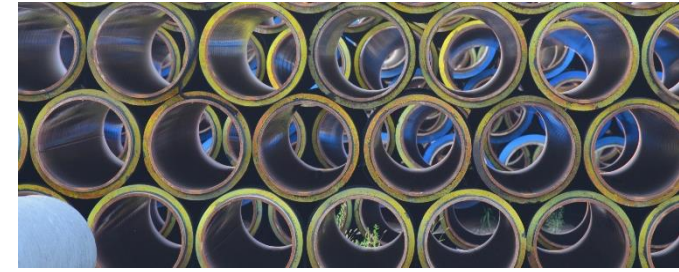




Delivering Energy to Improve Lives

TGP Pre-Winter Operations Meeting

November 2021



- TGP Gas Control Organizational Structure
- TGP System Overview
- 2021 Summer Review
- Operations/Remaining Outages
- Scheduling/DART Update
- Commercial Update

*Gina Mabry
Director, Trans and Storage Svc, East Region*

*Ganesh Venkateshan
Manager, TGP Gas Control*

*Ron Miller
Director, Operations- Northern Division 10*

*Cathy Soape Hutton
Manager, Trans and Storage Svc, East Region*

*Adam Harris
Manager, Trans and Storage Svc, East Region*

*Jim McCord
Manager, Commercial*

- Background
 - March 16, 2020, travel restrictions and office closures
 - KM Pandemic Plan Reviewed and subsequently updated to fit this
- Challenges in Division 10
 - Small teams operate key assets (more conservative approach to prevent disablement of small teams)
- Strategy
 - Implement KM plan and add requirements consistent with NE state guidance
 - Separation, distancing masks, hygiene, staggered breaks, etc.
 - Self reporting of any symptoms or household illness
 - Work with employee for on-the-job isolation, work at home, or pay for quarantine
 - Communicate, communicate, communicate (from a distance!)
- Results
 - Excellent cooperation with self reporting – over 50 issues reported and managed to date
 - Zero positive COVID results in team of 189 operations employees
 - Fully back to the office in Houston, Texas.

GAS CONTROL ORGANIZATIONAL STRUCTURE

Gas Control Organization



▲
VP-GAS CNTRL
PIPELINE MANAGEMENT
HOUSTON HEADQUARTERS
ROB PERKINS

ADMINISTRATIVE ASST SR
GPL-E-GAS CONTROL EAST
HOUSTON HEADQUARTERS
GLENDA COMEAUX

▶▶
DIRECTOR-GAS CNTRL
PIPELINE MANAGEMENT
HOUSTON HEADQUARTERS
BRIAN MERCHANT

▶▶
DIRECTOR-GAS CNTRL
GPL-E-GAS CONTROL EAST
HOUSTON HEADQUARTERS
LAYNE SANDERS

▶▶
DIRECTOR-GAS CNTRL
TEJAS GAS CONTROL
HOUSTON HEADQUARTERS
SEAN SASKO

▶▶
DIRECTOR-GAS CNTRL
TEJAS GAS CONTROL
HOUSTON HEADQUARTERS
ROBBIE STARNES

Gas Control Organizational Structure



MANAGER-GAS CNTRL
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
GANESH VENKATESHAN

CONTROLLER ASC
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
SIMON AJOKU

CONTROLLER
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
HUNTER CALHOUN

CONTROLLER ASC
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
ABHISHEK CHAUDHARI

CONTROLLER ASC
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
JACOB DASILVA

CONTROLLER SR
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
KEVIN EGGLESTON

CONTROLLER LEAD
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
KEITH FUSON

CONTROLLER SR
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
NOE GONZALEZ

CONTROLLER SR
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
CHUCK MARSHALL

CONTROLLER ASC
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
ZAKK MEINHOLD

MANAGER IC-CAPACITY PLANNING
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
JOHN O'NEAL

CONTROLLER
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
CODY SAFFORD

CONTROLLER SR
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
JOHN SHANKS

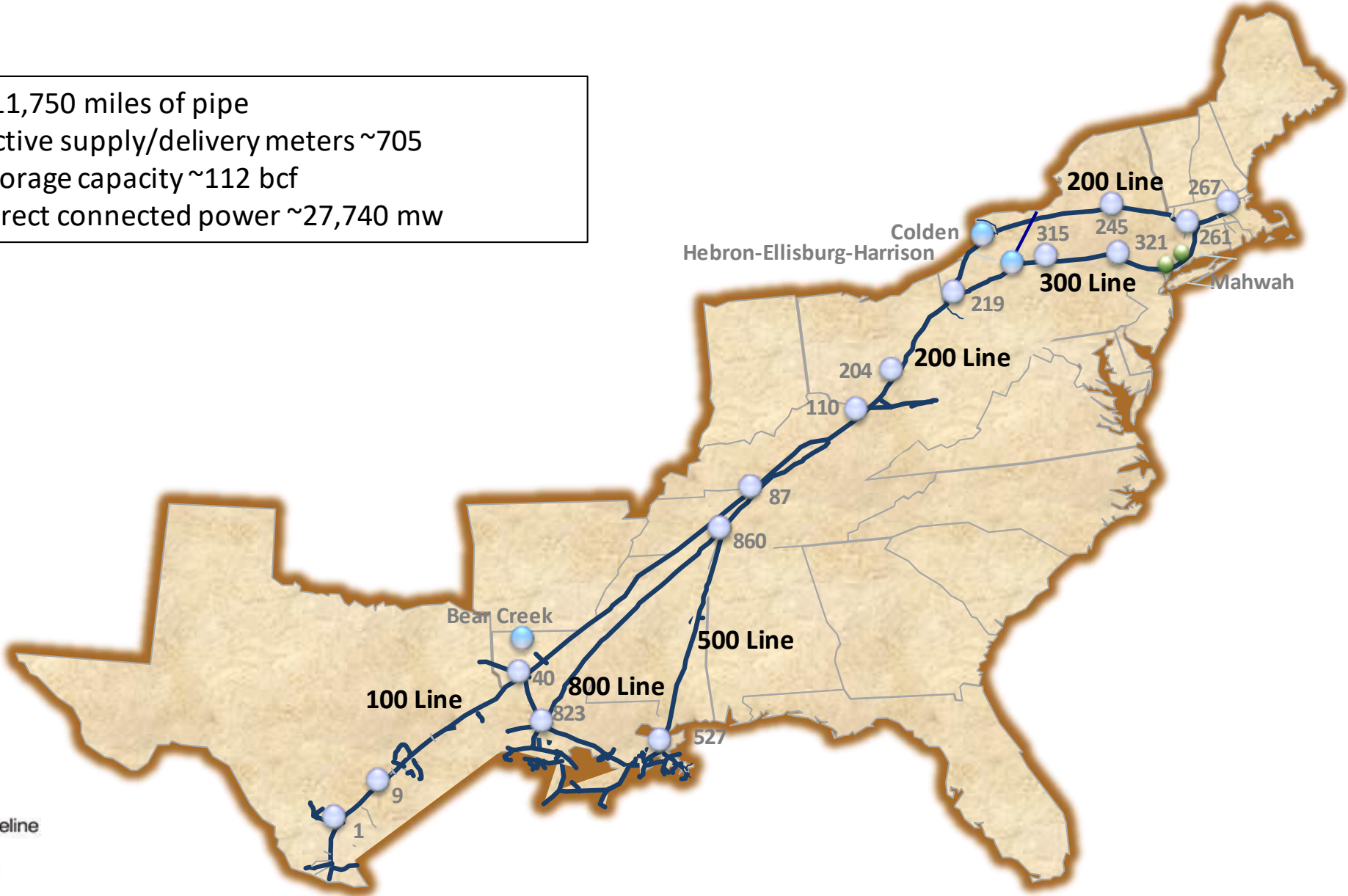
CONTROLLER
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
TREY SOAPE III

CONTROLLER LEAD
GPL-E-GAS CONTROL EAST-TGP
HOUSTON HEADQUARTERS
TAEKO YONEYAMA

SYSTEM OPERATIONS OVERVIEW

TGP System Map

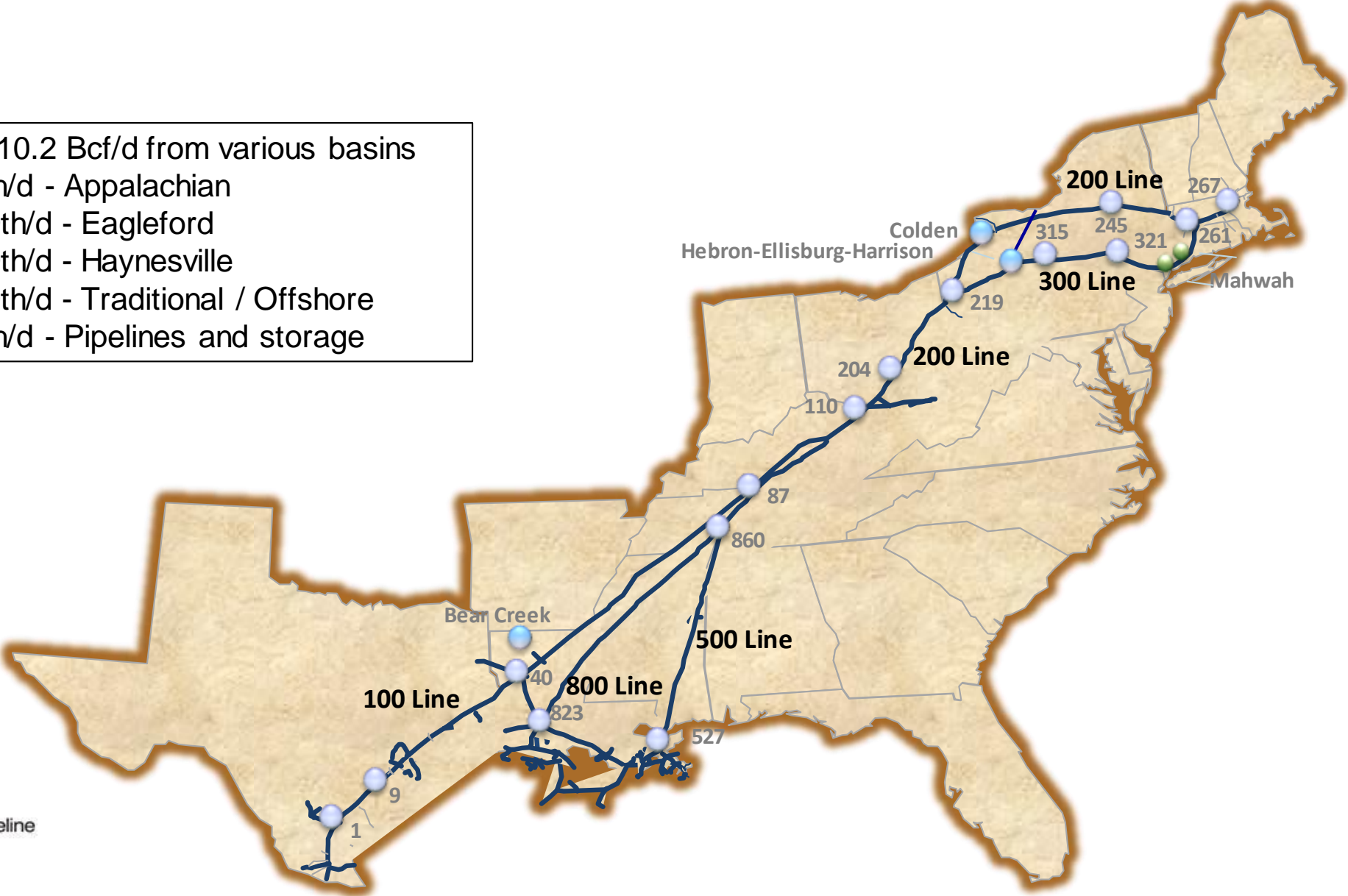
- ~11,750 miles of pipe
- Active supply/delivery meters ~705
- Storage capacity ~112 bcf
- Direct connected power ~27,740 mw



YTD TGP Gas Receipts



- Approximately 10.2 Bcf/d from various basins
- 4.5 MDth/d - Appalachian
 - 0.85 MDth/d - Eagleford
 - 0.45 MDth/d - Haynesville
 - 0.40 MDth/d - Traditional / Offshore
 - 4.0 MDth/d - Pipelines and storage



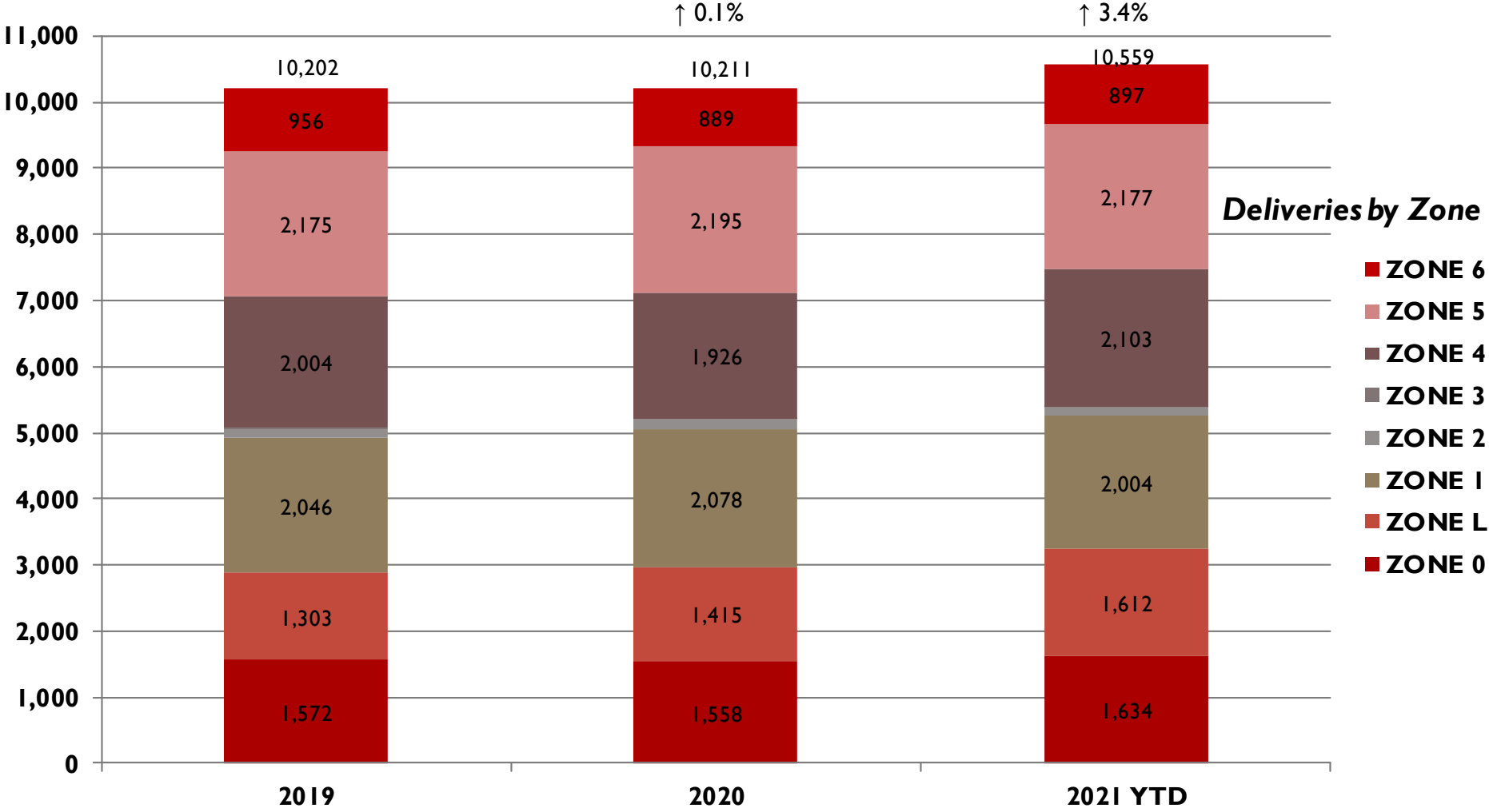
- SUPPLY

- Substantial associated gas growth in the Permian, proximity to largest growth markets along Gulf Coast
- Marcellus/Utica production remains strong
- Acquisition of Stagecoach Gas Services

- DEMAND

- Steady LNG increase
- Mexico: heavy reliance on KM assets for import
- Power: continued gasification of electric grid realized on TGP

TGP System Wide Throughput



*Through October

SUMMER 2021 LOOK BACK

- Overview

- System-wide throughput flat compared to previous summer
- Impact of COVID-19
- Challenging Maintenance Season

- Demand

- Strong demand across system
- Decreases in LDC (-6%), Increases in Interconnects (+5%) and in Power (17%)

Summer Northeast Market Flows



	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Change</u>
LDC	725	711	671	-6%
Power	336	370	434	+17%
Pipeline Interconnects	1,338	1,372	1,443	+5%
TOTAL	2,399	2,453	2,548	+4%

Volumes are MDth/d

*Through September

OPERATIONS UPDATE

Operations Organizational Structure



Operations Operational Structure



▲ DIRECTOR-OPS
GPL-E-EP NORTHERN DIRECTOR
DIVISION 10 OFFICE
RON MILLER

▶▶ COORDINATOR-OPS SR I
GPL-E-EP NORTHERN DIRECTOR
DIVISION 10 OFFICE
SUSAN ANDRESEN

▶▶ SUPV-CORROSION
GPL-E-CORROSION WEST DIV 10
CLIFTON SPRINGS CS 237
VINCENT BULLOCK JR

▶▶ SUPV-MEASUREMENT
GPL-E-MEASUREMENT SOUTH DIV 10
CARROLLTON CS 214
JAMES BURRIS JR

▶▶ MANAGER-OPS
GPL-E-EP NORTHERN DIRECTOR
NASSAU CS 254
BUTCH FERGUSON JR

▶▶ SUPV-MEASUREMENT
GPL-E-MEASUREMENT NORTH DIV 10
CLIFFORD CS 321
JIM HOLSINGER

▶▶ MANAGER-OPS
GPL-E-EP NORTHERN DIRECTOR
AGAWAM CS 261
MITCHELL MYER

▶▶ SUPV-CORROSION
CORROSION EAST DIV 10
DIVISION 10 OFFICE
MIKE PIECIUK

CONSULTANT
GPL-E-EP NORTHERN DIRECTOR
STAGECOACH
JOHN SHAFFER

▶▶ MANAGER-OPS
GPL-E-EP NORTHERN DIRECTOR
HAMBURG CS 229
TOM SUTTON

▶▶ SUPV-TECHNICAL SVC
GPL-E-MECHANICAL DIV 10
MARIENVILLE CS 307
DAVE SWANSON

▶▶ MANAGER-OPS
GPL-E-EP NORTHERN DIRECTOR
COUDERSPORT CS 313
JAKE TAYLOR

▶▶ MANAGER-OPS
GPL-E-EP NORTHERN DIRECTOR
CAMBRIDGE CS 209
STEVE WATKINS

Scheduled Maintenance

- Goal - complete routine maintenance by November 1.
 - Compressor station maintenance:
 - Station/Unit protective devices – Annual Calibrations
 - Compressor maintenance
 - Borescope inspections and water wash
 - Calibration/Testing of monitoring equipment
 - Test run units (as applicable)
 - Pipeline and meter station maintenance:
 - Annual Valve Maintenance
 - Auto-close checks
 - Device calibration/meter tests (Ongoing)

Winter Weather Preparation

- Inspect and test emergency equipment (i.e., generators, heaters, snow handling equipment, etc.)
- Contingency planning
 - Place personnel on site at key compressor stations during significant winter events.

Gas Control Preparation

- Daily meetings with regional managers
- Gas control to gas control operational meetings
- Pre-winter meetings with NE utilities

Winter 2020 -2021 Northeast Flows

	<u>2018-2019</u>	<u>2019-2020</u>	<u>2020-2021</u>	<u>Year Over Year Change</u>
LDC	1,582	1,516	1,564	+3%
Power Plants	247	298	333	+12%
Pipeline Interconnects	1,526	1,520	1,487	-2%
TOTAL	3,354	3,334	3,385	+1.5%

- Segments inspected: 5
- Tools launched and received: 11
- 0 Immediate digs resultant from 2021 ILI
- Outstanding inspection reports:
 - 270B-300 Haverhill Lateral AFD Inspection Report
 - Late January/Early February
- Completed 4 anomaly digs and 0 DA projects
 - SCCDA & ECDA
- 45 Digs scheduled for 2022 (2019 ILI)
- We continue to look for innovative ways to reduce customer impact
 - Dent fatigue life analysis
 - Foreign crossing review, etc.
 - Continued development of engineering analysis

SCHEDULING/DART UPDATE

Transportation Storage Services



▲ 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
RENEE LEWIS

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

▶▶ MANAGER-SCHEDULING
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
RICHARD WILLIAMS

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

DSRs

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

WEARs

REP-SCHEDULER II
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
WALKER AGNEW

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

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

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 I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
NICOLE LANG

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

REP-SCHEDULER I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
MECO REYNA

REP-SCHEDULER I
TRANSPORTATION/STORAGE SRVCS
HOUSTON HEADQUARTERS
HENRY SHARP

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

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

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

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

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)
	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Sta. 200/204	69%	68%	0%	0%	38%
Sta. 245	99%	100%	100%	100%	100%
Sta. 261	28%	81%	85%	63%	54%
Sta. 267	56%	68%	2%	0%	0%
MLV 268	0%	38%	9%	3%	5%
MLV 273	17%	76%	99%	70%	100%
Sta. 315 BH	97%	89%	61%	37%	100%
Sta. 321	93%	92%	81%	100%	100%
MLV 355 BH	5%	15%	34%	16%	28%
Mahwah	88%	60%	98%	100%	100%
Rivervale	81%	99%	88%	6%	0%

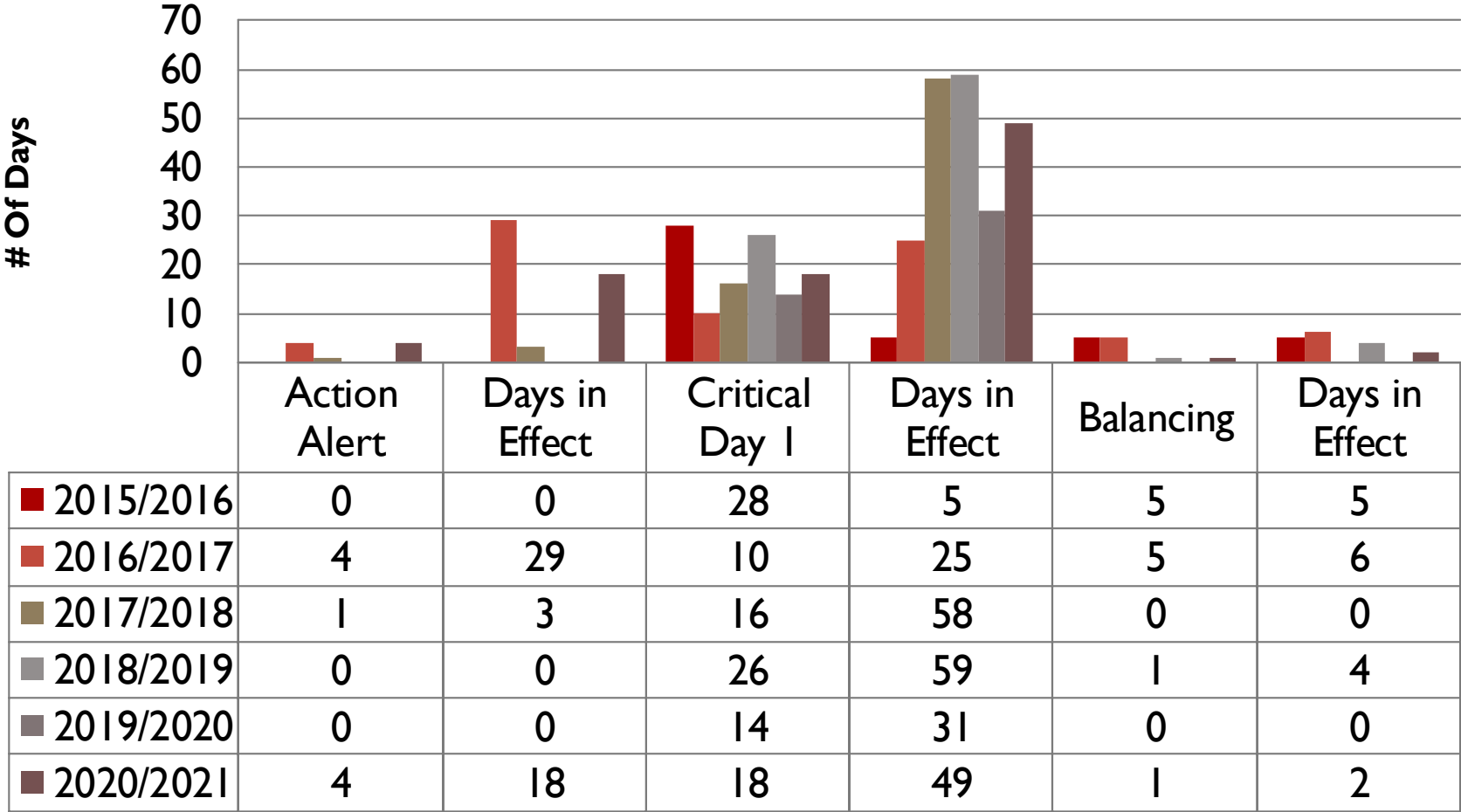
Summer Restrictions



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 (April - October)
	2017	2018	2019	2020	2021
Sta. 200/204	93%	67%	12%	44%	69%
Sta. 245	98%	98%	83%	94%	100%
Sta. 261	20%	49%	1%	14%	14%
Sta. 267	5%	10%	0%	0%	0%
MLV 268	0%	12%	0%	0%	0%
MLV 273	0%	17%	16%	66%	100%
Sta. 315 BH	99%	99%	70%	99%	96%
Sta. 321	76%	99%	63%	79%	100%
MLV 355 BH	29%	79%	23%	17%	74%
Mahwah	58%	50%	98%	89%	98%
Rivervale	57%	58%	68%	0%	1%

Winter Season OFOs

Zones 4,5&6



- Evaluate Displacement
- No delivery nominations allowed to Dracut
- No receipt nominations allowed at Mendon until ID1 (compared to EPSQ volumes)
- Invalid nominations not allowed
- Limitations of Storage Services/Linepack Services
- Can restrict meter bounces if causing directional changes to occur at locations
- EPSQ invoked on meters as needed
- New restriction locations as needed
- Imbalance Warnings
- OFOs

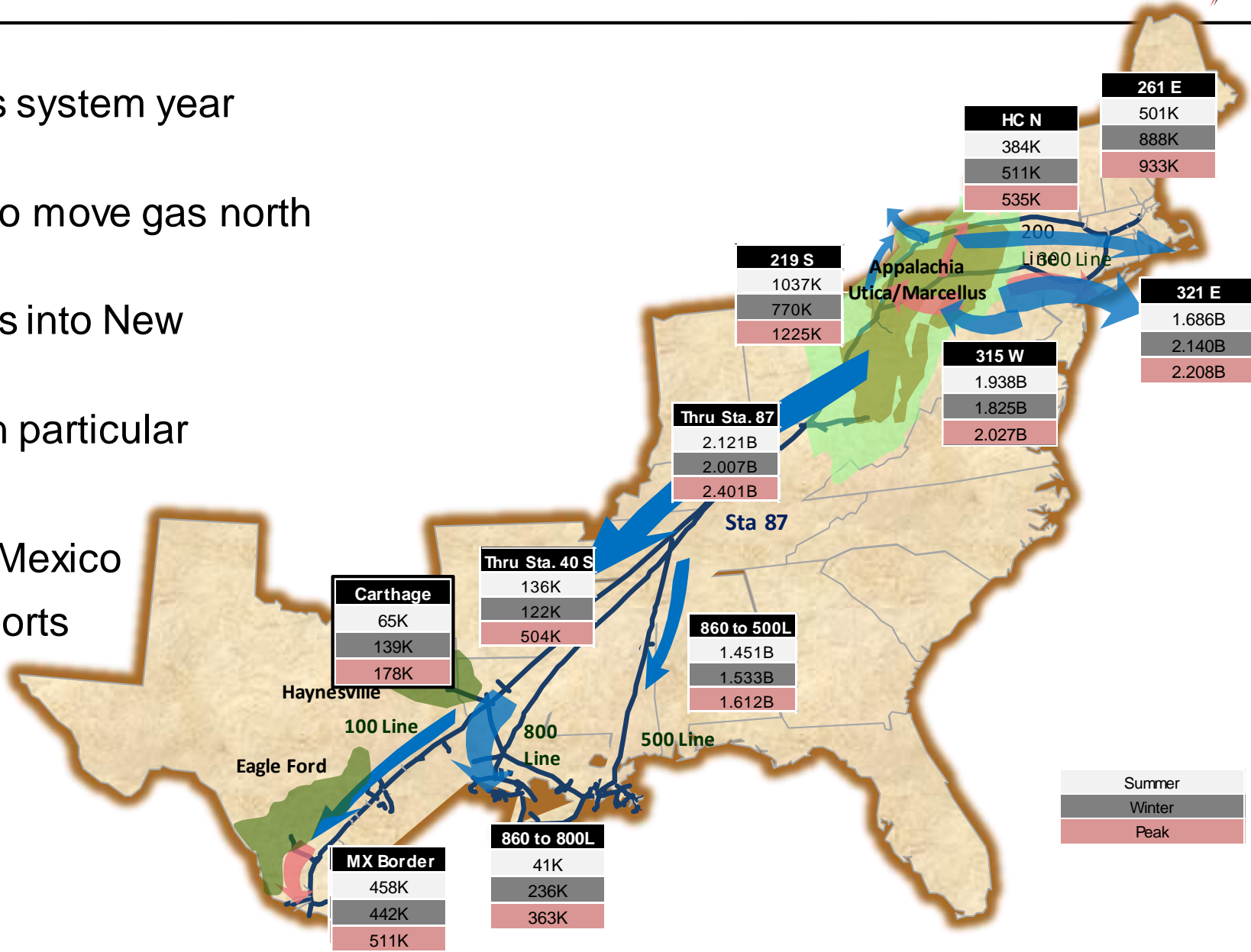
- DART Capacity Release Upload Feature
- New Restriction locations may be implemented
 - NOTE: New locations are stated in Restriction Notice
- Monitor EBB for System and Maintenance Updates
- Contract pathing should be determined – know exception pathing
- Be conscious of suppliers' priorities
- To 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

- System Considerations for Winter
 - More gas moving toward the Northeast as temperatures drop
 - OFO East of STA 245 and 325 for over-takes and under-deliveries
 - Scheduled maintenance finally coming to an end
 - Work with customers as operations allow
 - Storage Utilization
 - Protect firm storage
 - Daily system flexibility to manage ***scheduled*** payback
 - Gas control and Scheduling evaluate payback each cycle to determine availability
 - TGP encourages customers to nominate payback to minimize customer cashout exposure

COMMERCIAL UPDATE

System Flows

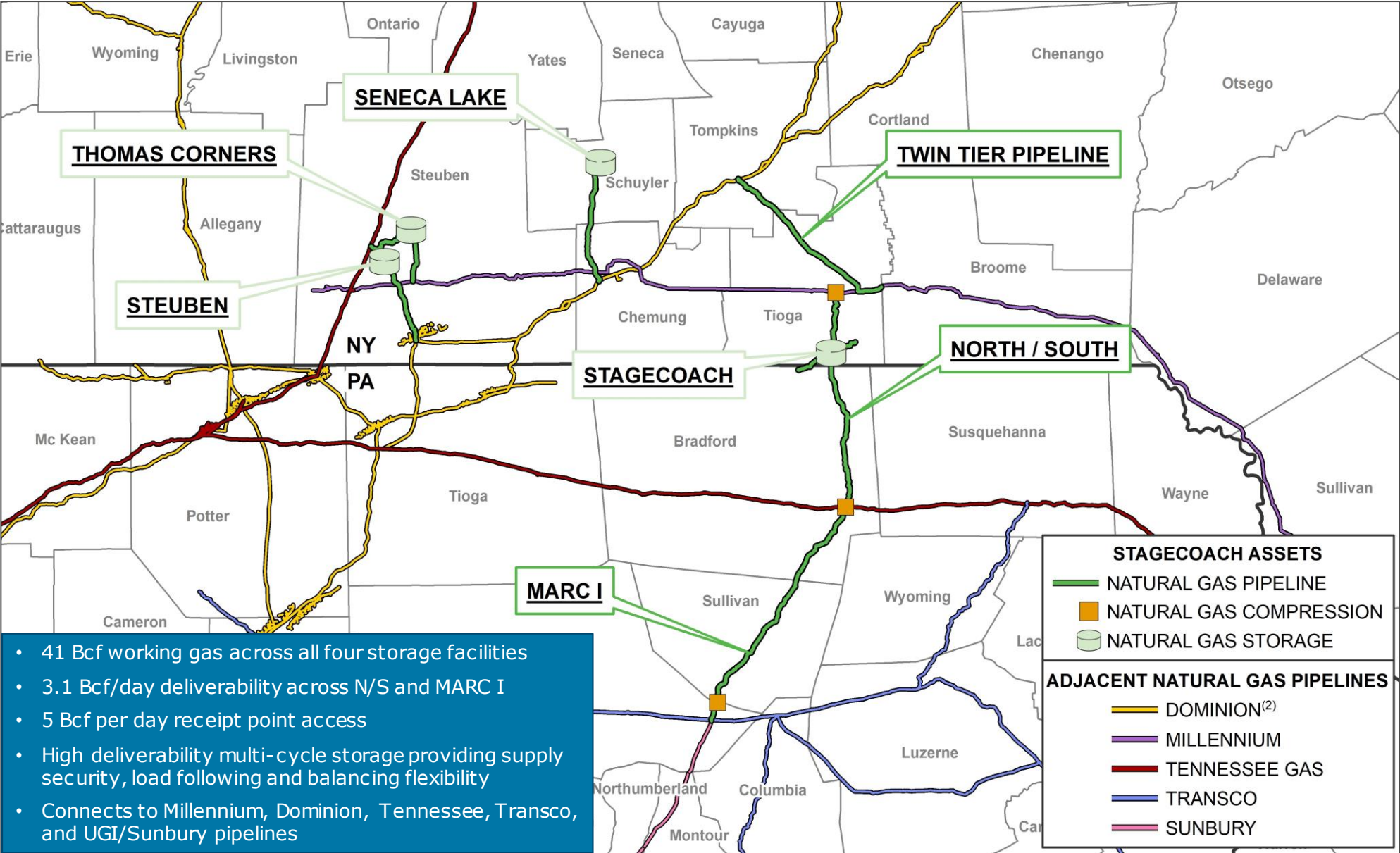
- High utilization across system year round
- Increasing demands to move gas north to south
- Traditional bottlenecks into New England remain
- Power growth- PJM in particular
- Growing LNG Export
- Continued interest in Mexico
- Steady Canadian Exports



- Combining FSMA 524 into FSMA 527
 - Combined MSQ 7.6 Bcf
 - Injection TQ – 50,689 Dth/day
 - Withdrawal TQ – 95,415 Dth/day
 - Ratchets
 - Level 0 – 95,415
 - Level 1 – 92,404
 - Level 2 – 55,604
 - Contract start – December 1, 2021
- Bottom-line – FSMA 524 ends November 30, 2021, and the contract volumes will be combined with FSMA 527 volumes.

Stagecoach Gas Services

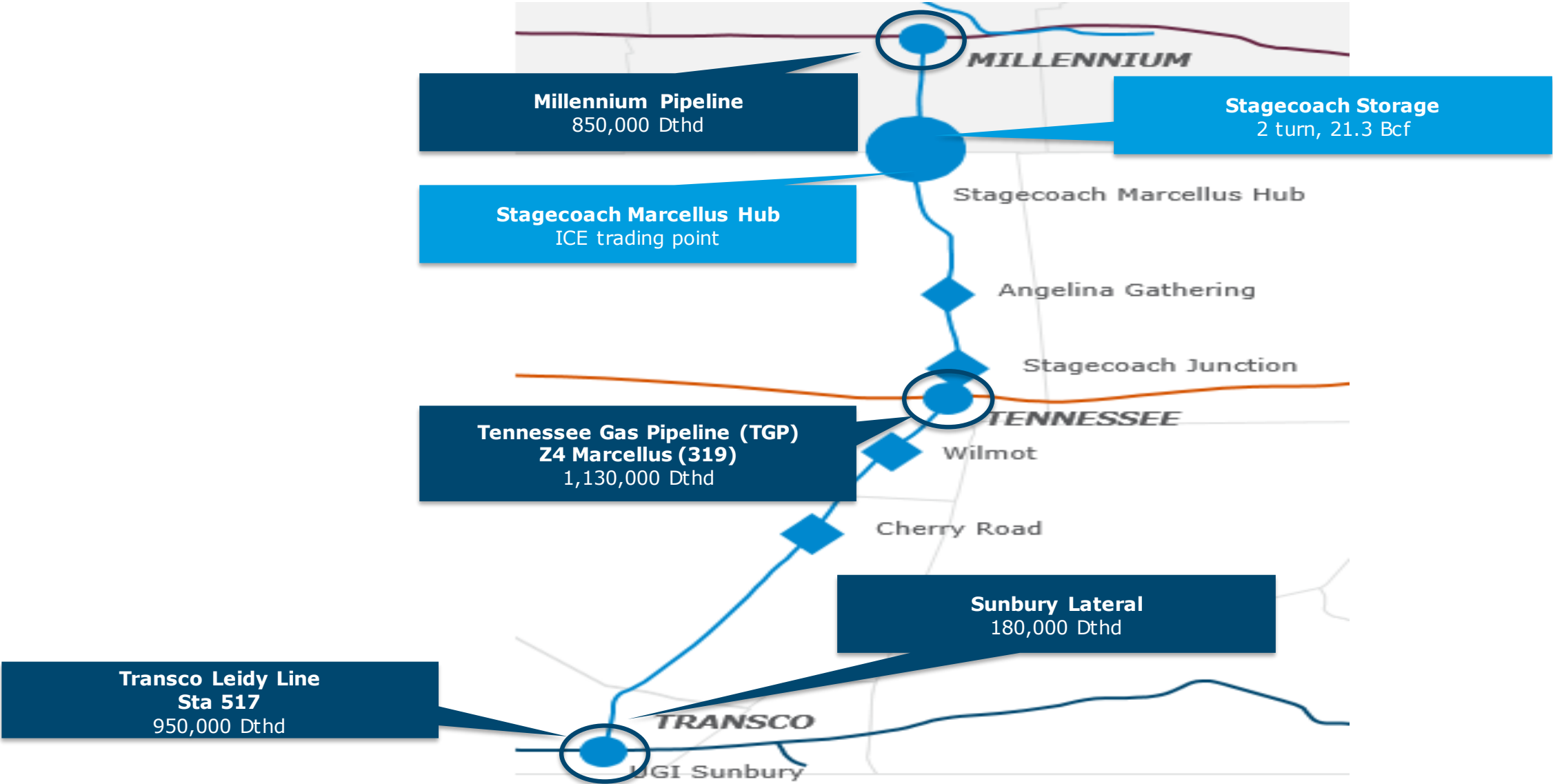
Asset Overview



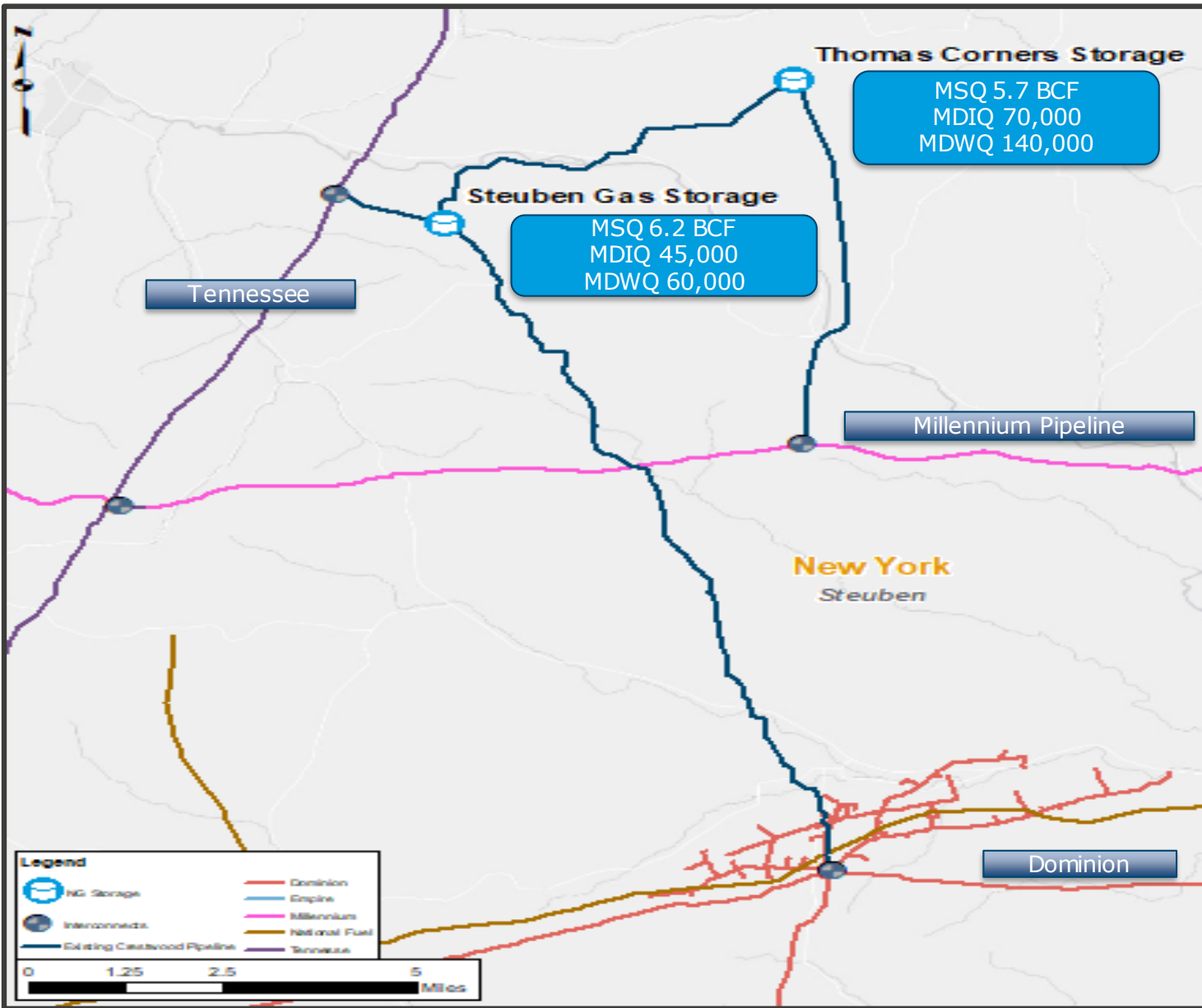
- 41 Bcf working gas across all four storage facilities
- 3.1 Bcf/day deliverability across N/S and MARC I
- 5 Bcf per day receipt point access
- High deliverability multi-cycle storage providing supply security, load following and balancing flexibility
- Connects to Millennium, Dominion, Tennessee, Transco, and UGI/Sunbury pipelines

Stagecoach

Delivery Point Diversity, Storage and Liquidity



Thomas Corners & Steuben



Steuben Path

Primary Inj: Dominion, Tennessee Primary
Del: Dominion, Tennessee

Primary Wheel firm inject and withdraw on the same day and pay associated variable costs.

Thomas Corners Path

Primary Inj: Millennium, Tennessee Primary
Del: Millennium, Tennessee

Primary Wheel firm inject and withdraw on the same day and pay associated variable costs.

Variable Charges

Steuben

Commodity:	\$.0032
Electric Power Use:	\$.0032
Fuel In Kind Inj:	1.5%
Fuel In Kind Wd:	.6%

Thomas Corners

Commodity:	\$.0000
Electric Power Use:	\$.0000
Fuel In Kind Inj:	1.5%
Fuel In Kind Wd:	0.0%

Park & Loan – Term (PAL-D)
ROPD & ROLD

Attributes:

- Lowest form Interruptible Services
- Invoiced on Total Scheduled volume

Offerings:
Term
Balancing

Park & Loan – Term (PAL-T)
ROPT & ROLT

Attributes:

- Highest form Interruptible Services
- Invoiced on Total Quantity (TQ)

Offerings:
Term
Balancing
Operational

Term

- Based on Market Price
- Cash, Balmo and Forwards
- Timing, Location and quantity based on operational flexibility

Balancing

- Acts like synthetic storage
- Price varies based on turns, locations and term
- Yearly and Monthly terms

Operational

- Contracted on a customer needs basis as operational flexibility allows



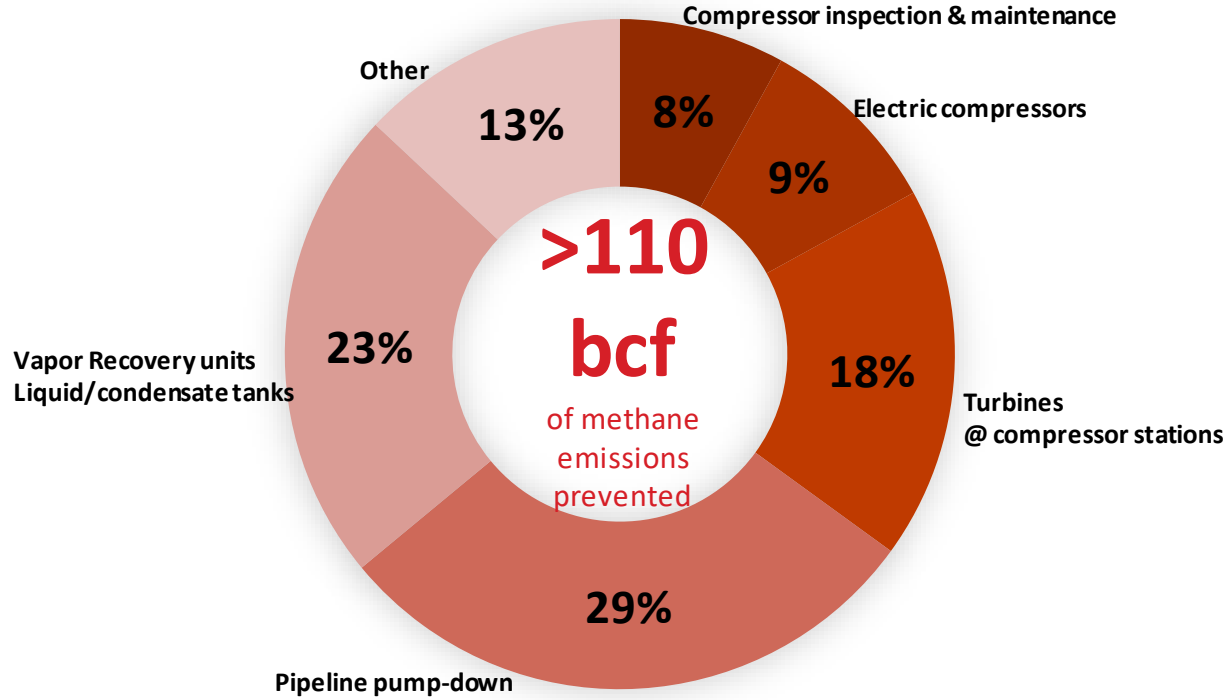
Recognized Industry Leader

ESG Multi-faceted Approach

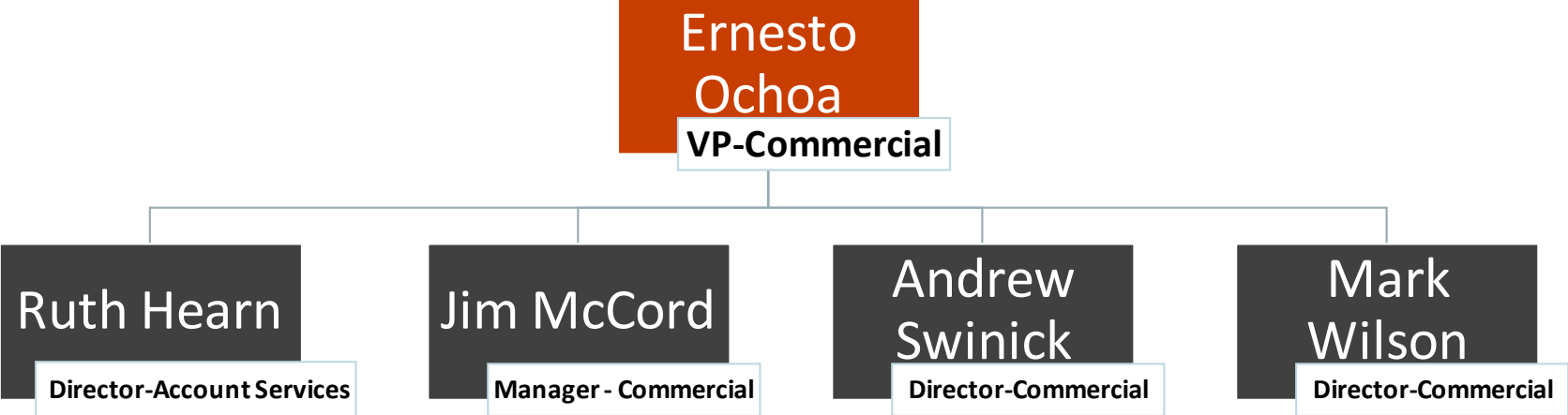


- Leadership
 - 2020 Emissions Intensity 0.02% TGP; 0.04% KM
 - ONE Future – Founding Member
 - INGAA GHG Task Force
 - Carbon Neutral Pipeline – Ruby
 - EPA Natural Gas STAR & Methane Challenge Programs
- Transparency
 - ESG Report
 - Utilize 3rd Party metrics
- Collaboration
 - Environmental Agencies – studies & new technology
 - Evaluate Opportunity – expansions & new facilities
 - Producers, Shippers & Peers
- Emission Reduction Methods
 - Pipeline pump-down
 - Compressor inspection & maintenance
 - Electric Compressor
 - Vapor Recovery Units
 - Turbines @ compressor stations

ESG RISK RATING^(a)



(a) – as of 8/10/2021

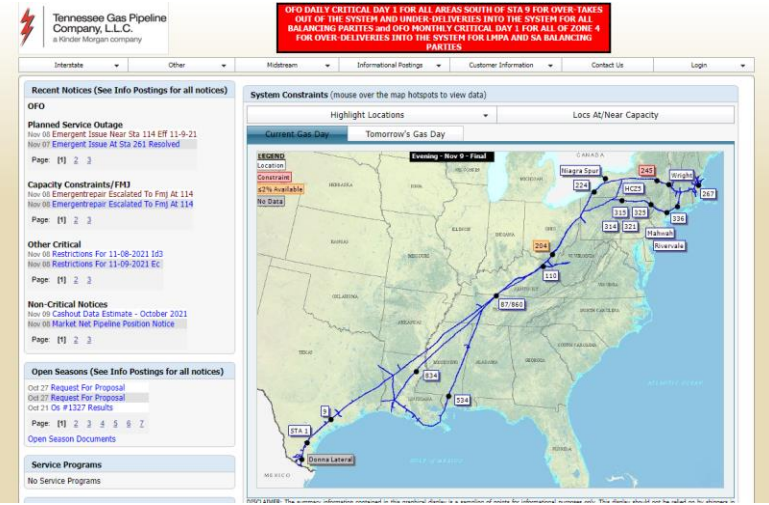


COMMERCIAL – Bidroom ORGANIZATION



On Call Assistance

- Commercial Hotline** (713) 420-4135
- Scheduling Hotline** (713) 420-4999
- Gas Control Hotline** (800) 231-2800
- Contract Mgmt. Hotline** (713) 420-3434
- DART Non-Security Issues** (713) 420-4999



Mark Wilson

Britton Burr

Kevin Cofer

Britton Durio

Bethany Gielecki

Caitlin Harris

Scott Minear

Greg Pollard

Adrienne Reid

Pipelines marketed daily by the Bidroom Group

- Tennessee Gas**
- Stagecoach Storage**
- Arlington Storage**
- MEP**
- KMLP**
- SNG**

Other Postings

- All Notices**
 - [Critical Notices](#)
 - [Non-Critical Notices](#)
- Operating Information**
 - [Outage Impact Report](#)
 - [Maintenance Outages \(Excel\)](#)
- Other Information**
 - [Training Documents \(DART\)](#)
 - [Training Videos \(DART\)](#)
 - [System Maps](#)

Gas Control

24 hour and emergency
800-231-2800

Ganesh Venkateshan – Manager
713-420-2099
Cell –832-980-8296

Layne Sanders – Director
713-420-5024
Cell – 832-563-5024

Rob Perkins - VP
713-420-5229
Cell – 205-527-0650

Transportation and Storage

24 hour Scheduling Hotline
713-420-4999

Cathy Soape – Manager
713-420-3814
Cell – 713-922-5083

Adam Harris – Manager
713-420-2672
Cell – 281-389-0024

Gina Mabry – Director
713-420-3685
Cell – 281-744-8666

Gene Nowak – VP
713-369-9329
Cell – 713-252-9759

Commercial/Marketing

Jim McCord – Account Manager
713-420-5611
Cell - 832-655-4043

Ruth Hearn-Director, Acct Svcs
713-420-3881
Cell- 281-352-7975

Mark Wilson – Director, Optimization
713-420-7205
Cell – 205-447-2589

Andrew Swinick – Director
713-420-5347
Cell – 713-853-7581

Ernesto Ochoa – VP
713-420-1734
Cell – 281-414-3823

Field Operations

Ron Miller– Director (Northeast)
724-662-6422
Cell – 716-378-1840

Mitch Myers – Manager (Northeast)
615-221-1511
Cell – 615-714-1930

Ron Bessette– VP
713-420-6012
Cell – 413-313-4380