BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

FILE	In the Matter of the Filing by Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company of a Grid Modernization Business Plan.	:	Case No. 16-481-EL-UNC			
	In the Matter of the Filing by Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company Application for Approval of a Distribution Platform Modernization Plan.	: : : :	Case No. 17-2436-EL-UNC			
	In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company to Implement Matters Relating to the Tax Cuts and Jobs Act of 2017.	: : : :	Case No. 18-1604-EL-UNC			
	In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Approval of a Tariff Change.	::	Case No. 18-1656-EL-ATA	PUC		
	REPLY BRIEF					

REPLY BRIEF OF THE SMART THERMOSTAT COALITION

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REPLY BRIEF OF THE SMART THERMOSTAT COALITION

I. INTRODUCTION

Of the seven initial briefs filed by signatories to the Stipulation,¹ only three address Smart

Thermostat Coalition ("STC") witness Tamara Dzubay's recommendation that the Stipulation

¹ As used herein, "Stipulation" refers to the original stipulation filed in these dockets on November 9, 2018, as modified by the supplemental stipulation filed January 25, 2019.

be modified to provide for a smart thermostat rebate program as a component of Grid Mod I, a measure necessary to assure that the Companies' ratepayer-funded investment in advanced metering infrastructure ("AMI") will achieve the Companies' stated objective of maximizing the benefits to customers² and to advance the grid modernization policy set forth in the Commission's PowerForward Roadmap.³ In this reply brief, STC will respond to the unfounded criticisms of Ms. Dzubay's proposal contained in the initial briefs of the Companies, Direct Energy Services, LLC / Direct Energy Business, LLC ("Direct Energy"), and the Ohio Energy Group ("OEG"). STC will also respond to the cookie-cutter arguments in the initial briefs of the signatory parties that assert that the Stipulation now before the Commission satisfies the Commission's familiar three-pronged test for evaluating stipulations, a proposition that all the non-signatory parties dispute.

II. ARGUMENT

A. THE COMPANIES' ATTACK ON STC WITNESS DZUBAY'S SMART THERMOSTAT REBATE PROPOSAL MISREPRESENTS THE RECORD, MISCASTS THE BASIS OF MS. DZUBAY'S RECOMMENDATION, AND IGNORES PERTINENT EVIDENCE.

The Companies begin their discussion of STC witness Dzubay's proposal with the charge that Ms. Dzubay "surmises, without any actual support, that Grid Mod I will not accomplish any of the Commission's PowerForward objectives because it does include a provision giving customers rebates to purchase smart thermostats."⁴ Of course, Ms. Dzubay said no such thing. Curiously, the footnote that accompanies this statement cites as the statement's source essentially

² Case No. 16-481-EL-UNC, Companies' Grid Modernization Business Plan filed February 26, 2016, at 3.

³ See PowerForward: A Roadmap to Ohio's Electricity Future. The PowerForward Roadmap is accessible at <u>https://www.puco.ohio.gov/ industryinformation/industry-topics/powerforward/powerforward-a-roadmap-to-ohios-electricity-future/</u>.

⁴ Companies Initial Brief, 30.

all of Ms. Dzubay's direct testimony,⁵ but, rather than attempting to discredit the detailed analysis Ms. Dzubay offered to support her recommendation (which the Companies simply dismiss as being "without any actual support"), the footnote goes on to discuss ELPC witness Volkmann's smart thermostat recommendation.⁶ As a review of her testimony will show, Ms. Dzubay does not address any objectives of the Commission's PowerForward Roadmap other than those that are related to smart thermostat deployment, so to say that Ms. Dzubay claimed that, without a smart thermostat rebate, Grid Mod I will not accomplish *any* objectives of PowerForward Roadmap is just flat incorrect. As explained in her testimony, Ms. Dzubay's concern is that, although the Stipulation lays out a specific plan to deploying 700,000 smart meters along with supporting communications facilities, and a meter data management system and associated facilities, the Stipulation does not include a specific plan for deploying the enabling technologies so that customers will have the tools necessary to realize the benefits from the enhanced information that will become available as a result of AMI.⁷

After repeating the assertion that STC's proposal is not supported by record evidence, the Companies attempt to call into question Ms. Dzubay's qualifications, pointing out that Ms. Dzubay is not holding herself out as an expert in grid modernization and has "no experience at all working on any aspect of grid modernization."⁸ However, the record shows that Ms. Dzubay does have experience in forming and improving a smart thermostat rebate program of the type she

⁵ See Id., n. 154 (citing pp. 3-20 of Dzubay Direct).

⁶ See Id.

⁷ See Dzubay Direct, STC Exhibit 4, at 4.

⁸ See Companies Initial Brief, 31. As an aside, STC would note that the actual question posed to Ms. Dzubay regarding whether she had experience working on grid modernization was whether she had worked on any aspects of grid modernization investments "such as distribution automation or advanced distribution management systems." See Dzubay Cross, Tr. II, 282.

is recommending in this proceeding as a result of her role as one of the leaders of the collaborative formed in connection with ComEd's smart thermostat program in Illinois – a program that was successful in accelerating customer participation to help ComEd reach its ultimate goal of 1 million smart thermostats.⁹

Next, the Companies point out that Ms. Dzubay testified that she did not conduct any cost/benefit analysis related to grid modernization prior to filing her testimony. However, it is important to note that this answer was given in response to a carefully-worded question.¹⁰ When Staff counsel subsequently asked Ms. Dzubay if she had considered the cost impact of her proposal on customers, Ms. Dzubay explained that she did not receive the Companies' cost/benefit analysis until January 30th (which was after the January 25th due date for her direct testimony), but that she did subsequently run a cost/benefit analysis of her proposal, including the energy and peak demand savings described in her testimony, and that this analysis showed that her recommended program was net beneficial.¹¹

The Companies also criticize Ms. Dzubay for being uncertain if the Commission had the legal authority to implement her proposal.¹² This criticism stems from a question posed to Ms. Dzubay by counsel for Direct Energy. After confirming the Ms. Dzubay is not an attorney, Direct Energy's attorney asked Ms. Dzubay if she knew if the Commission has the legal authority to require the Company to provide the incentives she is recommending.¹³ Ms. Dzubay responded

⁹ See Dzubay Direct, STC Exhibit 4, at 2, 18; see also Dzubay Cross, Tr. II, 289-290.

¹⁰ See Dzubay Cross, Tr. II, 282.

¹¹ See Dzubay Cross, Tr. II, 300.

¹² See Companies Initial Brief, 31.

¹³ See Dzubay Cross, Tr. 297-298.

that she did not.¹⁴ One can only imagine the furor that would have erupted if, as a non-lawyer, she had offered a legal opinion on this subject. More to the point, the PowerForward Roadmap specifically permits grid modernization proposals to "include a rebate program for enabling technologies (e.g. smart thermostats) which can be paired with TOU rates offered through the SSO or through CRES provider offerings that utilize time-based pricing,"¹⁵ which should lay to rest any question regarding the Commission's authority to implement the program Ms. Dzubay recommends.

This brings us to the Companies' accusation that, because Ms. Dzubay appeared on behalf of a coalition of smart thermostat manufacturers, her recommendation is biased because it is in the financial interest of ecobee (her employer) and Google, LLC to sell as many smart thermostats as possible.¹⁶ STC trusts that the Commission will see this argument for the red herring it is. The PowerForward Roadmap is replete with references to the important role that the private sector will play in providing innovative technology that will not only benefit individual customers in terms of energy savings, but will also drive systemic benefits to the grid in terms of peak demand reduction.¹⁷ Further, as discussed in STC's initial brief, Ms. Dzubay's recommended rebate program is not limited to ecobee or Google, LLC smart thermostat products, but would cover any smart thermostat that has obtained and maintained ENERGY STAR certification from the US EPA, a designation that requires proven cooling energy savings of at least 10 percent and heating energy savings of at least 8 percent. These products are available from a variety of manufacturers in addition to ecobee and Google, LLC. And, although the Companies complain that Ms. Dzubay

¹⁴ See Dzubay Cross, Tr. II, 298.

¹⁵ PowerForward Roadmap, 31.

¹⁶ See Companies Initial Brief, 31.

¹⁷ See, e.g., PowerForward Roadmap, 24, 27.

is "seeking subsidies for the more expensive thermostat options available in the market,"¹⁸ she is doing so because the ENERGY STAR-certified products are the ones that will maximize the benefits to customers and the grid when paired with time-varying rates.

In response to the Companies' claim of "bias" due to self-interest, STC would also point out that the Environmental Law & Policy Center, the Natural Resources Defense Council, and the Ohio Environmental Council, which obviously have no financial stake in the sale of smart thermostats, support Ms. Dzubay's rebate recommendation¹⁹ and that, as noted above, the PowerForward Roadmap specifically permits such rebates. Indeed, regulatory commissions in other states have authorized similar rebate programs, notwithstanding that the thermostats involved are sold by the private sector,²⁰ and regulatory commissions in other states have rejected proposed grid modernization investments that were not accompanied by sound plans to maximize the potential of AMI.²¹ Further, all customers, including those that do not have smart thermostats, benefit from the widespread deployment of smart thermostats because of their peak demand reduction capability. As the Commission noted in the PowerForward Roadmap, storage and nonwire alternatives ("NWA") can forestall the need for costly distribution upgrades and improvements.²² As Ms. Dzubay explained, smart thermostats can replicate the benefits of energy storage at a fraction of the cost,²³ and also represent a type of NWA encouraged by the

¹⁸ Companies Initial Brief, 31.

¹⁹ See Environmental Intervenors Initial Brief, 28-36.

²⁰ See STC Initial Brief, 16, citing Dzubay Direct, STC Exhibit 4, at 4, 10-19.

²¹ See Petition Of Virginia Electric And Power Company, Case No. PUR-2018-00100 (Final Order Dated January 17, 2019, at 10), accessible at https://www.scc.virginia.gov/newsrel/r_gridsec_19.pdf. and Application of Louisville Gas and Electric Company and Kentucky Utilities Company, Case No. 2018-00005 (Order dated August 30, 2018, at *6 and *7, 2018 WL 4707374 (Ky.PSC).

²² See PowerForward Roadmap, 22, 24.

²³ See Dzubay Direct, STC Exhibit 4, at 15.

Commission in the PowerForward Roadmap. Indeed, the Rocky Mountain Institute ("RMI") Study cited in the PowerForward Roadmap showed that pairing time-varying rates with active technologies (*i.e.*, technologies that automate the customer response) reduced peak load by an additional 10 to 20 percent.²⁴

The Companies next state that, because the focus of these proceedings is on grid modernization, "STC's proposal seems oddly out of place," and follow this with the snide comment that, because STC is a first-time participant in a proceeding before this Commission, STC may have been "unaware that smart thermostat programs are addressed in Ohio through the energy efficiency and portfolio plan proceedings of electric utilities."²⁵ STC would respectfully submit that the only thing that is odd here is that the Companies, which have participated in countless Commission proceedings, do not seem to grasp the difference between an energy efficiency and peak demand portfolio plan designed to assist the utility in achieving certain statutory benchmarks and a utility request for approval of a huge customer-funded investment in grid modernization pursuant to a plan that must be designed to assure that customers will receive a net benefit from the funds they are asked supply. The Companies then point to the testimony of Staff witness Schaefer, who stated that the Companies' current portfolio plan includes over 60,000 smart thermostats under two different programs.²⁶ However, as the Environmental Intervenors point out in their initial brief, neither Ms. Schaefer nor the Companies know the

²⁴ See PowerForward Roadmap, 30, citing Rocky Mountain Institute, A Review of Alternative Rate Designs: Industry Experience with Time-Based and Demand Charge Rates for Mass-Market Customers (May 2016) at 6, accessible at https://rmi.org/insight/review-alternative-rate-designs.

²⁵ See Companies Initial Brief, 32.

²⁶ Id., citing Shaefer Cross, Tr. 1, 207.

actual level of smart thermostat penetration in the Companies' service territories.²⁷ If the Companies are attempting to suggest that, because their portfolio plan includes smart thermostats, a smart thermostat rebate program cannot or need not be part of their grid modernization plan, that notion should be rejected out of hand. The Commission was certainly well aware that the portfolio plans of various EDUs included some form of smart thermostat rebates when it issued the PowerForward Roadmap, yet the PowerForward Roadmap specifically provides that a proposed grid modernization plan "may include a rebate program for enabling technologies (e.g., smart thermostats)."²⁸

The Companies also assert that "except for an indirect benefit if coupled with timevarying rates, smart thermostats do not require grid modernization in order to provide any of their benefits to customers."²⁹ Although STC agrees that smart thermostats provide savings to customers even if there is no time-varying rate in place,³⁰ it is the capability of smart thermostats, via their time-of-use optimization feature, to adjust the temperature settings automatically to take full advantage of time-varying rates while keeping customers comfortable that sets smart thermostats apart from other enabling technologies.³¹ By no means is this an "indirect" benefit, particularly in the context of an AMI program that will make it possible for the Companies and CRES providers to offer time-varying rates. As discussed in STC's initial brief, numerous studies have confirmed that passive technologies (*i.e.*, those that require a manual customer response),

²⁷ See Environmental Intervenors Brief, 32.

²⁸ Power Forward Roadmap, 31.

²⁹ Companies Initial Brief, 32.

³⁰ See Dzubay Direct, 19-20.

³¹ See Dzubay Direct, 14.

such as IHDs and web portals/apps, are relatively ineffective in providing consistent energy and peak demand reduction savings even when paired with time-varying rates, whereas active technologies, such as PCTs, when control decisions are automated by the utility, produced significantly better results.³² However, today's smart thermostats are the next-generation technology, with features that obviate the need for affirmative action by the customer and/or control by the utility to achieve consistent energy savings and peak demand reduction.³³ Thus, smart thermostats will maximize the benefits of the investment in AMI, providing both customer savings and peak demand reduction, an outcome consistent with the stated objective of both the Companies and the PowerForward Roadmap.

B. DIRECT ENERGY'S CLAIM THAT IT IS PREMATURE TO CONSIDER A DETAILED PLAN FOR IMPLEMENTING ENABLING TECHNOLOGIES IS SHORT-SIGHTED AND INCONSISTENT WITH ACHIEVING THE OBJECTIVES OF THE POWERFORWARD ROADMAP.

Direct Energy begins its discussion of STC witness Dzubay's smart thermostat rebate proposal with the observation that "no party disputes the benefits of enabling technologies like smart thermostats,"³⁴ but goes on to criticize Ms. Dzubay's recommendation on what appear to be three separate grounds.

First, Direct Energy faults Ms. Dzubay for failing to recognize that "there are already multiple avenues through which customers can, and in fact many currently do, obtain enabling technologies and even receive incentives to do so," and goes on to state that "(m)any CRES suppliers provide smart thermostats to their customers at little or no cost." ³⁵ Where is the record

³² See STC Initial Brief, 7-9.

³³ See Dzubay Cross, Tr. II, 289.

³⁴ Direct Energy Initial Brief, 6.

support for these claims? There is no evidence showing how many smart thermostats are actually deployed in the Companies' service area, and even the Companies do not know the answer to this question.³⁶ Although the record does show that the Companies offer customer-funded sales-based smart thermostat rebate incentives to certain big box retailers under their current portfolio plan, as Ms. Dzubay explained, these are midstream rebates and there is no evidence that are passed on to customers by these retailers in the form of reduced prices for smart thermostats.³⁷ Further, Dominion East Ohio does not offer any form of a smart thermostat rebate,³⁸ so that cannot be one of the "multiple avenues" Direct Energy claims are available for customers to receive incentives to purchase smart thermostats. Moreover, there is no evidence that "many" CRES suppliers provide smart thermostats to customers within the Companies' service territories at little or no cost. The only evidence regarding a CRES provider incentivizing customers in the Companies' service territory to acquire smart thermostats came in the testimony of IGS witness Childress, who indicated that IGS has utilized the \$30 rebate available to marketers under the Companies' energy efficiency program (which is funded by the Companies' customers) for this purpose.³⁹ Thus, although Direct Energy has attempted to create the impression that there is no need for a specific plan for smart thermostat deployment as a part of Grid Mod I because smart thermostats are generally available at little or no cost, there is no evidence that shows this to be the case. Ironically, Direct Energy indicates that CRES suppliers want to make it easier for their customers

³⁶ See Environmental Intervenors Initial Brief, 32, citing Fanelli Cross, Tr. I, 211-213, and the Companies response to an ELPC interrogatory admitted as ELPC Exhibit 8.

³⁷ See Dzubay Cross, Tr. II, 298.

³⁸ See Id.

³⁹ See Childress Cross, Tr. I, 190-191.

to have access to enabling technologies because "they recognize that such technologies are a key component to their ability to offer a whole new slate of products, such as time-varying rates which are also contemplated by the Stipulation," ⁴⁰ but opposes Ms. Dzubay's plan that will accomplish that very objective.

Next, Direct Energy argues that there are too many factors to be considered as to the best way to distribute enabling technologies to be covered in a stipulation, and suggests that "these factors must be discussed and decided by interested parties as more information becomes available and as the system that will allow those technologies to be best used is created and implemented."⁴¹ STC does not agree that implementing a program to incentivize customers to utilize smart thermostats is premature. Under the terms of the Stipulation, the Grid Mod I program approved in this proceeding will be in place for a three-year term.⁴² This means that, under the Stipulation, there can be no funding for a smart thermostat rebate program until Grid Mod II, at the earliest, notwithstanding that the Stipulation requires the Companies, after consultation with the Grid Mod collaborative, to submit proposed time-varying rate offerings within six months of the date of the Commission's order in these cases.⁴³ Thus, time-varying rates will be available to customers that receive smart meters for over two years without providing those customers the tools that Direct Energy agrees are a "key component" of achieving the benefits of time-varying rates. As Ms. Dzubay explained, combining the smart meter rollout with a smart thermostat incentive program that results in reduced prices to customers will present an

⁴⁰ Direct Energy Brief, 6-7.

⁴¹ Direct Energy Brief, 7.

⁴² See Dzubay Direct, STC Exhibit 4, at 17.

⁴³ See Stipulation, 17.

ideal and cost-effective opportunity to educate customers simultaneously on smart meters, timevarying pricing, and smart thermostats.⁴⁴

Direct Energy also asserts that customers will be protected if the mid-deployment review by the third-party consultant determines that the benefits ascribed to time-varying rates and improved customer energy management in the Companies' cost/benefit analysis are not being achieved.⁴⁵ However, the fact is that, as counsel for ELPC developed through her cross examination of Companies' witness Fanelli, there is nothing in the Stipulation that permits the Commission to reduce the Companies' cost-recovery if Grid Mod I does not deliver the projected customer benefits.⁴⁶ Moreover, although the Stipulation permits the third-party consultant to conduct a cost/benefit analysis, there is no requirement that the consultant do so.⁴⁷ Thus, the customer protection cited by Direct Energy as a ground for deferring consideration of the smart thermostat rebate program proposed by STC witness Dzubay is illusory.

Finally, Direct Energy cautions the Commission against modifying the Stipulation to provide funding for a smart thermostat rebate program because such a measure could jeopardize the benefits of the Stipulation, most notably the "(h)undreds of millions" of dollars that will be refunded to customers under the stipulated resolution of the treatment of the 2017 Tax Cuts and Jobs Act (TCJA) benefit.⁴⁸ Two points bear mention.

⁴⁴ Id.

⁴⁵ See Direct Energy Initial Brief, 5.

⁴⁶ See Environmental Intervenors Initial Brief, 19-20, citing Fanelli Cross, Tr. I. 75-76.

⁴⁷ See Supplemental Stipulation, 5.

⁴⁸ See Direct Energy Initial Brief, 33.

First, as discussed in more detail *infra*, the only reason this is a concern is because the TCJA cases were consolidated with the totally unrelated grid modification cases, a measure which has allowed the Companies to hold the tax benefit refund hostage to the approval of their Grid Mod I plan. The Commission should not allow itself to be bullied into approval of Grid Mod I as proposed in the Stipulation by the threat that a party to the Stipulation might blow up the deal if the Commission modifies the Stipulation to include a smart thermostat rebate incentive.

Second, although stipulations are entitled to careful consideration, the Commission is still required to "determine what is just and reasonable from the evidence presented at the hearing."⁴⁹ Thus, if the Commission finds that the stipulated version of Grid Mod I will not produce the benefits the signatory parties ascribe to it, the Commission must either reject the Stipulation or must modify the Stipulation to ensure that the money that will be exacted from customers to pay for the \$516 million investment in Grid Mod I will produce a net benefit to customers. Plainly, it is not enough to say that, because the \$900 million associated with the TCJA refund exceeds the \$516 million authorized for Grid Mod I investment, the Stipulation, as a package, benefits ratepayers and the public interest and, thus, satisfies the second prong of the Commission's test for evaluating stipulations. Indeed, one can reasonably argue that the \$900 million refund is not actually a benefit of the Stipulation in that the Companies, like all other large jurisdictional rate-regulated public utilities, were already subject to a Commission order directing them to "pass along to consumers the tax savings resulting from the TCJA."⁵⁰ Be that as it may, the question of

⁴⁹ Duff v. Pub. Util. Comm., 56 Ohio St.2d 367, 379 (1978).

⁵⁰ See In The Matter Of The Commission's Investigation of the Financial Impact of the Tax Cuts And Jobs Act of 2017 on Regulated Ohio Utility Companies, Case No. 18-0047-AU-COI (Entry January 10, 2018, ¶ 29).

whether the Grid Mod I investment is cost-justified is entitled to the same scrutiny that it would have received if the four cases now before the Commission had not been consolidated.

C. OEG'S CRITICISM OF STC WITNESS DZUBAY'S PROPOSED SMART THERMOSTAT REBATE PROPOSAL IS WITHOUT MERIT.

On brief, OEG asserts that STC witness Dzubay's recommended smart thermostat rebate program, with its proposed \$30 million budget, "seems primarily aimed at increasing their members' already substantial market share at the expense of FirstEnergy's customers."⁵¹ Although STC has already addressed this "financial self-interest" argument in its earlier response to the Companies' initial brief, STC would again point out that, under Ms. Dzubay's proposal, all ENERGY STAR-certified smart thermostat products would eligible for the rebate, not just the smart thermostat products of STC's members, ecobee and Google, LLC. However, STC feels compelled to address the implication in OEG's brief that Ms. Dzubay was deliberately trying to hide ecobee's market share, even though ecobee's share of the smart thermostat market has nothing to do with the merits of her recommendation and is simply a reflection or customer choice and preferences.

After stating that the costs the Companies' customers would incur in connection with Ms. Dzubay's smart thermostat rebate "would be incurred largely to help increase Google and ecobee's share of the smart thermostat market" – which is patently false⁵² – OEG then comments that "Attorney Examiner Price uncovered at the hearing" that ecobee's market share is already

⁵¹ OEG Initial Brief, 4.

⁵² Ms. Dzubay's proposal is designed to ensure that customers receive a the maximum possible net benefit for the \$516 million they will pay for Grid Mod I.

substantial.⁵³ This refers to questions posed by the attorney examiner following up on Ms. Dzubay's earlier response to a question by OEG's attorney asking Ms. Dzubay the "approximate market share of ecobee and the Nest thermostats with respect to the smart thermostat market," to which she had replied that the information was confidential.⁵⁴ During a break in the hearing, the attorney examiner located a press release issued in connection with a 2018 ecobee financing transaction that stated that "ecobee has acquired over a third of the smart thermostat market."⁵⁵ Ms. Dzubay agreed that publicly available information of this type was not confidential, but noted that she had been instructed that Ohio market share information was confidential. ⁵⁶ In any event, this was not a "gotcha" moment as OEG implies. Ms. Dzubay stated at the outset of her direct testimony that ecobee and Google are the industry leaders is smart thermostat technology.⁵⁷ Again, under the smart thermostats would be eligible for the rebate, not just those manufactured by ecobee and Google, LLC.

D. THE COMMISSION SHOULD REJECT THE GRID MOD I COST/BENEFIT ANALYSIS APPENDED TO THE STIPULATION ON MULTIPLE GROUNDS.

1. The Cost-Benefit Analysis Appended to the Stipulation Is Not Consistent with the Commission's Policy Set Forth in the PowerForward Roadmap.

Although all the briefs filed by signatory parties maintain that the Stipulation satisfies the Commission's three-pronged test for evaluating stipulations, STC submits that this is not the case.

⁵³ OEG Initial Brief, 4-5.

⁵⁴ Dzubay Cross, 292-293.

⁵⁵ See Attorney Examiner's Exhibit 1.

⁵⁶ See Dzubay Attorney Examiner Examination, Tr. Vol. II, 307-308.

⁵⁷ See Dzubay Direct, 1.

The PowerForward Roadmap clearly articulates the Commission's rational for requiring that requests for approval of grid modernization investments be accompanied by a cost/benefit analysis.

Furthermore, in requests for grid modernization investment, it only makes sense that an EDU include a **cost/benefit analysis** with the application. This way, the Commission and stakeholders can transparently evaluate whether a grid modernization investment should be made in the first place. (emphasis *sic*)⁵⁸

STC begins by noting that, in this instance, there is no EDU-filed application that contains the particulars of the Grid Mod I program. Instead, the details of Grid Mod I are set out in a Stipulation that was orchestrated and filed by the Companies in lieu of submitting an actual application. Further, the only reference to a cost/benefit analysis in the body of the Stipulation appears in Section V.C.a., which states, in its entirety, as follows:

> <u>Positive Cost-Benefit Analysis</u>. The Companies, Staff and other Signatory Parties agree that Grid Mod I produces a positive costbenefit analysis (on a net present value basis). (See in Attachment B.)⁵⁹

When one then turns to Attachment B to the Stipulation expecting to find a cost/benefit analysis, one finds only a 4-inch by 2.5-inch table that compares estimated Grid Mod I benefits of \$1,782,000 (nominal) and \$808,000 (NPV) with net estimated costs of \$683,000 (nominal) and \$574,000 (NPV) to show an estimated benefit-to-cost ratio of 2.6 (nominal) and 1.4 (NPV).

This brief, opaque summary cannot be what the Commission had in mind when it indicated in the PowerForward Roadmap that an application should be accompanied by a cost/benefit analysis that would permit a transparent evaluation as to whether a particular grid modernization investment should be made in the first place. The table contains no breakdown of

⁵⁸ PowerForward Roadmap, 27.

⁵⁹ Stipulation, 10.

the estimated costs or benefits by Grid Mod I investment component, no explanation of the methodology that was employed to derive the estimated costs or benefits, and no indication of the assumptions that were involved. The failure of the Companies to file the entire cost/benefit analysis along with the Stipulation created the anomalous situation in which a party that wished to attack the underlying cost/benefit analysis had to put the cost/benefit analysis into the record, whereas the production of this evidence should have been the obligation of the parties with the burden of proof with respect to the reasonableness of the analysis, *i.e.*, the Companies and the other signatory parties. To the extent that the cost/benefit analysis contained information that the Companies filing a public version of the analysis with the confidential information redacted, and with any confidential portions filed under seal pursuant to a motion for a protective order. Instead, contrary to the Commission's expectations set out in the PowerForward Roadmap, the Companies filed nothing to support the summary table set forth in Attachment B to the Stipulation.

When STC raised this issue at the outset of the hearing, the attorney examiner opined that the PowerForward Roadmap "was never intended to be a detailed set of procedural guidelines for dealing with these cases," and that it was not the Commission's intent "to limit the ability of the attorney examiners to manage these dockets."⁶⁰ STC agrees that the PowerForward Roadmap is not a rule, procedural or otherwise. However, there can be no question that the PowerForward Roadmap is an extraordinarily thorough and well-documented statement of Commission policy. Thus, the Commission's expectation that a transparent cost/benefit analysis would accompany any request for approval of a grid modernization investment cannot simply be dismissed, and the

⁶⁰ Attorney Examiner Price, Tr. I, 21.

Companies' failure to present such an analysis causes this element of the Stipulation to fail the second-prong of the three-prong test because this failure is inconsistent with an important principle established by the Commission. Further, STC in no way intended to suggest that the attorney examiners could not manage proceedings involving the presentation of confidential information. Rather, STC was merely attempting to point out the paradox that was created by forcing opponents of the Stipulation to put the Companies' cost/benefit analysis into evidence and to highlight its concern that this could be seen as flipping the burden of proof from Companies to the intervenors opposing the Grid Mod I component of the Stipulation. STC takes some comfort in the attorney examiner's assurance that the Companies still have the burden of proof,⁶¹ and urges the Commission to keep this standard firmly in view in considering the Stipulation.

- 2. <u>The Companies have Failed to Sustain their Burden of Proving that the</u> <u>Results of the Cost/Benefit Analysis Set Forth in Attachment B to the</u> <u>Stipulation Are Reasonable</u>.
 - a. The Companies produced no evidence in their case in chief to support the reasonableness of the cost/benefit analysis.

As discussed above, the only information regarding the cost/benefit analysis contained in the Stipulation is the seven-line summary of the results of the analysis set forth in Attachment B. The Companies did not introduce the underlying cost/benefit analysis into evidence, and the only mention of the analysis in Companies' witness Fanelli's direct testimony is housed in a single paragraph, which merely reiterates the information contained in Attachment B to the Stipulation and adds that the cost/benefit analysis was "developed in collaboration with the Commission Staff."⁶² However, the testimony of Staff witness Shaefer casts doubt on the impression Mr.

⁶¹ Id.

⁶² See Fanelli Direct, Companies Exhibit 2, at 10.

Fanelli attempted to create with respect to the Staff's role in the development of the cost/benefit analysis. On cross examination, Ms. Schaefer testified that she was "not supporting the CBA directly," but that Staff had reviewed the assumptions underlying the analysis and "generally. . . agreed with all those assumptions" and "thought they were reasonable."⁶³ In any event, the important point is that, regardless what the Staff may have thought of the Companies' cost/benefit analysis, that does not relieve the Companies from their burden of proving, on the record, that the analysis is reasonable.

b. The mere fact that the signatories to the Stipulation "agree that the Grid Mod I produces a positive cost-benefit analysis" does not obviate the need for record support for the analysis.

The "serious bargaining" prong of the three-part test applied by the Commission in evaluating stipulations is founded on the assumption that, when parties with competing interests are able to reach a hard-bargained compromise with respect to various elements of a stipulation, that compromise can be accorded substantial weight by the Commission. However, in this instance, despite the fact that all the initial briefs of the signatory parties pay lip service to the "serious bargaining" standard, there is every reason to believe that the stipulated "agreement" that the proposed Grid Mod I investment is net beneficial is not premised on any sort of bargained compromise by parties with competing interests, but, rather, is a function of the artful strategy the Companies employed by combining the grid modernization cases with the Companies' totally unrelated 2017 Tax Cuts and Jobs Act ("TCJA") refund case for purposes of the Stipulation.

As the Ohio Manufacturers' Association Energy Group ("OMAEG") argued in its interlocutory appeal from the attorney examiner's entry granting the Companies' motion to consolidate these cases for purposes of hearing and decision, combining the TCJA cases with the

⁶³ See Shaefer Cross, Tr. I, 202.

grid modernization cases allowed the Companies to hold the TCJA refund hostage to an agreement by the signatory parties that the Companies should be authorized to recover additional grid modernization costs.⁶⁴ That, for example, the Ohio Cable Telecommunications Association ("OCTA") agreed via Section V.C.a. of the Stipulation that Grid Mod I produces a positive costbenefit adds no gravitas to this conclusory statement because OCTA is unaffected by the results of the Grid Mod I cost/benefit analysis.

In this same vein, STC believes it likely that at least some of the parties that signed off on this provision of the Stipulation have never reviewed the underlying cost/benefit analysis, let alone understand it. Indeed, during his cross examination of ELPC witness Volkmann, counsel for OEG acknowledged that he was unfamiliar with cost/benefit analysis that underlies Attachment B to the Stipulation.⁶⁵ This is understandable because OEG's interest in these proceedings is in having the TCJA refunds returned to customers as promptly as possible.⁶⁶ However, as in the case of OCTA, OEG's signoff on Section V.C.a. of the Stipulation adds no weight to this provision.

In this connection, it is also important to note that, although, on brief, several of the signatories to the Stipulation point to the wide range of interests represented by the signatory parties in the context of their discussion of the "serious bargaining" test, none of the signatory parties representing residential customer interests have signed on to the representation made in Section V.C.a. of the Stipulation regarding the cost-effectiveness of the Grid Mod I investment. The Office of the Ohio Consumers' Council ("OCC"), the Northeast Ohio Public Energy Council

⁶⁴ See OMAEG Interlocutory Appeal Filed November 20, 2018, at 7.

⁶⁵ See Volkmann Cross, Tr. II, 251-252.

⁶⁶ Of course, this would not be a concern if these unrelated cases had not been addressed through a single stipulation and had not been consolidated for purposes of hearing and decision.

("NOPEC"), and the Ohio Partners for Affordable Energy ("OPAE"), each of which became signatories by virtue of signing the Supplemental Stipulation, apparently traded their agreement not to oppose the provisions of the Stipulation relating to Grid Mod I⁶⁷ for a larger piece of TCJA refund pie. This is certainly true in the case of OCC. OCC witness Willis specifically testified that OCC would not have signed on were it not for the increased tax benefits for residential customers provided in the Supplemental Stipulation.⁶⁸ In its initial brief, OPAE offers this same rationale as its basis for signing the Supplemental Stipulation, but takes matters a step further by noting that "(s)mart meters and other grid upgrades do not necessarily provide enough value to justify the increased charges to consumers"⁶⁹ and that its non-oppose status with respect to Grid Mod I is also tied to provisions of the Supplemental Stipulation that OPAE believes provide protections for customers against overpaying for Grid Mod I investments if, among other things, those investments do not achieve the projected results as measured by the performance metrics.⁷⁰ Although STC agrees with OPAE that the Companies – not their customers – should bear the risk that the Grid Mod I investment may not prove to be cost-justified, as discussed above, the Companies will not be subject to any financial consequences even if a mid-deployment review by the third-party consultant shows that the benefits projected by the cost/benefit analysis are not being realized.

To summarize, there is no presumption that the terms of a stipulation are reasonable. And, although a stipulation – even one that does have the unanimous support of all the parties to the

⁶⁷ See Supplemental Stipulation, 10, footnote to OCC, NOPEC, and OPAE signature blocks.

⁶⁸ See Willis Cross, Tr. II, 320.

⁶⁹ OPAE Initial Brief, 3.

⁷⁰ See OPAE Initial Brief, 3-4.

proceeding – is entitled to consideration by the Commission, the terms of a stipulation must, nonetheless, be supported by evidence of record because the Commission cannot fulfill its obligation to "determine what is just and reasonable from the evidence presented at the hearing"⁷¹ without looking beyond the four corners of the stipulation. As discussed above, in this instance, the Companies, which unquestionably have the burden of proof, presented no evidence to support Section V.C.a. of the Stipulation, which states only that the signatory parties "agree that Grid Mod I produces a positive cost-benefit." STC respectfully submits that no Commissioner could, in good conscience, sign an order finding that the Stipulation benefits ratepayers based on this single sentence. Moreover, for reasons explained above, the Commission cannot fairly find that this "agreement" by the signatory parties is the result of hard-bargained compromise. Thus, the Commission should accord this statement no weight in evaluating whether this element of the Stipulation passes the "serious bargaining" test.

3. <u>The Evidence Shows that the Projected Benefits Associated with AMI</u> <u>Deployment and Time-Varying Pricing in the Companies' Cost/Benefit</u> <u>Analysis Are Overstated, and There Is No Evidence to the Contrary.</u>

As noted above, notwithstanding that the Companies had the burden of proving that their cost/benefit analysis was reasonable, the Companies did not introduce their cost/benefit analysis into evidence. One might argue that the Companies' failure to do so, of itself, represents sufficient grounds for the Commission to reject the Stipulation's claim that the Grid Mod I investment provides a net benefit for customers. However, this legal nicety aside, even if the parties challenging this provision of the Stipulation had the burden of going forward despite the Companies' failure to make even a *prima facie* case that the proposed Grid Mod I investment is

⁷¹ Duff v. Pub. Util. Comm., 56 Ohio St.2d 367, 379 (1978).

cost-justified,⁷² the evidence presented and adduced by ELPC and STC is more than sufficient to call into question the reasonableness of the estimate of the benefits the Companies' cost/benefit analysis attributes to AMI deployment.

The reasonableness of the estimated benefits in two of the five benefit categories in the portion of the Companies' cost/benefit analysis relating to the investment in AMI73 – the "Time-Varying Rate Savings" (Category 1) and "Customer Energy Management Savings" (Category 3) - are dependent upon the reasonableness of the Companies' projections of customer response. "Time-varying rates savings" refers to the energy and capacity savings from customer participation in time-vary rate offers made possible by the deployment of smart meters, while "customer energy management savings" refers to energy and capacity savings resulting from better customer understanding of energy management made possible by the ability to access data provided by smart meters.⁷⁴ To predict the savings to be derived from time-varying rates and customer energy management activity, the cost/benefit analysis indicates that the Companies looked to both the EPRI 2015 Final Report on FirstEnergy's Smart Grid Investment Grant Consumer Behavior Study relating to the CEI three-year pilot program (the "SGIG Study")⁷⁵ and the 2013 SmartGrid Consumer Collaborative report on Smart Grid Economic and Environmental Benefits (the "SGCC Report").⁷⁶ However, the evidence shows that the resulting estimated savings benefits for these categories are suspect, at best.

⁷² The burden of proof never shifts from the Companies to the opposing parties.

⁷³ See ELPC Exhibit 23c, AMI Benefits Tab.

⁷⁴ See Fanelli Cross, Tr. I, 44.

⁷⁵ See ELPC Exhibit 16.

⁷⁶ See ELPC Exhibit 17.

The first and most obvious problem with the Companies' reliance on the results of the CEI pilot reported in SGIG Study as a predictor of the time-varying rate savings and consumer energy management savings that will flow from the Grid Mod I investment is that the conditions for the CEI pilot were far different than the conditions for the Grid Mod I program set out in the Stipulation. Customers participating in the CEI pilot were not only recruited, but were also provided with enabling technologies in the form of programmable communicating thermostats (PCTs) or in-home displays (IHDs) free of charge, whereas the Grid Mod I program does not provide even a rebate to incentivize customers to purchase enabling technologies. In fact, as discussed in STC's initial brief, the Supplemental Stipulation expressly prohibits such a measure.⁷⁷

Second, the studies reported by STC witness Dzubay show that passive technologies (*i.e.*, technologies that require customers to take action on their own in response to usage data provided by smart meters), such as IHD and web portals/apps, even when paired with time-varying rates, are much less effective in producing energy savings and demand reduction than enabling technologies that automate achieving consistent energy savings and peak demand reduction.⁷⁸ The SGIG Study of the results of the CEI pilot not only confirms this point,⁷⁹ but also reports that there is a customer fatigue factor involved that results in the modest savings achieved via an IHD in the first year virtually disappearing in the second and third year. This is important for the purpose at hand because the Companies' cost/benefit analysis treats the savings in the customer energy management category as being the same amount of IHD accumulated from year to year,

⁷⁷ See STC Initial Brief, 14-15 citing Supplemental Stipulation, 3; see also Fanelli Cross, Tr. I, 82-83.

⁷⁸ See Dzubay Direct, STC Exhibit 4, at 7-8.

⁷⁹ SGIG Study, 11, 47.

which is inconsistent with the observation in the SGIG Study that the customer response in year one is not replicated in subsequent years by customers who were given IHDs.

When questioned about the methodology used to project the benefits for these categories, Companies witness Fanelli testified that, although the cost/benefit analysis indicates that the SGIG Study and SGCC Report were the sources for the estimates, the Companies also took "other considerations" into account.⁸⁰ Although the impact of these other considerations was never quantified, they apparently involved a judgment as to the impact smart meters and time-varying pricing would have in leveraging the deployment of enabling devices such as smart thermostats.⁸¹ This makes the projected benefits even more speculative, because there is no empirical evidence showing that leaving enabling technology deployment to the market will produce benefits sufficient to justify the customer-funded cost of AMI investment, As things now stand, customers bear the entire risk that the investment in AMI will not prove to be cost-effective, an outcome which does not benefit ratepayers and is certainly not in the public interest, and the speculative nature of these "other considerations" only adds to that risk. Thus, the Stipulation does not pass the third prong of the three-part test for evaluating stipulations.

III. CONCLUSION

In this proceeding, the Companies have employed a variation of the strategy that has proven effective for them in their last two ESP cases.⁸² In both those cases, the Companies orchestrated a multi-party stipulation that was filed prior to the hearing on the application,⁸³

⁸⁰ See Fanelli Cross, Tr. I, 102-104.

⁸¹ See Id.

⁸² See Case No. 12-1230-EL-SSO, et al. ("ESP III") and Case No 14-1297-EL-SSO, et al. ("ESP IV").

⁸³ In ESP III, the stipulation was filed simultaneously with the application, while in ESP IV, there were actually a series of stipulations filed over the long and tortuous course of that proceeding.

thereby converting the focus of the hearing to the stipulation rather than the merits of the application and changing the paradigm under which the Commission decided the case. Rather than having to prove, by a preponderance of the evidence, that each of the proposals contained in their application was reasonable, the Companies, together with the other signatory parties, only had to show that the stipulation satisfied each prong of the Commission's three-part test for evaluating stipulations, which the Companies apparently see as a far less rigorous burden.

Here, there is no Company application in the Grid Mod I case. Instead, there is only a stipulation that covers not only grid modernization, but two unrelated TCJA benefit refund cases, which produced a scenario in which certain parties traded their signoff on (or agreement not to oppose) the stipulated Grid Mod I plan in exchange for a quick return of the TCJA benefits. As a late entrant in these proceedings, STC is not in a position to question the fairness of the process that lead to the Stipulation, but STC can say that the horse trade described above is not the type of hard-bargained compromise that would instill confidence in the Commission as to the reasonableness of the stipulated result in applying the first-prong of the test for evaluating stipulations. Moreover, the cost/benefit analysis appended as an attachment to the Stipulation is not consistent with the Commission policy enunciated in the PowerForward Roadmap and, thus, violates an important regulatory principle, causing the Stipulation to fail the second prong of the test for evaluating stipulations. Finally, the Companies have not sustained their burden of proving that the customer-funded investment in Grid Mod I will produce a net benefit for ratepayers. Thus, the Stipulation also fails the third prong of the three-part test.

As Direct Energy points out on brief, no party disputes the energy savings and demand reduction benefits of smart thermostats. Further, no party has challenged or otherwise cast doubt on STC witness Dzubay's analysis of the studies, many of which were also cited by the

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Commission in the PowerForward Roadmap, that show that smart thermostats, when paired with time-varying rates, will maximize benefits to customers in terms of energy savings and to the grid in terms of demand reduction. Moreover, no party has disputed Ms. Dzubay's opinion that, based on the results of the ComEd rebate program, with which she is intimately familiar, her recommended smart thermostat rebate program will prove to be effective in incenting customers to purchase smart thermostats, which will benefit not only the customers that purchase them, but will also create a scale of smart thermostat deployment sufficient to result in significant overall peak demand reduction, which will benefit all customers. Accordingly, STC urges the Commission to modify the Stipulation by incorporating the smart thermostat rebate program recommended by Ms. Dzubay. This program includes (a) the Companies providing a \$100 instant rebate to customers with central AC and Wifi to apply to the purchase of an ENERGY STAR-certified smart thermostat product at the Companies' online market place and at other qualifying on line and brick-and-mortar retailers; (b) an offer of free installation; (c) a program size of 210,000 of the 700,000 customers targeted for smart meters; and (d) rolling out the program in tandem with the smart meter deployment.

In addition, for the reasons stated in STC's initial brief, STC urges the Commission to also make the following changes to the stipulated Grid Mod I program.

 The Commission should eliminate the provision of Section C.d.v. of the Stipulating that states that the Companies, with Commission approval, *will* withdraw their time-of-use rate offering for SSO customers "(o)nce there are either (a) at least three suppliers offering products utilizing AMI data or (b) at least three different types of time-varying products utilizing AMI data."⁸⁴

⁸⁴ See STC Initial Brief, 21-27.

- 2. The Commission should direct the Companies that, going forward, STC shall be permitted to participate in the Grid Mod I collaborative and shall receive notice of all meetings of Grid Mod I collaborative group.⁸⁵
- 3. The Commission should modify the provision of Section V.H. of the Stipulation that limits the discussions initiated by the Companies and Staff regarding Grid Mod II to discussions with interested Signatory Parties to the Stipulation and should replace this provision with language indicating that "any interested party to this proceeding" may participate in such discussions.⁸⁶

Respectfully submitted,

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⁸⁵ See STC Initial Brief, 27-29

⁸⁶ See STC Initial Brief, 29-30.

Certificate of Service

I hereby certify that copies of the foregoing have been served by electronic mail on the following persons this 12th day of March 2019.

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