

ELECTRIC VEHICLES: NOTES FROM THE FIELD

By Rick Decker, CAPP

The landside department of the Minneapolis-St. Paul International Airport (MSP) is advancing an electric vehicle program on several fronts. To better serve our customers, we want to understand their experiences operating electric vehicles (EV) in the wide variations of Minnesota's climate. We also want to understand how our charging stations blend into the locations and timing of the community's existing network and how they work for our customers and our facility.



This past summer, we purchased a Chevy Volt as a landside staff vehicle. We use it daily to test the access controls to our gated entries, inspect the signage and the condition of our facilities, and perform enforcement and customer service actions. We want to experience the air conditioner in the 100 degree summer and the heat at -20 in the winter. We need to know how much of the battery's estimated range of 42 miles is affected by heat and cold.

We also wanted to know if and how our charging stations would fit into the community's network of charging stations. Our EV customers can find a charge well within range of the home-to-work commute, but have to watch their ranges more carefully than most of us watch our fuel gauges. We fit into the network well.

This led to the discussion of whether to assess a fee for the charging equipment. We decided to add a set amount to the parking fee regardless of how long the vehicle takes to charge or how many days the vehicle is parked. It will be collected, along with the regular parking fee, at exit via our credit card in/credit card out system (ePark) or at a cashier booth.

Currently, MSP only receives one call per month requesting information on charging stations. This, coupled with our weather extremes, leads us to cautiously

approach the number and technology of our stations. We don't want to take revenue-generating spaces out of service only to have them sit vacant. Additionally, it is not prudent to invest heavily in current charging station technology now only to have it change before we really start seeing EVs in our facilities. We are currently looking at installation during the second quarter of 2013. Our first equipment purchase will be funded with a state grant and MSP will be responsible for the installation and ongoing maintenance costs. This limits our investment while providing some EV charging capacity, allowing us to monitor actual customer use.

We first considered valet access to these stations. This allows efficient use of a single charging unit, as our staff could replace a fully-charged vehicle with one needing a charge. If we have no current EV demand, we can use this space for any other vehicle. We believe our valet clientele will most likely embrace the EV so we plan to market the units by placing them in their full view. Another location considered was in our guaranteed parking area (eParkElite). As these are our road-warrior, executive business travelers, we thought they would likely choose EVs before other customers.

I will write more to you in the future as we continue our progress. **P**



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