

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

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JOINT APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY D/B/A  
DOMINION VIRGINIA POWER,  
and  
TRANS-ALLEGHENY INTERSTATE LINE COMPANY

CASE NO. PUE-2007-00031

For certificates of public convenience  
and necessity to construct facilities:  
500 kV Transmission Line from Transmission  
Line #580 to Loudoun Substation

APPLICATION OF

TRANS-ALLEGHENY INTERSTATE LINE COMPANY

CASE NO. PUE-2007-00033

For certificates of public convenience  
and necessity to construct facilities:  
500 kV Transmission Line from Virginia-West Virginia  
Boundary to Virginia Electric and Power Company  
Transmission Line #580

ORDER

On April 19, 2007, Virginia Electric and Power Company d/b/a Dominion Virginia Power ("Dominion") filed with the State Corporation Commission ("Commission"), on its own behalf and on behalf of Trans-Allegheny Interstate Line Company ("TrAILCo") (an affiliate of The Potomac Edison Company d/b/a/ Allegheny Power), a joint application for approval of a 500 kV transmission line project ("Dominion Application"). On April 19, 2007, TrAILCo filed with the Commission an application for approval of an additional 500 kV transmission line project ("TrAILCo Application").<sup>1</sup> The transmission lines proposed in these two applications

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<sup>1</sup> Dominion and TrAILCo also are referred to herein collectively as "Applicants."

involve the Virginia segments of the 502 Junction - Loudoun line, which is a proposed 500 kV transmission line that begins in Pennsylvania, crosses West Virginia, and terminates at Dominion's Loudoun Substation.

In the Dominion Application, Dominion and TrAILCo seek authority to build a new 500 kV transmission line from a point in Warren County on the west side of the Appalachian Trail near the boundary of Warren and Fauquier Counties to Dominion's existing Loudoun Substation in Loudoun County.<sup>2</sup> TrAILCo would jointly own with Dominion an undivided 50% interest in a specified portion of the line.<sup>3</sup> The TrAILCo Application addresses the Virginia portion of the proposed 502 Junction - Loudoun transmission line that begins at the Virginia/West Virginia state line, connects with the Meadow Brook Substation, and ends at a point in Warren County approximately 300 feet west of the western boundary of the Appalachian Trail.<sup>4</sup>

On June 1, 2007, the Commission issued an Order for Notice and Hearing that directed public notice of the applications to be published, established a procedural schedule, set hearing dates to receive public comment and evidence, and appointed a Hearing Examiner to conduct further proceedings.

On July 28, 2008, Hearing Examiner Alexander F. Skirpan, Jr., entered a 223-page report that explained the extensive procedural history of this case, summarized the record, analyzed the evidence and issues in this proceeding, and made certain findings and recommendations ("Hearing Examiner's Report").

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<sup>2</sup> Exh. 5 at 2.

<sup>3</sup> *Id.*

<sup>4</sup> Exh. 37 at 2.

The Hearing Examiner identified the following as respondents who filed notices of participation for one or both of these cases by August 1, 2007:

- Piedmont Environmental Council ('Piedmont');
- Board of Supervisors of Fauquier County ('Fauquier County');
- Prince William County Board of Supervisors ('Prince William County');
- Power-Line Landowners Alliance ('PLA');
- Board of Supervisors of Loudoun County ('Loudoun County');
- Richard B. Clifford and Julianne C. Clifford ('Cliffords');
- Perch Associates, LLC ('Perch');
- Board of Supervisors of Culpeper County ('Culpeper County');
- CPV Warren, LLC ('CPV Warren');
- Virginians for Sensible Energy Policy ('Sensible Energy');
- Virginia's Commitment, LLC ('Virginia's Commitment');
- Board of Supervisors for Rappahannock County ('Rappahannock County');
- Virginia Outdoors Foundation ('Virginia Outdoors');
- Dominion Country Club, L.P. ('Country Club');
- Dominion Valley Owners Association and Regency at Dominion Valley Owners Association ('Regency');
- Madison at Greenfields ('Greenfields');
- William Nesbitt ('Nesbitt'); and
- Allen and Jennifer Richards, John Daniel McCarty, Montana Farm, LLC, Mt. Joy Farm, LP, Oakwood Enterprises, LLC, Richardson Oakwood Enterprises, LLC, Warrant K. Montouri Trust, William T. Semple; Robert B. Semple, Jr., Lloyd A. Semple, Nathaniel M. Semple, Elizabeth S. Knight, Kenneth C. Rietz, Christopher Paige, Sheila Paige, Ursula Landsrath, George M. Chester, Jr., and Virginia Farms, LLC (collectively, 'Individual Respondents').<sup>5</sup>

As explained by the Hearing Examiner, public hearings in this proceeding were held throughout the Commonwealth as follows: (1) July 26-27, 2007, Warrenton; (2) August 9-10, 2007, Bristow; (3) August 13-14, 2007, Winchester; (4) August 15-16, 2007, Front Royal; and (5) January 14, February 25-29, March 3, 5-7, 10-14, 17-18, and July 9, 2008,

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<sup>5</sup> Hearing Examiner's Report at 6. The Hearing Examiner subsequently granted motions to withdraw from CPV Warren and from Allen and Jennifer Richards, John Daniel McCarty, Kenneth C. Rietz, and Ursula Landsrath. *Id.* at 6 n.6, 8.

Richmond.<sup>6</sup> The Commission also received over 1,300 written and electronic comments in this proceeding.

The Hearing Examiner's Report included the following findings:

1. The PJM Interconnection, LLC ('PJM') generation deliverability and load deliverability tests and the Dominion test properly apply mandatory North American Electric Reliability Corporation ('NERC') transmission reliability planning standards;
2. The Applicants' load forecasts are based on reasonable assumptions for transmission planning purposes, including assumptions that project future savings from demand-side management ('DSM') programs to remain at current levels;
3. The Applicants' assumptions regarding future generation are consistent with the federally-mandated functional separation of transmission and generation, and PJM's general lack of authority to cause generation to be constructed. However, I find that PJM's generation assumptions produce less and less reliable load-flow results the farther projections are made into the planning horizon;
4. The Applicants' projected load-flow results for 2011 and 2012 support the need for additional transmission to address violations of NERC transmission reliability planning standards;
5. The Amos - Kempton line is a viable alternative, but the proposed 502 Junction - Loudoun line is the best alternative to meet the need demonstrated in these proceedings;
6. The Commission should condition approval of the Virginia segments of the 502 Junction - Loudoun line on approval in Pennsylvania and West Virginia;
7. For Case No. PUE-2007-00031, the proposed Southern Route reasonably minimizes adverse impact, makes use of existing right-of-way, and should be designated by the Commission as the route for the proposed line;
8. For Case No. PUE-2007-00033, Route B reasonably minimizes adverse impact, makes use of existing right-of-way,

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<sup>6</sup> *Id.* at 6-9.

and should be designated by the Commission as the route for the proposed line;

9. Recommendations contained in the Department of Environmental Quality ('DEQ') Report should be adopted by the Commission as conditions of approval, with the exceptions of DEQ's overall routing recommendation in Case No. PUE-2007-00031, and the Department of Game and Inland Fisheries ('DGIF') recommendations regarding clear-span bridges, a general prohibition of clearing and maintenance, and increased buffers;

10. Where existing Dominion right-of-way crosses land that is now subject to open space easements, Dominion has agreed to locate the proposed new line within the existing easement or provide landowners with an option of shorter transmission towers in exchange for an additional 60-foot easement into the open space land by providing written confirmation that the open space easement has been released within a month of the final order in this case. Dominion should be required to provide this option to such landowners;

11. Applicants should be required to develop and file with the Commission a detailed right-of-way clearing plan that follows Federal Energy Regulatory Commission ('FERC') guidelines and addresses future maintenance of the right-of-way; and

12. To ensure adherence to the right-of-way clearing plan, the Commission should require Applicants to each have one of its foresters, or a contract forester or arborist, supervise the day-to-day operations of its clearing contractor.<sup>7</sup>

Participants filed comments on the Hearing Examiner's Report on or before August 18, 2008.<sup>8</sup>

NOW THE COMMISSION, having considered this matter, is of the opinion and finds that the public convenience and necessity require construction of the transmission lines proposed

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<sup>7</sup> *Id.* at 221-222.

<sup>8</sup> On September 2, 2008, Prince William County, Sensible Energy, Virginia's Commitment, PLA, and Piedmont jointly filed a letter with the Commission that "move[d] to lodge in the record in these proceedings the August 15, 2008 Recommended Decision of Pennsylvania Public Utility Commission (PaPUC) Administrative Law Judges Mark A. Hoyer and Michael A. Nemec." On September 11, 2008, TrAILCo and Dominion filed letters that objected to "lodging" additional information into the record in this proceeding. The Commission will not re-open the record in response to this motion.

in this proceeding, as provided for and subject to the requirements and conditions set forth in this Order.

Code of Virginia

Section 56-265.2 A of the Code of Virginia ("Code") provides that "[i]t shall be unlawful for any public utility to construct . . . facilities for use in public utility service . . . without first having obtained a certificate from the Commission that the public convenience and necessity require the exercise of such right or privilege."

Section 56-46.1 A of the Code directs the Commission to consider several factors in reviewing proposed new facilities. It provides in part:

Whenever the Commission is required to approve the construction of any electrical utility facility, it shall give consideration to the effect of that facility on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact. . . . In every proceeding under this subsection, the Commission shall receive and give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection; and if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted. . . . Additionally, the Commission (i) shall consider the effect of the proposed facility on economic development within the Commonwealth and (ii) shall consider any improvements in service reliability that may result from the construction of such facility.

Section 56-46.1 B of the Code states that, with regard to overhead transmission lines, "[a]s a condition to approval the Commission shall determine that the line is needed and that the corridor or route the line is to follow will reasonably minimize adverse impact on the scenic assets, historic districts and environment of the area concerned."

Section 56-46.1 B of the Code also directs that "[i]n making the determinations about need, corridor or route, and method of installation, the Commission shall verify the applicant's

load flow modeling, contingency analyses, and reliability needs presented to justify the new line and its proposed method of installation."

Section 56-46.1 D of the Code explains that "'environment' or 'environmental' shall be deemed to include in meaning 'historic,' as well as a consideration of the probable effects of the line on the health and safety of the persons in the area concerned."

Section 56-46.1 C of the Code directs that "[i]n any hearing the public service company shall provide adequate evidence that existing rights-of-way cannot adequately serve the needs of the company."

Section 56-259 C of the Code states that "[p]rior to acquiring any easement of right-of-way, public service corporations will consider the feasibility of locating such facilities on, over, or under existing easements of rights-of-way."

### Need

We conclude, as did the Hearing Examiner, that the proposed 502 Junction - Loudoun line is needed in accordance with Virginia statutes. We find that: (1) it is reasonable to determine need based on violations of the NERC transmission reliability planning standards; (2) the tests employed by PJM and Dominion properly apply the NERC standards; (3) the results of those tests show NERC violations beginning in 2011; (4) the proposed 502 Junction - Loudoun line eliminates those NERC violations; and (5) sufficient Virginia need has been shown to give full weight to the line's regional need.<sup>9</sup> In reaching these conclusions, and as discussed in the Hearing Examiner's Report, the Commission has complied with the following directive in § 56-46.1 B of the Code: "In making the determinations about need, corridor or route, and method of installation, the Commission shall verify the applicant's load

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<sup>9</sup> See generally, Hearing Examiner's Report at 167-199.

flow modeling, contingency analyses, and reliability needs presented to justify the new line and its proposed method of installation." In addition, we find that the alternatives raised by those opposed to this line provide neither a factual nor legal basis requiring denial of the Applications.

#### *Load Flow Modeling*

We conclude that the load and generation assumptions used in the PJM and Dominion tests are reasonable,<sup>10</sup> and further adopt the following findings by the Hearing Examiner:

(i) "[t]he PJM generation deliverability and load deliverability tests and the Dominion test properly apply mandatory NERC transmission reliability planning standards;" (ii) "[t]he Applicants' load forecasts are based on reasonable assumptions for transmission planning purposes, including assumptions that project future savings from DSM programs to remain at current levels;" (iii) "[t]he Applicants' assumptions regarding future generation are consistent with the federally-mandated functional separation of transmission and generation,<sup>11</sup> and PJM's general lack of authority to cause generation to be constructed;" and (iv) "[t]he Applicants' projected load-flow results for 2011 and 2012 support the need for additional transmission to address violations of NERC transmission reliability planning standards."<sup>12</sup>

We find that the tests employed by PJM and Dominion using 2006 data, 2007 data, and data updated through February 2008 result in NERC violations as follows:

The 2006 [Regional Transmission Expansion Plan ('RTEP')] as conducted by PJM identified seven Category B NERC violations beginning in 2011, with the most severe violations predicted to occur on the Mt. Storm - Doubs line. The most severe overload for the PJM generation deliverability test was 101% of the line's

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<sup>10</sup> See, e.g., *id.* at 172-182.

<sup>11</sup> See, e.g., FERC Order No. 889, Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct, Docket No. RM95-9-000, 75 FERC ¶ 61,078 (Apr. 24, 1996) ("FERC Order 889").

<sup>12</sup> Hearing Examiner's Report at 221-222 (footnote added).

emergency rating, and the most severe overload for the PJM load deliverability test was 106%. The Dominion test produced eight Category B NERC violations beginning in 2011, with the most severe overload occurring on the Edinburg - Mt. Jackson line, which was modeled to be 114%, or 20% above the Dominion loading criteria of 94%. Applicants showed that both the number and severity of Category B NERC violations increase each year subsequent to 2011.

...

The tests conducted for the 2007 RTEP are limited in that they begin with 2012, with results for 2011 to be inferred from the 2006 RTEP. These tests show the need for additional transmission capacity in 2012.

...

The PJM and Dominion tests updated through February 2008, like the 2007 RTEP results, are limited in scope to 2012 and continue to show the need for additional transmission capacity.<sup>13</sup>

The Hearing Examiner also considered additional tests for NERC violations designed to incorporate the results of PJM's May 2008 Reliability Pricing Model ("RPM") auction ("RPM Tests"), which further support the finding of need made herein. We agree with the Hearing Examiner that: (1) "[f]or 2011, the most useful scenario is Scenario 3D, which is the 2011 without the proposed 502 Junction - Loudoun line, based on generation resources that cleared the RPM auction, including Mirant Potomac River units, and existing generation that bid but failed to clear;" (2) "the results for Scenario 3D supported the need for the proposed transmission line;" (3) "[f]or 2012, Joint Respondents' Scenario 7B showed that without either the proposed 502 Junction - Loudoun line or the Amos - Kempton lines, the Dominion test produces a

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<sup>13</sup> *Id.* at 182, 184, 186 (citations omitted). The Hearing Examiner explained that to pass the PJM tests (*i.e.*, PJM's generator deliverability test and load deliverability test), maximum loading for any transmission facility should not exceed 100% of its applicable rating: "NERC Reliability Standards mandate that the maximum loading for any transmission facility should stay within its 'Applicable Rating' for both thermal and voltage operating conditions, both pre-contingency and post-contingency." *Id.* at 169 (quoting Exh. 5, Appendix at 39) (internal quotations omitted). Under the Dominion test, no transmission facility should exceed 94% of its thermal rating under the following circumstances: "[Dominion's] planning criteria, which reflect NERC Reliability Standards, provide that, for the loss of a transmission line or for the loss of the most critical transmission line while the largest generating unit in the area is also not available, no facility should be loaded above 94% of its thermal rating." *Id.* at 170 (quoting Exh. 5, Appendix at 39) (internal quotations omitted).

NERC violation for an overload on the Mt. Storm-Doubs line of 1.4%," and (4) "the results for 2012 continue to show a need for additional transmission."<sup>14</sup>

As to the regional need for the proposed line, our January 29, 2008 Order in this proceeding explained as follows:

Regional, multi-state need for a proposed line – and regional, multi-state benefits projected therefrom - are factors that we may properly consider in reviewing an application to build the line. As further observed by Staff, the 'Commission has, however, uniformly granted its approval of lines on finding that Virginia consumers benefit from construction of the facility,' but 'the Commission has not held, however, that the public convenience and necessity required approval of a facility *solely* because of conditions outside Virginia.' We may properly consider regional, multi-state need and benefits as part of our evaluation under Virginia statutes; the weight accorded evidence of regional, multi-state need and benefits logically would increase to the extent that such need and benefits are related to, or affect, need and benefits within Virginia.<sup>15</sup>

In this regard, we adopt the Hearing Examiner's finding that "sufficient Virginia need has been shown to give full weight to the line's regional need."<sup>16</sup> Thus, we find *both* a Virginia need and a regional need; we are not required to determine, in this proceeding, whether need under Virginia law is met solely because of conditions outside Virginia, even should those conditions solely outside Virginia be alleged to raise the threat of indirect effects within Virginia, such as load shedding ordered by PJM.

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<sup>14</sup> *Id.* at 191-192. The Hearing Examiner also noted that Joint Respondents' Scenario 7B included 600 MW of generation from a proposed facility that had its certificate of public convenience and necessity canceled and 742 MW of generation from two facilities that are scheduled to be retired prior to the summer of 2012. *See, e.g., id.*; Exh. 225.

<sup>15</sup> January 29, 2008 Order at 3 (emphasis in original) (citation omitted).

<sup>16</sup> Hearing Examiner's Report at 197.

### *Generation Alternatives*

As discussed above, we have concluded that the load flow model used in the PJM generation deliverability and load deliverability tests and the Dominion test includes reasonable generation assumptions. We do not find, contrary to assertions by many of the opponents to this line, that the possibility of additional new generation - *i.e.*, proposed generation not included in the PJM and Dominion tests - warrants a denial of the Applications under the law and the facts presented in this case.

For example, several parties assert that Dominion should place CPV Warren and Possum Point 7 in service by 2011 as an alternative to the 502 Junction - Loudoun line. As a result of the current development status of these plants and the limitations imposed by PJM, however, we cannot reasonably assume that these facilities will be available for dispatch by that date. The availability of a proposed generation facility is dependent upon, among other things, its place in the PJM Generation Interconnection Request Queue ("queue"). In this regard, PJM witness Herling confirmed that PJM cannot - and will not - ensure that critical generation facilities will be interconnected to the transmission grid by any date certain:

We really have no ability to move generators ahead in the process based on their ability to solve one problem or another. The rights of one generator are in competition with the rights of every other generator and the process is very, you know, strictly structured to protect the rights of those parties with respect to their queue dates.<sup>17</sup>

Thus, regardless of how critical a new generation facility is in solving a reliability problem, Mr. Herling explained that PJM - which is regulated by FERC - does not have the authority to

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<sup>17</sup> Tr. 1935-36.

"move it to the top of the queue."<sup>18</sup> Moreover, Mr. Herling explained that PJM does not believe it should have such authority and is opposed to asking FERC for the same.<sup>19</sup>

In addition, even if we could reasonably assume that PJM would accept these facilities for dispatch into the grid by 2011, we find that the proposed transmission line is still needed. Dominion's load flow analyses show that if CPV Warren's projected 600 MW is available, transmission line overloads still occur - overloads that would be resolved by the 502 Junction - Loudoun line.<sup>20</sup> If the projected additional 600 MW at Possum Point is available, overloads may be reduced by approximately 2%, which still results in transmission line overloads necessitating the proposed line.<sup>21</sup> Furthermore, the evidence in this case does not establish that Dominion can complete construction of these facilities such that they would

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<sup>18</sup> Tr. 1936 (cross-examination of Mr. Herling by Piedmont counsel Mr. Watkiss):

Q. [If a new generation project] satisfies the reliability criteria violations that we established in the 2006 RTEP, let's move it to the top of the queue and say please go ahead with that in competition to some other solutions, you can't do that, can you?

A. No, I can't.

<sup>19</sup> Tr. 1937-38 (cross-examination of Mr. Herling by Piedmont counsel Mr. Watkiss):

Q. [D]id you recommend to FERC that if there are projects in the queue that resolve criteria reliability violations that you have some authority to move them to the head of the queue so that they can compete with other potential solutions?

A. No, we did not. That would be [] extremely disruptive to the queue process. It would create tremendous uncertainty for developers. And we recognize the need to move the process forward on a more timely basis and have taken a lot of steps to do so, but queue-jumping I firmly believe is not one of the ways to resolve this problem.

<sup>20</sup> See, e.g., Exh. 142. Dominion's load flow analyses indicated that, at best, CPV Warren reduced overloads on Mt. Storm - Doubs by approximately 2% for some contingencies, but served to increase overloads on Mt. Storm - Doubs and on other transmission lines for other contingencies tested. See *id.*

<sup>21</sup> See, e.g., Tr. 4053-54 (Dominion witness Bailey). Moreover, under the most current load flow analysis, which incorporated RPM auction results for 2011 and all existing generation that bid but failed to clear the market (*i.e.*, Scenario 3D discussed above), the overload on Mt. Storm - Doubs is 6% using the Dominion test. See, e.g., Hearing Examiner's Report at 189. A combined projected overload reduction of 4% from CPV Warren and Possum Point 7 would fail to eliminate this estimated 6% overload for 2011.

necessarily be physically available by 2011.<sup>22</sup> In sum, there has been no showing that either CPV Warren or Possum Point 7 can realistically be brought on line by 2011, and even if they could, they would not solve the problem that establishes the need for this line.

Opponents of the line also claim that if over 3,500 MW of new generation is constructed and in-service, the line is not needed; that is, the Commission should assume that over 3,500 MW of new generation will be available to meet the need identified herein, thus eliminating the necessity of the proposed line. Piedmont witness Merrill, for example, provided a 2012 sensitivity study based on modeling an additional sixteen proposed generation projects, apparently totaling over 7,800 MW.<sup>23</sup> We do not find, however, based on the evidence in this case, that it is reasonable to assume that a sufficient amount of additional new generation necessarily will be available from these proposed projects in order to obviate the reliability need established herein. Rather, as explained above, we conclude that the generation assumptions used in the PJM and Dominion tests - which includes both existing and new generation - are reasonable for the purposes herein.<sup>24</sup> Furthermore, even if we could reasonably assume that some unknown combination of these additional new generating units are in service and dispatched by PJM in 2011, we cannot necessarily conclude that such generation will result in

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<sup>22</sup> See, e.g., Tr. 3000 (Dominion witness Martin discussing CPV Warren) (confidential).

<sup>23</sup> See, e.g., Exh. 81. Further evidence showed that the estimated capacity available from these proposed projects could actually be significantly less. See, e.g., Exhs. 103, 227, 228, 229, 231.

<sup>24</sup> See also, Hearing Examiner's Report at 196:

Because the industry structure and market mechanisms are policy decisions that have been made primarily at the federal level, the approach taken in this case has been to update generation information and focus on the most current information, especially the May RPM auction, and to limit the analysis period. Therefore, because assumptions concerning future generation are built into the various tests as discussed above, there can be no reliance on other future generation as an alternative to the needs identified in the prior section.

zero reliability violations. As explained in the Staff consultant Bates White Report: "[A]dding generation resources at the 'wrong' location actually aggravates the severity of the expected reliability violations in 2011, as is shown by the Bath County and Tenaska cases."<sup>25</sup>

In summary, the Hearing Examiner found - and we agree that the record supports his finding - that PJM's and the Applicants' identification of a reliability problem by 2011 on the Mt. Storm - Doubs line is supported by the record, including the generation assumptions in the PJM and Dominion tests, and that the transmission line proposed herein will solve that problem. We have no assurance or proof that additional new power plants could realistically be constructed and available on a timely basis - in large part due to PJM's queue limitations and uncertain construction completion dates - sufficient to be found as a factual alternative or a legal basis to deny the applications.

#### *DSM and Transmission System Upgrades*

We also adopt the Hearing Examiner's findings regarding DSM and transmission system upgrades. As noted above, the load forecasts that we utilize herein include projected megawatt savings from DSM programs at current levels. We do not find, however, that DSM alone - or in a hypothetical combination with other alternatives - is a reasonable proposal to meet the need satisfied by the transmission line approved herein. As explained by the Hearing Examiner, "[the] uncertainty regarding projected DSM savings made such projections inappropriate for transmission system reliability planning[, and t]his same uncertainty eliminates DSM as a viable alternative to the proposed transmission line."<sup>26</sup>

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<sup>25</sup> Exh. 92 (Staff consultant Bates White Report at 78).

<sup>26</sup> Hearing Examiner's Report at 192.

In addition, we likewise adopt the Hearing Examiner's findings regarding transmission system upgrades: (1) "[b]ased on the testimony of [Dominion consultant] Mr. Palermo and the [Staff consultant] Bates White Report, . . . flow control devices do not represent a viable alternative to the proposed 502 Junction - Loudoun line;" and (2) "[b]ased on the testimony of [Dominion witnesses] Mr. Allen and James R. Bailey, I find that upgrading the Mt. Storm - Doubs line is not a viable option in this case."<sup>27</sup>

*Amos - Kemptown Transmission Line*

Next, in discussing the RPM Tests, the Hearing Examiner also concluded that "PJM and Dominion test results for 2012 based upon the various updated versions of the 2007 RTEP and reflecting the May 2008 RPM auction, indicate that if the Amos - Kemptown line is in service by 2012 it will eliminate the anticipated NERC violations for 2012."<sup>28</sup> We conclude, however, as did the Hearing Examiner, that the proposed Amos - Kemptown line does not eliminate the need found herein for the 502 Junction - Loudoun line. Based on the record in this case, we find that the potential for construction of the Amos - Kemptown line remains too speculative for us reasonably to conclude that the 502 Junction - Loudoun line will not be needed.<sup>29</sup> We cannot take the risk that a proposed Amos - Kemptown line will be available to meet on a timely basis the proven need found herein.

*Integrated Resource Planning and PJM*

As set forth herein, we have found need for the 502 Junction - Loudoun line under the Virginia statutes that we must apply to the instant applications, and we have concluded that the

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<sup>27</sup> *Id.* at 194-195.

<sup>28</sup> *Id.* at 192.

<sup>29</sup> *See, e.g., id.* at 192-193.

public convenience and necessity require construction of the line as provided for and subject to the requirements and conditions set forth in this Order. This finding notwithstanding, several of the respondents that oppose this line in effect ask us - in this case - to initiate an integrated resource planning ("IRP") exercise under Virginia law to determine whether there is any other conceivable combination of possible alternatives that represents a better solution to the threat to service reliability in Northern Virginia represented by the NERC violations on the Mt. Storm - Doubs line. For example, respondents assert that the Hearing Examiner erred as a matter of law by not considering IRP and associated economic considerations. Examples of such assertions include:

- [T]he law and market structure in existence in the Commonwealth today not only contemplates that the Commission will consider the optimal combinations of generation, demand management and *transmission* investments, but *mandates* integrated planning of those resources. In other words, current law requires exactly the analysis that the Hearing Examiner refused to engage in.<sup>30</sup>
- Dominion's assertion of an IRP prohibition, not surprisingly, is not supported by reference to any law or regulation. There is no such law, regulation, or prohibition. . . . [T]he Commonwealth's IRP law not only permits, but *requires* the Applicants and other Virginia electric utilities to integrate *transmission*, generation and demand resource planning. Va. Code § 56-597, *et seq.*<sup>31</sup>
- The IRP statute clearly demonstrates the legislature's move toward creating reasonable and cost-effective measures for providing energy through a comprehensive planning strategy, which includes not only *transmission* but generation and demand resources as well.<sup>32</sup>

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<sup>30</sup> Piedmont's August 18, 2008 Comments at 51 (emphasis added).

<sup>31</sup> *Id.* at 59-60 (emphasis added).

<sup>32</sup> Prince William County's August 18, 2008 Comments at 5 (emphasis added).

- The Hearing Examiner rejected out of hand . . . evidence - completely un rebutted on the record below - [which] proved that locating generation in proximity to the Mid-Atlantic markets that cause PJM's power flow simulations to overload the Mt. Storm - Doubs line is a more economical solution than is building the Loudoun line. . . .<sup>33</sup>
- Virginia Code § 56-597 *et seq.* reinstated integrated resource planning in Virginia. . . . It is within the Commission's authority to begin implementing Virginia's integrated resource planning policies during these proceedings. In-state generation is more reliable, reduces Virginia's dependence on energy imports, and, compared to large transmission projects, environmentally responsible, and should be considered as an alternative to the Loudoun line.<sup>34</sup>
- [T]he Hearing Examiner erred as a matter of law by refusing to consider economic issues and integrated resource planning. . . . [T]he Hearing Examiner's refusal to consider demand response programs in assessing need for the transmission line does not comport with the new Virginia IRP legislation.<sup>35</sup>

In this case, as required by Virginia statutes, we have evaluated the reliability needs presented to justify the proposed line. We also recognize, as did the Hearing Examiner, that "[a]ssumptions regarding future generation have a direct bearing on the need for the proposed transmission line,"<sup>36</sup> and, as discussed above, we have included such assumptions (including reasonable DSM assumptions) in our needs analysis. Opponents of the line, however, advocate using this case to initiate a new planning process under Virginia law to mesh the myriad of transmission, generation and conservation (including DSM) options into a comprehensive plan that could be presented as a better alternative than building the proposed transmission line.

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<sup>33</sup> Piedmont's August 18, 2008 Comments at 53 (citations omitted).

<sup>34</sup> Virginia's Commitment's August 18, 2008 Comments at 34-35.

<sup>35</sup> Sensible Energy's August 18, 2008 Comments at 3, 6 (typeface and case modified).

<sup>36</sup> Hearing Examiner's Report at 176.

We are indeed sympathetic to the opponents' position that planning for transmission, generation and conservation should be done in an integrated and holistic process, in order to arrive at the most rational and cost-effective plan to meet Virginia's future load growth and transmission reliability needs. As a policy matter, such an integrated planning approach may have significant merit. The reality is, however, that the law and facts applicable to this matter do not enable us to use a transmission line case brought under Va. Code §§ 56-265.2 and 56-46.1 to conduct an IRP exercise pursuant to Va. Code § 56-597 *et seq.* - and then use the result of that exercise as the legal basis to deny an application filed under §§ 56-265.2 and 56-46.1 when a clear reliability need has been shown and the proposed transmission line is an acceptable option under Virginia statutes to meet that need.<sup>37</sup>

Federal policy restricts Virginia utilities - and PJM - from conducting integrated transmission and generation planning of the type some respondents urge us to order in this proceeding.<sup>38</sup> For example, the record in this case illustrates that FERC's regulations and policies mandating functional separation of transmission and generation limit Dominion's ability to integrate planning for generation with planning for transmission. Indeed, Dominion witness Bailey, who works on the transmission side of the business, testified as follows:

I cannot collaborate or communicate with our generation side of the house. You know, I'm there to build a - make sure that the transmission system can deliver the generation regardless of who

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<sup>37</sup> The Hearing Examiner also noted that "Dominion witness Palermo confirmed that if enough new generation is built in the right locations, there would be no need for the proposed transmission line." *Id.* at 176 (citing Palermo, Tr. at 2602-03). There is a distinct difference, however, between: (1) including reasonable generation assumptions in our needs analysis; and (2) performing, as urged by opponents to this line, an IRP analysis under separate Virginia statutes to conclude that the Applicants should meet the reliability needs identified herein through means other than new transmission, such as building new generation.

<sup>38</sup> *See, e.g.*, Hearing Examiner's Report at 195; FERC Order No. 2004, Standards of Conduct for Transmission Providers, Docket No. RM01-10-000, 105 FERC ¶ 61,248 (Nov. 25, 2003); FERC Order 889; Dominion's May 19, 2008 Brief at 59.

the developer is. So I don't - I'm not privy to the plans of Dominion generation any more than I am of any other developer.<sup>39</sup>

Mr. Bailey further explained that such integrated operational planning simply does not exist as it did prior to FERC's orders on open access in wholesale power markets and Dominion's entry into PJM:

Q. . . . And again, going back a few years, wasn't one of the functions the Company went through in managing its rate base and its operations was to use a mix of generation and transmission to provide abundant, reliable power to its service territory at the best price, balancing the mix of transmission and generation?

A. I mean, I guess you're talking, you know, some time ago when there was - it sounds like you're talking about integrated resource type planning issues.

Q. Before PJM?

A. Well, it was long before PJM that we did that. Open access sort of changed all that. . . . I believe at one time, and I don't know when that was, it was before I got involved in this part of the Company, that the generation and transmission planning were under one organization. Today that does not exist.<sup>40</sup>

In this regard, an electric utility is required to functionally separate its generation and transmission business units. As related by Dominion:

PJM and the [Dominion] transmission function do not control or have influence over whether and where new generation will be sited or when it will become operational. Prior to FERC Order No. 889, transmission planning and generation planning were integrated. Today, that integration is prohibited. Tr. 2322. The Company's transmission function does not coordinate with the generation business portion of Dominion Virginia Power. Tr. 1780. Mr. Ronnie Bailey explained that federal and state Standards and Codes of Conduct restrict his communication and

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<sup>39</sup> Tr. 4056-57.

<sup>40</sup> Tr. 2321-2322 (cross-examination of Mr. Bailey by Fauquier County counsel Mr. Sutliff).

coordination with the generation side of Dominion Virginia Power.  
Tr. 4057; 4072.<sup>41</sup>

TrAILCo further explained that in place of an integrated planning process, PJM has attempted to create integrated market solutions:

PJM is required to allow market solutions to develop to meet generation resource needs, without interference or preference in that process. The PJM planning process is highly integrated, with a range of wholesale markets related to the provision of generation and demand response services, and is designed to provide signals to generation developers as to where their resources will be most valuable and where they will be most effective with respect to the resolution of reliability and transmission congestion-related problems. The planning process, however, does not identify or in any way select, nor does PJM have any authority to select, the most effective generation or demand response solutions.<sup>42</sup>

Accordingly, in responding to requests in this proceeding for integrated planning that concurrently evaluates economic considerations attendant to both generation and transmission, the Hearing Examiner explained as follows:

On brief, Fauquier County asserted that '[p]rofit is the underlying motive to the proposed transmission line.' Prince William County faulted Applicants for failing to provide a comprehensive cost/benefit analysis. Prince William County offered the testimony of Jeffery Brown who presented potential cost savings that could be achieved through local generation using gas-fired turbines. Virginia's Commitment and Piedmont also raise similar economic issues.

In this case, the question of need will be answered in terms of reliability based on projected power flows, loads, and available generation, not in terms of economics. Moreover, as discussed above, the current market structure does not permit integrated resource planning as proposed by Mr. Brown.<sup>43</sup>

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<sup>41</sup> Dominion's May 19, 2008 Brief at 59 (footnote omitted). *See also*, Hearing Examiner's Report at 195.

<sup>42</sup> TrAILCo's May 19, 2008 Brief at 49-50. *See also*, Hearing Examiner's Report at 195-196.

<sup>43</sup> Hearing Examiner's Report at 197 (citations omitted).

As a matter of policy, transmission planning and control of transmission assets are now conducted on a regional, multi-state basis by a regional transmission entity ("RTE"), which in this case is PJM. This is a direct result of the Virginia statute that requires Virginia's utilities to join an RTE.<sup>44</sup> Not only was the primary responsibility for transmission planning given to the RTE, but along with it control of Virginia's transmission assets and generation dispatch. It is also undisputed from the record of this case that under federal policy PJM itself cannot order a generating plant to be built to solve a clear reliability problem on a transmission line.<sup>45</sup> As the Hearing Examiner pointed out, that clearly tilts the field towards PJM recommending more and more new transmission lines when other options might be a more efficient use of capital and much less intrusive on the landscape.<sup>46</sup> Since PJM is regulated by FERC, whether these federal rules represent sensible policy is ultimately for the United States Congress to decide.

Finally, even if as a practical matter Dominion could accelerate construction of CPV Warren or Possum Point 7 as an alternative to the 502 Junction - Loudoun line, neither Dominion - nor PJM - can move these plants ahead of other planned generation plants in the PJM queue and allow these plants to interconnect with the electric grid on an accelerated basis. PJM has testified - and no one disputes - that federal law prevents PJM from ordering new generation to be built to satisfy a transmission need and further prevents PJM from moving a proposed plant ahead of others in its queue to satisfy a transmission need. As explained by the

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<sup>44</sup> Va. Code § 56-579.

<sup>45</sup> See, e.g., Hearing Examiner's Report at 177-78 (citing Dominion Brief at 59-60; Exh. 101 at 21; Herling, Tr. 2021):

Dominion also stressed the lack of control exercised by PJM over the construction of new generation, as well as the functional separation between transmission and generation planning. PJM cannot order a generator to be built and cannot keep a generator from retiring.

<sup>46</sup> See, e.g., *id.* at 178.

Hearing Examiner: "Indeed, [PJM witness] Mr. Herling testified that PJM cannot move critical generation projects ahead in its queue process."<sup>47</sup> This is the "market structure" that the Hearing Examiner referenced in his Report when finding that neither an IRP process as envisioned by opponents of this line, nor the CPV Warren and Possum Point 7 unbuilt plants, represent valid alternatives sufficient under Va. Code §§ 56-265.2 and 56-46.1 to deny these applications.<sup>48</sup>

#### West Virginia and Pennsylvania

We adopt the Hearing Examiner's finding that the "Commission should condition approval of the Virginia segments of the 502 Junction - Loudoun line on approval in Pennsylvania and West Virginia."<sup>49</sup> The Hearing Examiner stated that the "Applicants have failed to provide any evidence that construction of a 500 kV transmission line from the West Virginia-Virginia border to Loudoun provides any resolution to the NERC violations that are the subject of this case, namely overloads on the Mt. Storm - Doubs line."<sup>50</sup> Indeed, we find that the Applicants have not provided sufficient evidence, if any, to establish that the transmission lines

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<sup>47</sup> *Id.* at 178 (citing Herling, Tr. 1935-36).

<sup>48</sup> *See, e.g., id.* at 2 ("current market structure . . . no longer permits integrated resource planning to optimize planned generation and transmission"), 196-197. *See also, id.* at 178:

I partially agree with the Applicants that its assumptions regarding future generation are consistent with the federally-mandated functional separation of transmission and generation, and PJM's general lack of authority to cause generation to be constructed. PJM's limited authority in regard to generation amplifies the uncertainty of the queue process. That is, because the timing and location of new generation may have either a positive or negative impact on system reliability, PJM's limited authority, coupled with the historic completion rates of projects in the PJM queue, support PJM's conservative assumptions regarding future generation for system reliability planning.

<sup>49</sup> *Id.* at 222; *see also, id.* at 198-199.

<sup>50</sup> *Id.* at 199.

proposed in these proceedings are needed if the 502 Junction - Loudoun line is not completed in its entirety.

Accordingly, the certificates of public convenience and necessity and the authorizations granted herein are conditioned on the respective state commission approval of both a West Virginia portion and a Pennsylvania portion of the proposed 502 Junction - Loudoun line. Prior to commencing construction of the lines approved herein, the Applicants must submit to the Commission's Division of Energy Regulation a copy of the orders from the Public Service Commission of West Virginia and the Pennsylvania Public Utility Commission approving, respectively, a West Virginia segment and a Pennsylvania segment of the 502 Junction - Loudoun line.

#### Route

We adopt the Hearing Examiner's recommendation regarding the route of the proposed transmission lines: (1) for the TrAILCo Application, we approve Route B; and (2) for the Dominion Application, we approve the Southern Route. The Hearing Examiner found that: (1) "[f]or Case No. PUE-2007-00033, Route B reasonably minimizes adverse impact, makes use of existing right-of-way, and should be designated by the Commission as the route for the proposed line;" and (2) "[f]or Case No. PUE-2007-00031, the proposed Southern Route reasonably minimizes adverse impact, makes use of existing right-of-way, and should be designated by the Commission as the route for the proposed line."<sup>51</sup>

In recommending Route B for the TrAILCo Application, the Hearing Examiner concluded as follows:

As discussed by Staff witness McCoy, the environmental differences, though small, extend beyond wetlands and favor

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<sup>51</sup> *Id.* at 222.

Route B. Moreover, TrAILCo ignored the impact on residences within 500 feet of the centerline, which also favors Route B. Therefore, I agree with Staff and DEQ and find that Route B is the route that 'reasonably minimizes adverse impact' by the greatest degree.<sup>52</sup>

In recommending the Southern Route for the Dominion Application, the Hearing Examiner concluded as follows:

The recommendation as to a route generally comes down to a weighing of the benefits of using an existing right-of-way and corridor, against the greater number of homes impacted. In this case, use of the existing right-of-way and corridor by the proposed Southern Route is further strengthened by that route's lesser impact on historic and cultural assets, and by uncertainty raised by [the Virginia Department of Transportation ('VDOT')] regarding the alternate I-66 Route. Furthermore, the number of homes impacted is somewhat weakened by the fact that many of the homes were constructed subsequent to the existing transmission line. Though the alternate I-66 Route has a lower cost and less of an impact on agricultural and forest lands and other advantages as discussed above, these advantages do not tip the balance in favor of the alternate I-66 Route. Therefore, I find that the proposed Southern Route 'reasonably minimizes adverse impact.'<sup>53</sup>

In addition, the Hearing Examiner found as follows: (1) as to undergrounding, "[b]ased on the significant difference in cost and the novelty of an underground installation of a transmission line of this length and capacity, I agree with Dominion that this transmission line should not be installed underground;" and (2) as to the existing right-of-way from Meadow Brook to Doubs, "the Meadow Brook to Doubs option was considered and based on the evidence, rightfully rejected."<sup>54</sup>

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<sup>52</sup> *Id.* at 221.

<sup>53</sup> *Id.* at 218-219.

<sup>54</sup> *Id.* at 201.

Although we do not discuss herein all of the concerns expressed by each participant and public witness regarding the proposed routes, we have considered and weighed the relevant factors raised in this proceeding. We also have considered and weighed the factors set forth in §§ 56-265.2 A, and 56-46.1, and 56-259 C of the Code, factors that are, to a large extent, interrelated and overlapping. We have considered, as did the Hearing Examiner, comparisons of proposed routes, use of rights-of-way, impacts on residents (including probable effects of the line on the health and safety of the persons in the area concerned), open space easements, costs, agricultural and forest lands, environmental impacts, and historical and cultural impacts. We have reviewed all alternative proposals and have fully considered the adverse impacts of the proposed routes as required by statute.

We find that Route B and the Southern Route meet the need to maintain adequate reliability of service, while satisfying the legal standards set forth in the Code. We have considered each statutory criterion on an individual basis and as part of the whole, in light of all the relevant statutory criteria and with regard to the concerns raised by the participants and public witnesses. We also have considered the effect of the proposed lines on economic development within the Commonwealth, the improvements in service reliability that may result from the construction of these facilities, and local comprehensive plans that have been adopted. We find that the Applicants have provided adequate evidence that, to the extent new rights-of-way are required for the routes approved herein, existing rights-of-way cannot adequately serve the needs thereof. We further conclude that the routes recommended by the Hearing Examiner and approved herein reasonably minimize adverse impact on scenic assets, historic districts, and environment of the areas concerned.

## Department of Environmental Quality

The DEQ "coordinated a review of the proposed transmission line by a number of state, federal, and local agencies" ("DEQ Report").<sup>55</sup> The DEQ Report identified permits and approvals required for the transmission lines.<sup>56</sup> The Hearing Examiner explained that the DEQ Report also included the following recommendations:<sup>57</sup>

- The alternate I-66 Route was recommended by DEQ's Office of Wetland and Water Protection ('DEQ-OWWP'), Department of Conservation and Recreation ('DCR'), DGIF, and Virginia Marine Resources ('VMRC'). Furthermore, if the alternate I-66 Route is chosen by the Commission, DEQ recommended that Applicants coordinate during the planning phase with [VDOT] (to prevent conflicts with long-range plans to widen I-66) and [the Department of Historic Resources ('DHR')] (to avoid, minimize, and mitigate any potential adverse impacts to cultural resources).
- Follow DEQ recommendations to avoid wetlands and streams, and minimize indirect and temporary impacts to wetlands.
- Follow the recommendations of DCR's Division of Chesapeake Bay Local Assistance and Prince William County to minimize the impacts of the project on Resource Protection Areas.
- Take precautions to limit emissions of volatile organic compounds and oxides of nitrogen when working in ozone non-attainment areas.
- Conduct an environmental investigation that includes a search of waste-related databases to identify any solid or hazardous waste sites or issues on and around the property before work begins.
- Reduce solid waste at the source, re-use it, and recycle it to maximum extent practicable.
- Follow recommendations of the DCR and DHR to minimize the impacts of the project on the Appalachian National Scenic Trail.

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<sup>55</sup> *Id.* at 209 (citation omitted).

<sup>56</sup> *Id.* at 209-211.

<sup>57</sup> *Id.* at 211-213 (citations omitted).

- Coordinate this project with and follow the recommendations of the DCR regarding the protection of designated scenic rivers and trails, natural heritage resources and avoidance of natural area preserves.
- Coordinate this project with and follow the recommendations of the DGIF with respect to impacts to wildlife and protected species.
- Protect trees that are not identified for removal from the adverse effects of construction to the extent practicable.
- Coordinate with the DHR regarding archaeological and architectural surveys necessary to determine the full extent of the impacts of the selected route on historic properties and to develop measures for the avoidance, minimization, or mitigation of adverse effects.
- Coordinate road and transportation impacts with the affected counties and the appropriate VDOT District and Residency Offices.
- Follow the principles and practices of pollution prevention to the maximum extent practicable.
- Limit the use of pesticides and herbicides to the extent practicable.
- Follow the requirements of the Federal Aviation Regulations by notifying the Federal Aviation Administration about the construction of the proposed transmission line.
- Work with local officials to address local concerns related to the proposed line.

We adopt the Hearing Examiner's finding that the "[r]ecommendations contained in the DEQ Report should be adopted by the Commission as conditions of approval, with the exceptions of DEQ's overall routing recommendation in Case No. PUE-2007-00031, and DGIF recommendations regarding clear-span bridges, a general prohibition of clearing and maintenance, and increased buffers."<sup>58</sup> Based on the record in this matter, we find that the

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<sup>58</sup> *Id.* at 222; *see also, id.* at 213-216.

recommendations in the DEQ Report, absent the Hearing Examiner's aforementioned exceptions, are necessary to minimize the adverse environmental impacts of the proposed lines; the Applicants shall comply with such recommendations as a condition of our approval herein.<sup>59</sup>

#### Open Space Easements

The Hearing Examiner made the following finding:

Where existing Dominion right-of-way crosses land that is now subject to open space easements, Dominion has agreed to locate the proposed new line within the existing easement or provide landowners with an option of shorter transmission towers in exchange for an additional 60-foot easement into the open space land by providing written confirmation that the open space easement has been released within a month of the final order in this case. Dominion should be required to provide this option to such landowners.<sup>60</sup>

Dominion asserts that the Hearing Examiner "has converted [Dominion's] limited request for such authorization into a requirement, which is not appropriate or necessary for [Dominion] to honor its commitment."<sup>61</sup> Conversely, Rappahannock County contends, among other things, that the Commission should "give landowners 180 days in which to make the written confirmation" and should "begin the 180 day period when Dominion provides the landowner with a plat showing the size, type, number and location of the towers for each alternative."<sup>62</sup>

We find that where existing Dominion right-of-way crosses land that is now subject to open space easements, Dominion shall locate the proposed new line within the existing easement or provide landowners with an option of shorter transmission towers in exchange for an

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<sup>59</sup> The Applicants shall coordinate with DEQ the implementation of the DEQ recommendations adopted herein, including any potential modifications or clarifications thereto mutually agreeable to the Applicants and DEQ.

<sup>60</sup> *Id.* at 222.

<sup>61</sup> Dominion's August 18, 2008 Comments at 35.

<sup>62</sup> Rappahannock County's August 15, 2008 Comments at 4.

additional 60-foot easement into the open space land as follows: (a) for such landowners that have previously requested this option, and for those requesting this option within 30 days from the date of this Order, Dominion shall provide a diagram showing the size, type, number and location of the towers for each alternative; and (b) within 90 days from the date that the landowner receives such diagram, the landowner shall provide written confirmation to Dominion that the open space easement has been released.

#### Right-of-Way Clearing Plan

We adopt the following findings by the Hearing Examiner:

Applicants should be required to develop and file with the Commission a detailed right-of-way clearing plan that follows FERC guidelines and addresses future maintenance of the right-of-way; and

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To ensure adherence to the right-of-way clearing plan, the Commission should require Applicants to each have one of its foresters, or a contract forester or arborist, supervise the day-to-day operations of its clearing contractor.<sup>63</sup>

Accordingly, IT IS HEREBY ORDERED THAT:

(1) In Case No. PUE-2007-00031, Dominion and TrAILCo are authorized to construct and operate a 500 kV transmission line as provided for and subject to the requirements and conditions set forth in this Order.

(2) In Case No. PUE-2007-00033, TrAILCo is authorized to construct and operate a 500 kV transmission line as provided for and subject to the requirements and conditions set forth in this Order.

(3) Pursuant to §§ 56-265.2, 56-46.1, and related provisions of Title 56 of the Code of Virginia, the applications for certificates of public convenience and necessity in Case Nos.

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<sup>63</sup> Hearing Examiner's Report at 222.

PUE-2007-00031 and PUE-2007-00033 are granted as provided for and subject to the requirements and conditions set forth in this Order, and otherwise are denied.

(4) Pursuant to the Utility Facilities Act, Chapter 10.1 (§§ 56-265.1 *et seq.*) of Title 56 of the Code of Virginia, Trans-Allegheny Interstate Line Company is issued the following certificates of public convenience and necessity:

Certificate No. ET-184 authorizes Trans-Allegheny Interstate Line Company under the Utility Facilities Act to construct and operate the proposed Trans-Allegheny Interstate Line 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00033 in Frederick County, all as shown on the map attached to the certificate.

Certificate No. ET-185 authorizes Trans-Allegheny Interstate Line Company under the Utility Facilities Act to construct and operate the proposed Trans-Allegheny Interstate Line 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00033 in Warren County, all as shown on the map attached to the certificate.

Certificate No. ET-186 authorizes Trans-Allegheny Interstate Line Company under the Utility Facilities Act to construct and operate the proposed Trans-Allegheny Interstate Line 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031 in Fauquier County, all as shown on the map attached to the certificate. Portions of the proposed transmission line in Fauquier County are jointly owned with Virginia Electric and Power Company, which is issued a separate certificate.

Certificate No. ET-187 authorizes Trans-Allegheny Interstate Line Company under the Utility Facilities Act to construct and operate the proposed Trans-Allegheny Interstate Line 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031 in Rappahannock County, all as shown on the map attached to the certificate. The proposed transmission line in Rappahannock County is jointly owned with Virginia Electric and Power Company, which is issued a separate certificate.

Certificate No. ET-188 authorizes Trans-Allegheny Interstate Line Company under the Utility Facilities Act to construct and operate the proposed Trans-Allegheny Interstate Line 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031 in Culpeper County, all as shown on the map attached to the

certificate. The proposed transmission line in Culpeper County is jointly owned with Virginia Electric and Power Company, which is issued a separate certificate.

(5) Pursuant to the Utility Facilities Act, Chapter 10.1 (§§ 56-265.1 *et seq.*) of Title 56 of the Code of Virginia, Virginia Electric and Power Company is issued the following certificates of public convenience and necessity:

Certificate No. ET-189 authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to operate previously certificated transmission lines and facilities in Warren County, all as shown on the map attached to the certificate.

Certificate No. ET-80n authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to operate previously certificated transmission lines and facilities in Fauquier County, all as shown on the map attached to the certificate. Portions of the proposed transmission line in Fauquier County are jointly owned with Trans-Allegheny Interstate Line Company, which is issued a separate certificate. Certificate No. ET-80n cancels Certificate No. ET-80m issued to Virginia Electric and Power Company on November 13, 2006, in Case No. PUE-2006-00048.

Certificate No. ET-139a authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to operate previously certificated transmission lines and facilities in Rappahannock County, all as shown on the map attached to the certificate. The proposed transmission line in Rappahannock County is jointly owned with Trans-Allegheny Interstate Line Company, which is issued a separate certificate. Certificate No. ET-139a cancels Certificate No. ET-139 issued to Virginia Electric and Power Company on November 25, 1975.

Certificate No. ET-74e authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to

operate previously certificated transmission lines and facilities in Culpeper County, all as shown on the map attached to the certificate. The proposed transmission line in Culpeper County is jointly owned with Trans-Allegheny Interstate Line Company, which is issued a separate certificate. Certificate No. ET-74e cancels Certificate No. ET-74d issued to Virginia Electric and Power Company on May 2, 1978.

Certificate No. ET-105x authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to operate previously certificated transmission lines and facilities in Prince William County, all as shown on the map attached to the certificate. Certificate No. ET-105x cancels Certificate No. ET-105w issued to Virginia Electric and Power Company on November 13, 2006 in Case No. PUE-2006-00048.

Certificate No. ET-91q authorizes Virginia Electric and Power Company under the Utility Facilities Act to construct and operate the proposed Meadow Brook-Loudoun 500 kV transmission line and facilities as authorized in Case No. PUE-2007-00031; and to operate previously certificated transmission lines and facilities in Loudoun County, all as shown on the map attached to the certificate. Certificate No. ET-91q cancels Certificate No. ET-91p issued to Virginia Electric and Power Company on February 15, 2008 in Case No. PUE-2005-00018.

(6) Within thirty (30) days from the date of this Order, Dominion and TrAILCo shall file with the Commission's Division of Energy Regulation two copies of appropriate maps that show the routing of the transmission lines approved herein.

(7) Dominion and TrAILCo shall comply with the recommendations in the DEQ Report, with the exception of DEQ's overall routing recommendation in Case No. PUE-2007-00031, and DGIF recommendations regarding clear-span bridges, a general prohibition of clearing and maintenance, and increased buffers.

(8) Where existing Dominion right-of-way crosses land that is now subject to open space easements, Dominion shall locate the proposed new line within the existing easement or provide

landowners with an option of shorter transmission towers in exchange for an additional 60-foot easement into the open space land as follows: (a) for such landowners that have previously requested this option, and for those requesting this option within thirty (30) days from the date of this Order, Dominion shall provide a diagram showing the size, type, number and location of the towers for each alternative; and (b) within ninety (90) days from the date that the landowner receives such diagram, the landowner shall provide written confirmation to Dominion that the open space easement has been released.

(9) Within thirty (30) days from the date of this Order, Applicants shall develop and file with the Commission a detailed right-of-way clearing plan that follows FERC guidelines and addresses future maintenance of the right-of-way.

(10) Each of the Applicants shall have one of its foresters, or a contract forester or arborist, supervise the day-to-day operations of its clearing contractor.

(11) The certificates of public convenience and necessity and the authorizations granted herein are conditioned on the respective state commission approval of both a West Virginia portion and a Pennsylvania portion of the proposed 502 Junction - Loudoun line.

(12) Prior to commencing construction of the lines approved herein, the Applicants must submit to the Commission's Division of Energy Regulation a copy of the orders from the Public Service Commission of West Virginia and the Pennsylvania Public Utility Commission approving, respectively, a West Virginia segment and a Pennsylvania segment of the 502 Junction - Loudoun line.

(13) The transmission lines approved in Case Nos. PUE-2007-00031 and PUE-2007-00033 must be constructed and in-service by July 1, 2011; however, Dominion and TrAILCo are granted leave to apply for an extension for good cause shown.

(14) The September 2, 2008 joint letter request from Prince William County, Sensible Energy, Virginia's Commitment, PLA, and Piedmont that moved the Commission to re-open the record is denied.

(15) This matter is continued.

Commissioner Shannon participated in this matter.

Commissioner Dimitri did not participate in this matter.

AN ATTESTED COPY hereof shall be sent by the Clerk of the Commission to all persons on the official Service List in this matter. The Service List is available from the Clerk of the State Corporation Commission, c/o Document Control Center, 1300 East Main Street, First Floor, Tyler Building, Richmond, Virginia 23219.

A True Copy  
Teste:

  
Clerk of the  
State Corporation Commission

SHANNON, Commissioner, Concurs:

While I concur with the result, which properly applies the facts of this case to the current state of the law, I write separately to emphasize the following:

I had the honor to serve on this Commission from 1972 to 1996. During that period, and for decades prior, this Commission and the Commonwealth's electric utilities continually worked to plan - on an integrated basis - both transmission and generation. These efforts permitted the Commission to evaluate and to implement a *combination* of generation and transmission planning in order to reach the most efficient balance of both. This enabled Virginia's electric utilities to meet the rising demand for electricity in the Commonwealth at the least cost to ratepayers and at the least intrusion on the beautiful Virginia landscape. That system served the people of Virginia well, as the factual history of that period will demonstrate.

Subsequent to my active service on this Commission, the General Assembly - in moving toward retail market competition that ultimately did not develop - (1) vested the Commission

with *discretion*<sup>64</sup> over the divestiture of *generating* assets, but (2) *required*<sup>65</sup> the transfer of management and control of *transmission* assets to a regional transmission entity ("RTE").

Regarding generation, the Commission exercised its discretion and denied Dominion's request to divest its generating assets.<sup>66</sup> With respect to transmission assets, the Commission implemented the required transfer to an RTE, which in this region is PJM, headquartered in Pennsylvania and regulated by the federal government.<sup>67</sup>

The transfer of management and control of transmission assets to PJM places a myriad of restrictions on Virginia's sovereign authority over its public utilities - including effectively placing the responsibility for transmission planning, as well as Dominion's ability to interconnect its new generating facilities to its transmission facilities, under the control of the federally-regulated PJM. As a result, transmission planning and interconnection of generating plants to the grid are no longer based solely on what is best for Virginia, but also on the outcome of PJM's planning and interconnection process for a region currently consisting of thirteen states and the District of Columbia.

In addition, the federal policies put in place by the United States Congress and the Federal Energy Regulatory Commission ("FERC") governing PJM further affect the outcome for Virginians. PJM explained during this proceeding that due to FERC policies and regulations: (1) it cannot plan transmission and generation together to produce a reliable least-cost mix of

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<sup>64</sup> Va. Code § 56-590.

<sup>65</sup> Va. Code § 56-579.

<sup>66</sup> See *Application of Virginia Elec. and Power Co.*, Case No. PUE-2000-00584, 2001 S.C.C. Ann. Rept. 467 (Dec. 18, 2001).

<sup>67</sup> See *Commonwealth of Virginia, ex rel., State Corporation Commission, Ex Parte: In the matter concerning the application of Virginia Elec. and Power Co. d/b/a Dominion Virginia Power for approval of a plan to transfer functional and operational control of certain transmission facilities to a regional transmission entity*, Case No. PUE-2000-00551, 2004 S.C.C. Ann. Rept. 294 (Nov. 10, 2004).

both; (2) it cannot advance a generation project through its queue relative to other pending projects even when a specific project would solve a critical transmission problem; and (3) it cannot order a specific new generation alternative even if that option could be a preferable alternative in solving a critical transmission overload. Moreover, PJM has not asked for, and does not believe that it should have, such authority. Consequently, the PJM process may result in overbuilding transmission versus other alternatives, with the accompanying costs being borne by the ratepayers and the appearance of the Virginia landscape being adversely affected.

Moreover, while the Energy Policy Act of 2005 ("Act")<sup>68</sup> does not dictate a certain outcome in this case, it is worth noting that under the Act Congress permitted the federal government to designate "National Interest Electric Transmission Corridors" ("NIETC"). As a result, if a state does not approve a transmission line recommended by an RTE, and that line is in a federally-designated NIETC, state jurisdiction could be pre-empted and the federal government could order the line to be built notwithstanding the final decision of the state. The line proposed in this case is in an NIETC.

In my judgment, the mandate that Virginia electric utilities join a federally-regulated RTE such as PJM has not served Virginia well. PJM, by definition, performs regional planning and regional operations, while trying to maintain generation neutrality. As a result, PJM procedures could prevent critical generation, needed in Virginia, from being implemented on a timely basis. PJM can also reduce power flowing to parts of Virginia to solve infrastructure problems caused by other states. Although I conclude that the result in this case is dictated by the current laws that this Commission must follow in conjunction with the facts presented, I do

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<sup>68</sup> Pub. L. No. 109-58, 119 Stat. 594 (2005).

not believe that the PJM transmission planning process and the concomitant federal authority has produced the best result for Virginia.

Segner, Sharon  
 CPV Warren, LLC  
 8403 Colesville Rd Ste 915

Perrin, Laura  
 108 Lynhaven Dr

Silver Spring MD 20910  
 Montgomery, Jr., John W.  
 Montgomery & Simpson LLP  
 Suite A-1  
 2116 Dabney Road

Alexandria VA 22305  
 Burke, Kevin  
 Fauquier County Attorney  
 10 Hotel Street, Suite 204

Richmond VA 23230  
 Sutliff, Randolph A.  
 Esquire  
 McCandlish & Lillard, P. C.  
 11350 Random Hills Rd Ste 500

Warrenton VA 20186  
 Gary, Richard D.  
 Esquire  
 Hunton & Williams LLP  
 Riverfront Plaza, East Tower  
 951 E Byrd St

Fairfax VA 22030-7429  
 Palmer, Randall B.  
 Esquire  
 Allegheny Energy  
 800 Cabin Hill Drive

Richmond VA 23219-4074  
 Black, Kevin P.  
 Assistant County Attorney  
 County of Prince William  
 1 County Complex Ct

Greenburg PA 15601-1689  
 Roberts, John R.  
 County Attorney  
 County of Loudoun  
 1 Harrison St., SE/5th Fl.

Prince William VA 22192-9201  
 Waechter, Jr., C. W.  
 Esquire  
 Williams Mullen  
 1021 E Cary St  
 P.O. Box 1320

Leesburg VA 20175-3102  
 Greene, Brian R.  
 Esquire  
 SeltzerGreene, PLC  
 Eighth & Main Building  
 707 E Main St Ste 1025

Richmond VA 23218-1320  
 Bryant, Bethany  
 Esquire  
 Dickstein Shapiro LLP  
 1825 Eye St NW

Richmond VA 23219  
 Adams, Jeannie A.  
 Esquire  
 Hancock, Daniel, Johnson & Nagl  
 4701 Cox Rd Ste 400  
 POB 72050

Washington DC 20006-5403  
 Nolte, JoAnne L.  
 Esquire  
 The Conrad Firm  
 Suite 204  
 1520 West Main Street

Richmond VA 23255

Richmond VA 23220

|  |   |
|--|---|
| Perrow, Robert D.<br>Esquire<br>Williams Mullen<br>1021 E Cary St<br>PO Box 1320<br>Richmond VA 23218-1320   | Ellsworth, Brett C.<br>Asst. Attorney General<br>Office of the Attorney General<br>900 E Main St<br>Richmond VA 23219 |
| Fisher, Frederick S.<br>Special Asst. Attorney General<br>Office of the Attorney General<br>900 E Main St<br>Richmond VA 23219   | Gerrard, Michael B.<br>Esquire<br>Arnold & Porter, LLP<br>399 Park Ave<br>New York NY 10022                           |
| Alexander, Wendy A.<br>Esquire<br>Walsh Colucci Lubeley Emrich &<br>Glen Park I<br>4310 PrinceWilliam Pkwy Ste 300<br>Prince William VA 22192                            | Pethybridge, Matthew D.<br>Esquire<br>409 Major Andre Road<br>Virginia Beach VA 23462-3126                            |
| Quinan, Michael J.<br>Esquire<br>ChristianBarton<br>909 E Main St Ste 1200<br>Richmond VA 23219-3095   | Robb, Cliona M.<br>Esquire<br>Christian & Barton, L.L.P.<br>909 E Main St., Suite 1200<br>Richmond VA 23219-3095      |
| Roussy, Jr., D. M.<br>Assistant Attorney General<br>Office of Attorney General<br>Ins. & Utilities Regulatory Sec<br>900 East Main Street, 2nd Flr.<br>Richmond VA 23219 | Berghold, Eric J.<br>Esquire<br>McCandlish & Lillard<br>Suite 500<br>11350 Random Hills Rd<br>Fairfax VA 22030-7429   |
| Watkiss, Jeffrey D.<br>Esquire<br>Bracewell & Giuliani LLP<br>2000 K St NW Ste 500<br>Washington DC 20006  | Bartus, Jr., John J.<br>Esquire<br>Bracewell & Giuliani LLP<br>2000 K St NW Ste 500<br>Washington DC 20006            |
| Eisenstat, Larry F.<br>Esquire<br>Dickstein Shapiro LLP<br>1825 Eye St NW<br>Washington DC 20006-5403  | Madea, Cortney L.<br>Esquire<br>Dickstein Shapiro LLP<br>1825 Eye St NW<br>Washington DC 20006-5403                   |

Rinaldi, John E.  
Esquire  
Walsh Colucci Lubeley  
Emrich & Terpak PC  
4310 Prince William Pky Ste 300  
Prince William VA 22192

Booth, Lisa S.  
Esquire - Law Dept - RS-2  
Dominion Resource Services, Inc  
120 Tredegar St

Richmond VA 23219

Link, Vishwa B.  
Esquire  
McGuireWoods LLP  
One James Center  
901 E Cary St  
Richmond VA 23219

Pace, W. B.  
Esquire  
Williams Mullen  
PO Box 1320

Richmond VA 23218-1320

Hart, Katharine A.  
Esquire  
SeltzerGreene, PLC  
Eighth & Main Building  
707 E Main St Ste 1025  
Richmond VA 23219

Marmet, Robert G.  
Esquire  
Piedmont Environmental Council  
45 Horner St  
PO Box 460  
Warrenton VA 20188

Montgomery, Michael A.  
Esquire  
Bowman and Brooke, LLP  
1111 E Main St Ste 2100

Richmond VA 23219

Eicher, Robert E.  
Esquire  
Williams Mullen  
PO Box 1320

Richmond VA 23218-1320

Hundley, Charles W.  
Esquire  
Cherry, Seymour & Hundley, P. C  
4908 Monument Ave., Suite 200

Richmond VA 23230

Segner, Sharon  
CPV Warren, LLC  
8403 Colesville Rd Ste 915

Montgomery, Jr., John W.  
Montgomery & Simpson LLP  
Suite A-1  
2116 Dabney Road

Silver Spring MD 20910

Gary, Richard D.  
Esquire  
Hunton & Williams LLP  
Riverfront Plaza, East Tower  
951 E Byrd St

Richmond VA 23219-4074

Greene, Brian R.  
Esquire  
SeltzerGreene, PLC  
Eighth & Main Building  
707 E Main St Ste 1025

Richmond VA 23219

Ellsworth, Brett C.  
Asst. Attorney General  
Office of the Attorney General  
900 E Main St

Richmond VA 23219

Adams, Jeannie A.  
Esquire  
Hancock, Daniel, Johnson & Nagl  
4701 Cox Rd Ste 400  
POB 72050

Richmond VA 23255

Quinan, Michael J.  
Esquire  
ChristianBarton  
909 E Main St Ste 1200

Richmond VA 23219-3095

Roussy, Jr., D. M.  
Assistant Attorney General  
Office of Attorney General  
Ins. & Utilities Regulatory Sec  
900 East Main Street, 2nd Flr.

Richmond VA 23219

Richmond VA 23230

Sutliff, Randolph A.  
Esquire  
McCandlish & Lillard, P. C.  
11350 Random Hills Rd Ste 500

Fairfax VA 22030-7429

Bryant, Bethany  
Esquire  
Dickstein Shapiro LLP  
1825 Eye St NW

Washington DC 20006-5403

Fisher, Frederick S.  
Special Asst. Attorney General  
Office of the Attorney General  
900 E Main St

Richmond VA 23219

Gerrard, Michael B.  
Esquire  
Arnold & Porter, LLP  
399 Park Ave

New York NY 10022

Robb, Cliona M.  
Esquire  
Christian & Barton, L.L.P.  
909 E Main St., Suite 1200

Richmond VA 23219-3095

Berghold, Eric J.  
Esquire  
McCandlish & Lillard  
Suite 500  
11350 Random Hills Rd

Fairfax VA 22030-7429

Watkiss, Jeffrey D.  
Esquire  
Bracewell & Giuliani LLP  
2000 K St NW Ste 500

Washington DC 20006  
Eisenstat, Larry F.  
Esquire  
Dickstein Shapiro LLP  
1825 Eye St NW

Washington DC 20006-5403  
Marmet, Robert G.  
Esquire  
Piedmont Environmental Council  
45 Horner St  
PO Box 460

Warrenton VA 20188  
Link, Vishwa B.  
Esquire  
McGuireWoods LLP  
One James Center  
901 E Cary St

Richmond VA 23219  
Pace, W. B.  
Esquire  
Williams Mullen  
PO Box 1320

Richmond VA 23218-1320  
Hart, Katharine A.  
Esquire  
SeltzerGreene, PLC  
Eighth & Main Building  
707 E Main St Ste 1025  
Richmond VA 23219

Bartus, Jr., John J.  
Esquire  
Bracewell & Giuliani LLP  
2000 K St NW Ste 500

Washington DC 20006  
Madea, Cortney L.  
Esquire  
Dickstein Shapiro LLP  
1825 Eye St NW

Washington DC 20006-5403  
Montgomery, Michael A.  
Esquire  
Bowman and Brooke, LLP  
1111 E Main St Ste 2100

Richmond VA 23219  
Eicher, Robert E.  
Esquire  
Williams Mullen  
PO Box 1320

Richmond VA 23218-1320  
Hundley, Charles W.  
Esquire  
Cherry, Seymour & Hundley, P. C  
4908 Monument Ave., Suite 200

Richmond VA 23230