

**Dominion Virginia Power  
Meadow Brook – Loudoun 500kV Project  
SCC Application Highlights  
April 19, 2007**

- Proposed route
  - About 65 miles
  - Estimated cost -- \$243 million
- Total length of Allegheny – Dominion transmission project – about 265 miles from southwestern Pennsylvania to Loudoun
- The 65-mile proposed route for the transmission line is within or adjacent to an existing transmission power line corridor in Warren, Rappahannock, Culpeper, Fauquier, Prince William and Loudoun counties.
- Proposed route in miles by county
  - Culpeper           6.81 miles
  - Fauquier           26.62 miles
  - Rappahannock   13 miles
  - Prince William   18.01 miles
  - Loudoun           0.51 miles
- Locating this new line within or adjacent to the existing right of way provides the least overall impact of any of the viable transmission alternatives studied. Constructing a new line on a new corridor across undisturbed lands would create a completely new and separate impact in Northern Virginia.
- Where it is necessary to widen the existing right of way in Rappahannock, Culpeper and Fauquier counties, it will need to be widened no more than 125 feet.
- No new right of way is required in Prince William or Loudoun counties.
- In some areas, the company will replace existing lattice-style transmission towers with single-pole towers.
- Alternate route
  - Along Interstate 66 right of way (shoulder)
  - About 37 miles
  - Estimated cost -- \$153 million
- Information on other alternate routes in filing, but not recommended

## Excerpts from filing

- “The construction of (this line) is necessary to relieve identified violations of North American Electric Reliability Corporation mandatory reliability standards beginning in the Summer 2011 timeframe brought on by significant increases in electrical demand over the past 10 years as well as expected demand growth projected for the future. These reliability violations, if not relieved, will severely impact the transmission system’s ability to provide reliable service to Dominion Virginia Power’s and Allegheny Power’s customers in the northern Virginia load area. These reliability violations also will adversely impact reliable service to critical loads in the Washington, D.C. – Baltimore area and to a lesser extent a large portion of the eastern United States.” -- James R. Bailey testimony, Pages 3-4
- The Washington/Virginia/Maryland region “is home to 12 local jurisdictions, two states, the District of Columbia, the three branches of U.S. government, 231 federal departments and agencies, the largest number of high-ranking defense contracting companies, 2,100 non-profit organizations and over 4.2 million Americans, 340,000 of which are federal workers. Therefore, this fourth largest U.S. metropolitan area of 6,000 square miles, considered critical to national security, was established as a part of the National Capital Region (“NCR”) by the Homeland Security Act of 2002. ... In addition to the government security and intelligence agencies, there is a concentration of 251 military bases from all services clustered in the tri-state area that include a total of 204,258 military personnel. ... (The NCR) ranks fourth nationally in GDP at nearly \$288.3 billion. – Edward V. Badolato testimony, Pages 3-4. Badolato was Deputy Assistant Secretary, U.S. Department of Energy, for energy contingency planning under Presidents Reagan and Bush.
- “The demand for electric service has grown rapidly over the last five years in Dominion Virginia Power’s service area, and during this time the Company’s total electric demand has grown by 2,387 mw (megawatts), with 969 mw (40.6%) of this increase occurring in Northern Virginia.” – James R. Bailey testimony, Page 10
- Support for the need for the line has come from the Fairfax Chamber of Commerce, the Vienna – Tysons Chamber of Commerce, the Greater Prince William Chamber of Commerce, the Arlington Chamber of Commerce and the City of Manassas Utility Commission. – The Application, Pages 29-34

- Dominion has spent approximately \$142 million on transmission line and facilities upgrades in Northern Virginia since 2000. – James R. Bailey testimony, Pages 11-12.
- “The electric demand in northern Virginia has increased by 35.8% during this same time period (2000-2006), more than double the area’s population growth.” – Phillip Powell, Page 7
- “The Mt. Storm-Doubs overload (in 2011) is 226 mw. This would require a 2,850 mw load reduction. This is almost 40% of the northern Virginia load. To assume that such a program could be designed, approved, implemented, and accepted by DVP customers in less than four years is clearly not reasonable” – KEMA report, Page 61.
- “If, for example, we assume an average size for distributed generation of 100 kw, and that these units would be available for operation 90% of the time, then each mw (1,000 kw) of effective capacity would require 11 of these 100 kw units. This means that more than 31,000 of these new distributed generators would be needed by 2011 and more than 77,000 by 2016.” – KEMA report, Page 62.
- “The impact of a very large new generating plant located at the Loudoun substation, however impractical and difficult, could meet the need ... This would require a plant of 3,000 mw by 2011 – by far the largest plant in Virginia and one of the largest in North America. The plant would have to (be) even larger to be effective in 2016.” – KEMA report, Pages 62-63.
- “The Proposed Route has a number of advantages and positive attributes. The key advantage is that 100 percent of the route is either parallel to or completely on existing transmission line right-of-way. This approach is favored under Section 56-46.1 of the Code of Virginia, which requires a utility to show why existing right-of-way is not adequate for a proposed transmission line. ... This collocation of facilities is completely consistent with Virginia Statute sections 56-46.1 and 56-259, FERC Guideline #1, and the Appalachian Trail Conference Policy on Roads and Utility Developments criteria (Criteria #2), all of which encourage the use of existing rights-of-way. ... Dominion Virginia Power believes that locating within or adjacent to the existing rights-of-way provides the least overall impact.” – John B. Bailey testimony, Page 20.