



CONSIDERATION OF CHARGING STATION LOCATION MAY BE WARRANTED

# ELECTRIC VEHICLES: ARE THERE INHERENT RISKS ASSOCIATED WITH THE BATTERIES?

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For some time, the focus on accommodating Electric Vehicle (EV) owners had been so predominant that it often overlooked the serious risks posed by EV systems. Specialized legislation, for example, has supported EVs and their infrastructure in the form of “right to charge” bills, making law for nearly 20% of the United States. This includes California, which passed some “forward-looking” EV legislation some 13 years ago, and neighboring Oregon, which also adopted EV language modifying their Revised Statutes in 2021. Once these bills became law, board members were encouraged to find ways to accommodate owners who have purchased new EVs and wished to have the convenience of EV charging systems installed for their use. Legislators had sent the HOA a firm message: Anti-EV Charging Station restrictions contained in any governing documents were immediately rendered “void and unenforceable.” With these barriers to EV ownership removed, the floodgates were finally opened. But perhaps it’s time we call more attention to the car batteries and the risk they pose.

Most Electric Vehicles utilize two distinct types of batteries, each with a dedicated purpose. Electric cars, like typical gasoline-powered vehicles, rely on a traditional lead-acid, 12-volt battery to operate the car’s basic electrical systems. No matter how strong, lead-acid batteries are not sufficient to be used for the vehicle’s propulsion. Instead, it’s the lithium-ion battery that powers the engine, spins the tires, and enables the vehicle to move. (Yes, it’s the same lithium-ion that the FAA found to be so dangerous for checked-in luggage).

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This is an emerging threat worldwide as fires involving lithium-ion batteries require much more effort to extinguish. According to a report by the National Traffic Safety Board, a typical vehicle fire can be extinguished by several people in less than half an hour, with perhaps up to 1,000 gallons of water. Conversely, a lithium-ion battery powered vehicle that catches fire may require 20,000 gallons of water and many hours to extinguish.

Flames from the EV fire could rise to 1,000 degrees (Fahrenheit), greater than a typical gas-fueled auto fire—which represents a huge threat not only to neighboring vehicles but also to the structure itself. For a traditional condominium with two stories of parking that supports three or four stories of wood frame above, a lithium-ion fire could be the cause of a catastrophic fire loss.

These unique fires also pose other challenging characteristics. For example, lithium-ion releases highly toxic chemicals like hydrogen fluoride, which means HOAs with EV charging areas must have an evacuation plan in place for nearby residents. The first responders would need be fitted with oxygen-supplied head gear, and since those batteries have high voltage connections, there are additional electrocution risks for the fire fighters.

So much attention was on the accommodation of EV owners that few legislators even bothered to consider the extensive fire risk these EV cars and the infrastructure necessary to keep the vehicles charged might create—particularly considering the proliferation of these vehicles in multifamily dwellings. The new systems have promised improved, safer batteries, but the mass production of these new technologies seem decades away.

In the meantime, common sense dictates that Boards work with risk management specialists to find areas for placing EV vehicle charging stations that present less of an exposure for life and property. Boards should also work with local authorities to make sure they are both aware of the existence of electric vehicle charging stations and have availed themselves of most recent technologies. 🏠



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