Via Electronic Mail

September 14, 2021
Scott Seigal
Hearing Officer, Department of Public Utilities
One South Station, 5th Floor Boston, Massachusetts 02110

Re: DPU 21-90, DPU 21-91 and DPU 21-92 — Public Hearing and Request for Comments

Dear Hearing Officer and DPU,

Sagewell, Inc. is pleased to provide these written comments to the Department regarding dockets DPU 21-90, DPU 21-9, and DPU 21-92. We appreciate the DPU's attention to Electric vehicle (EV) load management as an important matter. Based in Cambridge, MA, Sagewell is a national leader in EV load management programs serving utilities with millions of meters. We also have active electric vehicle load management programs with several public power utilities in Massachusetts, including Braintree Electric Light Department which has a nation-leading 80% EV enrollment rate in Sagewell's Bring Your Own Charger® (BYOC) EV load management program. Sagewell has received numerous industry awards for its load management programs. Our pilot program with the Massachusetts Department of Resources also demonstrated that our BYOC program is one of the most effective EV load management programs.

Our interest is ensuring that EV programs, particularly managed charging programs and residential make-ready and EVSE rebates, are able to reach as many EV drivers as possible. Without widespread enrollment of EV drivers, load management programs will not have the desired impacts. Currently, the proposals from National Grid and Eversource rely on Wi-Fi networked Level 2 chargers for load management. While they are helpful technologies, they are unlikely to reach sufficient market share to meet the Department's load management goals and will significantly limit participation.

Approximately 90% of the battery electric vehicles sold in the U.S. in 2020 came with a manufacturer-supplied 240-volt Level 2 charging cord that plugs directly into a 240-volt outlet. These EV drivers do not need to purchase a separate Level 2 charger of any kind, and can

simply install 240-volt outlets near where they park their EVs. Our experience operating EV load management programs nationwide indicates that most EV drivers are unlikely to purchase a networked charger, and industry estimates indicate that WiFi-connected networked chargers likely have less than 10% market share nationwide.

To increase EV load management program participation, we encourage the Department to expand its definition of “managed charging capable L2 EVSE” to include telematics programs that leverage the onboard telematics systems in most EVs, and, in the future, AMI smart meter load disaggregation. Without needing specific charging hardware or in-car devices, telematics and AMI load disaggregation techniques offer the same functions as networked Level 2 chargers. To illustrate, a networked charger is a combination of a charger, an energy consumption meter, load reduction function, and a data transmitter. The same functions are delivered by the combination of any brand charging device (load controllable or not), a telematics connection (or whole-home AMI smart meter data access), and a programmable load reduction feature in the vehicle. As an example, the State of Michigan Public Service Commission has authorized its two leading investor-owned utilities to operate networked chargers, vehicle telematics, AMI load disaggregation, TOU rates, and other EV load management programs side by side.

We encourage the Department to also include passive or “every day” load shifting programs in its decisions. Our experience and data from the industry indicates that programs that are able to shift EV load every day, rather than based on specific load management events, have a greater overall impact. Passive load shifting does not require accurately monitoring and calling events.. In addition, by shifting load 5 days per week, 52 weeks per year, EDCs will increase overall savings as energy costs and carbon emissions are lowest during the overnight hours.

With regard to the Unitil proposal, passive “every day” load shifting programs can deliver better results and higher enrollment rates than time of use rates, without the barriers of shifting overall home electric use or installation of a separate meter.

We also encourage the Department to allow EDCs the flexibility to offer fixed monthly incentives rather than kilowatt hour incentives due to their very high effectiveness, and lower overall cost. The contribution of any particular EV to coincident peak demand is not closely related to the number of miles driven per year, but rather personal habits and vehicle charging rate. Allowing

for fixed monthly incentives for successfully charging during off-peak hours would better align interests, greatly simplify the process, lower costs to ratepayers, and allow utility program managers to implement the most successful EV load management incentive structure.

In summary, we encourage the Department to prioritize maximizing participation when considering EV management proposals. Expanding the reach of these programs through telematics or AMI meter data disaggregation, encouraging passive load shifting programs, and allowing flexibility in incentive structures will maximize the amount of peak load shifted to off-peak hours, and the benefits for the grid, ratepayers, and EV drivers.

Thank you for your time and consideration.

Sincerely,

/s/ Gary Smith

Gary Smith
Vice President of Programs
Sagewell, Inc.