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November 17, 2017

Kavita Kale  
Executive Secretary  
Michigan Public Service Commission  
7109 West Saginaw Highway  
3rd Floor  
Lansing, MI 48917

Re: U-18368

Dear Ms. Kale:

Attached are the Comments of Indiana Michigan Power Company regarding Case No. U-18368.

If you have any questions, please contact me. Thank you.

Sincerely,

**DYKEMA GOSSETT PLLC**

Jason T. Hanselman

Attachment

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, )  
to open a docket that will be used to collaboratively )  
consider issues related to both the deployment of )  
plug-in electric vehicle charging facilities and to )  
examine issues germane to the use of compressed )  
natural gas as a motor vehicle transportation fuel in )  
Michigan. )  
\_\_\_\_\_ )

Case No. U-18368

COMMENTS OF INDIANA MICHIGAN POWER COMPANY

**I. Introduction:**

Pursuant to the Michigan Public Service Commission's (Commission or MPSC) October 25, 2017, Order in Case No. U-18368, Indiana Michigan Power Company (I&M or Company) hereby submits these comments regarding the development of regulatory approaches pertaining to the deployment of plug-in electric vehicle (PEV) charging facilities.

By way of background, I&M's customers consist of both retail and sales-for-resale (wholesale) customers located in the states of Indiana and Michigan. Currently, I&M serves approximately 586,000 retail customers in those states; including over 458,000 and 128,000 in the states of Indiana and Michigan, respectively. The electric system of I&M is a completely integrated and interconnected entity and is operated as a single utility.

I&M is pleased to present comments regarding the development of regulatory approaches pertaining to deployment of plug-in electric vehicle charging facilities. I&M supports the development and adoption of PEVs and associated customer programs. Further, I&M concurs with the Commission that PEV utility programs and rates provide benefits for all customers. Development and implementation of new consumer programs and technology can be challenging. The Commission's approach of investigating the use of pilots to prove concept is a prudent approach. Targeted pilots are a suitable method to guide further Commission and utility decision making on this important topic. Utilities that choose to submit PEV pilot programs for consideration should be encouraged to consider strategic actions, customer experience, and grid impacts in their proposals.

A pilot program can provide regulated utilities, auto manufacturers, and equipment suppliers an opportunity to collaborate on building an infrastructure to support electrification of the transportation industry. As previously noted by the Commission in this case, utilities will play a key role in maintaining a distribution system that meets the needs of an expanding PEV

marketplace. Pilot programs allow utilities to gain “hands on experience” to analyze potential Electric Vehicle Service Equipment (EVSE) impacts on local distribution systems and plan accordingly. Further, pilot programs will provide utilities with data and information to meet future customer needs by offering a variety of EVSE and rate programs to ultimately provide for customer need and convenience.

## **II. Issues Being Addressed:**

1. Should utilities initiate a series of targeted pilot programs designed to explore issues related to the deployment of PEV charging stations and associated infrastructure?
2. If yes, what should the areas of focus be of such pilots so they could strategically identify and reduce barriers and inform future investment and regulatory strategies?
  - a. Rate design
  - b. Grid impact
  - c. Customer education
  - d. Role of regulated utility in infrastructure deployment/cost recovery

## **III. I&M Comments:**

### **Issue #1 – Should utilities initiate a series of targeted pilot programs designed to explore issues related to the deployment of PEV charging stations and associated infrastructure?**

Yes, utilities should have the option of submitting well thought-out pilot programs for Commission consideration. Pilot programs are an important step in evaluating the effectiveness of new technologies and consumer acceptance of new programs. Utilities have experience offering pilot consumer programs and new technologies to their customers. Given their relationship with customers and their experience in conducting and managing pilots, utilities are in a good position to administer pilots, gather and consider lessons learned for future program offerings. Recent examples include deployment of advanced metering technologies, Energy Waste Reduction programs and even current PEV EVSE programs. And given their unique positioning in the energy market as regulated entities, utilities can help provide the data and information from these pilots for the benefit of future Commission action in this developing technology area.

**Issue #2– If yes, what should the areas of focus be of such pilots so they could strategically identify and reduce barriers and inform future investment and regulatory strategies?**

**Issue #2a: Rate Design**

Rate design for PEV charging should be afforded as much flexibility as possible by the Commission in the early stages of PEV adoption and growth. When considering pilot programs, Michigan should look to other examples on rate design and keep an open mind when utilities propose varying rate design structures in Pilot programs. Creativity, when combined with lessons learned from other utilities and state commissions, will allow the best possible results to be achieved. There is not a single specific rate design that has proven to always be the best for optimal PEV charging. However, one feature that would almost certainly need to be included is the ability to offer Time of Use (TOU) rate designs, and/or other program design features that would encourage optimal EV charging times. These approaches allow the utility to provide transparent pricing or incentive signals to customers to optimize charging during off-peak times. Use of these rates and incentives will support creative pilot program designs to realize benefits for the EV charging customer, all other customers, and the utility.

Other examples of rate design options that should be considered for piloting include, but are not limited to: allowing the utility to offer voluntary customer programs to actively manage the EVSE use (time, capacity, etc.) in return for a reduced rate, designing other PEV tariffs to adequately reflect the impacts of various EVSE use on a utility's cost of providing service, and/or allowing the utility to require a second meter in certain circumstances when necessary to accurately measure energy and demand attributable to use of the EVSE. These are all examples of designs that are currently, or have been previously, utilized in other states. Due to differences in the characteristics of the service territories among Michigan's utilities, a one-size-fits-all rate design may not be appropriate. Utilities should have the option of proposing different customer programs and accompanying rate designs which are best for their service area.

**Issue #2b: Grid Impact**

Current rates of PEV adoption in the I&M service territory in Michigan do not present any immediate risks to I&M's grid reliability. However, the concentration of PEV charging on a circuit is an area that utilities need to monitor. The most likely scenario that would require remediation is concurrent use of several EVSEs at residences served by the same transformer that could cause potential overload. This situation serves to highlight why utilities should be allowed to engage in pilot programs. Utilities are in a unique position of being able to engage with customers to optimize the use of EVSEs to avoid negative grid impacts. Utility pilot programs could investigate these circumstances before they become common, develop mitigation strategies, and provide information to the Commission in support of the development of prudent regulatory policy and practices going forward.

Additionally, as EVs are increasingly being equipped with larger sized batteries, the use of this stored electricity can be used to the benefit of the grid. These batteries can potentially be used for voltage or frequency regulation, or for capacity or energy to support either the local distribution grid or the broader electric power market. These Vehicle-to-Grid (V2G) applications are currently being tested in several pilots throughout the US and in other parts of the world, and can serve as an example of the types of future pilots that might be considered in Michigan. They also highlight the unique role that utilities can serve in supporting EVSE market development.

### **Issue #2c: Customer Education**

I&M assists its customers with general learning and understanding of the benefits of PEVs and supports informed buying decisions via dedicated pages on the I&M website<sup>1</sup>. Additionally, an affiliate of I&M, AEP Ohio, has in the past provided materials that offered a rebate for any customer that purchased a Nissan Leaf. The rebate and all associated costs were covered by Nissan.

Pilot programs would be an ideal opportunity to further test the efficacy of partnerships on customer awareness, knowledge, consideration, and adoption of EVs. All customers would benefit if utilities were able to partner with automakers, particularly General Motors, Ford, and Chrysler Fiat, which all have regional appeal to the Michigan customer base. Working with the automakers to inform, educate and incentivize PEV adoption will provide mutual benefit to all involved. I&M is interested in considering pilot programs to further showcase the benefits of PEVs to its customers.

### **Issue #2d: Role of Regulated Utility in Infrastructure Deployment/Cost Recovery**

Various states have employed different models to encourage increased deployment of EVSE infrastructure. Some states have allowed utilities to own and operate EVSEs to support PEV adoption, while other states have disapproved. Since there are a number of approaches to EVSE ownership and competition, it makes sense for Michigan to encourage pilot programs to determine which approaches are most supportive of PEV adoption within the State.

As one example, investor-owned utilities in the State of California proposed numerous pilot programs and took an early adopter approach to PEV technologies. Initially, the Public Utility Commission of the State of California ruled against the utilities and barred them from operating EVSE facilities that were not used for the utilities' own fleets or workplaces. This stance did not result in sufficient investment from the competitive market, which prompted California Commission to reverse the original decision and subsequently encouraged utilities to submit proposals for review on a case-specific basis. As a result, in 2016 the California Public Utilities

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<sup>1</sup> I&M PEV website: <https://www.indianamichiganpower.com/environment/ElectricVehicles/>

Commission approved \$197M in vehicle charging infrastructure for regulated electric companies.

Without utility involvement, there is the potential for market failures or barriers in certain areas. Regulated utilities have been serving customers within their service territories for many years regardless of economic conditions or socioeconomic class. Given the immaturity of the EVSE market, many businesses in that market do not have long track records and may not be around to serve customers in the long run. Utilities are in the best position to offer EVSE infrastructure and programs across all customer classes in all local or regionalized markets. Also, utilities are uniquely positioned to standardize the deployment of technology which could allow for the optimization of such equipment and technology to provide greater system and customer benefits, for example providing an additional platform for demand side management programs. Finally, utilities are also uniquely positioned to standardized public charging payment systems in an effort to minimize customer confusion and frustration.

There are several benefits that utility customers and Michigan residents may see with utility and Commission support of PEV infrastructure deployment. Pilot programs can help educate customers about these benefits and provide informative data.

- **Promote PEV adoption** – With utility support, PEV infrastructure can be deployed throughout communities to remove customers concerns with lack of charging locations. Customer perceptions about the lack of charging stations are a major factor holding back many potential consumers from purchasing a PEV.
- **Reduced average electric system costs and downward pressure on rates** – As PEV adoption increases, there will be increased usage of the electric grid infrastructure through PEV charging and existing electric system fixed costs will be spread over a greater number of KWh sales. This results in lower per-KWh costs for all customers and puts a downward pressure on rates. TOU rate designs that reflect the temporal differences in costs will allow PEV charging customers to be properly incentivized to charge during off-peak times. The use of PEV charger load management programs, similar to Demand Response programs, can also be effective in limiting PEV charging impacts on system and grid peak demand. The effect of these programs further improves the utilization rate of existing assets, rather than requiring substantial incremental asset additions.
- **Reduced environmental impacts** - The use of PEVs, when compared to traditional internal combustion engines, provide important environmental benefits. NOx emission reductions, especially in non-attainment areas, are an important benefit shared by all area residents. To the degree PEVs help non-attainment areas meet their pollution control requirements at a lower cost; the result is an economic benefit to all area residents. Also, the reduction in CO<sub>2</sub> emissions resulting from PEV use help reduce greenhouse gases (GHG) impacts, providing an important reduction opportunity from the transportation sector.

- **Support for renewable generation** - Many PEV customers purchase these vehicles to reduce their carbon footprint and therefore, also support renewable generation. Green power programs and PEV programs can be viewed as complimentary by a growing segment of the public. By supporting the expansion of PEVs within the State of Michigan, there may be a subsequent increase in demand for renewable generation.

Since all customers have the opportunity to benefit from increased electric sales and reduced GHG emissions, it is reasonable for all customers to share in the necessary costs to bring these advantages forward. These costs would be primarily to support PEV programs, EVSE infrastructure and necessary distribution upgrades. As such, utilities should have the ability for recovery of reasonable and necessary costs associated with supporting PEV programs, including rate base treatment of the equipment and installation costs associated with utility owned EVSE infrastructure.

The Commission is encouraged to provide utilities flexibility in pilot programs designed to explore various business models in an effort to address their unique circumstances and the evolving needs and interests of their customers. For example, business models could include complete utility installation and ownership of EVSE equipment, customer owned equipment and utility responsibility for 'make-ready' customer-side-of-meter upgrades, customer rebates for EVSE adaptation, etc. The results of various models would be instructive to all parties as PEV technology develops and matures and customer adaptation increases.

Also, I&M encourages the Commission to collaborate with the Michigan Department of Environmental Quality (MDEQ) to investigate and possibly coordinate the expansion of EVSE deployment utilizing available funding in the Environmental Mitigation Trust under the VW Emissions Settlement. The MDEQ is contemplating the allocation process of funds for new light duty zero emissions vehicle supply equipment. Given the Commission's authority related to charging infrastructure regulatory barriers, there may be synergies to be gained from coordinating the goals of the MDEQ and the Commission when considering EVSE pilot programs.

The Commission is encouraged to consider the immature nature of the PEV industry and the need for flexibility when contemplating criteria to evaluate utility involvement in charging infrastructure. At this point, all reasonable pilot program approaches should be considered for EVSE deployment.

**IV. Summary:**

I&M supports the concept that utilities should have an opportunity to propose pilot PEV infrastructure deployment and associated consumer programs to the Commission. Utilities along with the Commission can utilize pilot data to determine and develop the best rate designs and programs that provide benefits to both electric vehicle owners as well as all customers on the utility system. Pilots can provide feedback on potential grid impacts and the types of information that customers need in order to understand the costs and benefits in their PEV and EV charging decision making.

Respectfully submitted,

INDIANA MICHIGAN POWER COMPANY

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