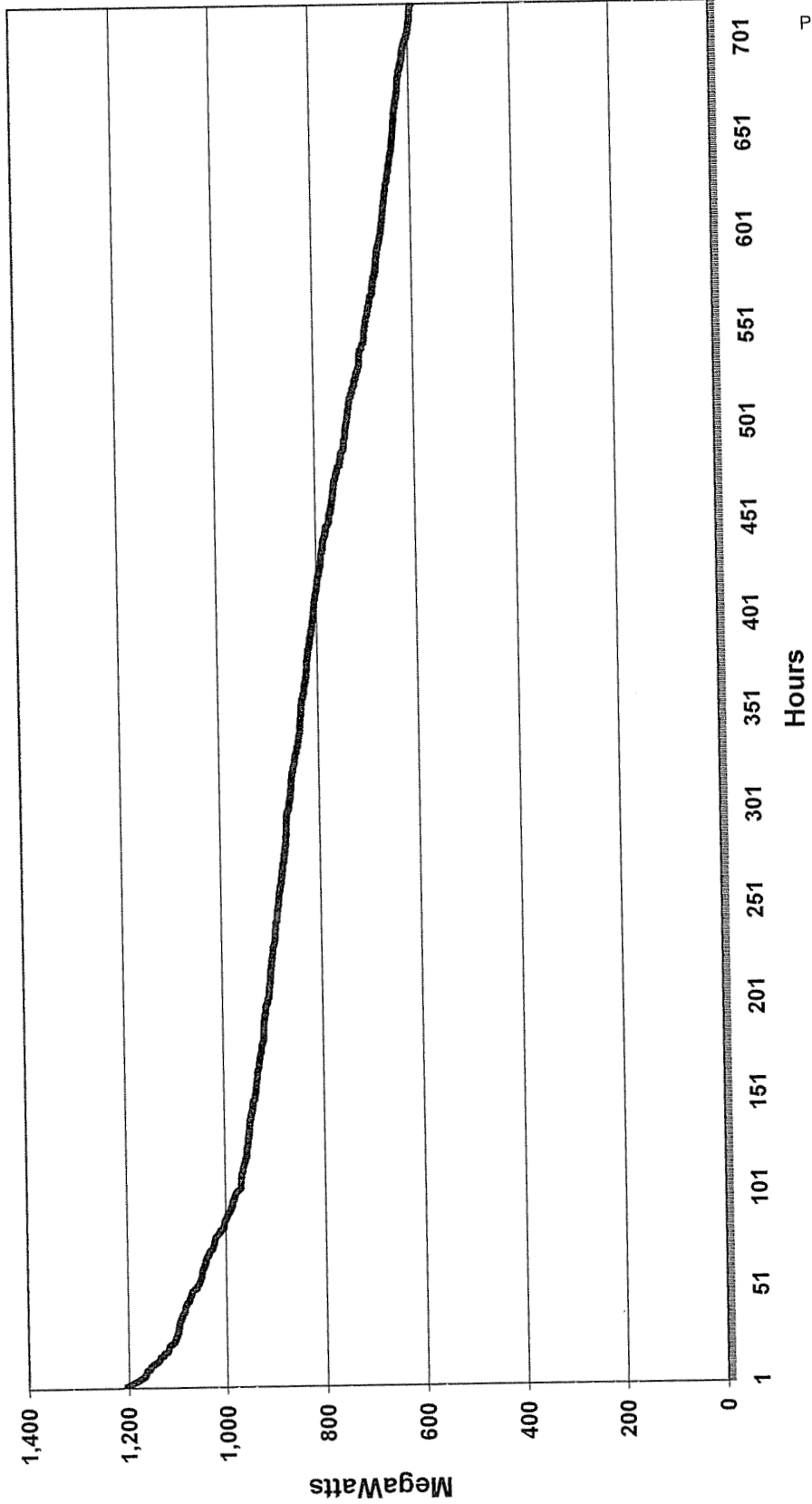


**Kentucky Power Company  
August 2008 Load Duration Curve  
(Internal Load)**

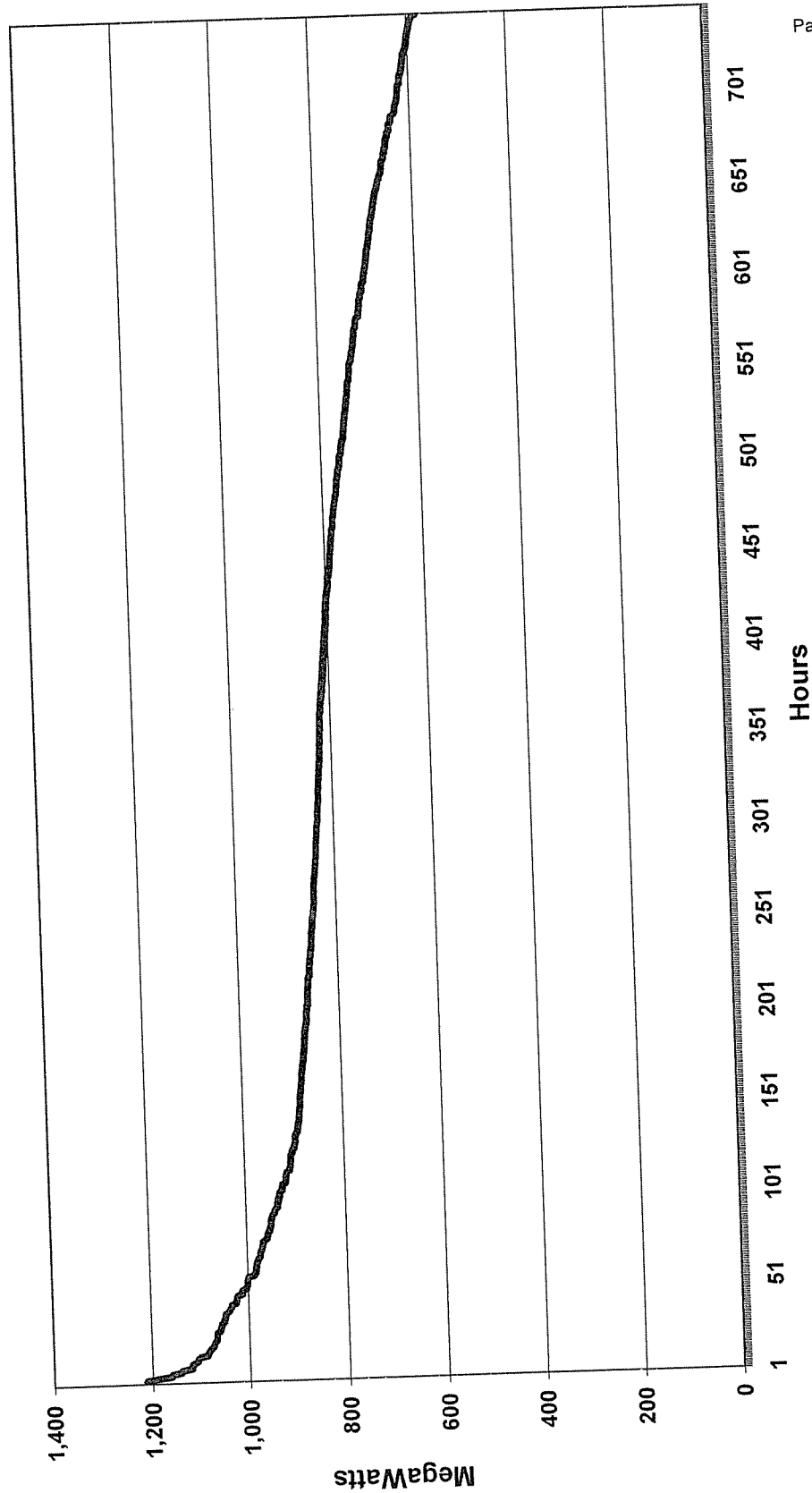




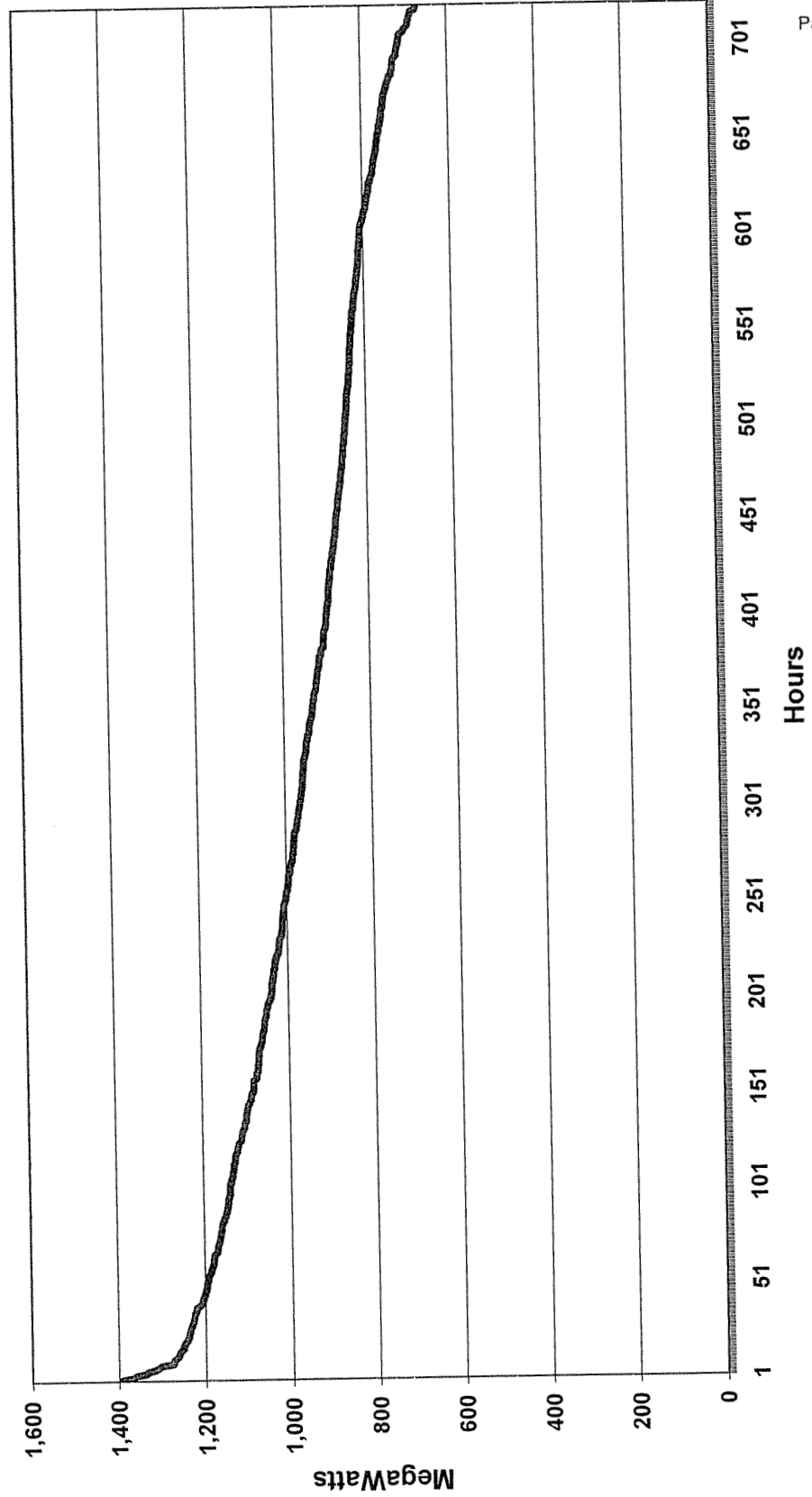
**Kentucky Power Company  
September 2008 Load Duration Curve  
(Internal Load)**



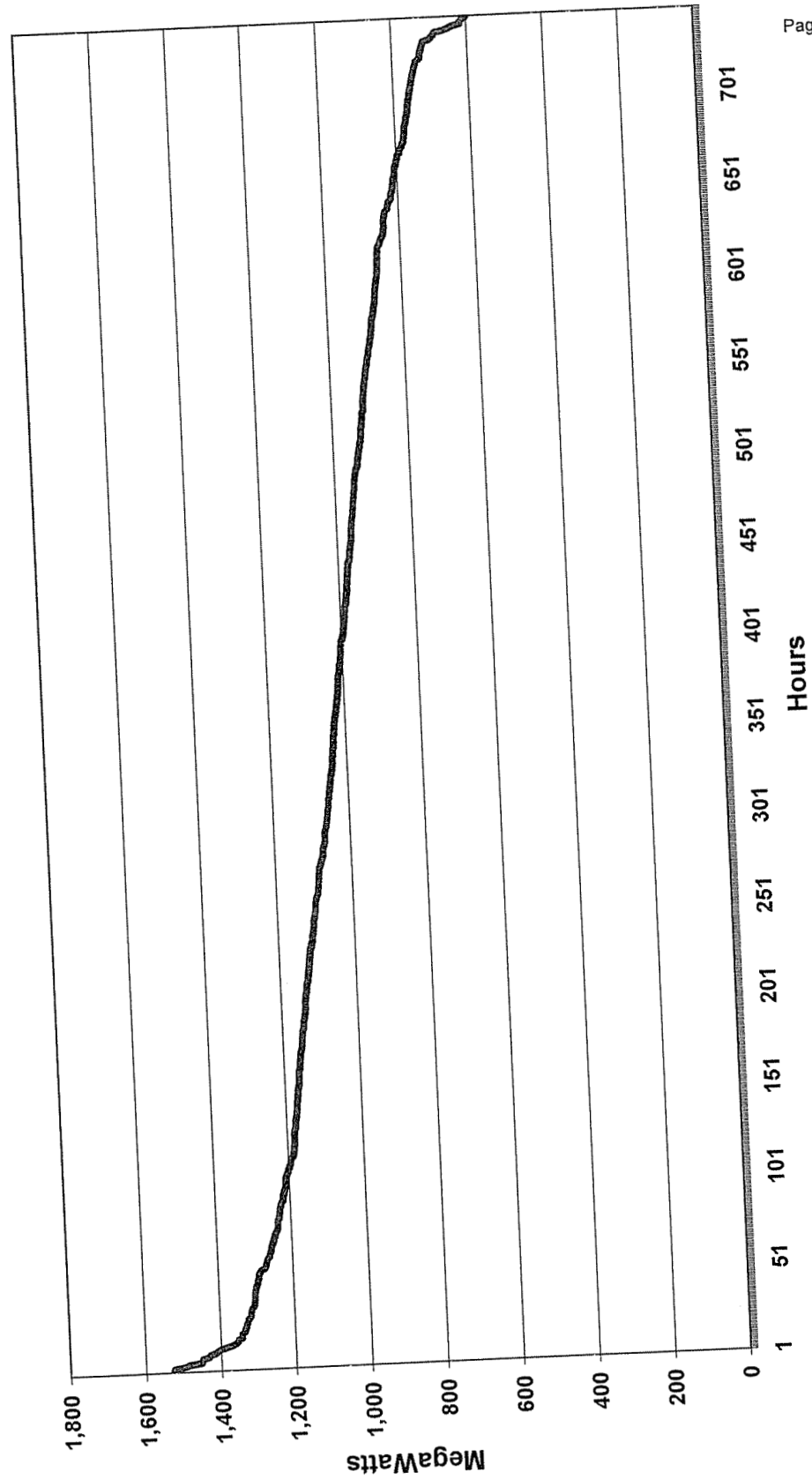
**Kentucky Power Company  
October 2008 Load Duration Curve  
(Internal Load)**



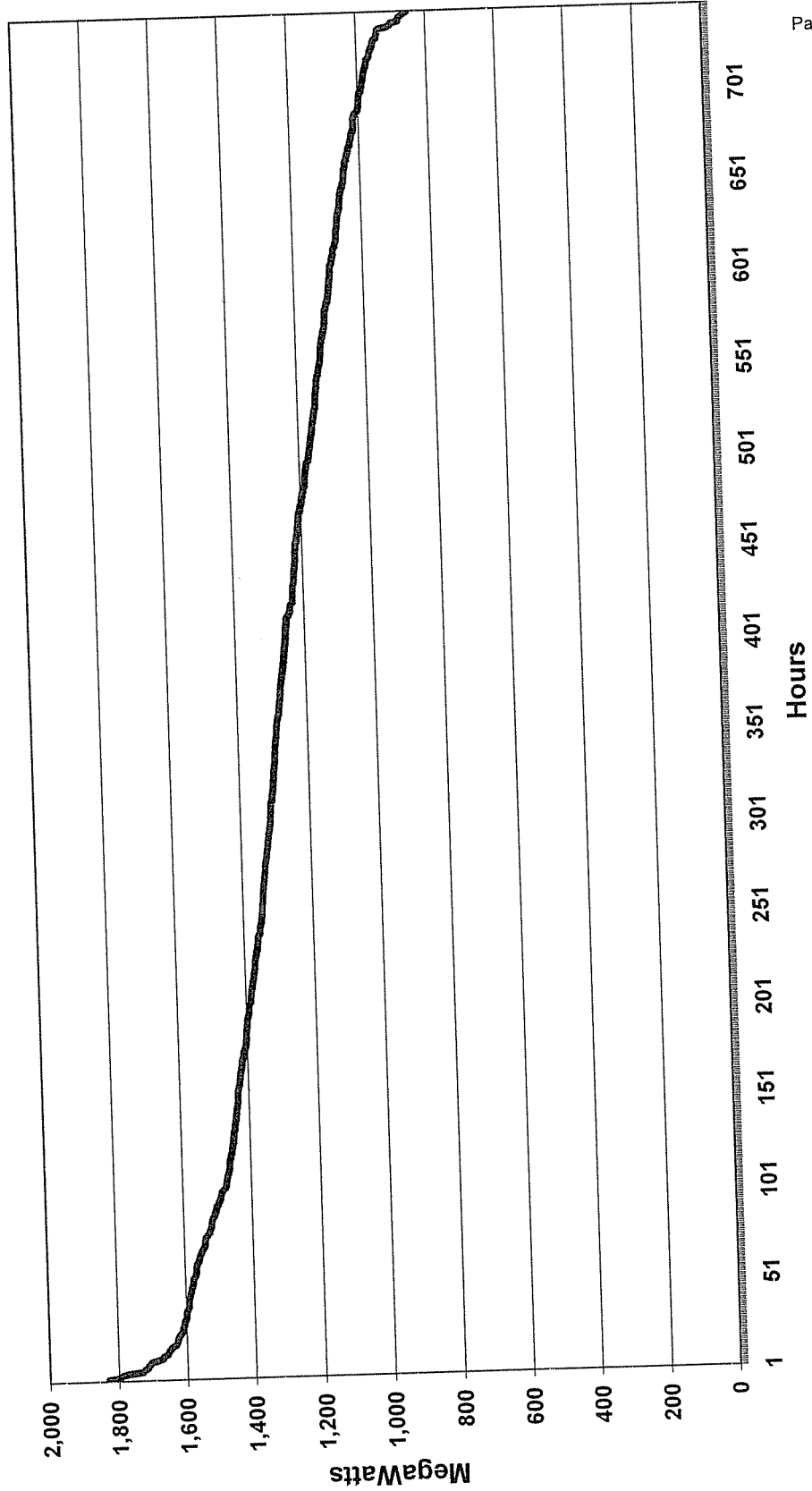
**Kentucky Power Company  
November 2008 Load Duration Curve  
(Internal Load)**



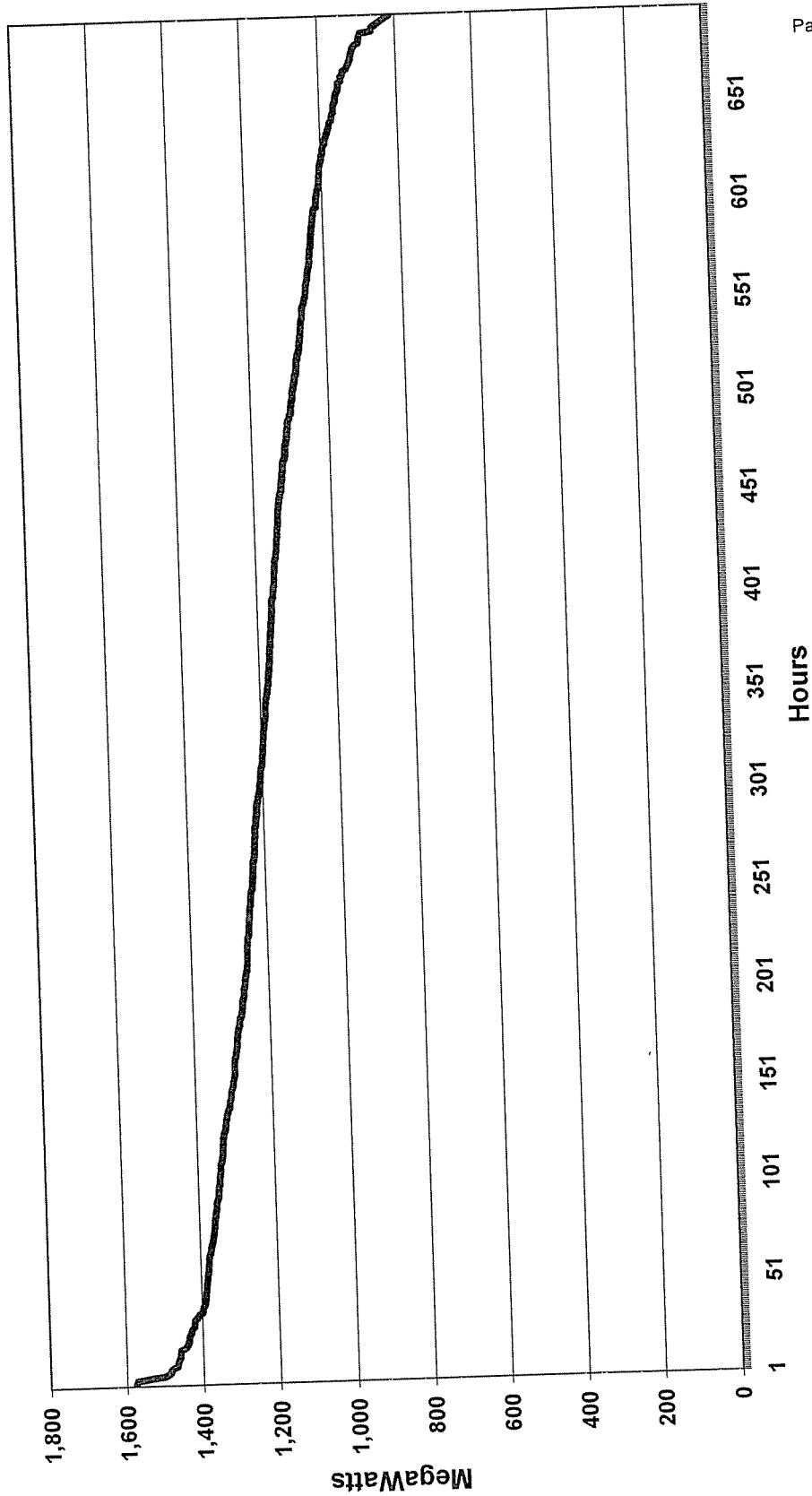
# Kentucky Power Company December 2008 Load Duration Curve (Internal Load)



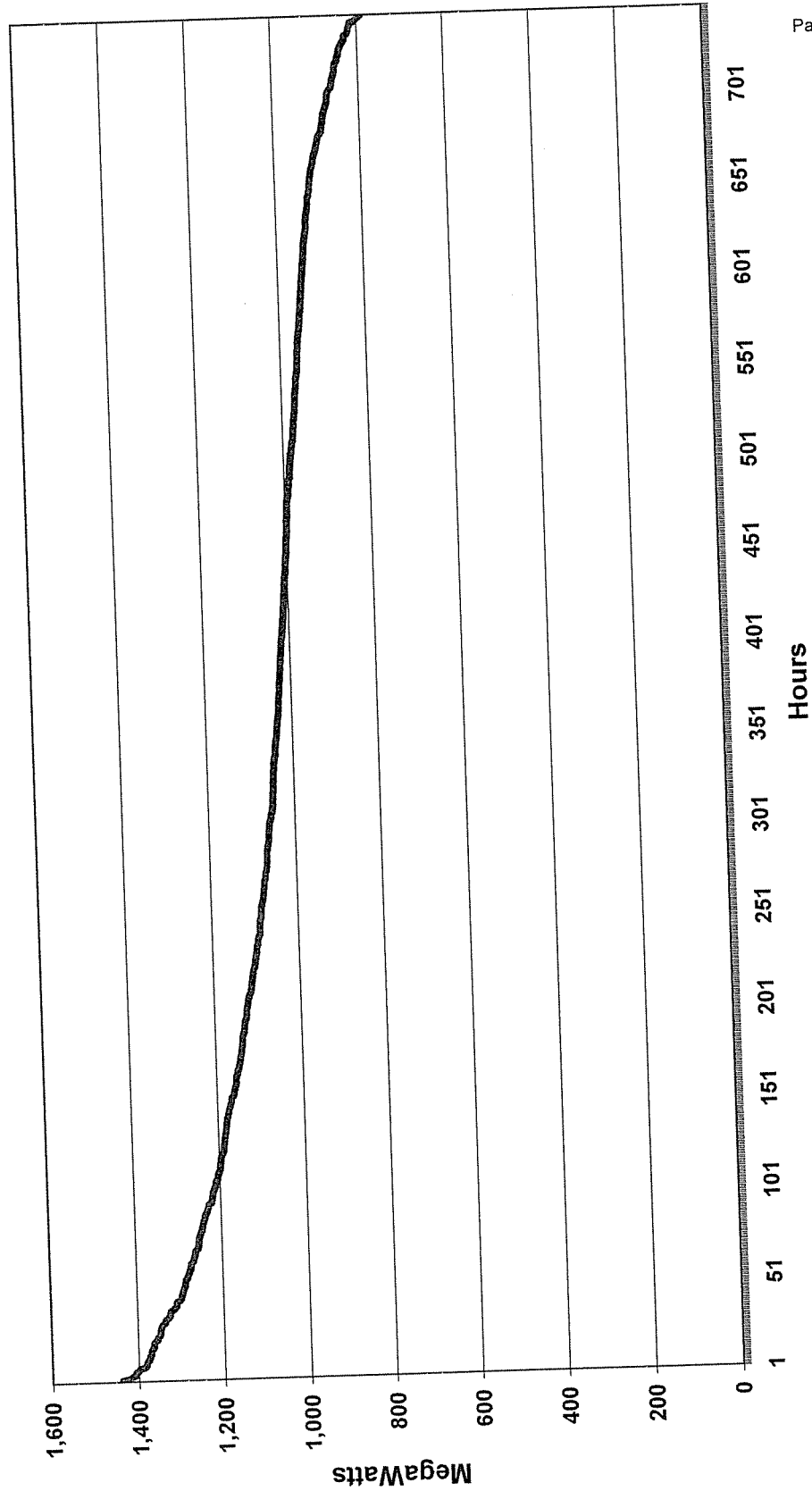
**Kentucky Power Company  
January 2008 Load Duration Curve  
(System Load)**



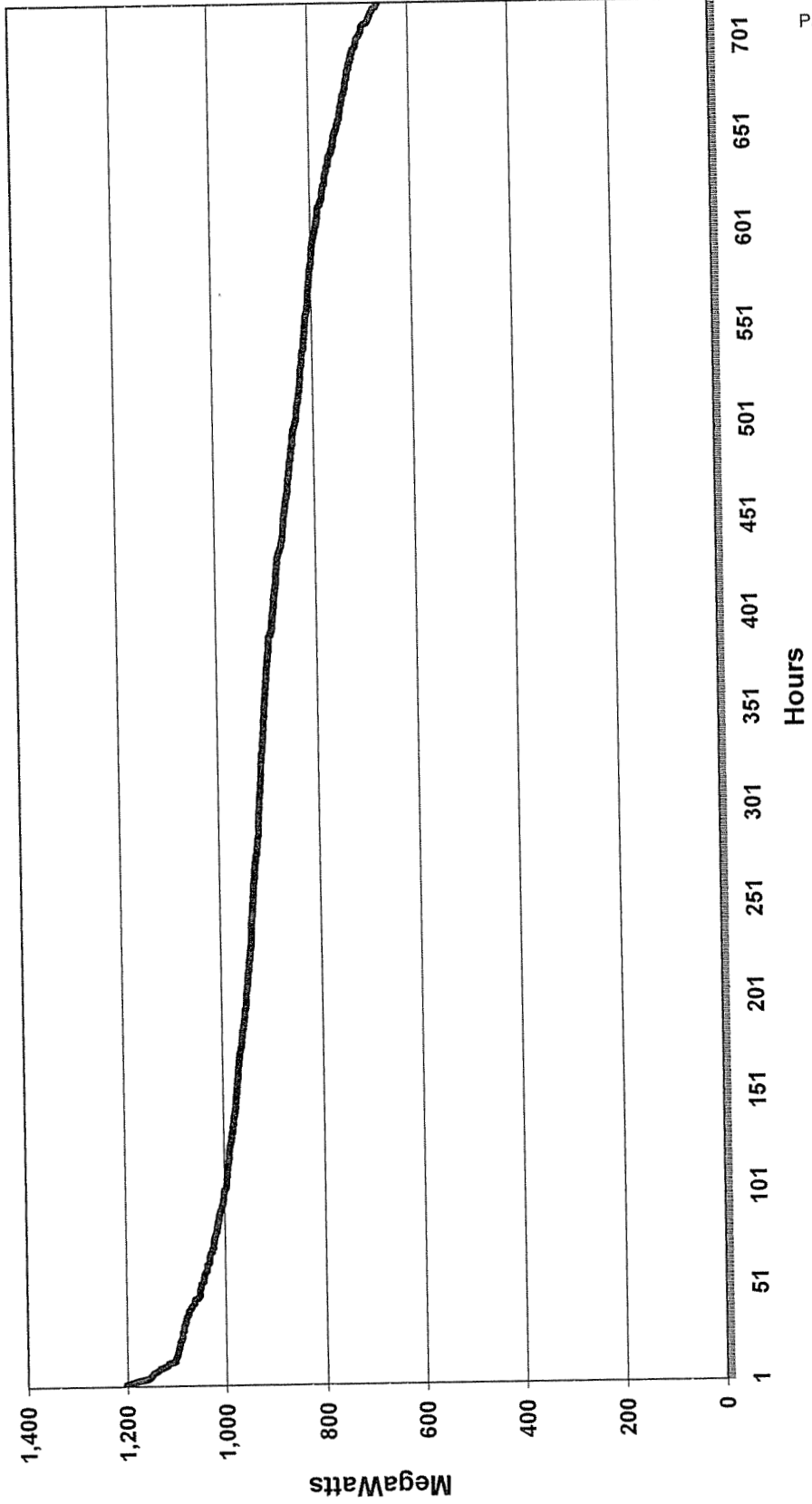
**Kentucky Power Company  
February 2008 Load Duration Curve  
(System Load)**



**Kentucky Power Company  
March 2008 Load Duration Curve  
(System Load)**

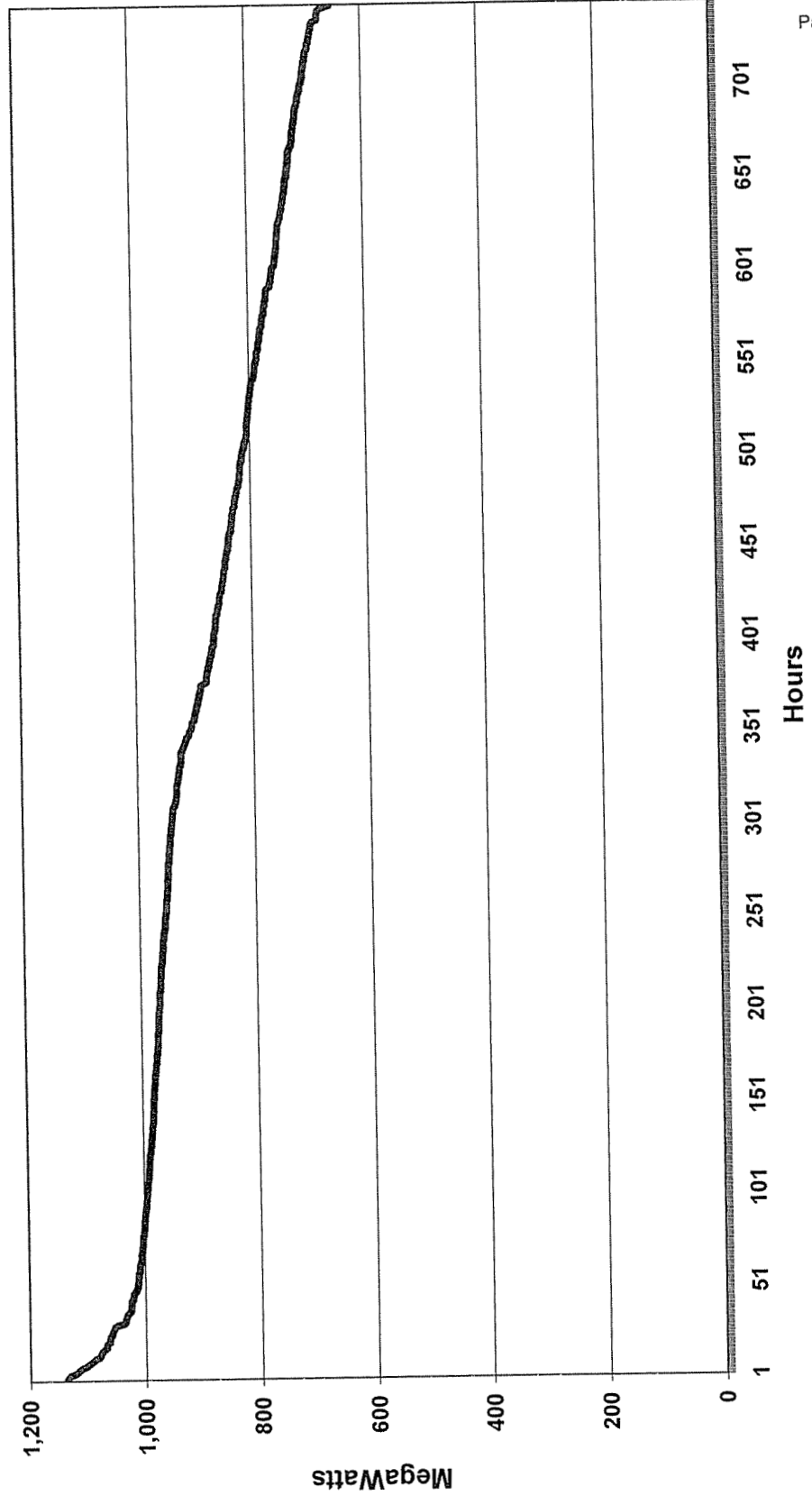


**Kentucky Power Company  
April 2008 Load Duration Curve  
(System Load)**

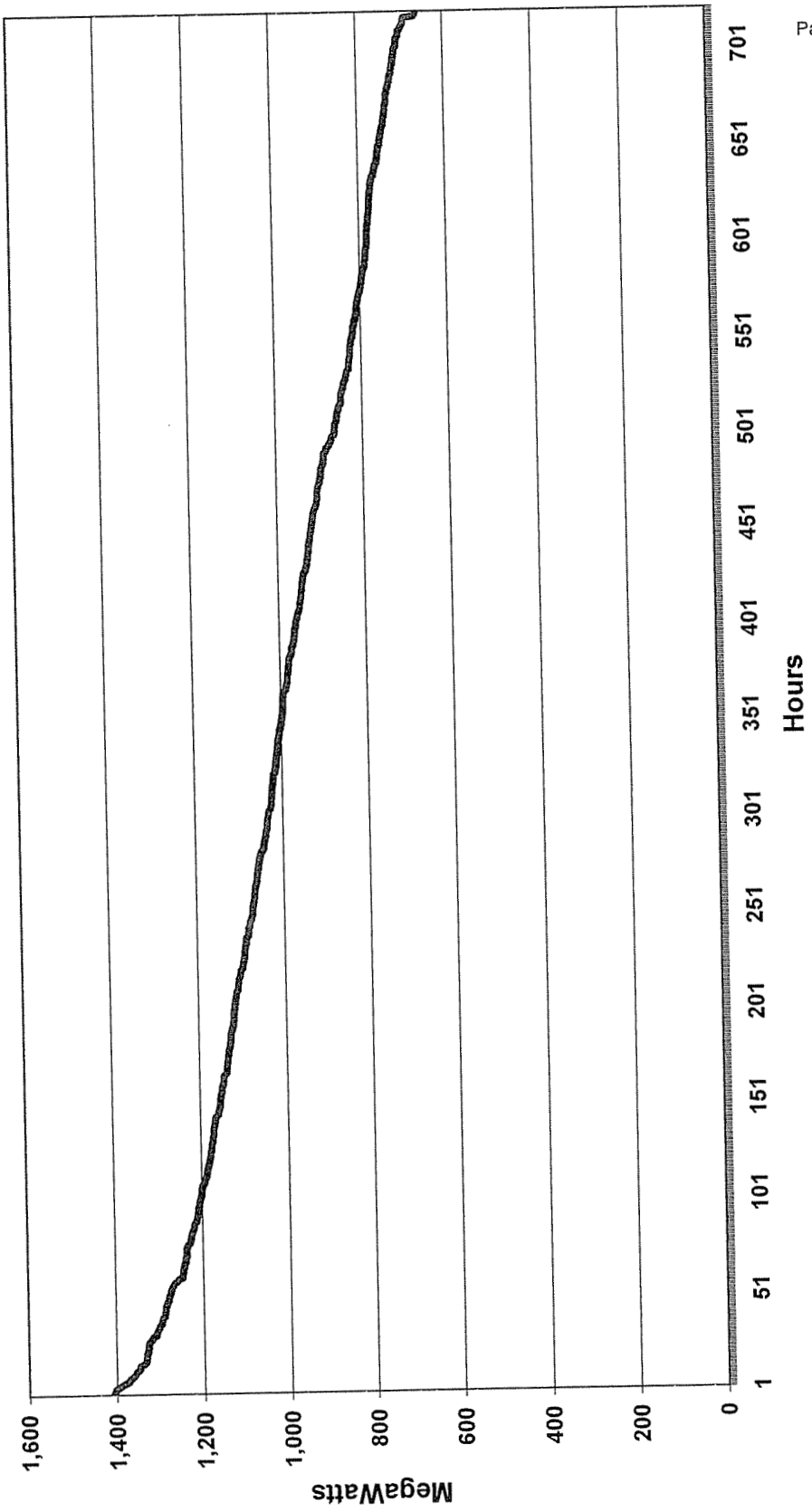




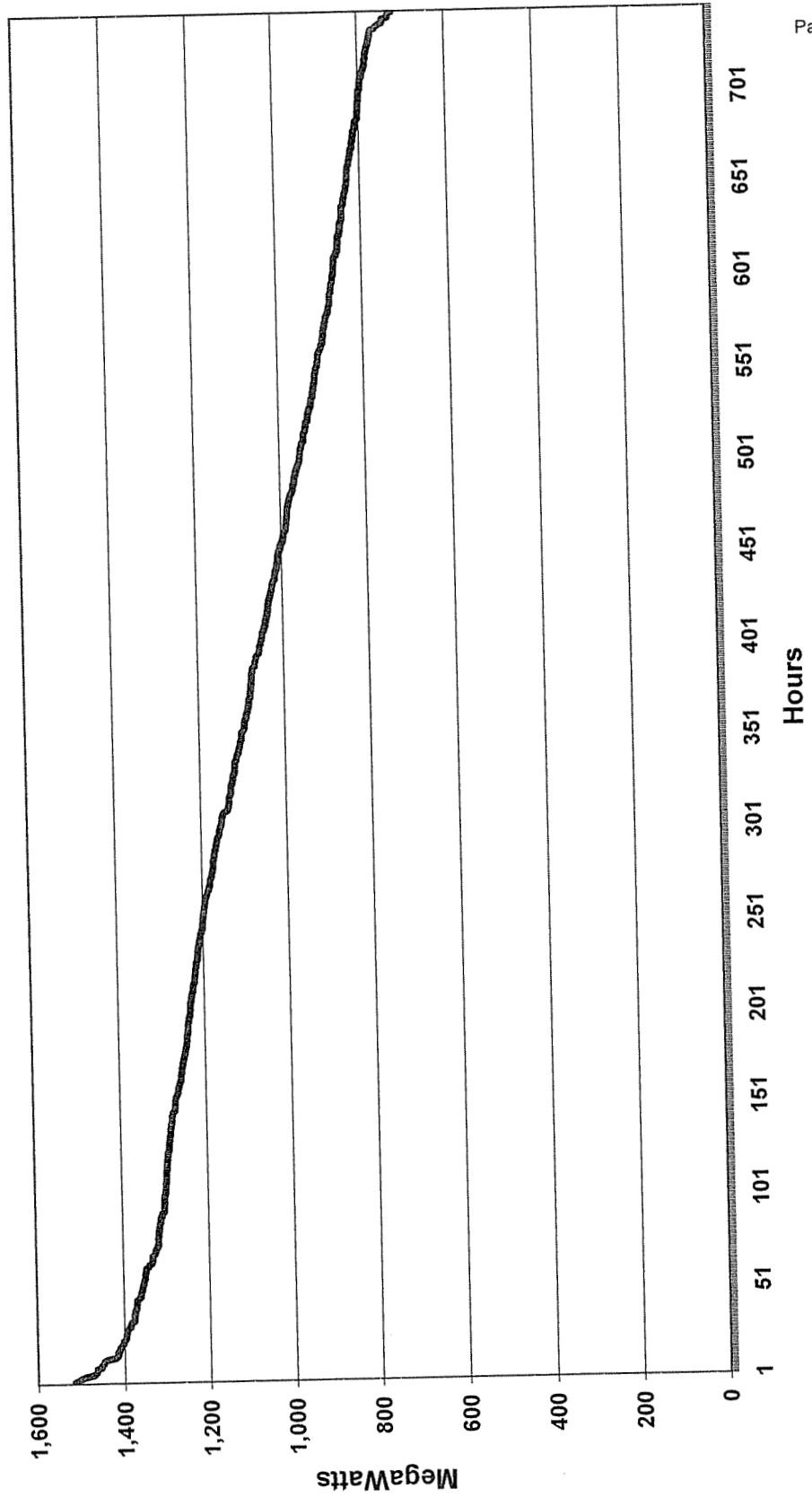
### Kentucky Power Company May 2008 Load Duration Curve (System Load)



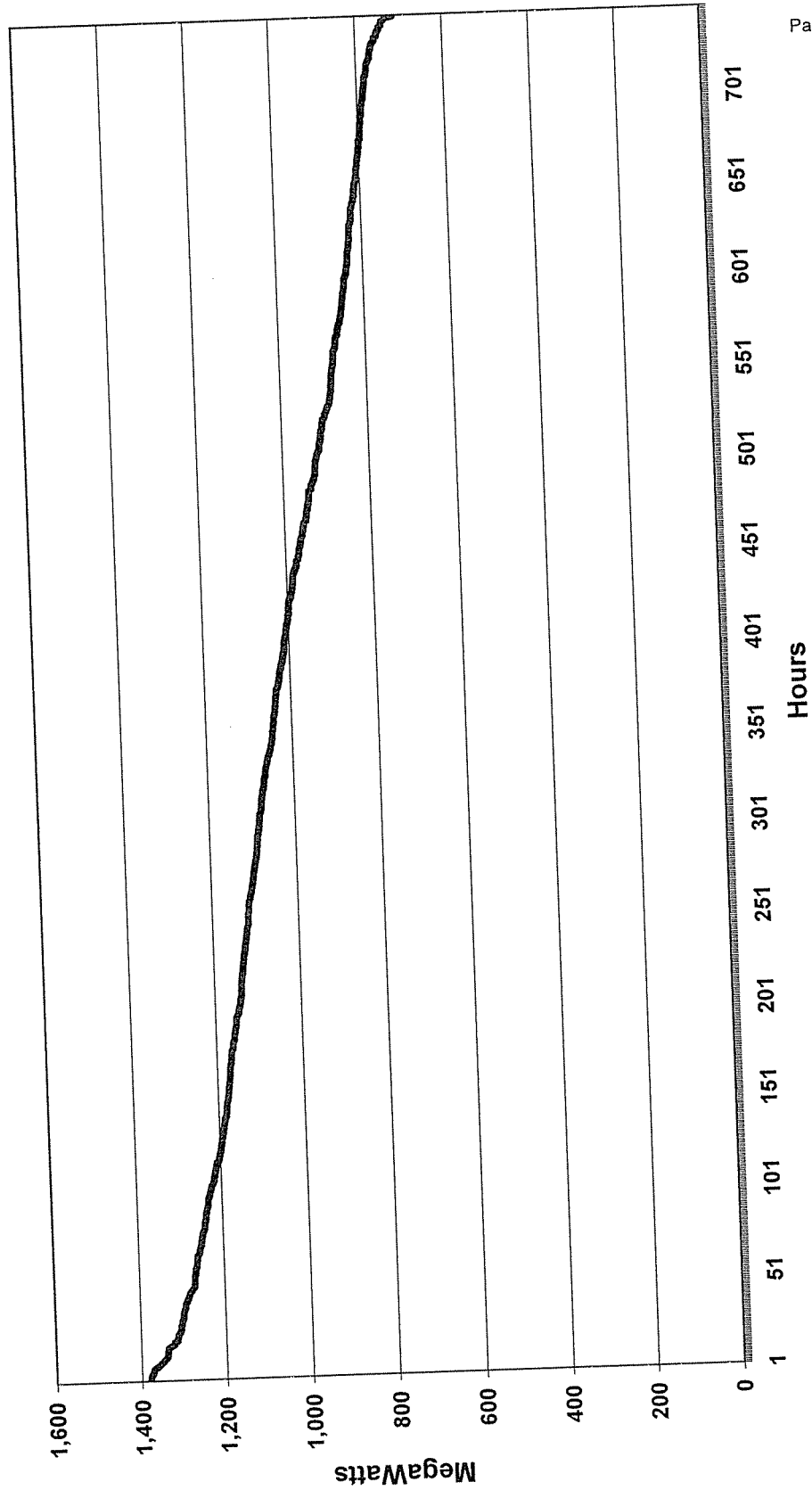
**Kentucky Power Company  
June 2008 Load Duration Curve  
(System Load)**



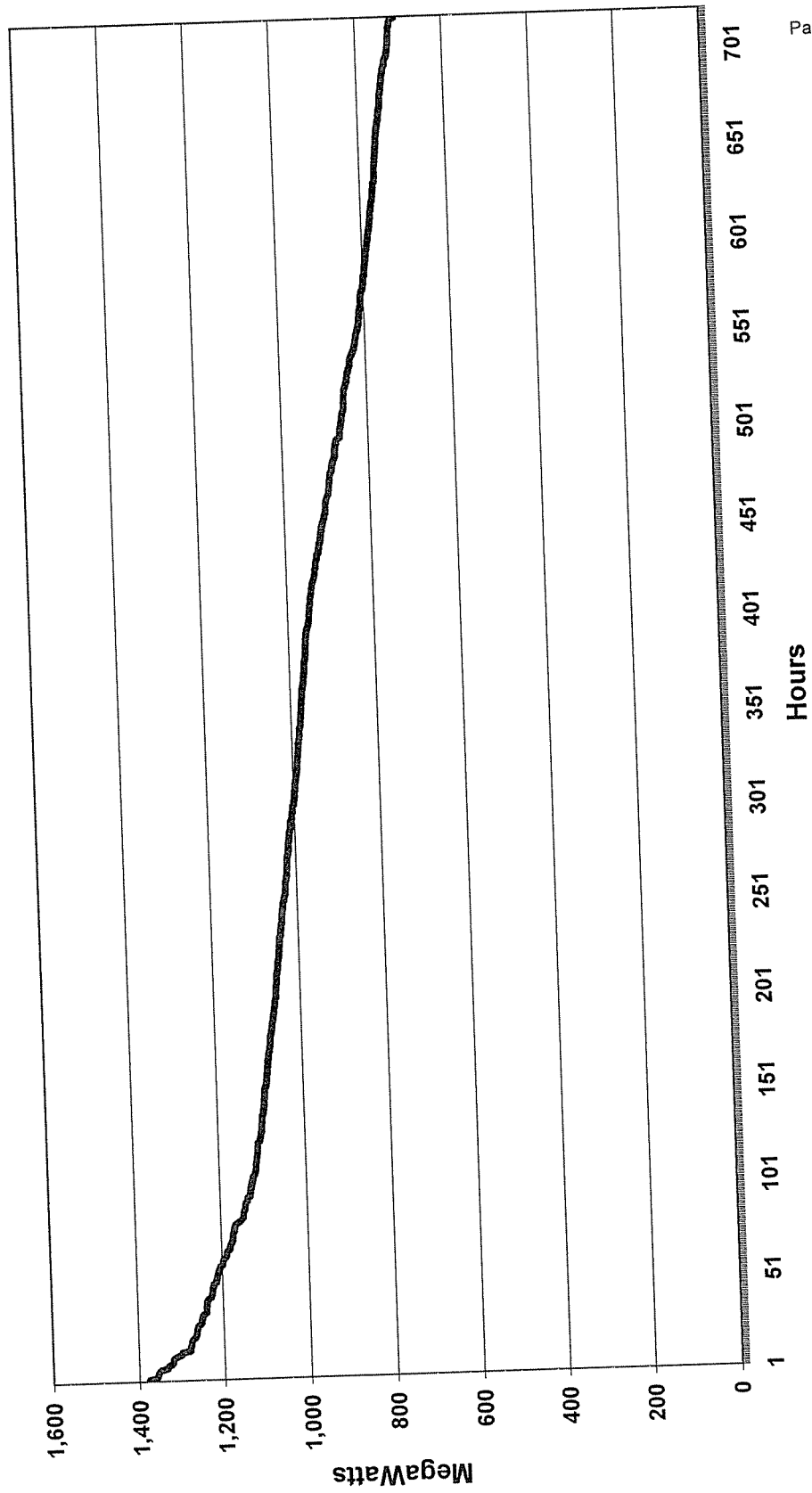
**Kentucky Power Company  
July 2008 Load Duration Curve  
(System Load)**



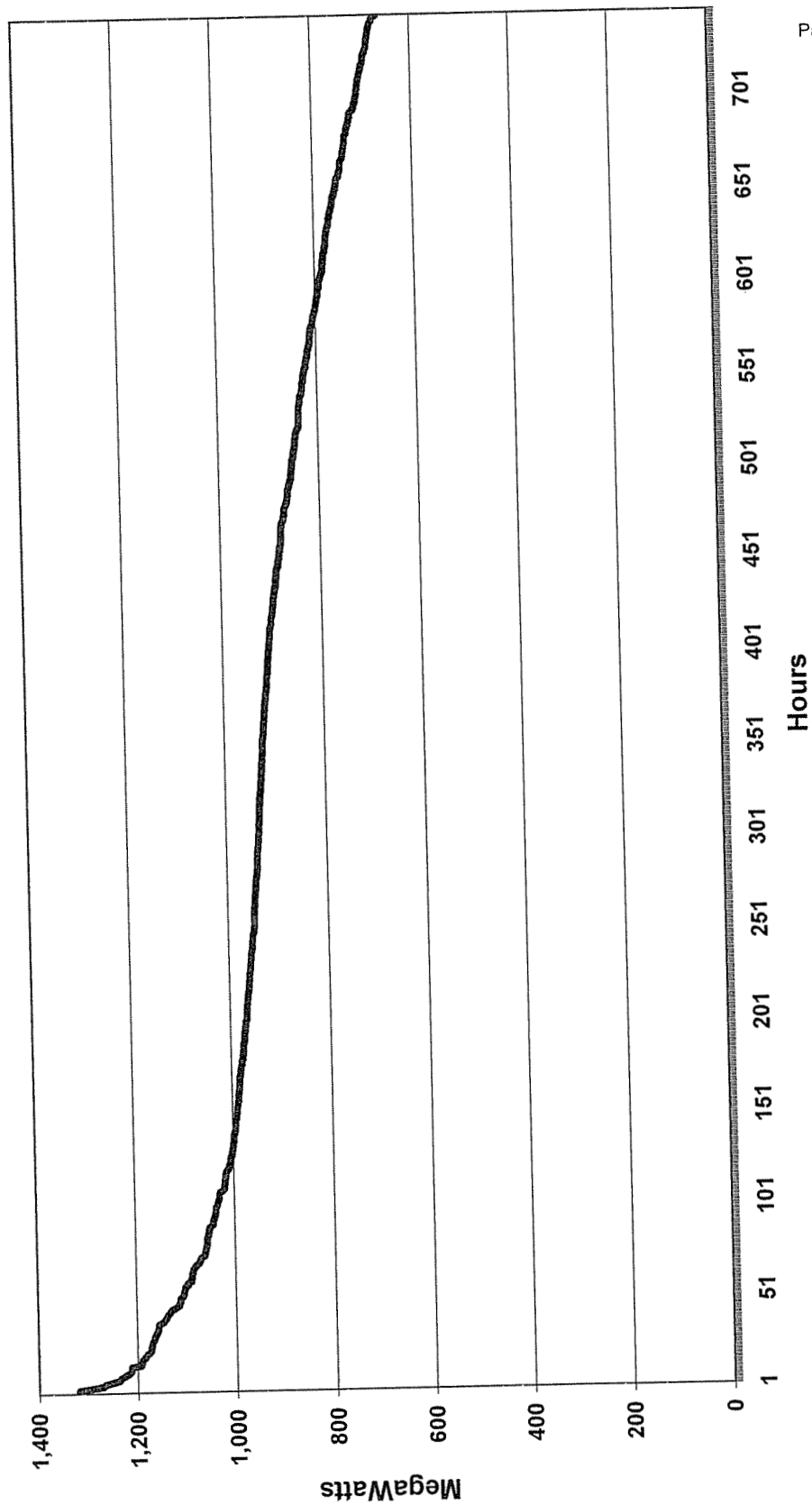
**Kentucky Power Company  
August 2008 Load Duration Curve  
(System Load)**



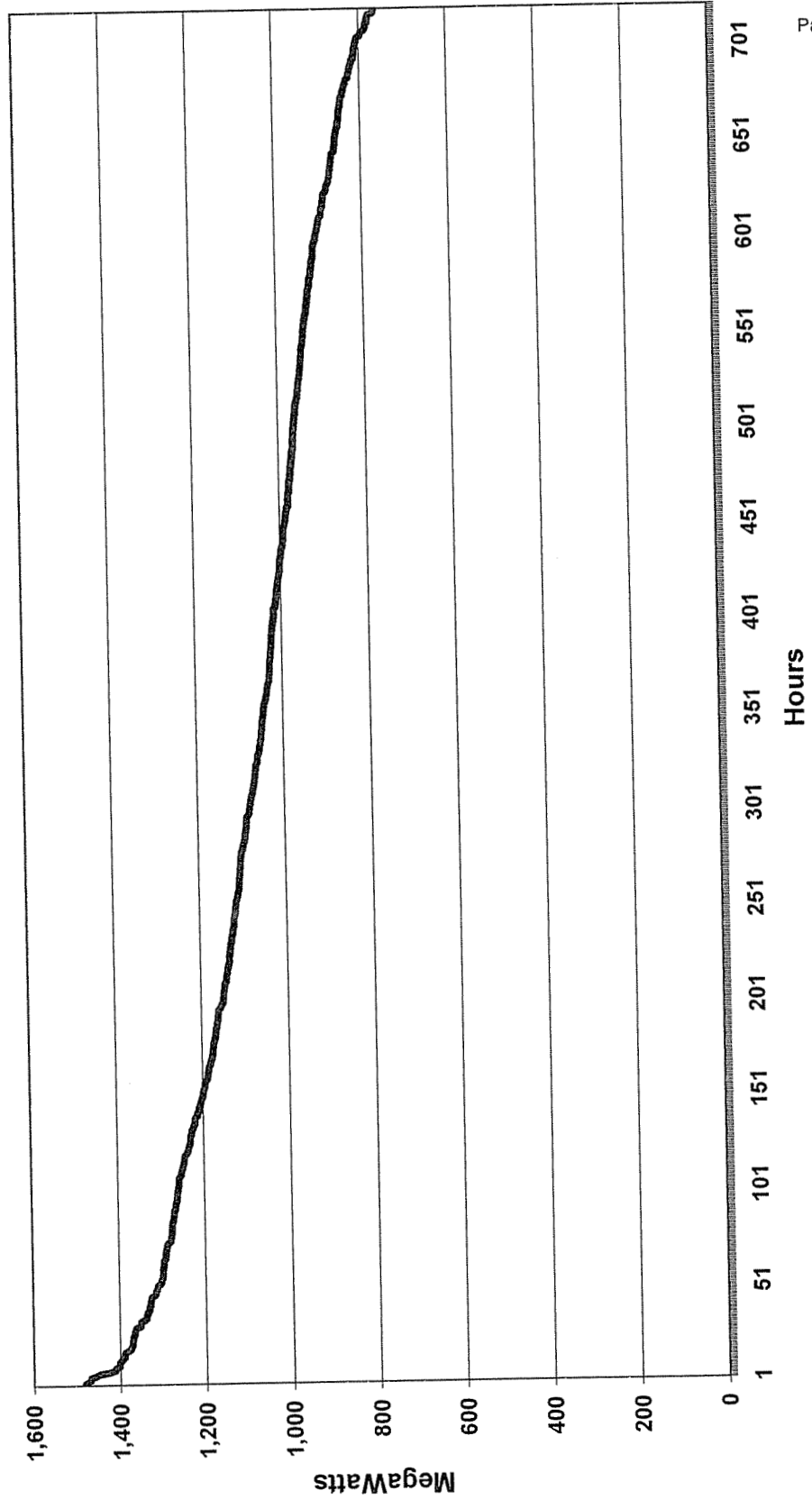
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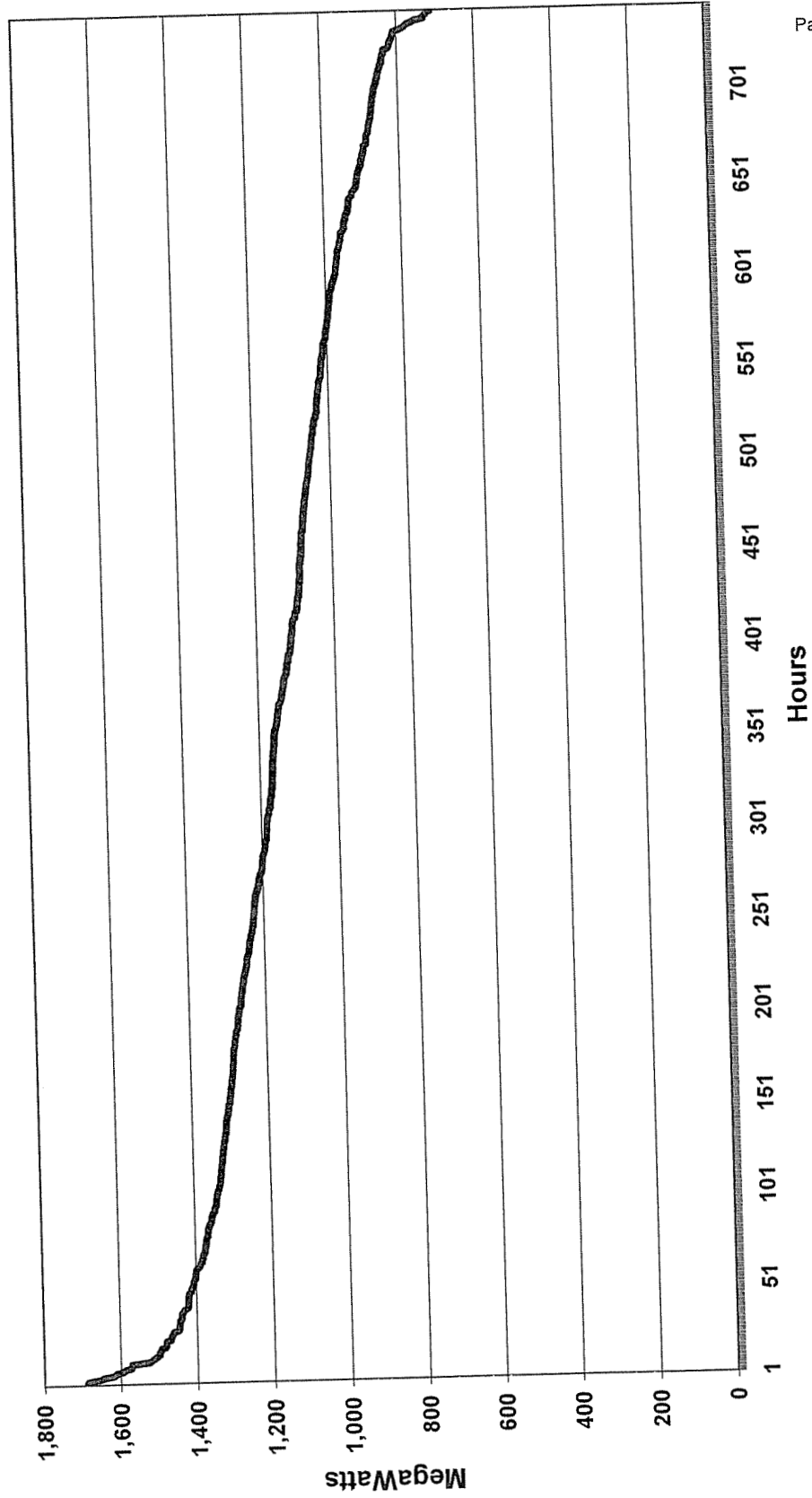
# Kentucky Power Company October 2008 Load Duration Curve (System Load)



**Kentucky Power Company  
November 2008 Load Duration Curve  
(System Load)**

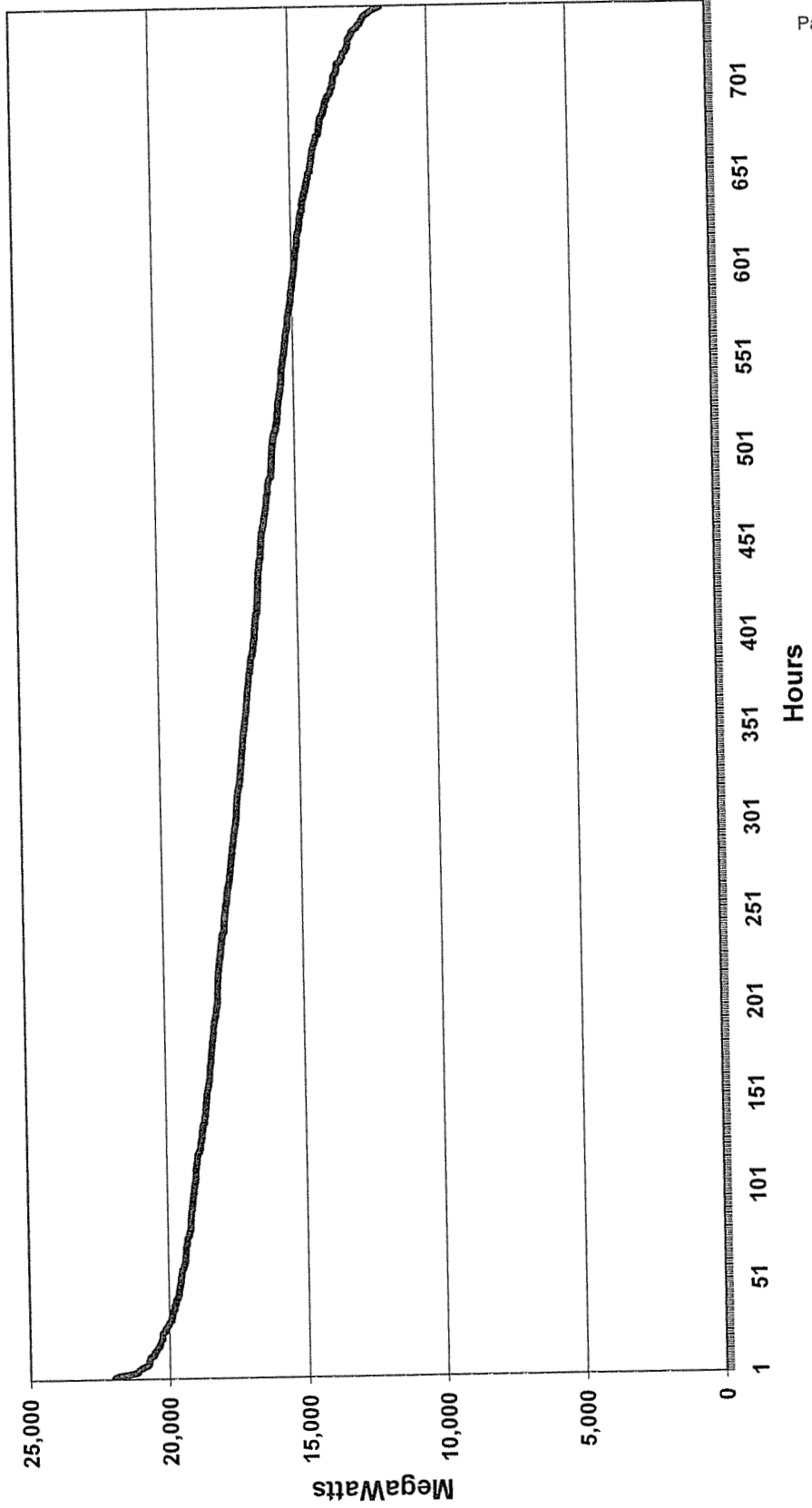


**Kentucky Power Company  
December 2008 Load Duration Curve  
(System Load)**

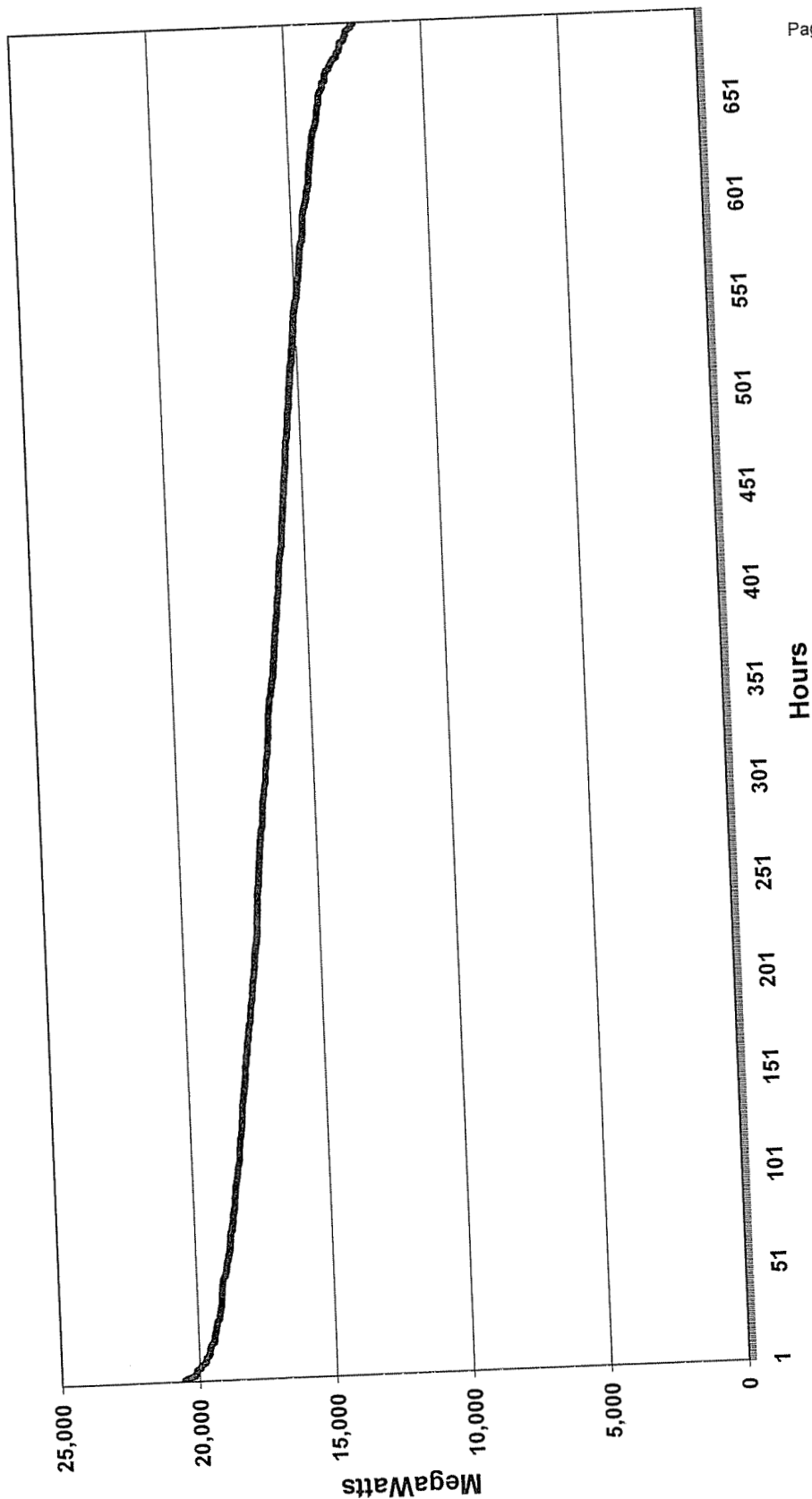




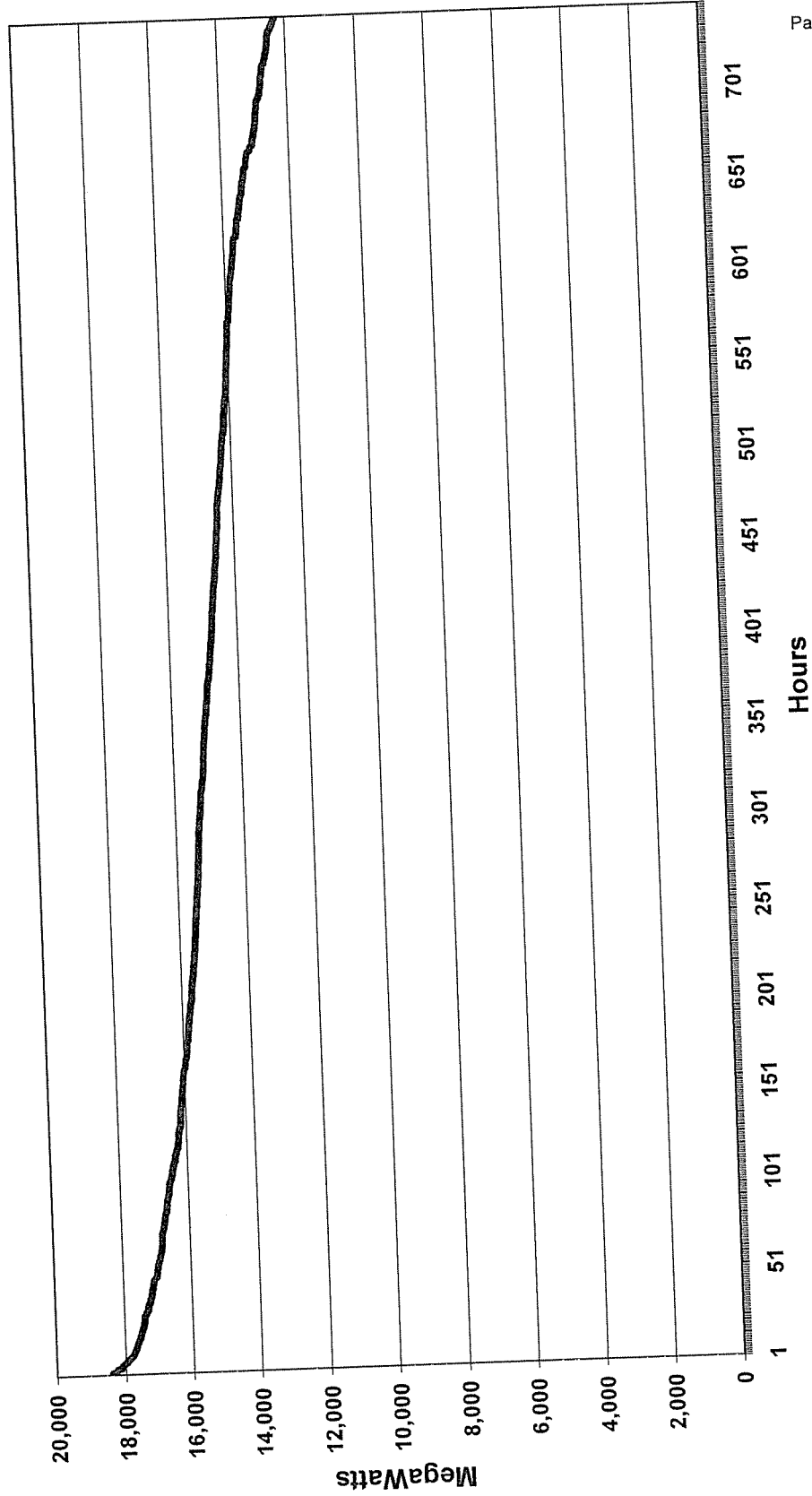
**AEP System-East Zone  
January 2008 Load Duration Curve  
(Internal Load)**



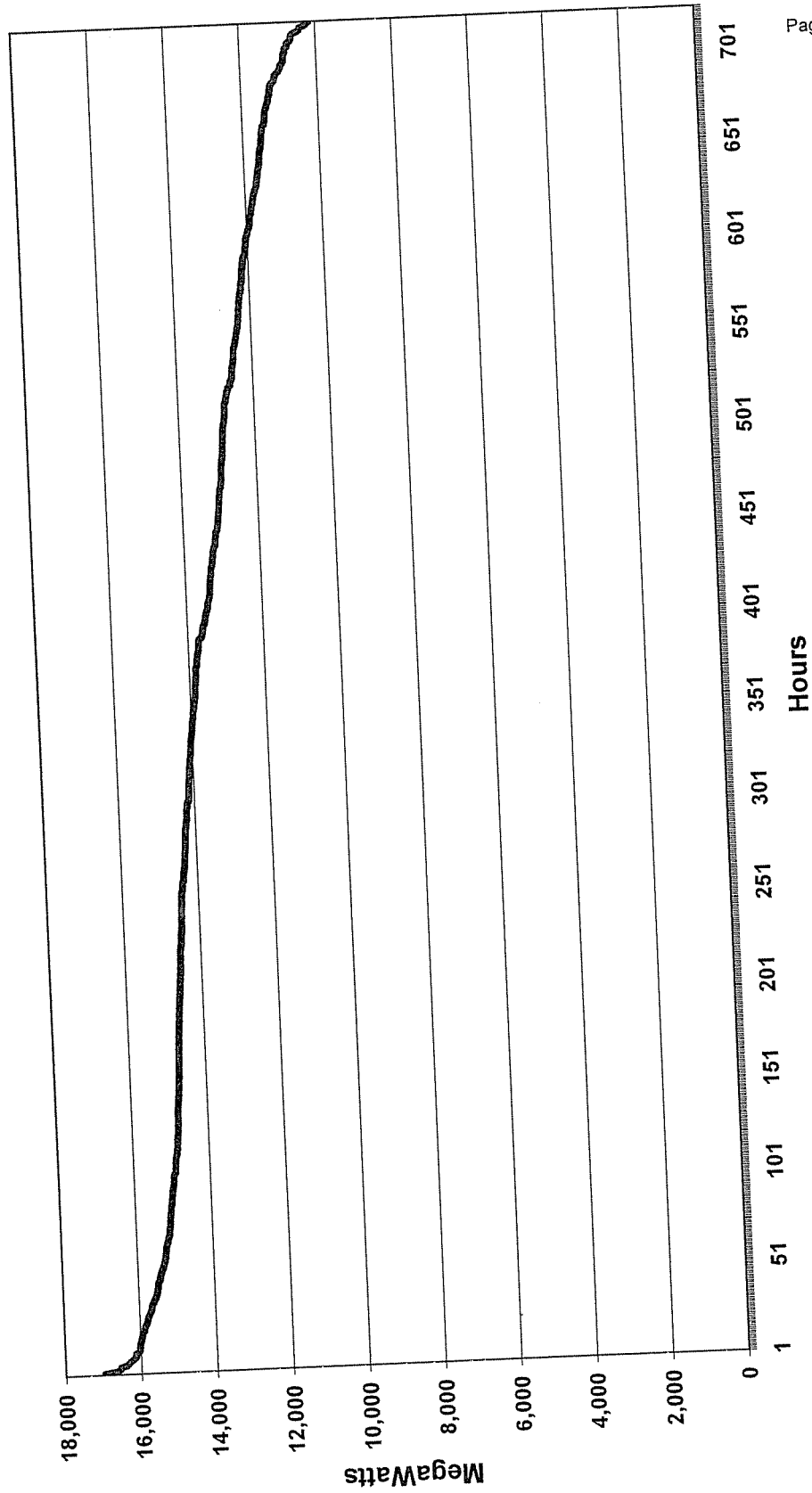
**AEP System-East Zone  
February 2008 Load Duration Curve  
(Internal Load)**



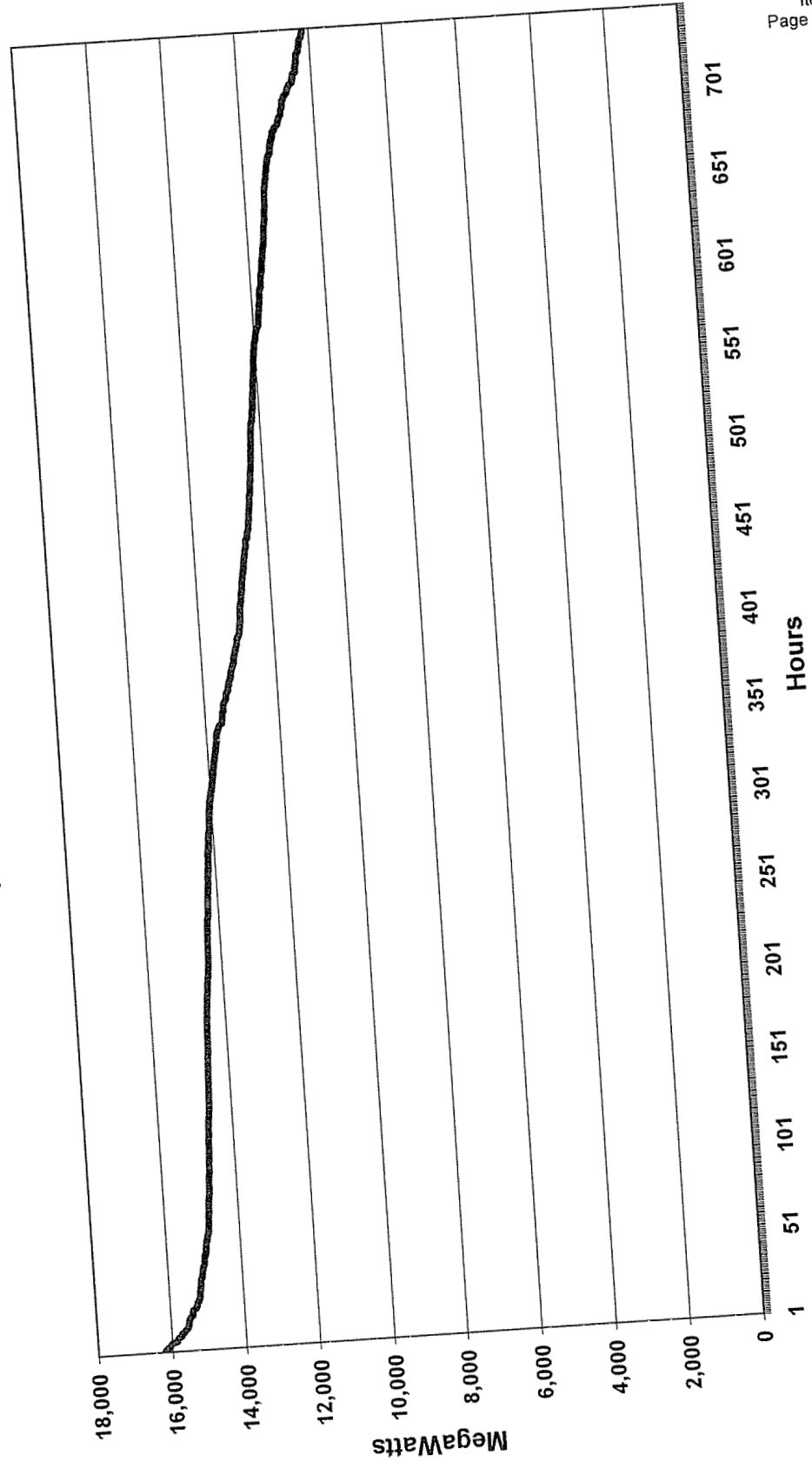
**AEP System-East Zone  
March 2008 Load Duration Curve  
(Internal Load)**



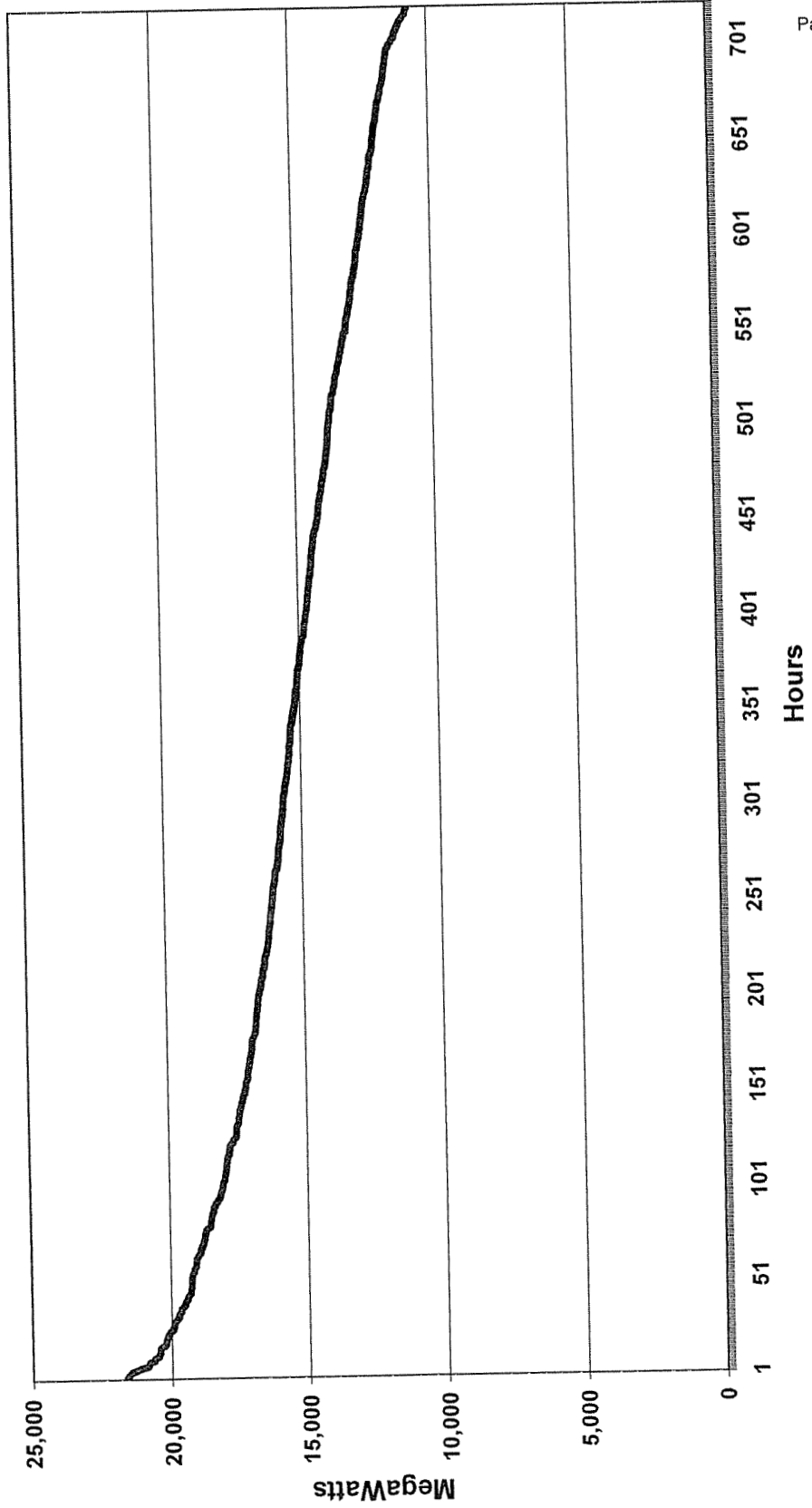
**AEP System-East Zone  
April 2008 Load Duration Curve  
(Internal Load)**



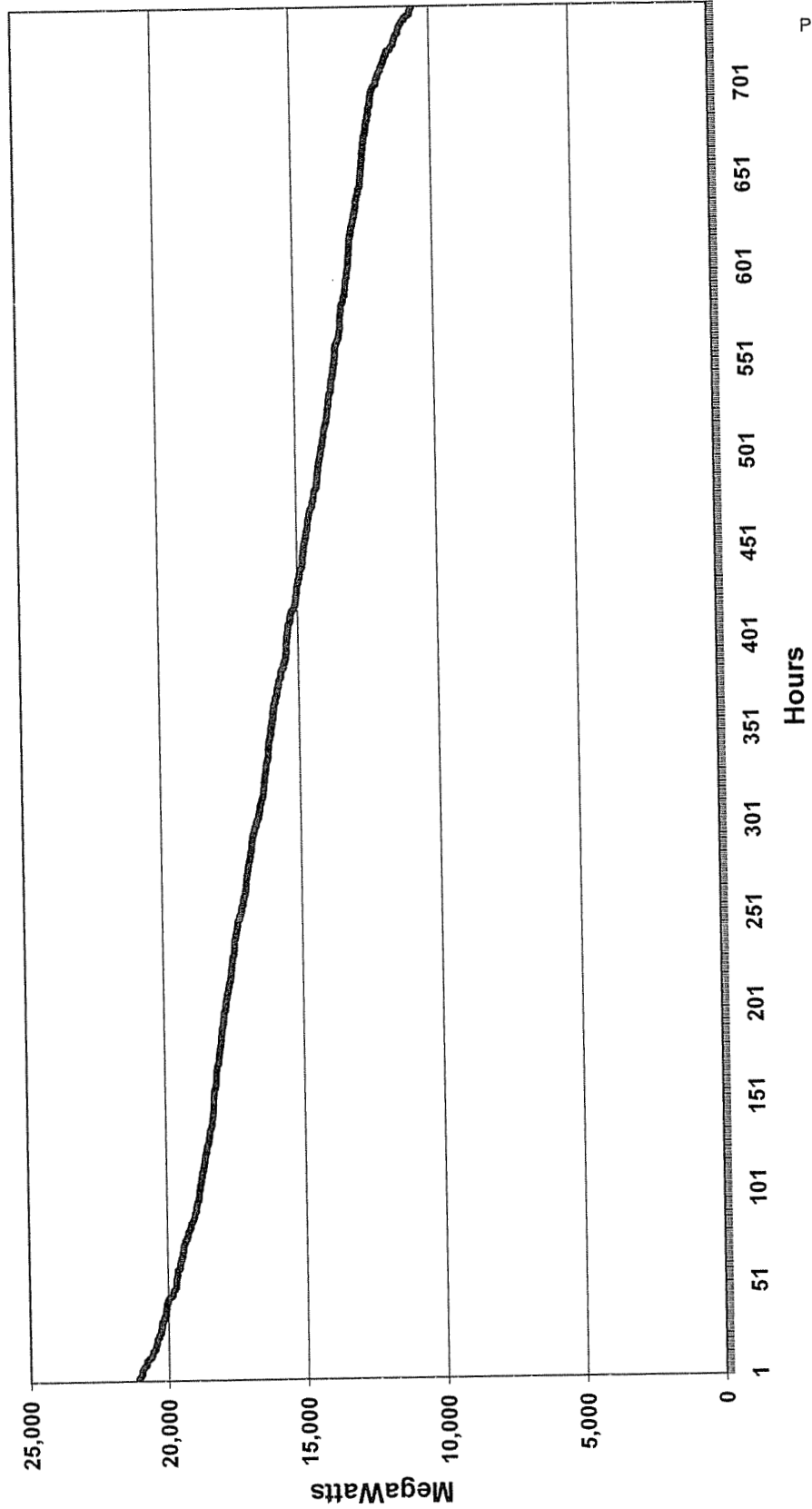
**AEP System-East Zone  
May 2008 Load Duration Curve  
(Internal Load)**



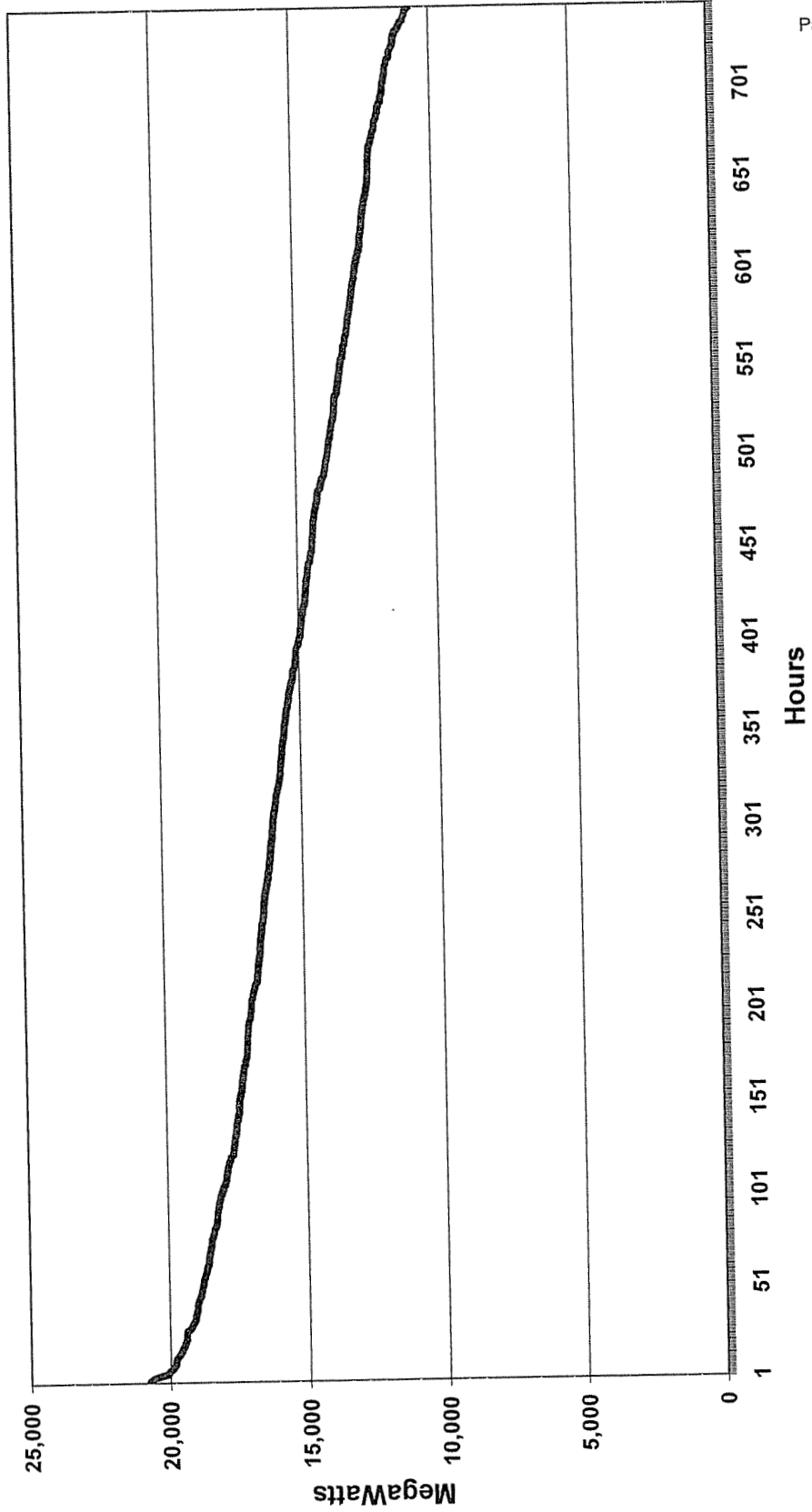
**AEP System-East Zone  
June 2008 Load Duration Curve  
(Internal Load)**



**AEP System-East Zone  
July 2008 Load Duration Curve  
(Internal Load)**

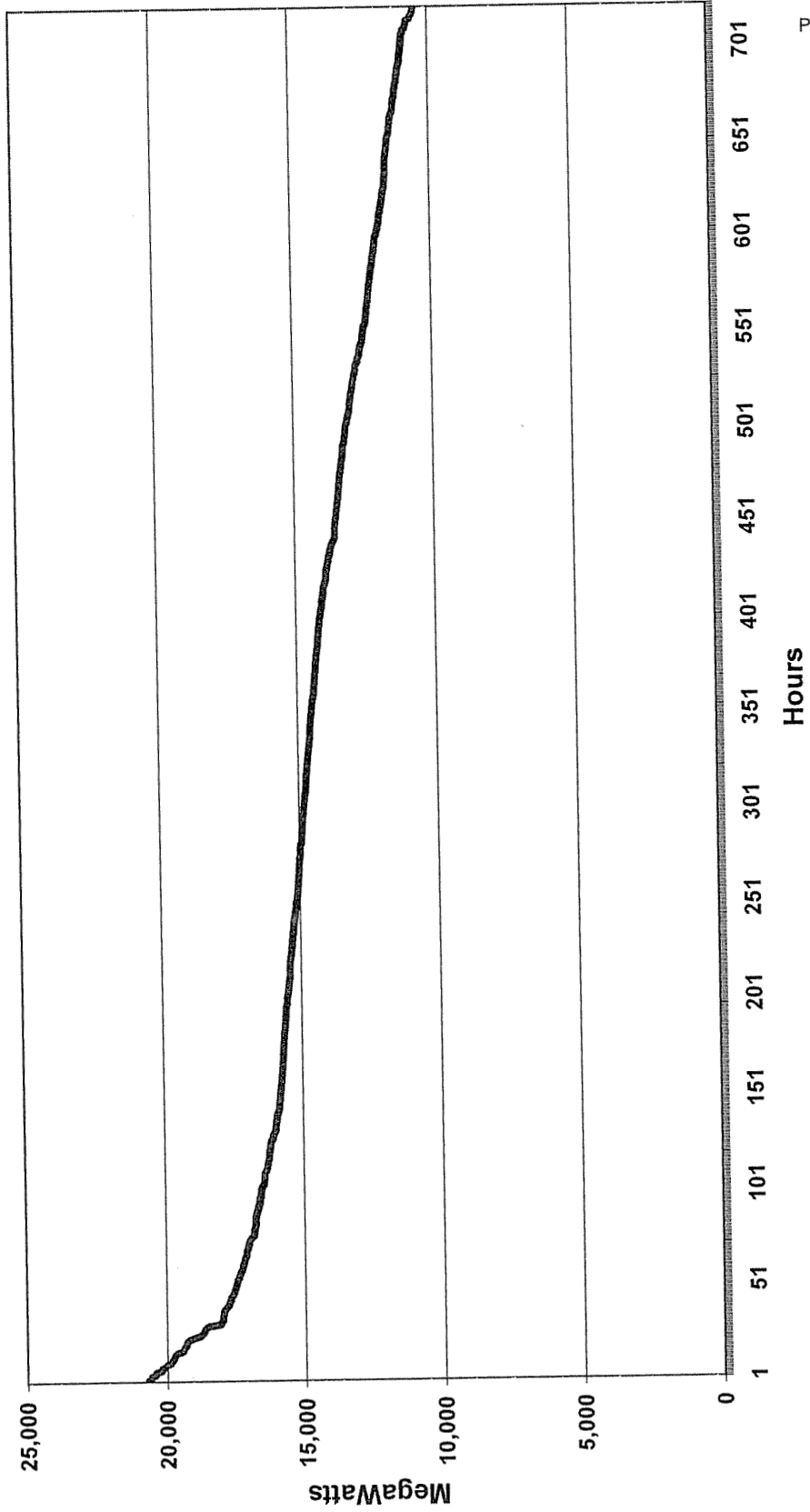


**AEP System-East Zone  
August 2008 Load Duration Curve  
(Internal Load)**

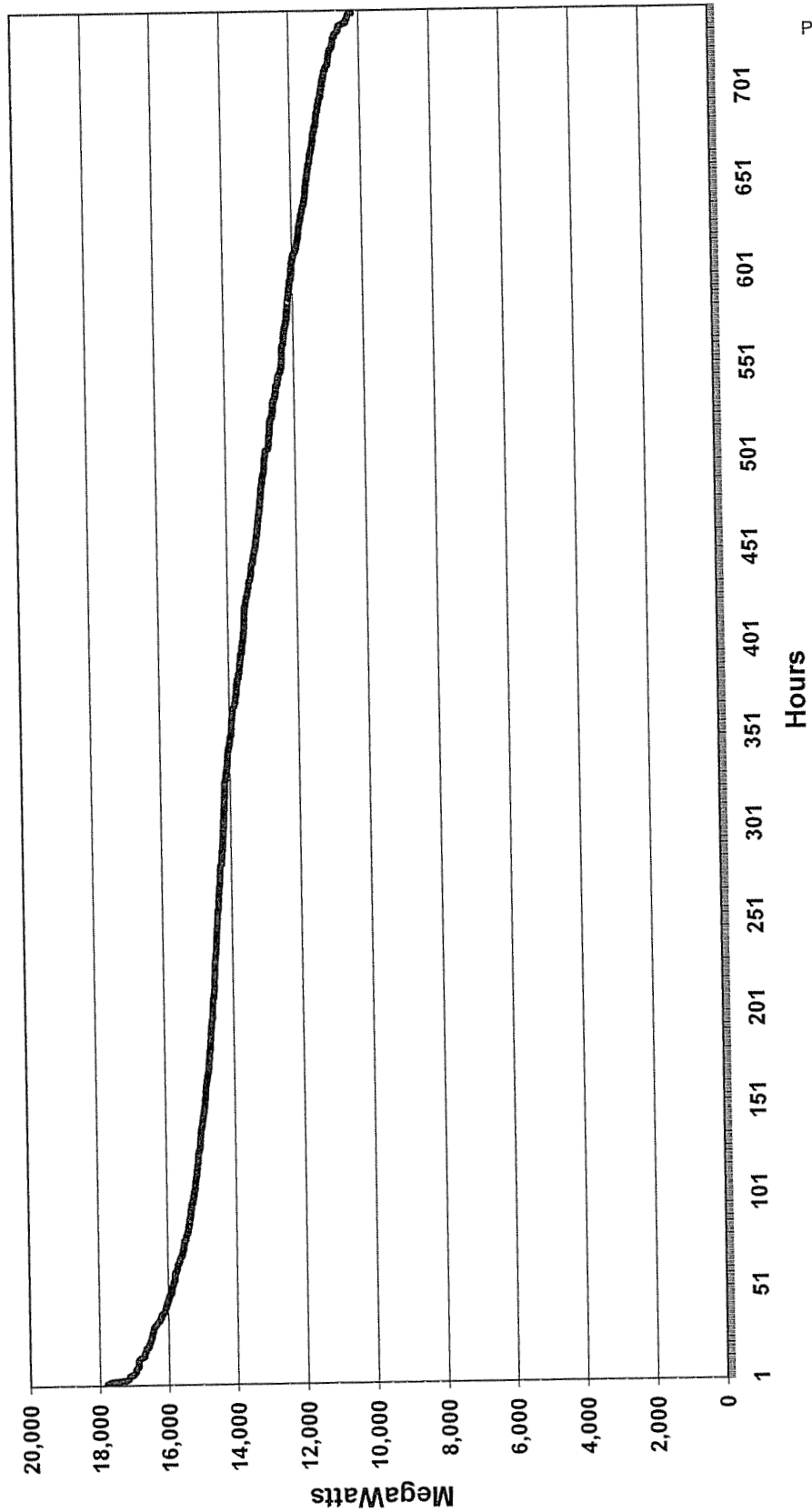




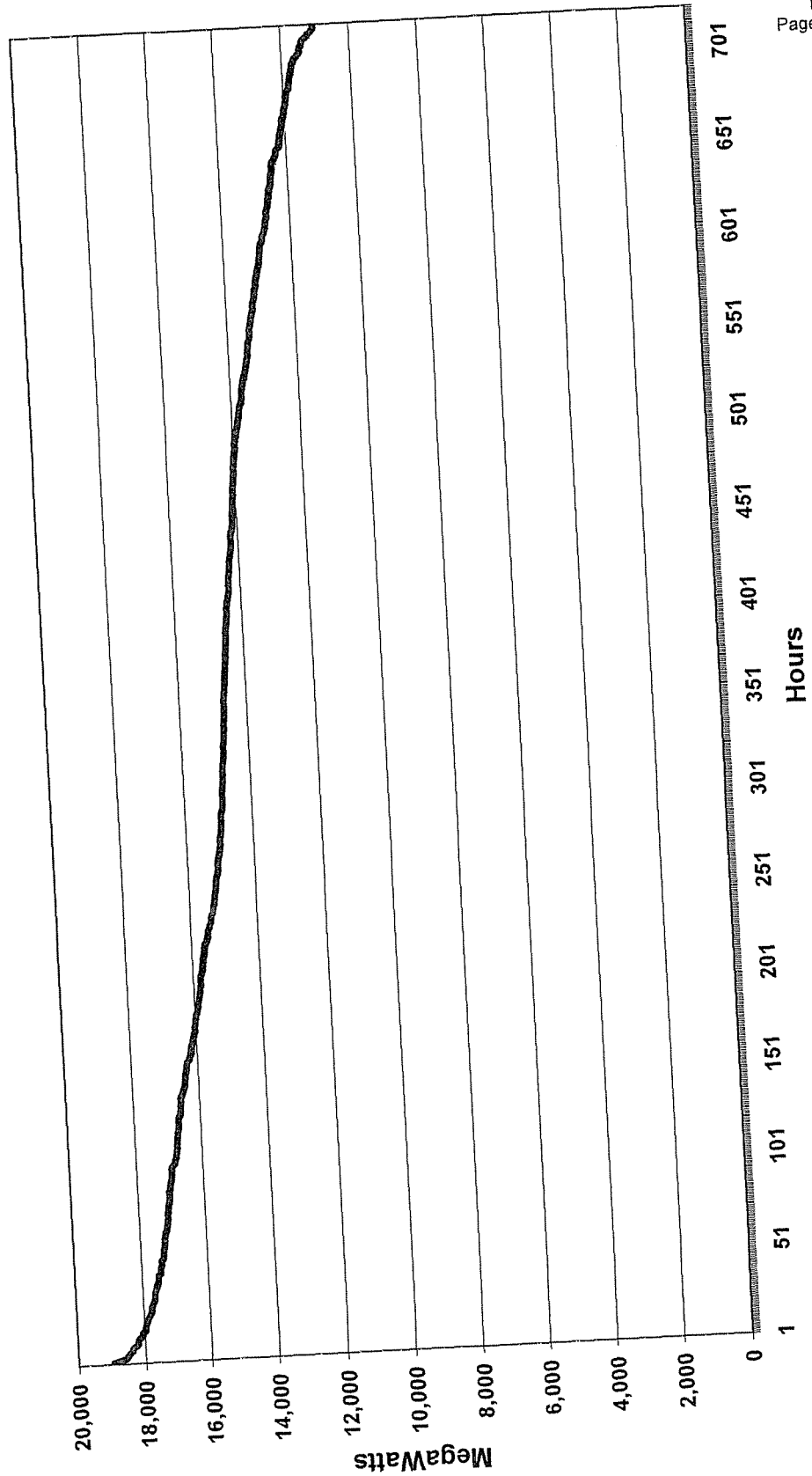
**AEP System-East Zone  
September 2008 Load Duration Curve  
(Internal Load)**



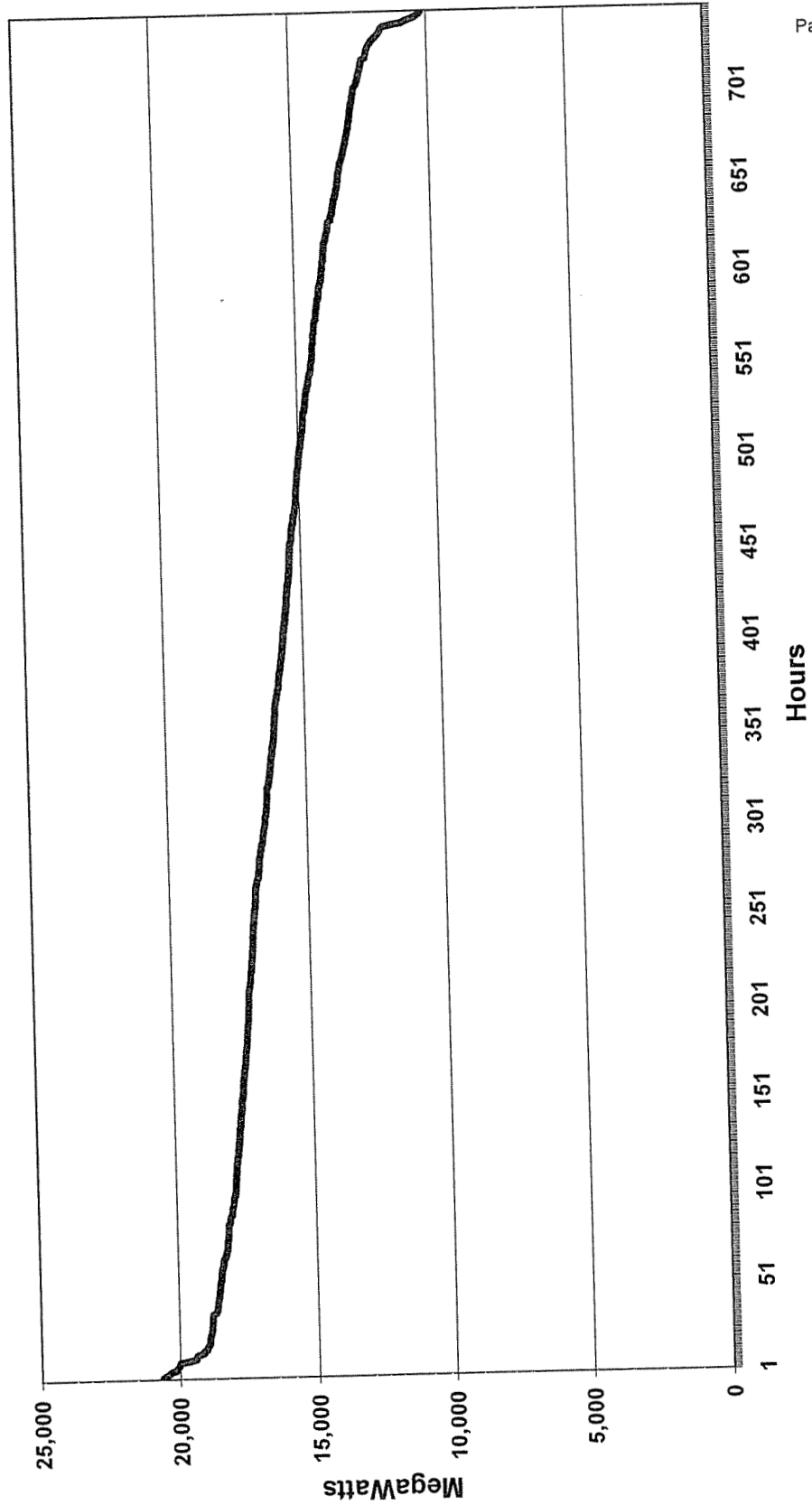
**AEP System-East Zone  
October 2008 Load Duration Curve  
(Internal Load)**



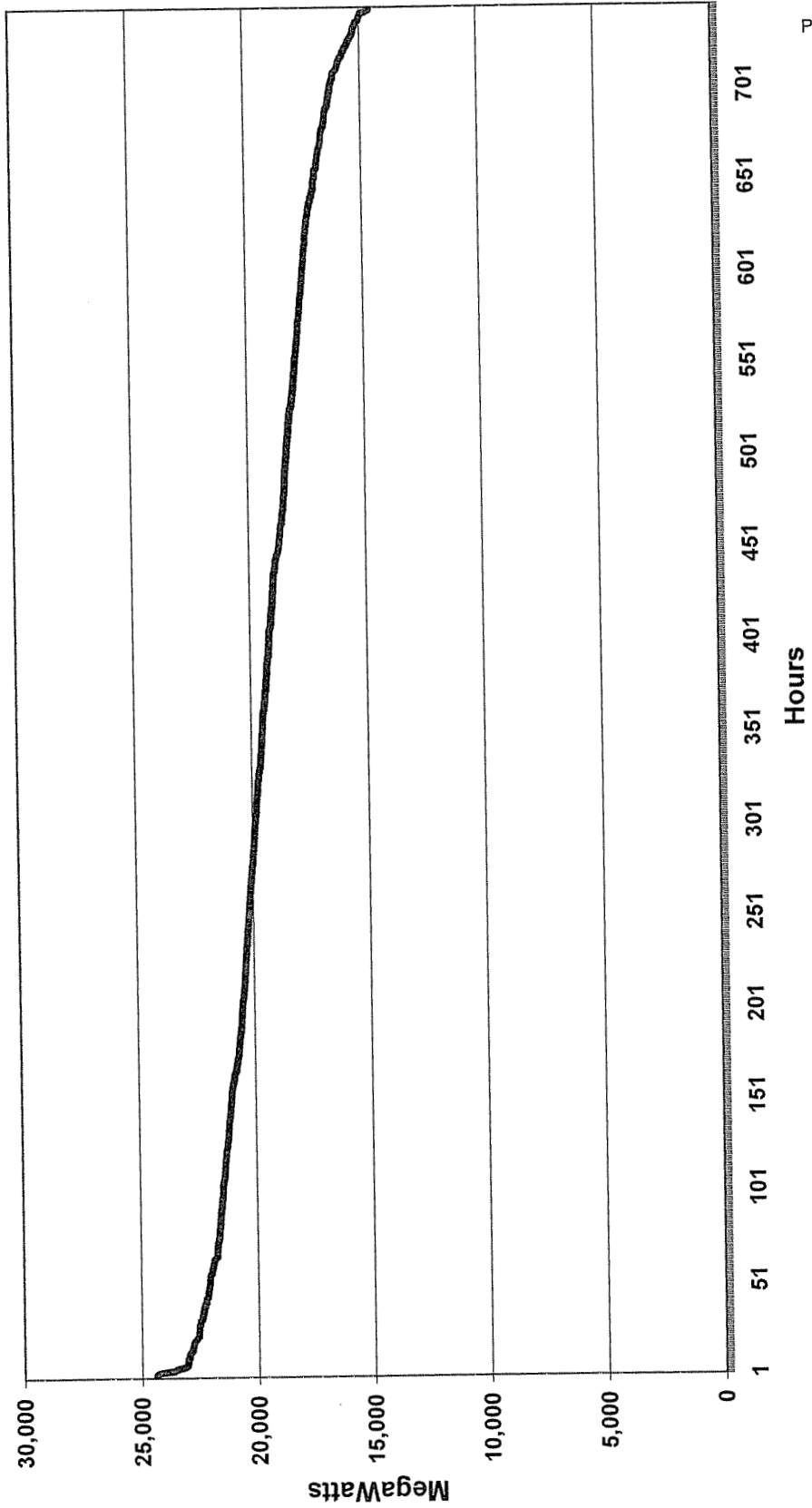
**AEP System-East Zone  
November 2008 Load Duration Curve  
(Internal Load)**



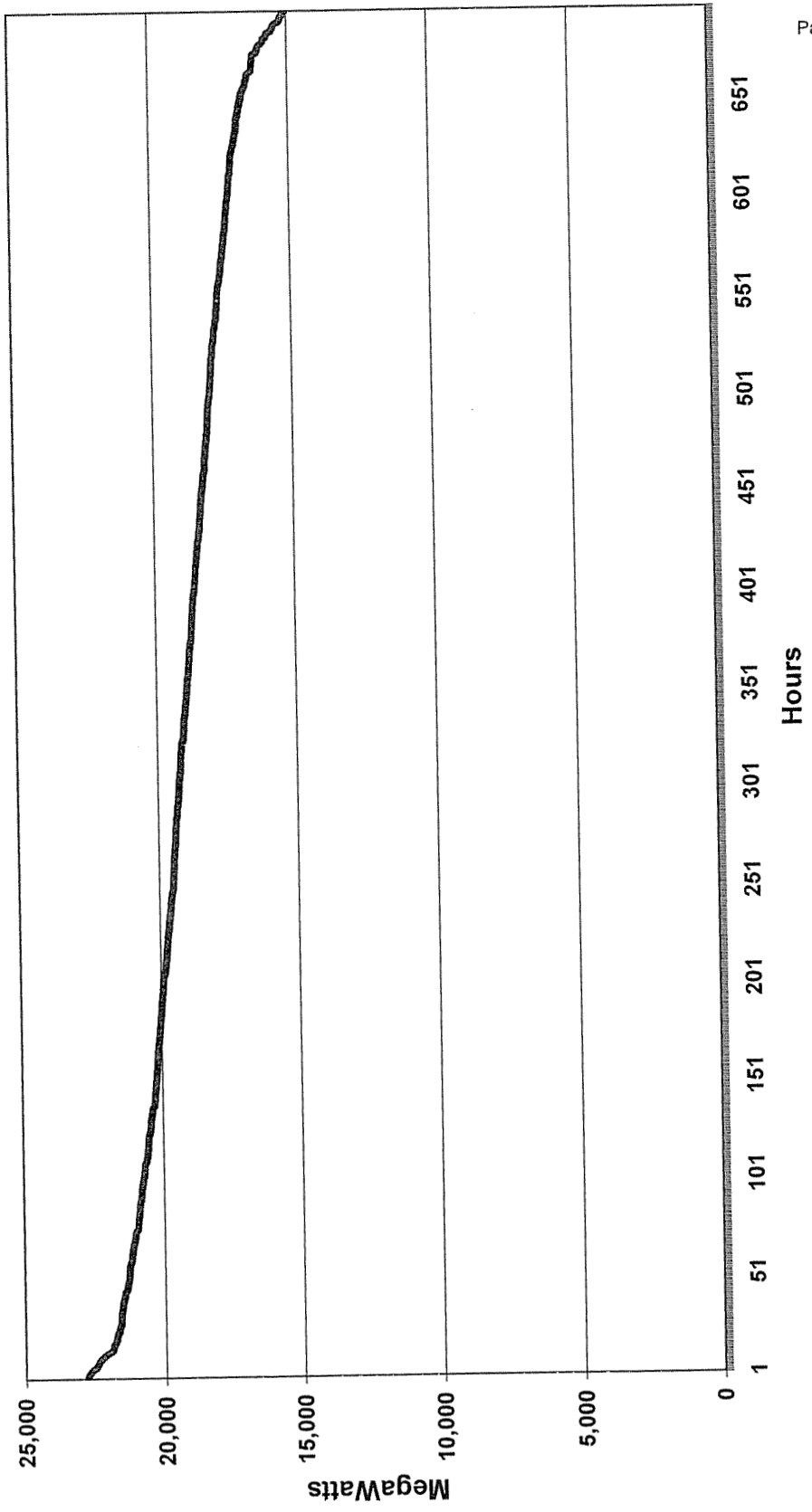
**AEP System-East Zone  
December 2008 Load Duration Curve  
(Internal Load)**



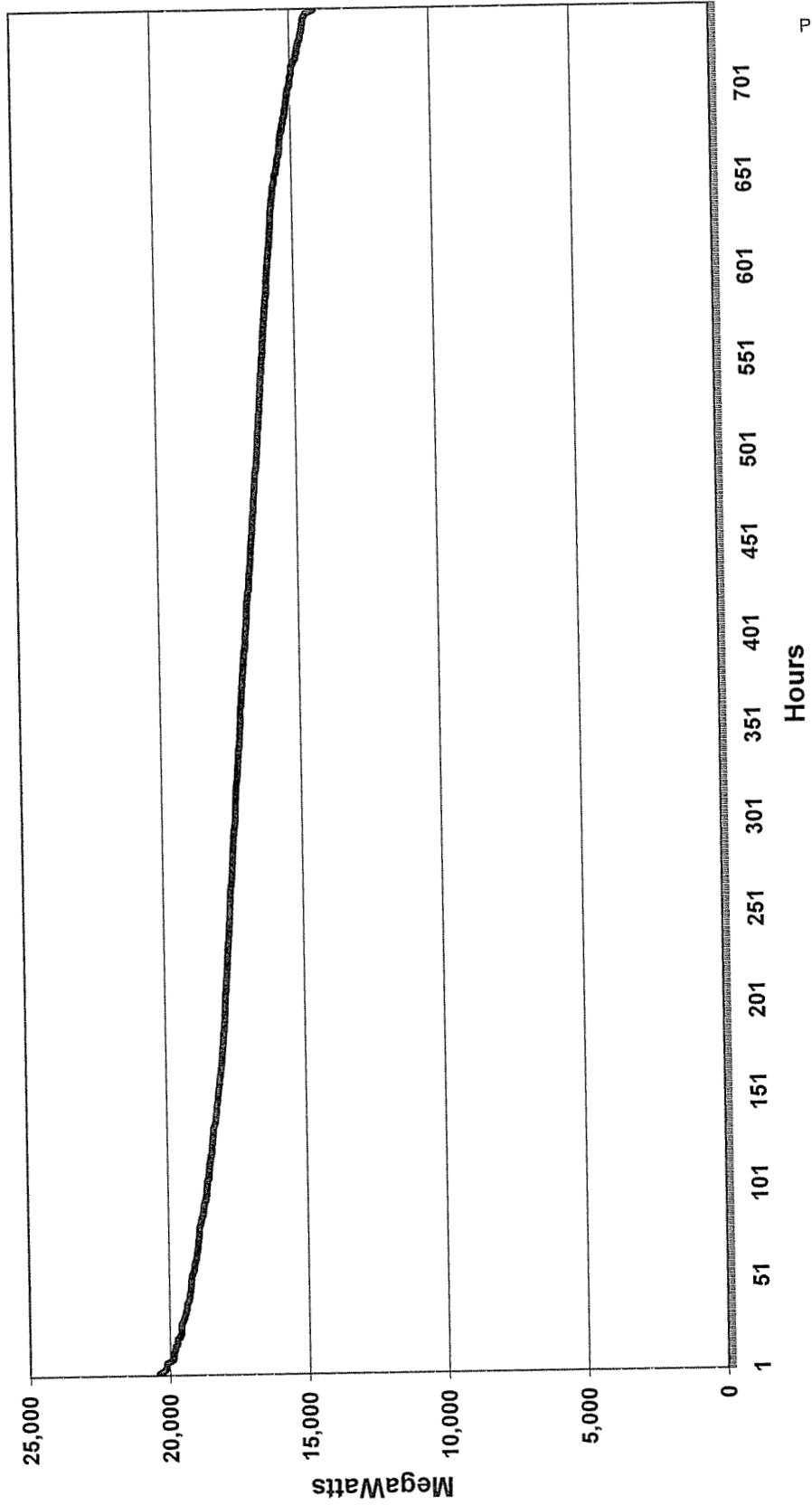
**AEP System-East Zone  
January 2008 Load Duration Curve  
(System Load)**



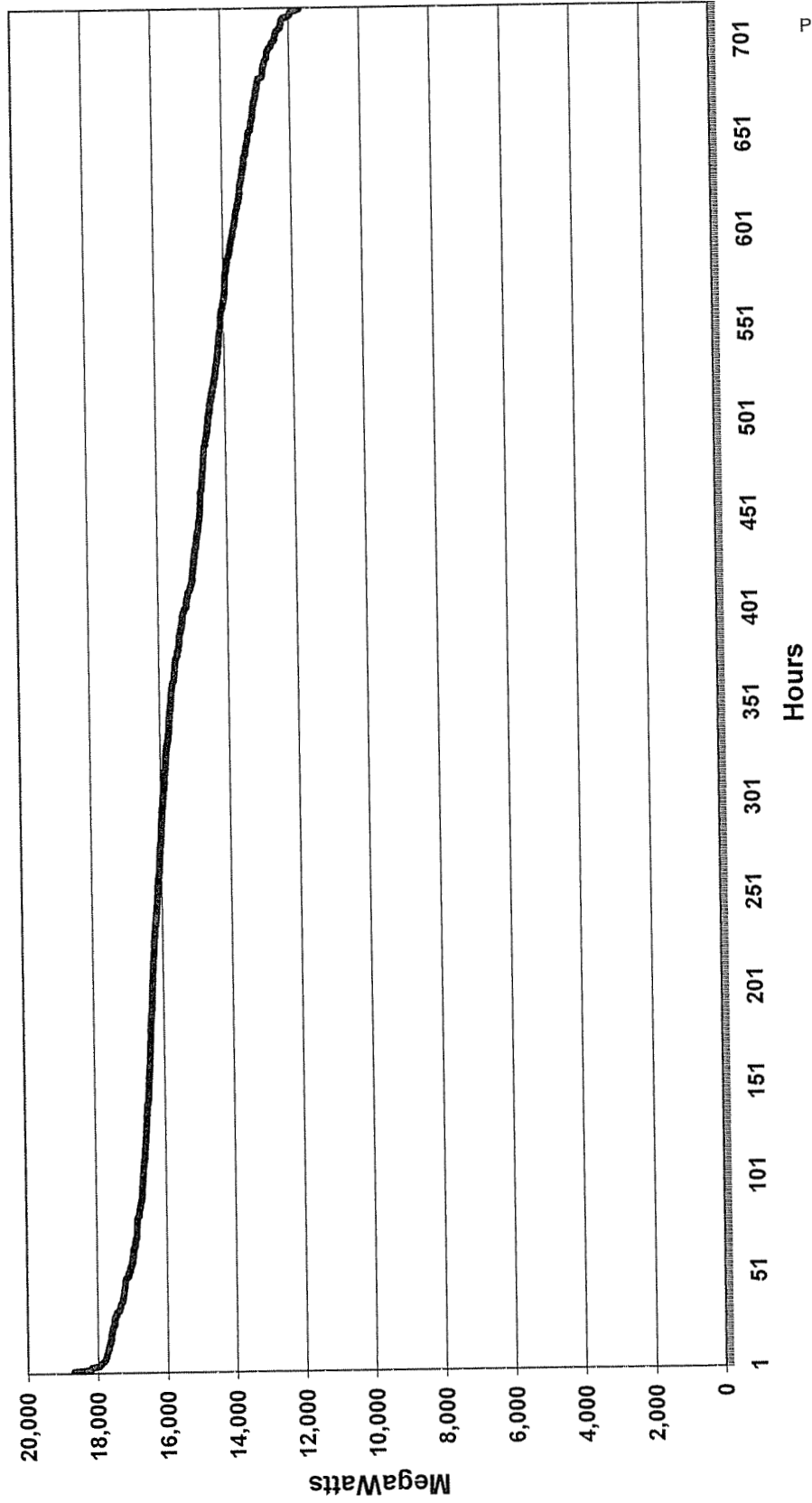
**AEP System-East Zone  
February 2008 Load Duration Curve  
(System Load)**



**AEP System-East Zone  
March 2008 Load Duration Curve  
(System Load)**

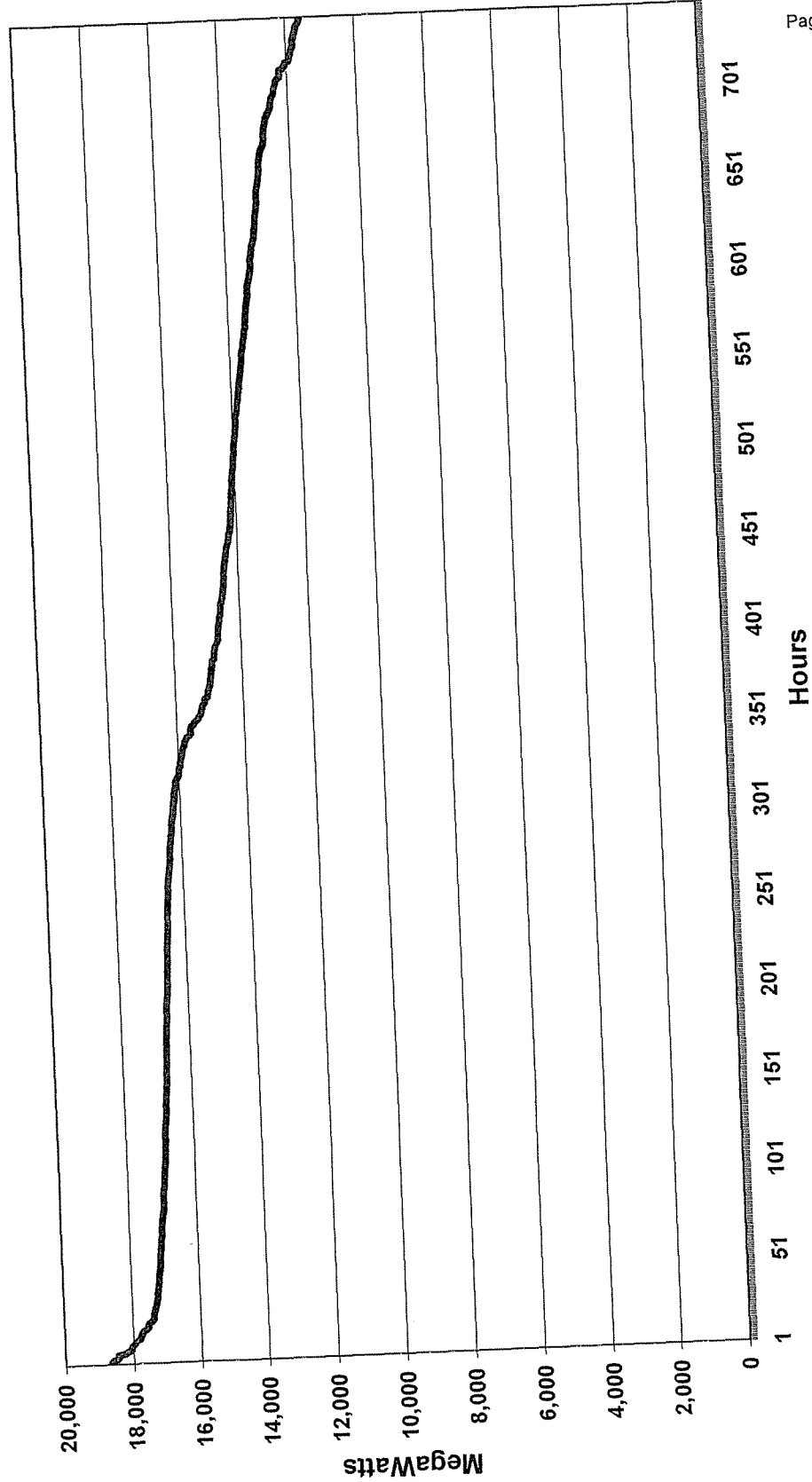


**AEP System-East Zone  
April 2008 Load Duration Curve  
(System Load)**

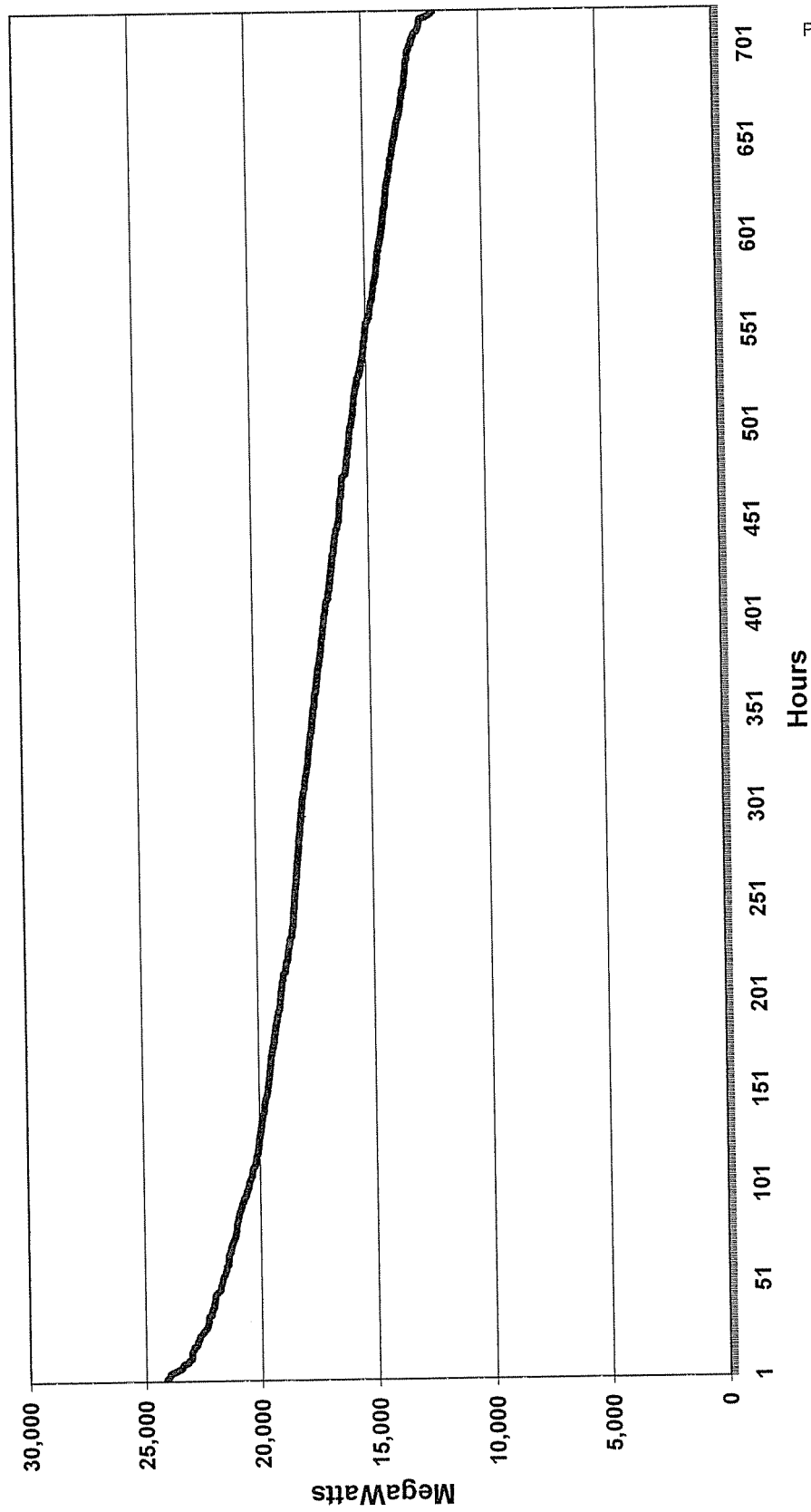




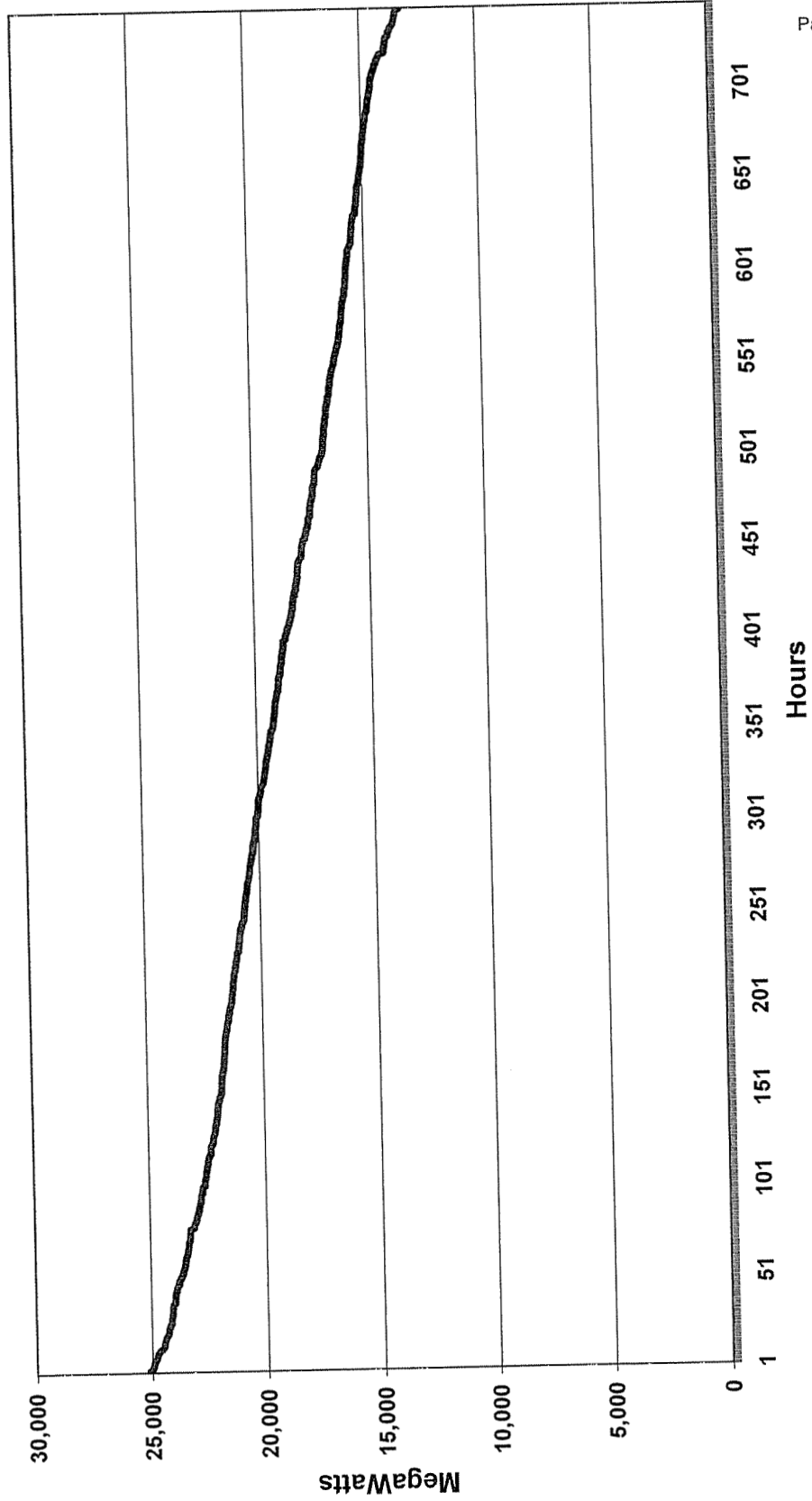
**AEP System-East Zone  
May 2008 Load Duration Curve  
(System Load)**



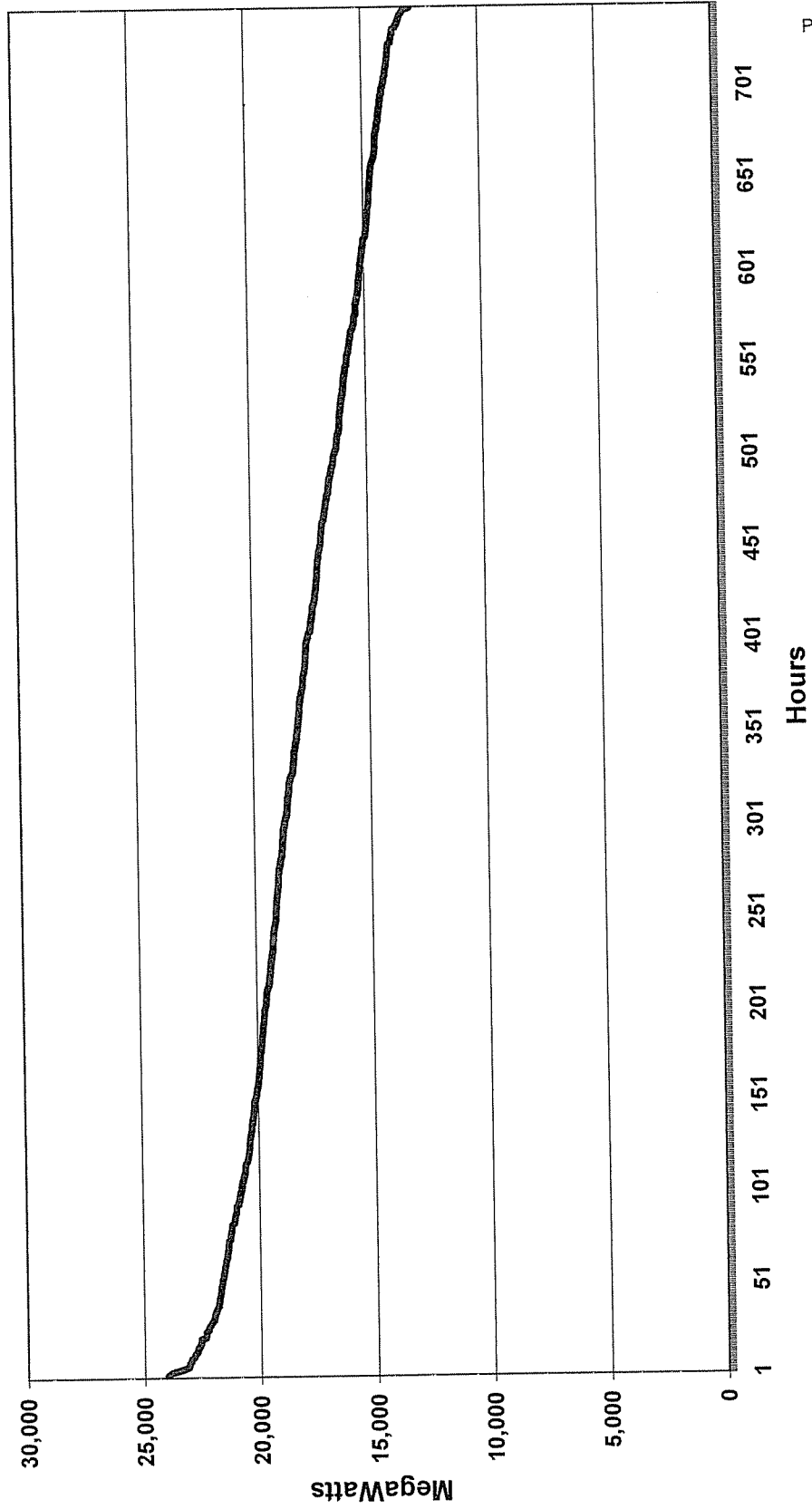
**AEP System-East Zone  
June 2008 Load Duration Curve  
(System Load)**



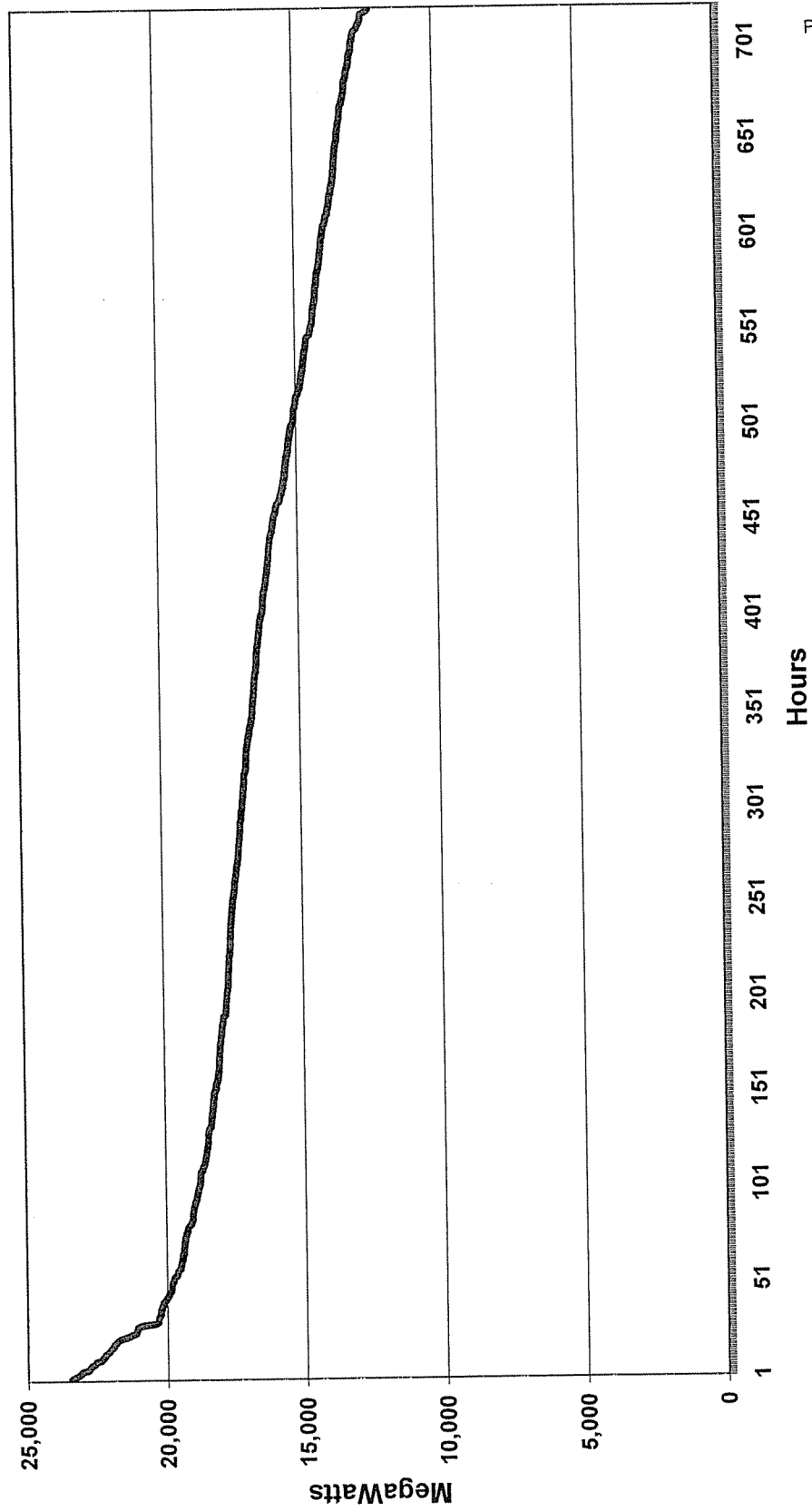
**AEP System-East Zone  
May 2008 Load Duration Curve  
(System Load)**



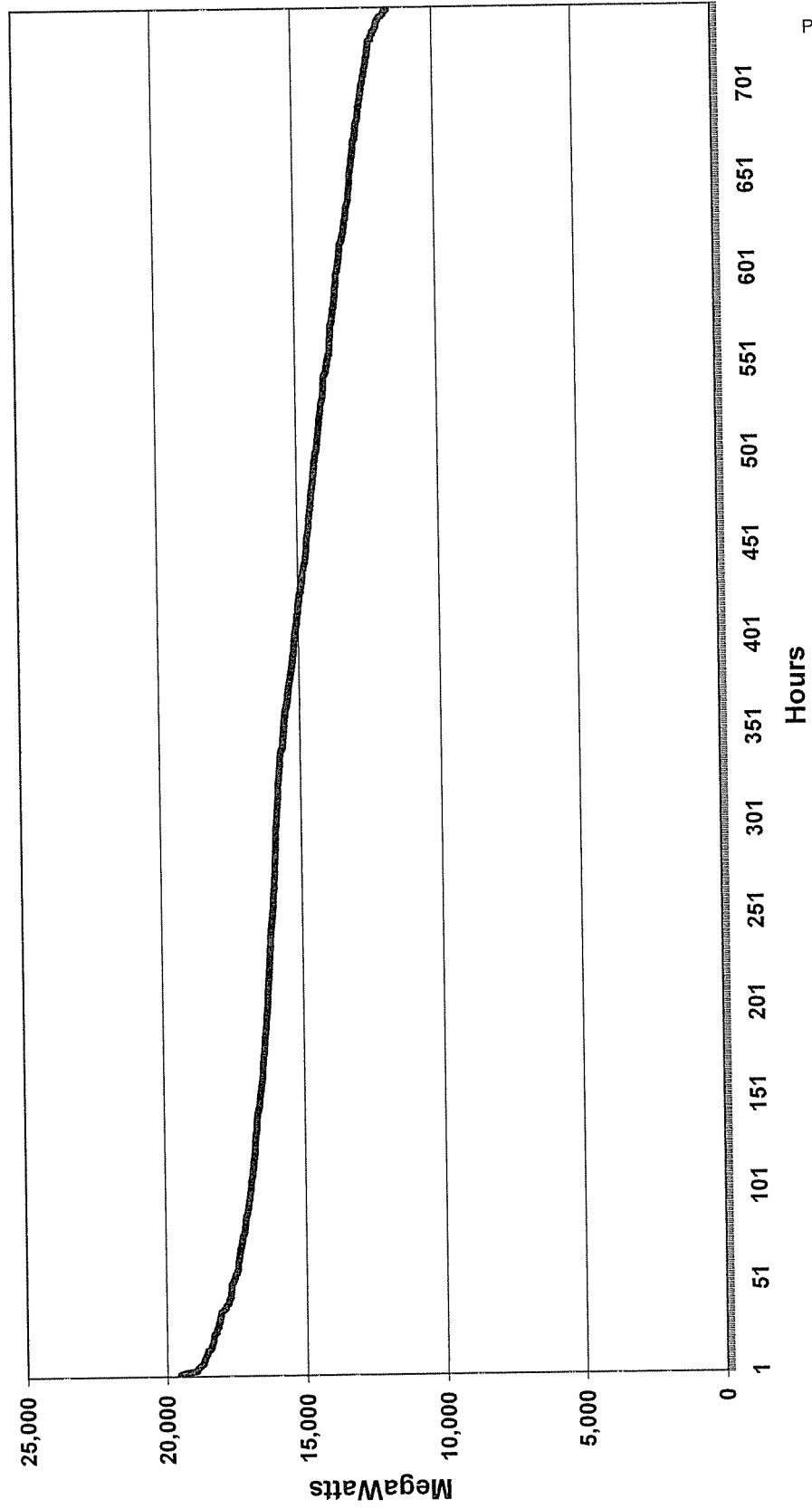
**AEP System-East Zone  
August 2008 Load Duration Curve  
(System Load)**



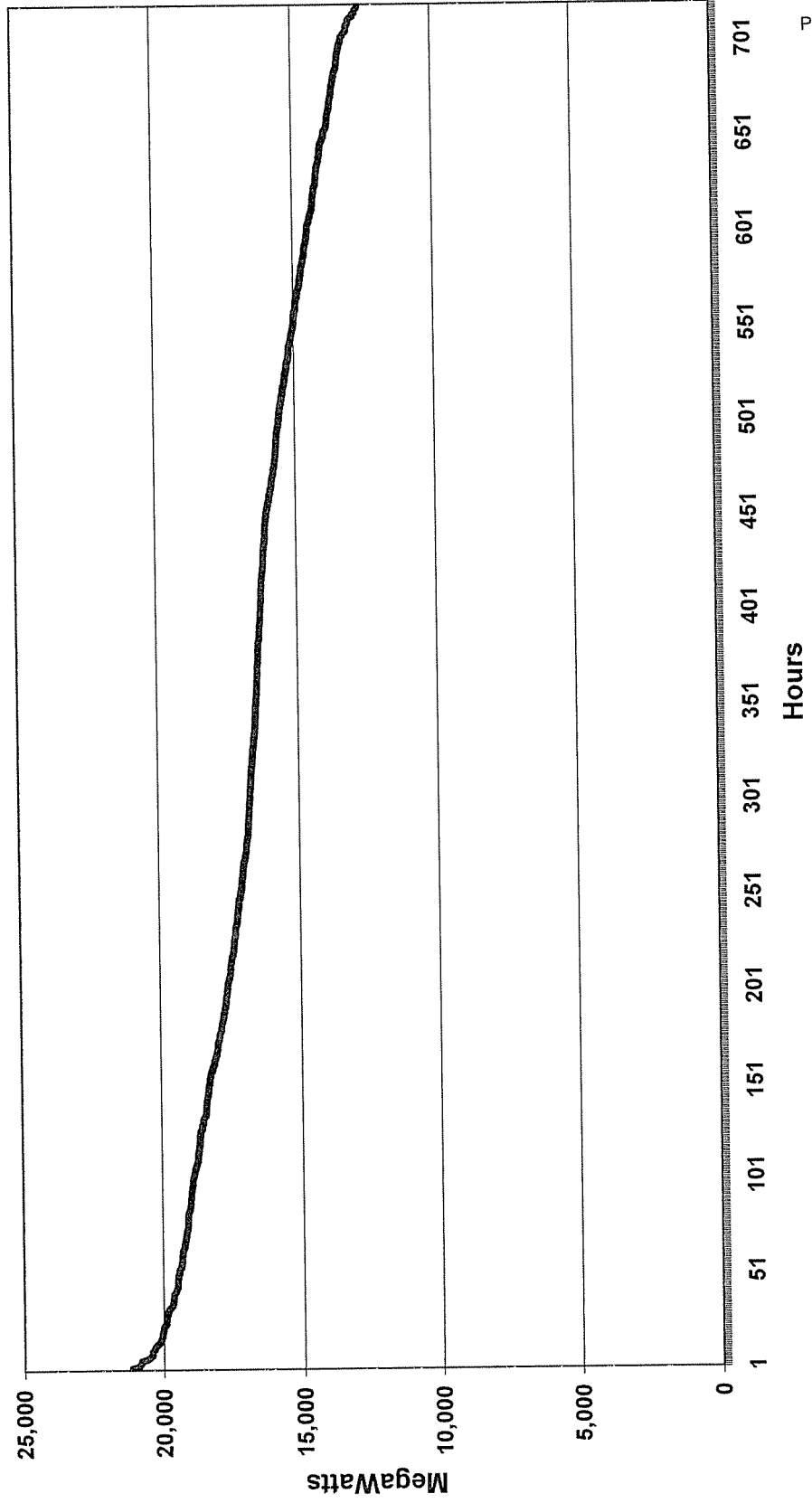
### AEP System-East Zone September 2008 Load Duration Curve (System Load)



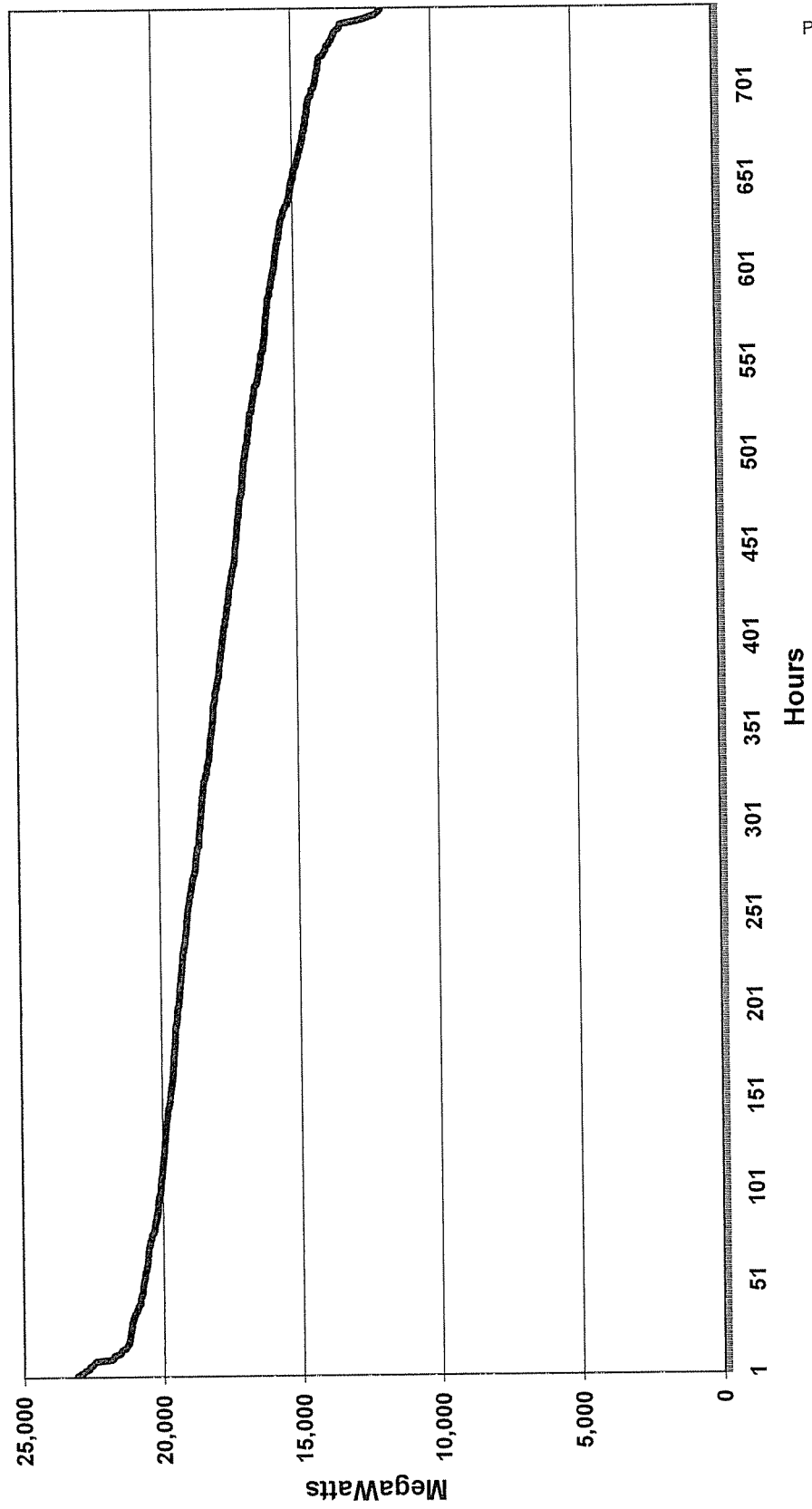
### AEP System-East Zone October 2008 Load Duration Curve (System Load)



**AEP System-East Zone  
November 2008 Load Duration Curve  
(System Load)**



**AEP System-East Zone  
December 2008 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 and therefore, such forecasts are not available.

**WITNESS:** Errol K. Wagner

Kentucky Power Company  
 Base and High Forecast  
 Energy Sales (GWH) and Seasonal Peak Demand (MW)  
 2009 - 2013

Year	Energy Sales		Summer Peak Demand		Preceding Winter Peak Demand	
	Base	High	Base	High	Base	High
2009	8,375	8,605	1,365	1,403	1,690	1,737
2010	8,431	8,762	1,378	1,432	1,699	1,766
2011	8,472	8,873	1,386	1,451	1,701	1,781
2012	8,560	9,021	1,396	1,471	1,711	1,803
2013	8,603	9,149	1,408	1,497	1,724	1,833

AEP System-East Zone  
 Base and High Forecast  
 Energy Sales (GWH) and Seasonal Peak Demand (MW)  
 2009 - 2013

Year	Energy Sales		Summer Peak Demand		Preceding Winter Peak Demand	
	Base	High	Base	High	Base	High
2009	134,045	137,733	22,409	23,025	21,377	21,965
2010	135,286	140,593	22,590	23,476	21,584	22,430
2011	136,138	142,569	22,761	23,836	21,694	22,719
2012	137,805	145,220	22,947	24,182	21,877	23,054
2013	138,724	147,536	23,174	24,646	22,085	23,488

**Kentucky Power Company and AEP-System-East  
Forecast Off-System Energy Sales (GWh)  
2009 - 2013**

<u>Year</u>	KPCo Off-System <u>Sales</u>	AEP-East Off-System <u>Sales</u>
2009	1,393	19,846
2010	1,969	27,769
2011	2,189	31,286
2012	1,722	24,908
2013	1,525	22,103



## 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 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. The attached Exhibit 4 of this response provides an example of the PJM reserve requirement calculation.

For the June 2009 through May 2010 delivery period, PJM has set the Installed Reserve Margin (IRM) at 15.0%. For the 2010/11 and 2011/12 delivery periods PJM has set the IRM at 15.5%. For the 2012/13 delivery period PJM has set the IRM at 16.2% and for planning purposes AEP has assumed a 16.2% level for future years. The resulting AEP reserve requirement ranges from 12.1% to 17.5%, as shown in Exhibit 5-2 attached to the response to Question 5. (This compares with 12% that AEP used, based on our own determinations, from the late 1990s until 2004, and 15% prior to that.) Note that the reserve requirement appears higher for 2010. This is due to the fact that the actual AEP EFORD rate of 11.24% used to calculate this year's requirement is considerably higher than the EFORDs which are used to calculate the requirement in the other years.

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: Errol K Wagner

**PJM Reserve Margin Example For 2009/10 Planning Year**

Line	Comment
1	<b>Factors</b>
2	PJM Installed Reserve Margin (IRM) = 15.00%
3	PJM EFORd = 6.13% Based on 5-year average PJM EFORd
4	Forecast Pool Requirement (FPR) = 1.0795 FPR = (1 + Line 2) * (1 - Line 3)
5	
6	<b>Obligations</b>
7	Total Load Obligation = 21,189 Coincident peak forecasted by PJM
8	UCAP Obligation = 22,874 Line 4 * Line 7
9	UCAP Market Obligations = 1,391
10	Total UCAP Obligation = 24,265 Line 8 + Line 9
11	
12	<b>Resources</b>
13	Net ICAP = 27,754
14	AEP EFORd = 8.47% MW-weighted average of Unit EFORds
15	Available UCAP = 25,403 Line 13 * (1- Line 14)
16	
17	<b>Position</b>
18	Net UCAP Position = 1,138 Line 15 - Line 10
19	Net ICAP Position = 1,243 Line 18 / (1- Line 14)
20	
21	Reserve Margin Percent = 17.5 Question 5 attached Exhibit 5-2, Column (16)
22	Reserve Percent Required By PJM = 12.1 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**

The attached Exhibit 5-1 to this response provides projected winter peak demands, capabilities, and margins for KPCo for the winter seasons 2008/09 through 2012/13.

The attached Exhibit 5-2 to this response provides projected summer peak demands, capabilities, and margins for the AEP System - East Zone for the period 2009 through 2013.

**WITNESS:** Errol K. Wagner

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

Winter Season	Peak Demand - MW					Capacity - MW					Margin			
	Internal Demand (a)	DSM (b)	Committed Sales (c)	Total Demand (d)=(1)+(2)+(3)	Inter-ruptible Demand (5)	Total Demand (6)=(4)+(5)	Existing Capacity & Chngs (7)	Net Sales (8)	Name/Identifier (f)	MW (9)	Purchases Annual Mkt. Purch. (10)	Total Equivalent Capacity (11)=(7)+(9)+(Sum(10)-(10))	MW (12)=(1)-(6)	% of Demand (13)=(12)/(6)*100
2008/09	1,691	1	16	1,706	0	1,706	1,465	121	No New Build	0	0	1,344	(362)	(21.2)
2009/10	1,700	11	15	1,704	0	1,704	1,465	74	No New Build	0	0	1,391	(313)	(18.4)
2010/11	1,703	32	0	1,671	0	1,671	1,465	72	50 MW Wind	7	0	1,400	(271)	(16.2)
2011/12	1,713	43	0	1,670	0	1,670	1,465	67	No New Build	0	0	1,405	(265)	(15.9)
2012/13	1,726	41	0	1,685	0	1,685	1,465	(9)	No New Build	0	0	1,481	(204)	(12.1)

Notes: (a) Based on Nov. 2008 Load Forecast.

(b) Includes expanded DSM.

(c) Includes companies MLR share of:  
 NCEMC sale, through 2010 (220 MW)

(d) Reflects winter capability assumptions.

(e) Includes companies MLR share of:  
 Sale of 100 MW to Wolverine through 2009/10

(e) continued

Purchase from Constellation (315 MW), 2009/10 through 2011/12

Contractual share of remaining Mone capacity

MISO Sale of 25 MW in 2009/10

Sale of 22 MW from Tamers Ck. 4 in 2010/11-2013/14

RPM Auction Sales 2008/09-2011/12 (1406 MW, 1390 MW, 1464 MW, 1405 MW ICAP)

3.6 MW capacity credit from SEPA's Philippot Dam via Blue Ridge contract

(f) New wind capacity value is assumed to be 13% of nameplate

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

Summer Season	Peak Demand - MW				Capacity - MW			Reserve Margin Before Interruptible w/ New Capacity		Reserve Margin After Interruptible w/ New Capacity		PJM ICAP Position After Interruptible w/ New Capacity		
	Internal Demand (a)	Inter-ruptible Demand (b)	DSM (c)	Net AEP Internal Demand (d) = (a) + (b) - (c)	Existing Capacity & Planned Changes (e)	Committed Net Sales (f)	Planned Capacity Additions Name/Identifier (g)	MW (h)	Annual Purch. (i)	Total Capacity (j) = (e) + (g) - (h) - (i)	MW (k) = (j) - (f)	% of Demand (l) = (k) / (j) * 100	Reserve % Required By PJM (m)	Position (n)
2009	22,487 (615)	(59)	21,793	1,273	28,198	1,125	200 MW Wind	26	0	27,099	3,418	14.4	12.1	1,243
2010	22,735 (615)	(216)	21,904	1,265	27,712	1,124	250 MW Wind	33	0	26,646	2,862	12.0	17.5	(569)
2011	23,028 (615)	(543)	21,870	1,043	27,712	1,052	200 MW Wind	26	0	26,744	3,216	13.7	15.3	328
2012	23,216 (615)	(676)	21,925	1,043	27,162	(41)	220 MW Wind	29	0	27,316	3,733	15.8	16.6	529
2013	23,445 (615)	(624)	22,206	1,043	27,162	(43)	540 MW D.C.C. & 100 MW Wind	553	0	27,871	4,007	16.8	15.8	957

Notes:

(a) Based on Nov. 2008 Load Forecast (not coincident with PJM's peak).

(b) Load forecasting view of Interruptible Demand.

(c) Includes expanded DSM.

(d) Includes:

Buckeye-Cardinal commitment  
 NCEMC sale, through 2010 (220 MW)

(e) Reflects the following summer capacity assumptions:  
 AEP PPR share of OVEC capacity: 951 MW (Summer)  
 Hydro plants, including Summersville, are rated at average August output.

FGD DERATES:

2009: Amos 3: 35 MW; Kyger Creek 4-5: 3 MW each; Conesville 4: 4 MW  
 2010: Amos 1: 22 MW; Cardinal 3: 10 MW; Clifty Creek 1-6: 2 MW each;  
 2010 continued Kyger Creek 1-3: 3 MW each  
 2011: Amos 2: 22 MW

EFFICIENCY IMPROVEMENTS:

2009: 59 MW  
 2010: 12 MW  
 2011: 22 MW  
 2012: 10 MW

(f) continued  
 ASSUMED RETIREMENTS FOR PLANNING PURPOSES:  
 2010: 440 MW  
 2012: 560 MW

(g) Includes: CPL unit power sale of 250 MW through 2009

Purchase to cover CSP's former Monongahela Power load in 2009

Purchase from Constellation (315 MW), 2009 through 2011

Contractual share of remaining Mone capacity

MISO Sale of 25 MW in 2009

Sale of 22 MW from Tanners Ck. 4 in 2010-2014

RPM Auction Sales 2009-2011 (1390 MW, 1464 MW, 1405 MW ICAP)

3.6 MW capacity credit from SEPA's Philipot Dam via Blue Ridge contract

(h) New wind capacity value is assumed to be 13% of nameplate.



## 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
2009	Less than 4 weeks	Less than 4 weeks
2010	More than 4 weeks	Less than 4 weeks
2011	Less than 4 weeks	More than 4 weeks
2012	Less than 4 weeks	Less than 4 weeks
2013	Less than 4 weeks	More than 4 weeks

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

**WITNESS:** Errol K Wagner



## 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

At the present time, AEP is evaluating a mix of generation resources to meet its projected capacity needs through 2019. Although the precise timing, mix of technology, location and size of such additions remain under review, for planning and projection purposes, System expansion plan includes these additions:

<u>Date</u>	<u>Size, MW</u>	<u>Type</u>	<u>Site</u>
2009	200	wind purchase	Indiana
late 2009	100	wind purchase	West Virginia
late 2009	150	wind purchase	Indiana
late 2010	100	wind purchase	Illinois
late 2010	100	wind purchase	unknown
late 2011	220	wind purchase	unknown
2013	540	combined cycle	Dresden, O.
2013	100	wind purchase	unknown
2014	400	wind purchase	unknown
2015	490	combined cycle	unknown
2015	3 x 159	combustion turbines	unknown
2016	500	wind purchase	unknown
2017	623	IGCC	unknown
2017	300	wind purchase	unknown
2018	400	wind purchase	unknown

WITNESS: Errol K Wagner





## 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:** Errol K. Wagner

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

<u>Received from (MWh):</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
	<u>(Actual)</u>	<u>(Actual)</u>	<u>(Actual)</u>	<u>(Actual)</u>	<u>(Actual)</u>	<u>(Actual)</u>	
Appalachian Power (1)	11,353,842	11,066,166	11,871,456	9,485,862	7,280,995	7,826,055	(4)
Ohio Power (1)	8,224,235	9,766,209	8,687,031	9,470,141	7,782,679	8,832,135	(4)
East Ky Power Coop	277,577	279,973	362,963	398,269	324,865	402,847	(4)
LGE(Kentucky Utilities)	91,767	95,146	137,523	330,912	600,592	810,871	(4)
TVA	585,205	700,836	649,374	501,071	390,216	448,365	(4)
Illinois Power Co. (2)	8,866	0	34,647	13,555	38,216	33,190	(5)
Illinois Power Co. (3)	10,190	752	30,508	11,908	24,485	23,629	(5)
Big Sandy Generating Plant	6,170,931	6,550,509	7,345,624	7,171,505	7,533,223	6,021,182	5,851,000

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

<u>Delivered to (MWh) :</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	
Appalachian Power (1)	18,721,045	20,152,403	20,485,009	18,982,168	15,501,979	15,917,326	(4)
Ohio Power (1)	235,326	205,829	303,310	215,747	257,462	360,333	(4)
East Ky Power Coop	275,826	314,621	263,853	218,005	277,818	213,189	(4)
LGE(Kentucky Utilities)	1,268	1,205	476	97	370	14	(4)
TVA	13	116	86	70	6,050	62	(4)
Illinois Power Co. (2)	0	1,267	0	0	0	0	(5)
Illinois Power Co. (3)	0	308	0	0	0	0	(5)
Vanceburg and Olive Hill				98,517	101,705	101,657	(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 2006 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 Question 9 will provide adequate capacity to serve the existing and projected loads shown in the table below.

8d. The actual summer and winter peak demands for 2008 and the forecasted summer and winter peak demands for 2009 through 2013 are noted in the table below.

<b>Kentucky Power Company</b>		
<b>Seasonal Peak Demand</b>		
<b>Actual 2008 and Forecast 2009-2013</b>		
<b>Year</b>	<b>Summer</b>	<b>Preceding</b>
	<b>Peak Demand</b>	<b>Winter</b>
	<b>(MW)</b>	<b>Peak Demand</b>
		<b>(MW)</b>
<b>2008</b>	<b>1249</b>	<b>1678</b>
<b>2009</b>	<b>1365</b>	<b>1690</b>
<b>2010</b>	<b>1378</b>	<b>1699</b>
<b>2011</b>	<b>1386</b>	<b>1701</b>
<b>2012</b>	<b>1396</b>	<b>1711</b>
<b>2013</b>	<b>1408</b>	<b>1724</b>

WITNESS: Errol K Wagner



## Kentucky Power Company

### REQUEST

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

### RESPONSE

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

- Coalton Area Network Improvement - Tap the Chadwick-KES 138 kV circuit and install a new 138/69 kV 200 MVA transformer at the Coalton station. This project will alleviate thermal overload and heavy loading conditions, improve reliability, and provide margin for future growth in the South Neal-Coalton-Bellefonte area. Current projected in service date is 2012.
- Thelma-Paintsville Area Project - Add a 138/69 kV, 90 MVA transformer at Thelma Station and construct 1.8 miles of 69 kV line from West Paintsville Station to Paintsville Station. Convert Thelma-Paintsville 46 kV line to 69 kV to close the 69 kV loop. This project will provide single contingency reliability to the Paintsville area. Current projected in service date is December 2012-2013.
- 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 subtransmission system and double contingency reliability to the area 138 kV system. Current projected in service date is 2013-2015.

Note: The current recession has reduced the availability of capital dollars for investment by KPCo. In response, the service dates for these projects have been adjusted to reflect the revised forecast plans.

**WITNESS:** Errol K Wagner