N A R U C
National Association of Regulatory Utility Commissioners

Staff "Surge Call" – Monday, May 13th, 2024: Utility Ownership of Electric Vehicle Charging Infrastructure (EVSE) Ownership

Synopsis

In 2019, NARUC's report *Electric Vehicles: Key Trends, Issues, and Considerations for State Regulators* showed that utility ownership of EV chargers (also known as "EVSE") was a major question for Public Utility Commissions. This May 2024 Commission Staff Surge Call allowed commission staff to share updates from their states on decisions to allow (or disallow) utility ownership of EV charging stations. This call provided a chance to hear the justifications that led to such decisions and the factors that were considered (e.g., ratepayer impacts, state EV goals, market competition, equity, etc.). Key questions or discussion points were also mentioned during the dialogue.

Nevada

Nevada passed Senate Bill 448 a few years ago. The legislation expressly allows utility ownership of EV charging infrastructure and requires utilities to complete a Transportation Electrification Plan every three years. The first cycle was termed the Emergency Recovery Transportation Electrification Plan (ER-TAP), and it would set up an incentive fund to recover 100% of the costs or be "cost agnostic." However, data on the breakdown between utility and third-party ownership is unavailable.

There is also a specific EV tariff approved for utilities and non-utilities. The cost for non-utility customers is structured based on a connection fee and varies by charging type:

- Level 2: $0.10 per minute
- DC Fast Charging (≤150 kW): $0.49 per minute
- DC Fast Charging (≥350 kW): $0.64 per minute

The next triennial transportation electrification plan is expected to be filed by the end of May 2024 and should provide more data on utility versus third party-owned charging stations.

Hawaii

As of July 2023, there are around 400 EV charging sites in Hawaii and 850 charging ports that provide DC Fast Charging (DCFC) or Level 2 (L2) across the State, roughly 100 public DCFCs, and 800 public L2 ports.[1] The Hawaii Department of Transportation plans to install roughly 50 additional charging ports across 11 sites for its NEVI plan.

One of the state's utilities, Hawaiian Electric (HECO), owns and operates around 30 of the 100 existing public fast chargers (32% of the existing DC fast charging market), but they do not own any L2 chargers. HECO administers two make-ready pilots and two DCFC pilots. The first make-ready pilot was launched in 2022 and allows the construction of make-ready investments to support nearly 200 charging ports across 30 sites. HECO has experienced issues with applicants withdrawing and higher-than-expected engineering costs. To generate more applications, the Commission recently approved the utility's request to modify the pilot by removing requirements for a dedicated meter and enrollment in commercial EV

[1] "Sites" generally refers to a location with EV chargers, public or private. "Ports" refers to the individual charging ports. One EV charging site can have several ports.

rates for primary metered customers. HECO also has a make-ready pilot to support up to 20 electric school bus charging stations.

In 2020, the Commission approved an EV Maui pilot that includes a shared savings mechanism. Currently, HECO is seeking approval of cost recovery for new and planned EV charging ports as part of its Electrification Transportation Roadmap, which showed that by 2030, Hawaii would need roughly 50,000 charging ports, 47,000 of which would be private and 3,500 public. HECO is seeking cost recovery for $79 million ($50 million in CapEx) to install 150 public DCFC ports (28% of the projected need by 2030) and 300 L2 ports (10% of the projected need by 2030). Many intervenors are concerned that the utility's market share for public DCFC ports will dramatically discourage private market investments, resulting in a dependence on HECO to serve the future need for DCFC ports. There are also questions and concerns around:

- The appropriate market share for the utility.
- An appropriate carve-out for disadvantaged communities' multi-unit dwellings in rural areas.
- Whether the utility should focus on make-ready projects instead of owning and operating EVSE.

Indiana

Indiana Chapter Code 8143 is a law that allows utilities to petition for pilot programs for EV chargers for public use vehicles. An electric utility may request approval from the Commission to install, own, or operate charging infrastructure or provide incentives or rebates to customers to encourage investment in public-use EVs and EV supply equipment. Thus, this allows for a limited deployment of charging infrastructure or make-ready infrastructure to evaluate the feasibility of these types of programs.

IURC Case number 45919- the Commission approved DCFC/EVSE tariffs for Indiana Michigan Power (I&M) but denied deferred accounting for I&M's fast chargers as they were considered premature since costs weren't yet estimated. The approved tariff rate is calculated using a regional average for charging stations in the petitioner's service territory and allows them to install and operate 12 public DCFCs. The utility charges a consumption or time-based fee for charging output capacity greater than 50 kilowatts for these stations. The stations must provide at least one charging connector and be available to the public 24 hours a day. I&M also requested authorization to defer costs net of revenues received from this EVSE tariff until costs net of revenues are reflected in the petitioner's base rates; this request was denied because the Commission determined the deferral proposal was premature and the costs were not yet reasonably estimated.

Wisconsin

Wisconsin changed State law to exempt EV charging station operators that charge by kilowatt-hour from the definition of a public utility. This law also established taxes on the electricity sold from EV charging stations equivalent to a gas tax. The changes in state law also included provisions regarding the type of charging stations state and local governments can own or operate and restricted their ability to own, lease, and operate chargers available to the public. Type 1 and Type 2 (also known as L1 or L2) chargers can be available to the public if they are free of charge.

In 2020, the Commission invited utilities to submit pilot programs related to EV charging since that was identified as the number one barrier to electric vehicle adoption. As of 2024, four of the five investor-owned utilities have approved pilot program requests. These include single-family, multifamily, residential, workplace, and fleet charging programs. As these programs are implemented, they will be evaluated closely to develop more standardized EV tariffs.

North Carolina

The NCUC approved a Duke Energy EVSE ownership program in 2023, where residential customers can rent L2 chargers from the utility; commercial customers can rent L2 or DCFCs. The residential L2 option costs roughly $15 per month for a 3-year rental term. The commercial option varies in price and typically has a 7-year rental term. There are only 2 completed residential installations, although 31 participants have applied. So far, the two participants have also used a Make Ready Credit.[2]

Stakeholders brought up several concerns in the proceeding for Duke Energy's pilot:

- Competition—Will this program give the utility an unfair market advantage? Will it enable suppliers of EV chargers, e.g., Tesla, Blink, etc., to participate?
- Is there a market need for Duke's proposed program? Would utility ownership hinder the competitive marketplace? There was much discussion around the risk of cross-subsidization. NC helped avoid this by creating a separate rate class/ voluntary program. Only customers participating in the EVSE program will pay for the program.
- How does this program fit into the overall Transportation Electrification planning strategy, and how does this provide charging for underserved markets?

In addition, Duke Energy has 6 other pilots and 2 commercial EV programs with TOU rates. A recent pending pilot in the latest rate case will build out 100 megawatts of EV fleet clusters. This will help fleets anticipate where the load will grow due to EVs and build up the infrastructure proactively.

Maryland

Maryland has several EV programs focused on public charging and a multi-unit dwelling utility-owned and operated program. In 2019, the Commission approved a utility public charging program for several reasons, including to jump-start the deployment of the public charging network, reduce range anxiety, and lay a foundation for the competitive market.

Supporters of the 2019 ruling mentioned that utilities have superior reliability services and could help build customer awareness of EV programs. Supporters of utility ownership suggested that utilities are better equipped to accelerate the deployment of chargers, especially in underserved areas. Utilities can provide the capital for charging infrastructure's high capital costs. Supporters also believe a utility can leverage different funding sources to meet state EV goals.

Opponents of the 2019 Commission ruling mentioned that utilities are better able to manage grid load impact overall, but utility ownership of chargers may stifle private competition and negatively impact ratepayers. Opponents are concerned that the utility will rate-base these investments, which private companies cannot do. They argued that utilities are better suited for make-ready programs and have issues with the performance of owned chargers.

In 2021, the Commission approved phase 1 of new utility EV programs, where the same issues from 2019 were brought up. This included a Multi-Unit Dwelling program allowing utilities to build, own, and operate multi-family charging infrastructure.

Michigan

[2] Make Ready Credits are credits given to customers for allowing a utility to install an EV charger. For more information on Duke's specific program, please see this website. https://www.duke-energy.com/home/products/ev-complete/charger-prep-credit

Traditionally, the Commission opposed utility ownership of EVSE due to concerns about market competitiveness. Although the stance has not completely changed, Michigan recently approved a limited pilot program allowing utility ownership of EV charging hubs. The utility will install, operate, and maintain two charging hubs with 12 DCFCs each. The goal is to encourage fleet operators to adopt EVs and provide the utility with valuable operational and distribution system data. Charging fees will cover the utility's service costs and include a per-session charge to help offset initial capital investments.

There are concerns that utility ownership could lead to non-competitive rates, discouraging market competition and increasing ratepayers' costs. However, it was argued that the pilot hubs would supply essential data on medium- and heavy-duty EVs, which is currently unavailable.

The commission approved the pilot but required the utility to:

- Collaborate with staff and third parties to enhance public access to distribution system capacity data.
- Improve existing capacity maps and incorporate industry best practices.
- Pursue all available federal funding for the project.
- Facilitate the development of third party-owned charging hubs to support fleet charging.

Minnesota

Minnesota has experienced many issues with approved pilots for DCFC ownership, and utilities like Xcel Energy have run into supply chain and vendor installation issues. Xcel Energy's pilot would have built 21 chargers, but now they plan to build only 6 due to this market uncertainty and lack of expertise.

Q&A/ Discussion Questions

Are other states experiencing significant delays in utility-owned and approved EV infrastructure, and is this affecting the perceptions of utility competence compared to private sector ownership?

North Carolina utilities have experienced similar delays due to unexpected barriers, such as transformer shortages, terms and conditions for setting up EV chargers, and limited 75 kW or larger charger availability for fast chargers like school buses. Often, challenges arise after programs are evaluated, but utilities may still be able to navigate supply chain challenges due to their long-standing industry presence. Hawaiian Electric encountered issues with unresponsive charger manufacturers, particularly in getting technical assistance and replacement parts. There is uncertainty in how utilities will address these issues in future RFPs for chargers.

Maryland has approved extensions for utilities' public charging programs due to supply chain issues exacerbated by the COVID-19 pandemic. Reports indicate these supply chain problems are a major obstacle. Additionally, there are concerns about the utilization of public charging stations (whether they will pay for themselves over time) and whether utilities are best positioned to manage them. However, the Maryland MUD program has a good uptake compared to generic incentives or non-utility-owned incentives.

How effective is setting tariff rates for utility owned EV chargers vs the regional average fees third-party chargers charge? Specifically, how are other states managing data collection when some EV companies refuse to share their charging costs?

Minnesota utilities use market rate data by pulling information from PlugShare, a publicly accessible platform where charging costs are displayed to users. All three utilities in the state now use market rate

data for setting tariffs. Some utilities already have operational charging stations using this data, and additional information can be shared if needed.

Are states allowing cost recovery for EV charging programs, such as ownership, make-ready incentives, etc., outside of a rate case?

Nevada does not allow cost recovery outside of a general rate case. Utilities were previously required to file rate cases every three years. However, after legislative changes, utilities can now file back-to-back rate cases to recover costs more quickly, which has increased the workload for regulatory staff. North Carolina does allow cost recovery, primarily through rate cases. A new pending program allows EVSE costs to be recovered separately from NC's EE/DSM mechanism. This new program may include EV projects outside the traditional rate case cycle.

HECO uses performance-based regulation (PBR) and must fund current utility-owned programs from their PBR budget. They have proposed an interim recovery mechanism for the annual recovery of both capital and operational expenses within the multi-year rate plan period. Any revenues received from these programs would offset their cost recovery.

Minnesota has heard concerns about the allocation of revenues from utility-owned DC fast charging stations. Regulators can scrutinize where new revenues are directed, how additional sales revenues are accounted for, and any accounting from these programs. Regulators are particularly interested in the impact on peak demand and overall rates. Ensuring that benefits from EV investments, like lower rates through better utilization, are properly accounted for is crucial.

In response to Hawaii's ability to potentially offset revenues, can states track incremental revenues from EV charging stations, both utility-owned and those supported through make-ready programs or other initiatives? How do they isolate these revenues and ensure proper offsetting of costs?

Minnesota primarily focuses on tracking new revenues from utility-owned charging stations but also requires utilities to track revenues from make-ready programs. Data collection is a key component of their programs, as several early EV pilot programs experienced issues with collecting metered data. Many utility programs have been overbudget, experienced delayed installation times, less than expected overall installations, etc. Careful tracking can avoid misuse of funds and ensure proper program evaluation. In Nevada, the revenue from utility-owned EV chargers is intended to offset costs for ratepayers. Although the process is not explicitly detailed, it is presented as a benefit of allowing utilities to own and recover costs for these chargers. Legislative mandates play a significant role since they often allow these provisions, as was the case in Nevada.

How can PUCs ensure cost control and reliability in utility-owned EV charging programs? What is a good reliability standard?

Nevada encouraged proper data collection to monitor uptime, reliability, and maintenance costs. Third party-owned charging companies do not like to share data, but the Nevada Commission utilized incentive funding to encourage them to share/report data. NEVI and other federal EV programs require a 97% reliability standard, and several states, like Hawaii and Connecticut, use the standard.

What is the justification for allowing a regulated utility to include in its rate base the cost of constructing charging stations that only a small set of its customers benefit from?

Maryland's justification focuses on jump-starting the EV market and addressing the "chicken-and-egg" problem of increasing charger availability, which would, in turn, encourage more people to buy EVs.

Connecticut relied on existing state energy policies and goals, such as greenhouse gas reductions and transportation electrification. The Commission requested utility proposals based on those existing state policies. Questions in Connecticut would often pop up around cost allocation.

Michigan determined that EVSEs build up new load. The rationale is that the cost is justified if the benefits to ratepayers, such as spreading fixed costs over greater usage and lowering overall rates, outweigh the costs. This applies to both incentives and utility ownership of charging infrastructure. Minnesota has focused on rural areas neglected by the private market. For make-ready programs, current incentives are designed to gather data and information with an eye toward long-term policy. There was also an equity component, ensuring all areas have access to charging infrastructure. However, there is a risk if utilities withdraw support due to unfavorable rate case decisions.

Are there instances where L2 ownership makes more sense than DCFC, and vice versa? Is there a balanced or optimized mix for L2 or DCFC?

Nevada's legislature mandated a mix of L2 and DCFC across various programs, including interstate corridor charging, urban charging, custom grants for transit, electric school buses, and tourism. However, no specific analysis was done to determine if either type was preferable for utility ownership. Michigan determined that L2 chargers are more appropriate for multi-dwelling units (MDUs), as DCFC would not suit these settings. Hawaii's residents often have low vehicle miles traveled (VMT), and where EVs have longer ranges, DCFC might be less necessary due to geography. L2 chargers are more cost-effective and can support more ports, which is crucial in places with high demand for public charging.

Maryland typically uses L2 chargers for residential and multi-unit programs, predominantly offering rebates and utility ownership for L2 chargers. DCFC is reserved for public programs. Michigan identified that DCFCs can lead to higher loads and suggested that it can be hard to determine a "market failure" for certain areas when demand for the chargers may not be there yet. Allowing the market to develop organically before determining if there is a market failure can help determine a balance of L2 vs DCFCs.

In North Carolina, a contentious decision was made to allow Duke Energy to own and operate chargers, which is customer demand-driven rather than widespread deployment. The program will be reviewed after three years. L2 chargers are favored for their cost-effectiveness and suitability in various settings. However, which type and where chargers are built are still based on customer demand, and buildout is occurring fast in certain areas.

How have different states grappled with the issue of rebates not being capital expenses and whether utilities should earn a return on non-owned and non-operated assets?

In Minnesota, utilities wanted to offer significant rebates, such as $1 million for transit buses. However, rebates are not capital expenses but rather are operating expenses related to billing. The MN PUC, therefore, rejected the utilities' proposal to treat these costs as capital expenses. The mechanism for energy efficiency rebates is separate statutorily. In Nevada, the Tech Program and Electric Vehicle Infrastructure Demonstration had legislatively mandated cost recovery, thus sidestepping the debate over rebate treatment. When these Nevada programs evolve and become less legislatively mandated, the assessment of rebate-related cost recovery will become more relevant. For Michigan, utility ownership of charging hubs was supported because it provided valuable information on usage patterns for commercial vehicles, an area not currently addressed by the market.