

NORTHEAST CUSTOMER SUMMER PREVIEW OPERATIONS MEETING

TENNESSEE GAS PIPELINE

MAY 7, 2020

AGENDA

Tom Burgett
Director, Operations Northern

Ganesh Venkateshan
Manager, TGP Gas Control

Gina Mabry
Director, Trans and Storage Svc.

Cathy Soape Hutton
Manager, Trans and Storage Svc.

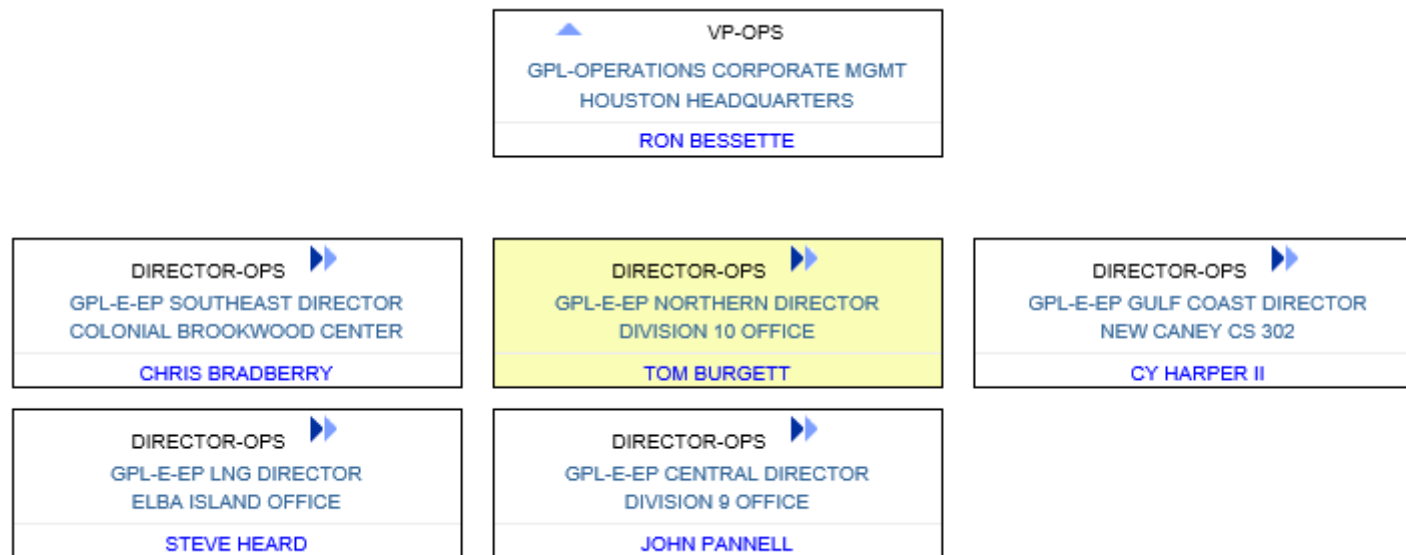
Adam Harris
Manager, Trans and Storage Svc.

Coralie Carter Sculley
Director, TGP Commercial

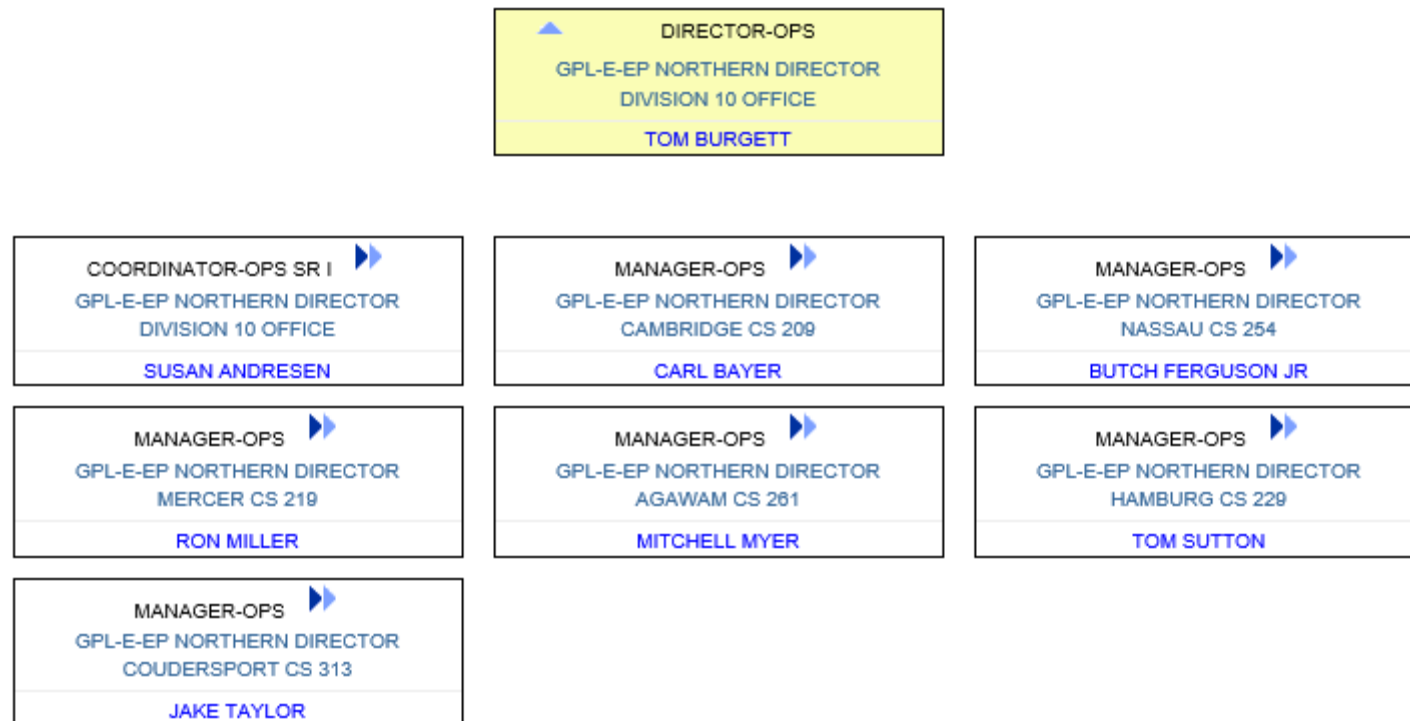
Northeast Operations
TGP Gas Control
2019/2020 Winter Review
Summer Maintenance
Scheduling/Dart Update
Commercial Update

OPERATIONS

OPERATIONS ORGANIZATIONAL STRUCTURE



OPERATIONS ORGANIZATIONAL STRUCTURE

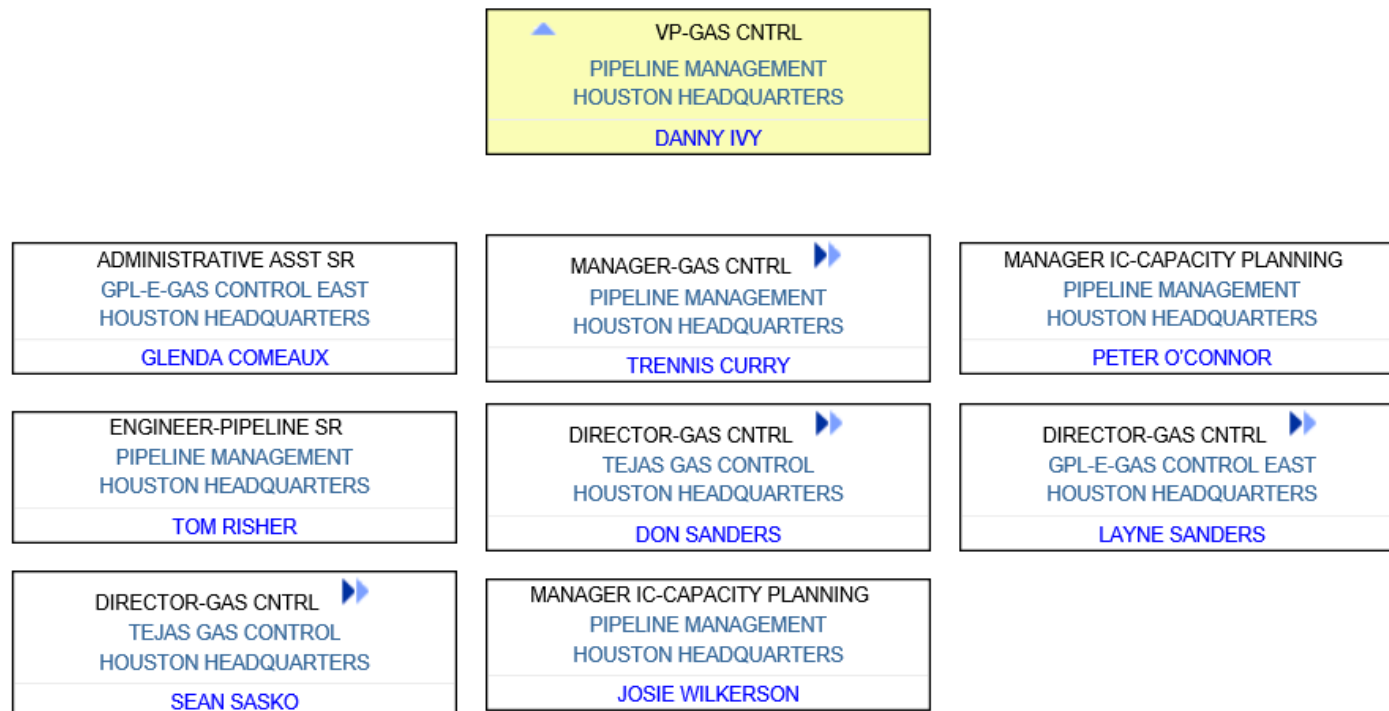


KINDER MORGAN PANDEMIC RESPONSE

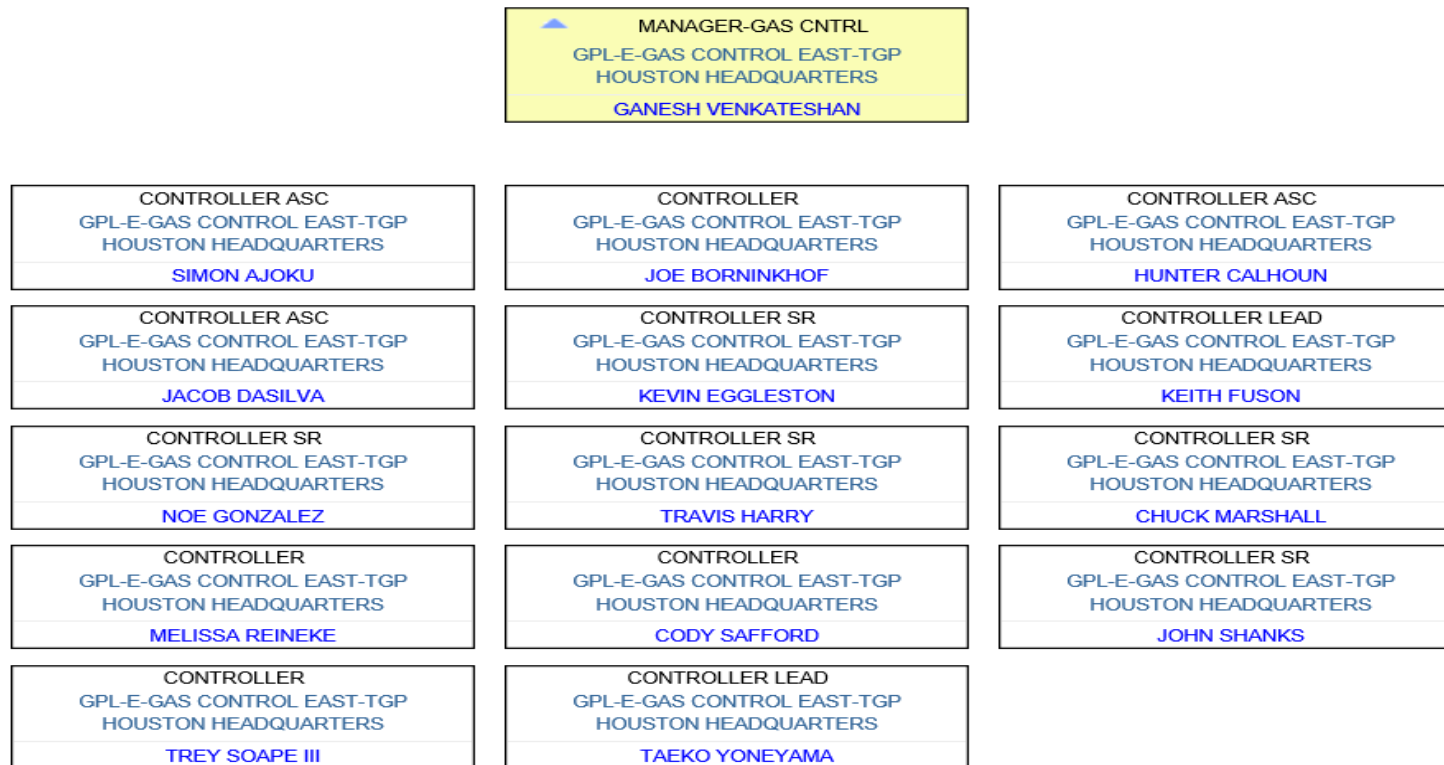
- Operating in the COVID-19 world

GAS CONTROL

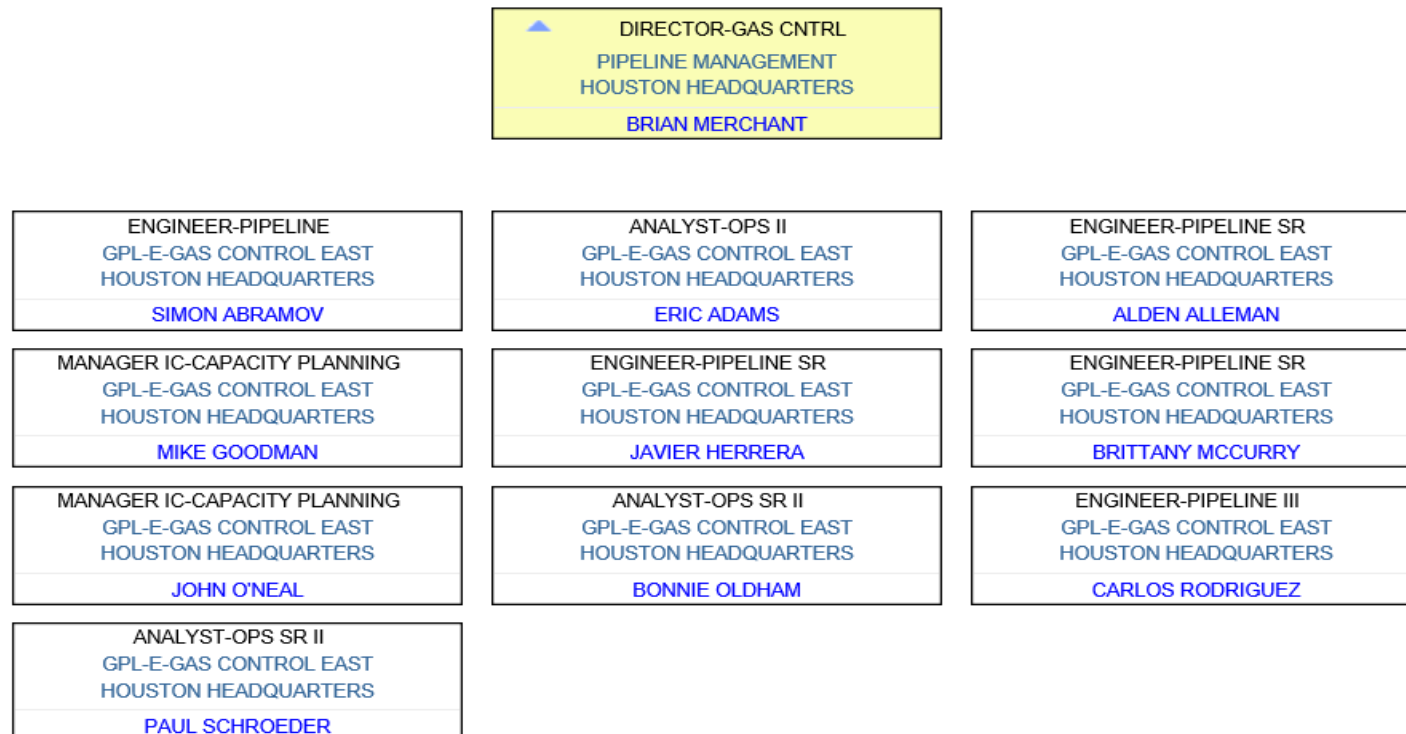
GAS CONTROL ORGANIZATIONAL STRUCTURE



GAS CONTROL ORGANIZATIONAL STRUCTURE

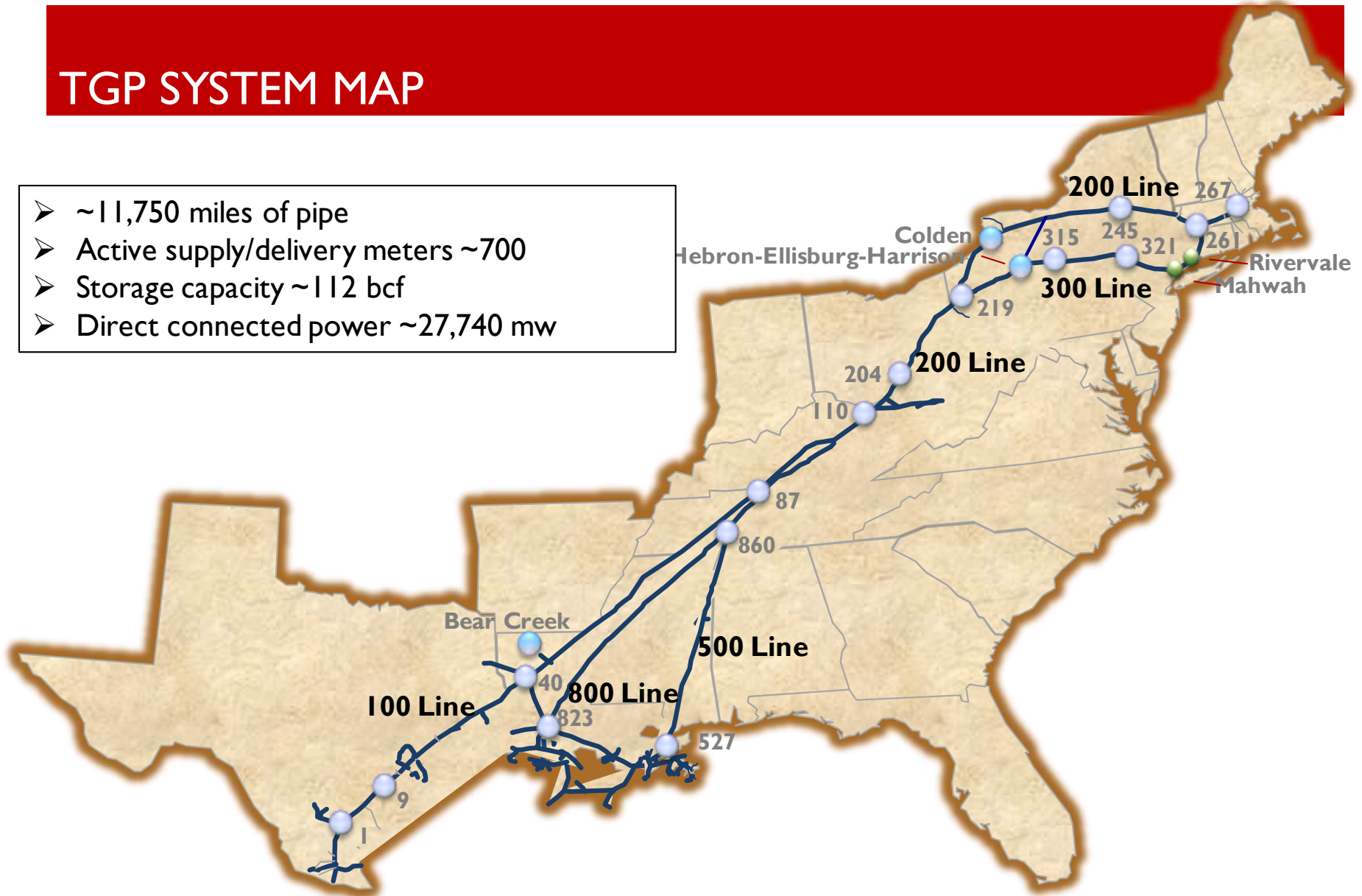


GAS CONTROL ORGANIZATIONAL STRUCTURE

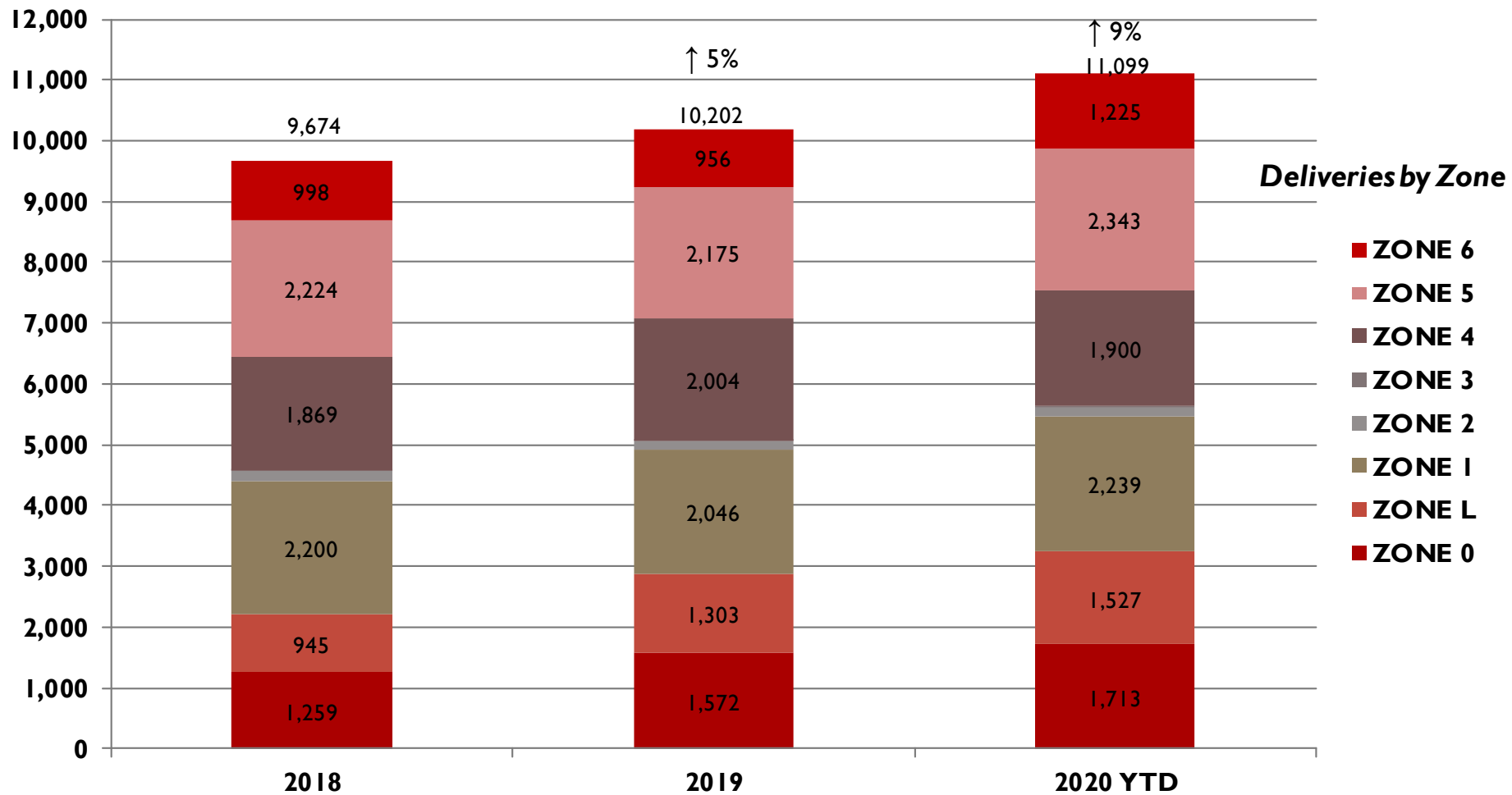


TGP SYSTEM MAP

- ~11,750 miles of pipe
- Active supply/delivery meters ~700
- Storage capacity ~112 bcf
- Direct connected power ~27,740 mw



TGP SYSTEM WIDE THROUGHPUT



*Through March

WINTER 2019 – 2020 LOOK BACK

WINTER 2019 - 2020

- Overview
 - Mild Winter Demand
 - System-wide throughput increased 7.3% compared to previous winter
 - Storage Inventories were higher than the prior year's levels at the end of winter due to lower demands
 - System Wide Peak Day was ~12.11 Bcf/d on January 20, 2020
 - Exports to Mexico decreased 3% compared to previous winter
- Supply
 - Supply in Zone 4 consistent as previous Winter
 - Supply changes were demand related at Dracut/Distrigas
- Operational Challenges

WINTER 2019 -2020 SYSTEM WIDE FLOWS

	<u>2017-2018</u>	<u>2018-2019</u>	<u>2019-2020</u>	<u>Change</u>
LDC	1,880	2,120	2,030	-4%
Power	1,324	1,105	1,286	+16%
Interconnects	5,469	5,840	5,494	-6%
Mexico	857	918	890	-3%
LNG	-	108	1,145	+960%
Industrial	63	56	47	-15%
TOTAL	9,593	10,146	10,892	+7.3%

Volumes are MDth/d

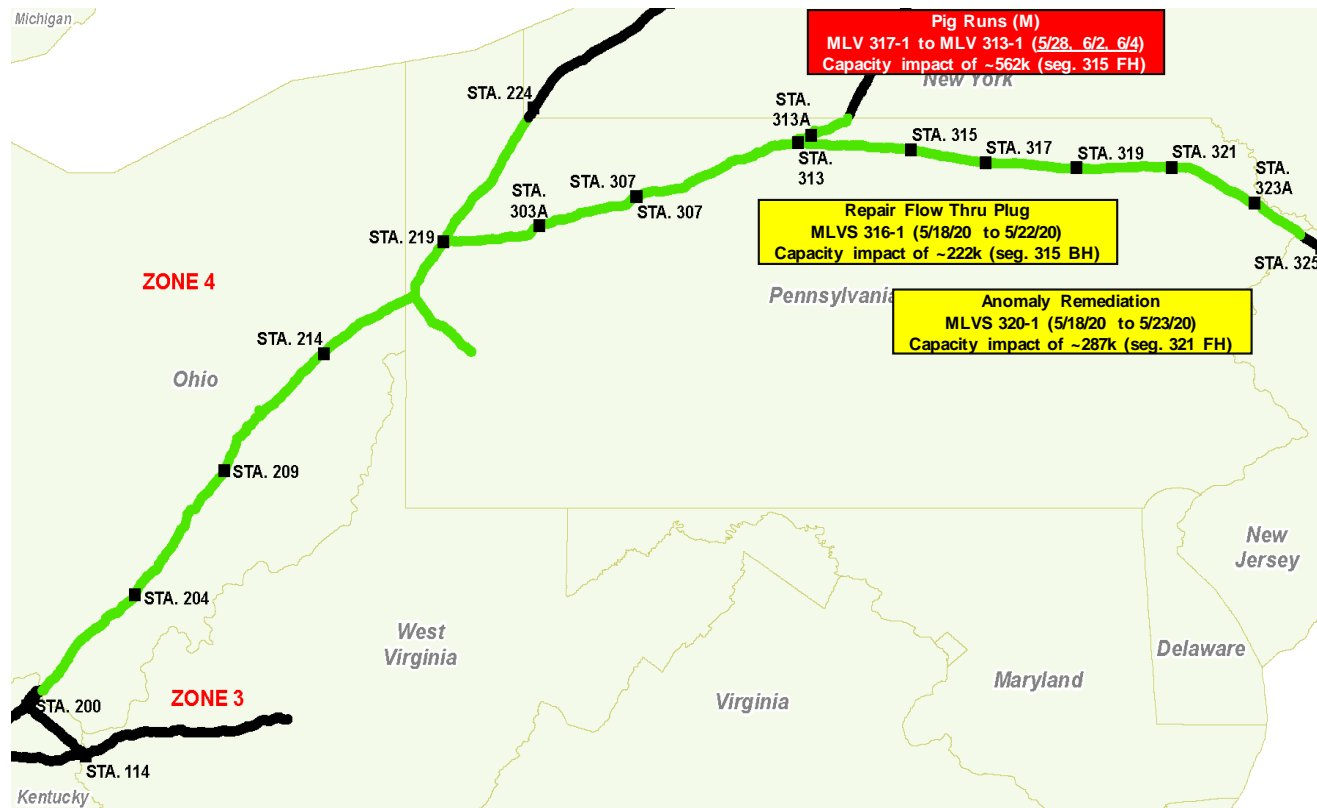
WINTER 2019 -2020 NORTHEAST FLOWS

	<u>2017-2018</u>	<u>2018-2019</u>	<u>2019-2020</u>	<u>Change</u>
LDC	1,376	1,582	1,516	-4%
Power	246	247	298	+21%
Pipeline Interconnects	1,561	1,526	1,520	-1%
TOTAL	3,183	3,354	3,334	-1%

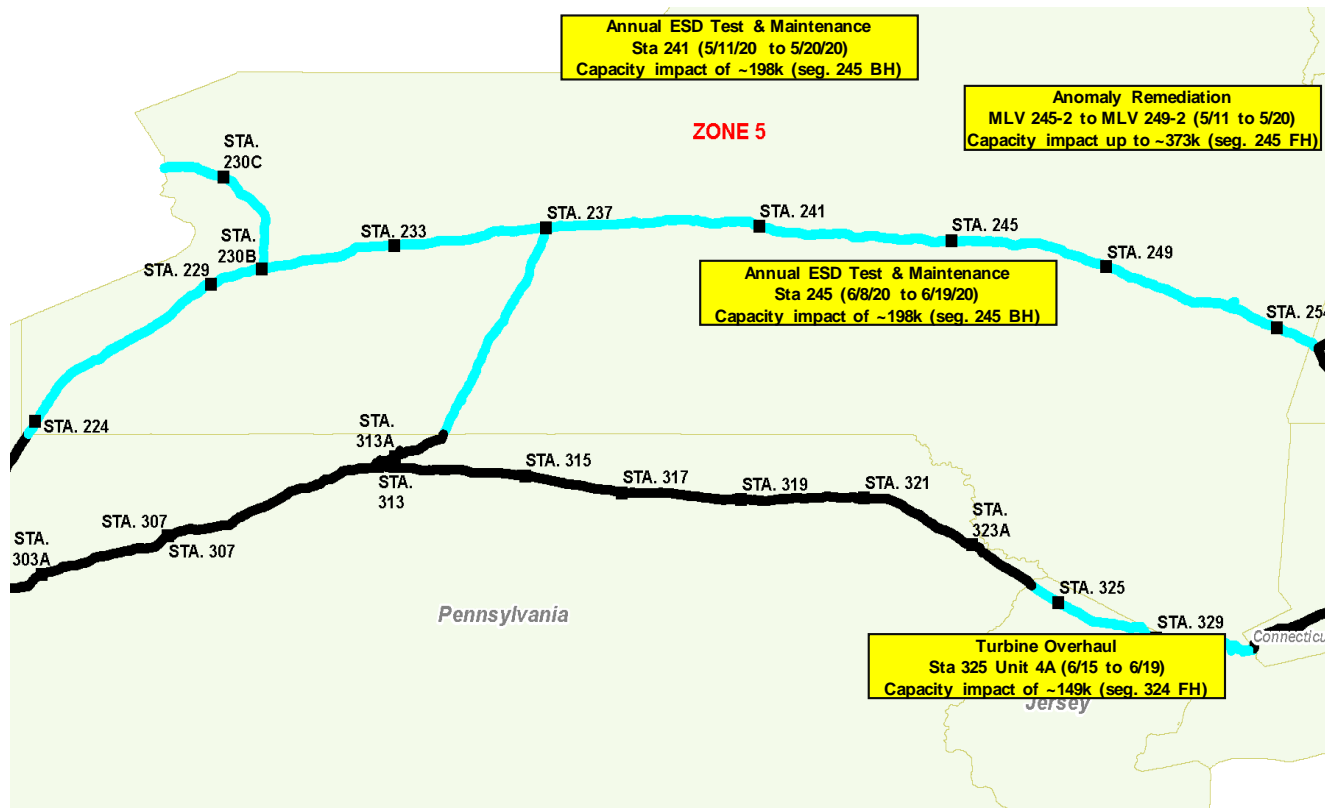
Volumes are MDth/d

PLANNED SUMMER MAINTENANCE

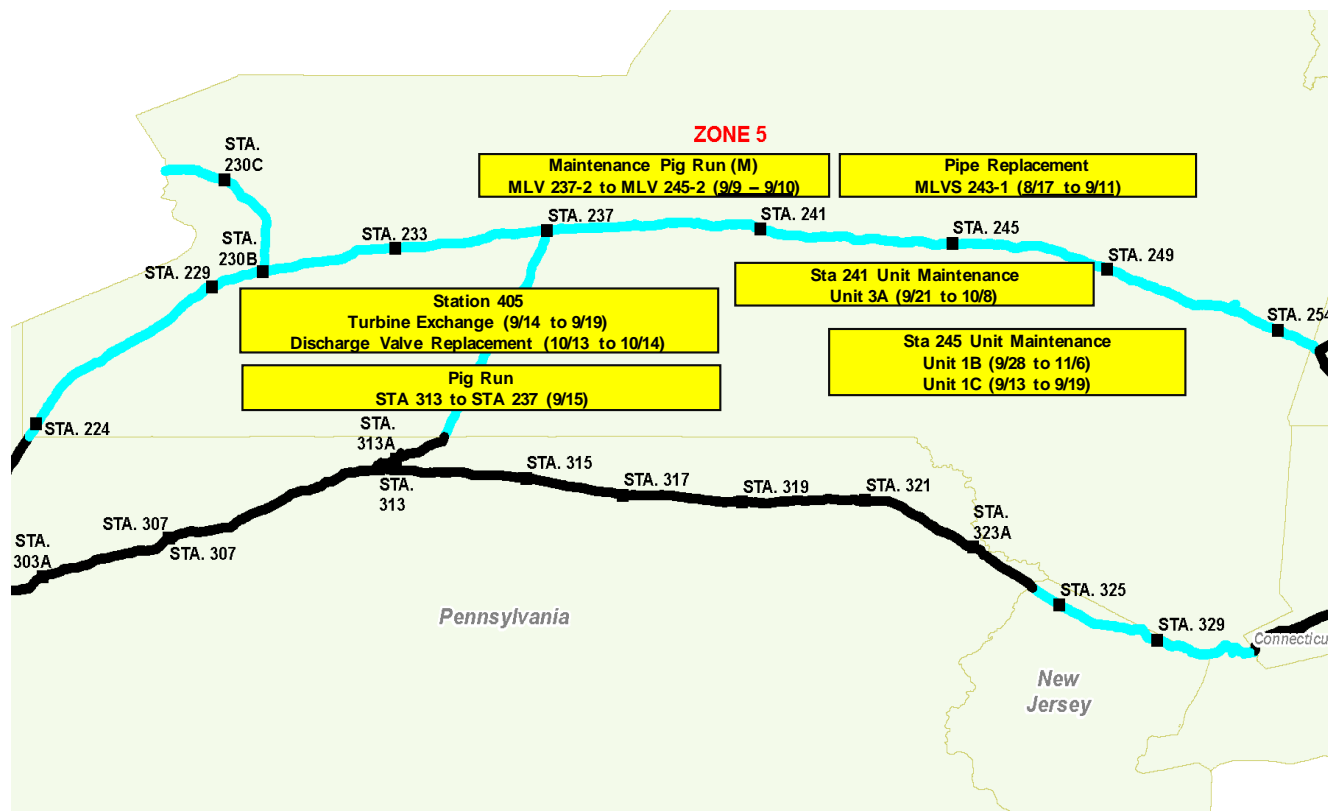
ZONE 4 (MAY - JULY)



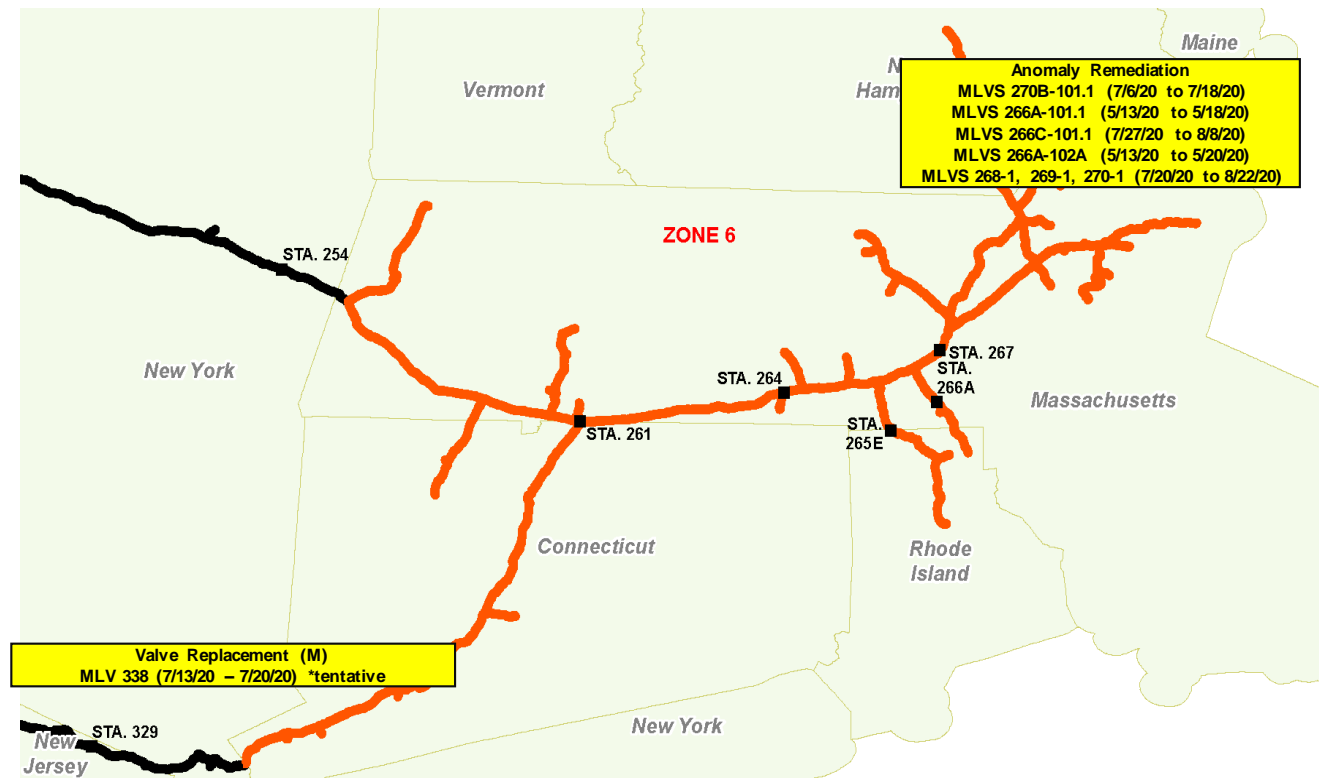
ZONE 5 (MAY - JULY)



ZONE 5 (FUTURE SIGNIFICANT OUTAGES)



ZONE 6 (MAY - JULY)



SCHEDULING\ DART UPDATE

TRANSPORTATION AND STORAGE SERVICES ORGANIZATIONAL STRUCTURE

▲ DIRECTOR-SCHEDULING
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
GINA MABRY

MANAGER-SCHEDULING ▶
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
KATIE CORNUTT

MANAGER-SCHEDULING ▶
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
ADAM HARRIS

MANAGER-SCHEDULING ▶
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
CATHY SOAPE

▲ MANAGER-SCHEDULING
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
ADAM HARRIS

DSRs

▲ MANAGER-SCHEDULING
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
CATHY SOAPE

WEARs

REP-SCHEDULER I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
BRITTON BURR

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
VERONICA ESPARZA

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
DANA GOODMAN

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
MANDEY ALLEN

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
GINGER BRYAN

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
COLONIAL BROOKWOOD CENTER
TODD DAVIS

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
BOB KAHLDEN

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
SUSANA LOPEZ

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
ERIN MORTIMER

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
CHARLOTTE HAWKINS

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
NICOLE LANG

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
PHYLLIS MILLER

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
TAMARA SCHNEIDER

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
DEB SHIPMAN

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
CARLA VANNOY

REP-SCHEDULER III
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
AHSAN MOHAMMAD

REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
JILL OVERMAN

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
JEREMY RAINWATER

REP-SCHEDULER III
TRANSPORTATION/STORAGE SRVCS
COLONIAL BROOKWOOD CENTER
DAVID SOKIRA

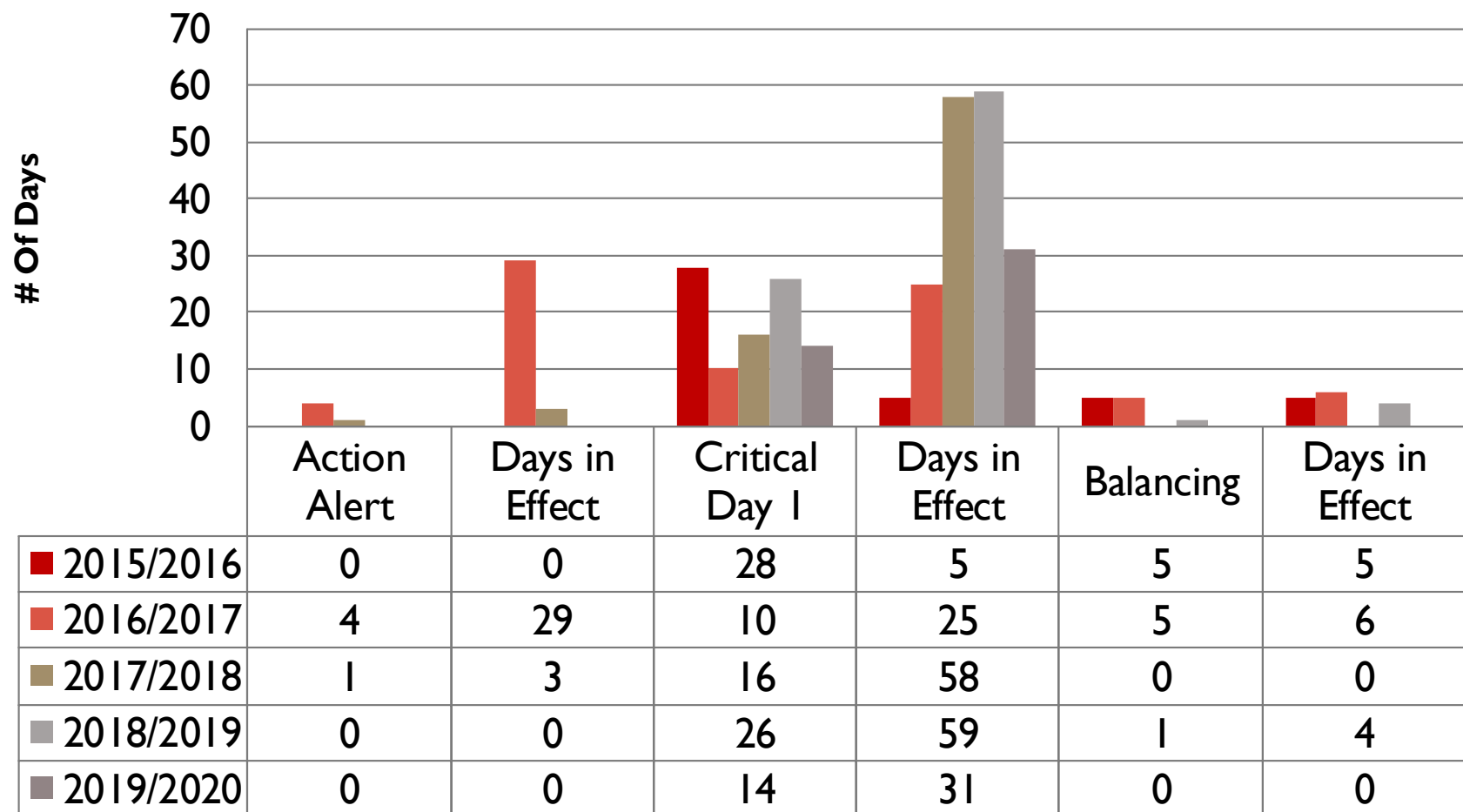
REP-SCHEDULER SR II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
DEBBIE TWEEDY

REP-SCHEDULER SR I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
NORMA VILLARREAL

WINTER RESTRICTIONS

Restriction Point Highly Utilized TGP Paths	Percentage Days Restricted (November - March)	Percentage Days Restricted (November - March)	Percentage Days Restricted (November - March)	Percentage Days Restricted (November - March)	Percentage Days Restricted (November - March)
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Sta. 200/204	64%	69%	68%	0%	0%
Sta. 245	100%	99%	100%	100%	100%
Sta. 261	68%	28%	81%	85%	63%
Sta. 267	31%	56%	68%	2%	0%
MLV 268	0%	0%	38%	9%	3%
MLV 273	0%	17%	76%	99%	70%
Sta. 315 BH	76%	97%	89%	61%	37%
Sta. 321	86%	93%	92%	81%	100%
MLV 355 BH	9%	5%	15%	34%	16%
Sta. 1 BH	84%	0%	21%	83%	17%
Sta. 9 BH	0%	44%	90%	31%	55%
Mahwah	93%	88%	60%	98%	100%
Rivervale	66%	81%	99%	88%	6%

WINTER SEASON OFOS – ZONES 4, 5 AND 6



SUMMER RESTRICTIONS

Restriction Point Highly Utilized TGP Paths	Percentage Days Restricted (April – October)	Percentage Days Restricted (April – October)	Percentage Days Restricted (April - October)	Percentage Days Restricted (April - October)	Percentage Days Restricted (thru April)
	2016	2017	2018	2019	2020
Sta. 200/204	74%	93%	67%	12%	12%
Sta. 245	100%	98%	98%	83%	100%
Sta. 261	12%	20%	49%	1%	7%
Sta. 267	1%	5%	10%	0%	0%
MLV 268	0%	0%	12%	0%	0%
MLV 273	0%	0%	17%	16%	100%
Sta. 315 BH	99%	99%	99%	70%	93%
Sta. 321	46%	76%	99%	63%	100%
MLV 355 BH	63%	29%	79%	23%	0%
Sta. 1 BH	65%	8%	80%	13%	29%
Sta. 9 BH	37%	50%	58%	22%	32%
Mahwah	86%	58%	50%	98%	100%
Rivervale	78%	57%	58%	68%	0%

PIPELINE EVALUATIONS

- Evaluate Displacement
 - No delivery nominations allowed to Dracut
 - No receipt nominations allowed at Mendon until ID I (compared to EPSQ volumes)
 - No delivery nominations allowed at Wright/Shelton until ID I (compared to EPSQ volumes)
- Invalid nominations not allowed
- Will restrict meter bounces if causing directional changes to occur at locations
- EPSQ invoked on meters as needed
- New restriction locations as needed
- Imbalance Warnings
- Daily/Monthly/Hourly OFOs

DART SUMMER REMINDERS

- New Restriction locations may be implemented
 - NOTE: New locations are stated in Restriction Notice
- Monitor EBB for System and Maintenance Updates
- Contract pathing should be determined – know exception pathing
- To avoid overlapping nominations, review MDQ Utilization screen before or after submitting batch
- After nomination submission, review priorities in Capacity Split Screen
- Supply points associated with pools can be found on the TGP home page in Location Information

CURRENT SYSTEM CONDITIONS

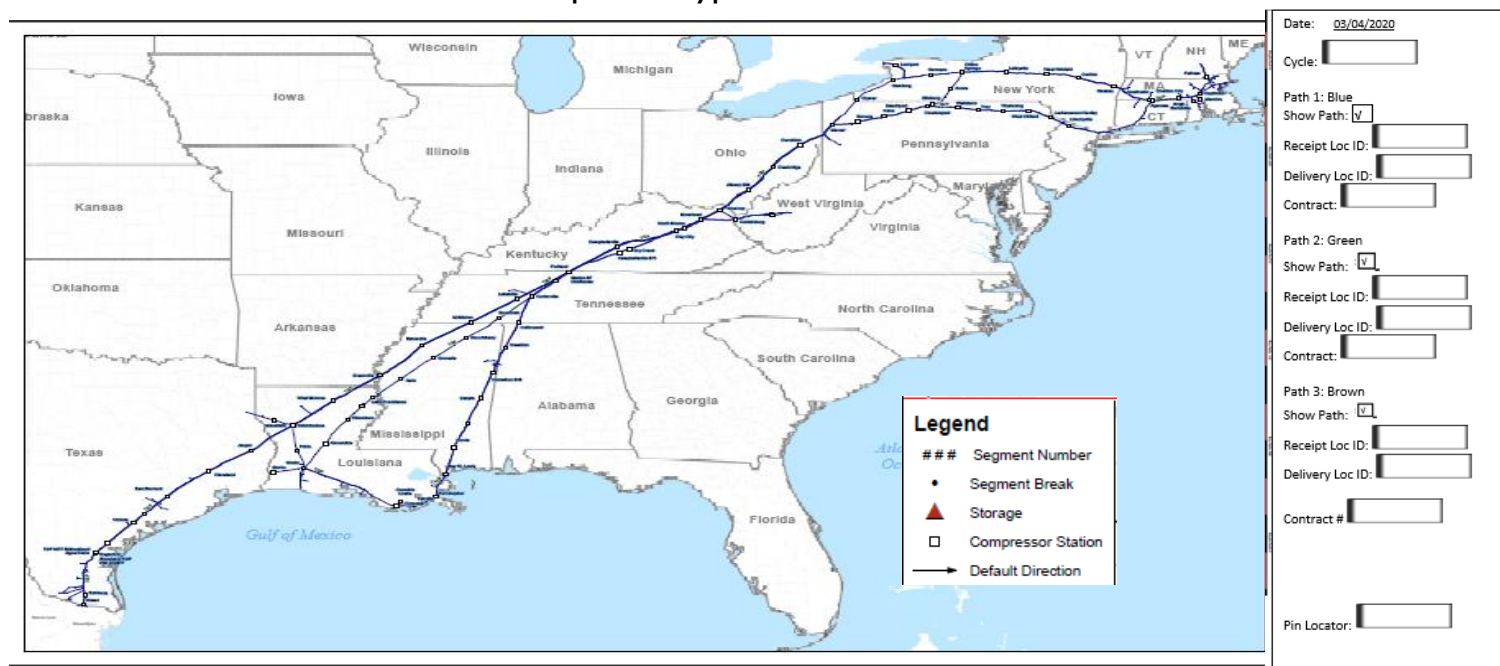
- Limitations of Interruptible Storage Injections
 - Effective April 1, 2020
 - High inventory coming out of a mild winter
 - COVID-19 demand impact
 - Protect firm storage
 - Systemwide OFO for long imbalances
- Short imbalance positions in result of month long OFO
 - Daily system flexibility to manage **scheduled** payback
 - Gas control and Scheduling evaluate payback each cycle to determine availability
 - TGP encourages customers to nominate payback in an effort to minimize customer cashout exposure

NEW HOURLY PROCESS IMPLEMENTED FEB. 2020

- TGP implemented enhancements to the Hourly cycles (11pm – 8am CCT) for shippers and confirming parties
- Purpose: add efficiency and automation
- Changes worth noting
 - Removal of the 'change indicator' check box (shipper)
 - Pipeline restrictions and system balancing, if necessary (shippers/operators)
 - Automated confirmation process (operators)
 - Shippers/Operators no longer need to email TGP approval of hourly changes
- Automated reporting and email notifications
 - Notification of a 'disapproved' nomination (shipper)
 - Notification of confirmation changes at a meter (operator)
 - Notification of final scheduled volumes for the cycle (shippers/operators)

GRAPHICAL PIPE CONCEPT

Map Prototype



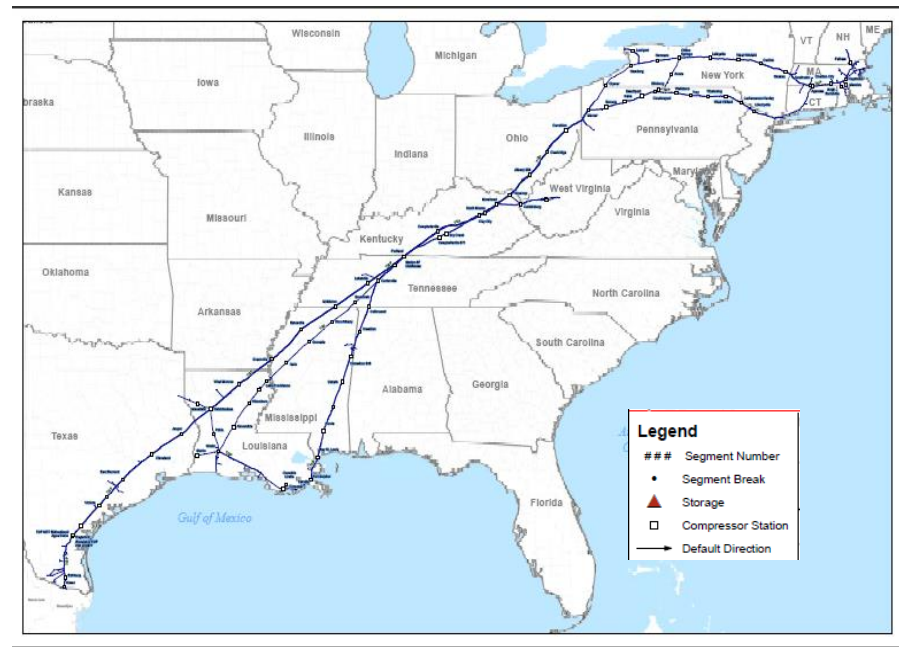
- Map will display pathing data

GRAPHICAL PIPE CONCEPT

- Default view will show the entire system map (very high level) with no segment or symbols
- Map will include a zoom feature for detail level

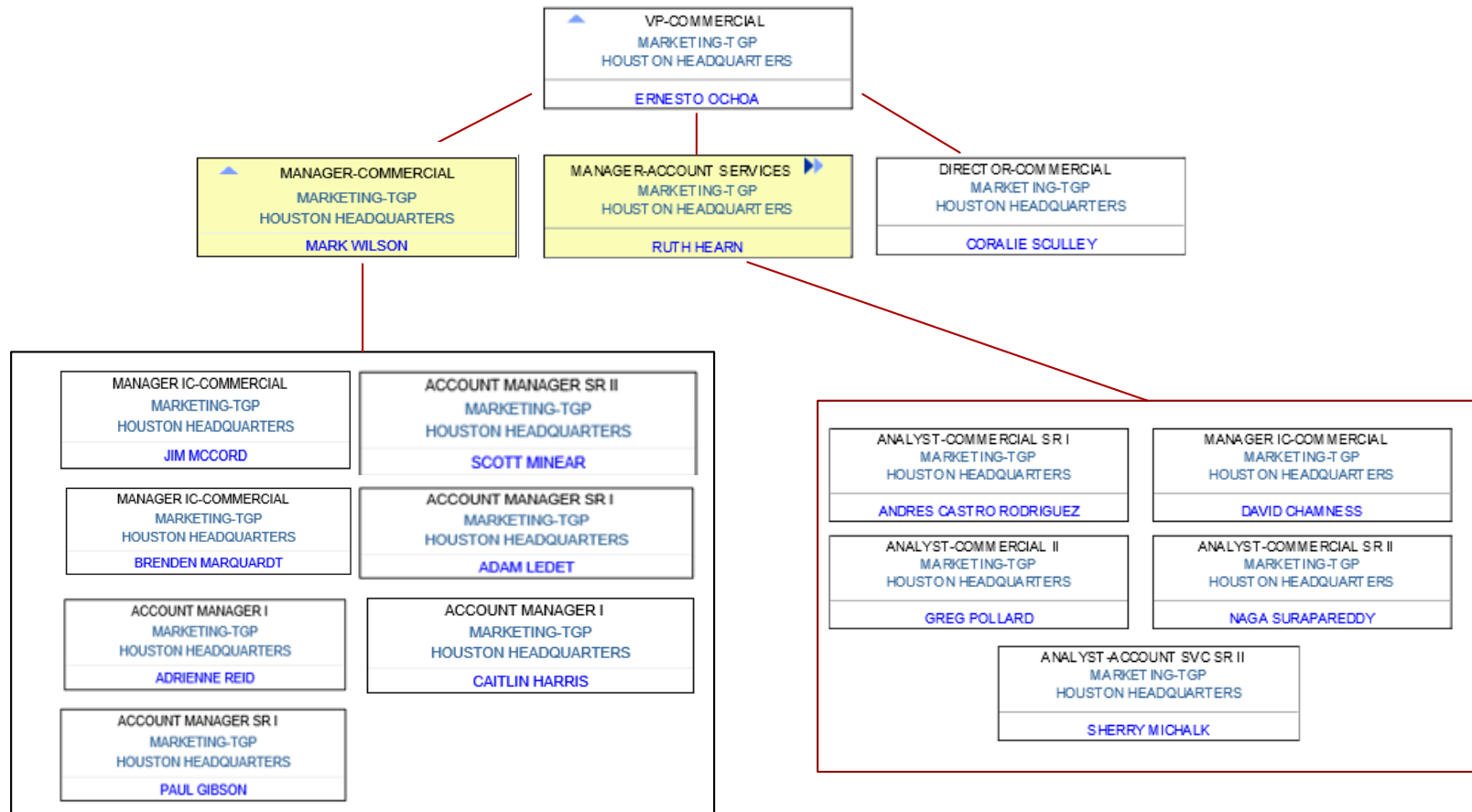
Proposed filter options to turn on/off:

- Compressor Stations
- Interconnects
- Pool Locations
- Restriction Points
- Segments Number and direction of flow
- Zones

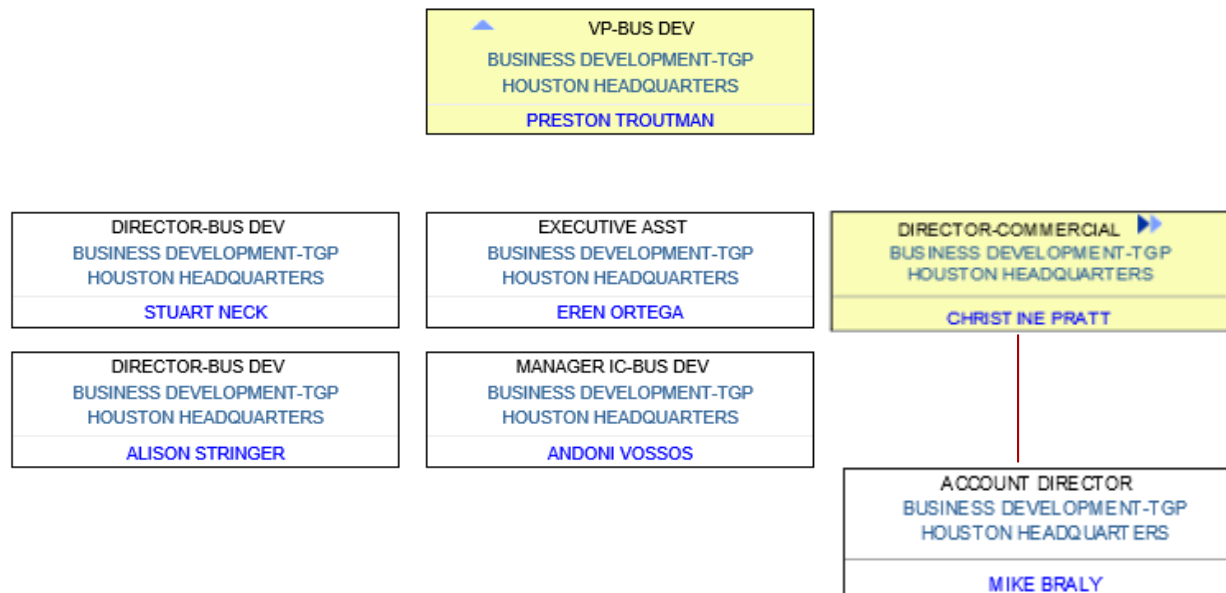


COMMERCIAL UPDATE

TGP COMMERCIAL TEAM



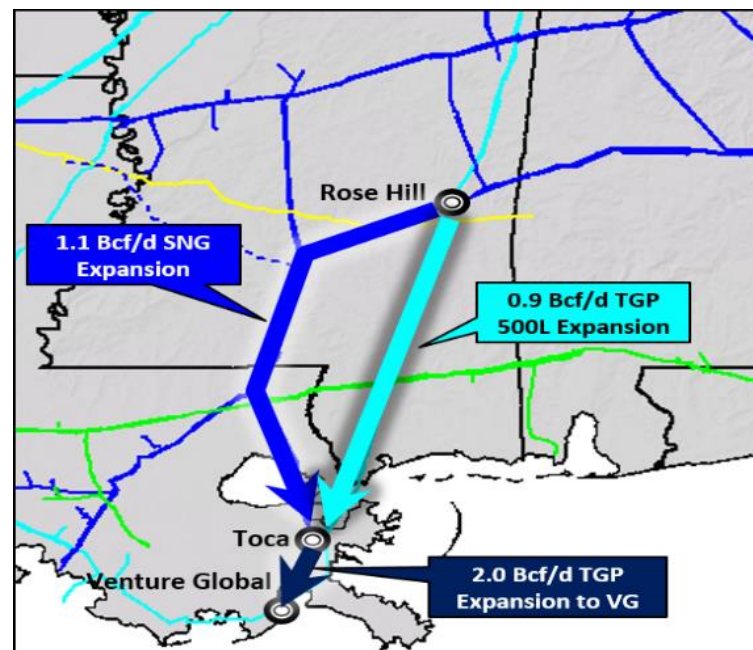
TGP BUSINESS DEVELOPMENT TEAM



EVANGELINE PASS

Details

- Commercial Driver: Venture Global Plaquemine, LLC
- Capacity Path:
 - 500 Leg from SNG Rose Lake to west of STA 527
 - Up to 2.0 Bcf/d
- Proposed In-service:
 - No later than December 2022
- Project Scope:
 - Compression
 - ~13 miles looping
- Status:
 - FERC filing February 2020 (CP20-50)



LINE 261 UPGRADE – CONSTRUCTION PHASE

Details

Commercial Driver:

- Residential/commercial gas demand growth

Capacity: 96,400 Dth/d

Customer:

- Columbia Gas of Mass (96,400 Dth/d)

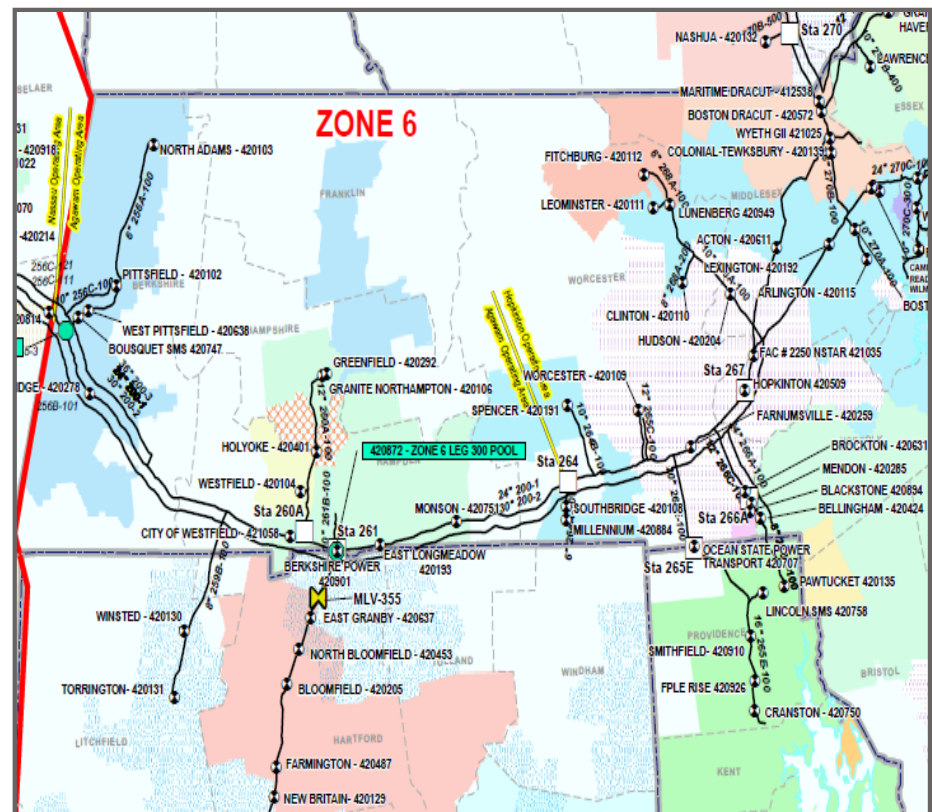
In-service: Q4 2020

Project Scope:

- HP Replacement at Station 261
- 2 miles of looping Springfield Lateral

Project Status:

- FERC Certificate Received – December 2019
- NTP Received / Construction Begins for HP Replacement – March 2020



EAST 300 UPGRADE – REGULATORY/PERMITTING PHASE

Details

Commercial Driver:

- Residential/commercial gas demand growth

Capacity: 115,000 Dth/d

Customer:

- Consolidated Edison Company of New York

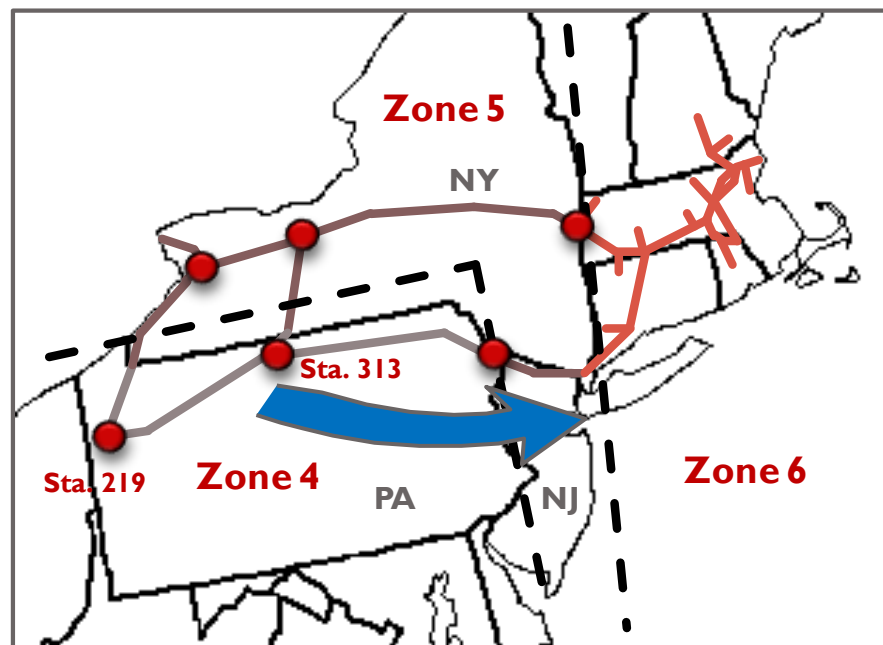
In-service: November 1, 2022

Project Scope:

- Compression only

Project Status:

- Developing FERC Filing



MARKET UPDATE

■ SUPPLY

- Substantial associated gas growth in the Permian, proximity to largest growth markets along Gulf Coast – **Tempered by decrease in price of oil**
- Marcellus/Utica production remains strong – **Stronger as associated gas plays decrease**

■ DEMAND

- LNG: Commercial production for Cameron and Cheniere Corpus Christi
- Mexico: heavy reliance on KM assets for import
- Power: continued gasification of electric grid realized on TGP

■ SERVICES

- Creative LNG peaking facilities and services

TENNESSEE GAS PIPELINE OPERATIONS CONTACT LIST

<u>Gas Control</u>	<u>Transportation and Storage</u>	<u>Commercial/Marketing</u>	<u>Field Operations</u>
24 hour and emergency 800-231-2800	24 hour Scheduling Hotline 713-420-4999	Mark Wilson - Manager 713-420-7205 Cell – 205-447-2589	Tom Burgett– Director (Northeast) 860-763-6027 Cell – 713-829-2919
Ganesh Venkateshan – Manager 713-420-2099 Cell –832-980-8296	Cathy Soape – Manager 713-420-3814 Cell – 713-922-5083	Coralie Sculley- Director 713-420-6336 Cell-713-818-0411	John Pannel – Director (Central) 615-221-1511 Cell – 615-714-1930
Layne Sanders – Director 713-420-5024 Cell – 832-563-5024	Adam Harris – Manager 713-420-2672 Cell – 281-389-0024	Ernesto Ochoa – VP 713-420-1734 Cell – 281-414-3823	Chris Bradberry – Director (Southeast) 205-325-7277 Cell – 205-567 - 0777
Danny Ivy - VP 713-369-9311 Cell – 713-829-2761	Katie Cornutt – Manager 713-420-5648 407-902-8027		Cy Harper – Director (South) 281-689-4534 Cell – 205-613-6701
Tom Dender – VP 713-420-3833 Cell – 205-572-1549	Gina Mabry – Director 713-420-3685 Cell – 281-744-8666		Ron Bessette– VP 713-420-6012 Cell – 413-313-4380
	Gene Nowak – VP 713-369-9329 Cell – 713-252-9759		Ken Grubb –COO GAS Pipelines 713-369-8763 Cell – 713-702-1210