

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Exelon Corporation	)	
	)	
Public Service Enterprise Group	)	Docket No. EC05-43-000
Incorporated	)	

PREPARED SUPPLEMENTAL DIRECT TESTIMONY OF  
JOSEPH P. KALT, Ph.D.  
ON BEHALF OF THE PPL COMPANIES  
May 27, 2005

**I. PURPOSE OF TESTIMONY AND SUMMARY OF FINDINGS**

1 **Q: DID YOU FILE PREPARED DIRECT TESTIMONY IN RELATION TO THIS**  
2 **APPLICATION ON APRIL 11, 2005?**

3 A: Yes. I submitted testimony on behalf of the PPL Electric Utilities Corporation; PPL  
4 EnergyPlus, LLC; PPL Brunner Island, LLC; PPL Holtwood, LLC; PPL Martins  
5 Creek, LLC; PPL Montour, LLC; PPL Susquehanna, LLC; PPL University Park,  
6 LLC and Lower Mount Bethel Energy, LLC (collectively the “PPL Companies” or  
7 “PPL”).<sup>1</sup>

8 **Q: ON WHOSE BEHALF IS YOUR SUPPLEMENTAL TESTIMONY HERE**  
9 **SUBMITTED?**

10 A: My supplemental testimony is submitted on behalf of the PPL Companies.

11 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A: I have been asked by the PPL Companies to review and analyze the Answer of  
13 Exelon Corporation and Public Service Enterprise Group Incorporated (“Merging  
14 Parties” or “Applicants”) in relation to their merger application<sup>2</sup> filed with the Federal  
15 Energy Regulatory Commission (“FERC” or the “Commission”).<sup>3</sup> The Merging

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<sup>1</sup> Prepared Direct Testimony of Joseph P. Kalt Ph.D., Docket No. EC05-43-000, filed April 11, 2005 (“Kalt Direct Testimony”).

<sup>2</sup> Exelon Corporation, Public Service Enterprise Group Incorporated, Application for Authorization for Disposition of Jurisdictional Assets, Docket No. EC05-43-000, filed February 4, 2005 (“Application”).

<sup>3</sup> Answer of Exelon Corporation, Public Service Enterprise Group Incorporated, Application for Authorization for Disposition of Jurisdictional Assets, Docket No. EC05-43-000, filed May 9, 2005 (“Answer”).

1 Parties' Answer entails both responses to critiques that I and others have offered  
2 regarding their original merger proposal, as well as a substantially revised merger  
3 proposal. Specifically, to address certain deficiencies in their original proposal, the  
4 Merging Parties now propose greater levels of divestiture and related remedies for the  
5 prospect of adverse impacts of the merger on competition. This new proposal is  
6 defended by a new analysis of competitive effects by Dr. William Hieronymus. Dr.  
7 Hieronymus also responds to my and others' critiques of the Applicants' original  
8 proposal and Dr. Hieronymus' original analysis of that proposal. I, here, set out the  
9 results of my analysis of Dr. Hieronymus' latest testimony.

10 The Applicants have made it clear that their revised proposal is offered only  
11 on the condition that the Commission not subject it to the scrutiny of an evidentiary  
12 hearing. The Applicants' new stance is that, if required to go to hearing, their revised  
13 proposal will be withdrawn and they will revert to their original proposal.  
14 Accordingly, I begin my analysis with a review of the Merging Parties' responses to  
15 the critiques of their original proposal. I then turn to examination of the Merging  
16 Parties' revised proposal and the accompanying demand that it not be subjected to an  
17 evidentiary hearing. My focus in this regard is on the implications of the Merging  
18 Parties' revised proposal and Answer from the perspective of the Commission's  
19 overriding goals of promoting a competitive and efficient electric power industry.<sup>4</sup>

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<sup>4</sup> My analysis is guided by the Commission's Order No. 642, Final Rule in Docket No. RM98-4-000, 18 C.F.R. Part 33, 93 FERC ¶ 61,164 (2000) ("Order No. 642").

1 Q: PLEASE SUMMARIZE YOUR FINDINGS.

2 A: As I describe below, the Merging Parties' Answer provides an inadequate response to  
3 the serious shortcomings of their original merger proposal that I discussed in my  
4 Direct Testimony. In addition, I find that their revised proposal is substantively  
5 flawed in important respects. Most tellingly:

- 6 • **Relevant Markets:** The Answer and the Supplemental Testimony of Dr.  
7 Hieronymus continue to provide no substantive analytical support for the  
8 Merging Parties' prior and continuing assertion that it is not necessary to  
9 analyze the impacts of the proposed merger on PJM Classic as a separate  
10 relevant geographic market. Similarly, the Merging Parties' analysis of  
11 Northern New Jersey remains inadequate, fails to show actual pre- and post-  
12 merger market concentrations, and ignores the implications of the merger for  
13 post-merger incentives for anticompetitive conduct on the part of the merged  
14 entity. The evidence from PJM shows important pockets of congestion and  
15 associated isolation of those pockets as separate relevant markets. I find that  
16 the merger (both as originally proposed and as revised) continues to raise  
17 important concerns regarding competitive impacts in markets such as  
18 Northern New Jersey, and that the Applicants' proffered analysis leaves  
19 substantial unanswered questions regarding competitive impacts in various  
20 other regions of PJM. From a public policy perspective, if nothing else,  
21 these unanswered questions warrant the attention of an evidentiary hearing.
- 22 • **Virtual Divestiture:** Merging Parties have inappropriately dismissed  
23 concerns raised regarding their proposal to "divest" critical and large (i.e.,  
24 nuclear) generation assets only through contract sales, rather than through the  
25 actual relinquishment of ownership by the merged entity.<sup>5</sup> I find that the  
26 Merging Parties' virtual divestiture and associated conditions on their  
27 contracting and operations of "virtually divested" assets are not adequate to  
28 eliminate incentives and opportunities for post-merger attempts to exercise  
29 market power. This holds for both the original proposed merger and the  
30 Applicants' revised proposal.
- 31 • **Market Power Analyses:** Even accepting the Merging Parties' and Dr.  
32 Hieronymus' delineations of relevant markets, their various analyses of  
33 prospects for post-merger exercises of enhanced market power are  
34 inadequate in key respects. By failing to model the actual nature of cross-

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<sup>5</sup> Answer at 37-42.

1 transmission-boundary importing of power into transmission-congested  
2 relevant markets, the Merging Parties have failed to detect real shortcomings  
3 of their proposed merger, even post-mitigation. I show below, for example,  
4 that proper analysis of imports into relevant markets leaves the Applicants'  
5 proposal in substantial violation of the Commission's market concentration  
6 thresholds in, for example, the important PJM East market. Further  
7 problems with the Merging Parties' and Dr. Hieronymus' analyses of the  
8 prospects of market power arise in their insistence on walking a knife-edge  
9 of purported compliance with the Commission's thresholds and  
10 inconsistencies in Dr. Hieronymus' treatment of market price levels at which  
11 he conducts market power analyses.

- 12 • **Restrictions on Buyers of Divested Assets:** The Merging Parties' original  
13 merger proposal recognized the need for substantial divestiture in light of the  
14 overwhelming evidence of competitive problems otherwise attendant to an  
15 unmitigated merger. The Parties' original divestiture proposal, however,  
16 would restrict the universe of prospective buyers of divested assets to buyers  
17 that currently hold no more than 5% market shares in PJM. The Applicants'  
18 Answer provides no material response to the concerns that I and others have  
19 raised regarding the buyer restrictions. The Applicants' desire to restrict  
20 asset sales to only small buyers continues to constitute an inappropriate  
21 substitution of the Merging Parties' wishes for the power of the marketplace  
22 to allocate assets efficiently and the power of the Commission to review  
23 whether any particular acquisitions pose threats to competition. Even under  
24 the Merging Parties revised proposal, which removes the originally proposed  
25 restrictions on buyers, the Merging Parties' failure to specify which assets  
26 would be divested leaves their proposal too indefinite to evaluate or approve  
27 as suitable merger mitigation.
- 28 • **Contingent Proposal:** Finally, I find that the Merging Parties' demand that  
29 their latest proposal not be subjected to an evidentiary hearing, while  
30 interesting as a tactic, if granted, would be wholly inconsistent with a proper  
31 public policy process. In the case of an electric power industry merger of  
32 this magnitude and complication, potentially affecting one of the most  
33 populous regions of the nation, the public's interest turns on complete  
34 examination of the substantive shortcomings and unanswered questions  
35 regarding the revised proposal.

## II. ANALYSIS

### 1 II.A Relevant Geographic Markets

2 Q: HOW HAVE THE MERGING PARTIES RESPONDED TO CONCERNS  
3 RAISED REGARDING DR. HIERONYMUS' CHOICES OF RELEVANT  
4 GEOGRAPHIC MARKETS?

5 A: Dr. Hieronymus dismisses critiques focused on his selection of relevant  
6 geographic markets as lacking merit.<sup>6</sup> With respect to the so-called PJM  
7 Classic market,<sup>7</sup> he summarily asserts that he has properly concluded it no  
8 longer requires separate consideration. In the case of Northern New Jersey, he  
9 references his original workpapers as providing a suitable analysis for the  
10 Commission to complete its review. Yet, his workpaper analysis shows none of  
11 the merger-related HHI analysis applicable under the Commission's screens for  
12 prospective harm to competition, nor do they properly consider the economic  
13 implications of the notable congestion faced by outside-Northern New Jersey  
14 suppliers seeking to compete in the region.

15 Even more generally, data on prices across various regions within PJM  
16 (as shown, for example, in Exhibit PPL-7) indicate substantial impediments to  
17 across-zone price equalization. Such price equalization is the *sine qua non* of  
18 regions of a market being effectively joined into a common large market. It is

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<sup>6</sup> Supplemental Testimony of Dr. William Hieronymus, filed with Answer of Exelon Corporation, Public Service Enterprise Group Incorporated, Application for Authorization for Disposition of Jurisdictional Assets, Docket No. EC05-43-000, May 9, 2005 ("Hieronymus Supplemental Testimony"), at 32-36.

1 well-documented transmission congestion within and across PJM which gives  
2 rise to sustained price inequalities of the type seen in Exhibit PPL-7.<sup>8</sup> Such  
3 transmission congestion prevents inter-regional power flows and price arbitrage  
4 that otherwise link regions into larger markets, and such congestion thus  
5 represents a preeminent cause of isolated zones and load pockets that become  
6 their own smaller markets during periods of transmission congestion. Yet, Dr.  
7 Hieronymus' analysis largely overlooks the economic implications of such  
8 patterns of congestion across PJM. The result is an incomplete analysis of the  
9 competitive implications of the proposed merger in either its original or its  
10 revised forms.

11 **Q: WHAT IS DR. HIERONYMUS' STATED BASIS FOR WHY HE HAS**  
12 **NOT ANALYZED THE PJM CLASSIC MARKET?**

13 **A:** Dr. Hieronymus cites the PJM Market Monitoring Units' 2004 State of the  
14 Market report, dated March 8, 2005 ("PJM 2004 SOM"), as the reason why he  
15 does not analyze the PJM Classic market. In particular, he observes that PJM  
16 reports that it has been managing its dispatch on either side of its western  
17 interface so as to hold down the number of hours during which the entire  
18 interface is constrained.<sup>9</sup> He does not address the persistent price differentials  
19 that exist on either side of the western interface (see Exhibit PPL-7), nor the

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<sup>7</sup> PJM Classic represents the geographic region of the PJM Interconnect prior to the incorporation of Allegheny Power.

<sup>8</sup> See, e.g., PJM 2004 SOM at 201 and discussion below.

1 congestion that is causing the need to re-dispatch in the first place. In fact, as I  
2 indicated in my prepared direct testimony, the trend in PJM is toward  
3 *attempting* to minimize the effects of within-PJM transmission constraints.  
4 Nevertheless, the number of hours the constraints are almost reached and the  
5 system is congested has increased substantially over time.<sup>10</sup> This warrants  
6 consideration.

7 **Q: PLEASE EXPLAIN THE PJM 2004 STATE OF THE MARKET**  
8 **REPORT'S ANALYSIS OF CONGESTION?**

9 **A:** The PJM 2004 SOM provides an extensive discussion of congestion on the  
10 PJM system, and how it is managed by the system operators. As defined by  
11 PJM: "Congestion occurs when available, low-cost energy cannot be delivered  
12 to all loads because of limited transmission capabilities. When the least cost  
13 available energy cannot be delivered to load in a transmission-constrained area,  
14 higher cost units must be dispatched in this constrained area to meet that load  
15 (footnote excluded). The result is that the price of energy in the constrained  
16 area is higher than elsewhere because of transmission limitations."<sup>11</sup> Thus, it is  
17 clear that the price differentials shown in Exhibit PPL-7 are driven by  
18 congestion. In fact, as I explain below, these price differentials are easily traced  
19 to specific congestion issues described in the PJM 2004 SOM.

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<sup>9</sup> Hieronymus Supplemental Testimony at 33-34.  
<sup>10</sup> Kalt Direct Testimony at 29.  
<sup>11</sup> PJM 2004 SOM at 201.

1       **Q: PLEASE EXPLAIN HOW PJM’S ANALYSIS OF CONGESTION**  
2       **SUPPORTS THE NEED TO CONSIDER PJM CLASSIC AS A**  
3       **RELEVANT GEOGRAPHIC MARKET.**

4       **A:** Although the PJM 2004 SOM reports fewer absolute interface constraints,<sup>12</sup>  
5       there continue to be transmission facilities associated with a particular interface  
6       that experience considerable congestion. For example, the western interface is  
7       composed of four transmission facilities (the Keystone-Juanita, Conemaugh-  
8       Juanita, Conemaugh-Hunterstown, and Doubs-Brighton lines) and is commonly  
9       subject to congestion.<sup>13</sup> Additional review of the PJM 2004 SOM reveals that  
10      another important transmission facility, the Bedington-Black-Oak line, which is  
11      a pathway to the Doubs-Brighton line where the latter forms part of the western  
12      interface, was “the single most constrained facility in PJM during 2004.”<sup>14</sup>

13               In fact, PJM further explains that the congestion event hours associated  
14      with Bedington-Black-Oak, combined with the AP (Allegheny Power) South  
15      Interface, restrict west-to-east flows of power and that these paths are the  
16      primary path for energy transfers from AP and midwestern generating resources  
17      to southwestern PJM and eastern Virginia load.<sup>15</sup> Thus, transfer limitations on  
18      upstream facilities limit flow into PJM Classic, and one of the affected  
19      pathways is the most congested line in PJM. The result is sustained price

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<sup>12</sup> PJM 2004 SOM at 214.

<sup>13</sup> See PJM Website at <http://www.pjm.com/etools/downloads/edatafeed/edatafeed-doc-product-sheet.pdf>  
for a description and depiction of the interfaces.

<sup>14</sup> PJM 2004 SOM at 214.

1 differences between AP and PJM. This can be seen in the persistent price  
2 differences between the AP Zone and the other end of its path into PJM Classic  
3 at the PEPCO Zone shown in Exhibit PPL-7. Exhibit PPL-8 shows the time  
4 pattern of these price differences. Similarly, the pathway from the AEP Zone to  
5 the FE Penelec Zone and the pathway from the AEP Zone to the AP Zone (and  
6 onto the PEPCO Zone) clearly leave the AEP Zone separated from PJM Classic  
7 for sustained periods. With the AEP Zone and the AP Zone unintegrated into  
8 the rest of PJM, we are left with PJM Classic. The price differences in Exhibit  
9 PPL-7 and the time pattern of sustained cross-boundary price differences seen  
10 in Exhibit PPL-8 indicate that PJM Classic is isolated as a relevant market  
11 during at least summer and winter peak periods. Notwithstanding this finding,  
12 Dr. Hieronymus has not analyzed the merger's implications for the PJM Classic  
13 market. Without further explanation by Dr. Hieronymus, the model he has  
14 provided is in such a form as to preclude me from performing the necessary  
15 calculations.

16 **Q: DOES DR. HIERONYMUS PROPERLY CONSIDER NORTHERN NEW**  
17 **JERSEY AS A RELEVANT GEOGRAPHIC MARKET?**

18 **A:** No. Dr. Hieronymus continues to argue in his supplemental testimony that  
19 Northern New Jersey need not be considered a relevant geographic market

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<sup>15</sup> PJM 2004 SOM at 218.

1 because Exelon does not own generation in this location.<sup>16</sup> Tellingly, however,  
2 Northern New Jersey exhibits persistently elevated prices relative to the  
3 neighboring portions of PJM (Exhibit PPL-9).<sup>17</sup> In fact, the PJM 2004 State of  
4 the Market Report notes that “in calendar year 2004, the PSEG Control Zone  
5 experienced 1,784 congestion-event hours, the most of any control zone, but  
6 only a 2 percent increase over the 1,751 congestion-event hours the PSEG  
7 Control Zone has experienced in 2003.”<sup>18</sup> Moreover, Exelon (along with  
8 others) has access to import (i.e., transmission) rights into Northern New  
9 Jersey, and Exelon has competed as a wholesale supplier in the New Jersey  
10 basic generation service (“BGS”) auctions.<sup>19</sup> The merger would eliminate  
11 Exelon as a ready entrant – and hence competitor – to PSE&G in a region,  
12 Northern New Jersey, in which PSE&G is already by far the dominant in-region  
13 owner of generation.

14 Dr. Hieronymus’ data and method of allocating ownership of import  
15 rights (albeit, flawed – see discussion below) indicate that Exelon can be a  
16 substantial competitor (via imports) in Northern New Jersey. This is seen in

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<sup>16</sup> Hieronymus Supplemental Testimony at 33.

<sup>17</sup> Exhibit PPL-9 shows the price difference between various Northern New Jersey buses and the near-by Martins Creek bus which is located on the low side of the primary Northern New Jersey transmission constraint.

<sup>18</sup> PJM 2004 SOM at 202. The SOM Report explains that although the recent year’s high level of congestion led to higher than normal price differentials, the previous year’s (2003) congestion was driven by the Cedar-Grove – Roseland, which is a primary constraint to power flow into Northern New Jersey.

<sup>19</sup> See Notice of Intervention and Comments of the New Jersey Board of Public Utilities and Request for a Hearing, filed in Docket No. EC05-43-000, April 1, 2005, at 6.

1 Exhibit PPL-10, taken from Dr. Hieronymus' workpaper data on Northern New  
2 Jersey. The Exhibit shows the Northern New Jersey market concentrations pre-  
3 and post-merger (as the merger was originally proposed).

4 As discussed in greater detail below, PJM's system of allocating  
5 financial transmission rights ("FTRs") into constrained areas, including  
6 Northern New Jersey, enables parties that lack generation within a constrained  
7 region to enter as importers of power – and, hence, competitors. Going forward  
8 in the absence of the proposed merger, Exelon would continue to represent a  
9 ready entrant and, hence, an actual competitor of PSE&G. Under such  
10 conditions, to the extent that PSE&G were to exercise any market power, it  
11 would find itself having to share the benefits of elevated prices with parties  
12 holding import rights into Northern New Jersey – including Exelon at any time  
13 Exelon would choose to hold import rights. To the extent that the merger  
14 would eliminate a competitor for import rights and leave the merged entity  
15 holding more of those rights in the future than Exelon and PSE&G would have  
16 held individually, the merged entity will have enhanced incentive and ability to  
17 exercise market power. Thus, at a minimum, Northern New Jersey must be  
18 considered as a relevant geographic market and the foregoing prospects for  
19 enhanced exercises of market power warrant investigation.

1 **II.B The Proposed Virtual Divestiture**

2 **Q: HAVE THE MERGING PARTIES ADEQUATELY RESPONDED TO**  
3 **CRITICISMS OF THEIR VIRTUAL DIVESTITURE PROPOSAL?**

4 A: No. As I indicated in my Direct Testimony, as far as merger mitigation is concerned,  
5 contracts for sale cannot reasonably be expected to replicate the benefits of actual  
6 ownership divestiture.<sup>20</sup> In particular, the Merging Parties' virtual divestiture  
7 proposal does not provide reasonable assurance that incentives of the merged entity to  
8 exercise market power will not be enhanced after the merger. As I explain below,  
9 this is due to the uncertain nature of the contractual instruments that would be relied  
10 upon to achieve the virtual divestiture under the Applicants' revised and original  
11 proposals, and the fact that the operations of the nuclear facilities will remain under  
12 the control of the merged entity.

13 **Q: PLEASE EXPLAIN YOUR UNDERSTANDING OF THE CONTRACTUAL**  
14 **APPROACH PROPOSED BY THE MERGING PARTIES.**

15 A: The Merging Parties have proposed that 2,600 MW of baseload nuclear capacity be  
16 virtually divested,<sup>21</sup> and that this proposed "virtual divestiture" will occur through  
17 either of two forms: (1) firm long-term sales contracts for a term that expires no later  
18 than 15 years following the close of the transaction or through a swap of assets with  
19 owners of generation facilities located outside of the PJM footprint, or (2) an annual

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<sup>20</sup> Kalt Direct Testimony at 35.

<sup>21</sup> 2,400 MW will be divested in PJM East, while 200 MW will be divested in the larger PJM Pre-2004 region

1 auction of 3-year firm entitlements to baseload energy in 25 MW blocks.<sup>22</sup> In  
2 particular, in relation to the 3-year firm entitlements, an auction process will be  
3 undertaken whereby one-third of the auction amount will be sold for one year  
4 forward, one-third will be sold for two years forward, and one-third will be sold for  
5 three years forward.<sup>23</sup> Thereafter, during each future year, one-third of the virtually  
6 divested capacity will be auctioned off again for a three-year term. Thus, the pricing  
7 for a portion of the virtually divested capacity will change each year.

8 **Q: HAVE YOU CONSIDERED HOW THIS DIVESTITURE PROPOSAL MIGHT**  
9 **WORK PRACTICALLY?**

10 **A:** Yes. I think it is quite plausible that there will be limited, if any, interest in  
11 purchasing this virtually divested capacity for a term of 15 years – especially given  
12 that no rights to control of the plant accompany the contracted-for energy. Moreover,  
13 given the absence of detail in the proposal as to what criteria would be used to  
14 differentiate between the revenues associated with a long-term sale and the revenues  
15 that may result from shorter-term sales, it is difficult to know with certainty what will  
16 occur when the auctions are completed. For the purposes of my analysis herein, I am  
17 assuming that it is more likely that the shorter-term product is attractive to buyers.  
18 Thus, as I understand the virtual divestiture proposal, all virtually divested capacity  
19 that is not sold for a 15-year term will then be sold in auctions for terms of three years

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<sup>22</sup> Application at 21, 22-25.

<sup>23</sup> Prepared Directed [*sic*] Testimony of Frank Cassidy on behalf of the Applicants, Docket No. EC05-43-000, filed February 4, 2005, at 12.

1 forward, and I assume that the long-term sales will be a small fraction of the total  
2 divestiture amount.

3 **Q: WHAT DO YOU SEE AS THE COMPETITIVE IMPLICATIONS OF THE**  
4 **PROPOSED VIRTUAL DIVESTITURE?**

5 A: My concern arises from the fact that the virtual divestiture will not result in control of  
6 the nuclear facilities transferring from the owners through the contracts. I believe that  
7 this fact, combined with the expected repeated auctions for three-year forward sales  
8 of “virtually” divested capacity, can create incentives for the merged entity to  
9 discover means for affecting near-term forward market electricity prices. For  
10 example, by controlling the nuclear units, the Merging Parties can reasonably be  
11 expected to exert substantial control over unit availability. Thus, when nuclear units  
12 are out on maintenance, the Merging Parties retain control over to when units return  
13 to service. Moreover, the Merging Parties will be able to affect maintenance  
14 planning. While the Merging Parties now offer up a group-oversight type of system,  
15 it remains the case that the capacity at issue is *nuclear*, and strong reasons can exist  
16 for not pushing for the return of a unit to service in the face of any party’s –  
17 including, here, the owner’s – reservations about re-starting. Finally, following the  
18 transaction, the merged entity will control considerably more capacity in the relevant  
19 geographic markets, creating greater incentives for monopolistic withholdings of  
20 supply than exist currently.

21 Strategies of monopolistic conduct are readily apparent. Thus, for example,  
22 withholding mid-merit supplies in conjunction with, or as opposed to, nuclear plants  
23 as the next round of nuclear power contracting comes due might credibly be used to

1 signal prospects of higher going-forward prices, thereby increasing the demand for  
2 and prices of power sold under “virtual divestiture” nuclear contracts.<sup>24</sup> Note, I am  
3 not implying nefarious designs on the part of the current Merging Parties. Rather,  
4 competition analysis properly concerns itself with incentives that can emanate from a  
5 merger, but that may not even be anticipated by merger parties at the time of their  
6 merging.

7 **Q: HAVE YOU CONSIDERED THE IMPACT OF VIRTUAL**  
8 **DIVESTITURE TURNING OUT TO BE INEFFECTIVE?**

9 **A:** Yes. Exhibit PPL-11 shows the data presented by Dr. Hieronymus, treating the  
10 nuclear divestiture as ineffective as a means of merger mitigation. For the  
11 purposes of the Exhibit, I have deducted the nuclear virtual divestiture amounts  
12 from “divested” assets to display the importance of the Merging Parties’ request  
13 that the Commission “trust” in the effectiveness of the proposed virtual  
14 divestiture. As the Exhibit shows, particularly during lower market price  
15 periods, the effectiveness of the nuclear divestiture is critical to ensuring that  
16 screening violations are eliminated. Screen failures are severe when the virtual  
17 divestiture of nuclear facilities is ineffective as merger mitigation.

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<sup>24</sup> Note that such impacts of going-forward contract prices for “virtually divested” nuclear power are not discouraged by contractual terms that require the seller to replace any non-delivery that may occur during the current term of a proposed virtual divestiture contract. See Answer at 39.

1 **II.C Market Power Analyses**

2 **Q: ARE THERE ELEMENTS OF THE MERGING PARTIES' MARKET**  
3 **POWER ANALYSES THAT CONTINUE TO BE INADEQUATE?**

4 A: As I describe below, I find that there are at least two key aspects of both the  
5 current and the revised analyses which are particularly unacceptable. First, the  
6 Merging Parties in their analyses have chosen to ignore FTRs and the related  
7 economics of competition from imported power in relevant markets. Second,  
8 Dr. Hieronymus uses market price levels for the delivered price test that are not  
9 clearly linked to recently observed market prices.

10 **II.C.1 Allocation of Power Imports**

11 **Q: TURNING FIRST TO THE ISSUE OF COMPETITION FROM**  
12 **IMPORTS INTO A RELEVANT MARKET, WHAT DO YOU FIND**  
13 **INADEQUATE ABOUT DR. HIERONYMUS' HANDLING OF FTRS?**

14 A: FTRs are in effect import rights that permit an owner the ability to take  
15 generation at a particular source outside of a particular market area and "sink,"  
16 or deliver, it at a different point or zone on the system. The Merging Parties  
17 have preferential access to FTRs through grandfathered rights, as well as  
18 through the auction and sale of non-grandfathered FTRs. Coupled with  
19 combined Exelon-PSE&G post-merger ownership of a considerable quantity of  
20 low-cost generation sources outside the congested PJM East relevant  
21 geographic market, the consideration of FTRs and associated control over  
22 imports into PJM East is of critical relevance.

1           As I have explained in my prepared direct testimony, Dr. Hieronymus  
2           relies on the so-called “squeeze down” method for allocating control over  
3           imports. This approach essentially allocates import rights on a pro-rata basis  
4           based on economic generation located outside of the region, rather than in  
5           accord with parties’ import rights. As a result, the “squeeze down” approach  
6           misrepresents actual holdings of import rights and can distort the results of the  
7           analysis.<sup>25</sup>

8           **Q: PLEASE EXPLAIN THE MERGING PARTIES’ POSITION REGARDING**  
9           **FTRS.**

10          **A:** The Merging Parties claim that “It is not possible to perform a useful analysis of  
11          FTRs in PJM,” and they suggest that since FTRs have a duration of a year, FTRs need  
12          not be considered in the market power analyses.<sup>26</sup> Additionally, the Applicants point  
13          out that FTRs “are sold at auction, are potentially convertible from Auction Revenue  
14          Rights (“ARRs”), and are actively traded on the secondary market.”<sup>27</sup> Thus, the  
15          Applicants suggest that FTRs are not relevant for the analysis of the Application.  
16          Yet, the facts that the Merging Parties are holders of grandfathered import rights and  
17          can participate as competitors in primary auction and secondary transactions for such

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<sup>25</sup> Kalt Direct Testimony at 33-34.

<sup>26</sup> Hieronymus Supplemental Testimony at 17-18.

<sup>27</sup> Hieronymus Supplemental Testimony at 18. Note that ARRAs are made available to those companies in PJM that have historically been owners of the transmission system. In effect, utilities that use, and continue to use, generation to serve load in the original PJM footprint have grandfathered rights whereby they are able to obtain ARRAs prior to the running of the FTR auctions. They can then use the ARRAs to preferentially obtain FTRs in the annual auctions.

1 rights make consideration of FTR holdings highly relevant to a proper merger  
2 analysis.

3 **Q: IS IT, IN FACT, POSSIBLE TO PERFORM A USEFUL ANALYSIS OF FTRS**  
4 **IN PJM?**

5 A: Yes. PJM provides detailed FTR ownership information on its website. This  
6 information includes datasets for the results of annual and monthly auctions starting  
7 in 2003 up to and including the recently completed annual auction for 2005-2006  
8 FTRs.<sup>28</sup> These datasets are a rich source of information that not only indicate the  
9 prices and number of MWs of import rights that clear for each product, but also  
10 include identities of successful bidders and the source-sink pairing for each FTR.  
11 Because of this readily available rich source of data and the relevance of FTRs in  
12 markets such as PJM East, the Merging Parties' analysis has not considered readily  
13 available information that warrants additional investigation.

14 **Q: WHY ARE FTRS RELEVANT TO THE MARKET POWER ANALYSES IN**  
15 **THIS CASE?**

16 A: In this instance, the Merging Parties own generation sources on both sides of the PJM  
17 eastern interface. Because PJM East is a key relevant geographic market in the  
18 analysis, we cannot ignore the fact that Exelon and PSE&G own 3,600 MW and

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<sup>28</sup> Note that FTR ownership data is available as far back as 1999, before the implementation of the annual auction.

1 1,900 MW, respectively, located on the western side of the eastern interface.<sup>29</sup> As  
2 such, they are viable importers into PJM East. As I have noted, examining FTR  
3 ownership provides information on the Merging Parties' current and future ability to  
4 import its combined generation of 5,500 MW west of the eastern interface without  
5 incurring congestion costs.

6 Importantly, when we examine actual holdings of FTRs we find that the  
7 Merging Parties control large amounts of FTRs sinkable into PJM East and, hence,  
8 the supply of imports into PJM East. For example, Exhibit PPL-12 shows the results  
9 of the annual auction for FTRs just completed in May 2005 for 2005-2006 FTRs.  
10 The products illustrated in Exhibit PPL-12 are on-peak and off-peak FTRs that sink  
11 into PJM East from sources located outside of PJM East. As Exhibit PPL-12 shows,  
12 the Merging Parties control over 40% of the on-peak and off-peak FTRs. Given that  
13 these FTRs allow Exelon and PSE&G to "sink" their lower cost generation into PJM  
14 East, they allow the Merging Parties an advantage that should be evaluated in the  
15 market power analyses to ensure a thorough examination of the merger's competitive  
16 impacts.

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<sup>29</sup> See Exhibits RF-3 and RF-4, Direct Testimony of Rodney Frame on behalf of Public Service Electric and Gas, February 28, 2005, submitted to New Jersey Board of Public Utilities in relation to the Merging Parties' merger proposal.

1       **Q: DOES THE FACT THAT FTRS DO NOT HAVE A DURATION OF MORE**  
2       **THAN ONE YEAR MAKE IT INAPPROPRIATE TO CONSIDER THEM IN**  
3       **A COMPETITIVE ANALYSIS?**

4       A: No. In markets, such as electricity, where seasonal and idiosyncratic conditions of  
5       tight supply may allow individual dominant sellers to elevate prices through  
6       noncompetitive bidding and withholding strategies, there may sufficient threat of  
7       harm to consumer welfare to raise significant public policy concerns even if the FTRs  
8       themselves have a duration of less than one year. Moreover, while FTRs may not last  
9       longer than one year, the grandfathered rights the Merging Parties retain in the annual  
10      auction are linked to generation and persist year after year unless specific generation  
11      is divested. Because the Merging Parties will retain a certain set of generating assets  
12      to which grandfathered rights adhere, the merged entity will have access to a  
13      considerable quantity of grandfathered FTRs year after year. Non-grandfathered  
14      FTRs acquired via the annual auction and/or secondary market transactions will also  
15      be available to the Merging Parties in both the with-merger and without-merger  
16      possible futures. The merger will put such FTRs into a single entity. Doing so  
17      implies increased concentration of sellers of power into load pockets “sinks” (relative  
18      to the world without the merger).

19      **Q: HOW DO THE AUCTION REVENUE RIGHTS (ARRS) AFFECT THE**  
20      **ANALYSIS OF FTRS?**

21      A: The existence of ARRs do not in any way prohibit an analysis of FTRs. PJM’s  
22      transmission right allocation system allows certain companies to obtain rights  
23      consistent with historical investments in the regional transmission system.

1 Companies may use those rights to either obtain revenue via sales of rights in the  
2 annual auction or self-schedule and convert those rights into FTRs. As was illustrated  
3 in Exhibit PPL-12, Merging Parties consistently – and in very significant volumes –  
4 convert those rights into FTRs, as witnessed by the amount the Merging Parties are  
5 obtaining.

6 **Q: WHAT ARE THE IMPLICATIONS OF FTR HOLDINGS FOR THE**  
7 **ANALYSIS OF THE COMMISSION’S MARKET CONCENTRATION**  
8 **SCREENS?**

9 **A:** The FTR market is a significant market. In the 2004-2005 annual auction, FTRs for  
10 the Mid-Atlantic region alone netted \$362 million in revenue.<sup>30</sup> Buyers are thus  
11 revealing the considerable value FTRs provide in allowing them to move low cost  
12 power into higher cost locations.

13 The data on PJM’s annual FTR auction can be employed to examine  
14 quantitatively how the delivered price tests of Dr. Hieronymus change when we  
15 consider actual import right ownership (as opposed to Dr. Hieronymus’ “squeeze  
16 down” approach). I have conducted such an analysis for PJM East. Rather than  
17 using a squeeze down allocation for imports that ignores FTR ownership, I have  
18 distributed FTRs to owners based on the results of the PJM annual auction for 2005-  
19 2006.<sup>31</sup> Substituting these allocations of imports for Dr. Hieronymus’ allocations in

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<sup>30</sup> PJM 2004 SOM at 260.

<sup>31</sup> To conduct my analysis, I used Dr. Hieronymus’ workpapers from his revised analysis to determine for each market price level the amount of generation that passes the delivered price test for PJM East. I

1 his workpapers results in the Merging Parties' having considerably greater control  
2 over imports than reported by Dr. Hieronymus. Exhibit PPL-13 presents the  
3 implications of this for the analysis of the Commission's HHI screens.

4 As the Exhibit shows, using actual FTR holdings to allocate imports to  
5 generators results in a pre-merger PJM East market concentration that is considerably  
6 higher than indicated by Dr. Hieronymus. After taking into account proposed  
7 divestiture under the Applicants' revised proposal, the post-merger mitigated market  
8 is more concentrated, and the HHI changes generally violate the Commission's  
9 screens. Since the original proposal of the Applicants entails less divestiture,  
10 corresponding results for that proposal can only indicate even more severe screen  
11 violations.

12 **Q: HAVE YOU EXAMINED THE CUMULATIVE IMPACT OF BOTH**  
13 **INEFFECTIVE VIRTUAL DIVESTITURE AND FTR ALLOCATION**  
14 **ON THE MARKET CONCENTRATION ANALYSES?**

15 **A:** For the PJM East marketplace, the data allow us to assess the impact of both  
16 ineffective virtual divestiture and FTR allocation on the screening analysis.  
17 Exhibit PPL-14 shows the results for the case of the Merging Parties' revised  
18 merger and mitigation proposal. Screening failures are significantly elevated,  
19 even after considering mitigation. As above, the results would be even more  
20 severe under the Applicants' original proposal, with its lower levels of

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then assume the import allocation in accordance with FTR holdings, subject to the 7,300 MW import

1 proposed divestiture. The implication is that even with the more “generous”  
2 divestiture of the revised proposal, the proposed mitigation is inadequate. This  
3 holds, *per* Exhibit PPL-13, even if the virtual divestiture of nuclear capacity is  
4 treated as fully effective as a mitigation device.

### 5 II.C.2 Market Price Level Determination

6 Q: YOU NOTED ABOVE THAT YOU ALSO HAVE CONCERNS AS TO  
7 DR. HIERONYMUS’ SELECTION OF THE MARKET PRICE LEVEL  
8 AT WHICH TO CONDUCT THE SCREENING ANALYSIS. COULD  
9 YOU EXPLAIN YOUR CONCERNS?

10 A: In his supplemental testimony, Dr. Hieronymus has indicated that his market  
11 price level determinations are ostensibly somewhat arbitrary as their selection is  
12 “as much an art as it is a science.”<sup>32</sup> Thus, instead of conducting his delivered  
13 price tests at market price levels that are consistent with recently observed  
14 prices in PJM, he argues that examining a wide range of price levels across all  
15 seasons analyzed ought to be sufficient.<sup>33</sup> In addition, Dr. Hieronymus  
16 indicates that he has calibrated his assumed market prices to match fuel inputs,  
17 although I note that this calibration process is not readily apparent in his  
18 workpapers. Although Dr. Hieronymus has offered additional commentary on

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limit.

<sup>32</sup> Hieronymus Supplemental Testimony at 18.

<sup>33</sup> *Ibid.*

1 price level determination, he has not responded to the concerns I raised in my  
2 direct testimony that there is difficulty explaining his chosen price levels.<sup>34</sup>

3 **Q: PLEASE EXPLAIN DR. HIERONYMUS' FURTHER EXPLANATIONS**  
4 **TO HIS MARKET PRICE LEVEL DETERMINATIONS.**

5 Dr. Hieronymus argues that by capturing a range of price levels, the analysis  
6 represents a full range of results. However, as I explained in my direct  
7 testimony (See Exhibit PPL-5), his selected price levels are inconsistent with  
8 observed market prices, especially during off-peak periods. He has defined an  
9 approach for determining his range of price levels, but his price-level range  
10 does not agree with relevant price levels recently observed in PJM. For  
11 example, Dr. Hieronymus analyzes off-peak price levels that are consistently  
12 lower than those prices observed in the market (\$20/MWh shoulder, \$25/MWh  
13 summer, and \$30/MWh winter). As reported in my prepared direct testimony,  
14 actual average off-peak prices calculated in accordance with Dr. Hieronymus'  
15 approach have recently ranged from \$30-\$39/MWh.<sup>35</sup> Because different  
16 generating units are marginal during different times of the year, it is important  
17 that the market price levels accurately assess the likely generation dispatch on a  
18 seasonal basis. Arguing that across seasons all price levels are captured does  
19 not appropriately ensure that the unique supply mixture available during each  
20 particular season is properly accounted for in the analysis.

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<sup>34</sup> Kalt Direct Testimony at 32-33.

1 **II.D Restrictions on Buyers of Divested Assets**

2 **Q: YOUR PREPARED DIRECT TESTIMONY WAS QUITE CRITICAL OF**  
3 **THE APPLICANTS' ORIGINAL PROPOSAL TO RESTRICT ANY**  
4 **BUYERS OF DIVESTED ASSETS TO BUYERS WITH NOT MORE**  
5 **THAN A 5% SHARE OF GENERATION CAPACITY. HAVE THE**  
6 **APPLICANTS NOW ALLAYED YOUR CONCERNS?**

7 A: No, they have not. The Applicants' Answer provides no material response to  
8 the concerns that I and others have raised regarding the buyer restrictions.  
9 Moreover, because the Applicants have made their revised proposal (which  
10 removes the buyer restrictions) contingent on whether the Commission requires  
11 the proposed merger to go to hearing, and the Commission may well do exactly  
12 that, the Merging Parties' original proposal is still on the table. Under that  
13 proposal, the Applicants' desire to restrict asset sales to only small buyers  
14 continues to constitute an inappropriate substitution of the Merging Parties'  
15 wishes for both the power of the marketplace to allocate assets efficiently and  
16 the power of the Commission to review whether any particular acquisitions  
17 pose threats to competition.<sup>36</sup>

18 I should point out, as well, that the removal of the buyer restrictions  
19 under the Merging Parties' revised proposal does not make their proposed  
20 divestiture strategy satisfactory. In particular, the Merging Parties have not

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<sup>35</sup> Kalt Direct Testimony at Exhibit PPL-5.

1 specified which assets would be divested, making it impossible to evaluate  
2 whether their proposal would constitute adequate merger mitigation. To  
3 illustrate by example, while the Applicants now list certain plants that might be  
4 divested and some of those plants are in Northern New Jersey, the Merging  
5 Parties request approval of their proposal without hearing and without any  
6 guarantees that actual divestiture would take place in Northern New Jersey.  
7 Similarly, the process proposed by Applicants provides no mechanism by  
8 which to assess whether plants now cited as up for possible divestiture will  
9 actually perform as advertised (i.e., as incorporated into Dr. Hieronymus'  
10 analysis of the Commission's screens). In conjunction with the other elements  
11 of the Applicants' proposal that remain inadequate and that I have discussed  
12 above, the revised proposal cannot be judged adequate from a public policy and  
13 public interest proposal. At the very least, no such judgment can be reached  
14 without the opportunity to vet the proposal(s) of the applicant via a hearing  
15 process.

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<sup>36</sup> Kalt Direct Testimony at 5-7, 14-19, and 36.

### **III. THE MERGING PARTIES' CONTINGENT REVISED PROPOSAL**

1       **Q: BY WHAT CRITERIA DO YOU FIND THE MERGING PARTIES' MAKING**  
2       **THEIR REVISED PROPOSAL CONTINGENT ON THE COMMISSION'S**  
3       **FORGOING AN EVIDENTIARY HEARING OBJECTIONABLE?**

4       **A:** The nation's public has abiding interests in an efficient and competitive electric  
5       power sector. Mergers can pose threats to these interests of the public because  
6       mergers can enhance prospects for the exercise of market power. Moreover, the  
7       public's interest in the efficiency of the electric power sector is particularly at  
8       risk in the case at hand: The Merging Parties' proposal entails the proposition  
9       that, if they must go to hearing, they will request and defend restrictions on  
10      buyers of divested assets. As discussed at length in my prepared direct  
11      testimony, this would reasonably be expected to prevent some or all of the  
12      divested assets from being acquired by the most efficient prospective buyers.<sup>37</sup>

13             The Merging Parties' proposal amounts to a threat that "if we go to a  
14      hearing, we'll play hard(er) ball and compel the parties to fight over a merger  
15      that is far less attractive than our 'sweeter,' albeit contingent, proposal." While  
16      understandable as a litigatory strategy from the Applicants' point of view,  
17      acquiescing to such a demand would hardly serve the public's interests. As  
18      precedent, acquiescence would imply the ability of parties to entice the  
19      Commission to eschew its powers of review through evidentiary hearings. In

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<sup>37</sup> Kalt Direct Testimony at 15-16, and 36.

1 the case at hand, as I have detailed here, both the original and the revised  
2 merger proposals suffer from severe shortcomings and important unanswered  
3 and/or superficially answered questions and not-yet-performed analyses. Under  
4 such circumstances, and in light of the fact that the merger of Exelon and  
5 PSE&G would create a very large new entity in a very populous region of the  
6 country with well-known problems of transmission congestion, approval of the  
7 merger as now proposed without an evidentiary hearing would represent an  
8 especially undesirable outcome and precedent.

#### **IV. CONCLUSIONS**

9 **Q: PLEASE SUMMARIZE YOUR CONCLUSIONS.**

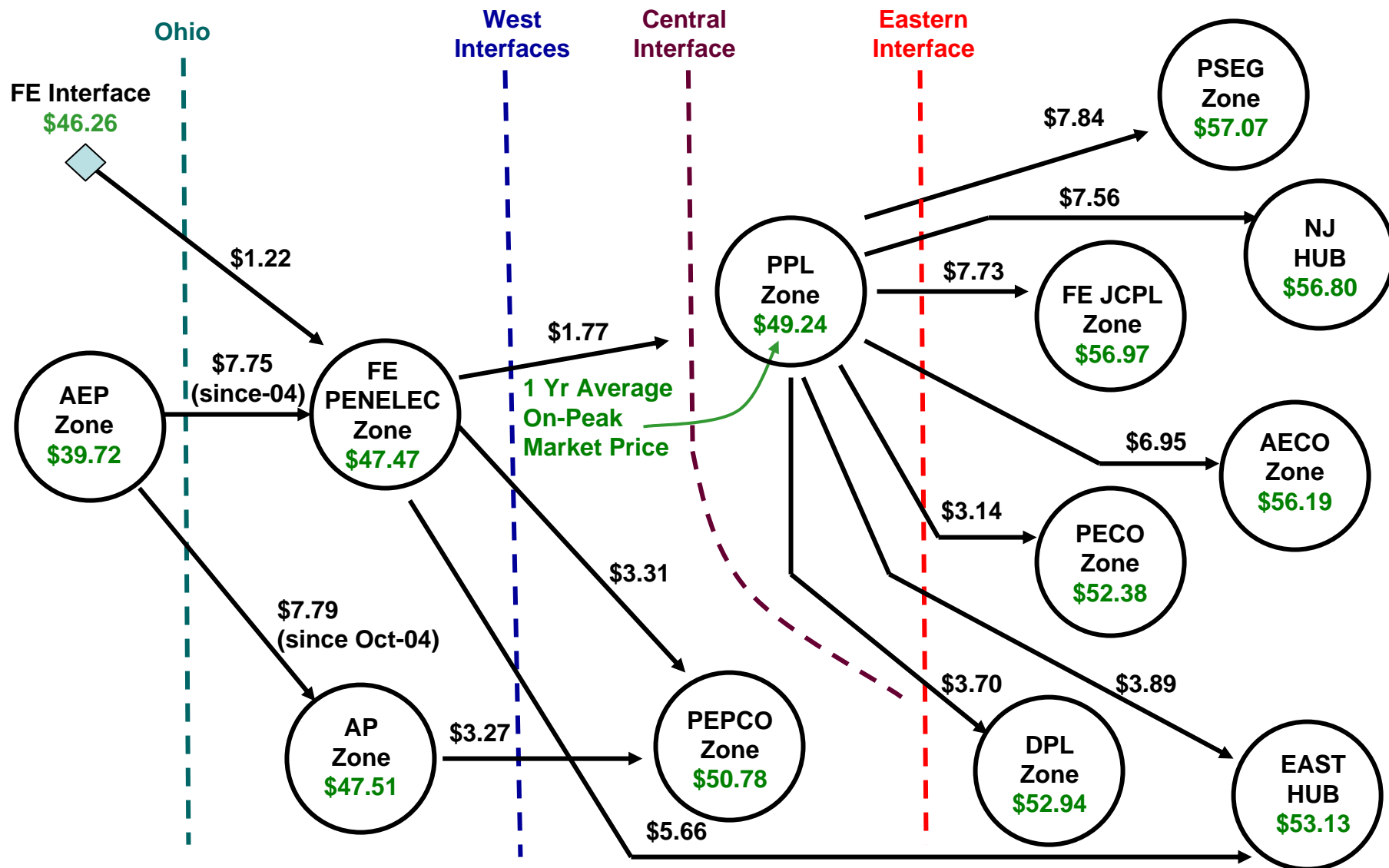
10 **A:** I find that the Merging Parties' revised proposal and competitive analyses continue to  
11 be inadequate for us to conclude that the proposed merger with mitigation will allow  
12 competitive conditions post-merger to go unharmed. Because the Applicants have  
13 made their revised proposal contingent on the Commission's not ordering an  
14 evidentiary hearing, where appropriate I have analyzed both proposals. In this regard,  
15 I find that both proposals continue to be deficient by: not analyzing all relevant  
16 geographic markets consistent with Commission guidelines; inappropriately relying  
17 on virtual divestiture as an effective means of mitigating incentive of merged entity to  
18 exercise market power; disregarding the important ownership rights the Merging  
19 Parties obtain through their FTRs; and using market price levels that are not  
20 analytically substantiated.

1           Moreover, because the revised proposal is contingent upon no evidentiary  
2 hearing, and the original buyer restrictions are still intact if a hearing is called for by  
3 the Commission, the Applicants continue to request that the Commission apply poor  
4 public policy by accepting the Merging Parties' judgments as opposed to the  
5 Commission's own reasoned review. If the Commission sets the matter for hearing,  
6 the Merging Parties' originally proposed buyer restrictions in divestiture sales would,  
7 essentially, seek to avoid the Commission's judgment as to whether particular  
8 acquisitions by particular buyers with greater than 5% ownership in PJM pose real  
9 threats to competition. If the Commission approves the Applicants' revised proposal  
10 without a hearing, the Commission will have forgone the process by which it could  
11 most reliably make informed judgments regarding the obvious shortcomings and  
12 unanswered questions that plague the revised merger proposal. Backed into this  
13 choice by the Applicants' tactics, the public's interest lies in setting the matter for  
14 hearing, rejecting proposed buyer restrictions, and ensuring that the proper amount  
15 and form of divestiture are implemented.

16       **Q: DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?**

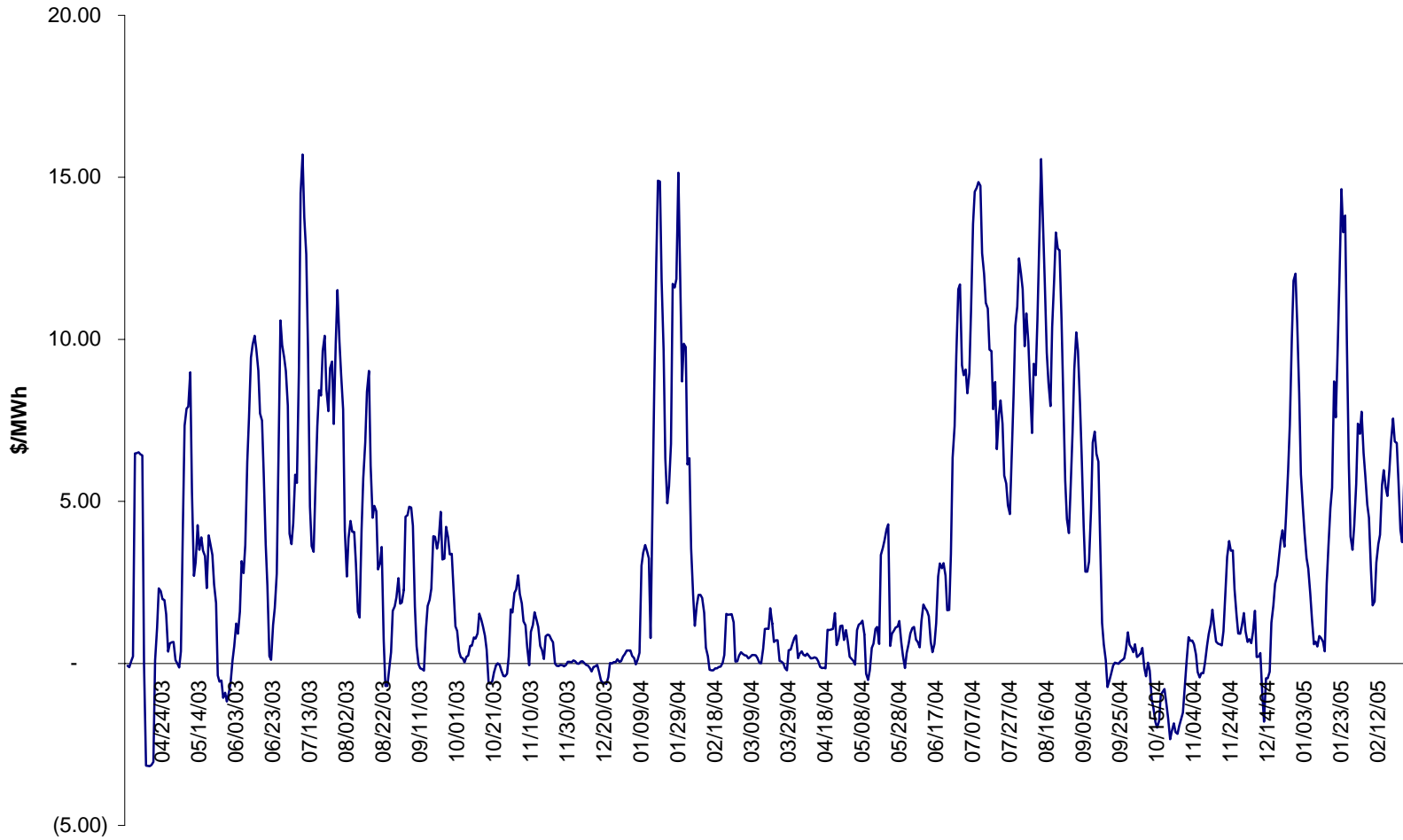
17       **A:** Yes.

### PJM 1-YEAR AVERAGE ON-PEAK ZONAL PRICES AND PRICE DIFFERENCES (\$/MWh) January 1, 2004 – December 31, 2004



Source: PJM Interconnection website.

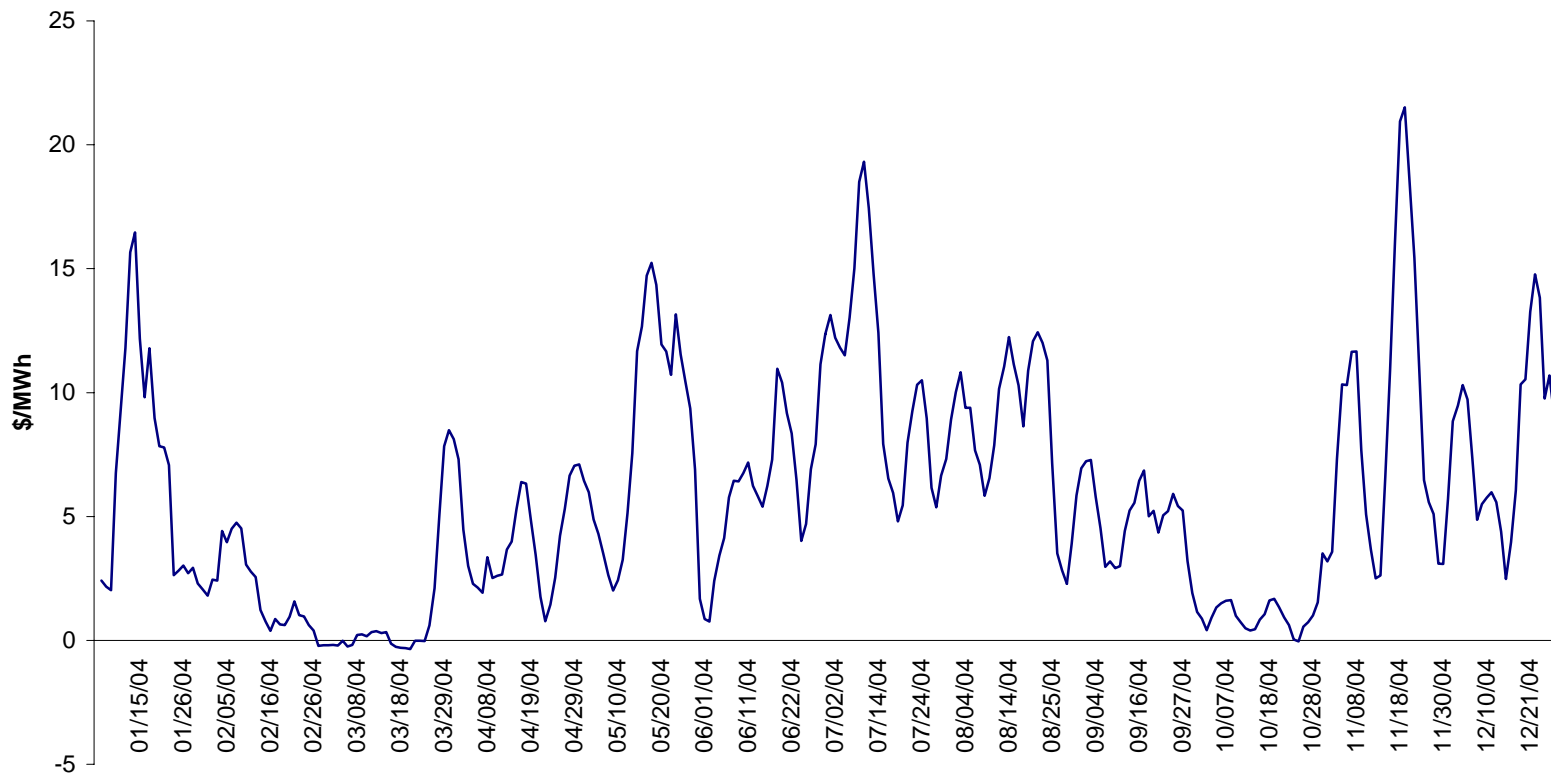
### PEPCO vs. AP AVERAGE ON-PEAK ZONAL PRICE DIFFERENTIALS April 2003 - February 2005



**Note:** Graph shows the price difference between the Pepco and AP (Allegheny Power) moving weekly (5-day) averages.

**Source:** PJM Interconnection website.

### NORTHERN NEW JERSEY vs. MARTINS CREEK AVERAGE ON-PEAK BUS PRICE DIFFERENTIALS, 2004



**Note:** Northern New Jersey prices are an average of the Bayonne, Bergen, Essex, Fair Lawn, Hudson, Linden and Kearny buses. Graph shows the price difference between this Northern New Jersey average bus and Martins Creek bus (located on the low side of Cedar Grove-Roseland constraint) moving weekly (5-day) averages.

**Source:** PJM Interconnection website.

**THE IMPACT OF PROPOSED MERGER  
ON THE NORTHERN NEW JERSEY MARKET <sup>1</sup>  
Economic Capacity**

<b>Period</b>	<b>Exelon Market Share</b>	<b>PSEG Market Share</b>	<b>Pre-Merger HHI <sup>2</sup></b>	<b>EEG Post-Mitigation Market Share</b>	<b>Post-Merger Post-Mitigation HHI</b>	<b>Change in HHI</b>
S_SP1	6.65%	67.15%	4,553	69.14%	4,780	227
S_SP2	7.76%	61.12%	3,796	63.80%	4,070	275
S_P	11.41%	51.38%	2,771	54.00%	2,916	146
S_OP	26.42%	14.22%	900	28.74%	826	(74)
W_SP	7.93%	61.91%	3,896	64.82%	4,202	306
W_P	12.01%	50.80%	2,725	53.86%	2,901	176
W_OP	19.41%	28.81%	1,207	37.58%	1,412	205
SH_SP	11.22%	48.12%	2,441	51.94%	2,697	256
SH_P	19.68%	24.45%	985	34.88%	1,217	232
SH_OP	26.18%	12.38%	839	27.70%	767	(71)

**Source:** Dr. Hieronymus' workpapers.

**Notes:**

1) This tabulation presents Dr. Hieronymus' Northern PSEG (with imports) results but excludes his unrealistic derivation of additional mitigation in Northern New Jersey. His proposed additional mitigation assumes that 100 MW of generation in Northern PSEG is sold to two parties, but such a divestiture is not feasible.

2) Because Dr. Hieronymus does not report other suppliers' market shares in his analysis, the market concentrations are understated as all other suppliers to the market are assumed to represent atomistic competition. Also, mitigation represents unit divestiture assumed to occur outside of Northern New Jersey.

**SENSITIVITY OF MARKET POWER ANALYSES TO FAILURE OF VIRTUAL DIVESTITURE AS ACCEPTABLE MITIGATION**  
**Economic Capacity, Applicants' Revised Proposal**

Period	Price	Pre-Merger						Post-Merger				Mitigation and Post-Mitigation Results				
		Exelon MW	Exelon Share	PSEG MW	PSEG Share	Mkt Size	HHI	EEG MW	EEG Share	HHI	HHI Chg	Mitigation MW	Nuclear	EEG Share	HHI	HHI Chg
<b><i>PJM East</i></b>																
S_SP1	\$250	6,948	18.5%	9,653	25.7%	37,610	1,282	16,600	44.1%	2,230	948	3,685	0	34.3%	1,624	342
S_SP2	\$80	6,016	18.6%	7,750	23.9%	32,384	1,207	13,766	42.5%	2,096	889	2,569	0	34.6%	1,608	401
S_P	\$55	5,105	21.9%	5,948	25.5%	23,362	1,347	11,052	47.3%	2,460	1,113	2,569	0	36.3%	1,687	340
S_OP	\$25	4,887	31.0%	2,631	16.7%	15,779	1,486	7,518	47.6%	2,519	1,033	0	0	47.6%	2,519	1,033
W_SP	\$80	6,404	19.5%	7,790	23.7%	32,900	1,220	14,194	43.1%	2,142	922	2,603	0	35.2%	1,643	423
W_P	\$55	5,435	22.5%	5,762	23.8%	24,186	1,314	11,197	46.3%	2,385	1,071	2,603	0	35.5%	1,657	343
W_OP	\$30	5,167	26.8%	3,594	18.7%	19,258	1,326	8,761	45.5%	2,327	1,001	692	0	41.9%	2,057	731
SH_SP	\$65	4,877	20.4%	5,087	21.3%	23,872	1,189	9,964	41.7%	2,060	871	2,116	0	32.9%	1,539	350
SH_P	\$45	4,675	26.2%	2,935	16.4%	17,863	1,257	7,610	42.6%	2,117	860	504	0	39.8%	1,920	663
SH_OP	\$20	4,338	30.6%	2,051	14.5%	14,180	1,413	6,389	45.1%	2,298	885	0	0	45.1%	2,298	885
<b><i>PJM Pre-2004</i></b>																
S_SP1	\$250	10,508	13.5%	11,210	14.4%	77,815	877	21,718	27.9%	1,266	389	3,685	0	23.2%	1,095	218
S_SP2	\$80	9,545	13.7%	9,288	13.3%	69,950	865	18,834	26.9%	1,227	362	2,569	0	23.3%	1,094	229
S_P	\$55	7,976	14.5%	7,455	13.6%	54,840	934	15,431	28.1%	1,329	395	2,569	0	23.5%	1,153	219
S_OP	\$25	6,416	26.1%	3,189	13.0%	24,609	1,220	9,605	39.0%	1,896	676	0	0	39.0%	1,896	676
W_SP	\$80	9,899	14.0%	9,334	13.2%	70,720	864	19,233	27.2%	1,233	369	2,603	0	23.5%	1,098	234
W_P	\$55	8,299	14.9%	7,273	13.1%	55,722	937	15,571	27.9%	1,325	388	2,603	0	23.3%	1,153	216
W_OP	\$30	7,701	17.7%	4,946	11.4%	43,416	986	12,648	29.1%	1,390	404	692	0	27.5%	1,321	335
SH_SP	\$65	7,866	15.4%	6,263	12.2%	51,221	923	14,129	27.6%	1,299	376	2,116	0	23.5%	1,148	225
SH_P	\$45	6,936	17.3%	4,070	10.1%	40,127	1,005	11,006	27.4%	1,355	350	504	0	26.2%	1,304	299
SH_OP	\$20	5,472	26.6%	2,440	11.9%	20,590	1,209	7,912	38.4%	1,839	630	0	0	38.4%	1,839	630
<b><i>PJM Expanded</i></b>																
S_SP1	\$250	24,354	14.8%	12,929	7.9%	164,249	768	37,283	22.7%	1,002	234	3,685	0	20.5%	924	156
S_SP2	\$80	23,384	15.1%	11,006	7.1%	154,731	789	34,390	22.2%	1,004	215	2,569	0	20.6%	946	157
S_P	\$55	18,813	15.3%	9,153	7.4%	123,042	893	27,966	22.7%	1,120	227	2,569	0	20.6%	1,046	153
S_OP	\$25	16,950	22.3%	3,189	4.2%	75,898	1,452	20,139	26.5%	1,639	187	0	0	26.5%	1,640	188
W_SP	\$80	24,013	15.3%	11,053	7.1%	156,732	798	35,067	22.4%	1,014	216	2,603	0	20.7%	955	157
W_P	\$55	19,150	15.2%	8,973	7.1%	125,619	898	28,123	22.4%	1,116	218	2,603	0	20.3%	1,043	145
W_OP	\$30	18,373	17.9%	4,946	4.8%	102,839	1,104	23,319	22.7%	1,276	172	692	0	22.0%	1,251	147
SH_SP	\$65	19,460	16.3%	7,672	6.4%	119,305	841	27,133	22.7%	1,051	210	2,116	0	21.0%	987	146
SH_P	\$45	15,842	16.6%	5,462	5.7%	95,744	933	21,304	22.3%	1,122	189	504	0	21.7%	1,102	169
SH_OP	\$20	12,975	21.9%	2,440	4.1%	59,286	1,433	15,415	26.0%	1,613	180	0	0	26.0%	1,613	180

Source: Exhibit J-28 to Applicants' Supplemental Testimony.

**ANNUAL HOLDINGS OF FTRs WITH PJM EAST ACCESS**  
**On-Peak, 2005-2006**

Name	Cleared MW	Share
ACN Energy, Inc.	6.6	0.08%
Allegheny Electric Cooperative, Inc.	25.1	0.32%
Amerada Hess Corporation	88.8	1.14%
Appalachian Power Company (AEP Generation)	100	1.29%
BP Energy	5.6	0.07%
Citadel Energy Products, LLC	532.8	6.85%
Commonwealth Energy	88	1.13%
ConEdison Energy	15	0.19%
Constellation Energy	864	11.11%
Coral Power	47	0.60%
Dominion Energy	31	0.40%
Edison Mission Marketing and Trading, Inc.	41.9	0.54%
Energy Cooperative Association of PA	3	0.04%
<b>Exelon Generation Co., LLC (Power Team)</b>	<b>2256.1</b>	<b>29.01%</b>
FPL Energy Power Marketing, Inc.	60	0.77%
FirstEnergy	207.3	2.67%
J. Aron & Company	20	0.26%
Merrill Lynch Commodities, Inc.	45	0.58%
Mirant Americas Energy Marketing (Potomac River)	25	0.32%
Morgan Stanley Capital Group, Inc.	800	10.29%
NRG New Jersey Energy Sales LLC	8.6	0.11%
Old Dominion Electric Cooperative	75	0.96%
PPL EnergyPlus, L.L.C.	86.6	1.11%
<b>PSEG Energy Resources and Trade LLC</b>	<b>897</b>	<b>11.53%</b>
Pepco Holdings	259.1	3.33%
Reliant Energy	42.7	0.55%
Select Energy, Inc. (Wholesale Marketing)	501.6	6.45%
Sempra Energy	39.7	0.51%
Strategic Energy L.L.C.	14.8	0.19%
Susquehanna Energy Products, LLC	292.1	3.76%
UGI Energy Services, Inc.	5	0.06%
Williams	9.8	0.13%
Others	284	3.65%
<b>TOTAL ON-PEAK</b>	<b>7778.2</b>	

**Source:** PJM Interconnection website.

**Note:**

- 1) Results represent FTR pairings that cross the PJM Eastern Interface.
- 2) Results include both on-peak and 24-hour FTRs.

**ANNUAL HOLDINGS OF FTRs WITH PJM EAST ACCESS**  
**Off-Peak, 2005-2006**

<b>Name</b>	<b>Cleared MW</b>	<b>Share</b>
ACN Energy, Inc.	6.6	0.10%
Allegheny Electric Cooperative, Inc.	25.1	0.37%
Amerada Hess Corporation	88.8	1.31%
Appalachian Power Company (AEP Generation)	100	1.47%
BP Energy	5.6	0.08%
Citadel Energy Products, LLC	145	2.13%
Commonwealth Energy	88	1.29%
ConEdison Energy	15	0.22%
Constellation Energy	704.9	10.36%
Coral Power	34	0.50%
Dominion Energy	31	0.46%
Edison Mission Marketing and Trading, Inc.	10	0.15%
Energy Cooperative Association of PA	3	0.04%
<b>Exelon Generation Co., LLC (Power Team)</b>	<b>2303.3</b>	<b>33.86%</b>
FPL Energy Power Marketing, Inc.	83	1.22%
FirstEnergy	147.3	2.17%
J. Aron & Company	20	0.29%
Merrill Lynch Commodities, Inc.	169.9	2.50%
Mirant Americas Energy Marketing (Potomac River)	115	1.69%
Morgan Stanley Capital Group, Inc.	425	6.25%
NRG New Jersey Energy Sales LLC	8.6	0.13%
Old Dominion Electric Cooperative	25	0.37%
PPL EnergyPlus, L.L.C.	86.6	1.27%
<b>PSEG Energy Resources and Trade LLC</b>	<b>913</b>	<b>13.42%</b>
Pepco Holdings	210	3.09%
Reliant Energy	42.7	0.63%
Select Energy, Inc. (Wholesale Marketing)	405.6	5.96%
Sempra Energy	59.7	0.88%
Strategic Energy L.L.C.	14.8	0.22%
Susquehanna Energy Products, LLC	279.9	4.11%
UGI Energy Services, Inc.	5	0.07%
Others	232	3.41%
<b>TOTAL OFF-PEAK</b>	<b>6803.4</b>	

**Source:** PJM Interconnection website.

**Note:**

- 1) Results represent FTR pairings that cross the PJM Eastern Interface.
- 2) Results include both off-peak and 24-hour FTRs.

**EFFECT OF PROPOSED MITIGATION IN PJM EAST WITH IMPORTS ALLOCATED BY FTR HOLDINGS**  
**Economic Capacity, Applicants' Revised Proposal**

Period	Exelon Capacity MW	PSEG Capacity MW	Pre- Merger HHI	Post-Merger Pre-Mitigation HHI	Change in HHI	EEG Capacity Pre-Mitigation MW	EEG Post-Mitigation Market Share	Post-Merger Post-Mitigation HHI	Change in HHI	EEG Capacity Post-Mitigation MW	Mitigated Amount MW
S_SP1	8417	10213	1491	2743	1251	18630	37%	1774	282	13571	5059
S_SP2	7450	8294	1437	2652	1214	15744	36%	1734	297	11615	4129
S_P	6557	6438	1705	3273	1567	12995	38%	1807	102	8866	4129
S_OP	5926	3082	2083	3679	1596	9008	45%	2300	217	6807	2201
W_SP	7848	8333	1455	2697	1242	16181	37%	1757	302	11938	4243
W_P	6892	6251	1643	3134	1491	13143	37%	1741	99	8900	4243
W_OP	6701	4097	1930	3516	1586	10798	43%	2150	220	7965	2833
SH_SP	6192	5615	1439	2674	1235	11807	35%	1661	223	8421	3386
SH_P	6046	3402	1705	3016	1311	9448	41%	1987	282	7252	2196
SH_OP	5349	2521	2039	3504	1465	7870	45%	2263	224	6070	1800

**Mitigation assumption:** FirstEnergy, Pepco, PPL and Reliant each acquire 25% of divested assets in each period.

**Source:** Dr. Hieronymus workpapers, Exhibit J-28 to Supplemental Testimony.

**SENSITIVITY OF PJM EAST MARKET POWER ANALYSES  
TO FAILURE OF VIRTUAL DIVESTITURE AS ACCEPTABLE MITIGATION**  
**Economic Capacity, Applicants' Revised Proposal Including the Allocation of Imports by FTR Holdings**

Period	Exelon Capacity MW	PSEG Capacity MW	Pre- Merger HHI	Post-Merger Pre-Mitigation HHI	Change in HHI	EEG Capacity Pre-Mitigation MW	EEG Post-Mitigation Market Share	Post-Merger Post-Mitigation HHI	Change in HHI	EEG Capacity Post-Mitigation MW	Mitigated Amount MW
S_SP1	8417	10213	1491	2743	1251	18630	40%	1991	499	14945	3685
S_SP2	7450	8294	1437	2652	1214	15744	41%	2032	594	13175	2569
S_P	6557	6438	1705	3273	1567	12995	45%	2268	563	10426	2569
S_OP	5926	3082	2083	3679	1596	9008	60%	3679	1596	9008	0
W_SP	7848	8333	1455	2697	1242	16181	42%	2069	615	13578	2603
W_P	6892	6251	1643	3134	1491	13143	44%	2187	545	10540	2603
W_OP	6701	4097	1930	3516	1586	10798	54%	3129	1199	10106	692
SH_SP	6192	5615	1439	2674	1235	11807	41%	1981	543	9691	2116
SH_P	6046	3402	1705	3016	1311	9448	51%	2746	1041	8944	504
SH_OP	5349	2521	2039	3504	1465	7870	58%	3504	1465	7870	0

**Mitigation assumption:** FirstEnergy, Pepco, PPL and Reliant each acquire 25% of divested assets in each time period.

**Source:** Dr. Hieronymus workpapers, Exhibit J-28 to Supplemental Testimony.

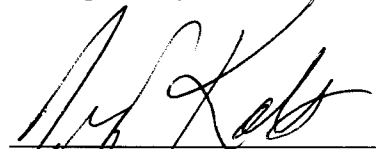
**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

Exelon Corporation )  
Public Service Enterprise Group Incorporated ) Docket No. EC05-43-000

**AFFIDAVIT OF JOSEPH P. KALT**

State of Arizona )  
County of Pima )

I, Joseph P. Kalt, being duly sworn, depose and say that the statements contained in the testimony and supporting exhibits of Joseph P. Kalt served on behalf of PPL Electric Utilities Corporation; PPL EnergyPlus, LLC; PPL Brunner Island, LLC; PPL Holtwood, LLC; PPL Martins Creek, LLC; PPL Montour, LLC; PPL Susquehanna, LLC, PPL University Park, LLC and Lower Mount Bethel Energy, LLC in these proceedings are true and correct to the best of my knowledge, information and belief, and I hereby adopt said testimony and supporting exhibits as if given by me in a formal hearing, under oath.

  
\_\_\_\_\_  
Joseph P. Kalt

SUBSCRIBED AND SWORN to before me  
This 24 day of May, 2005

Alyssa Bailey  
\_\_\_\_\_  
Alyssa Bailey  
Notary Public Pima County,  
State of Arizona

My Commission expires: July 5 2005

