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NEW HAMPSHIRE

Driving Towards a Sustainable New Hampshire Economy

SUPPORTING NEW HAMPSHIRE'S TOURISM INDUSTRY THROUGH EV CHARGING INFRASTRUCTURE

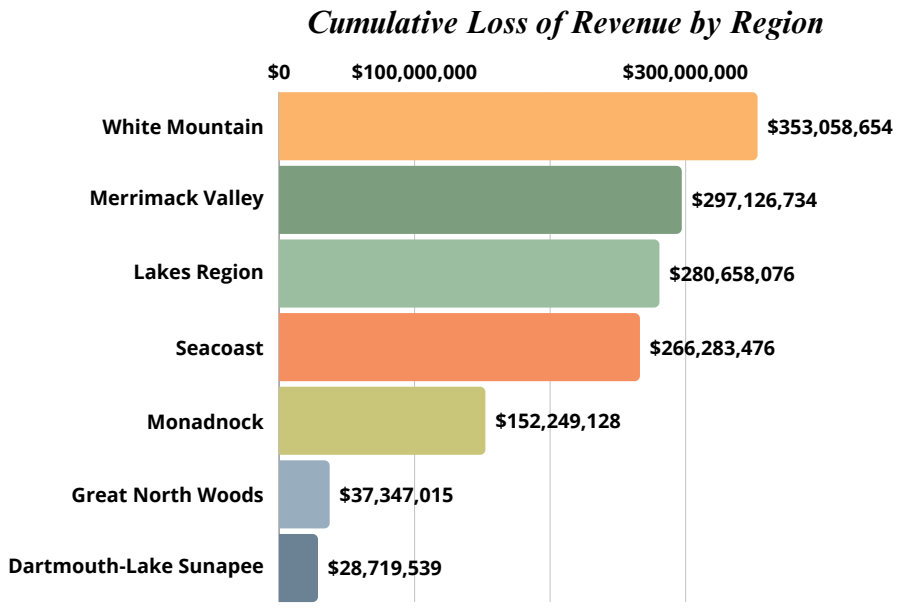
SUMMARY

As the second largest sector in the state's economy, the travel and tourism sector stands as a cornerstone of New Hampshire's small business ecosystem.

The expected rapid adoption of millions of electric vehicles (EVs) in southern New England states and in the Canadian provinces, combined with New Hampshire's current insufficient EV charging infrastructure, poses a threat to New Hampshire's economic strength, particularly to its travel and tourism industry. Recognizing the significance of the transition to EVs, Maine and Vermont - New Hampshire's biggest tourism competitors - have proactively invested in expanding their network of public EV chargers, positioning themselves as attractive destinations for EV owners. In contrast, New Hampshire's comparatively slower progress in this regard threatens to undermine its competitiveness in the regional tourism market and weaken its allure as a destination for both leisure and business travelers.

To better understand the economic risks associated with its slower approach, this report evaluates the potential economic impact of the state failing to keep pace with its neighbors in accommodating the regional growth of electric vehicles on the road by supporting the development of the necessary public charging infrastructure.

This analysis of the economic impacts of New Hampshire's current reliance on a "passive rollout" strategy for public EV charging finds that **the state risks suffering an overall economic impact of approximately $1.4 billion** (including direct, indirect, and induced consumption) in the travel and tourism sector by 2031. Regions dependent on tourism to sustain their communities would be particularly hard hit, and would have a greater likelihood of losing tourism dollars, tourism jobs, and tourism-related taxes.



TOTAL LOSS: $1,415,442,622

NEW HAMPSHIRE TOURISM INDUSTRY

Visitors contributed over $7 BILLION to the state in 2023 and are the lifeblood of many communities and even entire counties.

Tourist spending also generated $314.3 Million in tax receipts.

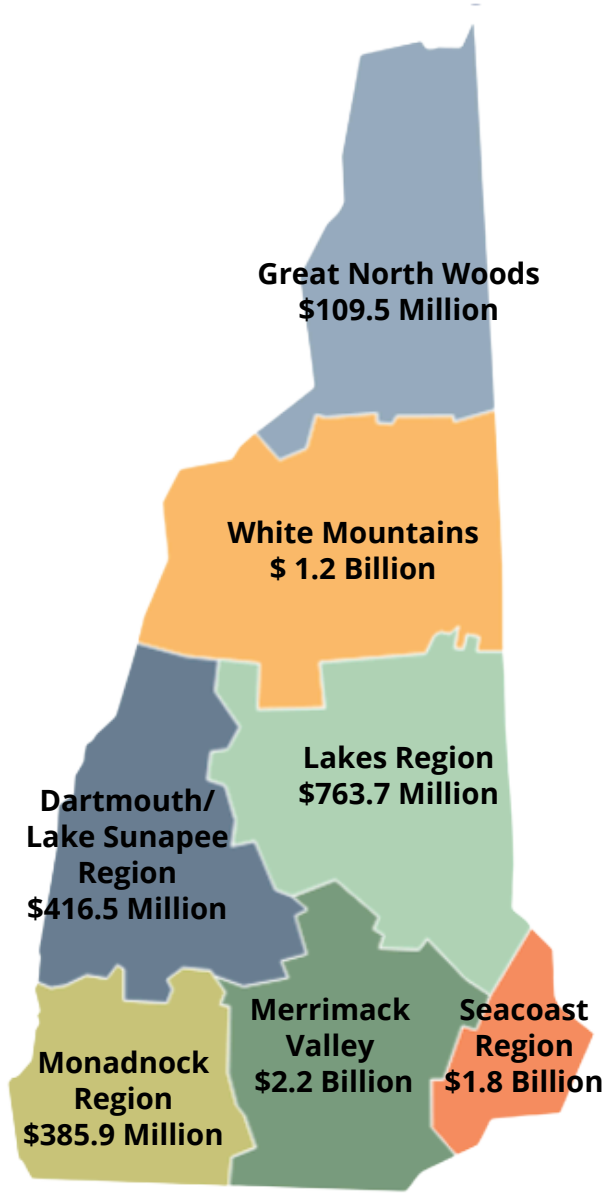
Visitor Traffic – Where Guests Come From

A significant number of New Hampshire's guests come from Massachusetts, and after New Hampshire travelers, the following top states of origin are Maine, Connecticut, Vermont, New York, and Rhode Island. In the winter months, six out of 10 of New Hampshire's skier visits come from out of state, with roughly half of all skiers hailing from Massachusetts alone.

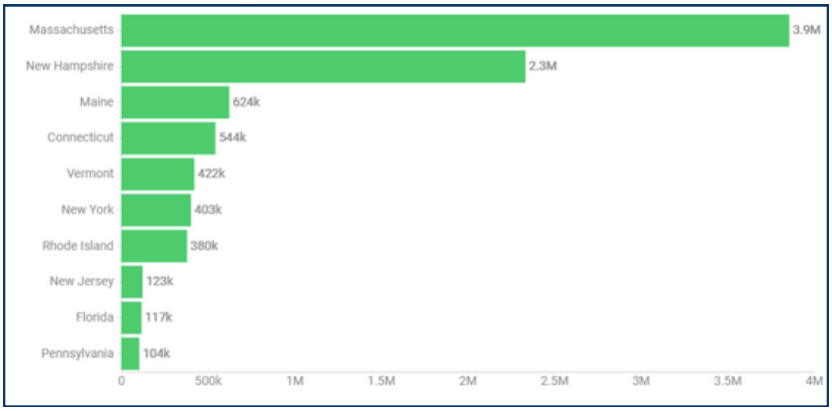
Why This Is Important

Massachusetts is already one of the top states in the country for electric cars per capita, and ISO-NE estimates the Bay State will have more than 1.5 million electric vehicles registered within a decade. The state has enacted numerous policies designed to encourage EV adoption, and has worked to develop the charging infrastructure necessary to support those EVs. In fact, over half of New England's EV chargers are in Massachusetts.

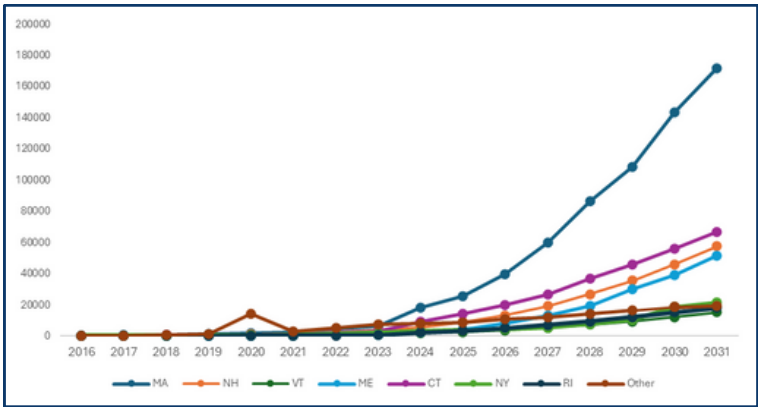
Likewise, other New England states - all of which are key to NH's travel & tourism industry - have taken steps to promote EV adoption and build out their EV charging infrastructure. With the exception of New Hampshire, nearly all Mid-Atlantic and New England states have adopted California's Zero Emissions or Low Emissions vehicle standards, impacting their policies in favor of EVs.



Destination spending revenue generated by region, 2023. **Source: New Hampshire Travel Barometer - Impacts, Dean Runyan Associates.**



Trip Volume by Top 10 Origin States, 2022. **Source: Arrivalist, NH Division of Travel and Tourism Development.**



EVs by origin: the states that bring the most tourists, and tourist dollars, to the Granite State. **Source: Economic Impacts of Public EV Charging In New Hampshire**

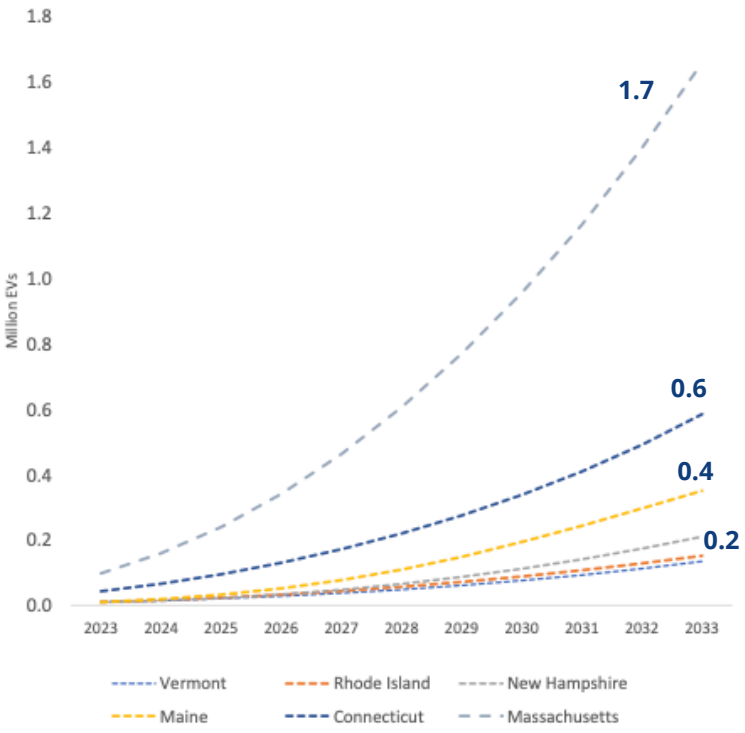
EV MARKET & CHARGING INFRASTRUCTURE IN NEW ENGLAND

In it's Final 2024 Transportation Electrification Forecast, ISO-NE estimated that there would be nearly 3 Million EVs (personal light-duty vehicles) on the road in New England by 2033.

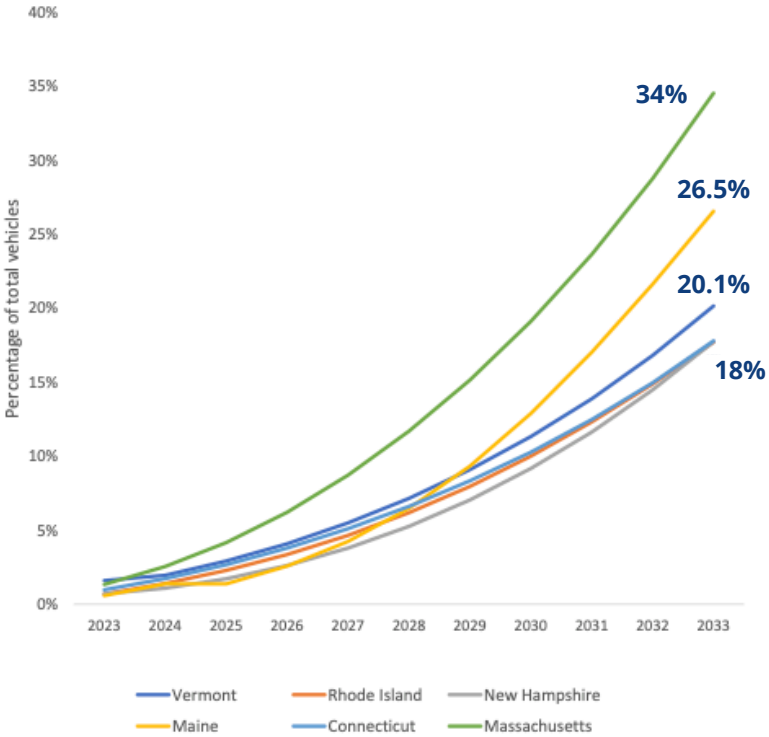
The EV market in New England has shown significant growth over the past five years, consistently exceeding the national average growth rate, except for a dip in 2022. By the end of 2023, the region had 127,000 registered EVs, representing a 20-fold surge since 2016. Massachusetts and Connecticut have been the main contributors to this impressive growth. Notably, while national EV stock growth slowed in 2023, New England saw a strong 92% increase. Rhode Island led the way with a remarkable 127% growth, followed by Massachusetts at 97% and Connecticut at 95%. As a result, 77% of the EVs on New England roads are owned by residents in Massachusetts and Connecticut.

Over the next decade, the number of EVs in New England is expected to increase significantly. According ISO-NE's 2024 forecast, it is estimated that there will be around 3 million EVs in New England by 2033, which is 24 times the current number of EVs. Consequently, the market penetration of EVs in New England is projected to approach 30% of the total number of vehicles on the road.

New England BEV adoption forecast



New England BEV market share forecast



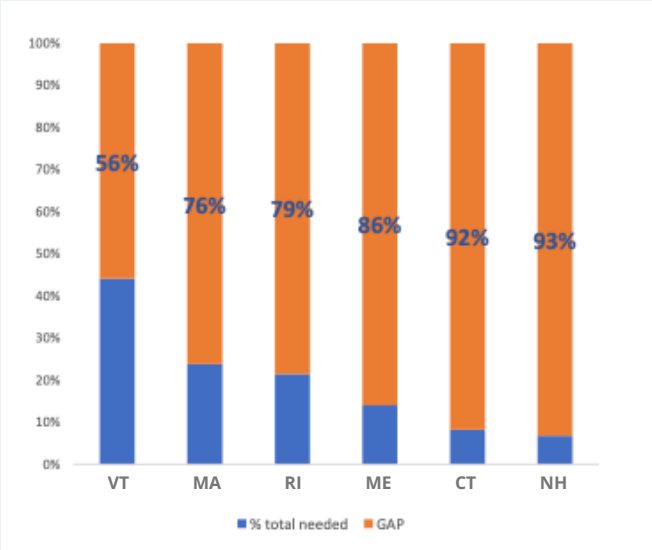
Source: ISO New England - Final 2024 Transportation Electrification Forecast

However, when it comes to providing sufficient charging infrastructure for these EVs, New Hampshire is falling far behind our New England neighbors and the states with which we compete the most for tourists (Vermont, Maine, and Massachusetts) when it comes to publicly available charging locations for electric cars and trucks.

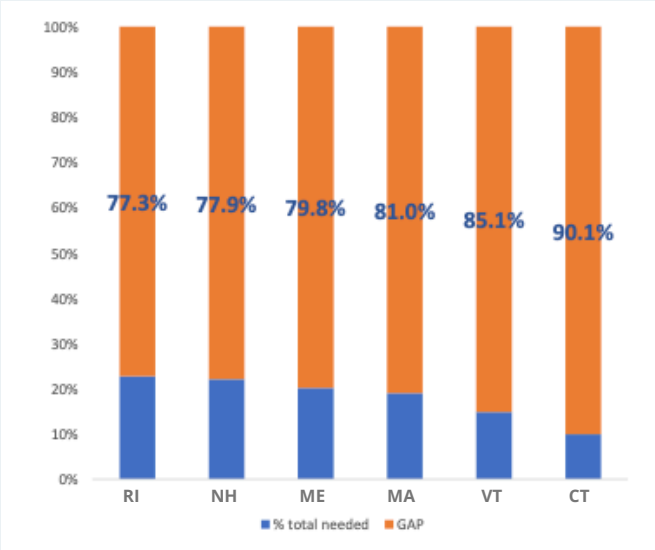
LACK OF CHARGING INFRASTRUCTURE WILL HAVE GROWING RAMIFICATIONS FOR THE STATE'S VITAL YEAR-ROUND TOURISM ECONOMY.

OUR ANALYSIS FINDS THAT NEW HAMPSHIRE HAS THE HIGHEST "CHARGING GAP" OF ANY NEW ENGLAND STATE.

L2 charging gap (chargers needed by 2030 as percentage of current number of chargers)



DC- Fast charging gap (chargers needed by 2030 as percentage of current number of chargers)



Source: National Renewable Energy Laboratory

THIS PROBLEM IS EXACERBATED by the fact that electric vehicles are expanding most rapidly in the states that bring the most tourists, and tourist dollars, to the Granite State.

The trends in the EV market and the current state and outlook for charging infrastructure are particularly concerning for the State of New Hampshire. According to data from the National Renewable Energy Laboratory (NREL), the existing infrastructure is insufficient to serve the state's growing fleet of light-duty Battery Electric Vehicles (BEVs). This gap in charging infrastructure is exacerbated by trends in EV penetration in other states that have accelerated EV adoption, and implies that more EVs are expected to drive through New Hampshire from other New England states.

ACCORDING TO THE US DEPARTMENT OF ENERGY

New Hampshire has roughly **230** public charging stations

(the bulk of them located south of Concord)

Vermont has **375** stations

Maine has over **475** stations

Additionally, the rapid growth of charging infrastructure in neighboring states like Maine and Vermont, compared to New Hampshire, poses a **direct threat** to sectors highly dependent on traffic such as tourism. If New Hampshire fails to keep pace with these states, it will not only miss out on the environmental and economic benefits of increased EV adoption but also jeopardize economic development.

Simply put, a Boston EV driver is going to find it far more convenient to spend a weekend hiking or skiing in Vermont or Maine compared to doing these things in New Hampshire.

RESULT:

Our analysis finds that the net effect of this will be a **net loss of $1.4 billion dollars to the NH economy** over the next decade. This is roughly the same economic impact as if for one winter season, no visitors came to New Hampshire. This impact would also entail a loss of $43 million in tax revenue, and more than 9,000 jobs.

THE ECONOMICS OF EV CHARGING

Investments in EV charging infrastructure are inadequate in part because of the peculiar market structure created by the "natural monopoly" that exists for delivery of electricity, which means that any utility investment must be approved by regulators.

Utility investments must all be approved by state-appointed public utilities commissioners. As a result, they are not able to make business decisions to enhance the opportunities to sell their product in the way that the purveyors of other transportation fuels can.

Furthermore, their rate structures must also be approved by regulators and were often designed with more traditional consumers of electricity in mind and are not aligned with the performance profile of EV chargers.

By implementing public policy interventions—such as financial incentives and supportive regulatory measures—we can create an environment where EV charging infrastructure proliferates.

An analysis by Synapse Energy economics has found that nationwide, EV investments have yielded $2.44 BILLION more in revenues than in costs.[1]

Boosting EV Adoption Through Strategic Charging Investments

Drivers' concern about lack of available charging infrastructure is a significant barrier to EV adoption, which means that investing in charging infrastructure can help speed EV adoption. In fact, a World Bank analysis has found that investing in charging infrastructure is nearly 7x more cost-effective at encouraging EV adoption than direct subsidies for purchase.[2]

As such, investing in publicly available charging for tourists will also have the effect of encouraging more NH residents to adopt EVs. Since those EVs will overwhelmingly be charged at home during non-peak times, increasing electricity sales delivered over the same grid infrastructure, this will have the effect of driving down electricity rates for all consumers.

1. Li, S., Wang, B., Yang, M., & Zhang, F. (2021). The Global Diffusion of Electric Vehicles: Lessons from the First Decade. In World Bank policy research working paper. https://doi.org/10.1596/1813-9450-9882

2. Shenstone-Harris, S., Rhodes, P., Frost, J., Carlson, E., Borden, E., Lane, C., & Whited, M. (2024). Electric vehicles are driving rates down for all customers. https://shorturl.at/7aO2u

RECOMMENDATIONS FOR A BRIGHTER FUTURE

To keep New Hampshire's economy competitive, we recommend the following policy actions which will help to jump-start investment of private capital in an EV charging network of sufficient size and geographic dispersal.

DEVELOP TARGETED, COMPREHENSIVE POLICIES

Establish clear targets for EV infrastructure development. These targets should be based on realistic EV adoption trends region-wide, and should be geographically specific to ensure that no part of the state is left behind.

ENCOURAGE UTILITY INVOLVEMENT

Implement programs allowing utilities to invest in EV infrastructure in a manner that is designed to maximize ratepayer and economic benefits. Ensure that utility programs are market-based and non-discriminatory in order to encourage maximum competition. Require the creation of rate structures and line-extension policies that foster enhanced charging deployment.

PROMOTE PUBLIC-PRIVATE PARTNERSHIPS

Foster collaboration between the public and private sectors to expand charging infrastructure. Develop mechanisms to allow and encourage privately owned chargers on public property, or publicly owned chargers on private property.

ENHANCE FUNDING STRATEGIES

Create a mechanism whereby state funds can be used to complement federal resources, and fill in critical gaps in the EV charging infrastructure map.

The transition to electric vehicles and the establishment of robust charging infrastructure are essential for reducing greenhouse gas emissions and fostering a sustainable transportation system. Tourists from EV-dense states are more likely to visit destinations with accessible charging infrastructure, and by enhancing this network, New Hampshire can secure its place as a top travel destination for the growing number of EV drivers.

To access the full technical report, head to https://rb.gy/ek1706
or scan the QR Code →