- ~11,750 miles of pipe
- Active supply/delivery meters ~700
- Storage capacity ~109 bcf
- Direct connected power ~24,650 mw
Winter 2018/19 Look Back

• Overview
  – Strong Winter Demand
    • 8 out of the Top-10 All-time System Peak Delivery Days occurred this past winter
  – System-wide throughput increased 6% compared to previous winter
  – Storage Inventories are slightly lower than last year’s levels at this time
  – System Wide Peak Day was ~11.72 Bcf/d on January 30, 2019
  – Power Plant Peak Day was ~2.16 Bcf/d on January 30, 2019
  – Exports to Mexico increased 7% compared to previous winter

• Supply
  – Supply in Zone 4 down from previous Winters.(Other projects in-service; Nexus and Atlantic Sunrise)
  – More supply coming from Dracut/Distrigas
## Winter Northeast Market Flows

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LDC</td>
<td>1,284</td>
<td>1,376</td>
<td>1,582</td>
<td>+15%</td>
</tr>
<tr>
<td>Power</td>
<td>266</td>
<td>246</td>
<td>247</td>
<td>+0.5%</td>
</tr>
<tr>
<td>Pipeline Interconnects</td>
<td>1,488</td>
<td>1,560</td>
<td>1,524</td>
<td>-2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,038</td>
<td>3,181</td>
<td>3,353</td>
<td>+5%</td>
</tr>
</tbody>
</table>

- All volumes are MDth/d
Average Daily Receipts and Deliveries in Zones 4, 5 and 6
Supply-Driven

<table>
<thead>
<tr>
<th>Project</th>
<th>Dth/d</th>
<th>In-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad Run Expansion</td>
<td>200,000</td>
<td>Oct-2018</td>
</tr>
</tbody>
</table>

Market-Driven

<table>
<thead>
<tr>
<th>Project</th>
<th>Dth/d</th>
<th>In-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW Louisiana Supply</td>
<td>900,000</td>
<td>Mar-2018</td>
</tr>
<tr>
<td>Triad</td>
<td>180,000</td>
<td>Jun-2018</td>
</tr>
<tr>
<td>Lone Star Project</td>
<td>300,000</td>
<td>Dec-2018</td>
</tr>
<tr>
<td>Line 261 Upgrade</td>
<td>101,400</td>
<td>Nov-2019, Nov-2020</td>
</tr>
</tbody>
</table>
“On the Horizon”

- Managing Development Risk
- Permian & Haynesville Supply Basins
- LNG
  - U.S. Export and Global market dynamics/Fundamentals
  - Creative LNG peaking facilities and services
- Power Plant Development
- Southeastern U.S. & Texas markets
- Mexico
Additional Slides
Winter 2018/19 Operations
## TGP Top Flow Dates

### System Wide Deliveries

<table>
<thead>
<tr>
<th>Rank</th>
<th>Gas Day</th>
<th>MDth/d</th>
<th>Bcf/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/30/2019</td>
<td>12,127</td>
<td>11,715</td>
</tr>
<tr>
<td>2</td>
<td>1/2/2018</td>
<td>12,062</td>
<td>11,654</td>
</tr>
<tr>
<td>3</td>
<td>1/21/2019</td>
<td>12,007</td>
<td>11,605</td>
</tr>
<tr>
<td>4</td>
<td>1/10/2019</td>
<td>11,897</td>
<td>11,501</td>
</tr>
<tr>
<td>5</td>
<td>1/4/2018</td>
<td>11,754</td>
<td>11,358</td>
</tr>
<tr>
<td>6</td>
<td>1/29/2019</td>
<td>11,743</td>
<td>11,359</td>
</tr>
<tr>
<td>7</td>
<td>3/6/2019</td>
<td>11,742</td>
<td>11,382</td>
</tr>
<tr>
<td>8</td>
<td>1/14/2019</td>
<td>11,724</td>
<td>11,347</td>
</tr>
<tr>
<td>9</td>
<td>1/15/2019</td>
<td>11,686</td>
<td>11,322</td>
</tr>
<tr>
<td>10</td>
<td>3/5/2019</td>
<td>11,642</td>
<td>11,284</td>
</tr>
</tbody>
</table>

### Storage Withdrawals

<table>
<thead>
<tr>
<th>Rank</th>
<th>Gas Day</th>
<th>MDth/d</th>
<th>Bcf/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/23/2014</td>
<td>1,809</td>
<td>1,762</td>
</tr>
<tr>
<td>2</td>
<td>1/22/2014</td>
<td>1,728</td>
<td>1,683</td>
</tr>
<tr>
<td>3</td>
<td>2/11/2014</td>
<td>1,707</td>
<td>1,661</td>
</tr>
<tr>
<td>4</td>
<td>2/10/2014</td>
<td>1,670</td>
<td>1,626</td>
</tr>
<tr>
<td>5</td>
<td>3/14/2017</td>
<td>1,661</td>
<td>1,612</td>
</tr>
<tr>
<td>17</td>
<td>1/21/2019</td>
<td>1,526</td>
<td>1,489</td>
</tr>
</tbody>
</table>

### Power Plants

<table>
<thead>
<tr>
<th>Rank</th>
<th>Gas Day</th>
<th>MDth/d</th>
<th>Bcf/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/17/2018</td>
<td>2,480</td>
<td>2,383</td>
</tr>
<tr>
<td>2</td>
<td>8/11/2016</td>
<td>2,402</td>
<td>2,304</td>
</tr>
<tr>
<td>3</td>
<td>8/28/2018</td>
<td>2,398</td>
<td>2,302</td>
</tr>
<tr>
<td>4</td>
<td>8/12/2016</td>
<td>2,300</td>
<td>2,210</td>
</tr>
<tr>
<td>5</td>
<td>1/16/2018</td>
<td>2,282</td>
<td>2,197</td>
</tr>
<tr>
<td>12</td>
<td>1/30/2019</td>
<td>2,239</td>
<td>2,155</td>
</tr>
</tbody>
</table>
TGP System Wide Throughput
Annually 2015-2018

System Wide Throughput: 1,072 MDth/d in 2015, increasing to 1,047 MDth/d in 2016 (+7%), then to 983 MDth/d in 2017 (+1%), and finally to 998 MDth/d in 2018 (+14%).

Zone breakdown:
- Zone 0: 687 MDth/d in 2015, increasing to 871 MDth/d in 2016 (+25%), then to 972 MDth/d in 2017 (+10%), and finally to 1,259 MDth/d in 2018 (+30%).
- Zone 1: 654 MDth/d in 2015, increasing to 664 MDth/d in 2016 (+1.5%), then to 723 MDth/d in 2017 (+9%), and finally to 945 MDth/d in 2018 (+34%).
- Zone 2: 2,080 MDth/d in 2015, increasing to 2,108 MDth/d in 2016 (+1.3%), then to 1,960 MDth/d in 2017 (-7.1%), and finally to 2,198 MDth/d in 2018 (+11.9%).
- Zone 3: 1,106 MDth/d in 2015, increasing to 1,369 MDth/d in 2016 (+2.3%), then to 1,474 MDth/d in 2017 (+8.5%), and finally to 1,869 MDth/d in 2018 (+26.7%).
- Zone 4: 2,070 MDth/d in 2015, increasing to 2,154 MDth/d in 2016 (+3.5%), then to 2,154 MDth/d in 2017 (+0.1%), and finally to 2,224 MDth/d in 2018 (+3.2%).
- Zone 5: 2,000 MDth/d in 2015, increasing to 2,224 MDth/d in 2016 (+11.2%), then to 2,224 MDth/d in 2017 (+0.1%), and finally to 2,224 MDth/d in 2018 (+0%).
- Zone 6: 1,000 MDth/d in 2015, increasing to 1,047 MDth/d in 2016 (+4.7%), then to 1,474 MDth/d in 2017 (+47.7%), and finally to 1,869 MDth/d in 2018 (+26.7%).
## Winter System Wide Flows 2018/2019

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LDC</td>
<td>1,724</td>
<td>1,880</td>
<td>2,120</td>
<td>+13%</td>
</tr>
<tr>
<td>Power</td>
<td>1,095</td>
<td>1,324</td>
<td>1,105</td>
<td>-17%</td>
</tr>
<tr>
<td>Pipeline Interconnects</td>
<td>5,170</td>
<td>5,372</td>
<td>5,729</td>
<td>+7%</td>
</tr>
<tr>
<td>Mexico</td>
<td>844</td>
<td>857</td>
<td>918</td>
<td>+7%</td>
</tr>
<tr>
<td>LNG</td>
<td>-</td>
<td>-</td>
<td>108</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>301</td>
<td>305</td>
<td>319</td>
<td>+4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9,134</strong></td>
<td><strong>9,738</strong></td>
<td><strong>10,299</strong></td>
<td><strong>+6%</strong></td>
</tr>
</tbody>
</table>

• All volumes are MDth/d
Winter 2018/19 Northeast Temperatures

Boston weather data:  NOAA and Custom Weather Inc.

HDDs

Winter 2018/19
Winter 2017/18
Winter 2016/17
Winter 2015/16
Winter 2014/15
30 Year Average
Winter Northeast Supply Analysis

- 2015-2016: MDth/d
- 2016-2017: MDth/d
- 2017-2018: MDth/d
- 2018-2019: MDth/d

- Cobb
- Cornwell
- Dracut
- DistriGas
- Marcellus
- Rex
- Shelton
- Utica
- Wright

- 2015-2016: +8%
- 2016-2017: -1%
- 2017-2018: +8%
- 2018-2019: -9%
TGP Monthly Average Flow
Wright, Dracut and Distrigas

Iroquois Wright

Dracut

Distrigas
Project Development
# TGP’s Recent Development Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Volume (Dth)</th>
<th>Shippers</th>
<th>Effective Date</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triad (Invenergy)</td>
<td>180,000</td>
<td>Lackawanna Energy (Invenergy)</td>
<td>June 2018</td>
<td>Facilities Complete (Commercial Contracts June 2018)</td>
</tr>
<tr>
<td>Southwest Louisiana Supply Project (Cameron LNG)</td>
<td>900,000</td>
<td>Mitsui, Mitsubishi</td>
<td>March 2018</td>
<td>In-service</td>
</tr>
<tr>
<td>Broad Run Flexibility</td>
<td>590,000</td>
<td>Antero Resources</td>
<td>Nov 2015 October 2018</td>
<td>590,000 Dth/d – In-service</td>
</tr>
<tr>
<td>Broad Run Expansion</td>
<td>200,000</td>
<td></td>
<td></td>
<td>200,000 Dth/d – In-service</td>
</tr>
<tr>
<td>Lone Star</td>
<td>300,000</td>
<td>Cheniere</td>
<td>July 2019</td>
<td>In-Service December 2018</td>
</tr>
<tr>
<td>Line 261 Upgrade</td>
<td>101,400</td>
<td>Columbia Mass, Holyoke</td>
<td>Phased in-service 2019-2020</td>
<td>Regulatory/Permitting Phase</td>
</tr>
</tbody>
</table>
Broad Run Expansion Project – *In Service*

- **Commercial Driver:**
  - SW Marcellus/Utica production to Gulf Coast markets
- **Capacity:** 200,000 Dth/d
- **Customer:** Antero Resources
- **Project Scope:**
  - New compression/HP replacement at 2 existing stations (S114 and S106)
  - New compression at 4 greenfield stations (S118, S119, S875 and S563)
- **In Service October 2018**
Southwest Louisiana Supply Project

**In-Service**

- **Commercial Driver**: Supply from multiple basins to Cameron LNG Export Facility
- **Capacity**: 900 MDth/d
- **Customer**: Mitsubishi, MMGS

**Project Scope**:
- Station reversals: S847, S834, S827 and S823
- 18,000 HP of new compression
- 2 new laterals (3.8 miles) for enhanced supply access to Perryville/Delhi
- 5 new pipeline interconnects: MEP, Tiger, Gulf South, Gulf Crossing, Line CP

- **In-Service**: March 2018
Lone Star – *In Service*

**Details**

- **Commercial Driver:**
  - Supply for new Corpus Christi LNG export project

- **Capacity:** 300,000 Dth/d

- **Customer:** Cheniere

- **Project Scope:**
  - 2 new compressor stations (3A and 11A)

- **In Service:** December 2018
Line 261 Upgrade – *Regulatory / Permitting Phase*

### Details

- **Commercial Driver:**
  - Residential/commercial gas demand growth

- **Capacity:** 101,400 Dth/d

- **Customer:** Columbia Gas of Mass (96,400 Dth/d)
  - Holyoke (5,000 Dth/d)

- **Phased In-service 2019-2020 timeframe**

- **Project Scope:**
  - HP Replacement at Station 261
  - 2 miles of looping Springfield Lateral

---

**Station 261 Area**

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*Image of a map showing the Station 261 Area with ZONE 6 highlighted.*
Mexico/South Texas

Details

- **Commercial Driver:** Mexico Demand

- **Capacity Path:**
  - Receipts immediately north of Station 1
  - up to 150,000 Dth/d to Mexico Border
  - up to 150,000 Dth/d to Edinburg area delivery

- **Proposed In-service:** 4Q 2021

- **Project Scope:**
  - Compression only
  - No looping/pipe required

- **Status:**
  - Binding Open Season: Q2 2019
Contacts
TGP Business Development Team
# Tennessee Gas Pipeline Contact List

## Gas Control
- **24 hour and emergency**
  - **800-231-2800**
- Ganesh Venkateshan – Mgr
  - 713-420-2099
  - Cell – 832-980-8296
- Layne Sanders – Dir
  - 713-420-5024
  - Cell – 832-563-5024
- Brian Merchant – Dir
  - 713-420-5867
  - Cell – 713-206-0590
- Danny Ivy – VP
  - 713-369-9311
  - Cell – 713-829-2761
- Tom Dender – VP
  - 713-420-3833
  - Cell – 205-572-1549

## Transportation and Storage
- 24 hour Scheduling Hotline
  - 713-420-4999
- Cathy Soape – Manager
  - 713-420-3814
  - Cell – 713-922-5083
- Katie Cornutt – Manager
  - 713-420-5648
  - 407-902-8027
- Gina Mabry – Director
  - 713-420-3685
  - Cell – 281-744-8666
- Gene Nowak – VP
  - 713-369-9329
  - Cell – 713-252-9759

## Commercial/Marketing
- Jason Connelly – Director
  - 713-420-2446
  - Cell – 713-444-3940
- Coralie Sculley – Director
  - 713-420-6336
  - Cell – 713-818-0411
- Ernesto Ochoa – VP
  - 713-420-1734
  - Cell – 281-414-3823
- Kim Watson – President
  - 713-369-9233
  - Cell – 713-204-5423

## Field Operations
- Bret Metzger – Ops Manager (Coudersport Area)
  - 814-274-3122
  - Cell – 814-366-1712
- Butch Ferguson – Ops Manager (Nassau Area)
  - 860-763-6013
  - Cell – 518-542-8907
- Mitchell Myer – Ops Manager (NE Area)
  - 413-821-2022
  - Cell – 713-205-7864
- Tom Burgett – Director (Northeast)
  - 860-763-6027
  - Cell – 713-829-2919
- Ron Bessette – VP
  - 713-420-6012
  - Cell – 413-313-4380
- Ken Grubb – COO GAS Pipelines
  - 713-369-8763
  - Cell – 713-702-1210