



# Assessment of Gas Scheduling Changes to Assist Power Customers

Presentation to NAESB

April 22, 2014



# Issues Raised by Electric Industry

- Timely nomination deadline occurs before electric dispatch – more acute in capacity-constrained markets
- Limited scheduling opportunities to manage intraday changes in electric load
- Too many hours between the last opportunity to schedule and the end of the gas day

# Natural Gas Council Gas Day Initiative

- September 2013: Council approved initiation of initiative
  - Willing to explore changes to FERC policies on the gas day and gas nomination schedule that would improve coordination with electric day and electric commitment and dispatch schedules, without imposing undue costs on gas customers
  - Recognize central issue of how to expand gas infrastructure, particularly in Northeast, will not be solved by scheduling issues
- Steering Committee
  - Representatives from each sector (6 producers, 6 pipelines, 6 LDCs)
- Technical Working Group
  - Over 70 schedulers, operators, traders, regulatory reps from each sector
  - Industrial customers participated
- Presented to Power Sector (February 2014)



# Operational Considerations

- Gas industry unbundled: Producers, gathering systems, processors, intrastate pipelines, interstate pipelines and LDCs all need to coordinate
- Infrastructure in remote locations (plants, compressors, thousands of wells) and millions of miles of pipelines (gathering, transmission and distribution)
  - Many unmanned and not supported electronically, requiring physical changes at times to maintain services and operations
- Physical operations will remain prevalent part of gas industry
  - Start of gas day requires physical operations such as redirecting flows from one pipeline to another
- Producers must flow all production on ratable basis to ensure operations not adversely impacted
- A single North American Gas Day has served the industry well for over 15 years

# NGC Gas Industry Consensus Proposal

- Results in material changes and costs for gas industry, but facilitates greater coordination and generator participation in scheduling while maintaining effectiveness and reliability of the gas system
- Objectives of consensus:
  - Achieve comprehensive and lasting resolution of scheduling issues
  - Implement conforming changes in both industries that ensure scheduling improvements provide maximum benefits

# Current Gas Schedule

<b>Gas Nomination Timeline (all times Central Clock Time)</b>						
<b>Cycles</b>	<b>Nomin- ation Deadline</b>	<b>Confirm- ations</b>	<b>Schedule Issued</b>	<b>Start of Gas Flow</b>	<b>Remaining Gas Day</b>	<b>Firm Bumping Rights</b>
Timely	11:30 a.m.	3:30 p.m.	4:30 p.m.	9:00 a.m.		n/a
Evening	6:00 p.m.	9:00 p.m.	10:00 p.m.	9:00 a.m.		Bumpable
Intraday 1	10:00 a.m.	1:00 p.m.	2:00 p.m.	5:00 p.m.	2/3 (16 hours)	Bumpable
Intraday 2	5:00 p.m.	8:00 p.m.	9:00 p.m.	9:00 p.m.	1/2 (12 hours)	No-Bump

# NGC Consensus

1. Extends Timely Nomination deadline to 1:00 pm CT (from current 11:30 am)
2. Provides two bumpable intraday cycles during business day (currently one)
3. Adds third, evening intraday cycle for early morning gas flow
4. Maintains 9:00 am CT start of gas day subject to further discussion with power sector

# Consensus Details

<b>Gas Nomination Timeline (all times Central Clock Time)</b>						
<b>Cycles</b>	<b>Nomin- ation Deadline</b>	<b>Confirm- ations</b>	<b>Schedule Issued</b>	<b>Start of Gas Flow</b>	<b>Remaining Gas Day</b>	<b>Firm Bumping Rights</b>
Timely	1:00 p.m.	4:30 p.m.	5:00 p.m.	9:00 a.m.		n/a
Evening	6:30 p.m.	9:00 p.m.	9:30 p.m.	9:00 a.m.		Bumpable
Intraday 1	9:00 a.m.	11:30 a.m.	12:00 p.m.	3:00 p.m.	3/4 (18 hours)	Bumpable
Intraday 2	2:00 p.m.	4:00 p.m.	4:30 p.m.	9:00 p.m.	1/2 (12 hours)	Bumpable
Intraday 3	9:00 p.m.	11:00 p.m.	11:30 p.m.	12:00 a.m.	3/8 (9 hours)	No Bump



# Current Gas Schedule vs. NGC Consensus

		Current	NGC Consensus
<b>Timely Cycle</b>	Nomination Deadline	11:30 a.m.	1:00 p.m.
	Confirmations	3:30 p.m.	4:30 p.m.
	Schedule Issued	4:30 p.m.	5:00 p.m.
	Start of Gas Flow	9:00 a.m.	9:00 a.m.
<b>Evening Cycle</b>	Nomination Deadline	6:00 p.m.	6:30 p.m.
	Confirmations	9:00 p.m.	9:00 p.m.
	Schedule Issued	10:00 p.m.	9:30 p.m.
	Start of Gas Flow	9:00 a.m.	9:00 a.m.
<b>Intraday 1 Cycle</b>	Nomination Deadline	10:00 a.m.	9:00 a.m.
	Confirmations	1:00 p.m.	11:30 a.m.
	Schedule Issued	2:00 p.m.	12:00 noon
	Start of Gas Flow	5:00 p.m.	3:00 p.m.
	Hours of Flow	16 hours	18 hours
<b>Intraday 2 Cycle</b>	Nomination Deadline	5:00 p.m.	2:00 p.m.
	Confirmations	8:00 p.m.	4:00 p.m.
	Schedule Issued	9:00 p.m.	4:30 p.m.
	Start of Gas Flow	9:00 p.m.	9:00 p.m.
	Hours of Flow	12 hours	12 hours
	Firm Bumping Rights	No-bump	Bumpable
<b>Intraday 3 Cycle</b>	Nomination Deadline	-	9:00 p.m.
	Confirmations	-	11:00 p.m.
	Schedule Issued	-	11:30 p.m.
	Start of Gas Flow	-	12:00 a.m.
	Hours of Flow	-	9 hours
	Firm Bumping Rights	-	No-bump

# Timely Nomination

- Moving the Timely nomination deadline to 1:00 pm CT:
  - Allows generators increased opportunities to make a timely nomination, particularly if electric dispatch schedules are also changed to conform to this modification
  - Increases value of firm transportation
  - Helps reduce forecasting errors

# Timely Nomination

- Moving the Timely nomination deadline to 1:00 pm CT:
  - Is doable but adds costs due to extending the business day for scheduling
    - Increases time by schedulers and traders: anywhere from 20 to 30% increases based on size of company's scheduling division
  - Reduces time for pipelines and LDCs to confirm and schedule and for producers and customers to react
  - Pipelines and LDCs need four hours to complete the confirmation process for the Timely cycle
    - Moving beyond 1:00 pm CT is highly problematic – if the cycle not completed by end of the business day, transactions are unsettled until the evening cycle

# Intraday Changes

- Providing 2 bumpable intraday cycles during business hours increases opportunities for generators to:
  - Manage intraday variations in load and accommodate changes in dispatch orders throughout the day
  - Bump interruptible transportation during the day if they hold firm transportation
  - Flow more gas intraday (18 hours of flow/75% at ID 1, as opposed to the current maximum intraday flow of 16 hours/67% in ID 1)

# Intraday Changes

- The intraday schedule should provide:
  - Adequate time to complete the cycle
  - Adequate time between cycles (one hour)
  - No overlap between cycles (intraday and day-ahead)
  - Bumpable cycles that conclude by the end of the business day so that schedulers and traders can end their day knowing that their gas will flow
    - If a nomination is not confirmed, shipper must coordinate alternative supply and transportation arrangements
- Adding additional intraday cycles will result in:
  - Increased staffing costs
  - Bumping later in the day – leaving less time in the business day to redo transactional arrangements when bumping occurs
  - Additional complications – shortened cycle times may make process more difficult depending on how active the cycle turns out to be

# Additional Late Intraday Cycle

- Adding a third, late intraday cycle for gas flow at 12:00 midnight:
  - Increases opportunities for generators to arrange for fuel supplies starting at the beginning of the electric day, helping to avoid derates during the morning electric ramp-up period
  - Increases opportunities for generators to accurately forecast gas needs and manage imbalances prior to the end of the gas day
  - Reduces the gap between the last scheduling opportunity and the end of the gas day to 12 hours (with 9 hours of gas flow remaining)



# Additional Late Intraday Cycle

- Cycles after normal business hours must be no-bump
  - Creates cascading effect on supply transactions that cannot be easily redirected if cut in later periods
  - Not all industry participants are financially equipped to stay open to deal with late night transactions
- Given potential lack of liquidity in the evening, cycle may be primarily used to move gas into or out of storage
- Increased staffing may be required to manage an additional late cycle

# Start of Gas Day

## Moving the start of the Gas Day from 9:00 am CT

- Nighttime gas day start times raise a number of operational and financial concerns
- Shipper imbalances may become more difficult to manage if gas day is moved to night-time
- Different gas day start times have vastly different impacts by region
- Some existing contracts based on the start of the gas day (options need to be exercised prior to gas day start)
- NGC members recognize need to accommodate power market needs while limiting gas industry operational disruptions



# Further Dialogue

- Natural Gas Council committed to further dialogue
  - Willing to consider suggestions that recognize gas industry operations and that are effective in improving electric reliability

