

Success Story: EV Town

Markets Served
Municipalities



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Geoff Fruin, assistant to the city manager for Iowa City (assistant city manager for Normal during the EV Town project)

Eaton keeps EV Town moving

Location:

Normal, IL

Segment:

Municipalities

Problem:

Normal needed to have the EVs and charging stations available to consumers at the same time.

Solution:

Eaton's AC Level 2 Pow-R-Station and DC Quick Charger

Results:

Two ideal charging station options and a successful partnership plan

Contact Information

For more information, please visit Eaton.com/plugin, call 1-855-ETN-EVSE (1-855-386-3873) or call your local Eaton sales office.



Background

The future of the automobile is hitting the road in Normal, IL, with the potential for 1000 electric vehicles (EVs) in their community by 2014 and nearly 50 Eaton charging stations powering the way. As a corporation focused on innovation, technology and positively impacting people's lives through electrical power advances, Eaton was a logical partner for Normal as they hatched the idea for EV Town.

EV Town developed out of a relationship between the Town of Normal, community leaders and the local Mitsubishi manufacturing plant. "Due to the manufacturing plant being in Normal, we had close relations with them and ongoing conversations about what they saw in the market for EVs and where they thought the industry was going," shared Geoff Fruin, assistant to the city manager for Iowa City. Fruin was assistant city manager in Normal when discussions began about creating EV Town.

The idea was to create a town that would be a model EV community, using the latest technology to reap budget, environmental and sustainability rewards.

Fruin, Mayor Chris Koos and several other leaders in the community quickly formed a task force, realizing that they had the opportunity to be on the front end of the EV movement. The excitement over the idea rapidly expanded beyond the task force to the community and the pursuit to make it a reality moved at lightning speed, forming partnerships, launching an EV Town Web site (www.evtown.org), and organizing events and EV test drive opportunities so that the public could physically experience the technology. Awareness and excitement over the future was high; product adoption was sure to quickly follow.

Challenges

"This whole EV charging station thing is kind of like the chicken and the egg dilemma in that most people don't want to put in charging stations until the cars are on the road, and people are reluctant to buy the cars unless the charging stations are there to support it," commented Fruin.

Normal wanted to make both available simultaneously, knowing it would take partnerships and funding to make that happen.

"We learned from other things in this community that you really need a consortium of business, government, education, media, things from all facets of life to put such a major initiative together, especially taking advantage of already existing partnerships and relationships," said Dan Irvin, lifetime resident of the Bloomington-Normal area and general manager of corporate communications and public relations for Mitsubishi Motors North America. Normal partnered with Mitsubishi to ensure EV availability in local dealerships when the Mitsubishi "i" came to market in spring 2012.

For the charging stations, Normal had federal energy grant money available but needed to find a company to provide the products. Irvin said Mitsubishi was quick to suggest Eaton products given their proven quality and reliability. "We've dealt with Eaton all over the country in terms of supplying commercial chargers in our dealerships."

Mercy Davison, town planner for Normal, said, "Early in the process we decided to work with Eaton because we knew Mitsubishi had a really strong relationship with them. We felt there was a benefit to going with an established company that had a track record of actually manufacturing these products, getting them to you, and having them maintained."

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Fruin agreed, "We really felt we needed to work with a company that had been around for a long time, had a proven track record of delivering quality products, was able to stand by warranties and help troubleshoot any problems that would come up. The stability of a company like Eaton was very attractive not knowing where the industry was going to go in the next five to 10 years. We wanted to be sure we were working with a company that had been tested over time."

Solution

Eaton presented Normal with a partnership plan that offered:

- Recommendations on which stations to use and how many to purchase
- Insight into new advancements on the horizon
- The option for assistance making selections on where to put the stations around town
- Education for the EV task force and other members in the community on what the charging stations were and how to use them
- Training for local electrical inspectors
- Marketing collateral such as fliers and pull-up banners, promoting that stations were available and how to use them
- A designated representative available to answer any questions

Eaton offered two ideal charging station options for commercial use: AC Level 2 Pow-R-Station and DC Quick Charger.

AC Level 2 Pow-R-Station

The Level 2 charging station offers a safe and reliable way to charge a fully depleted EV battery in as little as four hours. The station can be wall mounted or freestanding, and is rated for indoor or outdoor use. In addition to functioning as a standalone station, it can easily be networked with other stations and then managed collectively by one entity.

Networks can be created to exist within close range, across the United States or globally.

DC Quick Charger

The DC Quick Charger is a step up from the Level 2 in that it can charge a depleted EV battery to 80 percent full in as little as 20 to 30 minutes, which makes it ideal for commercial use. The DC Quick Charger can also be used as a standalone station or as part of a charging network.

For implementation, Normal opted to install nearly 50 Level 2 charging stations as well as some DC Quick Chargers. Charging station locations include the city hall campus, public parking garages, local businesses, university campuses and a regional airport.

In the spirit of partnership and using local resources, Eaton collaborated with a local product distributor, Crescent Electric Supply Company, to supply the town with the charging stations. Craig Vedvik, senior sales engineer for Eaton, commented that, "People prefer to deal with people in their same town if they can. That really helped a lot to have feet on the ground right there in Normal. In addition to providing the product, there was now a local contact."

Crescent Electric and Eaton worked closely with Normal to get the charging stations installed, inspected and ready to use. "I believe that Eaton produces a good quality product," said Dave Albright, account manager for Crescent Electric Supply Company. "They back it with good support and service. You've got the tech support line you can call into, and it's kind of like a live chat because you get on the phone and you've got someone who can actually answer the question. They went above and beyond, and made sure that I got answers in an expedient manner."

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Results

EV Town is up and running. Normal is centrally located so EV drivers can easily travel from nearby towns of Bloomington, Peoria and Champaign, top off their battery charge at one of the many charging station locations, and then return home. "It's helped to build a corridor," stated Vedvik. "That way, all the towns benefit. We're trying to get installations at other nearby towns, too. One charging station in Illinois doesn't do you much good, but once you have that, then you start building around there and you have a network."

For the first several years, people will be able to use the EVs at no charge. There may come a point where the town or local businesses choose to modify that. If so, it will be an easy adjustment. Both the AC Level 2 and DC Quick Charger can be field upgraded with options to provide access control and to monetize the charging session such as a credit card swipe or using the ChargePoint Network.

Throughout the process, "Everything that Eaton said they could deliver they did," said Fruin. "Eaton did a good job of keeping us up to speed on not only what was available now but what might be available down the road, and then we were able to weigh those options."

One thing all parties agree on is that partnership was key to creating EV Town. It is estimated that, by 2020, 3.5 million EVs will be on the road.¹ Eaton already produces products prepared to meet that need, but rest assured we're working on new advances, new features and making the charging stations easier to acquire. Normal may be the first EV Town, but it won't be the last. Eaton is ready to power the individuals, corporations, universities and cities that see the value in sustainability as clearly as we do.

Partner with Eaton and gain the wisdom of 100 years and the foresight of 100 more.

¹ <http://gas2.org/2010/05/14/so-how-many-electric-cars-will-there-be-in-2020-analysts-are-all-over-the-place>. Accessed November 2011.

