

# FIRM TRANSPORTATION GAS SUPPLIER PRESENTATIONS



## GAS LOAD FORECAST

## GAS LOAD FORECAST OVERVIEW

- Daily Forecast Process
- Indexed Temperature
- Usage Factors
- Review Past Years Imbalances
- Imbalance Report
- TSQ at 80% of MDQ
- 2006/2007 Activity

## DAILY FORECAST PROCESS

**WEATHER ENTRY**

Forecast

Forecast Date	Predicted Indexed Temp	Predicted System Load	Holiday
10/16/2003	54	116576	No
10/17/2003	49	151576	No
10/18/2003	51	141576	No
10/19/2003	54	117576	No

Actual

Date	Actual Indexed Temp
10/13/2003	63

OK Cancel

## INDEXED TEMPERATURE

Takes into account the effect wind, sun and lag have on the average temperature as it relates to gas load

Examples:

- Oct. 16, 2003 – Average temperature was predicted to be 54 degrees with 7 mph wind and 40% sun. Previous day's average temperature was 51 degrees. The effective or Indexed Temperature is 54 degrees.
- Oct. 17, 2003 – Average temperature was predicted to be 46 degrees with 10 mph wind and 50% sun. Previous day's average temperature was 54 degrees. The effective or Indexed Temperature is 49 degrees.

## DAILY FORECAST PROCESS

- Oct. 16, 2003 – indexed temperature is 54 degrees
- The forecast model then calculates a “typical” load for each revenue class at 54 degrees
  - Typical Residential = .1626 Mcf
  - Typical Commercial = .8959 Mcf
  - Typical Industrial = 6.9679 Mcf
  - Typical OPA = 3.0547 Mcf

## DAILY FORECAST PROCESS (cont.)

Example: Supplier "A" has 2 customers – one is an industrial customer and the other is a commercial customer

- The industrial customer has a UF =2.5 and the commercial customer has a UF =0.5
- The TSQ for this Supplier is calculated as:

$$\text{Typical Ind. } (6.9679) * \text{UF } (2.5) = 17.4198$$

$$\underline{\text{Typical Com. } (.8959) * \text{UF } (0.5) = .4480}$$

$$\text{Raw TSQ} = 17.8678 \text{ Mcf}$$

## USAGE FACTORS

- Calculated once per year by month, by billing cycle and by revenue class for all Duke Energy Ohio, Inc. customers
- Example: industrial customer on the previous slide
  - This customer is in billing cycle 1
  - Last October, the meter was read on the first of the month – the October 2002 bill was for 351.4 Mcf
  - The previous meter read was on September 1, 2002
  - The 351.4 Mcf accounts for gas used from September 2, 2002 to October 1, 2002 (a 30-day period)

## USAGE FACTORS (cont.)

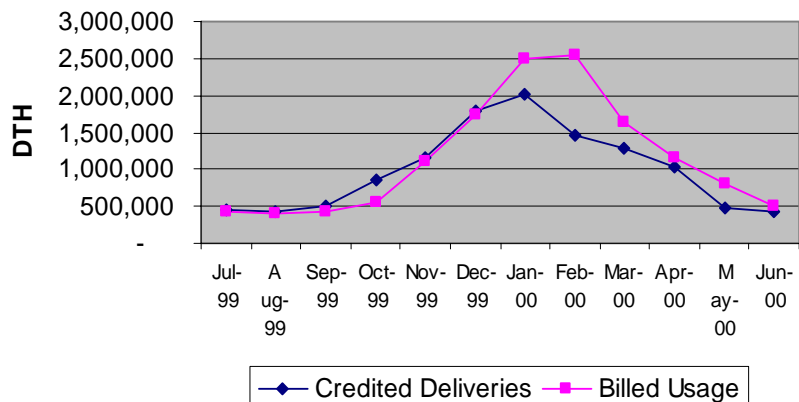
To calculate the Oct. UF for this customer:

- Take the actual “indexed temperatures” from Sept. 2, 2002 to Oct. 1, 2002
- Calculate “typical” industrial for each day
- The sum of the “typical industrial” is totaled for the 30-day period (140.5) and compared to the customer’s actual usage for the same 30-day period
- $UF = \text{Actual usage } (351.4) / (140.5) = 2.5$

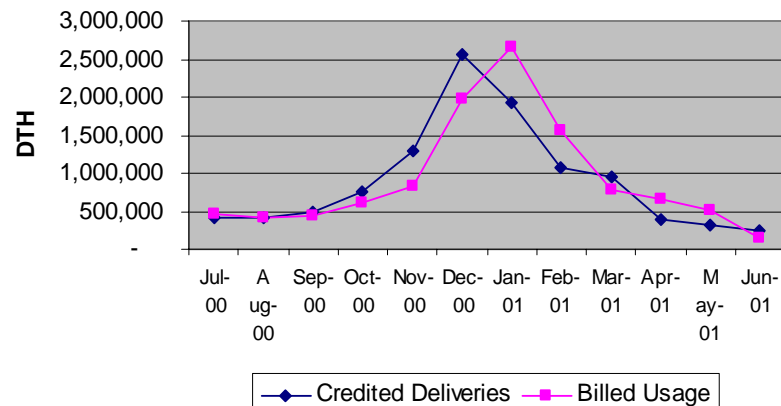
## REVIEW LOAD FORECAST PROCESS

- Index temperature (effective temperature)
- Forecast a “typical” for each revenue class based on weather response functions (residential, commercial, industrial, OPA)
- Apply a customer UF (Usage Factor) to the “typical” forecast
- Scale to system forecast

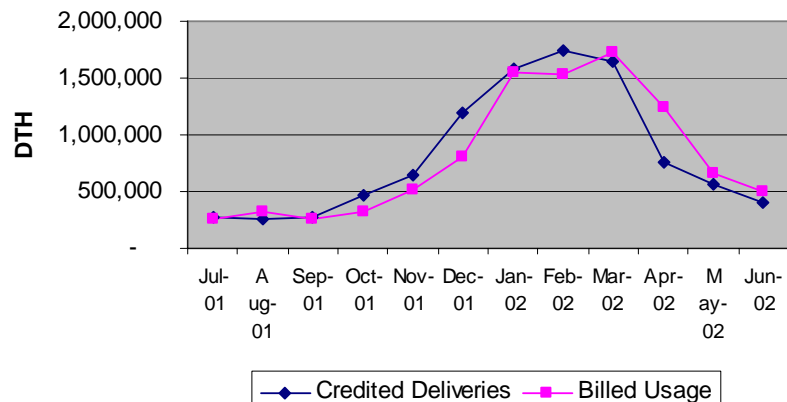
**CCP Supplier Deliveries v. Customer Usage**  
1999-2000 True-Up Period



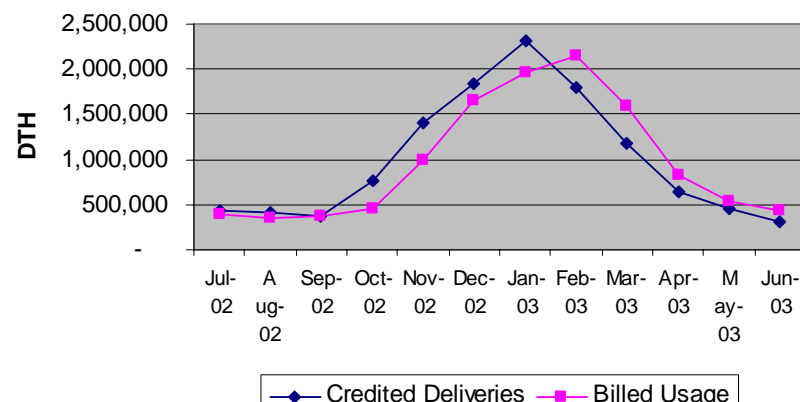
**CCP Supplier Deliveries v. Customer Usage**  
2000-2001 True-Up Period



**CCP Supplier Deliveries v. Customer Usage**  
2001-2002 True-Up Period



**CCP Supplier Deliveries v. Customer Usage**  
2002-2003 True-Up Period



<b>The Cincinnati Gas &amp; Electric Company - Firm Transportation Program</b>										<b>July 2002 to Date - Imbalance Report</b>			
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<b><i>Average for All Current Suppliers</i></b>													
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Month	Year	Billed Usage (burner tip mcf)	Btu	Billed Usage (burner tip dth)	Net Usage (burner tip dth)	Credited Deliveries (city gate dth)	Less Prior Period Payback (city gate dth)	Net Credited Deliveries (city gate dth)	Fuel	Credited Deliveries (burner tip dth)	Net Imbalance (burner tip dth)	Net Imbalance (city gate dth)		
July	2002	16,411.9	1.026	16,838.6	16,838.6	18,819.3	0.0	18,819.3	0.991	18,650.0	1,811.4	1,827.9		
August	2002	15,252.6	1.026	15,649.1	15,649.1	12,760.3	4,046.2	16,806.5	0.991	16,655.2	1,006.1	1,015.2		
September	2002	15,404.6	1.026	15,805.1	15,805.1	16,529.3	0.0	16,529.3	0.991	16,380.5	575.4	580.6		
October	2002	19,498.7	1.026	20,005.6	20,005.6	31,539.1	0.0	31,539.1	0.990	31,223.7	11,218.1	11,331.4		
November	2002	41,921.9	1.026	43,011.8	43,011.8	57,152.8	0.0	57,152.8	0.990	56,581.3	13,569.5	13,706.6		
December	2002	69,948.2	1.026	71,766.9	71,766.9	87,444.5	0.0	87,444.5	0.990	86,570.0	14,803.1	14,952.6		
January	2003	83,159.7	1.026	85,321.9	85,321.9	103,637.0	0.0	103,637.0	0.990	102,600.7	17,278.8	17,453.3		
February	2003	90,805.8	1.026	93,166.7	93,166.7	79,374.8	0.0	79,374.8	0.990	78,581.1	(14,585.6)	(14,732.9)		
March	2003	67,618.5	1.027	69,444.2	69,444.2	51,565.1	0.0	51,565.1	0.990	51,049.5	(18,394.7)	(18,580.5)		
April	2003	34,973.5	1.027	35,917.8	35,917.8	27,989.3	0.0	27,989.3	0.990	27,709.5	(8,208.3)	(8,291.2)		
May	2003	22,356.3	1.028	22,982	22,982.3	19,616.8	0.0	19,616.8	0.990	19,420.6	(3,561.7)	(3,597.7)		
June	2003	18,204.0	1.028	18,713.7	18,713.7	13,187.0	0.0	13,187.0	0.990	13,055.1	(5,658.6)	(5,715.8)		
Totals		495,556		508,624	508,623.7	519,615.5	4,046.2	523,661.7		518,477.2	9,853.5	9,949.5	*	
											1.9%			

**\*\*\*IMPORTANT REMINDER\*\*\* Please keep in mind that imbalances calculated on less than a twelve month basis do not reflect any unbilled usage estimate to adjust for the difference between cycle billing usage and actual calendar usage.**

**If you feel there are discrepancies with the information contained in this report, please contact Phyllis Baker at 513-287-3106.**

**\* Imbalance for payback will actually be calculated as "Net Imbalance - burner tip dth" X current month fuel. (Negative net imbalance indicates supplier owes CG&E. Positive net imbalance indicates CG&E owes supplier.)**

## TSQ IS AT 80 % OF MDQ

Two options available to you:

- Deliver your TSQ
- Deliver 80 % of MDQ
  - Difference is cashed out at Duke Energy's cost of producing propane/air or alternate peaking supply

## 2007 ACTIVITY

- New UF (Usage Factors)
- Weather response functions and load forecast methodology will remain the same.
- The calculation of imbalance was changed beginning July 1, 2006 to reflect deliveries from the 16th of the previous month to the 15th of the current month
  - This matches billed usage with deliveries more closely and should reduce month to month imbalances caused by unbilled revenue