

Environmental Protections

June 2017

Best in Class Environmental Protections

Dominion Energy is committed to best-in-class standards for both the construction and operation of the proposed Atlantic Coast Pipeline. This means the most efficient design, which will go above and beyond regulatory requirements to minimize environmental impact while providing safe and reliable construction and operations.

Dominion is taking steps in each area:

Compressor Station Emissions: The three new ACP compressor stations will use a turbine design that includes state-of-the-art technology to minimize nitrogen oxide emissions. In addition, selective catalytic reduction pollution controls will further reduce such emissions, while oxidation catalysts will cut emissions of volatile organic compounds by about 50 percent and carbon monoxide emissions by about 80 percent. Neither of these control technologies is required.

Methane Emissions: Best in Class engineering design and operational measures will be used to minimize fugitive and episodic methane emissions. For example, prior to maintenance that requires the evacuation of gas from the system (or blowdown), the compressor will be used to drop the pressure in the pipe as low as possible to greatly reduce the amount of gas released into the atmosphere.

Sediment and Erosion Control for Steep Slopes:

ACP will employ Best in Class design and operational measures for construction in steep slopes (>30% slope) to minimize or eliminate landslides during construction and operations. Dominion will hire subject matter experts to provide input and review during the design, assessment and implementation of the best in class measures in steep slope portions of the project. Restoration of steep terrain may include: grading to



Blue skies over Dominion Energy's compressor station in Myersville, MD

the natural conditions; installation of permanent erosion control devices (i.e., slope breakers) designed to reduce runoff velocity and encourage retention of soils; and the use of additional structural materials (e.g., rock or woody debris) to provide an anchor for re-vegetation and deposition of soil.

Above and Beyond Environmental Protections

Karsts: Caves, Sinkholes and Springs: ACP hired an expert to assist with surveying and understanding karst terrain in West Virginia and Virginia. Measures will be taken to avoid any impacts to caverns, sinkholes and springs. We are engineering the pipeline, including design and materials, to withstand sinkhole formation without compromising pipe integrity or safety. There are more than 4,100 miles of natural gas transmission lines in known or potential karst areas in the mid-Atlantic, including more than 450 miles in Virginia.

Timbering: Tree clearing will be conducted to avoid or minimize impacts on nesting migratory birds and bats. ACP is investigating the potential to beneficially re-use the logs and slash, except where otherwise directed by the land owner or land manager.

Protected Species and Wildlife Habitat: Detailed surveys and coordination with the U.S. Fish and Wildlife Service, federal land managing agencies and the Federal Energy Regulatory Commission (FERC), together with state agency staff, will be completed in strict accordance with the procedures and requirements of the U.S. Endangered Species Act prior to starting construction. Dominion will coordinate with these agencies during construction to avoid, minimize and compensate for impacts to sensitive species.

Stream and River Crossings: ACP will use a variety of methods (open-cut, flume, dam-and-pump, cofferdam, conventional bore, or Horizontal Directional Drilling) to construct the proposed ACP pipeline beneath water-bodies. ACP identified each water-body crossing method on a case by case basis, based on topographic conditions and resource characteristics in order to minimize impacts on the water-body, aquatic life and any receiving waters.

Wetland Crossing Methods: ACP is working with multiple agencies to determine how its design can best avoid or minimize impacts to migratory birds and their habitats. Clearing for construction along the pipeline will be limited to a 75-foot wide construction right-of-way in wetlands, which will minimize temporary impacts on wetland vegetation. Temporary workspaces will be located in upland areas, a minimum of 50 feet from wetland and water-body edges. These actions will minimize impacts on migratory birds that utilize wetland and riparian habitats.

Wetland Vegetation: Most wetland vegetation impacts associated with construction activities are considered temporary, but long-term impacts on such vegetation may occur depending on the time required for reestablishment of wetland functions associated with vegetative cover. In forest habitats, many wetland functions such as surface water detention, nutrient recycling, particle retention, and some wildlife habitat will be restored prior to the full regeneration of the forest.

Pollinator Habitat and Right-of-Way Restoration:

To address a national concern regarding the loss of pollinator species, ACP is offering to re-seed portions of its pipeline right-of-way after construction with a combination of native grasses and flowers that will provide attractive food and shelter to many native pollinators. This will be at the landowner's discretion.

Right-of-Way Maintenance: Control of woody vegetation on Rights-of-Way will be by mechanical means; herbicides will not be used except for the spot treatment of invasive species.

Invasive Plant Species: ACP's Invasive Plant Species Management Plan identifies locations currently inhabited by invasive plant species populations and describes procedures to be implemented during construction and operation of ACP to minimize the spread of invasive plant species.

Carbon Reduction Benefits and the Clean Power Plan: Preliminary analysis indicates that ACP could contribute 25 to 50 percent of the CO₂ reductions required by 2022 in Virginia and North Carolina under the Clean Power Plan.

Environmental Compliance: ACP will incorporate environmental requirements and environmental mitigation plans into the project's construction contracts. Prior to construction, ACP will conduct environmental training for all company and contractor personnel. During construction, if a contractor does not comply with the environmental requirements, necessary actions will be taken, including issuing stopwork orders, until the contractor is in compliance. ACP will monitor environmental compliance during construction and environmental inspectors will have the authority to stop construction, if necessary, to maintain environmental compliance.

Third-Party Compliance Monitoring: ACP will fund a third-party contractor, to be selected and managed by FERC staff, to provide environmental compliance monitoring. The third-party contractor will provide regular reports to FERC staff on compliance issues and assist FERC staff in screening and processing variance requests during construction.