BEP - EV Energy Mangement System

This document is for review only, to submit your response please use the submission form provided here.

1.1 Company Background

ComEd is a unit of Chicago-based Exelon Corporation (NASDAQ: EXC), a Fortune 250 energy company with approximately 10 million electricity and natural gas customers. ComEd powers the lives of more than four million customers across northern Illinois or 70 percent of the state's population.

1.2 RFI Background

ComEd is soliciting ideas from interested parties to inform implementation of the eight BE pilots approved in the Final Order in ComEd's Beneficial Electrification Plan ("BE Plan") proceeding. These pilots aim to test new technologies in new communities and ComEd is using the request for information ("RFI") process to understand the benefits and risks associated with these technologies from a diverse set of viewpoints.

In the final order staff has recognized that ComEd "does not currently have technology or structures in place that would allow for mitigating utility side make ready infrastructure through the use of EV EMS to limit the host site's peak demand." NRDC Ex. 1.0 at 29. EV EMS pilot will provide the opportunity to make charging infrastructure more affordable to low income and disadvantaged communities. Through this RFI process ComEd seeks input to provide an opportunity for how it might be incorporate EV EMS given ComEd's technical or structural limitations.

The electric vehicle (EV) companion phase 1 pilot that ComEd ran in 2022 built a foundation of understanding of the customers experience during optimized charging. ComEd seeks to develop these learnings for EV EMS, Submetering, and Residential Optimize Charging pilot that should all be coordinated during the BE pilot implementation.

1.3 RFI Objectives

As part of the current BE Plan, ComEd is developing a portfolio of BE pilots to increase the positive impact of increased electrification, especially transportation electrification, that may help inform its next BE Plan. ComEd will continue to develop a forward-looking electrification strategy, and for these guided BE pilots, that begins with the information collected through RFI responses.

ComEd is moving forward with EV EMS concept as one of the pilots. "EV EMS, also known as Automated Load Management (ALM), refers to the use of behind-the-meter software (e.g., power sharing) and/or hardware (e.g., integrated or located battery storage) solutions to limit EV charging demand at the service connection to a predetermined level below the aggregated charging capacity of the EVSE." NRDC Ex. 1.0 at 28.

ComEd seeks to utilize real-time demand monitoring and load control technologies to evaluate the viability of using demand management to avoid having to upgrade a customer's electric service to accommodate a Level 2 EV charger. This additional load may exceed the remaining capacity of the current electric service drop, which would require a costly service upgrade. However, the National Electrical Code allows the total potential loads to exceed the service to the panel if there is an Energy Management System (EMS) to limit simultaneous loads such that the service limit is not exceeded. This system will allow a homeowner to install a Level 2 EV charger – even if the maximum load of the charger exceeds the available capacity – without having to upgrade the electrical service to the home.

Using "EV EMS can help mitigate upgrade costs on old/outdated utility infrastructure usually used to supply power to low-income and disadvantaged communities, thereby making EV charging infrastructure more affordable for these communities." Id. at 29.

This RFI does not commit ComEd to award a contract, pay any costs incurred in the preparation of a response to this RFI, or to procure or contract for services. ComEd reserves the right to accept or reject any or all proposals received as a result of this RFI, to negotiate with any qualified submitting entities, or to cancel this RFI in part or in its entirety.

ComEd may launch a Request for Proposals (RFP) in 2024-2025, with pilot contract in 2024-2025. Details on timing release will be shared as a follow-up to the RFI. ComEd reserves the right to cancel or change the proposed RFP release dates and details.

2.1 RFI Schedule

This RFI will be launched on November 3rd, 2023. Responses will be accepted until December 1st, 2023 at 5 PM CST. It is the sole responsibility of the responding firms to ensure their submission is received through Qualtrics on or before the due date and time.

2.2 Schedule of Events

RFI issued – November 3, 2023

Response to RFI deadline – 5:00 p.m.M CST December 1, 2023

Submitting participants will be notified of next steps after ComEd has reviewed responses – No later than March 1, 2024

2.3 Documentation and point of contact

Participants should respond with the information listed in the questions below (and found in the submission form). For questions or concerns regarding this solicitation, please reach out to BEPilots@comed.com.

SUBMISSION QUESTIONS

1. Describe, in sufficient detail, what concept(s) could support and meet the objectives of this pilot and to enable the implementation of a scalable and successful pilot.
2. Please rank the following benefits that could be achieved by this pilot in order from most important to least important:
    a. Advances beneficial electrification
    b. Increases grid resilience, reliability, or power quality
    c. Economic benefits to customers
    d. Energy savings to customers
    e. Decreases in greenhouse gas emissions or local air pollution
    f. Addresses an existing equity gap, either with regard to technology access, program benefits, or community stakeholder inclusion
3. Are there any benefits not included in the list above that ComEd should consider? If so, how would you rank it in the list above?

4. Cite or provide links to any studies, references, or benchmarking data that support aspects of this pilot.
5. Provide a list of current manufacturers or suggested suppliers who produce products/technologies that can be used in this pilot. If known, please detail product readiness and any known deployments.
6. Identify or propose geographical regions where this pilot can best provide benefit and/or experience successful deployment.
7. Describe how this pilot can be designed to maximize customer benefits including energy savings, cost savings, and non-energy benefits.
8. Describe how this pilot can be designed to benefit income-eligible customers or Equity Investment Eligible Communities
9. Provide a list of any community groups or other relevant stakeholders that may be beneficial to engage in the development or implementation of this pilot.
10. Describe what considerations should be made for the overall potential grid impact of the pilot and how that can be measured.
11. Describe the potential operational and safety risks that should be considered and addressed in the development of this pilot. What technologies or measures can be put in place to mitigate these risks?
12. Please provide any additional information that could contribute to the successful implementation of this pilot.