

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION )  
OF DELMARVA POWER AND LIGHT )  
COMPANY FOR APPROVAL OF ) PSC DOCKET NO. 11-362  
QUALIFIED FUEL CELL PROVIDER )  
PROJECT TARIFFS )  
(FILED AUGUST 19, 2011) )

FINDINGS, OPINION AND ORDER NO. 8079

BEFORE COMMISSIONERS:

ARNETTA McRAE, Chair  
JOANN T. CONAWAY, Commissioner  
J. DALLAS WINSLOW, Commissioner  
JAYMES B. LESTER, Commissioner  
JEFFREY J. CLARK, Commissioner

APPEARANCES:

FOR THE APPLICANT, DELMARVA POWER & LIGHT COMPANY:

TODD L. GOODMAN, ESQUIRE  
Pepco Holdings, Inc./Delmarva Power Legal Services  
Associate General Counsel

GLENN C. KENTON, ESQUIRE  
TODD COOMES, ESQUIRE  
Richards, Layton & Finger, P.A.

FOR THE DELAWARE PUBLIC SERVICE COMMISSION STAFF:

JAMES McC. GEDDES, ESQUIRE  
Ashby & Geddes

REGINA A. IORII, ESQUIRE  
Deputy Attorney General

FOR THE DIVISION OF THE PUBLIC ADVOCATE:

MICHAEL D. SHEEHY, Public Advocate

KENT A. WALKER, ESQUIRE  
Deputy Attorney General

**FOR INTERVENOR CAESAR RODNEY INSTITUTE:**

DAVID STEVENSON, Director, Center for Energy  
Competitiveness

**FOR INTERVENOR BLOOM ENERGY CORPORATION:**

JOSEPH C. SCHOELL, ESQUIRE  
Drinker, Biddle & Reath

**FOR INTERVENOR DELAWARE DEPARTMENT OF NATURAL RESOURCES AND  
ENVIRONMENTAL CONTROL:**

THE HONORABLE COLLIN P. O'MARA, Secretary

VALERIE SATTERFIELD, ESQUIRE  
Deputy Attorney General

I. STATUTORY BACKGROUND

1. On July 7, 2011, the Governor of the State of Delaware signed into law amendments (the "Amendments") to the Renewable Energy Portfolio Standards Act (the "REPSA") that allow energy output from Delaware-manufactured fuel cells to be considered a resource eligible to fulfill a portion of a Delaware Public Service Commission-regulated electric utility's obligations under REPSA. The Amendments are part of a comprehensive State economic development and clean energy program in which a new form of baseload generation will be added (fuel cells manufactured by Bloom Energy Corporation ("Bloom") in Delaware that are powered by natural gas). As has been widely reported in the local media, Bloom will construct its east coast manufacturing facility in Newark, Delaware at the former Chrysler facility.

2. The Amendments create a regulatory framework whereby the Commission-regulated electric company and the Qualified Fuel Cell

Provider<sup>1</sup> will jointly submit tariffs that enable and obligate the Commission-regulated electric company, as the agent for collection and disbursement, to collect from its customers non-bypassable charges for incremental site preparation, filing, administrative and other costs incurred by the Qualified Fuel Cell Provider. 26 Del. C. §§364(b), (c). Furthermore, the tariff, at a minimum, must provide for the following:

- A project of up to 30 MW nominal nameplate, and future potential additions of up to an additional 20 MW nominal nameplate, not to exceed a total of 50 MW nominal nameplates or 1,152 MWh per day averaged on an annual basis. The total allowable 50MW of nominal nameplate shall be reduced by any customer-sited installations referred to in §353(d)(2) of this title or additional installations of Qualified Fuel Cell Provider fuel cells. Any additional MW beyond the 30MW project made pursuant to this Section and §353(d)(2) of this title must be reviewed and approved by the Commission (id. §364(d)(1)a.);
- At least a 20-year term of service from commercial operation of the completed Qualified Fuel Cell Provider Project (id. §364(d)(1)b.);<sup>2</sup>
- That the cost to customers of the Commission-regulated electric company for each MWh of output produced by the project, on a levelized basis at the time of our approval, does not exceed the highest cost source for combined energy, capacity and environmental attributes that we have approved for inclusion in the

---

<sup>1</sup> A Qualified Fuel Cell Provider is "an entity that: a. By no later than the commencement date of commercial operation of the full nameplate capacity of a fuel cell project, manufactures fuel cells in Delaware that are capable of being powered by renewable fuels, and b. prior to approval of required tariff provisions, is designated by the Director of the Delaware Economic Development Office and the Secretary of DNREC as an economic development opportunity." 26 Del. C. §352(16).

<sup>2</sup> "Qualified Fuel Cell Provider Project" means a fuel cell power generation project located in Delaware owned and/or operated by a Qualified Fuel Cell Provider under a tariff approved by the Commission pursuant to §364(d) of this title." (hereinafter "QFCPP").

Commission-regulated electric company's renewable portfolio as of January 1, 2011 (id. §364(d)(1)c.);

- That the non-bypassable charges to be collected from customers and distributed to the Qualified Fuel Cell Provider will also compensate it for its fuel costs to produce such output and will reduce compensation to the Qualified Fuel Cell Provider for any revenues it receives for such output sold in the PJM or any successor market (id. §364(d)(1)d.);
- A requirement that the Qualified Fuel Cell Provider must sell all energy, capacity, and ancillary services that the QFCPP produces, and any other output available or that becomes reasonably available to the Qualified Fuel Cell Provider during the term of the QFCPP, into the PJM or any PJM successor market. To the extent any additional output that the QFCPP produces, including but not limited to any product or environmental attribute from the project, becomes available for sale in the PJM Market, PJM successor market, or a market other than PJM or a PJM successor market, the Qualified Fuel Cell Provider and the Commission-regulated electric company shall jointly propose additional provisions to the tariff designed to reduce the cost of the QFCPP to the Commission-regulated electric company's customers (id. §364(d)(1)e.);
- The Commission-regulated electric company shall, on behalf of the QFCPP, collect from its customers, through the non-bypassable charge provided for in 26 Del. C. §§364(b) and (c), any positive difference between the sum of (i) the price for each MWH of output produced by the QFCPP plus (ii) the cost of fuel to produce such output plus (iii) any costs incurred by the Commission-regulated electric company arising out of the QFCPP minus the amount received by the Qualified Fuel Cell Provider for the market sale of its output, and shall distribute such amount to the Qualified Fuel Cell Provider (id. §364(d)(1)f.);
- A distribution mechanism whereby the Commission-regulated electric company shall, on behalf of the QFCPP, distribute to its customers from the QFCPP any positive difference between the amount received by the QFCPP for the market sale of its output minus the sum of (i) the price established for each MWH of output from the QFCPP plus (ii) the cost of fuel to produce such output plus (iii) any costs incurred by the

Commission-regulated electric company arising out of the QFCPP (id. §364(d)(1)g.);

- An average efficiency level that the fuel cells in a project must maintain (id. §364(d)(1)h.);
- A definition of the role of the Commission-regulated electric company solely as the agent of the QFCPP for the collection of funds and disbursement of such collected funds to the Qualified Fuel Cell Provider and to its customers (id. §364(d)(1)i.);
- The mechanism through which the Commission-regulated electric company, on behalf of the QFCPP, shall collect from its customers, through the non-bypassable charge provided for in 26 Del. C. §§364(b) and (c), any difference between the sum of (i) the price for each MWH of output produced by the project plus (ii) the cost of fuel to produce such output plus (iii) any costs incurred by the Commission-regulated electric company arising out of the QFCPP minus the amount received by the Qualified Fuel Cell Provider for the market sale of its output (id. §364(d)(1)j.);
- The mechanism through which the Commission-regulated electric company, on behalf of the QFCPP, shall distribute to its customers, through bill credits, any positive difference between the amount received by the Qualified Fuel Cell Provider for the market sale of its output minus the sum of (i) the price established for each MWH of output from the project plus (ii) the cost of fuel to produce such output plus (iii) any costs incurred by the Commission-regulated electric company arising out of the QFCPP (id. §364(d)(1)k.);
- A provision that protects a Qualified Fuel Cell Provider from any future changes to the REPSA that would prevent a Qualified Fuel Cell Provider providing service under approved tariff provisions from recovering all amounts approved in such tariff. Such a provision must also include the Commission-regulated electric company's obligation, in the event of any such change to the REPSA, to collect from its customers amounts necessary to disburse to the Qualified Fuel Cell Provider the full amount that we have approved in the pre-existing tariff for each MWH of output produced by the QFCPP (id. §364(d)(1)l.); and

- In the event of a force majeure event that prevents the Qualified Fuel Cell Provider from supplying output from at least 80% of the QFCPP's capacity, or a full or partial interruption in fuel supply to the QFCPP, a mechanism through which, (a) during the event of force majeure, the Commission-regulated electric company shall, on behalf of the QFCPP, collect from its customers and transfer to the Qualified Fuel Cell Provider, a maximum of 70% of the price per MWH of output affected by the event of force majeure, and during an interruption in fuel supply, the Commission-regulated electric company shall, on behalf of the QFCPP, collect from its customers and transfer to the Qualified Fuel Cell Provider 100% of the price per MWH of output affected by the interruption; and (b) during the force majeure event or interruption in fuel supply, the Commission-regulated electric company will continue to receive the full reduction in renewable portfolio standards that would have been provided by the output but for the force majeure event or interruption in fuel supply (*id.* §364(d)(1)m.).

3. Finally, Bloom and Delmarva had the right to, and in fact did, amend the proposed tariff prior to a Commission decision pursuant to amended §364(d)(3).<sup>3</sup>

4. Section 364(d)(2) of the Amendments specifically require the Commission to either approve or reject Delmarva's tariff filings in whole as proposed, without alteration or the imposition of any condition or conditions.

5. In determining whether to approve or deny the tariff, we must first verify that the provisions set forth in § 364(d)(1)a. through m. have been satisfied. Next, we are to consider the QFCPP's

---

<sup>3</sup> The proposed tariff amendment was entered into the record at the hearing. References in this Order (and in the Commission's prior Order No. 8062) to the proposed tariff filing contained in Delmarva's Application shall refer to the proposed tariff as so amended.

incremental cost to customers, applying at least the following factors:

- Whether the QFCPP utilizes innovative baseload technologies (id. §364(d)(2)a.);
- Whether the QFCPP offers environmental benefits relative to conventional baseload generation technologies (id. §364(d)(2)b.);
- Whether the QFCPP promotes economic development in the State (id. §364(d)(2)c.); and
- Whether the tariff as filed promotes price stability over the project term (id. §364(d)(2)d.).

If the tariff satisfies all of the requirements of § 364(d)(1)a.- m. and we find that the incremental cost to customers is justified pursuant to § 364(d)(2), we must approve the tariff.

## II. PROCEDURAL BACKGROUND

6. On August 19, 2011, Delmarva Power & Light Company ("Delmarva") filed an application for approval of a new electric tariff - Service Classification QFCP-RC, a new gas tariff - Service Classification LVG-QFCP-RC, and a Service Application and Agreement to Comply with Obligations (together the "Application") pursuant to which a Qualified Fuel Cell Provider would sell the energy, capacity and other products from a 30 MW natural gas-fueled fuel cell project (the "Project") into the PJM market. Delmarva's distribution customers would pay the net amount of specified charges minus revenues to be obtained from the sale of products in the PJM marketplace.<sup>4</sup>

---

<sup>4</sup> Under Service Classification QFCP-RC, the Qualified Fuel Cell Provider may install and commence service using fuel cell units in increments of any amount as long as the total installed nameplate capacity of the project does not exceed 30 MW and such installed

7. Delmarva requested expedited scheduling of its Application so that a decision would be rendered on or before October 18, 2011.

8. At our regularly-scheduled meeting on August 23, 2011, our Executive Director briefed us on the Application and particularly on Delmarva's request for an expedited schedule to obtain a decision from us on or before October 18, 2011. The Executive Director advised us that the Application and Delmarva's prefiled testimony had been uploaded to the Commission's website, and that public notice of the Application had been published in The News Journal and the Delaware State News that very day, providing the public with notice that the intervention deadline was September 6, 2011; that public comment sessions would be held in Dover on September 27, 2011, in Wilmington on September 28, 2011 and in Georgetown on September 29, 2011; and that the Commission would hold an evidentiary hearing on October 18, 2011, which date was subject to change. He inquired whether we would consider an expedited schedule, which would contemplate holding an evidentiary hearing before us on October 18, 2011. We agreed that we would attempt to accommodate the request for expedition.

9. By Order No. 8025 dated September 6, 2011, we opened this docket to consider Delmarva's Application. We approved the request for expedition, with the goal of holding an evidentiary hearing on October 18, 2011 during our regularly-scheduled meeting. We cautioned

---

nameplate capacity commences service no later than September 30, 2014, or as may be otherwise provided in the Service Classification. In addition, failure to install up to 5MW of capacity on or prior to March 31, 2013 will not lead to a loss of Tariff eligibility for such lesser amount of capacity, nor would it impose any limit on Tariff eligibility for subsequent amounts of capacity up to the 30 MW.

that this date was subject to change depending on how the docket proceeded. We ratified the public notice published in The News Journal and the Delaware State News on August 23, 2011, establishing the September 6, 2011 intervention deadline and the dates and locations for the public comment sessions. We designated Hearing Examiner Mark Lawrence to supervise the procedural process and delegated to him the authority to grant or deny petitions to intervene and to determine the manner and content of any further public notice. We also instructed Mr. Lawrence that he would conduct the evidentiary hearing before us.

10. Hearing Examiner Lawrence entered a procedural schedule providing for written discovery and a discovery conference, and the filing of testimony or comments on the Application on September 30, 2011 (later extended to October 3, 2011 with the consent of all participants in the docket). Mr. Lawrence also granted intervenor status to the Caesar Rodney Institute ("CRI"), DNREC and Bloom.<sup>5</sup> The Public Advocate filed a statutory notice of intervention pursuant to 29 Del. C. §8716(g).

---

<sup>5</sup> On October 4, 2011, the Retail Supply Energy Association ("RESA") filed a petition to intervene out of time. Due to the fact that the deadlines for discovery and the filing of written comments had expired prior to the filing of RESA's petition to intervene, Delmarva and Bloom responded to RESA's petition with a request that RESA's participation be restricted in accordance with the procedural schedule. RESA indicated that it would accept such restrictions. The other parties either did not object to the intervention request or took no position regarding it. The Hearing Examiner subsequently granted the intervention petition pursuant to the aforementioned restrictions, but RESA did not actively participate in the proceedings.

### III. PUBLIC COMMENT

11. We received scores of written comments from members of the public, not all of whom were Delaware residents or even Delmarva ratepayers. The overwhelming majority of the written comments exhorted us to reject the Project, and echoed certain general themes. Many compared the Project to Solyndra, the recently failed solar company in California. Many called it a "boondoggle" or "crony capitalism." Others complained that if the fuel cell technology were truly so promising, Bloom could have found private investment to back it. Still others expressed displeasure that Delmarva was not taking any risk since under the proposed tariff it will be made whole for all expenses it incurs. Many questioned the calculation of the \$1.00 per month cost to Delmarva ratepayers. Many also criticized the semantics of calling a generator fueled by natural gas a "renewable" resource. Very few written comments supported the Project.

12. We also held three public comment sessions, one in each county. On September 27, 2011, we conducted the first public comment session at our office in Dover. Alan Levin (Director of the Delaware Economic Development Office ("DEDO")) and DNREC Secretary Collin O'Mara made brief presentations, as did a Delmarva representative. Representatives from the offices of Senators Carper and Coons read statements from their respective Senators in support of the project. Several members of the public, including John Flaherty of Common Cause, spoke in favor of the Project, citing Delaware's high unemployment and the jobs that the Project will bring to Delaware.

Members of the public that spoke against the Project raised the same arguments described above in paragraph 11.

13. On September 28, 2011, we held a public comment session at the auditorium in the Carvel State Office Building in Wilmington. DEDO Deputy Director Bernice Whaley, State Representative John Kowalko, Delaware State Chamber of Commerce Senior Vice-President of Government Affairs Richard Heffron, Delaware Contractors' Association Executive Director John Casey and Doug Gramiak from Congressman Carney's office all spoke in favor of the Project. Some members of the public commented favorably on the Project, and the remaining speakers urged the Commission to reject the Project for the same reasons previously described.

14. On September 29, 2011, we held the final public comment session at Delaware Technical & Community College in Georgetown. Again, Director Levin spoke in favor of the Project, while the citizens who spoke were against the Project.

#### IV. THE PARTIES' COMMENTS AND TESTIMONY

15. On September 29, 2011, the CRI filed written comments regarding the Application. CRI claimed that the proposed fuel cell tariff could cost over three times more than advertised, and might increase Delmarva's electric consumers' bills by up to \$750 million over the life of the contract. Because CRI asserted Delmarva customers are being asked to assume the entire risk of the fuel cell Project, CRI suggested more conservative assumptions should be used in analyzing whether the Commission should approve the Project under the guidelines set forth in the statute.

16. Staff filed the report of New Energy Opportunities, Inc., La Capra Assoc., Inc., and Birch Tree Capital L.L.C. ("Staff Report") on October 3, 2011. Staff examined the details of the proposed electric and natural gas tariffs in terms of whether they meet the requirements of the Amendments and whether they pose any particular issues. Staff expressed concern that ratepayers would not be adequately protected if the manufacturing facility was not built or, if built, stopped operating before the end of the contract term.

17. On October 10, 2011, DNREC Secretary O'Mara filed rebuttal testimony in response to Staff's Report, addressing in particular the issues related to whether the economic benefits will actually be realized and whether the Project offers substantial environmental benefits compared to conventional baseload generation.

18. On October 14, 2011, CRI filed additional written comments, admitted into the record (over Delmarva's objection for being filed out of time), addressing three issues: (1) the value of the economic benefits of a fuel cell manufacturing plant; (2) the risk of higher costs to ratepayers; and (3) health benefits of the 30 MW fuel plant.

19. On October 18, 2011, the Commission convened to hear oral testimony and deliberate in open session on the Application and the parties' positions regarding it. We issued a brief minute order on that date approving the Application and stating that we would issue a subsequent order explaining our decision. This is the final Findings, Opinion and Order of the Commission in this matter.

V. THE HEARING EVIDENCE

A. Delmarva, Bloom and DNREC

20. In support of its Application Delmarva filed the prefiled testimony of Gary R. Stockbridge, President of the Delmarva Power region of Delmarva; Joshua Richman, Vice President of Development for Bloom Energy Corporation ("Bloom"); Mark W. Finfrock, Director of Risk Management for Pepco Holdings, Inc. ("PHI"); Maria F. Scheller, Vice President and Director for ICF Resources, LLC's Energy & Resources practice area and head of this practice's Model Development group; Robert M. Collacchi, Jr., PHI's Director of Supply Customer Energy; Robert W. Brielmaier, Delmarva's Manager of Gas Operations; Stephen J. Steffel, Delmarva's Manager of Distributed Energy Resources and Analytics; Wayne W. Barndt, PHI's Manager of Regulatory Strategy and Policy; C. Ronald McGinnis, Jr., Regulatory Team Lead, Regulatory Affairs Department for PHI; and DNREC Secretary Collin P. O'Mara.<sup>6</sup>

21. Delmarva states that the Fuel Cell Program will meet the Program's identified objectives : (a) enhance the Company's renewable portfolio through diversifying its renewable sources with an innovative baseload technology; (b) provide a renewable energy portfolio benefit at a cost that does not exceed the costs of assets currently in the Company's renewable portfolio; (c) provide price stability over the term of the Project; (d) provide environmental benefits relative to conventional baseload generation; (e) provide

---

<sup>6</sup> Specific references to the prefiled testimony introduced at the evidentiary hearing will be cited as "Ex. \_\_\_ (Witness' Name) at \_\_\_" for direct testimony; and "Ex. \_\_\_ (Witness' Name - R) at \_\_\_" for rebuttal testimony. The transcripts will be cited as "Tr. at \_\_\_."

additional incentive for Bloom Energy to expand its manufacturing capabilities in Delaware; and (f) prevent undue risk to Delmarva or its customers. (Ex. 4 (Stockbridge) at 3, 7). In addition, Delmarva suggests that there may be additional unquantified distribution benefits that could be achieved by placing the units at various locations on the utility distribution system. (Id. at 4).

22. Delmarva concentrated its analysis on determining the premium over future market prices that the Project would have and whether the Project met the price cap limitation set forth in the Amendments. Delmarva did not perform any statewide economic impact study in connection with its analysis of this "opportunity"; rather, according to Mr. Stockbridge, "[t]he State gave [Delmarva] the parameters to work under to reflect the economic development opportunity... [T]he State has identified the Bloom Fuel Cell Project as a qualifying opportunity..." (Ex. 4 (Stockbridge) at 5).

23. Delmarva determined that the overall levelized cost per month per average residential customer would be \$1.00 (specifically, \$0.996) above projections of future market prices during the Program's 20-year term. (Id.) This estimate reflects the revised allocation of RECs, SRECs and the SREC cap proposed by Secretary O'Mara to reduce the overall customer impacts in the Project's initial years. (Id.).

24. The Company's analysis supported its stated position that the cost impact of the Project was less than the highest cost resource in the Company's existing renewable energy portfolio as of January 1, 2011, as required by the Amendments. Company witness Scheller concluded that the fuel cell Project would result in an overall

estimated levelized cost per month per average residential customer of \$1.00, while the levelized monthly cost for the Bluewater Wind project would be between \$1.70 and \$2.28. (Ex. 12 (Scheller) at 19-21).<sup>7</sup>

25. Company witness Scheller testified on the issue of price stability over the term of the contract, concluding that the Program satisfied the Amendments' requirements regarding price stability. (Tr. at 273). Although she acknowledged that the Project did not affect the stability of customer costs "significantly," she pointed out that the Project's impact on a year to year basis for the entire distribution system is limited because the Project only reflects a small share of the total cost of serving Delmarva's customers (roughly 3%). (Id. at 21-22). In addition, she testified that the Project offers the advantage of providing a known rate for the output of the facility. (Id. at 23).

26. Joshua Richman, Bloom Energy's Vice President of Business Development, also testified. He provided detailed information concerning the development of fuel cells and Bloom's competitive advantage over other fuel cell manufacturers. He described the growing market for his company's fuel cells, its desire to enter the East Coast market, and why Bloom selected Delaware for its manufacturing facility. (Ex. 14 (Richman) at 3-5, 9, 15). He emphasized for the record that Bloom was committed to building its manufacturing facility in Delaware and that "there should be no grey

---

<sup>7</sup> As of January 1, 2011, the most expensive renewable resource in Delmarva's portfolio was the Bluewater Wind offshore wind Power Purchase Agreement. (Ex. 4 (Stockbridge) at 6).

there." (Tr. at 309). He reiterated that he hoped the factory would be up and running in 2013. (Id.)

27. The Application was also supported by the testimony of Secretary O'Mara. He discussed the importance of the Fuel Cell Program to the overall economic development opportunity for the State, as well as the benefits of fuel cell technology as it relates to the State's energy and environmental goals. (Ex. 17 (O'Mara) at 1-4). He also proposed an adjustment to the Fuel Cell Project regarding REC/SREC ratios to reduce the overall cost impact to ratepayers in the initial years of the Project. Under the provisions of §353(d)(1)b., the Secretary proposed adjusting the statutory allowances for partial fulfillment of Delmarva's obligations towards the RPS standards permitting Delmarva to fulfill the equivalent of 2 RECs for each MWh of energy produced by a qualified fuel cell provider project during the first 15 years; thereafter, fulfilling the equivalent of 1 REC for each MWh of energy produced for the remaining years of the Project. (Id. at 6-8).<sup>8</sup> He asked that the Commission adopt his proposal as a way to reduce the monthly impact on customers. (Id. at 7-8).

28. Finally, Secretary O'Mara placed in the record the certification required under 26 Del. C. §352(16), signed by both the Director of DEDO and himself on behalf of DNREC, that the Bloom Fuel Cell Project is an economic development opportunity.

---

<sup>8</sup> In addition, the Secretary proposed that a QFCP could fulfill a portion of the SREC requirements at a ratio of 6 MWh of RECs per 1 MWh of SRECs for the first 15 years of the Project, and at a ratio of 3 to 1 in years 16 through 21. The SREC Contribution Cap will be 25% in Years 1-5, 30% in Years 6-15 and 35% in years 16-21. (Ex. 14 (O'Mara) at 6).

B. Staff

29. Staff's Report, prepared by its consultant New Energy Opportunities, Inc. ("NEO"), was also made part of the record. It concluded, as Delmarva did in its testimony, that the Application met the minimum requirements set forth in the Amendments, including the requirement that the cost to ratepayers be less than the highest cost resource in the Company's existing renewable energy portfolio as of January 1, 2011. See 26 Del. C. §364(d)(1)a-m. (Ex. 21 (Staff Report) at 46-59). NEO concluded that the overall levelized above market cost per month per average residential customer would be \$1.34 for the fuel cell Project compared to \$2.42 for the Bluewater Wind offshore wind project (*Id.* at 48).

30. In terms of whether the Commission should approve the proposed tariffs, Staff's Report pointed out that the high cost and risk allocation features, viewed alone, were unfavorable to Delmarva ratepayers, and that absent the economic benefits to the State from construction of Bloom's proposed manufacturing plant, NEO would not recommend that the Commission approve the proposed tariffs. (*Id.* at 67).

31. The key to the proposal, in Staff's view, was Bloom's construction and sustained operation of the proposed fuel cell manufacturing plant in Delaware with its planned 900 employees. Based on NEO's review of DEDO's economic impact analysis, the increase in value added to the State of Delaware would be in the neighborhood of several hundreds of millions of dollars per year if the manufacturing plant were built and operated at its expected capacity. (*Id.* at 23-

27). Against that, the net incremental costs to be paid by Delmarva's ratepayers in connection with the Project was estimated to be approximately \$113 million on a net present value basis, or about \$1.34/month for the average residential customer. Hence, if Bloom's business were successful, and the expected employment and economic benefits materialized and the estimates of ratepayer net costs were reasonable, the benefits to the State appeared to clearly exceed the costs to Delmarva's ratepayers. In this calculus, Staff recognized that these economic benefits to the State and costs to Delmarva's ratepayers were not necessarily an "apples to apples" comparison, and that the benefits were statewide, whereas only Delmarva's customers will be paying for the costs under the proposed tariffs. (Id. at 27).

32. Staff's Report raised a number of questions regarding the risks associated with the proposal and whether the State had adequately managed those risks. First, the tariff and the proposed Termination Agreement between DEDO and Bloom did not address the risk to ratepayers that under the proposed tariff Delmarva's ratepayers could be charged for 10 MW under the proposed tariff and the manufacturing plant would never be built. (Id. at 28-32).

33. Staff was also concerned about the responsibilities of Delmarva ratepayers if the manufacturing plant were built but did not operate on a sustained basis so that most of the expected employment and economic benefits were not realized. (Id. at 33-34). In this context, Staff also raised questions as to how the termination payments to the State would be made, and for whose benefit, if the

proposed manufacturing plant permanently ceased operations. (Id. at 31-32).

C. DNREC

34. After receiving Staff's Report, the State -- according to Secretary O'Mara -- recognized that additional clarity and protection for ratepayers was needed in the event Bloom reversed its decision to build a manufacturing facility in Delaware. As a result, the State and Bloom agreed to additional protections to make ratepayers whole in the "unlikely" event the manufacturing facility was not constructed. The Termination Agreement was revised to include a provision obligating Bloom to pay to the State of Delaware, for the benefit of Delmarva ratepayers, the sum of \$41 million, which was calculated to represent the net present cost to Delmarva ratepayers if the first 10 MW of Bloom Energy Servers were installed and the factory was not constructed. (Tr. at 387; Ex. 20). This obligation is to be secured by a letter of credit or other instrument of surety in the event that Bloom should require bankruptcy protection. (Tr. at 382).

35. In addition, Secretary O'Mara pointed out that the State had spent a significant amount of time with Bloom's senior management, investors, and customers over the last 12 months, during which Bloom shared proprietary information with the State regarding its cost curve, customer base, and future order pipeline, as well as financial and investor information. (Ex. 19 (O'Mara-R) at 4). Based on this information, "[t]he State is confident that Bloom will not only build the planned manufacturing facility in Delaware, but that they have the resources, personnel, and business plan in place to generate

sufficient orders and manufacture the anticipated annual output from the factory for years, if not decades to come." (Id. at 5).

36. DNREC also believes that Staff's Report underestimates the Project's environmental and health benefits. Secretary O'Mara contends that since the fuel cells will provide baseload power, comparing them to an intermittent source is not appropriate. Rather, the fuel cells' deployment will reduce the need for older, dirtier baseload units to operate as well as the need to fire older peaking units in times of high demand. These reductions in air pollution will be, according to the Secretary, substantial. (Id. at 9).

D. CRI

37. CRI took issue with the State being involved in making investment decisions for its citizens, citing the Governor's "Blue Print for Change" as authority for avoiding having state officials making investment decisions for Delmarva ratepayers. In addition, CRI challenged the amount of actual economic benefit the Project will have on Delaware, suggesting that it could be as little as \$45 million on a net present value basis. (Ex. 24 (CRI) at 1).

38. CRI also suggested that the cost to ratepayers might be as high as \$4.32 per month for residential customers and up to \$110,000 annually for large manufacturing and commercial users. (Id. at 3).

39. Finally, CRI contended that a combined cycle natural gas facility would produce much more energy (300 MW versus 30 MW) with very little additional air pollutants, for approximately the same price to ratepayers as the Project. (Id. at 4).

VI. DISCUSSION AND DELIBERATIONS

40. As we noted earlier, the Amendments direct us to either approve or reject the tariffs filed in the Application that will allow Delmarva (as the collection agent for the Project) to collect from Delmarva's entire customer base amounts sufficient for the utility to recoup its allowable costs incurred in helping site the Project and in administering the tariff filings for the Project. In addition, the proposed tariffs guarantee that the Bloom project company will receive net revenues under the proposed tariff with respect to the electric output from the 30 MW fuel cell generation facility over the 21-year term of the Project.

41. Unlike most issues that come before us, the approval process here is binary -- we can only approve or reject the tariff filings in toto. And although some Commissioners expressed concern about the structure of the Application,<sup>9</sup> the Amendments strip the Commission of any right to propose modifications to the tariffs in exercising its authority to approve or disapprove the Application. Most significant, however, is that the Application -- once approved -- makes the tariffs (and the obligations of Delmarva's ratepayers thereunder) unalterable, except upon joint application of Delmarva and Bloom Energy. There are no "do overs" in this legislative construct.

42. Accordingly, our first task under the Amendments is to make sure that the technical requirements of the Amendments found in

---

<sup>9</sup> As one Commissioner noted: "We have a tariff with one entity and an agreement between the State and some other entity not obligated by the tariff taking up obligations for a third party. It is not a good way of doing business, in my opinion." (Tr. at 459).

§364(d)(1) a.-m. have been met. We believe they have been.  
(Unanimous).

43. The evidentiary hearing elicited very little evidence that all the requirements under § 364(d)(1) had not been met. The only issue raised - and then only tangentially - was whether the Project satisfied the requirement of sub-paragraph (d)(1)c. that requires the cost of the Project not to exceed the "highest cost source for combined energy, capacity and environmental attributes approved by the Commission." Although the language of the Amendments is not clear as to how the cost comparison is to be made, most parties agreed that comparing the Project against the Bluewater Wind PPA (signed in 2008) on a net levelized basis for an average residential customer (or on a \$/MWh basis to customers) was the appropriate standard.

44. Although CRI suggested that the actual monthly costs to Delmarva ratepayers may be higher than ICF's \$1 levelized monthly cost estimate, or the \$1.34 monthly levelized cost that NEO calculated, there was no testimony or otherwise persuasive evidence placed in the record that suggested the Bluewater cap would be exceeded based on current estimates of the Project's costs. Whether the actual Project costs will exceed currently-projected costs is impossible to know. We are limited to considering the projected costs now, and we find that the requirement that those estimates not exceed the Bluewater cap has been met.

45. Our second task is to consider the incremental cost to customers of the Project applying -- at a minimum -- four statutorily-

specified factors. Again, we find that the Application satisfies §364(d)(2). (Unanimous).

46. The first factor - whether the Qualified Fuel Cell Provider utilizes innovative base load technology - is not in dispute. Our role is not to quantify the level of innovation over existing baseload technologies, but merely to determine whether the fuel cell technology is innovative as compared to other baseload technologies. As Staff pointed out, Bloom fuel cells can certainly be viewed as being innovative. Bloom is the only major fuel cell manufacturer building solid oxide fuel cells in the 100 kW-200 kW size range, which can be combined for larger applications. (Ex. 21 (Staff Report) at 37-38). There is ample support in this record to conclude that the Project will use innovative baseload technology.

47. Regarding whether the Project offers environmental benefits to the State relative to conventional baseload technologies, again the issue is not quantitative, but is merely whether such benefits exist. Clearly on this record the answer must be yes. DNREC, which is charged with protecting the State's environment, has testified through its Secretary that such benefits do exist and, in fact, has suggested that Staff's Report underestimated the Project's environmental and health benefits. (Ex. 19 (O'Mara-R) at 9). Specifically, Secretary O'Mara testified that the replacement of older, dirty base load and peaking units with Bloom fuel cells creates substantial environmental benefits and significantly reduces emissions. As compared to a similarly sized combined cycle natural gas facility (NGCC), the virtual elimination of NO<sub>x</sub>, SO<sub>2</sub> and water make the Bloom servers more

environmentally advantageous. These factors, coupled with scalability and flexibility in locating these servers near utility customer loads, add to the environmental benefits of the Project. (Id. at 11).

48. The question of whether the Project will promote economic development in the State is also not subject to much dispute in this record. We have comments from the Director of DEDO and testimony of Secretary O'Mara that the Project does create economic opportunity, and they have so certified the Project -- a necessary requirement under the Amendments. (Ex. 17 (O'Mara) att. 1) and 26 Del. C. §352(16)(b). Staff also agrees that the expected economic benefits associated with the Project substantially outweigh the projected costs to ratepayers.<sup>10</sup> However, the concerns -- raised primarily by Staff -- are whether those economic benefits will actually be realized and what protections, if any, do ratepayers have if the benefits do not materialize. Staff focused primarily on two possible scenarios: (1) the 10 MWs are installed from fuel cells manufactured outside of the State and the manufacturing plant is not built; and (2) Bloom's business is not sustainable and the manufacturing plant ceases to operate before the end of the tariff period.

49. Both of these concerns were addressed in DNREC's testimony, and specifically through the modified Termination Agreement. (Ex. 20) As Secretary O'Mara stated, the Termination Agreement was specifically modified to address Staff's concern regarding the lack of any

---

<sup>10</sup> Even CRI admits that there are prospective economic benefits derived from this Project, albeit much more limited than the other parties suggest. (Ex. 24 (CRI) at 1).

financial compensation to Delmarva's customers if the manufacturing facility was not built. As a result, the State negotiated additional protections (to which Bloom agreed) to make ratepayers whole in the event the manufacturing facility is not constructed. Bloom has now agreed to be obligated to the State of Delaware for the benefit of Delmarva ratepayers in the amount of \$41 million, which is the estimated net present value cost to Delmarva's ratepayers if the first 10 MW of Bloom boxes are installed, but the factory is not constructed.

50. The State maintains that the payment will be due and payable to ratepayers if the manufacturing facility is not constructed by December 2013. In addition, according to Secretary O'Mara, no electrons will flow from the facility without the State having Bloom's commitment securitized in some meaningful way. (Tr. at 399-401). We believe that these additional commitments by Bloom in response to Staff's Report are significant and increase the likelihood that the manufacturing facility will actually be constructed. We also note Mr. Richman's comment about there being no "grey" on this point. (*Id.* at 309).

51. The concerns raised about the sustainability of the business and manufacturing plant's viability, should the demand for Bloom Fuel cells decrease over time, is harder to evaluate in any meaningful way on this record. Although the modified Termination Agreement attempts to protect the ratepayers in the event the manufacturing facility ceases to operate sometime in the future, through a series of declining termination payments, it is clear that

potential scenarios exist where ratepayers would not be fully protected. (Ex. 21 (Staff Report) at 32). This is clearly a risk, and although the State has attempted to mitigate the full impact of that risk, it still exists and must be considered in determining the incremental cost of the Project to Delmarva's customers. See 26 Del. C. §364(d)(2).

52. On this point, we believe the State, and those who are charged with promoting economic development in Delaware, considered these risks to ratepayers when they invited Bloom to consider Delaware as a potential site for new manufacturing capability, negotiated economic incentives for Bloom to come here, drafted the Amendments and negotiated additional provisions that provided special force majeure protections for Bloom's fuel cell project investment in Delaware, and performed due diligence on Bloom and its business plan. In addition, State representatives testified before us that the business model was a good one that was sustainable over time and told us that we could rely on their expert opinion regarding the validity and sustainability of the Project in making our decision on this Application. (Tr. at 399). As Secretary O'Mara acknowledged, the Commission's work may affect business development in the State, but it is not its primary expertise. (Tr. at 399) Thus, any concerns we may have about the level of risk that ratepayers are being asked to assume under this legislation must be tempered by the knowledge that the State has spent 17 months investigating this Project and its viability, and believes in its collective judgment that it is sustainable and will be

successful for decades to come. (*Id.* at 401). We have nothing in this record to point us to a different conclusion.

53. The last factor that we must consider under the Amendments is price stability over the Project term. Representatives of both Delmarva and Staff have testified that this factor has been met. Because the Bloom Project is anticipated to serve only 3% of the expected Delmarva load requirement, it reflects only a small share of the total cost of serving customers. Thus the impact year over year on price stability for the entire distribution system load is limited. Although natural gas is a component of the total price for the Project, which will change with changes in natural gas prices, the majority of the total fuel cell price is fixed in the Disbursement Rate, which is netted against the PJM revenues received for the electrical output of the Project. And because PJM energy prices generally track natural gas prices, PJM revenues received for the Project's generation output should increase if natural gas prices increase. Accordingly, the netting of PJM revenues against the Project's costs adds to the stability of those costs.

54. Although several Commissioners expressed concern about the ability to forecast with any certainty the actual costs that will be associated with this Project, the nature of the tariff fixes a major portion of the charge in the Disbursement Rate and, as noted above, fluctuations in the cost of natural gas costs are correlated with corresponding fluctuations in the PJM energy market. Together with the relatively small size of the Project, as compared to Delmarva's overall load, there is sufficient evidence to support a finding that

the proposed project and tariffs will make at least some contribution to price stability.

55. Finally, Secretary O'Mara had asked us to consider adopting his adjustments to the statutory allowances for partial fulfillment of Delmarva's obligations towards the RPS standards. As he explained, in order to lower the cost impact to Delmarva customers of the Project, he doubled the number of RECs that could be offset by each MWH of energy produced by a Qualified Fuel Cell Provider for the first fifteen years of the Project, as well as making other adjustments to reduce the overall cost impact to ratepayers. (Ex. 17 (O'Mara) at 6-7). We believe that the reduction in the overall cost burden to Delmarva customers resulting from these adjustments is in the public interest and should be adopted. (Unanimous).

ORDER

AND NOW this 1<sup>st</sup> day of December 2011, it is hereby ordered:

1. That the Commission adopts Order No. 8062, dated October 18, 2011, for the reasons stated herein.
2. That the Commission adopts the allowance adjustments made by the Secretary of DNREC to the REC and SREC credits.
3. That the Commission reserves the jurisdiction and authority to enter such further orders in this matter as may be deemed necessary or proper.

BY ORDER OF THE COMMISSION:

---

Chair

/s/ Joann T. Conaway  
Commissioner

/s/ Jaymes B. Lester  
Commissioner

/s/ Jeffrey J. Clark  
Commissioner

\_\_\_\_\_  
Commissioner

ATTEST:

/s/ Alisa Carrow Bentley  
Secretary