Question: *Dunsmuir - Vancouver Island 525kV AC line has been in place serving for over 30 years. This is not speculative or experimental but long proven technology. The capacity of the Dunsmuir - Vancouver line is 1200MW, more than the output of the two coal fired plants at Yorktown (323MW). It is still more than the 3 stations at Yorktown if including the peak demand oil fired plant. Total of the three is 1141 MW. Yet, Dominion's Alternative Analysis cites a 500 kV underground AC cable as "Speculative and experimental technology" they go on "Highly experimental" and "The reliability of this alternative is unknown.*

Response: The question is based on a false premise. As stated in the third paragraph of DVP's July 6 Response to Nos. 21 and23 of the Corps' questions received June 25, 2015, "Constructing a 500 kV line underwater at the distances needed to cross the James River and at a capacity needed to solve the NERC Reliability Violations has never been done before and would carry too much risk to be a project supported by the Company" and "The Company is not aware of any applications of 500 kV underground that have the thermal capacity needed for this project, let alone any which has been constructed underwater." (emphasis added) As explained in DVP's August 14, 2015 Response to No. e. (1) of the Corps' letter dated July 31, 2015, generation capacity cannot be directly compared with transmission capacity, and the transmission capacity of the proposed 500 kV line is required to deliver sufficient bulk power from distant generation resources to resolve the identified violations of the identified NERC Reliability Standards currently scheduled to begin as early as June 1, 2016. The rating of the Vancouver line (composed of two cables with ratings of 1200 MW each) represents less than 50% of the transmission capacity required to meet the mandatory NERC requirements. Moreover, the Vancouver line rating is based on a 20° C earth temperature, while DVP uses a 30° C design temperature, meaning a forced water/glycol cooling system would have to be added to achieve even the 2400 MW rating.

Construction and operation of a Vancouver-type line would also present significant issues as to impacts and reliability. The cable phase separation of the Vancouver line spaces them 1640 feet apart, requiring a right-of-way 1.5 miles wide for two cables to reach the insufficient rating of that line. The type of vessels required to install the Vancouver line are highly specialized, not generally available and draw too much water to navigate the James River. In the event of an outage, repairs could require months to obtain a vessel and associated specialized equipment to make repairs and restore service.