

A Different Kind of
ENERGY COMPANY



NGA 2017 Pre-Winter Briefing TENNESSEE GAS PIPELINE COMPANY LLC

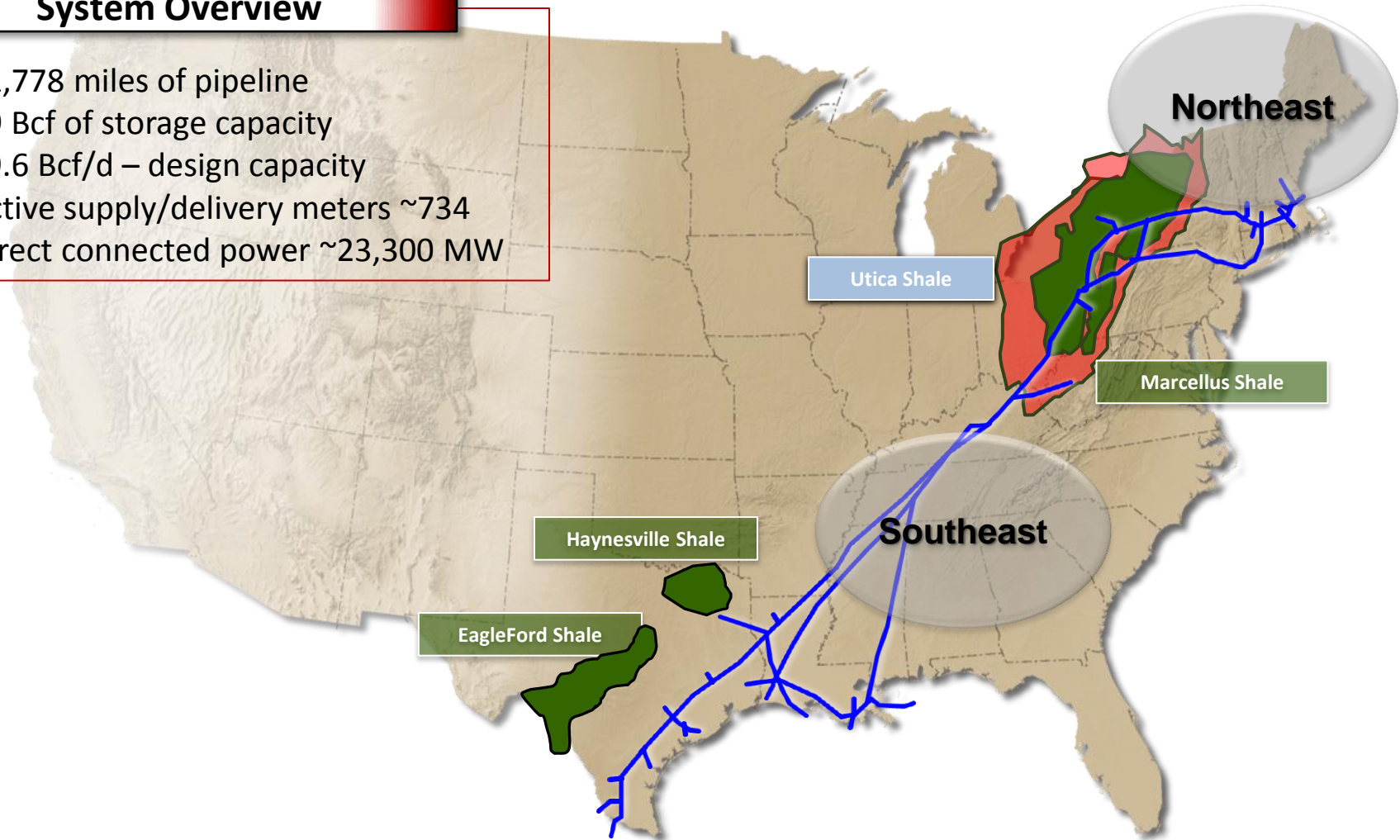
Coralie Carter Sculley



Tennessee Gas Pipeline

System Overview

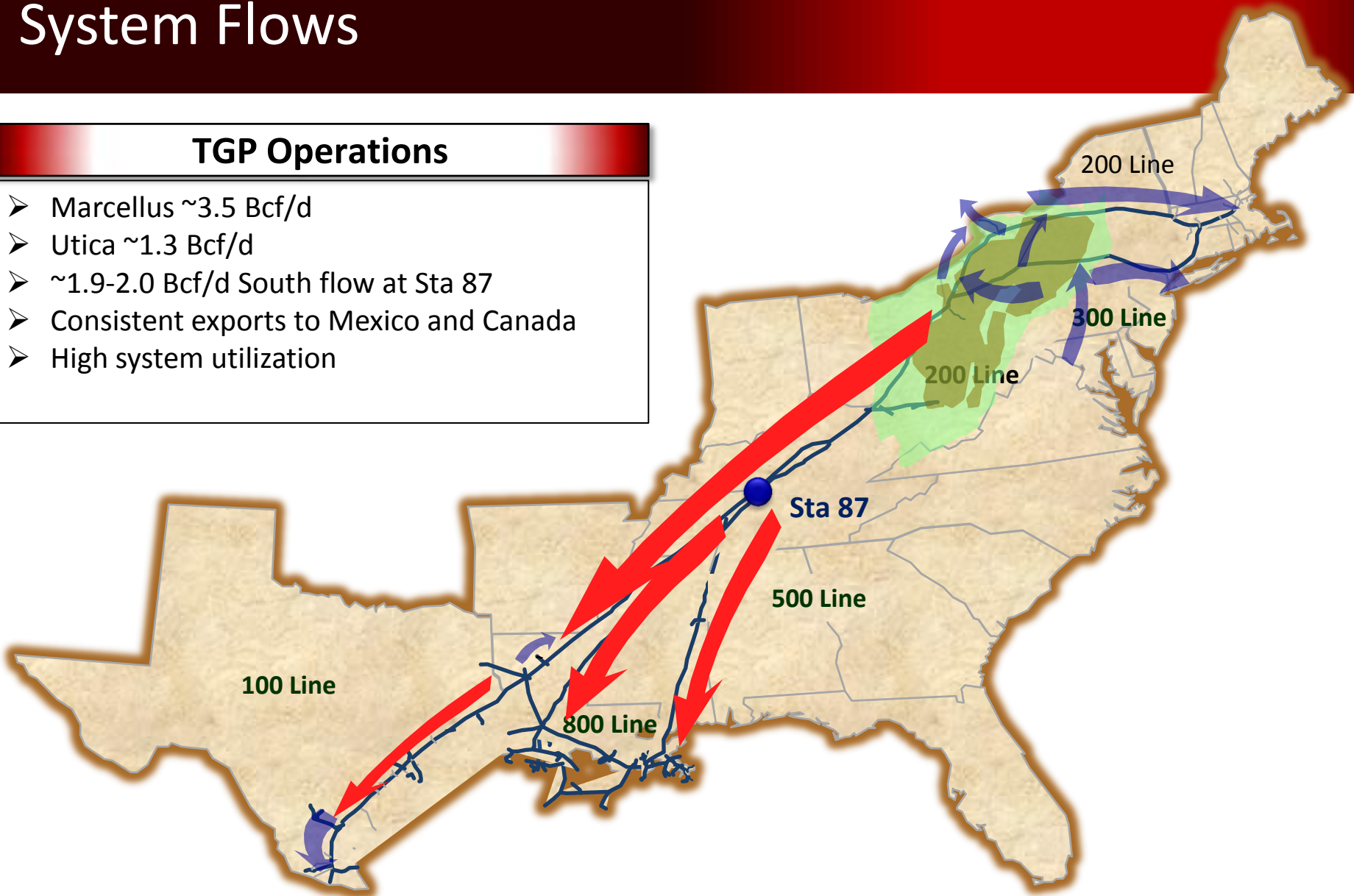
- 11,778 miles of pipeline
- 99 Bcf of storage capacity
- ~9.6 Bcf/d – design capacity
- Active supply/delivery meters ~734
- Direct connected power ~23,300 MW



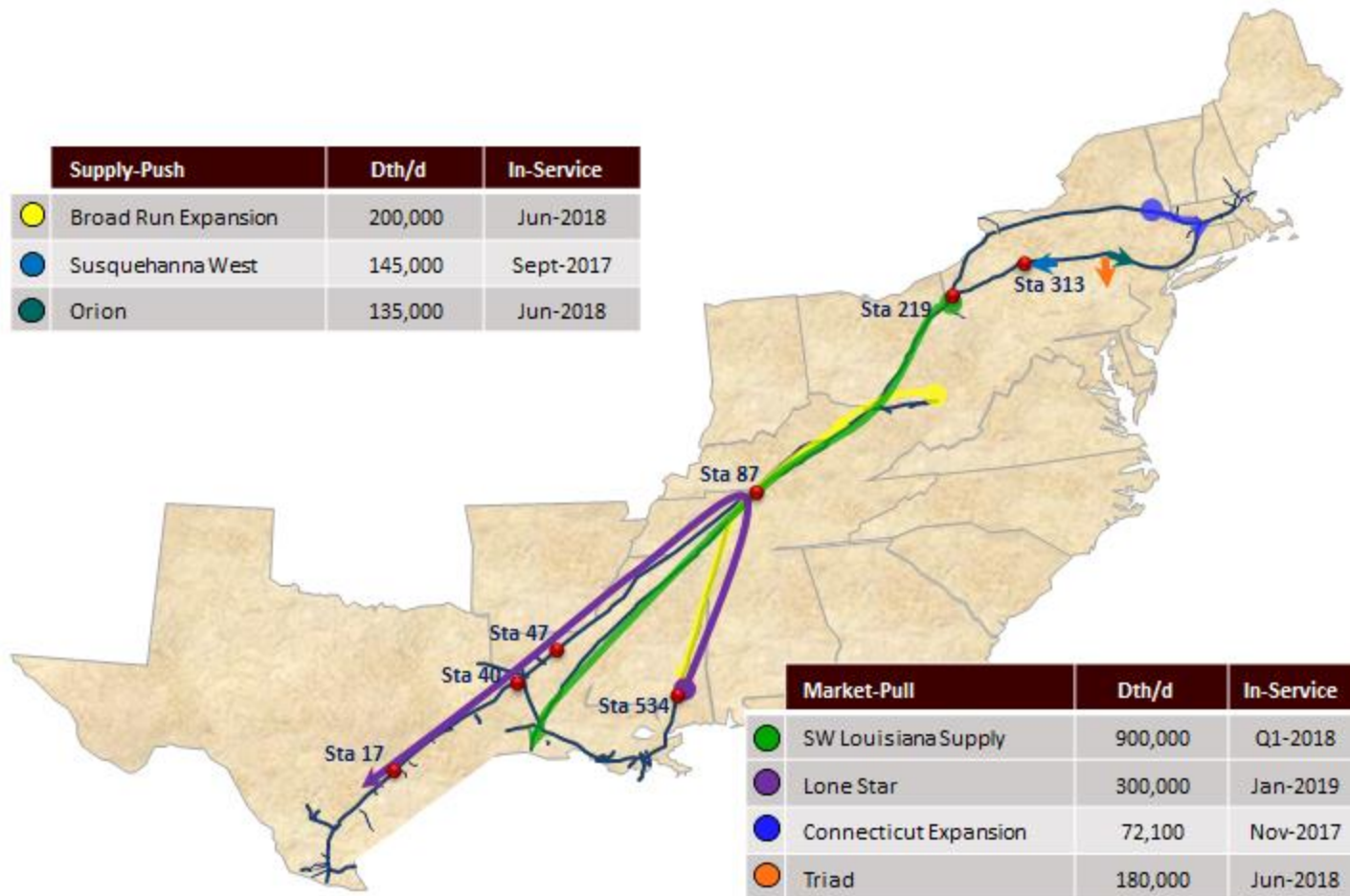
System Flows

TGP Operations

- Marcellus ~3.5 Bcf/d
- Utica ~1.3 Bcf/d
- ~1.9-2.0 Bcf/d South flow at Sta 87
- Consistent exports to Mexico and Canada
- High system utilization



TGP Development Project Updates



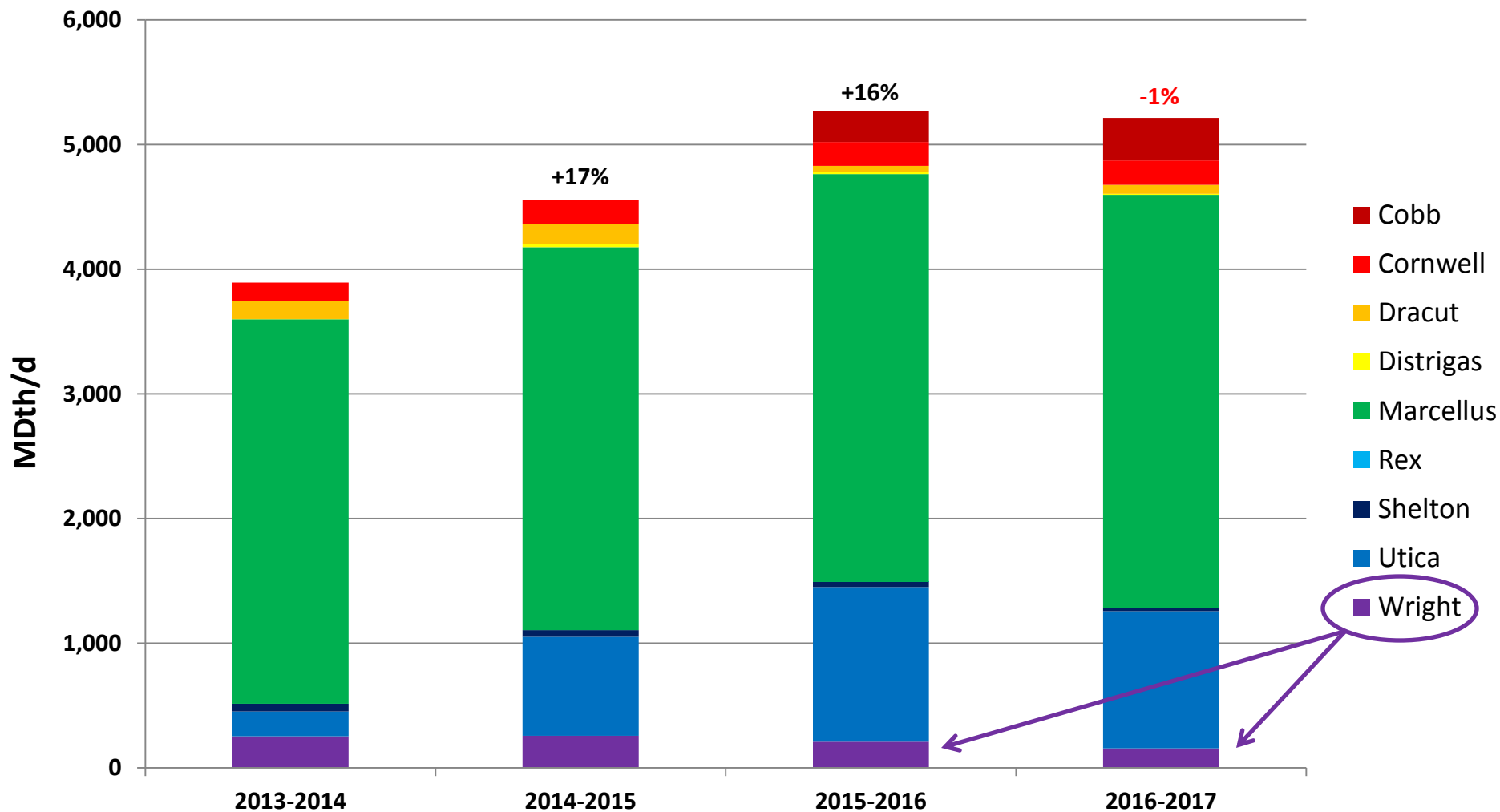
Winter Northeast Market Flows

	<u>2014-2015</u>	<u>2015-2016</u>	<u>2016-2017</u>	<u>% Change</u>
LDC	1,506	1,178	1,279	+9%
Power	315	326	266	-19%
Interconnects	1,361	1,485	1,493	+1%
TOTAL	3,183	2,989	3,038	+2%

volumes are MDth/d



Winter Northeast Supply Analysis



Winter 2016/2017 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)
	2013/2014	2014/2015	2015/2016	2016/2017
Sta. 200/204	30.46%	22.52%	64.47%	68.87%
Sta. 245	100%	100%	100.00%	99.33%
Sta. 261	30.46%	32.45%	68.42%	27.81%
Sta. 267	2.65%	5.29%	30.92%	55.63%
MLV 273	0.00%	0.00%	0.00%	17.22%
Sta. 315 BH	100%	100%	76.32%	96.69%
Sta. 321	94.70%	94.71%	86.18%	92.72%
MLV 355 BH	70.20%	5.96%	9.21%	5.30%
Sta. 1 BH	50.99%	11.26%	84.21%	0.00%
Sta. 9 BH	0.00%	0.00%	0.00%	43.71%
Mahwah	49.67%	64.24%	92.76%	88.08%
Rivervale	80.79%	80.79%	66.45%	80.79%

OFO Winter Count

Nov - Mar

OFO Types	2013/14	2014/15	2015/16	2016/17
Monthly	0	0	6	2
Action	5	3	3	2
CD1	9	6	10	10
CD2	0	0	0	0
Balancing	3	7	2	11
Hourly	0	0	0	0
Total	17	16	21	25

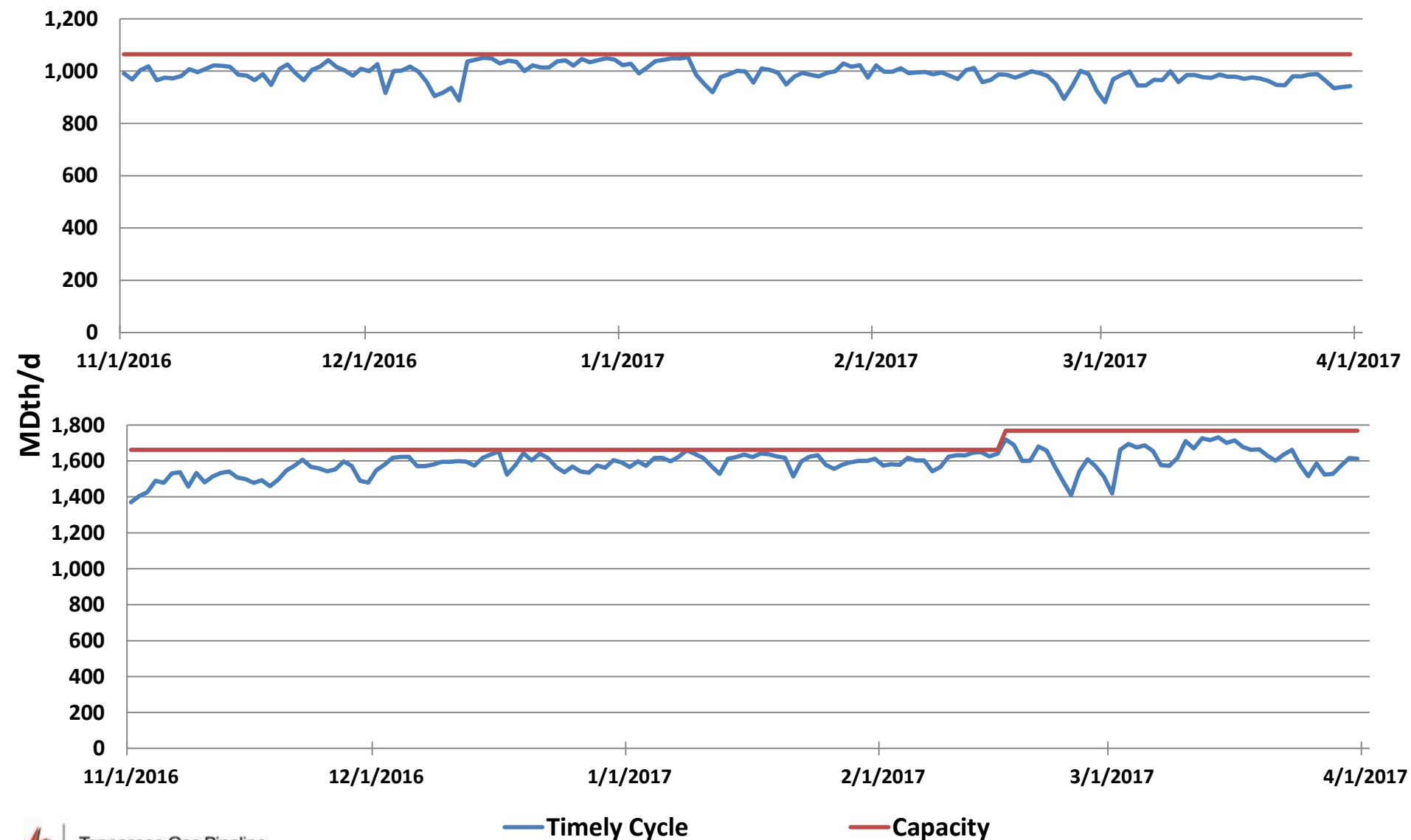
Months include carry over OFOs

Possible Scheduling Processes Implemented during Winter

- No delivery nominations allowed at Receipt Meters
- No receipt nominations allowed at Delivery Meters
- No meter bounces allowed at Power Plants
- Meters held to EPSQ
- Restriction locations adjusted as capacity utilization changes
- Limitations of Storage Services/Linepack Services
- Imbalance Warnings
- Monthly OFOs
- Daily OFOs
- Meter Specific OFOs
- Hourly OFOs



Segment 245 and 321 Scheduled Volumes



Winter Readiness - Operations

- **Scheduled Maintenance**

- All routine compressor station maintenance in the Market Area shall be completed by early November. Examples include:
 - Station/Unit Protective Devices
 - Compressor maintenance
 - Borescope Inspections
 - Device Calibration/Testing
 - Test run units (as applicable)
- All routine pipeline and meter station maintenance in the Market Area will be completed by early November. Examples include:
 - Annual Valve Maintenance
 - Auto Closure Checks
 - Boiler Maintenance
 - Device Calibration/Meter Tests (Ongoing)

- **Winter Event Preparation**

- Check/Test run emergency equipment (i.e. generators, heaters, etc)
- Field Operations will be on site at key compressor stations during significant winter events.

TGP ZONES 4, 5, & 6

