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Electricity in a Can: Keeping Your EV Fired Up

I began to formulate this newsletter topic several weeks ago, long before the advent of Irma. Whether global warming had a role to play in that or not, it did make me think about the greenhouse gas effect. Regardless of which side of the argument you find yourself, there is a growing number of other reasons to consider Electric Vehicles (EV) for your personal transportation.

- EVs are fun to drive
- EVs are easier and cheaper to fuel (by about 5 times)
- EVs are cheaper to maintain
- Switching to an EV is one of the biggest steps we can take to reduce dependence on oil and gas
- EVs are creating good American jobs
- EVs cut air pollution compared to conventional vehicles

On the list of challenges, two come to the top of the list:

- Initial cost and availability
- “Range Anxiety” (referring to the concern people have for the relatively short distance an EV can go on a charge and the limited number of charging stations, both compared to traditional vehicles)

There is notable growth in the popularity of EVs. They are much more common in Europe where long distance driving is not as common due, in part, to proximity and public transportation infrastructure.

Range Anxiety has created an opportunity for a local start-up company. The idea for Spark Charge emerged from typical circumstances. Josh Aviv, a recent Syracuse University Graduate (2014) had borrowed a friend’s Jeep. Before returning it to its owner, he stopped to fill the tank and took note of the out of pocket expense. He drove it for a short distance and noticed that the fuel gauge dropped rather quickly. He thought about the need to find something more environmentally friendly and economical and began to consider purchasing an EV. He

experienced Range Anxiety for himself. In discussions with friends, they came up with the idea to start a company that would follow the “gas station” model and install a network of charging stations to provide easy access for EVs all along the Thruway. This turned out to be much more difficult than he was prepared to support. He continued to problem solve and the result was Spark Charge. He and his partners, Bryan Morris and Jaydeep Sathe, are just introducing a portable charging station that fits in the trunk of a car.

The first version when finalized, will provide enough of a charge to drive 15-20 miles before needing to recharge the portable unit. Enough to get to a charging station. The great news is it requires only a 120-amp outlet to accomplish the recharge. Not unreasonable to make that happen while at work or in class. The design of this unit accommodates several versions of vehicle connections (not all EVs have the same connection).

Spark Charge has been formed as an LLC. The team is in the process of acquiring five patents, has written their business plan, has hired employees to get this off the ground, are finalizing a working prototype, and are working on getting the word out.

The next steps for the Spark Charge team is to develop a supply chain (they are adamant about sourcing locally), and find the resources necessary to put this unit into production. This is no small undertaking.

While this is a story about Spark Charge, it is also about the effective resources available in our community to support viable start-ups. Spark Charge credits their progress to several organizations.

Their patent search was facilitated by the New York State Science and Tech Law Center. They worked extensively with the Syracuse Center of Excellence (CoE). They have been significantly supported by Syracuse University’s Blackstone Launch Pad program, The Clean Tech Center (a program of The Tech Garden), and the Falcone Center for Entrepreneurship. They have won several business competitions including the grand prize at the NYS Business Plan Competition, Syracuse CoE Innovation Fund, the Panasci Business Plan Competition through Syracuse University’s Whitman School of Management, and RvD IDEA (Raymond vonDran Innovative and Disruptive Entrepreneurship Accelerator) Award. This is not an exhaustive list but representative of the help our community can provide.

It is also about the opportunities our manufacturers have to participate in green and renewable energy technology. As Spark Charge moves forward with production plans, they will be looking for suppliers, testing, and manufacturing partners. MACNY has and will continue to make these types of connections for manufacturers in this community and throughout New York State. To learn more, contact me via email at coehmigen@macny.org.