

THE FUTURE IS SOONER THAN YOU THINK –

When will there be 1 million electric vehicles registered in New Jersey?



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Approximately 9 million people live in New Jersey. And we drive over 6.6 million vehicles.¹ Today, just about 10,000 of them are electric.² Forecasts range in the estimates but some industry analysts predict that by the year 2025 there will be 1 million electric vehicles (or roughly 15%) on the road in New Jersey.

As a result of innovation in the automotive, energy, and transportation services sectors over the last decade, transportation companies are taking huge technological initiatives and making great strides. One of these technologies is the car battery. Between 2010 and 2016, technology innovation enabled suppliers to reduce the cost of a battery pack for an electric vehicle by close to 80% - and prices continue to decline.³

A major impact of this cost reduction is the feasibility of electric vehicle (EV) production at a lower cost than the combustion engine vehicles that are the status quo - though New Jersey's own Thomas Edison was building electric vehicles nearly 100 years ago. Global vehicle manufacturers are taking this trend very seriously (and taking note of Tesla's soaring stock price). Over the past few months alone, over \$90B of investments have been announced in electric vehicles coming to market in all shapes and sizes and across all eight vehicle classes by General Motors, Daimler, Ford and others.⁴

While this new vehicle technology presents an opportunity for all of us to lower our transportation costs, industry experts are projecting fleet vehicles (delivery trucks, work vans, buses, taxis, etc.) to lead the charge (see Figure 1). Why? High utilization vehicles can reduce operating costs by up to 25% **today** by making the transition. In their transition to electric, they eliminate most of their fuel costs, drastically reduce maintenance costs, and in many cases, extend the expected useful life of their vehicles. These substantial savings are driving - no pun intended - fleets around the globe to assess when and how they can convert to electric.

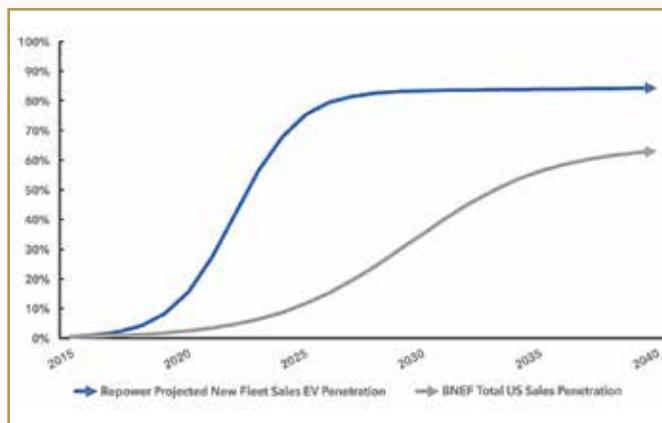
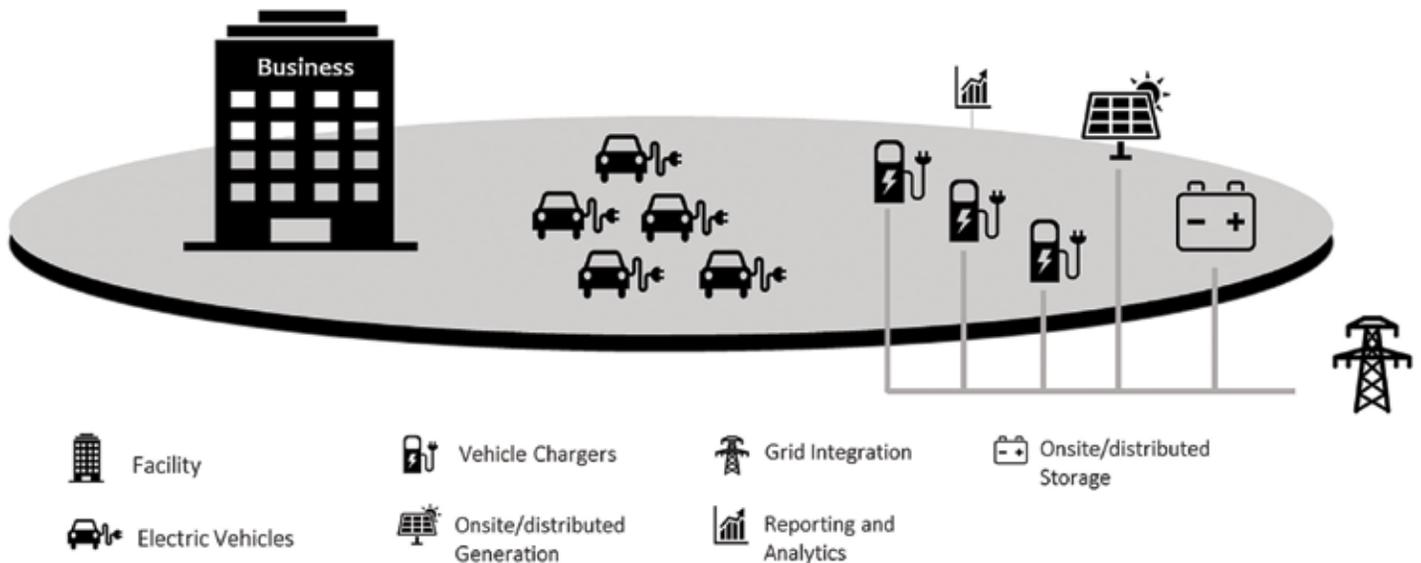


Figure 1: Projected US fleet vs. overall market EV sales projection (% of annual sales)⁴

In addition, groups like ChargeVC (www.chargevc.org) in New Jersey are creating coalitions in support of programs and policies to accelerate the adoption of electric vehicles and providing guidance on the infrastructure investments needed to support these vehicles. Elsewhere, startups like Repower Group (www.RepowerGroup.com) are bringing to market creative approaches to financing these infrastructure investments.

The short story, and this won't surprise you, is that electric vehicles run on electricity. The bigger the vehicle, the more electricity needed to keep it charged. The more vehicles, the more chargers and other infrastructure needed to support those chargers. Other infrastructure includes things like energy storage (i.e. big on-site batteries), distributed energy resources (i.e. solar panels) and general upgrades to our electrical grid. To put things in perspective, an illustrative infrastructure suite for a fleet of vehicles looks like this:

Illustrative Electric Vehicle Fleet Infrastructure⁵



While the investments required in infrastructure to support electric vehicles are not insignificant, even with those costs – the economic advantages of making this transition are clear. And that’s even without accounting for the positive environmental impact that this transition will have on our communities. While it will take our smartest minds in the public and private sector dedicated to identifying the opportunities, working through the challenges, providing strong

regulatory support and overcoming some bumps along the way, I believe that we have what it takes to achieve this feat and lead the nation in this change.

If you still think 1 million electric vehicles registered in New Jersey by 2025 is not achievable, contact me at Lloyd C. Birnbaum, Esq., Lauletta Birnbaum LLC, 856-232-1600, lbirnbaum@lauletta.com to express your point of view.



Sources:

1. <https://www.fhwa.dot.gov/policyinformation/statistics/2010/mv1.cfm>
2. <http://www.njspotlight.com/stories/17/12/17/in-nj-electric-vehicles-could-be-key-to-economic-environmental-progress/>
3. <https://electrek.co/2017/01/30/electric-vehicle-battery-cost-dropped-80-6-years-227kwh-tesla-190kwh/>
4. <https://www.repowergroup.com/single-post/2017/11/16/Is-Tesla-semi-on-to-something-Fleets-are-poised-for-step-change-EV-adoption>
5. <https://www.repowergroup.com/>