

Electric Vehicle Infrastructure

Although millions of dollars have been spent on installing public EV charging infrastructure in California and Arizona, the goals of available, convenient charging for EVs has not been met. The experiences EV1 drivers have had with inductive charging has been mixed. They have suffered from a very high failure rate of the floor-mounted inductive chargers. The required level of service for these chargers has been high, with associated delays in getting units repaired. With Edison EV's recent announcement that they are folding up operations, the future of complex off-board electric vehicle chargers is in doubt.

EV drivers' experience is that standard 120 and 240-V conductive outlets are far and away more reliable than dedicated EV chargers. What is needed is a charging infrastructure in which the power connection points for vehicles are as simple, reliable, and cheap as possible. AC Propulsion is working on prototypes for such connection devices - watch for details on this web site.

AC Propulsion's reliable, onboard, powerful Reductive charging system has all the features that EV drivers want! Read about it below.

What do people that drive EV's on a daily basis really want in their charging infrastructure? Read on for a dose of reality from the voice of the customer (exerpts from the EV1 internet mailing list during March and April, 1999).

"It should be mandatory that all electric cars have a built in 120 volt charger. You never know when or where you'll get hung up without electrons."

"The fact that with a 110VAC (115VAC) input to an EV literally makes EVERY home and BUSINESS a filling station really should be re-evaluated. IT is extremely important, and should have been incorporated into the new NiMH model"

". . .with the ability to charge with 115VAC, virtually every home, business, and parking structure becomes a potential charging location. So instead of people bitching about the number of EV filling stations compared to ICE filling stations, There is 1000's of times more EV refueling stations. A simple point and - no matter how slow the charge, it is a safety blanket. "

". . . I'm going to stick with any EV that allows me some type of interface with a NEMA spec., 110/115VAC wall outlet which has been around for longer than I've been alive. I wouldn't call that a trend, but a fact of modern life."

". . . Every time this happens to me I think that the one strategy all the pro-inductives in the

charger wars overlooked was to design a reliable charger. Even though engineers pontificate endlessly about how hard it is to actually get something like a magna-charger to work well in version 1.0, this gives the conductive opposition plenty of empirical ammunition, and causes lay skeptics to quite reasonably question why public charging is such an iffy affair when their other electrical devices can simply be plugged into the mains without problems. (Maybe GM should have thought twice before airing the original ad touting the EV1 as the ultimate household appliance!)"

"this charger has been down for a month or more. i reported it a long time ago. i get the feeling edison has given up on repairs, judging by the ever-increasing list of inoperables."

"Inductive (Gen1) has been, by far, the least reliable. Port failure, paddle failure, charger failure, failure failure. Wall mount is much better, of course, but still not perfect. Inductive is a neat idea...for toothbrushes. "

". . . From my own experience both ways, I still prefer conductive, though I don't really care that much. The only thing I've found to be 100% reliable, compared to Avcon and Inductive, has been 220 volt dryer and RV outlets."

"I would opt for a built-in 115VAC charger over *ALL* the public charging (as it seems to always be ICE'd or down anyway). I want that safety blanket. "

"I was up in Hollywood last night for a concert and parked at the Cherokee/Whitley garage in Hollywood where there are 2 inductive chargers. Unfortunately the right-hand charger had the infamous "Looks like it's working fine but no power is reaching the batteries so eventually it says Check Charger" problem. The left-hand charger had the paddle SMASHED open with half the plastic gone and the innards exposed. I tried inserting the thing into the car and it turned on but no power to the batteries. The little puck in the center of the paddle had fallen out but there was just enough plastic remaining to hold it in place so I stuck it back in the remains of the paddle and re-inserted into the car... ta-da! 5kw..."

"There is no infrastructure in this country that is more available than that of a 120 V plug. Why this abundant resource has been ignored is just beyond comprehension."

"There isn't a day goes by that I don't sign onto this server without reading about yet another Public Charger that is inoperable or someone ICE'd and in total frustration, or, in your case having to rebuild a charging paddle to get your charge at some Hollywood parking structure. Sorry, give me a 120VAC charger anyday before asking me to accept and depend this kind of electronic refueling nightmare. "

"I sympathize with those drivers that have had to deal with the constantly down chargers. It's a mystery as to why chargers that have been reported down for weeks are not up and running - shameful."

"The ideal charger, in my opinion, could be programmed to draw a user-specified maximum power from the line. It would also accept either 120V or 240V, and be small and light enough to carry around...or be built into the car..."

"This could be a direct quote from AC Propulsion's literature."

"Inductive charging died the minute that Volkswagen decided to adopt the AC Propulsion charging system, which costs (much) less and performs (much) better. Unlike Microsoft, GM doesn't have the market power to force an inferior system on users."

"Tomorrow we will formally announce that Edison EV will cease operations in the near future -- most likely within the next six months. While we believe in the long-term viability of EVs, we have concluded that the market is growing too slowly to sustain a stand-alone business at this time. . . . Along those lines, we have received literally hundreds of service calls so far this year."

"Who will step forward to maintain the public chargers? Nobody! If Edison EV can't make a business case for it, how can anyone else? "

"The Infrastructure people were not told to create an infrastructure to make Charging work for the drivers but rather to sell Magnachargers (Manufactured by GM). The competition between the inductive (Magnachargers) and the Conductive chargers, used by most everyone else has been totally destructive to this baby trying to walk."

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