STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission
On Its Own Motion
Notice of Inquiry Regarding Electric Vehicles

18-NOI-01

COMMENTS OF THE PEOPLE OF THE STATE OF ILLINOIS

1. Introduction

This Notice of Inquiry (NOI) contains an extensive list of questions, stretching to more than 50 inquiries. See NOI pages 4-7 (Sept. 24, 2018). Parties were given less than one month to respond.

The assumptions underlying the NOI require the parties to look far into the future: For example the NOI refers to predictions about electric vehicle (EV) penetration in 2030 and 2040. At the same time, the NOI recognizes that EV adoption is “in its infancy.” Id. at 3. As a preliminary matter, the Commission should note that in Illinois, as of December 31, 2017, electric vehicles and electric plug-in hybrid vehicles each represented only 0.07% of registered vehicles (7,692 and 7,856 respectively out of 10,979,102 registrations).1 Illinois is consistent with national trends, where electric-only vehicles and plug-in hybrid EVs each represented less than 1% of the nation’s total vehicle sales in 2017.2

As the NOI notes, there are many different types of electric vehicles. In the mass market, there are fully electric cars and electric hybrids which supplement mileage with gas. The fully electric cars can have ranges from 100 miles to 400 miles on a full charge, and hybrid plug-in

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1 https://autoalliance.org/in-your-state/IL/ While the number of electric registrations increased by about 31.5% from the prior year, together, these vehicles make up only 0.14% of registrations.
electric cars have ranges of 20-50 miles, depending on make and model and driving conditions. Today plug-in hybrids are more widespread and less costly than all-electric cars. In designing policy, the Commission must recognize that the EV market is still unsettled. Clearly, a car that requires an electric charge for 400 miles will present a different challenge than a car that needs to charge only 40 miles.

The NOI asks about EV charging station infrastructure. This is another area that is currently in flux. Importantly, private investors are bringing a wide range of approaches to EV charging. There are various business models, including on-premises and in-home charging, pay-as-you-go free standing charging stations, free charging at businesses for employees or customers, free or pay charging in public and private parking lots, and free or pay charging in public spaces such at national parks and on municipal property. Notwithstanding these options, the literature reports that 80% of charging is done at home. As a result, rate design options for utility customers, rather than development of charging infrastructure that competes with private interests, should be the focus of an EV investigation.

2. It Is Premature To Answer Many Of The Detailed Questions Contained In The NOI.

The NOI contains seven topics and multiple subtopics, raising detailed questions about the effect of EVs on Illinois and future policy options and “solutions.” These questions cannot be answered today without engaging in extensive speculation. A better approach is to recognize where Illinois is today, and address issues that are arising today, recognizing that circumstances might change and require different or new approaches. Solutions based on speculation about what the future may bring can result in unintended and unexpected consequences, can obstruct or

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3 Conditions affecting range include weather conditions and temperature, driving speed, road conditions, traffic, and use of heat/air conditioning and other vehicle amenities.
skew private, non-utility investment, and can result in improper subsidies of higher income EV owners by utility customers.

Given current conditions, the Commission may consider the following issues:

1. Rate Design
2. Utility Investment
3. Customer Class Subsidies

A fuller discussion of these issues follows.

3. Rate Design – To The Extent that Off-Peak Charging Can Limit Peak Usage and Increase Load, It Can Be Encouraged Through Rate Design Tools.

While Illinois has been pursuing utility ratepayer funded energy efficiency programs, usage is not on a straight downward trend. Rather, usage varies year-by-year, depending on many factors, including weather. As the following usage statistics from the ICC’s Electric Sales Reports\(^4\) show, in three of the last six years, total usage increased compared to the prior year, while three years’ usage decreased compared to the prior year. However, the overall trend since 2011 appears to be declining usage. Future energy efficiency spending is intended to continue to reduce usage.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total MWH Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>131,318,667</td>
</tr>
<tr>
<td>2012</td>
<td>132,551,942</td>
</tr>
<tr>
<td>2013</td>
<td>133,445,659</td>
</tr>
<tr>
<td>2014</td>
<td>130,435,568</td>
</tr>
<tr>
<td>2015</td>
<td>126,951,888</td>
</tr>
<tr>
<td>2016</td>
<td>128,766,097</td>
</tr>
<tr>
<td>2017</td>
<td>125,491,496</td>
</tr>
</tbody>
</table>

\(^4\) https://www.icc.illinois.gov/publicutility/salesstatistics.aspx (see Table 25, Total Sales of Electricity).
The rates of Illinois’s two major utilities, Commonwealth Edison and Ameren, are set based on an annual formula that incorporates annual changes in expenses, investment, and sales.\(^5\) As a result, their revenues are protected from the risks associated with a reduction in usage. However, because rates paid by consumers are affected by how much energy is used, a reduction in usage can increase the usage rate and an increase in usage can decrease the usage rate. Because EVs are a new source of energy usage, by increasing overall usage, usage rates can decrease because rate recovery is spread over more kilowatthours.

Today residential *distribution* rates are subject to regulatory review and are based on fixed monthly charges as well as usage or per kilowatthour charges. Commercial *distribution* rates include a demand charge as well. The first question that must be clearly understood is whether there should be a change to *distribution* charges to reflect expected expanded demand from EVs. Today no Illinois regulated electric utility has time-of-use distribution rates to reflect the effect of usage at different times of day on peak demand or cost. If a change in distribution rates is considered to reflect the demand associated with EVs, the Commission should require hard data linking EVs to changes in demand and in peak load. To the extent that this information supports a change in rate design, time-of-use rates to encourage off-peak usage and charging should be made available to customers with EVs, and to other customers who opt into the rate. The interest in shifting usage to off-peak times is not limited to EV owners and a new time-of-use rate could help education consumers about the costs associated with usage at different times of day.

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Unlike distribution service, supply service is unregulated and is ordinarily charged on a kilowatthour basis. Illinois utilities provide supply to customers who can take advantage of hourly pricing or are “eligible” retail customers taking electricity service from the utility. In current market conditions, EV customers would benefit from hourly pricing that includes lower prices in the late night, early morning hours and relatively higher prices in midday. Illinois already has a significant supply rate design option (hourly pricing) available to EV (and all other) customers that provides a price signal for when it is least costly to charge an EV. The key is for EV owners to know about hourly rates and understand how hourly rates work.

To the extent that customers use unregulated alternative suppliers, the major problem facing the residential EV market is unreasonably high prices often charged by alternative suppliers. There is no evidence that any alternative supplier offers a supply rate that incorporates the lower, off-peak energy charges available in the wholesale energy markets. To the extent that consumers lack access to lower prices at off-peak times, EV adoption will not be encouraged. Indeed, alternative supplier rates that are priced significantly higher than the utility rate will stifle adoption of EV, as consumers fear prices that increase without explanation or notice.

Consumers who choose EVs will need to have a deeper understanding of the cost of electric energy if they are to make rational choices that do not turn out to be unreasonably costly.

4. The Current Level Of Private, Non-Utility Investment In EV Infrastructure Should Caution Against Regulator Action That Can Stifle Innovation And Shift Investment Risk To The Ratepaying Public.

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7  Id. at 16-103, 16-110.
9  The Commission’s Plug-In Illinois site includes charges up to 12.0 cents per kilowatthour (Clean Choice), while ComEd’s default price is 7/292 cents. The Office of the Attorney General has seen charges as high as 14 cents per kilowatthour. See https://www.pluginillinois.org/offers.aspx?said=1
In order to assess the role of the utility in developing EV infrastructure, the Commission must do two things: First, it must assess its statutory authority, including whether the construction of EV charging stations is currently treated as a utility function. Second, it should investigate the extent of private, non-utility investment in EV infrastructure.

The Public Utilities Act provides that persons or entities that install, maintain, or repair EV charging stations must obtain certain certifications from the Commission. 220 ILCS 5/16-128A(d). The Commission has adopted Part 469 to govern the installation, maintenance, or repair of electric vehicle charging stations. 83 Ill. Admin. Code 469. The statute and the rules apply to non-utility entities. There is no indication that utilities were expected to compete with these independent installers.

Over their history, Illinois’s electric utilities have incorporated the introduction of a myriad of electricity-devouring appliances, from air conditioners to televisions to home computers to game consoles to mobile phones. The associated increased electricity usage has been treated as growth. As air conditioning use drove up summer peak, summer-winter rate designs were considered to reflect the increased peak-related costs associated with air conditioning use.10 As discussed above, consideration of rate design to incent EV charging to off-peak times should reflect both the effect of EV charging on infrastructure costs and the premise that increased usage will benefit all customers on the system, and can counteract the pressure that reduced usage might place on usage rates.

At the current penetration of EVs in Illinois (less than 1% of vehicles), Illinois utilities should not have difficulty incorporating the additional demand on the system. As demand grows, the utilities can assess how EV charging affects infrastructure needs and costs and how it

interacts with other consumer uses. Today the extent of future EV charging is unknown and its
effect on infrastructure cannot be the basis of either Commission policy or utility investment
mandates.

Many of the questions posed by the NOI concern the commercial development of
transportation electrification and the utility’s role. In addition to falling outside the
Commission’s jurisdiction, these questions are more naturally and economically addressed by the
marketplace in response to consumer demand. In fact, the private marketplace is responding to
the need for EV charging infrastructure. Charging options include:

1. Home charging
2. Charging at businesses (free for employees or customers or at a charge)
3. Private charging sponsored by companies such as EVgo or ChargePoint
4. Municipal or other public entity charging stations (free, subsidized, or at a charge)
5. Parking lot charging (free, subsidized, or at a charge).

These various models provide various benefits to consumers and businesses, depending on the
model. The risks and benefits to the installers are assessed by them, borne by them, and the
decisions to proceed are non-utility decisions. Importantly, utility consumers are not asked to
accept any risk associated with these investments.

Any utility role in EV charging stations must be considered against both the legal
limitations on distribution utilities to provide delivery service\(^\text{11}\) and the inhibiting effect it could
have on private investment. Providing an EV charging station is a step beyond providing utility
infrastructure to an electric meter, representing the point where the utility infrastructure ends and

\(^{11}\) 220 ILCS 5/16-103(e)
the customer’s property begins. A charging station is not a delivery service under the law, and therefore should not be a utility function. Further, the lack of risk associated with annual formula rates\textsuperscript{12} place persons and entities that rely on private capital to finance charging stations at a serious competitive disadvantage. While private investors bear the risks that the placement of their charging stations is optional, that EV adoption will grow as expected, that their costs will be covered and their return will be adequate, the utility can be expected to include all EV charging station costs in rate base, where the billions of dollars of utility investment can mask or swallow inefficient EV charging station investment, increase the utility’s revenue requirement, and, in turn, increase customer rates.

Utility investment is infrastructure, paid by all consumers with no investor risk, can squeeze out private capital that currently is innovative and based on investor risk. As EV penetration increases, one can expect privately funded charging infrastructure to grow. The Commission and the State of Illinois should give the private sector a fair opportunity to provide EV market needs and not adopt policies that may discourage private sector charging stations and unnecessarily increase customer rates.

5. The Commission Must Protect Affordable Electric Service And Avoid Utility Investment That Will Result In A Wealth Transfer To Higher Income Consumers.

The electric car market includes very high end, or expensive, cars. For example, a fully electric Tesla Model S sedan has a base price of $74,000, while a Model X SUV can cost $140,000 fully loaded.\textsuperscript{13} Other electric cars, such as a plug-in hybrid, can have much lower prices. Nevertheless reports are that “the uncomfortable fact of America's early EV adopters is

\textsuperscript{12} In addition to annually resetting rates to cover costs, formula rates include a guaranteed return on both projected and actual rate base as well as a retroactive charge if the prior year’s guaranteed return and expenses were higher than expected. No investor in private charging stations enjoys this type of cost recovery. See 220 ILCS 5/16-108.5(c) and (d).

\textsuperscript{13} See https://www.eenews.net/stories/1060102493
that they skew wealthy. EVs are still more expensive than equivalent gas cars. A rich person can pay for that, install a charger in the garage and keep a second gas-powered car for road trips that exceed an EV's range.”

Utilities provide an essential service that must be universally available at affordable prices. Given the extremely low number of EVs, with electric-only cars accounting for only about 7,700 vehicles out of more than 10 million in the state, it is unreasonable to expect all electricity consumers to pay for EV charging infrastructure for the convenience of people who own only 0.07% of the registered vehicles in Illinois. If utilities invest in an expansive network of EV charging to incent EV adoption, the result would be that all customers, including low-income and payment-challenged customers, pay for infrastructure that only the more wealthy consumers will ever use, assuming that EV adoption grows. Given that the private sector has proven both able and innovative in providing EV charging service to those customers who want it, utilities should not be authorized to include EV charging investment in their rates. At this stage of EV adoption, it is not reasonable or prudent for Illinois monopoly utilities to expect ratepayers to fund EV charging stations in rates.

14 Id.
15 Plug-in hybrids use gas stations to supplement EV charging, and do not require charging stations to the same extent as all-electric cars do. The use of commercial EV charging for a hybrid EV is more discretionary.
6. Conclusion

For the foregoing reasons, the People of the State of Illinois request that the Commission accept the above comments.

Respectfully submitted,

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