



Backing Up Electric Vehicles

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Electric Vehicles (EVs) are growing in popularity but especially on Long Island. A 2018 study conducted by PSEG and LIPA projects that the thousands of EVs on our roads will soon be joined by tens of thousands more. By 2025, 30% of new cars will be fueled by a plug.

Governmental support has been critical in the growth of EV sales. The NYS Clean Pass Program offers E-Z Pass discounts and HOV lane passes. The IRS has a Plug-in Electric Drive tax credit of \$7,500. In 2017, the Drive Clean Rebate sent out 6,000 checks to New York drivers who went electric. Nearly a third of these \$2,000 checks went to Long Islanders. NYS has roughly 30,000 to 40,000 EVs rolling today and expect nearly a million by 2025.

The advantages of driving an EV over an ICE vehicle (Internal Combustion Engine) are obvious and attractive. The U.S. Department of Energy estimates that EV owners save \$1.23 per mile driven. Maintenance and servicing costs are well below gasoline vehicles. There are no oil changes or exhaust system repairs and fewer brake jobs, because EVs utilize braking to generate electricity.



Old arguments about inconvenient charging issues are obsolete. Level 2 charging takes under 4 hours. High speed 480V DC charging can provide an 80% charge in 20 minutes. The average Long Island driver goes 29 miles daily, well below the 250 mile range most EVs now advertise. These drivers only have to top off their batteries nightly.

Local industry has recognized the coming switch from fossil fuels to electricity. Many have installed EV charging stations at their facilities, finding that it enhances their “brand” as a *green* leader and helps attract forward thinking talent. There are even government grants to companies of \$4,000 per charging unit and discounts from PSEG on the energy used.

But storm clouds are on the horizon for EVs and that storm was named Sandy. The 2012 Superstorm exposed critical weaknesses in Long Island infrastructure.



With regional power failures because of the hurricane and following snowstorm, Long Island was “out of gas.” Few stations had backup generators power to pump gas to desperate drivers. Long Islanders were powerless, flooded, freezing, in the dark and trapped.

Learning lessons from this disaster, New York State developed a 21st century Fuel Infrastructure Protection Strategy. Beginning in 2014, all new gas stations were required to be wired for a backup generator. All stations within a ½ mile of an evacuation route exit are now ready to use standby generators to provide gas under any circumstance. If another Sandy type superstorm cripples the metropolitan area, ICE drivers will have the fuel they need to keep their families safe and secure.



But EV drivers will be left in the dark. The over 600 public charging stations across Long Island will be useless during a regional power outage. None of the 14 EV charging networks are equipped with emergency standby generators. Residential charging units will also be powerless, except for the few drivers who

already have a home with an automatic standby generator.

The fuel industry hardened their infrastructure *after* the disaster of Sandy. The EV industry must harden their charging network, *before* the next storm. While the charging infrastructure is being established, backup generators need to be part of the plan.



“The technology exists today,” according to Frank Navetta, president of PowerPro Generators, “to backup public charging networks and homeowner’s EV charging stations. There are natural gas and propane generators that can fully and quickly charge their electric cars.”

By 2025, almost a million EVs will populate NYS roads. They deserve a refueling system as secure as the ICE drivers have. For buildings and homes already equipped with generators, modifications can be made to accommodate the new power demands. “We can enhance existing systems or add smart modules that can manage the generator’s power to wherever it is needed,” Frank said.

For charging systems that are currently without a backup, “We can install a residential unit in 6 to 8 weeks, with enough power to operate an entire home and any Level 2 charging unit out there. We even developed a portable system, using a gas powered generator to provide EV drivers a “quick fix” during a prolonged blackout.”



Electric Vehicles are coming down the road. Instead of waiting to learn from another Sandy type tragedy, we need to harden EV charging systems today. “Our generators are the solution to a critical issue that has not arrived yet,” said Frank. “Whether it’s an industrial and residential automatic standby generator, visit our website at PowerProGenerators.com to get the power you need to get rolling and keep your lights on too.”