

BEFORE THE MARYLAND PUBLIC SERVICE COMMISSION

CASE NO. 9207

IN THE MATTER OF

POTOMAC ELECTRIC POWER COMPANY AND

DELMARVA POWER AND LIGHT COMPANY

REQUEST FOR THE DEPLOYMENT OF ADVANCED METER INFRASTRUCTURE

REPLY TESTIMONY OF J. RICHARD HORNBY

ON BEHALF OF THE

MARYLAND OFFICE OF PEOPLE'S COUNSEL

NOVEMBER 9, 2009

1 **Q. PLEASE STATE YOUR NAME, EMPLOYER, AND PRESENT POSITION.**

2 A. My name is James Richard Hornby. I am a Senior Consultant at Synapse Energy
3 Economics, Inc., 22 Pearl Street, Cambridge, MA 02139.

4 **Q. ARE YOU THE SAME J. RICHARD HORNBY WHO SUBMITTED PRE-FILED**
5 **DIRECT TESTIMONY IN THIS PROCEEDING?**

6 A. Yes.

7 **Q. WHAT IS THE PURPOSE OF YOUR REPLY TESTIMONY?**

8 A. My Reply Testimony responds to certain of the statements made in the Direct
9 Testimonies filed by Witnesses Hurley, Norfolk and Godfrey on behalf of the Staff of the
10 Public Service Commission of Maryland (“Staff”).

11 **Q. PLEASE RESPOND TO THE DIRECT TESTIMONY OF STAFF WITNESS**
12 **HURLEY REGARDING THE CAPACITY REVENUE THAT THE COMPANIES**
13 **WILL RECEIVE FOR PARTICIPATING IN THE PJM RPM MARKET.**

14 A. Potomac Electric Power Company (“Pepco”) and Delmarva Power and Light Company
15 (“Delmarva”), collectively “the Companies,” are proposing to establish a tariff with a
16 Critical Peak Rebate (“CPR”) as the pricing for “default” service to residential customers
17 and to offer those customers the option of selecting a tariff with Critical Peak Pricing
18 (“CPP”) and a tariff with the current flat rate. The Company characterizes CPR and CPP
19 as dynamic pricing that it will enable with its advanced metering infrastructure (“AMI”).
20 The Company expects that dynamic pricing will motivate 75% of its residential
21 customers to reduce their electricity consumption during critical peak periods (Hornby
22 Direct, p. 8).

23 My Direct Testimony provides the basis for my conclusion that the Companies’ will not
24 obtain the maximum capacity and energy value for the demand reductions from dynamic

1 pricing if they do not actively bid those reductions into PJM wholesale markets. Based
2 upon that conclusion, I recommended that the Commission not make a decision to
3 approve or disapprove the Companies' proposed AMI until the Companies file a specific
4 proposal for advising PJM of the reductions in peak load from that dynamic pricing and
5 of monetizing those reductions and all parties have had the opportunity to comment on
6 that specific proposal.

7 In his Direct Testimony, Mr. Hurley discusses the supply side benefits of that AMI-
8 enabled dynamic pricing. On page 12 he discusses the projected "capacity revenue" the
9 Companies will receive for bidding the projected reductions in demand from this AMI-
10 enabled dynamic pricing into the PJM RPM market. Mr. Hurley is apparently not aware
11 that, unlike Baltimore Gas and Electric, the Companies have not definitely committed to
12 bidding the projected reductions in demand from their AMI-enabled dynamic pricing into
13 the PJM RPM market. Dr. Faruqui, the Companies' witness on this issue, discusses each
14 of the two approaches in his Direct Testimony, at page 21 as well as in the Companies'
15 response to OPC Data Request 4-20, which I attach as Exhibit____(JRH-8).

16 I recommend that Mr. Hurley supplement his Direct Testimony to address the uncertainty
17 associated with this major component of the projected supply side benefits of the
18 Companies' proposed AMI-enabled dynamic pricing.

19 **Q. PLEASE RESPOND TO THE DIRECT TESTIMONY OF STAFF WITNESS**
20 **NORFOLK REGARDING THE BILL IMPACTS OF THE COMPANIES'**
21 **PROPOSAL.**

1 A. The Companies propose recovering the projected revenue requirements of AMI from all
2 rate classes via base rates and to flow the distribution service operational benefits from
3 AMI to ratepayers through base rates. They propose to return the electricity supply
4 benefits to ratepayers through four other mechanisms. Mr. Gausman, the Companies’
5 witness on this issue, provided an illustration of the impact of their proposal on system-
6 wide average bills in his Schedule WGC-3. In my Direct Testimony I re-created that
7 Schedule as Exhibit___(JRH-8) and explained that it was misleading. First, it does not
8 present the impacts by rate class which is a concern because within the residential rate
9 class increases of a few dollars per month are serious for low income customers. Second,
10 the illustration implies that the AMI costs will be recovered as an unavoidable monthly
11 fixed charge in \$ per meter per month, a rate design that the Companies’ will need to
12 justify based upon the results of a cost-of-service (“COS”) study and an analysis of bill
13 impacts.

14 In his Direct Testimony Mr. Norfolk also recreates Schedule WGC-3 as an Exhibit.
15 However he does not note that Schedule WGC-3 is not a sufficiently detailed analysis of
16 bills by, and within, rate classes. He also does not note that the Companies should be
17 required to justify their allocation of AMI revenue requirements among rate classes and
18 the design of the rates through which it will recover those revenue requirements by rate
19 class. Since these cost allocation and rate design issues will be addressed when the
20 Company files its base rate case, in this proceeding I simply recommend that Mr. Norfolk
21 acknowledge them as unresolved issues.

22 **Q. PLEASE RESPOND TO THE DIRECT TESTIMONY OF STAFF WITNESS**
23 **GODFREY.**

1 A. In her Direct Testimony Ms. Godfrey provides a summary of Staff's position on the
2 Companies' proposal. That position is informed by the positions of Staff Witnesses
3 Hurley and Norfolk.

4 I recommend that Ms. Godfrey supplement her Direct Testimony in conjunction with Mr.
5 Hurley in order to address the uncertainty arising from the Companies' lack of a definite
6 strategy for capturing the capacity value from its proposed AMI-enabled dynamic
7 pricing.

8 **Q. DOES THIS CONCLUDE YOUR REPLY TESTIMONY?**

9 A. Yes.

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RESPONSE TO OPC DATA REQUEST NO. 4

Exhibit___(JRH-8)
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QUESTION NO. 20

Q. WITH RESPECT TO YOUR TESTIMONY AT P. 21 REGARDING THE PJM CAPACITY MARKET, YOUR RESPONSE TO OPC DATA REQUEST 4-21C FOLLOW-UP JUNE 2, 2009 AND OPC DATA REQUEST 5-40 IN DISTRICT OF COLUMBIA FC 1056, AND DIRECT TESTIMONY OF BG&E WITNESS VAHOS IN CASE 9208.

- A. REGARDING FIRST METHOD - PLEASE DESCRIBE THE EXACT PROCESS THROUGH WHICH PJM WOULD TRANSLATE A REDUCTION IN CUSTOMER PEAK DEMAND INTO A REDUCTION IN CAPACITY OBLIGATION. PLEASE DESCRIBE THE TIME LAG BETWEEN THE FIRST YEAR OF ACTUAL DEMAND REDUCTION AND THE FIRST YEAR WHEN PJM WOULD RESPOND BY SETTING A LOWER SUPPLY OBLIGATION. PLEASE RECONCILE THIS TESTIMONY WITH YOUR RESPONSE TO OPC DATA REQUEST 5-40 IN DISTRICT OF COLUMBIA FC 1056.
- B. REGARDING SECOND METHOD. PLEASE RECONCILE THIS TESTIMONY WITH YOUR RESPONSE TO OPC DATA REQUEST 4-21C FOLLOW-UP JUNE 2, 2009 IN DISTRICT OF COLUMBIA FC 1056 AND DIRECT TESTIMONY OF BG&E WITNESS VAHOS IN CASE 9208.
- C. REGARDING SECOND METHOD. PLEASE DESCRIBE THE EXACT PROCESS THROUGH WHICH RESIDENTIAL CUSTOMERS, OR AGENT(S) ACTING ON THEIR BEHALF, WOULD BID THEIR DEMAND REDUCTIONS INTO THE PJM RPM FOR A GIVEN POWER YEAR. PLEASE DESCRIBE THE NUMBER OF YEARS IN ADVANCE OF THE YEAR OF ACTUAL DEMAND REDUCTION THAT THE CUSTOMERS OR AGENTS WOULD HAVE TO BID THE FORECAST REDUCTION INTO THE BASE RESIDUAL AUCTION FOR THAT POWER YEAR. PLEASE RECONCILE THIS TESTIMONY WITH YOUR RESPONSE OPC DATA REQUEST 5-40 IN DISTRICT OF COLUMBIA FC 1056, AND DIRECT TESTIMONY OF BG&E WITNESS VAHOS IN CASE 9208.
- D. PLEASE PROVIDE ALL ANALYSES PREPARED BY OR FOR YOU OF THE VALUE OF CAPACITY IN THE PJM RPM MARKET EACH YEAR FROM 2012 THROUGH 2026. PLEASE INCLUDE ALL SUPPORTING WORKPAPERS, INPUTS, ASSUMPTIONS AND CALCULATIONS IN OPERATIONAL WORKBOOKS.
- E. PLEASE EXPLAIN WHETHER YOUR ESTIMATES OF AVOIDED CAPACITY COSTS IN EXHIBITS AF-3 AND AF-4 ARE BASED ON THE FIRST METHOD OR THE SECOND METHOD, AND THE SUPPORTING RATIONALE.

- F. PLEASE EXPLAIN HOW THE ESTIMATES OF AVOIDED CAPACITY COSTS IN EXHIBITS AF-3 AND AF-4 FOR DEMAND REDUCTIONS RESULTING FROM METER INSTALLATIONS IN 2010 AND 2011 RESPECTIVELY REFLECT THE TIMELINES UNDER THE FIRST AND/OR SECOND METHODS. IF THERE IS NO CONSIDERATION OF TIMELINES PLEASE EXPLAIN WHY NOT.
- G. PLEASE RECONCILE YOUR ESTIMATE OF THE CAPACITY VALUE OF DEMAND RESPONSE WITH YOUR MAY 2006 ELECTRICITY JOURNAL ARTICLE REGARDING THE VALUE OF DEMAND RESPONSE.

RESPONSE:

- A. DPL and Pepco are working with PJM to determine the most appropriate manner of deriving PJM electricity market benefits obtained from load reductions attributable to dynamic pricing. Per my testimony, customers served under dynamic pricing are currently able to reduce their capacity obligation in the following PJM planning year by reducing their peak electricity demand during the current year. This market mechanism, if used, would result in a one year delay of the monetization of achieved capacity reductions. As I noted in my testimony, other approaches currently exist. Other approaches may be preferred by both PJM and other PJM market stakeholders. These statements are not in conflict with the information presented in response to Pepco's response to OPC Data Request No. 5-40.
- B. The second market interface method I identified in my testimony discusses possible participation of dynamic pricing programs in the existing PJM demand response market. This discussion is consistent with Pepco's response to DC OPC Data Request No. 5-40. The statements in my testimony regarding the PJM demand response opportunity appear to be consistent with those made by BG&E Witness Vahos in Case No. 9208. However, as I noted on p. 21 of my testimony, Pepco and DPL representatives are working through the PJM stakeholder process to ascertain the most appropriate method of interfacing demand reductions achieved from dynamic pricing with the PJM wholesale electricity market.
- C. As I stated in my testimony on p. 21, Pepco and DPL representatives are working through the PJM stakeholder process to determine the exact process that demand reductions resulting from dynamic pricing would interface with the PJM market. Assuming that dynamic pricing forecast demand reductions were bid into the capacity market, they could be entered into that market as an Interruptible Load for Reliability or through interim or Base Residual auctions. In this manner, demand reductions could be monetized in each future PJM planning year. This is consistent with Pepco's response to DC OPC Data Request No. 5-40 and appears to be consistent with the testimony of BG&E Witness Vahos in Case No. 9208.
- D. The capacity market value for the PJM planning year of 2012/2013 was based upon known PJM market values applicable to the DPL and Pepco Zones. It was

assumed that over time, capacity prices were assumed to revert to the PJM market net cost of new entry for capacity. The assumed capacity market price values are attached as Attachment "Capacity Cost Estimate Correction 10-5-2009.xls"

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E. My analysis does not make a specific judgment about which of these methods would be used. It is based on a more general assumption that the reductions in peak demand and resulting decrease in need for generating resources would be realized by Pepco and Delmarva.

F. Please see my response to question 20.e.

G. My May 2006 article presents an alternative method for valuing demand response. However, for the purposes of my analysis for Pepco and Delmarva, I have used the approach that is the most commonly accepted practice for AMI business case filings.

SPONSOR: Ahmad Faruqui