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### Spring Natural Gas Pipeline Policy Outlook

We continue to receive quite a few questions concerning natural gas pipelines, and I wanted to provide you with an updated version of a chart we sent out in December tracking all ongoing major projects.

A few takeaways from the updated chart:

- **Nexus On Deck at FERC.** Although the clock essentially ran out on FERC's approval of gas pipelines due to the departure of former Commissioner Norman Bay on February 3, we expect **DTE** (DTE) and **Spectra's** [being acquired by **Enbridge** (ENB)] Nexus project to receive approval shortly after the Commission reestablishes quorum, most likely in May or June. Investors should note that the project still lacks a 401 Water Quality Certification (WQC) from the Ohio EPA, as well as Section 301 and 303 wetlands permits that are controlled by Michigan officials. We view neither set of permits as likely to materially delay this project, but believe it is unlikely to go into service until Q2 2018. Settlements with recalcitrant landowners are fairly typical in these instances.
- **Northern Access Decision Coming April 7 from New York.** We maintain that the odds lean *against* the New York Department of Environmental Conservation (NYDEC) issuing a Clean Water Act Section 401 WQC for **National Fuel Gas'** (NFG) Northern Access 2016 in a decision the agency has targeted for April 7. Read-through would likely be negative for the recently certificated Atlantic Bridge [owned by **Spectra** (SRE)], although we have maintained that this project, only four miles of pipeline in New York, is more likely to be eventually approved.
- **Access Northeast: Looking for Love In All the Wrong Places.** Sticking with Spectra, we believe the firm's announced strategy of seeking Massachusetts legislative approval for cost recovery through electric tariffs of its proposed Access Northeast pipeline, rather than anchoring the project through contracts with gas utilities, is *unlikely* to be successful, based upon the high levels of opposition to this policy in the state legislature. Therefore, we retain a bearish outlook for the project unless it is tethered to gas distribution utilities.

- Atlantic Sunrise Eyeing the Regulatory Finish Line.** A quick scan of the pipeline landscape suggests to us that Williams’ Atlantic Sunrise pipeline remains in good shape and likely to go into service late-summer 2018. Although the project still lacks a Chapter 105 water obstruction and encroachment permit and the Chapter 102 erosion and sediment control permit, we expect these to be relinquished by the Pennsylvania Department of Environmental Protection (DEP) this fall, with hearings over the permits likely this summer. Finally, Atlantic Sunrise also requires a Section 404 discharge of dredged or fill material permit, a comment period for which ended on January 20. We expect approval for the Section 404 permit after the chapter 102 and 105 permits are issued.
- Rover Condemnation Proceedings Ongoing, Forecast Tight Window for Completion.** ETP’s (ETP) Rover pipeline has had some positive momentum recently with the resolution of its dispute with the Fish and Wildlife Service (FWS) as well as approval for a Water Quality Certification from the Ohio EPA, but still faces a tight window to complete tree clearing activities on private lands that require sign off from various federal courts in condemnation proceedings. The first phase of the project is supposed to be completed by July 1; however, all tree-clearing needs to be completed by the end of this month, and hearings in at least one proceeding will not take place until March 9, which may give only a couple weeks to complete tree-clearing before it is suspended due to bird migration. Therefore, we retain a 1H 2018 *full* in-service expectation.

Name	Size	Cap Ex	Owners	Anchor Shippers	FERC Docket	Status and Outlook	Developer’s in-service	Proj. in-service	States
Access Northeast	925 Mmcf/d	\$3B	<p><b>Spectra</b> (SE, being acquired by <b>Enbridge</b> (ENB)): 40%</p> <p><b>National Grid</b> (NGG): 20%</p> <p><b>Eversource</b> (ES): 40%</p>	N/A	PF16-1	<p><b>Massachusetts Unlikely to Approve Rate Changes.</b> We place very low odds of MA legislative approval for long-term gas contracts being recoverable through electric tariffs, as Spectra has stated it will seek this legislative session.</p>	Q4 2018	N/A	CT, MA, NY, RI, NJ

<p><b>Atlantic Bridge</b></p>	<p>133 Mmcf/d</p>	<p>\$500M</p>	<p><b>Algonquin Gas Transmission, LLC</b> [owned by <b>Spectra</b> (SE), being acquired by <b>Enbridge</b> (ENB)]: 40%</p> <p><b>Maritimes &amp; Northeast Pipeline, LLC</b> (US &amp; Canada): 60%</p>	<p><b>Unitil</b> (UTL)</p> <p><b>Irving Oil Terminal Operations</b></p> <p><b>Maine Natural Gas Co.</b></p> <p><b>NStar Gas Co.</b> [owned by <b>Eversource</b>]</p> <p><b>Norwich Public Utilities</b></p> <p><b>New England Gas Supply Ltd.</b></p>	<p>CP16-9</p>	<p><b>FERC issued a certificate for Atlantic Bridge in January.</b> Project will also require approval from the NYDEC but, because it is only about four miles of new pipeline within the state, we expect approval. Note that NYDEC issued completeness determination September 28, 2016, which means review could stretch into September 2017 and delay project. Compressor station faces intense opposition in Weymouth, MA and August 23 deadline for consistency determination.</p>	<p>November 2017</p>	<p>Q1 2018</p>	<p>CT, MA, ME, NY</p>
<p><b>Atlantic Coast</b></p>	<p>1.44 Bcf/d</p>	<p>\$4.5-\$5B</p>	<p><b>Dominion</b> (D): 45%</p> <p><b>Duke</b> (DUK): 50%</p> <p><b>Southern Company</b> (SO): 5%</p>	<p><b>Virginia Power Services Energy</b> [owned by <b>Dominion</b> (D)]: 300 Mmcf/d</p> <p><b>Virginia Natural Gas</b> [owned by <b>Southern Company</b>]: 75 Mmcf/d</p> <p><b>Duke</b> (DUK): 885 Mmcf/d</p> <p><b>PSNC Energy</b> [owned by <b>SCANA</b> (SCG)]: 100</p>	<p>CP15-554, CP15-555</p>	<p><b>FERC Approval this Fall.</b> Final environmental impact statement (EIS) for Atlantic Coast due June 30, but approval could slide well into the fall. We note pipeline requires special use permit from National Forest Service for crossing George Washington National Forest as well as Monongahela National Forest, where there are endangered species, and detailed analysis with input of FWS will likely be required as well. A total of 21 miles of this project crosses those forests and the FWS may call for the creation of a biological opinion, which routinely is submitted after the issuance of a certificate by FERC and prevents pre-construction activities until it is produced.</p>	<p>Late-2019</p>	<p>2020</p>	<p>VA, NC, WV</p>

<p><b>Atlantic Sunrise</b></p>	<p>1.7 Bcf/d</p>	<p>\$3B</p>	<p><b>Williams (WMB)</b></p>	<p>15-year agreements</p> <p><b>Anadarko</b> (APC): 44 Mmcf/d</p> <p><b>Cabot (COG):</b> 850 Mmcf/d</p> <p><b>Chief Oil &amp; Gas</b> (private): 420 Mmcf/d</p> <p><b>Inflection Energy LLC</b> (private): 26 Mmcf/d</p> <p><b>MMGS Inc.</b> (private): 22 Mmcf/d</p> <p><b>Seneca Resources</b> (owned by <b>National Fuel Gas (NFG):</b> 189.4 Mmcf/d</p> <p><b>Southern Company Services (SO):</b> 60 Mmcf/d</p> <p><b>Southwestern Energy (SWN):</b> 44 Mmcf/d</p>	<p>CP15-138</p>	<p><b>Pennsylvania Chapter 102 and 105 Permits Likely this fall.</b> We expect key outstanding permits from PA officials to be relinquished this fall and believe project has low risk of rejection. Atlantic Sunrise still needs outstanding permits from PA DEP, as well as Sec. 404 permits from the Army Corps of Engineers (USACE), but we maintain that this project is in good shape and unlikely to encounter further delays. Although 404 permit is not necessary for tree-clearing activities to begin, Williams must also reach an understanding with USACE regarding the 12W route alternative before pipeline construction may proceed. Additionally, tree-clearing activities must be completed by March 31<sup>st</sup>.</p>	<p>Mid-2018</p>	<p>Late-summer 2018</p>	<p>PA, VA</p>
<p><b>Constitution Pipeline</b></p>	<p>650 Mmcf/d</p>	<p>\$683M</p>	<p><b>Williams (WMB) :41%</b></p> <p><b>Cabot (COG):</b> 25%</p> <p><b>WGL Holdings (WGL):</b> 10%</p> <p><b>Duke (DUK):</b> 24%</p>	<p><b>Cabot:</b> 500 Mmcf/d</p> <p><b>Southwestern Energy (SWN):</b> 150 Mmcf/d</p>	<p>CP13-499</p>	<p><b>Outlook for project remains bleak.</b> 2<sup>nd</sup> Circuit Court of Appeals will likely either uphold New York regulators’ denial of 401 WQC last April or else remand the decision back to the agency in an order we expect by February 2017. Remanding denial order would mean it will be reissued in another year and project’s chances do not materially improve.</p>	<p>2H 2018</p>	<p>N/A</p>	<p>PA, NY</p>

<b>Dalton Expansion</b>	490 Mmc/d	\$472M	<b>Transco Williams Partners</b> [owned by (WPZ)]: 50%,  <b>Southern Company (SO):</b> 50%	<b>Atlanta Gas Light Company:</b> 236.5 Mmc/d  <b>Oglethorpe Power Corporation</b> [owned by <b>Southern Company</b> ]: 208	CP15-117	<b>Currently under construction.</b> Partial in-service for Oglethorpe portion of offtake likely to be approved by FERC on or around March 17, and the rest of the project should be in service by the fall.	Mid-2017	Fall 2017	GA, NC, VA
<b>ET Rover</b>	3.25 Bcf/d	\$4.2B	<b>Energy Transfer Partners (ETP):</b> 65%  <b>Traverse Midstream Partners, LLC:</b> 35%	<b>Ascent Resources LLC</b> (private) 1.1 Bcf/d  <b>Antero Resources (AR)</b>  <b>Range Resources Corp. (RRC)</b>	CP15-93	<b>Facing tight window for Phase I Completion by July 1.</b> Rover received 401 WQC from Ohio officials February 24. ETP targeting July 1 for partial in-service in Alliance, Ohio, a deadline we view as very tight. Recent positive momentum does not alter our broader expectations that project will not go into service until 1H 2018.	Phase I – July 2017  Phase II – November 2017	1H 2018 (Phase II)	OH, WV, PA, MI
<b>Leach Xpress and Rayne Xpress</b>	1.53 Bcf/d	\$1.8B	<b>TransCanada (TRP)</b>	15-16 year agreements  <b>Range Resource Corp. (RRC):</b> 300 Mmc/d  <b>Noble Energy (NBL):</b> 200 Mmc/d  <b>Ascent Resources LLC:</b> 400 Mmc/d  <b>Kaiser Marketing Appalachian LLC (private):</b> 400 Mmc/d  <b>Gulfport Energy:</b> 100 Mmc/d	CP15-514	<b>FERC certificate received January 19.</b> In February, this project finally received its 401WQC from the Ohio EPA. Project has also received partial notice to proceed from FERC that includes most construction activities.	Nov. 2017	Early-2018	OH, PA, WV

<b>Millennium Valley Lateral</b>	130 Mmcf/d	N/A	<b>Millennium Pipeline Company LLC</b> (private)	N/A, 15 year agreements	CP16-17	<b>FERC approval expected 1H 2017.</b> Lawsuit initiated in December by Millennium against NYDEC suggests project will be rejected by state regulators. Outcome for Constitution pipeline litigation will have direct read-through for this project as well. Project would serve CPV power plant in Orange County and requires 401 water permit from New York officials. Delays in review likely due to ongoing federal corruption probe over <b>Competitive Power Ventures'</b> (private) power plant consulting fees paid to former Cuomo aide's spouse.	April 2017	N/A	NY
<b>Mountain Valley Pipeline</b>	2 Bcf/d	\$3.5B	<b>EQT Midstream Partners, LP</b> (EQM): 45.5%  <b>NextEra Energy</b> (NEP): 31%  <b>Con Edison Gas Midstream LLC</b> (ED): 12.5%  <b>WGL Midstream</b> (WGL): 10%  <b>RGC Midstream LLC</b> : 1%	20 year agreements  <b>EQT</b> (EQT): 1.29 Bcf/d  <b>USG</b> [owned by <b>NextEra</b> (NEE): 250 Mmcf/d  <b>WGL Holdings</b> (WGL): 500 Mmcf/d  <b>RGC Midstream LLC</b> (private): 10 Mmcf/d  <b>ConEd</b> (ED): 250	CP16-13, CP16-10	<b>FERC approval likely fall 2017.</b> Final EIS has been delayed and may not be issued until May or June, which forecasts FERC approval this fall. Even with this timetable, we believe MVP can go into service Q1 2019.	Q4 2018	Q1 2019	VA, WV
<b>Mountaineer/Gulf Xpress</b>	2.7 Bcf/d	\$2B	<b>TransCanada</b> (TRP)	N/A, 8 shippers, 15 year agreements, 2.6 Bcf/d total	CP16-357	<b>FERC approval pushed back in an updated review schedule to late summer/early fall 2017.</b> Revised schedule indicates final EIS July 28 after favorable draft EIS issued February 27. Note that the project potentially affects 13 endangered species, but West Virginia FWS may opt for informal consultation that bypasses requirement for biological opinion that adds review time. We expect FERC approval this fall. Project would go from Marshall County to Wayne County, WV for 165 miles total.	Oct. 31, 2018	YE 2018	WV

<p><b>Nexus</b></p>	<p>835 Mmcf/d</p>	<p>\$2B</p>	<p><b>Spectra (SE): 50%</b> <b>DTE (DTE): 50%</b></p>	<p><b>Union Gas Limited</b> (private): 150 Mmcf/d  <b>DTE Gas (DTE):</b> 75Mmcf/d  <b>DTE Electric:</b> 75 Mmcf  <b>Enbridge (ENB):</b> 110 Mmcf/d  <b>CNX Gas Company LLC</b> [owned by <b>CONSOL (CNX)</b>]: 150 Mmcf/d  <b>Noble Energy (NBL):</b> 35 Mmcf/d (from CNX capacity)  <b>Chesapeake Energy Marketing</b> [owned by <b>Chesapeake Energy (CHK)</b>]: 200 Mmcf/d  <b>Columbia Gas of Ohio:</b> 50 Mmcf/d</p>	<p>CP16-22</p>	<p><b>FERC approval this summer once quorum is reestablished.</b> Although pipeline did not receive certificate prior to departure of former FERC Commissioner Norman Bay, we expect it to receive approval once Commission reestablishes quorum, most likely by May or else June. Project still lacks 401 WQC from Ohio EPA, but we doubt this will be denied.</p>	<p>Q4 2017</p>	<p>Q2 2018</p>	<p>OH, VA, WV</p>
<p><b>Northern Access 2016</b></p>	<p>490 Mmcf/d</p>	<p>\$455M</p>	<p><b>National Fuel Gas (NFG): 83%</b>  <b>Empire Pipeline</b> [owned by <b>National Fuel Gas (NFG)</b>]: 17%</p>	<p><b>Seneca Resources</b> [owned by <b>National Fuel Gas (NFG)</b>]: 490 Mmcf/d</p>	<p>CP15-115</p>	<p><b>Decision from New York expected April 7.</b> We lean against New York officials approving this project. Parallels with Constitution Pipeline present potential headwinds and we note that a modest amount of in-state offtake also hurts its chances.</p>	<p>Q2 2018</p>	<p>N/A</p>	<p>NY, PA</p>

<p><b>PennEast</b></p>	<p>1.0 Bcf/d</p>	<p>\$1B</p>	<p><b>Southern Company</b> [formerly, AGL Resources (SO)] 20%</p> <p><b>NJR Pipeline Company</b> (NJR) 20%</p> <p><b>PSEG Power LLC</b> [owned by PSEG (PEG)] 10%</p> <p><b>South Jersey Industries</b> (SJI) 20%</p> <p><b>Spectra Energy Partners</b> (SEP) 10%</p> <p><b>UGI</b> (UGI) 20%</p>	<p><b>New Jersey Natural Gas Pipeline Company</b> (NJR): 180 Mmcf/d</p> <p>PSEG Power LLC [PSEG (PEG)]: 125 Mmcf/d</p> <p><b>Texas Eastern Transmission</b> [owned by Spectra (SE)]: 125 Mmcf/d</p> <p><b>South Jersey Gas</b> [owned by South Jersey Industries (SJI)]: 105 Mmcf/d</p> <p><b>Consolidated Edison</b> (ED): 100 Mmcf/d</p> <p>Pivotal Utility Holdings Inc. (Elizabethtown Gas): 100 Mmcf/d</p> <p><b>UGI Energy Services LLC</b> [owned by UGI (UGI)]: 100 Mmcf/d</p> <p><b>Cabot</b> (COG): 150 Mmcf/d</p> <p><b>Talen Energy Marketing</b> [owned by Talen (TLN)]: 50 Mmcf/d</p> <p><b>Enerplus Corp:</b> (TSE.ERF) 30 Mmcf/d</p>	<p>CP15-558</p>	<p><b>FERC approval likely summer 2017.</b> The project's final EIS deadline has been pushed back again, this time to April 7, 2017, which potentially forecasts FERC approval this fall. Although the project received its 401 WQC in PA on February 10, it still faces strong opposition in New Jersey and pockets of Pennsylvania. Project also requires docket from Delaware River Basin Commission (DRBC), which weighed in favorably for Williams' (WMB) Leidy Southeast in 2015 and we believe is unlikely to deny this permit, although it has yet to begin review and could cause further delay. In our view, project is unlikely to go forward due to significant organized opposition.</p>	<p>2H 2018</p>	<p>N/A</p>	<p>PA, NJ</p>
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<p><b>Texas Appalachian East Project (TEAL)</b></p>	<p>950 Mmcf/d</p>	<p>\$180M</p>	<p><b>Spectra (SE)</b> 100%, being acquired by <b>Enbridge (ENB)</b></p>	<p>(see NEXUS for shipper info)</p> <p><b>Union Gas Limited</b> (private)</p> <p><b>DTE (DTE)</b></p> <p><b>CNX Gas Company LLC</b> [owned by <b>CONSOL (CNX)</b>]</p> <p><b>Noble Energy (NBL)</b> and</p> <p><b>Chesapeake Energy Marketing</b> [owned by <b>Chesapeake Energy (CHK)</b>]</p>	<p>CP16-23</p>	<p><b><u>FERC approval this summer once quorum is reestablished.</u></b> Linked to Nexus pipeline, which still needs ACE 404 and OH EPA 401 permits. Note that opposition in both Ohio and Michigan is fairly high and that condemnation proceedings, similar to <b>ETP's (ETP) Rover</b>, may delay some construction activities for Nexus by a modest amount of time. We expect FERC approval once a third commissioner is confirmed. Project is roughly five miles of new loop pipeline in Ohio. Capacity lease to Nexus to get gas into Canada.</p>	<p>Q4 2017</p>	<p>Spring 2018</p>	<p>OH</p>
<p><b>TETCO Access South, Adair Southwest and Lebanon Expansion</b></p>	<p>Access South (322 Mmcf/d)</p> <p>Adair Southwest (200 Mmcf/d)</p> <p>Lebanon Expansion (102 Mmcf/d)</p>	<p>N/A</p>	<p><b>Texas Gas Transmission</b> [owned by <b>Spectra Energy Partners (SEP)</b>, being acquired by <b>Enbridge (ENB)</b>]</p>	<p><b>EQT Corporation (EQT):</b> 100 Mmcf/d</p> <p><b>Engie (EPA-ENGI):</b> 200 Mmcf/d</p> <p><b>Gulfport Energy/City of Hamilton:</b> 102 Mmcf/d</p> <p><b>Mitsubishi Corporation:</b> 100 Mmcf/d</p> <p><b>MMGS, Inc.</b> [owned by <b>Mitsui (TYO: 8031, 1,452 JPY)</b>]: 100 Mmcf/d</p> <p><b>Range Resources, Appalachia LLC</b> [owned by <b>Range Resources (RRC)</b>]: 200 Mmcf/d</p> <p><b>Rice Energy (RICE):</b> 320 Mmcf/d</p>	<p>CP16-3, CP16-3-001</p>	<p><b><u>FERC certificate received December 21<sup>st</sup>, 2016.</u></b> The project has obtained all federally relevant authorizations.</p>	<p>Nov. 2017</p>	<p>Nov. 2017</p>	<p>PA, OH, WV, KY, TX, LA, TN,MS</p>

<b>TGP Broad Run Expansion</b>	197.1 Mmcf/d	\$452.5M	<b>Tennessee Gas Pipeline Company</b> [owned by <b>Kinder Morgan Inc. (KMI)</b> ]	<b>Antero Resources (AR):</b> 200 Mmcf/d	CP15-77	<b><u>Broad Run received partial “Notice to Proceed with Construction” on December 7.</u></b> FERC granted construction of a compressor station located in Madison County, KY on February 27.	June 2018	June 2018	KY, TN, WV
<b>TGP Southwest Louisiana Supply</b>	886.8 MMcf/d	\$100M	<b>Tennessee Gas Pipeline Company</b> [owned by <b>Kinder Morgan (KMI)</b> ]	<b>MMGS, Inc. [owned by Mitsui]:</b> 300Mmcf/d  <b>Mitsubishi Corporation (MTU):</b> 600Mmcf/d	CP16-12	<b><u>FERC certificate received on December 15, 2016.</u></b> On February 17, FERC approved TGP’s request to begin construction on remaining facilities and project does not lack any substantive permits.	Feb. 2018	Late-Summer 2018	LA
<b>WB Xpress</b>	1.3 Bcf/d	\$850M	<b>TransCanada (TRP)</b>	<b>Antero Resources (AR)</b>  <b>Noble Energy (NBL)</b>  <b>WGL (WGL)</b>	CP16-38	<b><u>FERC approval likely YE 2017.</u></b> An updated review schedule indicates Environmental Assessment deadline of March 24th, 2017, which forecasts decision late this fall or else YE 2017. On February 17, FWS requested formal consultation under Endangered Species Act.	Nov. 2018	Spring 2019	VA, WV

Additional information is available upon request.

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