

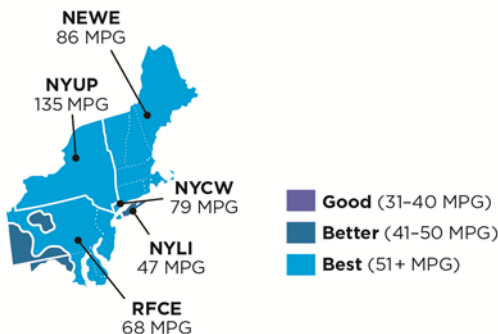
# Bringing Electric Vehicles to the Northeast and Mid-Atlantic

Through California's Zero Emission Vehicle Program, eight states in the Northeast and Mid-Atlantic region (Connecticut, Maryland, Massachusetts, Rhode Island, New York, Vermont, New Jersey, and Maine) have committed to working with California and Oregon to put more than three million zero-emission vehicles on their collective roads by 2025. And for good reason: zero-emission vehicle technologies such as electric vehicles (EVs) can save consumers money, cut oil use, improve air quality, and bring much-needed reductions in global warming emissions from our transportation sector.

## Electric Vehicles Bring Major Benefits

The transition to EVs will benefit the Northeast in three critical ways:

- **Reduce vehicle emissions by more than 50 percent.** Transportation is the largest source of global warming emissions in the Northeast. EVs produce far fewer emissions than conventional vehicles, especially when powered by clean electricity. For example, an EV plugged in to the New England grid produces the equivalent emissions of an 86-miles-per-gallon vehicle—more than 50 percent lower than the average new gasoline vehicle. (UCS 2015). Numerous studies demonstrate that widespread adoption of vehicle electrification is critical to reach state, regional and international climate goals.



Electric Vehicle Global Warming Emissions by Electricity Grid Region (equivalent gasoline miles per gallon fuel economy rating)

- **Reduce Northeast drivers' fuel costs by hundreds of dollars per year.** EVs can cost the equivalent of less than \$2 per gallon to drive. Consumers who spend less money on oil will have more money to spend in the local economy (DOE 2016).
- **Improve public health.** Transitioning to EVs will reduce emissions of harmful pollutants—including nitrogen oxide, sulfur dioxide, and volatile organic compounds—that are responsible for smog and create serious health problems, particularly for low-income communities and communities of color (EPRI 2015).
- **Cut oil use.** By 2035, EVs could save our country 1.5 million barrels of oil—every single day (UCS 2012).

## Northeast Drivers Want Electric Vehicles

Drivers in the Northeast are ready for EVs, and EVs are ready to meet the driving needs of Northeast residents.

- **55 percent of consumers in the Northeast are interested in EVs**, according to a survey from the Union of Concerned Scientists and Consumers Union. (UCS 2016)
- **Currently available electric cars could replace an estimated 87 percent of gasoline cars on a given day**, according to a recent study by the Massachusetts Institute of Technology. (Needell 2015).
- **EVs are ready for New England winters.** More all-wheel-drive EVs and longer ranges are reducing the challenges with cold-weather driving.

## Auto Companies Should Do More to Sell Electric Vehicles in the Northeast

In spite of widespread consumer interest in EVs, auto dealers and manufacturers have not made EVs widely available to drivers in the Northeast. Car buyers can't buy EVs if they aren't available for purchase.

- **There are far more EVs listed for sale in California than the Northeast.** For example,

analysis by the Union of Concerned Scientists found that Boston had 90 percent fewer listings for EVs than in the San Francisco-Oakland Bay Area, even when adjusted for relative car ownership.

- **As of October 2016, some auto companies, including Honda, Subaru, and Mazda, offer no plug-in vehicles anywhere.** (UCS 2016)
- **California auto dealers have twice as many EVs on the lot and available for test drives as dealers in the Northeast,** according to a recent analysis by the Sierra Club (Sierra Club 2016).

## What's Next for the Zero Emission Vehicle Program?

One of the most important policies driving the adoption of EV technology is the California Zero Emission Vehicle (ZEV) Program, which requires automakers to sell an increasing number of zero-emission vehicles. This program is run by the California Air Resources Board (CARB), which has unique authority under the federal Clean Air Act to set stringent standards for vehicle emissions. Nine states, including eight states in the Northeast, have adopted California's zero-emission rules. As a result, decisions made by California agencies can have a big impact on how many EVs are available in the Northeast.

This winter, California regulators will consider further updates to the regulation. The decisions made by CARB may determine whether the Northeast region remains on track to

achieve our goals for EV penetration and transportation emissions.

### **AUTOMAKERS MUST BRING ELECTRIC VEHICLES TO THE NORTHEAST**

One major challenge limiting EV sales in the Northeast is that currently California's ZEV regulation allows sales of battery-electric and fuel-cell EVs in California to count towards compliance in the Northeast. Automakers have therefore focused sales efforts on California, at the expense of Northeast consumers. This current exemption must expire at the end of 2017 as scheduled to ensure that Northeast consumers can choose from the full suite of plug-in vehicle technologies.

### **TECHNICAL ADJUSTMENTS SHOULD BE MADE TO THE PROGRAM TO ACCOUNT FOR IMPROVEMENTS IN EV TECHNOLOGY**

In addition, to fully achieve the goals of the ZEV program, the program must be adjusted to account for faster-than-expected advances in EV technology. When the ZEV rules were revised in 2012, the average range of a battery-electric vehicle in 2018 was expected to be roughly 70 miles, and no improvement was assumed through 2025. Already, today's cars are far ahead. The 2016 Nissan LEAF has a range of 107 miles, while the range of Tesla's forthcoming Model 3 and the Chevrolet Bolt will exceed 200 miles. The electric range of the popular Chevy Volt, a plug-in hybrid vehicle, also far exceeds the expected range by 2025.



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These developments are great news for consumers who are getting more capable EVs to choose from, and they demonstrate the effectiveness of the ZEV program in stimulating innovation. But because automakers receive more credits for longer-range EVs, this advance in technology will result in the regulation requiring fewer EVs than originally envisioned. As a result, the ZEV program will require some adjustments to ensure we remain on track to achieve our goal of deploying over 3 million EVs by 2025.

The Zero-Emission Vehicle program remains a critical pillar of the Northeast strategy to achieve our climate goals, reduce oil use, save consumers money and reduce local air pollution. Northeast states should remain engaged with California regulators to ensure that this program remains strong through 2025.

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