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PRIVILEGED INFORMATION CONTAINED IN THE ATTACHED DECLARATION HAS BEEN REMOVED

April 25, 2005

Honorable Magalie Roman Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

Re: PJM Interconnection, L.L.C., Docket No. ER05-10-00_

Dear Secretary Salas:

On October 1, 2004, PJM Interconnection, L.L.C. filed for a change in rates to permit market-based offers in the expanded PJM market for regulation in the PJM West/South Regulation Zone.[1] In that filing, PJM proposed that market-based offers of regulation service be permitted upon the integration of Virginia Power into PJM.[2] PJM

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1 The PJM West/South Regulation Zone covers the geographic territories of Allegheny Power (which collectively is Monongahela Power Company, The Potomac Edison Company, and West Penn Power Company), American Electric Company, Commonwealth Edison Company, The Dayton Power and Light Company, Duquense Light Company, and Virginia Electric Power Company ("Virginia Power").

2 See PJM Interconnection, L.L.C., Docket No. ER05-10-000, Market Based Regulation Offers in the PJM West/South Region (Oct 1, 2004), at 2 ("October 1 Filing).

also included a declaration of the PJM Market Monitor, which presented the results of his analysis of the expected competitiveness of regulation markets in PJM.[3]

In his declaration, the PJM Market Monitor advised the Commission that, prior to the integration of Virginia Power, he would submit an updated analysis based on the experience in the market following the AEP/Dayton integrations. Accordingly, PJM hereby submits the PJM Market Monitor's updated analysis (attached as Exhibit 1).

PJM does not believe there is any material change in the expected excess supply of regulation, which formed the factual bases for the requested market-based regulation authority in this docket, accepted by the Commission by notice dated November 30, 2004. Ample potential supply remains. Not all potential supply has bid in the market in all hours. However, PJM has no indication to suggest this behavior is anticompetitive. If PJM or the PJM Market Monitor detects problems in the market after Virginia Power's integration, the Commission can be informed and take prompt action, if necessary.[4]

Request For Privileged Treatment

Pursuant to 18 C.F.R. § 388.112, PJM respectfully requests privileged treatment of portions of the Declaration of Joseph E. Bowring attached hereto as Exhibit 1. This information is exempt from mandatory public disclosure requirements, as it contains privileged or confidential commercial and financial information of the PJM members. See 5 U.S.C. § 552(b)(2); 18 U.S.C. § 1905, 18 C.F.R. §§ 388.107(d), 388.112; and

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3 Id., Ex. A.

4 See Expedited Tariff Revisions For Regional Transmission Organizations and Independent System Operators, 111 FERC ¶ 61,009 (2005).

Operating Agreement § 18.17.[5] Disclosure of the information contained in the attached declaration would reveal privileged or confidential commercial and financial information of PJM members and would cause harm to the competitive positions of PJM members and also is prohibited by the Operating Agreement.

In accordance with 18 C.F.R. § 388.112(b)(2)(iii), PJM submits one unredacted original transmittal letter and Exhibit 1 (Declaration of Joseph E. Bowring). The first page of the transmittal letter and the cover page of Exhibit 1 (Declaration of Joseph E. Bowring) boldly indicate that the Declaration of Joseph E. Bowring contains privileged information that should not be released. In addition, the information for which PJM seeks privileged treatment is identified within the unredacted Exhibit 1 (Declaration of Joseph E. Bowring).

As further required by 18 C.F.R. § 388.112(b)(2)(i), PJM also submits fourteen copies of this transmittal letter and Declaration of Joseph E. Bowring that exclude all privileged material. The first page of the transmittal letter, the cover page of Exhibit 1 (Joseph E. Bowring Declaration), and each redacted page therein, boldly indicate that privileged material has been removed.

The persons to be contacted regarding this request for privileged treatment are:

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5 Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement").

Respectfully submitted,

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EXHIBIT 1

Declaration of Joseph E. Bowring

Privileged Information Removed

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.) **Docket No. ER05-10-00___**

DECLARATION OF JOSEPH E. BOWRING

I, Joseph E. Bowring, Market Monitor of the PJM Interconnection, L.L.C. depose and say as follows:

Introduction

1. The markets within PJM Interconnection, L.L.C. ("PJM") expanded upon the integration of American Electric Power ("AEP")[1] and The Dayton Power and Light Company ("Dayton"), effective October 1, 2004 and upon the integration of Duquesne Light Company ("Duquesne"), effective January 1, 2005. PJM markets will expand further upon the integration of Virginia Electric Power Company ("Virginia Power" or "Dominion"), currently expected to be effective on May 1, 2005.

2. This declaration presents the results of the analysis of the competitiveness of the PJM Western Region Regulation Market,[2] undertaken by the PJM Market Monitoring Unit ("MMU"), after the integration of AEP, Dayton and Duquesne, and of the expected competitiveness of the PJM Western Region Regulation Market after the expected May 1, 2005 integration of Virginia Power. The analysis of the pre-Virginia Power regulation market confirms the analysis presented in the PJM 2004 State of the Market Report, published on March 8, 2004. The analysis of the post-Virginia Power regulation market also indicates that the market power tests are failed and that this is not offset by the excess supply of regulation as measured by pivotal supplier analysis. The analysis of both the pre-Virginia Power regulation market and the post-Virginia Power analysis is based on data not available at the time of the October 1, 2004 MMU declaration and includes a more definitive analysis of the excess supply issue than in the initial declaration. The analysis of the regulation market post-Virginia Power was triggered by PJM's April 15, 2005 acceptance of the conditions specified by the North Carolina Utilities Commission. On March 30, 2005, the North Carolina Utilities Commission issued a Notice of Decision conditionally

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1 The American Electric Power Company operating companies are: Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, and Wheeling Power Company.

2 The "PJM Western Region Regulation Market" also may be referred to as "PJM West/South Regulation Zone" in this proceeding.

approving Dominion's integration into PJM. The conditions were spelled out in the Notice of Decision. PJM accepted the conditions in the Notice of Decision and conveyed this acceptance to the North Carolina Utilities Commission April 15, 2005. The full order was issued on April 19, 2005.[3]

3. The PJM Western Region Regulation Market currently includes the Commonwealth Edison Company (including Commonwealth Edison of Indiana) ("ComEd,"); AEP, Dayton, Duquesne and Allegheny Power.[4] Effective upon the integration of Virginia Power, the PJM Western Region Regulation Market will also include Virginia Power.

4. On September 1, 2004 PJM filed revisions to the PJM Open Access Transmission Tariff ("PJM Tariff") and Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), among other things, to establish separate zones for the provision and pricing of regulation and spinning reserves. The filing also indicated that PJM would invoke the requested authority to designate the combination of the ComEd, AEP, Dayton, Duquesne and Allegheny Power zones as one Regulation Zone while MAAC would remain a separate Regulation Zone.[5]

5. In the September 1 Filing PJM also stated that "PJM does not propose any changes at this time to the tariff provisions that require cost-based offers for regulation in the portions of the PJM region in MAIN and ECAR. However, the larger regulation market enabled by these changes may facilitate a subsequent request to the [Federal Energy Regulatory Commission ("Commission" or "FERC") for market-based rate authority for this service. PJM's market monitoring unit is considering this question, and PJM will report the results of that analysis when it is complete."[6]

6. By letter order dated September 28, 2004, the Commission accepted the revisions to the PJM Tariff and Operating Agreement submitted in the September 1 Filing.[7] The PJM Mid-Atlantic Regulation Market[8] has been market-based since June

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3 In re VA. Elec. & Power Co., N.C. Utils. Comm'n, Docket No. E-22, Sub 418 (Apr. 19, 2005).

4 The Allegheny Power operating companies are: Monongahela Power Company, the Potomac Edison Company, and West Penn Power Company (collectively "Allegheny Power").

5 PJM Interconnection, L.L.C., Transmittal Letter, Docket No. ER04-1175-000, at 7 (Sept. 1, 2004) ("September 1 Filing").

6 Id. at 8 (footnote omitted).

7 PJM Interconnection, L.L.C., Letter Order, Docket No. ER04-1175-000 (Sept. 28, 2004).

8 The "PJM Mid-Atlantic Regulation Market" also may be referred to as the "MAAC Regulation Zone" in this proceeding.

2000, with an offer cap of $100.[9] The PJM Market Monitor filed an affidavit on February 15, 2000 supporting a market-based PJM Mid-Atlantic Regulation Market.[10] The regulation market in Allegheny Power has been cost based since the integration of Allegheny Power into PJM in April 2003 because the market structure is not consistent with a competitive outcome.

7. On October 1, 2004 the PJM Market Monitor filed with FERC a declaration presenting the results of an analysis of the expected competitiveness of regulation markets in the newly redefined regulation markets within PJM Interconnection, L.L.C.[11] In the October 1 Declaration, the PJM Market Monitor recommended that the regulation market in the PJM Western Region Regulation Market continue to be cost based until the integration of Virginia Power. In the October 1 Declaration the MMU also committed to the submission of an updated analysis, data and recommendation to the Commission prior to the integration of Virginia Power indicating if the cumulative experience with the PJM Western Region Regulation Market demonstrated that the combined market following the integration of Virginia Power may not pass the Commission's market power tests, including any additional, relevant mitigating factors.

8. The Commission did not issue an order in this proceeding but rather issued a Notice of Acceptance of Filing by Operation of Law dated November 30, 2004 stating, "Pursuant to section 205 of the Federal Power Act, PJM's filing will take effect by operation of law."[12]

The Competitiveness of the PJM Western Region Regulation Market: October 1, 2004 through March 31, 2005

9. Based on the October 1 Declaration at paragraph 47, this declaration first presents an updated analysis of the competitiveness of the PJM Western Region Regulation Market following the integration of AEP, Dayton and Duquesne. An analysis of the competitiveness of the PJM Western Region Regulation Market for the period from October 1 through December 31, 2004 was presented in the PJM 2004 State of the Market Report. The analysis presented here updates and confirms the results of the analysis presented in the State of the Market Report by including updated actual regulation market data through March 31, 2005.

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9 Market-based means that the market is cleared on the basis of price offers with an overall offer cap while cost-based means that the market is cleared on the basis of cost plus a margin offers.

10 PJM Interconnection, L.L.C., Docket No. ER00-1630-000, Affidavit of Joseph E. Bowring (Feb. 15, 2000).

11 PJM Interconnection, L.L.C., Docket No. ER05-10-000, Market Based Regulation Offers in the PJM West/South Region, Exh. A (Oct. 1, 2004) ("October 1 Declaration").

12 PJM Interconnection, L.L.C., Docket No. ER05-10-000, Notice of Acceptance of Filing by Operation of Law, at P 2 (Nov. 30, 2004).

10. The provision of the regulation ancillary service, defined by FERC in Order No. 888,[13] is coordinated by PJM. NERC requires that PJM maintain regulating capability in order to match short-term deviations in system load. Regulation refers to the PJM control action that is performed to correct for load changes that may cause the power system to operate above or below 60 Hz.[14] The Capacity Resources assigned to meet the PJM Regulation Requirement must be capable of responding to the Area Regulation ("AR") signal within five minutes and must increase or decrease their outputs at the Ramping Capability rates that are specified in the Offer Data that is submitted to PJM.[15] The regulation service supplied by individual generating units is: "[t]he capability of a specific generating unit with appropriate telecommunications, control and response capability to increase or decrease its output in response to a regulating control signal."[16]

11. A Regulation Zone is defined as any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to the provision of and requirement for, regulation service.[17] Regulation for each Regulation Zone shall be supplied from generators located within the metered electrical boundaries of such Regulation Zone.[18] Thus, the largest relevant geographic market for regulation service in the PJM Western Region Regulation Market is that entire regulation zone. Imports of regulation are not possible. Suppliers in the relevant geographic market include all entities which own generating capacity in the market that have the required capability to provide regulation and pass PJM tests for regulation. To date, the regulation capability in the newly integrated areas has generally not yet been tested by PJM.[19]

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13 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 1991-1996 FERC Stats. & Regs., Regs. Preambles ¶ 31,036 (1996), order on reh'g, Order No. 888-A, 1996-2000 FERC Stats. & Regs., Regs. Preambles ¶ 31,048, order on reh'g, Order No. 888-B, 81 FERC ¶ 61,248 (1997), reh'g denied, Order No. 888-C, 82 FERC 61,046 (1998), aff'd in part and remanded in part sub nom. Transmission Access Policy Study Group v. FERC, 225 F.3d 667 (D.C. Cir. 2000), aff'd sub nom. New York v. FERC, 535 U.S. 1 (2002).

14 PJM Manual for Pre-Scheduling Operations, Manual M-10, at 25.

15 PJM Manual for Pre-Scheduling Operations, Manual M-10, at 26.

16 PJM Manual for Definitions and Acronyms, Manual M-35, at 54.

17 Operating Agreement, Section 1.38A.

18 Operating Agreement, Section 1.7.18 (a).

19 PJM tests units' regulation capability when they are providing regulation service.

12. The provision of regulation constitutes a separate market as there are no good substitutes for the regulation product in the PJM market.

13. The supply of regulation can be measured as regulation capability, regulation offered, regulation offered and eligible, or regulation assigned.

14. Regulation capability represents the total volume of regulation capability reported by resource owners based on unit characteristics. Regulation capability represents the absolute maximum level of regulation and exceeds the expected level of regulation offers for a variety of reasons discussed below.[20]

15. Regulation offered represents the level of regulation capability actually offered to the PJM Regulation Market. Resource owners may offer those units with approved regulation capability into the PJM Regulation Market. PJM does not require a resource capable of providing regulation service to offer its capability to the market. Regulation offers may be submitted on a daily basis and these daily offers may be modified on an hourly basis. It is possible to offer regulation for a day but to subsequently make that capability unavailable for any number of hours, including all hours of the day.

16. Regulation offered and eligible represents the level of regulation capability actually offered to the PJM Regulation Market and actually eligible to provide regulation in an hour. Some regulation offered to the market is not eligible to participate in the regulation market as a result of identifiable offer parameters specified by the supplier. As an example, the regulation capability of a unit will be included in regulation offered based on the daily offer and availability status, but that regulation capability will not be eligible in one or more hours because the supplier sets the availability status to unavailable for one or more hours of that same day. (The availability status of a unit may be set in both a daily offer and an hourly update table in the PJM market software.) As another example, the regulation capability of a unit will be included in regulation offered if the owner of a unit offers regulation, but that regulation capability will not be eligible if the owner sets the unit's economic maximum generation level equal to its economic minimum generation level. In that case, the unit cannot provide regulation and is not eligible to provide regulation. As another example, the regulation capability of a unit will be included in regulation offered but that regulation capability will not be eligible if the unit is not operating, unless the unit is a combustion turbine that meets specific operating parameter requirements, including start time. During the six months ended March 31, 2005 in the PJM Western Region Regulation Market, the volume of regulating capability offered and eligible on an hourly basis was approximately 7 percent less than that which was offered to the market on an hourly basis.

20 The extent and height of barriers to entry into the regulation market are also relevant in considering the competitiveness of the market.

17. Only those offers which are eligible to provide regulation in an hour are part of supply for that hour, and only those offers actually are considered by PJM for purposes of clearing the market. Regulation offered and eligible constitute the full extent of the market in an hour and are, therefore, the appropriate market offers for the application of market structure tests.

18. Regulation assigned represents those regulation resources selected through the regulation market-clearing mechanism to provide regulation service for a given hour.

19. The experience of PJM in ComEd (Northern Illinois Control Area or "NICA") indicates that all declared regulation capability may not actually be provided for a variety of reasons. The actual average daily offer volume of regulation offered in NICA was 55 percent of the total regulation capability declared prior to the integration of NICA into PJM.[21] The regulation market did not work as anticipated in NICA for a number of reasons, of which the level of offers was not the most significant.

20. A similar difference between the level of submitted regulation capability and that actually offered to the market was observed following the integration of AEP on October 1, 2004. As noted in the 2004 PJM State of the Market Report, the average daily offer volume of regulation in the PJM Western Region Regulation Market during Phase 3[22] was 77 percent of the submitted capability.[23] The average hourly offer level during Phase 3 was 53 percent of the submitted capability, while the average hourly offered and eligible offer level during Phase 3 was 49 percent of capability.

21. A similar difference between the level of submitted regulation capability and that actually offered to the market was also observed in the PJM Mid-Atlantic Regulation Market in 2004. During calendar year 2004, the average daily offer volume in the Regulation Market in the MAAC Regulation Zone constituted

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21 Daily regulation offers in NICA during Phase 2 were 60 percent of the submitted capability as defined in the 2004 PJM State of the Market Report (at 184). Submitted capability was defined to be the maximum level of daily offered regulation capability during the entire analysis period without regard to the actual availability of the resource. Submitted capability is a better measure of total regulation capability than the stated capability provided prior to integration as the initially provided data was estimated and included errors while the submitted capability is based on actual offers.

22 Phase 3 is the three-month period from October 1 through December 31, 2004, during which PJM was comprised of the Mid-Atlantic Region, including its 11 zones, the AP Control Zone and the ComEd Control Zone plus the American Electric Power Control Zone and The Dayton Power & Light Company Control Zone. The ComEd Control Area became the ComEd Control Zone on October 1, 2004.

23 2004 PJM State of the Market Report at 185.

approximately 72 percent of the submitted capability.[24] The average hourly offer level during 2004 was 55 percent of the submitted capability, while the average hourly offered and eligible offer level during 2004 was 44 percent of capability.

22. Thus, the available market data across all PJM regulation markets, both market-based and cost-based, indicates that from 53 percent to 55 percent of submitted capability is actually offered into the regulation market on an hourly basis while from 44 percent to 49 percent of submitted capability is offered and eligible. This is neither good nor bad, it is simply an observed fact about the regulation markets. This result does not imply that withholding is occurring. There are many legitimate reasons why regulation capability is not offered into the regulation markets on an hourly basis including whether a unit is on line, how a unit's operating parameters are set, whether a combustion turbine ("CT") has a start time permitting it to participate in the next hour and a variety of other factors. The level of actual offers also does not imply anything about reliability. With some exceptions in the ComEd control zone during Phase 2 of 2005, PJM has always had adequate regulation resources available to meet the regulation requirements.[25]

23. For this report, the six months of available market data for the PJM Western Region Regulation Market was analyzed from the integration of AEP and Dayton on October 1, 2004 through March 31, 2005. The data reflects the integration of Duquesne on January 1, 2005.

24. The market power analysis follows the Commission logic specified in the AEP Order.[26] The PJM Market Monitor follows the logic of the delivered price test by calculating market share, HHI and pivotal supplier metrics for each market configuration. The analysis presented here differs in two ways from the Commission's delivered price test. The analysis here includes all regulation capability offered into the market without regard to cost. The delivered price test would start with the universe of regulation offered and eligible and then limit the analysis to those units that could offer regulation at less than or equal to 1.05 times the clearing price. In addition, the analysis here (prior to the integration of Dominion) includes all regulation offered by each supplier while the delivered price test uses the gross supply by participant net of their load obligation. The fact that suppliers have load obligations does affect their incentives to exercise market power. The analysis of expected competition following the integration of Dominion does include an analysis of supply net of load obligations.

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24 2004 PJM State of the Market Report at 182.

25 Phase 2 is the five-month period from May 1 through September 30, 2004 during which PJM was comprised of the Mid-Atlantic Region, including its 11 zones, the AP Control Zone and the ComEd Control Zone.

26 AEP Power Mktg. Inc., 107 FERC ¶ 61,018 ("AEP Order"), order on reh'g, 108 FERC ¶ 61,026 (2004).

25. The Commission's AEP Order indicates that failure of any one of the specified tests is adequate for a showing of market power. The analysis presented here goes one step further in order to analyze the significance of excess supply. If the market fails either or both of the market share test or the HHI test in the presence of excess supply, the PJM Market Monitor applies the three pivotal supplier test. The analysis here uses the three pivotal supplier test as a specific threshold in the presence of excess supply. The three pivotal supplier test permits an explicit evaluation of whether available excess supply offsets market power concerns associated with market share and market concentration results. If the three pivotal supplier test is passed, the available suppliers could meet the demand for regulation without the three dominant suppliers and the market would be deemed competitive. The three pivotal supplier test is used here only to determine if there is evidence to mitigate the results of the market share and market concentration analyses.

26. The three pivotal supplier test represents an analytical approach to the issue of excess supply. Excess supply, by itself, is not necessarily adequate to ensure a competitive outcome. A monopolist could have substantial excess supply but the monopolist would not be expected to change its market behavior as a result. The same logic applies to a small group of dominant suppliers. However, if there is adequate supply without the three dominant suppliers to meet the demand, then the market can reasonably be deemed competitive.

27. This explains the difference between the results for the PJM Mid-Atlantic Regulation Market and the results for the PJM Western Region Regulation Market. The levels of concentration are significantly lower in the PJM Mid-Atlantic Regulation Market as are the calculated market shares. In the PJM Mid-Atlantic Regulation Market, the presence of excess supply in the context of a much lower level of concentration, led to the recommendation by the PJM Market Monitor that the market should be market-based. The conditions are quite different in the PJM Western Region Regulation Market.

28. Excess supply, defined as the ratio of the hourly regulation offered to the hourly regulation requirement, averaged 2.11. Based on hourly offered and eligible regulation, this ratio averaged 1.96. (Note that the excess ratio in the October 1 Declaration was defined to be the difference between regulation offered and requirement, divided by requirement.[27] The data is presented here as the simple ratio of hourly regulation offered to the hourly regulation requirement in order to make the results more transparent. This simple ratio will result in a higher ratio than the prior method, but the meaning of the data is unchanged. The change in the method of presentation has no substantive implications for the analysis.) The average regulation requirement for the PJM Western Region Regulation Market was 466 MW during this six-month period. As the regulation requirement is a function of load, the 466 MW is below the expected maximum regulation requirement of 755 MW following the integration of the Dominion Region. The

27 October 1 Declaration at P 33.

expected peak regulation requirement prior to the integration of the Dominion Region is approximately 602 MW.

29. Hourly HHI values were calculated based upon the regulation offered, regulation offered and eligible, and regulation assigned. Based upon regulation offered, HHI ranged from a maximum of 4318 to a minimum of 2335 with an average value of 3223. Based upon regulation offered and eligible, HHI values ranged from a maximum of 5648 to a minimum of 2283, with an average of 3425. Based upon regulation assigned, HHI values ranged from a maximum of 10000 to a minimum of 1996. The average HHI value for regulation assigned was 3674.

30. There was one supplier with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. The second largest market share for offered supply was [redacted] with [redacted] percent. There was one supplier with a market share in excess of 20 percent for regulation offered and eligible. The largest market share for regulation offered and eligible was [redacted] with [redacted] percent. The second largest market share for regulation offered and eligible was [redacted] with [redacted] percent. There was one supplier with a market share in excess of 20 percent for regulation assigned. The largest market share for regulation assigned was [redacted] with [redacted] percent. The second largest market share for regulation assigned was [redacted] with [redacted] percent.

31. In the PJM Western Region Regulation Market, 44 percent of the hours failed the single pivotal supplier test for offered supply. This means that during 44 percent of the hours, total demand could not be met in the absence of the largest single supplier in the market. For offered regulation, 95 percent of the hours failed the two pivotal supplier test for offered supply. This means that during 95 percent of the hours, total demand could not be met in the absence of the two largest suppliers in the market. For offered regulation, 100 percent of the hours failed the three pivotal supplier test for offered supply. This means that during 100 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market.

32. For regulation offered and eligible, 70 percent of the hours failed the single pivotal supplier test. This means that during 70 percent of the hours, total demand could not be met in the absence of the largest single supplier in the market. For regulation offered and eligible, 98 percent of the hours failed the two pivotal supplier test. This means that during 98 percent of the hours, total demand could not be met in the absence of the two largest suppliers in the market. For regulation offered and eligible, 100 percent of the hours failed the three pivotal supplier test. This means that during 100 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market.

33. The MMU concludes from these results that the PJM Western Region Regulation Market prior to the integration of Dominion is characterized by market power based on the market share results and the HHI results. These results are not offset by the excess supply as demonstrated by the pivotal supplier results. The results presented for offered supply consider all regulation capability offered to the market, regardless of cost. The results also include all supply regardless of load obligations.

34. The observed market results in the PJM Western Region Regulation Market have been consistent with a competitive outcome because offers have been limited to cost-based levels.

The Expected Competitiveness of the PJM Western Region Regulation Market After the Integration of Virginia Power

35. On March 30, 2005, the North Carolina Utilities Commission issued a Notice of Decision conditionally approving Dominion's integration into PJM. The conditions were spelled out in the Notice of Decision. PJM accepted the conditions in the Notice of Decision and conveyed this acceptance to the North Carolina Utilities Commission April 15, 2005. The full order was issued on April 19, 2005.[28]

Base Analysis

36. In reviewing the expected competitiveness of the regulation markets following the integration of Virginia Power, the MMU began with the basic facts of the market. The MMU has gathered data on regulation capability from the generators in the Dominion region and cross checked that data against available sources. The important caveat about the data is that it reflects capabilities reported by generation owners that have not yet been validated in actual market operation within PJM or been subjected to PJM tests of regulation capability. The analysis reported here of the anticipated structural conditions following the integration of Virginia Power was conducted by incorporating this data on regulation capability provided by Dominion region resource owners into the analysis of actual market data for the balance of the PJM Western Region Regulation Market.

37. The market structure analysis uses actual market results reflecting the hourly level of regulation capability offered into the PJM Western Region Regulation Market during the period October 1, 2004 through March 31, 2005 as the baseline. The regulation capabilities of resources in the Dominion region are incorporated into the actual market results to evaluate the expected market structure conditions following the integration of the Dominion region on May 1, 2005.

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[28] See In re VA. Elec. & Power Co., N.C. Utils. Comm'n, Docket No. E-22, Sub 418 (Apr. 19, 2005).

38. Dominion region resource owners currently report a total regulation capability of 1,585 MW. Of this total, [redacted] MW, or [redacted] percent, is under the control of [redacted].

39. Sensitivity analyses were conducted assuming that Dominion region resources offer regulation to the market at both 100 percent and 60 percent of their pre-integration stated regulating capabilities, in order to encompass a range of possible regulation supply. The upper bound is unlikely to be approached, based on the observation of other PJM regulation markets.

40. For the case with Dominion region resources participating at 100 percent of their capability, excess supply defined as the ratio of the hourly regulation offered to the hourly regulation requirement, averaged 4.54. The average regulation requirement for the PJM Western Region Regulation Market was 571 MW, reflecting the lower seasonal demand levels during this six-month period. At the estimated peak regulation requirement of 755 MW and a mean hourly offer volume of 2,542 MW, this ratio is 3.36.

41. For the case with Dominion region resources participating at 100 percent of their capability, based upon regulation offered, hourly HHI values ranged from a maximum of 4145 to a minimum of 2696 with an average value of 3360. The HHI was at or above 2500 for 100 percent of the hours. The market concentration test is failed.

42. For the case with Dominion region resources participating at 100 percent of their capability, there was one supplier with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed.

43. For the case with Dominion region resources participating at 100 percent of their capability, all hours pass the single pivotal supplier test for offered supply. This means that during every hour, total demand could be met in the absence of the single largest supplier in the market. For the case with Dominion region resources participating at 100 percent of their capability, 3.1 percent of the hours failed the two pivotal supplier test for offered supply. This means that during 3.1 percent of the hours, total demand could not be met in the absence of the two largest suppliers in the market. For the case with Dominion region resources participating at 100 percent of their capability, 95.1 percent of the hours failed the three pivotal supplier test for offered supply. This means that during 95.1 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, even with the assumption that 100 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

44. During the study period October 1, 2004 through March 31, 2005, PJM made periodic adjustments to the required level of regulation in the PJM Western Region Regulation Market. These adjustments increased the amount of required regulation in order to improve system performance as measured by the NERC Control Performance Standards. PJM currently has such an adjustment in effect. A sensitivity analysis was performed to evaluate the expected competitiveness of the PJM Western Region Regulation Market absent these adjustments. The removal of these adjustments has the effect of reducing hourly regulation demand thereby increasing excess supply and potentially reducing the hours during which there are one or more pivotal suppliers. With the actual level of regulation demand, the average regulation requirement for the PJM Western Region Regulation Market during the study period was 571 MW while the average regulation requirement without the PJM increases in regulation demand was 504 MW during the study period. The removal of these adjustments affects only the demand for regulation and therefore does not affect market share or HHI results.[29] The case chosen for analysis was that with Dominion region resources participating at 100 percent of their capability.

45. The removal of the regulation demand adjustments resulted in an increase in the excess supply ratio from 4.54 to 5.08 during the study period. The removal of the regulation demand adjustments does not affect the excess supply ratio of 3.36 for the peak regulation demand which was based on the estimated peak demand for energy rather than actual regulation demand. The removal of the regulation demand adjustments resulted in a decrease in the proportion of hours failing the two pivotal supplier test from 3.1 percent of the hours to 0.1 percent of the hours. The removal of the regulation demand adjustments resulted in no change in the proportion of hours failing the three pivotal supplier test, remaining at 95.1 percent of the hours.

46. An additional case was analyzed in which Dominion region resources participated at 60 percent of their stated capability. The 60 percent level was chosen because it reflects the average of the daily, hourly, and hourly and eligible participation levels observed in the PJM Western Region Regulation Market prior to the integration of Virginia Power.

47. For the case with Dominion region resources participating at 60 percent of their capability, excess supply defined as the ratio of the hourly regulation offered to the hourly regulation requirement, averaged 3.41. The average regulation requirement for the PJM Western Region Regulation Market was 571 MW, reflecting the lower seasonal demand levels during this six-month period. At the estimated peak regulation requirement of 755 MW and a mean hourly offer volume of 1,908 MW, this ratio is 2.52.

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[29] As the market share and HHI results were, in general, based on offered or offered and eligible regulation amounts, these results were not affected by the level of demand for regulation. The market share and HHI results were not based, in general, on cleared regulation levels and thus it was not necessary to rerun the regulation markets in order to analyze this issue.

48. For the case with Dominion region resources participating at 60 percent of their capability, based upon regulation offered, hourly HHI values ranged from a maximum of 3294 to a minimum of 2247 with an average value of 2728. The HHI was at or above 2500 for 94.4 percent of the hours. The market concentration test is failed.

49. For the case with Dominion region resources participating at 60 percent of their capability, there were two suppliers with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed.

50. For the case with Dominion region resources participating at 60 percent of their capability, all hours pass the single pivotal supplier test for offered supply. This means that during every hour, total demand could be met in the absence of the single largest supplier in the market. For the case with Dominion region resources participating at 60 percent of their capability, 20 percent of the hours failed the two pivotal supplier test. This means that during 20 percent of the hours, total demand could not be met in the absence of the two largest suppliers in the market. For the case with Dominion region resources participating at 60 percent of their capability, 95 percent of the hours failed the three pivotal supplier test for offered supply. This means that during 95 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, with the assumption that 60 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

Net Position Analysis

51. The MMU performed a sensitivity analysis using the net positions of market participants in the PJM Western Region Regulation Market after the integration of Dominion. As noted above, the delivered price test specifies use of net positions. The estimated regulation requirements for owners of regulation were subtracted from their offered regulation and the market structure tests were run. Four cases were analyzed. Assuming 100 percent of Dominion region capability, the hourly offered and the hourly offered and eligible cases were analyzed for the non-Dominion resources. Assuming 60 percent of Dominion region capability, the hourly offered and the hourly offered and eligible cases were analyzed for the non-Dominion resources.

52. The sensitivity was first done for the case including estimated Dominion region regulation resources participating at 100 percent of their capability, using regulation offered to participate in the regulation market. For the case with Dominion region resources participating at 100 percent of their capability, excess supply defined as the ratio of the hourly regulation offered to the hourly

regulation requirement, averaged 75.2. The average net regulation requirement for the PJM Western Region Regulation Market was 33.4 MW, reflecting both assumed self supply and the lower seasonal demand levels during this six-month period. The net regulation requirement is what remains after the integrated utilities have served their own regulation demand and represents the amount that needs to be provided from the market assuming that retail competition does not increase. For the case with Dominion region resources participating at 100 percent of their capability, based upon regulation offered, hourly HHI values ranged from a maximum of 5657 to a minimum of 2902 with an average value of 4175. The HHI was at or above 2500 for 100 percent of the hours. The market concentration test is failed. For the case with Dominion region resources participating at 100 percent of their capability, there was one supplier with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed. For the case with Dominion region resources participating at 100 percent of their capability, all hours pass the single pivotal supplier test and the two pivotal supplier test for offered supply. This means that during every hour, total net demand, after subtracting the regulation owned by those with load obligations, could be met in the absence of the single largest supplier in the market and the two largest suppliers in the market. For the case with Dominion region resources participating at 100 percent of their capability, 0.3 percent of the hours failed the three pivotal supplier test for offered supply. This means that during 0.3 percent of the hours, total net demand could not be met in the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, even with the assumption that 100 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

53. The MMU performed a second sensitivity analysis using the net positions of market participants in the PJM Western Region Regulation Market after the integration of Dominion, using regulation both offered and eligible to participate in the regulation market. The estimated regulation requirements for owners of regulation were subtracted from their offered regulation and the market structure tests were run. The sensitivity was done for the case including estimated Dominion region regulation resources participating at 100 percent of their capability. For the case with Dominion region resources participating at 100 percent of their capability, excess supply defined as the ratio of the hourly regulation offered and eligible to the hourly regulation requirement, averaged 53. The average net regulation requirement for the PJM Western Region Regulation Market was 55 MW, reflecting both assumed self supply and the lower seasonal demand levels during this six-month period. The net regulation requirement is what remains after the integrated utilities have served their own regulation demand and represents the amount that needs to be provided from the market assuming that retail competition does not increase. For the case with Dominion region resources participating at 100 percent of their capability, based upon

regulation offered and eligible, hourly HHI values ranged from a maximum of 6045 to a minimum of 3095 with an average value of 4335. The HHI was at or above 2500 for 100 percent of the hours. The market concentration test is failed. For the case with Dominion region resources participating at 100 percent of their capability, there was one supplier with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed. For the case with Dominion region resources participating at 100 percent of their capability, all hours pass the single pivotal supplier test and the two pivotal supplier test for offered supply. This means that during every hour, total net demand, after subtracting the regulation owned by those with load obligations, could be met in the absence of the single largest supplier in the market and the two largest suppliers in the market. For the case with Dominion region resources participating at 100 percent of their capability, 5.6 percent of the hours failed the three pivotal supplier test for offered and eligible supply. This means that during 5.6 percent of the hours, total net demand could not be met in the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, even with the assumption that 100 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

54. The MMU performed a third sensitivity analysis using the net positions of market participants in the PJM Western Region Regulation Market after the integration of Dominion, using regulation offered to participate in the regulation market. The estimated regulation requirements for owners of regulation were subtracted from their offered regulation and the market structure tests were run. The sensitivity was done for the case including estimated Dominion region regulation resources participating at 60 percent of their capability. For the case with Dominion region resources participating at 60 percent of their capability, excess supply defined as the ratio of the hourly regulation offered to the hourly regulation requirement, averaged 51.7. The average net regulation requirement for the PJM Western Region Regulation Market was 33.4 MW, reflecting the lower seasonal demand levels during this six-month period. The net regulation requirement is what remains after the integrated utilities have served their own regulation demand and represents the amount that needs to be provided from the market assuming that retail competition does not increase. For the case with Dominion region resources participating at 60 percent of their capability, based upon regulation offered, hourly HHI values ranged from a maximum of 4881 to a minimum of 2393 with an average value of 3344. The HHI was at or above 2500 for 98 percent of the hours. The market concentration test is failed. For the case with Dominion region resources participating at 60 percent of their capability, there were two suppliers with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed. For the case with Dominion region resources participating at 60 percent of their

capability, all hours pass the single pivotal supplier test and the two pivotal supplier test for offered and eligible supply. This means that during every hour, total net demand, after subtracting the regulation owned by those with load obligations, could be met in the absence of the single largest supplier in the market and the two largest suppliers in the market. For the case with Dominion region resources participating at 60 percent of their capability, 0.3 percent of the hours failed the three pivotal supplier test for offered supply. This means that during 0.3 percent of the hours, total net demand could not be met in the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, even with the assumption that 60 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

55. The MMU performed a fourth sensitivity analysis using the net positions of market participants in the PJM Western Region Regulation Market after the integration of Dominion, using regulation both offered and eligible to participate in the regulation market. The estimated regulation requirements for owners of regulation were subtracted from their offered regulation and the market structure tests were run. The sensitivity was done for the case including estimated Dominion region regulation resources participating at 60 percent of their capability. For the case with Dominion region resources participating at 60 percent of their capability, excess supply defined as the ratio of the hourly regulation offered and eligible to the hourly regulation requirement, averaged 35.9. The average net regulation requirement for the PJM Western Region Regulation Market was 55 MW, reflecting the lower seasonal demand levels during this six-month period. The net regulation requirement is what remains after the integrated utilities have served their own regulation demand and represents the amount that needs to be provided from the market assuming that retail competition does not increase. For the case with Dominion region resources participating at 60 percent of their capability, based upon regulation offered and eligible, hourly HHI values ranged from a maximum of 5440 to a minimum of 2511 with an average value of 3516. The HHI was at or above 2500 for 100 percent of the hours. The market concentration test is failed. For the case with Dominion region resources participating at 60 percent of their capability, there were two suppliers with a market share in excess of 20 percent for offered supply. The largest market share for offered regulation was [redacted] with [redacted] percent. [redacted] had the second largest market share with [redacted] percent. The market share test is failed. For the case with Dominion region resources participating at 60 percent of their capability, all hours pass the single pivotal supplier test and the two pivotal supplier test for offered and eligible supply. This means that during every hour, total net demand, after subtracting the regulation owned by those with load obligations, could be met in the absence of the single largest supplier in the market and the two largest suppliers in the market. For the case with Dominion region resources participating at 60 percent of their capability, 5.6 percent of the hours failed the three pivotal supplier test for offered and eligible supply. This means that during 5.6 percent of the hours, total net demand could not be met in

the absence of the three largest suppliers in the market. The three pivotal supplier test shows that the available excess supply, even with the assumption that 60 percent of the Dominion region resources offer into every hourly market, does not serve to mitigate the results of the market share and market concentration results.

56. While the analysis of participants' net positions corroborates the analysis of participants' gross positions, it is important to consider the meaning of net positions in this context. Net positions are calculated by subtracting the regulation obligation from the regulation supply for all participants that have both an obligation to purchase regulation and the ability to supply regulation. Such entities, in this case, are primarily integrated utility companies that retain most of their native load, as they have not yet been exposed to significant retail competition. The net position analysis shows the market results when the integrated utility companies retain their dominant position in the market. The gross position analysis shows the market results when the integrated utility companies either no longer have the load obligation or have separated their generation companies from the integrated company so that their financial incentives no longer correspond to those of a fully integrated company. While the net position analysis illustrates the current incentives to increase prices, another impact of higher prices that is not explicitly considered is the fact that high prices for regulation could serve as a barrier to entry by competitive retail suppliers who would have to pay the high regulation cost in order to compete with the incumbent utility. In considering the significance of the market analysis results under both gross and net position approaches, the impact of varying actual and potential levels of retail competition on the results should be considered.

57. The data available to the MMU indicate that the PJM Western Region Regulation Market after the integration of Dominion is expected to fail the market power tests identified here. In addition, the three pivotal supplier test is used as a measure of whether the presence of excess supply is adequate to mitigate the results of the market share and market concentration results. The three pivotal supplier is failed and indicates that the presence of excess supply is not adequate to mitigate the results of the market share and market concentration results. These results are confirmed by the sensitivity that includes only regulation owners' net positions. That sensitivity analysis, in the absence of actual market data for the Virginia Power integration, is performed in a way that increases the chances of passing the market power tests compared to the Commission's definition of the delivered price test. All of the supply is considered to be competitive and the actual nature of the supply curve is ignored because there is no data on which to base a conclusion. With actual market data, a delivered price test could be performed that would include only competitive resources, consistent with the Commission's definition.

58. The MMU concludes, based on an analysis of actual market data and assuming that 100 percent of the declared capability in the Dominion region is competitive, that the market does not pass the market share test and does not pass the HHI test.

These results are not offset by the excess supply as demonstrated by the pivotal supplier results. While the excess supply ratio averaged 4.54, 95.1 percent of the hours failed the three pivotal supplier test. This means that during 95.1 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market. The conclusions remain the same when the increases in regulation demand required by PJM during the period are removed. The conclusions remain the same when the increases in regulation demand required by PJM during the period are removed. The conclusions remain the same when only net supply is included in the analysis.

59. The MMU concludes, based on an analysis of actual market data and assuming that 60 percent of the declared capability in the Dominion region is competitive, that the market does not pass the market share test and does not pass the HHI test. These results are not offset by the excess supply as demonstrated by the pivotal supplier results. While the excess supply ratio averaged 3.41, 95 percent of the hours failed the three pivotal supplier test. This means that during 95 percent of the hours, total demand could not be met in the absence of the three largest suppliers in the market. The conclusions remain the same when only net supply is included in the analysis.

Assumed 100 Percent Offer Analysis

60. An additional sensitivity analysis was performed including 100 percent of the submitted regulation capability for the pre-Dominion PJM Western Region Regulation Market plus 100 percent of the stated capabilities of the owners in the Dominion Region. Based on the observations of both the market-based and cost-based markets and the actual nature of regulation supply, this is very unlikely to occur, but the results provide additional information about the potential outside bounds.

61. Based upon the 100 percent of the submitted regulation capability for the pre-Dominion PJM Western Region Regulation Market plus 100 percent of the stated capability of the owners in the Dominion Region, two suppliers have market shares in excess of 20 percent. The largest single supplier is [redacted] with a [redacted] percent market share. The next two largest suppliers are [redacted] and [redacted] with a [redacted] percent market share and a [redacted] percent market share respectively. The market share test is failed.

62. Based upon the 100 percent of the submitted regulation capability for the pre-Dominion PJM Western Region Regulation Market plus 100 percent of the stated capability of the owners in the Dominion Region, the HHI is 2447. While the concentration level is below 2500, the market concentration data does not provide a mitigating influence to the market share results as market concentration is still high (greater than 1800).

63. With a total capability of 3,400 MW and an expected peak regulation obligation of 755 MW for the PJM Western Region, the excess supply ratio is 4.50. Under conditions of peak regulation requirement and market participation at 100 percent of resource owners' stated capabilities, the three pivotal supplier test would be passed. That is, in the unlikely event that all the regulation capacity of all owners were offered and eligible in every hour, the peak regulation requirement could be met in the absence of the three largest suppliers. The MMU performed a sensitivity analysis to determine the minimum level of offers that would pass the three pivotal supplier test. The result was that if less than or equal to 98 percent of resource owners' stated capabilities were offered, that the three pivotal supplier test would be failed. Under the unlikely condition that 100 percent of all supply is offered and eligible in each hour, the three pivotal supplier test is passed. However, if the level of offered and eligible supply is reduced only to 98 percent, the three pivotal supplier test is no longer passed. If the three pivotal supplier test were passed in actual markets, this would be an adequate mitigating factor of the market share and market concentration results. It is for this reason that analysis of actual market data should be performed after six months of experience with the integration of Virginia Power. While the current market data indicate that the reported market power tests are not passed, it is possible that analysis of actual market data after the integration of Virginia Power could lead to a different conclusion.

64. The data needs to be validated with actual operating experience before it can reasonably be relied upon to make a final market power determination. Data on both the actual available regulation supply and the relative costs of that supply, accounting both for direct costs and opportunity costs, is needed to validate the analysis presented in this declaration. That data will be available only after the integration of Virginia Power.

65. As a general caveat about the above analysis, there is an important feature of the Commission' delivered price test that was not examined here. The supply considered is all offers regardless of cost whereas the delivered price test includes only those resources capable of providing supply for less than or equal to 1.05 times the clearing price. Until we have experience with Dominion included in the market we do not have data to accurately calculate the supply curve to include only competitive supply options. Inclusion of only those competitive resources is likely to make the failure of the delivered price test worse.

66. The MMU will submit an updated analysis, data and recommendation to the Commission within seven months after the integration of Virginia Power indicating whether the combined market passes the Commission's market power delivered price test, including any relevant mitigating factors. The existence of substantial excess supply evaluated using pivotal supplier tests and the nature of the actual associated supply curve for regulation are such factors. A large surplus of supply serves a role in mitigating the exercise of market power only if it actually exists, only if it is not controlled by a small number of dominant

suppliers and only if it can be supplied at a competitive cost. In this case, we will have the opportunity to review actual data and inform the Commission as to actual supply conditions following the integration of Virginia Power.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 25th day of April 2005.

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Joseph E. Bowring

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CERTIFICATE OF SERVICE

I hereby certify that I have this 25th day of April 2005 served this filing in accordance with Commission rules upon each person designated on the official service list compiled by the Secretary in Docket No. ER05-10.

Carrie L. Bumgarner