IROQUOIS GAS TRANSMISSION SYSTEM, L.P.

Northeast Gas Association
Regional Market Trends Forum

Implications for System Operations & Reliability
May 3, 2018
Hartford, CT
Iroquois Gas Transmission System

- Commenced Operations in 1991
- Primary Markets
  - New York City
  - Long Island
  - Connecticut
- 1.6 Bcf/d Physical Receipt Capability:
  - TransCanada = 1.2 Bcf/d
  - Algonquin = 0.4 Bcf/d
  - Dominion = 0.1 Bcf/d
- Piping
  - 416-mile of 30” and 24” pipeline
  - MAOP = 1440 psig
- Pipeline Interconnects:
  - TransCanada
  - Dominion
  - Tennessee (200 and 300 lines)
  - Algonquin
- 7 Compressor Stations - 106,400 HP
- Mainline Interzone Rate = $0.37/Dt
  $0.35 » $0.33 » $0.295/Dt
  (Max. Fuel = 1%)
- Eastchester Rate = $0.635/Dt
  $0.455 » $0.455 » $0.395/Dt
  (Max. Fuel = 4.5%)
2017/ Volumes Winter Volumes

27.4% Generators, 23.6% Interconnects, 49.0% LDC’s
3 Year Winter Volumes

November 1 - March 31 (Bcf)
## Historical Peak Day/Physical

<table>
<thead>
<tr>
<th>Location</th>
<th>Dt/d</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waddington</td>
<td>1,221,160</td>
<td>2/6/15</td>
</tr>
<tr>
<td>Brookfield</td>
<td>432,790</td>
<td>11/7/17</td>
</tr>
<tr>
<td>Waddington/Brookfield</td>
<td>1,544,556</td>
<td>3/5/15</td>
</tr>
<tr>
<td>Wright TGP</td>
<td>410,471</td>
<td>3/3/16</td>
</tr>
<tr>
<td>Wright &amp; Shelton TGP</td>
<td>509,128</td>
<td>3/3/16</td>
</tr>
<tr>
<td>South Commack</td>
<td>563,262</td>
<td>2/14/16</td>
</tr>
<tr>
<td>Hunts Point</td>
<td>356,830</td>
<td>1/20/09</td>
</tr>
<tr>
<td>Northport/South Commack/Hunts Point</td>
<td>860,927</td>
<td>2/7/10</td>
</tr>
<tr>
<td>D/S of Milford Compressor Station</td>
<td>912,185</td>
<td>1/12/10</td>
</tr>
<tr>
<td>Total Physical Deliveries – All Meters</td>
<td>1,537,971</td>
<td>12/14/17</td>
</tr>
</tbody>
</table>
Top 10 Total System Deliveries (Dth) 16/17 vs 17/18

<table>
<thead>
<tr>
<th>2016/2017 DTH</th>
<th>2017/2018 DTH</th>
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<tbody>
<tr>
<td>1,466,400</td>
<td>1,537,971</td>
</tr>
<tr>
<td>1,465,202</td>
<td>1,523,820</td>
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<tr>
<td>1,447,007</td>
<td>1,506,366</td>
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<tr>
<td>1,429,957</td>
<td>1,497,344</td>
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<tr>
<td>1,420,189</td>
<td>1,495,866</td>
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<tr>
<td>1,408,065</td>
<td>1,493,712</td>
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<tr>
<td>1,395,943</td>
<td>1,492,180</td>
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<tr>
<td>1,380,718</td>
<td>1,480,789</td>
</tr>
<tr>
<td>1,380,115</td>
<td>1,479,013</td>
</tr>
<tr>
<td>1,377,680</td>
<td>1,470,207</td>
</tr>
</tbody>
</table>
Bomb Cyclone – Winter 2017/2018

- January 5, 2018 NE Gas Spot Prices (High)
  - Iroquois Zone 2 (NYC) $113.19
  - Algonquin Boston City Gate $ 92.64
  - TGP Zone 6 (Boston) $ 95.32
  - Transco Zone 6 NY $159.60
  - Transco Zone 5 (Virginia/Carolinas) $145.75
  - Dominion South (Western PA) $ 4.49

» Source: Platts Gas Daily
Constitution / Wright Interconnect Project

- Capacity = 650 MDt/d
- Status = Supreme Court, FERC Rehearing
- In-Service Date = ????????
  originally March 2015
Dominion Projects

**New Market Project**
- Capacity = 82 MDt/d
- Status = In Service, Nov 2017
  (In-service delayed 1-year)
NE Gas Projects and the “Wall of Cuomo”

Source: BTU Analytics
Nexus Pipeline

- DTE / Enbridge JV
- 255 miles, 36” pipe
- 1.5 BCF/day
- Western Marcellus Shale Gas to Dawn Hub
- $2 Billion
- Anticipated In-service date – late 3Q 2018
Rover Gas Pipeline

- Energy Transfer Partners / Blackstone Group
- 713 miles, 42” pipe
- 3.25 BCF/day
- $4.2 Billion
- Anticipated In-service date – 2Q 2018
- Marcellus Shale Gas to Dawn Hub

Source: ETP
TransCanada’s long term fixed price (LTTF)

- Toll Certainty
  - Evolution of rate structure due to changes in market
    - Hi tolls – prior to LTTF $1.86 CDN/GJ
  - Empress (Alberta) to Dawn (Southern Ontario)
    - 27 new long-haul contracts for a total of 1.5 BCF
    - Secondary deliveries to select points on GLGT
    - $0.77 CDN/GJ/day ~ $0.63 US/Dth/day
    - Choose start date between Nov 1, 2017 and Nov 1, 2019
    - Up to 10-year terms with early termination after 5-years
    - Early termination pay higher rates in final two-years of contract
Downward Price Pressure at Dawn

(Data as of 11/2/17)

Source: NGI's Forward Look
Cricket Valley Energy Center – Dover, NY

- Rating – 1,110 MW, ~175 MDt/d
- Capital Investment - $1.584B
- Status - Construction
- In-Service Date - Jan 2020
PSEG’s Bridgeport Harbor Station – Bridgeport, CT

- Rating – 485MW, ~75 MDt/d
- Capital Investment - $550M
- Status - Construction
- In-Service Date - June 2019
Thank You