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FILED[2]
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Missouri Public Service Commission

Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P.O. Box 360
Jefferson City, Missouri 65102

RE: *In the Matter of Atmos Energy Corporation and Arkansas Western Gas Company, d/b/a Associated Natural Gas Company,* Case No. GM-2000-312

Dear Mr. Roberts:

Pursuant to the Commission's Order Approving Stipulation and Agreement issued on April 20, 1999, in the above-referenced matter, enclosed for filing are the original and eight (8) copies of the Peak Day Study of Atmos Energy Corporation d/b/a United Cities Gas Company. A copy of the Peak Day Study has been hand-delivered or mailed this date to parties of record.

Thank you for your attention to this matter.

Sincerely,

James M. Fischer

James M. Fischer

/jr
Enclosures

cc: Office of the Public Counsel
Dana K. Joyce
All parties of record

Contents

Note: For actual day comparisons, the coldest day in the 1998-1999 and 1999-2000 winter season was compared

PEAK DAY METHODOLOGY

Items required are two (2) years of:

1. Daily Pipeline Receipts (December, January, & February)
2. Daily Transportation Deliveries (December, January, & February)
3. Daily Interruptible Deliveries where available (December, January, & February)
4. Monthly Sales Volumes by Customer Class (Year Round)
5. Monthly No. of Sales Customers by Customer Class (Year Round)
6. Monthly Heating Degree Days (Year Round)
7. Daily Heating Degree Days (December, January, & February)

Process for Determination of Total Receipts for Firm Delivery

Using the daily information for the winter months, subtract daily **transportation** and **interruptible** deliveries from daily **pipeline receipts** to arrive at a volume that is close to being receipts for firm customers. Reference this volume as **"Firm and Non-daily Interruptibles"** because in many instances this figure will still contain some volume of receipts for **interruptible** customers. To extract the remainder of the gas for **interruptible** customers, there are two methods that may be employed.
If there are sufficient EFM daily reads, allocate the remainder of the interruptible volumes by dividing the known daily volume by the given month total daily volumes and multiply by the remaining monthly interruptible volume.

Or if adequate daily reads are unavailable:

Perform the following calculations:

1. Using the monthly sales data by customer class, combine the classes of Commercial Interruptible and Industrial Interruptible for each month, then;
2. For each month, subtract the total of the daily interruptible volumes to obtain the remainder of interruptible volumes, (non-daily), then;
3. Sum this remainder of interruptible volume, residential sales volume, commercial sales volume, and industrial sales volume, then;
4. Divide this non-daily interruptible volume by the total obtained in step 3 above and subtract the result from one (1), then;
5. Multiply the result obtained from step 4 above times the daily volume obtained above called **Firm and Non-daily Interruptibles** to obtain **receipts for delivery to firm customers**.

Using these daily **Receipts for delivery to firm customer,** delete the days falling on weekends and holidays. Using a regression analysis, define this **Firm Receipt** volume as the Y-variable and the daily **Heating Degree Days (HDDs)** as the X-variable. The regression analysis will yield a daily Intercept coefficient (Baseload Factor or **BLF**) and what is termed as the X Variable 1 coefficient (Heatload Factor or **HLF**). (The coefficients listed above are labels used by the Microsoft Excel Data Analysis Toolpak add-in. These labels may vary with other applications.)

Using the appropriate number of **HDDs** for the area being evaluated (refer to the section titled **Determination of Appropriate HDDs for Peak Day Design** contained later in this narrative), perform the following calculations:

1. Multiply the **HLF** times the **HDDs** to determine total heating load Requirements, then;
2. Add the heating load requirements to the **BLF.**
3. The resulting volume is the **Firm Requirements for Peak Day Design.**

Process for Determination of Firm Requirements by Customer Class

Using the **monthly sales data by customer class**, perform the following calculations to obtain the Peak Day requirements for the residential and the firm commercial class of customers.

1. For each individual class of customers, divide the monthly consumptions by the number of customers to obtain consumption per customer for each month of the two (2) year period being evaluated, then;
2. Using a regression analysis, define the monthly consumption per customer as the Y-variable and the respective monthly **HDDs** as the X-variable. The regression will yield a monthly **BLF** and **HLF**.
3. Since the **BLF** is in a monthly form, it will have to be divided by 30.42, (which is the average number of days per month), to obtain a one day **BLF**.
4. Multiply the Number of customers during the peak month of the most previous winter season by that customer class's respective annual rate of growth to obtain the expected number of customers for the upcoming winter season. Retain this difference in number of customers for use in step 8 below.
5. To obtain the base consumption requirements for the **Peak Design Day**, multiply the **BLF** times the expected number of customers.
6. To obtain the heating load requirements for the **Peak Design Day**, multiply the **HLF** times the expected number of customers times the appropriate **HDDs** for **Peak Day Design** for that area, (refer to the section titled **Determination of Appropriate HDDs for Peak Day Design** contained later in this narrative).
7. Sum the base requirements and the heating load requirements to obtain the total Peak Day requirements for each class of customers (residential and firm commercial).
8. Perform steps 5 through 7 above again for each of the residential and firm commercial class of customers with the customer count being equal only to the increase in customers due to growth. (From step 4 above)

9. Add the volumes attributable to customer growth for the residential and firm commercial classes calculated in step 8 above to the **Firm Requirements for Peak Day** Design calculated in the above section titled **Process for Determination of Receipts for Firm Delivery** to obtain the **Total Receipts for Firm Delivery**.
10. Subtract the residential and firm commercial Peak Day requirements from the total firm requirements calculated earlier to obtain the Peak Day requirements for the firm industrial class of customers.

Select the actual peak day for the interruptible customers to be shown below the firm sales customers.

Process for Determination of Appropriate HDDs for Peak Day Design

At least thirty years of daily High and Low temperature data is analyzed and the months of November through March of each year is extracted to isolate the winter months. This data is further analyzed and the peak daily **HDD** for each winter season (November through March) is selected. These peak days are then arranged into groups of five years each.

By observing the highest **HDD** in each five year period, the highest **HDD** that is seen to re-occur in each of the five year periods is selected being careful to exclude any unreasonably highs or lows, (see the sample narrative and table provided below).

This process is be followed in each of the areas where a Peak Design Day is to be calculated and the documentation illustrating this selection criteria is retained for later back-up and support.

Weather Stations Used:

Integrated System – Paducah, Ky with a design heating degree day of 68
Jackson & Piedmont – Poplar Bluff, Mo with a design heating degree day of 75
Butler – Kansas City with a design heating degree day of 72
Kirksville – Kirksville, Mo with a design degree day of 75

2000 - 2001 PROJECTED PEAK DAY REQUIREMENTS
JACKSON MO AREA (NGPL Pipeline)
PEAK DAY: 75 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	6,089	0.0477	0.01441	290	88	6,871
COMMERCIAL FIRM	885	0.1425	0.046437	126	41	3,208
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	6,974			416	129	10,079
INTERRUPTIBLE	3					1,246
TOTAL PEAK THRUPUT	6,977			416	129	11,325

JANUARY 4, 1999
JACKSON MO AREA (NGPL Pipeline)
Actual Day Comparison 53 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	5,698	0.0477	0.01441	272	82	4,624
COMMERCIAL FIRM	840	0.1425	0.046437	120	39	2,187
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	6,538			392	121	6,811
INTERRUPTIBLE	3					812
TOTAL PEAK THRUPUT	6,541			392	121	7,623

Actual Flow for Firm Customers on January 4, 1999 was 6044 MCF

JANUARY 25, 2000
JACKSON MO AREA (NGPL Pipeline)
Actual Day Comparison 42 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	5,874	0.0477	0.01441	280	85	3,835
COMMERCIAL FIRM	862	0.1425	0.046437	123	40	2,245
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	6,736			403	125	6,080
INTERRUPTIBLE	3					1,111
TOTAL PEAK THRUPUT	6,739			403	125	7,191

Actual Flow for Firm Customers on January 25, 2000 was 6048 MCF

Poplar Bluff, MO HDD Statistics

LOCATION	WINTER PERIOD	MAXIMUM HDD'S
KIRKSVILLE, MO	1960/1961	67
KIRKSVILLE, MO	1961/1962	72
KIRKSVILLE, MO	1962/1963	74
KIRKSVILLE, MO	1963/1964	69
KIRKSVILLE, MO	1964/1965	70
KIRKSVILLE, MO	1965/1966	75
KIRKSVILLE, MO	1966/1967	62
KIRKSVILLE, MO	1967/1968	69
KIRKSVILLE, MO	1968/1968	66
KIRKSVILLE, MO	1969/1970	70
KIRKSVILLE, MO	1970/1971	67
KIRKSVILLE, MO	1971/1972	74
KIRKSVILLE, MO	1972/1973	65
KIRKSVILLE, MO	1973/1974	72
KIRKSVILLE, MO	1974/1975	67
KIRKSVILLE, MO	1975/1976	66
KIRKSVILLE, MO	1976/1977	74
KIRKSVILLE, MO	1977/1978	67
KIRKSVILLE, MO	1978/1979	69
KIRKSVILLE, MO	1979/1980	62
KIRKSVILLE, MO	1980/1981	72
KIRKSVILLE, MO	1981/1982	76
KIRKSVILLE, MO	1982/1983	65
KIRKSVILLE, MO	1983/1984	80
KIRKSVILLE, MO	1984/1985	76
KIRKSVILLE, MO	1985/1986	65
KIRKSVILLE, MO	1986/1987	58
KIRKSVILLE, MO	1987/1988	64
KIRKSVILLE, MO	1988/1989	68
KIRKSVILLE, MO	1989/1990	77
KIRKSVILLE, MO	1990/1991	68
KIRKSVILLE, MO	1991/1992	55
KIRKSVILLE, MO	1992/1993	60
KIRKSVILLE, MO	1993/1994	72
KIRKSVILLE, MO	1994/1995	61
KIRKSVILLE, MO	1995/1996	76
KIRKSVILLE, MO	1996/1997	68
KIRKSVILLE, MO	1997/1998	55
KIRKSVILLE, MO	1998/1999	66
KIRKSVILLE, MO	1999/2000	57

2000 - 2001 PROJECTED PEAK DAY REQUIREMENTS
PIEDMONT, MO AREA (MRT Pipeline)
PEAK DAY: 75 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	1,786	0.0586	0.015307	105	27	2,155
COMMERCIAL FIRM	372	0.0000	0.043944	0	16	1,226
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	2,158			105	44	3,381
INTERRUPTIBLE	3					927
TOTAL PEAK THRUPUT	2,161			105	44	4,308

JANUARY 4, 1999
PIEDMONT, MO AREA (MRT Pipeline)
Actual Day comparison 50 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	1,846	0.0586	0.015307	108	28	1,521
COMMERCIAL FIRM	392	0.1452	0.043944	57	17	918
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	2,238			165	45	2,439
INTERRUPTIBLE	3					632
TOTAL PEAK THRUPUT	2,241			165	45	3,071

Actual Flow for Firm Customers on January 4, 1999 was 2148 MCF

JANUARY 27, 2000
PIEDMONT, MO AREA (MRT Pipeline)
Actual Day comparison 41 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	1,815	0.0586	0.015307	106	28	1,245
COMMERCIAL FIRM	386	0.1452	0.043944	56	17	751
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	2,201			162	45	1,996
INTERRUPTIBLE	3					352
TOTAL PEAK THRUPUT	2,204			162	45	2,348

Actual Flow for Firm Customers on January 27, 2000 was 1784 MCF & January 28, 2000 was 1776. Both days had 41 Heating Degree Days

Poplar Bluff, MO HDD Statistics

LOCATION	WINTER PERIOD	MAXIMUM HDD'S
KIRKSVILLE, MO	1960/1961	67
KIRKSVILLE, MO	1961/1962	72
KIRKSVILLE, MO	1962/1963	74
KIRKSVILLE, MO	1963/1964	69
KIRKSVILLE, MO	1964/1965	70
KIRKSVILLE, MO	1965/1966	75
KIRKSVILLE, MO	1966/1967	62
KIRKSVILLE, MO	1967/1968	69
KIRKSVILLE, MO	1968/1968	66
KIRKSVILLE, MO	1969/1970	70
KIRKSVILLE, MO	1970/1971	67
KIRKSVILLE, MO	1971/1972	74
KIRKSVILLE, MO	1972/1973	65
KIRKSVILLE, MO	1973/1974	72
KIRKSVILLE, MO	1974/1975	67
KIRKSVILLE, MO	1975/1976	66
KIRKSVILLE, MO	1976/1977	74
KIRKSVILLE, MO	1977/1978	67
KIRKSVILLE, MO	1978/1979	69
KIRKSVILLE, MO	1979/1980	62
KIRKSVILLE, MO	1980/1981	72
KIRKSVILLE, MO	1981/1982	76
KIRKSVILLE, MO	1982/1983	65
KIRKSVILLE, MO	1983/1984	80
KIRKSVILLE, MO	1984/1985	76
KIRKSVILLE, MO	1985/1986	65
KIRKSVILLE, MO	1986/1987	58
KIRKSVILLE, MO	1987/1988	64
KIRKSVILLE, MO	1988/1989	68
KIRKSVILLE, MO	1989/1990	77
KIRKSVILLE, MO	1990/1991	68
KIRKSVILLE, MO	1991/1992	55
KIRKSVILLE, MO	1992/1993	60
KIRKSVILLE, MO	1993/1994	72
KIRKSVILLE, MO	1994/1995	61
KIRKSVILLE, MO	1995/1996	76
KIRKSVILLE, MO	1996/1997	68
KIRKSVILLE, MO	1997/1998	55
KIRKSVILLE, MO	1998/1999	66
KIRKSVILLE, MO	1999/2000	57

2000 - 2001 PROJECTED PEAK DAY REQUIREMENTS
BUTLER, MO AREA (Panhandle Eastern Pipeline)
PEAK DAY: 72 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	3,437	0.0317	0.01447267	109	50	3,690
COMMERCIAL FIRM	529	0.0509	0.03621146	27	19	1,406
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	3,966			136	69	5,096
INTERRUPTIBLE	2					290
TOTAL PEAK THRUPUT	3,968			136	69	5,386

JANUARY 4, 1999
BUTLER, MO AREA (Panhandle Eastern Pipeline)
Actual Day Comparison 65 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	3,382	0.0317	0.01447267	107	49	3,289
COMMERCIAL FIRM	511	0.0509	0.03621146	26	19	1,229
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	3,893			133	67	4,518
INTERRUPTIBLE	2					290
TOTAL PEAK THRUPUT	3,895			133	67	4,808

Actual Flow for Firm Customers on January 4, 1999 was 4,535 MCF

DECEMBER 20, 1999
BUTLER, MO AREA (Panhandle Eastern Pipeline)
Actual Day Comparison 48 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	3,398	0.0317	0.014473	108	49	2,469
COMMERCIAL FIRM	521	0.0509	0.036211	26	19	1,252
INDUSTRIAL FIRM	0					0
TOTAL FIRM SALES	3,919			134	68	3,721
INTERRUPTIBLE	2					0
TOTAL PEAK THRUPUT	3,921			134	68	3,721

Actual Flow for Firm Customers on December 20, 1999 was 3,318 MCF and was 3,293 on December 21, 1999. Both days had 48 heating degree days.

Kansas City, Mo HDD Statistics

LOCATION	WINTER PERIOD	MAXIMUM HDD'S
Kirksville, Mo	1972/1973	66
Kirksville, Mo	1973/1974	71
Kirksville, Mo	1974/1975	58
Kirksville, Mo	1975/1976	65
Kirksville, Mo	1976/1977	71
Kirksville, Mo	1977/1978	64
Kirksville, Mo	1978/1979	70
Kirksville, Mo	1979/1980	62
Kirksville, Mo	1980/1981	67
Kirksville, Mo	1981/1982	76
Kirksville, Mo	1982/1983	53
Kirksville, Mo	1983/1984	77
Kirksville, Mo	1984/1985	68
Kirksville, Mo	1985/1986	61
Kirksville, Mo	1986/1987	52
Kirksville, Mo	1987/1988	68
Kirksville, Mo	1988/1989	67
Kirksville, Mo	1989/1990	80
Kirksville, Mo	1990/1991	67
Kirksville, Mo	1991/1992	50
Kirksville, Mo	1992/1993	61
Kirksville, Mo	1993/1994	59
Kirksville, Mo	1994/1995	59
Kirksville, Mo	1995/1996	67
Kirksville, Mo	1996/1997	64
Kirksville, Mo	1997/1998	56
Kirksville, Mo	1998/1999	65
Kirksville, Mo	1999/2000	48

2000 - 2001 PROJECTED PEAK DAY REQUIREMENTS
KIRKSVILE, MO AREA (ANR Pipeline)
PEAK DAY: 75 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	5,410	0.0361	0.013127	195	71	5,521
COMMERCIAL FIRM	833	0.1932	0.038471	161	32	2,564
INDUSTRIAL FIRM	4					415
TOTAL FIRM SALES	6,247			356	103	8,500
INTERRUPTIBLE	6					2,802
TOTAL PEAK THRUPUT	6,253			356	103	11,302

JANUARY 4, 1999
KIRKSVILE, MO AREA (ANR Pipeline)
Actual Day Comparison 66 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	5,102	0.0361	0.013127	184	67	4,604
COMMERCIAL FIRM	1,027	0.1932	0.038471	198	40	2,806
INDUSTRIAL FIRM	3					415
TOTAL FIRM SALES	6,132			382	106	7,825
INTERRUPTIBLE	6					2,138
TOTAL PEAK THRUPUT	6,138			382	106	9,963

Actual Flow for Firm Customers on January 4, 1999 was 8,026 MCF

JANUARY 26, 2000
KIRKSVILE, MO AREA (ANR Pipeline)
Actual Day Comparison 49 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	5,213	0.0361	0.013127	188	68	3,541
COMMERCIAL FIRM	952	0.1932	0.038471	184	37	2,601
INDUSTRIAL FIRM	4					262
TOTAL FIRM SALES	6,169			372	105	6,404
INTERRUPTIBLE	6					1,578
TOTAL PEAK THRUPUT	6,175			372	105	7,982

Actual Flow for Firm Customers on January 26, 2000 was 6,123 MCF

Kirksville, Mo HDD Statistics

LOCATION	WINTER PERIOD	MAXIMUM HDD'S
Kirksville, Mo	1960/1961	67
Kirksville, Mo	1961/1962	72
Kirksville, Mo	1962/1963	74
Kirksville, Mo	1963/1964	69
Kirksville, Mo	1964/1965	70
Kirksville, Mo	1965/1966	75
Kirksville, Mo	1966/1967	62
Kirksville, Mo	1967/1968	69
Kirksville, Mo	1968/1968	66
Kirksville, Mo	1969/1970	70
Kirksville, Mo	1970/1971	67
Kirksville, Mo	1971/1972	74
Kirksville, Mo	1972/1973	65
Kirksville, Mo	1973/1974	72
Kirksville, Mo	1974/1975	67
Kirksville, Mo	1975/1976	66
Kirksville, Mo	1976/1977	74
Kirksville, Mo	1977/1978	67
Kirksville, Mo	1978/1979	69
Kirksville, Mo	1979/1980	62
Kirksville, Mo	1980/1981	72
Kirksville, Mo	1981/1982	76
Kirksville, Mo	1982/1983	65
Kirksville, Mo	1983/1984	80
Kirksville, Mo	1984/1985	76
Kirksville, Mo	1985/1986	65
Kirksville, Mo	1986/1987	58
Kirksville, Mo	1987/1988	64
Kirksville, Mo	1988/1989	68
Kirksville, Mo	1989/1990	77
Kirksville, Mo	1990/1991	68
Kirksville, Mo	1991/1992	55
Kirksville, Mo	1992/1993	60
Kirksville, Mo	1993/1994	72
Kirksville, Mo	1994/1995	61
Kirksville, Mo	1995/1996	76
Kirksville, Mo	1996/1997	68
Kirksville, Mo	1997/1998	55
Kirksville, Mo	1998/1999	66
Kirksville, Mo	1999/2000	57

2000 - 2001 PROJECTED PEAK DAY REQUIREMENTS
INTEGRATED SYSTEM AREA
PEAK DAY: 68 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	25,516	0.0277	0.015296	706	390	27,246
COMMERCIAL FIRM	3,230	0.1143	0.044832	369	145	10,216
INDUSTRIAL FIRM	8					3,132
TOTAL FIRM SALES	28,754					40,594
INTERRUPTIBLE	35					10,082
TOTAL PEAK THRUPUT	28,789			0	0	50,676

DECEMBER 30, 1998
INTEGRATED SYSTEM AREA
Actual Day Comparison 46 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	25,787	0.0277	0.015296	713	394	18,857
COMMERCIAL FIRM	3,211	0.1143	0.044832	367	144	6,989
INDUSTRIAL FIRM	8					3,371
TOTAL FIRM SALES	29,006					29,217
INTERRUPTIBLE	35					3,883
TOTAL PEAK THRUPUT	29,041			0	0	33,100

Actual Flow for Firm Customers on December 30, 1998 was 28,978 MCF

DECEMBER 21, 1999
INTEGRATED SYSTEM AREA
Actual Day Comparison 44 HDDs

CUSTOMER	NUMBER OF CUSTOMERS	DAILY BASE/ CUSTOMER	HEAT USE/ CUSTOMER/DDD	TOTAL BASE LOAD	TOTAL MCF/DDD	TOTAL PEAK DAY
RESIDENTIAL	25,468	0.0277	0.0153	704	390	18,624
COMMERCIAL FIRM	3,206	0.1143	0.0448	367	144	6,979
INDUSTRIAL FIRM	8					2,565
TOTAL FIRM SALES	28,682					28,168
INTERRUPTIBLE	35					3,712
TOTAL PEAK THRUPUT	28,717			0	0	31,880

Actual Flow for Firm Customers on December 21, 1999 was 27,472 MCF

Paducah, KY HDD Statistics

LOCATION	WINTER PERIOD	MAXIMUM HDD'S
PADUCAH BARKLEY REGIONAL AP	1960/1961	60
PADUCAH BARKLEY REGIONAL AP	1961/1962	65
PADUCAH BARKLEY REGIONAL AP	1962/1963	63
PADUCAH BARKLEY REGIONAL AP	1963/1964	52
PADUCAH BARKLEY REGIONAL AP	1964/1965	59
PADUCAH BARKLEY REGIONAL AP	1965/1966	59
PADUCAH BARKLEY REGIONAL AP	1966/1967	50
PADUCAH BARKLEY REGIONAL AP	1967/1968	59
PADUCAH BARKLEY REGIONAL AP	1968/1968	50
PADUCAH BARKLEY REGIONAL AP	1969/1970	62
PADUCAH BARKLEY REGIONAL AP	1970/1971	54
PADUCAH BARKLEY REGIONAL AP	1971/1972	60
PADUCAH BARKLEY REGIONAL AP	1972/1973	46
PADUCAH BARKLEY REGIONAL AP	1973/1974	54
PADUCAH BARKLEY REGIONAL AP	1974/1975	46
PADUCAH BARKLEY REGIONAL AP	1975/1976	56
PADUCAH BARKLEY REGIONAL AP	1976/1977	63
PADUCAH BARKLEY REGIONAL AP	1977/1978	56
PADUCAH BARKLEY REGIONAL AP	1978/1979	55
PADUCAH BARKLEY REGIONAL AP	1979/1980	51
PADUCAH BARKLEY REGIONAL AP	1980/1981	54
PADUCAH BARKLEY REGIONAL AP	1981/1982	66
PADUCAH BARKLEY REGIONAL AP	1982/1983	40
PADUCAH BARKLEY REGIONAL AP	1983/1984	66
PADUCAH BARKLEY REGIONAL AP	1984/1985	72
PADUCAH BARKLEY REGIONAL AP	1985/1986	56
PADUCAH BARKLEY REGIONAL AP	1986/1987	47
PADUCAH BARKLEY REGIONAL AP	1987/1988	54
PADUCAH BARKLEY REGIONAL AP	1988/1989	52
PADUCAH BARKLEY REGIONAL AP	1989/1990	68
PADUCAH BARKLEY REGIONAL AP	1990/1991	54
PADUCAH BARKLEY REGIONAL AP	1991/1992	45
PADUCAH BARKLEY REGIONAL AP	1992/1993	51
PADUCAH BARKLEY REGIONAL AP	1993/1994	68
PADUCAH BARKLEY REGIONAL AP	1994/1995	47
PADUCAH BARKLEY REGIONAL AP	1995/1996	63
PADUCAH BARKLEY REGIONAL AP	1996/1997	61
PADUCAH BARKLEY REGIONAL AP	1997/1998	43
PADUCAH BARKLEY REGIONAL AP	1998/1999	50
PADUCAH BARKLEY REGIONAL AP	1999/2000	44