Millennium Pipeline Update – What is the pathway ahead?

NGA 2017 Regional Market Trends Forum
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Millennium Pipeline System Overview

Infrastructure & Oversight

- ~244 Interstate Pipeline Miles
- Critical Energy Conduit for New York & Northeast
- Highly Regulated Industry
  - Federally Regulated
    - Rates & Facilities (FERC)
    - Safety (PHMSA)
    - U.S. Army Corps of Engineer
    - U.S. Fish and Wildlife
    - Environmental Protection Agency
- State Regulated
  - NY Department Environmental Conservation
  - NY State Historic Preservation Office
Millennium Pipeline

Millennium Pipeline is owned by the partnership of:
• TransCanada - Columbia Pipeline Group
• National Grid
• DTE Energy

Millennium Pipeline interconnects with:
• Empire Pipeline
• Dominion Transmission
• National Fuel
• Columbia Gas Transmission
• Algonquin
• Stagecoach Storage
• Laser
• Bluestone

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Winter Operations Summary

- ZERO interruptions of firm service
- Two Operational Flow Orders
  - Affected eight critically cold days
    - Called to preserve integrity of system and balance hourly swings
  - Three days where firm contracts were limited to primary receipts and deliveries
    - Required to manage flows during unplanned maintenance
Working to improve the customer experience

- Tariff changes
  - Reorganize and clarify the language
  - Implement industry proven tools
    - Auto-PALs to assist customers with scheduling imbalances
    - Capacity sales to provide for pre-arranged releases

- Requested reporting of “Ramapo delivered” on InterContinental Exchange (ICE)
  - Improve pricing transparency for customers
ESU Project Overview

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Eastern System Upgrade (ESU)

- Increases capacity between Corning and Ramapo by 220,000 Dth/day
  - Customers are Northeast Utilities
  - Customers are seeking diversity of supply
- Increased supply at Ramapo benefits both New York and New England energy consumers
- Ramapo is a major supply point for New York State utilities and power plants

Millennium is in discussions with counterparties to contract the currently unsubscribed capacity – 20,500 Dth
Outlook for ESU Project

- **FERC Authorizations**
  - Filed July 29, 2016 after six months in pre-filing
  - Filed a Human Health Risk Assessment in February 2017
  - Received a “clean” Environmental Assessment on March 31, 2017
  - Comments on the EA were due on May 1, 2017

- **NYSDEC Authorizations**
  - Need air and 401 Water Permits from NYSDEC
  - NYSDEC expected to act on MPC’s 401 Water Permit by end of August 2017
  - No statutory deadline for action on air permits

- **ESU vs other projects denied permits**
  - 7.8 miles of looping along existing ROW
  - Adding compression at existing station; also constructing new station
  - Market pull
Valley Lateral Project Description

- 7.8 Mile 16” Lateral to CPV’s 650 MW Combined Cycle Power Plant
  - Reduces regional dependency on older less efficient power plants
  - Improves electric pricing for New York energy consumers
- Competitive Power Ventures is the sole customer

New market directly attached to Millennium – up to 127,200 Dt/d
Valley Lateral Project Regulatory Status

- Received a FERC order on Valley Lateral in November 2016
  - Construction was conditioned on receipt of Clean Water Act Section 401 certification

- Sought review of NYSDEC delay of this certification in the US Court of Appeals in the District of Columbia
  - We have met all Clean Water Act standards

- Valley Lateral Project vs other projects in New York that have been denied
  - Also greenfield, but much smaller - 7.8 miles of 16-inch pipeline
  - Will cross most streams and wetlands by trenchless method
  - Will serve gas fired generation facility that received air/clean water permits from NYSDEC
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What is the pathway ahead for pipelines in the Northeast?

“Don’t believe everything you read on the Internet just because there’s a picture with a quote next to it.”

—Abraham Lincoln
We ALL need to be proactive in messaging

- Opposition to natural gas infrastructure has filled the internet and regulatory filings with statements that pipeline operations and compressor stations emit Volatile Organic Compounds, “VOCs”
  - Benzene, Ethylbenzene, Formaldehyde, Toluene, Xylene
- Opposition fails to mention that MANY EVERYDAY activities emit VOCs
- Millennium invites you to review a report on the Millennium web site created by Gradient of Cambridge MA
Did you know?

- Modeled VOCs that will be emitted from the proposed ESU Highland compressor, running 24 hours/day x 365 days compare to other activities as follows:
  - Benzene exposure equivalent to:
    - Driving a car for about 5 minutes
    - Being outdoors in New York City for about 90 minutes
  - Ethylbenzene exposure equivalent to:
    - Driving a car for about 45 minutes
    - Being outdoors at a gas station for about 50 minutes
  - Toluene exposure equivalent to:
    - Driving a car for about 20 minutes
    - Being inside a nail salon for about 10 minutes

Comparison information was taken from peer-reviewed sources and is all footnoted in the Gradient report.