# 2017/2018 Winter Operations Overview

May 16-18, 2018

TENNESSE GAS PIPELINE COMPANY, L.L.C.









#### Organization Structure



#### GAS CONTROL ORGANIZATIONAL STRUCTURE

VP-GAS CNTRL PIPELINE MANAGEMENT HOUSTON HEADQUARTERS

DANNY IVY

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

**GLENDA COMEAUX** 

DIRECTOR-ENGINEERING DIRECTOR-

**BRIAN MERCHANT** 

DIRECTOR-GAS CNTRL DIRECTOR-GAS CONTROL EAST HOUSTON HEADQUARTERS

LAYNE SANDERS

MANAGER-GAS CNTRL PIPELINE MANAGEMENT HOUSTON HEADQUARTERS

TRENNIS CURRY

ENGINEER-PIPELINE SR PIPELINE MANAGEMENT HOUSTON HEADQUARTERS

TOM RISHER

DIRECTOR-GAS CNTRL TEJAS GAS CONTROL HOUSTON HEADQUARTERS

SEAN SASKO

ANALYST-OPS SR I PIPELINE MANAGEMENT HOUSTON HEADQUARTERS

KENNY LOCHBAUM

DIRECTOR-GAS CNTRL TEJAS GAS CONTROL HOUSTON HEADQUARTERS

DON SANDERS

MANAGER IC-CAPACITY
PLANNING
PIPELINE MANAGEMENT
HOUSTON HEADQUARTERS

JOSIE WILKERSON

#### TGP 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

JOE BORNINKHOF

CONTROLLER LEAD

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

KEITH FUSON

CONTROLLER SR

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

CHUCK MARSHALL

CONTROLLER ASC

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

CODY SAFFORD

CONTROLLER SR

GPL-E-GAS CONTROL EAST

HOUSTON HEADQUARTERS

TAEKO YONEYAMA

CONTROLLER

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

STEDMAN DONNELL

CONTROLLER SR

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

TRAVIS HARRY

CONTROLLER GPL-E-GAS CONTROL EAST-

TGP HOUSTON HEADQUARTERS

MELISSA REINEKE

CONTROLLER SR

GPL-E-GAS CONTROL EAST-TGP HOUSTON HEADQUARTERS

JOHN SHANKS

CONTROLLER SR

GPL-E-GAS CONTROL EAST-

HOUSTON HEADQUARTERS

KEVIN EGGLESTON

CONTROLLER LEAD

GPL-E-GAS CONTROL EAST-TGP

HOUSTON HEADQUARTERS

REESE HART III

CONTROLLER

GPL-E-GAS CONTROL EAST-TGP

**HOUSTON HEADQUARTERS** 

CARLOS RODRIGUEZ

CONTROLLER ASC

GPL-E-GAS CONTROL EAST-TGP

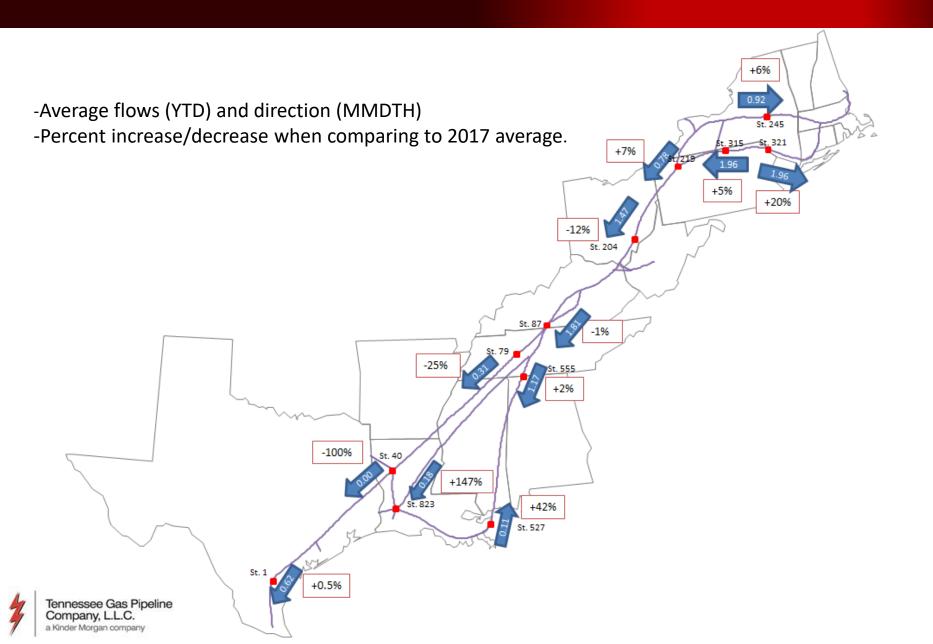
HOUSTON HEADQUARTERS

TREY SOAPE III

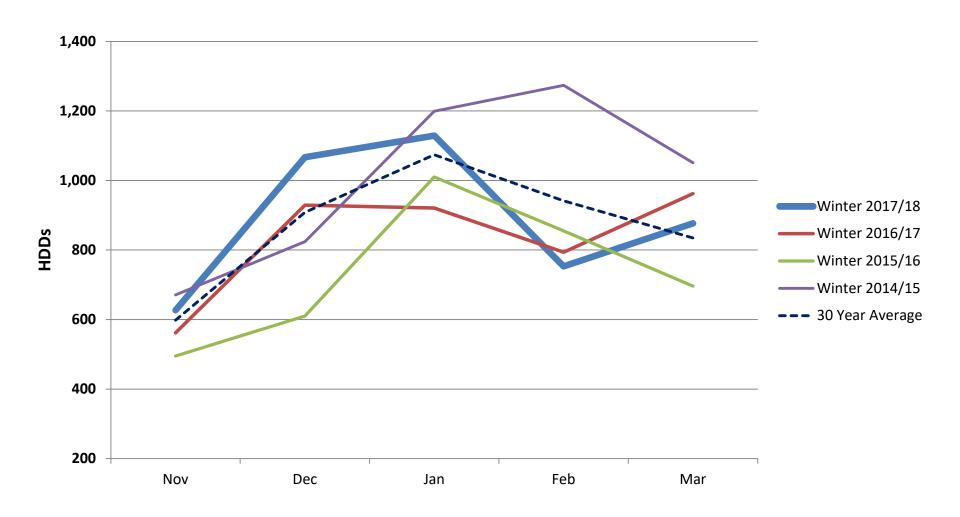
#### Winter Operations 2017/2018



#### TGP FLOWS



#### Winter 2017/18 Northeast Temperatures





Boston weather data: NOAA and Custom Weather Inc.

#### TGP Top Flow Dates

#### System Wide Deliveries

| Rank | Gas Day    | MDth/d | Bcf/d  |
|------|------------|--------|--------|
| 1    | 1/2/2018   | 12,045 | 11,638 |
| 2    | 1/4/2018   | 11,752 | 11,356 |
| 3    | 1/1/2018   | 11,572 | 11,180 |
| 4    | 1/6/2018   | 11,536 | 11,155 |
| 5    | 1/17/2018  | 11,516 | 11,120 |
| 6    | 1/5/2018   | 11,499 | 11,118 |
| 7    | 1/16/2018  | 11,379 | 10,992 |
| 8    | 1/13/2018  | 11,334 | 10,944 |
| 9    | 1/30/2018  | 11,309 | 10,924 |
| 10   | 12/15/2016 | 11,284 | 10,870 |

#### **Storage Withdrawals**

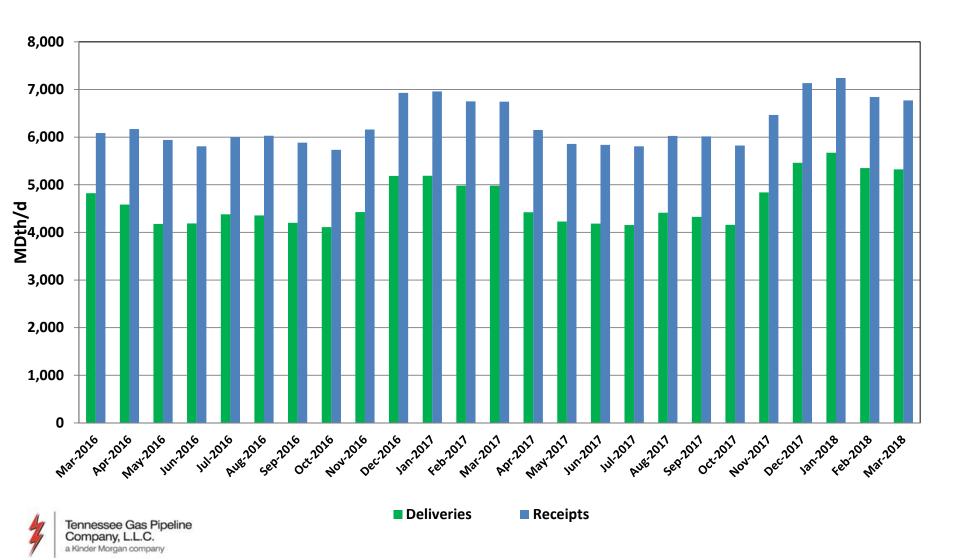
| Rank | Gas Day   | MDth/d | Bcf/d |
|------|-----------|--------|-------|
| 1    | 1/23/2014 | 1,809  | 1,762 |
| 2    | 1/22/2014 | 1,728  | 1,683 |
| 3    | 2/11/2014 | 1,707  | 1,661 |
| 4    | 2/10/2014 | 1,670  | 1,626 |
| 11   | 1/4/2018  | 1,612  | 1,566 |

#### **Power Plants**

| Rank | Gas Day   | MDth/d | Bcf/d |
|------|-----------|--------|-------|
| 1    | 1/17/2018 | 2,482  | 2,384 |
| 2    | 8/11/2016 | 2,402  | 2,304 |
| 3    | 8/12/2016 | 2,300  | 2,210 |
| 4    | 1/16/2018 | 2,282  | 2,197 |
| 5    | 8/10/2016 | 2,250  | 2,150 |



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

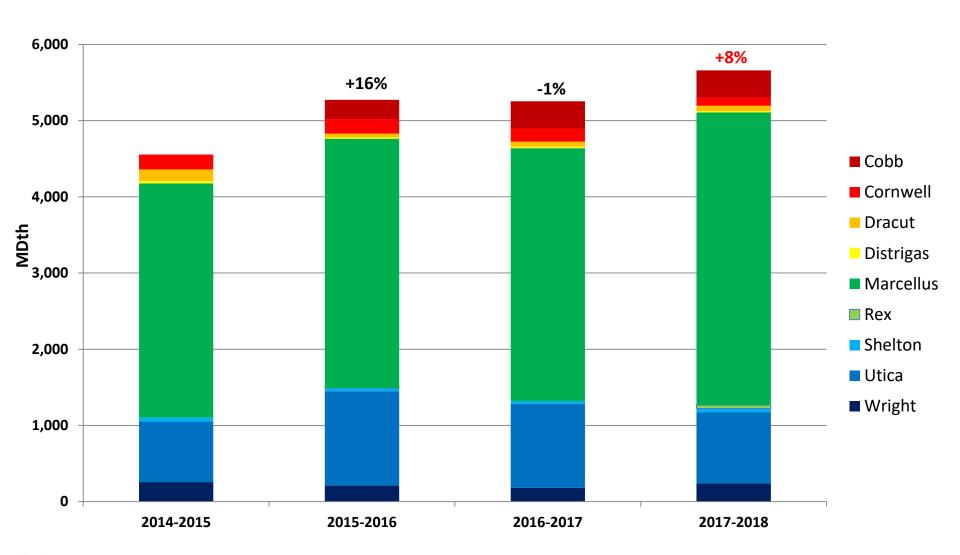


#### Winter System Wide Flows 2017/2018

|                           | <u>2015-2016</u> | 2016-2017 | 2017-2018 | <u>Change</u> |
|---------------------------|------------------|-----------|-----------|---------------|
|                           |                  |           |           |               |
| LDC                       | 1,659            | 1,724     | 1,880     | +9%           |
| Power                     | 1,132            | 1,095     | 1,324     | +21%          |
| Pipeline<br>Interconnects | 4,938            | 5,170     | 5,371     | +4%           |
| Mexico                    | 696              | 844       | 857       | +1.5%         |
| Other                     | 365              | 300       | 215       | -28%          |
|                           |                  |           |           |               |
| TOTAL                     | 8,790            | 9,133     | 9,647     | +5.6%         |

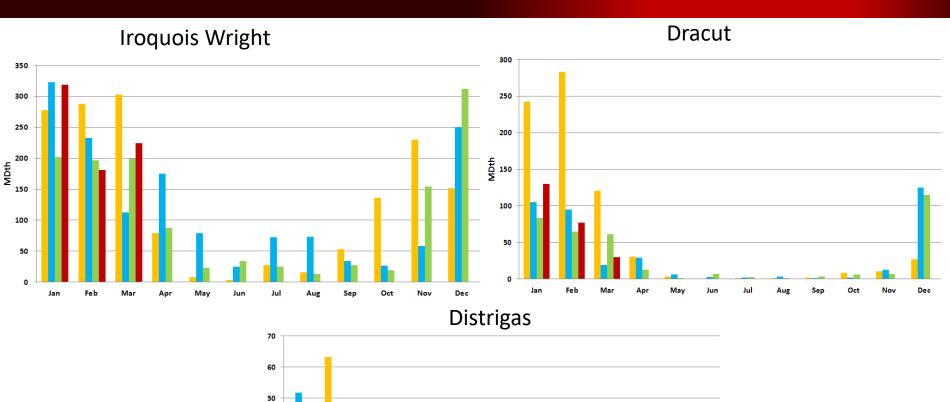


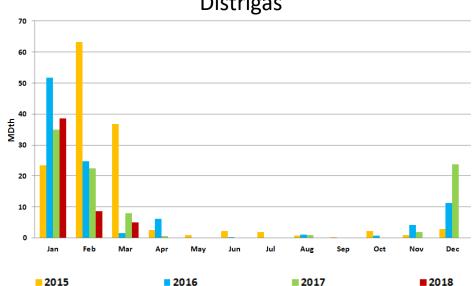
#### Winter Northeast Supply Analysis





#### Monthly Average Flow







#### TGP Winter 2016/2017 Restrictions

| Restriction Point Highly Utilized TGP Paths | Percentage Days<br>Restricted<br>(November -<br>March) | Percentage Days<br>Restricted<br>(November -<br>March) | Percentage Days<br>Restricted<br>(November -<br>March) | Percentage Days<br>Restricted<br>(November -<br>March) |
|---|--|--|--|--|
|   | 2014/2015  | 2015/2016  | 2016/2017  | 2017/2018  |
| Sta. 200/204                                | 22.52%   | 64.47%   | 68.87%   | 68.21%   |
| Sta. 245                                    | 100%   | 100.00%  | 99.33%   | 100.00%  |
| Sta. 261                                    | 32.45%   | 68.42%   | 27.81%   | 81.46%   |
| Sta. 267                                    | 5.29%  | 30.92%   | 55.63%   | 67.55%   |
| MLV 273                                     | 0.00%  | 0.00%  | 17.22%   | 76.16%   |
| Sta. 315 BH                                 | 100%   | 76.32%   | 96.69%   | 89.40%   |
| Sta. 321                                    | 94.71%   | 86.18%   | 92.72%   | 92.05%   |
| MLV 355 BH                                  | 5.96%  | 9.21%  | 5.30%  | 14.57%   |
| Sta. 1 BH                                   | 11.26%   | 84.21%   | 0.00%  | 21.19%   |
| Sta. 9 BH                                   | 0.00%  | 0.00%  | 43.71%   | 90.37%   |
| Mahwah                                      | 64.24%   | 92.76%   | 88.08%   | 60.26%   |
| Rivervale                                   | 80.79%   | 66.45%   | 80.79%   | 99.34%   |

#### **OFO Winter Count**

#### Nov - Mar

| OFO Types | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|-----------|---------|---------|---------|---------|
| Monthly   | 0       | 6       | 2       | 2       |
| Action    | 3       | 3       | 2       | 1       |
| CD1       | 6       | 10      | 10      | 31      |
| CD2       | 0       | 0       | 0       | 0       |
| Balancing | 7       | 2       | 11      | 6       |
| Hourly    | 0       | 0       | 0       | 0       |
| Total     | 16      | 21      | 25      | 38      |

Months include carry over OFOs



#### Planned Maintenance ('18)

#### Disclaimers

- Anticipated Impacts are estimates. Actual nominations, market demand, weather and pipeline conditions, etc. will determine if, and through what level, restrictions become necessary.
- Unless otherwise stated, all scheduled dates represent gas days as defined in the Tennessee Gas Pipeline tariff to mean a period of twenty-four consecutive hours, beginning and ending at 9:00 a.m. (Central Clock Time).

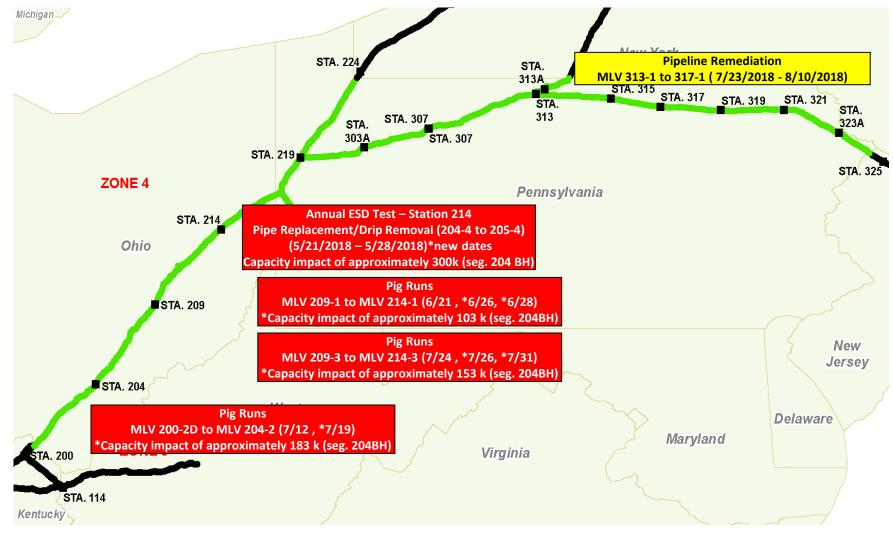
#### **Disclaimers**

- Scheduled dates are subject to change.
- Projects may be added, altered, delayed or cancelled.
- TGP will provide notice of such additions or changes via DART postings.
- Dates posted on DART should be deemed correct in the event of conflicts between DART posted dates and dates within this presentation.

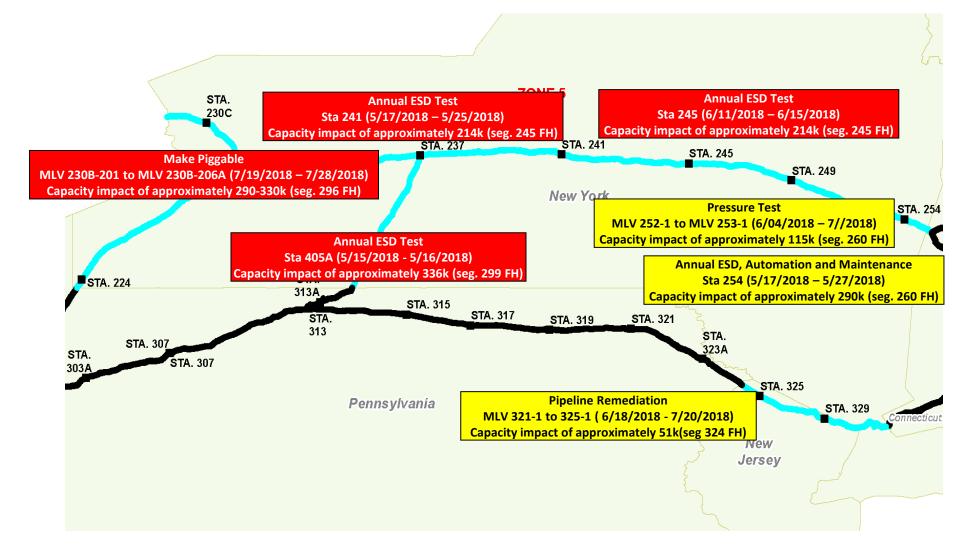
## Color Key for Maps

- Yellow
  - Restrictions are possible, but not likely
  - With extended duration, restrictions could be necessary from time to time
  - (M) denotes that meter(s) may be impacted, refer to EBB posting
- Red
  - Restrictions are probable
- Purple
  - Primary restrictions may be necessary

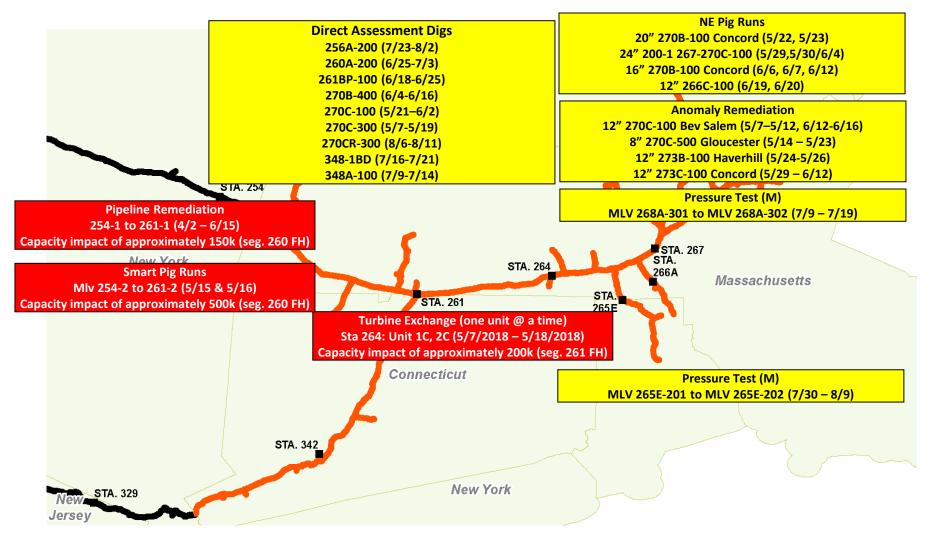
Zone 4 (May - July)



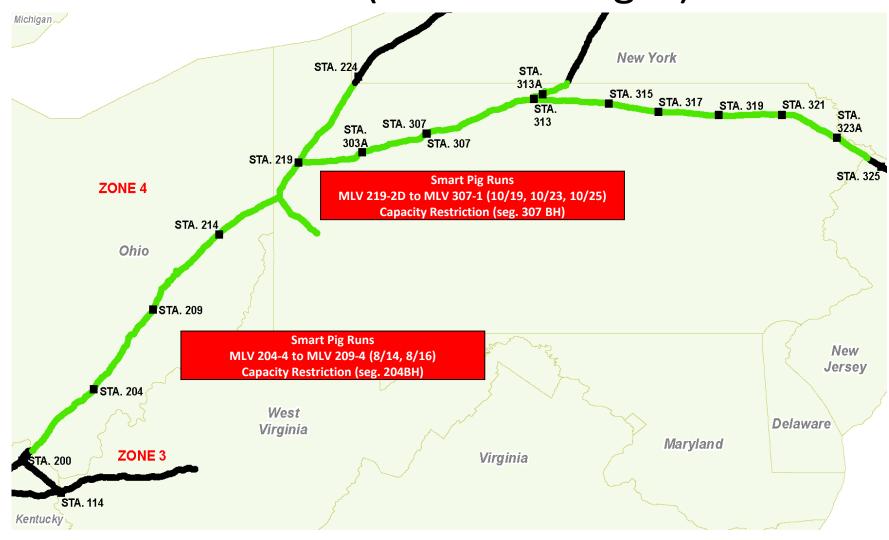
## Zone 5 (May - July)



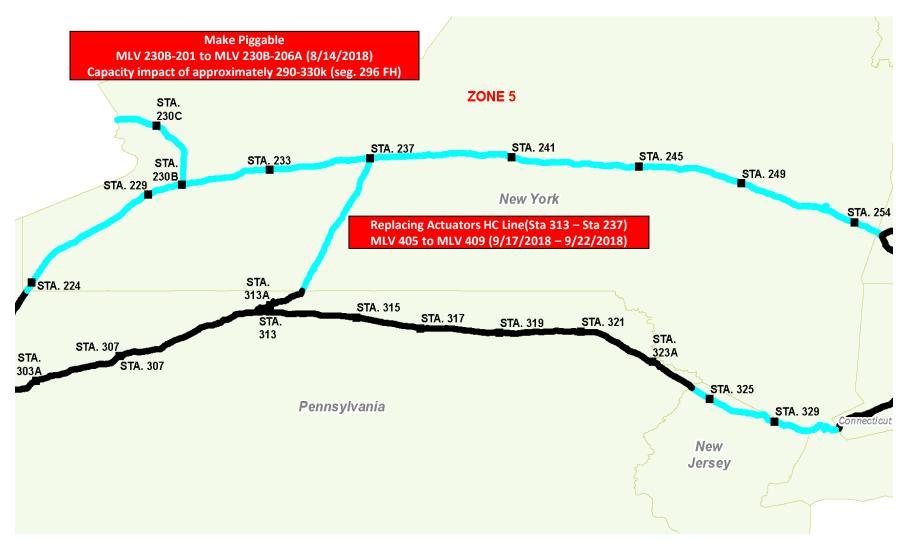
### Zone 6 (May - July)



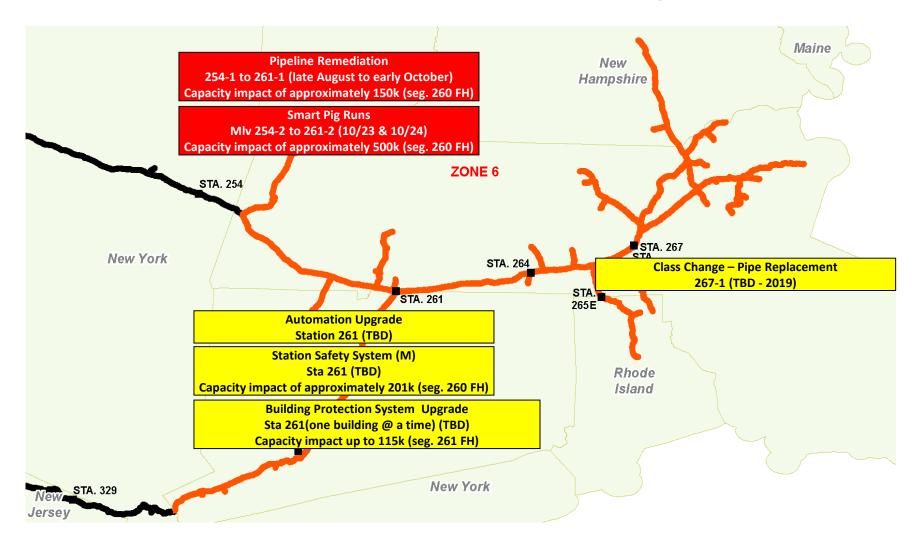
#### Zone 4 (Future Outages)



## Zone 5 (Future Outages)



## Zone 6 (Future Outages)



#### **Thank You**









