

The 2019 EMP found that the State can cost-effectively reach its legislative and gubernatorial goals on climate largely through a single approach—the electrification of the transportation sector. 2019 EMP at 12. In order to address these critical and urgent consequences, the 2019 EMP provides that the transportation sector should be almost entirely decarbonized by 2050, primarily through electrification. More so, the 2019 EMP urges that the State must take “concrete steps to start to phase out motor gasoline and conventional diesel consumption as quickly as possible.” 2019 EMP at 60. The goal is clear: rapid and widespread EV adoption. One of the concrete steps to achieve this goal is the rapid expansion of the number of publicly-accessible locations to charge electric vehicles.

New Jersey has long recognized that climate change, caused by increased greenhouse gas emissions, will result in catastrophic effects on human, animal, and plant life. Despite the enormity of the climate change problem, the New Jersey Legislature understood that solutions exist to halt emissions of greenhouse gases, and “as a State, there are specific actions that can be taken to attack the problem of global warming,” as noted by the Global Warming Response Act, P.L. 2007, c.112 (C.26:2C-37 et seq.) (“GWRA”).

More generally, the Legislature reflected this sentiment when it provided the Board with the authority to “require any public utility to furnish safe, adequate and proper service, including furnishing and performance of service in a manner that tends to conserve and preserve the quality of the environment and prevent the pollution of the waters, land and air of this State. . . .” N.J.S.A. 48:2-23.

Governor Murphy continued these efforts to combat greenhouse gas emissions when he released the 2019 EMP, which provides a roadmap for the State to reach 100% clean energy and 80% emission reductions from 2006 levels by 2050. The 2019 EMP begins by stating, “[t]here is near unanimous scientific consensus that the global threat of climate change is grave and that it demands swift local action and focused state leadership.” 2019 EMP at 11. The threats reach beyond environmental risks and include economic and health-related impacts. With this understanding, Governor Murphy’s 2019 EMP seeks to provide steps so that the residents of New Jersey may avoid the increasing consequences of climate change impacting public health, infrastructure, and the overall economy.

In 2020, the State took another step to effectuate the goals of the GWRA and the 2019 EMP by enacting the PIV Act. Finding that “vehicle electrification offers a wide range of benefits, such as improved air quality, reduced greenhouse gas emissions, and savings in motor vehicle operating costs for vehicle owners,” the PIV Act sets aggressive goals and specific steps to increase widespread plug-in vehicle (“PIV”) adoption. N.J.S.A. 48:25-1. Some of these goals include:

1. At least 330,000 light-duty, plug-in EVs shall be registered in New Jersey by December 31, 2025, and at least 2 million EVs shall be registered in New Jersey by December 31, 2035.
2. At least 85% of all new light-duty vehicles sold or leased in New Jersey shall be plug-in EVs by December 31, 2040.
3. At least 25% of State-owned non-emergency light-duty shall be plug-in EVs by December 31, 2025.
4. At least 400 DC Fast Chargers shall be available for public use at no fewer than 200 charging locations in the state by December 31, 2035.
5. At least 1,000 Level Two chargers shall be available for public use across the state by December 31, 2025.

6. At least 15% of all multi-family residential properties in the state shall be equipped with Electric Vehicle Service Equipment (“EVSE”) for routine charging of EVs by December 31, 2025.
7. The Department of Environmental Protection (“DEP”), in consultation with the Board, shall establish goals for vehicle electrification and infrastructure development for medium and heavy duty vehicles by December 31, 2020.

The PIV Act also mandated that the Board establish incentive programs for both EVs and EV charging and provided that the Board may “adopt policies and programs to accomplish the goals established pursuant to this section.” N.J.S.A. 48:25-3(b).

The Legislature and the Governor have made it clear that in order to combat the consequences of climate change, the electrification of the transportation sector is in the public interest. All of New Jersey — its residents, its businesses, its economy, its environment — will benefit from the widespread adoption of EVs.

With the directives and authority provided by the GWRA, 2019 EMP, and the PIV Act, the Board built on its efforts to assist in electrifying the state’s transportation sector when it released its Electric Vehicle Infrastructure Ecosystem 2020 Straw Proposal (“Straw Proposal”) on May 18, 2020.

II. ELECTRIC VEHICLE INFRASTRUCTURE ECOSYSTEM STRAW PROPOSAL

BPU Staff (“Staff”) drafted and released the Straw Proposal and solicited comments for a pathway forward to an EV public charging infrastructure build-out and the roles of private and public entities in this endeavor. The Straw Proposal highlighted the need to create a comprehensive EV Infrastructure Ecosystem – that is, a network of different players who simultaneously work together towards the goal of widespread EV adoption. These players include New Jersey consumers, employers, property owners, electric distribution companies (“EDCs”), and investors.

A robust EV Infrastructure Ecosystem includes all the physical equipment necessary to charge a vehicle, including the EVSE, the pre-wiring of electrical infrastructure at a parking space to facilitate future installation of chargers on a “plug and play” basis, which this Order refers to as the “Make-Ready” portion of the electrical system, as well as distribution upgrades on the utility-side of the meter.

On June 3, 2020, Staff held a stakeholder meeting to solicit comments on the Straw Proposal. Comments were due on June 17, 2020. The Board received 34 comments from individuals, coalitions, and businesses. All comments were posted to the Board’s website.

Through a holistic approach, the proposed EV Infrastructure Ecosystem seeks to address range anxiety and obstacles to EV adoption. Range anxiety is the concern that there will not be enough publicly available locations to charge an EV to make it a reliable transportation option beyond a local radius and the EV owner’s home charger.

To date, the private sector has not made a business case to install EV chargers without a critical mass of EVs on the road, and consumers hesitate to purchase EVs without the ability to charge away from home. As a result, the adoption of EVs has lagged. The circular problem continues as the EVSE Infrastructure Companies are disinclined to develop publicly available charging sites where there is an uncertain amount of demand for their services.

Since the competitive market has not yet provided the investment necessary to spur adoption, concerted action from all parties — consumers, private infrastructure companies, and the EDCs — is necessary. Staff’s proposed EV Infrastructure Ecosystem calls these parties into action in order to jumpstart widespread EV adoption. While New Jersey ranks near the bottom of EV adoption, stakeholders generally agree that an investment in charging infrastructure to address range anxiety coupled with the BPU’s new EV incentives will serve to spark EV adoption and confidence in the emerging technologies.

After considering the stakeholder comments, input from the panelists at the stakeholder meeting, and internal deliberation, Staff recommends that the Board help advance an EV Infrastructure Ecosystem by adopting the shared responsibility model laid out in the Straw Proposal. These steps, in coordination with investment and participation from key players, are necessary so that New Jersey may uphold its stated goals within the desired timeframe.

III. COMMENTS

Public Charging

Stakeholders suggested that programs that utilize ratepayer dollars for Make-Ready investments should require that chargers be able to be utilized by all EVs on the market. Commenters point out that nearly 40% of all households are in multi-family dwellings and that public charging is needed in order to support EV adoption across the state. Commenters also point to New Jersey’s low ranking in comparison to other states’ regarding EV adoption as a reason to rapidly invest in EV charging infrastructure. Stakeholders also suggested that incentivizing fleet chargers in addition to publicly-accessible chargers would speed adoption.

Response

Staff concurs with the importance of public charging, and this Board Order requires that publicly-accessible chargers and Make-Ready investments funded through utility investment must be accessible to all mass-market EV users.

Additionally, as discussed in more detail below, the Board is keenly aware of the practical and equity concerns presented regarding enabling residents of multi-family dwellings to have access to the cost savings and environmental benefits potentially provided by EV ownership on an equal basis as residents living in single-family houses. To accomplish this, charging infrastructure must accommodate EV owners living in multi-family dwellings, including addressing the rate design issues that currently cause residents in multi-family dwellings to pay more for charging services than those living in single-family households.

Staff also understands the importance of fleets to adoption and commits to initiating a stakeholder proceedings on this question in the future. However, the scope of this Board Order is to address publicly-accessible, light-duty charging.

Expansion of Site Owner Definition

Several stakeholders suggested an expansion of who can own and operate EVSE chargers across the state. The Straw Proposal defines EVSE Infrastructure Companies as the owner and operators of the charging systems in most cases. Commenters suggested that in many areas it is the property owners or management companies of a specific location that become owners and operators and that traditional EVSE Infrastructure Companies supply the equipment and

technology for the charging. Other stakeholders suggested that, while property owners should be able to own and operate charging equipment, EVSE Infrastructure Companies should also be able to be owners and operators.

Commenters suggested that utilities allow a variety of ownership structures to best address needs in different areas of the state.

Response

Staff recommends that charger ownership be open to market forces, including site owners, property management companies, and other private investment. The Board Order provides clarification on this matter.

EV Incentives and Fleets

Stakeholders presented a variety of perspectives on the electric vehicle incentive program, Charge Up New Jersey, administered by the Board. Many recommended the expansion of the program to include fleet vehicles, while others made suggestions regarding the most effective way to electrify the state as a whole. One comment called for incentivizing hydrogen-fueled vehicles as well.

Response

Staff appreciates the variety of comments received in reference to the Charge Up New Jersey Program. At this time, the program is set by parameters set by the PIV Act, as well as the terms and conditions established by the FY20 Compliance Filing for Phase One of the Program. The Board anticipates implementing the point-of-sale incentive and addressing the EV charger incentive in separate proceedings, at which point stakeholders will have the opportunity to provide comments and recommendations. Staff also notes that the PIV Act authorizes the Board to review and amend the program in years two through 10 of the program.

Impact on Ratepayers

The viewpoints of stakeholders varied greatly with regard to the impact of the EV ecosystem build-out on ratepayers in the state of New Jersey. Some expressed concern regarding the legislation that provided the Board with the statutory authority to require utilities to establish a comprehensive EV ecosystem. Due to the current EV market, some commenters suggested that the build-out of charging infrastructure is unnecessary since it does not have the ability to benefit the majority of New Jersey's ratepayers. Others supported the collaborative approach taken by the Board and urged consideration of ratepayer impact but recognized that ratepayer support is needed in order to move the EV market in any meaningful way and reach the state's goals.

Stakeholders suggested that ratepayer impacts could be minimized by encouraging partnerships between local chambers of commerce and business groups to develop sites for charging infrastructure. In addition, some suggested that the Board could create a system whereby ratepayers may provide the upfront costs for a Make-Ready solution, but the costs would be returned to the ratepayers at a later date via an equitable mechanism. Furthermore, stakeholders called upon the Board to assess the financial impact of utility EV programs on ratepayers by considering both the costs and savings through a whole-house lens that takes into account overall energy consumption and spending.

Response

Staff recognizes the need to mitigate costs to the ratepayers, which can be reflected in the underlying structure of the program, which rewards investment of private capital and attempts to direct ratepayer funds to areas where they are necessary, consistent with meeting the statutory goals established by the Legislature. This commitment can be seen, for example, in the requirement that the utilities' role in ownership and operation of charging infrastructure using ratepayer dollars are limited to areas of "Last Resort," which is discussed in more detail herein.

Staff further recognizes that, in the nascent days of adoption, residents in overburdened communities will be less likely to purchase an EV. The Board has sought to address these issues by requiring EDCs to create programs to provide programs that ensure equitable access.

Utility Cost Recovery

Comments from stakeholders regarding utility cost recovery maintained that the Board should take a flexible approach and consider the broad-based benefits that EV charging infrastructure delivers to the entire state. Multiple stakeholders called for a flexible approach and maintained that limiting cost recovery may limit utility participation. Some commenters requested that the Board permit full and timely cost recovery for all costs associated with utility programs. In addition, they stated that cost recovery should include a return on, and of, all capital investments. A suggested mechanism was that revenues received from the use of utility-owned chargers could be credited back as an offset of program costs.

Response

Staff agrees that EDCs may recover costs that are permitted by the overall policy and encourages each EDC to file their own cost-recovery proposal. Staff also agrees that any revenues earned should offset program costs.

Equity – EV Owners and the Community

On the issue of equity, some stakeholders cautioned against populating overburdened communities with EV charging stations when other options may provide greater emissions reductions for a lower cost. In addition, stakeholders requested that investment in overburdened communities include not only low-income communities but also multi-family dwellings. The comments expressed some consensus that utilities may be best suited for equity-based work, but suggestions regarding the timing and mechanisms for such work varied. These options ranged from dedicating a portion of program funds to deploying infrastructure in low-income communities to investing a certain portion of funds to the electrification of transit or school buses in urban areas. Stakeholders further stated that density, rather than a community's income level, is a more likely indicator of areas where utility intervention may be most appropriate to ensure equity.

Overall, there was agreement from stakeholders that utilities and the Board needed to establish and maintain relationships with community leaders, organizations, businesses, and other stakeholders who can provide a necessary, locally-informed perspective on the unique risks created by EVSE build-out in overburdened communities.

Response

Staff agrees that multiple approaches are required to ensure that overburdened communities are included in EV adoption measures. The current Board Order addresses publicly-accessible, light-duty charging and does require that filings include programs designed to address overburdened communities.

In addition, Staff recognizes that equity is closely tied to the electrification of the medium- and heavy-duty sector. As a result, there will be a separate straw proposal, currently scheduled for Fiscal Year 2021, on medium- and heavy-duty electrification, which may address electric transit and school buses, as well as other methods to ensure equitable electrification.

Transportation Trust Fund

Stakeholders expressed concerns regarding the proper funding of the Transportation Trust Fund (“TTF”), resulting from increased EV adoption and overall transportation electrification. The commenters stated that a lack of contribution to the TTF for maintenance and roadway repairs will place an undue burden on New Jersey residents unless a mechanism is established to ensure that EV drivers pay their fair share. The consensus was to develop a user fee for EV drivers, with caution against overly burdensome fees which could negatively impact EV adoption.

Response

Staff has been aware of the issue regarding EV adoption and the associated impact on the TTF. It is Staff’s view that this issue will be of increased importance as EV adoption grows and that the Board should continue to work with the New Jersey Department of Transportation and other relevant stakeholders to address this issue.

Subscription versus Pay per Use

Commenters stated that the subscription, or pay-per-use method, for charging seemed to exclude multi-family dwellings and workplace chargers. Stakeholders also suggested several different business models and the need for flexibility in the nascent days of EV adoption.

Response

The PIV Act was clear that the sale of electricity at an EV charger is a service, not a regulated sale of energy. As such, Staff recommends providing private entities with the flexibility to adopt payment methods that meet their specific use-case. For example, Staff anticipates that this will provide charging companies addressing the multi-family dwelling market to adopt payment mechanisms that meet their specific needs. It is also Staff’s assumption that, as the market develops, preferred methods will emerge. While Staff does not at this time recommend establishment of any specific payment methodology, Staff recommends that the Board keep a close eye on marketing practices as they develop to ensure transparency, fairness, and access.

Charger Incentives

Perspectives from stakeholders regarding charger incentives varied greatly. Some commenters suggested that EV charger incentives would increase rates on ratepayers in overburdened communities. In addition, they stated that the PIV Act created incentives for chargers and

maintained that ratepayer dollars should not expand upon, nor duplicate, that initiative. Other stakeholders suggested that supportive programs for home chargers would be a beneficial mechanism to assist with EV adoption. These stakeholders requested that the Board provide flexibility by allowing for utility charger incentives that are synergistic, rather than duplicative, with offerings by the Board through the Charge Up New Jersey Program.

Response

As previously stated, Staff is sensitive to the fact that ratepayer dollars must be utilized for the benefit of all users. As such, Staff believes that offering additional residential charger incentives on top of those offered through the Charge Up New Jersey program is not advisable. Residential charging incentives should not duplicate state incentives, but proposals may include programs to address targeted areas of need. Residential and multi-family dwelling charging incentives should promote managed charging, which may encompass software or hardware solutions.

Staff additionally suggests that charger incentives should address particular obstacles in EV adoption, but notes that they are not part of the minimum requirements of a utility filing.

Smart Chargers and Managed Charging

There was a general consensus from the stakeholder comments that managed charging is necessary in order to reap the benefits of EV charging on the grid and that it should be encouraged wherever possible. Commenters were split regarding the mechanism to promote smart and managed charging. Some commenters stated that Advanced Metering Infrastructure (“AMI”) offers increased functionality, but has significant drawbacks in its ability to effectively enable managed charging. In addition, commenters stated that AMI is an additional expense and that the timeframe for deploying AMI to all utility customers would be too long. As such, many of the stakeholders suggested that smart chargers could be a viable option for this initiative instead of AMI. In addition, stakeholders suggested that there be minimum requirements for EVSE installed under the Charger-Ready program. Additional methods that stakeholders recommended for managed charging were direct load control and dynamic, real-time pricing, which exist as software-based solutions. Stakeholders noted that managed charging options, like software-based solutions, may be better equipped to utilize and dispatch flexible EV loads at charging stations with longer dwell times, but also adapted for faster charging at Direct Current Fast Chargers (“DCFCs”).

Response

Staff recognizes that managed charging eases the impact on the grid, increasing reliability and decreasing total costs. Staff notes that, as stated above, duplicative residential charging incentives are discouraged; however, in proposed tailored charging incentives, managed charging should be a minimum requirement.

Vehicle-to-Grid

Stakeholders noted that vehicle-to-grid (“V2G”) pilots and programs should be included in the minimum filing requirements due to the technology’s synergy with rate design. The comments also stated that time-of-use (“TOU”) rates and active managed charging with one-way power flow (“V1G”) are a foundational component of V2G integration and cited significant potential grid benefits for the state. The benefits cited by stakeholders included: (1) improved reliability; (2) a lower cost of electrical service by avoiding adverse grid impacts from on-peak

charging; (3) lowering the costs of integrating increasing levels of variable renewable generation; and (4) increasing the utilization of existing assets, thereby putting downward pressure on electricity prices to the benefit of all utility customers.

Response

Staff appreciates the recommendation to include V2G pilots and programs in the minimum filing requirements. Staff views V2G as most promising in connection with fleets and medium- and heavy-duty electrification. As indicated above, Staff intends to recommend that the Board conduct similar stakeholder processes in the future on both issues, with V2G addressed in those processes. While these matters are largely outside the scope of this proceeding, Staff does see V2G and TOU rates as important to the grid of the future and encourages utilities to include such options in their specific filings to allow consumers the option of enrolling in these programs and further reducing their electric bills.

Demand Charges

Stakeholders shared a variety of approaches for managing demand charges, which ranged from the set point approach to simply waiving demand charges for DCFC chargers, as well as phased incentives and EV-specific tariffs. The consensus among the commenters was that demand charges need to be reduced in a meaningful way to support the build-out of an EV charging network across the state, since one major barrier to the deployment of DCFC is high demand charges. Stakeholders recognized that longer term solutions exist but, due to the short-term need for DCFC build-out, an innovative approach is needed. Some stakeholders stressed the need for coincident demand charges that offer more precise time signals to the market as a means of managing charging behaviors and costs. Stakeholders also suggested the utilization of term and megawatt (“MW”)-limited demand rate discounts that could help EV public charging stations overcome low utilization rates in the early years of deployment.

Stakeholders noted broadly that set points are one option to manage the issue of demand charges. Some indicated that the immediate need for charging solutions makes set points a short-lived but viable solution due to the urgent need to act quickly and ensure that private capital will work synergistically with utility Make-Ready investments. Due to the short-lived nature of set points, other stakeholders maintained that the approach is unsustainable and that the Board should instead focus on long term, sustainable options to manage demand charges. Other stakeholders supported simply waiving demand charges.

Stakeholders in favor of the set point approach requested that the set point be benchmarked, such that commercial EV charging remains competitive with liquid fuels on a per-mile-traveled basis. In addition, stakeholders noted that the set point needs to be based on something within the Board’s or utility’s control, such as average commercial class rates. The consensus was that basing set point factors on anything outside of the electric sector, such as retail gasoline price equivalencies, would be volatile and difficult to administer. For this reason, some stakeholders favored waivers instead of set points due to the short term nature and instability of the solution.

Some commenters suggested establishing EV tariffs, as an alternative to the traditional demand-based rate structure. Since it is a newer approach, stakeholders suggested a separate proceeding to consider EV tariffs, which could be utilized in place of demand charges. In addition, stakeholders recommended a two-year EV tariff pilot, wherein tariffs would be applied statewide for consistency.

When weighing the options to manage demand charges, some commenters viewed waiving demand charges as a favorable approach, since it serves as a direct means to reduce demand charges and lower the per-unit cost of charging. This is seen as an essential step in minimizing the demand charge barrier that currently exists. Stakeholders suggested establishing a waiver for approximately five to 10 years, with a potential phase-in structure in later years, to provide a significant degree of long-term certainty in the rate structure applicable to charging stations. Commenters emphasized that the waiver should be designed such that the resulting rate is competitive with liquid fuels, even at relatively low station utilizations, but that the rate should not be indexed to liquid fuel prices, to avoid the problems associated with a set point approach.

Stakeholders acknowledged that demand charge waivers are neither a permanent nor long term solution but would provide time for the state to develop rebate methodology. Conversely, other stakeholders stated that time limited waivers for demand charges should be avoided since they do not provide sufficient certainty for investments in infrastructure or commercial fleets.

Response

Staff agrees that demand charges are an obstacle to EV adoption, and this Board Order requires that EDC filings include a proposal to address how to minimize the barriers to EV adoption created by demand charges.

Time of Use Rates

Some stakeholders favored TOU rates as a mechanism to manage EV charging. This group of stakeholders recommended coupling TOU rates with policies and programs that encourage off-peak charging. There were different viewpoints regarding how TOU rates could be designed, with a split between whole-house TOU rates versus EV-specific TOU rate design.

Conversely, some stakeholders viewed TOU rates as a useful first step but not a sustainable, long-term solution to managing EV load. The commenters stated that rates should be cost-based and minimize demand charges, as well as maximize the use of TOU volumetric rates. In addition, some commenters viewed TOU rates as a blunt approach that fails to effectively optimize EV load. Those who were against TOU rates as a long-term option stated that software could be leveraged to manage charging via direct load control and dynamic, real-time pricing.

Overall, the commenters stated that TOU rates are viable in some areas, since they have the potential to accelerate EV adoption more than eliminating or reducing demand charges. Some stakeholders cautioned against using TOU rates for public areas that have DCFC.

Some stakeholders suggested using a whole-house TOU rate, and others advocated for an EV-specific rate. The consensus among one stakeholder group was that rate design should be for the whole-house and that it should be voluntary. The consensus for this group in favor of whole-house TOU rates was that TOU rates is an effective tool which empowers customers to manage their own energy consumption and, as such, should include the whole-house rather than being technology-specific and only affecting EV charging. Other stakeholders supported this viewpoint and maintained that whole-house TOU rates allow for easier load management but that EV-specific rates could be viable and appropriate in some cases. Those who supported EV-specific rates cited the success of 48 utilities from over 26 states who utilized this approach and noted that it worked better in specific use cases.

Response

Staff believes that the conflicting perspectives on whole-house versus EV-specific TOU rates represent an area wherein EDCs may wish to coordinate on a statewide approach or develop their own approach. Staff recognizes that an expedient solution to EV rates is necessary and that TOU rates are a viable first step in accelerating EV adoption in the state while more sustainable and long-term options are developed. Staff acknowledges that additional work can be done to explore how best to approach this area.

The Role for Utilities in the EV Ecosystem

Stakeholders complimented the BPU's efforts to mitigate impacts to ratepayers by focusing on private investment in charging infrastructure before utility ownership. Nearly all comments supported the Make-Ready role for utilities. Commenters were more divided when it came to when utilities should own charging stations. Some suggested that utilities should have a larger role early on with a plan to move to private investment later. Others suggested that a larger utility role would reduce private investment and slow market growth.

Some commenters urged an expanded role for utilities, claiming that the Straw Proposal limited involvement and thus reduced the state's ability to meet the aggressive timelines that have been set. Similarly, other commenters suggested that, because EDCs are able to recover costs, they are uniquely equipped to invest in areas where market barriers exist. Other commenters suggested that ratepayer dollars should not be used for anything more than Make-Ready improvements.

Some commenters believed that the current competitive market for charging infrastructure is strong enough to not require additional ratepayer subsidies. Commenters urged quick investment in Make-Ready infrastructure investment as an investment in economic recovery. They pointed out that infrastructure investment has historically been a proven job creator in economic downturns, such as the one caused by COVID-19.

Many commenters suggested that, rather than using the term Charger-Ready, the BPU should utilize the more common Make-Ready terminology.

Commenters suggested that creating consistent standards is necessary for EV adoption and should include communication and data format standards for metering. Commenters also suggested that chargers located where utilities have supplied Make-Ready infrastructure have minimum technology standards, including open design and architecture to ensure interoperability and reduce risk of stranded assets.

Stakeholders suggested that, prior to Make-Ready work commencing, the application process should require firm commitments from the site owners and EVSE Infrastructure Companies to bring chargers online quickly. Commenters suggested that, in certain cases, EVSE Infrastructure Companies should not have to wait for EDCs to commence Make-Ready work but should be permitted to do it themselves, and some commenters suggested that such projects would be eligible for reimbursement for Make-Ready work.

Many stakeholders suggested that utilities should not have oversight over privately owned EVSE performance. These commenters suggested that utilities have no criteria by which to judge performance and also may have a conflict in determining which EVSE sites are underperforming and thus should be taken over by the utility. Commenters suggested that a

Charger-Ready Advisory Council should be created to provide oversight and review performance, while other commenters suggested oversight by the Department of Community Affairs' Office of Weights and Measures to create parity regarding oversight of retail gasoline providers.

Response

Staff believes that the conflicting perspectives on utility involvement are an indication that the balanced approach offered in the Straw Proposal will provide the necessary inducement to invest in EV infrastructure while encouraging market investment. However, Staff takes special note of the widespread agreement from virtually all parties that the EDCs have a critical role to play in installing Make-Ready sites.

In response to concerns over utility ownership, Staff likewise recommends a middle path that allows for utility ownership of charging stations where the private sector has not shown the willingness to invest. Specifically, Staff recommends that utility ownership of chargers be allowed in very limited circumstances, known as "Last Resort" areas. Staff further recommends that the Board should require case-by-case determinations of whether a utility may own chargers in an area of Last Resort, based on the following criteria:

- Whether the proposed charging site is more than 25 miles from another charging station;
- For overburdened communities, whether the utility has had a minimum of 12 months of no expressions of interest from private owners of EVSE;
- For non-overburdened communities, whether the utility has had a minimum of 18 months of no expressions of interest from private owners of EVSE;
- Density of the area; and
- Other factors that the EDC may determine are relevant to why utility ownership is appropriate.

While no one factor is determinative, Staff recommends that the Board weigh these considerations to ensure that private investment is preferred over ratepayer investment, where possible, but also keep in mind the fierce urgency of meeting our climate goals. For determinations on Last Resort, Staff views "no expression of interest" as no applications for a Make-Ready from a private EVSE Infrastructure Company within the allotted period of time. Additionally, Staff recommends that, once a utility triggers the Last Resort process and begins constructing a Make-Ready, it must publicly advertise the location and offer private EVSE owners with the opportunity to own the charger, with an incentive of up to 50% of the utility's capital costs for installing the charger.

Staff concurs that standardization across the state is essential and strives to provide that guidance through its recommendations to the Board in this Order. Furthermore, Staff understands that the advancement of technology changes the minimum requirements for this standardization, which include the capacity to provide data to the EDC, to be networked, allow for interoperability, and encourage managed charging.

Staff understands that individual EDCs will create their own processes for Make-Ready approvals and will determine payment methods, but Staff recommends that EDCs establish consistent standards and contracts when creating those processes. Staff concurs that there is a conflict and potential cost to the ratepayers in requiring the EDCs to oversee privately owned EVSE site

performance, but does not believe that additional committees or the Office of Weights and Measures is the appropriate mechanism. Staff recommends that the Board require EVSE Infrastructure Companies to produce an independent audit of chargers operating in the state each year.

Finally, Staff recommends that this Board Order recognizes the term “Make-Ready” as synonymous with “Charger-Ready,” which was the term used in the PIV Act.

Mapping

Some stakeholders suggested that all mapping efforts should define areas for investment, rather than specific sites or properties. Commenters also suggested that the EDCs provide regular updates to the maps. Commenters suggested that mapping should not specifically direct EVSE deployment or prioritization as market forces and their own demand prediction models. They further suggested that mapping should not be the only criteria considered in placement and that customer accessibility be considered as well.

Stakeholders suggested that the mapping process include more than just the EDCs and be a more collaborative process, including the EVSE Infrastructure Companies, the DEP, and others. They also suggested that the work the EDCs do on mapping should be able to be included in cost recovery.

Commenters suggested that, in addition to mapping, EDCs should be required to perform a distribution grid impact study to evaluate long term impacts and needed build outs. Commenters also suggested that EDCs develop reverse hosting capacity maps.

Response

Mapping is an important guide to understanding where EV charging infrastructure can be easily deployed and where investment needs to be made. The DEP mapping process takes several factors into consideration, such as traffic flows, commuting patterns, and population density and will act as a starting point. In addition, up to date EDC mapping of existing capacity will play an important role in ensuring the effective and timely build out of the EV Ecosystem.

Zoning and Planning Issues

Some stakeholders suggested that the 12 month timeline for Make-Ready to reach completion was too short given the local requirements. These commenters suggested that, in order to encourage investment and development of charging sites, local land use needs to be amended to permit charging stations in certain zones. The length of time and amount of capital required to go through a zoning board hearing deter many from investing in EV charging stations. Other commenters suggested that the 12 month timeline to go from Make-Ready to completion was too long for industry adoption and suggested shortening it to six months.

Response

Staff understands that local review can create delays in the process. The 2019 EMP identified this obstacle. Staff, DEP and the New Jersey Department of Community Affairs are working to craft model ordinances to provide local governments with the ability to appropriately address this issue.

Outreach and Education

Several stakeholders suggested that the Straw Proposal lacked any reference to the EDCs' role in outreach and education to help provide customers with information about EV charging and the benefits of EV adoption. Commenters also suggested that the Board integrate information about EVs and chargers into the statewide utility marketplace. Commenters suggested that EDC outreach and education plans must include proactive marketing campaigns across multiple platforms.

Response

Staff agrees with commenters that the EDCs have unique opportunities to provide outreach and education to consumers. The minimum filing requirements include requirements for outreach and education.

Current Filings

Many commenters urged the Board to not delay the two EV filings that have been submitted to the Board from Atlantic City Electric ("ACE") and Public Service Gas and Electric ("PSE&G").

Response

Staff is currently working on both filings, and a schedule for each of proceeding has been produced. While Staff is not recommending that these utilities re-file or amend their existing filings, Staff does recommend that the requirements in this Board Order inform the Board's position on all current and future EV filings.

Straw Proposal Process

Commenters suggested that there is a need for more time in the stakeholder process and requested additional opportunities for input. Commenters suggested that the timelines are too aggressive and do not provide enough time to properly achieve goals.

Commenters stated that the Board has no authority to require incentives for school buses.

Response

The Legislature through the PIV Act and the Governor through the goals established in the 2019 EMP have signaled that it is necessary to address these issues on an accelerated schedule. Staff also points out that this Board Order is specifically focused on light-duty, publicly-accessible charging. Staff is not recommending a requirement regarding school buses.

IV. STAFF RECOMMENDATIONS

As the State speeds towards 2025 yet lags in reaching its EV targets for those dates, Staff appreciates the need for compelling action. As such, Staff recommends that the Board make some "pragmatic adjustments" which are "called for by particular circumstances." Atl. City Sewerage Co. v. Bd. of Public Util. Comm'rs, 128 N.J.L. 359, 368 (Sup. Ct. 1942). In understanding what type of specific scenarios may call for the Board to act, there "is no formula making for certainty in the exercise of this authority." Id. at 366. Instead, the Board must use its "reasonable judgement" grounded "in a proper consideration of all relevant facts." Id.

Staff appreciates that the Board's involvement in the advancement of EVs is a holistic exercise, but one entirely within its statutory authority to require public utilities to provide "service in a manner that tends to conserve and preserve the quality of the environment and prevent the pollution of the waters, land and air of this State." N.J.S.A. 48:2-23. Applied here, the Board must consider not only the goals, but also the current status of those goals and where we are currently in the timeline, as well as the need for further development of the record on issues such as heavy-duty electric vehicle charging and fleet vehicle infrastructure.

After careful consideration of comments received, Staff proposes a "shared responsibility" model for EV infrastructure that promotes appropriate roles for the Board, consumers, EVSE Infrastructure Companies, EDCs, and private investors. Staff believes that this approach will assist the State in reaching its stated goals by the desired deadlines.

One of the Board's roles in this collaborative effort is to supervise and regulate the EDCs in promoting EV adoption. N.J.S.A. 48:2-13. Although achieving the charging infrastructure necessary to support 330,000 vehicles is a large undertaking, the Board is provided a "sweeping grant of power . . . 'intended to delegate the widest range of regulatory powers over utilities.'" Matter of Valley Rd. Sewerage Co., 154 N.J. 224, 235 (1998) (quoting Township of Deptford v. Woodbury Terrace Sewerage Corp., 54 N.J. 418, 424, 255 A.2d 737 (1969)). While the PIV Act calls upon the BPU to establish EV incentive programs, the Board's authority "extends beyond powers expressly granted by the statute to include incidental powers that the agency needs to fulfill its statutory mandate." Id. More specifically, the PIV Act provides the Board the authority to adopt additional policies and programs to accomplish the established goals. N.J.S.A. 48:25-3(b). Nothing in the PIV Act forecloses the Board's ability to implement minimum EV filing requirements for the EDCs.

The EDC's role in the electrification of the transportation sector is multifaceted. Addressed in more detail below, close coordination and cooperation from the electric utility companies is required to reach New Jersey's aggressive climate change goals. Further, EDC involvement will foster improved reliability and ensure that EV load growth is supported by the electric grid through proper planning. The 2019 EMP highlights that EDC involvement under a shared responsibility model provides "significant opportunity for widespread charging deployment across multiple transportation modes and sectors (i.e., residential, multi-family, workplace, fleets, and public DC fast charging), using both rate-based and non-rate-based solutions, and resulting in diminished consumer 'range anxiety' and increased EV adoption rates." 2019 EMP at 68.

With clear targets and the authority to act in order to reach those targets, Staff recommends that the Board adopt EV minimum filing requirements for the EDCs as proposed below.

Staff recommends that the following definitions be used to ensure consistency in approach, both statewide and to align with standard industry practices:

Electric Vehicle Definitions

Staff appreciates the comments from all parties on the definitions included in the Straw Proposal and proposes adopting the following definitions:

"Charger-Ready Map Proposal" is a proposal from an EDC which pre-identifies areas that are suitable for installation of Level Two or DC Fast Chargers. These maps must be as up to date as possible in order to ensure the timely and effective build out of charging infrastructure.

“Community location” means a charging location that is not a travel corridor location and that is established in a town center, commercial area, or retail center or near concentrations of multi-family dwellings to provide vehicle charging services to local plug-in electric vehicle drivers near where they live and work.

“DC Fast Charger” means EVSE that provides at least 50 kilowatts of direct current electrical power for charging a plug-in electric vehicle through a connector based on fast charging equipment standards and which is approved for installation for that purpose under the National Electric Code through an Underwriters Laboratories Certification or an equivalent certifying organization.

“Demand charges” are an existing feature of many rates whereby large users of the electric system pay for their contribution to the fixed costs of operating the electric system. In most cases, Demand Charges are set at a customer’s peak annual usage.

“Density of an area” refers to the quantity of people in a given area or space and the impact that population has on the EV charging needs of an area and the proximity of the EV charging necessary.

“Electric Vehicle Service Equipment” or “EVSE” means the equipment, including the cables, cords, conductors, connectors, couplers, enclosures, attachment plugs, power outlets, switches and controls, network interfaces, and point of sale equipment and associated apparatus designed and used for the purpose of transferring energy from the electric supply system to a plug-in electric vehicle. EVSE may deliver either alternating current or direct current electricity consistent with fast charging equipment standards. “Electric Vehicle Service Equipment” is synonymous with “Charging Station Infrastructure.”

“EV Ecosystem” or “Ecosystem” refers to all of the physical equipment necessary to charge a vehicle, which includes the Electric Vehicle Service Equipment (i.e., “Charging Station Infrastructure”), the Make-Ready portion of the electrical system, as well as distribution upgrades on the utility-side of the meter.

“EV Mapping Effort” refers to the effort to map existing and proposed EV Ecosystem investments, under the lead of the New Jersey Department of Environmental Protection in conjunction with the Board and other Agencies.

“EVSE Infrastructure Company” refers to an entity using private capital to deploy Electric Vehicle Service Equipment (i.e., “Charging Station Infrastructure”). An EVSE Infrastructure Company cannot be an EDC, affiliated with an EDC, or controlled by an EDC, unless otherwise approved by the Board.

“Low-income household” means a household with adjusted gross income at or below 200% of the federal poverty level.

“Make-Ready” means the pre-wiring of electrical infrastructure at a parking space, or set of parking spaces, to facilitate easy and cost-efficient future installation of Electric Vehicle Service Equipment, including, but not limited to, Level Two EVSE and DC Fast Chargers. Making a site Charger-Ready includes expenses related to service panels, junction boxes, conduit, wiring, etc., necessary to make a particular location able to accommodate Electric Vehicle Service Equipment on a “plug and play” basis. “Make-Ready” is synonymous with the term “Charger-Ready.”

“Operational” means a charging location that the operator of an EV charging station would be required to maintain and promptly fix, in accordance with industry standards, in the event of malfunctioning hardware or software that would impede the use of the equipment by a consumer.

“Overburdened community” means any census block group, as determined in accordance with the most recent United States Census, in which at least one half of the households qualify as low-income households and either: (1) at least 40% of the residents of the census block group identify as Black, African American, Hispanic or Latino, Asian, Pacific Islander, or as members of a State-recognized tribal community; or (2) at least 40% of the households in the census block group have limited English proficiency. Overburdened community is synonymous with the previously used term “Equity Area.”

“Poorly Performing EVSE Infrastructure Companies” means EVSE Infrastructure Companies that fail to regularly maintain or promptly fix malfunctioning locations in accordance with industry practices, i.e., EVSE Infrastructure Companies that fail to maintain operational charging locations, as defined above.

“Publicly-accessible charging” means a charger located on public land, a community location, or a travel corridor. Such chargers are owned and operated by site owner, property manager or management company, or, in limited cases, an EDC that is accessible to the public 24 hours a day, seven days a week; however, generic parking restrictions or requirements, such as in a commercial garage, or emergency restrictions, including construction, street cleaning, etc., are not applicable. Such chargers may charge the EV owner a fee for charging; such fees will be clearly displayed to the user.

“Site owner and operator” means site host, property manager, an EVSE Infrastructure Company, or an EDC with Board approval that is responsible for installing EVSE.

“Travel corridor” means heavily used public roads in the state, as designated by the New Jersey Department of Environmental Protection, which shall include, but need not be limited to, the Garden State Parkway, the New Jersey Turnpike, the Atlantic City Expressway, federal interstate highways, and the subset of federal or State roads which collectively support the majority of long distance travel through and within the state, as well as the majority of daily travel by local drivers.

The above definitions will be utilized throughout Staff’s recommendations to achieve the goals established by the 2019 EMP and the Legislature.

MINIMUM FILING REQUIREMENTS

Light-Duty, Publicly-Accessible Charging

Light-duty, or passenger, vehicles are any two-axle, four-wheel vehicle, primarily designed for passenger travel or light-duty commercial use. N.J.S.A. 48:25-2. The 2019 EMP provides that light-duty EVs are “three to five times more efficient per mile traveled than their gas-fueled counterparts.” 2019 EMP at 60. While a robust EV Infrastructure Ecosystem will eventually involve all types of EVs including light-, medium- and heavy-duty, in an effort to advance the policy objectives in the desired timeline, Staff recognizes that focusing on light-duty vehicles initially is sensible.

Publicly-accessible charging stations must be accessible to the general public 24 hours a day, seven days a week. Sites may be on public land, community locations, or travel corridors. Examples include, but are not limited to, charging stations in downtown areas, public parking lots and garages, hotels, transit centers, destinations and attractions, colleges and universities, retail parking areas, and public parks. The owner operators of these publicly-accessible chargers can be site owners, property managers or management companies, EVSE Infrastructure Companies, or, in areas of Last Resort, as prescribed below, EDCs. Chargers must be listed on the U.S. Department of Energy (“USDOE”) Alternative Fueling Station Locator. Chargers must provide all EV users, regardless of make and model, with the ability to charge their vehicle and must allow network interoperability.²

In curing range anxiety, public confidence is necessary in the availability and functionality of public chargers. In order to ensure such confidence and to access the functionality of the EV Ecosystem, Staff proposes that EVSE Infrastructure Companies operating within the state of New Jersey shall provide the Board with a yearly independent audit report on areas of service and operability updates.

Make-Ready Locations

One of the core functions of EDCs is to site, design, and build-out electric infrastructure, making them a critical partner in creating a robust EV Infrastructure Ecosystem. Traditional utility function includes ensuring that the EDCs string wire and conduit, provide adequate distribution system infrastructure to serve their customers, and otherwise facilitate end-use electrification.

Under the “shared responsibility” model, the EDCs’ role would primarily be to “Make-Ready” a site for publicly-accessible EV infrastructure. This means that EVSE Infrastructure Companies or Site Hosts would notify the appropriate EDC of their intent to install EVSE at a specific location. The EDCs would then develop and own the traditional utility infrastructure, such as transformers, utility services, and meters necessary for the charging stations, which are largely, but not necessarily, located on land owned or controlled by the utility, as well as the panels, conduits, and wiring which would support the charging station, which may often be located on land not generally owned by the utility and available for use through easement. More generally, each EDC would be responsible for the wiring and backbone infrastructure necessary to enable a robust number of Charger-Ready locations. Non-utility entities, including site owners, property management companies, and EVSE Infrastructure Companies, would be responsible for installing, owning and/or operating, and marketing EVSE using private capital.

In determining what a utility may place in its rates, the Board must ensure that New Jersey EDCs provide safe, adequate, and proper service at just and reasonable rates to their customers. N.J.S.A. 48:2-23 and N.J.S.A. 48:3-1. Based on the comments received, Staff notes that there is almost universal support for allowing the EDCs to construct Make-Ready sites. Staff agrees with most commenters that utility investment in Make-Ready work is “used and useful in the public service,” since Make-Ready infrastructure is specifically designed to facilitate publicly-accessible charging services. See Atl. City Sewerage Co. v. Bd. of Pub. Util. Comm'rs, 128 N.J.L. 359, 365 (Sup. Ct. 1942) (“Atlantic City Sewerage”); accord In re the Petition of Pub. Serv. Coordinated Transp., 5 N.J. 196, 217 (1950); In re N.J. Power & Co., 9 N.J. 498, 509 (1952); Verizon

² To meet the “network interoperability” requirement, a charging station must be able to share and readily use information securely and effectively with two or more networks, systems, devices, applications, or components with little or no inconvenience to the user.

Communications v. Fed. Communications Comm'n., 535 U.S. 467, 484 (2002). An EDC may recover only the fair value of prudent investments in utility property that is used and useful in providing public utility service. This determination includes viewing the infrastructure as “an integral and unitary whole, considering all the elements properly entering into the ascertainment of a reasonable return for supplying the public need.” Atl. City Sewerage, 128 N.J.L. at 366. There must also be “an honest and intelligent forecast’ of probable future values,” considering all the circumstances relevant to the particular inquiry. Id. An informed estimate of future values, however, is “at best an approximation” and in every instance there exists “a reasonable margin of fluctuation and uncertainty.” Dayton Power & Light Co. v. Public Util. Com., 292 U.S. 290, 310 (1934).

While, as noted above, certain investments related to Make-Ready infrastructure may involve investments located on private land. In these instances, the utility is expected to own the equipment installed on the private land through easements, comparable to the way electric meters in a house remain utility equipment. These factors make the situation here different from, for example, the issues recently litigated before the Board regarding utility rate-basing of lead service lines or upgrades on the customer-side of the meter related to the installation of Advanced Metering Infrastructure, particularly since the EVSE Charging Infrastructure discussed in this Order is designed to be open to the public. See In the Matter of the Petition of SUEZ Water Company New Jersey, Inc. for Approval of a Pilot Program to Facilitate the Replacement of Lead Service Lines and a Related Cost Recovery Mechanism, BPU Docket No. WO19030381 (September 9, 2020) *and, respectively, In re the Petition of Rockland Electric Co. for Approval of an Advanced Metering Program: and for Other Relief*, BPU Docket No. EM16060524 (August 23, 2017).

The PIV Act sets forth goals which demonstrate the anticipated widespread adoption of EVs and publicly-accessible EV charging. In consideration of these goals and the comments received, Staff believes that the Make-Ready infrastructure will, in the near future, increasingly be used by EV owners. Further, the 2019 EMP indicates that this infrastructure will not only serve EV owners, but all New Jersey residents due to known benefits associated with the electrification of our transportation system. Having the EDCs conduct Make-Ready work on infrastructure, which will provide benefits to ratepayers, is consistent with the traditional utility function of ensuring adequate physical support for its customers, as well as the Board’s statutory authority “to conserve and preserve the quality of the environment and prevent the pollution of the waters, land and air of this State.” N.J.S.A. 48:2-23.

Staff notes that the Board is always required to balance the rights of the ratepayers and the rights of regulated utilities. See In re N.J. Power & Co., 9 N.J. 498, 508-509 (1952). In particular, the Board has traditionally applied the “used and useful” principle to ensure that utilities only earn on investments that benefit ratepayers. See, e.g., Duquesne Light Co. v. Barasch, 488 U.S. 299, 307-308 (1989) (disallowing investments in a planned nuclear power plant because the plant was never used). Here, Staff recommends that the Board adopt a clearly delineated approach where a utility making a site Charger-Ready at the request of an unaffiliated EVSE Infrastructure Company shall be deemed “used and useful,” even if the Make-Ready site is not immediately used. While this does not exempt the utility from showing that it was prudent in the manner in which it made the site Charger-Ready, the utility should not be at financial risk for putting in an installation that was duly authorized pursuant to this Order.

Staff recognizes the costs associated with reaching the stated goals. While the Legislature seeks to electrify the transportation sector, ratepayer costs must nonetheless be kept at the forefront of those efforts. As such, Staff proposes that, while the EDCs shall make a site Charger-Ready

upon request from a qualified EVSE Infrastructure Company or Site Host, any location where the total cost of making the site ready is anticipated to exceed \$100,000, the EDC shall notify Staff and New Jersey Division of Rate Counsel ("Rate Counsel") of the cost estimate before any work is conducted, as described in more detail below. In its notification to Staff and Rate Counsel, the EDC will also provide commentary on why the site warrants the expense, with additional input from the EVSE Infrastructure Company and/or Site Host. Unless Staff or another Party objects to the expenditures within 60 days from the Staff being notified, the Make-Ready work may continue provided the costs do not exceed the estimate previously provided to Staff. Otherwise, the EDC may file a petition with the Board.

Staff further recommends that any Make-Ready installation anticipated to cost more than \$250,000 must seek Board approval before any work is conducted. Staff will refer to the notification process triggered by Make-Ready work costing \$100,000-\$249,999 as the "soft cap," while any work over \$250,000 and requiring Board approval will be referred to as the "hard cap."

Further, Staff recommends that Staff review Make-Ready costs and recommend adjustments to these limits as reasonably needed. Staff recommends that the Board require each EDC to make an informational filing every year, including total Make-Ready expenditures.

In order to ensure that any Make-Ready infrastructure funded by ratepayers is indeed available to the public, Staff recommends that any ratepayer-funded Make-Ready work be conditioned on:

1. Public access to the EVSE seven days a week, 24 hours a day, provided, however, that generic parking restrictions or requirements, such as in a commercial garage, or emergency restrictions, including construction, street cleaning, etc., do not disqualify a site;
2. Network interoperability to enable data sharing; and
3. Chargers being listed on the United States Department of Energy Fueling Station Locator.

Staff maintains that ownership and operation of EV charging stations should be driven by the market. As such, EVSE Infrastructure Companies, site owners and property management companies are the preferred owners and operators of EVSE.

Staff recommends that the utilities create an application and administrative process that includes a standard set of criteria for owners/operators, a standard contract for owners/operators, a queue, and an available map of all requests currently in process. Staff also recommends that EDCs include in their filings requirements for applicants to show good faith in the construction of sites, including commitments from the location, permit applications and approvals, and the expectation that projects be fully operational within 18 months of their approval. If applicants cannot complete the project within 18 months, the EDCs should establish an extension process. EDCs are encouraged to harmonize their processes so that New Jersey has consistent rules governing the process across the state.

Finally, Staff notes that, in rare instances, certain requested Make-Ready sites may involve the extension of electrical service to locations that are not currently served by the utility, possibly implicating the Board's Main Extension Rule at N.J.A.C. 14:3-8.1 et seq. The potential

applicability of this rule is still unknown, and will not be known, until the EDC receives a request to make a site ready.

In the likely infrequent instance where the Main Extension Rule may be implicated, Staff recommends that the Board grant a waiver of the rule to allow such new service. Staff notes that application of the Main Extension Rule here will likely result in added barriers and delays in the broad deployment of EVs and EV infrastructure, particularly in underserved areas. As such, Staff notes that a waiver of the Main Extension Rule to allow for the utility to make a site ready is in the interest of the general public. N.J.A.C. 14:1-1.2. While Staff recommends a waiver of the Main Extension Rule, Staff also recommends that the utility notify Staff if or when the Main Extension Rule applies before any work is conducted.

Further, given that Make-Ready projects will be subject to the soft-cap of \$100,000 or the hard cap of \$250,000, Staff does not expect that waiving the Main Extension Rule will result in excessive costs. For the soft-cap of \$100,000, Staff recommends a 60-day period wherein, after the EDC has submitted a written description of the proposed costs and the rationale for the proposed costs, any party may object in writing. If a party objects, the proposed costs will not take effect unless and until the Board has approved the work to be done. Accordingly, Staff recommends that, in the event the Main Extension Rule applies in a specific Make-Ready location, the Board waive application of N.J.A.C. 14:3-8.1 et seq. to advance widespread EV adoption, which it has been told is in the public interest by the Legislature.

Areas of Last Resort

In areas where installation of publicly-accessible EV chargers has not yet materialized, EDCs may then, and only then, own and operate EV Chargers and EVSE as a “Last Resort.” Areas of Last Resort are locations that have not generated private investment interest for a minimum of 12 months after the EDC program has begun, for overburdened communities, or 18 months for other areas. This approach bridges Staff’s desire to maximize the investment of private capital into the EV Ecosystem, while also ensuring that areas within the State are not forced to languish without EV infrastructure.

In looking at New Jersey’s current EV market in areas of Last Resort, it is evident that “sufficient competition is no longer present.” N.J.S.A. 48:3-56. In fact, by definition, areas of Last Resort have no competitive presence. Private EVSE Infrastructure Companies have not yet established a robust network of publicly-accessible chargers in these areas, presumably, due to the lack of demand, excess costs, unfavorable demand charge structures, or some combination of these factors. Applying the circular predicament as previously discussed, demand will not materialize until there are EV chargers.

What Staff is recommending is a very narrow application where utilities may own and operate EVSE in order to prompt competition only in areas where there is currently none. Drawing upon the same discussion of used and useful above in the discussion of Make-Ready Infrastructure, Staff notes that many of the same factors that are present in the utility ownership Make-Ready infrastructure applies to possible utility ownership of charging infrastructure as well. In particular, the utility will be required to show that any chargers it owns and operates in areas of Last Resort are held open to the same open-access requirements that apply to EVSE Infrastructure Companies seeking a Make-Ready site.

Staff also appreciates that in involving EDCs in the ownership and operating of EV charging infrastructure, even for short period of time, cannot be unbridled without damaging the underlying investment thesis for private entities to build out privately owned public charging networks. As

such, Staff recommends requiring that EDCs seek Board approval, on a case by case basis, to own and operate EVSE chargers in areas of Last Resort. Additionally, Staff proposes to include the following additional limitations:

- No applications may be made until 12 months after the EDC's program is approved for chargers proposed for overburdened communities and 18 months after the EDC's program is approved for all other areas;
- An EDC may file an application to locate a charger in a given area by filing a petition with the Board, approval of which will allow the EDC to begin the process of siting the charger;
- The EDC will make public quarterly informational updates on its progress identifying locations and making the site Charger-Ready, including identifying any lease or other arrangements;
- The EDC must offer an incentive of up to 50% of the expected capital cost of the charging station for an approved Last Resort location to induce private sector investment;
- After the EDC application is filed with the Board, but prior to the installation of a charger, a private owner may opt to become the owner/operator of the equipment, under comparable terms and conditions to those that the EDC had negotiated, or may notify the Board that it intends to request a Make-Ready in a comparable location such that the utility ownership is obviated; and
- EDCs may not petition the Board for Last Resort locations after December 31, 2025.

An EDC's application to have a potential charger location designated as an area of Last Resort, and therefore eligible for EDC ownership, the application must address the following criteria:

- Whether the proposed charging site is more than 25 miles from another charging station;
- For overburdened communities, whether the utility has had a minimum of 12 months of no expressions of interest from private owners of EVSE;
- For non-overburdened communities, whether the utility has had a minimum of 18 months of no expressions of interest from private owners of EVSE;
- Density of the area; and
- Other factors that the EDC may determine are relevant to why utility ownership is appropriate.

For determinations on Last Resort, "no interest" is defined as no applications from non-utility actors for a Make-Ready to install a DC Fast Charger within a three-mile radius.

Given the 2025 deadline, after which the EDCs cannot petition the Board for Last Resort locations, the goal of this program is purely to jumpstart EV adoption in underserved areas.

Ratepayer Costs

N.J.S.A. 48:2-27 provides that the Board may require utilities to "establish, construct, maintain and operate any reasonable extension of its existing facilities where, in the judgment of the board, the extension is reasonable and practicable." Based on the comments received, Staff believes that permitting EDCs to own and operate EV chargers solely in areas of Last Resort is reasonable. Further, Staff believes that by encouraging EV adoption through this Board Order, the Charge Up New Jersey program and other related programs, use of the chargers in Last Resort locations will only increase. The expectation is of increased usage as these chargers will, eventually, "furnish sufficient business to justify the construction and maintenance of the same." N.J.S.A. 48:2-27.

In developing an EV Ecosystem, charging infrastructure may not see use in the nascent days of adoption. As many comments indicated, this lack of use may create burdensome demand charges that may slow adoption. Staff acknowledges that tariff demand charges remain a hurdle to private investment and urges each EDC to propose a method to address the burden caused by demand charges in the emerging market. Each EDC may propose its own method to address demand charges concerns, and those solutions should:

- Incorporate managed charging solutions, either through hardware or software; and
- In determining which method best addresses demand charges in their area, EDCs must consider:
 - A strong preference that there be parity between single-family and multi-family dwelling rates for EV charging;
 - That charging should remain competitive between publicly- and privately-held assets, but also with liquid fuels on a per-mile-traveled basis to the best extent possible;
 - If utilizing a benchmarking method, the utility should explain how the benchmark promotes savings against a publicly-accessible fuel index; and
 - If a temporary solution such as set-point or waivers is utilized, that solution must show meaningful reductions over a length of time and include a sunset provision.

As indicated in the PIV Act goals, EV adoption at multi-family dwellings is critical to achieving widespread and equitable adoption of EVs. Commenters focused on concerns about the impact of demand charge and on the disparity between residential rates and rates for multi-family dwellings, which are characterized as commercial and industrial uses. Staff recommends that EV Chargers located at multi-family dwellings utilize the same rate as residential customers are charged for EV charging.

Residential Charging

Stakeholders explored several options regarding residential charging, including EV Tariffs, TOU EV rates, and whole-house TOU rates. Each rate type aims at encouraging managed charging and off-peak charging times. Each of these rates are used by various EDCs across the country, and there is much debate as to which is most suitable for encouraging changes in EV charging behavior. Staff recommends that each EDC filing should include its own proposal on which rate options would best suit their customer base, and such proposals should include inducements to encourage managed charging.

Additionally, several stakeholders commented on the need for incentives to encourage managed residential charging. Staff acknowledges that the PIV Act allows the BPU to establish a residential charger program and recommends that EDCs should be prohibited from offering programs that would duplicate the Board's program. Staff also understands that EDCs may include proposals in their filings for residential programs in specific areas, including overburdened communities and multi-family dwellings, which seek to address a specific need.

Overburdened Communities

There is a commitment that all communities, including overburdened communities, within the state of New Jersey have equitable access to the EV Ecosystem. Proposals should include plans for equitable distribution of both charging infrastructure, as well as support for electrified transportation modes to serve all communities.

Mapping

To ensure the effectiveness of publicly-accessible EV charging infrastructure, the public must know where these charging stations are located. The DEP EV Mapping Effort seeks to identify areas that need EV charging infrastructure in order to address range anxiety and travel needs. In addition to these efforts, site owners and EVSEs need to understand which locations are well suited for installation due to underutilization of the grid, as well as upgrades to support the additional supply required for EV charging. These three pieces of information are vital for generating private investment in the proper locations to encourage EV adoption.

Staff recommends that EDCs execute and provide up-to-date maps which illustrate areas in which EV charging equipment is well suited for installation due to underutilization of the grid, as well as areas in need of upgrades to support the additional supply required for EV charging. These EDC maps must be as current as possible.

Outreach

As EV adoption grows, so do the questions about vehicles and charging options. In this regard, there was nearly universal agreement that the EDCs have a unique opportunity and role to play in educating the public about this nascent technology. Staff recommends that the EDCs provide outreach and education on EVs and EV charging in a variety of consumer-friendly and comprehensible formats.

Rulemaking

While EV technology and adoption has slowly unfolded in New Jersey, the Board has not yet taken formal steps to advance EDC involvement. EDC involvement in EV adoption is still a novel concept. In promulgating these minimum filing requirements, Staff's goals are threefold: 1) to retain flexibility so that it may swiftly respond to changing needs and technology; 2) to create a program designed for a case-by-case, utility-by-utility analysis, rather than sweeping applicability; and 3) to take immediate action in reaching widespread EV adoption. The Board must continue to monitor and supervise "for the correction of inequities and a means of adjustment to shifting circumstances." Atl. City Sewerage, 128 N.J.L. at 367.

In tandem with promulgating these minimum filing requirements, Staff recommends that the Board initiate a rulemaking proceeding.

V. DISCUSSION AND FINDINGS

The Board **FINDS** that the process utilized in developing Staff's recommendations was appropriate and provided stakeholders and interested members of the public with adequate notice and opportunity to comment.

The Board has reviewed the stakeholder comments and Staff's recommendations. The Board **FINDS** that Staff's recommendations will benefit New Jersey's residents, energy users, ratepayers, and electric and gas public utilities and are consistent with the goals of the Clean Energy Act, the 2019 EMP, the PIV Act, and the Governor's goals. Therefore, the Board **HEREBY APPROVES** Staff's recommendations, with specific directives included below.

The Board is committed to upholding the Legislature and the Governor's goal to combat the consequences of climate change through the electrification of the transportation sector. The Board understands that all of New Jersey — its residents, its businesses, its economy, its environment — will benefit from the widespread adoption of EVs. In reviewing that current status of EV deployment in New Jersey, the Board **FINDS** that the competitive market has not yet provided the investment necessary to spur the level of EV adoption required for the State to reach its goals. As such, the Board **FINDS** that immediate action is appropriate and necessary to achieve the stated goals.

In accordance with the PIV Act and the authority granted to the Board by the Legislature, the Board **FINDS** that it has the authority and obligation to advance the widespread adoption of EVs through the "shared responsibility" model proposed by Staff.

Having reviewed the comments received and Staff's recommendations, the Board **FINDS** that publicly-accessible charging stations will advance the widespread adoption of EVs. Therefore, the Board **HEREBY ORDERS** that these chargers must be accessible to the general public 24 hours a day, seven days a week, be listed on the USDOE Alternative Fueling Station Locator, provide all EV users, regardless of make and model, with the ability to charge their vehicles, and allow for network interoperability. The Board **ORDERS** all EVSE Infrastructure Companies operating within the state of New Jersey to provide the Board with an annual independent audit report on areas of service and operability updates.

Additionally, the Board **FINDS** that Staff's proposal under the "shared responsibility" model, where the EDC's role would primarily be to "Make-Ready" a site for publicly-accessible EV infrastructure, is reasonable. The Board **HEREBY ADOPTS** Staff's "Make-Ready" recommendations and **ORDERS** that any ratepayer-funded Make-Ready work be conditioned on the requirements for publicly-accessible chargers.

Understanding that the electrification of the transportation sector benefits all of New Jersey residents, the Board **FINDS** that the EDCs may recover the costs associated with making a site ready, provided the EDC owns the equipment installed regardless of whether it is located on private land. The Board also **FINDS** that, where a utility is making a site Charger-Ready at the request of an unaffiliated EVSE Infrastructure Company, that infrastructure shall be deemed "used and useful," even if the Make-Ready is not immediately used. The Board, however, **ORDERS** the utility to show that it was prudent in the manner in which it made the site Charger-Ready.

The Board **FINDS** Staff's recommendations that application of the Main Extension Rule here will likely result in added barriers and delays in the broad deployment of EVs and EV infrastructure, particularly in underserved areas, to be reasonable and in the public interest. Therefore, in the rare instance where a request for a Make-Ready site involves the extension of electrical service to locations that are not currently served by the utility, the Board **HEREBY GRANTS** a waiver of the Main Extension Rule at N.J.A.C. 14:3-8.1 et seq. in accordance with Staff's proposed requirements. The Board further **ORDERS** in any instance where the Main Extension Rule waiver is applied, the utility notify Staff before any work is conducted.

The Board **FINDS** that ownership and operation of EV charging stations should be driven by the market, and, therefore, EVSE Infrastructure Companies, site owners, and property management companies are the preferred owners and operators of EVSE; however, there are occasional and narrow instances where it is appropriate for the utility to own and operate EV charging stations.

The Board **FINDS** Staff's definition of areas of Last Resort to be reasonable and **HEREBY PERMITS** EDCs to own and operate EV Chargers and EVSE as a "Last Resort." EDC ownership and operating of charging infrastructure in areas of Last Resort is strictly contingent on Board approval pursuant to Staff's recommendations addressed in this Order. The Board therefore **ORDERS** any EDC seeking to own and operate EV Chargers and EVSE as a "Last Resort" to gain Board approval before any work is conducted and comply with Staff's recommendations laid out herein.

Having reviewed the comments received and Staff's recommendations, the Board **FINDS** Staff's proposed approach to ratepayer costs, residential charging, underserved communities, mapping, and outreach to be reasonable and in the interest of the public. As such, the Board **HEREBY APPROVES** Staff's recommendations and **ORDERS** the EDCs to file EV proposals that incorporate the minimum requirements contained herein, including, but not limited to:

- A shared responsibility model with respect to Publicly-Accessible EV Charging Infrastructure with:
 - EDCs funding the Make-Ready investments for EV chargers;
 - Private ownership and operation of EV chargers; and
 - Last Resort options for EDC ownership based on Board approval, as defined within this Board Order.
- Proposed rate structure to address:
 - Demand charges;
 - Residential EV charging; and
 - Multi-family dwellings rates.
- Proposed rate structures that encourage networked, managed charging;
- Proposals that provide equitable access to the EV Ecosystem in overburdened communities;
- Mapping that details areas which are best suited for EV infrastructure build-out on a regular basis;
- Outreach and education plans; and
- A list of Make-Ready investments made to date and all pending applications.

The Board **HEREBY DIRECTS** all EDCs to file electric vehicle proposals by February 28, 2021, which must include the minimum requirements for publicly-accessible EV charging outlined herein.

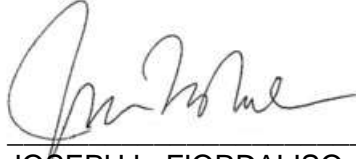
Any electric vehicle proposal currently filed with the Board on or before this Order need not be re-filed; however, the Board **DIRECTS** Staff to use this Order to inform its position on any current or future proposals.

In reviewing Staff's recommendations and comments received, the Board **FINDS** that the minimum filing requirements set forth herein represent another significant step forward in the Board's efforts to achieve widespread EV adoption. While these requirements provide the Board with flexibility to review the EV proposals on a case-by-case basis, the Board **HEREBY DETERMINES** that EV minimum filing requirements should eventually be codified for broad applicability. Therefore, the Board **HEREBY DIRECTS** Staff to take necessary steps to immediately initiate a rulemaking process to adopt the framework contained herein through administrative rules in order to ensure equity and consistency throughout the state.

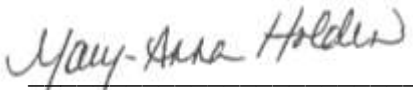
The effective date of this order is September 30, 2020.

DATED: September 23, 2020


BOARD OF PUBLIC UTILITIES
BY:



JOSEPH L. FIORDALISO
PRESIDENT



MARY-ANNA HOLDEN
COMMISSIONER



DIANNE SOLOMON
COMMISSIONER

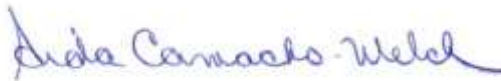


UPENDRA J. CHIVUKULA
COMMISSIONER



ROBERT M. GORDON
COMMISSIONER

ATTEST:



AIDA CAMACHO-WELCH
SECRETARY

IN THE MATTER OF STRAW PROPOSAL ON ELECTRIC VEHICLE INFRASTRUCTURE
BUILD OUT - DOCKET NO. QO20050357

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