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September 30, 2020

Via Electronic Filing

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Re: Docket No. P-2020-3019522
Petition of Duquesne Light Company for Approval of Its Default
Service Plan for the Period June 1, 2021 Through May 31, 2025

Dear Secretary Chiavetta:

Attached for filing in accordance with Deputy Chief Administrative Law Judge Hoyer's Prehearing Conference Order is MAREC Action's Main Brief in the above matter. A copy of MAREC Action's Main Brief is being served on Judge Hoyer and the parties listed on the attached Certificate of Service.

Very truly yours,

THOMAS, NIESEN & THOMAS, LLC

By

Charles E. Thomas, Jr.

Enclosure

cc: Bruce H. Burcat, Esquire
Elizabeth A. Stanton, Ph.D.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for :
Approval of Its Default Service Plan for the : Docket No. P-2020-3019522
Period June 1, 2021 through May 31, 2025 :

**MAIN BRIEF OF
MAREC ACTION**

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DATED: September 30, 2020

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I. INTRODUCTION

A. Duquesne's Petition

On April 20, 2020, Duquesne Light Company (“Duquesne” or “Company”) filed its Petition with the Pennsylvania Public Utility Commission (“Commission”) requesting approval of its Default Service Plan (“DSP”) for the period June 1, 2021 through May 31, 2025.

As explained in Judge Hoyer’s Prehearing Order dated June 23, 2020, in its DSP, Duquesne proposed to continue separate default supply procurements for: (1) residential and lighting customers, (2) small commercial and industrial (C&I) customers, (3) medium C&I customers with demands under 200 kW (Medium C&I <200kW), and (4) medium C&I customers with demands equal to or greater than 200 kW and Large C&I customers (collectively, “HPS-Eligible”). Duquesne proposed to procure supplies for residential and lighting and small C&I customers through the combination of twelve (12) and twenty-four (24) month fixed price, full requirements, laddered contracts. Duquesne would continue to supply medium C&I <200kW default service customers through fixed-price full requirements supply contracts with three-month terms from third-party suppliers with no laddering. Duquesne also proposed to continue to procure supply for HPS-Eligible default service customers through the day-ahead PJM energy market prices and to continue the current structure and administration for HPS customers, to conduct an RFP to supply HPS customers, and to preserve the demand threshold for HPS at \geq 200 kW.

In its DSP, Duquesne also proposed to (1) create an Electric Vehicle Time-of-Use Pilot Program (EV-TOU) for residential, small C&I and medium C&I <200kW customers who own or lease an EV or who operate EV charging infrastructure at the service location; (2) allow customers participating in the Company’s Customer Assistance Program (“CAP”) to purchase

supply from EGSs, subject to certain protections (CAP Shopping), provided that there are sufficient EGSs that are willing to serve CAP customers; (3) use a third-party vendor to administer the Company's Standard Offer Customer Referral Program ("SOP"); and (4) enter into a long-term Solar Power Purchase Agreement to support a utility-scale solar project in Pennsylvania, preferably in Duquesne's service area.

B. MAREC Action's Intervention

A number of Petitions to Intervene were filed in the matter, including a Petition by MAREC Action which was filed on June 5, 2020 and granted by Judge Hoyer's Prehearing Order dated June 23, 2020.

Several of the issues summarized by Judge Hoyer in his Prehearing Order have been resolved and only a limited number remain, including the issue raised by MAREC Action involving long-term contracts to support utility scale solar projects.

MAREC Action presented the testimony of Elizabeth A. Stanton, PhD. Dr. Stanton's experience and background are extensive, both domestically and internationally, and are detailed in MAREC Action St. No. 1 containing Dr. Stanton's direct testimony. Dr. Stanton also presented surrebuttal testimony which was identified as MAREC Action St. No. SR-1. Significantly, Dr. Stanton is Director and Senior Economist of Applied Economics Clinic ("AE Clinic") whose study, entitled Pennsylvania Long-Term Renewable Contracts Benefits and Costs, was presented as part of MAREC Action's Comments to the Commission's Secretarial Letter issued February 26, 2017 in its *Investigation Into Default Service and PJM Interconnection, LLC Settlement and Reform* proceeding at Docket No. M-2019-3007101.

A principal purpose of Dr. Stanton's testimony in that proceeding was to discuss the benefits of long-term renewable contracts. In its *Secretarial Letter* at Docket No. M-2019-

3007101, the Commission referenced MAREC Action's Comments concerning long-term contracts for renewables, agreed on the importance of this issue, and requested electric distribution companies ("EDCs") to address this procurement mechanism in their default service plan proposals. The Commission's directive in this regard was quite clear:

Concerning procurement and long-term contracts, the Commission agrees that long-term contracts need to be carefully considered and that we need to consider this topic further in upcoming DSP proceedings. We request that the EDCs include in their filings evidence showing how its DSP proposal complies with the prudent mix requirements of the Public Utility Code [Act 129] and case law.¹

II. DUQUESNE'S PROPOSAL

In its DSP Petition, Duquesne expressed its intent to enter into a long-term solar power purchase agreement ("PPA") during the term of DSP IX.

Duquesne Light intends to enter into a long-term Solar PPA (i.e., more than four years and less than twenty years) to support a utility-scale solar project (up to a total of 7 MW) in Pennsylvania, preferably in Duquesne Light's service area.²

Duquesne added that the alternative energy credits ("AECs") associated with this project (or projects up to the 7 MW cap) would be used to help satisfy the solar requirements of serving all default service customers.

Duquesne seeks to support utility-scale solar facilities in Pennsylvania through a long-term solar PPA to be consistent with the "prudent mix" and "least cost" requirements of Act 129.³ The Company also is considering a long-term solar PPA since it has the potential to "provide greater opportunity for cost-effective financing for the developer of a utility-scale solar

¹ *Investigation into Default Service and PJM Interconnection, LLC. Settlement Reforms*, Docket No. M-2019-3007101 (Secretarial Letter dated Jan. 23, 2020) ("*Secretarial Letter*"), at 8.

² Duquesne Petition, ¶ 54.

³ Duquesne Petition, ¶ 55.

project.”⁴ Duquesne also noted how the development of solar facilities addresses requirements set out by the Alternative Energy Portfolio Standards:

The development of solar facilities is consistent with Act 129’s objectives, as it addresses the Alternative Energy Portfolio Standards (“AEPS”) “prudent mix” and “least cost” requirements.⁵

In accordance with the requirements of Act 129, Duquesne plans to conduct a competitive solicitation for the PPA, the results of which would be reported to the Commission consistent with the process used for the Company’s other default service supply auctions.⁶ The Commission would have the opportunity to review the results and approve or reject the competitive solicitation outcome.⁷

Duquesne also explained that it plans to purchase the associated energy from the solar facility, which is expected to provide greater opportunity for cost-effective financing for developers of utility-scale solar projects.⁸ In addition to purchasing the associated energy, the Company “intends to assess the potential of purchasing the associated capacity and ancillary services from the facility.”⁹

The requirements of Pennsylvania’s Alternative Energy Portfolio Standards Act of 2004 were also considered. By 2021, the AEPS require the Commonwealth’s EDCs to purchase Tier I AECs equal to 8 percent of their retail sales, and Tier II AECs equal to an additional 10 percent of their retail sales. At present, Pennsylvania EDCs purchase renewable generation and the AECs associated with it at procurement auctions every six months.

⁴ Duquesne Petition, ¶ 55.

⁵ *Direct Testimony of C. James Davis*, Docket No. P-2020-3019522, at 14.

⁶ Duquesne Petition, ¶ 57.

⁷ Duquesne Petition, ¶ 57.

⁸ Duquesne Petition, ¶ 56.

⁹ Duquesne Petition, ¶ 56.

III. DR. STANTON'S ANALYSIS

The standards used for Duquesne's procurement methodologies under its DSP are based upon the standards set forth by Act 129. These standards require that "electric power acquired shall be procured through competitive procurement processes" and the procurement plan must include a "prudent mix" of spot market purchases, short-term contracts and long-term contracts.¹⁰ In its Petition, Duquesne claims to achieve a prudent mix of contracts for its DSP and to satisfy the requirement that this mix is "the least cost to customers over time":¹¹

[T]his Plan includes a prudent mix of contracts given the current levels of, and experience with, switching for each class of customers, and the competitive market enhancements proposed in the Petition.¹²

However, contrary to its assertions, the evidence submitted by Duquesne does not support its claim that 7 MW of solar is sufficient to result in a prudent mix of resources. If any analysis were conducted along these lines, the Company did not provide it in its Petition.

Dr. Stanton testified that an appropriate analysis to determine a prudent mix of contracts would be an all-resource Request for Proposals followed by Integrated Resource Modelling to determine the least-cost mix of resources that meet the Company's other requirements including its AECs obligation.

On pages 8-17 of her direct testimony in MAREC Action St. No. 1, Dr. Stanton provided an overview of her analysis explaining the importance of long-term contracts, not only in the

¹⁰ 66 Pa.C.S. § 2807(e)(3.1-3.2).

¹¹ 66 Pa.C.S. § 2807(e)(3.4).

¹² Duquesne Petition, ¶ 41.

development of renewable energy projects, but in keeping energy prices low. She explained that long-term renewable contracts benefit consumers by providing:¹³

- **Price stability:** Long-term contracts for renewable energy can offer price stability over a multi-year timeframe. Customers are protected from constant rate adjustments during periods when energy and capacity markets are unstable.
- **Incentives to renewable development:** Long-term contracts encourage the development of new renewable generation resources by offering increased price certainty and lower financing costs.
- **Lower renewable energy certificate (REC) prices:** The addition of renewable generators leads to an increase in the availability of RECs. An increase in the supply of RECs helps to lower the price, which in turn reduces the cost of meeting the RPS and benefits ratepayers.
- **Lower energy costs:** The addition of renewable generation to the wholesale market supply curve displaces the most expensive generating units and lowers the wholesale market price of energy. Utilities dealing directly with developers in a competitive process are able to pass along cost savings (such as lower financing costs) to customers.
- **Economic development:** In-state development of renewables adds jobs and economic development.
- **Reduced air pollution:** Displacement of fossil-fired generators with non-emitting renewables leads to a reduction in air emissions and a corresponding increase in health benefits for consumers.

A principal focus of Dr. Stanton's analysis was a study conducted by the Applied Economics Clinic and Sommer Energy LLC on behalf of MAREC Action ("AEC Study"). Dr. Stanton was the lead researcher and the AEC Study was submitted in the Commission's default service investigation proceeding at Docket No. M-2019-3007101. The AEC Study examined the potential benefits of longer-term contracting of 10 to 20 years for the renewables needed to meet one-half of Pennsylvania's AEPS as compared to the current practice of purchasing renewable generation and associated AECs at procurement auctions every six months.

As explained by Dr. Stanton, the AEC Study concluded that long-term renewable contracts saved significant money for electric consumers. Dr. Stanton testified:

¹³ MAREC Action St. No. 1 at 9-10.

Over a ten-year period from 2018 to 2027, 20-year renewable PPAs for one-half of Pennsylvania's incremental AEPS requirement would save ratepayers \$134 to \$331 million (see Table 1, where red text indicates savings to consumers). These savings estimates do not account for long-term PPA contracts' potential to lower spot-market AEC prices. Instead, saving measures are limited to the result of differences in the price of renewable energy depending on whether it is purchased at auction or via contract.¹⁴

Dr. Stanton further explained that the advantages of long-term renewable contracts depend on the price of natural gas. Twenty-year PPA contracts are less expensive than auction purchases under any of the natural gas price scenarios examined, while 10-year contracts were less expensive than auction purchases under a high natural gas price future. Significantly, the natural gas prices are low and are projected to remain so.¹⁵

Dr. Stanton also explained that the advantages of long-term renewables contracts depend on the length of the contract. Twenty-year PPA contracts are substantially cheaper than 10-year contracts.

The AEC Study also demonstrated that the advantage of long-term renewable contracts varies over time. The costs of meeting one-half of Pennsylvania's incremental renewable energy needs using 20-year PPAs were below the auction costs even at the lowest natural gas price predictions.

Although the AEC Study has not been updated since its original release, from the trends discussed on pages 15-17 of MAREC Action St. No. 1, it appears that solar prices are dropping more quickly than those of auction prices, while wind prices are dropping at the same rate. This suggests that the advantage of a solar long-term contract is even greater now than it was in 2017, whereas wind likely maintains the same advantage that it did in 2017.

¹⁴ MAREC Action St. No. 1 at 11.

¹⁵ MAREC Action St. No. 1 at 12.

As for natural gas, price predictions released in 2020 are lower than they were in 2017.

When asked about this, Dr. Stanton testified that:

Lower natural gas prices are the most likely cause of lower auction prices. Solar prices, however, have been dropping even more rapidly, suggesting that an update of the December 2017 analysis would show even more favorable results for renewable PPAs.¹⁶

Dr. Stanton added that renewable capital costs have also fallen since the 2017 analysis:

Average overnight capital costs for solar and wind fell by 11-13 percent and 6 percent per year, respectively, from 2016 to 2019 (see Table 3). Overnight capital costs are one of the key components driving PPA prices and can be a good indicator of changes in PPA prices.¹⁷

When asked directly what effect these updated procurement prices would have on her 2017 analysis, Dr. Stanton testified:

From these simple trends it appears that solar prices are dropping more quickly than those of auction prices, while wind prices are dropping at the same rate. This suggests that the advantage of a solar long-term contract is even greater now than it was in 2017, whereas wind likely maintains the same advantage that it did in 2017.¹⁸

Her testimony was similar with respect to natural gas prices:

Q. What effect would these updated gas prices have on the December 2017 analysis?

A. Lower natural gas prices are the most likely cause of lower auction prices. Solar prices, however, have been dropping even more rapidly, suggesting that an update of the December 2017 analysis would show even more favorable results for renewable PPAs.¹⁹

If there were ever a more appropriate time to address the procurement practices raised in the Commission's *Secretarial Letter* at Docket No. M-2019-3007101, it is this proceeding. It is time to stop kicking the can down the road and to address the data.

¹⁶ MAREC Action St. No. 1 at 17.

¹⁷ MAREC Action St. No. 1 at 15.

¹⁸ MAREC Action St. No. 1 at 16.

¹⁹ MAREC Action St. No. 1 at 17.

IV. OVERVIEW OF LONG-TERM CONTRACTS

Dr. Stanton provided an extensive overview of long-term contracts in the United States²⁰ beginning first with Pennsylvania where solar resources are mostly small scale and behind the meter. She explained that independent power producers are looking elsewhere for investors:

PA DEP's *Solar Future Plan* discusses strategies to encourage both utility-scale and distributed (behind-the-meter) solar generation. As part of its utility-scale strategies, PA DEP plans to "develop guidelines for the limited use of long-term contracts for 10 or more years to ensure Pennsylvania benefits from grid scale solar," evaluate the pros and cons of utility ownership of solar generation, and investigate opportunities for grid modernization. According to the *Plan*, the Commonwealth could increase utility scale and distributed solar by 37 times and 2.5 times 2015 levels, respectively.²¹

This proceeding provides an ideal starting point for Commission level first steps. Dr. Stanton also explained how municipalities can enter into long-term renewable contracts²² and provided examples of existing long-term renewable contracts in Pennsylvania, especially at the collegiate level. The University of Pennsylvania, which expects to be 100% carbon neutral by 2042, has signed a long-term contract for the largest solar project in Pennsylvania and, coupled with a second long-term contract, could provide 450,000 MW of annual generation, or 75% of campus electric demands.

Similarly, as Dr. Stanton noted, the *Philadelphia Inquirer* reports that four other Pennsylvania schools (Lehigh University, Lafayette College, Muhlenberg College and Dickenson College) have collectively signed a long-term contract for 45.9 MW "virtual" share in a solar farm in Texas.²³ Under this virtual PPA, the schools will purchase only the RECs

²⁰ MAREC Action St. No. 1 at 17-32.

²¹ MAREC Action St. No. 1 at 18 (footnotes omitted).

²² MAREC Action St. No. 1 at 19.

²³ MAREC Action St. No. 1 at 21.

associated with the generation and not the energy. She also observed that according to a 2017 press release, the City of Philadelphia aims to have 100% renewable electricity by 2030 and that in 2018, the City had signed a long-term contract that will enable it to meet 20% of its energy demand with renewable electricity. Dr. Stanton also pointed out that the PJM planning queue includes new renewable energy and capacity resources.

Dr. Stanton cited evidence from other jurisdictions that supports the use of long-term contracts for the acquisition of renewable resources to meet renewable portfolio standard requirements including in-depth examples from the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, and through the U.S. Environmental Protection Agency.

The evidence from these other states is informative and introduces price considerations as Dr. Stanton noted when considering the Peregrine study from Massachusetts:

The Peregrine study notes that one of the benefits of long-term contracting for renewables is that the projects resulting from those contracts increase the supply of Class 1 RECs needed to meet demand under the RPS, thereby reducing REC market prices. A shortage of RECs, conversely, would cause REC prices to move toward the Alternative Compliance Price, resulting in higher rates for customers. An increase in the amount of renewable energy generation resulting from long-term contracts suppresses the wholesale price of energy; when zero or low variable cost resources are added to the supply curve, the wholesale market clearing price falls in many hours of the year.²⁴

Dr. Stanton also cited a 2015 Sustainable Energy Advantage statement which examined the potential benefits of using long-term contracts to meet 50 percent of New Jersey's incremental RPS obligation between 2017 and 2025, compared to purchasing 100 percent of required RECs on the spot market. The Sustainable Energy Advantage found that the presence of long-term contracts leads to an increased ability to finance new renewable energy facilities,

²⁴ MAREC Action St. No. 1 at 26 (footnotes omitted).

which lowers energy costs, REC prices, and costs to ratepayers. The cost savings associated with meeting 50 percent of incremental RPS obligations through long-term contracting was estimated to be more than \$600 million over the study period. In fact, Dr. Stanton concluded that the Sustainable Energy Advantage's estimate of the rate impacts were conservative.

In its New York study referenced by Dr. Stanton, the Brattle Group, in addition to reducing the net retainage price of electricity, identified a number of other benefits to consumers associated with an increase in the amount of renewable generation in New York. Those benefits included:

- 1) displacement of fossil-fired generation and reduction in air emissions, which reduces the cost of emission reductions needed from other parts of the economy;
- 2) creation of jobs and income associated with new facilities, as well as payments for land leases and purchases of materials and services; 3) a reduction in health impacts from air pollutants; and 4) a reduction in peak demand from increased solar generation, displacing more expensive peaking generation units, and possibly leading to a reduction in the need for new peaking capacity resources.²⁵

Dr. Stanton concluded her consideration of long-term renewable contracts with a review of the Green Power Partnership offered by the Environmental Protection Agency. Her recommendation was that the Commission require Duquesne to issue a bundled renewables RFP. In the absence of such an RFP, the Commission should require Duquesne to initiate a pilot program amounting to 10 percent or more of its total AECs obligation (or a minimum of 21 MW solar or 12 MW wind renewables contracts). For optimal results for ratepayers, Dr. Stanton testified that the Commission should direct the Company to work together with stakeholders to design a prudent mix that allows customers to receive the benefits of long-term contracts for renewables.²⁶

²⁵ MAREC Action St. No. 1 at 30.

²⁶ MAREC Action St. No. 1 at 32-33 (footnotes omitted).

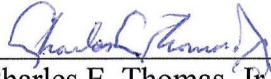
V. CONCLUSION

Given the lack of evidence provided by Duquesne in this proceeding, the record does not support Duquesne's contention that its plan achieves a prudent mix of contracts for its DSP and that this mix is "the least cost to customers over time."²⁷ MAREC Action on the other hand has provided substantial evidence through the testimony of Dr. Stanton that long-term renewable energy contracts would provide significant cost savings to customers and enable project financing at lower costs. Solar and wind projects would get constructed and Duquesne would be providing low cost and stable pricing as part of its obligation to meet the requirements of the Alternative Energy Portfolio Standard.

At this stage of the proceedings, MAREC Action now thinks that the best path forward for the Company to achieve a prudent mix of renewables at the lowest costs to consumers is to establish a stakeholder working group at the conclusion of this docket to bring a proposal forward to the Commission for its review. Duquesne should be required to work with stakeholders to design a prudent mix that allows consumers to receive the benefits of long-term contracts for renewables. The Commission could determine to amend DSP IX to include the proposal that would take effect after year one or two of Duquesne's default service plan. In the event that a stakeholder disagrees with the outcome of the working group's efforts, it should be permitted to file a Petition with the Commission to contest the proposal or to request consideration of its own proposal.

²⁷ 66 Pa.C.S. § 2807(e)(3.4).

WHEREFORE, MAREC Action's proposals should be adopted and made part of any final order in this proceeding.



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DATED: September 30, 2020

APPENDIX A

PROPOSED FINDINGS OF FACT
RESTRICTED TO MAREC ACTION ISSUES

1. Duquesne is an electric distribution company providing service in its certificated territory.

2. MAREC Action is a 501(c)4 non-profit Pennsylvania corporation formed to help advance the opportunities for renewable energy development primarily in the region where the Regional Transmission Organization, PJM Interconnection, operates. MAREC Action's foot print includes Pennsylvania and none other jurisdictions in the region. MAREC Action members include utility scale wind and solar developers, wind turbine manufacturers and non-profit organizations dedicated to the growth of renewable energy technologies. MAREC Action Petition to Intervene ¶ 4.

3. MAREC Action presented the testimony of Elizabeth A. Stanton, PhD who is Director and Senior Economist of Applied Economics Clinic ("AE Clinic") whose study, entitled Pennsylvania Long Term Renewable Contracts Benefits and Costs, was presented as part of MAREC Action's Comments to the Commission's Secretarial Letter issued February 26, 2017 in its *Investigation Into Default Service and PJM Interconnection, LLC Settlement and Reform* proceeding at Docket No. M-2019-3007101. MAREC Action St. No 1 at 2.

4. In its Petition, Duquesne states its intent to enter into a long-term solar power purchase agreement ("PPA") during the term of its DSP. MAREC Action St. No. 1 at 1.

5. The alternative energy credits ("AECs") associated with this project would be used to help satisfy the solar requirements of serving all default service customers. MAREC Action St. No. 1 at 3.

6. Duquesne seeks to support utility-scale solar facilities in Pennsylvania through a long-term solar PPA to be consistent with the “prudent mix” and “least cost” requirements of Act 129. MAREC Action St. No. 1 at 3.

7. The development of solar facilities is consistent with Act 129’s objectives, as it addresses the Alternative Energy Portfolio Standards (“AEPS”) “prudent mix” and “least cost” requirements. MAREC Action St. No. 1 at 4.

8. By 2021, Pennsylvania’s Alternative Energy Portfolio Standards Act of 2004 requires the Commonwealth’s electric distribution companies (EDCs) to purchase Tier I AECs equal to 8 percent of their retail sales, and Tier II AECs equal to an additional 10 percent of their retail sales. MAREC Action St. No. 1 at 4.

9. Pennsylvania EDCs purchase renewable generation and the AECs associated with it at procurement auctions every six months. MAREC Action St. No. 1 at 5.

10. The standards used for Duquesne’s procurement methodologies under its DSP are based upon the standards set forth by Act 129. These standards require that “electric power acquired shall be procured through competitive procurement processes” and the procurement plan must include a “prudent mix” of spot market purchases, short-term contracts and long-term contracts. MAREC Action St. No. 1 at 5.

11. The evidence submitted by Duquesne does not support its claim that 7 MW of solar is sufficient to result in a prudent mix of resources. MAREC Action St. No. 1 at 5.

12. An appropriate analysis to determine a prudent mix of contracts would be an all-resource Request for Proposals followed by Integrated Resource Modelling to determine the least-cost mix of resources that meet the Company’s other requirements including its AECs obligation. MAREC Action St. No. 1 at 5.

13. Long-term renewable contracts benefit consumers by providing price stability, incentives to renewable development, lower renewable energy certificate (REC) prices, lower energy costs, economic development and reduced air pollution. MAREC Action St. No. 1 at 6.

14. A principal focus of Dr. Stanton's analysis was a study conducted by the Applied Economics Clinic and Sommer Energy LLC on behalf of MAREC Action ("AEC Study"). The AEC Study examined the potential benefits of longer-term contracting of 10 to 20 years for the renewables needed to meet one-half of Pennsylvania's AEPs as compared to the current practice of purchasing renewable generation and associated AECs at procurement auctions every six months. MAREC Action St. No. 1 at 10.

15. The AEC Study concluded that long-term renewable contracts saved significant money for electric consumers. MAREC Action St. No. 1 at 11.

16. The advantages of long-term renewable contracts depend on the price of natural gas and the length of the contract. MAREC Action St. No. 1 at 12.

17. The AEC Study demonstrated that the advantage of long-term renewable contracts varies over time. MAREC Action St. No. 1 at 13.

18. As for natural gas, price predictions released in 2020 are lower than they were in 2017. An update of the December 2017 analysis would show even more favorable results for renewable PPAs. MAREC Action St. No. 1 at 14, 16.

19. Average overnight capital costs for solar and wind fell by 11-13 percent and 6 percent per year, respectively, from 2016 to 2019. Overnight capital costs are one of the key components driving PPA prices and can be a good indicator of changes in PPA prices. MAREC Action St. No. 1 at 15.

20. The University of Pennsylvania, which expects to be 100% carbon neutral by 2042, has signed a long-term contract for the largest solar project in Pennsylvania and, coupled with a second long-term contract, could provide 450,000 MW of annual generation, or 75% of campus electric demands. MAREC Action St. No. 1 at 20.

21. The *Philadelphia Inquirer* reports that four other Pennsylvania schools (Lehigh University, Lafayette College, Muhlenberg College and Dickenson College) have collectively signed a long-term contract for 45.9 MW “virtual” share in a solar farm in Texas. Under this virtual PPA, the schools will purchase only the RECs associated with the generation and not the energy. Dr. Stanton also observed that according to a 2017 press release, the City of Philadelphia aims to have 100% renewable electricity by 2030 and that in 2018, the City had signed a long-term contract that will enable it to meet 20% of its energy demand with renewable electricity. MAREC Action St. No. 1 at 20.

22. The PJM planning queue includes new renewable energy and capacity resources. MAREC Action St. No. 1 at 21.

23. Long-term contracts may be used for the acquisition of renewable resources to meet renewable portfolio standard. MAREC Action St. No. 1 at 21

24. The presence of long-term contracts leads to an increased ability to finance new renewable energy facilities, which lowers energy costs, REC prices, and costs to ratepayers. The cost savings associated with meeting 50 percent of incremental RPS obligations through long-term contracting was estimated to be more than \$600 million over the study period. MAREC Action St. No. 1 at 28.

25. In its New York study, the Brattle Group, in addition to reducing the net retail price of electricity, identified a number of other benefits to consumers associated with an increase in the amount of renewable generation in New York including:

- 1) the displacement of fossil-fired generation and reduction in air emissions, which reduces the cost of emission reductions needed from other parts of the economy;
- 2) the creation of jobs and income associated with new facilities, as well as payments for land leases and purchases of materials and services; 3) a reduction in health impacts from air pollutants; and 4) a reduction in peak demand from increased solar generation, displacing more expensive peaking generation units, and possibly leading to a reduction in the need for new peaking capacity resources.

MAREC Action St. No. 1 at 29

APPENDIX B

PROPOSED CONCLUSIONS OF LAW
RESTRICTED TO MAREC ACTION ISSUES

1. The Commission has jurisdiction over the subject matter of and the parties to this proceeding. 66 Pa.C.S. § 2801 *et seq.*; 52 Pa.Code §§ 54.181-54.189.

2. The party seeking a rule or order from the Commission has the burden of proof in that proceeding. It is well-established that “[a] litigant’s burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible.” *Samuel J. Lansberry, Inc. v. Pa.P.U.C.*, 578 A.2d 600, 602 (Pa.Cmwlth. 1990); 66 Pa.C.S. § 332(a).

3. Duquesne has the burden of proving it has met the requirements for approval of its proposed default service programs.

4. Where competing proposals are introduced, the sponsoring party must show that the alternative proposal will better service customers. *Joint Petition of Metropolitan Edison Company and Pennsylvania Electric Company for Approval of Their Default Service Programs*, Docket No. P-2009-2093053 and P-2009-2093054 (Opinion and Order entered November 6, 2009) at 19.

5. MAREC Action has met its burden of proof for the Commission to require Duquesne to issue a bundled renewables RFP. In the absence of such an RFP, Duquesne is required to initiate a pilot program amounting to 10% or more of its total AECs obligation (or a minimum of 21 MW solar or 12 MW wind renewables contracts). For optimal results for ratepayers, Duquesne is required to work together with stakeholders to design a prudent mix that allows consumers to receive the benefits of long-term contracts for renewables.

CERTIFICATE OF SERVICE

I hereby certify that I have this 30th day of September, 2020, served a true and correct copy of the foregoing Main Brief of MAREC Action, upon the persons listed below which MAREC Action believes are participating in the proceeding:

VIA ELECTRONIC MAIL

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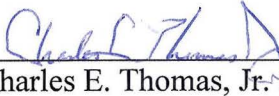
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