

# Transco Winter Operations Meeting

October 2014



# Welcome

- > Facilities
  - > Emergency Exits
  - > Safety Moment Video – Eyes on the Road
- 
- > [https://www.youtube.com/embed/JHixeIr\\_6BM?rel=0&autoplay=1&iv\\_load\\_policy=3](https://www.youtube.com/embed/JHixeIr_6BM?rel=0&autoplay=1&iv_load_policy=3)

# Forward-Looking Statements

The reports, filings, and other public announcements of The Williams Companies, Inc. and Williams Partners L.P. (WPZ) may contain or incorporate by reference statements that do not directly or exclusively relate to historical facts. Such statements are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. We make these forward looking statements in reliance on the safe harbor protections provided under the Private Securities Litigation Reform Act of 1995. You typically can identify forward-looking statements by various forms of words such as "anticipates," "believes," "seeks," "could," "may," "should," "continues," "estimates," "expects," "assumes," "forecasts," "intends," "might," "goals," "objectives," "targets," "planned," "potential," "projects," "scheduled," "will," "guidance," "outlook," "in service date" or other similar expressions. These forward-looking statements are based on management's beliefs and assumptions and on information currently available to management and include, among others, statements regarding:

- > Amounts and nature of future capital expenditures;
- > Expansion and growth of our business and operations;
- > Financial condition and liquidity;
- > Business strategy;
- > Cash flow from operations or results of operations;
- > The levels of dividends to Williams stockholders and of cash distributions to WPZ unitholders;
- > Seasonality of certain business components; and
- > Natural gas, natural gas liquids, and crude oil prices and demand.

Forward-looking statements are based on numerous assumptions, uncertainties and risks that could cause future events or results to be materially different from those stated or implied in this presentation. Many of the factors that will determine these results are beyond our ability to control or predict. Specific factors that could cause actual results to differ from results contemplated by the forward-looking statements include, among others, the following:

- > Whether Williams has sufficient cash to enable it to pay current and expected levels of dividends;
- > Whether WPZ has sufficient cash from operations to enable it to pay current and expected levels of cash distributions following establishment of cash reserves payment of fees and expenses, including payments to WPZ's general partner;
- > Availability of supplies, market demand, volatility of prices, and the availability and cost of capital;
- > Inflation, interest rates, -- and in the case of Williams fluctuation in foreign exchange and general economic conditions (including future disruptions and volatility in the global credit markets and the impact of these events on our customers and suppliers);
- > The strength and financial resources of our competitors;

# Forward-Looking Statements continued

- > Ability to acquire new businesses and assets and integrate those operations and assets into our existing businesses, as well as expand our facilities;
- > Development of alternative energy sources;
- > The impact of operational and development hazards;
- > Costs of, changes in, or the results of laws, government regulations (including safety and climate change regulation and changes in natural gas production from exploration and production areas that we serve), environmental liabilities, litigation, and rate proceedings;
- > Williams' costs and funding obligations for defined benefit pension plans and other postretirement benefit plans sponsored by its affiliates;
- > WPZ's allocated costs for defined benefit pension plans and other post retirement benefit plans sponsored by its affiliates;
- > Changes in maintenance and construction costs;
- > Changes in the current geopolitical situation;
- > Our exposure to the credit risk of our customers and counterparties;
- > Risks related to strategy and financing, including restrictions stemming from our debt agreements, future changes in our credit ratings and the availability and cost of credit;
- > Risks associated with future weather conditions;
- > Acts of terrorism, including cybersecurity threats and related disruptions; and
- > Additional risks described in our filings with the Securities and Exchange Commission ("SEC").

Given the uncertainties and risk factors that could cause our actual results to differ materially from those contained in any forward-looking statement, we caution investors not to unduly rely on our forward-looking statements. We disclaim any obligations to and do not intend to update the above list or to announce publicly the result of any revisions to any of the forward-looking statements to reflect future events or developments.

In addition to causing our actual results to differ, the factors listed above may cause our intentions to change from those statements of intention set forth in this announcement. Such changes in our intentions may also cause our results to differ. We may change our intentions, at any time and without notice, based upon changes in such factors, our assumptions, or otherwise.

With respect to WPZ, limited partner interests are inherently different from the capital stock of a corporation, although many of the business risks to which we are subject are similar to those that would be faced by a corporation engaged in a similar business.

Investors are urged to closely consider the disclosures and risk factors in Williams' annual report on Form 10-K filed with the SEC on Feb. 28, 2012, WPZ's annual report on Form 10-K filed with the SEC on Feb. 28, 2012 and each of our quarterly reports on Form 10-Q available from our offices or from our websites at [www.williams.com](http://www.williams.com) and [www.williamspl.com](http://www.williamspl.com)

# Agenda

**Pipeline Control Update**

**2015 Construction and Maintenance**

**Customer Services Update**

**Break**

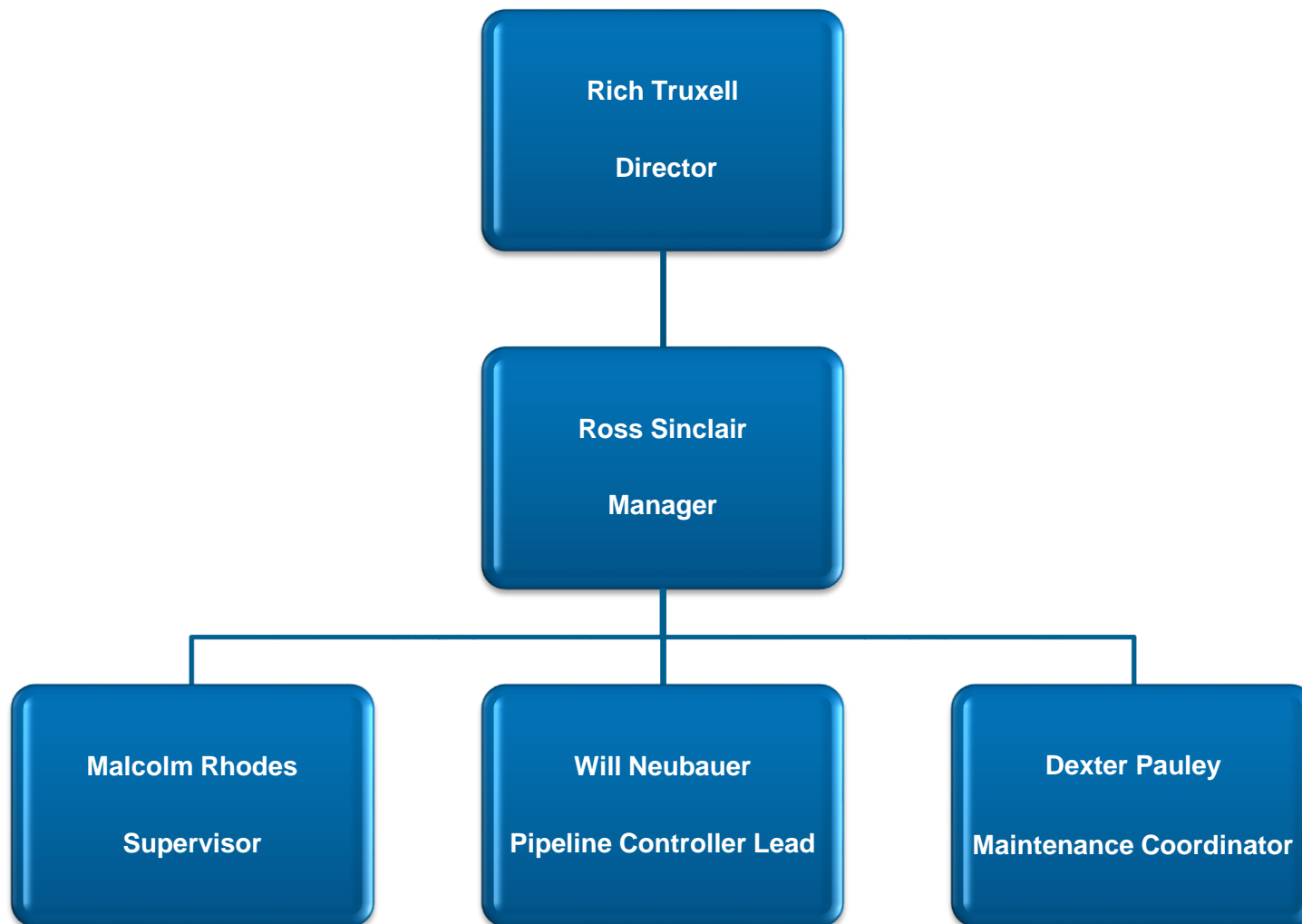
**Transportation Services & 1Line Update**

**Business Development Update**

**System Planning – Future Flow Conditions on Transco**

# Pipeline Control Update

# Pipeline Control Houston Organization

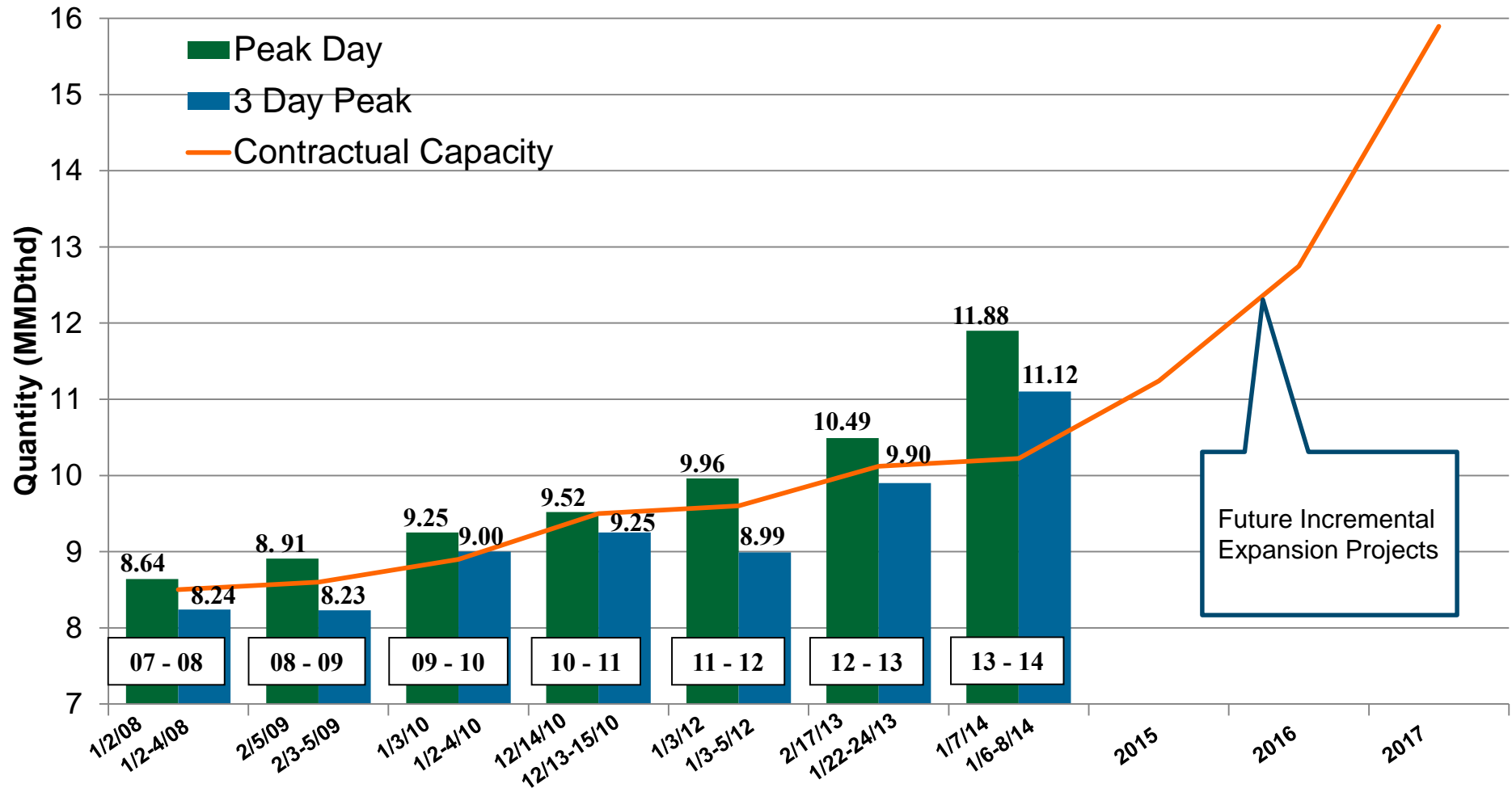


# Winter Highlights

- ❖ New all time market area delivery peak day set on January 7, 2014 with 11.9 MMdt.
- ❖ Deliveries for the period December through March averaged 1.4 MMdt/day greater than same period last year.
- ❖ 24 of the top 25 all time delivery days occurred this winter
- ❖ Imbalance operational flow orders utilized to protect system integrity.
- ❖ Non-ratable deliveries provide hourly challenges during peak demand.

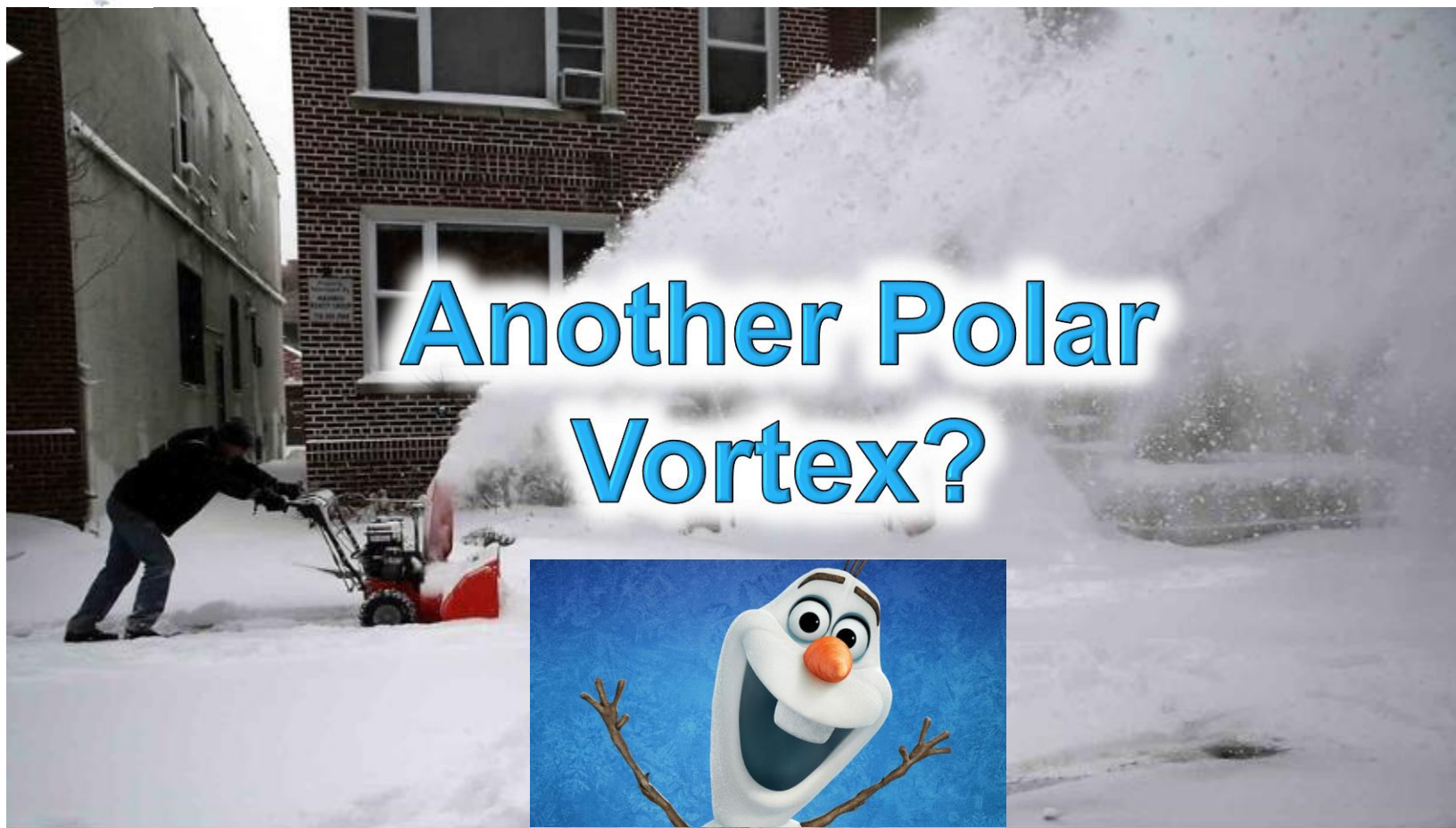


# Transco Peak Day Deliveries\* And System Capacity



\*Market area deliveries, which includes Zones 4 through 6.

# Winter Weather Outlook

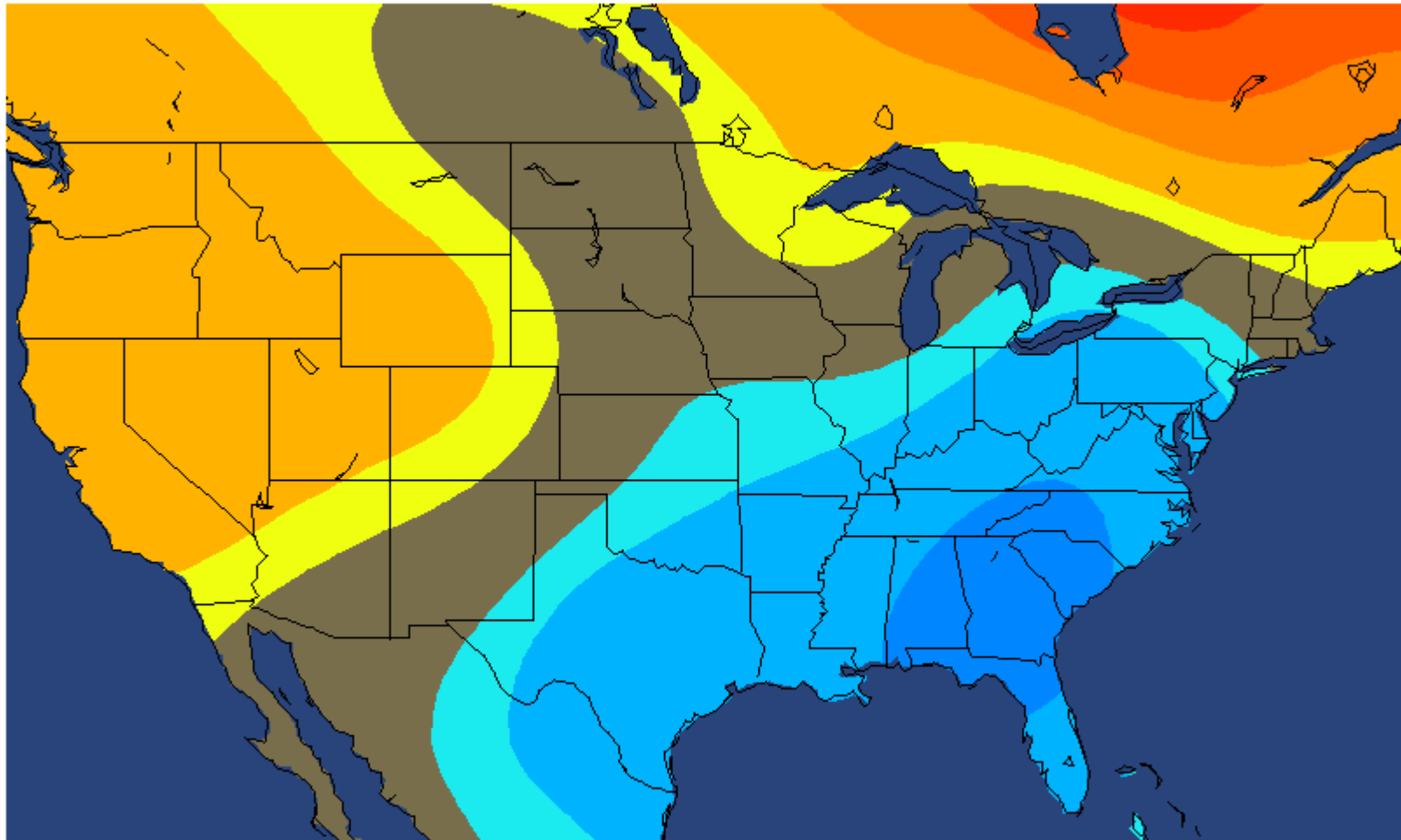


## Winter Forecast Summary

- Weak El Niño in a long-term negative (cooler) PDO (Pacific Decadal Oscillation) regime favors cold south & east.
- Another rapid and early buildup of Eurasian snow would favor cold.
- The winter season immediately following solar max tends to be cold. (Solar max is a normal period of greatest solar activity in the 11 year solar cycle of the Sun).
- A large Iceland volcanic eruption may have some limited cooling influence.

<http://www.frontierweather.com>

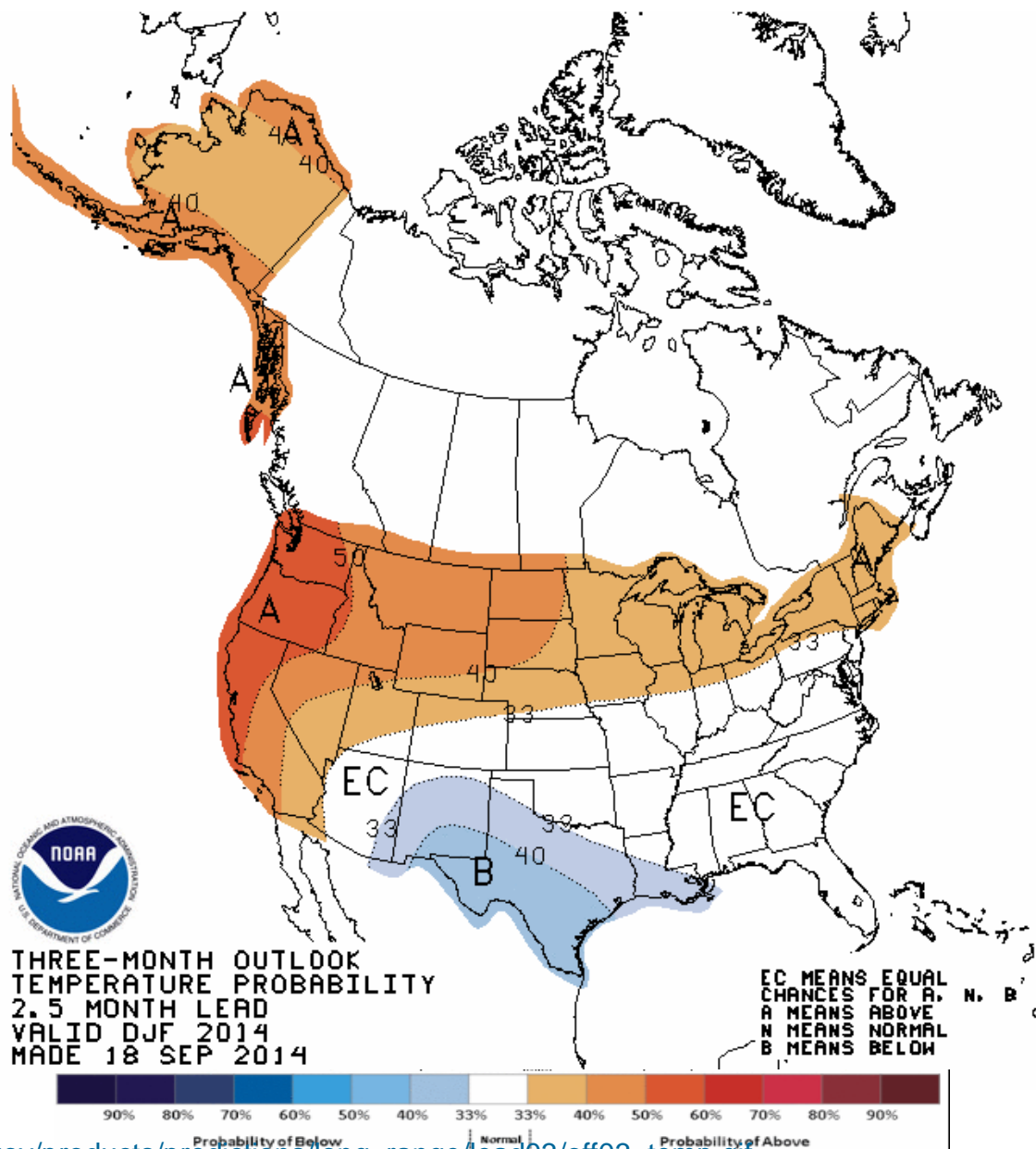
# Forecast Winter Temperature Anomalies



Forecast Temperature Anomalies



<http://www.frontierweather.com>



[http://www.cpc.ncep.noaa.gov/products/predictions/long\\_range/lead03/off03\\_temp.gif](http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead03/off03_temp.gif)

# Winter Weather Outlook

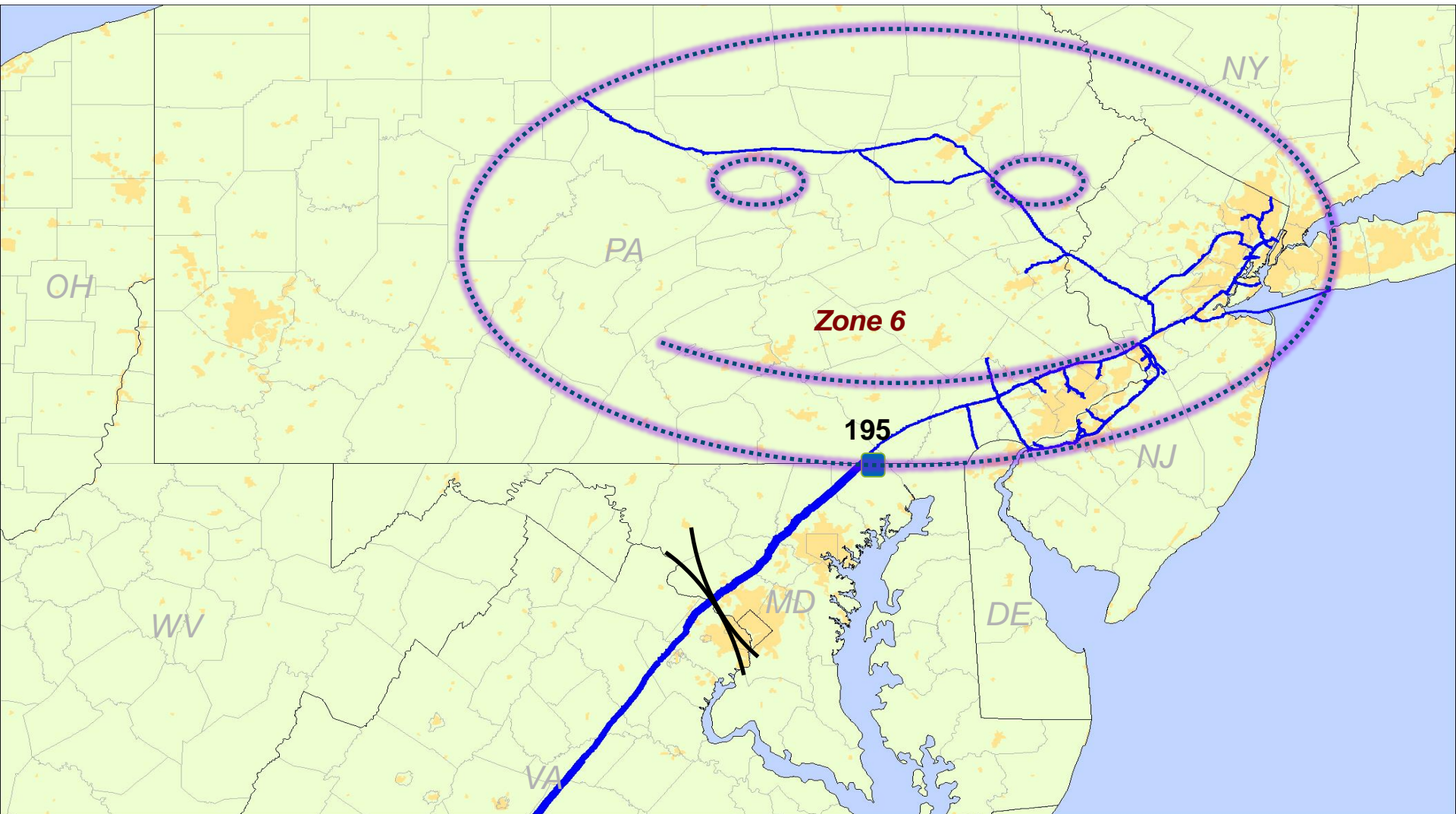
According to the Experts:



Temperatures in the Northeast and the Southeast will either be 1-3 degrees below normal or they have an even chance to 33% chance of being above normal. Other sources are forecasting temperatures slightly warmer than average. Many are predicting this winter to be not as cold as last winter. Only time will tell if they are correct.

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# Zone 6 Operational Challenges



# Operational Flow Orders – Why So Many?

- > Last winter OFOs were issued due to high utilization of storage and transportation capacity.
- > Recent OFOs were issued due to Transco's limited flexibility to manage imbalances in Zone 6. Gas received in Zone 6 has to be consumed in Zone 6 because that gas is odorized.
- > Due to shipper imbalances have contributed to Zone 6 operational issues. Whether the imbalances were a result of over supplying on receipt points or under burning at delivery points the result was too much gas.
- > Therefore, Imbalance OFOs were issued for Zone 6 - Buyers with deliveries in Zone 6 may be subject to this Imbalance OFO if their receipts exceed delivered quantities in Zone 6 regardless of the zone of receipt.



**Questions???**

# 2015 Construction & Maintenance

# Types of Construction & Maintenance Jobs

- > ***Pipe Inspection***
- > ***Anomaly Investigation***
- > ***DOT Replacement***
- > ***Hydrotest***
- > ***Facility Modification***
  
- > Depending on the work & the scope of the project, meters listed may be affected.
- > Be sure to check 1Line EBB for dates

# Pipe Inspection

- > Pipeline pigging for cleaning purposes and to check for anomalies.
  - > Corrosion
  - > Coating damage
  - > Dents



# Anomaly Investigations

## > What is an anomaly dig?

- > A pipeline excavation for means of direct assessment and repairs or replacement if necessary.

## > What prompts anomaly digs?

- > Data received from smart pigs shows an irregularity in wall thickness that warrants examination.

## > Types of digs

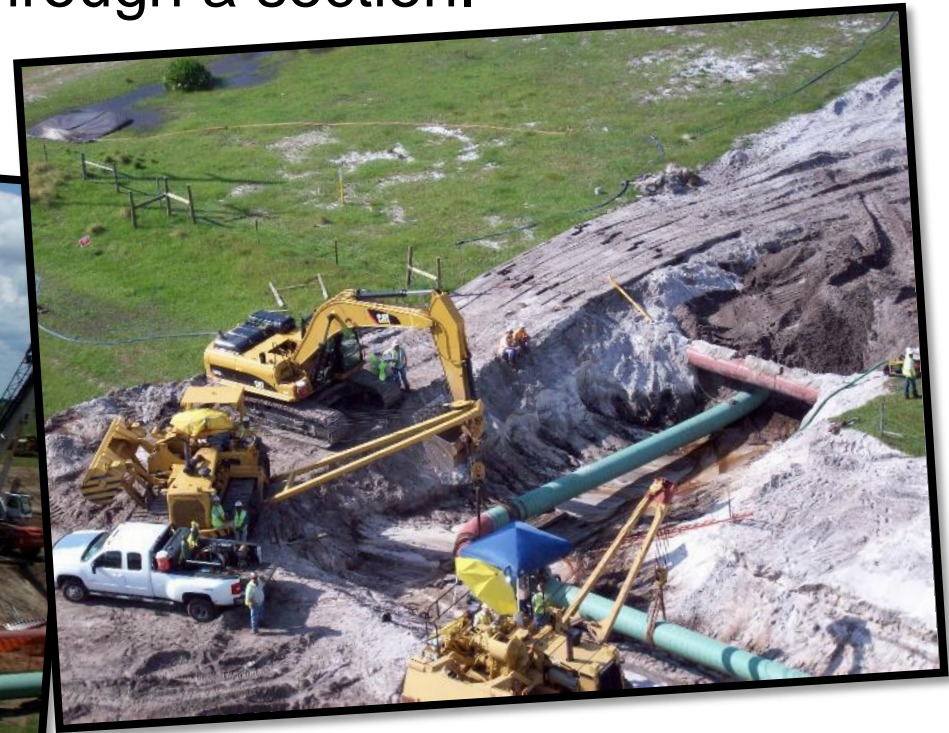
- > Immediate dig – If smart pig data shows severe wall loss, we will immediately reduce line pressure in that segment and perform anomaly dig. There will be limited advanced notice.
- > Scheduled dig – the smart pig data shows potential wall loss, but not to an extent that pipeline integrity is compromised. The anomaly dig may be scheduled during a low-load season where impacts to flow are minimized.

## > Impacts Depend on:

- > Type of dig.
- > Location of anomaly – do we have looped lines in the area?
- > Season – if we are in a low-load season there may be minimal impact.

# Replacements

- > What situation might lead to a pipe replacement?
  - > Anomaly or physical damage.
  - > DOT class location change.
  - > Increased line pressure through a section.



# Hydrotests

- > Testing with pressurized water to ensure pipeline safety.
- > Hydrotesting is required for:
  - > New pipeline segments.
  - > Segments that are being up-rated.



# Facility Modifications

- > Station expansion or maintenance work.
- > Pipeline expansion looping, pigging facilities, valve work.

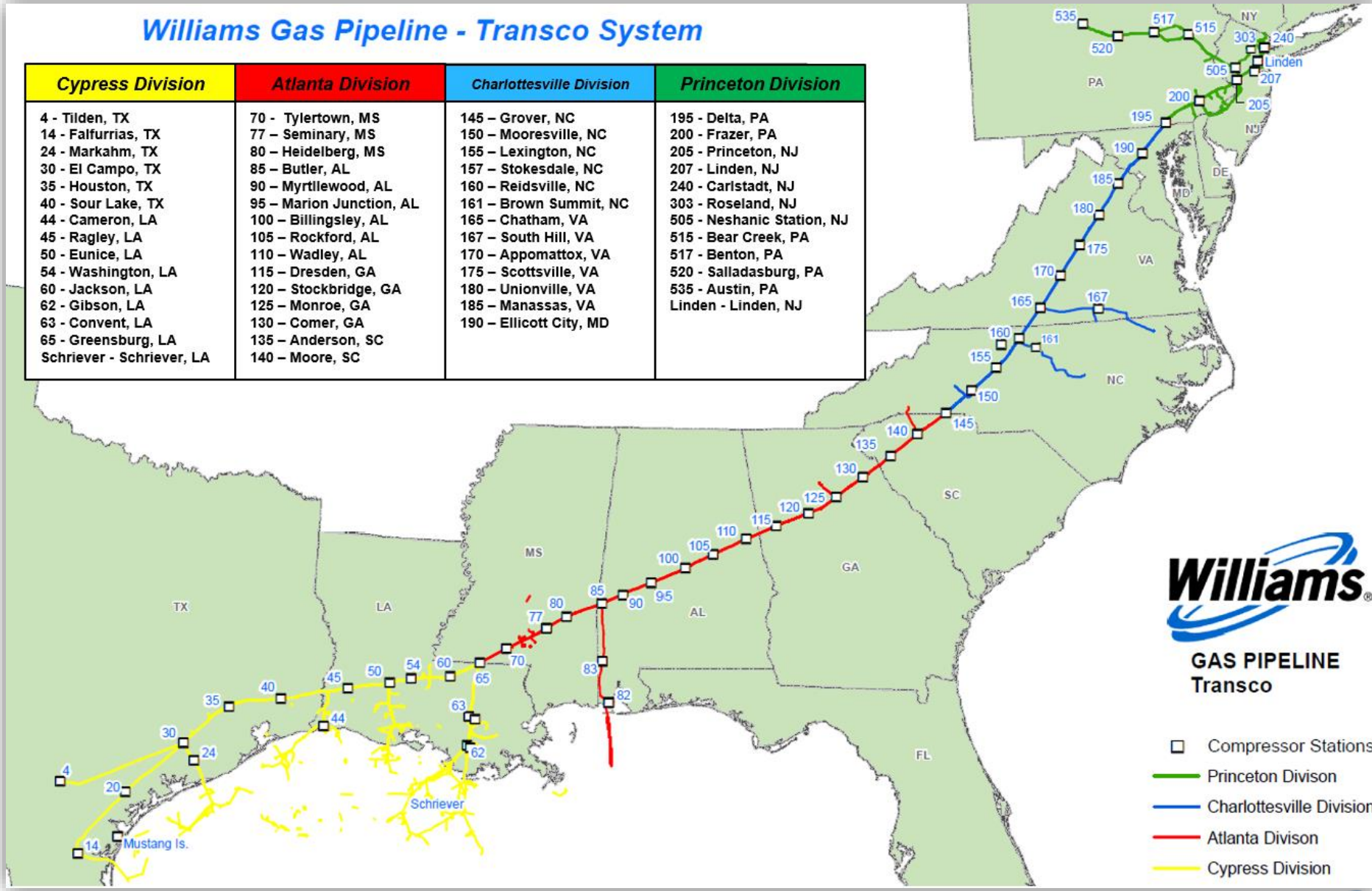




# System Work Summary

## Williams Gas Pipeline - Transco System

Cypress Division	Atlanta Division	Charlottesville Division	Princeton Division
4 - Tilden, TX	70 - Tylertown, MS	145 - Grover, NC	195 - Delta, PA
14 - Falfurrias, TX	77 - Seminary, MS	150 - Mooresville, NC	200 - Frazer, PA
24 - Markahm, TX	80 - Heidelberg, MS	155 - Lexington, NC	205 - Princeton, NJ
30 - El Campo, TX	85 - Butler, AL	157 - Stokesdale, NC	207 - Linden, NJ
35 - Houston, TX	90 - Myrtlewood, AL	160 - Reidsville, NC	240 - Carlstadt, NJ
40 - Sour Lake, TX	95 - Marion Junction, AL	161 - Brown Summit, NC	303 - Roseland, NJ
44 - Cameron, LA	100 - Billingsley, AL	165 - Chatham, VA	505 - Neshanic Station, NJ
45 - Ragley, LA	105 - Rockford, AL	167 - South Hill, VA	515 - Bear Creek, PA
50 - Eunice, LA	110 - Wadley, AL	170 - Appomattox, VA	517 - Benton, PA
54 - Washington, LA	115 - Dresden, GA	175 - Scottsville, VA	520 - Salladasburg, PA
60 - Jackson, LA	120 - Stockbridge, GA	180 - Unionville, VA	535 - Austin, PA
62 - Gibson, LA	125 - Monroe, GA	185 - Manassas, VA	Linden - Linden, NJ
63 - Convent, LA	130 - Comer, GA	190 - Ellicott City, MD	
65 - Greensburg, LA	135 - Anderson, SC		
Schriever - Schriever, LA	140 - Moore, SC		



- Compressor Stations
- Princeton Division
- Charlottesville Division
- Atlanta Division
- Cypress Division



# Cypress Division Work

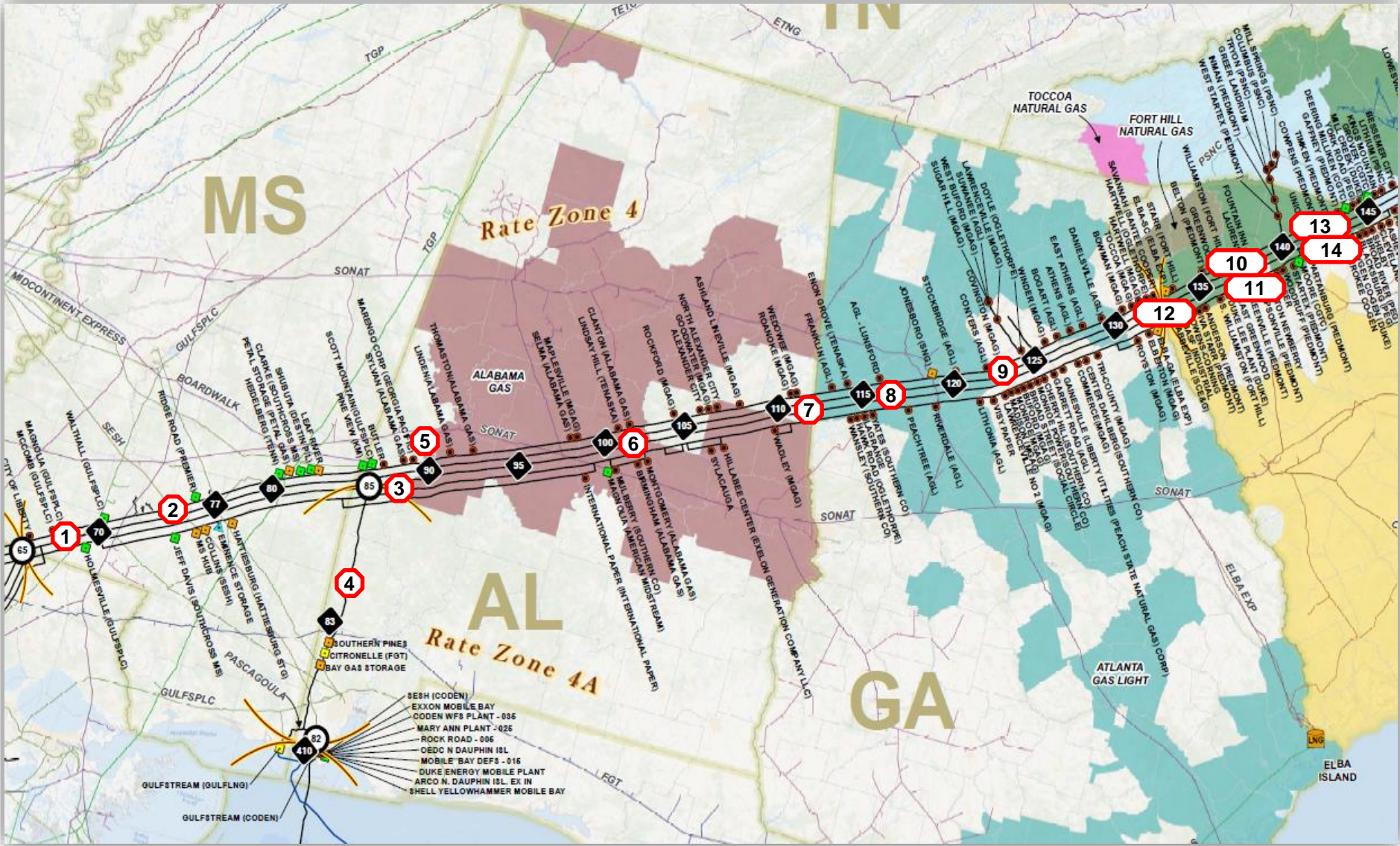


# Cypress Division Work

Job	Type	Description	MP From	MP To	Dia	County/Parish	Meters Potentially Affected*
1	Facility Modification	North High Island Lateral Line D (LW660 to LW673)	0.13	6.81	24	Cameron	
2	Facility Modification	M/L A VLV-040A20 to VLV-40A30 Casing Work	418.12	432.74	30	Jasper, Newton	
3	Pipe Inspection	Line C from STA-044 to North End Yard	0.00	20.26	36	Calcasieu, Cameron	2877
4	Facility Modification	VLV-050A10 to VLV-050A20 Casing Work	533.72	546.24	30	St Landry	
5	Anomaly Investigations	20" Central LA Lateral (Egan Jct. to STA-050)	0.00	23.61	20	St Landry, Acadia	2909
6	Facility Modification	36" Washington Storage Lateral	542.04	542.04	36	St Landry	4325, 3309
7	Facility Modification	M/L D STA-054 to Atchafalaya River	542.08	559.82	42	St Landry	
8	Anomaly Investigations	M/L C Atchafalaya River to Mississippi River	559.82	582.74	36	Pointe Coupee	
9	Anomaly Investigations	M/L 30", 36"N, 36"S Mississippi River Crossing	583.17	583.17	30,36	Pointe Coupee, West Feliciana	
10	Pipe Inspection	M/L D Mississippi River to STA-060	583.17	588.62	42	West Feliciana, East Feliciana	
11	Facility Modification	M/L B VLV-060B20 to STA-065 Casing Work	618.20	626.51	36	St Helena	
12	Facility Modification	Mosquito Bay 30" C Line (Junction Platform)	101.44	130.87	30	Terrebonne	3235
13	Replacement	SELA Line C VLV-062C10 to VLV-062C20	87.61	91.84	30	Terrebonne, Lafourche	
14	Pipe Inspection	SELA Line C STA-063 to STA-065	0.00	64.17	30	Saint James, Ascension, Livingston, St Helena	7323
15	Pipe Inspection	SELA Line A from Mississippi River to STA-065	0.00	65.54	24	Saint James, Ascension, Livingston, St Helena	
16	Recoats	SELA Line A-B-C STA-063 to STA-065	0.00	64.17	24, 30, 30	Saint James, Ascension, Livingston, St Helena	7323, 4398, 4636

\*Refer to 1Line for Meter - Location ID cross reference. (1Line Path: Resources > Master Location List > Meter(s) to Nominatable Location)

# Atlanta Division Work

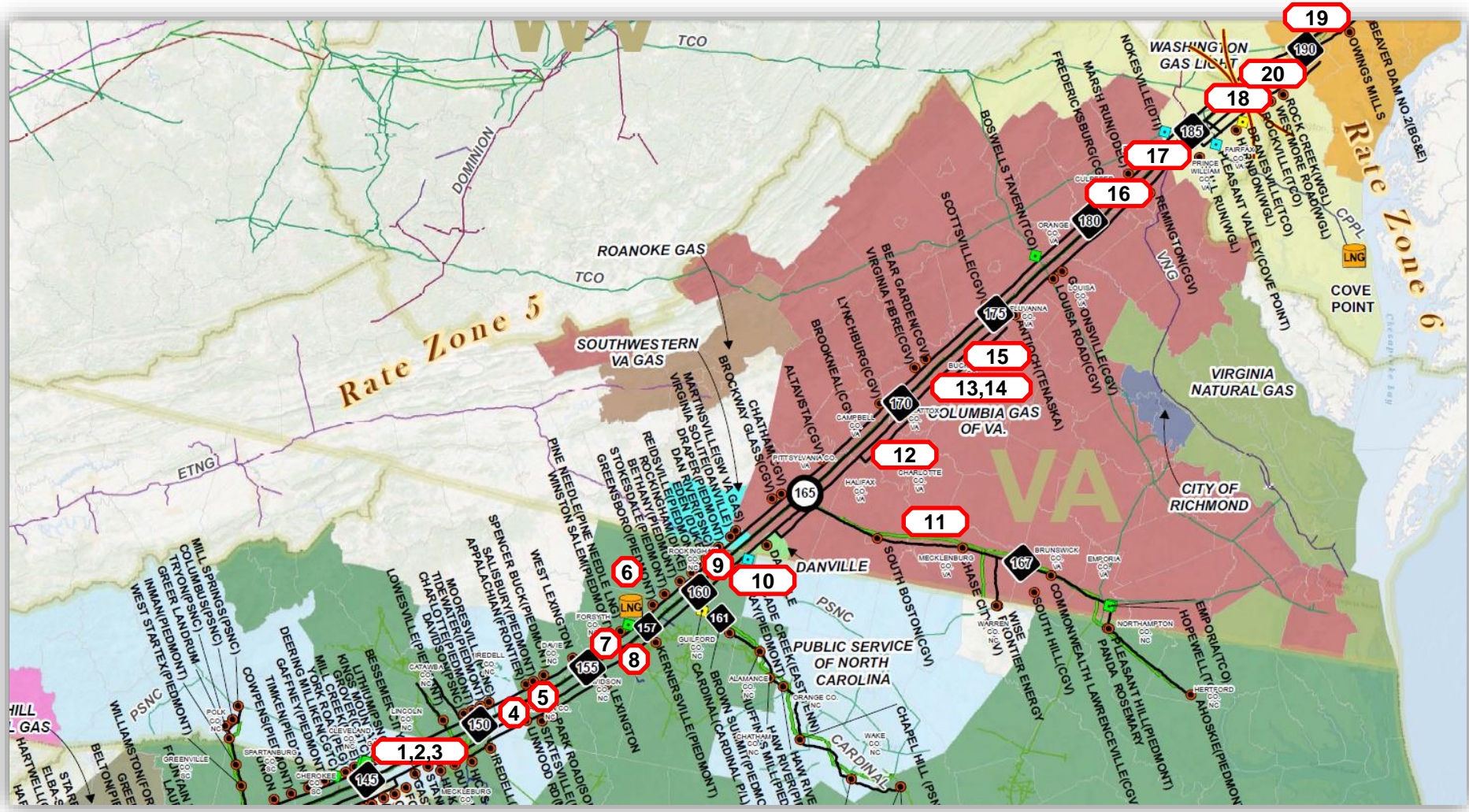


# Atlanta Division Work

Job	Type	Description	MP From	MP To	Dia	County/Parish	Meters Potentially Affected*
1	Anomaly Investigations	M/L B STA-065 to STA-070	626.51	661.67	36	St Helena, Amite, Pike, Walthall	
2	Anomaly Investigations	M/L C STA-065 to STA-080	626.51	740.50	36	St Helena, Amite, Pike, Walthall, Marion, Jefferson Davis, Covington, Jones	3446
3	Anomaly Investigations	M/L E STA-085 to STA-090	784.30	811.13	42	Choctaw, Marengo	
4	Anomaly Investigations	Mobile Bay Lateral	0.00	123.56	30	Choctaw, Washington, Mobile	4514, 4624, 3603, 4603, 3614, 4614, 3593, 4621, 4596, 3577
5	Facility Modification	STA-090	811.13	811.13		Marengo	
6	Replacement	M/L C MP 904.20 (STA-100 to VLV-100C10)	890.61	909.89	36	Chilton, Autauga	
7	Anomaly Investigations	M/L D STA-110 to STA-120	969.48	1048.34	42	Randolph, Heard, Coweta, Fayette, Clayton, Henry	
8	Replacement	M/L A & C MP 1013.69 (STA-115 to VLV-115-10)	1007.65	1017.47	30,36	Coweta	
9	Anomaly Investigations	M/L D STA-120 to STA-130	1048.34	1124.71	42	Henry, Rockdale, Decalb, Newton, Walton, Oconee, Clarke, Madison	7347
10	Pipe Inspection	M/L C STA-130 to STA-140	1124.71	1205.89	36	Madison, Elbert, Hart, Anderson, Greenville, Laurens, Spartanburg	
11	Anomaly Investigations	M/L D STA-130 to STA-140	1124.71	1205.89	42	Madison, Elbert, Hart, Anderson, Greenville, Laurens, Spartanburg	
12	Hydro Test	M/L A Savannah River Crossings	1148.46	1148.46	30	Hart, Anderson	
13	Pipe Inspection	M/L A STA-140 to STA-145	1205.89	1247.03	30	Spartanburg, Cherokee, Cleveland	
14	Pipe Inspection	M/L D VLV-140D10 to STA-145	1219.95	1247.03	42	Cherokee, Cleveland	7366

\*Refer to 1Line for Meter - Location ID cross reference. (1Line Path: Resources > Master Location List > Meter(s) to Nominatable Location)

# Charlottesville Division Work

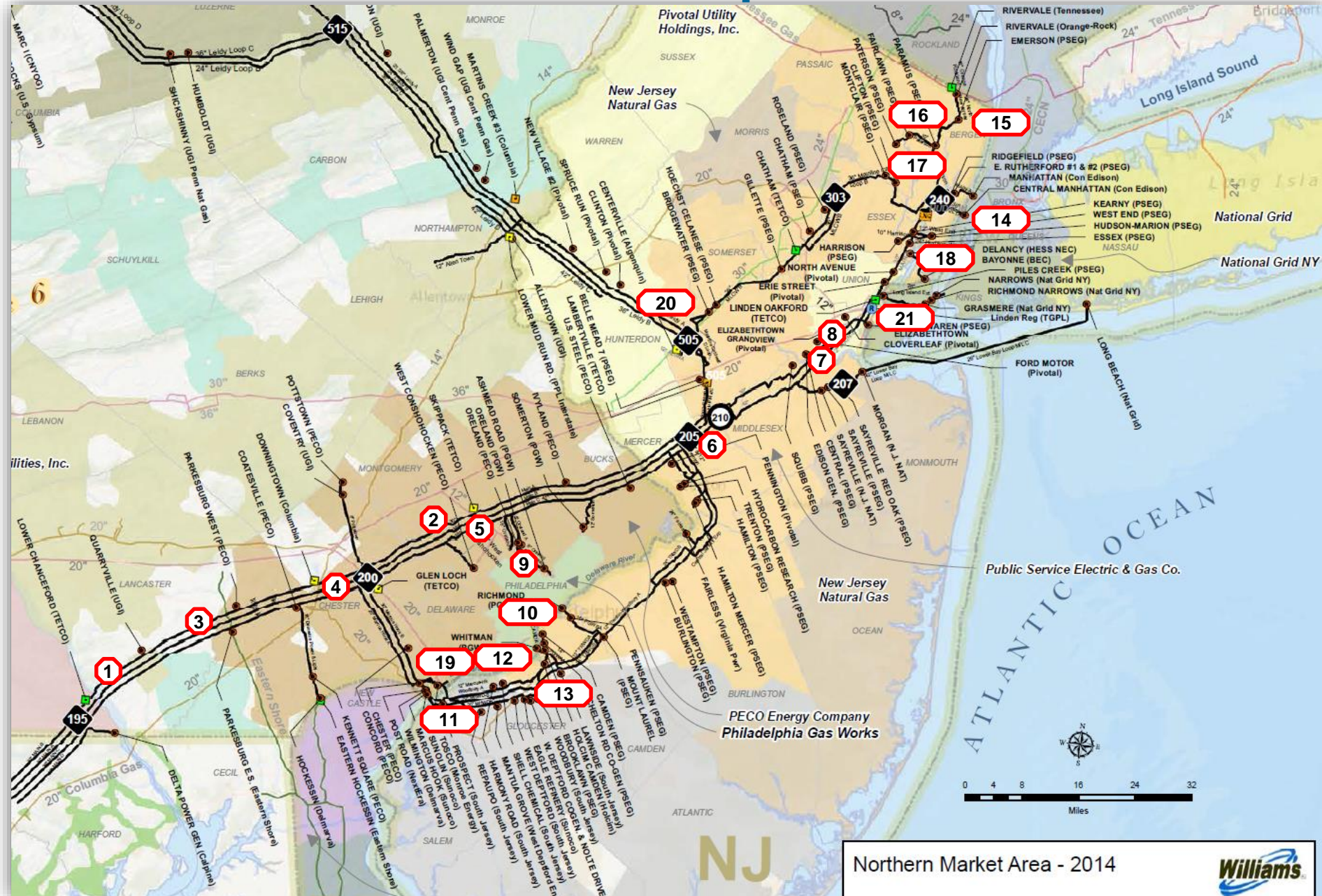


# Charlottesville Division Work

Job	Type	Description	MP From	MP To	Dia	County	Meters Potentially Affected*
1	Anomaly Investigations	M/L A STA-145 to STA-150	1247.16	1287.00	30	Cleveland, Gaston, Lincoln, Mecklenburg, Iredell	
2	Anomaly Investigations	M/L B STA-145 to STA-150	1247.16	1287.00	36	Cleveland, Gaston, Lincoln, Mecklenburg, Iredell	
3	Anomaly Investigations	M/L C STA-145 to STA-150	1247.16	1287.00	36	Cleveland, Gaston, Lincoln, Mecklenburg, Iredell	
4	Pipe Inspection	M/L A STA-150 to STA-160	1287.28	1369.20	30	Iredell, Rowan, Davie, Davidson, Forsyth, Guilford, Rockingham	
5	Anomaly Investigations	M/L C STA-150 to VLV-155C20	1287.28	1355.15	36	Iredell, Rowan, Davie, Davidson, Forsyth, Guilford	
6	Pipe Inspection	Pine Needle LNG Supply A	1356.95	1356.95	10	Guilford	
7	Anomaly Investigations	M/L C VLV-155C21 to VLV-160C15	1355.15	1394.60	42	Guilford, Rockingham, Pittsylvania	
8	Replacement	M/L A VLV-155A20 to VLV-160A0	1355.15	1369.20	30	Guilford, Rockingham	
9	Hydro Test	M/L A STA-160 to VLV-160A10	1369.61	1386.33	30	Rockingham	
10	Pipe Inspection	M/L A STA-160 to James River	1369.61	1494.12	30	Rockingham, Pittsylvania, Campbell, Appomattox, Buckingham	
11	Anomaly Investigations	South Virginia Lateral	0.00	144.65	20	Pittsylvania, Halifax, Charlotte, Mecklenburg, Brunswick, Greenville, Northampton, Hertford	7249, 7253, 7365, 7266, 7268, 7261, 7264, 7319, 7341, 7274
12	Anomaly Investigations	M/L D VLV-V382 to STA-170	1436.31	1456.85	42	Campbell, Appomattox	
13	Pipe Inspection	M/L B STA-170 to VLV-175B20	1456.85	1521.82	30	Appomattox, Buckingham, Fluvanna, Louisa	
14	Pipe Inspection	M/L C STA-170 to VLV-175C20	1456.85	1521.82	36	Appomattox, Buckingham, Fluvanna, Louisa	
15	Facility Modification	M/L D VLV-170D10 to James River	1472.72	1494.21	42	Appomattox, Buckingham	
16	Anomaly Investigations	M/L B VLV-180B10 to VLV-185B5	1557.76	1584.86	30	Fauquier, Prince William, Fairfax	
17	Hydro Test	M/L A Potomac River Crossing	1603.90	1604.00	24	Fairfax, Montgomery	
18	Anomaly Investigations	M/L B VLV-185B10 to STA-190	1589.60	1628.74	30	Fairfax, Montgomery, Howard	
19	Replacement	M/L A, B, C STA-190 to VLV-19010 (Old Frederick Road)	1628.94	1642.48	30, 36	Howard, Baltimore	
20	Replacement	M/L C VLV-185C20 to STA-190	1616.23	1628.74	36	Montgomery, Howard	

\*Refer to 1Line for Meter - Location ID cross reference. (1Line Path: Resources > Master Location List > Meter(s) to Nominatable Location)

# Princeton Division Work – Map A



Northern Market Area - 2014



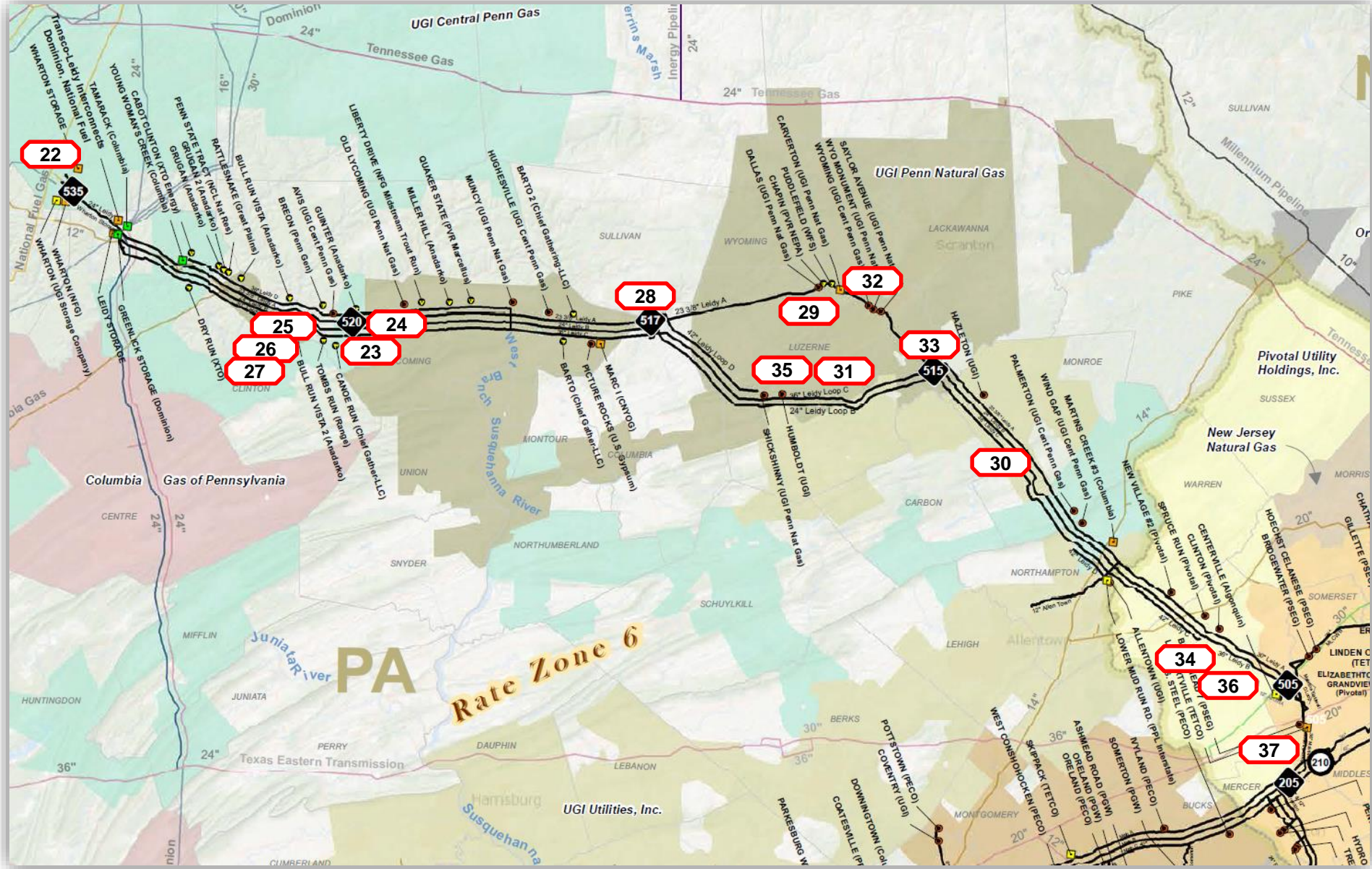


# Princeton Division Work – Chart A

Job	Type	Description	MP From	MP To	Dia	County	Meters Potentially Affected*
1	Pipe Inspection	M/L A VLV-195A0 to VLV-P347	1674.55	1711.66	30	York, Lancaster, Chester	
2	Pipe Inspection	M/L B VLV-195B20 to STA-505	1708.85	1789.55	30, 36	Chester, Montgomery, Bucks, Mercer, Somerset	3133, 4133
3	Replacement	M/L A VLV-195A10 to VLV-195A20	1691.06	1708.85	30	Lancaster, Chester	
4	Anomaly Investigations	M/L A VLV-P352 to STA-200	1715.08	1722.17	30	Chester	
5	Anomaly Investigations	M/L C VLV-200C10 to Delaware River	1738.95	1765.27	42	Montgomery, Bucks	
6	Facility Modification	STA-205	1773.40	1773.40		Mercer	
7	Hydro Test	Raritan River Crossing	1794.85	1794.85	24	Middlesex	
8	Pipe Inspection	M/L A Raritan to Passaic River	1795.00	1819.01	30	Middlesex, Union, Essex	6031, 6197, 6017, 6033, 6153, 6023, 6323, 6327
9	Facility Modification	Oreland Lateral	1745.74	1745.74	Various	Montgomery	6239, 6021, 6045
10	Facility Modification	PGW Plant A Lateral	45.28	45.28	10,14	Camden, Philadelphia	6093
11	Facility Modification	Sunolin - Marcus Hook Lateral	19.16	19.16	16	Delaware, New Castle, Gloucester	
12	Hydro Test	Camden Lateral	48.26	48.26	8	Camden, Gloucester	6011, 6083, 6310, 6299, 6093
13	Hydro Test	Trenton Woodbury Line A	43.18	49.76	12	Camden, Gloucester	6011, 6083, 6310, 6299, 6093
14	Hydro Test	72nd St. Lateral Hudson River Crossing	1827.25	1827.25	24	Bergen, York	6115
15	Pipe Inspection	North New Jersey Lateral	8.60	8.60	24	Bergen	3091, 6266, 6087, 6147
16	Pipe Inspection	10" Patterson Lateral	8.60	8.60	10	Bergen	6091, 6047
17	Pipe Inspection	30" Patterson Lateral	1826.39	1826.39	30	Bergen	6047, 6091, 6147, 6087, 6266, 3091
18	Pipe Inspection	Bayonne Lateral	1816.50	1816.50	20,14	Essex, Hudson	6323
19	Anomaly Investigations	Chester Lateral	17.35	17.35	8	Delaware	6003
20	Anomaly Investigations	M/L D Caldwell STA-505 to VLV-505D5	1789.63	1794.83	42	Somerset	
21	Anomaly Investigations	Long Island Extension	1808.05	1808.05	26	Union, Richmond	6263, 6062, 6028

\*Refer to 1Line for Meter - Location ID cross reference. (1Line Path: Resources > Master Location List > Meter(s) to Nominatable Location)

# Princeton Division Work – Map B



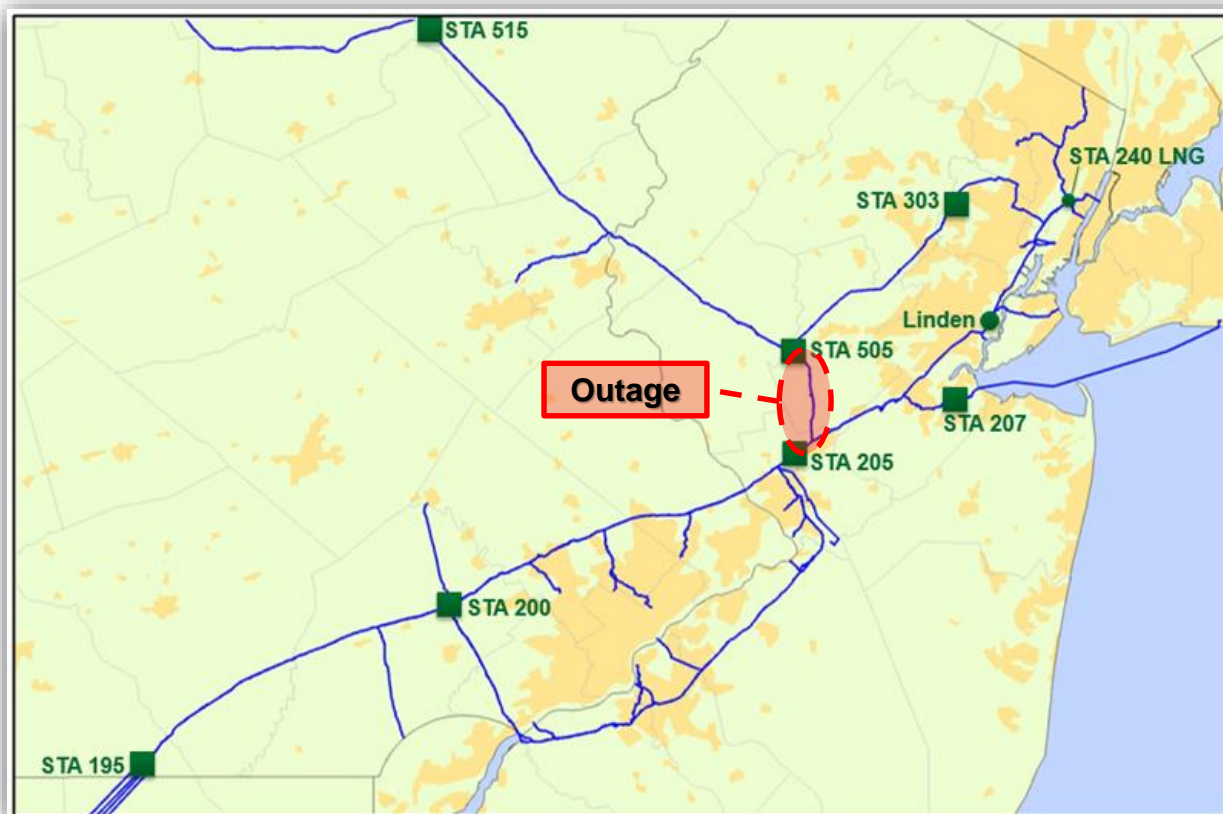
# Princeton Division Work – Chart B

Job	Type	Description	MP From	MP To	Dia	County	Meters Potentially Affected*
22	Recoats	STA-535 12", 16" Wharton Ext & Loop	203.54	203.54	12, 16	Potter	3261, 6172, 6174
23	Facility Modification	STA-520	157.69	157.69		Lycoming	
24	Pipe Inspection	Leidy Line D VLV-517LD20 to STA-520	142.74	157.52	36	Lycoming	
25	Pipe Inspection	Leidy Line B STA-520 to VLV-520LB30	157.52	194.06	24	Lycoming, Clinton	
26	Anomaly Investigations	Leidy Line C STA-520 to VLV-520LC30	157.52	193.97	30	Lycoming, Clinton	3605
27	Anomaly Investigations	Leidy Line D STA-520 to VLV-520LD25	157.52	183.55	36	Lycoming, Clinton	
28	Facility Modification	STA-517	115.48	115.48		Columbia	
29	Recoats	Leidy Line A STA-515 to STA-517	68.84	114.68	24	Luzerne, Columbia	6159, 3642, 3631, 4651, 3651, 6111, 6200, 6161
30	Recoats	Leidy Line A STA-515 to Delaware River	68.84	30.29	24	Luzerne, Monroe, Northampton	
31	Anomaly Investigations	Leidy Line C STA-515 to Hughesville	68.84	129.52	36	Luzerne, Columbia, Lycoming	
32	Replacement	Leidy Line A MP 84 to 90 (VLV-515LA22 to VLV-515LA30)	82.36	96.87	24	Luzerne	6159, 3642, 3631, 4651, 3651, 6111, 6200
33	Facility Modification	STA-515	68.84	68.84		Luzerne	
34	Facility Modification	Pleasant Run Loop; Leidy Line B (VLV-505LB40 to STA-505)	1789.55	1816.5	36	Somerset, Hunterdon	
35	Facility Modification	Dorance Loop; Leidy Line B, C (VLV-515LB10 to VLV-515LB20; VLV-515LC10 to VLV-515LC22)	11.82	26.11	24, 36	Luzerne	6281
36	Hydro Test	Algonquin Centerville M&R Lateral	0.00	0.99	16	Somerset	4402
37	Facility Modification	Skillman Loop; Caldwell M/L B (VLV-200B26 to VLV-200B27)	1773.4	1776.75	36	Mercer, Somerset	NMA

\*Refer to 1Line for Meter - Location ID cross reference. (1Line Path: Resources > Master Location List > Meter(s) to Nominatable Location)

# Station 505 to Princeton Junction Outage

- > Line “B” from STA-505 to Princeton Junction will be out of service during construction of adjacent Line “D” loop.
- > Construction is part of Leidy Southeast Expansion Project.
- > Will limit or make unavailable certain services through STA-505.



# Now What?

## ***Individual Project Updates***

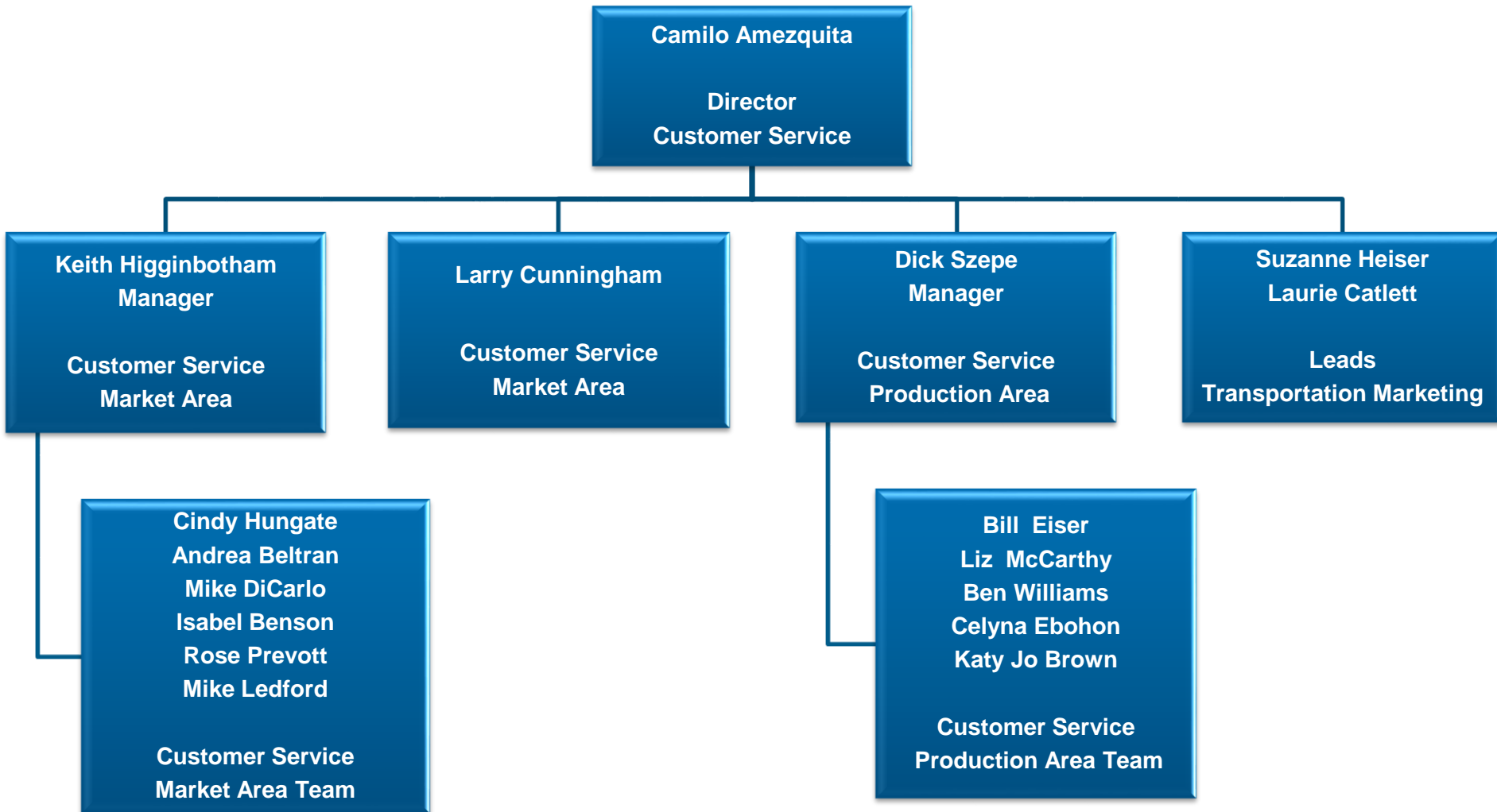
- > Transco's *1Line* closer to job start date

## ***Further Questions?***

- > Ross Sinclair (*Manager, Pipeline Control*)
  - > 713-215-2688
  - > [Ross.M.Sinclair@Williams.com](mailto:Ross.M.Sinclair@Williams.com)
- > John Cassapo (*Supervisor, OE System Planning Atlantic/Gulf*)
  - > 713-215-2748
  - > [john.m.cassapo@williams.com](mailto:john.m.cassapo@williams.com)
- > Your Transco Representative

# Customer Services Update

# Commercial Operations - Customer Service



# Marcellus Shale Supply



### Legend

● Existing Meter Stations

### Marcellus Interconnects

- In Service
- I/C Agmt. In Place
- In Negotiations
- Preliminary

### In Service

NCL – Penn State	10,661	existing
XTO – Cabot Clinton	10,350	existing
Regency – Canoe Run	155,250	11/2008
Regency – Barto	155,250	03/2009
Anadarko – Grugan	119,025	10/2010
Pennsylvania General – Breon	238,050	07/2011
Anadarko – Bull Run Vista	72,450	07/2011
Anadarko – Grugan 2	243,225	10/2011
Williams Field Services – Puddlefield	724,500	01/2012
Great Plains Operating – Rattlesnake	12,420	04/2012
Anadarko – Guinter	637,560	04/2012
NFG Midstream Trout Run – Liberty Drive	282,245	05/2012
Regency – Chapin	776,250	09/2012
Anadarko – Miller Hill	637,560	10/2012
CNYOG – Marc I (Pipeline Interconnect)	571,320	11/2012
Mountain Gathering (XTO) - Dry Run	124,200	12/2012
Regency – Quaker State	38,709	01/2013
Anadarko – Bull Run Vista 2	119,025	01/2013
Regency – Barto II	258,750	05/2013
UGI Penn Natural Gas - Carverton	310,500	11/2013
Regency – Tombs Run	724,500	02/2014

### IC Meter Design (dt/d)

6,221,800

### ISD

### In Progress

New Station	310,500	4Q 2014
Expansion of Current Station	175,950	4Q 2014
Expansion of Current Station	168,291	2015
Expansion of Current Station	517,500	2016
New Station	132,584	TBD

### IC Meter Design (dt/d)

7,526,625

### Proposed ISD

4Q 2014
4Q 2014
2015
2016
TBD

Total Interconnect Meter Design

7,526,625

July 2014

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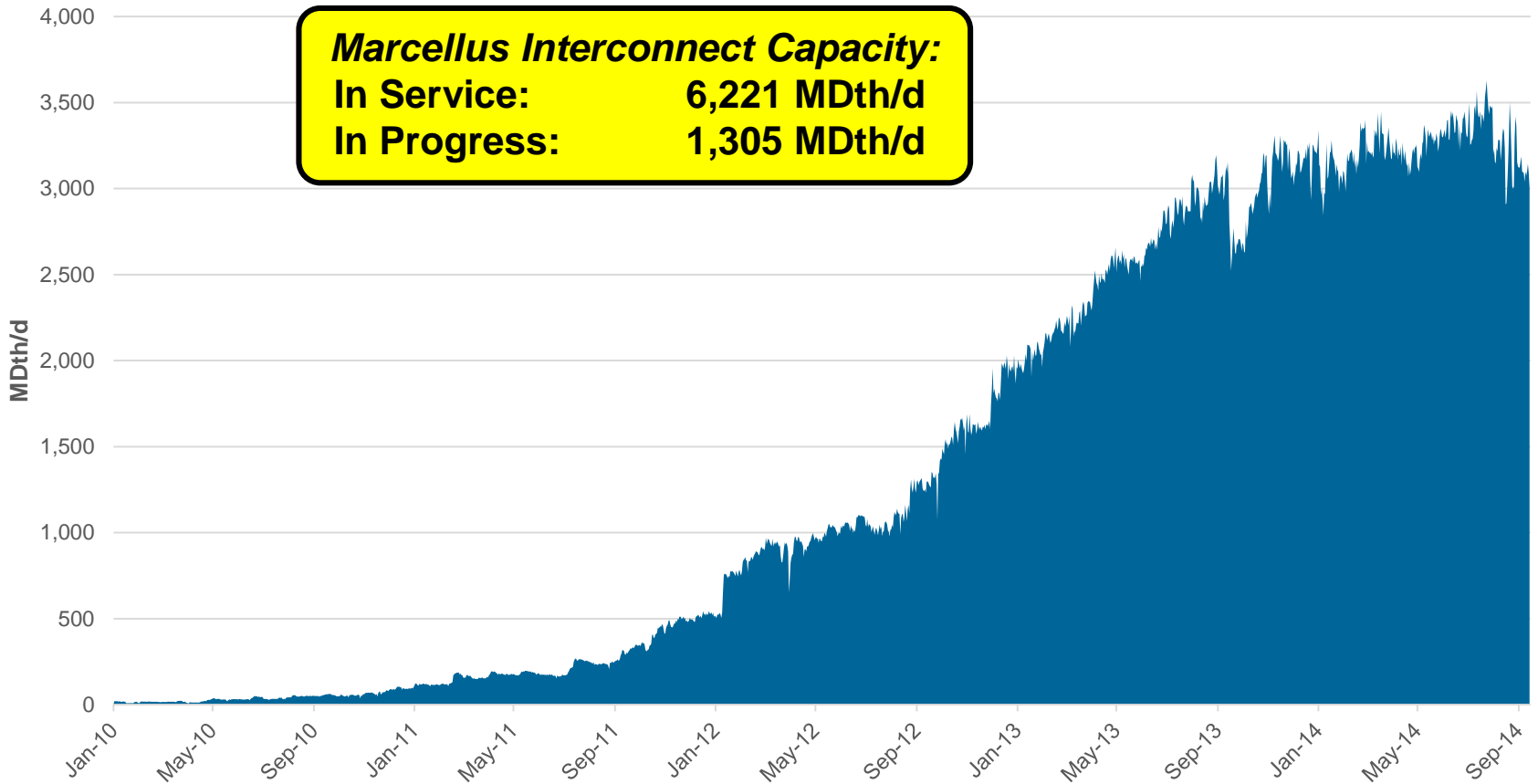
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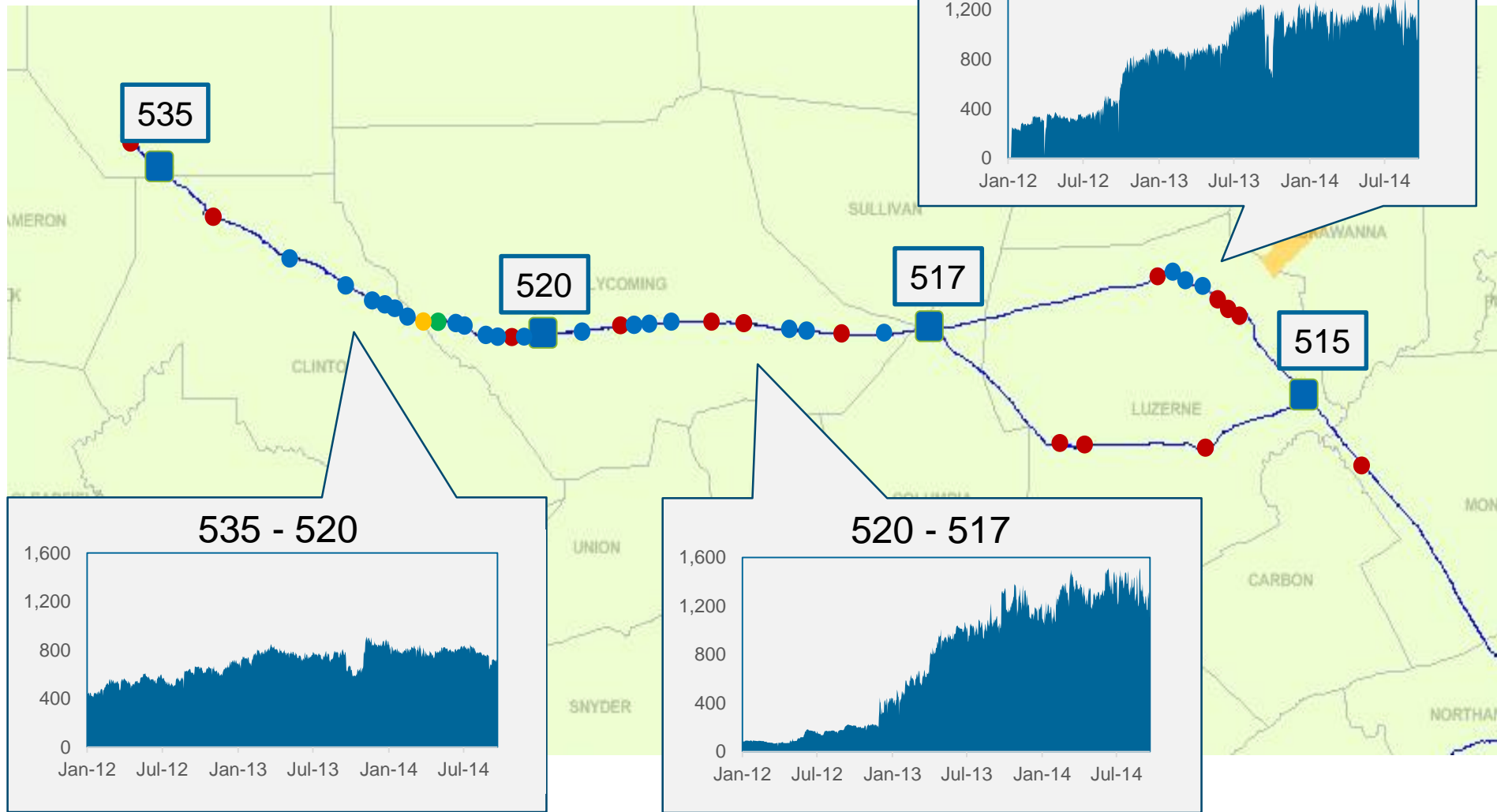
# Marcellus Shale - Transco

## Marcellus Flow Volumes (MDth/d)

**Marcellus Interconnect Capacity:**  
**In Service: 6,221 MDth/d**  
**In Progress: 1,305 MDth/d**

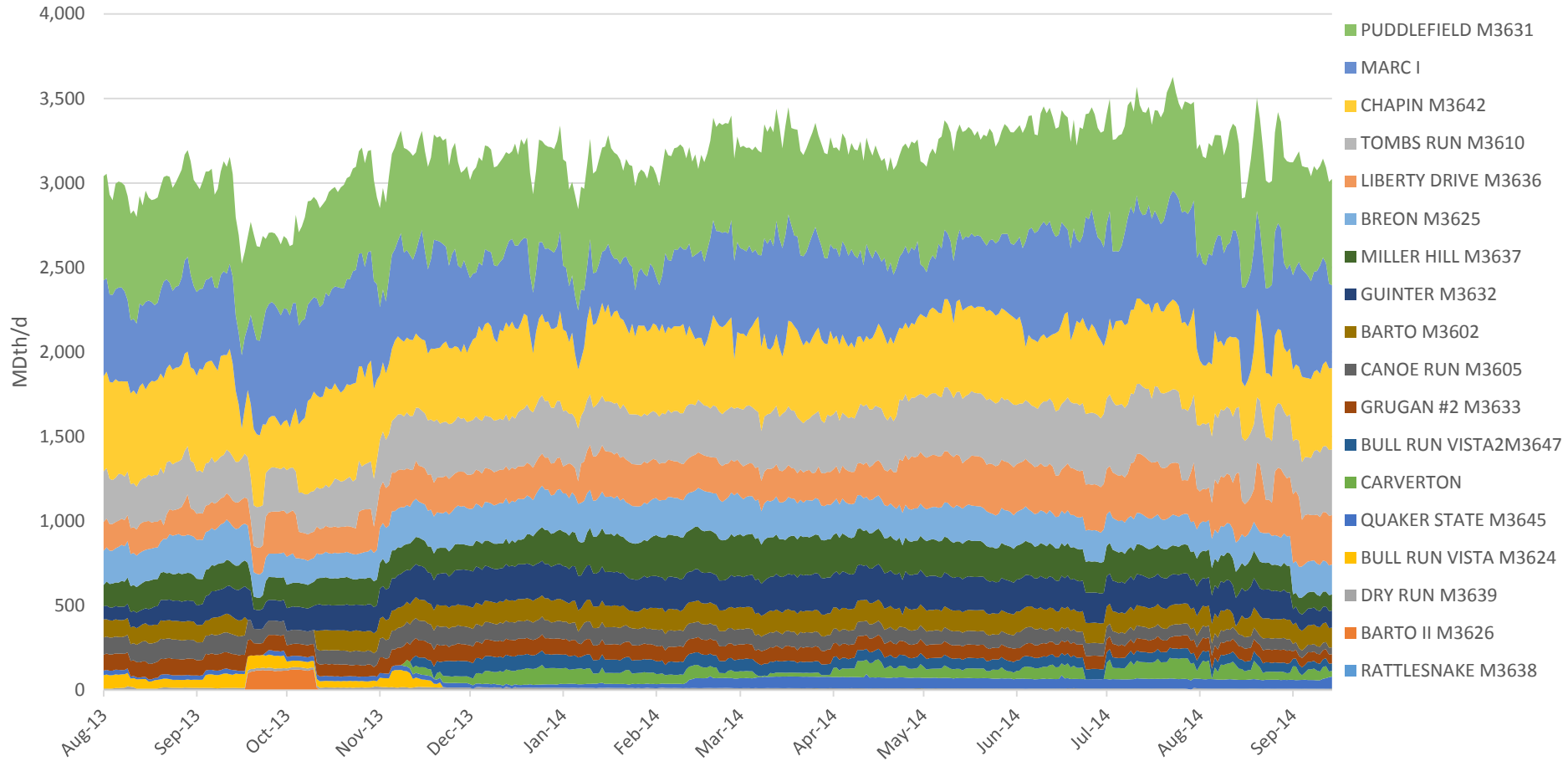


# Marcellus Shale Receipts\*



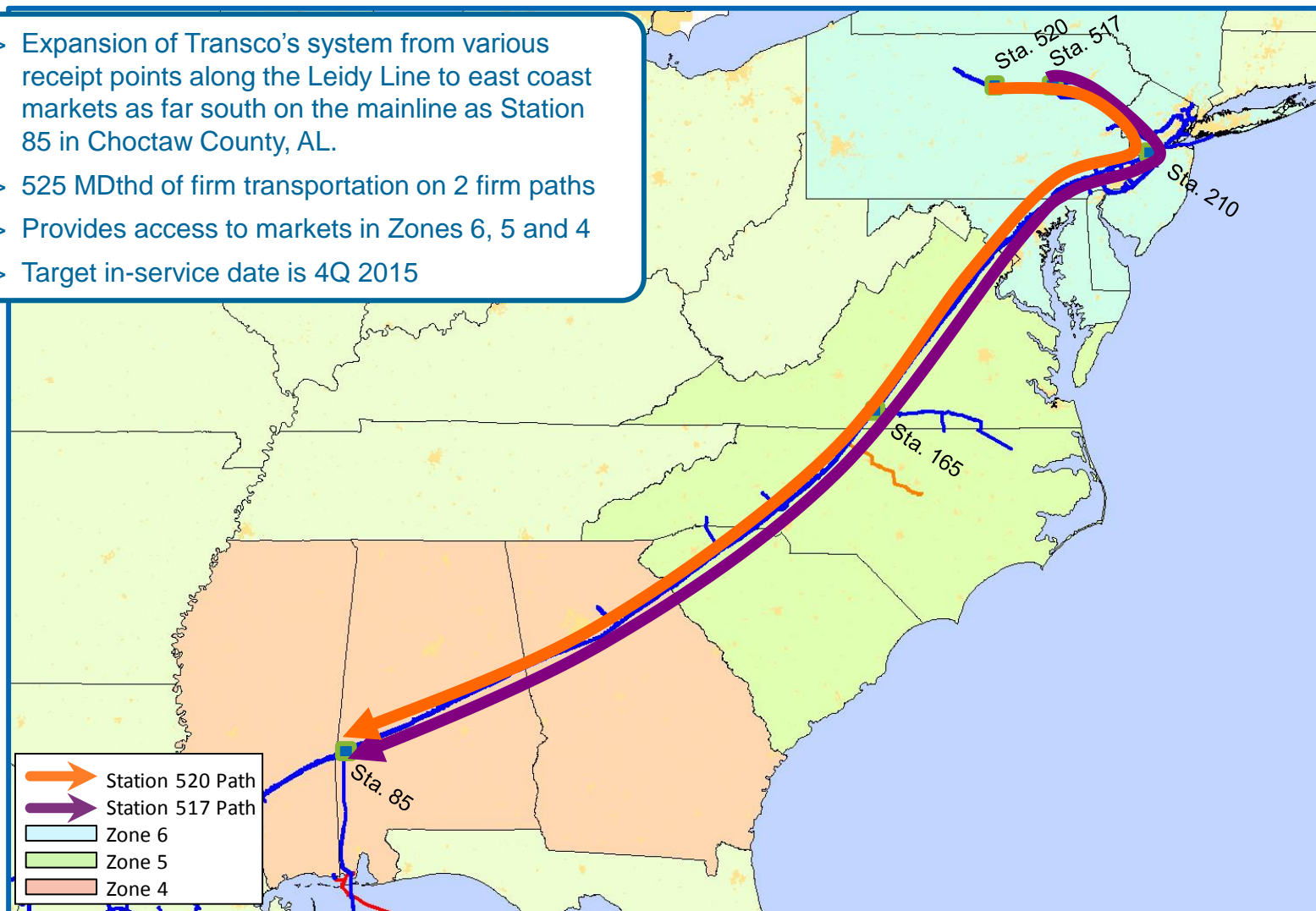
\*Volumes are Mtdh/d

# Marcellus Shale Supply - Transco



# Leidy Southeast

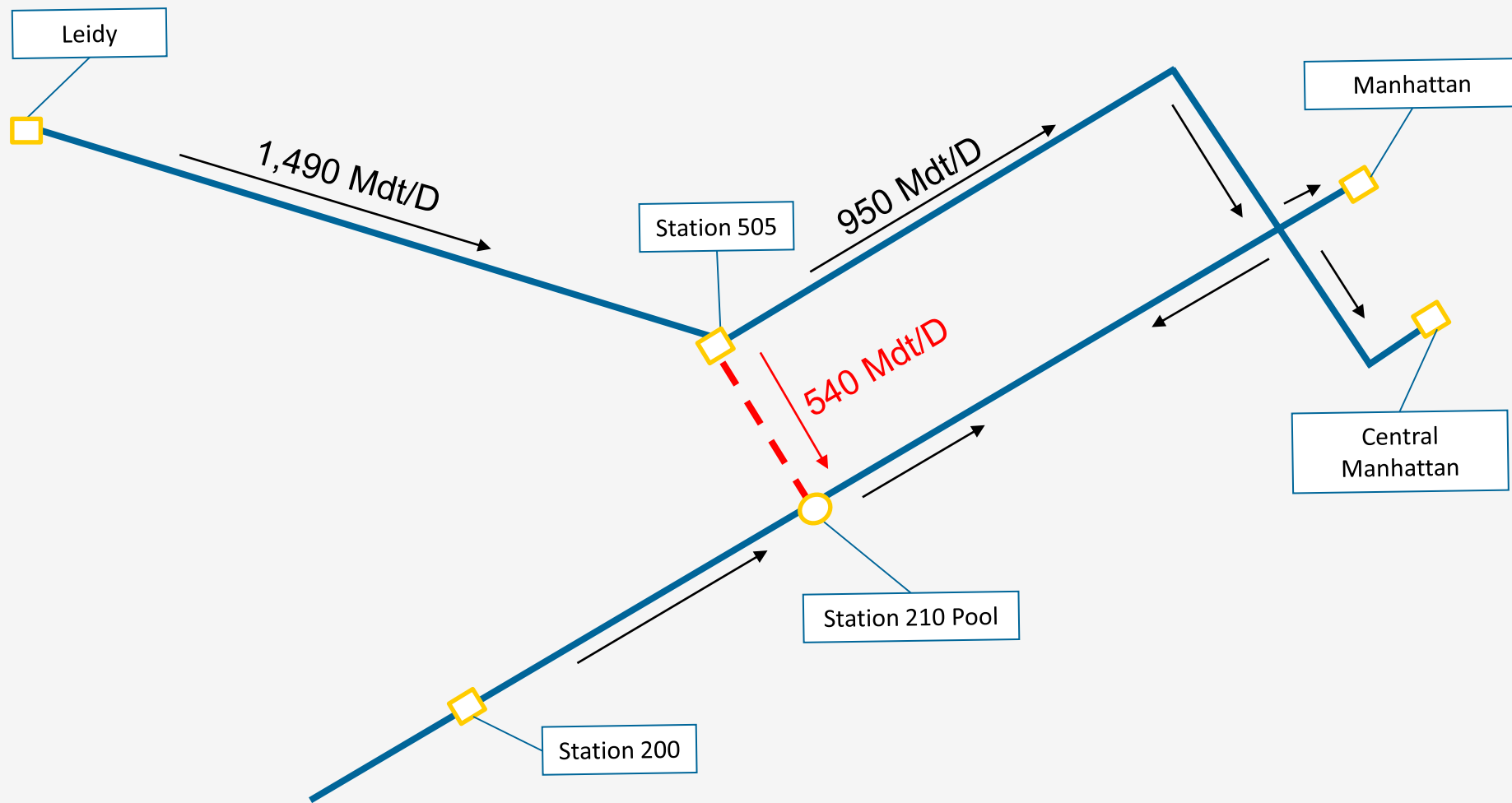
- > Expansion of Transco's system from various receipt points along the Leidy Line to east coast markets as far south on the mainline as Station 85 in Choctaw County, AL.
- > 525 MDthd of firm transportation on 2 firm paths
- > Provides access to markets in Zones 6, 5 and 4
- > Target in-service date is 4Q 2015



## Leidy Southeast – Construction Outage Details

- > Line “B” will be out of service between Station 505 and Princeton Junction (Station 210 Pool) during construction of the adjacent “D” loop.
- > Estimated outage time – Approximately 30 days
- > Start date: May 11, 2015
- > All interruptible services, including non-secondary reverse path (NSRP), secondary FT, and interruptible (IT) moving west to east through Station 505 will not be available.
- > All interruptible services moving west to east through Station 515 may be limited or will not be available.
- > Up to 540 Mdt/day of Leidy firm transportation (FT) moving west to east through Station 505 may not be available.

# Leidy Southeast Outage – 5/11/15



## Leidy Southeast Outage - Mitigation Options

- > Maximize Leidy storage injections to displace Leidy firm transportation (FT) moving from west to east through Station 505.
  - Total Storage Service (including GSS, LSS & SS2): 518,507 dts/day
  
- > Ask Customers to utilize Leidy delivery points upstream of Station 505 to move FT off of the Leidy line.
  - Centerville (Algonquin)
  - Martins Creek #3 (Columbia)
  - MARC I (CNYOG)
  
- > Work with delivery interconnect operators to maximize take-away from the interconnects.

# Operational Flow Orders (OFOs)

- > High Utilization of OFOs during Winter 2013/2014
  - Cold winter resulted in first test of customers' true peak day requirements in many years
  - Supply diversity created new operating challenges
  - Segmentation use contributed to high pipeline capacity utilization
- > As a result Transco is evaluating the following:
  - Tariff tools available.
  - Did Imbalance OFOs protect system integrity and still meet customer needs?
  - Modification of OFO limitations to provide more flexibility?
  - What prevented the use of less punitive tools (i.e. Operational Controls) and do those tools need to be modified to be more effective?
- > Recently implemented Zonal OFOs (vs. System-wide)
  - Receipt locations in Zone 6 with a delivery in any zone
  - Delivery locations in Zone 6 with a receipt in any zone



# OFO Tariff Language Modifications Being Considered

## > Recap as a result of last winter

- Change tolerance variation in Section 52.4 of the GT&C
  - Inserting the language “at least 5% or 1,000 dth” in Section 52.4(a) and (b) of the GT&C.
- Proposed Penalty structure changes
  - Removal of the reference to Section 37.1 of the GT&C in the penalty structure for OFOs in Section 52.5 of the GT&C
  - Replacing the cashout price for OFO penalties with a daily Transco delivered spot price that is more representative of the actual cost of gas

# Operational Controls (OC) Tariff Language Modification Being Considered

- > OC (use OCs instead of OFOs to help manage operational concerns)
  - Modify OC Variance Notices (i.e. Scheduling OC) to be applicable to delivery locations as well as receipt locations to capture over/under supply and/or over/under burn
  - Remove the pre-conditions necessary prior to issuing a Variance Notice
  - Apply the Imbalance Make-Up Notice to either daily or cumulative month-to-date imbalances
  - Remove the pre-conditions necessary prior to issuing a Make-Up Notice
  - Change the reference prices

# Delivery Point Entitlements (DPE) Proposed Tariff Language

## > DPE Utilization

- Establishes operating parameters on the system
- Establishes the maximum quantity of gas that Transco is obligated to deliver at each delivery point and facility group
- From EC – System Planning perspective, DPEs are in place to provide modeling guidance of contractual obligations that must be met when performing an expansion project analysis.
- Ensure system integrity for all existing and future FT shippers
- Regardless of flow direction, DPEs are valid.

# Key Changes in the DPE Tariff Language

- > Align those provisions more closely with the current tariff, business and operational practices.
- > Elimination of delivery point unauthorized daily overrun penalty for mainline delivery points and facility groups.
- > Only delivery points and facility groups located on laterals (designated as (L) on the individual delivery point operator DPE sheet) will potentially be subject to a delivery point unauthorized daily overrun penalty.
- > Changed applicable DPE provisions from “Buyer” to “Delivery Point Operator” to reflect the fact that delivery point operators control and confirm the flows of gas taken off Transco’s system.

## Some Key Changes in the Tariff Language

- > Changed from “Buyer’s Maximum Daily Contract Demand” to “total deliveries at a delivery point operator’s Swing Service Delivery Points may not exceed the delivery point operator's confirmed gas quantities, including limit values, plus any swing service overtakes and Tier I Unauthorized Overrun Gas allocated at the Swing Service Delivery Point”
- > Allow for a delivery point operator to request Transco to revise existing DPEs under specified conditions and with Transco’s agreement to reflect the delivery point operator’s current delivery requirements

# Some Key Changes in the Tariff Language Cont.

## > Mainline Facility Group

- Deliveries in excess of the delivery point operator's Maximum Daily Delivery Entitlement by Facility Group, located on the mainline will not be subject to penalty.

## > Lateral Facility Group

- Deliveries in excess of the delivery point operator's Maximum Daily Delivery Entitlement by Facility Group, located on a lateral will be subject to penalty.

## > Circumstances Giving Rise to a Lateral Penalty Notice

- To the extent that Transco reasonably determines that a delivery point operator's takes in excess of the Maximum Daily Delivery Entitlement by Facility Group is impairing Transco's ability to provide firm service to other delivery point operators that have delivery point(s) on the lateral
  - Transco shall issue a penalty notice to the offending delivery point operator
  - The penalty notice shall state
    - The quantity to which the delivery point operator must reduce its delivered quantities at the specified Facility Group, but not less than the Maximum Daily Delivery Entitlement by Facility Group
    - The effective date and time of the penalty notice.
  - Transco shall attempt to give the delivery point operator reasonable time for voluntary action.

# Rates and Regulatory update

## > RP12-993 Rate Case Settlement

- Transco is required to meet with customers within one year of the effective date of the settlement adopted in this proceeding to discuss the pooling structure on the Transco system and gas quality issues
- Meetings will be scheduled prior to March 1, 2015

## MASTIO Survey Results

- > MASTIO published the 18th Edition Natural Gas Pipeline Customer Value & Loyalty Study in February 2014.
- > This study identifies and quantifies the perceptions and needs of natural gas pipeline customers.
  - The most important issues to transporters of natural gas in the latest study:
    1. Firm gas transportation is highly reliable.
    2. Accuracy of invoices.
    3. Communicates in an honest forthright manner.
  - On the issues listed above, Transco exceeded the rankings of listed competitors: Columbia Gas/Gulf, Dominion, Tennessee, Texas Eastern.
- > Voice of the Customer - based on written comments, Transco is focusing on improving communications, especially during system restrictions, for training and with the customer newsletter.



# Transco Mastio Ratings Relative to other Pipelines

- > Mega Pipeline Group: Transco ranked 3<sup>rd</sup> out of 16 listed
  - Note: Mega Pipeline Group consists of pipelines with at least 3,500 miles of transportation pipe and deliveries of at least 1 trillion CF (TCF).
- > Major Pipeline Group: Transco ranked 5<sup>th</sup> out of 23 listed
  - Note: Major Pipeline Index consists of pipelines with at least 3,500 miles of transportation pipe and that serve at least 3 states.
- > Interstate Pipeline Group: Transco ranked 8<sup>th</sup> out of 42 listed
- > Across each group, Transco scored higher than its competing pipelines in customer satisfaction (Texas Eastern, Tennessee, Columbia Gas, Columbia Gulf and Dominion)
- > Transco welcomes feedback on the services it provides year-round to ensure continuous improvement

# 2014 Energy Insights Survey

- > Survey conducted by Energy Insights in September 2014
- > Survey Participants were direct customers of Transco.
  - Total number of customers asked to participate: 100
  - Total number of companies: 53
    - Includes LDCs, marketing companies and producers
  - Sample includes a broad mix of customers
    - Front line reps, mid-level manager and officers
    - Scheduling and Customer Services
  - Research Objectives
    - Determine the relative importance of service attributes to customers
    - Measure performance on each service attribute
    - Assess overall customer satisfaction
    - Enhance findings when possible via follow-up questions

## 2014 Energy Insights Survey (cont.)

### > Service attributes covered in the survey

- Quality of Service
- Quality of Communications
- Quality of Operations
- Product Related Services

### > Timeline for survey results

- Transco expecting survey results as early as November 2014
- Internal analysis and presentations
- External communication of the survey results via “Transco Connection” newsletter.

### > Utilizing the survey results

- Identify potential areas of concern and develop action plans to address areas of concern

# Break

# Transportation Services and 1Line Support Update

# Transportation Services/1Line Org Chart



## Reductions to scheduled FT

### How will Transco cut FT during Force Majeure or Operating Conditions

- > Tariff provides guidance in Section 11 of the General Terms and Conditions and Rate Schedule FT
- > Transco will minimize the impact to primary path rights for which firm transportation customers have paid
- > Any reductions to firm transportation nominations within the primary path of the contract will be done based on the pro-rata share of contract entitlements in that segment

# 1Line System Outage

- > On July 15, 2014 1Line experienced a system outage that extended for approximately 31 hours
- > First significant service disruption in 1Line's 12 year history
- > What Happened?
  - The database servicing the 1Line system experienced an unanticipated failure while completing a data migration from an old storage device to a new one
  - Transco was unable to communicate through, and customers were unable to access, the 1Line system until approximately 11:00 pm CDT on July 16
  - Transco's Disaster Recovery site was unavailable due to maintenance
- > Transco filed a self-report with FERC on September 4, 2014



# 1Line System Outage

- > Actions taken by Transco during and after the event
  - Communications to customers
    - Phone and e-mail blasts
    - “Splash” page updates on EBB
    - Notification of force majeure occurrence
  - Prior to making 1Line available for business on gas day July 17<sup>th</sup>, 1Line had to process all the nomination cycles it missed
  - Transco allowed a 4% pool tolerance and did not enforce EPSQ for the ID1 cycles for both gas days July 16 and July 17
  - Returned to normal processes in time for Timely cycle for gas day July 18<sup>th</sup>

# 1Line System Outage Lessons Learned

- > Be more prompt in providing notice via a “splash” page when the 1Line system or EBB is down for an extended period of time
  - Some customers spent time trying to trouble-shoot their own systems
- > Enhance cross training in key infrastructure areas and system administration
- > Improve the disaster recovery system and back-up restoration processes
- > Explore whether modifications to 1Line could minimize customer impacts in the event of a future outage and make appropriate Tariff changes

## Priority of Service

- > Transco outlined its plans to clarify its Priority of Service last year
- > The draft tariff language is near completion and will be posted on 1Line for customer review and comment soon
- > Target for filing in 2015 is dependent on customer feedback

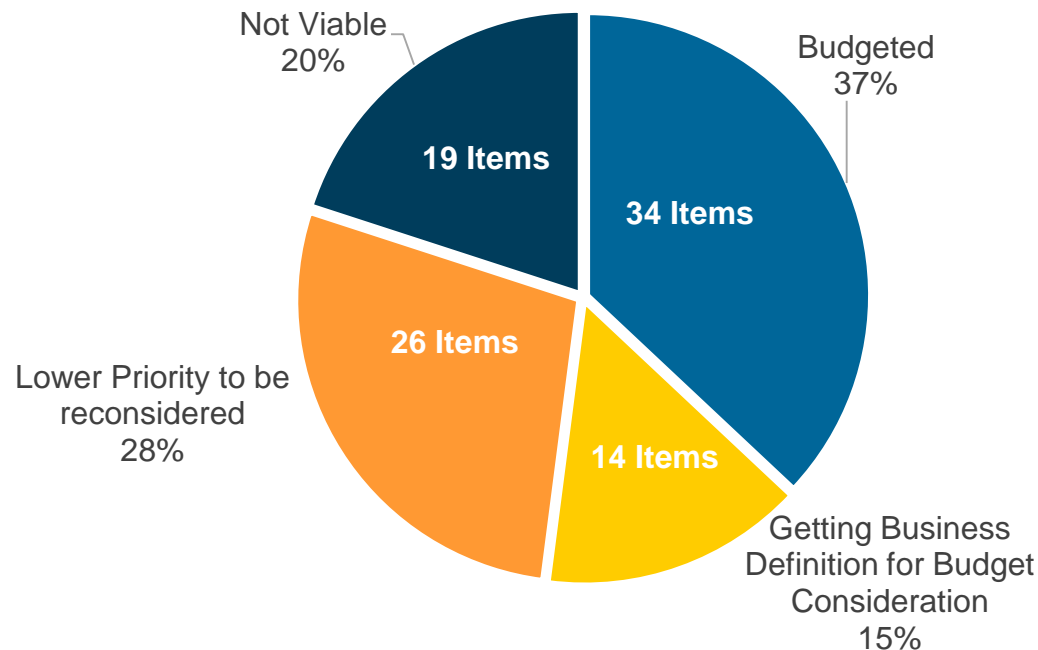
# Nomination and Capacity Release changes

- > Changes to the timing for Nominations and Capacity Release are driven by FERC RM 14-2
- > NAESB Wholesale Gas Quadrant Exec. Committee adopted the following changes
  - Timely Nom deadline moves to 1:00 p.m.
  - Reduce processing times for issuing SQRs by 1 hour
  - ID2 Nom cycle at 2:30 p.m. day of flow and is bumpable
  - New ID3 Nom cycle at 7:00 p.m. day of flow that is non-bumpable
  - Capacity Release timeline for biddable deals moves up 3 hours, other timelines adjusted accordingly
  - NO commitment on the start of the Gas Day
- > Transco is planning for a fall 2015 implementation, depending on FERC's actions

# 1Line system changes driven by Customer Feedback

- > Ongoing efforts to ensure 1Line meets customer's needs
- > The 1Line User Forum has helped assess and prioritize ongoing system improvements

93 Ideas Considered by the User Forum



# Recent 1Line System Changes

- > More details in Dashboard Alerts and in cut emails
- > More scheduling cut information via Alerts, “Quick View” pages and data files
- > Daily Invoice Details Available to Download
- > Auto-Approve and Auto Confirmation elections to streamline customer interactions
- > Measurement summary page for Operators/Agents
- > Meter Aggregation to Nominatable Parent Location report on EBB
- > Streamlining the Retro process and ease customer approvals and navigation
- > Added a 6<sup>th</sup> working tab

# What's left for this year?

- > Planned for the 4<sup>th</sup> quarter of 2014
  - Streamline the Post nom cycle
    - Automatically confirm noms submitted by operators
    - Provide shippers a view of their Post Nom status
  - Redesign of Pooling screens to provide a side-by-side view
    - Easier to find pooling mismatches
    - Drill down as needed
  - Provide e-mail alerts when measurement changes at a location

# What's Coming

## > Planned for 2015

- Elapsed Pro-Rata Schedule alerts and automatic request e-mails to operators if desired
- Cross-reference tool for customer contact information
- Southern and Northern maps showing Nominatable Locations and constraint points

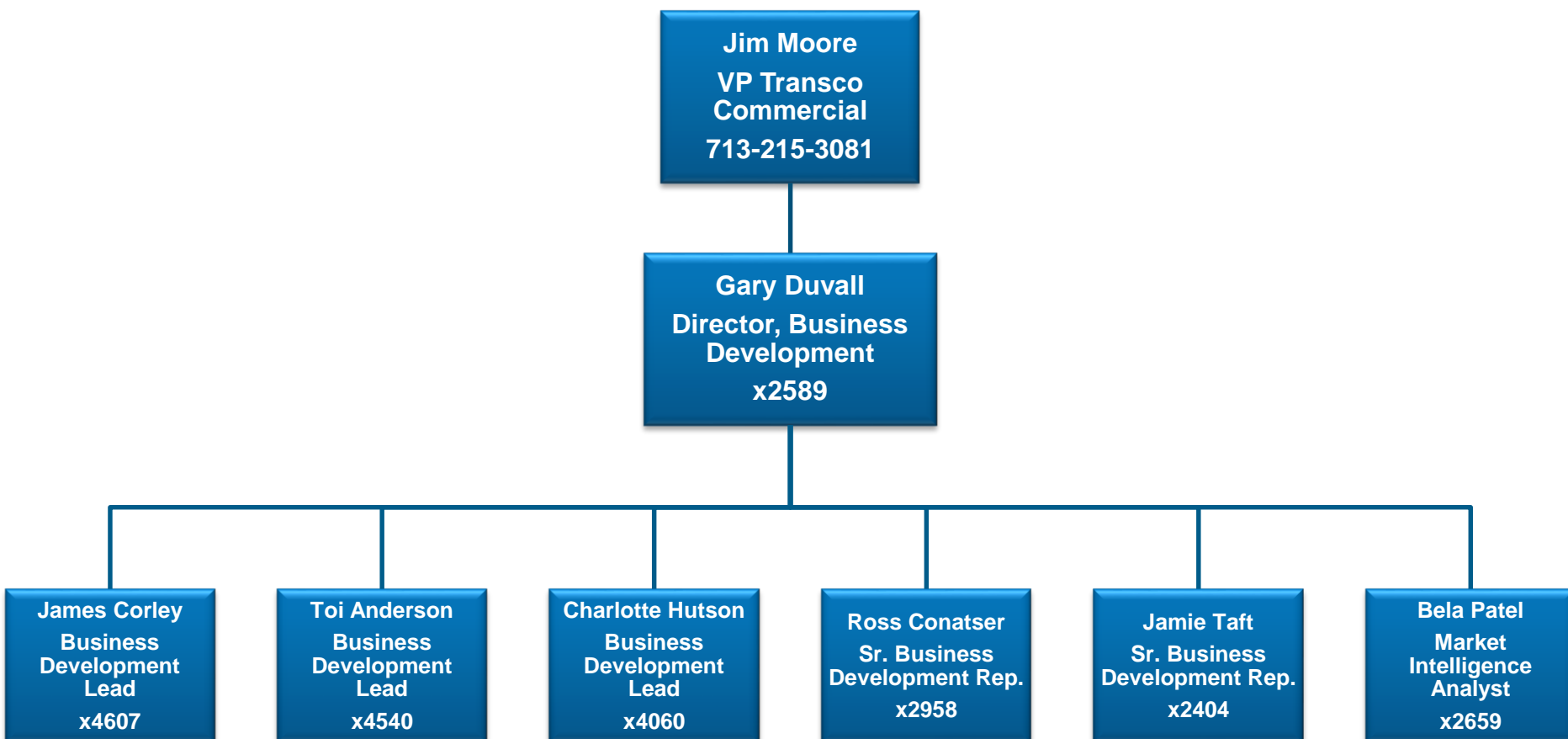
## > Additional enhancements under evaluation

- Master Contracts and/or Cross-contact ranking
- Balancing service at pools for minor mismatches
- MDQ warnings upon nomination submission
- Improved graphical maps with the ability to search for a location or identify constraints within a designated path



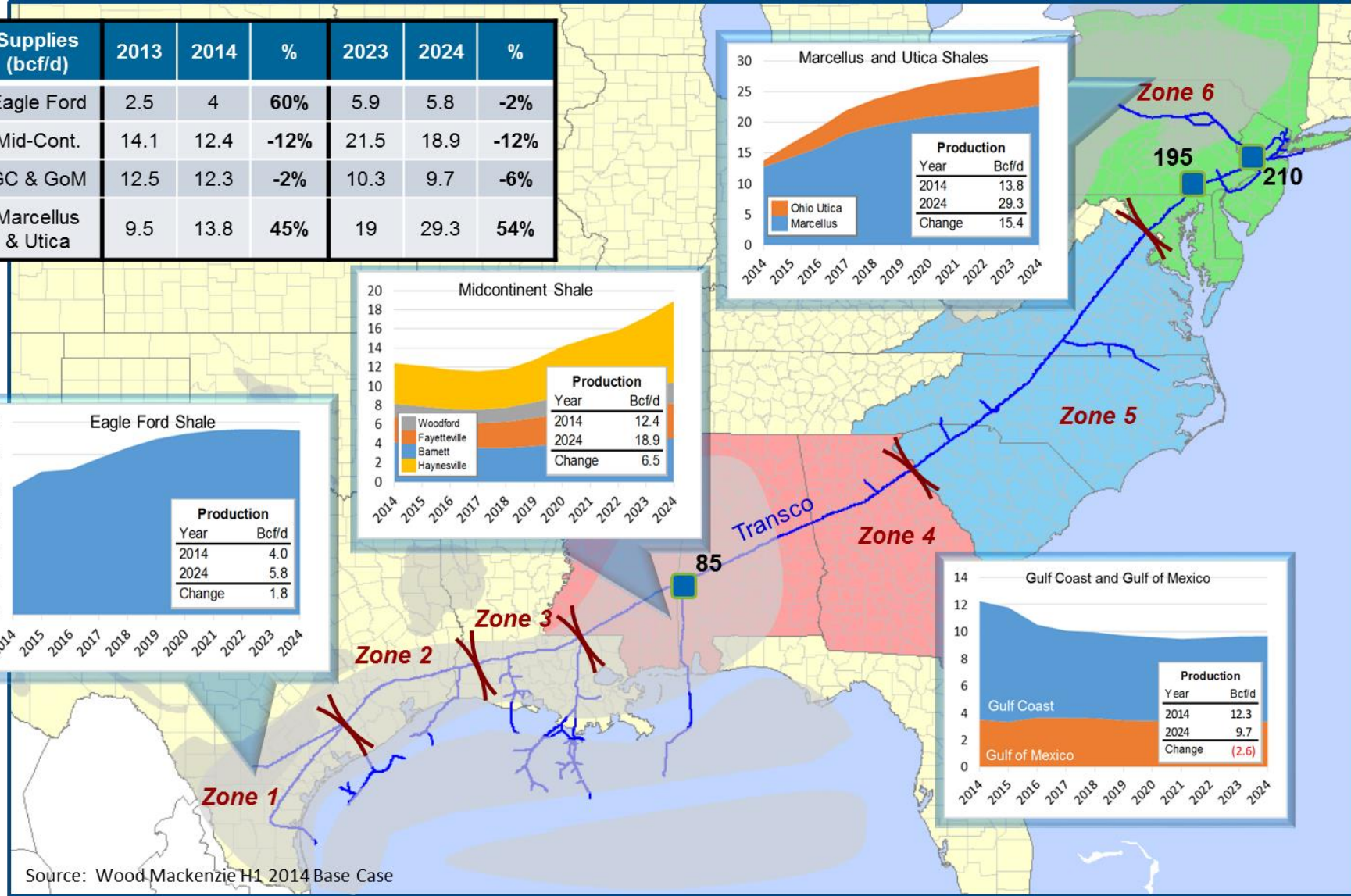
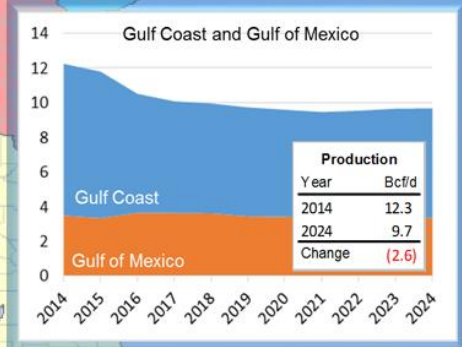
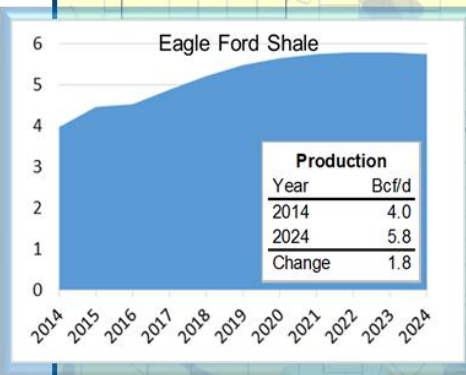
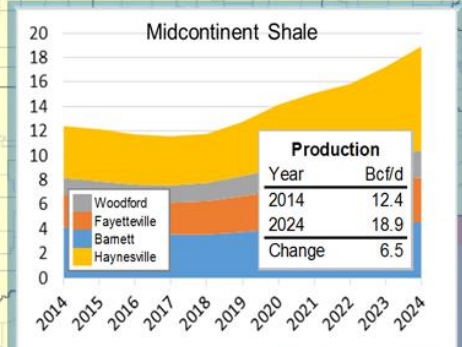
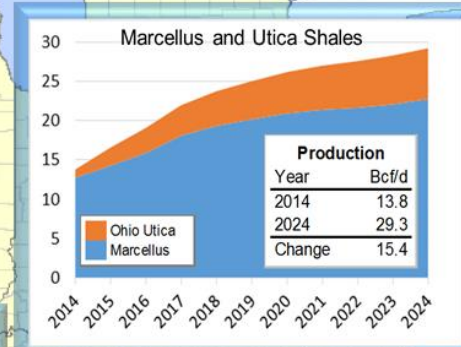
# Transco Business Development Update

# Transco Business Development Group



# Impact of Shale Supplies

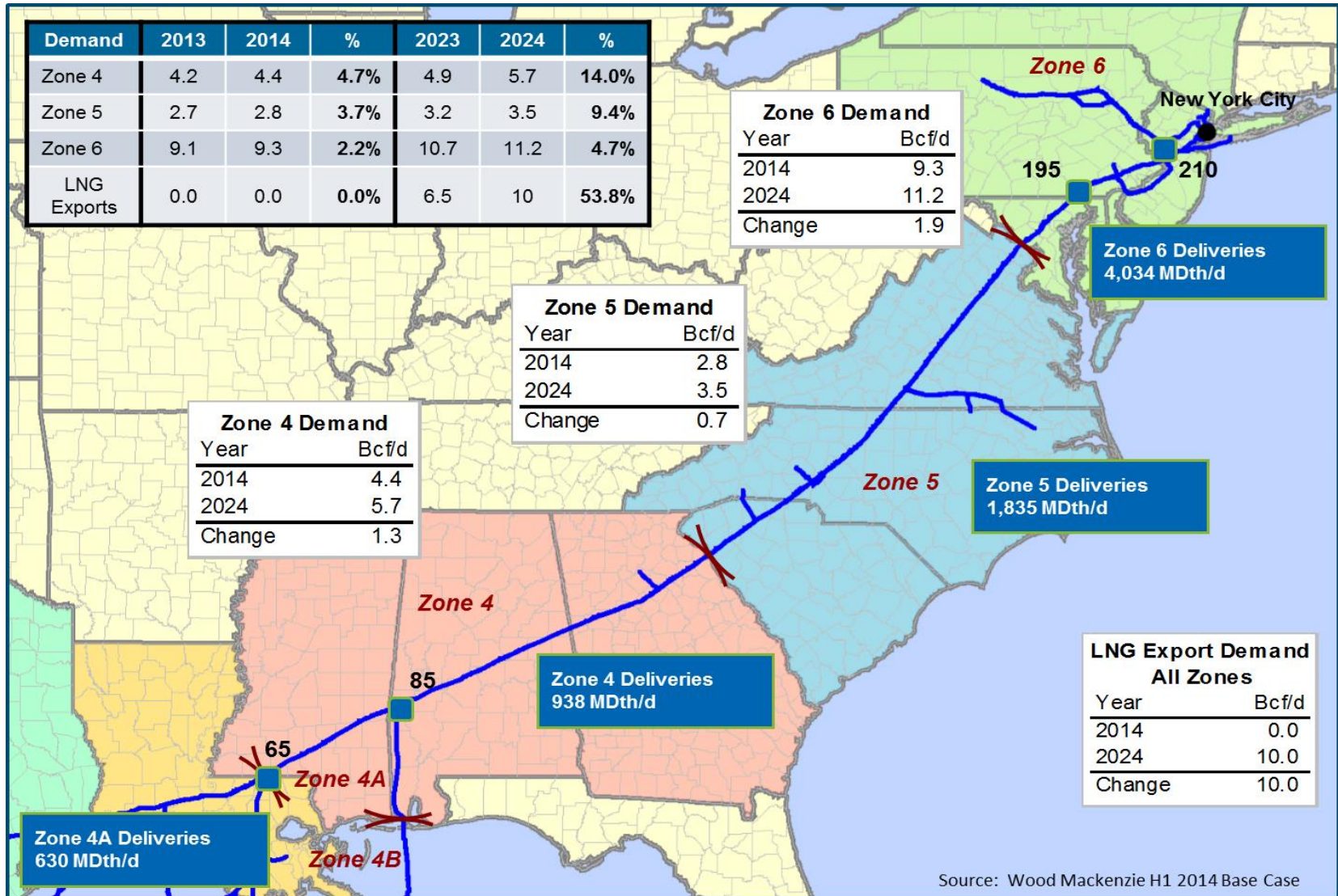
Supplies (bcf/d)	2013	2014	%	2023	2024	%
Eagle Ford	2.5	4	60%	5.9	5.8	-2%
Mid-Cont.	14.1	12.4	-12%	21.5	18.9	-12%
GC & GoM	12.5	12.3	-2%	10.3	9.7	-6%
Marcellus & Utica	9.5	13.8	45%	19	29.3	54%



Source: Wood Mackenzie H1 2014 Base Case



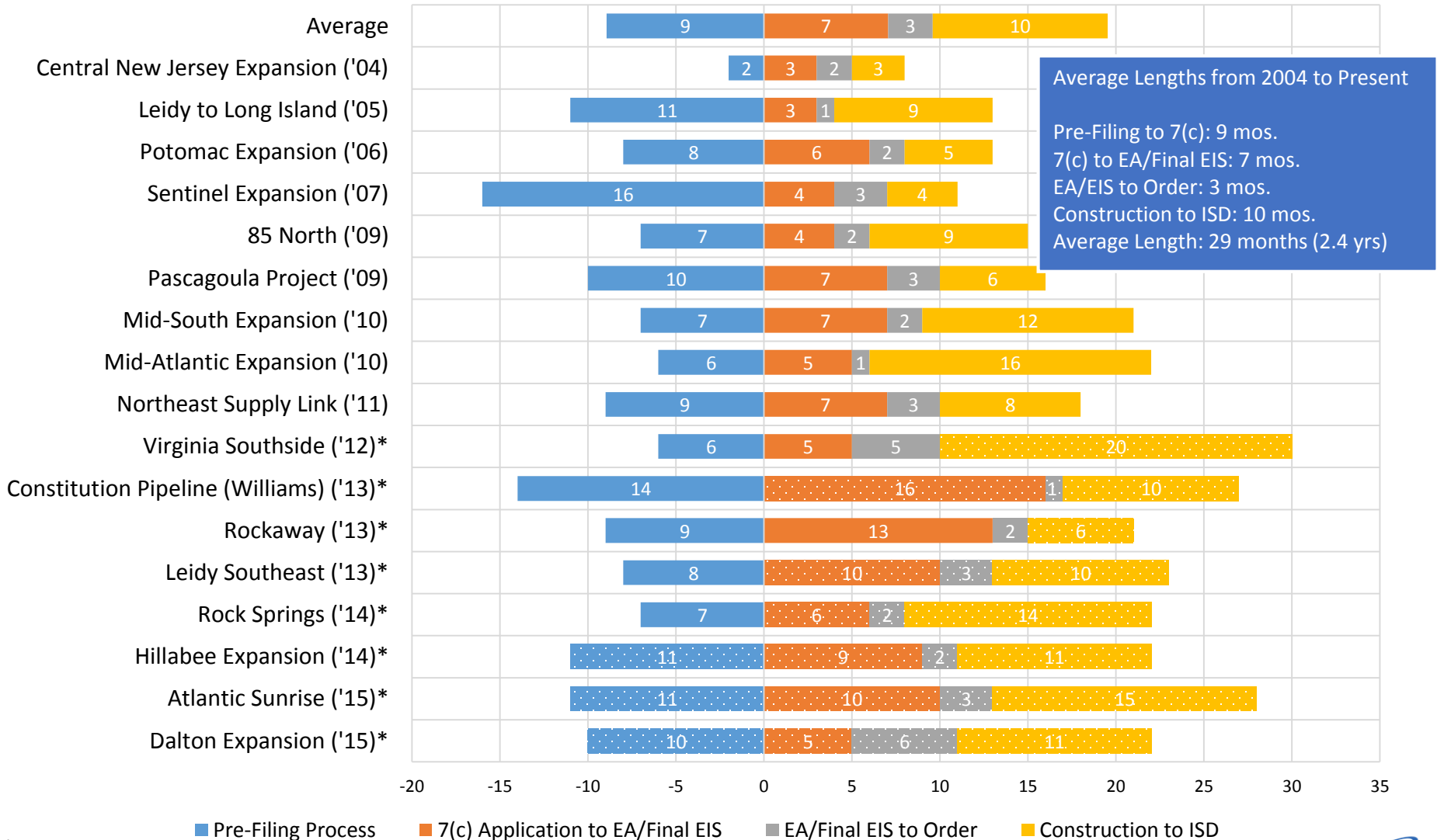
# Projected State demand growth by Zone



\*Deliveries are an average of daily volumes delivered to each zone during 2013.

# FERC Project Timeline – Transco Projects

## Transco Projects Certificated using the FERC Pre-Filing Process

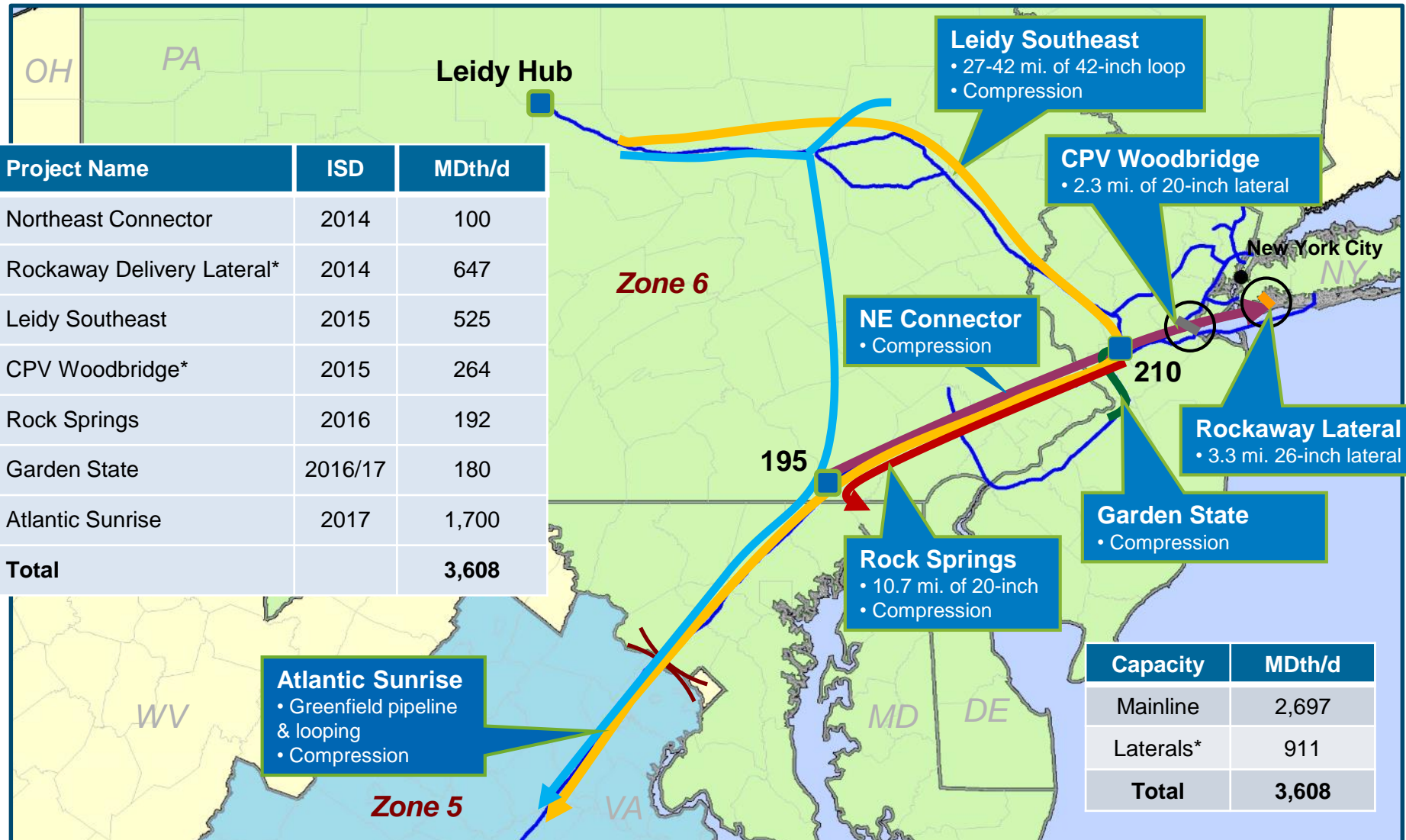


■ Pre-Filing Process ■ 7(c) Application to EA/Final EIS ■ EA/Final EIS to Order ■ Construction to ISD  
 \* Denotes estimated durations.



# Growth Projects

# Northern Market Area Projects



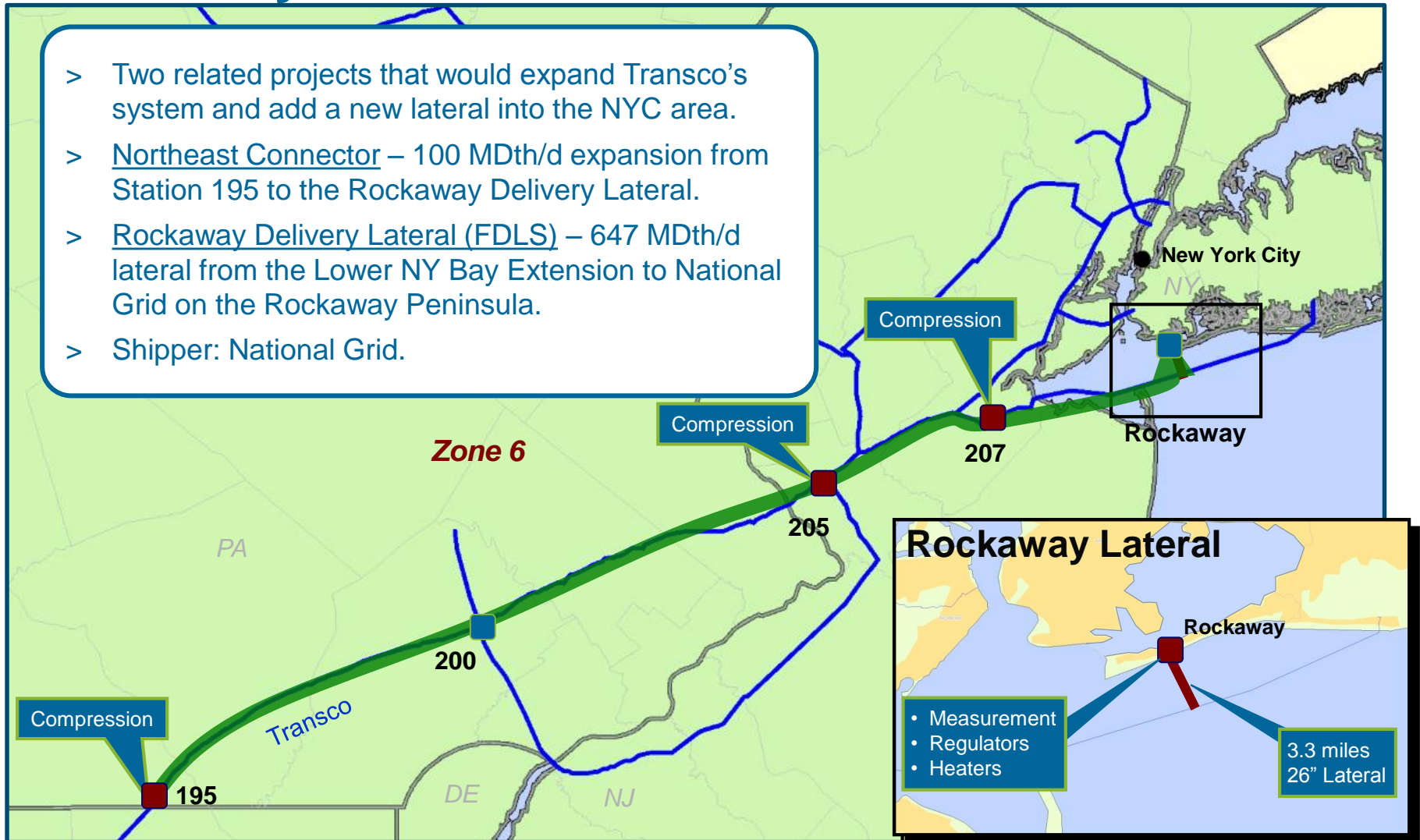
\* These projects are FDLS and do not add mainline capacity.

# Northeast Connector & Rockaway Lateral

Status:

- In Construction
- Target In-Service Date: 4Q 2014

- > Two related projects that would expand Transco's system and add a new lateral into the NYC area.
- > Northeast Connector – 100 MDth/d expansion from Station 195 to the Rockaway Delivery Lateral.
- > Rockaway Delivery Lateral (FDLS) – 647 MDth/d lateral from the Lower NY Bay Extension to National Grid on the Rockaway Peninsula.
- > Shipper: National Grid.



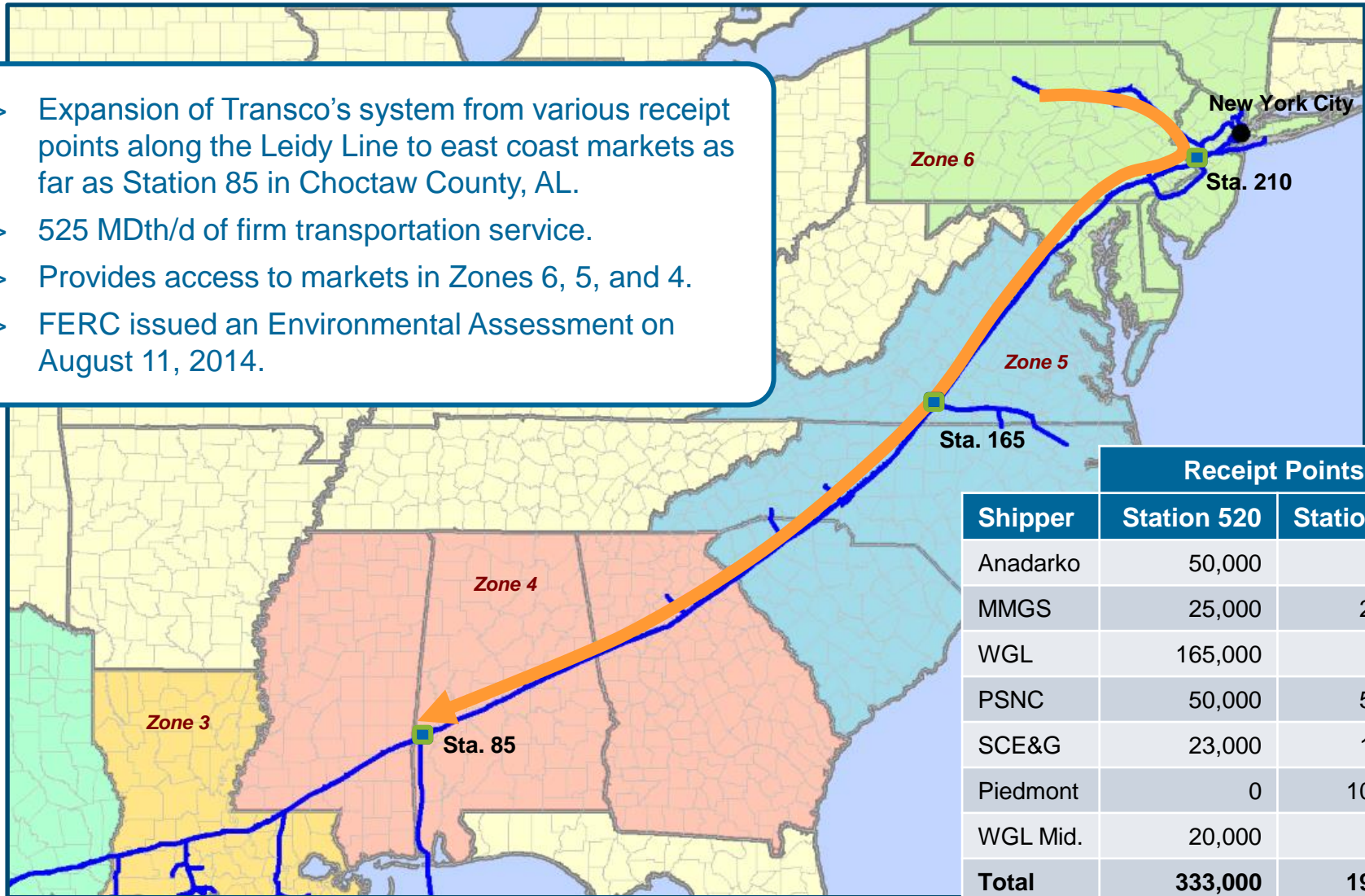


# Leidy Southeast

Status:

- Awaiting FERC Action
- Target In-Service Date: December 2015

- > Expansion of Transco's system from various receipt points along the Leidy Line to east coast markets as far as Station 85 in Choctaw County, AL.
- > 525 MDth/d of firm transportation service.
- > Provides access to markets in Zones 6, 5, and 4.
- > FERC issued an Environmental Assessment on August 11, 2014.



Shipper	Receipt Points	
	Station 520	Station 517
Anadarko	50,000	0
MMGS	25,000	25,000
WGL	165,000	0
PSNC	50,000	50,000
SCE&G	23,000	17,000
Piedmont	0	100,000
WGL Mid.	20,000	0
<b>Total</b>	<b>333,000</b>	<b>192,000</b>

# CPV Woodbridge & Rock Springs

## CPV Woodbridge

- > New 2.28-mile lateral from Transco to serve Competitive Power Ventures' proposed 725 MW Woodbridge Energy Center in Woodbridge, NJ.
- > Service will be provided under Transco's FDLS.
- > Capacity: 264 MDth/d.
- > Shipper: Competitive Power Ventures.

## Rock Springs

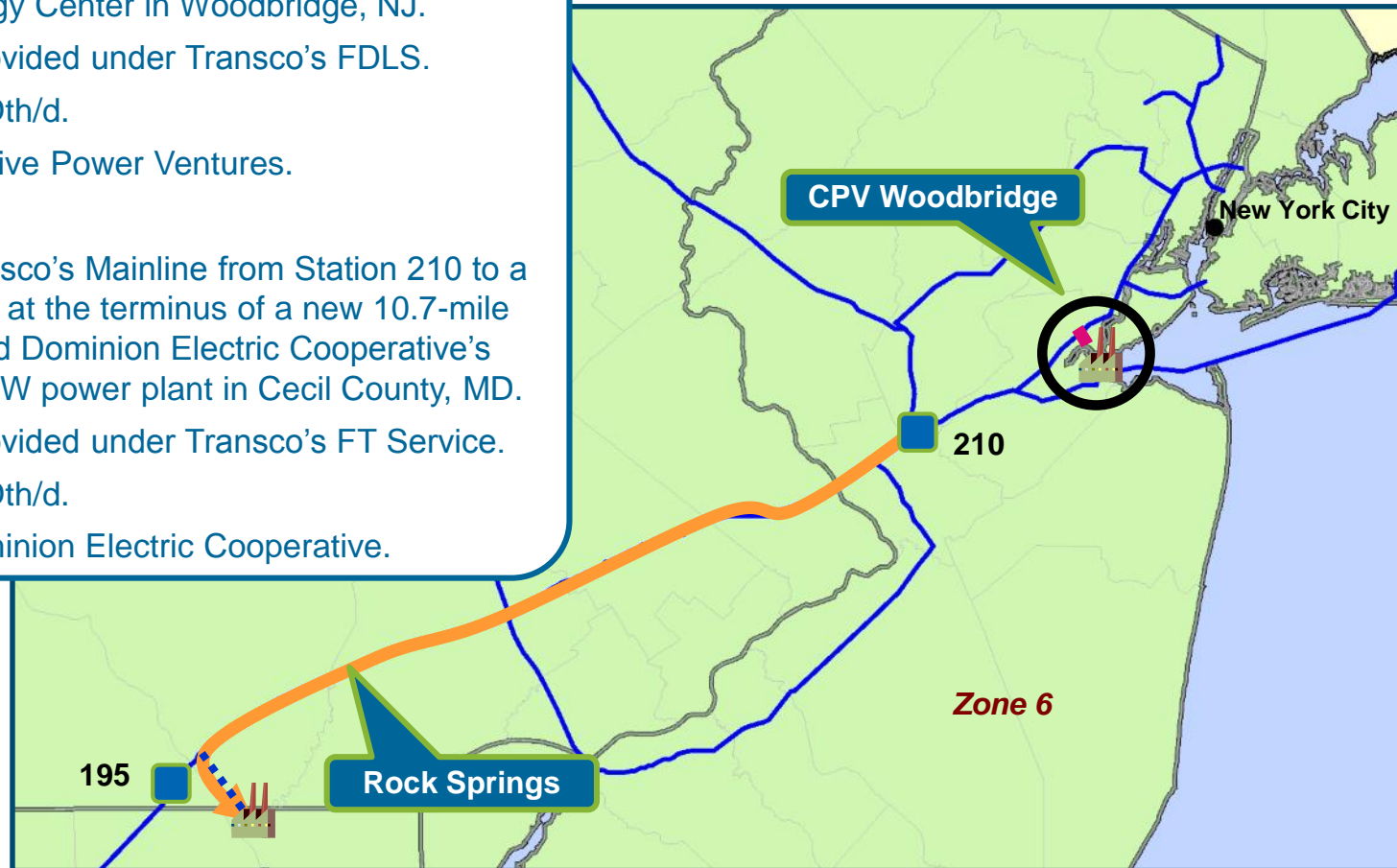
- > Expansion of Transco's Mainline from Station 210 to a new delivery point at the terminus of a new 10.7-mile lateral to serve Old Dominion Electric Cooperative's proposed 1,000 MW power plant in Cecil County, MD.
- > Service will be provided under Transco's FT Service.
- > Capacity: 192 MDth/d.
- > Shipper: Old Dominion Electric Cooperative.

## Woodbridge Status:

- FERC Order issued on August 11, 2014
- Target In-Service Date: April 2015

## Rock Springs Status:

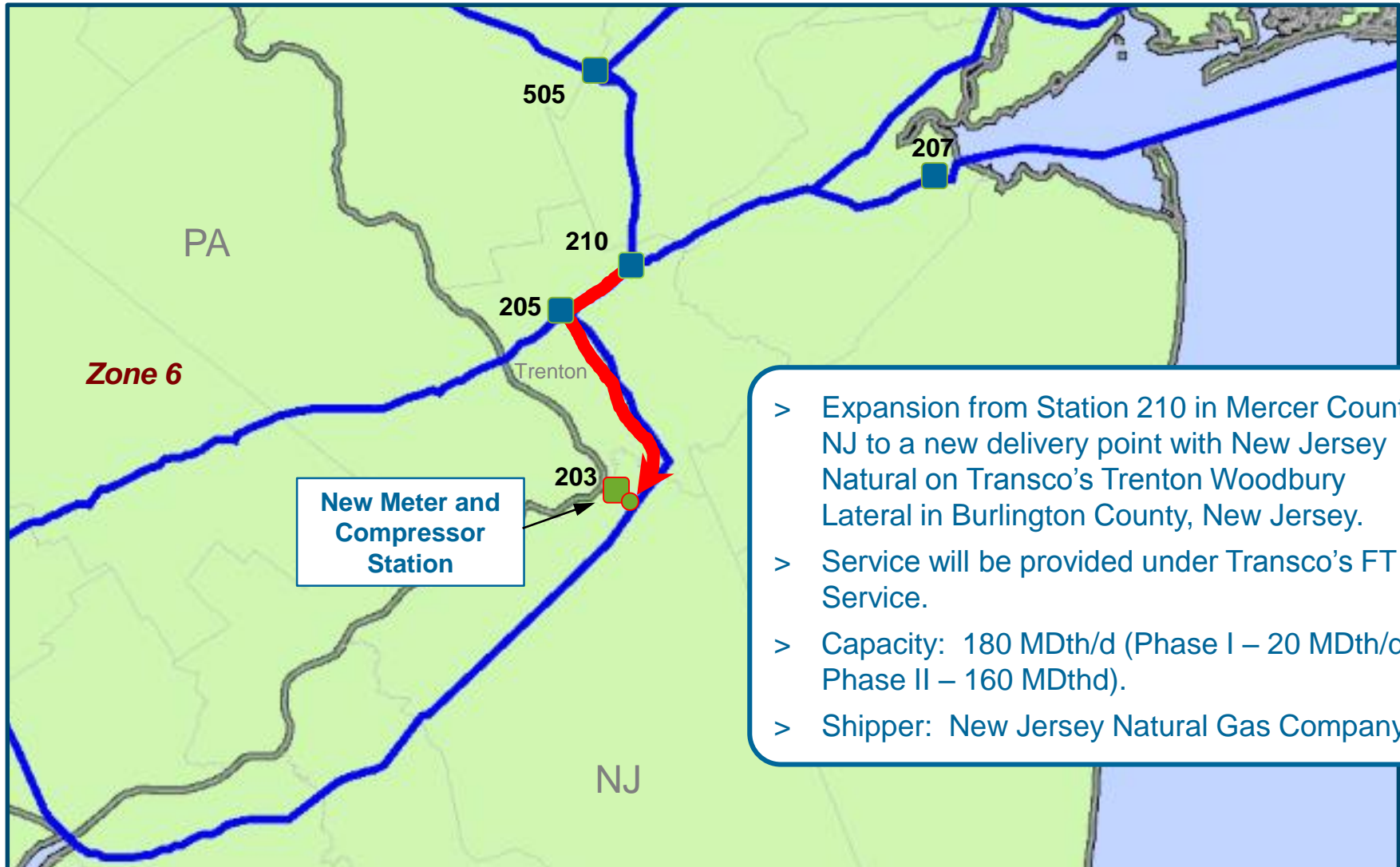
- FERC Application filed on June 23, 2014
- Target In-Service Date: August 2016



# Garden State Expansion

## Status:

- FERC Certificate to be filed in 1Q 2015
- Target In-Service Date: Phase I – November 2016 and Phase II – August 2017



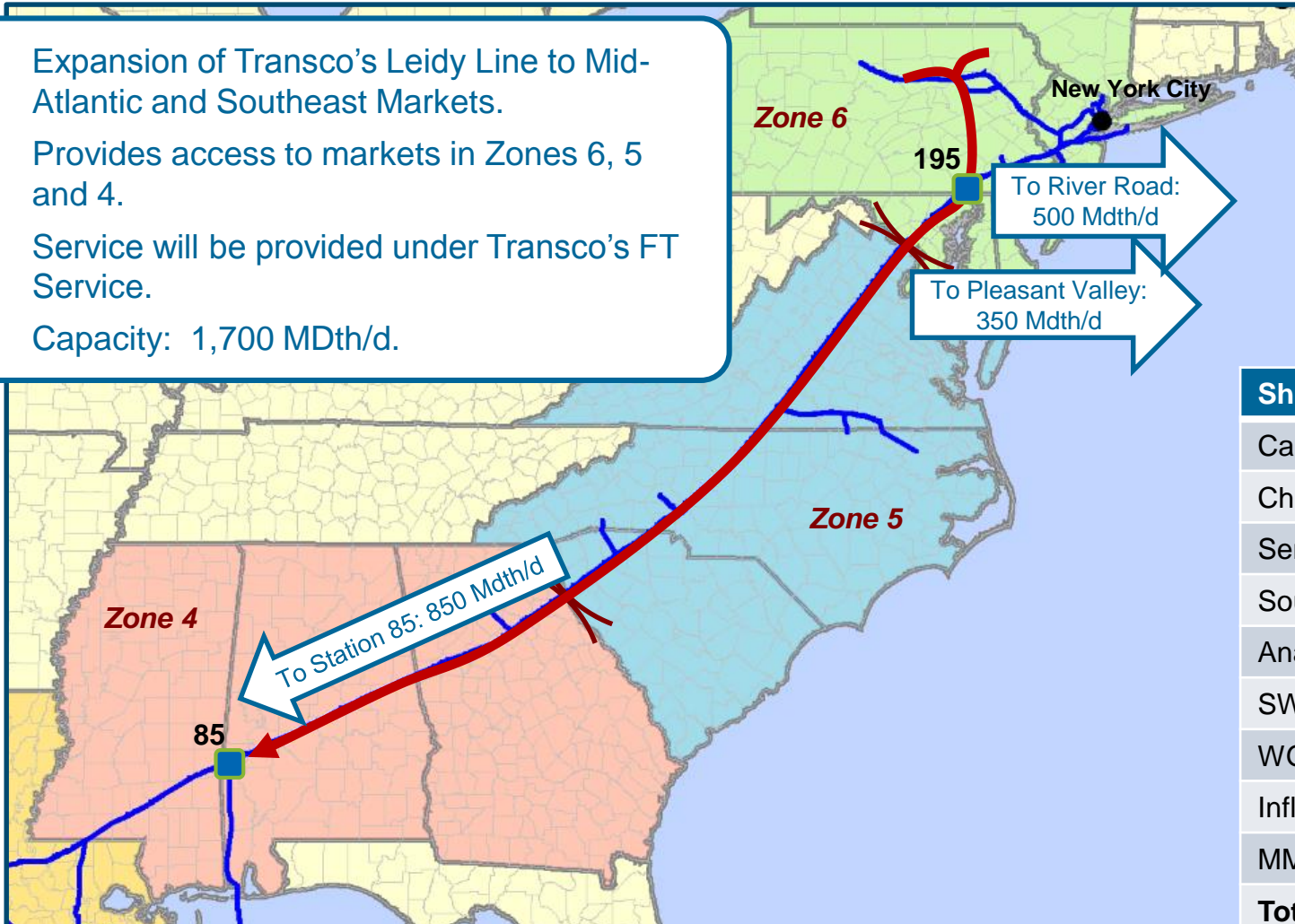
- > Expansion from Station 210 in Mercer County, NJ to a new delivery point with New Jersey Natural on Transco's Trenton Woodbury Lateral in Burlington County, New Jersey.
- > Service will be provided under Transco's FT Service.
- > Capacity: 180 MDth/d (Phase I – 20 MDth/d; Phase II – 160 MDthd).
- > Shipper: New Jersey Natural Gas Company.

# Atlantic Sunrise

Status:

- In Pre-Filing
- FERC Certificate to be filed in 1Q 2015
- Target In-Service Date: September 2017

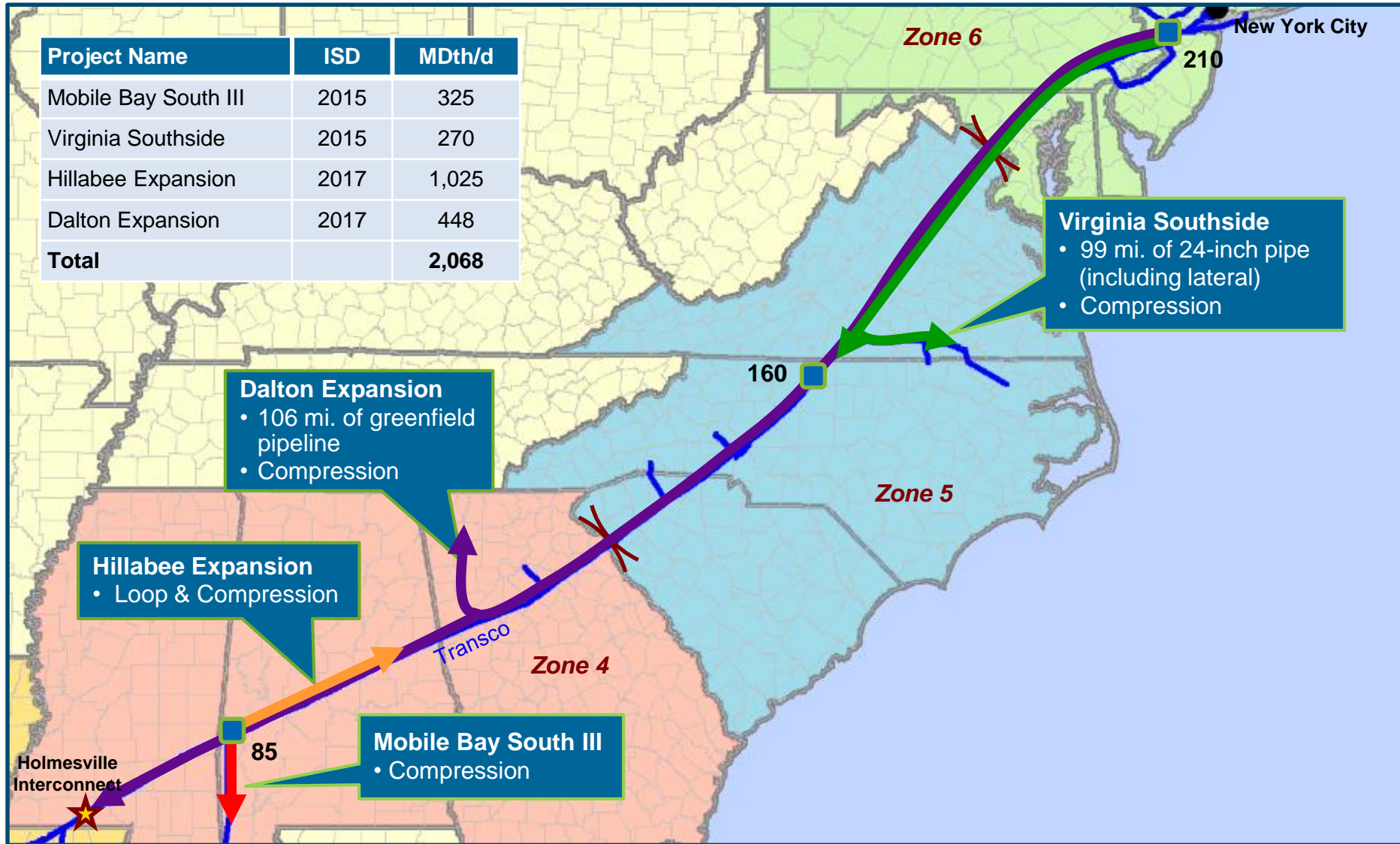
- > Expansion of Transco's Leidy Line to Mid-Atlantic and Southeast Markets.
- > Provides access to markets in Zones 6, 5 and 4.
- > Service will be provided under Transco's FT Service.
- > Capacity: 1,700 MDth/d.



Shipper	Dth/d
Cabot	850,000
Chief	420,000
Seneca	189,405
Southern Co.	60,000
Anadarko	44,048
SWN	44,048
WGL	44,048
Inflection	26,429
MMGS	22,024
<b>Total</b>	<b>1,700,002</b>

# Southern Market Area Projects

Project Name	ISD	MDth/d
Mobile Bay South III	2015	325
Virginia Southside	2015	270
Hillabee Expansion	2017	1,025
Dalton Expansion	2017	448
<b>Total</b>		<b>2,068</b>



**Dalton Expansion**  
 • 106 mi. of greenfield pipeline  
 • Compression

**Hillabee Expansion**  
 • Loop & Compression

**Mobile Bay South III**  
 • Compression

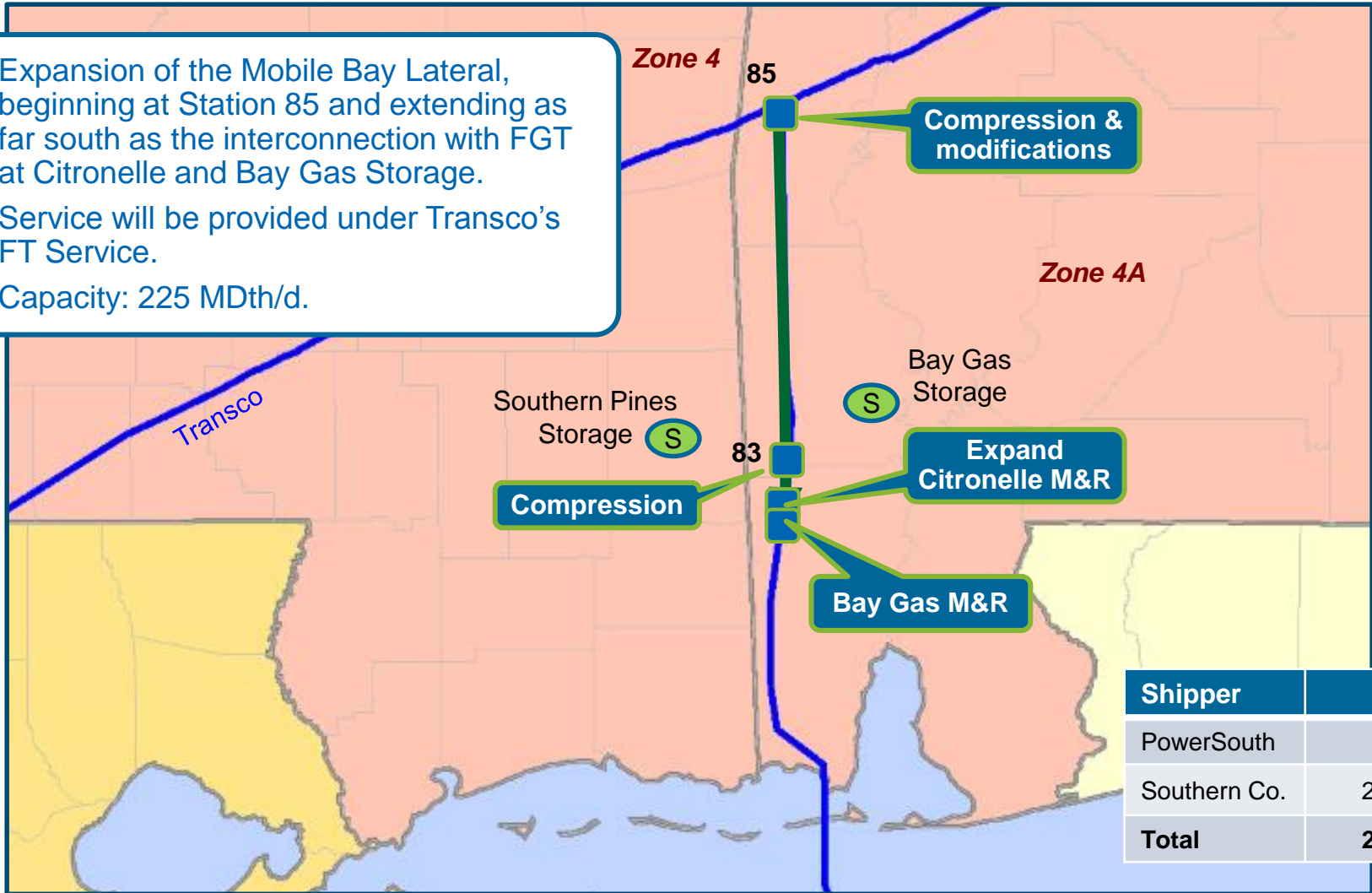
**Virginia Southside**  
 • 99 mi. of 24-inch pipe (including lateral)  
 • Compression

# Mobile Bay South III

Status:

- In Construction
- Target In-Service Date: April 2015

- > Expansion of the Mobile Bay Lateral, beginning at Station 85 and extending as far south as the interconnection with FGT at Citronelle and Bay Gas Storage.
- > Service will be provided under Transco's FT Service.
- > Capacity: 225 MDth/d.



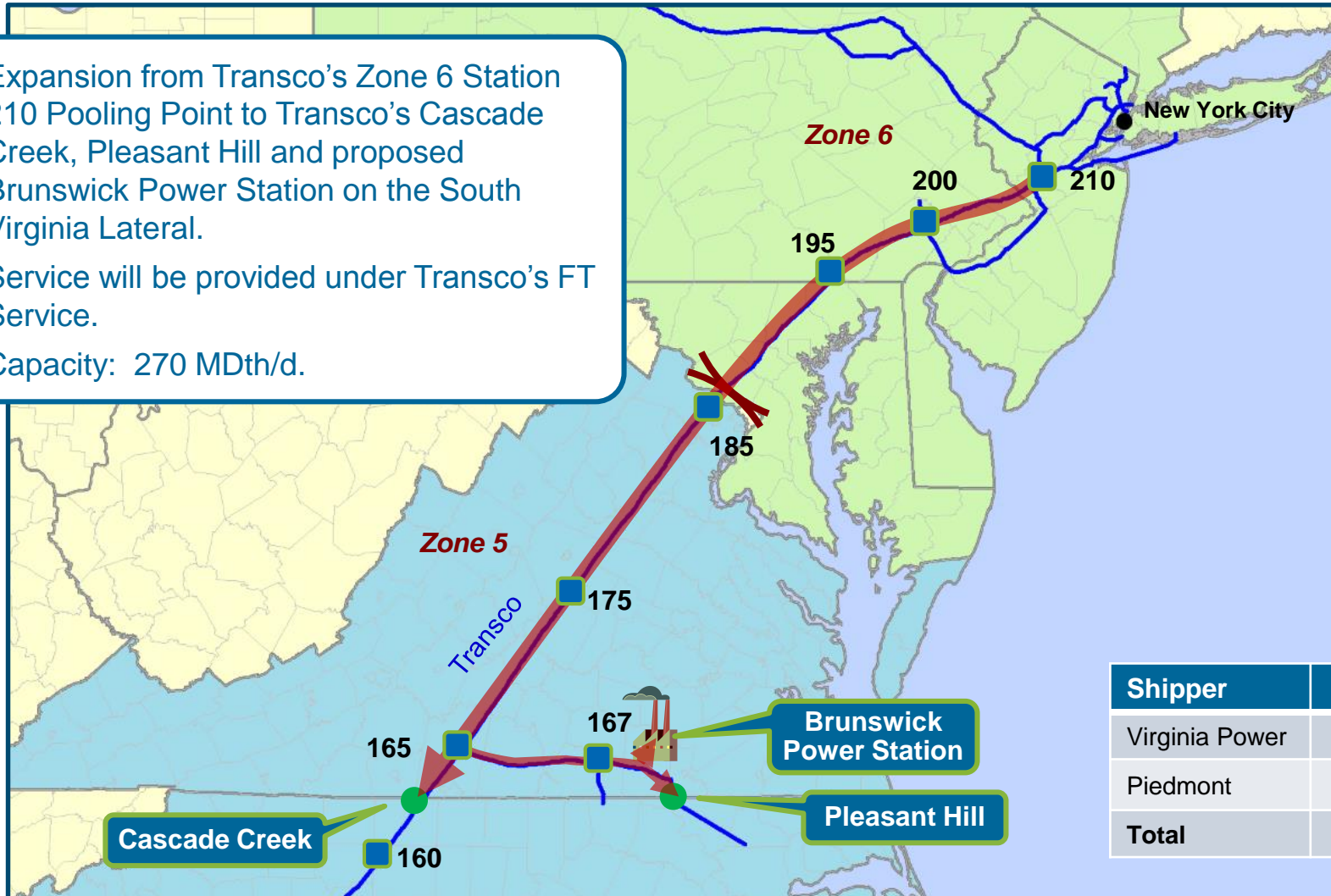
Shipper	Dth/d
PowerSouth	25,000
Southern Co.	200,000
<b>Total</b>	<b>225,000</b>

# Virginia Southside Expansion

Status:

- In Construction
- Target In-Service Date: September 2015

- > Expansion from Transco's Zone 6 Station 210 Pooling Point to Transco's Cascade Creek, Pleasant Hill and proposed Brunswick Power Station on the South Virginia Lateral.
- > Service will be provided under Transco's FT Service.
- > Capacity: 270 MDth/d.



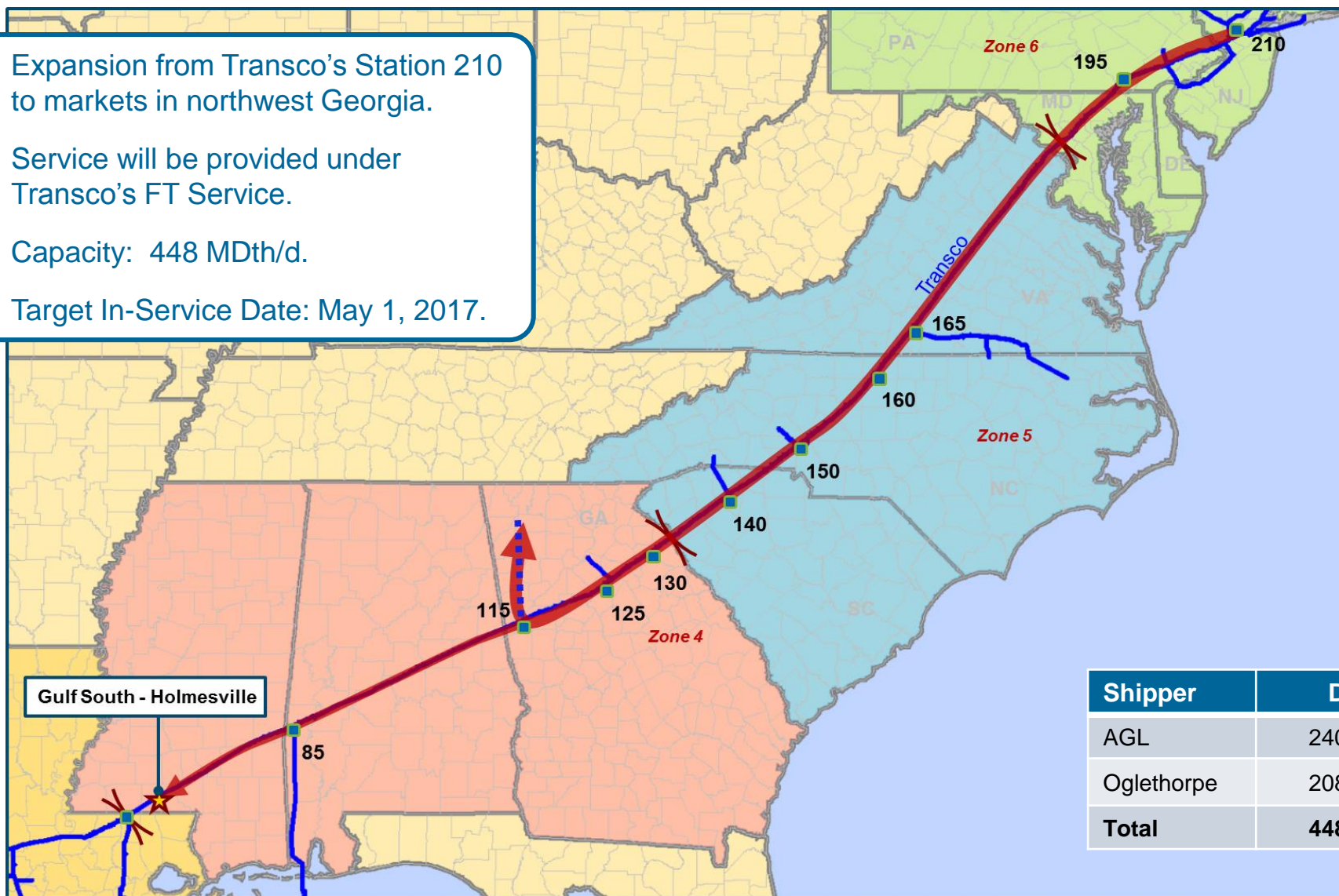
Shipper	Dth/d
Virginia Power	250,000
Piedmont	20,000
<b>Total</b>	<b>270,000</b>

# Dalton Expansion

Status:

- In Pre-Filing
- FERC Certificate to be filed in 1Q 2015

- > Expansion from Transco's Station 210 to markets in northwest Georgia.
- > Service will be provided under Transco's FT Service.
- > Capacity: 448 MDth/d.
- > Target In-Service Date: May 1, 2017.

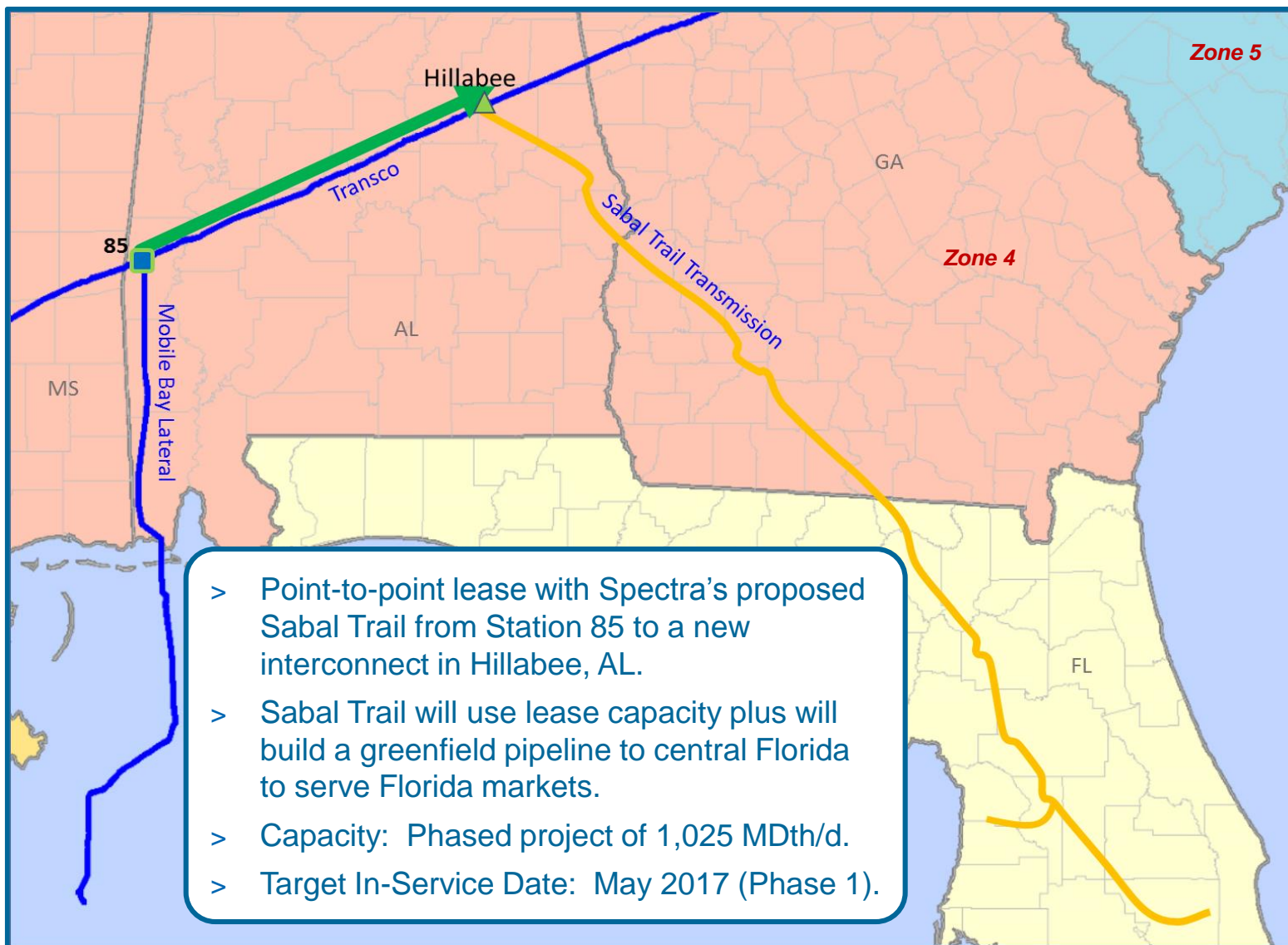




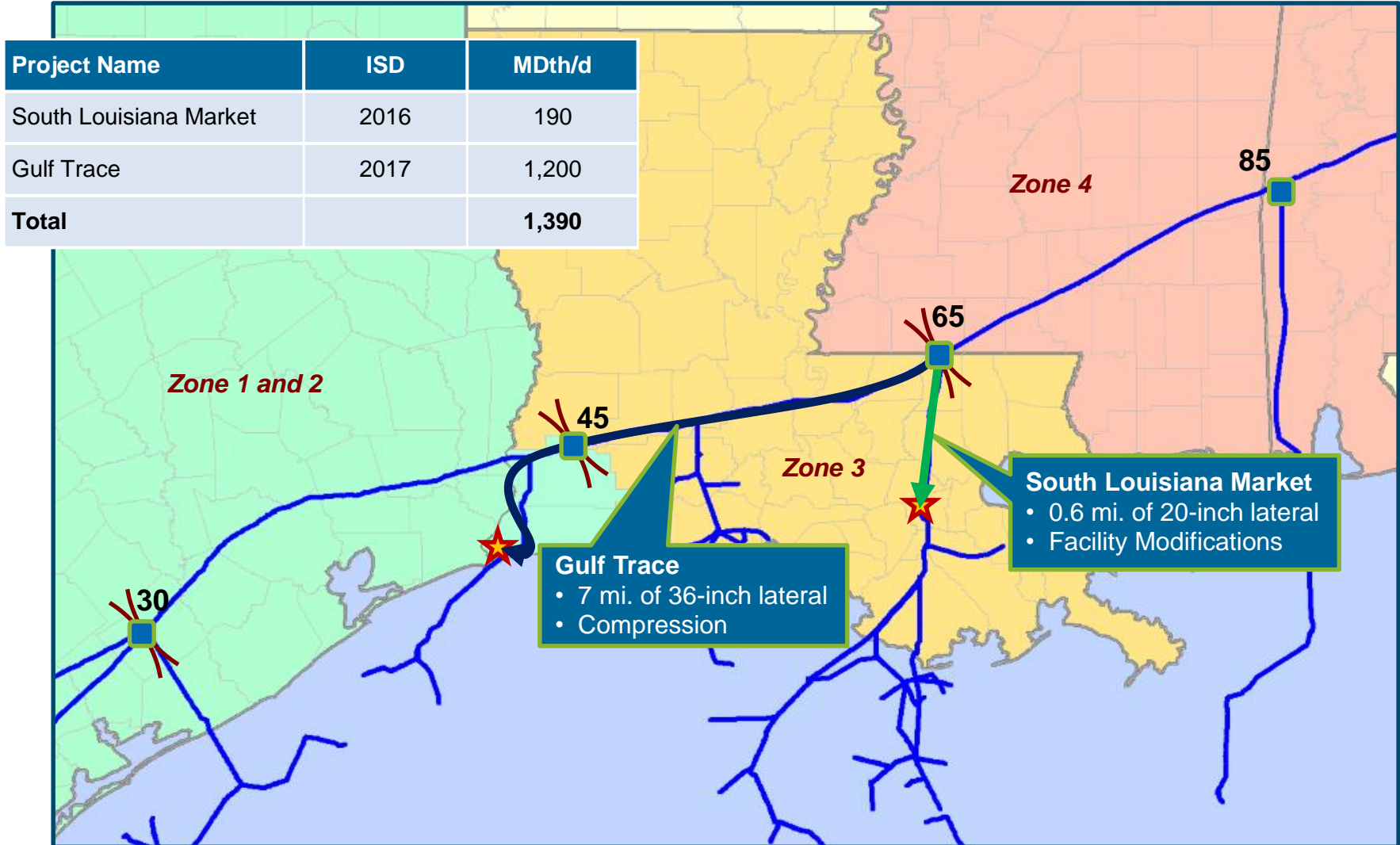
# Hillabee Expansion

## Status:

- In Pre-Filing
- FERC Certificate to be filed in 4Q 2014



# Production Area Projects

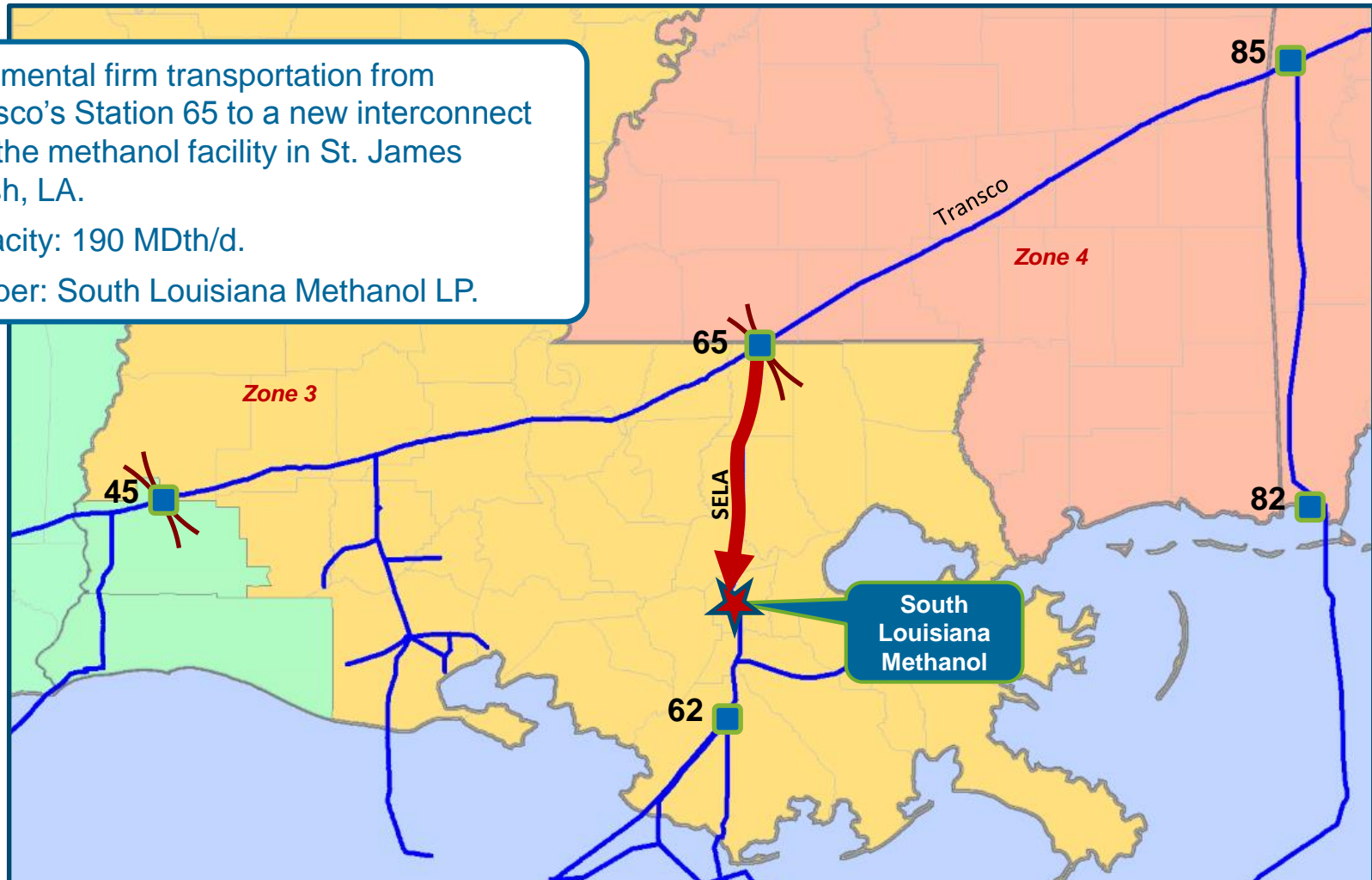


# South Louisiana Market Project

**Status:**

- FERC Application to be filed mid-2015
- Target In-Service Date: December 2016

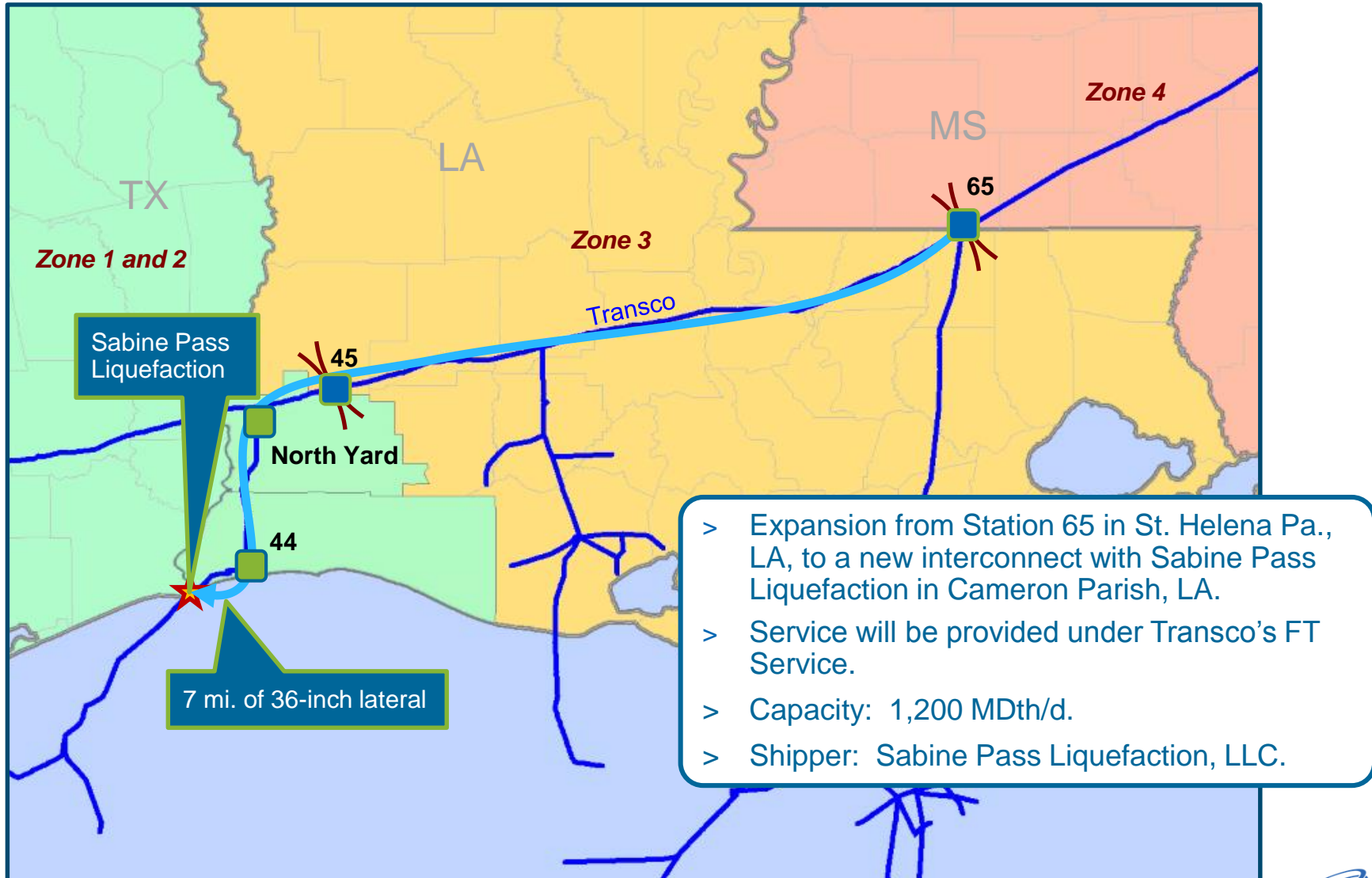
- > Incremental firm transportation from Transco's Station 65 to a new interconnect with the methanol facility in St. James Parish, LA.
- > Capacity: 190 MDth/d.
- > Shipper: South Louisiana Methanol LP.



# Gulf Trace

## Status:

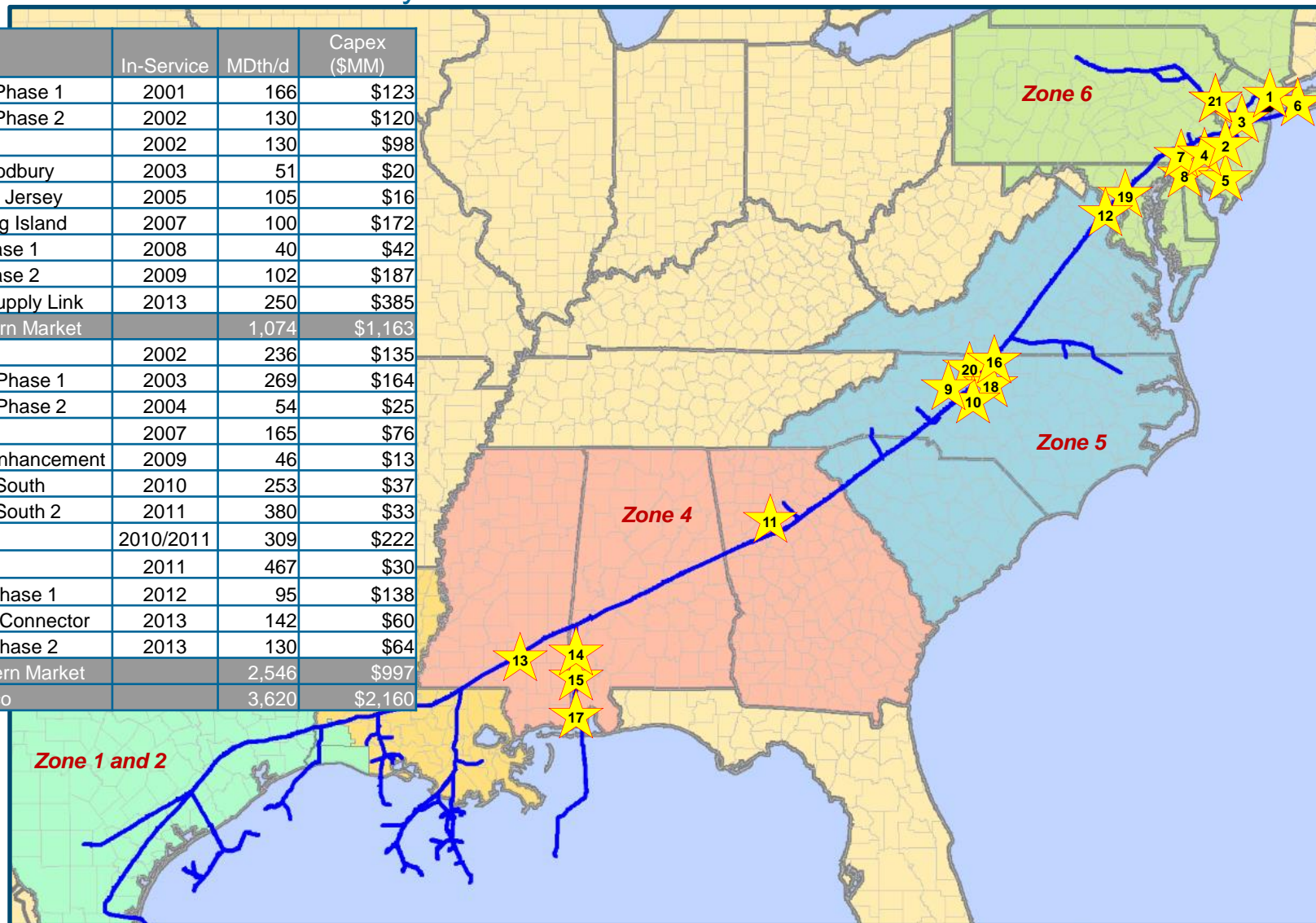
- FERC Certificate to be filed in 4Q 2014
- Target In-Service Date: May 2017



# Over \$2 Billion In Transco Expansions (2001-2013)

> Strong track record of successfully building system expansions to meet the customers' needs...when they need it.

#	Project	In-Service	MDth/d	Capex (\$MM)
1	MarketLink Phase 1	2001	166	\$123
2	MarketLink Phase 2	2002	130	\$120
3	Leidy East	2002	130	\$98
4	Trenton Woodbury	2003	51	\$20
5	Central New Jersey	2005	105	\$16
6	Leidy to Long Island	2007	100	\$172
7	Sentinel Phase 1	2008	40	\$42
8	Sentinel Phase 2	2009	102	\$187
21	Northeast Supply Link	2013	250	\$385
Total Northern Market			1,074	\$1,163
9	Sundance	2002	236	\$135
10	Momentum Phase 1	2003	269	\$164
11	Momentum Phase 2	2004	54	\$25
12	Potomac	2007	165	\$76
13	Eminence Enhancement	2009	46	\$13
14	Mobile Bay South	2010	253	\$37
15	Mobile Bay South 2	2011	380	\$33
16	85 North	2010/2011	309	\$222
17	Pascagoula	2011	467	\$30
18	Mid-South Phase 1	2012	95	\$138
19	Mid-Atlantic Connector	2013	142	\$60
20	Mid-South Phase 2	2013	130	\$64
Total Southern Market			2,546	\$997
Total Transco			3,620	\$2,160

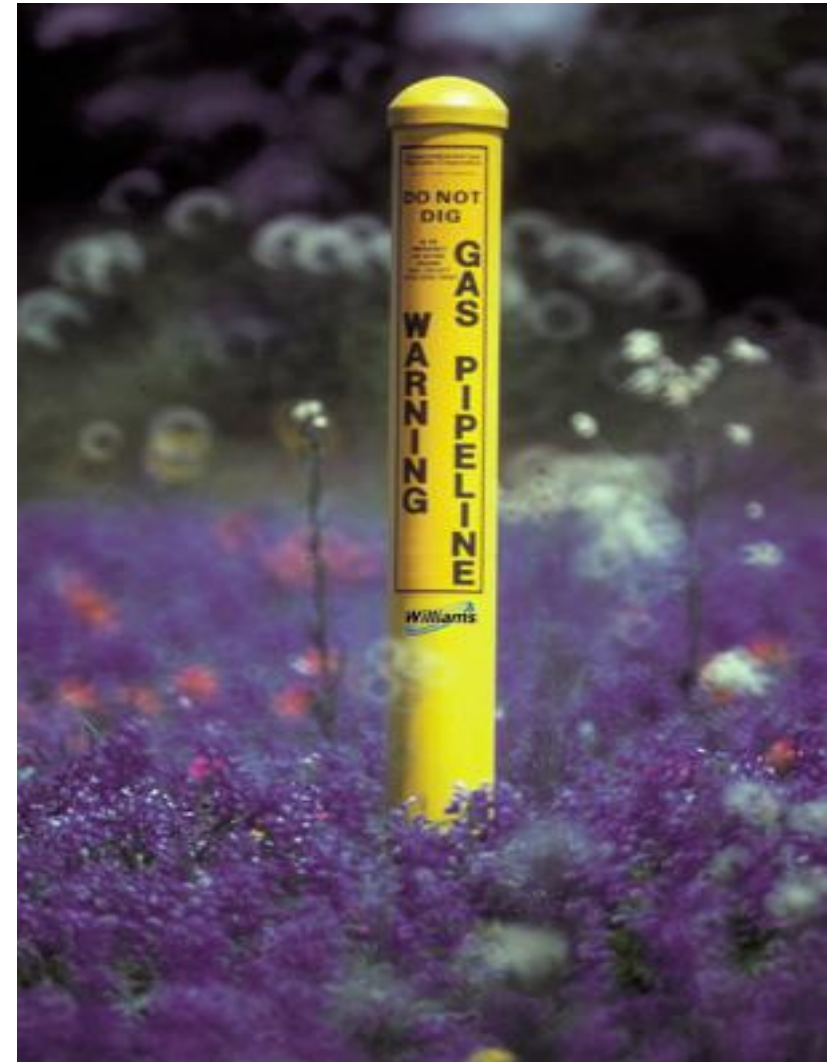


# Post-Expansion Mainline Capacity (2020)

Project	In-Service	Mdt/d
Northeast Connector	2014	100
Rockaway*	2014	647
CPV Woodbridge*	2015	264
Leidy Southeast	2015	525
Rock Springs	2016	192
Atlantic Sunrise	2017	1,700
<b>Total Northern Market</b>		<b>3,248</b>
Virginia Southside	2015	270
Mobile Bay South III	2015	225
Dalton Expansion	2017	448
Hillabee Expansion – Phase I	2017	818
Hillabee Expansion – Phase II	2020	207
<b>Total Southern Market</b>		<b>1,968</b>
South Louisiana Market	2016	190
Gulf Trace	2017	1,200
<b>Total Production Area</b>		<b>1,390</b>
<b>Total Expansion Capacity**</b>		<b>4,305</b>
<b>Current Transco Capacity (2013)</b>		<b>10,122</b>
<b>Total Transco Mainline Post-Expansions</b>		<b>14,427</b>

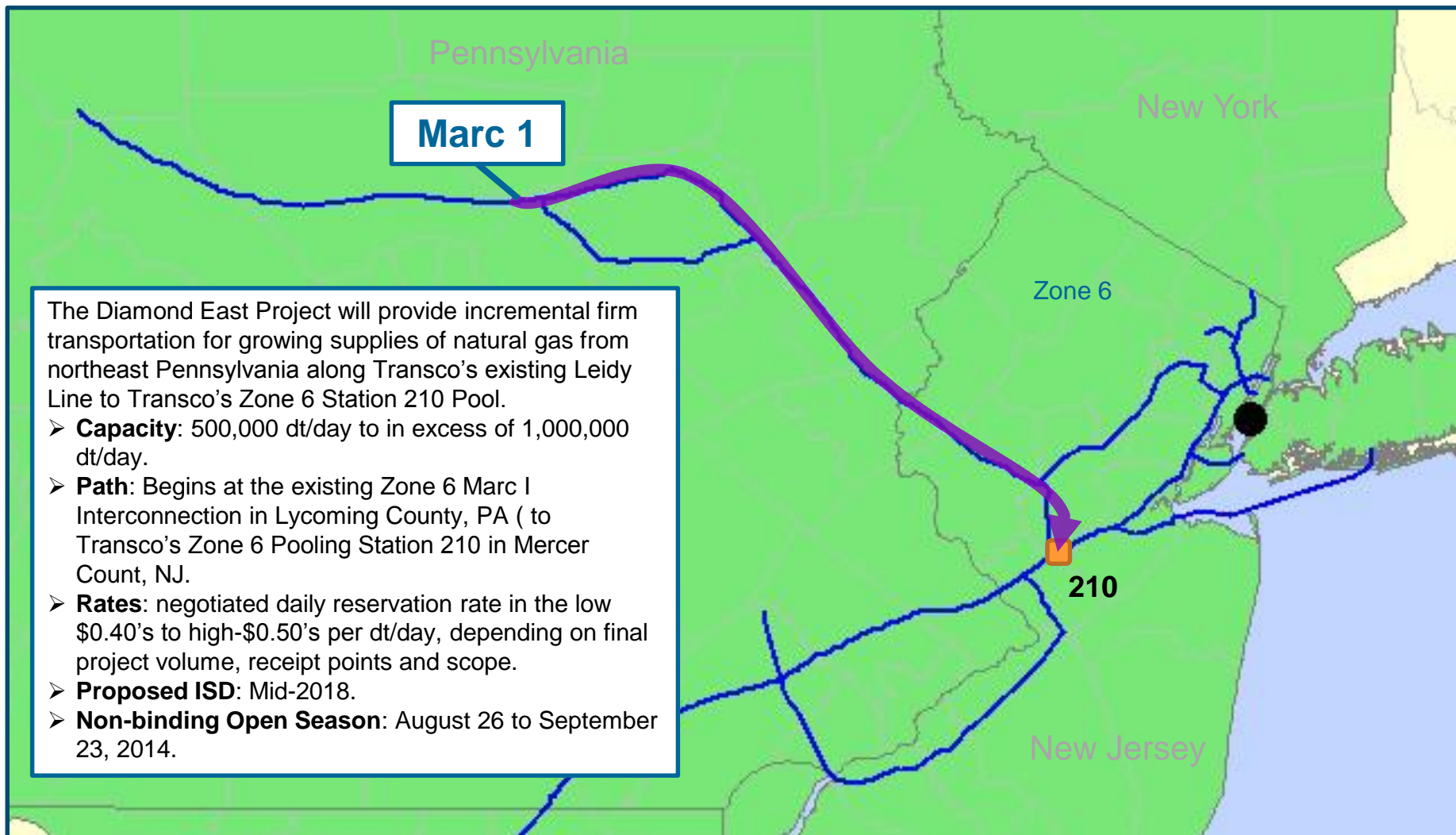
\* These projects are FDLS and do not add mainline capacity.

\*\* Does not include FDLS projects



# Opportunities

# Diamond East Project – Open Season Summary

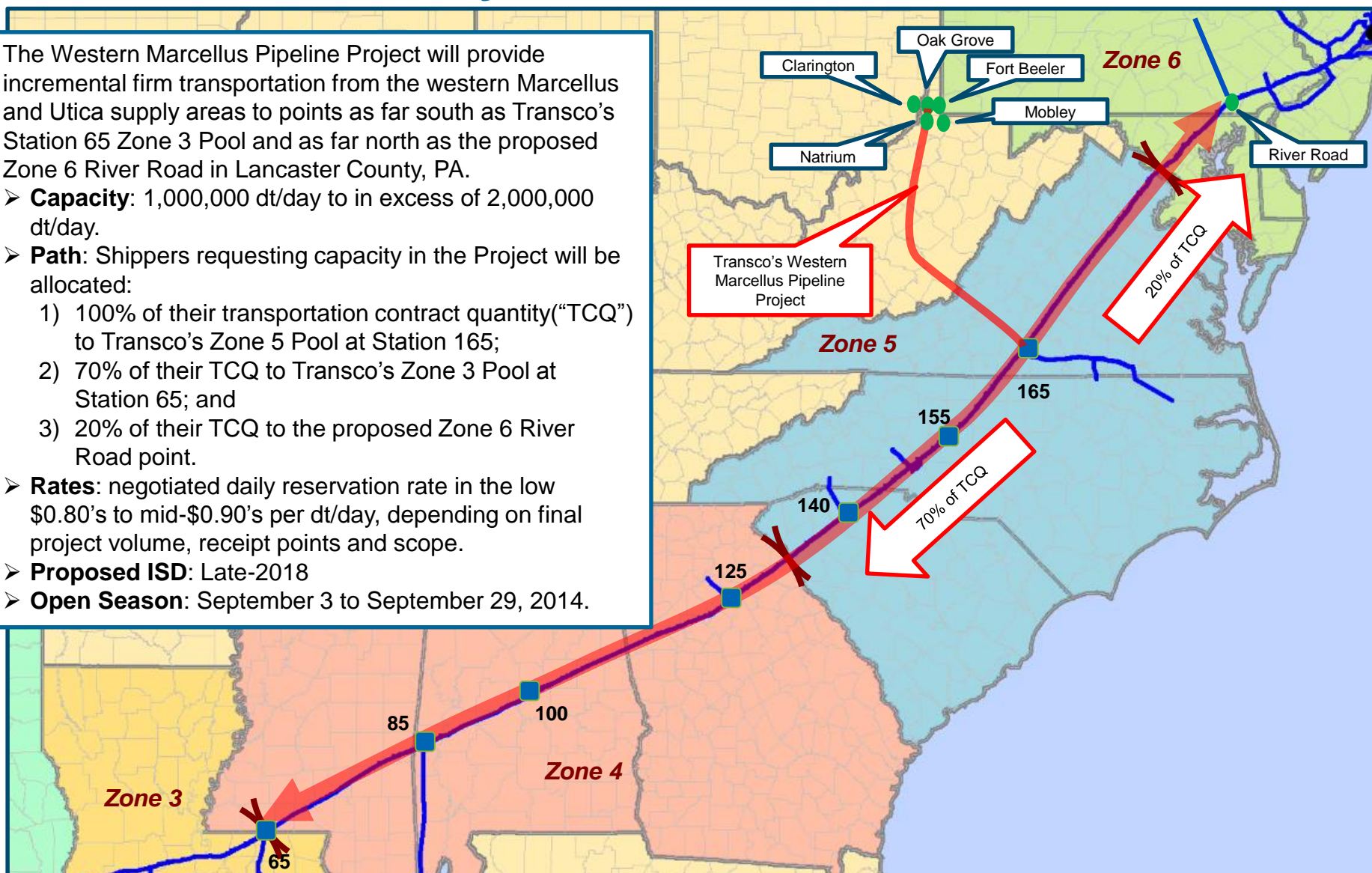




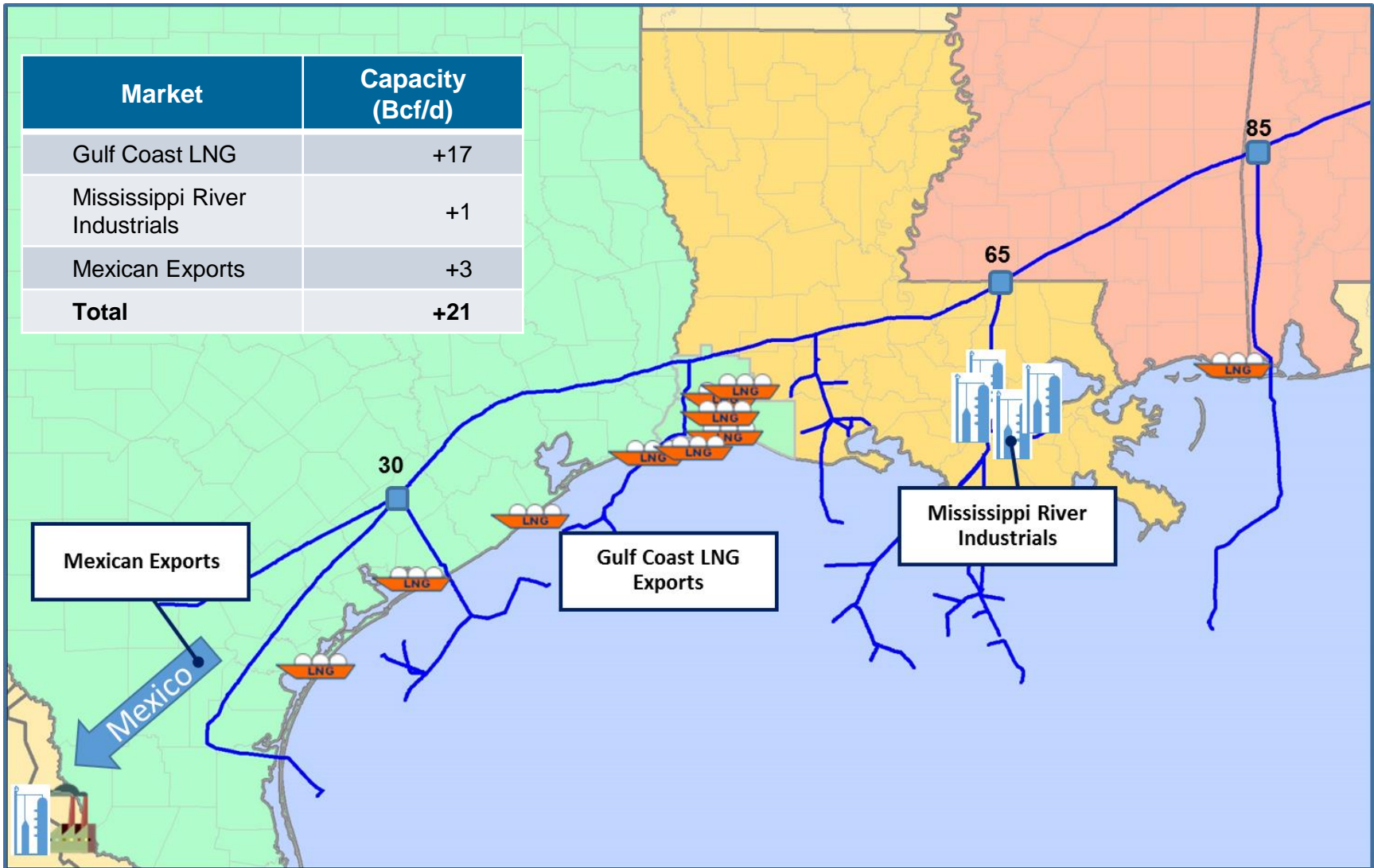
# Western Marcellus Pipeline Project – Open Season Summary

The Western Marcellus Pipeline Project will provide incremental firm transportation from the western Marcellus and Utica supply areas to points as far south as Transco's Station 65 Zone 3 Pool and as far north as the proposed Zone 6 River Road in Lancaster County, PA.

- **Capacity:** 1,000,000 dt/day to in excess of 2,000,000 dt/day.
- **Path:** Shippers requesting capacity in the Project will be allocated:
  - 1) 100% of their transportation contract quantity ("TCQ") to Transco's Zone 5 Pool at Station 165;
  - 2) 70% of their TCQ to Transco's Zone 3 Pool at Station 65; and
  - 3) 20% of their TCQ to the proposed Zone 6 River Road point.
- **Rates:** negotiated daily reservation rate in the low \$0.80's to mid-\$0.90's per dt/day, depending on final project volume, receipt points and scope.
- **Proposed ISD:** Late-2018
- **Open Season:** September 3 to September 29, 2014.

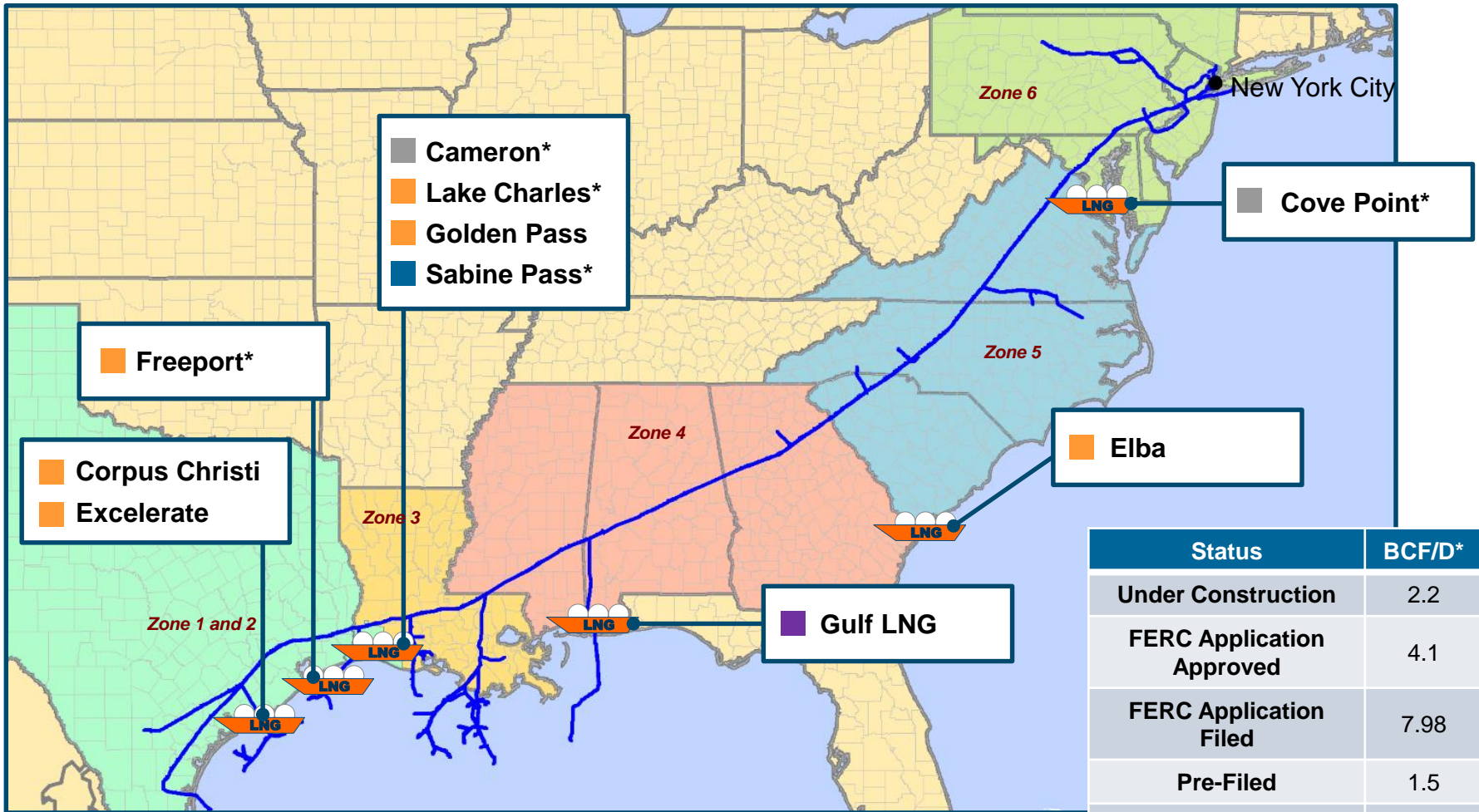


# Production Area or Gulf Market Area??



# LNG Service Opportunities Increase Along Transco System Path

■ PRE-FILED    
 ■ FERC APPLICATION FILED    
 ■ FERC APPLICATION APPROVED    
 ■ UNDER CONSTRUCTION



\* FTA/non-FTA approved by U.S. Department of Energy. Source: U.S. Department of Energy; FERC

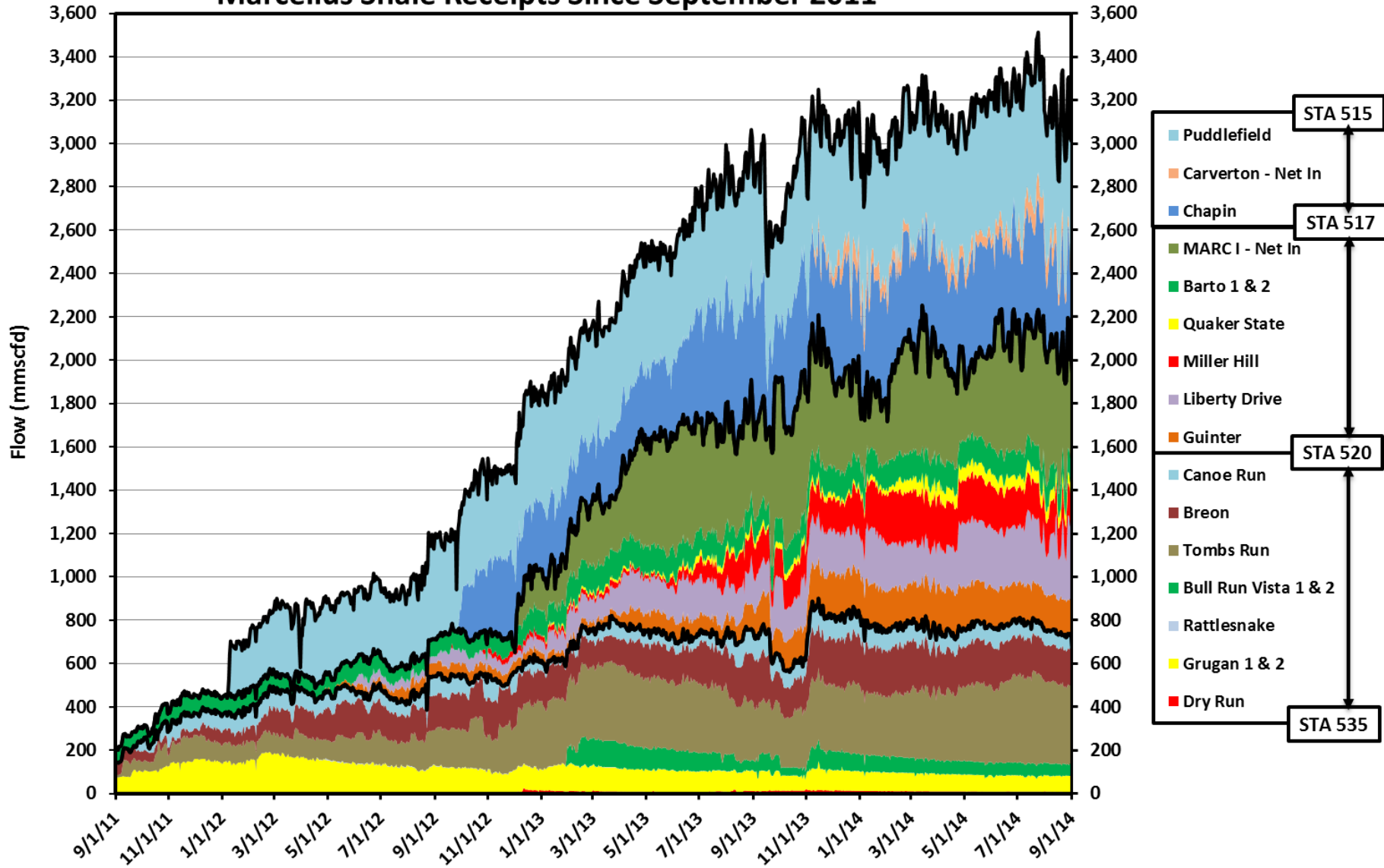
# **System Planning – Future Flow Conditions on Transco**

# System Dynamics

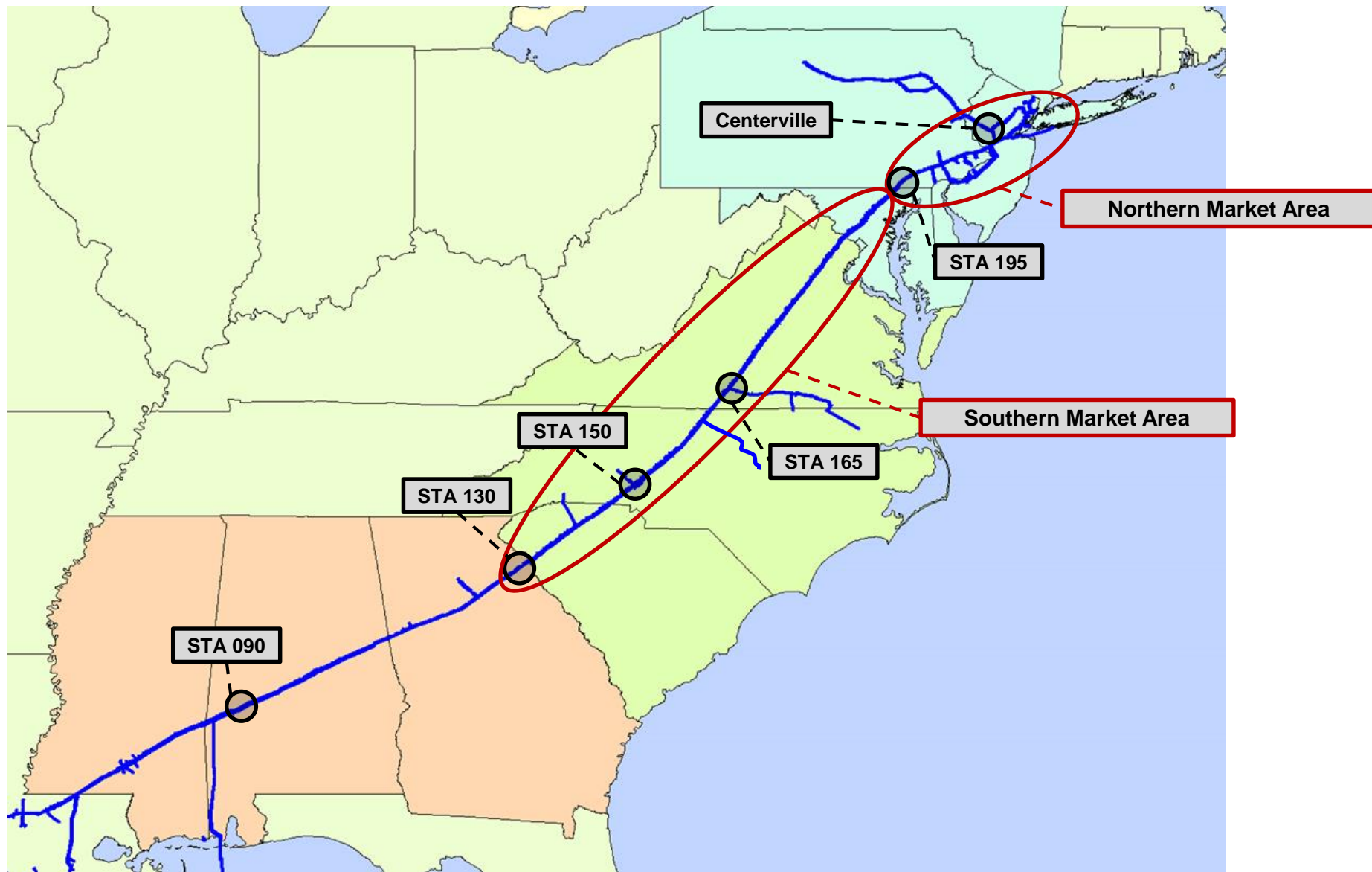
- > Shale Drilling, especially, within the Mid-Continent and Marcellus regions has dramatically altered the traditional flows on Transco's System.
- > Marcellus supplies on the Leidy Line continue to increase
  - Interconnect capacity / flowing volumes continue to increase
  - Multiple expansions from this relatively new supply region continue at a rapid rate
- > Marcellus supplies showing up other places as well...
  - TETCO's flows at Lower Chanceford
  - Columbia's flows at Boswell's Tavern
  - Etc.
- > Mobile Bay volumes flow southward on a regular basis
- > Steady volumes from Mid-Continent shales provide supply reliability at Station 85
- > Supply from Transco's traditional Production Area has declined in recent years; however, signs are pointing to a change
- > All of this relatively inexpensive supply has caused a rebirth in pipeline transmission construction and will continue to fundamentally change the way Gas Flows throughout the United States and North American, in general

# Leidy Receipts

## Marcellus Shale Receipts Since September 2011



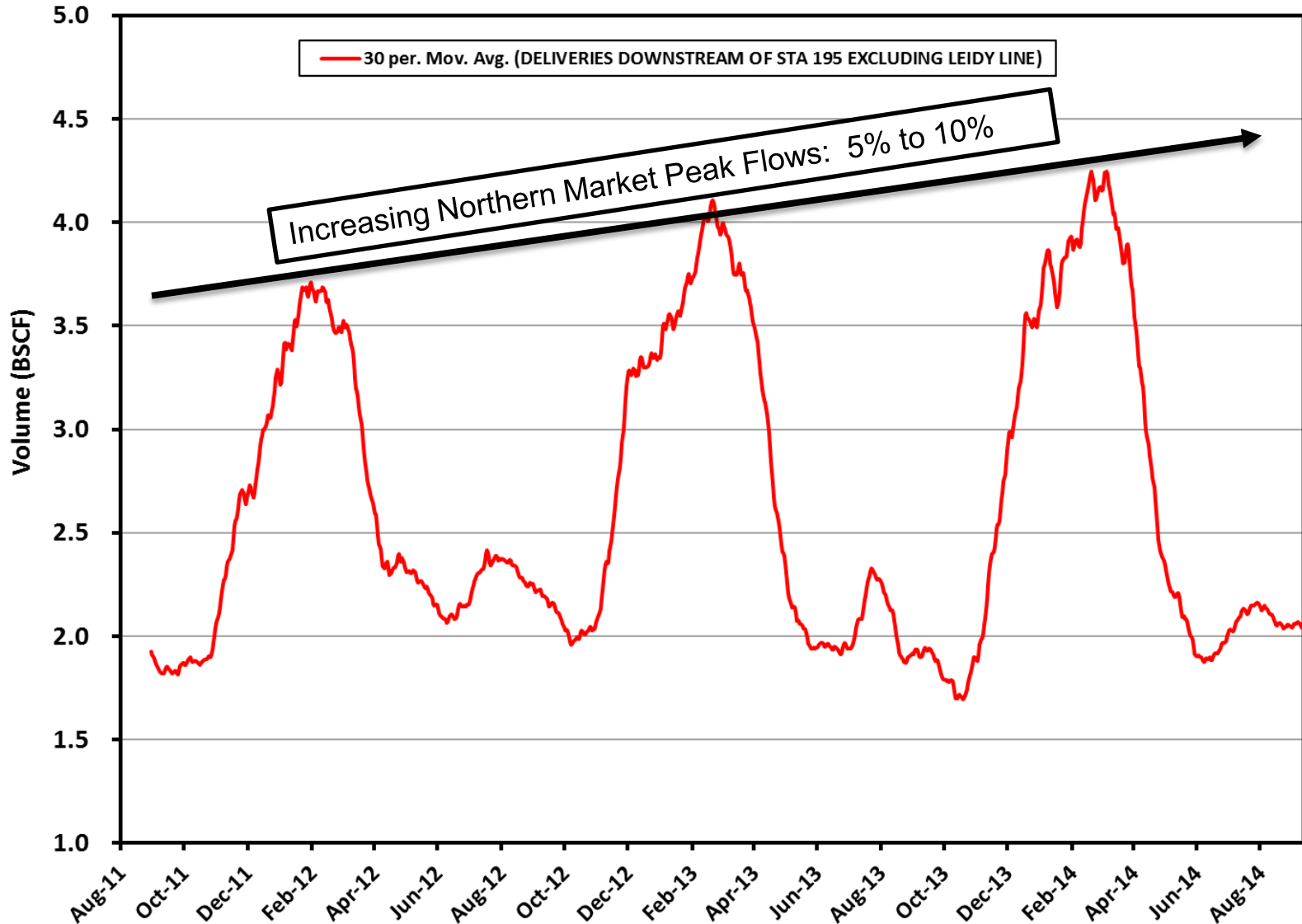
# Simplified Map



# System Load – Northern Market Area

## Growth in Northern Market Area 5-10%

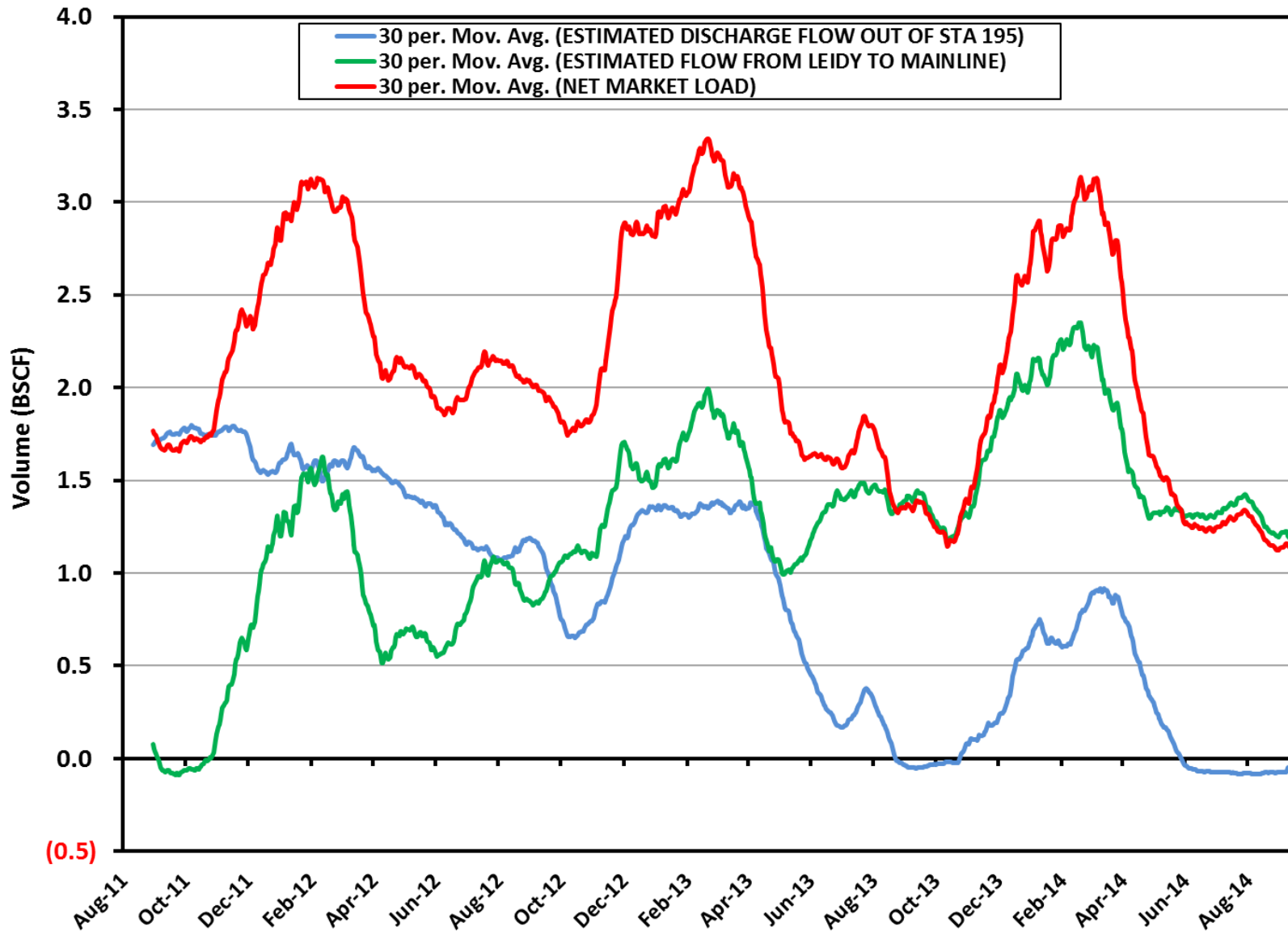
Deliveries East of Centerville & North of Station 195





# System Throughput – Into North Market Area

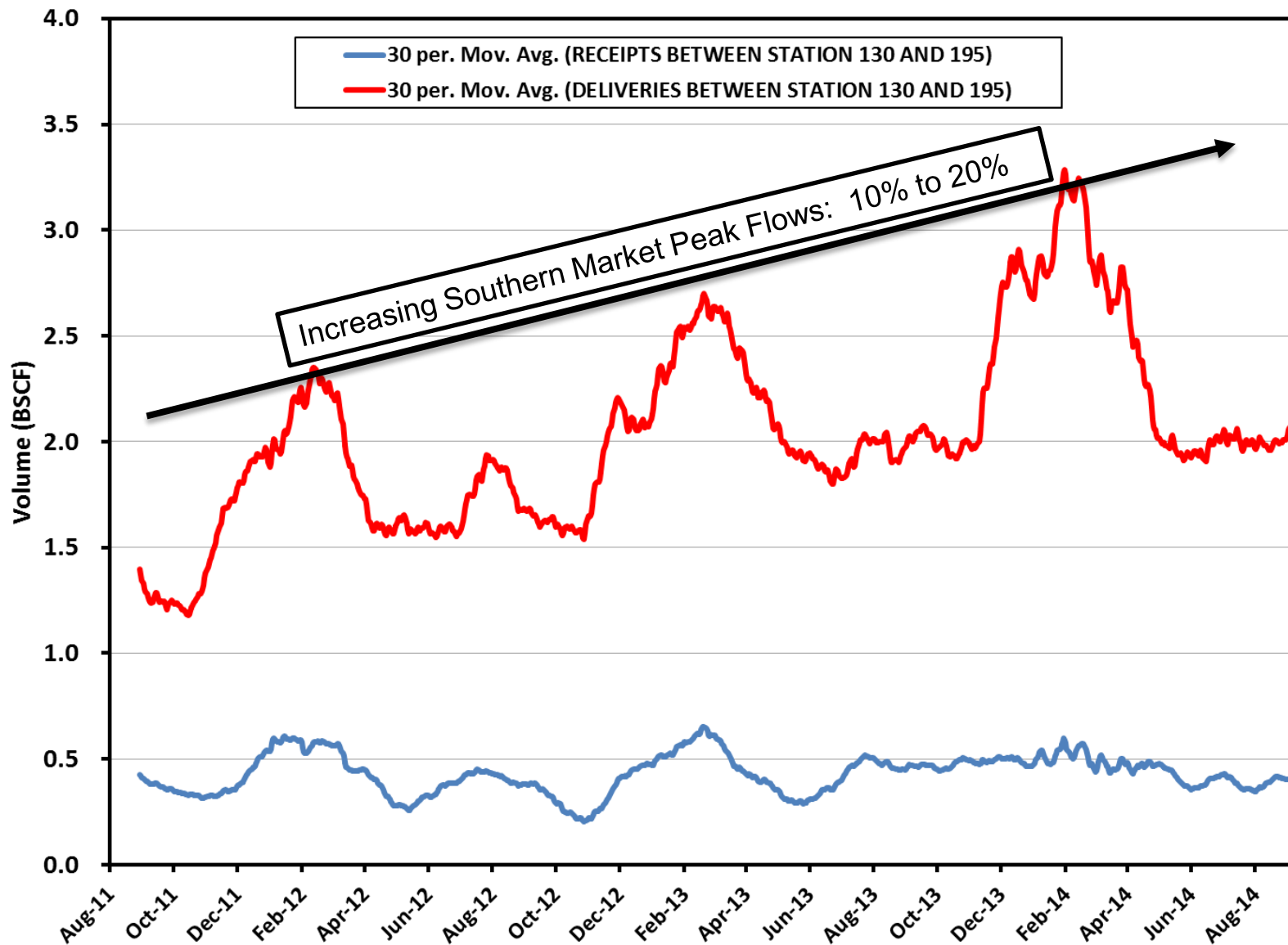
Rolling 30-Day Average



(0.5)

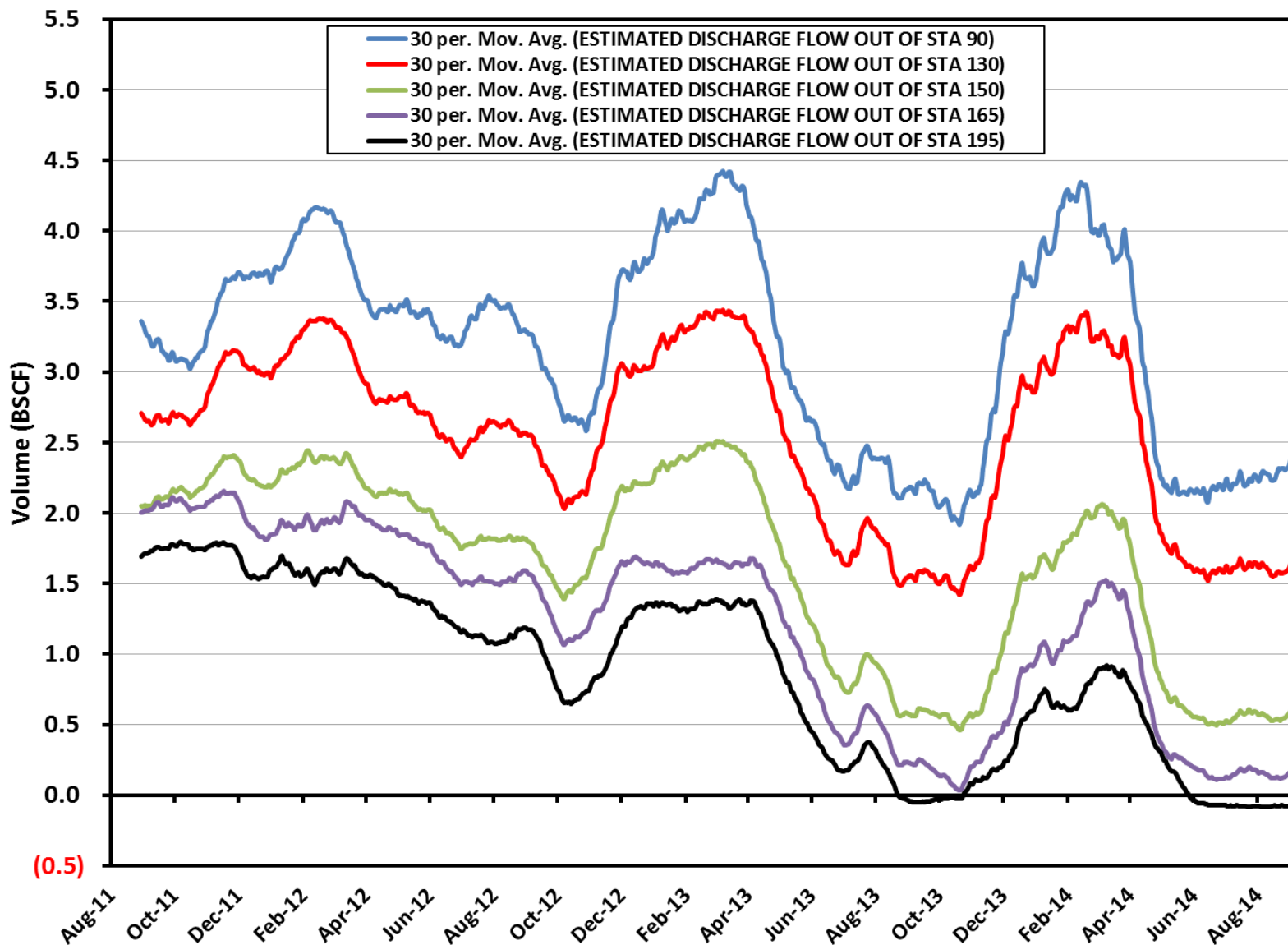
# System Load - Southern Market Area STA130-195

Rolling 30-Day Average



# System Throughput - Mainline

Rolling 30-Day Average



# Expansion Projects

## > Northeast Connector

- December 2014, +100
- No odorization changes.



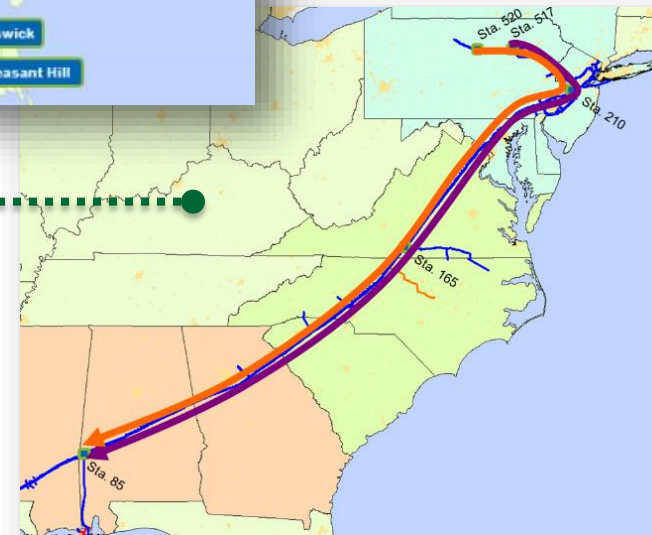
## > Virginia Southside

- September 2015, +270
- Odorization back to MLV190-5.



## > Leidy Southeast

- December 2015, +525
- Odorization back to STA 165 discharge.



# Expansion Projects

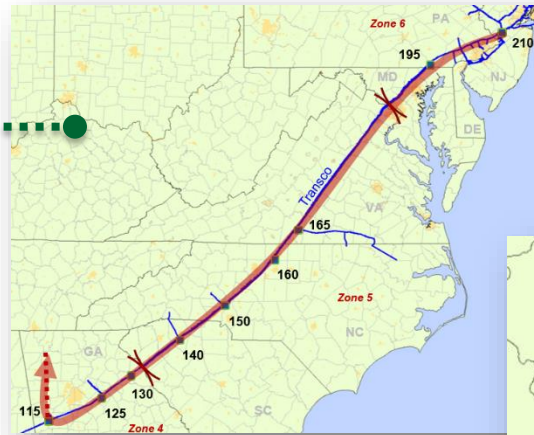
## > Hillabee

- May 2017, +818
- No odorization changes.



## > Dalton

- May 2017, +448
- Odorization back to STA160 & includes SVL.



## > Atlantic Sunrise

- September 2017, +1,700
- Odorization back to MLV140-10.

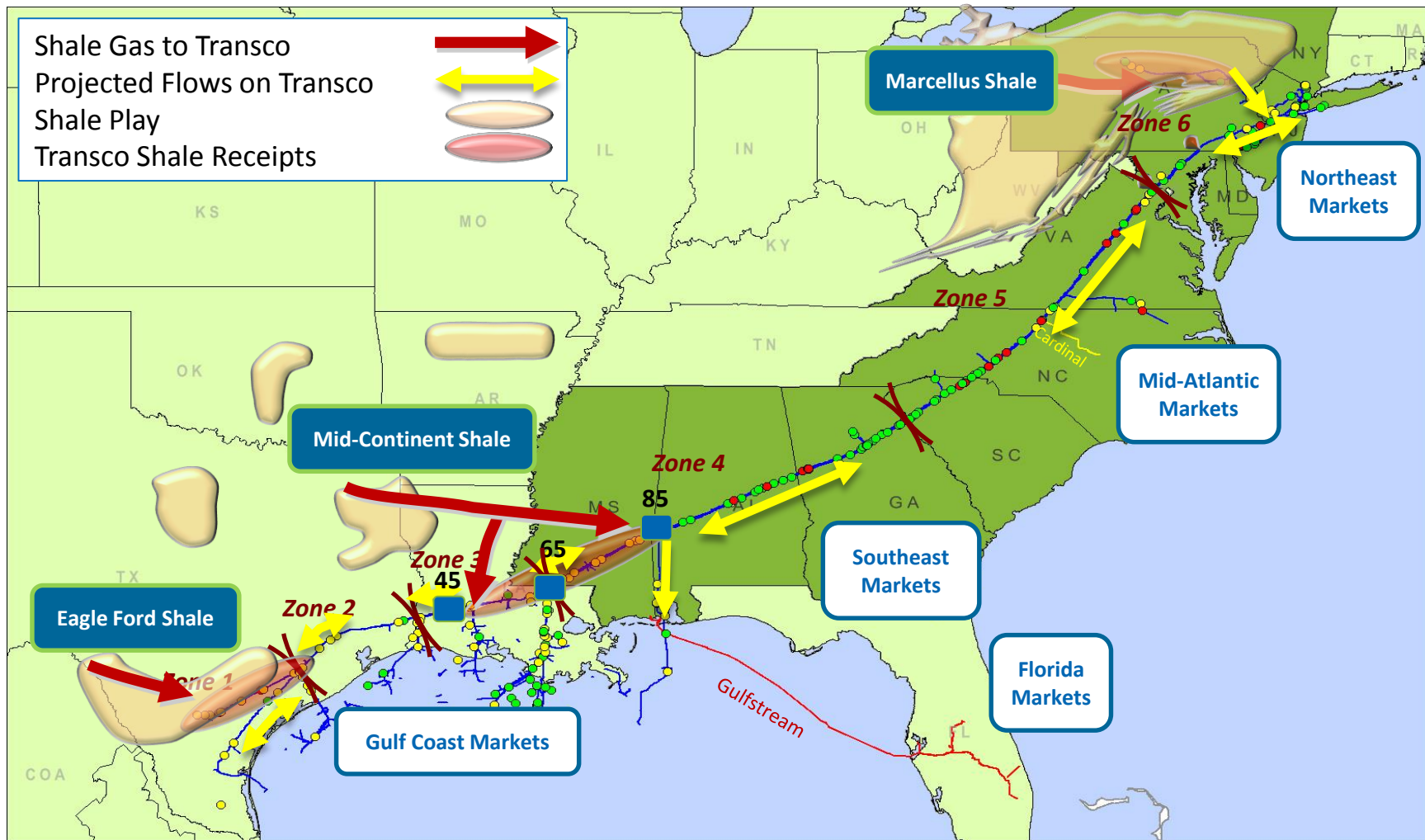


## > Gulf Trace

- May 2017, +1,200
- No odorization changes.



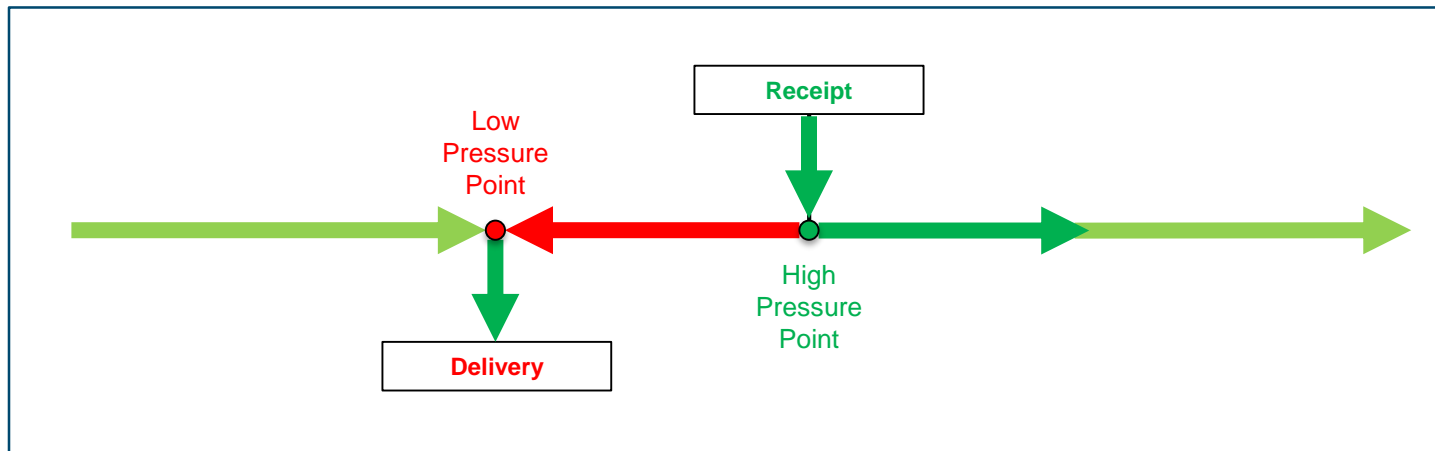
# Future



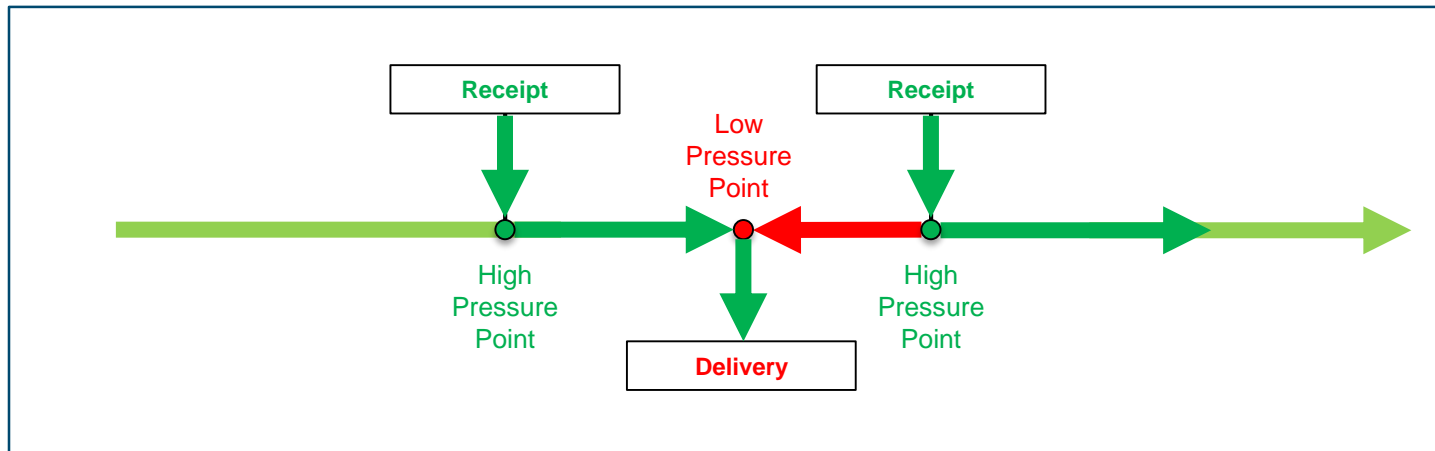
# Null Points

- > A Null Point can basically be defined as a physical location where there is neither forward flow nor back flow, i.e., net throughput equals zero.
- > From a physical standpoint, Null Points form at either a point of highest pressure or lowest pressure.
  - Receipt points can create high pressure Null Points.
  - Delivery points can create low pressure Null Points.

## > Receipt Based Null Point



## > Delivery Based Null Point





# Null Points

- > Null Points are not a new concept. Pipelines have been working with them for many years. However, what is new is that Null Points are now forming in non-traditional areas.
  - Gas Quality
    - Since Transco has traditionally used Area Chromatographs, Null Points within an Area Chromatograph's zone can be problematic.
      - How do we go about assigning the right gas quality to a meter station or set of meter stations?
      - How do we determine where the Null Point is at any given time?
    - There are solutions to these issues and Transco is working very diligently to ensure the correct assumptions are applied throughout its system
  - Odorization
    - As Null Points move around, how do we ensure that Odorization stays consistent and within acceptable limits
    - Working with individual customers to ensure we are all on the same page and working towards a solution that works best for everyone. Each situation can be somewhat unique.
  - Historical Pressures
    - As the system morphs from uni-directional to multi-directional, historical operating pressures may change as well.
      - Locations that were once just downstream of compressor stations may now be just upstream of a compressor station.
  - Maximum Allowable Operating Pressure (MAOP)

**Questions???**