EV and EVSE Metering Accuracy Testing RFI Stakeholder Questions

Answers Prepared and Distributed by the Joint Utilities of New York

Question 1

Question 4 in the RFI states:

> **"*For all respondents*: Please provide feedback on the strengths and weaknesses of this testing protocol. a. *For third-party managed charging service providers*: Please respond to whether the Joint Utilities' assumption of connecting a vehicle to only one service provider at a time is accurate or prudent."**

Please provide further clarification on question 4a. What is meant by "connecting a vehicle to only one service provider" and what is the Joint utilities reasoning behind this assumption and its benefits?

Joint Utilities Response

Third-party EV managed charging service providers may use different methods of leveraging the vehicle's telematics to obtain or infer kWh values for a charging session or interval data. This was described as part of Rolling Energy Resources' April 26th presentation at the Technical Standards Working Group meeting.

The Joint Utilities are looking for feedback about whether a vehicle can be enrolled in more than one third-party EV managed charging service provider at a time and whether that would influence the kWh readings being obtained from those third-party EV managed charging service providers in any way. Enrolling a vehicle in more than one managed charging service provider at a time may allow for a quicker or more efficient testing protocol, however it is unclear to the Joint Utilities whether this would result in non-representative kWh readings from those managed charging service providers.

Question 2

The Testing Protocol described on pp. 4-7 will yield 4 observations for each unique combination of make/model, charging level (L1, L2 and DCFC), 3rd party managed charging provider, and EVSE (L2 and possibly DCFC): trusted meter/device, EVSE, third party managed service provider, and OEM. The starting SOC will be between 10% and 20%, and the length of the charging session will vary across iterations of the protocol. Thus, observations from different iterations of the test will not be strictly comparable. ***What results do the JU plan to present in the final report? In what format do they expect to be able to present them? What specific questions do they expect the report to answer based upon these data?***

Joint Utilities Response

The specific reporting requirements for the testing initiative have not been established at this time, however at minimum the Joint Utilities expect to obtain the data tables containing the kWh measurements for each load test in a format that allows for easy statistical analysis and comparison and documentation describing the methodology used to perform the testing. The Joint Utilities welcome feedback on how to present the data and findings from the testing initiative.

Further, as stated in the RFI, New York Department of Public Service (DPS) Staff will submit a comprehensive filing with recommendations to the Public Service Commission based on the results of the accuracy testing by no later than October 1, 2024.

Question 3

Will each iteration of the protocol be reported as the result of a one-off test, in which the kWh readings from the devices being tested will be compared to the reading from the trusted meter/device? Or do the JU envision treating the set of observations resulting from the exercise as a sample from a population and conducting statistical analysis on it? If so, what would that be? For example, comparing the accuracy (relative to the trusted meter/device) of kWh readings from different devices in different configurations.

Joint Utilities Response

The exact testing setup and protocol have not been established, however the testing protocol described in the RFI would allow for comparison of up to four kWh readings for each of the Fast-Charging, Level 2, and Level 1 load tests being performed. The overall results being obtained could be analyzed in several dimensions, including at the device level, as a statistical analysis across all results from a given load test (i.e., Fast Charging, Level 2, Level 1), as a statistical analysis across all devices in a device class (i.e., vehicles, EVSE, and third party managed charging providers), and in other ways.

The Joint Utilities view this testing initiative as a research exercise, akin to a benchmarking study of the current state of the market for managed charging enabling devices. The Joint Utilities do not expect to directly use these results of this initiative to qualify or disqualify the devices being tested for use in managed charging programs.

Question 4

The Managed Charging Order directs that the JU's Phase 3 filing to "include a proposal for addressing technologies which do not meet minimum accuracy standards. For example, one option may be tiered incentive structures that correspond with categories of accuracy of the metering device." [p. 28] ***How will the proposed approach support development of such a proposal?***

Joint Utilities Response

The Joint Utilities view this testing initiative as a research exercise, akin to a benchmarking study of the current state of the market for managed charging enabling devices. The testing initiative will provide data regarding the present-day accuracy and variability of energy metering from different devices.

Question 5

Will the exercise from the efforts in the RFI and potential subsequent RFP lead to an official Certification program for managed charging devices? If so, will the testing be done by JU or will there be an external third party lab to perform the testing?

Joint Utilities Response

The Joint Utilities view this testing initiative as a research exercise, akin to a benchmarking study of the current state of the market for managed charging enabling devices.

Further, as stated in the RFI, New York Department of Public Service (DPS) Staff will submit a comprehensive filing with recommendations to the Public Service Commission based on the results of the accuracy testing by no later than October 1, 2024.

Question 6

Will there be an official requirement established for inspection of Managed Charging Devices to assess the metering accuracy of each installed charging station and or EV with a managed charging device? If so, will the inspections be done by JU or other government agencies, or will third party organizations be allowed to conduct the inspections?

Joint Utilities Response

The Joint Utilities view this testing initiative as a research exercise, akin to a benchmarking study of the current state of the market for managed charging enabling devices.

Further, as stated in the RFI, New York Department of Public Service (DPS) Staff will submit a comprehensive filing with recommendations to the Public Service Commission based on the results of the accuracy testing by no later than October 1, 2024.

Question 7

Will the testing of metering devices in the list be done in 2023 or in 2024?

Joint Utilities Response

The RFI lays out a high-level implementation schedule, indicating that device testing is currently assumed to take place in the first quarter of 2024.

Question 8

Will JU provide the devices and EVs in the list of devices provided in the RFI, or will there be an expectation for a third party to source the devices?

Joint Utilities Response

Question 15 of the RFI states that respondents should "assume that any vehicles being tested are provided, but please discuss whether you would need to install any EVSE to support this testing at your facility" and to "assume that any coordination of the vehicles and devices is largely already provided for." Respondents are free to state any assumptions they used when responding.

Question 9

Would we be allowed to change the order of the tests based on various considerations, such as level of charge after each test, which would allow for test time optimization?

Joint Utilities Response

The testing setup and protocol described in the RFI are illustrative and intended to support gathering industry feedback. The Joint Utilities welcome feedback and suggestions on how to make this initiative more efficient and effective.

Question 10

What is the budget for the execution of the testing round described in RFI?

Joint Utilities Response

The Joint Utilities are using this RFI to inform the scope and budget for the testing initiative. No implementation budget has been established yet. Respondents are welcome to provide feedback and suggestions on how to make this initiative more efficient and effective.

Question 11

Is vehicle-to-grid (bidirectional charging) considered to be in-scope for this RFI? For example, should meter accuracy during discharge also be characterized where applicable?

Joint Utilities Response

The Joint Utilities are responding to the requirements from a New York Public Service Commission Order about residential EV managed charging programs. To date, none of the programs involve incentives for bidirectional charging, however the Joint Utilities welcome any suggestions or considerations about including bidirectional charging in this testing exercise.

Question 12

What deliverables are expected from this testing? Is each device to receive its own report, and/or, is the testing implementor responsible for drafting the report analyzing the overall findings? Are there any non-report deliverables?

Joint Utilities Response

The specific reporting requirements for the testing initiative have not been established at this time, however at minimum the Joint Utilities expect to obtain the data tables containing the kWh measurements for each load test in a format that allows for easy statistical analysis and comparison and documentation describing the methodology used to perform the testing. The Joint Utilities welcome feedback on how to present the data and findings from the testing initiative.