

PIPELINE SITING IN WEST VIRGINIA: An Uphill Battle – Even in an Energy Friendly State

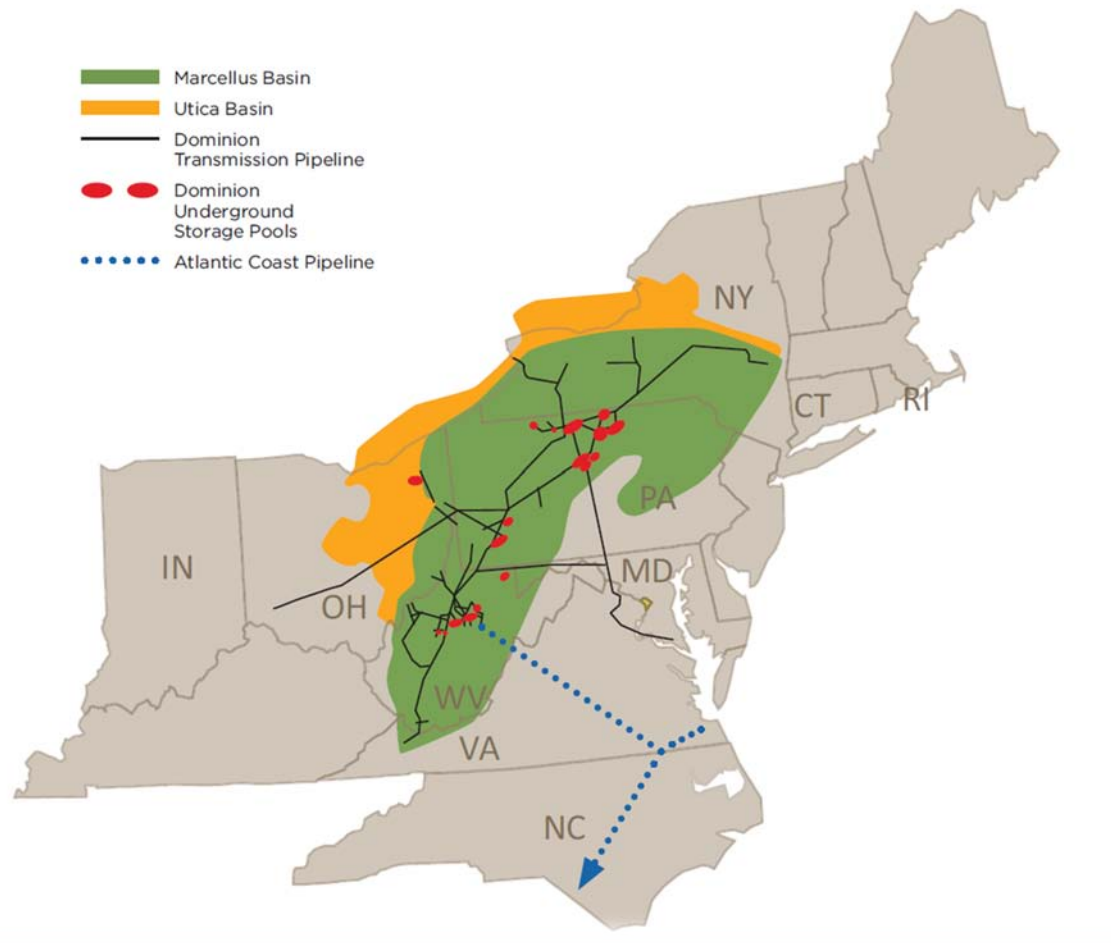


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Dominion
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Dominion®

West Virginia: A Major Contributor to the “Gas Revolution” Reshaping American Energy



The center of Appalachian Basin shale production expansion

Siting: A Difficult, Complex Process – Even in an Energy Friendly State like WV

- Rugged terrain – complicating construction and maintenance
- Complex, time-consuming regulatory and permitting process – at both federal and state levels
- Federal approvals – including U.S. Army Corps of Engineers, Bureau of Land Management, Forest Service
- Landowner and community interaction and outreach – essential for successful routing
- Growth of social media provides a vehicle for rapid mobilization of opponents

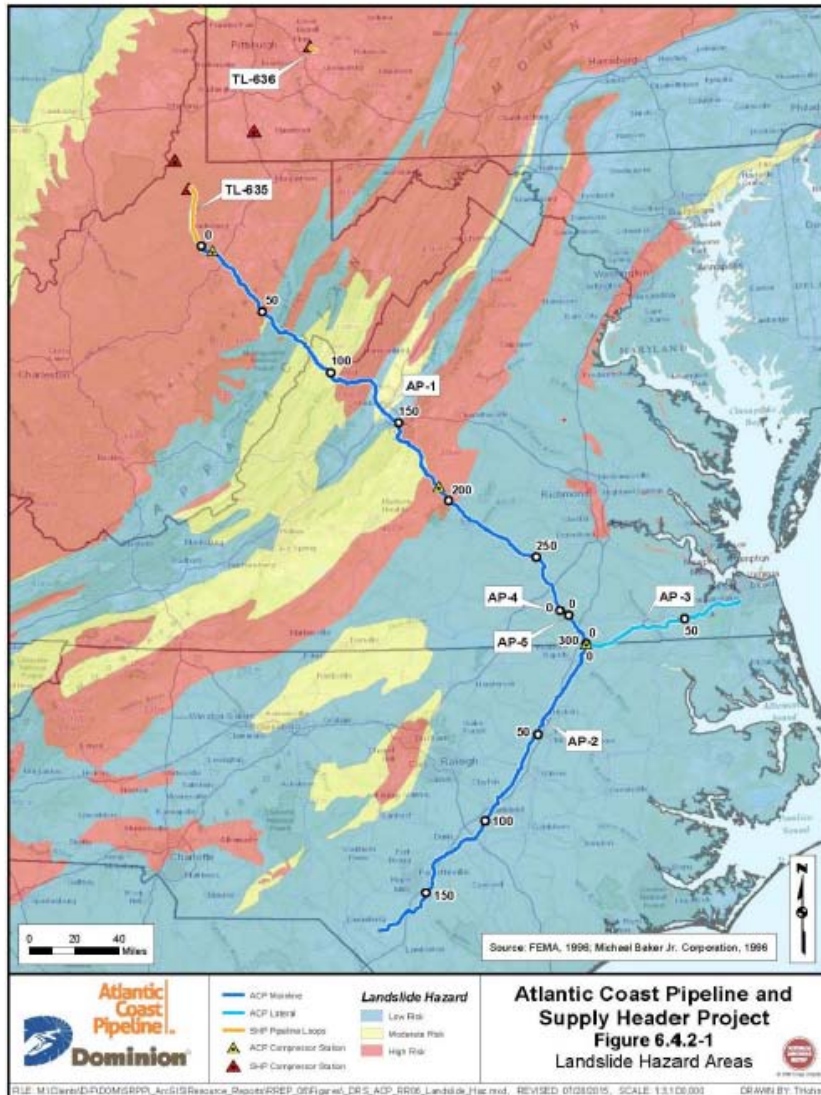


Terrain Issues: Mountain-Valley Construction Much More Difficult than Flatland

- Shallow bedrock in Appalachian Plateau, Valley and Ridge region complicates excavation process
 - Shallow formations require blasting or other special trenching techniques
- Increased risk of slips/landslides, particularly when crossing steep slopes
- High susceptibility along many pipeline routes in WV



Landslide Hazard Risk: Significant in Most of WV



- ❑ DTI has adopted best in class policies and procedures to avoid and mitigate slip issues.
- ❑ These procedures are designed to provide the most efficient and protective design with the least environmental impact, providing reliable construction and operations above and beyond regulatory requirements.

Regulatory and Permitting Requirements – Necessary, but Complex, Time-Consuming

- Thorough, extensive state and local permitting requirements for environmental protection (including endangered species protection) and historic site preservation
- State Agency Involvement includes:
 - WV Department of Environmental Protection
 - Division of Air Quality
 - Division of Water and Waste Management
 - WV Division of Culture and History
 - WV Division of Natural Resources



By the numbers....

Atlantic Coast Pipeline will require approximately 425 state and local permits/approvals in WV alone.

Supply Header Project will require 133 more.



Federal Regulatory Requirements

- ❑ U.S. Army Corps of Engineers – permits for stream crossings
- ❑ Federal approvals for crossing protected areas (such as Monongahela and George Washington National Forests)
 - Bureau of Land Management – rights-of-way grants
 - U.S. Forest Service – special use permits, concurrence in rights-of-way grants
- ❑ Other federal agencies such as U.S. EPA and U.S. FWS also have oversight
- ❑ Applicants must prove no undue environmental impacts, mitigate when necessary



US Army Corps of Engineers



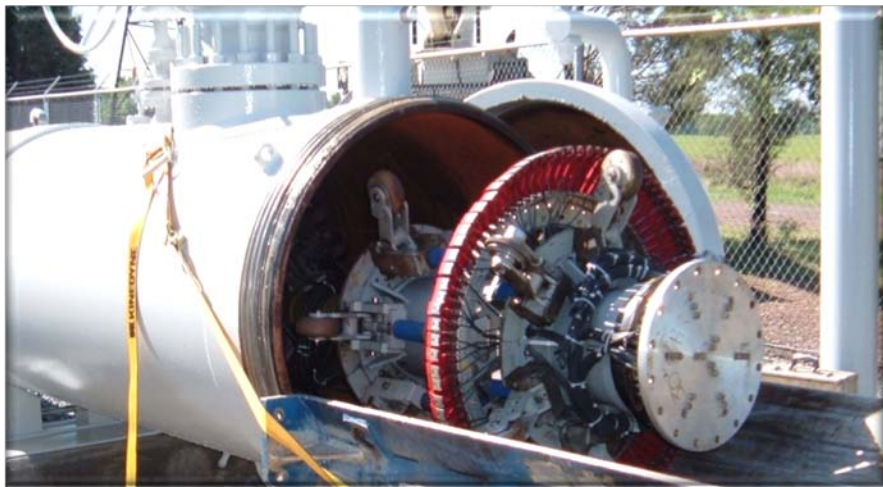
By the numbers....

Atlantic Coast Pipeline will require over 2,100 federal permits and approvals.

Supply Header Project will require 165 more.

Project Priority: Safety

- Strict federal regulatory standards for design and materials
- Rigorous federal and state testing protocols
- Pipeline welds are X-rayed
- Thorough inspections and pressure tests prior to operation



- Government-mandated operator qualification standards
- Community awareness programs
- Coordination with local emergency responders
- 24/7 monitoring from Dominion gas control center



FERC Jurisdictional Process

- Major challenge for interstate projects - obtaining FERC Certificate of Public Convenience and Necessity
 - FERC must determine, through a rigorous process, if facility meets a public need
 - Application process includes an Environmental Impact Statement (EIS) or an Environmental Assessment (EA)
 - Frequent opportunities for public input and intervention, including pre-filing process
 - Review culminates in formal hearing, followed by Commission ruling



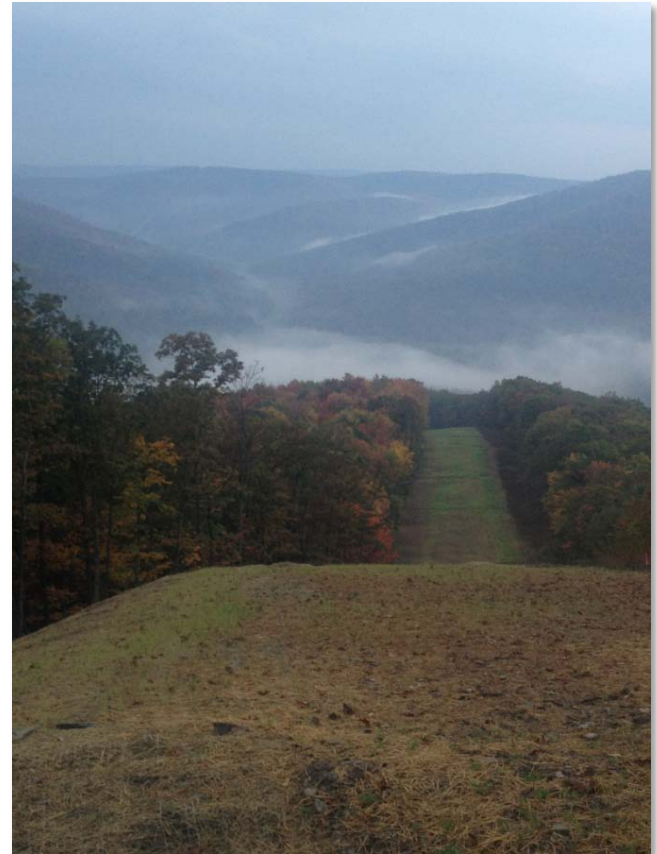
Landowner and Community Involvement

- Continuous interactions with landowners, communities essential for project success
- Interaction must include state and local officials; community leaders; landowners; media
- Process must begin early, well before surveying takes place. Must be carefully managed and documented.
- Surveying essential to successful routing
- Information provided to landowners, other stakeholders through mailings, individual contacts, “open house” meetings to explain project
- Public also participates through FERC review process (scoping meetings, hearings)
- Social media has transformed the process
 - Allows opponents can rapidly spread message
 - But also provides useful platform for pipeline developers to respond



Uphill Battle – Even in WV

- Process difficult, becoming progressively more complex and challenging
- Regulatory requirements, pervasive NIMBY behavior – more in other jurisdictions than WV
- Despite difficulty, we believe projects can be successfully proposed and built, with routes that protect environment and serve public interest
- End result: positive public and economic benefits



Proposed Projects in WV

Pipeline Project	Construction Related Economic Impact	Jobs Supported During Construction	Taxes During Construction
Atlantic Coast Pipeline	\$478.7 Million	3,093	\$4 Million
Dominion Supply Header Project	\$400 Million	1,035	\$4.9 Million
EQT - Mountain Valley	\$712 Million	8,250	\$42.6 Million
Energy Transfer - Rover	\$336 Million	1,800 – 2,200	\$3.9 Million
Columbia Pipeline Group - Leach Expressway	\$1.4 Billion	1,800-2,000	\$3.9 Million
Columbia Pipeline Group - WB and Mountaineer Expressway	\$870 Million	1,700	\$1.5 Million
Total	\$5.7 Billion	18,035	\$61.1 Million

Case Study: Atlantic Coast Pipeline

Length, Capacity, and Associated Facilities

Length - 564 Miles through WV, VA, and NC
Capacity - 1.5 billion cubic feet/day
Three compressor station locations:

1. Lewis County, West Virginia
2. Buckingham County, Virginia
3. Northampton County, North Carolina

Ownership Structure

Dominion Resources*	45%
Duke Energy	40%
Piedmont Natural Gas	10%
AGL Resources (Virginia Natural Gas)	5%

Estimated Cost

\$4.5 - \$5.0 billion**

Projected Timeline

✓ Submit FERC pre-filing	October 2014
✓ File FERC application	September 2015
▪ Receive FERC Certificate	Summer 2016
▪ In-Service	Late 2018

* Dominion will construct, operate, and manage the pipeline.

** Excludes financing costs.

Pipeline Siting – An Uphill Battle

Questions?

