CHARGEVC | NJ
BETTER TRAVEL, STRONGER GRID.

INTRODUCTION

ChargEVC is a not-for-profit member organization that works to accelerate the electrification of transportation by providing actionable and achievable solutions to the challenges New Jersey faces in achieving that goal. Founded in 2016, the organization does New Jersey-based research that informs legislation, policy and program development for the state. It was created and has been managed by Gabel Associates since 2026.

As part of its market development efforts, ChargEVC developed its first Roadmap in 2017 and an updated Roadmap in 2020 that provides a foundation for advocacy. Given the many policy and market changes over the last year it is time for another Roadmap. The new Roadmap continues the focus on "full-market electrification", covering both light-duty vehicles (LDVs) and Medium- and Heavy-Duty Vehicles (MHDVs), as well as both privately owned vehicles and fleets.

Priorities reflect the fact that vehicle affordability and concerns about access to charging infrastructure remain the top adoption barriers. We also have a heightened focus on two strategic aspects of vehicle electrification: Grid Readiness, and Energy Affordability.

RECOMMENDED MARKET DEVELOPMENT ACTIONS

Action 1: Sustain Market-Leading State Goals and Expand Where Appropriate

This action establishes goal setting across multiple aspects of the EV market, enables advocacy and policy/program development, and establishes a foundation upon which the other actions are built. Since the previously established goals had set key targets for 2025, this action updates goals moving forward.

Action 1A Set goals for the number of light-duty EVs in New Jersey (weight class 1 and 2a):

- Urge the New Jersey legislature to review and update the state's LDV electrification goals to reflect current market conditions including volatile gasoline prices, capacity constraints and the changes in the regulatory environment that have occurred since the enactment in 2019 of the law establishing state goals for plug-in electric vehicles (N.J.S.A. 48:25-1).
- Lead by example – state level: by the end of 2035 100% of the State's non-emergency LDVs will have a plug, consistent with provisions in the current EV Law.
- Lead by example – local level (i.e., county and municipal government): Establish a state goal (not addressed in the current EV Law) for local government non-emergency LDVs will be 100% electrified by the end of 2040.

Action 1B: Set goals for the number of medium-/heavy-duty EVs in New Jersey (class 2b and class 3-8) through a two-level structure:

- Urge the New Jersey Legislature to review and update the state's MHDV electrification goals to reflect current market conditions, including volatile gasoline prices, capacity constraints

and the changes in the regulatory environment that have occurred since N.J.S.A. 48:25-1 was enacted.

- **Specific MHDV Goals:** Refine the class-level goals further to quantify specific adoption goals for certain high priority vehicle types and applications, including:
  - **New Jersey Transit:** at least 10% of new bus purchases in 2025 are electrified, increasing to 50% of purchases in 2027, and 100% of bus purchases in 2033 and thereafter, consistent with the current requirements in the EV Law.
  - **K-12 School Buses:** Follow the same schedule as for New Jersey Transit. This schedule is not currently part of the EV Law but adopts the same schedule as established for New Jersey Transit for bus electrification.
  - **Medium Duty Local Delivery and Shuttle (typically class 2b and 3):** 100% of such vehicles registered in the state are plug-in by 2040. This is the sub-segment of the MHDV market that is adopting EVs rapidly.
  - **Heavy-Duty Freight:** 25% of new Class 8 trucks registered in the state are plug-in electric by 2040

Action 1C: Establish public charging infrastructure goals, but update them to reflect significant market changes, especially the widespread commitment to J3400 (formerly NACS) medium term, and CCS (with adapters) during the transition:

- Establish specific goals for both Community and Corridor DCFC charging infrastructure (exact numbers TBD).
- For both Community and Corridor DCFC segments, establish geographic distribution targets to eliminate charging deserts. Recognize the role of Corridor chargers in both long-distance travel as well as local driver needs, the role of Community chargers to support multi-family residences where L2 infrastructure is limited, and regional plans to ensure fast charging for key MHDV routes.
- Promote key technical requirements for fast public charging, with particular focus on universal access, convenience, and especially reliability.
- Ensure charging infrastructure goals reflect industry standardization of SAE J3400, while recognizing that access to CCS will remain critical during the transition period. Charging goals should avoid mandating legacy connector standards for new stations given ubiquitous market adoption of J3400.
- Establish public and depot charging infrastructure goals for medium- and heavy-duty vehicles that are forward-looking and aligned with the industry standard SAE J371, also known as Megawatt Charging System (MCS). Charging goals and program requirements should not preclude developers from deploying the appropriate technology to meet the needs of different medium-duty and heavy-duty vehicle use cases.

Action 1D: Reinforce market action to achieve private charging infrastructure goals, some of which are already established in law:

- Support market action so that at least 30% of multi-family properties are equipped with L2 chargers for their residents, or are "charger ready,"[1] by 2030 (as per existing law).
- Support market action so that at least 50% of overnight lodging establishments (hotels, etc.) have chargers available for use by their guests by 2030.
- Establish new goals so that at least 50% of non-residential properties have L2 chargers available for use by their employees by 2035. Recognize that these workplace chargers play a variety of important roles in the EV charging ecosystem, including providing routine access to charging by multi-family residents or other EV drivers that don't have convenient charging access at home.

Action 1E: Streamline data reporting processes for state charging infrastructure programs:

- Align data reporting fields and submission with existing and widely adopted tools or standards, such as EV-ChART (open-source program reporting software developed by the Joint Office of Energy and Transportation) or Open Charge Point Interface (OCPI), which is a free, open and widely used communication protocol.
- Consider automation of data submission via API to reduce cost burden of manual data reporting for state and incentive recipients.

Action 2: Address the Affordability Gap Related to Electrification and Highlight and Prioritize the Ways in Which EV Adoption Can Reduce Electricity (and other) Costs.

This action continues addressing the affordability gap regarding the higher cost of electric vehicles. Importantly, the state must look at the impact on customers from incentives holistically (registration fees, sales tax and buy down incentives). It also highlights a renewed focus on the ways EVs can reduce costs for all electric customers as well as EV owners and operators.

Action 2A: Implement a $300M grant program to reduce the price premium associated with light-duty EVs to accelerate adoption, expand consumer awareness, and increase industry scale, consistent with the provisions in the current EV Law. Evaluate the incentives levels and budget holistically in conjunction with other fees and taxes from the state. Advocate to improve implementation of that program to avoid program start/stop cycles, scale-up of the budgets over time to align with the expanding market, and better program transparency and data reporting.

Action 2B: Expand the "truck voucher" grant program to encourage the accelerated adoption of MHDVs (classes 2b and 3-8), including particular focus on electric school buses, medium-duty local delivery and shuttle vehicles, refuse trucks, and short haul drayage vehicles.

[1] "Charger ready" means pre-wired and ready for easy charger installation at multi-family locations, with signage that indicates charger ready.

Action 2C: Take action to educate policymakers and the market regarding the role that EVs can play in reducing electricity costs through increased electricity volume, and the potential for EVs to reduce peak-time costs as well. Advocate for policies and programs that encourage development of V2B programs for all vehicles, and more advanced V2G programs over time. Advocate for programs that encourage all charging to be during off-peak times, and to avoid additional peak-loading on the grid.

Action 3: Ensure Grid Readiness, and Energy Affordability, Leveraging the Ability of EVs To Reduce Costs

This action highlights focusing on developing programs that 1) allow EVs to reduce costs for all electric customers and 2) facilitates integration of EVs with the electric grid.

Action 3A: Encourage utility rate-design and other incentive programs to influence when EV charging occurs, especially in residential settings where most charging will take place, so as to direct load to optimal (typically off-peak) periods. Utilities may provide rates designed for EV charging, or other tariffs, programs, or incentives that influence when charging occurs.

Action 3B: Recognize the need for managed charging and responsible grid integration to ensure widespread electrification benefits:

- Establish policies, programs, rate-design, and utility ratemaking to ensure that most EV charging happens at times and in ways that maximizes public benefit and minimizes grid reinforcement that could be avoided, including time-of-day tariffs, active managed charging programs, a focus on responsible grid integration, innovative make-ready programs, and rate-design that fairly balances utility cost-recovery needs with supportive market development.
- For LDVs, encourage the development of policies and programs that motivate optimal loading on the utility grid, primarily residential charging at off-peak times and emerging advanced technologies such as Vehicle-to-Building (V2B) and Vehicle-to-Grid (V2G), and the use of private LDVs to provide back-up power.
- For MHDVs, focus on make-ready programs that facilitate higher power charging needs, mitigate avoidable grid impacts, and encourage the development of the charging infrastructure (especially within depot settings) needed to enable MHDV electrification. Explore innovative rate designs that fairly balance utility cost-recovery needs with supportive market development. Prioritize the use of energy storage integrated closely with charging infrastructure to mitigate grid impacts where feasible.

Action 3C: Ensure utility infrastructure upgrade efforts are planned and addressed proactively. As the EV market achieves significant adoption, ensure that the electric utilities track market development and EV uptake, assess evolving infrastructure requirements, plan for and implement necessary infrastructure upgrades proactively, and maximize the broader benefit of those upgrades. Authorize the regulated utilities to make distribution investments before such impacts are realized to avoid harmful reliability or cost impacts.

Action 3D: Encourage policies and programs that recognize and leverage the synergy between widespread EV adoption and increased renewable energy use, particularly including the value of

using electricity from renewable sources for EV charging, and the ability of EV charging to absorb and firm renewable electricity generation.

Action 3E: Ensure utilities offer flexible service connection programs for EV charging that allow controllable loads to connect more quickly by accommodating temporary or time-limited capacity constraints, enabling projects to operate with managed limitations while awaiting full-service upgrades.

Action 4: Expand Public Charging to Eliminate Range Anxiety

This action highlights enabling the feasibility of public charging infrastructure goals (as established in Action 1) through policies and programs that encourage the development of necessary infrastructure.

Action 4A: Immediately establish policies, programs, and utility initiatives to ensure the development of a critical mass of a high-powered charging network to serve electric LDV and MHDVs in New Jersey in support of the infrastructure goals established in Action 1:

- Implement utility programs to incentivize the make-ready components of public DCFC charging infrastructure.
- Augment the utility programs with state-sponsored incentives for the chargers and related costs in specific high priority segments.
- Develop best practices to ensure that public charging stations are clearly visible, well-marked, and easy to locate. Stations should, where feasible, include consistent on-site signage, pavement markings, and lighting, and major roadways should include directional signage guiding drivers to charging locations. Public charging sites should also be sited, where feasible, to provide convenient access to nearby amenities such as restrooms, food, and retail services to enhance the driver experience and support broader economic activity.

Action 4B: Proactively address weights & measures issues for EV charging, including:

- Guidance for stakeholders on compliance requirements related to metering accuracy to promote transparency for consumers and reduce confusion for EV charging operators.
- Establish a collaborative working group between the New Jersey Department of Environmental Protection (NJDEP), New Jersey Office of Weights and Measures, county weights & measures officials, and industry to support the expansion of EV charging, ensure consumer protection, and mitigate regulatory uncertainty.

Action 5: Ensure Sufficient Private Charging Infrastructure

The public DCFC program addresses range anxiety (Action 4), however, it is also important to ensure that all drivers have routine access to private chargers for long duration charges. This action highlights the need for routine charging infrastructure. Private chargers will deliver the majority of vehicle charging needed, and without access to appropriate routine charging infrastructure, most private drivers or fleet operators will not adopt EVs.

Action 5A: Pursue "Right to Charge" policies, programs, and especially utility initiatives that encourage the installation of L2 chargers for LDVs in single-family residential, multi-family, overnight lodging, workplace (for use by employee), and commercial fleet applications. Adopt a "charging ecosystem approach" to the development of this private charging infrastructure, recognizing a role for state programs, utility initiatives, and private investment. Encourage the use of networked "smart chargers" that provide key functions (such as point-of-sale transactions, user administration, usage tracking, etc.), and allow for the collection of detailed charging information to inform utility load planning and program or rate design.

Action 5B: Pursue policies, programs, and especially utility initiatives, including advanced make-ready programs, that encourage the installation of L2, DCFC and Megawatt Charging System (MCS) chargers for MHDVs in the depots and public locations that support commercial fleets. These chargers will, in aggregate, represent relatively high-power loads that—in addition to basic charging equipment costs—could impose significant make-ready and grid reinforcement costs. Active support by electric utilities will be necessary to ensure responsible grid integration of this crucial new infrastructure and to minimize barriers that might otherwise slow MHD EV adoption.

Action 5C: Support "EV Ready" building codes and standards. For new and existing construction, changes to the building codes and standards will be necessary to reduce barriers to equitable and widespread private charging infrastructure access, and to minimize significant retrofit costs when deploying EV chargers in the future.

Action 5D: Continue to improve New Jersey's landmark model ordinance framework to further streamline local permitting and zoning processes that ensure community needs are met and lower the cost to site, install, operate, and plug in to charging stations throughout the Garden State.

Action 6: Ensure Electrification Solutions Reach All Communities Equitably

Action 6A: Establish programs for electric fleets, taxis and rideshare services, public transit and school buses, and other advanced mobility services. In urban areas, electrifying these transportation modes will have a direct beneficial impact on urban air quality. Widespread vehicle electrification will only be successful if all New Jersey residents benefit equitably.

Action 6B: Given the significant public health benefits that result from vehicle electrification, support allocating a meaningful percentage of public and regulated utility transportation electrification budgets for underserved, LI and/or EJ communities which ensures equitable investment in electric public transportation and deployment of charging infrastructure.

Action 7: Ensure Long Term Funding for the TTF

Remove the punitive treatment of EVs regarding vehicle registration fees currently in place and replace it with a fair and equitable fee for EVs to pay into the Transportation Fund. Longer term, identify a mechanism for ensuring that all road-vehicles are paying their fair share into the Transportation Trust Fund (TTF) on a sustainable long-term basis and begin the transition to that modernized framework as soon as possible.

Action 8: Build Consumer Awareness

Lack of consumer awareness remains one of the biggest adoption barriers and getting the word out about the many benefits of driving an EV is a must. To ensure this message sticks, take advantage of the multiple ways to engage consumers, from ride and drive events, signage, EV education centers, utility marketing programs, local government engagement, and both traditional media and digital/social media campaigns. A coordinated campaign with a consistent message can dramatically increase consumer awareness. Multiple messengers, including ChargEVC members and government agencies like the NJDEP and the New Jersey Department of Public Utilities (NJBPU), should also be tapped as part of a coordinated campaign to broaden consumer awareness.

Action 9: Supportive Market Development Efforts

ChargEVC, in collaboration with its members, will undertake the following supportive market development activities:

Policy Advocacy & Regulatory Engagement

- Advocate directly for the key policy actions summarized in Roadmap 3.0 with a special focus on affordability and grid readiness and integration;
- Advocate with the NJDEP, the State Legislature, and the California Air Resource Board for a change in regulations that require vehicles to be “placed in service” or “retailed” before automakers receive full credit for vehicles delivered for sale in New Jersey under the ZEV framework;
- Coordinate with the Governor’s Office and specifically the Office of Climate Action and the Green Economy to implement this roadmap;
- Coordinate with state agencies and other entities to implement this roadmap;

Market Coordination & Industry Partnerships

- Continue to work in partnership with the New Jersey Coalition of Automotive Retailers (NJ CAR) and dealerships on education and support of these goals;
- Engage and create opportunities for competitive technology providers and utilities to deliver solutions cooperatively;
- Partner with the auto and bus industries to ensure vehicle availability and strong consumer experience;

Investment, Infrastructure & Market Growth

- Attract investment to the state;
- Encourage the accelerated adoption of new, clean renewable electricity generation, which has high synergy with transportation electrification;
- Ensure a strong foundation for long term growth through codes and standards;

Consumer Awareness & Public Engagement

- Take action on consumer awareness and education;
- Create public awareness for all public charging opportunities;

Regional & Local Collaboration

- Identify and collaborate with other market participants that can support market development, including Clean Cities Coalition, the regional transportation planning organizations, Sustainable Jersey, etc.;
- Continue to participate in regional initiatives and expand regional involvement;
- Encourage state leadership, especially through EVs in state fleets; and
- Actively engage local government support and participation.