

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Ohio)	
Power Company for an Increase in)	Case No. 20-585-EL-AIR
Electric Distribution Rates.)	
In the Matter of the Application of Ohio)	Case No. 20-586-EL-ATA
Power Company for Tariff Approval.)	
In the Matter of the Application of Ohio)	
Power Company for Approval to)	Case No. 20-587-EL-AAM
Change Accounting Methods.)	

DIRECT TESTIMONY OF ERIC REHBERG

ON BEHALF OF

ARMADA POWER, LLC

April 20, 2021

1 **I. BACKGROUND**

2 **Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND ON WHOSE**
3 **BEHALF YOU ARE TESTIFYING?**

4 A1. My name is Eric Rehberg. I am the Chief Engineer with Armada Power, LLC
5 (“Armada Power” or “Armada”). My business address is 230 West Street, Suite
6 200, Columbus, Ohio 43215. I am presenting testimony in this proceeding on
7 behalf of Armada Power.

8 **Q2. PLEASE DESCRIBE ARMADA POWER’S BUSINESS.**

9 A2. Armada Power is a Columbus, Ohio-based company that creates technology
10 solutions for the electric utility industry. Our mission is to make the power grid
11 more reliable, renewable, and cost effective. Our main product is a combination
12 high-tech and secure water heater controller manufactured here in Ohio that
13 combines with our proprietary Armada software platform. We use the Armada
14 software platform to turn thousands of connected water heaters into flexible energy
15 storage-type devices for the power grid while minimizing the comfort impact to the
16 water heater user.

17 **Q3. WHAT ARE YOUR JOB RESPONSIBILITIES?**

18 A3. I lead the development of our technology roadmap and provide support to our
19 business development team.

20 **Q4. WHAT IS YOUR EDUCATIONAL BACKGROUND AND YOUR**
21 **PROFESSIONAL EXPERIENCE?**

22 A4. I have a bachelor of science degree in Electrical and Computer Engineering from
23 The Ohio State University. I am a licensed Professional Engineer in the State of
24 Ohio. PE.73543. I previously worked for American Electric Power at its Dolan

1 Technology Center where I helped develop new technologies for use across the
2 AEP system and evaluated emerging smart grid technologies. I then went to the
3 Battelle Memorial Institute to lead projects in energy technology and research. It
4 was at Battelle that we developed the core technology components that were
5 eventually spun out into Armada Power. I'm currently the Chief Engineer for
6 Armada Power and am an inventor with 14 patents in the field of energy
7 technology.

8 **Q5. HAVE YOU REVIEWED THE STIPULATION FILED IN THESE**
9 **PROCEEDINGS ON MARCH 12, 2021?**

10 A5. Yes, I have reviewed such stipulation (the "Stipulation").

11 **Q6. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A6. I am testifying in support of Armada Power's objections to the Staff Report and in
13 support of an additional pilot program involving utility-owned water heater
14 controllers to address grid reliability in a non-wires alternative program that does
15 not involve battery and circuit requirements on the grid but provides comparable
16 grid insights and storage capabilities (the "Pilot").

17 **Q7. WHAT IS THE PURPOSE OF THE PILOT?**

18 A7. The purpose of the Pilot is to provide Ohio Power Company ("AEP") and the
19 industry with data and information on the practicality of addressing grid storage
20 and grid reliability through water heater controllers. Unlike traditional utility wire-
21 side technology, such controllers would be installed inside a customer's home or
22 business. This is not a smart technology for the customers, although, as discussed
23 below, there are tangential smart use customer benefits. To emphasize, the primary

1 purpose of the Pilot will be utility control for grid reliability and therefore
2 ownership of the controllers to ensure this control will remain with the utility.

3 **Q8. DOES THE PILOT’S TECHNOLOGY SUPPORT UTILITY SYSTEM**
4 **RELIABILITY?**

5 A8. Yes. The Pilot’s technology allows a utility to (i) defer replacement and investment
6 in additional equipment such as upgrading transformers or conductors on capacity
7 constrained circuits and (ii) reduce the amount of battery storage needed while
8 being more cost effective. Also, the Pilot’s water heater controller technology helps
9 reduce restoration times after sustained outages by removing the water heaters from
10 the initial cold load pickup. This allows circuits to be re-energized faster with less
11 risk of tripping out up-stream protection. By implementing the controllers at a fleet
12 level (e.g. 20,000 units) across constrained portions of the AEP system, AEP can
13 use and benefit from the controllers and technology in the following ways:

14 a. Storage: The Armada technology is a more cost-effective storage-type
15 solution than batteries for many grid applications. The National Renewable
16 Energy Laboratory (“NREL”) currently projects the best case Lithium Ion
17 Battery (“LIB”) technology at approximately \$300-\$350/kWh and \$200-
18 \$300/kW. The Armada Power technology is less than half the cost of LIB
19 on dollars per kWh and comparable on cost per kW. Note that the LIB costs
20 may not include additional life cycle and installation and land costs whereas
21 the cost of installing the Armada Power technology is an “all-in” cost that
22 includes those components. Water heater control allows for the shifting in
23 time of the second largest residential electric load with little to no comfort

1 impact to the end user due to the Armada Power data and algorithms along
2 with the natural thermal insulation present in modern water heater tanks.
3 Such shifting in time to support the power grid, given the unique nature of
4 water heaters and their usage, achieves grid benefits comparable to grid
5 storage. This flexible storage asset can be used to absorb unpredictable
6 renewable generation output, reduce system load to avoid higher generation
7 fuel costs, or even extend the life of grid-scale batteries by reducing the
8 number of quick discharge cycles. This technology has been used and
9 proven through demonstration projects as a wind-farming resource in
10 Hawaii, and as a “solar sponging” resource in Arizona. In the Hawaii and
11 Arizona projects, the Armada Power technology, which was held by
12 Battelle at the time of the Hawaii project, demonstrated the capability to
13 shift water heater load completely onto high renewable output hours with
14 zero load consumed during system load peaks. The Hawaii project occurred
15 in 2015 and the Arizona project occurred in 2020-21. Additionally, Armada
16 has approximately 2,000 units installed in PJM operations in Ohio and
17 Virginia and is involved in other pilot programs with utilities around the
18 country.

- 19 b. Load Shift and Peak Shave: Two-way advanced water heating control
20 allows for multi-hour load shifts while avoiding rebound peaks after the
21 events. In this context, the controllers, if combined with daily time of use
22 peak optimization as well as demand response events, create money-saving
23 opportunities for both the utility and the end use customers.

- 1 c. Voltage: The controllers can automatically respond to local voltage
2 deviations from distributed renewables, and provide revenue quality
3 measurements to augment other distribution automation systems. For
4 example, with a Conservation Voltage Reduction (“CVR”) or Integrated
5 Volt Var Control (“IVVC”) system, grid operators may want to use
6 controlled voltage regulators to drop system voltage to the minimum
7 American National Standards Institute (“ANSI”) limits. However, they
8 must compensate for voltage drop across the line and ensure delivery at the
9 end of the line is within ANSI spec. The Armada controllers on a circuit
10 could be another verification point to observe voltage drop and could enable
11 a control system to maximize the CVR effect while staying within band.
- 12 d. Droop Control: The technology to be utilized in the Pilot can also provide
13 primary frequency stability through a patented simulated droop control,
14 which allows water heaters to respond to locally measured deviations in
15 system frequency within a few cycles. The fleet responds with a greater
16 magnitude with larger changes in frequency, and responds with a smaller
17 magnitude and responds slower with small changes in frequency simulating
18 the governor control on a generator. This supports system stability without
19 introducing oscillations.
- 20 e. Better Option than Full Water Heater Replacement: Retrofitting existing
21 water heaters with controllers that optimize pricing, usage and power
22 controls is a much more cost-effective option than a utility program

1 involving full water heater replacement. Estimated costs for the Pilot are
2 set forth below.

3 **Q9. DOES THE PILOT OFFER TANGENTIAL CUSTOMER-SIDE**
4 **BENEFITS?**

5 A9. There are several such benefits:

6 a. Customer Control: This technology can allow residential customers a
7 means to control the second largest energy-consuming device in their home,
8 and allow non-residential customers a means to control the device too.
9 Through a smart phone app, customers can opt-in or opt-out of grid events,
10 set “away” modes when on vacation which reduces standby losses, and
11 optimize usage around time of day rates.

12 b. Maintenance: Customers will receive maintenance alerts for common
13 consumable items within the water heater like failed heating elements and
14 an optional leak sensor.

15 c. Improved Functionality: The technology proposed for the Pilot turns a
16 standard electric water heater into a superior storage and energy
17 management tool as compared to the “premium” price point of smart water
18 heaters or heat pump water heating. The controller is rated for over 4
19 million full load-switching cycles and can switch on or off instantly at any
20 time. It does not wear out after a few thousand switches like traditional
21 demand response switches or require compressor cycle times to expire.

22 d. No Financial Hurdles to Customer: The customer would not need to pay
23 for the controller and then receive a refund, like other smart initiatives and

1 devices with which the Commission may be familiar. This means that a
2 low-income customer will not need to come up with \$150 to pay for
3 something first and then await a rebate. The device would be utility-owned
4 because, again, the device's primary purpose would be grid reliability,
5 although other customer benefits would be optional to the customer. The
6 device can be placed on any standard resistive electric tank water heater of
7 a customer who chooses to participate, which means many customer
8 locations could qualify for the data and information gathering including
9 rented dwellings and traditionally underserved communities. Additionally,
10 shopping and non-shopping customers can participate.

11 **Q10. WHAT IS THE COST OF THE PILOT IF 20,000 UNITS WERE**
12 **DEPLOYED?**

13 A10. As I discuss later in my testimony, I recommend that the Pilot deploy 20,000 units
14 with a target of 4,000 units deployed per year over five years. That will allow for
15 the cost of the Pilot to be spread out over five years. The Pilot could use controllers
16 connected through Wi-Fi, which I estimate, with a five-year software license,
17 would cost approximately \$6 million for the deployment of the entire 20,000 unit
18 fleet, or \$1.2 million per 4,000 units. For additional communication flexibility, a
19 cellular-enabled controller could also be deployed for customers without Wi-Fi.
20 With such cellular-enabled controllers, the controllers would be connected via
21 cellular service, and I estimate, with a five-year software license, such cellular-
22 enabled controllers would cost approximately \$6.9 million for the deployment of
23 20,000 units, or \$1.38 million per 4,000 units. Additionally, for such cellular-

1 enabled controllers, cellular service would cost about \$42 per annum per unit, or
2 \$840,000 per year for a 20,000 unit deployment or \$168,000 per year for a 4,000
3 unit deployment. These aforementioned costs represent the cost of the controllers,
4 software licensing and communication costs, but not the installation costs. Armada
5 can provide installation services if AEP prefers to contract out for installations. In
6 my experience, a controller can be installed within 15 to 30 minutes.

7 **Q.11. WHAT IS THE BENEFIT OF CELLULAR SERVICE VERSUS A WI-FI**
8 **OPTION?**

9 A11. Cellular service would offer the utility direct connectivity without requiring the
10 cooperation of a customer or tenant other than consent for control, which would be
11 obtained at installation. There would not be a concern of customer Wi-Fi failure,
12 Wi-Fi disconnection, or the customer simply changing their Wi-Fi password and
13 forgetting to reconnect. In addition, for customers who rent, the new tenant would
14 need to reconfigure Wi-Fi. While connecting with community Wi-Fi could resolve
15 some of the above issues, a typical home or business would still continue to need
16 to reconfigure Wi-Fi. This could be a bigger concern when a guarantee for grid
17 reliability is needed.

18 **Q12. CAN THE CONTROLLER UTILIZE AEP'S EXISTING SMART METERS**
19 **RATHER THAN WI-FI OR CELLULAR?**

20 A12. Yes; however, Ohio is a competitive generation state. In order to allow customers
21 a more seamless option for time of use rates that are not strictly programmed
22 through the utility, we do not recommend that the controllers utilize Zigbee to
23 communicate. For example, the Zibgee connection to the smart meter AMI

1 communication platform does not allow a customer's CRES provider to implement
2 a time of use program through the controller or for the customer to update settings
3 on their controller in real time. If AEP was solely using Armada for grid purposes
4 with no customer interaction, then the Zigbee connection could be an option.
5 However, for full benefits in a state with competitive choice, Wi-Fi and/or cellular,
6 which have a faster response time and can accommodate multiple options such as
7 multiple customers on different CRES providers, will allow customer use in
8 addition to grid use. In short, relying on Zigbee/AMI wireless technology will not
9 allow full recognition of the benefits provided by Armada Power's technology and,
10 therefore, is not recommended for the Pilot.

11 **Q13. DO YOU HAVE AN OPINION AS TO AEP'S TECHNOLOGY**

12 **INTEGRATION COSTS FOR IMPLEMENTATION OF THE PILOT?**

13 A13. I would anticipate AEP would incur minimal additional technology costs to
14 integrate under the Pilot. The Armada software platform is a stand-alone
15 technology platform which does not require integration into any AEP existing
16 systems in order to get the full benefits and features of the system. With that said,
17 the Armada platform is very partner integration friendly and we have a number of
18 partnerships with common Distributed Energy Resource Management ("DERM")
19 platform providers. All of the human interactable features of the Armada software
20 platform can also be operated via our Application Programming Interface ("API").
21 We also have extensive experience integrating into PJM's real time Supervisory
22 Control and Data Acquisition ("SCADA") systems for receiving their 2 second
23 continuous Automatic Generation Control ("AGC") signals for Frequency

1 Regulation, which we have been operating 24/7 for the past 4 years. We are
2 confident we can provide AEP with a scalable, low cost, and secure set of solutions
3 for immediate operation of the system and be future-proof in regards to forthcoming
4 integration requirements.

5 **Q14. IS THERE A COMFORT OVERRIDE CONCERN WITH USING THE**
6 **WATER HEATER CONTROLLER AS A GRID DEVICE?**

7 A14. No. When utilities look to traditional residential behind-the-meter technologies for
8 grid calls, there is always the possibility of a customer seeking to override the
9 device (“comfort override”). These include things like failure to re-connect to Wi-
10 Fi, a thermostat customer turning up the heat because they are cold, or electric
11 vehicle (“EV”) charging being unused due to summer vacations or random home
12 schedules. The water heater, however, is different because it is the least invasive
13 appliance and can be held to a very specific amount available and temperature.
14 People do not regularly change their water temperature and small delays in energy
15 use do not affect the hot water still stored in the tank. Therefore, as long as the hot
16 water is delivered at the amount and temperature needed, there is generally no need
17 for comfort override. However, the Armada technology does have the option for
18 the utility to allow a customer, via the customer app, to opt-in or opt-out per event
19 or via settings on the app.

20 **Q15. CAN AN END-USE CUSTOMER OVERRIDE A CONTROLLER?**

21 A15. Yes, if the customer chooses to use the app. Through the app with the software,
22 the end-use customer has access to information that shows them the following:

- 23
- Current amount of water available at their chosen temperature;

- If the utility would like to allow opt-in/out functionality, it would be enabled in the customer's smart phone app;
- Status of functionality, such as whether an upper or lower element is about to fail or has failed;
- Leak information;
- Time of use schedule - the customer can set specific usage times to meet their chosen time of use product or automatically enable the utility to manage it once opted-in; and
- Utility calls – the customer can see if the utility has called upon their water heater, for example, for things like solar sponging or droop control.

Q16. WHAT WOULD THE UTILITY BE ABLE TO ACCESS WITH THE TECHNOLOGY?

A16. The utility will have control to schedule and configure demand response events, and see live data via a dashboard to monitor fleet-level power consumption and states of charge. The system also provides detailed individual device data allowing the utility to see if the water heater has failed or has components that need maintenance. For example, if a customer calls to complain their water is cold, the utility can advise them the water heater is broken, which element failed, or if there is a leak – which can assist with energy conservation and energy efficiency. We have found this data transparency to be critical and preferential to legacy one-way non-communicating switches to help customers feel positive and remain in the programs.

Q17. CAN CRES PROVIDER CUSTOMERS PARTICIPATE?

A17. Yes. The Armada water heater controller has revenue-grade power and energy metering and control to support the power grid and can provide data and information that a customer can use directly. Just as a competitive retail electric

1 service (“CRES”) provider can access a smart meter owned and used by the utility
2 for the CRES provider’s own products (with the customer’s permission), a CRES
3 provider would be able to utilize the Armada technology. For example, a customer
4 choosing a CRES provider’s time of use offer can set the installed controller or give
5 their CRES provider permission to set the controller to match the time of use offer.

6 **Q18. HOW DOES THE ARMADA TECHNOLOGY DIFFER FROM**
7 **TRADITIONAL WATER HEATER CONTROLS?**

8 A18. The Armada technology uses a two-way, real-time secure controller with revenue-
9 grade accuracy. Traditional control programs operate “blind” without knowledge
10 of how much charge is available or how much performance was achieved. The
11 algorithms and technology Armada uses make it simple to manage demand at the
12 fleet level for the grid operator, while ensuring end user comfort. Control inputs
13 like AGC or other SCADA data can also be directly integrated into the system to
14 perform advanced grid functions like renewables firming, cold load pickup, and the
15 other features I have already discussed.

16 **Q19. HAVE OTHER STATE REGULATORY COMMISSIONS APPROVED**
17 **SIMILAR PILOTS FOR REGULATED UTILITIES?**

18 A19. Yes, Arizona and California have approved similar pilots. *See, e.g., (i) Application*
19 *of Pacific Gas and Electric Company (U 39-E) for Approval of its 2018 Energy*
20 *Storage Procurement and Investment Plan*, Public Utilities Commission of
21 California Decision 19-06-032 (June 27, 2019) and Resolution E-5073 (January 14,
22 2021) approving implementation of a new electric water heating thermal energy
23 storage program called WatterSaver Program by Pacific Gas and Electric Company

1 to enable shifting of electric water heating load and (ii) *In matter of the application*
2 *of Arizona Public Service Company for a Ruling Relating to its 2020 Demand Side*
3 *Management Implementation Plan*, Docket Number E-01345A-19-0088 before
4 The Arizona Corporation Commission, Decision No. 77763 (October 2, 2020).

5 **Q20. WHY IS IT APPROPRIATE FOR THE COMMISSION TO INCLUDE THE**
6 **PILOT AS AN ADDITIONAL COMPONENT OF GRANTING A RATE**
7 **INCREASE TO AEP IN THIS CASE?**

8 A20. The Armada technology would be a grid asset that operates on a fleet basis. The
9 full value will not be realized through a traditional customer-purchase-and-rebate
10 construct because the timing to reach fleet would take too long. While there are
11 benefits to customers that fall into the energy optimization and demand response
12 categories, the core function of the Armada technology is to act as a distribution
13 asset. Meaning, it can be called upon outside of normally scheduled demand
14 response events and used in a comparable manner to a wires-side asset as described
15 earlier. Therefore, it is appropriate for the Commission to approve the Pilot in this
16 rate case where AEP has addressed a long-term strategy for distribution reliability
17 per its Distribution Work Plan, Staff has investigated the utility's past distribution
18 system reliability, and the Signatory Parties to the Stipulation propose that
19 distribution system reliability programs continue, with cost recovery.

20 Ohio does not have a formal integrated resource planning process and the
21 lag time between rate cases means it is necessary for the Commission to have a
22 forward view of the grid now. It is well documented that renewables and forms of
23 distributed energy resources ("DER") are being placed onto AEP's system and that

1 system must look at both wire and non-wire options to meet this change. The
2 Commission should bring more benefits to the public by approving the Pilot as an
3 additional opportunity to improve current grid reliability capabilities, support
4 advancing technologies, while providing data and information to AEP and the
5 industry regarding a technology that is one of the most cost-effective, secure, and
6 reliable forms of energy storage available today. Improving reliability requires a
7 strategy with multiple, coordinated activities on varied fronts. The Pilot would
8 provide an additional and varied front – one that does not exist today in AEP’s
9 Distribution Work Plan.

10 **Q21. HOW DO YOU PROPOSE THE PILOT BE IMPLEMENTED BY AEP?**

11 A21. I propose implementing the Pilot at an initial level of 20,000 water heater controller
12 units with a minimum goal of 4,000 units to be deployed annually. The primary
13 purpose of the Pilot would be to demonstrate through data and information over a
14 period of at least 5 years the benefits of the thermal storage water heater network
15 to the grid, including grid reliability functions (i.e., grid control including circuit,
16 solar sponging, etc.), load droop, and storage, with the tangential benefit of
17 permitting customers to participate through the app to learn about their energy
18 usage and explore time of use price optimization and demand reduction. The
19 Commission should make clear in adopting the Pilot that: (a) customers have the
20 option to offer control/access to CRES providers for time of use, Demand
21 Response, and Peak Load Contribution products and (b) AEP’s use will be solely
22 for distribution purposes or for customer use with AEP time of use options and AEP
23 should not impact or preclude the customer’s use of the devices under any CRES

1 program. For example, coordination with time of use offerings from CRES
2 providers would allow customers the ability to combine CRES provider products
3 with the technology to increase the benefits. I would recommend that interested
4 parties meet within 60 days of the Commission's order adopting the Pilot to discuss
5 how customers and CRES providers will be notified about the availability of the
6 Pilot, data requirements for reporting and to finalize any other details of the
7 deployment such as the installation provider and installation training. A final,
8 detailed program should be completed by the working group within 120 days from
9 the order adopting the Pilot with installation of the units expected to start within
10 180 days of the order. Armada could begin providing quarterly data reports as
11 designed by the working group to AEP and Commission Staff starting with the first
12 few days of the calendar quarter after installation begins.

13 **Q22. HOW WOULD THE RESULTS OF THE PILOT BE REPORTED?**

14 A22. Armada can provide granular reporting to show the benefits of the Pilot because a
15 revenue-grade meter is imbedded in its technology which collects data that in-turn
16 can be used to show how the Pilot is working and the benefits realized by the Pilot.
17 AEP would also have access to all data in real-time and historical. As noted above,
18 we recommend the working group to define what data would be necessary for the
19 program reporting. However, using directly measured data, Armada would provide
20 quarterly reports to AEP and to the Commission's Staff on the Pilot results, and
21 that data can be to the controller level and can include actual data showing AEP's
22 use of the devices, kW shifted as a result of the utilization of the fleet, time of use
23 utilization by customers and AEP or the customer's CRES providers, and, if

1 combined with renewable generation data, and the associated carbon savings. I am
2 confident that the ability to provide robust Measurement and Verification (“M&V”)
3 reporting to AEP and the Commission Staff (and to the Commission if it so desires)
4 will show the benefits of the fleet deployment.

5 **Q23. DO YOU PROPOSE AN END DATE FOR THE PILOT?**

6 A23. No. I don’t recommend an end date. Instead, I believe the deployment should
7 remain in place with continued quarterly reporting until the Commission further
8 modifies the program.

9 **Q24. IS THE PILOT PROPOSED BY ARMADA IN THE PUBLIC INTEREST?**

10 A24. Yes, I believe it is. The March 12, 2021 Stipulation contains certain pilot programs
11 and the proposed Armada Pilot, in my opinion, would provide the most benefit to
12 AEP customers. For example, the Stipulation provides for the proposed adoption
13 of a pilot electric vehicle (“PEV”) tariff that will allow new separately metered
14 Level 2 or DCFC EV charging stations to be billed on non-demand metered rates.
15 The arguments in favor of the stipulated tariff (see testimony of Sara Rafalson on
16 behalf of EVgo Services LLC filed on April 9, 2021, page 5) are that such stipulated
17 tariff can increase the efficiency of the grid and reduce peak load. Similarly, like
18 the proposed PEV tariff, the Pilot can improve both grid efficiency and reduce peak
19 load. However, unlike the proposed PEV tariff, the objectives under the Pilot will
20 not be dependent on electric consumers changing their behavior (e.g., when they
21 charge electric vehicles or even transition to electric vehicles). Consumers already
22 have electric water heaters. The Pilot’s technology vests control with the utility to
23 make the grid more efficient and consumers need not do anything on their end other

1 than allow for the installation of the technology. Additionally, as set forth above,
2 the Pilot's technology is cost-effective and has been proven on other applications.
3 I am confident that the Pilot will further demonstrate how such technology can aid
4 AEP in making the grid more reliable. Given the benefits of the Pilot, it would not
5 be reasonable to approve the Stipulation without adding the Pilot.

6 **Q25. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

7 A25. Yes, but I reserve the right to supplement my testimony.

CERTIFICATE OF SERVICE

The Public Utilities Commission of Ohio's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to this case. In addition, the undersigned certifies that a courtesy copy of the foregoing document is also being served upon the persons below via electronic mail this 20th day of April, 2021.

/s/ Gretchen L. Petrucci
Gretchen L. Petrucci

Armada Power, LLC	mjsettineri@vorys.com glpetrucci@vorys.com dromig@armadapower.com
ChargePoint, Inc.	dborchers@bricker.com eakhbari@bricker.com jspottswood@bricker.com
Citizens' Utility Board of Ohio	mfleisher@dickinsonwright.com
Clean Fuels Ohio	mfleisher@dickinsonwright.com
Constellation NewEnergy, Inc.	mjsettineri@vorys.com glpetrucci@vorys.com
Direct Energy Business, LLC and Direct Energy Services, LLC	whitt@whitt-sturtevant.com fykes@whitt-sturtevant.com
Environmental Law & Policy Center	ccox@elpc.org rkelter@elpc.org
EVgo Services LLC	jschlesinger@keyesfox.com
Greenlots (Zeco Systems, Inc.)	todonnell@dickinsonwright.com mfleisher@dickinsonwright.com tom@greenlots.com jcohen@greenlots.com
Industrial Energy Users-Ohio	mpritchard@mcneeslaw.com rglover@mcneeslaw.com

	bmckenney@mcneeslaw.com
Interstate Gas Supply, Inc.	bethany.allen@igs.com joe.oliker@igs.com michael.nugent@igs.com
The Kroger Company	paul@carpenterlipps.com
Nationwide Energy Partners, LLC	mjsettineri@vorys.com glpetrucci@vorys.com
Natural Resources Defense Council	rdove@keglerbrown.com
Ohio Consumers' Counsel	angela.obrien@occ.ohio.gov christopher.healey@occ.ohio.gov
Ohio Energy Group	mkurtz@BKLawfirm.com kboehm@BKLawfirm.com jkylercohn@BKLawfirm.com
Ohio Environmental Council	ctavenor@theOEC.org tdougherty@theOEC.org mleppla@theOEC.org
Ohio Hospital Association	dparram@bricker.com rmains@bricker.com
Ohio Manufacturers' Association Energy Group	bojko@carpenterlipps.com
Ohio Partners for Affordable Energy	rdove@keglerbrown.com
Ohio Power Company	stnourse@aep.com cblend@aep.com christopher.miller@icemiller.com egallon@porterwright.com
One Energy Enterprises LLC	ktreadway@oneenergylc.com dstinson@bricker.com mwarnock@bricker.com hogan@litohio.com little@litohio.com
Staff of the Public Utilities Commission of Ohio	werner.margard@ohioattorneygeneral.gov kyle.kern@ohioattorneygeneral.gov
Walmart, Inc.	cgrundmann@spilmanlaw.com dwilliamson@spilmanlaw.com

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Summary: Testimony - Direct Testimony of Eric Rehberg electronically filed by Mrs. Gretchen L. Petrucci on behalf of Armada Power, LLC