OFFICIAL
EXHIBITS

FILED
April 27, 2023
INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF INDIANAPOLIS POWER & LIGHT COMPANY D/B/A AES INDIANA FOR COMMISSION APPROVAL OF AN ELECTRIC VEHICLE PORTFOLIO, INCLUDING: (1) A PUBLIC USE ELECTRIC VEHICLE PILOT PROGRAM PURSUANT TO IND. CODE CH. 8-1-43; AND (2) TIME-VARYING AND OTHER ALTERNATIVE PRICING STRUCTURES AND TARIFFS PURSUANT TO IND. CODE § 8-1-2.5-6(3); AND FOR APPROVAL OF ASSOCIATED ACCOUNTING AND RATEMAKING	)	**CAUSE NO. 45843**

IURC
INTERVENOR'S - ChargePoint
EXHIBIT NO. 1
7-6-23 AT
DATE REPORTER

CHARGEPOINT'S EXHIBIT 1

VERIFIED DIRECT TESTIMONY

OF

MATTHEW J. DEAL

April 27, 2023

I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

Q: Please state your name and business address.

A: My name is Matthew J. Deal. My business address is 254 E. Hacienda Ave., Campbell, CA 95008.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of ChargePoint, Inc. ("ChargePoint"), where I serve as serve as Senior Manager of Utility Policy.

Q: Please describe your current role and your relevant professional experience.

A: In my current role, I lead ChargePoint's regulatory activity across North America. I engage on behalf of ChargePoint at utility regulatory commissions to promote the development of policies and programs that expand electric vehicle ("EV") infrastructure and advance best practices within the EV charging industry. My relevant professional experience appears in my CV, which I attach as Attachment MJD-1.

Q: Have you previously provided testimony in any proceedings before regulatory commissions?

A: Yes. I have testified before the Minnesota Public Utilities Commission (Docket No. M-22-432); the Public Utilities Commission of Colorado (Proceeding No. 23-A-0025E); the Public Utilities Commission of Nevada (Docket No. 22-09006); the Massachusetts Department of Public Utilities (Case Nos. 21-90, 21-91, and 21-92); The New York Public Service Commission (Case Nos. 22-E0317 and 22-E-0319); the Illinois Commerce Commission (Case Nos. 22-0432 and 22-431); the California Public Utilities Commission (Docket No. A. 21-10-010); the New Hampshire Public Utilities Commission (Docket Nos.

DE 20-170, DE 21-030, and DE 21-078); the Pennsylvania Public Utility Commission (Docket Nos. R-2021-3023618, R-2021-3024601, and R-2021-3024750); and, the Michigan Public Service Commission (Case No. U-20836). I have also appeared as a witness regarding EV issues before the Connecticut Public Utilities Regulatory Authority in Docket No. 17-12-03RE04.

Q: Are you sponsoring any attachments?

A: Only the previously identified Attachment MJD-1, my CV.

Q: Please describe ChargePoint.

A: ChargePoint is one of the world's largest EV charging networks, with scalable solutions for charging at home, work, around town, and on the road. With customers that include workplaces, cities, retailers, apartments, utilities, hospitals, and fleets, ChargePoint provides an integrated experience enabling consistent performance, efficiency and reliability at every touchpoint whether one is using a mobile app, plugging into a charger, managing the station, or analyzing charging data.

ChargePoint delivers scalable solutions that enable businesses to support more drivers, add the latest software features, and expand their EV and fleet needs with minimal disruption to overall business. Hardware offerings include Level 2 ("L2") and DC fast charging ("DCFC") products, and ChargePoint provides a range of options across those charging levels for specific use cases including light and medium duty and transit fleets, multi-unit dwellings, residential (multi-family and single family), destination, workplace, and more. ChargePoint's software and cloud services enable site hosts to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability.

ChargePoint products are UL-listed, ENERGY STAR® and CE (EU) certified, and the modular design minimizes downtime and makes maintenance and repair more seamless. ChargePoint's primary business model consists of selling its smart charging solutions directly to businesses and organizations while offering tools that empower site hosts and station owners to deploy charging designed for their individual application and use case. ChargePoint provides charging network services and data-driven and cloud-enabled capabilities that enable site hosts to better manage their charging assets and optimize services. For example, with those network capabilities, site hosts can view data on charging station utilization, frequency and duration of charging sessions, set access controls to the stations, and set pricing for charging services. These features are designed to maximize utilization and align the EV driver experience with the specific use case associated with the specific site host. Additionally, ChargePoint has designed its network to allow other parties, such as electric utilities, the ability to access charging data and conduct load management to enable efficient EV load integration onto the electric grid.

Q: What is the purpose of your direct testimony?

A: The purpose of my direct testimony is to explain ChargePoint's position regarding Indianapolis Power & Light Company d/b/a AES Indiana's ("AES Indiana" or "Company") EV Portfolio proposal in this proceeding.

Q. Please summarize your recommendations to the Commission.

A: I recommend that the Commission take the actions identified below with respect to each program in the proposed EV Portfolio:

General Applicability

- Direct AES Indiana to modify each of its tariffs, as necessary, to remove any prohibition on resale, to ensure that providers of EV charging services can price and sell their services in accordance with HEA 1221.

Tariff EVSE

- Direct the Company to file an additional tariff option that expressly enables third party turnkey solutions or customer ownership of the EVSE within 60 days of the Commission's decision in this docket.
- Direct the Company to provide site hosts the ability to choose from at least two (2) vendors of EV charging hardware and software for all options available to customers under Tariff EVSE.
- Direct AES Indiana to require any EV chargers installed through Tariff EVSE to be networked.

Bi-directional Charging Pilot

- Direct the Company to modify the Bidirectional Charging Pilot to explicitly provide customers the ability to choose among multiple providers of EV charging hardware and network services. Doing so would support the existing competitive market for EV charging station hardware and network services.

Fleet Solutions

- Direct the Company to ensure that all marketing materials and communications with customers through any fleet planning services be vendor neutral.

- Direct the Company against selecting preferred providers or influence fleet operators' choice of equipment and service providers as long as the providers are capable of meeting the Company's operational requirements.

Rate Design

- Direct the Company to submit one or more alternatives to traditional demand-based tariffs for Commission approval within 6 months from the date of an order in this proceeding.

Q: Please provide the context for your testimony today.

A: Yes. On March 11, 2022, House Enrolled Act No. 1221 ("HEA 1221") was signed by Governor Holcomb. HEA 1221, among other things, provides that a person that: (1) owns, operates, or leases EV supply equipment; and (2) makes the EV supply equipment ("EVSE") available for use by the public for compensation; may charge the public for such use based in whole or in part on the kilowatt hours of electricity sold. HEA 1221 also specifies that a person that makes EV supply equipment available for use by the public for compensation, regardless of whether the person charges the public for such use based on: (1) the kilowatt hours of electricity sold; (2) the amount of time spent by an EV at a designated charging space; or (3) a combination of both; is not a public utility solely by reason of engaging in this activity.

I highlight HEA 1221 because several of AES Indiana's current electricity tariffs contain provisions that prohibit resale. These provisions would appear to be in conflict with HEA 1221 because customers seeking to offer EV charging services to the public would not be able to price their services on a kilowatt hour basis, as permitted by state law.

Therefore, ChargePoint recommends the Commission direct AES Indiana to modify each of its tariffs, as necessary, to ensure that providers of EV charging services can price and sell their services in accordance with state law.

II. SUMMARY OF AES INDIANA'S PROPOSED EV PORTFOLIO

Q: Please describe AES Indiana's proposal.

A: AES Indiana proposes a $16.2 million three-year EV Portfolio designed to facilitate and manage EV adoption in its service territory. The portfolio consists of the following components:

Public Use EV Pilot Program

- **Bi-directional Charging Pilot**: This pilot program will test vehicle-to-grid ("V2G") integration and bi-directional power flow with select customers in AES Indiana's service territory.
- **Fleet Solutions:** This pilot program will provide planning and advisory services to customers who are transitioning their fleets from traditional fuels to Public Use EVs.
- **EVSE Rebates:** This pilot program will provide rebates to encourage customer investment in L2 and DCFC equipment to serve Public Use EVs.
- **EVSE Rebates for Disadvantaged Communities**: This program dedicates funds to help ensure that all customers within AES Indiana's service area have convenient access to charging infrastructure, including in areas that are economically distressed or racially or ethnically diverse.

Residential Alternative Rates, Tariffs, and Pricing Structures

- **Residential Managed Charging:** This alternative pricing structure provides incentives to residential customers for allowing AES Indiana to curtail their EV charging during peak hours.
- **Off-Peak Incentive:** This time-varying pricing structure provides incentives for customers to self-manage their load during peak hours.
- **Rate EVX:** AES Indiana proposes to close this tariff to new participants and instead offer new participants the opportunity to participate in the proposed Managed Charging or Off-Peak Incentive offerings.

Commercial, Industrial, and Public Alternative Rates, Tariffs, and Pricing Structures

- **C&I Managed Charging**: This alternative pricing structure provides incentives to C&I customers for allowing AES Indiana to curtail their EV charging during peak hours.
- **Rate EVP**: This alternative rate would update AES Indiana's existing L2 public charging rate to match current market conditions. This updated rate would be charged to drivers using AES Indiana-owned L2 charging infrastructure.
- **Rate DCFC**: This alternative rate would provide a new, market-based rate that would be charged to drivers using AES Indiana-owned DCFC charging infrastructure.
- **Tariff EVSE**: This voluntary, participant-funded alternative tariff will provide charging infrastructure to participating customers for a fixed, monthly fee.

Q: Will AES Indiana's proposed EV Portfolio only create value for participating customers?

A: No. The program has the potential to create value for all customers in AES Indiana's service territory, including those who do not participate in the program. Increased deployment of EV charging infrastructure can create sufficient new load to reduce unit energy costs, resulting in lower electricity rates and net benefits for all ratepayers, irrespective of EV ownership.[1] For example, a state-wide cost-benefit analysis of EV adoption in Indiana conducted by MJ Bradley and Associates found that net benefits (in the form of reduced electricity bills) to ratepayers could reach $5.6 billion by 2050.[2] Furthermore, a cost-effectiveness analysis of EV charging investments proposed by four utilities in Maryland found that the proposed investments would generate net benefits to all ratepayers due to increased load.[3]

Managed charging, which AES Indiana has proposed, can help ensure that EV charging takes place at times that are most beneficial to the grid. This can support the creation of widespread grid benefits resulting from more efficient grid utilization and deferred capital upgrades. Some of the same studies referred to above note that benefits to all ratepayers increase when EV charging is shifted off-peak or intelligently managed (e.g. smart

[1] *See, e.g.* M.J. Bradley & Associates (2016-2017), *State-Wide Costs and Benefits of Plug-in Vehicles in Connecticut, Maryland, Massachusetts, New York, and Pennsylvania, Colorado, Illinois, Michigan,* https://www.mjbradley.com/reports/mjba-analyzes-state-wide-costs-and-benefits-plug-vehicles-five-northeast-and-mid-atlantic; Submission to the Maryland Public Utilities Commission re: CASE NO. 9478(2018), https://webapp.psc.state.md.us/newIntranet/Maillog/content.cfm?filepath=C:%5CCasenum%5CAdmin%20Filings%5C200000-249999%5C221921%5CJointSignatoriesComments_FF.pdf; Gabel Associates, Inc. (2018), *Long Island Cost and Benefits,* https://www.psegliny.com/saveenergyandmoney/solarrenewableenergy/electricvehicles/-/media/2C0D0CC8E48648ECBB38463CD0405826.ashx.

[2] M.J. Bradley & Associates (2018), *Plug-in Electric Vehicle Cost-Benefit Analysis: Indiana,* https://mjbradley.com/sites/default/files/IN%20PEV%20CB%20Analysis%20FINAL.pdf.

[3] Submission to the Maryland Public Utilities Commission re: CASE NO. 9478 (2018), https://webapp.psc.state.md.us/newIntranet/Maillog/content.cfm?filepath=C:%5CCasenum%5CAdmin%20Filings%5C200000-249999%5C221921%5CJointSignatoriesComments_FF.pdf. (Baltimore Gas and Electric Company found that revenue from residential charging would exceed program costs by two times through 2025, and Potomac Electric Power Company found that program costs would be exceeded by three times through 2025).

charging programs).[4] For example, a study commissioned by PSEG Long Island found that managed charging could generate significant net benefits in the form of deferred and reduced grid impacts, and deliver an additional 30% saving to ratepayers.[5]

In addition, several studies highlight that the expected long-term electric sales from incremental EV load exceeds the marginal cost of grid infrastructure to support that load.[6] According to a NARUC report published in October 2019, EV load that charges during off-peak hours can provide positive net revenue flowing back to all customers due to the efficient use of the existing electric grid.[7] Further, a study by Synapse Energy Economics found that in the territories of Pacific Gas & Electric and Southern California Edison, the incremental electrical sales enabled by EV programs exceeded the costs to the electric system by more than 3 to 1.[8] The addition of new dispersed load during off-peak hours can result in the wider distribution of fixed costs, leading to lower rates for all customers.[9] In effect, prudent investments in EV charging infrastructure result in increases in electric use,

[4] *E.g.* M.J. Bradley & Associates (2016-2017) and Gabel Associates, Inc. (2018).

[5] Gabel Associates, Inc. (2018), *Long Island Cost and Benefits*, https://www.psegliny.com/saveenergyandmoney/solarrenewableenergy/electricvehicles/-/media/2C0D0CC8E48648ECBB38463CD0405826.ashx (and related presentation to the Long Island Power Authority Board of Trustees, https://www.lipower.org/wp-content/uploads/2018/10/EV-Study-LIPA-Board-Presentation-Oct-24-2018-FINAL.pdf).

[6] *See, e.g.*, E3, *Cost-Benefit Analysis of Plug-in Electric Vehicle Adoption in the AEP Ohio Service Territory*, April 2017. https://www.ethree.com/wp-content/uploads/2017/10/E3-AEP-EV-Final-Report-4_28.pdf.

[7] NARUC, Electric Vehicles: Key Trends, Issues, and Considerations for State Regulators, at 21 (Oct. 2019) ("NARUC EV White Paper"), available at https://pubs.naruc.org/pub/32857459-0005-B8C5-95C6-1920829CABFE (citing Jones et al. "The Future of Transportation Electrification: Utility, Industry and Consumer Perspectives," Lawrence Berkeley National Laboratory (2018), at http://eta-publications.lbl.gov/sites/default/files/feur_10_transportation_electrification_final_20180813.pdf).

[8] Synapse Energy Economics, Electric Vehicles Are Driving Rates Down, at 4 (Feb. 2019), available at https://www.synapse-energy.com/sites/default/files/EVs-Driving-Rates-Down-8-122.pdf.

[9] NARUC EV White Paper at 21.

exerting downward pressure on retail rates that can benefit all utility customers regardless of EV ownership.

III. EVALUATION OF AES INDIANA'S PROPOSAL

Q: Do you recommend the IURC approve AES Indiana's proposal?

A: Yes, with the modifications described later in my testimony. ChargePoint is generally supportive of the EV Portfolio's goals and objectives. ChargePoint believes the EV Portfolio will allow AES Indiana to expand its services to encourage, facilitate, and better manage EV adoption across its service territory. The program, with my proposed modifications, will encourage EV adoption and provide opportunities for customers to enroll in beneficial charging programs and tariffs, while also supporting both the competitive EV and EV charging markets.

I will walk through the elements of the EV Portfolio that ChargePoint recommends modifying and the policy rationale below.

Tariff EVSE

Q: What has AES Indiana proposed regarding Tariff EVSE?

A: AES Indiana has proposed a Tariff EVSE that would be available on a voluntary basis to AES Indiana's non-residential customers. Customers who voluntarily elect to participate would pay a fixed, monthly fee for qualifying AES Indiana owned/operated EVSE under a five-year term. The additional, fixed monthly charge will be 1.65% of the cost, including

equipment, installation, administrative, and projected maintenance cost, of the EVSE used or ready to be used at the beginning of the monthly billing period.[10]

Q: Does ChargePoint support the Company's Tariff EVSE as proposed?

A: No. The Company is proposing the creation of Tariff EVSE for "eligible customers who request to have Electric Vehicle Supply Equipment (EVSE) installed at one or more of their facilities."[11] Participating customers would "pay a fixed, monthly fee for qualifying AES Indiana owned/operated EVSE…including equipment, installation, administrative, and projected maintenance cost, of the EVSE… ."[12] In other words, AES Indiana proposes to offer its customers a turnkey solution to EV charging installation, operation and maintenance.

ChargePoint acknowledges that there may be instances where a site host would like to have charging options on its property but cannot or does not want to own or operate the charging infrastructure. In these cases, utility ownership is not the only solution. The private sector offers many different business models and products to provide turnkey solutions for site hosts, coordinating all aspects of the charging experience from installation to operation and maintenance, including solutions for site hosts that are not seeking to own or operate their own charging equipment.[13] For example, ChargePoint offers customers a subscription solution for EV charging, "ChargePoint as a Service" ("CPaaS") that is similar to "Software as a Service" ("SaaS") models, which offer access to smart solutions at a reduced

[10] *See* Direct Testimony of Zachary Elliot at 27.
[11] See Tariff EVSE at 1.
[12] *See* Direct Testimony of Zachary Elliot at 27.
[13] Multiple entities, including ChargePoint, currently provide site hosts a CaaS option. *See*, https://www.chargepoint.com/products/cpaas; https://shellrecharge.com/enus/solutions/product/charging-as-a-service; https://blinkcharging.com/businesses/host-a-station/; https://semaconnect.com/products/caas/; https://www.evgo.com/charging-solutions/evgo-fleetsolutions/.

cost through subscription pricing. Under the CPaaS option, ChargePoint coordinates the installation, operation, and any needed maintenance of the charging infrastructure, providing a single point of contact for site hosts and drivers using the station. ChargePoint recommends the Commission direct the Company to offer both utility ownership and third-party turnkey solutions. Alternatively, ChargePoint recommends the Commission direct the Company to file an additional tariff option that expressly enables third party turnkey solutions within 60 days of the Commission's decision in this docket.

Q: Does ChargePoint have any additional concerns with the Company's Tariff EVSE as proposed?

A: Yes, ChargePoint has two additional concerns with the proposed Tariff EVSE. As proposed by the Company, the Tariff EVSE provides generic descriptions of eligible EVSE options available for customers electing to take service under this tariff.[14] However, the Company's proposal does not explicitly provide site hosts the ability to choose from at least two vendors of EV charging hardware and software. ChargePoint believes that one of the main pillars of effective utility investment is the ability for site hosts to choose among multiple, qualified vendors of charging equipment and network software to find the best solution for their specific needs. Protecting customers' ability to choose their preferred solution – rather than providing a "one-size, fits-all" solution – is essential to protecting the competitive market for EV charging stations in Indiana. When customers can choose the charging solution that works best for them, charging solution vendors will compete to make high-quality, innovative products that customers want. Creating ongoing competition between

[14] See EVSE Tariff at 1. "Equipment Eligibility: EVSE is available for networked or non-networked Level 2 and/or Direct Current Fast Charging ("DCFC") EVSE.

vendors through customer choice within utility programs is essential to ensuring that a competitive market can thrive within utility programs and sustainably continue after they cease.

Therefore, ChargePoint recommends the Commission direct the Company to provide site hosts the ability to choose from at least two (2) vendors of EV charging hardware and software for all options (L2 and DCFC) available to customers under Tariff EVSE.

Q: Please explain your additional concerns.

A: ChargePoint recommends that the Company and the Commission require any EV chargers installed through the Tariff EVSE to be networked. Under the terms of the proposed tariff, it will be likely that there will be an incremental price difference for customers that may choose a networked charger and when presented with the option, many customers may choose the non-networked charger simply because of the lower price. Networked chargers will be vital to ensure that EV charging benefits the distribution grid by enabling customers, the Company and third parties to have advanced load management capabilities to facilitate off-peak charging and other managed charging strategies. Non-networked chargers cannot provide the same depth of information and functionality as networked chargers and ChargePoint recommends the Company use the Tariff EVSE as an opportunity to ensure customers can manage EV charging now and in the future. In fact, managing charging is a central underpinning of the Company's rationale for the proposed EV Portfolio.

A networked charger can also collect interval data to inform usage patterns and provide enhanced network communication capabilities between the EV driver and the utility, or third-party systems. These capabilities can be significant to site hosts to enable charging services at their facilities, as well as to utilities and third-party providers since the smart

station can enable various demand side management programs. Those programs could include demand response or enable a time of use (TOU) rate specific to EV charging through utilization of the embedded meter. The associated communication and cloud-based technology platform can also be leveraged to provide enhanced station management features like reservations or notifications for charge completion for an improved driver experience through greater visibility and interaction.

Requiring networked charger capabilities now will future-proof investment in EV charging infrastructure. By requiring smart chargers from the outset, the Commission and the Company will enable AES Indiana, third-party providers, vendors, and customers to reap significant benefits from increased functionality and wider future program design options.

Bi-directional Charging Pilot

Q: Does ChargePoint support AES Indiana's proposed Bi-directional Charging Pilot?

A: Generally, yes. ChargePoint supports the proposal to test V2G integration and bi-directional power flow with select customers in AES Indiana's service territory. AES Indiana states the goals of the Bi-directional Charging Pilot include "(1) to study and establish requirements as necessary for the make ready infrastructure and charging equipment for vehicle to grid installations, (2) establish future requirements as necessary for vehicle to grid interconnection, (3) to collect load profiles for participating customers' EV charging, and (4) to assess the system impacts and benefits and costs of operating bi-directional charging on AES Indiana's distribution system" and that "this work will inform the future value of distributed bi-directional EV charging as a grid service."[15]

15 *See* Direct Testimony of Zachary Elliot at 27.

However, similar to ChargePoint's perspective stated above on the importance of enabling the competitive market, ChargePoint is concerned that AES Indiana has proposed to "install, own, and operate charging and make ready infrastructure sited at the participating customer's facility."[16] It is not necessary for the Company to own and operate the charging infrastructure in order to accomplish the goals of the proposed pilot program and AES Indiana has provided no justification for its proposal to own and operate the charging infrastructure. Further, the Company has not provided information regarding whether AES Indiana would allow customers participating in the program a choice amongst multiple providers of hardware and network services for the equipment installed on their property. Therefore, consistent with our recommendations regarding the proposed Tariff EVSE, ChargePoint recommends that the Commission direct the Company to modify the Bidirectional Charging Pilot to explicitly provide customers the ability to choose among multiple providers of EV charging hardware and network services. Doing so would support the existing competitive market for EV charging station hardware and network services.

Fleet Solutions

Q: What has AES Indiana proposed in regard to its Fleet Solutions proposal?

A: AES Indiana has proposed to "prepare an electric fleet transition plan for participating customers, which will include make and model review, total cost of ownership analysis, and recommendations on EV charging infrastructure and make ready work. These planning and advisory services could be paired with AES Indiana's proposed EVSE Rebates

[16] *See* Direct Testimony of Zachary Elliot at 11.

program, proposed Tariff EVSE, and/or proposed price discounts through C&I Managed Charging."[17]

Q: Does ChargePoint support AES Indiana's proposed Fleet Solutions program?

A: ChargePoint does not oppose the Company's Fleet Solutions proposal but cautions against a program that largely duplicates offerings already available in the competitive market.[18] ChargePoint believes that there is a meaningful role for the Company to play in raising awareness of available EV charging infrastructure to support electrification of fleet operations. There are many unique and complex factors that go into fleet electrification decisions and deployment. While ChargePoint supports the position that the Company plays an important role in raising awareness of the available EV charging infrastructure, many of the unique and complex factors that go into fleet electrification decisions and investments can and should be resolved through collaboration with private market actors, such as a charging site's EVSE provider. Moreover, established EVSE service providers have a broad range of information available to customers regarding products and service availability and pricing.

ChargePoint believes that the Company can be an effective partner for all interested EVSE providers in their service territory to share their current offerings and to market to fleet managers. The Company provided Fleet Solutions should leverage the expertise of private actors in the EV fleet ecosystem to guide site hosts and fleet operators most efficiently in their EV transition. ChargePoint cautions that blurring the lines between a utility providing customer incentives and a utility offering input on topics such as EV procurement and

[17] *See* Direct Testimony of Zachary Elliot at 16.
[18] *See* https://www.chargepoint.com/solutions/fleet

management, funding options, or EVSE choices fall beyond the scope of a utility advisory function and could adversely affect the market for charging equipment or services. ChargePoint recommends that these services focus on promoting technical guidance, as well as an educational focus on how to manage charging and effectively integrate newly electrified vehicles, while mitigating disruptions to business operations.

Additionally, while it is appropriate for the Company to encourage its fleet customers to embrace electrification, it would distort the competitive markets for charging equipment and services, and for light duty (LD) and medium- and heavy duty (MHD) EVs, if the Company were to promote specific vendors or vendor-specific technologies. ChargePoint recommends that the Company ensure that all marketing materials and communications with customers through any fleet planning services be vendor neutral. Further, the Company's Fleet Solutions should not pick preferred providers or influence fleet operators' choice of equipment and service providers as long as the providers are capable of meeting the Company's operational requirements.

Rate Design

Q: What will you discuss in this section of your testimony?

A: In this section of my testimony, I will discuss the challenges that traditional demand-based utility tariffs pose for providers of EV charging services and offer some potential alternative rate options that the Company should implement.

Q: **Does AES Indiana address how customers deploying EV charging stations could be affected by existing commercial and industrial ("C&I") rate structures?**

A: No. AES Indiana's proposal does not address traditional demand-based rates which represent one of the biggest financial challenges facing EV charging providers. To address the potential for significant costs to operators of EV charging stations from traditional demand charges and as supported by the reasons set forth in my testimony, ChargePoint recommends that the Commission require the Company to submit one or more alternatives to traditional demand-based tariffs for Commission approval within 6 months from the date of an order in this proceeding.

Q: In what ways do traditional demand charges represent a hurdle to the success of a long-term sustainable and competitive market for the installation and operation of EV charging infrastructure?

A: Traditional demand-based rates can pose a significant challenge to the deployment of EV charging, particularly at commercial and public charging locations because these charging sites can be dominated by relatively rare, yet very power-intensive, bouts of fast charging. In some markets, demand charges can account for as much as 90% of a site host's electricity costs.[19]

For example, site hosts taking service on AES Indiana's Rate SL face significant demand charges at over $21 per-kW, which, due to the few but relatively high-power charging sessions that occur each month, may lead to prohibitively high operating costs that deter EV infrastructure deployment and do not necessarily reflect the cost to serve DCFC customers.[20] Simply put, rates like Rate SL were not designed with serving EV charging

[19] Rocky Mountain Institute, 2017. "EVgo Fleet and Tariff Analysis." Available at: https://rmi.org/wp-content/uploads/2017/04/eLab_EVgo_Fleet_and_Tariff_Analysis_2017.pdf.

[20] *See* https://www.aesindiana.com/sites/default/files/2022-07/Rate-SL-Secondary-Service-Large-50409-Effective-06-30-22.pdf

customers in mind. Effective rate reform would allow the utility to more appropriately balance the need to accelerate charging infrastructure deployment with the cost of serving new DCFC customers.

Implementing appropriate rate designs that eliminate, defer, or reduce demand charges is key to unlocking increased investment in the EV charging infrastructure needed to support EV drivers in Indiana, as well as those transiting through the State.

Q: What does ChargePoint recommend in lieu of AES Indiana's present demand charges?

A: There is no "one-size-fits-all" alternative to traditional demand-based rates, and utilities should have flexibility in developing appropriate solutions for their customers. ChargePoint believes that it is critical for the Commission to ensure the development of long-term, sustainable, tariff-based solutions that reflect actual costs and benefits to the grid of EV load.

There are numerous examples of alternatives to traditional demand-based rate structures that are currently in effect. It is important to note that some of the alternative rate structures are "technology neutral" enabling any commercial and industrial customer to take service on the applicable rate structure whether the customer operates an EV charging station or not.

Models that have been employed by utilities in other states include:

a. **Eversource, National Grid, and Unitil; Massachusetts:** For commercial EV customers with relatively low peak demand (less than 100-200 kW), Eversource's GS-1, National Grid's GS-2, and Unitil's GD-2 eliminate demand charges and bill EV customers entirely on a volumetric (per kWh) basis. For customers with higher

monthly peaks, Eversource's EV-2, National Grid's GS-3 and Unitil's GD-3 rates provide a discount on demand charges on a sliding scale according to utilization.[21] The sliding-scale rates appropriately consider market growth (i.e., utilization) by adjusting per-kW and per-kWh charges in each graduation of the sliding scale to make the effective price of electricity relatively consistent for EV customers. Rates will be effective in July 2023 and be available for ten years to provide stability and predictability to the EV charging market. The sliding scale graduations are based on the following structure:

- <5% utilization: 100% demand charge discount
- Between 5% and 10% utilization: 75% demand charge discount
- Between 10% and 15% utilization: 50% discount
- >15% utilization: regular demand charges

b. **Central Hudson, National Grid, NYSEG, RG&E, ConEdison, Orange & Rockland; New York:** The New York Public Service Commission approved short-term and long-term relief for demand charges across the state. In the short term, all investor-owned utilities must provide a 50% discount on existing demand charges for all public DCFC customers. The demand charge discount will offer immediate relief while the utilities design and propose long-term rate solutions. Like the Massachusetts solution, the "EV Phase In" rates eliminate demand charges at low (<5%) load factors and phase in demand charges on a sliding scale as load factor

[21] Massachusetts Department of Public Utilities, D.P.U. 21-90; D.P.U. 21-91; D.P.U. 21-92 Final Order, issued on December 30, 2022, available at:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/16827694

increases, with relief available up to 20% load factor.[22] Each utility service territory will have discretion to design the appropriate mix of per-kW and per-kWh charges in each graduation of the sliding scale to recover the revenue requirement based on the embedded cost of service. The framework for the EV Phase In Rates was approved in January 2023, and rates should be available for enrollment by mid-2024. When the EV Phase In Rates are available, all commercial EV customers will also be able to opt in to managed charging programs to further managed operational costs and minimize the grid impacts of coincident peak load.

c. **Dominion, VA: Low Load Factor Rate (Below 200 kWh per kW):** Dominion's GS-2 rate provides an all-volumetric, technology-neutral, low-load factor rate applicable to non-residential customers with a load factor below 200 kWh per kw.[23] This rate effectively provides relief from prohibitive demand charges for low-load factor customers through an all-volumetric rate that has been designed to recover the utility's cost to serve. ChargePoint recommends the Commission consider alternative rate designs for low-load factor customers – such as the GS-2 rate – which are designed to recover capacity costs that may traditionally be recovered through demand charges on an all-volumetric basis. Importantly, GS-2 is

[22] New York Public Service Commission, Order Establishing Framework for Alternatives to Traditional Demand Based Rate Structures, Docket No. 22-E-0236, issued on January 18, 2023 and available at: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={2043A628-EC7D-4064-9F32-662D82598760}

[23] *See* Schedule GS-2, available at https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/business-rates/schedule-gs2.pdf?la=en&rev=65c74050107549f299d48689f738e948&hash=7CBE70107AE10C66B8EB5C5A1E248D12

technology neutral enabling any low load factor customer to take service on the rate.

d. **Evergy, Kansas: Business EV Charging Service:** Evergy's Business EV Charging Service provides a three-period TOU rate option for non-residential customers for the exclusive use of charging electric vehicles.[24] While this rate eliminates the demand charge and has been designed to recover the majority of costs through volumetric energy charges, it does include a small kW-based facility charge ($2.32/kW).

e. **Madison Gas and Electric, WI: Low Load Factor Rate (50% Demand Reduction):** The Low-load factor rate provides a 50% discount in the demand charge for customers with load factors below 15%. This technology-neutral rate is targeted not only for DCFC facilities, but also other types of low-load-factor customers.[25]

Q: The Commission is currently examining EV rate design, among other issues, in Cause No. 45816. Given the pendency of Cause No. 45816, should alternatives to traditional demand-based rates be considered in this proceeding?

A: Yes. ChargePoint appreciates the Commission opening Cause No. 45816 to consider measures to promote greater electrification of the transportation sector pursuant to Section 111(d)(21) of the Public Utility Regulatory Policies Act, as amended by the Infrastructure

[24] *See* https://www.evergy.com/-/media/documents/billing/kansas-central/other/bevcs-business-ev-charging-service-12062021_03282022.pdf.
[25] *See* https://www.mge.com/MGE/media/Library/pdfs-documents/rates-electric/E32.pdf. *See also* https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=402247.

Investment and Jobs Act. ChargePoint is actively participating in that proceeding and looks forward to working with the parties, Staff, and the Commission. I do not believe, however, that the pendency of Cause No. 45816 should prohibit the Commission from directing AES Indiana to submit one or more alternatives to traditional demand-based tariffs for Commission approval within 6 months from the date of an order in this proceeding.

IV. CONCLUSION

Q: Please summarize your recommendations to the Commission.

A: ChargePoint recommends that AES Indiana's EV Portfolio be approved by the Commission with the following modifications:

General Applicability

- Direct AES Indiana to modify each of its tariffs, as necessary, to remove any prohibition on resale, to ensure that providers of EV charging services can price and sell their services in accordance with HEA 1221.

Tariff EVSE

- Direct the Company to file an additional tariff option that expressly enables third party turnkey solutions or customer ownership of the EVSE within 60 days of the Commission's decision in this docket.
- Direct the Company to provide site hosts the ability to choose from at least two (2) vendors of EV charging hardware and software for all options available to customers under Tariff EVSE.
- Direct AES Indiana to require any EV chargers installed through Tariff EVSE to be networked.

Bi-directional Charging Pilot

- Direct the Company to modify the Bidirectional Charging Pilot to explicitly provide customers the ability to choose among multiple providers of EV charging hardware and network services. Doing so would support the existing competitive market for EV charging station hardware and network services.

Fleet Solutions

- Direct the Company to ensure that all marketing materials and communications with customers through any fleet planning services be vendor neutral.
- Direct the Company against selecting preferred providers or influence fleet operators' choice of equipment and service providers as long as the providers are capable of meeting the Company's operational requirements.

Rate Design

- Direct the Company to submit one or more alternatives to traditional demand-based tariffs for Commission approval within 6 months from the date of an order in this proceeding.

For all of the foregoing reasons, the Commission should adopt ChargePoint's recommendations to maximize the opportunity for success of the EV Portfolio and for supporting the impending electrification of transportation in AES Indiana's service territory.

Q: Does this conclude your direct testimony?

A: Yes.

VERIFICATION

I hereby verify under the penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

Signature: Matthew J. Deal
Matthew J. Deal

Dated: 4/27/2023

MATTHEW J. DEAL

PROFESSIONAL EXPERIENCE

CHARGEPOINT, INC
Senior Manager, Utility Policy 2023 – Present
Manager, Utility Policy 2020 – 2023
Lead the development and execution of ChargePoint's regulatory strategies to promote electric vehicle charging solutions for site hosts, businesses, utilities and electric vehicle drivers.

SIERRA CLUB
Clean Energy Program Manager 2019 – 2020
Responsible for implementation of approved clean energy objectives through the design and implementation of campaign strategies for the N.C. Chapter. Work with N.C. Sierra Club local groups around the state on campaigns related to clean energy. Represent the Sierra Club to partner organizations, the media, policymakers and executive branch agencies.

EXELON
Senior Manager, Strategic Environmental Initiatives 2013 – 2017
Led renewable policy and supported commercial development activities. Tracked and analyzed renewable/environmental intelligence nationwide for internal stakeholders, including solar, wind, efficiency, load response and origination.

Manager, Policy Analysis 2011 – 2013
Analyzed corporate policy positions on federal, state, retail and wholesale market issues.

CALIFORNIA PUBLIC UTILITIES COMMISSION, San Francisco, CA
Director, Policy and Planning Division 2010 – 2011
Developed independent research on comprehensive long and medium-term regulatory strategies. Represented Commission programs & policies at Legislature, Governor's office, national policy forums and conferences.

Advisor, Office of the President 2007 – 2010
Facilitated success of gubernatorial appointee working in high-stakes, fast-paced political environment by counseling Commission President on major state-wide initiatives, including resource adequacy, long-term procurement, wholesale market structure, smart grid, demand response, renewable portfolio standards, transmission, greenhouse gas reductions and retail market design.

Senior Analyst 2006 – 2007
Provided technical research and analysis on electric procurement, including resource adequacy, long-term planning, compliance, load forecasting and risk mitigation.

FEDERAL ENERGY REGULATORY COMMISSION, Washington, DC

Energy Analyst 2002 – 2006
Provided expert consultation to Commissioners and top management on energy policy issues. Served as Energy Specialist on demand response, California wholesale market design and renewable energy issues.

EDUCATION

Master of Science (MS), Economics (2002)
Illinois State University, Normal, IL

Bachelor of Science (BS), Economics (2000)
Illinois State University, Normal, IL

PUBLICATIONS

Electric Energy Storage: An Assessment of Potential Barriers and Opportunities. July 2010. Available at https://jointventure.org/images/stories/pdf/cpuc.storagewhitepaper7910.pdf

Assessing the State of Wind Energy in Wholesale Electricity Markets. November 2004. Available at https://www.ferc.gov/sites/default/files/2020-05/11-04-wind-report.pdf