

**BEFORE
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

INITIAL BRIEF OF INTERSTATE GAS SUPPLY, INC. AND IGS SOLAR, LLC

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I. INTRODUCTION

In this case, Ohio Power Company (“AEP Ohio”) requests that the Public Utilities Commission of Ohio (“Commission”) find that there is a need to build at least 900 megawatts of renewable energy resources. While Interstate Gas Supply, Inc. and IGS Solar, LLC (collectively “IGS”) are supportive of renewable energy and are actively working to develop such resources in Ohio, AEP Ohio’s proposal takes the wrong approach to that endeavor.

AEP Ohio’s proposal is a throwback to a bygone era when the planning and construction of generation was performed by the vertically integrated utility to ensure that the lights stay on. Yet, AEP Ohio’s request is not based upon the need to build new generation to meet a reliability concern. Rather, the purported foundation for AEP Ohio’s

proposed finding of need is a consumer survey, a set of unreliable projections of market prices, and illusory promises of economic stimuli.

According to AEP Ohio, a portion of its customers *want* renewable generation and this is sufficient to support a finding of *need*. The two concepts, however, are very different. “A want is something you desire to have, but it is not actually needed.”¹ If the Rolling Stones have taught us anything, it’s “you can’t always get what you want, but if you try sometimes you just might find you get what you need.”² Likewise, in Ohio, if you want renewable energy, nothing stops you from procuring it—there are a multitude of options available to customers that so desire it.³

Therefore, AEP Ohio’s warped legal theory is disconnected from the plain language of the law, state policy, and the clear intent of the law. The Commission lacks authority to make a finding of need for renewable generation resources. The General Assembly narrowly tailored the “need” statute as a safety valve to maintain reliability. By AEP Ohio’s own admission, its proposal has nothing to do with market failure or maintaining reliability on the electric grid.

Indeed, AEP Ohio has not even attempted to demonstrate a shortfall in the development of renewable generation by the competitive market. Given the state policy in favor of market-based solutions, AEP Ohio’s utter failure to provide evidence regarding

¹ IGS Ex. 11 at 14.

² THE ROLLING STONES, *You Can’t Always Get What You Want*, On LET IT BLEED (Decca Record 1969).

³ Interstate Gas Supply, Inc. and IGS Solar, LLC Ex. 11 at 14. Hereinafter, the exhibits of Interstate Gas Supply, LLC and IGS Solar, LLC will be referred to as “IGS Ex.”

existing and potential development of market-based renewable generation creates an insurmountable factual hole in AEP Ohio's application.⁴

Placing the law aside for a moment, AEP Ohio has not provided any good reason to indulge its request to move backward to a traditional integrated resource planning construct that Ohio wisely left behind twenty years ago. By AEP Ohio's own projections, the cost of deploying renewable generation resources is falling like a stone and competitive developers of renewable energy are actively ramping up operations in the state to meet consumer desires for renewable energy. There is simply no need to dictate renewable resource development—or to override the General Assembly's renewable mandates—through a command and control paradigm when the market is well positioned to develop renewable resources without picking winners and losers and saddling all distribution customers with the consequences.

Moreover, the economic impact of AEP Ohio's proposal is based entirely on a flawed and unreliable projection of market prices. Based upon more realistic market prices, it is apparent that AEP Ohio's proposal would cost customers millions of dollars over the next 20 years.

Given the numerous infirmities in AEP Ohio's application, IGS urges the Commission to reject AEP Ohio's finding of need. Rather than indulging AEP Ohio's request to pick winners and losers—which would ultimately harm the development of the renewable energy market—the Commission should focus on providing competitively

⁴ Tr. Vol. I at 86.

neutral incentives for renewable energy and removing existing barriers to development of clean distributed energy resources.

II. BACKGROUND

On April 16, 2018, AEP Ohio filed an initial LTFR in this proceeding. As required by Commission rule, the initial LTFR included several forms containing detailed forecasted data with respect to generation, transmission, and distribution requirements in AEP Ohio's service territory. The filing was completely unremarkable. It did not identify a shortfall in generation resources to meet demand.⁵

But, on June 7, 2018, AEP Ohio filed a motion for waiver of certain Commission rules and indicated that it "intends to file an amendment to its 2018 LTFR later this year to demonstrate the need for at least 900 MW of renewable energy projects in Ohio."⁶ On September 19, 2018, the Commission granted AEP Ohio's request for waivers.⁷

After previously giving a hint of its intentions to file an application to establish the need for 900 MWs of renewable generation, AEP Ohio then set about to find evidence to support its predetermined conclusion.

On September 19, 2018, AEP Ohio filed an application to amend its LTFR ("Amended LTFR"), requesting that the Commission find a need for at least 900 MWs of renewable generation resources.⁸ AEP Ohio's Amended LTFR conceded that there is

⁵ See AEP Ohio Ex. 1; AEP Ohio Ex. 3 at 8.

⁶ Motion of Ohio Power Company for Waivers and Request for Expedited Treatment at 1 (Jun. 7, 2018).

⁷ Entry (Sep. 19, 2018).

⁸ AEP Ohio Ex. 2.

no need to construct renewable generation to maintain reliability.⁹ Rather, in an attempt to rewrite the ESP statute for its own purpose, AEP Ohio alleged that there is a need for at least 900 MWs of renewable generation.

AEP Ohio alleges that need should be found because a survey shows that customer's want AEP Ohio to develop renewable generation resources.¹⁰ According to AEP Ohio, want translates to need.¹¹ Also, AEP alleges that need should be found because its proposed renewable resources would be economically beneficial because the resources would be located in Ohio and over the long-term the renewable energy purchase agreements ("REPAs") will result in bill credits.¹² While AEP Ohio's factual assertions are fatally flawed, IGS will first address AEP Ohio's incorrect legal standard. After examining AEP Ohio's application under the correct legal framework, it is apparent that this case should have been decided on a directed verdict or dismissed *sua sponte* by the Commission.

III. ARGUMENT

A. "Need" under R.C. 4928.143(B)(2)(c) relates to generation and capacity to maintain reliability

Within the permissive sections of the ESP statute, an electric distribution utility ("EDU") may request authority to establish a non-bypassable surcharge related to a generating facility to the extent that certain conditions are satisfied. Specifically, R.C. 4928.143(B)(2)(c) permits:

⁹ AEP Ohio Ex. 3 at 8.

¹⁰ AEP Ohio Ex. 2 at 7.

¹¹ *Id.*; AEP Ohio Ex. 3 at 7-8, 11.

¹² AEP Ohio Ex. 3 at 9; *see generally* AEP Ohio Ex. 14.

The establishment of a nonbypassable surcharge for the life of an electric generating facility that is owned or operated by the electric distribution utility, was sourced through a competitive bid process subject to any such rules as the commission adopts under division (B)(2)(b) of this section, and is newly used and useful on or after January 1, 2009, which surcharge shall cover all costs of the utility specified in the application, excluding costs recovered through a surcharge under division (B)(2)(b) of this section. However, no surcharge shall be authorized unless the commission first determines in the proceeding that there is need for the facility based on resource planning projections submitted by the electric distribution utility. Additionally, if a surcharge is authorized for a facility pursuant to plan approval under division (C) of this section and as a condition of the continuation of the surcharge, the electric distribution utility shall dedicate to Ohio consumers the capacity and energy and the rate associated with the cost of that facility. Before the commission authorizes any surcharge pursuant to this division, it may consider, as applicable, the effects of any decommissioning, deratings, and retirements.

In interpreting a statute, the “paramount concern in construing a statute is legislative intent.” *Ohio Neighborhood Finance, Inc. v. Scott*, 139 Ohio St.3d 536 at ¶ 22 (2014). All statutes which relate to the same general subject matter must be read in *pari materia*. See *Maxfield v. Brooks*, 110 Ohio St. 566 (1924). All provisions of the Revised Code bearing upon the same subject matter should be construed harmoniously. *Couts v. Rose*, 152 Ohio St. 458, 461 (1950). Finally, the Court has determined that statutory construction should seek to avoid absurd results. *Gulf Oil Corp. v. Kosydar*, 44 Ohio St.2d 208, 217 (1975).

Based upon the plain language of the ESP statute, the balance of Chapter 4928, and historical context regarding the passage of SB 221, it is clear that AEP Ohio’s proposal is a misguided attempt to jam a round peg in a square hole. “[R]esource planning projections” submitted pursuant to R.C. 4935.04 are required to ensure that there is no imbalance between supply and demand. If an imbalance is identified, then a utility can request in an ESP that the Commission find that there is need to construct a

new generating facility. Such a determination, however, cannot be based upon a desire for renewable energy—there is a completely different statute and policy framework in place to support the procurement and development of renewable energy.

In any event, *want* does not translate to *need* because they are not the same thing. As IGS witness White testified, there is a “big difference between a ‘want’ and a ‘need.’ A want is something you desire to have, but it is not actually needed.”¹³ Thus, a finding of “need” to construct a new generation facility under R.C. 4928.143(B)(2)(c) must be based upon the requirement for capacity and energy to maintain reliability—not the desires of a few customers to build renewable generation, which relates to an endeavor they may already undertake without any action whatsoever in this case.

1. Resource Planning Projections relate to capacity and energy for reliability purposes—need must as well

A finding of need must be based upon resource planning projections submitted by the EDU. Such projections are submitted in accordance with R.C. 4935.04 and OAC 4901:5-5-03 *et sec.* As AEP Ohio witness Torpey testified, an EDU has historically been required to submit a long-term forecast report (“LTFR”) when there is a change in the load forecast.¹⁴ Witness Torpey indicated that this approach is logical, because if there is a large jump in the load forecast, there may be a need to build new generation.¹⁵

¹³ IGS Ex. 11 at 13-14.

¹⁴ Tr. Vol. V at 1303.

¹⁵ Tr. Vol. V at 1303 (“Q. And the reason, logically, why that would be is this is a large jump in the load forecast there may be a need to build new generation. A. Well, right.”)

By statute, LTFR proceedings are "limited to issues relating to forecasting"¹⁶ and the Commission's role is to determine whether the LTFR is accurate, complete, and reasonable.¹⁷ The ultimate purpose of an LTFR is to determine whether the applicant's forecast of load requirements and resources is accurate and reasonable—it is specifically focused on the reasonableness of forecasting techniques and methodologies with respect to distribution, transmission, and generation requirements. Because the purpose of an LTFR proceeding is to obtain data related to various reliability criteria, the need to construct a generation facility is limited in scope to addressing an imbalance between supply and demand only.

If the LTFR results project an imbalance between supply and demand, however, the LTFR proceeding is not the place to determine whether a new generating facility should be built to fill the gap. That is a matter for an ESP proceeding.¹⁸ Thus, as initial matter, AEP Ohio's proposed finding of need has been proposed in the wrong case. Regardless, AEP Ohio has not identified an imbalance between supply and demand; therefore, the resource planning projections at issue cannot provide the basis for a finding of need.

2. Finding need for renewable energy resources would conflate two statutes passed at the same time: the Electric Security Plan Statute and the Renewable Portfolio Standards Statute—both of which address different policy concerns

¹⁶ Section 4935.04(E)(1), Revised Code.

¹⁷ Section 4935.04(F), Revised Code.

¹⁸ R.C. 4928.143(B)(2)(c) states that a "no surcharge shall be authorized unless the commission first *determines in the proceeding* that there is need for the facility." (emphasis added).

In any event, historical context and the statutory scheme further demonstrates that the General Assembly intended that (B)(2)(c) only be applied if there is a shortfall of supply to meet demand. In 2008, Ohio's energy future was at a crossroads. Despite the restructuring that had occurred in 1999, "Competition, however, "fail[ed] * * * to develop according to expectations."¹⁹ little shopping occurred for competitive retail electric service.²⁰ The majority of customers continued to take default service under the standard service offer ("SSO"),²¹ which was provided by the electric distribution utilities ("EDUs") through their owned or affiliate generation resources. At the same time, peak demand and electricity prices were rising year after year.²²

In light of these market dynamics, the General Assembly passed Amended Substitute Senate Bill 221 ("SB 221"). The law established a new paradigm for authorizing the standard service offer rate, either through a market rate offer or through an electric security plan.²³ The former "as the name implies, sets rates using a competitive-bidding process to harness market forces;²⁴" the latter permitted an EDU to

¹⁹ *OCC v. Pub. Util. Comm.*, 114 Ohio St. 3d 340 at ¶ (2007).

²⁰ *In re Application of Columbus Southern Power Co.*, 128 Ohio St. 3d. 512 at ¶ 28 (2011) ("The record showed that AEP has had 'virtually no' shopping in the last eight years, including no residential shoppers.") see also *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of a Post-Market Development Period Rate Stabilization Plan*, Case No. 04-169-EL-UNC, Opinion and Order at 5 (Jan. 26, 2005); see *In the Matter of the Application of Columbus Southern Power Company for Approval of an Electric Security Plan; an Amendment to its Corporate Separation Plan; and the Sale or Transfer of Certain Generating Assets*, Case Nos. 08-917-EL-SSO, *et al.*, Entry on Rehearing at 25 (Jul. 23, 2009).

²¹ *In re Application of Columbus Southern Power Co.*, 128 Ohio St. 3d. 512 at ¶ 28 (2011); *OCC v. Pub. Util. Comm.*, 114 Ohio St. 3d 340 at ¶ 14.

²² Tr. Vol. I at 73; *In re Application of Columbus Southern Power Co.*, 128 Ohio St. 3d. 512 at ¶ 4 (2011)

²³ *Id.* at ¶ 5.

²⁴ *Id.*

utilize its own generating assets to provide the SSO to the extent that such an outcome is more favorable in the aggregate than the otherwise applicable market rate offer. Moreover, the ESP option provided a “safety valve” that would permit an EDU to retrofit or construct a new generation facility—and to recover the associated costs from all customers through a non-bypassable charge—if there is a need for the generation resource based upon resource planning projections.²⁵

In a separate section of SB 221, the General Assembly established the renewable energy portfolio standards (“RPS”) to incentivize the development of renewable energy resources.²⁶ The General Assembly “established a policy that determines the amount of renewable and solar energy that is required to meet customer’s electric needs.”²⁷ The RPS mandated that both EDUs and competitive retail electric service providers (“CRES providers” or “Suppliers”) to source a portion of their electric supply from renewable energy resources in amounts that escalated each year.²⁸ The State, through the RPS and SRPS, has set percentage requirements that specifies the exact amount of renewable energy generation and solar generation that the state needs for each year through 2026.²⁹ Indeed, the law specifically required a portion of the renewable resources to be physically located within the state of Ohio.³⁰

²⁵ R.C. 4928.143(B)(2)(b) and (c).

²⁶ R.C. 4928.64.

²⁷ IGS Ex. 11 at 8.

²⁸ Tr. Vol. I at 75; R.C. 4928.64(B).

²⁹ IGS Ex. 11 at 8.

³⁰ Tr. Vol. I at 76. See also *In re Review of the Alternative Energy Rider Contained in the Tariffs of Ohio Edison Co.*, 153 Ohio St. 3d 289 at ¶ 5 (2018) (“Under an earlier version of the statute, electric utilities were required to purchase at least half of their renewable energy from in-state suppliers.”).

Recognizing that retail electric generation is a competitive service³¹ and that the RPS would apply to all market participants on an equal basis,³² the General Assembly specifically required under R.C. 4928.64(E) that all costs associated with sourcing renewable generation “shall be bypassable by any consumer that has exercised choice of supplier under section 4928.03 of the Revised Code.”³³ The General Assembly ensured that this requirement was not disrespected by any provision authorized within the context of an ESP, stating, “Notwithstanding any other provision of Title XLIX of the Revised Code *to the contrary except . . . division (E) of section 4928.64* [t]he plan may provide for or include a non-bypassable surcharge.”³⁴ Thus, construing these statutes together, the General Assembly has provided that the recovery of renewable generation costs is not eligible for a non-bypassable surcharge under R.C. 4928.143(B)(2)(c). Likewise, interpreting the ESP statute to permit non-bypassable cost recovery for renewable generation development beyond the levels contemplated by the RPS would lead to an absurd result that the General Assembly did not intend.

This legal conclusion is further reinforced by subsequent amendments to Ohio’s RPS standard. Fast forward to 2013, the General Assembly passed Senate Bill 310 (“SB 310”). The law placed a temporary freeze on renewable portfolio standards and energy

³¹ R.C. 4928.03.

³² *Id.*

³³ R.C. 4928.64(E).

³⁴ R.C. 4928.143(B) and R.C. 4928.143(B)(2) (emphasis added).

efficiency standards.³⁵ The law also specifically required EDUs and CRES providers to disclose the cost of compliance with the RPS.³⁶

SB 310 eliminated the requirement to source renewable electricity from facilities physically located in the state of Ohio.³⁷ As IGS testified, although in-state renewable requirement would provide increased incentives for the development of renewable energy resources, the General Assembly has chosen a different direction.³⁸ While “some may not agree with the policy - some want to increase the RPS and some want to eliminate it all together; however, we live in a democracy, and the State of Ohio has settled on a statutory construct to incent renewable energy generation.”³⁹ Likewise, some customers may want renewable generation; others may not.

“[S]ince the enactment of SB 310 load serving entities have had little difficulty meeting the RPS or SRPS requirements.”⁴⁰ Indeed, AEP Ohio concedes that it will have no difficulty meeting these requirements.⁴¹ Moreover, “Ohio law allows load serving entities to apply at the PUCO for relief of the RPS and SRPS requirements if compliance with the statute exceeds 3% of the total electric costs.”⁴² Further, an EDU or CRES

³⁵ Tr. Vol. I at 77.

³⁶ R.C. 4928.65(A)(1)(a).

³⁷ Tr. Vol. I at 76-77.

³⁸ IGS Ex. 11 at 17-18.

³⁹ IGS Ex. 11 at 8.

⁴⁰ *Id.* at 9.

⁴¹ AEP Ohio Ex. 3 at 13; Staff Ex. 1 at 2-4.

⁴² *Id.* See also R.C. 4928.64(C)(3).

provider “a force majeure determination pursuant to this division regarding all or part of the utility's or company's compliance with any minimum benchmark under division (B)(2) of this section during the period of review occurring pursuant to division (C)(2) of this section.”⁴³ Thus, when there is a challenge procuring reasonably priced market-based renewable generation, the General Assembly did not intend for EDUs to build new generation in response—rather, load serving entities are excused from their obligation to procure renewable energy. In any event, since the enactment of SB 310, no entity has sought to reduce its RPS or SRPS, which is an indication that entities are not having difficulty meeting the State’s need for renewable energy.⁴⁴

Moreover, the current RPS standard is working well. “Evidence that the RPS is working is that cost of RPS compliance has come down significantly since implementation of RPS requirements, while the percentage of renewable energy being built and supplied in Ohio continues to rise.”⁴⁵ And “if it is the will of the citizens of the State of Ohio to build more solar or wind, the State legislature could simply increase the SRPS requirement or add an in-state procurement requirement to its SRPS.”⁴⁶ Through such competitively neutral policies, the States of Pennsylvania and New Jersey increased the development of in-state solar.⁴⁷ While IGS takes no position in this case whether there *should* be an in-state requirement “[t]he fact that the Ohio legislature has eliminated the in-state SRPS

⁴³ R.C. 4928.64(C)(4)(a).

⁴⁴ IGS Ex. 11 at 8.

⁴⁵ IGS Ex. 11 at 9.

⁴⁶ *Id.* at 10.

⁴⁷ *Id.* at 12.

requirements indicates the legislature does not believe there is a need to build additional resources beyond what the market is already building with the current available state and federal incentives.”⁴⁸ And the desire of a portion of AEP Ohio’s customers to develop additional renewable resources within this state does not translate to a need to do so in contravention to the General Assembly’s intent. This is especially true given that customers that desire renewable energy are free to procure it on the competitive market.⁴⁹

Accordingly, IGS urges the Commission to conclude that AEP Ohio has submitted correct data projections (AEP Ex. 1) of the future capacity requirements for the AEP Ohio service territory. But, given that AEP Ohio has not identified any imbalance between projected demand and the available supply, there is simply *no need* to construct new generation facilities.

B. AEP Ohio’s legal theory is neither correct nor supported by the evidence

For the remainder of this brief, IGS places aside the law and focuses on AEP Ohio’s flawed, concocted theory of the case, which is based upon unsubstantiated and misleading factual assertions. Specifically, while conceding that it does not need to construct generation for reliability purposes, AEP Ohio alleges that the Commission should find a need to construct at least 900 MWs of renewable generation because: (1) a survey alleges that a portion of its customers *want* additional renewable generation; (2) in the long-term, the proposed renewable generation resources will be economically beneficial; and (3) the resources will be constructed in Ohio, which will provide localized economic benefits. Each of these claims is incorrect or misleading; therefore, even if AEP

⁴⁸ *Id.*

⁴⁹ *Id.* at 15; see also Tr. Vol. VII at 1982-86, 2008-10.

Ohio's proposed legal standard had any merit, AEP Ohio has not provided sufficient evidentiary support to establish a finding of need.

1. The Flawed Survey

After AEP Ohio determined in June that it would request a finding of need for 900+ MWs of renewable generation, it then looked for creative ways to justify its predetermined course of action. In that regard, it retained Navigant to perform a survey. Structurally, the survey contained infirmities. For example, the survey was sent via e-mail to a sample of customers.⁵⁰ But Navigant did no analysis whether customers with e-mail addresses may respond differently than customers responding to "snail mail."⁵¹ The sample itself was flawed, given that thousands of AEP Ohio and AEP service company employees were included in the population from which the sample was derived.⁵² The responses of these individuals cannot be considered representative or objective.

The sample is also flawed because the survey did not objectively assess the views of commercial and industrial customers. In fact, Navigant did not provide customers with usage greater than 1,000,000 kWh with an opportunity to respond to the survey.⁵³ Indeed, the only large commercial and industrial customers that Navigant contacted were those that had already indicated support for the development of renewables. Thus, Navigant gathered data based upon a biased sample. Indeed, on cross-examination, Witness Horner conceded that the purpose of its limited commercial and industrial

⁵⁰ AEP Ohio Ex. 6 at TH-1 p. 15 of 41.

⁵¹ Tr. Vol. III at 583-84.

⁵² Tr. Vol. I at 109.

⁵³ Tr. Vol. II at 568-69.

outreach “was not to look at the overall population but to quantify the interest in renewables among companies that had already identified that interest.”⁵⁴ The survey itself states that “outreach should not be considered statistically representative of AEP’s C&I customer base or even its largest corporate customer base due to the targeted sample selection approach and limited responses.”⁵⁵

Although AEP Ohio’s testimony claimed that commercial and industrial customers support its proposal, in reality these customers simply support development of renewable resources.⁵⁶ And many of them are already undertaking or plan to undertake their own development of renewable resources through arrangements that meet their individual needs.⁵⁷

The survey itself contains additional substantive flaws as well. As a starting point, the Survey identified the amount of renewable generation utilized to provide the SSO, stating “AEP Ohio currently obtains 4.5% of its electricity from renewable sources such as wind and solar.”⁵⁸ The survey then asked “customers whether they would support AEP Ohio increasing the amount of renewable generation it utilizes.”⁵⁹ In other words, the survey identified how much of the SSO is supplied by renewable generation, and then it asked whether AEP Ohio should increase the amount of renewable generation used to

⁵⁴ *Id.* at 575.

⁵⁵ AEP Ohio Ex. 6 at TH-1 p. 14 of 41.

⁵⁶ *Id.*

⁵⁷ Tr. Vol. I at 147-50.

⁵⁸ AEP Ohio Ex. 6 at TH-1 p. 17 of 41.

⁵⁹ *Id.*

supply the SSO.⁶⁰ This question, however, is irrelevant to the proposal before the Commission, which is to develop at least 900 MWs of renewable generation and to recover the cost associated with those resources from all customers—not just SSO customers. To the extent that customer desire for AEP Ohio to procure more than the statutorily required amounts for SSO customers, AEP Ohio is free to make such a proposal in its next SSO application.

The survey is also misleading. It implies that the renewables proposed by AEP Ohio would actually provide green energy to customers. But, in reality, AEP Ohio would not retire the renewable energy credits that the facilities produce for the benefit of customers—rather it would sell the RECs. Consequently, by law, AEP Ohio cannot claim that it is using the 900 MWs to provide renewable energy, that was alleged in the survey.⁶¹

The 900 MW+ proposal is an example of a solution searching for a problem. AEP Ohio claims that a portion of its customers have indicated that there is an undersupply of renewable generation. But, AEP itself concedes that it has not calculated the level of undersupply.⁶² Thus, even if AEP Ohio's consumer survey approach had any merit, it is of little value for purposes of determining how many megawatts of renewable generation the Commission should find that there is a "need" to develop.

One can argue that the survey demonstrates that many customers do not support AEP Ohio's proposal. In the willingness to pay section, small C&I customers are generally

⁶⁰ Tr. Vol. I at 108-09

⁶¹ IGS Ex. 11 at 16.

⁶² Tr. Vol. I at 87; IGS Ex. 11 at MW -1 (containing AEP Ohio's Response to Direct-INT-01-008).

split down the middle on whether they would be willing to pay 1.25%-1.5% more.⁶³ And, more than 50% of small C&I customers indicated they are not willing or not sure if they would pay 1.5%-1.75% more.⁶⁴ Likewise, 55% of small C&I customers indicated that they are not willing or not sure if they would pay 2.25%-2.5% more.⁶⁵ Likewise, more than 50% of AEP Ohio PIPP and small C&I customers were either neutral or agreed that maintaining the current bill amount was more important than AEP Ohio investing in wind and solar.⁶⁶ And just over 50% of the residential class disagreed that maintaining the current bill amount was more important than investing in solar and wind.⁶⁷ Not exactly a landslide in favor of AEP Ohio's misleading proposal.

The survey also incorrectly classified specific customer comments (AEP Ohio Ex. 7) as being "supportive"⁶⁸ and "mixed."⁶⁹ Included in the "mixed" section were comments

⁶³ AEP Ohio Ex. 6 at TH-1 p. 21 of 41.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.* at TH-1 at p. 24 of 41.

⁶⁷ *Id.* at TH-1 at p. 25.

⁶⁸ For example, the following responses were categorized as "supportive":

- "Anything's better than you messing up my driveway and lawn with your trucks then refusing the fix any of it."
- "I'm sure it will cost me money, everything AEP does cost the customer money."
- "Would AEP have any input in putting in an electric high speed rail from rural communities to larger cities? Country people need the same healthcare as city people but it's harder to achieve due to distances."
- "Have no clue on what renewable energy initiatives aep is a part of."

⁶⁹ Below are examples of comments labeled "mixed":

- "Please stop. The windmills are ugly, they kill birds and bats, and they are a giant waste of money (literally). If you have to use renewables, then give more credits for homeowners to purchase their own solar panels."
- "Sounds good, but it's not wise. without a strong nuke component to any renewable plan, it's doomed to failure."
- "Generation should be on the lowest cost basis. AEP should lobby the government to remove incentives for all types of generation and allow the market to choose."

indicating a preference for customer deployment of renewable energy resources on their side of the meter.⁷⁰ The mistaken classification tilts the results in AEP Ohio's favor. But on reality, the responses identify strong support for market-based deployment of customer sited renewable resources.

These comments aside, it is noteworthy that several hundred respondents submitting scathing comments in opposition to the proposed renewable projects.⁷¹ Based upon the strong feelings of customers—some in favor but a large contingent against—it quickly becomes apparent that the construction of renewable generation resources should be driven by consumer preferences rather than involuntarily subscribing all customers to backstop renewable development through an administratively determined directive.

2. AEP failed to evaluate renewable development by the competitive market

⁷⁰ For example:

- “AEP should support customer generated renewable energy production as it would be the most efficient and secure source for the future.”
- “I would like to see more ideas around solar panels on customers roofs/property to cover their own energy needs and to be able to supply AEP with extra power.”
- “A shared generation model could be implemented, so customers could sell their surplus to the network.”
- “AEP's support for the installation of solar systems on individual or group residences would be deeply appreciated.”
- “[S]olar installations on private residences is not supported adequately; that should be changed to benefit homeowners, ratepayers and the public.”
- “Offer programs to help get solar on the roofs of homes.”
- “Is AEP looking at incentive programs for residents to add solar/wind generation so excess can go back into the grid?”
- “I would be interested in solar panels if they were more affordable.”
- “I would like to see incentives placed on Home energy solar systems to help reduce demand on the grid.”
- “Any chance for incentives for people that are willing to install solar panels?”
- “If we get more help with solar roofs and rebates to promote such investments , that would help.”

⁷¹ IGS Ex. 11 At MW-2; IGS Ex. 3.

While the survey purported to identify whether customers desire the addition of renewable energy resources, neither the survey nor AEP Ohio attempted to quantify the amount of renewable generation that will be developed by the competitive market.⁷² As IGS testified, the competitive market is well positioned to meet any demand for renewables.⁷³ Indeed, IGS, a privately held company headquartered in AEP Ohio's service territory is rapidly expanding its renewable offerings, including offerings from renewable resources located in Ohio.⁷⁴ Although IGS is only one of many competitors in the marketplace, IGS is currently in discussions to develop over 50 MWs of solar in Ohio.⁷⁵ And IGS intends to invest in \$450 million in solar projects located in Ohio and nationwide over the next three years.⁷⁶

3. AEP Ohio's Rate Projections are Flawed

According to AEP Ohio, its proposal will result in a positive net present value for customers of \$173 million. This alleged benefit is broken down as follows: (1) \$31 as a result of price suppression in the PJM market; (2) \$88 million from solar resources; and (3) \$54 million from wind resources.⁷⁷ Each of these values, however, are based upon flawed or incomplete analysis.

⁷² Tr. Vol. I at 86.

⁷³ See IGS Ex. 11 at 15. Tr. Vol. VII at 1982-86, 2008-10.

⁷⁴ *Id.*

⁷⁵ Tr. Vol. IX at 2600.

⁷⁶ *Id.*

⁷⁷ AEP Ohio Ex. 14 at JFT-1 p. 19.

a. Price Suppression impacts are illusory and ignore other costs

AEP Ohio argues that the introduction of zero dispatch costs resources will suppress locational marginal prices (“LMPs”) in PJM.⁷⁸ While zero dispatch cost resources may reduce LMP prices in the near term, they cause other external costs, which may outweigh the price suppressive impacts of the resources. Indeed, PJM performed a study that “assumed that the penetration of renewable resources would increase and investigated how the PJM system would be affected.”⁷⁹ PJM has concluded “[t]he impact of renewables on production cost savings was investigated, but the analysis did not include possible secondary impacts to the capacity market such as increased retirements due to non-economic performance or a possible need for generators to recover more in the capacity market because of reduced revenue in the energy market.”⁸⁰ While PJM did not analyze the impact on retirements, PJM concluded that [w]ith 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.”⁸¹

Examples of such services include:

- Regulation, which include generating units or demand response resources that are under automatic control and respond to frequency deviations,
- Reserves, which include Contingency (Primary) Reserve (combination of Synchronized and Non-Synchronized Reserves), and Secondary Reserve,

⁷⁸ *Id.* at JFT-1 p. 19-20.

⁷⁹ IGS Ex. 2 at 1.

⁸⁰ *Id.*

⁸¹ *Id.* at 14.

- Black Start Service, which include generating units that can start and synchronize to the system without having an outside (system) source of AC power, and
- Reactive Services, which help maintain transmission voltages within acceptable limits.⁸²

For example, the sun may go behind the clouds, resulting in line sag, or conversely, the sun may then emerge from the clouds, resulting in unanticipated production of electricity.⁸³ Consequently, frequency regulation resources may have to be dispatched to ensure transmission voltage does not rise above or below 60 Hz.⁸⁴ Alternatively, with significant changes in renewable dispatch, another generating unit may be ordered to continue to operate out of the normal dispatch order.⁸⁵ To the extent that its day ahead bid into the wholesale energy market is higher than the average LMP price when it is directed to operate out of the normal dispatch order, it will result in uplift.⁸⁶ Such costs are not collected through LMP prices, but rather assessed to load serving entities as an ancillary services line item on the PJM bill.⁸⁷ Either way, the above scenarios may result in the imposition of additional wholesale costs for customers that AEP Ohio did not consider in its analysis.

Moreover, AEP Ohio failed to account for the additional transmission construction that may be necessitated by the proposed 900 MWs of generation. As PJM concluded,

⁸² *Id.*

⁸³ Tr. Vol. II at 450; Tr. Vol. II at 446-455.

⁸⁴ Tr. Vol. II at 446.

⁸⁵ *Id.* at 451-53.

⁸⁶ *Id.* at 453-455.

⁸⁷ Tr. Vol. II at 446, 455.

the construction of additional renewable generation will require the construction of additional transmission facilities.⁸⁸

In addition to failing to account for these costs, AEP Ohio also failed to correctly model the locations of its projected resources, incorrectly assuming that the Highland facility was located in the AEP zone of PJM when in fact the resources were proposed to be connected to the Dayton Power and Light zone.⁸⁹ While AEP Ohio attempted to address this incorrect assumption in rebuttal testimony, the fact remains that AEP Ohio did not accurately present the modeling of the alleged LMP price suppression in its direct case. And, even though AEP Ohio submitted testimony to rebut its own incorrect modeling assumption, AEP Ohio's rebuttal testimony utterly failed to provide testimony to rebut the additional costs that PJM has identified renewables may impose on load serving entities. AEP Ohio's silence is deafening.

b. Flawed Natural Gas Projections

AEP Ohio's economic analysis of solar and wind the impact of its proposal largely rests on a forecast of future power prices provided by Witness Blatzacker.⁹⁰ The forecast relies on a projection of natural gas prices and the assumption of a carbon burden, which is completely detached from reality. As IGS Witness Leanza explained, AEP Ohio's forecast is off base for three reasons:

⁸⁸ IGS Ex. 2. at 17-18.

⁸⁹ Tr. Vol. VIII at 2048, 2062-63; *see also generally* OCA Ex. 1.

⁹⁰ AEP Ohio Ex. 11 at 3-4. Although Mr. Blatzacker's testimony references a Lower Band, Upper Band, Status Quo, and the Base Fundamentals forecast, only the Base Fundamentals Forecast was relied upon in this case. Tr. Vol. V at 1310.

(1) AEP's conclusions are based upon a flawed and overstated projection of natural gas prices; (2) AEP's forecasts have been incorrect time and again; (3) AEP and its affiliates clearly have no confidence in their own forecast; therefore, the Commission should give it little credibility.⁹¹

First, "AEP's forecast is well above what the market believes gas prices are valued at through 2030."⁹² For example, "by 2030, AEP's natural gas price estimate is \$6.479 while the market is valuing natural gas prices in 2030 at \$3.389 or almost half of AEP's forecasted prices."⁹³ Part of the reason for AEP Ohio's overstatement of natural gas prices and power prices—at least after the first seven years when the facilities do not break even—relates to the fact that it assumes that there will be a tax on carbon emissions starting in 2028.⁹⁴ The resources that it modeled simply do not "break even" on a net present value basis without the introduction of a carbon tax in 2028, even assuming the resources receive capacity revenue, which they may not.⁹⁵ As AEP Ohio conceded during trial, a carbon tax falls disproportionately on coal-fired generation, which increases the dispatch of natural gas resources, thereby increasing the demand and price for natural gas.⁹⁶ No such carbon burden exists today; therefore, it would be inappropriate to plan for market dynamics that are yet to materialize.⁹⁷

⁹¹ IGS Exhibit 13 at 3.

⁹² *Id.* at 5.

⁹³ *Id.*

⁹⁴ Tr. Vol. III at 832.

⁹⁵ See AEP Ohio Ex. 14 at JFT-1 at p. 21-22.

⁹⁶ Tr. Vol. III at 828.

⁹⁷ IGS Ex. 10 at 6-7.

AEP Ohio's overstatement of natural gas prices translates into overstated power prices.⁹⁸ "Using the average Heat Rate of 9.63 from AEP's Nominal Forecast, a \$1.00 increase in the price of natural gas will increase power prices by approximately \$9.63 or \$1.00 times the heat rate ratio."⁹⁹ "[T]he price difference of \$3.09 translates to an overinflated power price by approximately \$29 per megawatt hour in 2030."¹⁰⁰ What does this mean? While AEP Ohio claims that the wholesale energy price in 2030 will be \$60.7 per megawatt hour for solar (on peak) and \$54.8 per megawatt hour for wind (off peak), the market believes that it will be closer to \$32 per megawatt hour (on peak) and \$26 per megawatt hour (off peak), which is well below the REPA purchase price.

2030 is not an anomaly. Throughout the forecast period, actual trades of natural gas futures contracts are being executed at significantly lower prices than AEP Ohio estimates. These figures are reflected on p. 14, Table 1 of the Testimony of IGS Witness Leanza:

⁹⁸ IGS Ex. 13 at 6.

⁹⁹ *Id.* at 6.

¹⁰⁰ *Id.*

Table 1

Year	AEP NG Forecast	NYMEX Settle	
		12/4/2018	Difference
2021	\$ 4.688	\$ 2.630	\$ 2.06
2022	\$ 4.822	\$ 2.665	\$ 2.16
2023	\$ 4.959	\$ 2.726	\$ 2.23
2024	\$ 5.120	\$ 2.802	\$ 2.32
2025	\$ 5.221	\$ 2.896	\$ 2.32
2026	\$ 5.321	\$ 3.015	\$ 2.31
2027	\$ 5.411	\$ 3.107	\$ 2.30
2028	\$ 5.990	\$ 3.193	\$ 2.80
2029	\$ 6.150	\$ 3.294	\$ 2.86
2030	\$ 6.479	\$ 3.389	\$ 3.09
2031	\$ 6.710	\$ 3.485	\$ 3.23

Based upon AEP Ohio's own heat rate assumptions, its forecast of energy prices is inflated by \$19-\$30 per megawatt hour from 2021 through 2031.¹⁰¹ The consequence of this overstatement is to render the proposed REPA's uneconomic, given that the proposed REPA price is \$45 per megawatt hour for solar and \$40 per megawatt hour for wind.

Second, as IGS Witness Leanza discussed, AEP Ohio's projections are so aggressive that, if correct, there would simply be no need to seek regulatory approvals in this case to move forward with construction of 900 Megawatts of renewables. If it believed its own forecast, its affiliates would simply develop the resources themselves.¹⁰² Or, even better, "an affiliate could purchase natural gas futures at current market prices and collect all the associated profits once the natural gas price reaches their forecasted price."¹⁰³ Mr.

¹⁰¹ These figures are calculated by multiplying the natural gas price difference by the heat rate of 9.63. See IGS Ex. 13 at 6.

¹⁰² *Id.* at 14-18.

¹⁰³ *Id.* at 14.

Leanza calculated that potential profit opportunity—assuming the forecast is correct—between \$281 million and \$535 million, which would on an annual basis, at a minimum, provide sufficient revenue for an AEP Ohio affiliate to cover any near term shortfall in revenue that would exist if they entered into the REPAs themselves.¹⁰⁴ Mr. Leanza, however, further testified that he is not surprised that AEP Ohio’s affiliates have not undertaken the “profit opportunity” he described, because AEP Ohio’s forecast is completely detached from what the market expects will transpire.¹⁰⁵

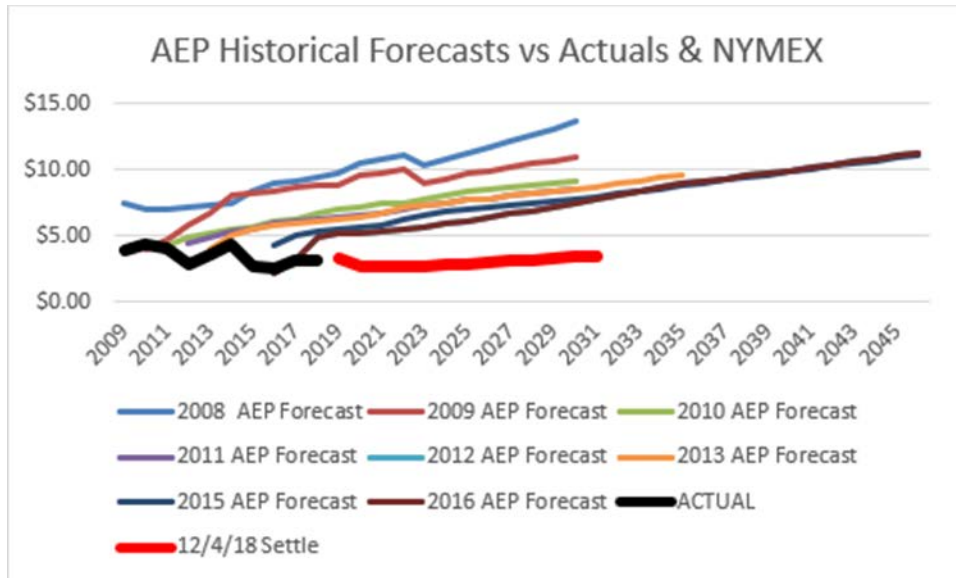
Third, Mr. Bletzacker’s fundamentals forecast track record does not instill confidence for purposes of making long-term decisions. “[E]ach of AEP’s fundamental forecasts since 2008 has missed the mark by a wide margin.”¹⁰⁶ Mr. Leanza plotted these massive misses on Figure 4 of his testimony.¹⁰⁷

¹⁰⁴ *Id.* at 16-17.

¹⁰⁵ *Id.* at 13.

¹⁰⁶ *Id.* at 10.

¹⁰⁷ IGS Ex. 13 at 11.



Sometimes a picture is worth a thousand words. There are only two constants: (1) “AEP always manages to forecast very high Henry Hub gas prices”¹⁰⁸; and (2) “AEP can’t seem to accurately forecast 2 years out and becomes increasingly bad at forecasting the further out in time they project prices.”¹⁰⁹

If AEP Ohio’s own track record is convincing of the risk, take AEP Ohio’s own word. After the Amended LTFR was filed, the Chief Executive Officer of American Electric Power, Nick Akins, stated publicly “There is nothing more risky for us to make in our industry today than a generation-related investment.”¹¹⁰ Of course, in this case, AEP

¹⁰⁸ *Id.* at 10.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at Ex. PL-3 “AEP Chief Sees Market Rule Changes Falling Behind Investment Shifts” (Dec. 6, 2018).

Ohio has no issue making the investment because it does not propose to bear the risk—the risk is placed on the backs of all distribution customers.

c. AEP’s flawed projection of capacity revenue

AEP Ohio projects that the proposed solar and wind resources will receive capacity revenue through the PJM Interconnection, LLC (“PJM”) by clearing in the base residual auction.¹¹¹ But, as IGS Witness Haugen testified, PJM recently proposed to change the rules for the capacity market. Specifically, “PJM has filed proposed capacity market rule changes which would only allow state subsidized resources to either submit a bid at the Minimum Offer Price Rule (MOPR) or the capacity would fall under the Resource Carve-Out option.”¹¹² Under the new rule, the proposed resources “would be deemed the recipient of an actionable state subsidy.”¹¹³ Consequently, “it is unlikely the resource would clear at the price associated with the MOPR.”¹¹⁴ Therefore, the resources may not receive revenue from the capacity market.

Even if the resources are eligible to be included as part of fixed resource requirement alternative, PJM proposed to apply an “Extended Resource Carve Out.” Under that proposal, customers may end up paying for capacity twice:

Under this proposal, the REPA generation resources would not only be carved out of the PJM capacity auctions, but customers who receive service in the AEP territory would still be required to buy the full amount of capacity that clears in the PJM auction and their respective load would not be carved out. Therefore, customers in the territory would be paying for generation

¹¹¹ See AEP Ohio Ex. 14 at JFT-1 p. 21-22.

¹¹² IGS Ex. 10 at 5.

¹¹³ *Id.*

¹¹⁴ *Id.*

that meets their reliability requirements from PJM and paying the capacity for REPA resources which are not participating in the capacity auctions.¹¹⁵

Thus, [u]nder either of these options, it is unlikely that Capacity associated with the REPA[s] would have any value in the PJM capacity auction and the analysis provided in support of the IRP is therefore fundamentally flawed.”¹¹⁶

d. Even accepting AEP Ohio’s flawed rate projections, the ESP would flunk the MRO vs. ESP price test

Under R.C. 4928.143(C)(1), the ESP and all of its terms must be “more favorable in the aggregate as compared to the expected results that would otherwise apply under section 4928.142 of the Revised Code.” The current electric security plan will end on May 31, 2024.¹¹⁷ The Commission’s order in the ESP case did not want to “speculate as to the quantitative impact” of this yet to be filed application.¹¹⁸ Based upon AEP Ohio’s own rate projections, however, the proposal backloads the alleged benefits to a timeframe that occurs outside of the ESP currently in effect.

Specifically, AEP Ohio witness Torpey’s own testimony shows that the solar REPAs will lose money through 2024 and only begin to make up for past losses starting in 2025 (and only barely).¹¹⁹ Likewise, the wind REPAs will lose money through 2026

¹¹⁵ *Id.* at 6.

¹¹⁶ *Id.*

¹¹⁷ *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan, Case Nos. 16-1852-EL-SSO, et al., Opinion and Order at 5 (Apr. 25, 2018).*

¹¹⁸ *Id.* at 123.

¹¹⁹ AEP Ohio Ex. 14 at JFT-1 p. 21-22.

and only start to make up for past losses in 2027 (and only barely).¹²⁰ Moreover, as stated above, the REPAs do not actually start to make up for the mountain of earlier losses until 2028 when AEP Ohio assumes carbon regulations will be in place.¹²¹ That is nearly five years after the ESP ends. Even accepting AEP Ohio's flawed numbers as accurate, which they are not, the proposal should not be approved because it would cause the ESP to fail the ESP vs. MRO price test.

4. AEP Ohio's flawed study

In support, AEP Ohio filed an economic impact study, titled "Impacts of Solar Plant Construction and Operation on the Ohio Economy,"¹²² which was summarized and discussed in the direct testimonies of its authors, Dr. Stephen A. Buser and Bill Lafayette. The study, however, falls well short of providing any analysis or discussion of the proposal's impact on system reliability in the AEP Ohio load zone, and should not be used by the Commission to evaluate need in this case.

The authors acknowledge that the primary focus of the study is the potential economic and fiscal impacts of AEP Ohio's proposal to construct and maintain the two solar energy resources.¹²³ To that end, the study evaluated the proposal's economic impact on the Ohio economy on the value of goods and services produced, household earnings, employment, and gross domestic production; and included an analysis on the

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² AEP Ohio Ex. 12 at Ex. SB/BL-1.

¹²³ AEP Ohio Ex. 12 at 2-3.

tax effects for the state of Ohio and various local communities that might be generated by the construction and maintenance of the proposed solar facilities.¹²⁴ An examination of the potential “social” and “public health benefits” that the Study’s authors regard as affiliated with AEP Ohio’s proposal also was included.¹²⁵

Yet, the study provided no economic analysis of the relationship between the need to improve system reliability in the AEP Ohio load zone and the cost to construct the solar generation facilities. The study merely attempted to quantify the economic stimulus that Ohioans might enjoy if AEP Ohio’s proposal is approved. Indeed, renewable project development of any scale in most any industry often can be relied upon to provide direct, indirect, and induced impacts in the region where the project is developed.¹²⁶ Thus, similar benefits could be delivered by competitive development of renewable energy resources.

Under the regulated utility construct, however, an assessment of a potential economic stimulus is irrelevant to the Commission’s evaluation of whether the need for additional generation is sufficient to justify recovery of that facility’s costs by an EDU. The study AEP Ohio offered in support of its proposal does not provide an economic analysis that explores the relationship between improved system reliability and the cost to construct and maintain the proposed solar facilities. The study provides nothing more than an estimate of economic and fiscal impacts that may or may not come true.

¹²⁴ *Id.* at 3-5.

¹²⁵ AEP Ohio Ex. 12 at Ex. SB/BL-1, 14-21.

¹²⁶ Tr. Vol. I at 105.

Accordingly, the study is immaterial to an evaluation of need under R.C. 4928.143(B)(2)(c) and should not be considered by the Commission in its review of this case.

a. The economic impact analysis (the study) is flawed and misleading and does not support a finding of need

The Commission should not give any weight to the study that AEP Ohio filed in support of its Application because the conclusions reached are flawed and misleading. The study's authors concede that their analysis failed to consider the potential negative economic or fiscal impacts that AEP Ohio's proposal might have on the competitive market and renewable resource generators.¹²⁷ The authors also acknowledge that the Study failed to account for any of the potential charges that all customers in the AEP Ohio service territory would be required to pay if the proposal is approved under R.C. 4928.143(B)(2)(c).¹²⁸ AEP Ohio's contribution to the study's projected economic stimulus is also exaggerated given that its authors admit those impacts are likely to be realized absent the utility's participation in the project's development.¹²⁹ Accordingly, the Commission should not rely upon the study in its evaluation of AEP Ohio's Application in this proceeding.

b. The study failed to evaluate potential economic impacts on the competitive market and the development of renewable generation resources

¹²⁷ Tr. Vol. IV at 1100.

¹²⁸ *Id.* at 1141.

¹²⁹ *Id.* at 1087-1088.

The study that AEP Ohio filed in support of its Application promises that the proposed solar facilities will provide “critical economic benefits to the state, and specifically to Appalachian Ohio,” by creating new jobs, increasing earnings for Ohio workers, growing economic output, and growing Ohio’s GDP.¹³⁰ The study emphasized the economic, fiscal, and social benefits that AEP Ohio’s proposal is estimated to produce, yet it failed to consider the potential negative economic and fiscal impacts that the proposal might have on the competitive market.

Admittedly, neither of the study’s authors have a background in the energy industry.¹³¹ The authors also have no understanding of the operational methodology PJM uses to dispatch generation resources.¹³² Nor does it appear that the authors received any detailed training regarding the generation supply mix in the AEP Ohio load zone and PJM system to assist in completing their economic analysis.¹³³ Perhaps it is for those reasons that the study failed to evaluate the potential economic impacts that AEP Ohio’s zero-cost renewable generation proposal might create for other non-subsidized marginal resources in the Ohio competitive market.

Indeed, in a separate part of AEP Ohio’s case, it touts that the addition of zero-cost resources into the wholesale market results in a reorganization of the PJM dispatch order.¹³⁴ Consequently, other resources such as coal and natural gas receiving less

¹³⁰ AEP Ohio Ex. 1 at 3.

¹³¹ Tr. Vol. IV at 1098, 1143.

¹³² *Id.* at 1102, 1143.

¹³³ *Id.* at 1118.

¹³⁴ See AEP Ohio Exs. 5 and 14 (regarding the alleged LMP price suppression benefits).

market-based revenue.¹³⁵ As dispatch and revenue declines, the consumption of Ohio-produced coal and natural gas may decline with it. The study failed to examine whether the proposal will produce any adverse job-related impacts on Ohio's oil, gas, and coal mining industries.¹³⁶ Moreover, as a result of decreased dispatch and lower revenue, there is an increased likelihood that those same coal or natural gas plants are forced into retirement.¹³⁷ PJM's own study of the impact of proliferation of renewable resources has indicated that this may occur.¹³⁸ Such retirements could increase energy and capacity prices, since renewable resources are intermittent and may not be available when the system is under stress. In each instance, the study's authors relied upon assumptions and information provided directly from AEP Ohio to validate their conclusion that no adverse economic impacts can be attributed to the proposal.¹³⁹

c. The study fails to evaluate potential to crowd out development of other renewable generation resources

The study also ignores the potential economic impacts that AEP Ohio's proposal will have on the development of competitive renewable resources. Specifically, the study fails to consider whether AEP Ohio's proposal could have a chilling effect on private development of renewable generation projects.¹⁴⁰ Although the study and AEP's

¹³⁵ Tr. Vol. V at 1314.

¹³⁶ Tr. Vol. IV at 1091.

¹³⁷ *Id.* at 1146; *see id.* at 1102, 1143

¹³⁸ IGS Ex. 2 at 1,7, 21-22, and 48.

¹³⁹ Tr. Vol. IV at 1096, 1102, 1143, 1146.

¹⁴⁰ *Id.* at 1100.

Application tout the potential job growth associated with the proposal, an inherent risk exists that fewer Ohio jobs could be netted over the long-term as other, non-regulated renewable developers question the stability of the macro economic factors in the Ohio solar market.¹⁴¹ Indeed, AEP Ohio's proposal could stifle renewable project development for all customer classes (i.e. residential, commercial and industrial, utility scale, small scale, etc.) in that developers such as IGS Solar may be unwilling to bear the risks associated with renewable investments when an EDU offering the same, or similar, service is not required to do the same.¹⁴² Likewise, the study failed to consider the potential suppression of the price for renewable energy credits, which, all else being equal, would reduce the economic viability of competitive renewable development.¹⁴³ As IGS Witness White testified, "[i]f AEP is allowed to build 400 MW of solar in Ohio, irrespective of cost, and irrespective of whether Ohio needs the solar to meet its SRPS requirement, the SREC market in Ohio will tank."¹⁴⁴ Reducing the REC price in Ohio would result in "lowering the incentive for those developers to build solar in Ohio."¹⁴⁵

The study also failed to consider the potential economic impact of AEP Ohio's proposal on renewable land lease rates. Here again, the study turned a blind eye to the fact that participation by a regulated entity in a competitive market often distorts market

¹⁴¹ Tr. Vol. IX at 2591.

¹⁴² *Id.* at 2584.

¹⁴³ "If AEP is allowed to build 400 MW of solar in Ohio, irrespective of cost, and irrespective of whether Ohio needs the solar to meet its SRPS requirement, the SREC market in Ohio will tank." IGS Ex. 11 at 20.

¹⁴⁴ IGS Ex. 11 at 20.

¹⁴⁵ *Id.*

pricing.¹⁴⁶ In the case of renewable land leases, recent regulation in the New Jersey competitive market has demonstrated that permitting EDUs to recover the even a small amount solar generation costs tends to artificially inflate land lease prices, because the rate recovery mechanism permits the EDU to offer a higher land lease rate than the market otherwise expects.¹⁴⁷

Flaws in the study are further evidenced in the authors' acknowledgement that in performing their analysis, no inquiry was made concerning the development of solar facilities by entities other than AEP Ohio.¹⁴⁸ The study failed to undertake an evaluation of whether the Ohio competitive market can provide the same, or similar, services identified in AEP Ohio's proposal without the need to recover any economic shortfalls through nonbypassable rates.¹⁴⁹ For example, IGS Solar recently developed and installed a 4 megawatt utility-scale solar facility in Cuyahoga County, Ohio and has plans to invest \$450 million in solar development in Ohio and nationwide in the next three years.¹⁵⁰ Corporate entities also entered into 6.4 gigawatts of virtual PPA offtake agreements¹⁵¹ during 2018. Both cases demonstrate that the competitive market is well-situated to meet customer preferences and provide renewable generation of all scales,

¹⁴⁶ Tr. Vol. VI at 1782.

¹⁴⁷ *Id.* at 1790.

¹⁴⁸ Tr. Vol. IV at 1119.

¹⁴⁹ Tr. Vol. VI at 1804.

¹⁵⁰ Tr. Vol. IV at 2572.

¹⁵¹ Tr. Vol. VI at 1793.

yet an analysis of renewable activity in the Ohio competitive market appears to have played no role in the Study's economic evaluation.

d. The Study's Failure to Evaluate the Economic Impact of Potential Billing Increases Associated with AEP Ohio's Proposal is Misleading and Exaggerates Other Portions of the Economic Analysis

The failure of the study to account for any of the potential charges that all customers in the AEP Ohio service territory would be required to pay if AEP Ohio's proposal moves forward is not only misleading, but also exaggerates other portions of the economic analysis.¹⁵² Indeed, the study's failure to account for any potential rate increases is based on the flawed assumption that the REPAs will be economic over time.¹⁵³ In preparing that portion of the economic analysis, the study's authors relied upon information provided exclusively by AEP Ohio, and in doing so, made no attempt to evaluate whether customers would in fact break even as AEP Ohio suggests.¹⁵⁴ The study simply assumed that the proposal would have no adverse economic impact on household income, and therefore ignored the possible ripple effect that any rate increases might have on the fiscal impacts cited in support of AEP Ohio's proposal.

The study evaluated certain economic and fiscal impacts and concluded that AEP Ohio's proposal will increase earnings for Ohio workers, grow economic output, and grow Ohio's GDP.¹⁵⁵ To arrive at that conclusion, the authors evaluated revenue generated

¹⁵² Tr. Vol. IV at 1141.

¹⁵³ AEP Ohio Ex. 14 at JFT-1 p. 21-22; Tr. Vol. IV at 1141.

¹⁵⁴ Tr. Vol. IV at 1141.

¹⁵⁵ AEP Ohio Ex. 12 at Ex. SB/BL-1

from state and county sales and use taxes paid on purchases made from the direct, indirect, and induced wages associated with AEP Ohio's proposal.¹⁵⁶ To project the state and county sales and use taxes paid, the study estimated the share of household earnings spent on taxable income.¹⁵⁷

Since the authors did not consider the potential rate increases that AEP Ohio's customers would be required to pay, it only seems reasonable to conclude that the state and county sales and use tax benefits identified in the Study are exaggerated. The study failed to consider that as AEP Ohio's billing rates increase, that portion of income that Ohioans might otherwise be able spend on goods and services similarly declines. As spending declines, so too will the amount of sales and use tax revenue paid on purchases made from the direct, indirect, and induced impacts associated with AEP's proposal. Yet, the study failed to account for that reduction in tax revenues in its analysis.¹⁵⁸

e. AEP Ohio's contribution to the study's projected economic stimulus is exaggerated

AEP Ohio's contribution to the study's projected economic stimulus is also exaggerated given that its authors admit those impacts are likely to be realized absent the utility's participation in the project's development.¹⁵⁹ The foundation for AEP Ohio's proposal is the 20-year REPAs it executed to acquire the energy, capacity, and

¹⁵⁶ *Id.* at Ex. SB/BL-1, 13.

¹⁵⁷ *Id.*

¹⁵⁸ Tr. Vol. IV at 1142.

¹⁵⁹ Tr. Vol. IV at 1087-88.

environmental attributes produced by two solar facilities.¹⁶⁰ The proposed facilities will operate on AEP Ohio's behalf,¹⁶¹ but the construction and maintenance associated with those renewable generation resources shall be performed by third-party solar developers.

It should come as no surprise then that the authors admit the construction jobs that AEP Ohio's proposal is expected to produce will be realized regardless of whether the utility participates as an investor.¹⁶² The authors also concede that the projected earnings generated from those construction jobs are similarly unrelated to AEP Ohio's involvement in the development of the solar generation resources.¹⁶³ Likewise, the authors confirm that the tax benefits and permanent employment impacts identified in the Study shall inure to the benefit of Ohioans absent AEP Ohio's participation.¹⁶⁴ In short, any perceived benefits that AEP Ohio might offer Ohioans through the development of the solar facilities are illusory and exaggerated.

AEP Ohio's Amended LTFR filing concedes that "PJM wholesale markets are adequately supplying capacity and energy to the AEP Ohio load zone."¹⁶⁵ To that end, similarly situated competitive markets have encouraged EDUs to develop solar through its unregulated affiliate(s) after finding insufficient need exists to justify the development

¹⁶⁰ AEP Ohio Ex. 1 at 2.

¹⁶¹ *Id.*

¹⁶² Tr. Vol. IV at 1149.

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 1149-1150

¹⁶⁵ AEP Ohio Ex. 2 at 3.

of additional generation facilities using ratepayer dollars.¹⁶⁶ The results of the study make clear that certain deregulated AEP Ohio affiliates such as AEP Energy Partners, AEP OnSite Partners, AEP Renewables, or another unaffiliated entity can provide the same, or similar, economic and fiscal benefits through renewable development absent the use of ratepayer dollars to subsidize generation development costs. Accordingly, AEP Ohio's contribution to the study's projected economic stimulus should be given no weight.

5. AEP Ohio's third party projections of solar costs favor letting the market work

AEP Ohio concedes that, even under its own optimistic forecast of power prices, its proposal will cost customers money for several years.¹⁶⁷ But AEP Ohio urges the Commission to rush to authorize its request because the Investment Tax Credit and Production Tax Credit are being phased out over time.¹⁶⁸ As a result, AEP Ohio claims that the cost of construction of renewable energy resources will only go up; therefore, the Commission must act now. The Commission should not fall for AEP Ohio's fear mongering, given that its argument is contradicted by evidence that it presented in its own direct case.

Specifically, AEP Ohio witness Torpey identified that solar prices are falling like a stone and that trend is expected to continue. Residential solar photovoltaic costs are projected to be **half of what they are today around the 2021/2022 time frame.**¹⁶⁹

¹⁶⁶ Tr. Vol. VI at 1782.

¹⁶⁷ AEP Ohio Ex. 14 at JFT-1 p. 21-22.

¹⁶⁸ AEP Ohio Ex. 3 at 15.

¹⁶⁹ AEP Ohio Ex. 14 at JFT-1 p. 13.

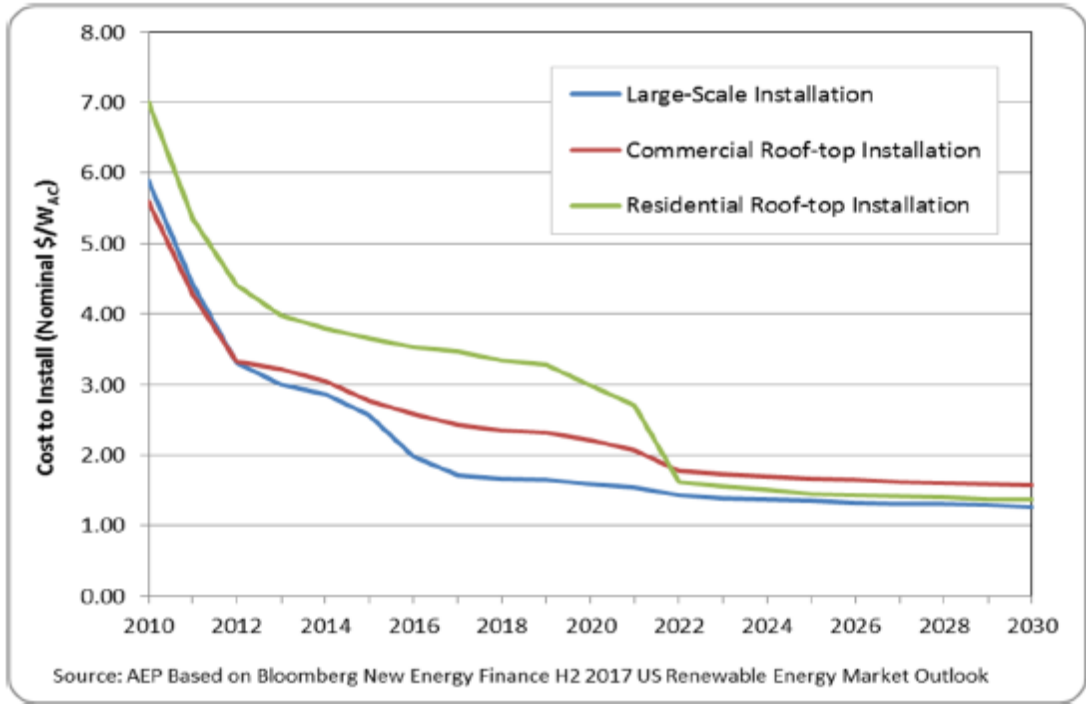


Figure 2. PJM Average Solar Photovoltaic (PV) Installation Cost (Nominal \$/Watt AC) Trends

More recent projections of solar prices provided by AEP Ohio in another state projects that residential solar installed costs in 2022 will be \$1.50 per watt, which is even cheaper than the large scale solar projections identified above.¹⁷⁰ Given the declining price of solar, on cross-examination, AEP Ohio conceded that it could provide higher present value savings for customers if it waited to execute the REPAs until power prices do in fact increase.¹⁷¹

Although a large portion of AEP Ohio's case focuses on the advantages of economies of scale and its proposal, the cost difference between constructing large-scale solar and residential rooftop solar is projected to compress significantly—and even more

¹⁷⁰ IGS Ex. 8.

¹⁷¹ Tr. Vol. V at 1331.

so in AEP Ohio's most recent analysis.¹⁷² Generally, smaller solar projects result in more jobs per MW installed.¹⁷³

Moreover, there are economic advantages to behind the meter generation that are wholly absent from large scale generation. As IGS witness Rever testified, "customer-sited behind the meter solar is both connected to the distribution system and co-located with load, it provides certain benefits that transmission-sited solar does not bring, particularly in the area of avoided distribution expenses."¹⁷⁴ Moreover, behind the meter generation enables a customer to indirectly obtain value from the PJM capacity market. If behind the meter generation is operating during the 5 PJM coincident peak hours, it will reduce a customer's peak load contribution on a one to one basis.¹⁷⁵ On the other hand, in order to directly participate in the PJM capacity market, a renewable generation resource must significantly derate their biddable capacity to mitigate the risk associated with capacity performance penalties. Thus, while AEP Ohio assumes that solar may only bid 19% of nameplate capacity into the capacity auction and 5% of wind nameplate capacity, behind the meter generation may reduce a customer's peak load contribution by up to 100% of nameplate capacity.¹⁷⁶ Consequently, behind the meter generation provides customer benefits from a capacity perspective that are otherwise unavailable from in front of the meter large scale generation.¹⁷⁷

¹⁷² IGS Ex. 8.

¹⁷³ Tr. Vol. IX at 2599.

¹⁷⁴ IGS Ex. 9 at 12; *see also* Tr. Vol. V at 1271; Tr. Vol. V at 1356-57.

¹⁷⁵ Tr. Vol. V at 1348.

¹⁷⁶ Tr. Vol. I at 69.

¹⁷⁷ Tr. Vol. V at 1360.

Moreover, the evidence suggest that the competitive development of renewable energy will bring many jobs to Ohio. Indeed, competition has been highly successful in that respect. IGS alone employs over 700 individuals in Ohio.¹⁷⁸ IGS had achieved this success and undoubted economic stimulus within the AEP service territory without saddling AEP Ohio's customers with non-bypassable charges.

IGS, moreover, is rapidly expanding IGS Solar's operations and is on pace to invest several hundred million dollars over the next three years.¹⁷⁹ IGS Solar is hopeful that it will develop significant renewable resources in Ohio. But AEP Ohio's proposal would create additional barriers to investment in the state through the combination punch of (1) depressing the price for renewable energy credits, which would harm the economics of other renewable projects,¹⁸⁰ and (2) reducing the demand for renewables that would otherwise exist absent AEP Ohio's proposal moving forward, thereby reducing and distorting the pool of willing buyers of renewable energy in the market.¹⁸¹

6. Customers have several options to obtain renewable energy—should they desire it.

Setting aside the litigation of this proceeding for a moment, it is important to note that distribution customers of AEP Ohio already have several options to procure renewable electricity—to the extent they desire it. There are currently 36 residential renewable electricity offers posted on the apples to apples website, including offers for

¹⁷⁸ IGS Ex. 11 at 3.

¹⁷⁹ Tr. Vol. IX at 2600.

¹⁸⁰ IGS Ex. 11 at 20; IGS Ex. 12 at 3-4.

¹⁸¹ Tr. Vol. VI at 1817.

renewable electricity produced by resources physically located in Ohio.¹⁸² In fact, IGS makes available a competitive renewable electric product that is sourced from all-Ohio electric generation resources.¹⁸³ Moreover, customers may purchase their own renewable generation resources or enter into a purchase power agreement with a developer of such resources.¹⁸⁴ Through such PPAs, customers may install solar with “no up-front cost to the customer so that a customer can meet all, or a portion of, its electric needs through solar power.”¹⁸⁵ Indeed, even percentage of income payment plan customers have the ability to purchase renewable energy credits.¹⁸⁶

Market-based approaches are also more favorable than AEP Ohio’s proposal, given that they actually result in the delivery of a renewable product to customers. Indeed, “AEP would not be retiring SRECs or RECs on customer’s behalf but rather would sell the RECs generated by the generation facilities into the wholesale REC market.”¹⁸⁷ “By law, a customer is not being supplied by renewable generation unless the REC or SREC from the facility is retired by the customer, or an entity acting on the customer’s behalf.”¹⁸⁸ Thus, AEP Ohio’s proposal does not even achieve the purpose for which it is intended,

¹⁸² Tr. Vol. II at 305-06; IGS Ex. 11 at 15.

¹⁸³ IGS Ex. 11 at 15.

¹⁸⁴ *Id.* at 15.

¹⁸⁵ *Id.*

¹⁸⁶ Tr. Vol. VII at 1982-84.

¹⁸⁷ IGS Ex. 11 at 16.

¹⁸⁸ *Id.*

since “AEP’s customers would not actually be supplied electricity by the renewable generation facilities.”¹⁸⁹

7. Rather than picking winners and losers, the Commission should focus on removing barriers to developing renewable generation

Rather put the risk and cost of wind and solar development on all customers, IGS recommends that the Commission’s focus on establishing competitive neutral incentives and reducing barriers to customer sited generation. IGS Witness Rever identified three ways the Commission could remove barriers to deploying behind the meter generation:

- 1) Improve net metering, specifically by adopting an annual netting period for net metering, rather than the current structure that only allows for monthly netting.
- 2) Establish distribution rate design for commercial customers that acknowledges the role that solar plays in reducing distribution system peak demand; and
- 3) Continue to transform the manner in which it performs wholesale settlements.¹⁹⁰

These are just a few competitively neutral policies that the Commission can put in place to empower customers to construct distributed generation resources that meet their individuals preferences.

IV. CONCLUSION

AEP Ohio’s Amended LTFR application concedes that it does not need to construct generation to satisfy a reliability concern. Given this fact, based upon the plain language of the ESP statute, the balance of Chapter 4928, and historical context regarding the passage of SB 221, it is clear that AEP Ohio’s proposal to construct 900

¹⁸⁹ *Id.*

¹⁹⁰ IGS Ex. 9 at 6. See also *id.* at 7-11.

MWs of renewable generation lacks merit. The purported desire of a portion of AEP Ohio's customers to develop additional renewable resources within this state does not translate to a need to do so in contravention to the General Assembly's policy framework. This is especially true given that customers have access to several different renewable energy products through the competitive market.

Rather than indulging AEP Ohio's request to return to a bygone era, the Commission should focus its efforts on eliminating barriers to deployment of customer sited generation. In doing so, the Commission can empower individual customers to deploy clean renewable resources to meet actual consumer preference, whether it is greater than or less than what AEP is proposing in this case.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing *Initial Brief of Interstate Gas Supply, Inc. and IGS Solar, LLC*, was served this 6th day of March 2019 via electronic mail upon the following:

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