



Operational Flow Orders

Don Brandon
Gas Reliability Specialist



Types of OFOs (from CGT's tariff)



- Standard OFO
 - “Standard OFO shall mean an OFO requiring pre-emptive or preventative actions or measures to neutralize or reduce threats, or otherwise preserve the integrity of all or a portion of Pipeline’s system, as determined by Pipeline at its sole discretion.”
- Emergency Response OFO
 - “Emergency Response OFO shall mean an OFO requiring immediate actions or measures to neutralize or reduce threats or otherwise preserve the integrity of all or a portion of Pipeline’s system, as determined by Pipeline in its sole discretion.”

Standard OFOs



- Preemptive or preventative in nature
- May be driven by weather or shipper imbalances
 - Scheduled Receipts < Forecasted Demand or vice versa
- Reduces or neutralizes threats
- Preserves the integrity of all or a portion of CGT's system
- If feasible, issued 12 hours before the last nomination cycle prior to the OFO becoming effective
- Penalty for non-compliance: \$5 per Dt plus the highest Gas Index Price for that Gas Day, the Preceding Gas Day, or the following Gas Day

Emergency OFOs



- Curative or reactive in nature
 - Response to an unforeseen or Force Majeure event
 - CGT has not issued an Emergency OFO to date
- Requires immediate actions to reduce or neutralize threats to the integrity of all or a portion of CGT's system
- If feasible, issued 2 hours before the last nomination cycle prior to the OFO becoming effective
- Penalty for non-compliance: \$20 per Dt plus the highest Gas Index Price for that Gas Day, the Preceding Gas Day, or the following Gas Day

CGT's OFO History



- Four OFO's during the Winter of 2006-2007
 - 12/8/06 – 12/9/06 (Standard OFO for negative imbalances)
 - 1/31/07 – Was subsequently cancelled
 - 2/5/07 – 2/6/07 (Standard OFO for negative imbalances)
 - 2/14/07 – 2/17/07 (Standard OFO for negative imbalances)
- Two OFO's during the Winter of 2007-2008
 - 1/2/08 – 1/4/08 (Standard OFO for negative imbalances)
 - 1/19/08 – 1/21/08 (Standard OFO for negative imbalances)
- Two OFO's during the Winter of 2008-2009
 - 1/15/09 – 1/16/09 (Standard OFO for negative imbalances)
 - 2/3/09 – 2/5/09 (Standard OFO for negative imbalances)



Factors Considered for OFOs



- Weather forecast
 - Heating degree days
 - Length of extreme weather events
- Historic demand
 - CGT looks at similar days in the past with the same number of HDDs
 - From this, CGT can forecast demand with a good degree of certainty
 - CGT notes changes that may have occurred and adjusts the forecast
- Pipeline condition
 - Line inventory and pressures
- Scheduled quantities
 - CGT compares currently scheduled receipts into the system with projected demand (based on the factors above)
 - Based on the projected system imbalance and the condition of line inventory/system pressures, CGT may post an OFO probability notice

Calculation of Heating Degree Days



Monday September 30, 2009

- Daily High: 74
- Daily Low: 48
- $74 + 48 / 2 = 61$
- $65 - 61 = 4$ HDD



OFO Probability Notice



- The OFO Probability Notice is CGT's primary method of communicating the current state of the pipeline
- CGT typically posts these notices in three day increments

Sample OFO Probability Notice

The following information is NOT an OFO (Operational Flow Order) notice, but is CGT's projection of the likelihood of implementing an OFO to remedy system balancing issues based on current conditions.

OFO Probability:

Wednesday, January 16, 2009: HL for Negative imbalances

Thursday, January 17, 2009: TCTC for Negative imbalances

Friday, January 18, 2009: UL for Negative imbalances

CGT monitors system conditions and supply nominations for each cycle. If CGT determines that adverse changes have occurred in system conditions or one of the scheduling cycles, CGT may need to issue an OFO requiring shippers to take corrective actions. CGT can implement an OFO on 12 hours notice or less depending on the situation. Shippers are encouraged to have personnel available, particularly over the weekend, in the event that it becomes necessary to implement an OFO.



Probability Notice Codes



UL (Unlikely)

- An OFO is unlikely for this Gas Day.
- Linepack Level can handle a positive/negative imbalance.
- For Shippers it is business as usual.

TCTC (To Close to Call)

- An OFO could be issued based on the projected imbalance condition of the system.
- Linepack Level is borderline to be able to handle a positive/negative imbalance.
- All Shippers should review their demand forecast and adjust supply, if needed, to remedy any projected imbalances.



Probability Notice Codes



HL (Highly Likely)

- An OFO will be issued if the projected imbalance condition of the system does not moderate.
- Linepack Level is critical and cannot handle a positive/negative imbalance.
- All Shippers should take immediate effective action to remedy any imbalances

OFO (Operational Flow Order)

- An OFO is in effect for positive/negative imbalances.
- All Shippers should adhere to the OFO notice posted on CGT's Internet Website.

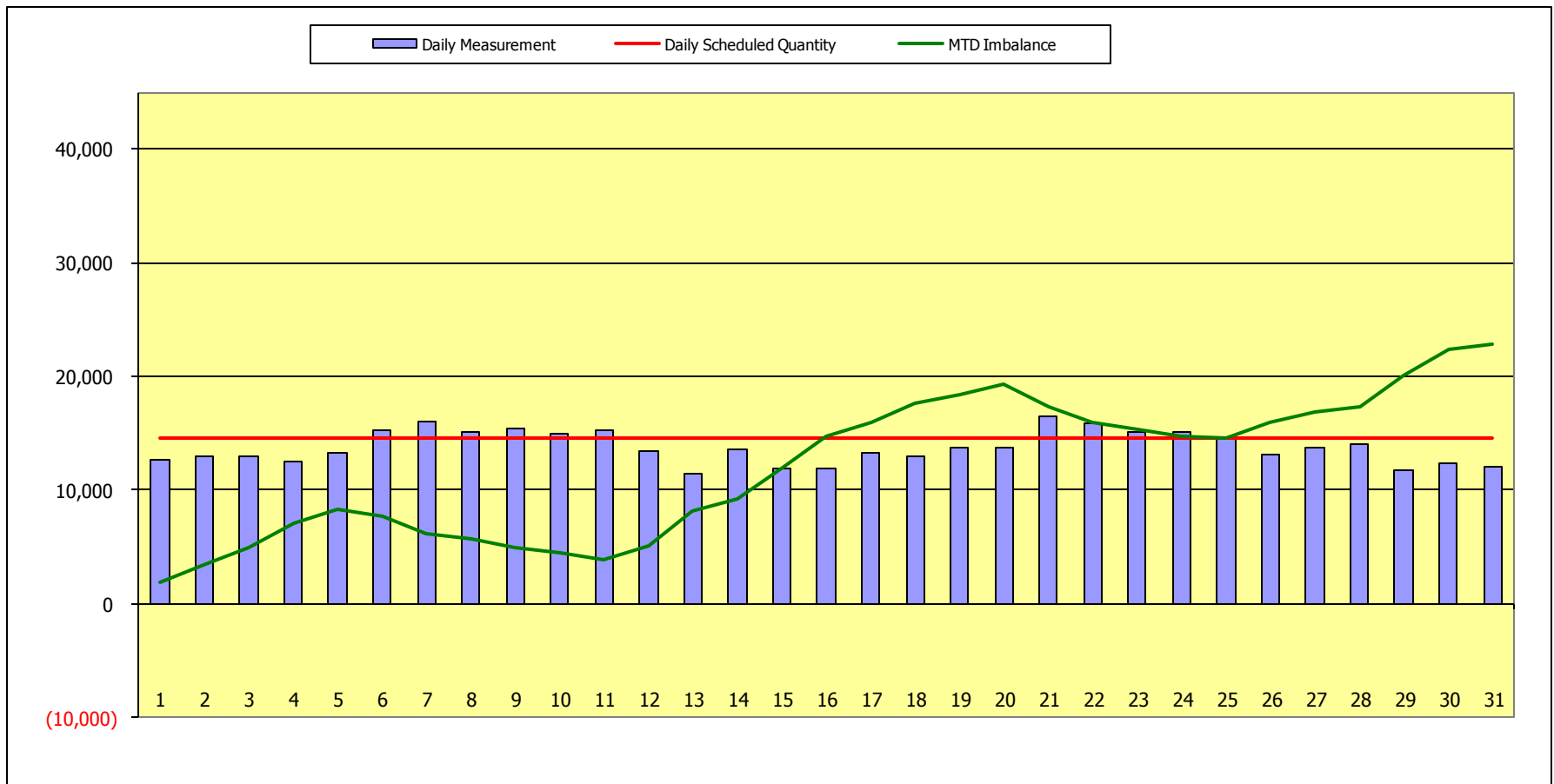




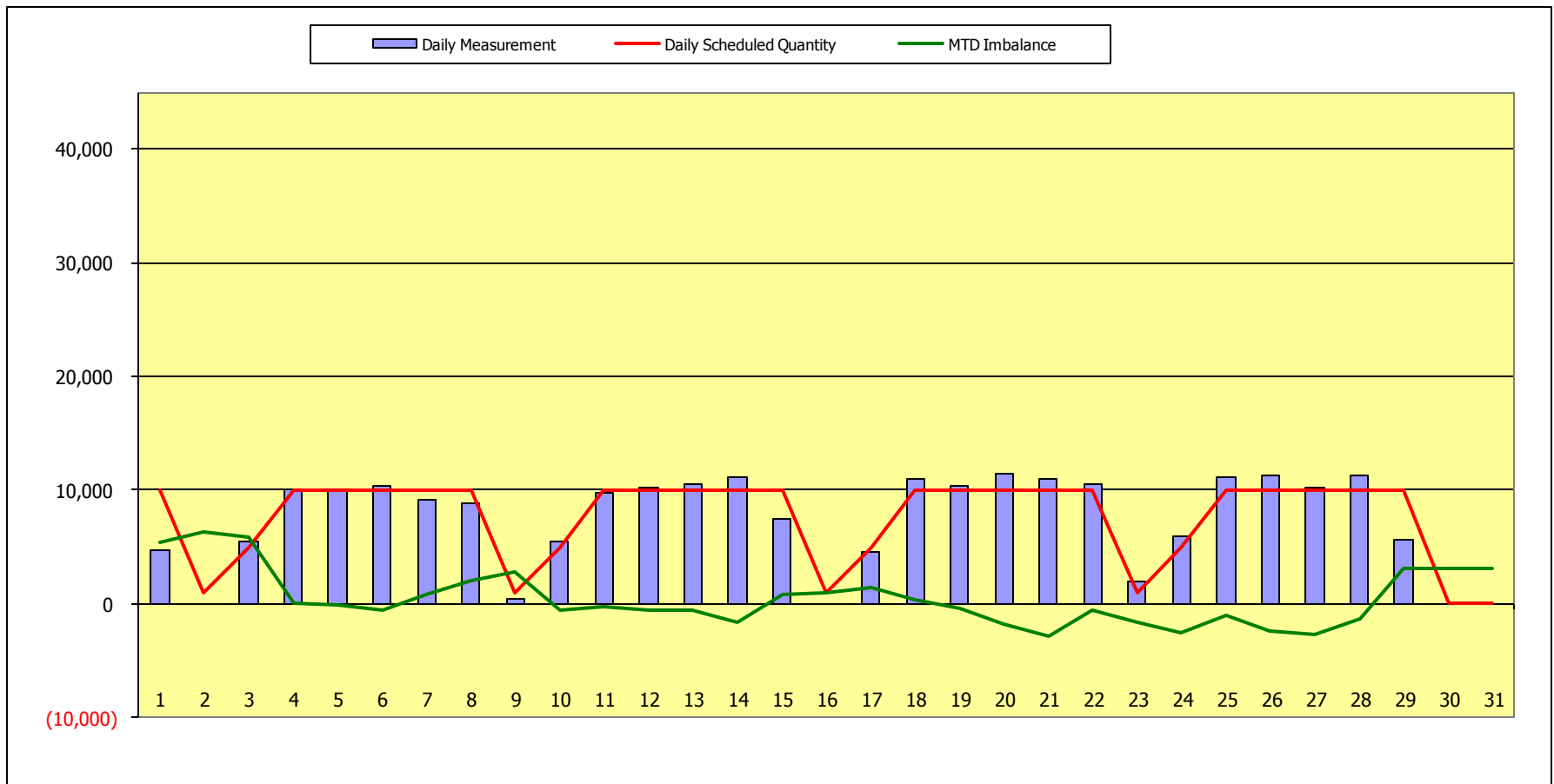
You can help minimize OFO frequency by:

- Nom what you think you will use each day
 - Not just an average for the month
- Make adjustments daily if necessary
- Utilize intraday noms when needed
- Make adjustments for unusual events such as plant shutdowns, system maintenance, etc...

Daily Average Nomination



Day To Day Nomination





Questions?

