

A Different Kind of
ENERGY COMPANY



NGA MARKET TRENDS FORUM

April 25, 2019

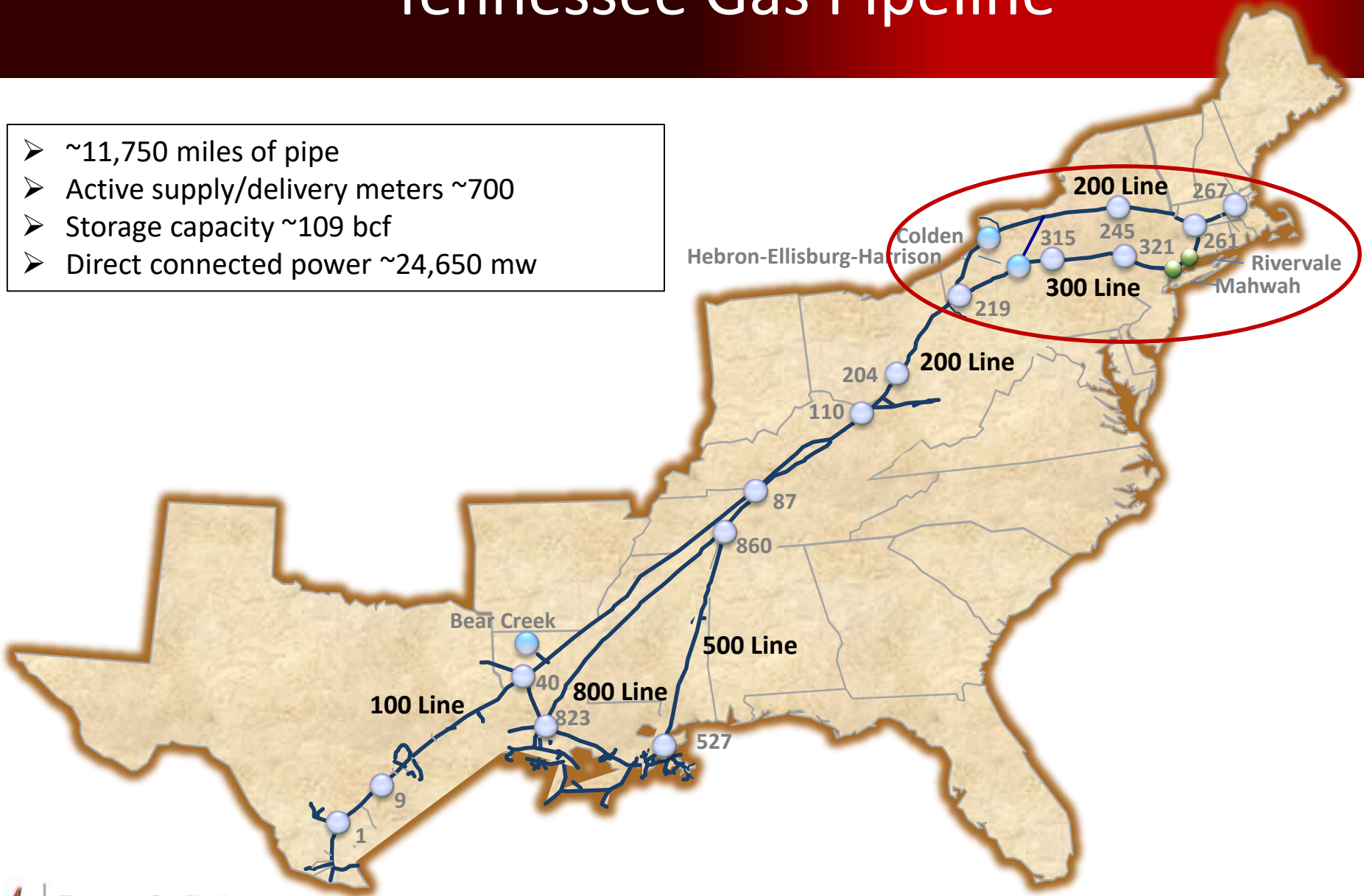
TENNESSEE GAS PIPELINE COMPANY, L.L.C.

KINDER  MORGAN



Tennessee Gas Pipeline

- ~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**

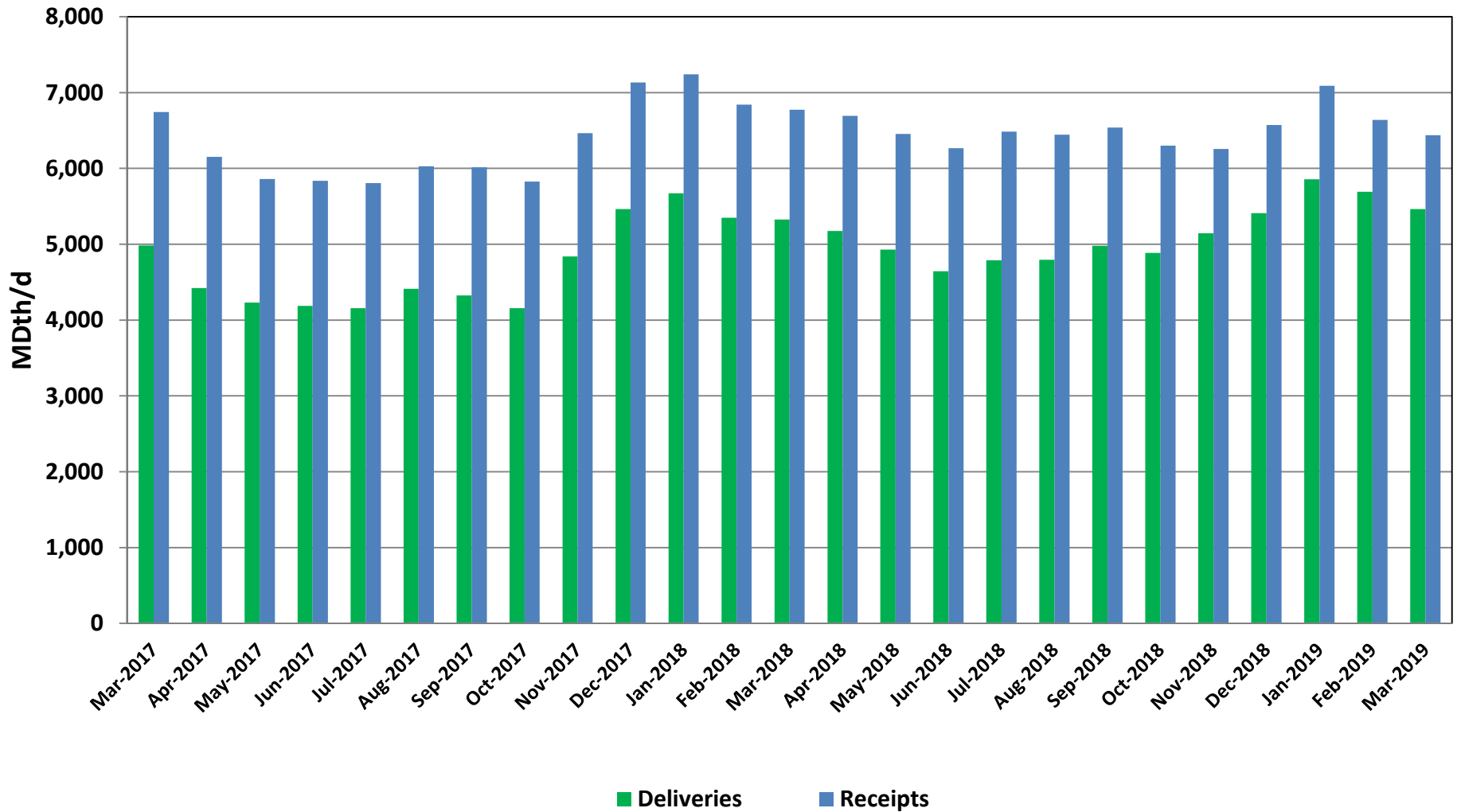


Winter Northeast Market Flows

	<u>2016-2017</u>	<u>2017-2018</u>	<u>2018-2019</u>	<u>Change</u>
LDC	1,284	1,376	1,582	+15%
Power	266	246	247	+0.5%
Pipeline Interconnects	1,488	1,560	1,524	-2%
TOTAL	3,038	3,181	3,353	+5%

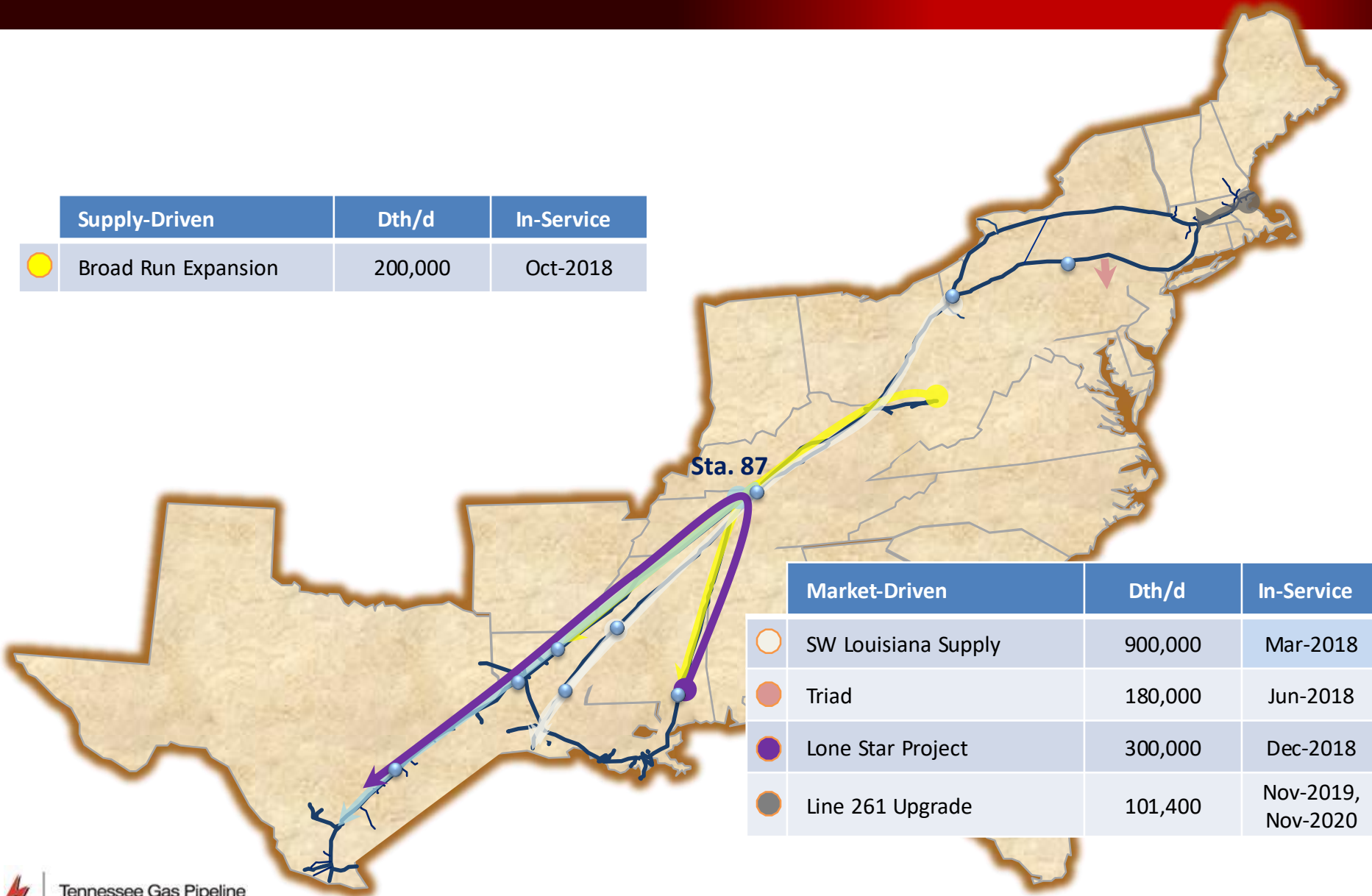
• All volumes are MDth/d

Average Daily Receipts and Deliveries in Zones 4, 5 and 6



TGP Active/Recently Completed Projects

Supply-Driven	Dth/d	In-Service
● Broad Run Expansion	200,000	Oct-2018



Market-Driven	Dth/d	In-Service
○ SW Louisiana Supply	900,000	Mar-2018
○ Triad	180,000	Jun-2018
○ Lone Star Project	300,000	Dec-2018
○ Line 261 Upgrade	101,400	Nov-2019, Nov-2020

“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

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

Storage Withdrawals

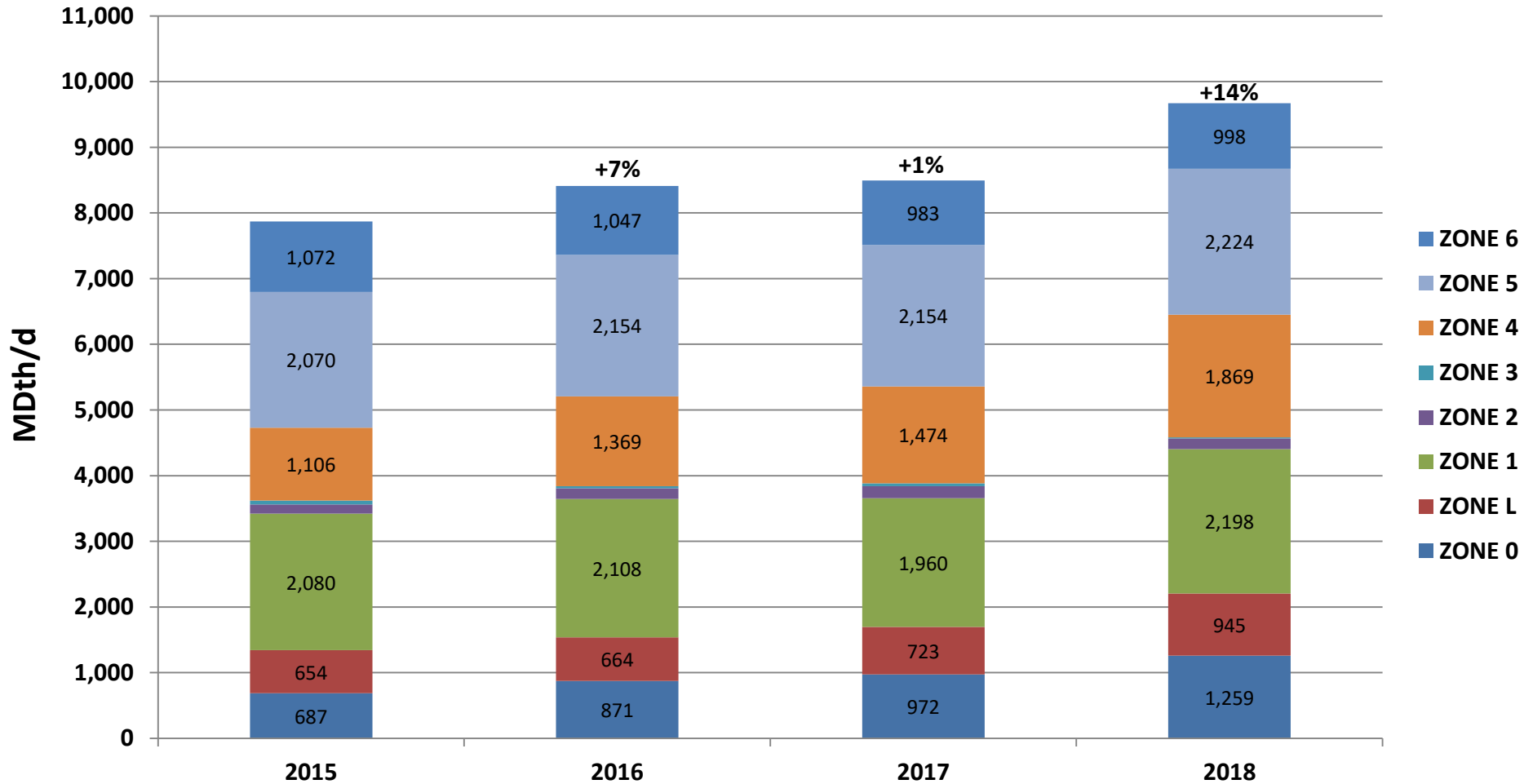
Rank	Gas Day	MDth/d	Bcf/d
1	1/23/2014	1,809	1,762
2	1/22/2014	1,728	1,683
3	2/11/2014	1,707	1,661
4	2/10/2014	1,670	1,626
5	3/14/2017	1,661	1,612
17	1/21/2019	1,526	1,489

Power Plants

Rank	Gas Day	MDth/d	Bcf/d
1	1/17/2018	2,480	2,383
2	8/11/2016	2,402	2,304
3	8/28/2018	2,398	2,302
4	8/12/2016	2,300	2,210
5	1/16/2018	2,282	2,197
12	1/30/2019	2,239	2,155

TGP System Wide Throughput

Annually 2015-2018

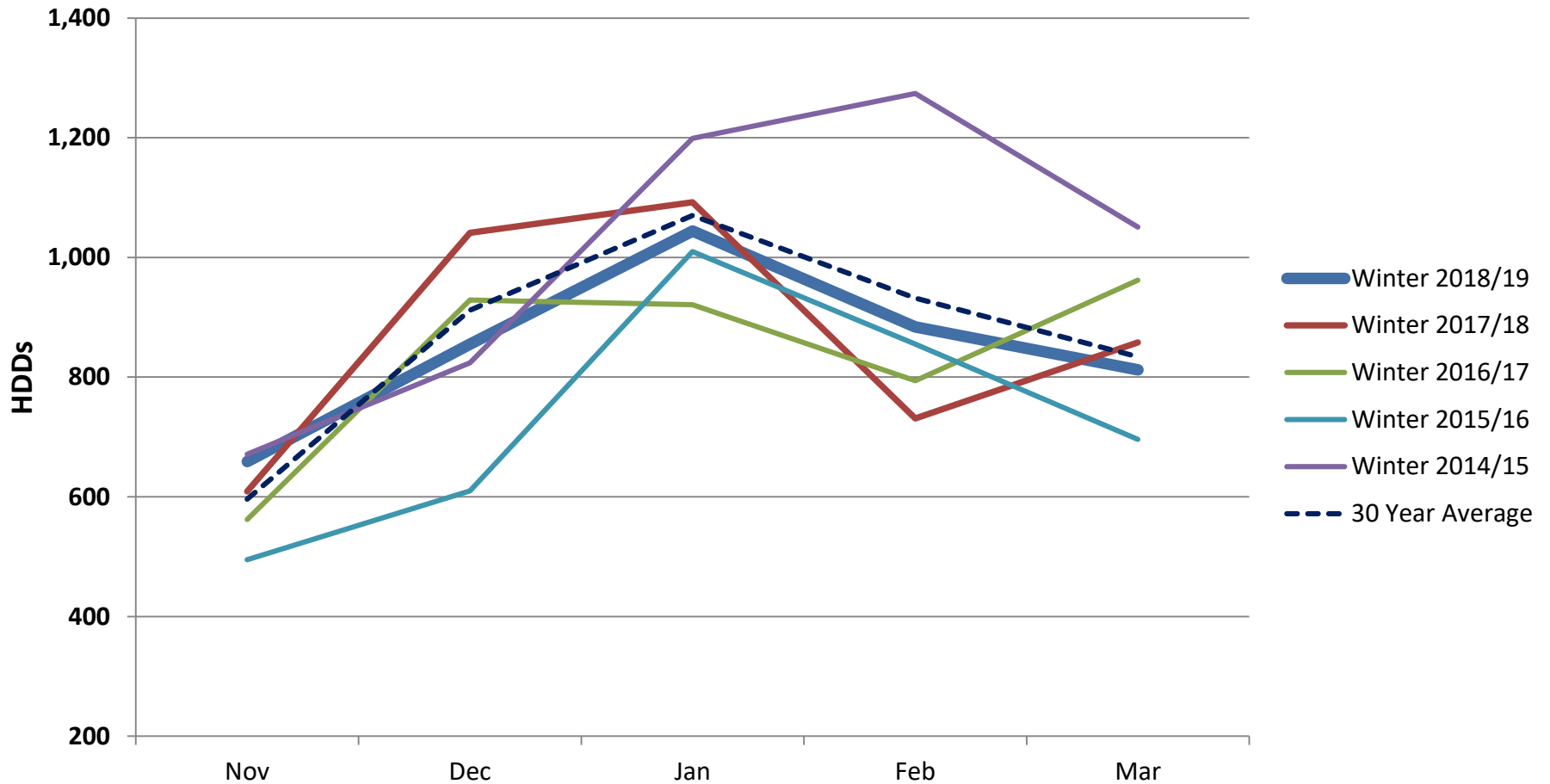


Winter System Wide Flows 2018/2019

	<u>2016-2017</u>	<u>2017-2018</u>	<u>2018-2019</u>	<u>Change</u>
LDC	1,724	1,880	2,120	+13%
Power	1,095	1,324	1,105	-17%
Pipeline Interconnects	5,170	5,372	5,729	+7%
Mexico	844	857	918	+7%
LNG	-	-	108	-
Other	301	305	319	+4%
TOTAL	9,134	9,738	10,299	+6%

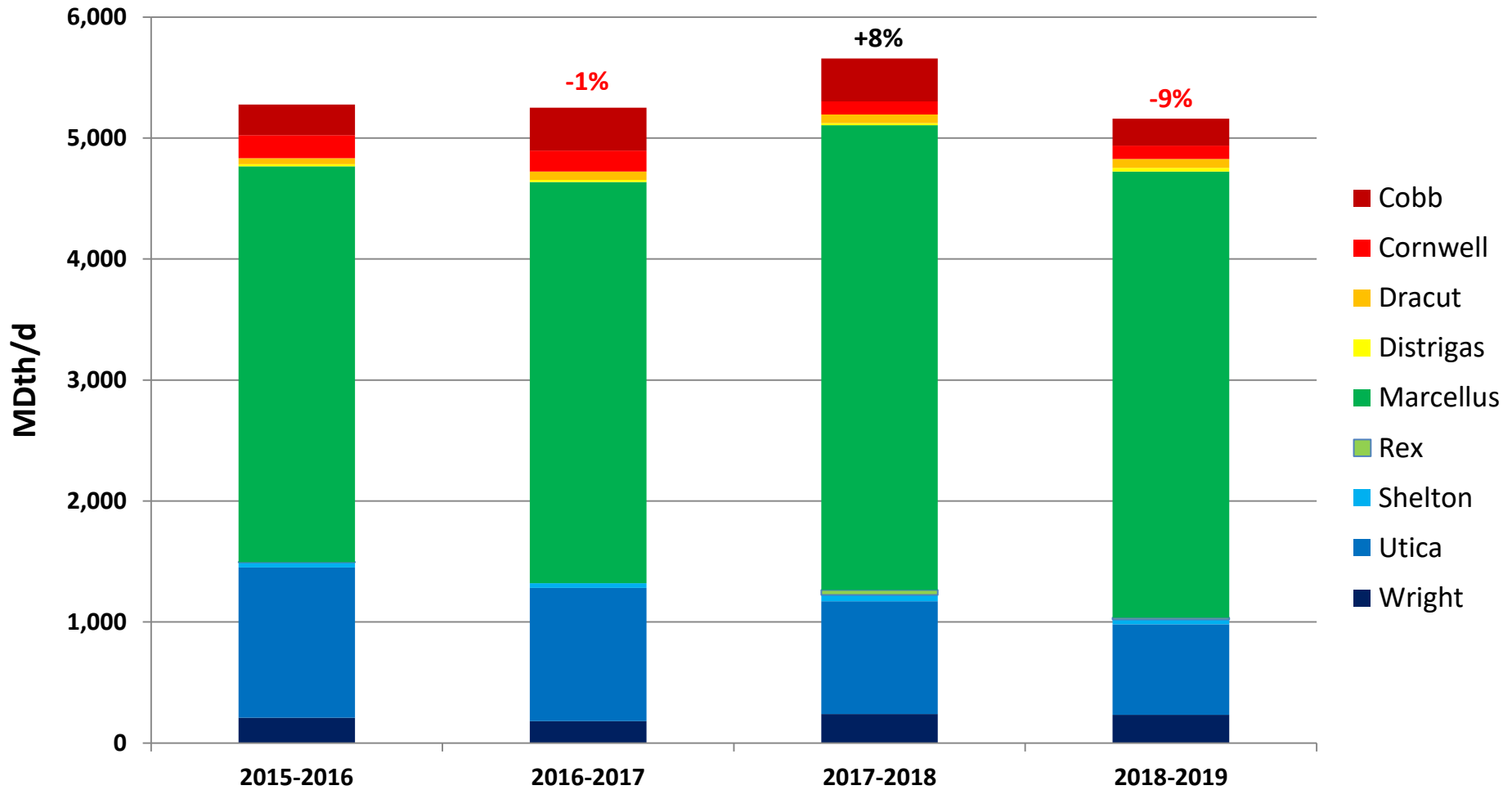
• All volumes are MDth/d

Winter 2018/19 Northeast Temperatures



Boston weather data: NOAA and Custom Weather Inc.

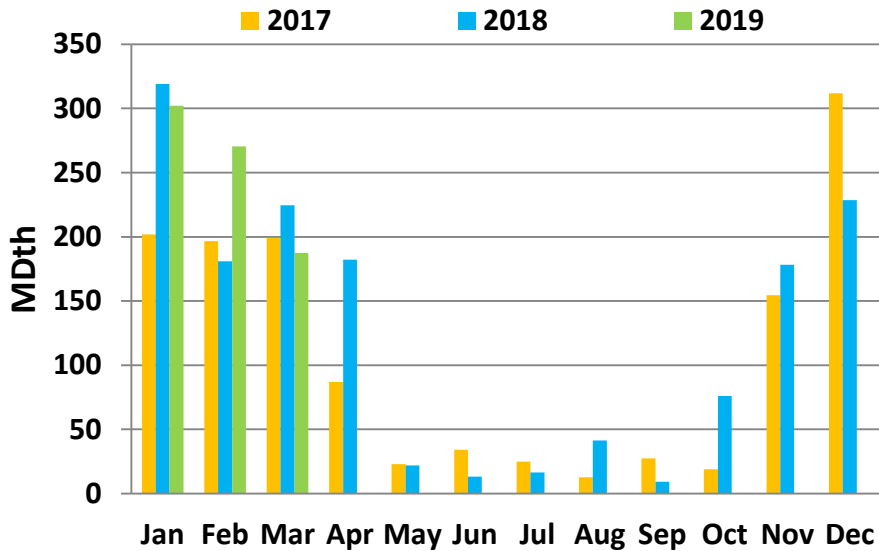
Winter Northeast Supply Analysis



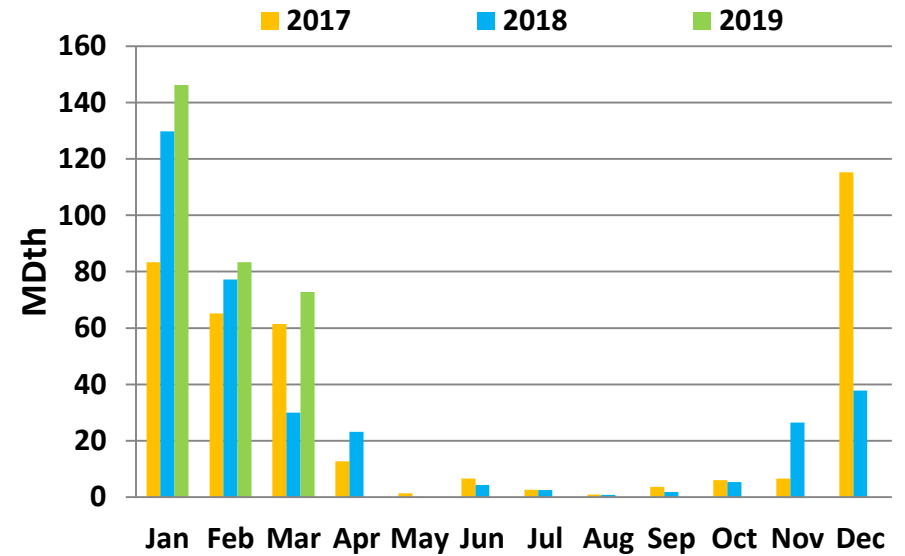
TGP Monthly Average Flow

Wright, Dracut and Distrigas

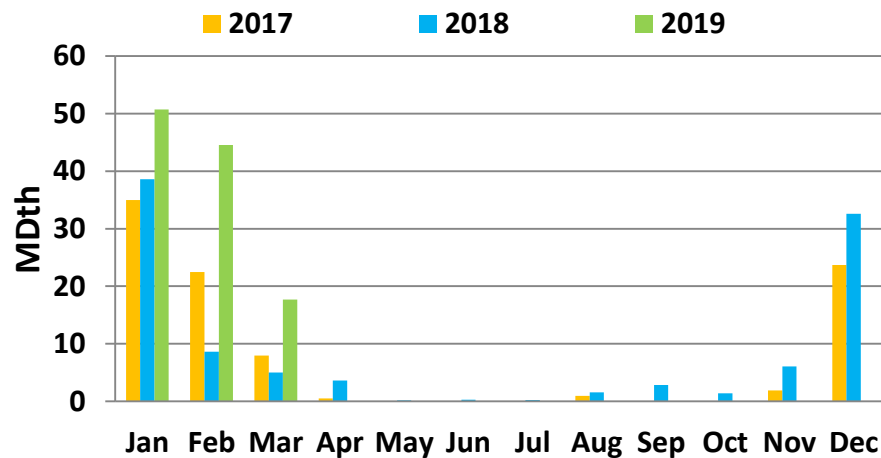
Iroquois Wright



Dracut



Distrigas

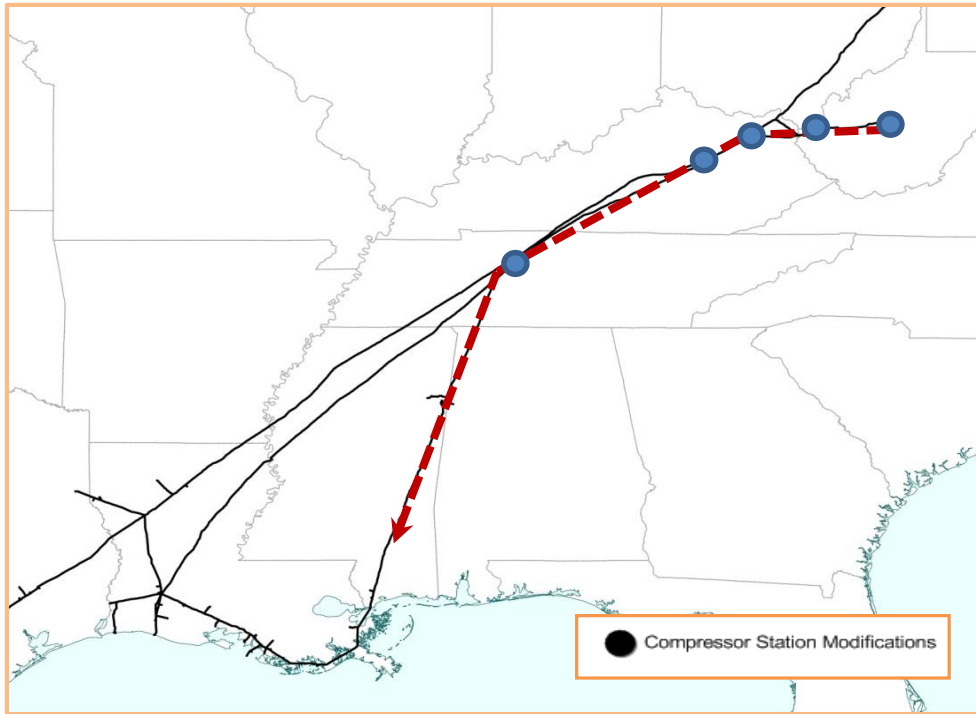


Project Development

TGP's Recent Development Projects

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

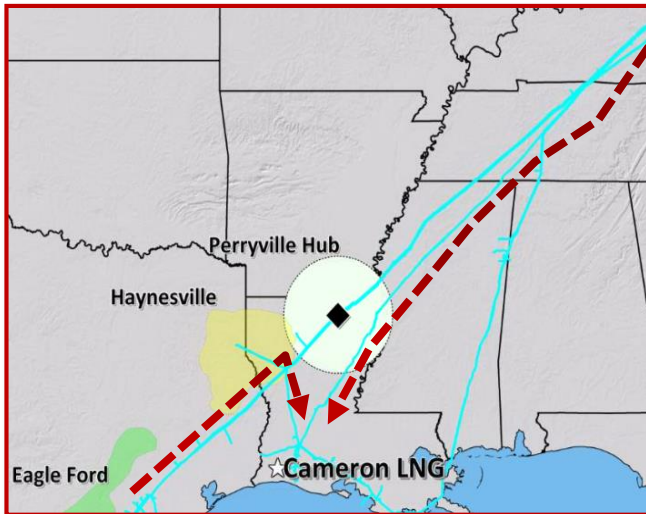
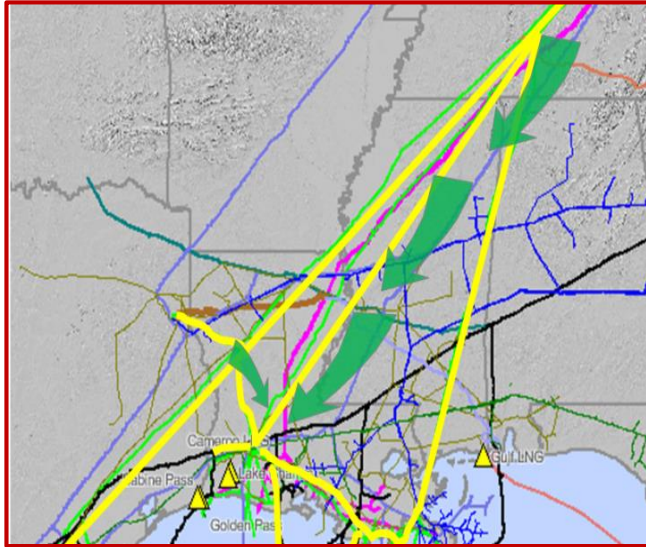
Broad Run Expansion Project – *In Service*



Details

- 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*



Details

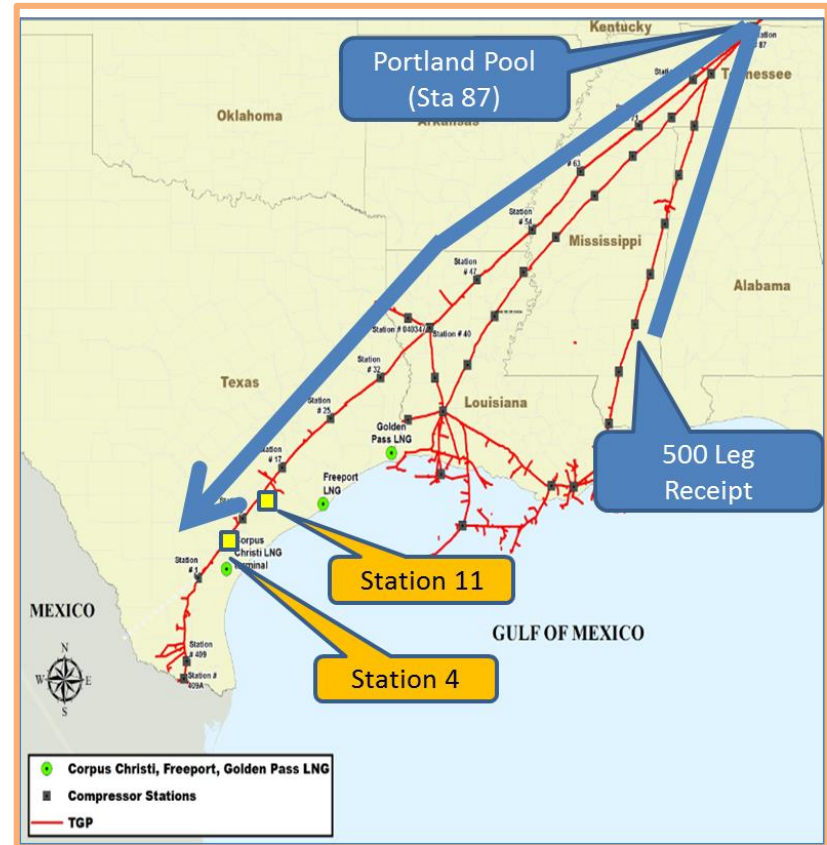
- **Commercial Driver:** Supply from multiple basins to Cameron LNG Export Facility
- **Capacity:** 900 MDth/d
- **Customer:** Mitsubishi, MMGS
- **Project Scope:**
 - Station reversals: S847, S834, S827 and S823
 - 18,000 HP of new compression
 - 2 new laterals (3.8 miles) for enhanced supply access to Perryville/Delhi
 - 5 new pipeline interconnects: MEP, Tiger, Gulf South, Gulf Crossing, Line CP
- **In-Service:** March 2018



Lone Star – *In Service*

Details

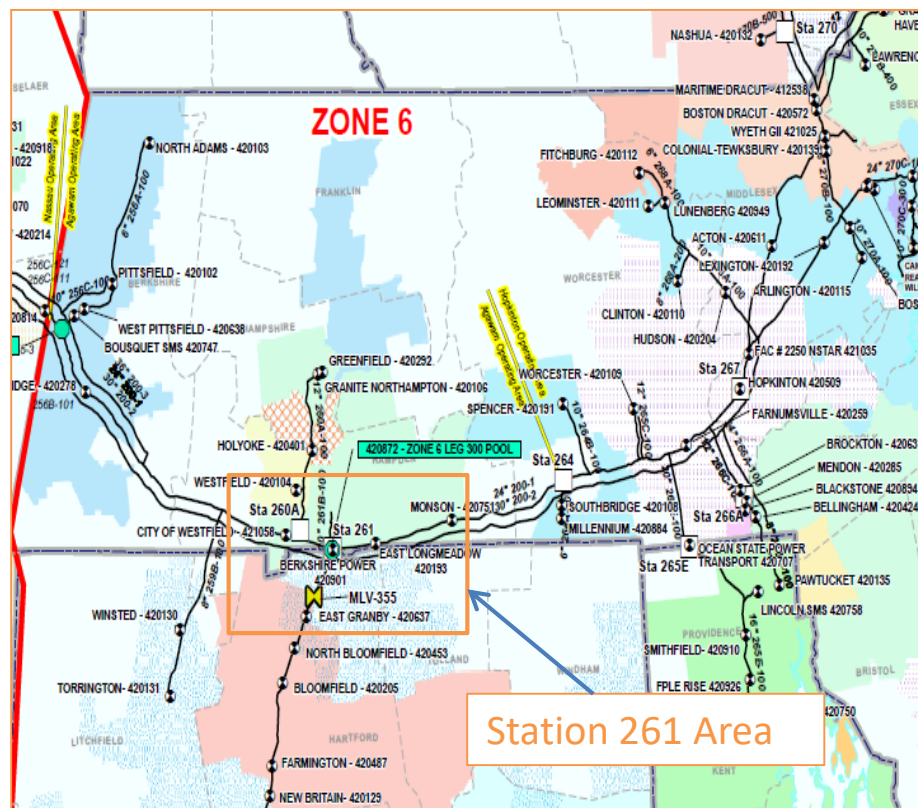
- **Commercial Driver:**
 - Supply for new Corpus Christi LNG export project
- **Capacity:** 300,000 Dth/d
- **Customer:** Cheniere
- **Project Scope:**
 - 2 new compressor stations (3A and 11A)
- **In Service:** December 2018



Line 261 Upgrade – *Regulatory / Permitting Phase*

Details

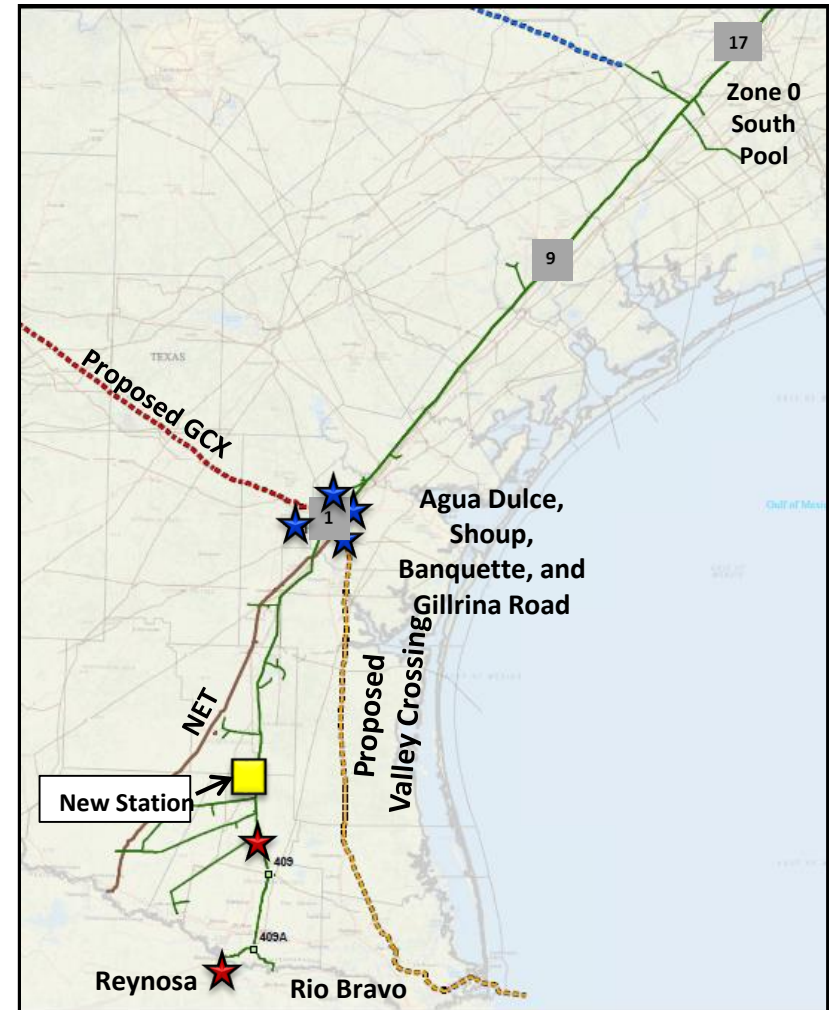
- **Commercial Driver:**
 - Residential/commercial gas demand growth
- **Capacity:** 101,400 Dth/d
- **Customer:** Columbia Gas of Mass (96,400 Dth/d)
Holyoke (5,000 Dth/d)
- **Phased In-service 2019-2020 timeframe**
- **Project Scope:**
 - HP Replacement at Station 261
 - 2 miles of looping Springfield Lateral



Mexico/South Texas

Details

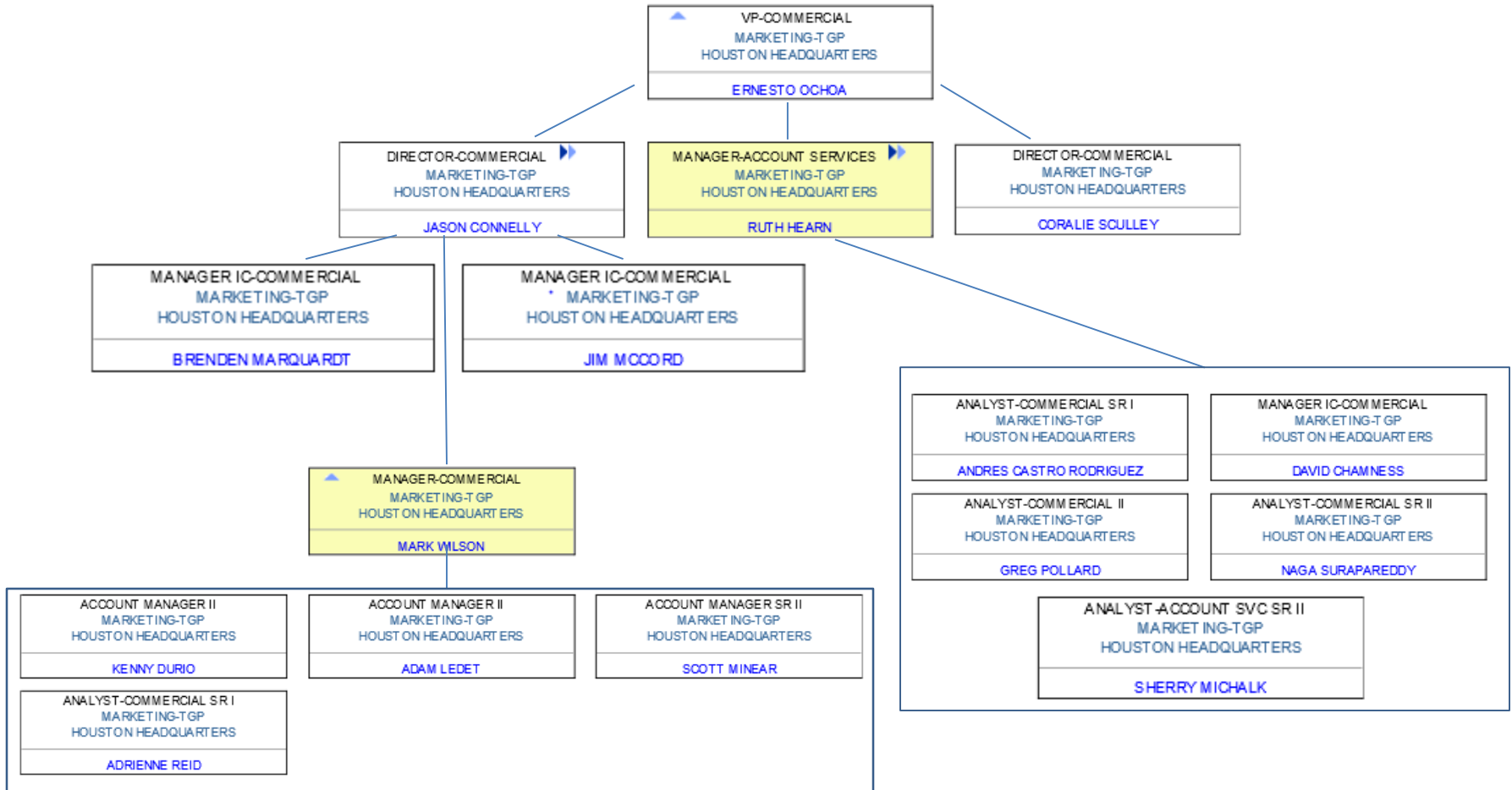
- **Commercial Driver:** Mexico Demand
- **Capacity Path:**
 - Receipts immediately north of Station 1
 - up to 150,000 Dth/d to Mexico Border
 - up to 150,000 Dth/d to Edinburg area delivery
- **Proposed In-service:** 4Q 2021
- **Project Scope:**
 - Compression only
 - No looping/pipe required
- **Status:**
 - Binding Open Season: Q2 2019



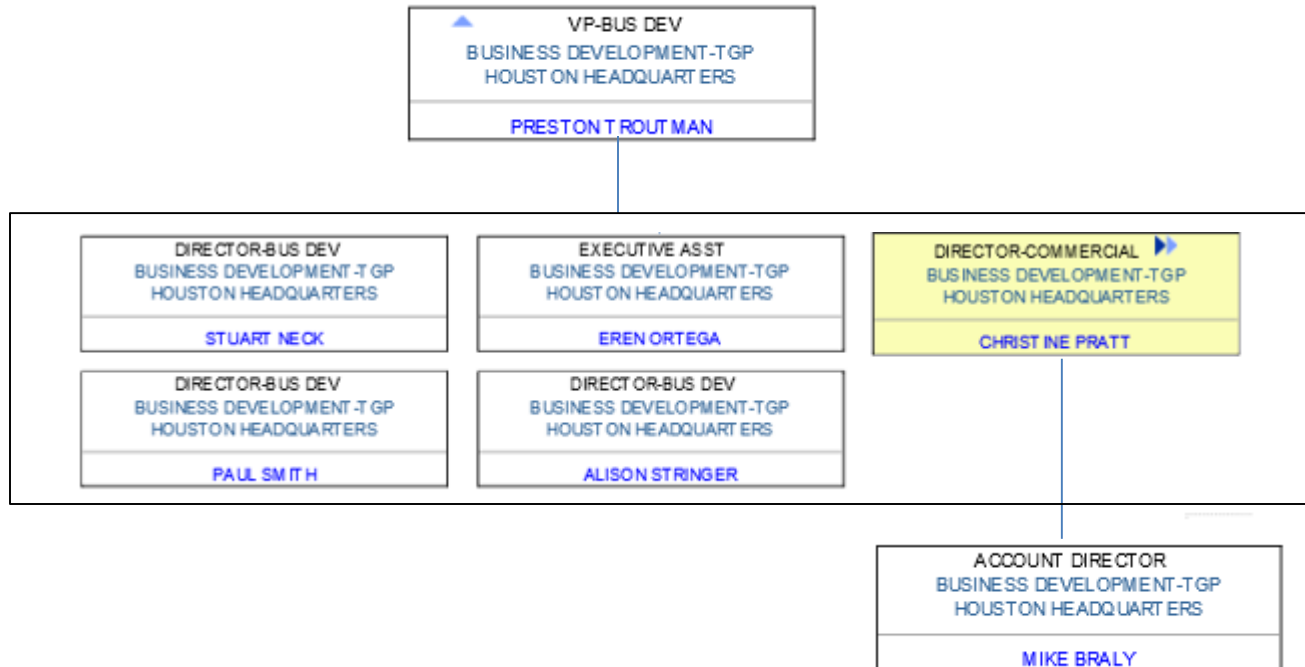
Contacts



TGP Commercial Team



TGP Business Development Team



Tennessee Gas Pipeline Contact List

Gas Control

24 hour and emergency
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