

THE PUBLIC UTILITIES COMMISSION OF OHIO

IN THE MATTER OF THE 2018 LONG-TERM FORECAST REPORT OF OHIO POWER COMPANY AND RELATED MATTERS.

CASE NO. 18-501-EL-FOR

IN THE MATTER OF THE APPLICATION OF OHIO POWER COMPANY FOR APPROVAL TO ENTER INTO RENEWABLE ENERGY PURCHASE AGREEMENTS FOR INCLUSION IN THE RENEWABLE GENERATION RIDER.

CASE NO. 18-1392-EL-RDR

IN THE MATTER OF THE APPLICATION OF OHIO POWER COMPANY FOR APPROVAL TO AMEND ITS TARIFFS.

CASE NO. 18-1393-EL-ATA

OPINION AND ORDER

Entered in the Journal on November 21, 2019

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I. SUMMARY

{¶ 1} The Commission finds that the long-term forecast report of Ohio Power Company d/b/a AEP Ohio for 2018 complies with R.C. 4935.04(F), except as otherwise determined in this Opinion and Order, as it fails to demonstrate a need, under any offered definition of the term, for at least 900 megawatts of renewable generating facilities, pursuant to R.C. 4928.143(B)(2)(c). Accordingly, phase II of these proceedings will not be necessary.

II. DISCUSSION

A. *Procedural History*

{¶ 2} Ohio Power Company d/b/a AEP Ohio (AEP Ohio or the Company) is an electric distribution utility (EDU) as defined in R.C. 4928.01(A)(6), an electric light company as defined in R.C. 4905.03, and a public utility as defined in R.C. 4905.02. AEP Ohio is also a person within the meaning of R.C. 4935.04(A)(2) and 4906.01. As such, AEP Ohio is subject to the jurisdiction of this Commission.

{¶ 3} On April 16, 2018, AEP Ohio filed its long-term forecast report (LTFR) for 2018 in Case No. 18-501-EL-FOR (*LTFR Case*). AEP Ohio corrected and supplemented its LTFR on May 31, 2018, and June 26, 2018, at the request of Staff.

{¶ 4} On June 7, 2018, pursuant to Ohio Adm.Code 4901-1-12 and 4901:5-5-02(C), AEP Ohio filed a motion for waiver, requesting that the Commission waive certain portions of the LTFR requirements for electric utilities and electric transmission owners. In its motion, AEP Ohio stated that it intended to file an amendment to its 2018 LTFR to demonstrate the need for at least 900 megawatts (MW) of renewable energy projects in Ohio, consistent with the Commission's orders in the Company's recent electric security plan (ESP) proceedings and its earlier power purchase agreement (PPA) proceedings. *In re Ohio Power Co.*, Case No. 16-1852-EL-SSO, et al. (*ESP 4 Case*), Opinion and Order (Apr. 25, 2018); *In re Ohio Power Co.*, Case No. 14-1693-EL-RDR, et al. (*PPA Rider Case*), Opinion and Order (Mar. 31, 2016), Second Entry on Rehearing (Nov. 3, 2016), Fifth Entry on Rehearing (Apr. 5,

2017). AEP Ohio explained that the stipulation and recommendation approved by the Commission in the *PPA Rider Case* includes an agreement and commitment by the Company and its affiliates to develop a total of at least 500 MW nameplate capacity of wind energy projects in Ohio and at least 400 MW nameplate capacity of solar energy projects in the state, subject to Commission approval. AEP Ohio noted, however, that it must first submit a demonstration of need filing pursuant to R.C. 4928.143(B)(2)(c), as a predicate for advancing project-specific proposals through subsequent EL-RDR filings.

{¶ 5} With respect to its waiver request, AEP Ohio asserted that the designated information required by certain LTFR rules is not necessary for an efficient review of the Company's integrated resource plan that will be the focus of the LTFR amendment. AEP Ohio added that the information required by the rules is voluminous and would be time consuming for the Company to prepare, while much of the information is publicly available in the Company's Federal Energy Regulatory Commission (FERC) Form 715.

{¶ 6} By Entry dated September 19, 2018, the Commission granted AEP Ohio's unopposed motion for waiver, subject to certain conditions.

{¶ 7} On September 19, 2018, AEP Ohio filed the amendment to its 2018 LTFR, along with supporting testimony. In the amendment, AEP Ohio requested that the Commission consider the 2018 LTFR on an expedited basis.

{¶ 8} On September 21, 2018, Staff filed a motion for a hearing in the *LTFR Case*.

{¶ 9} On September 27, 2018, in Case No. 18-1392-EL-RDR and Case No. 18-1393-EL-ATA (*Tariff Cases*), AEP Ohio filed an application seeking approval of the inclusion of two solar energy resources totaling 400 MW of nameplate capacity in the Company's Renewable Generation Rider (RGR), as well as approval to establish a new Green Power Tariff under which customers may purchase renewable energy certificates (RECs) for the solar energy resources' environmental attributes. AEP Ohio states that, in accordance with the *PPA Rider Case* and the *ESP 4 Case*, the Company has executed 20-year renewable energy

purchase agreements (REPAs) for the energy, capacity, and environmental attributes associated with two solar energy projects to be constructed in Highland County, Ohio - a 300 MW nameplate capacity solar facility known as Highland Solar (Highland) and a 100 MW nameplate capacity solar facility known as Willowbrook Solar (Willowbrook). AEP Ohio further states that, although the solar facilities would be operated on its behalf, the Company would be responsible for the dispatch of the resources in the wholesale markets. AEP Ohio requests that the Commission find that it is reasonable and prudent for the Company to enter into the REPAs associated with the two solar energy projects and that the Company should be authorized under R.C. 4928.143(B)(2)(c) to recover through the RGR its REPA costs and debt equivalency costs for the life of the facilities. With respect to the Green Power Tariff, AEP Ohio notes that it requests approval to establish the tariff under R.C. 4909.18, as an application not for an increase in rates, in order to provide all customers, whether served by the Company's standard service offer (SSO) or by a competitive retail electric service provider, the opportunity to purchase RECs to cover some or all of their usage.

{¶ 10} Also on September 27, 2018, AEP Ohio filed a motion seeking to consolidate the *LTFR Case* and the *Tariff Cases*.

{¶ 11} By Entry dated October 22, 2018, the attorney examiner granted, to the extent set forth in the Entry, Staff's motion for a hearing in the *LTFR Case* and AEP Ohio's motion to consolidate the above-captioned proceedings. The attorney examiner determined that the consolidated cases should proceed in two phases, with the first phase to consist of a hearing on the issue of need, while, in the second phase of the consolidated proceedings, a separate hearing will be held to consider the issues raised by AEP Ohio's application in the *Tariff Cases*. Additionally, the attorney examiner established a procedural schedule for the first phase of the consolidated proceedings. The attorney examiner also directed that, in the event that any motion is made prior to the issuance of the Commission's order, any memorandum contra shall be filed within five business days after the service of such

motion, and a reply memorandum to any memorandum contra shall be filed within three business days.

{¶ 12} On November 13, 2018, the procedural schedule was amended, in order to afford the intervenors additional time to prepare for hearing. Pursuant to the amended procedural schedule, testimony on behalf of intervenors and Staff was due for filing by January 2, 2019, and January 8, 2019, respectively. Additionally, a prehearing conference was set to occur on January 7, 2019, with the evidentiary hearing to be called on December 4, 2018, and reconvened on January 15, 2019.

{¶ 13} By Entry dated November 30, 2018, the following entities were granted intervention in these proceedings: Ohio Energy Group (OEG); Industrial Energy Users-Ohio (IEU); Ohio Partners for Affordable Energy (OPAE); Sierra Club; Ohio Manufacturers' Association Energy Group (OMAEG); Interstate Gas Supply, Inc. and IGS Solar, LLC (jointly, IGS); Ohio Consumers' Counsel (OCC); The Kroger Co. (Kroger); Ohio Environmental Council (OEC); Natural Resources Defense Council (NRDC); Direct Energy, LP (Direct Energy);¹ Ohio Coal Association (OCA); Retail Energy Supply Association; One Energy Enterprises LLC; Ohio Hospital Association; Mid-Atlantic Renewable Energy Coalition (MAREC); Calpine Retail Holdings, LLC (Calpine); and PJM Power Providers Group and Electric Power Supply Association.

{¶ 14} The evidentiary hearing for the first phase of these proceedings was called, as scheduled, on December 4, 2018, continued to January 15, 2019, and concluded on February 8, 2019.

{¶ 15} Consistent with R.C. 4935.04(D)(3), proof of publication of notice of the public hearing was filed by AEP Ohio on December 12, 2018.

¹ Although Direct Energy did not seek to intervene in the *Tariff Cases*, the attorney examiner determined that Direct Energy should nonetheless be deemed a party to all three of the above-captioned cases.

{¶ 16} Initial and reply briefs were filed by the parties on March 6, 2019, and March 27, 2019, respectively.

B. Applicable Law

{¶ 17} There are several key statutory provisions at issue in these proceedings. First, R.C. 4928.143(B)(2)(c) provides that an electric security plan (ESP) may include a nonbypassable surcharge for the life of an electric generating facility that is owned or operated by an EDU, was sourced through a competitive bid process, and is newly used and useful on or after January 1, 2009. The statute directs the Commission to determine, in advance of authorizing any surcharge, whether there is need for the facility based on resource planning projections submitted by the EDU.

{¶ 18} Further, R.C. 4935.04(C) requires each person owning or operating a major utility facility within this state, or furnishing gas, natural gas, or electricity directly to more than 15,000 customers within this state, to furnish to the Commission, on an annual basis, a LTFR, including, among other information, a year-by-year, ten-year forecast of annual energy demand, peak load, reserves, and a general description of the resource planning projections to meet demand, as well as a description of major utility facilities planned to be added or taken out of service in the next ten years. Pursuant to Ohio Adm.Code 4901:5-3-01(A) and 4901:5-5-06(A), an electric transmission owner or electric utility is required to file its LTFR, including an integrated resource plan, by April 15 of each year.

{¶ 19} R.C. 4935.04(D)(3) provides that the Commission shall hold a public hearing regarding a LTFR upon the showing of good cause to the Commission by an interested party. If a hearing is held, the Commission shall fix a time for the hearing, which shall be not later than 90 days after the report is filed, and publish notice of the hearing. R.C. 4935.04(E)(2) provides that the hearing shall include, but not be limited to, a review of the projected loads and energy requirements for each year of the period and the estimated installed capacity and supplies to meet the projected load requirements. After reviewing

the LTFR and the hearing record, the Commission, in compliance with R.C. 4935.04(F), must determine if:

- (1) All information relating to current activities, facilities agreements, and published energy policies of the state has been completely and accurately represented;
- (2) The load requirements are based on substantially accurate historical information and adequate methodology;
- (3) The forecasting methods consider the relationships between price and energy consumption;
- (4) The report identifies and projects reductions in energy demands due to energy conservation measures in the industrial, commercial, residential, transportation, and energy production sectors in the service area;
- (5) Utility company forecasts of loads and resources are reasonable in relation to population growth estimates made by state and federal agencies, transportation, and economic development plans and forecasts, and make recommendations where possible for necessary and reasonable alternatives to meet forecasted electric power demand;
- (6) The report considers plans for expansion of the regional power grid and the planned facilities of other utilities in the state;
- (7) All assumptions made in the forecast are reasonable and adequately documented.

{¶ 20} Additionally, Ohio Adm.Code 4901:5-5-06 provides that an electric utility, as part of its LTFR, must include an integrated resource plan.² Ohio Adm.Code 4901:5-5-

² Ohio Adm.Code 4901:5-5-01(L) defines an “integrated resource plan” as a plan or program to furnish electric energy services in a cost-effective and reasonable manner, consistent with the provision of adequate and reliable service, and giving appropriate consideration to supply- and demand-side resources and transmission or distribution investments for meeting projected demand and energy requirements.

06(B)(3)(e) directs the reporting person to provide information sufficient for the Commission to determine the reasonableness of the resource plan, including the adequacy, reliability and cost-effectiveness of the plan, as well as whether the plan gives adequate consideration to potential rate and customer bill impacts of the plan; environmental impacts of the plan and their associated costs; other significant economic impacts and their associated costs; impacts of the plan on the financial status of the company; other strategic considerations, including flexibility, diversity, the size and lead time of commitments, and lost opportunities for investment; equity among customer classes; impacts of the plan over time; and such other matters as the Commission considers appropriate. The plan must also address whether the methodology used to develop the plan evaluates demand-side management programs and nonelectric utility generation on both sides of the meter in a manner consistent with the electric utility's generation and other electricity resource options.

C. Summary of the Public Testimony

{¶ 21} During the hearing held on December 4, 2018, 55 individuals testified in support of AEP Ohio's efforts to develop renewable energy projects for reasons such as reductions in pollution and other adverse environmental impacts, increased financial savings for customers, and creation of new jobs. No opposition testimony was offered. Additionally, thousands of letters and comments have been received by the Commission in support of the Willowbrook and Highland solar projects.

D. Preliminary Issues

1. FEDERAL PREEMPTION

{¶ 22} OCC argues that the Commission lacks jurisdiction to authorize a charge under the RGR. According to OCC, the Commission's jurisdiction is preempted under the Federal Power Act (FPA), 16 U.S.C. § 824 et seq. OCC reasons that the FPA, along with FERC's creation of regional transmission organizations (RTOs), including PJM Interconnection, LLC (PJM), to operate energy and capacity markets, reflects a comprehensive program of regulation. *PPL EnergyPlus v. Nazarian*, 753 F.3d 467, 472 (4th

Cir. 2014); *see also PPL EnergyPlus v. Solomon*, 766 F.3d 241, 248 (3d Cir. 2014). (OCC Br. at 39-47.)

{¶ 23} AEP Ohio asserts that OCC's argument misstates the scope of the FPA and misapprehends the import of recent U.S. Supreme Court case law interpreting the FPA. The Company declares that the RGR is a retail rate that does not set or otherwise mandate any wholesale rates or charges or require AEP Ohio to engage in or continue any wholesale transaction. Under the FPA, according to AEP Ohio, FERC has "exclusive authority to regulate 'the sale of electric energy at wholesale in interstate commerce.'" *Hughes v. Talen Energy Marketing, LLC*, ___ U.S. ___, 136 S. Ct. 1288, 1292, 194 L.E.2d 414 (2016) (*Talen*), quoting *FERC v. Electric Power Supply Assn.*, ___ U.S. ___, 136 S. Ct. 760, 766, 193 L.E.2d 661 (2016) (*EPSA*). Significantly, according to AEP Ohio, "the law places beyond FERC's power and leaves to the States alone, the regulation of 'any other sale' – most notably, any retail sale – of electricity." *Talen* at 1292, quoting *EPSA* at 766; 16 U.S.C. § 824(b). Therefore, AEP Ohio states the line between wholesale electricity sales, which are FERC's exclusive province, and retail electricity sales, which belong to the states, is clearly drawn. Further, AEP Ohio reiterates that this issue has been considered and previously decided by the Commission in the Company's *ESP 4 Case*, which is pending on appeal to the Ohio Supreme Court.

{¶ 24} As it has been the Commission's policy, the Commission hereby acknowledges the arguments of OCC on the issue of federal preemption but declines, however, to address constitutional issues, recognizing that, under the specific facts and circumstances of these proceedings, such issues are best reserved for judicial determination. *In re Ohio Power Co.*, Case No. 13-2385-EL-SSO, et al., Opinion and Order (Feb. 25, 2015) at 26; *In re Ohio Power Co.*, Case No. 14-1693-EL-RDR, et al., Opinion and Order (Mar. 31, 2016) at 102-103. Accordingly, to the extent that the facts and circumstances of these cases would require the Commission to address constitutional issues as raised by OCC, we reiterate and confirm that such arguments should be resolved by a court of competent jurisdiction. In

any event, in light of the Commission's determination below that AEP Ohio has failed to demonstrate need, OCC's federal preemption argument is moot.

2. PROPER PROCEEDING TO DETERMINE NEED

{¶ 25} According to Direct Energy, as a prerequisite to the consideration of AEP Ohio's application to demonstrate need for the renewable generation facilities and to populate the RGR, AEP Ohio was required to demonstrate a need for the generation facilities as part of its ESP case. Therefore, Direct Energy avers the Commission lacks the authority to approve the RGR in the manner and sequence that led to these proceedings. Direct Energy argues that R.C. 4928.143(B)(2)(c) permits an ESP to include a nonbypassable surcharge for an electric generation facility, pursuant to certain criteria, and provided the Commission first determines in the ESP proceeding that there is a need for the facility based on resource planning projections submitted by the EDU. Direct Energy maintains, and IGS seems to endorse, that, under the basic tenets of statutory construction, "the proceeding" to which the statute refers can only mean the ESP case in which the surcharge was proposed. Thus, Direct Energy and IGS submit that AEP Ohio was required to make a demonstration of need in the *ESP 4 Case* when the RGR was created. Further, noting that, as a creature of statute, the Commission has no authority to act beyond its statutory powers, Direct Energy concludes that the Commission failed to find need in the *ESP 4 Case* and is without authority to make a need determination in any other proceeding, including these matters. *Disc. Cellular, Inc. v. Pub. Util. Comm.*, 112 Ohio St.3d 360, 373, 2007-Ohio-53, 859 N.E.2d 957, ¶ 51. (Direct Energy Br. at 13-16; IGS Br. at 9-10, 18.)

{¶ 26} The Commission has previously considered and repeatedly rejected the contention that the EDU is required to establish need for the facility in the ESP proceedings when the rider to collect the nonbypassable surcharge is created. *ESP 4 Case*, Opinion and Order (Apr. 25, 2018) at ¶ 227; *In re Ohio Power Co.*, Case No. 10-501-EL-FOR, et al. (*Turning Point*), Opinion and Order (Jan. 9, 2013) at 23. R.C. 4928.143(B)(2)(c) provides that no surcharge shall be authorized unless the Commission first determines in the proceeding

that there is a need for the facility based on resource planning projections submitted by the EDU. As was recognized early in these matters, determining the need for the generating facility is the issue to be addressed in the first phase of these proceedings. Oct. 22, 2018 Entry at ¶ 32. We disagree with the strict interpretation of the sequence of the process that must be followed as put forth by Direct Energy and IGS. Given that the Commission has merely approved a rider to include a surcharge if need is demonstrated, and the other requirements of the statute are met, we are adhering to the purpose and intent of R.C. 4928.143(B)(2)(c) and, therefore, consistent with prior decisions on this issue, we reject the contrary arguments of Direct Energy and IGS. *ESP 4 Case*, Opinion and Order (Apr. 25, 2018) at ¶ 227; *In re Columbus Southern Power Co. and Ohio Power Co.*, Case No. 11-346-EL-SSO, et al (*ESP 2 Case*), Opinion and Order (Aug. 8, 2012) at 24, citing *Duff v. Pub. Util. Comm.*, 56 Ohio St.2d 367, 379, 384 N.E.2d 264 (1978); *Toledo Coalition for Safe Energy v. Pub. Util. Comm.*, 69 Ohio St.2d 559, 560, 433 N.E.2d 212 (1982); *Turning Point*, Opinion and Order (Jan. 9, 2013) at 23, Entry on Rehearing (Mar. 6, 2013) at 3-4. Nonetheless, in light of our decision below that AEP Ohio has failed to demonstrate need, we find intervenors' arguments to be moot.

E. Summary of the Parties' Positions

{¶ 27} AEP Ohio urges the Commission to find that the Company has demonstrated need under R.C. 4928.143(B)(2)(c) for at least 900 MW of renewable energy resources in Ohio. AEP Ohio also requests that the Commission act on an expedited basis in both phases of these proceedings, in order to permit the Company to take maximum advantage of federal tax credits that impact the price of renewable energy products and that are only available for a limited time. (Co. Br. at 79-81.)

1. MEANING OF "NEED"

a. AEP Ohio's and Supporting Intervenors' Position

{¶ 28} In these proceedings, AEP Ohio advocates for a broad definition of "need." AEP Ohio notes that R.C. 4928.143(B)(2)(c) permits an EDU to own or operate a new electric

generation facility and authorizes the Commission to approve a nonbypassable surcharge for the life of the facility, if the Commission first determines in the proceeding that there is need for the facility based on resource planning projections submitted by the EDU. AEP Ohio further notes that R.C. 4928.143(B)(2)(c) does not define “need,” although the statute specifies that need must be shown through the EDU’s resource planning projections. AEP Ohio adds that Ohio Adm.Code 4901:1-35-03(C)(9)(b) provides that need must be reviewed and determined through an integrated resource planning process, which includes the submission of an integrated resource plan as part of the LTFR filed on an annual basis by the electric utilities. Ohio Adm.Code 4901:5-3-01(A); Ohio Adm.Code 4901:5-5-06. AEP Ohio also points out that, pursuant to Ohio Adm.Code 4901:5-5-06(B)(3)(e)(iii), the Commission’s consideration of the reasonableness of an integrated resource plan must encompass the following factors, among others: potential rate and customer bill impacts of the plan; environmental impacts of the plan and their associated costs; other significant economic impacts and their associated costs; impacts of the plan on the financial status of the company; other strategic considerations, including flexibility, diversity, the size and lead time of commitments, and lost opportunities for investment; equity among customer classes; the impacts of the plan over time; and such other matters that the Commission considers appropriate. (Co. Br. at 11-13.)

{¶ 29} AEP Ohio argues that neither R.C. 4928.143(B)(2)(c) nor R.C. 4935.04(E)(2), which addresses the scope of a hearing on a LTFR, limits the determination of need through the resource planning process to the sole issue of generation resource adequacy, as Staff and certain intervenors contend. AEP Ohio adds that such a constrained interpretation of need is nonsensical, given that the EDUs had been mandated under Senate Bill 3 to cede control of their transmission facilities to RTOs well before R.C. 4928.143(B)(2)(c) was enacted as part of Senate Bill 221. According to AEP Ohio, the General Assembly, in requiring electric utilities to join RTOs, had already ensured that there would be sufficient generation to meet demand and, therefore, the term “need” in R.C. 4928.143(B)(2)(c) must mean something more than resource adequacy as provided for by PJM. *State ex rel. Cleveland Elec. Illum. Co.*

v. *City of Euclid*, 169 Ohio St. 476, 479, 159 N.E.2d 756 (1959) (“[I]t is a basic presumption in statutory construction that the General Assembly is not presumed to do a vain or useless thing, and that when language is inserted in a statute it is inserted to accomplish some definite purpose.”). AEP Ohio reiterates that, while Ohio Adm.Code 4901:5-5-06 does require that an integrated resource plan address generation resource adequacy, it is not the plan’s sole focus under the rule. (Co. Br. at 13-16.)

{¶ 30} Additionally, AEP Ohio argues that the Commission’s decision in Case No. 10-501-EL-FOR, which involved the Company’s proposed Turning Point solar project, can be distinguished from the present proceedings. *Turning Point*, Opinion and Order (Jan. 9, 2013). AEP Ohio asserts that the Commission’s findings regarding the market conditions existing at that time were based on the facts and record in that prior case and are not binding here. AEP Ohio emphasizes that, in *Turning Point*, the Commission did not determine that an electric utility seeking to recover the costs of a renewable energy facility must demonstrate that the facility is needed to meet the utility’s renewable energy resource benchmarks under R.C. 4928.64(B). AEP Ohio notes that the Commission, instead, stated that it was only assuming that the determination of need under R.C. 4928.143(B)(2)(c) may take into account the solar energy resource benchmarks. *Turning Point* at 26. AEP Ohio concludes that the fact that it does not require additional wind or solar capacity to meet its renewable energy resource benchmarks is not an impediment to its showing of need. (Co. Br. at 18-20.)

{¶ 31} NRDC, OEC, and Sierra Club (collectively, Environmental Intervenors) contend that the Commission has broad powers under R.C. 4928.143(B)(2)(c). Environmental Intervenors claim that, because both “need” and “resource planning projections” are undefined terms, the Commission is afforded discretion in determining their meaning. Environmental Intervenors assert that the Commission has exercised its discretion in promulgating broad integrated resource planning rules that make clear that need for additional electricity resource options is based on a host of relevant factors that

must be balanced and considered in tandem. Ohio Adm.Code 4901:5-5-06(B)(2). Environmental Intervenors further assert that the Commission has been directed by the General Assembly, pursuant to R.C. 4935.01(A)(1), to consider and balance a variety of factors, including regional development, the maintenance of a sound economy, conservation and environmental concerns, and other factors and trends of significance in determining the need for additional generation. Environmental Intervenors add that R.C. 4935.04(E) makes it clear that the Commission's consideration of the issues in an LTFR proceeding is not limited to the forecasting of demand and capacity, as opposing intervenors contend. (Environmental Intervenors Br. at 4-12.)

{¶ 32} Consistent with R.C. 1.47, OEG argues that the Commission must reject any interpretation of need that would effectively render R.C. 4928.143(B)(2)(c) meaningless. OEG emphasizes that, if the Commission were to base its need inquiry entirely on PJM's current and projected reserve margin, the Commission would never be able to employ R.C. 4928.143(B)(2)(c) to further state-specific interests, given that PJM's market design protects against capacity shortages. OEG asserts that there is no credible scenario under which PJM would not have an adequate capacity reserve, because PJM is able to provide cost-based payments as necessary to procure sufficient capacity. OEG adds that a need inquiry that is focused solely on compliance with the renewable energy portfolio standard (RPS) in R.C. 4928.64 would also render the Commission's statutory authority under R.C. 4928.143(B)(2)(c) meaningless with respect to non-renewable resources. OEG also contends that, because the term "need" is ambiguous and not expressly defined, the Commission must, in accordance with R.C. 1.49, interpret the term in a manner that will give R.C. 4928.143(B)(2)(c) meaning consistent with the General Assembly's intent. In OEG's view, the General Assembly, through the flexible regulatory scheme of Senate Bill 221, granted the Commission important generation-related authority that can be used to further state-specific interests, including Ohio's interest in protecting customers from the volatility of market pricing, while also permitting the state to enjoy the benefits of the federally-regulated wholesale markets. OEG argues that, to give full effect to the statutory scheme

outlined in Senate Bill 221, the Commission's need inquiry should examine whether a proposed resource would help further the state policy directives in R.C. 4928.02. OEG adds that the inquiry should also be based on resource planning projections and the broad range of information that is provided as part of an integrated resource plan pursuant to Ohio Adm.Code 4901:5-5-06. Additionally, OEG offers that nothing in federal law prohibits the Commission's exercise of its authority under R.C. 4928.143(B)(2)(c) to protect and promote Ohio's specific generation-related interests, while, at the same time, enjoying the benefits of the federally-regulated wholesale markets. (OEG Br. at 3-10.)

{¶ 33} OPAE asserts that the Commission has flexibility to determine need under Ohio law. According to OPAE, the factors enumerated in Ohio Adm.Code 4901:5-5-06(B)(3)(e)(iii) are all elements of need that the Commission will consider, although the Commission is not limited by any one factor. Additionally, OPAE maintains that investment in renewable energy projects in Ohio will advance several important state policy objectives, including those found in R.C. 4928.02(A), (B), (C), (D), (J), L, (M), and (N). Acknowledging that AEP Ohio is not seeking a determination of need based on current PJM capacity, OPAE asserts that the PJM capacity reserve margin is irrelevant, because only the Commission accounts for the needs and preferences of the Company's customers. OPAE adds that the Commission should look beyond the PJM capacity market and focus on the need for long-term stability in the market and how fixed price renewable energy will help to meet this need. (OPAE Br. at 4-8, 12.)

{¶ 34} MAREC argues that the term "need" should encompass more than PJM's generating capacity alone, given that R.C. 4928.143 does not limit the factors that the Commission may consider in making its determination. MAREC adds that AEP Ohio's proposed projects would help the state to achieve many of its important energy policy objectives, including those set forth in R.C. 4928.02(A), (B), (C), and (J). Specifically, MAREC contends that the proposed projects will facilitate the provision of reliable and reasonably priced retail electric service to customers, position Ohio to meet customers' demands and

expectations, promote fuel diversity, act as a hedge against rising electricity costs, and support carbon emission reduction requirements and goals. (MAREC Br. at 5, 10-13.)

b. Staff's and Opposing Intervenors' Position

{¶ 35} Opposing intervenors argue, consistent with the plain language of R.C. 4928.143(B)(2)(c), AEP Ohio has failed to demonstrate a need for the 900 MW of renewable generation facilities. Each of the opposing intervenors notes that AEP Ohio admits, in its application and testimony, that AEP Ohio has not demonstrated a shortage of energy supply, capacity, or renewable energy credits, based on resource planning projections, consistent with the requirements of R.C. 4928.143(B)(2)(c). (Co. Ex. 2 at 3; Co. Ex. 3 at 8; Staff Br. at 4-5; OCC Br. at 8-9; IGS Br. at 9-10; OMAEG Br. at 20-22; Kroger Br. at 31-34; Direct Energy Br. at 5-8; OCA Br. at 8-10; IEU Br. at 11.)

{¶ 36} OCC reasons that the intent of the General Assembly, by enacting Senate Bill 3, as amended by Senate Bill 221, was to facilitate and encourage the development of electric generation facility competition in the electric market, to provide customers with the benefits of lower prices, to foster the implementation of industry technology and innovation, and to ensure retail customers reliable electric service. In keeping with the General Assembly's intent, OCC asserts that R.C. 4928.143(B)(2)(c) sets forth a limited exception to the Ohio regulatory scheme where an electric utility may build and pursue cost recovery for a new generation plant. OCC notes that the Commission has previously recognized the limited exception that R.C. 4928.143(B)(2) affords to market-based generation projects. *ESP 2 Case*, Opinion and Order (Dec. 14, 2011) at 39-40. (OCC Ex. 18 at 16; OCC Br. at 3-4.)

{¶ 37} Various opposing intervenors cite R.C. 4935.04, which requires resource planning projections to ensure that there is no imbalance between supply and demand. OCA, OCC, OMAEG, and IGS reason that the statute permits an electric utility, such as AEP Ohio, to construct a new generation facility under R.C. 4928.143(B)(2)(c), where there is a need for such generation based on projections of a shortfall in the supply required to serve customers. Staff, OCA, OMAEG, and IGS also contend that the Commission, as a creature

of statute, has no authority to act beyond the authority conferred by statute. *Dayton Communications Corp. Pub. Util. Comm.*, 64 Ohio St.2d 302, 307, 414 N.E.2d 1051 (1980). Staff, Direct Energy, OCA, OCC, OMAEG, Kroger, IEU, and IGS reason that the unambiguous language of R.C. 4928.143(B)(2)(c) leaves no room for the unprecedented and unlawfully broad definition of need advanced by AEP Ohio and supporting intervenors. OMAEG states the Supreme Court of Ohio has repeatedly held that “when construing a statute, we first look to its plain language.” *In re Black Fork Wind Energy, L.L.C.*, 156 Ohio St.3d 181, 2018-Ohio-5206, 124 N.E.3d 787, ¶ 17, citing *State v. Thomas*, 148 Ohio St.3d 248, 2016-Ohio-5567, 70 N.E.3d 496, ¶ 7. Further, OMAEG notes that the Court has also held that “[w]e apply a statute as it is written when its meaning is unambiguous and definite.” *Portage Cty. Bd. of Commrs. v. Akron*, 109 Ohio St.3d 106, 2006-Ohio-954, 846 N.E.2d 478, ¶ 52, citing *State ex rel. Savarese v. Buckeye Local School Dist. Bd. of Edn.*, 74 Ohio St.3d 543, 545, 660 N.E.2d 463 (1996). Opposing intervenors advocate that the rules of statutory construction must achieve a just and reasonable result. R.C. 1.47(C). Accordingly, under the rules of statutory construction, opposing intervenors contend that, in accordance with R.C. 4928.143(B)(2)(c), need can only mean a situation where supply to serve customers, considering additions and retirements, is insufficient to meet projected energy demand, peak load, and reserve requirements. Therefore, Staff and opposing intervenors conclude the Commission lacks the authority to expand upon the definition of need as used in the statute. *State ex rel. Foster v. Evatt*, 144 Ohio St. 65, 56 N.E.2d 265 (1944), at paragraph eight of the syllabus. (Co. Ex. 3 at 4; Co. Ex. 2 at 3; OCC Ex. 18 at 23; OMAEG Br. at 20-21; Staff Br. at 4-5; OCC Br. at 8-9, 38; IGS Br. at 9-10; OMAEG Br. at 20-22; Kroger Br. at 31-34; Direct Energy Br. at 5-8; OCA Br. at 7-10; IEU Br. at 11.)

{¶ 38} Several opposing intervenors emphasize that the Commission has previously determined that need, in accordance with R.C. 4928.143(B)(2)(c), is established only when, based on resource planning projections, generation needs cannot be met through the competitive market. *ESP 2 Case*, Opinion and Order (Dec. 14, 2011) at 39-40; *Turning Point*, Opinion and Order (Jan. 9, 2013) at 25-27. Opposing parties argue the situation is the

same in these proceedings and the Commission should follow its precedent. *Cleveland Elec. Illum. Co. v. Pub. Util. Comm.*, 42 Ohio St.2d 403, 431, 330 N.E.2d 1, 19-20 (1975). Furthermore, Direct Energy, IEU, Kroger, OCA, OCC, and OMAEG note that AEP Ohio, in fact, concedes that it is not making a demonstration of need based on a traditional analysis of integrated resource planning, a need for capacity to meet its peak load, or a need for additional renewable energy credits to satisfy state renewable energy requirements. On that basis, opposing intervenors contend that AEP Ohio has failed to meet its burden to demonstrate need based on resource planning projections in accordance with R.C. 4928.143(B)(2)(c). (Co. Ex. 2 at 3-4; Co. Ex. 3 at 8, 13; OCC Ex. 18 at 7; Staff Ex. 1 at 3-4; Staff Ex. 2 at 8; Kroger Ex. 4 at 12-13; Tr. Vol. I at 70-71; Tr. Vol. II at 428, 462; Tr. Vol. V at 1382; IEU Br. at 7-13; Kroger Br. at 31; OMAEG Br. at 21-22, 26; OCA Br. at 8-10; OCC Br. at 5, 13, 17; Direct Energy Br. at 6-8; Staff Br. at 5-7.)

{¶ 39} Staff, IEU, and OCC submit that AEP Ohio, in its attempt to convince the Commission to approve its application, intentionally conflates need, as determined by resource planning projections, in R.C. 4928.143(B)(2)(c), with the statutory provisions that apply to renewable energy in R.C. 4928.64. OCC and IGS note that Senate Bill 310 eliminated the requirement to source renewable electricity from facilities located in the state of Ohio. R.C. 4928.64. Opposing intervenors request that the Commission apply R.C. 4928.143(B)(2)(c) as written, consistent with its decision in *Turning Point*, and deny AEP Ohio's application. *Turning Point*, Opinion and Order (Jan. 9, 2013) at 27. (IGS Br. at 13-15; OCC Br. at 28.)

{¶ 40} Further, opposing intervenors point out that PJM, as the RTO, is responsible for ensuring that there are sufficient energy and capacity resources in the region which serves Ohio. PJM has determined that a reserve margin of 16 percent is necessary to meet reliability standards in the region. In its most recent generation reserve margin forecast, PJM determined that, at 16 percent, projected margins of energy and capacity resources are more than sufficient to meet reliability in the region (OCC Ex. 18 at JAL-7). The North

American Energy Reliability Corporation came to a similar conclusion in its most recent assessment of the reserve margin for 2018/2019 (OCC Ex. 25 at 18). Various intervenor witnesses, through their own respective methods and analysis, reach the same conclusion that there is no reliability need for energy or capacity in Ohio or the PJM region (OCC Ex. 25 at 17; Kroger Ex. 4 at 5; OMAEG Ex. 16 at 6, 16; IEU Ex. 1 at 5-6; Direct Energy Ex. 2 at 6, 14, FL-1 at 1; OCA Ex. 3 at 3). Based on an analysis of the recent base residual auction through the 2021/2022 delivery period, Staff determined that there is sufficient energy and capacity in Ohio. Other opposing intervenor witnesses reached the same conclusion. (Staff Ex. 2 at 7; IEU Ex. 1 at 5; Direct Energy Ex. 2 at 5-6; OCC Br. at 20, 22; OCA Br. at 9-10.)

{¶ 41} Opposing intervenors also declare, as they interpret the Commission decision in *Turning Point*, that consideration of other factors is not equivalent to the required demonstration of need pursuant to R.C. 4928.143(B)(2)(c). *Turning Point*, Opinion and Order (Jan. 9, 2013) at 27. OCC points out the Commission has no authority, under any rule of statutory construction, to add to, enlarge, supply, expand, extend, or improve the provision of the statute to meet a situation not provided for. *State ex rel. Foster v. Evatt*, 144 Ohio St. 65, 56 N.E.2d 265 (1944). Thus, opposing intervenors contend any discussion of the purported benefits of the proposed renewable generation facilities is irrelevant. Further, opposing intervenors also note that the Commission previously determined that it was erroneous for AEP Ohio to expect that the need for energy and capacity could not be met by the competitive market. *Turning Point*, Opinion and Order (Jan. 9, 2013) at 26-27. According to opposing intervenors, the circumstances have not changed and the Commission should follow the *Turning Point* precedent. (Staff Br. at 5-7; OCC Br. at 7, 8-9, 13; Kroger Br. at 31-34; IEU Br. at 23, 36; OMAEG Br. at 24.)

2. EVIDENTIARY BASIS FOR A FINDING OF NEED

{¶ 42} AEP Ohio argues that the evidence presented by the Company and the supporting intervenors in these proceedings demonstrates that there is a resource planning need for the development of at least 900 MW of economical renewable energy resources in

the Company's service territory that the market is not meeting. AEP Ohio adds that the development of those resources would meaningfully further the Ohio energy policy set forth in R.C. 4928.02. More specifically, AEP Ohio asserts that there are six distinct factual bases with record support that warrant a finding of need: (1) a formal survey shows that the Company's customers want and need long-term renewable power generated by new Ohio renewable projects; (2) large-scale development of reasonably priced Ohio renewable energy projects conveys a price advantage and rate stability for customers; (3) developing renewable projects in Ohio that are deliverable to the Company's service territory can help reduce congestion costs and, ultimately, transmission rates; (4) new in-state renewable projects will provide significant local and state-wide economic benefits; (5) new renewable projects will help reduce Ohio's importation of power and avoid Ohio consumers being price-takers for out-of-state generation supply; and (6) new renewable projects will promote fuel diversity, advance the development of renewable technology, and help reduce carbon emissions in Ohio. (Co. Br. at 20-21, 26-27.)

a. Supporting Customer Preferences

i. AEP OHIO'S AND SUPPORTING INTERVENORS' POSITION

{¶ 43} AEP Ohio argues that its customers have a growing awareness of the need to modernize the electric grid and to diversify supply options. In order to gauge customer interest in utility-sourced renewable energy, AEP Ohio explains that it retained Navigant Consulting, Inc. (Navigant) to assess customer preferences, which culminated in a report entitled "AEP Ohio Voice of the Customer: Attitudes and Expectations for Renewable Energy." AEP Ohio notes that Navigant sought to identify large commercial and industrial (C&I) customers exhibiting an interest in renewable energy as evidenced by a commitment to one or more leading sustainability organizations, with Navigant finding that 75 of the Company's largest customers, representing 8.8 percent of C&I load, have made such a commitment. AEP Ohio adds that, in order to serve all of these customers with renewable generation, the Company would need to procure approximately 2,600 gigawatt hours. (Co. Br. at 27-28.)

{¶ 44} AEP Ohio states that Navigant also distributed an online survey in August 2018 to three customer groups - active percentage of income payment plan (PIPP) residential customers, non-PIPP residential customers, and small C&I customers – to explore their views toward utility-sourced renewable energy and the associated bill impacts. According to AEP Ohio, the survey results indicate that a strong majority of customers believe that it is important for the Company to make greater use of renewable energy above current levels, while at least half of the participants in each customer group also believe that it is important for the Company to provide renewable energy produced in Ohio. Specifically, AEP Ohio notes that the survey data shows that 92 percent and 94 percent of non-PIPP residential customers and PIPP residential customers, respectively, indicated that it is important (slightly important, moderately important, important, or very important) that the Company make great use of renewable energy above the mandatory level, with small C&I customers at 85 percent. AEP Ohio adds that the results also show that many non-PIPP residential customers and small C&I customers are willing to pay for additional utility-sourced renewable resources at levels that range much higher than the expected cost of the Company's current proposal. Noting that meeting customer needs furthers the state policy in R.C. 4928.02(B), AEP Ohio concludes that the Commission should find that the Company's customers expect, demand, and need more renewable energy than is being provided through existing market sources. (Co. Br. at 28-33.)

{¶ 45} Additionally, AEP Ohio argues that criticisms raised by certain intervenors regarding the survey's methodology, implementation, and biases do not warrant a rejection of the responses. AEP Ohio adds that the intervenors' witnesses lack experience in developing or implementing customer surveys, while no intervenor actually surveyed customers regarding their interest in renewable energy and willingness to pay or provided evidence of any existing comparative study that would provide a counter-point to the Company's survey. According to AEP Ohio, it is also clear that no opposing intervenor conducted an informal customer survey or even polled its own stakeholders to obtain feedback on the Company's proposal. Along with its survey results, AEP Ohio notes that

the public reaction to its proposal has been overwhelmingly positive, as evidenced by the public testimony offered at the outset of the hearing and the many public comments filed for the Commission's consideration. AEP Ohio emphasizes that not a single public witness or commenter has opposed the Company's proposal. (Co. Br. at 33-45.)

{¶ 46} OPAE takes the position that AEP Ohio's customers have demonstrated need for the proposed projects. OPAE asserts that Navigant's survey indicates that AEP Ohio's customers expect to be served by more renewable generation on a going-forward basis and believe that the Company should make greater use of renewable energy produced in the state. OPAE urges the Commission to consider the public comments and testimony in support of AEP Ohio's proposal. (OPAE Br. at 17-24.)

{¶ 47} Noting that the results of Navigant's report are consistent with a finding of need, MAREC agrees with AEP Ohio's position that its customers have expressed a clear desire for in-state renewables and that companies nationwide are increasingly seeking to utilize renewable energy sources to meet their internal sustainability goals. MAREC adds that Ohio law does not preclude consumer demand from being considered as part of the Commission's need analysis. According to MAREC, an uptick in renewable energy generation will help meet the needs of large scale energy consumers seeking far more access to clean energy to power their operations, while simultaneously making the state more attractive to the business community. (MAREC Br. at 8-10.)

ii. STAFF'S AND OPPOSING INTERVENORS' POSITION

{¶ 48} First and foremost, Staff and certain opposing intervenors aver the customer survey is irrelevant to a determination of need pursuant to R.C. 4928.143(B)(2)(c). Further, in regard to the customer survey, several opposing intervenors argue, for a variety of reasons, the customer survey is seriously flawed, is unreliable, and lacks credibility. Kroger and OMAEG point out that AEP Ohio witness Allen admits that the survey formed the primary basis of the claims in his testimony regarding customers' desire for renewable energy. Most opposing intervenors cite to the testimony of OCC witnesses Dormady and

Lesser regarding the evaluation of the survey. Mr. Dormady, who offered the most comprehensive testimony opposing the customer survey, testified that the customer survey design, methodology, and administration incorporated various implicit and explicit biases designed to endorse the policy conclusions that AEP Ohio customers support the development of the proposed renewable projects and are willing to pay higher electricity bills in support of renewable generation projects. Mr. Dormady testified that the survey was poorly designed and includes several inherent biases (framing bias, hypothetical bias, social desirability bias, and likely selection bias) to the extent that the survey is unlikely to accurately represent AEP Ohio customers' true attitudes, preferences, and especially willingness to pay for renewable energy. In Dr. Lesser's testimony were specific examples of various biases and poorly worded and vague questions from the survey. (Co. Ex. 3 at 7; Tr. Vol. I at 204-205; OCC Ex. 18 at 79-91; OCC Ex. 24 at 4; OMAEG Br. at 35, 37-40; Kroger Br. at 44-45, 47.)

{¶ 49} IEU, Direct Energy, OCC, OMAEG, and IGS challenge the customer survey presented by AEP Ohio as nothing more than an indication that a portion of AEP Ohio customers desire renewable generation. Among the reasons opposing intervenors declare that the survey is not credible, and should not be relied on by the Commission, are the following: (1) the survey response rates were low at 0.6 percent for residential non-PIPP customers, 0.0066 for residential PIPP customers, and 0.0044 percent for small commercial and industrial single-meter customers; (2) the survey was conducted by email to an AEP Ohio-selected sample of the Company's customers, including AEP Ohio and American Electric Power Service Corporation employees; (3) AEP Ohio did not attempt to survey all of its customers; and (4) the survey results were reviewed with a lack of coding consistency and reliability for customer open-ended responses or comments. (Co. Ex. 10 at 3; Co. Ex. 6 at 15, Ex. TH-1; OCC Ex. 24 at 4, 10-27; Tr. Vol. I at 109; Tr. Vol. III at 583-584, 635-637; IEU Br. at 18; Direct Energy Br. at 9-10; OCC Br. at 29; Kroger Br. at 43-44; IGS Br. at 18-22; OMAEG Br. at 35-40.)

{¶ 50} Further, OCC and other opposing intervenors assert that it is difficult to extrapolate from the customer survey that all of AEP Ohio customers desire and are willing to pay for renewable generation, as AEP Ohio advocates. The survey reveals small C&I customers are fairly equally divided on whether they would be willing to pay 1.24 percent to 1.5 percent more on their electric bills. Similarly, 50 percent of small C&I customers indicate they are not willing or not sure if they would be willing to pay 1.5 percent to 1.75 percent more. Indeed, several opposing parties point out that 55 percent of small C&I customers indicate that they are not or are not sure if they would pay 2.25 percent to 2.5 percent more. The survey also revealed that more than half of AEP Ohio's residential PIPP customers and small C&I customers were either neutral or agreed that maintaining the current bill amount was more important than AEP Ohio investing in renewable energy. For this reason, opposing intervenors argue that, even if the Commission accepts AEP Ohio's broader definition of need, the Commission should reject the interpretation of the survey results as represented by the Company and intervenors advocating for the approval of the LTFR as proposed by AEP Ohio. (Co. Ex. 6 at TH-1 at 14, 15, 21, 24-25; Tr. Vol. III at 641; OCC Ex. 18 at 88; OCC Ex. 24 at 4; IGS Br. at 20-22.)

{¶ 51} The survey also included a review and evaluation of large C&I customers. IEU and other opposing intervenors note that the portion of the Navigant survey which reviewed large C&I customers is not, as Navigant admits, "statistically significant in terms of a survey and in terms of the program and initiative that we [Navigant] understood AEP Ohio to be undertaking." (Tr. Vol. III at 578.) In other words, IEU argues the survey of large C&I customers was not designed to determine an unmet customer desire for renewable energy or a demand for renewable energy; the survey reviewed the attitudes and plans of entities that had expressed a desire to support renewable energy development. IEU also notes that more than half of the 29 respondents to the large C&I survey did not have or did not know if their company had renewable energy or carbon emission goals. In addition, IGS notes that customers with usage greater than 1,000,000 kilowatt hours (kWh) were not afforded an opportunity to participate in the customer survey. (Co. Ex. 6, Att. TH-1 at 14,

41; Tr. Vol. II at 568-569, 575, Tr. Vol. III at 577-578, 714-716, 766; IEU Ex. 10; IEU Br. at 19-20; IGS Br. at 18-19.)

{¶ 52} Opposing intervenors OCC, IEU, and IGS argue the survey was poorly designed and the methodology incorporates numerous inherent biases, which renders the entire survey unreliable. Intervenors point out that the survey questions are misleading and irrelevant to the issue of need. For example, IGS notes that the survey states that "AEP Ohio currently obtains 4.5 percent of its electricity from renewable sources such as wind and solar" and then proceeds to ask the survey participant "whether they would support AEP Ohio increasing the amount of renewable generation it utilizes" (Co. Ex. 6, Att. TH-1 at 17). IGS contends the questions are misleading to the extent the survey implies the renewable projects proposed by AEP Ohio would actually provide green energy to AEP Ohio customers. In fact, IGS emphasizes that AEP Ohio proposes to sell the renewable energy credits produced into the market rather than use the generation to serve its SSO customers. Further, IGS avers the cost of the proposed renewable generation projects would be recovered from all AEP Ohio customers, not just SSO customers. (Tr. Vol. I at 108-109; IGS Ex. 11 at 16; IGS Br. at 19-22; OCC Ex. 24 at 4; OCC Ex. 18 at 80; OCA Ex. 3 at 34.)

b. Providing Economic Benefits for Customers

i. AEP OHIO'S AND SUPPORTING INTERVENORS' POSITION

{¶ 53} In addition to the general support reflected in the survey results, public testimony, and public comments, AEP Ohio argues that its economic analysis demonstrates that the construction of additional Ohio-sited renewable energy resources would be economically beneficial to its customers. AEP Ohio notes that its integrated resource plan, as sponsored by Company witness Torpey, includes the results of four analyses that the Company performed to determine the expected economic impact associated with the addition of utility-scale renewable energy projects in Ohio. According to AEP Ohio, each of its analyses demonstrate significant economic benefits for the Company's customers. (Co. Br. at 45-46.)

{¶ 54} First, AEP Ohio asserts that its PJM impact analysis, which was performed by using electric market simulation software (specifically, PROMOD) to determine the effect of adding 400 MW of solar resources and 250 MW of wind resources on locational marginal pricing (LMP) in PJM at the AEP load hub, demonstrates net present value (NPV) savings of \$31 million for the Company's customers. AEP Ohio explains that Company witness Ali's analysis includes a base case, consisting of an unmodified version of the PROMOD model developed by PJM, and a study case, which modeled one new wind project and two new solar projects with technologies, locations, and outputs similar to projects already in the PROMOD model and the PJM generation queue and near the locations where future projects may be sited. AEP Ohio further explains that, for 2021, 2024, and 2027 – the most recent years for which the PROMOD model base case was available from PJM – Mr. Ali's analysis demonstrates that adding 650 MW of renewable resources to the Company's system would lower LMPs when compared to the base case. According to AEP Ohio, Company witness Torpey used the LMP reductions calculated by Mr. Ali to interpolate and extrapolate those benefits for the 20-year lives of the generic REPAs that are the subject of the Company's integrated resource plan, resulting in a reduction in the cost of energy at the AEP load hub of \$0.07/MWh on a levelized basis, which, when applied to the Company's load for the period of 2021-2040, results in \$31 million in annual energy cost savings. (Co. Br. at 46-49.)

{¶ 55} Second, the Company notes that its AEP Ohio impact analysis measures the change in the Company's net financial position by adding 250 MW of wind REPAs and 400 MW of solar REPAs and evaluates those resources based on their levelized net cost of energy (LNCOE), which compares the estimated contract cost of a renewable resource (i.e., REPA price) to the avoided cost of energy and capacity from the market based on the forecasted hourly energy and capacity prices obtained from Company witness Bletzacker's August 2018 fundamentals forecast. AEP Ohio explains that the fundamentals forecast is a long-term, weather-normalized commodity market forecast that is developed using the Aurora energy market simulation model; the fundamentals forecast is made available to the Company and its affiliates for resource and strategic planning, among other purposes.

According to AEP Ohio, Company witness Torpey determined that the NPV benefit from the 400 MW generic solar resources would be \$88 million, while the NPV benefit from 250 MW of generic wind resources would be \$54 million, or \$108 million, when scaled from 250 MW to 500 MW.³ AEP Ohio concludes that Mr. Torpey's analysis shows that there would be a \$196 million total NPV benefit to customers over the 20-year REPA period that was modeled. (Co. Br. at 49-54.)

{¶ 56} Third, AEP Ohio offers a break-even analysis for both the generic wind and solar projects. Specifically, AEP Ohio contends that, for solar projects with operational characteristics similar to those in the generic solar case, a 400 MW fixed price solar REPA at a cost of \$56.82/MWh would result in \$0 NPV, and \$0/MWh LNCOE. AEP Ohio adds that, for wind projects with operational characteristics similar to those in the generic wind case, a 250 MW fixed price wind REPA at a cost of \$48.40/MWh results in \$0 NPV, and \$0/MWh LNCOE, which holds true for 500 MW of wind resources. According to AEP Ohio, its break-even analysis demonstrates that solar and wind REPAs with costs lower than these respective break-even values have the potential to lower the Company's costs, thus providing economic benefits to customers. (Co. Br. at 54.)

{¶ 57} Fourth, AEP Ohio performed a probabilistic analysis to simulate the volatility of the PJM energy market, which shows that solar projects will result in a net benefit to customers 100 percent of the time, while wind projects will result in a net benefit to customers 99.9 percent of the time. AEP Ohio contends that its probabilistic analysis confirms that customers will experience economic benefits if the Company enters into REPAs for wind and solar resources with characteristics similar to the generic projects modeled for the integrated resource plan. In sum, AEP Ohio concludes that each of

³ Although AEP Ohio believes that Mr. Torpey's analysis utilized conservative capacity credit values that are consistent with current PJM capacity market constructs, the Company asserts that, even if the capacity credits are eliminated from the analysis, customers would nonetheless benefit from considerable NPV savings from the generic 400 MW of solar resources and the generic 250 MW of wind resources, with savings in the amount of \$54.1 million and \$48.4 million, respectively.

Company witness Torpey's four analyses indicates that renewable energy projects that are comparable to the modeled generic projects would result in lower costs to customers over the projects' life cycles, in addition to providing a hedge against market volatility and diversifying the Company's resource mix. (Co. Br. at 54-55.)

{¶ 58} OEG argues that AEP Ohio has presented sufficient evidence that the development of generic renewable resources in Ohio would lower energy prices in the AEP zone and result in savings for customers, thus satisfying a need for reasonably priced retail electric service, consistent with R.C. 4928.02(A). OEG believes that Mr. Torpey's analyses are based on reasonable assumptions, including his reliance on both Mr. Ali's separate analysis of the impact of generic projects on energy prices in PJM and Mr. Bletzacker's fundamentals forecast, which OEG notes is not a targeted analysis aimed solely at justifying the Company's proposal in these proceedings. OEG adds that AEP Ohio's carbon cost assumptions are consistent with the common industry practice that has been adopted by many states. (OEG Br. at 10-12.)

{¶ 59} Environmental Intervenors argue that, because energy market clearing prices are set based on marginal production costs, and renewable energy projects have large upfront capital costs but very low marginal production costs (including zero fuel costs), they are able to significantly reduce energy market clearing prices in PJM to the benefit of AEP Ohio's customers, as shown by Company witness Ali's analysis. Environmental Intervenors emphasize that every one of the analyses done by AEP Ohio found that the addition of 650 MW in generic renewable energy resources would result in economic benefits for the Company's customers. Agreeing that AEP Ohio's analyses show projected savings, OPAE argues that the addition of economically beneficial renewable energy projects will lead to lower energy costs for customers. OPAE further argues that securing low cost renewable energy resources meets a need of the Company's customers. (Environmental Intervenors Br. at 12-16; OPAE Br. at 2-4.)

ii. STAFF'S AND OPPOSING INTERVENORS' POSITION

{¶ 60} Staff and opposing intervenors OCC, IEU, and Direct Energy reason that evidence purported to demonstrate a benefit for AEP Ohio customers misses the point. Opposing intervenors declare that the economic analyses to support an alleged customer benefit are irrelevant, as need, pursuant to R.C. 4928.143(B)(2)(c), has not been demonstrated. Opposing intervenors emphasize that, if a need for generation had been demonstrated, an economic study may go to the proper portfolio of resources to be developed. *See* Ohio Adm.Code 4901:5-5-06(B)(3). However, given that the demonstration of need has not been met, no further economic analyses are necessary. Further, several intervenors offer that, if the economic benefits are as good as AEP Ohio asserts, then development of the renewable facilities will occur without captive ratepayer recovery. (Staff Br. at 2-5, 7; OCC Br. at 30-31; Direct Energy Ex. 2 at 24; IEU Br. at 18, 23.)

{¶ 61} Nonetheless, challenging intervenors contest numerous aspects of AEP Ohio's economic analyses, which project a savings benefit for customers. These intervenors argue that the analyses are flawed, reflect unreasonably high natural gas and energy prices, and are outdated and incomplete.

{¶ 62} To begin, opposing intervenors offer the asserted benefits for customers, as reflected in the testimony of AEP Ohio witness Torpey, are based on outdated information and the projections of benefits are unrealistic and overstated. OCC argues AEP Ohio's economic analysis is based on the Energy Information Administration (EIA) 2017 Annual Energy Outlook issued January 2017, almost two years before the amended LTFR application was filed on September 19, 2018. EIA released its 2018 Annual Energy Outlook in January 2018, just months before AEP Ohio filed the amended LTFR application. AEP Ohio states, and OCC agrees, that natural gas prices are important because fuel prices are a key component in determining the supply stack, or merit order, for the dispatch of generating units. OCC notes that the natural gas prices in the EIA 2017 Annual Energy Outlook range from 2.5 percent to 18 percent higher than the EIA 2018 Annual Energy

Outlook. IGS notes that AEP Ohio's gas prices forecast through 2030 is well above the New York Mercantile Exchange market forecast; AEP Ohio estimates natural gas prices to be \$6.479 by 2030, whereas the market projects natural gas prices to be \$3.389 by 2030. Accordingly, OCC reasons that the natural gas prices utilized in AEP Ohio's economic analysis are higher, by 12 percent, on average, for the period 2018 through 2048 than the EIA 2018 forecasts. (Co. Ex. 11 at 7; OCC Ex. 18 at 42-44, 46-47, 49; OMAEG Ex. 16 at 6; Direct Energy Ex. 2 at 24; IGS Ex. 13 at 3, 5-8; OCC Br. at 30-34; IGS Br. at 27.)

{¶ 63} OCC and OCA aver the assumptions in AEP Ohio's economic benefits analyses are inconsistent and unreasonable in comparison to other industry sources. OCC and OCA note that, over the 30-year period from 2018 to 2048, the average natural gas price differential between AEP Ohio's forecast at Henry Hub and the EIA 2018 Annual Energy Outlook is \$0.76 per one million British thermal units (MMBtu). With an average annual growth rate of more than 4.5 percent, at a 10,000 MMBtu per kWh average heat rate for gas-fired generation, as the marginal generating unit in PJM, OCC witness Lesser states that translates to a \$7.60/MWh price differential between AEP Ohio's forecast of PJM wholesale prices when natural gas is on the margin. OCC witness Lesser believes that, given PJM's overall generation resource mix, and as coal and nuclear units retire and natural gas becomes more predominant, the number of hours per year that AEP Ohio's price forecast overstates wholesale market clearing prices will likely increase over time. (OCC Ex. 18 at 43-46; OCA Br. at 33-34; OCC Br. at 32.)

{¶ 64} OCC emphasizes that AEP Ohio's higher natural gas price forecast effectively increases the overall PJM wholesale electric energy price forecast and leads to overstated revenues for the output of the solar projects in the market. OCC notes that AEP Ohio's analysis of the benefits assumes, contrary to the realities of the PJM generation resource dispatch process, that all of the solar capacity from the projects would be offered into the PJM market. This assumption, according to OCC witness Lesser, also disregards the uncertainty that currently exists due to proposals pending at FERC that may prevent

subsidized resources from participating in the regional capacity market. Opposing intervenors also disagree with AEP Ohio whether it is reasonable to expect the proposed solar and wind projects to receive capacity revenue from PJM as a result of clearing the base residual auction. IGS and OCC reason capacity revenue is unlikely in light of PJM's proposed rule changes. For wind resources, under PJM's proposed rule, state subsidized resources would either submit a bid at the minimum offer price rule (MOPR) or the capacity would fall under the resource carve-out option. Therefore, according to IGS witness Haugen, the proposed generation facilities are unlikely to clear at the associated MOPR and may not receive revenue from the capacity market as AEP Ohio anticipates. Similarly, OCC witness Lesser surmised that AEP Ohio includes unrealistic capacity prices as part of its fundamentals forecast, as AEP Ohio assumed market capacity prices would increase at a rate of 14.64 percent per year, topping out at over \$500/MW-day in 2048, inconsistent with past behavior of the PJM capacity market. OCC witness Lesser, acknowledging that the renewable resources may be included as part of AEP Ohio's fixed resource requirement, notes that PJM proposes to apply an extended resource carve-out, which may cause AEP Ohio customers to pay for capacity twice under the proposed REPA. (Co. Ex. 11 at 7; Co. Ex. 14 at JFT-1 at 21-22; IGS Ex. 10 at 5-6; OCC Ex. 18 at 42-44, 46-47, 49-58; Kroger Reply Br. at 27; IGS Br. at 32-33; OCC Br. at 33.)

{¶ 65} IGS reasons that AEP Ohio's overstatement of natural gas prices causes power prices to increase by a ratio of 9.63 for every dollar increase in the price of natural gas.⁴ Accordingly, IGS theorizes AEP Ohio's energy prices are inflated by \$19 to \$30 per MWh and the proposed REPAs are uneconomic at \$45 per MWh for solar and \$40 per MWh for wind. (Co. Ex. 11 at 3-5; Co. Ex. 14 at JFT-1 at 21-22; IGS Ex. 13 at 3, 6; Tr. Vol. III at 778, 828, 832; IGS Br. at 28-29; OCA Br. at 32.)

⁴ Based on the average heat rate used in AEP Ohio's nominal forecast of 9.63, a \$1.00 increase in the price of natural gas will increase power prices by approximately \$9.63 (IGS Ex. 13 at 6).

{¶ 66} Opposing intervenors IGS, OCC, OCA, and IEU submit that, excluding the status quo case scenario, each of AEP Ohio's fundamental forecasts presumes a tax on carbon emissions starting in 2028 at a cost of \$15 per ton that escalates by 5 percent annually thereafter. Opposing intervenors argue the presumption of a carbon tax, without any basis, greatly impacts forecasted prices and allows AEP Ohio's model to break even on a NPV basis, including the receipt of capacity revenues. Opposing intervenors contend the imposition of a carbon tax constitutes a significant portion of the purported customer benefits but is based on nothing more than AEP Ohio's unsubstantiated speculation. Accordingly, opposing intervenors reason the purported carbon tax is inappropriate to be included in AEP Ohio's benefit analysis. (Co. Ex. 11 at 7-8, 14; Co. Ex. 14 at 6, JFT-1 at 14; OCC Ex. 18 at 42-44, 46-48, 49-58; IGS Ex. 10 at 6-7; Tr. Vol. VI at 1714; IGS Br. at 27; OCA Br. at 21-22, 32-33, 38, 40; IEU Br. at 27-28.)

{¶ 67} Opposing intervenors note that AEP Ohio's benefit analyses overlook the inherent nature of renewable generation and the possibility that such generation will incur non-performance penalties. OCC contends that AEP Ohio overstates any alleged customer benefits analysis, as the analysis did not include any cost associated with backing up inherently interruptible solar power, whether through back-up generation or battery storage. In addition, OCC notes that AEP Ohio excludes from its customer benefit analysis any costs that AEP Ohio customers may incur for non-performance penalties the renewable generation facilities could be required to pay pursuant to PJM's capacity performance regime to be effective June 1, 2020. (Co. Ex. 11 at 7; OCC Ex. 18 at 42-44, 46-47, 49-50; OMAEG Ex. 16 at 6; Direct Energy Ex. 2 at 24; OCC Br. at 30-34.)

{¶ 68} In the opinion of OMAEG and OCC, it should be telling to the Commission that, while AEP Ohio projects cost savings benefits for AEP Ohio customers, AEP Ohio will not guarantee any of the purported savings or agree to cap rates to customers (Co. Ex. 14; Tr. Vol. V at 1424; OCC Br. at 30; OMAEG Br. at 44).

{¶ 69} OCA and IGS proclaim that AEP Ohio's forecasts have been incorrect time and time again. OCA and IGS assert that even AEP Ohio and its affiliates have no confidence in their own forecast. IGS witness Leanza proclaims that each of the fundamental forecasts since 2008 has consistently missed the mark by a wide margin, even two years out, and consistently overstated the Henry Hub prices. IGS recommends the Commission not rely on AEP Ohio's forecasts to reach a decision in this phase of the proceedings. (IGS Ex. 13 at 8-11; IEU Br. at 27; OCA Br. at 34; IGS Br. at 27.)

{¶ 70} As previously noted, AEP Ohio's current Commission-approved ESP 4 became effective June 1, 2018, to continue through May 31, 2024. *ESP 4 Case, Opinion and Order* (Apr. 25, 2018) at 5. Pursuant to R.C. 4928.143(C)(1), all the terms of the ESP must be more favorable in the aggregate as compared to the expected result that would otherwise apply under a market rate offer (MRO) pursuant to R.C. 4928.142. IGS argues, in accordance with R.C. 4928.143(C)(1), that, even accepting AEP Ohio's pricing projections, the ESP versus MRO test cannot be met, given that, according to AEP Ohio's rate projections, the benefits of the proposed REPAs are back loaded and outside of the currently effective ESP term. IGS notes that, as proposed, the solar REPAs will be losses through 2024 and the wind REPAs will be losses through 2026, with recovery of the losses commencing thereafter, without the implementation of carbon regulation as AEP Ohio expects and includes in its analysis of customer benefits. (Co. Ex. 14 at JFT-1 at 21-22; IGS Br. at 33-34; Co. Reply Br. at 64.)

{¶ 71} Opposing intervenors also raise a number of flaws with the Company's LMP analysis which AEP Ohio submits will provide a financial benefit for AEP Ohio customers. IGS notes that AEP Ohio alleges that the proposed renewables, with zero dispatch costs, will suppress LMP costs in the PJM region. However, IGS submits that, while such zero dispatch resources may suppress prices in the near term, they cause other costs to be incurred that may outweigh the price suppressive impacts. In fact, IGS notes that PJM performed an analysis of the impact of the penetration of renewable resources and PJM

concluded that, with increasing levels of wind and solar generation, it will be necessary for PJM to carry higher levels of reserves to respond to the inherent variability and uncertainty in the output of those resources, including regulation, reserves, black start services, and reactive services. Thus, IGS contends that the introduction of renewable generation may result in the imposition of additional wholesale costs for customers, as well as additional transmission construction that may be necessary as a result of the proposed generation, neither of which AEP Ohio considered as part of its analysis. (Co. Ex. 14, Ex. JFT-1 at 19-20; IGS Ex. 2 at 14, 17-18; IGS Br. at 23-25.)

{¶ 72} OCA notes that, as part of AEP Ohio's LMP analysis, AEP Ohio did not consider the benefits or the liabilities of the ancillary system requirements. OCA submits that AEP Ohio's LMP analysis did not include any analysis of capacity impacts, but focused solely on the energy impacts. OCA reasons that renewable energy resources are not valued for capacity benefits and PJM discounts renewable capacity values. Nor did AEP Ohio consider "uplift" costs in its LMP analysis. According to OCA, uplift costs routinely apply when units are dispatched for reliability purposes, even though uplift costs definitely result in a loss of revenues to the system. In fact, OCA asserts renewable resources are a detriment to the system since PJM is required to carry higher reserves to compensate for the inherent variability of renewables resources. (OCA Br. at 14-15; Tr. Vol. II at 417, 419-420, 422, 424, 453, 459.)

{¶ 73} OCA emphasizes, as AEP Ohio acknowledges, that the AEP Ohio transmission model using PROMOD only accounts for three years over the life of the generation facilities, years 2021, 2024, and 2027, to conclude that there is no congestion in the AEP East Zone and assumes LMP prices would be uniform across the system. Certain opposing intervenors point out that AEP Ohio's transmission study is flawed for several reasons. First, intervenors insist that AEP Ohio's transmission study was initially modeled to interconnect with AEP Ohio transmission facilities but actually, using the Highland and Willowbrook projects as models, the generation facilities would connect with the Dayton

Power & Light Company (DP&L) transmission system. OCA argues the relevant pricing nodes, the location of the new generation facilities, load, and rate profile are important for accurate modeling. IEU argues the location of the interconnection is important to the proper projection of pricing as a result of congestion between different transmissions zones. Because the original transmission study included an incorrect interconnection point, opposing intervenors proclaim no weight should be given to the claim of any savings or the study. (Co. Ex. 5 at 4-6; Co. Ex. 26 at 2, 6-7; Tr. Vol. II at 409, 503-505, 506, 527; Tr. Vol. XII at 2750-2751, 2759, 2792; OCA Br. at 24-31; IEU Br. at 24-25; IEU Ex. 14 at 3; IGS Br. at 26.)

{¶ 74} Further, as to the LMP analysis, while IEU acknowledges that in rebuttal AEP Ohio corrected the location of the interconnection, IEU submits that the location of the interconnection point assumed the availability of an interconnection facility in 2021. IEU points out that the interconnection facility is not expected to be operational prior to December 31, 2021. While the transmission study, according to AEP Ohio, is generic, IEU and other opposing intervenors contend that AEP Ohio's study must be based in reality. IEU argues that AEP Ohio ignores that the solar generation facility modeled for 400 MW of solar generation cannot reach the transmission grid. (Tr. Vol. XII at 2764, 2765; IEU Ex. 14 at 3; IEU Br. at 24.)

{¶ 75} IEU notes that AEP Ohio forecast, based on its transmission and PJM impact analyses, a \$0.07 per kWh savings for its customers. Consequently, IEU proclaims that the impact to a residential customer using 1,000 kWh a month would be just \$0.84 per year. IEU and OCC witness Lesser proclaim that such a minuscule amount of savings per residential customer does not justify the Commission allowing AEP Ohio to saddle customers with the 20 years of risk that AEP Ohio's forecast of savings for the renewable energy projects is incorrect. Further, OCA argues that the LMP analysis offered by AEP Ohio and the projected savings asserted over a 20-year period are within the margin of error of the forecast and any slight change in any number of assumptions could reverse the outcome. Accordingly, OCA, IEU, and OCC argue that the results are not dispositive and the

Commission should not rely on the analysis for decision-making purposes. (OCA Ex. 3 at 18; OCC Ex. 25 at 19; IEU Br. at 25.)

{¶ 76} OCA notes that AEP Ohio witness Ali, in fact, concedes that the proposed solar projects will not meaningfully impact rate stability or volatility in the PJM market region, given that, at 400 MW, such projects are only ½ percent of the PJM installed capacity. Further, OCC notes that AEP Ohio witness Ali testified that the PJM capacity market is an efficient market where the most cost-effective units are dispatched first and renewable resources, given their nature, will not likely displace baseload capacity units. (Tr. Vol. II at 416, 418; OCA Ex. 2, REB Ex. 1 at 47; OCA Br. at 13-15.)

{¶ 77} OCA asks this Commission to recognize that other utility commissions have rejected the forecasted cost benefit analysis of AEP Ohio affiliates in similar proceedings in Virginia, West Virginia, and Texas. OCA notes that the Virginia State Corporation Commission rejected the Appalachian Power Company's (APCO) application to recover the cost associated with the acquisition of two wind generation facilities based, in part, on its inflated forecasted energy and natural gas prices in comparison to the market and other independent forecasts. *In re Appalachian Power Co.*, Case No. PUR-2017-00031, Final Order (Apr. 2, 2018) at 2, 5. Similarly, OCA offers that the Public Service Commission of West Virginia also denied the application of APCO and Wheeling Power Company to recover the cost of the two wind generation facilities, where, as is the case here, there was not a demonstrated capacity need for the facilities. APCO and Wheeling Power Company had asserted a need for the facilities based on a net cost savings to consumers, as well as to promote fuel diversity and to provide a hedge against market prices and projects impacted by future carbon regulations. *In re Appalachian Power Co. and Wheeling Power Co.*, Case No. 17-0894-E-PC, Commission Order (May 30, 2018). The West Virginia Commission expressed concern that the companies' 2016 fundamentals forecast demonstrated a benefit based on near term price increases of 200 percent to 300 percent at the Henry Hub and longer term projections of 427 percent to 650 percent increases in Appalachian natural gas prices.

According to OCA, the West Virginia Commission, in addition to other factors, rejected the application on that basis. (OCA Br. at 20-24.)

{¶ 78} Finally, OCC emphasizes that the testimony of AEP Ohio witnesses Bletzacker, Torpey, and Ali is inextricably intertwined and unreliable. The testimony of Mr. Torpey relies on the testimony and analysis of Mr. Ali and the testimony of Mr. Torpey relies on the testimony of Mr. Bletzacker. OCC argues that, because Mr. Ali's testimony is unreliable, and Mr. Bletzacker's forecast overstates the benefits of the proposal and understates the potential cost to customers, the testimony of all three witnesses is unreliable and should be disregarded by the Commission. (OCC Br. at 42, 46.)

{¶ 79} For all of the above noted reasons, opposing intervenors submit that, even if the Commission accepts AEP Ohio's broad definition of need pursuant to R.C. 4928.143(B)(2)(c), the Commission should not rely on AEP Ohio's purported customer savings benefit analyses in consideration of a demonstration of need.

c. Providing Economic and Social Benefits for Ohio

i. AEP OHIO'S AND SUPPORTING INTERVENORS' POSITION

{¶ 80} AEP Ohio asserts that the construction of additional Ohio-sited renewable energy resources will result in tangible and significant economic benefits for the state, as addressed in the testimony of Company witnesses Allen, Buser, and LaFayette. Initially, AEP Ohio claims that the economic benefits from the proposed generation are relevant to the need determination, given that "significant economic impacts" are expressly included among the non-exhaustive list of factors that an integrated resource plan must address, in accordance with Ohio Adm.Code 4901:5-5-06(B)(3)(e). Additionally, AEP Ohio emphasizes that it is the only party that presented a study quantifying the projected economic impacts of the Company's proposal. AEP Ohio adds that the study, which is titled "Impacts of Solar Plant Construction and Operation on the Ohio Economy," was co-authored by Dr. Bill LaFayette, of Regionomics LLC, and Dr. Stephen Buser, Professor Emeritus, Fisher College

of Business at The Ohio State University, both of whom have considerable experience in conducting economic benefit analyses. According to AEP Ohio, the study undertaken for these proceedings by Dr. LaFayette and Dr. Buser used reliable and standard multipliers provided by the U.S. Bureau of Economic Analysis, commonly referred to as the Regional Input-Output Modeling System or RIMS II, and relied on specific cost estimates provided by the Company, where applicable, to enhance reliability and accuracy. (Co. Br. at 55-56.)

{¶ 81} AEP Ohio notes that the study sponsored by Dr. LaFayette and Dr. Buser quantifies three types of economic impacts – construction, operating, and fiscal. With respect to construction impacts, AEP Ohio states that the study projects that the construction of the new facilities will create 3,870 new jobs, Ohio earnings for Ohio workers will grow by more than \$250 million, output will grow by nearly \$700 million, and the value added measure of the net effect on Ohio's gross domestic product will grow by nearly \$390 million. AEP Ohio further states that, in terms of ongoing operating impacts, the study projects that continuing Ohio employment will grow by roughly 50 jobs, earnings for Ohio workers will grow by more than \$2.5 million, output will grow by more than \$38 million, and the value added measure of the net contribution to the Ohio economy will grow by more than \$33 million. Finally, addressing the fiscal impacts, AEP Ohio notes that, as reflected in the study, the construction of the solar facilities is expected to generate more than \$24 million in additional tax revenue for the state, along with \$8.4 million in additional tax revenue for various local communities, while the increase in annual tax revenue from continuing operations after construction is projected to be nearly \$320,000 per year for the state and more than \$50,000 per year for various local communities. Aside from the projected economic benefits, AEP Ohio contends that the study indicates that the development of additional utility-scale renewable energy technologies would have numerous non-quantifiable economic and social benefits, including public health benefits, the development of transferable skills that can lead to enhanced gender equality in the energy industry, improved standards of living, and potential amelioration of the opioid crisis. (Co. Ex. 12, Co. Ex. 13; Co. Br. at 57-58.)

{¶ 82} AEP Ohio emphasizes that the study conducted by Dr. LaFayette and Dr. Buser is conservative in many respects. AEP Ohio notes that the study focused on the benefits associated with two solar projects totaling 400 MW rather than 900 MW of wind and solar resources. AEP Ohio also notes that the study does not fully reflect all of the commercial activity tax revenues that may result from the projects and also does not account for a jobs commitment in the Highland REPA that was finalized after the study was completed and that provides for at least 113 full-time, permanent jobs that are not related to the construction or operation of the facility. (Co. Br. at 58-59.)

{¶ 83} OEG contends that, consistent with R.C. 4928.02(N) and R.C. 4928.143(B)(2)(i), the development of 900 MW of renewable energy resources in Ohio would facilitate the state's effectiveness in the global economy by creating new jobs and tax revenues in a depressed portion of the state. OEG adds that the increased presence of renewable energy resources in Ohio will help to attract businesses with sustainability goals, thus facilitating economic development in the state. According to OEG, economic development is an important objective for the state and should be given due weight in the Commission's need analysis. (OEG Br. at 14-15.)

{¶ 84} OPAE argues that the Commission should consider the need for economic development in the economically stressed Appalachian region of Ohio, which would greatly benefit from the jobs and tax revenues resulting from the proposed projects. OPAE also notes that the greater availability of renewable energy will encourage companies with commitments to sustainability or corporate responsibility to site their facilities in the state. In addition to the economic upside of AEP Ohio's proposal, OPAE also highlights the environmental advantages and associated health benefits. OPAE asserts that the impact of adding 900 MW of renewable energy on the level of carbon and other emissions is significant. OPAE maintains that the development of renewable generation has become a cost-effective way of addressing climate concerns, consistent with the long-term trend of minimizing the use of fossil fuels. (OPAE Br. at 13-17, 25-28.)

{¶ 85} Environmental Intervenors contend that AEP Ohio's proposal offers an opportunity for economic development in a region of the state that has suffered through recent and past economic recessions. In addition to the projected jobs for the construction and operation of the facilities, Environmental Intervenors highlight that the facilities will attract companies that have corporate sustainability goals that Ohio is currently unable to meet, which will further stimulate the economy in the surrounding communities. Noting that the Commission is required under R.C. 4935.01(A)(1) to consider protection of public health and safety in assessing statewide and regional needs for energy, Environmental Intervenors add that the region will also experience health and environmental benefits from reduced air pollution, as shown by the United States Environmental Protection Agency's Avoided Emissions and Generation Tool. Agreeing that the Appalachian community is in dire need of economic revival, MAREC argues that the direct and indirect local and statewide economic benefits of renewable energy projects are an important consideration in determining need. MAREC and Environmental Intervenors assert that renewable energy generation provides economic benefits through the collection of tax revenue, the creation of hundreds of construction and ongoing operations and maintenance jobs, and landowner lease payments. (Environmental Intervenors Br. at 16-21; MAREC Br. at 6-8.)

ii. STAFF'S AND OPPOSING INTERVENORS' POSITION

{¶ 86} While the economic and social impact study highlights the potential benefits to the Ohio communities, Staff and opposing intervenors reiterate their arguments that the Commission should apply a narrow interpretation of need under R.C. 4928.143(B)(2)(c), consistent with its decision in *Turning Point*. *Turning Point*, Opinion and Order (Jan. 9, 2013) at 27. Kroger, IEU, OCA, OMAEG, and IGS point out that the economic and social impact study, like the Company's evidence offered regarding alleged customer savings benefits, is irrelevant to a determination of need pursuant to R.C. 4928.143(B)(2)(c). (Staff Br. at 4-6; Kroger Br. at 41; IGS Br. at 35; IEU Br. at 29; OCA Br. at 50.) Otherwise, opposing intervenors offer a number of reasons why the social and economic impact study is not reliable and should be disregarded by the Commission.

{¶ 87} First, Kroger, IGS, and OMAEG note, as AEP Ohio witnesses Buser and LaFayette admit, similar construction, operation, and fiscal benefits could be delivered by competitive development, without AEP Ohio's involvement as an investor or all of AEP Ohio's distribution customers incurring a surcharge. Several opposing intervenors offer that, if the economic benefits are as good as AEP Ohio asserts, then development of the renewable facilities should happen without recovery from captive ratepayers. (Tr. Vol. IV at 1087-1088, 1147; OCC Br. at 30-31; Direct Energy Ex. 2 at 24; Staff Br. at 7; OMAEG Br. at 43-44; IGS Br. at 35; OCA Br. at 50; Kroger Br. at 41.)

{¶ 88} IGS notes that neither of the study authors, AEP Ohio witnesses Buser and LaFayette, have a background in energy, an understanding of PJM's operation methods, or any training on the generation supply mix in the AEP Ohio load zone or the PJM system as it relates to the economic impact analysis presented in their respective testimony and study (Tr. Vol. IV at 1098, 1102, 1118, 1143; IGS Br. at 37).

{¶ 89} IGS reasons the economic and social impact study fails to provide any discussion or economic analysis of the relationship between system reliability in the AEP Ohio load zone and the cost to construct the solar generation facilities. Further, opposing intervenors emphasize that the study ignores potential negative economic or fiscal impacts the proposed generation facilities may have on the competitive market and other renewable resource generators, including Ohio facilities, or the potential charges AEP Ohio customers may incur if this application is approved. Thus, Kroger, IGS, and OMAEG reason the economic impact study fails to produce any favorable or probative evidence to support AEP Ohio's definition of need, is immaterial to an evaluation of need in accordance with R.C. 4928.143(B)(2)(c), and should not be considered by the Commission. (Co. Ex. 12 at 2-5, Ex. SB/BL-1 at 14-21; Tr. Vol. IV at 1102, 1140-1141, 1149; Kroger Br. at 43-44; IGS Br. at 35-36; OMAEG Br. at 43-44.)

{¶ 90} OCA notes that the economic impact study assumed all direct jobs would be Ohio jobs, which may not be the case, and did not consider the impact of probable

property tax abatements for renewable generation facilities. OCA also points out that, while AEP Ohio witness LaFayette acknowledged that sourcing for a solar project, unlike standard construction with readily available multipliers, must be analyzed line-by-line with particular attention to whether goods are sourced in Ohio, the witness could not provide details to support the information in the study. AEP Ohio witness LaFayette did not review the specific REPA contract to determine any contractual commitment to source goods but relied on AEP Ohio to provide such information (which AEP Ohio received from developers) in preparing his testimony and the study. OCA states, as to the solar panels and inverters, the witness did not know the number of solar panels or inverters or the manufacturer, had no direct communication with the developer, and could not independently verify the source or location of the manufacturer of the solar panels or inverters. Based on the evaluation of OCA witness Brown, that the RIMS II model is heavily dependent on the assumptions made, which may cause actual economic benefits to vary by a factor of ten, OCA recommends that the Commission give the economic impact study little weight in its decision on need. (Co. Ex. 12 at Ex. SB/BL-1 at 10; OCA Ex. 2 at REB Ex. 1 at 25; Tr. Vol. IV at 1140, 1150-1166; OCA Br. at 50-52.)

{¶ 91} Kroger argues AEP Ohio's social impact analysis lacks any supporting justification that, as the study asserts, the proposed generic projects could: (a) improve the gender imbalance in the energy sector workforce; (b) improve the standard of living for all Ohio citizens; (c) improve the public health of all Ohio citizens; and (d) help in the fight against Ohio's ongoing opioid epidemic. Kroger points out that, as a finance professor, AEP Ohio witness Buser is not an expert in any of these topics and, in fact, the witness conceded he relied on published studies and other information where he had no input and had not verified the information. Importantly, Kroger notes, as Mr. Buser admits, the social benefits of the projects proposed by AEP Ohio in these proceedings would be the same if the projects were constructed without AEP Ohio's investment. (Co. Ex. 12 at 6-10; Tr. Vol. IV at 1087-1088, 1102, 1104-1115; OMAEG Br. at 42-43; Kroger Br. at 42.)

{¶ 92} Certain intervenors reason that the competitive market favors projects that are economically beneficial and, if these projects are as beneficial as AEP Ohio claims, the competitive market should support them or similar projects without the introduction of a nonbypassable charge on the bills of AEP Ohio customers. (OMAEG Br. at 31; OCA Br. at 18; Kroger Br. at 50; OCC Ex. 18 at 13-14, 90; OCC Br. at 29-30; OMAEG Ex. 16 at 10; Tr. Vol. I at 155, 163, 181, 275-276.)

{¶ 93} Further, OCC and IGS note that, while AEP Ohio touts the purported benefits of the construction and operation of renewable generation facilities for Ohio, AEP Ohio overlooks that Senate Bill 310 eliminated the requirement to source renewable electricity from facilities located in the state of Ohio. R.C. 4928.64. (IGS Br. at 13-15; OCC Br. at 28.)

d. Ameliorating Market Failures

i. AEP OHIO'S AND SUPPORTING INTERVENORS' POSITION

{¶ 94} As another matter, AEP Ohio claims that a finding of need will help to ameliorate a number of market failures that have discouraged development of in-state, utility-scale renewable resources and left many of the Company's customers under-served in this area. Specifically, AEP Ohio asserts that market failures can be attributed to aspects of the PJM market structure and practical limitations on the deployment of distributed solar, as well as the limited nature of renewable energy offerings provided by competitive retail electric service (CRES) providers. AEP Ohio notes that, although market failure is not mentioned in either R.C. 4928.143(B)(2)(c) or Ohio Adm. Code 4901:5-5-06, the Commission has previously indicated that it "will continue to look to the markets as the primary drivers of an adequate supply of energy from any source, including renewable energy." *PPA Rider Case*, Opinion and Order (Mar. 31, 2016) at 82-83. (Co. Br. at 60-61.)

{¶ 95} First, AEP Ohio maintains that the PJM market structure fails to address Ohio-specific factors supporting the development of additional renewable energy resources,

given that PJM's regional planning process is focused on identifying the most effective and cost-efficient improvements to the grid to ensure reliability and economic benefits on a system-wide basis. Initially, AEP Ohio asserts that, although PJM is indifferent to the type of generation resources in the capacity market, the Commission should not discount the impact of 900 MW of renewable energy resources on fuel diversity in this state, consistent with the state policy in R.C. 4928.02(C) and the resource planning considerations in Ohio Adm.Code 4901:5-5-06(B)(3)(e)(iii)(e). Noting that solar resources comprise only 0.7 percent of PJM's current capacity resource mix, AEP Ohio asserts that the Commission can further the state's fuel-diversity policy through a finding of need, consistent with the Commission's recognition in the *PPA Rider Case* that renewable energy enhances the diversity of available generation options and offsets the price volatility impact that any single fuel source may have on electric rates. *PPA Rider Case*, Opinion and Order (Mar. 31, 2016) at 82-83. (Co. Br. at 61-64.)

{¶ 96} Additionally, AEP Ohio notes that, because PJM operates regional markets indifferent to state boundaries, there is no assurance that individual states achieve an appropriate balance between energy imports and exports. AEP Ohio further notes that, with the exception of a single year, Ohio has not produced enough energy to meet demand for the period of 2001 through 2017, while the gap continues to widen. AEP Ohio, therefore, asserts that the addition of 900 MW of renewable energy resources in Ohio would help to ameliorate the imbalance. Further, AEP Ohio notes that PJM is indifferent to the local- and state-specific economic benefits derived from adding energy resources. AEP Ohio contends that Company witness Allen's testimony indicates that, when Ohio's energy dollars are reinvested in the state through locally produced energy, the multiplier effect of economic development benefits the Company's customers and their communities, while also enhancing Ohio's ability to attract and retain businesses with corporate sustainability goals. Finally, AEP Ohio argues that, with PJM increasingly dominated by natural gas resources, the Company's proposal for 900 MW of renewable energy resources, which is based on

generic REPAs with a fixed price over a 20-year term, will result in a valuable hedge against potentially volatile market prices. (Co. Br. at 64-68.)

{¶ 97} As its second example of market failure, AEP Ohio claims that the deployment of renewable resources in PJM is falling short of levels seen in other regions, due to certain aspects of PJM market design and uncertainty regarding the capacity market. Among other statistics, AEP Ohio notes that, although wind and solar resources generate around 8.9 percent of electricity nationally, they account for only 2.8 percent of generation in PJM. AEP Ohio cites PJM's minimum offer price rule, capacity repricing proposals, method for calculating wind and solar capacity values, asymmetric capacity performance penalties, energy market price caps, and ancillary services rules as factors injecting uncertainty and risk into the development of renewable energy resources in PJM. AEP Ohio concludes that a finding of need would help to address PJM's failure to incent renewable energy development at a level comparable to other regional markets. (Co. Br. at 68-70.)

{¶ 98} Finally, AEP Ohio contends that other options available in the market, such as distributed generation, CRES offerings, and government aggregation, are limited and no substitute for utility-scale renewable energy projects. With respect to distributed generation, AEP Ohio notes that only 0.1 percent of its customers participate in net metering for various reasons, including insufficient income and access to capital, inadequate load, or inability to install the necessary equipment on property that is rented or not physically suitable for solar panels. According to AEP Ohio, utility-scale solar projects enjoy economies of scale, promote equity among customer classes, and offer a lower cost alternative to rooftop solar installations. Regarding the availability of CRES offerings of renewable energy, AEP Ohio asserts that only about 35 percent of customers in the Company's service territory receive their generation service from CRES providers and that, in any event, the record reflects that none of the available CRES offers are based on Ohio renewable energy credits. (Co. Br. at 70-74.)

{¶ 99} Noting that certain intervenors contend that other utility-scale projects are being developed in Ohio, AEP Ohio contends that none of these projects have commenced construction and, regardless, the limited number of such projects does not undercut the need for utility-scale renewable energy in Ohio, given that development and construction are two separate matters. AEP Ohio highlights that its proposal would triple the amount of installed solar resources in Ohio from 200 MW to 600 MW. Addressing municipal aggregation as a potential alternative to utility-scale renewable projects, AEP Ohio notes that its proposal would serve all customers without precluding the limited aggregation options that exist. More generally, AEP Ohio emphasizes that a finding of need will not eliminate other existing market options, as the Company's proposal is competitively neutral, but will instead ensure that all of the Company's customers have access to renewable energy resources. (Co. Br. at 74-79.)

{¶ 100} According to OEG, the development of 900 MW of renewable energy would contribute to fuel diversity, protecting against overreliance on any one particular fuel source and the potential for future carbon regulation, consistent with R.C. 4928.02(C) and (J), respectively, as well as the Commission's prior findings in the *PPA Rider Case*. *PPA Rider Case*, Opinion and Order (Mar. 31, 2016) at 82-83. OEG adds that, contrary to the arguments of the opposing intervenors that renewable energy development should be left to the market, the current reality is that there is an undersupply of renewable power to meet the needs of AEP Ohio's customers and that PJM does not seek to prioritize the development of renewable energy resources, as PJM is fuel agnostic and only concerned with cost and reliability. OEG reiterates that Ohio is free to develop a generation policy that serves its own specific interests, including furthering fuel diversity in the state. OEG also argues that the proposed generic renewable energy resources would protect against potentially volatile market prices and provide rate stability to retail customers through a 20-year fixed cost hedge, consistent with the General Assembly's rate stability objective as set forth in R.C. 4928.143(B)(2)(d). OEG concludes that, given that the type of renewable energy hedge

proposed by AEP Ohio is a rate stability solution that is not readily available on the market, the Company has demonstrated a need for the proposed resources. (OEG Br. at 12-14.)

{¶ 101} OPAE agrees with AEP Ohio that competitive markets alone will not address customer need for renewable energy. With respect to PJM's capacity market, OPAE claims that PJM incentivize the retention of excess generating capacity, which militates against the development of new renewable generating resources. Asserting that some customers may be unable to avail themselves of CRES offers or rooftop solar, OPAE argues that AEP Ohio is the only entity that can take advantage of economic renewable power over a long period of time for all of its customers. OPAE adds that CRES providers may pursue small solar projects in Ohio, but there is no large CRES investment in significant renewable energy that would achieve goals such as price stability, clean energy, mitigation of climate change, and economic development. (OPAE Br. at 10-12, 28-33.)

{¶ 102} Environmental Intervenors assert that there are limited utility-scale solar resources in Ohio, despite the fact that they provide greater economic and environmental benefits than smaller projects. According to Environmental Intervenors, current options for renewable energy procurement in the state, such as rooftop solar and CRES offerings, are inadequate, given that 43 percent of residential buildings are not suitable for solar panels and few, if any, CRES providers offer products that support Ohio-based renewable energy or make use of long-term contracts that rely on out-of-state renewable energy credits. Environmental Intervenors contend that AEP Ohio's proposal will enable all customers to be part of a long-term contract for in-state renewable energy procurement that provides price stability and certainty. Additionally, Environmental Intervenors maintain that the PJM markets discriminate against renewable energy, which is another basis for a finding of need. Noting that PJM's lagging utility-scale renewable energy development cannot be explained by resource quality and economic factors alone, Environmental Intervenors contend that PJM's reliance on a robust capacity market tends to depress energy revenues, which disproportionately impacts renewable energy projects, as they are more dependent

on energy market revenues than other types of generation. Environmental Intervenors further contend that the volatility and ongoing uncertainty in the PJM capacity market disproportionately inhibits renewable energy projects, which have higher upfront capital demands than other projects and are more dependent on capital financing. (Environmental Intervenors Br. at 21-29.)

ii. STAFF'S AND OPPOSING INTERVENORS' POSITION

{¶ 103} Opposing intervenors contend that, contrary to the claims of AEP Ohio and supporting parties, the PJM market is reliable, reflects a diverse generation resource mix, and is an efficient energy and capacity market (OCC Ex. 18 at 34; OCC Br. at 35-36; OCA Br. at 12-13; IEU Br. at 31).

{¶ 104} OCA notes that the generation resource mix across PJM is approximately 33 percent each for coal and natural gas, 18 percent for nuclear, and 6 percent for renewables, including wind and solar. OCA asserts that coal-fired generation serves as the backbone of the PJM market, because it offers resiliency and reliability attributes that renewable resources do not provide. Wind and solar generation, according to OCA, cannot materially contribute to PJM system capacity, flexibility, load regulation, or other ancillary requirements. As AEP Ohio witness Ali recognized, the PJM market dispatches the most cost effective units first. Thus, OCA offers that there are clear reasons why renewable generation resources do not figure more prominently in PJM's generation resource mix. (OCA Br. at 12-13; OCA Ex. 3 at Att. ESM-3 at 4, 9-10; Tr. Vol. I at 269-270; Tr. Vol. II at 418; Tr. VIII at 2375.)

{¶ 105} Furthermore, IEU notes that PJM has recently determined that there is more than sufficient capacity in the PJM region (IEU Ex. 1 at 5-7; Co. Ex. 19; IEU Br. at 31).

{¶ 106} OCA states that wind and solar renewable resources receive tax incentives, as well as state-sponsored mandates, and, when combined with zero fuel costs, will likely be dispatched to displace available energy output from baseload units. OCA states that, as

a result, renewable resources adversely impact baseload operations, and, for that reason, result in a less efficient and distorted market. (OCA Br. at 15-16, OCA Ex. 2, REB Ex. 1 at 12-13, 52-55; Tr. Vol. II at 413; Tr. Vol. VII at 1928, 1930, 1945.)

{¶ 107} Regarding AEP Ohio's claims that the renewable energy projects will improve fuel diversity in the state in compliance with the state policy at R.C. 4928.02(C), intervenors OCA, OCC, and IGS note that Senate Bill 310 eliminated the requirement to source renewable electricity from facilities located in the state of Ohio. R.C. 4928.64. Further, AEP Ohio remarks that Ohio was a net importer of energy from 2001 through 2017, and such fact should be considered by the Commission. OCA and IEU note that Ohio has been a net importer of energy for many years, before and after energy deregulation. OCC contends that no aspect of R.C. 4928.143(B)(2)(c) incorporates state energy independence. (Co. Ex. 3 at 9; IGS Ex. 13 at 6-8; OCC Ex. 18 at 98-101; OCA Br. at 17; OCC Br. at 14-15; IGS Br. at 15; IEU Br. at 30-31; Tr. Vol. I at 77, 99, 101-102, 210.)

{¶ 108} OCA offers that FERC is considering changes in the PJM capacity rules to address out-of-market subsidization of generation resources. *Calpine Corp. v. PJM Interconnection, LLC*, Case No. EL-16-49-000, et al. Opposing intervenors offer that PJM has filed proposed capacity market rule changes which would allow state subsidized resources to submit a bid at the MOPR or the capacity would fall under the resource carve-out option. Opposing intervenors argue that AEP Ohio ignored this potential outcome in its benefit analysis and market impact claims. (IGS Ex. 10 at 5; OCA Br. at 17.)

{¶ 109} IEU and OCA maintain that additional generation capacity is being developed in Ohio, including utility-scale solar projects in the competitive market. In addition, several intervenor witnesses offered that, over the past decade, the Ohio Power Siting Board (Board) has approved 2,650 MW of solar facilities and 42 wind generators, with other applications pending before the Board. Put another way, OCA notes that there are 327 operating wind turbines in Ohio, providing 670 MW of generation and 79 potential turbines pending Board approval to provide 1,910 MW of capacity. Further, OCA notes that

almost 1,250 MW of solar facilities are pending approval before the Board. Opposing intervenors note that nothing precludes an AEP Ohio affiliate from entering into bilateral arrangements or joint ventures or constructing wind and solar renewable energy projects without encumbering AEP Ohio ratepayers. (IEU Ex. 1 at 7-9, KMM-6; OCA Ex. 4; OCA Ex. 5; OCA Br. at 18.)

{¶ 110} IGS and Kroger believe that the competitive market is well positioned to meet any demand for renewable energy at lower prices for customers. Further, IGS states, as one of the many competitors operating in AEP Ohio's service territory, IGS is in discussions to develop over 50 MW of solar in Ohio and intends to invest \$450 million in solar projects located in Ohio and throughout the nation over the next three years. IGS notes that the purported economic benefits of the proposed generic renewable resources fail to consider the risk that other non-regulated renewable developers will question the stability of the macroeconomic factors in the Ohio solar market and the impact to renewable land lease rates, which could stifle renewable project development at all levels. IEU notes the long-term effect of the proposed generation facilities could cause competitive suppliers to leave the market. (Kroger Br. at 50; IGS Ex. 11 at 15; Tr. Vol. VI at 1782, 1790; Tr. Vol. VII at 1982-1986, 2008-2010; Tr. Vol. IX at 2584, 2591, 2600.)

{¶ 111} The record evidence demonstrates, according to opposing intervenors, competitive retail electric service (CRES) providers offer numerous renewable energy generation products to residential and commercial customers. According to Staff witness Benedict, as of November 8, 2018, AEP Ohio residential customers had 29 CRES renewable energy offers for 100 percent renewables. IGS counted 36 residential renewable electricity offers posted on the Commission's apples to apples website, including offers for renewable electricity produced by resources located in Ohio. Further, opposing intervenors note that Ohio businesses are procuring renewable energy from the competitive wholesale and retail markets or by installing their own renewable generation, while there are also green tariff options and governmental aggregation programs with a renewable energy focus available

for residential and commercial AEP Ohio customers. (OCC Ex. 17 at 1-2; IEU Ex. 1 at 9, 12 at Ex. KMM-6; OCC Ex. 18 at 38-39; OCC Ex. 25 at 6, 15-16, 22; OCA Ex. 5; Staff Ex. 2 at 10; IGS Ex. 9 at 5; IGS Ex. 10 at 4; IGS Ex. 11 at 15; IGS Ex. 12 at 17-18; Tr. Vol. I at 201-202; Tr. Vol. II at 305-306.)

{¶ 112} Kroger notes that competitive forces will yield lower prices for customers that desire to secure their energy needs through a CRES provider as a result of competition among renewable developers in the market. Further, Kroger witness Bieber testified that it is unreasonable and inappropriate to impose a financial obligation on shopping customers, as proposed by AEP Ohio, who have demonstrated their preference to procure their generation supplies through a competitive supplier rather than AEP Ohio. (Kroger Ex. 4 at 16.)

{¶ 113} Opposing intervenors note that even NRDC witness Stebbins testified that recently Ohio has seen significant growth in the amount of wind and solar generation in the state's generation mix, a 40 percent increase from 2015 to 2017 (Tr. Vol. IV at 1034-1035).

{¶ 114} Direct Energy reasons the capacity that AEP Ohio proposes to add could push the price of renewable energy below a price that would otherwise serve as a signal to the competitive market and force generation developers to pursue projects where they can earn the market price (Direct Br. at 11-12; Direct Ex. 2 at 22-23).

{¶ 115} Several opposing intervenors note that, if the benefits of the proposed renewable generation resources are as lucrative as put forth by AEP Ohio, nothing precludes an AEP Ohio affiliate such as AEP Energy, AEP Renewables, or another AEP Ohio affiliate from entering into bilateral arrangements, joint ventures or constructing to build the associated renewable resources (OMAEG Br. at 31; OCA Br. at 18; Kroger Br. at 50; OCC Ex. 18 at 13-14, 90; OCC Br. at 29-30; OMAEG Ex. 16 at 10; Tr. Vol. I at 155, 163, 181, 275-276).

F. Commission Conclusion

{¶ 116} R.C. 4928.143(B)(2)(c) provides that the Commission may establish, as part of an ESP, a nonbypassable surcharge for the life of an electric generating facility. Among other requirements, in considering whether to authorize a surcharge, the Commission must first determine that there is a need for the facility based on resource planning projections submitted by the EDU. In these proceedings, AEP Ohio proposes, and has the burden to demonstrate, that there is a need for at least 900 MW of renewable energy, consistent with the requirements of R.C. 4928.143(B)(2)(c).

{¶ 117} By its own admission, AEP Ohio concedes that there is not a need for at least 900 MW of generation based on “traditional” integrated resource planning projections. The Company also acknowledges that there is not a need for at least 900 MW of generating capacity to meet reliability requirements, nor does AEP Ohio require additional renewable energy credits to satisfy the Company’s state renewable energy requirements. AEP Ohio also admits that PJM and wholesale markets are adequately supplying capacity and energy to the AEP Ohio load zone. (Co. Ex. 2 at 3; Co. Ex. 3 at 8, 13; Tr. Vol. II at 426-427.)

{¶ 118} Instead, AEP Ohio, and intervening supporters of the amended LTFR application, advocate in favor of a broader interpretation of the term “need” under R.C. 4928.143(B)(2)(c). As AEP Ohio emphasizes, the statute specifies that need must be shown through the EDU’s resource planning projections. The Commission’s rules, in turn, provide that need must be reviewed and determined through an integrated resource planning process, which includes the submission of an integrated resource plan as part of the annual LTFR filing. Ohio Adm.Code 4901:1-35-03(C)(9)(b); Ohio Adm.Code 4901:5-3-01(A); Ohio Adm.Code 4901:5-5-06. The Commission’s review of the reasonableness of an integrated resource plan entails consideration of a number of factors. These include the potential rate and customer bill impacts of the plan; environmental impacts of the plan and their associated costs; other significant economic impacts and their associated costs; impacts of the plan on the financial status of the company; other strategic considerations, including

flexibility, diversity, the size and lead time of commitments, and lost opportunities for investment; equity among customer classes; the impacts of the plan over time; and such other matters that the Commission considers appropriate. Ohio Adm.Code 4901:5-5-06(B)(3)(e)(iii). With respect to the need for additional electricity resource options pursuant to R.C. 4928.143(B)(2)(c), an integrated resource plan must address “[a]ll major factors.” Ohio Adm.Code 4901:5-5-06(B)(2).

{¶ 119} Although AEP Ohio acknowledges that, as one such major factor, an integrated resource plan must address reliability, the Company is correct that it is not the sole consideration enumerated under Ohio Adm.Code 4901:5-5-06. In putting forth its proposal to pursue at least 900 MW of renewable energy, AEP Ohio raises several factors that it believes are relevant to the determination of need based on its resource planning projections. Namely, AEP Ohio advocates that additional renewable energy is desired by AEP Ohio customers and that the renewable energy facilities will be beneficial to the economy of the community where the facilities are constructed and to the state of Ohio. The Commission will address AEP Ohio’s case for need based on purported customer preferences and economic and social benefits, although, in light of our conclusions below, we merely assume, without deciding, that such factors are relevant to the determination of need.

{¶ 120} First, we consider AEP Ohio’s Voice of the Customer survey in support of the Company’s demonstration of need pursuant to R.C. 4928.143(B)(2)(c). Even assuming that customer preferences are appropriately considered in the analysis of need, we find, based on the record evidence, the results of the survey unreliable and insufficient to support or supplement a demonstration of need in accordance with R.C. 4928.143(B)(2)(c). Initially, the Commission notes that, while the survey report claimed to address large C&I customer preferences on renewable energy, according to Navigant, this aspect of the survey was not intended to demonstrate need, as proposed by AEP Ohio, like the other parts of the survey

(Co. Ex. 6 at TH-1, Tr. Vol. III at 574, 576-578, 756-757, 766). The survey, therefore, did not target the views of the large C&I customer class on the key issue.

{¶ 121} Further, the record evidence in relation to the survey demonstrates, among several other critical biases, a potential for error and selection bias. OCC witness Dormady, assistant professor of Public Policy at The Ohio State University, teaches and conducts research focused on energy and environmental economics and policy and, as a part of his research designs, supervises a team that administers and analyzes surveys, including surveys of utility customers. Dr. Dormady explained that bias in survey research occurs when a survey is designed or administered in such a way as to introduce error that consistently results in one outcome over another. A biased survey leads to conclusions that are not representative of the respondents' true beliefs, because it is skewed in one direction. Further, according to witness Dormady, bias and error are not the same, as error is generally benign, whereas bias is not. The Commission finds that aspects of the survey selection process render the survey results unreliable for purposes of determining need in accordance with R.C. 4928.143(B)(2)(c). To reflect the population of AEP Ohio customers, survey participants must be randomly and objectively selected. (OCC Ex. 24 at 9-11; Tr. Vol. III at 574-575, 587.)

{¶ 122} As to the selection of survey participants, the Commission notes that 38 percent of non-PIPP residential customer accounts, 43 percent of PIPP residential customer accounts, and 65 percent of small C&I customer accounts did not have an email address on file with AEP Ohio and, therefore, were not invited to participate in the online survey or offered another means by which to participate in the survey. AEP Ohio selected the customers with email addresses from its database to be invited to participate in the survey but did not substantiate the process implemented to select survey participants. The record evidence does not include a discussion of the process utilized to ensure the random selection of AEP Ohio customers with an email address on file to be invited to participate. Nor did Navigant, as survey administrator, oversee the selection process, confirm the survey

selection process, or direct AEP Ohio in the selection process to verify that the sample of customers invited to participate was randomly selected or representative of AEP Ohio's customer base or that the process was objectively conducted. (Co. Ex. 5; Co. Ex. 6, Ex. TH-1; OCC Ex. 5; OCC Ex. 24 at Atts. ND-2, ND-7; Tr. Vol. III at 582-584, 586-587.)

{¶ 123} As to residential and small C&I customers, the Commission is not persuaded that the survey results reflect a statistically valid, random sample of residential and small C&I customers and their demand for renewable energy. Navigant stated that it had no reason to think that customers with email addresses on file with AEP Ohio were any different from customers without email addresses on file. There is no evidence in the record that accounts with an email address are representative of AEP Ohio customers as a whole. While the characteristics of AEP Ohio's residential and small commercial customers with an email address on file, in comparison with customers without an email address on file, could be very similar, no analysis was performed and offered into evidence to determine the demographics of the customer population and whether the customers invited to participate were a true representation of all AEP Ohio customers. (Co. Ex. 5; Co. Ex. 6, Ex. TH-1; Tr. Vol. III at 587.)

{¶ 124} We also note that, while AEP Ohio former and current employees were not initially screened out of participating in the survey, Navigant determined, after the survey was conducted, 484 former or current AEP Ohio employees were invited to participate in the survey. Navigant claims that, even if all responded, 484 participants, or approximately seven percent of the 7,498 non-PIPP residential customers who responded, would not materially impact the conclusions that were drawn in the survey report. Further, AEP Ohio's argument that, although former and current AEP Ohio employees were not excluded from the survey, neither were employees or former employees of competitive retail suppliers who reside in AEP Ohio's service territory excluded from the population of potential participants is not persuasive. Consequently, the Commission finds the record evidence does not support a finding that the selection of survey participants was random,

objective, and representative of AEP Ohio's customer base. For these reasons, we find the survey results unreliable and insufficient to bolster a demonstration of need based on resource planning projections in accordance with R.C. 4928.143(B)(2)(c). (Co. Ex. 5; Co. Ex. 6, Ex. TH-1; Tr. Vol. III at 583-584, 724-726, 757-758)

{¶ 125} Next, we consider the economic benefits asserted to accrue to AEP Ohio customers, and the economic and social benefits alleged to accrue to the communities where the proposed facilities would be constructed and operate. Without making an assessment of the purported benefits, economic and social, the Commission finds it compelling that such projected financial benefits and social advantages, if true, are not unique to AEP Ohio as an investor or owner and operator of the renewable generation facilities. As AEP Ohio witnesses Buser and Lafayette readily admit, the social and economic benefits advanced as a result of the construction and operation of new renewable generation facilities are independent of AEP Ohio's involvement as an investor. The purported economic and social benefits can be the result of development of such generation facilities by a competitive developer. In addition, if the new renewable generation facilities are constructed by competitive generators, AEP Ohio customers are not saddled with the attendant costs and risks of the generation facility. Accordingly, even assuming the relevancy of the Company's arguments, the Commission finds the record evidence presented by AEP Ohio of projected financial benefits and social advantages that could evolve from the renewable energy projects to be unavailing to the demonstration of need as required pursuant to R.C. 4928.143(B)(2)(c). (Co. Ex. 5; Co. Ex. 11; Co. Ex. 26; Co. Ex. 12; Co. Ex. 13; Tr. Vol. IV at 1087-1088, 1147.)

{¶ 126} Similarly, the Commission rejects the Company's claim that at least 900 MW of renewable generation would ameliorate certain market failures. All facets of the electric energy and capacity markets, including regulators, the utility industry, competitive suppliers, and competitive generation developers, continually monitor the markets and work to ensure retail electric utility customers the benefits of competitive markets and

reliable electric service. As the Commission considers AEP Ohio's arguments and those of intervening parties, we are not persuaded that the energy or capacity markets have, in fact, failed, as AEP Ohio asserts. We agree with the opposing intervenors that, generally, the PJM markets are reliable, efficient, and reflective of a diverse generation resource mix. Furthermore, the record evidence demonstrates that Ohio's residential, commercial, and industrial customers who desire energy sourced from renewable generation facilities have available options from which they may select renewable energy service.⁵ (OCC Ex. 17 at 1-2; IEU Ex. 1 at 9, 12 at Ex. KMM-6; OCC Ex. 18 at 34, 38-39; OCC Ex. 25 at 6, 15-16, 22; OCA Ex. 5; Staff Ex. 2 at 10; IGS Ex. 9 at 5; IGS Ex. 10 at 4; IGS Ex. 11 at 15; IGS Ex. 12 at 17-18; Tr. Vol. I at 201-202; Tr. Vol. II at 305-306.)

{¶ 127} After thoroughly considering the evidence of record presented in these matters, the Commission finds that, under any of the parties' offered views on the definition of "need," AEP Ohio has not demonstrated a need for the introduction of new renewable generation resources. Accordingly, the Commission must deny AEP Ohio's request for a finding of need for at least 900 MW of renewable generating facilities, during the LTFR planning period, based on the resource planning projections submitted by the Company, pursuant to R.C. 4928.143(B)(2)(c). Recognizing that the Commission has received considerable public testimony and written correspondence in support of AEP Ohio's proposal, we note that our conclusion on the question of need is not intended to address the merits of the Willowbrook or Highland projects, which may provide significant benefits to the region. Nothing in our decision today precludes AEP Ohio (or its affiliates) from investing in the Willowbrook or Highland projects and pursuing the projects' claimed social and economic benefits through means other than a nonbypassable surcharge under R.C. 4928.143(B)(2)(c). Indeed, the legal and regulatory framework in Ohio permits AEP Ohio or

⁵ Although AEP Ohio emphasizes that few customers participate in net metering, the Company has opposed the Commission's efforts to promulgate a rule requiring that a single net metering tariff be offered by an EDU to all customer-generators, regardless of whether the customer-generator takes service under the SSO or shops for generation. *See, e.g., In re Comm. Review of Chapter 4901:1-10 of the Ohio Administrative Code*, Case No. 12-2050-EL-ORD, Seventh Entry on Rehearing (Feb. 27, 2019).

its affiliates, supporting intervenors, and interested stakeholders to invest in or support the Willowbrook, Highland, and other renewable energy projects, without the implementation of a nonbypassable surcharge on all AEP Ohio customers, as proposed in these proceedings. In addition, the Commission notes that the 133rd General Assembly adopted Amended Substitute House Bill No. 6, effective October 22, 2019, which, among other things, provides that the owner or operator of certain solar energy facilities meeting the definition of a “qualifying renewable resource” may apply to the Ohio Air Quality Development Authority to receive payments for renewable energy credits. R.C. 3706.40 et seq. The Willowbrook and Highland projects may be eligible to apply for such payments.

{¶ 128} In sum, under any definition of “need” put forth by the parties, AEP Ohio has failed to sustain its burden under R.C. 4928.143(B)(2)(c) and, in light of our decision, we find that phase II of these proceedings will not be necessary.

G. Procedural Rulings

{¶ 129} Pursuant to Ohio Adm. Code 4901-1-14 and 4901-1-15(F), certain intervenors include, in their respective initial briefs, procedural rulings which they request be reconsidered and reversed by the Commission. Each request is summarized below.

1. CONSOLIDATION OF THE CASES AND SCOPE OF THE HEARING

{¶ 130} OCC, Kroger, and OMAEG argue that the consolidation of AEP Ohio’s *LTFR Case* and the *Tariff Cases* was unjust, unreasonable, unfair, and prejudicial and should be reversed by the Commission. As previously noted, by Entry issued October 22, 2018, AEP Ohio’s motion to consolidate the *LTFR Case* and the *Tariff Cases* was granted and the Entry directed that the Commission’s consideration of the cases would proceed in two phases. The October 22, 2018 Entry explained that the first phase of the consolidated proceedings would consist of a hearing on the issue of need, and, if need was determined, the second phase of the consolidated proceedings would consist of a separate hearing to consider the issues raised by AEP Ohio’s application in the *Tariff Cases*. The Entry also

established the procedural schedule for the first phase in these matters. On October 29, 2018, OCC, OMAEG, and Kroger (Joint Appellants) filed a joint interlocutory appeal of the October 22, 2018 Entry. Subsequently, by Entry issued November 13, 2018, Joint Appellants' request for certification of the interlocutory appeal to the Commission was denied and the procedural schedule was amended.

{¶ 131} In their respective briefs, Kroger and OMAEG argue the decision to consolidate these proceedings conflicts with the Commission's directives that a utility's need to build specific generation facilities must be proven by the utility in a filing for a rider. *ESP 4 Case*, Opinion and Order (Apr. 25, 2018) at ¶ 227, Second Entry on Rehearing (Aug. 1, 2018) at ¶ 50. Kroger and OMAEG also assert that consolidation of the cases conflicts with R.C. 4928.143(B)(2)(c). They contend that, before the Commission can approve a nonbypassable surcharge pursuant to R.C. 4928.143(B)(2)(c), Ohio Adm. Code 4901:1-35-03(C)(9)(b)(i) requires that, at the time an application for recovery is filed, the need for the proposed facility must have already been determined by the Commission. Further, OMAEG and Kroger each point out that the Commission has previously determined that a utility cannot seek cost recovery for the construction of a new power plant under R.C. 4928.143(B)(2)(c) until the year following the year in which the utility's LTFR was filed. *Turning Point*, Opinion and Order (Jan. 9, 2013) at 20-21. Kroger and OMAEG argue that consolidation of these proceedings was unjust, unreasonable, inappropriate, and problematic, as AEP Ohio was not seeking the same relief in each of these proceedings, but instead seeks relief for different renewable projects. OMAEG submits that these asymmetrical issues – the asserted generic need for renewable generation under R.C. 4928.143(B)(2)(c), on the one hand, and the proposed recovery for specific projects, on the other, are not easily considered in the same proceedings. Similarly, Kroger states that, while AEP Ohio attempts to establish need for a generic 900 MW of renewable generation in the *LTFR Case*, AEP seeks, in the *Tariff Cases*, cost recovery for two specific renewable generation facilities, Highland and Willowbrook, totaling 400 MW of solar generation. OMAEG argues that these cases concern distinct legal questions and Ohio law and Commission rules dictate

that the *LTFR Case* must be resolved before the *Tariff Cases* proceed. Further, Kroger alleges that the Commission's rules reject the proposition that these issues can be resolved simultaneously. *See* Ohio Adm.Code 4901:5-5-06. Kroger and OMAEG aver that the bifurcation of the cases was blurred with subsequent rulings by the attorney examiners at the evidentiary hearing, as discussed below, such that bifurcation of the proceedings was an inadequate solution to the legal flaws of granting consolidation. (OMAEG Br. at 7-10; Kroger Br. at 13-17.)

{¶ 132} From a slightly different perspective, OCC argues that the attorney examiners should have granted OCC's request to address all of the elements of R.C. 4928.143(B)(2)(c) in this initial phase of these proceedings. OCC asserts each of the requirements of R.C. 4928.143(B)(2)(c) is an independent element which AEP Ohio as the electric utility must demonstrate and, if any of the statutory elements are not met, phase II of these proceedings, to address the specific terms of AEP Ohio's proposal, cannot go forward. OCC asserts that each of the elements of the statute is a condition precedent to the establishment of a nonbypassable surcharge under R.C. 4928.143(B)(2)(c). For the attorney examiners to limit phase I of these proceedings to only the issue of need, excluding the other statutory elements that are a condition precedent to the establishment of the surcharge, is error, according to OCC. OCC requests that the attorney examiners' ruling regarding the scope of phase I of the proceedings be reversed and the hearing be reopened to allow parties to provide evidence in phase I regarding each of the statutory elements. (OCC Br. at 56-57.)

{¶ 133} In its reply brief, AEP Ohio notes that Kroger and OMAEG resurrect the arguments against consolidation previously raised and rejected. The Company contends none of the arguments warrants the extraordinary relief Kroger and OMAEG request. AEP Ohio reasons that the Commission will, indeed, determine whether AEP Ohio demonstrated need for the Highland and Willowbrook projects, as well as consider the other criteria in R.C. 4928.143(B)(2)(c), in a proceeding to authorize cost recovery, as a part of these consolidated proceedings. According to AEP Ohio, these consolidated and bifurcated

proceedings will permit the Commission to require a demonstration of need, consistent with R.C. 4928.143(B)(2)(c) and Ohio Adm.Code 4901:1-35-03(C)(9)(b)(i), before the Commission can approve any cost recovery for proposed renewable generation facilities. AEP Ohio notes that, if the Commission determines need pursuant to the statute in phase I, the Commission will determine in phase II whether to include the Highland and Willowbrook projects in the RGR, consider AEP Ohio's request to establish a Green Power Tariff, and evaluate the other issues raised in the *Tariff Cases*. AEP Ohio avers the Commission's procedural rules do not limit case consolidation to instances in which different proceedings present the same legal questions and seek the same relief. AEP Ohio notes that Kroger and OMAEG do not reference or distinguish the cases cited in the Entries and do not deny that the *LTFR Case* and *Tariff Cases* are fundamentally related. AEP Ohio submits that Kroger and OMAEG have not identified a good reason to reverse the attorney examiners' Entries and none of the intervenors' claims require the Commission to attempt to disconnect these two proceedings at this stage as intervenors request. (Co. Reply Br. at 74-76.)

{¶ 134} We note that these are primarily the same arguments offered in Joint Appellants' motion in limine and interlocutory appeal. The arguments regarding the consolidation of the *LTFR Case* and *Tariff Cases* were thoroughly considered and addressed in the attorney examiners' Entries of October 22, 2018, and November 13, 2018. The Commission affirms the rulings in the Entries issued on October 22, 2018, and November 13, 2018. Oct. 22, 2018 Entry at ¶¶ 27, 32; Nov. 13, 2018 Entry at ¶¶ 34-38. We find OMAEG's and Kroger's declaration of the sequence of events to be overly prescriptive. R.C. 4928.143(B)(2)(c) requires that the Commission first determine that there is a need for the generation facility based on resource planning projections submitted by the EDU *before* any costs may be authorized by the Commission. That is indeed the purpose of phase I of these proceedings. The Commission is well within its authority to assign its attorney examiners to hear and rule on matters which come before this Commission, including making the necessary procedural rulings. This Commission is afforded broad discretion to manage its dockets under R.C. 4901.13. By consolidating these proceedings into two distinct phases,

with the first phase of the consolidated proceedings dedicated to the issue of need, we are complying with R.C. 4928.143(B)(2)(c). To the extent it is necessary, given the October 22, 2018 Entry, the Commission hereby grants AEP Ohio a waiver of Ohio Adm.Code 4901:5-05-06(B), *sua sponte*, as to the requirement that the long-term forecast report be filed in the forecast year prior to filing for an allowance under R.C. 4928.143(B)(2)(c). Furthermore, the Commission finds that, given our determination in phase I of these consolidated proceedings that AEP Ohio has failed to demonstrate need consistent with the requirements of R.C. 4928.143(B)(2)(c), Kroger's and OMAEG's motion for reconsideration of the consolidation of these proceedings, as well as OCC's request to address all elements of the statute at the same time, are moot.

2. OPPOSING INTERVENORS' MOTION IN LIMINE

{¶ 135} On January 7, 2019, OCC, OMAEG, Kroger, OCA, and IGS (Joint Movants) filed a joint motion in limine to exclude or, in the alternative, a motion to strike certain evidence to be offered by AEP Ohio regarding the economic impact study and customer survey. By Entry issued January 14, 2019, Joint Movants' motion in limine to exclude or, in the alternative, motion to strike the testimony of AEP Ohio witnesses Horner, Fry, Buser, and LaFayette, in their entirety, and select portions of the testimony of AEP Ohio witness Allen was denied. In their respective initial briefs, Kroger, OCC, IEU, and OMAEG argue that the attorney examiners erred when they denied Joint Movants' January 7, 2019 motion in limine. OMAEG notes that the Supreme Court of Ohio has held that the intent of a motion in limine is "to avoid injection into trial of matters which are irrelevant, inadmissible, and prejudicial." *State v. Grubb*, 28 Ohio St.3d 199, 200, 503 N.E.2d 142 (1986). Kroger argues that the motion in limine was necessary to focus phase I of these proceedings on the threshold determination of need pursuant to R.C. 4928.143(B)(2)(c). OMAEG points out that AEP Ohio admitted that it did not have a resource planning need for generation and wholesale markets are adequately supplying capacity and energy to the AEP Ohio load zone (Co. Ex. 2 at 3). Kroger and OMAEG contend, therefore, that the attorney examiners' error was compounded when opposing intervenors were simultaneously prevented from

presenting testimony challenging the very same evidence AEP Ohio was allowed to present, in violation of the Entry limiting the scope of the hearing in phase I of these proceedings. OCC and IEU cite to Ohio Rules of Evidence 401 and 402. OCC submits that the attorney examiners failed to consider the admissibility of the evidence to be excluded. IEU proclaims the testimony was not relevant to a determination of need. OCC requests that the testimony identified in the motion in limine be stricken from the record. Similarly, IEU argues that the Commission should grant the motion to strike and issue a decision as to need based on the corrected record.⁶ At a minimum, Kroger and OMAEG argue that the attorney examiners should have deferred the testimony of AEP Ohio witnesses Horner, Fry, Buser, and LaFayette to phase II of these proceedings. Accordingly, Kroger and OMAEG request that the Commission reconsider the attorney examiners' decision and hold such testimony in abeyance until phase II of these proceedings. (OCC Br. at 51-35; IEU Br. at 33-36; Kroger Br. at 7-17-19; OMAEG Br. at 7-8, 10-17.)

{¶ 136} AEP Ohio argues, like the Company argues as to the motion for a directed verdict, that the intervenors' motion in limine relied on a narrow interpretation of need under R.C. 4928.143(B)(2)(c), as intervenors requested before the hearing that certain evidence and testimony be found irrelevant and the motion was denied. Jan. 14, 2019 Entry at ¶ 24. The Company reasons a decision on the merits of an application rests with the Commission, in accordance with R.C. 4903.09, as the Commission is required to "file * * * findings of fact and written opinions setting forth the reasons prompting the decisions arrived at." Further, at this stage, AEP Ohio states the relief intervenors seek is unavailable, as any claim that granting the motion would have "furthered the interest of administrative economy, facilitated a timely decision, saved parties time and expense of putting on evidence in opposition, or worked an injustice on opposing intervenors" cannot be restored

⁶ IEU lists in its initial brief at pages 34-35, table 1 and table 2, the exhibits and portions of the transcript which the intervenors request be stricken from the record.

by the Commission. AEP Ohio declares that further attention to the intervenors' motion in limine serves no useful purpose at this stage. (Co. Reply Br. at 19-20.)

{¶ 137} The Commission finds that it was not inappropriate for the attorney examiners to permit AEP Ohio to present its case and to afford opposing intervenors the opportunity to oppose the Company's claims, in order to develop a full record for the Commission's consideration. Further, at this stage of the proceedings, the Commission finds the request for reconsideration of the motion in limine to be moot.

3. OPPOSING INTERVENORS' MOTION FOR DIRECTED VERDICT

{¶ 138} OCC, IEU, Kroger, and OMAEG argue that, in light of AEP Ohio's admission that the Company was not presenting, through its testimony or evidence, a need for the facility based on resource planning projections, the attorney examiners unlawfully, unreasonably, and without good cause, or any stated rationale, denied opposing intervenors' oral motion at the hearing for a directed verdict, at the conclusion of AEP Ohio's case-in-chief. OCC, IEU, Kroger, and OMAEG cite the undisputed record before the Commission and Ohio Rule of Civil Procedure 50(A)(4). IEU acknowledges that the Commission does not have a rule that provides for a directed verdict. However, IEU reasons the Commission also does not have a rule similar to Civil Rule 12(B), but has nonetheless issued decisions granting a motion to dismiss under similar standards. *In re Ohio Edison Co., The Cleveland Electric Illuminating Co., and The Toledo Edison Co.*, Case No. 09-384-EL-EEC, et al., Entry (Dec. 16, 2009) at 2-3. Kroger and OMAEG contend the attorney examiners' denial of the directed verdict constitutes reversible error.⁷ Kroger and OMAEG contend the sole question for purposes of the motion for directed verdict was to test the legal sufficiency of AEP Ohio's evidence in support of the requisite need showing pursuant to R.C.

⁷ Where a motion for a directed verdict has been properly made, and the trial court, after construing the evidence most strongly in favor of the party against whom the motion is directed, finds that, upon any determinative issue reasonable minds could come to but one conclusion upon the evidence, the court shall sustain the motion and direct a verdict for the moving party as to that issue. *Wagner v. Midwestern Indem. Co.*, 83 Ohio St.3d 287, 699 N.E.2d 507 (1998).

4928.143(B)(2)(c). Kroger and OMAEG contend that, because AEP Ohio produced no testimony or documentary evidence that demonstrated that the projected energy and capacity were insufficient to meet the projected demand, it is clear error for the motion for a directed verdict to have been denied. IEU avers that adverse parties were not afforded relief for AEP Ohio's failure to allege sufficient grounds for relief in its application or to meet the burden of going forward with sufficient evidence to support its case. Accordingly, OCC, IEU, Kroger, and OMAEG request that the Commission reverse the attorney examiners' denial of the motion for a directed verdict. (Tr. Vol. VI at 1577-1581; OCC Br. at 53-54; IEU Br. at 37-40; Kroger Br. at 5-6, 38-40; OMAEG Br. at 29-30.)

{¶ 139} AEP Ohio reiterates its position as to intervenors' motion for directed verdict as stated above in regard to the motion in limine. AEP Ohio declares, for the same reasons offered as to opposing intervenors' motion in limine, that the motion for directed verdict relied on a narrow interpretation of need under R.C. 4928.143(B)(2)(c). Nonetheless, AEP Ohio reasons that the relief requested by the intervenors was unavailable, as the Company argues that attorney examiners do not have the authority to issue dispositive rulings from the bench on an application's merits. *See* Ohio Adm.Code 4901-1-27(B)(4). The Company reasons a decision on the merits of an application rests with the Commission, in accordance with R.C. 4903.09, as the Commission is required to "file *** findings of fact and written opinions setting forth the reasons prompting the decisions arrived at." Further, at this stage, AEP Ohio states the relief intervenors request, reversal of the attorney examiners' ruling on the directed verdict, is unavailable, as the Commission cannot restore the parties' time or expense or otherwise change the attorney examiners' minds retroactively. AEP Ohio declares that further attention to the intervenors' motion for directed verdict serves no useful purpose at this stage. (Co. Reply Br. at 19-20.)

{¶ 140} The Commission affirms the attorney examiners' ruling to deny opposing intervenors' motion for a directed verdict at the conclusion of AEP Ohio's case-in-chief and proceed to the presentation of Staff and intervenor witnesses to develop a full record for the

Commission's consideration. In addition, at this stage of the proceedings, the Commission finds the request for reconsideration of the motion for a directed verdict to be moot. Although we are guided by the Ohio Rules of Civil Procedure, we are not bound to follow them, and there is no provision for a motion for directed verdict in Chapter 4901-1 of the Ohio Administrative Code.

4. AEP OHIO'S MOTION TO STRIKE OR DEFER CERTAIN TESTIMONY

{¶ 141} In their respective briefs, opposing intervenors request that the Commission review and reverse AEP Ohio's motion to strike or defer certain intervenor testimony offered in the need phase of these proceedings. Kroger claims the January 14, 2019 Entry was unlawful, unreasonable, and prejudicial in its grant of AEP Ohio's motion to strike or, in the alternative, to defer certain opposing intervenor testimony to phase II of these proceedings. Kroger and OMAEG submit that, by granting the motion, AEP Ohio was permitted to introduce irrelevant and prejudicial information into the record, while Kroger, OMAEG, and other opposing intervenors were prevented an opportunity to present testimony and to challenge the same irrelevant and prejudicial information. Kroger and OMAEG reason that it is well-established law that, if a party presents evidence and testimony about a particular issue, the presenter has opened the door for opposing parties to present evidence and testimony in response.⁸ Kroger and OMAEG contend that, by Entry issued January 14, 2019, the attorney examiners, without sufficient explanation or good cause, granted AEP Ohio's motion to strike or, in the alternative, to defer to the next phase of these proceedings the testimony of four opposing intervenor witnesses. Kroger and OMAEG submit that the record in this phase of the proceedings is skewed in favor of AEP Ohio and request that the Commission reconsider the scope of the evidence admitted into the record. OMAEG argues that the record lacks the benefit of four opposing witnesses'

⁸ See, e.g., *Sheets v. Norfolk S. Corp.*, 109 Ohio App.3d 278, 286, 671 N.E.2d 1364 (3d Dist. 1996) (holding that, based on the totality of the opening statement and trial testimony, "defendants clearly opened the door" to competing evidence and testimony); see also *State v. Johnson*, 8th Dist. Cuyahoga No. 81692, 2003-Ohio-3241, ¶ 33 (holding that "[h]aving opened the door, the defense waived any right to object to the admission of the witness' testimony regarding those photos on redirect").

testimony. OCC, similarly, avers that fundamental fairness necessitates that the other parties to the proceedings be permitted to offer evidence regarding the specific costs of AEP Ohio's two proposed projects in this phase of the proceedings. (Kroger Br. at 13, 20-21; OMAEG Br. at 13-14; OCC Br. at 54-56.)

{¶ 142} Kroger's and OMAEG's arguments regarding the scope of the hearing and the rulings of the attorney examiners seem to emanate, at least in part, from their opposition to the consolidation and bifurcation of these proceedings. With the consolidation of these proceedings, the October 22, 2018, Entry allowed AEP Ohio to offer direct testimony filed in the *Tariff Cases*, in support of its demonstration of need to be addressed in the phase I hearing. We note that, on October 26, 2018, the Company filed in the dockets of the *LTFR Case* and *Tariff Cases* a notice of additional witnesses as permitted in accordance with the October 22, 2018 Entry. Intervenors' and Staff's testimony was not due until January 2, 2019, and January 8, 2019, respectively. Accordingly, Staff and intervenors had an opportunity to offer testimony challenging the purported generic economic and social benefits alleged by AEP Ohio witnesses Buser and LaFayette. On that basis, the Commission was only considering the purported benefits of the proposed 900 MW of renewable generation proposed, in general, in support of need pursuant to R.C. 4928.143(B)(2)(c). All other requirements of R.C. 4928.143(B)(2)(c) and the specific issues raised in the *Tariff Cases*, as the October 22, 2018 Entry indicated, were to be addressed in phase II of these proceedings. The Commission notes that the attorney examiners further explained the January 14, 2019 Entry and the bifurcation of the issues as reflected in the transcript (Tr. Vol. I at 62). Accordingly, the Commission denies the request of opposing intervenors to reconsider the attorney examiners' rulings. Furthermore, the Commission finds that, given our determination in phase I of these consolidated proceedings that AEP Ohio has failed to demonstrate need consistent with the requirements of R.C. 4928.143(B)(2)(c), Kroger's, OMAEG's, and OCC's motions for reconsideration regarding the deferral of certain testimony are moot.

5. SCOPE OF EVIDENCE PERMITTED IN PHASE I

{¶ 143} OMAEG and Kroger submit that, as explained above, AEP Ohio was permitted to present testimony and evidence regarding economic benefits, impacts, and customer surveys, but opposing intervenors were simultaneously denied the opportunity to present all of their evidence challenging AEP Ohio's testimony and evidence regarding the benefits, impacts, and customer surveys. OMAEG and Kroger state opposing intervenors' testimony and evidence was deferred to phase II of these proceedings and, therefore, opposing intervenors were precluded from fully challenging AEP Ohio's justification of need in the phase I hearing. The two opposing intervenors acknowledge that the attorney examiners offered some clarification of the January 14, 2019 Entry from the bench on January 15, 2019, but contend that AEP Ohio's witnesses and certain supporting intervenor witnesses were protected from being cross-examined by opposing intervenors regarding specific project costs, economic benefits of specific projects, or other details regarding the Highland and Willowbrook projects. However, Kroger claims that, in the midst of the hearing, over the objection of certain intervenors, AEP Ohio witnesses Buser and LaFayette, whose testimony was initially filed as part of the *Tariff Cases*, were permitted to offer testimony in the need phase of these proceedings. Kroger notes that witnesses Buser and LaFayette admit that their economic and social impact study is based on the impact of the proposed Highland and Willowbrook projects (Co. Ex. 12 at 2; Co. Ex. 13 at 2, Ex. SB/BL-1 at 6.) Kroger contends that, to be consistent with the January 14, 2019 Entry, the attorney examiners' clarification of the Entry on the first day of the hearing, and the law of the case, the testimony of AEP Ohio witnesses Buser and LaFayette should have been deferred to phase II of these proceedings. Further, Kroger argues that Dr. LaFayette's testimony regarding the contractual provision of the Highland REPA relating to an additional commitment for full-time permanent jobs should have been deferred to phase II and the motion to strike was unreasonable denied. Kroger contends that the one-sided presentation of evidence and inconsistent rulings are unjust, unreasonable, prejudicial, and contrary to Ohio law. For these reasons, Kroger requests that the Commission find the attorney

examiners erred in these evidentiary rulings and, as a result, the Commission should not consider the testimony of AEP Ohio witnesses Horner, Fry, Buser, and LaFayette in rendering its decision. OMAEG asserts the decision to defer portions of intervening witnesses' testimony and deny intervenors the opportunity to cross-examine and challenge AEP Ohio witnesses on certain topics, while allowing AEP Ohio to offer testimony on those topics is an abuse of discretion that constitutes reversible error. (Kroger Br. at 22-28; OMAEG Br. at 14-17; Tr. Vol. IV at 1071-1078.)

{¶ 144} For the same reasons stated in regard to Kroger's and OMAEG's request that the Commission reconsider the attorney examiners' ruling as to AEP Ohio's motion to strike or, in the alternative, to defer certain testimony, the Commission also denies OMAEG's and Kroger's request to reverse the ruling to allow the testimony of AEP Ohio witnesses Buser and LaFayette. The bifurcation of the testimony was explained in the January 14, 2019 Entry and further explained to the parties from the bench. Accordingly, the Commission finds that the attorney examiners' ruling was reasonable and not prejudicial, and, in light of our determination that AEP Ohio has failed to demonstrate need pursuant to R.C. 4928.143(B)(2)(c), the motions for reconsideration of the attorney examiners' ruling are moot.

6. AEP OHIO'S REBUTTAL TESTIMONY

{¶ 145} To recap the relevant facts, on September 19, 2018, AEP Ohio filed the testimony of Kamran Ali, Managing Director of Transmission Planning for American Electric Power Service Corporation. Mr. Ali performed the analysis and testified to the impact new generic renewable generation projects would have on LMP, provided an overview of AEP Ohio's transmission system planning and operations, and supported certain information in the amended LTFR to meet the requirements of Ohio Adm.Code 4901:5-5-04(D). Mr. Ali offered his testimony and was cross-examined on January 16, 2019. After all intervenor witnesses had testified, on February 1, 2019, AEP Ohio requested to file rebuttal testimony by Mr. Ali. Over the objections of several intervenors, IEU, OMAEG, and

IGS, the attorney examiners granted AEP Ohio's request to file rebuttal testimony. At the evidentiary hearing, IEU argued that it was not proper rebuttal testimony, as Mr. Ali addressed an issue raised by an intervenor as part of the intervenor's direct case. Further, IEU reasoned that it was improper to permit a reopening of the record to allow AEP Ohio to buttress its direct case. Further, OMAEG reasoned that AEP Ohio knew or should have known, prior to Mr. Ali taking the stand, that the Highland Solar project, on which Mr. Ali based his transmission analysis, would be interconnected to the DP&L Stuart transmission line as opposed to an AEP Ohio transmission line. IEU also argues it is unfair to reward AEP Ohio for being aware of the incorrect interconnection location months before the pending application and supporting testimony were filed and refusing to correct a critical misrepresentation until presented in its rebuttal testimony on January 16, 2019. (Tr. Vol. XII at 2750-2752, 2756-2760, 2766.) IEU asks that the Commission not encourage nor permit AEP Ohio's lack of transparency. (IEU Br. at 26.) (Co. Ex. 5; Co. Ex. 26; Tr. Vol. II at 402-528; Tr. Vol. X at 2660-2661; Tr. Vol. XII at 2748-2833; IEU Br. at 23-26; OMAEG Br. at 17-19; Kroger Br. at 28-30.)

{¶ 146} AEP Ohio replies that intervenors mischaracterize Mr. Ali's testimony and the purpose of his analysis. AEP Ohio contends that the purpose of AEP Ohio witness Ali's LMP analysis was to model 650 MW of renewable energy projects with technologies, locations, and outputs similar to projects in the PJM-developed PROMOD model and the PJM generation queue, near the locations where future projects may be sited. Mr. Ali's analysis assumed, although the analysis was not location specific, that the Highland solar project would interconnect to the AEP load zone. The Company argues that, as a result of intervenors introducing evidence showing that the point of interconnection for Highland was the DP&L zone, not the AEP zone, and the value of the LMP savings calculation would change due to congestion between AEP Ohio and the DP&L load zones, it was appropriate for AEP Ohio to be able to offer rebuttal testimony. (Co. Reply Br. at 32-35.)

{¶ 147} Upon review of the record, we affirm the ruling of the attorney examiners. The Commission appoints its attorney examiners to, among other things, oversee various proceedings, investigations, and complaints and to preside at the hearings in various matters coming before the Commission. R.C. 4901.18. To that end, as we have previously determined on this issue, there is no rule as to when rebuttal testimony may be presented or is prohibited from being offered. Whether rebuttal testimony may be offered is based on the circumstances of the case and determined on a case-by-case basis. It is within the discretion of the attorney examiner to determine whether rebuttal is appropriate. *In re Duke Energy Ohio, Inc.*, Case No. 14-841-EL-SSO, et al., Opinion and Order (Apr. 2, 2015) at 13. In these proceedings, after considering the arguments of AEP Ohio and various intervenors, the presiding attorney examiners explained that AEP Ohio's request to offer the rebuttal testimony of Mr. Ali would be granted so as to afford the Commission a full and accurate record on which to render its decision (Tr. Vol. X at 2660-2676). In addition, the Commission finds that the rebuttal testimony was appropriate to address opposing intervenors' evidence that a change in the location of new generic renewable generation facilities would impact projected savings. For these reasons, the Commission finds the ruling to support judicial efficiency and the request of IEU, OMAEG, and Kroger to reverse the ruling is denied. Furthermore, the Commission finds that, given our determination that AEP Ohio has failed to demonstrate need consistent with the requirements of R.C. 4928.143(B)(2)(c), Kroger's, OMAEG's, and IEU's requests for reversal of the attorney examiners' ruling are moot.

H. Other Miscellaneous Matters

{¶ 148} Direct Energy also argues that the RGR violates R.C. 4928.64(E). According to Direct Energy, R.C. 4928.143(B) lists the features an ESP must or may include, notwithstanding any other provision of Title 49 of the Revised Code to the contrary, except for specifically listed statutes. Direct Energy notes that R.C. 4928.64(E) is among the listed statutes. On that basis, Direct Energy and IGS reason that R.C. 4928.64 requires the bypassability of RPS compliance costs. (Direct Energy Br. at 16-18; IGS Br. at 14.)

{¶ 149} AEP Ohio submits that Direct Energy's arguments are an untimely and impermissible collateral attack on the RGR, which was approved in the Company's *ESP 4 Case*. *ESP 4 Case*, Opinion and Order (Apr. 25, 2018) at ¶¶ 20-22. AEP Ohio declares that the Commission has thoroughly considered and approved the creation of the placeholder RGR and that the matter is not subject to further debate as a part of these proceedings. *In re FirstEnergy*, Case No. 18-857-EL-UNC, Opinion and Order (Mar. 6, 2019) at ¶ 26 (rejecting OCC's attempt to rehash an issue in a significantly excessive earnings test proceeding that the Commission thoroughly considered in the company's ESP case). Further, AEP Ohio reasons that Direct Energy's challenge of the RGR also ignores that R.C. 4928.64(B)(1) makes clear that "nothing in this section precludes a utility * * * from providing a greater percentage" of renewable energy resources than the renewable portfolio standard benchmarks require. AEP Ohio avers, and OEG agrees, that R.C. 4928.64 and R.C. 4928.143 are distinct, independent statutes, and nothing in the Revised Code limits the application of R.C. 4928.143(B)(2)(c) to only those resources needed to satisfy the RPS. (Co. Reply Br. at 64, 70-72, 73; OEG Br. at 9-10.)

{¶ 150} The Commission recognizes that, pursuant to R.C. 4928.64(E), an EDU's cost to comply with R.C. 4928.64 shall be bypassable for shopping consumers. Given the Commission's decision in this first phase of these proceedings, Direct Energy's arguments need not be addressed.

{¶ 151} OCA requests and proffers that the Commission consider, as part of the first phase of these proceedings, the debt equivalency costs, which are not included in AEP Ohio witness Torpey's analysis (OCA Ex. 2; OCA Br. at 42-43; Tr. Vol. V at 1599).

{¶ 152} The Commission finds that, in light of our determination that AEP Ohio has not made an adequate demonstration of need pursuant to R.C. 4928.143(B)(2)(c), OCA's request for a proffer is moot.

III. FINDINGS OF FACT AND CONCLUSIONS OF LAW

{¶ 153} AEP Ohio is a public utility and electric light company within the definitions of R.C. 4905.02 and 4905.03, as well as a person within the meaning of R.C. 4935.04(A)(2) and 4906.01, and, as such, is subject to the jurisdiction of this Commission.

{¶ 154} AEP Ohio is the owner or operator of a major utility facility and furnishes electricity directly to more than 15,000 customers within this state within the meaning of R.C. 4935.04(C), and, thus, must annually furnish a LTFR to the Commission for its review.

{¶ 155} On April 16, 2018, AEP Ohio filed its LTFR for 2018. AEP Ohio corrected and supplemented its LTFR on May 31, 2018, and June 26, 2018.

{¶ 156} On September 19, 2018, AEP Ohio filed an amendment to its 2018 LTFR, seeking to demonstrate the need for at least 900 MW of renewable energy projects in Ohio.

{¶ 157} In accordance with R.C. 4935.04(D)(3), a hearing on AEP Ohio's 2018 amended LTFR was held on December 4, 2018, continued to January 15, 2019, and concluded on February 8, 2019.

{¶ 158} On December 12, 2018, AEP Ohio filed its proofs of publication of notice of the hearing in accordance with R.C. 4935.04(D)(3).

{¶ 159} Except as otherwise determined in this Opinion and Order, AEP Ohio's 2018 LTFR satisfies the statutory criteria set forth in R.C. 4935.04(F).

{¶ 160} Based on the record in these proceedings, AEP Ohio has not demonstrated a need for additional Ohio-sited renewable energy projects during the LTFR planning period.

IV. ORDER

{¶ 161} It is, therefore,

{¶ 162} ORDERED, That, except as otherwise determined in this Opinion and Order, AEP Ohio's 2018 LTFR be accepted. It is, further,

{¶ 163} ORDERED, That the procedural and evidentiary rulings of the attorney examiners be affirmed. It is, further,

{¶ 164} ORDERED, That nothing in this Opinion and Order shall be binding upon the Commission in any future proceeding or investigation involving the justness or reasonableness of any rate, charge, rule, or regulation. It is, further,

{¶ 165} ORDERED, That a copy of this Opinion and Order be served upon all parties of record.

COMMISSIONERS:

Approving:

Sam Randazzo, Chairman
M. Beth Trombold
Lawrence K. Friedeman
Daniel R. Conway
Dennis P. Deters

GNS/SJP/hac

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Case No(s). 18-0501-EL-FOR, 18-1392-EL-RDR, 18-1393-EL-ATA

Summary: Opinion & Order Opinion and Order that the Commission finds that the long-term forecast report of Ohio Power Company d/b/a AEP Ohio for 2018 complies with R.C. 4935.04 (F), except as otherwise determined in this Opinion and Order, as it fails to demonstrate a need, under any offered definition of the term, for at least 900 megawatts of renewable generating facilities, pursuant to R.C. 4928.143(B)(2)(c). Accordingly, phase II of these proceedings will not be necessary. electronically filed by Docketing Staff on behalf of Docketing