WHY YOUR CITY OR TOWN SHOULD CONSIDER ELECTRIC VEHICLE CHARGING STATIONS

BY EVAN CUMMINGS

New technologies in the transportation sector are making cities and towns turn their heads—and fast. As demographics and consumer demands shift, the next generation of smart communities needs data-driven technology solutions to help with expansion and evolution planning. With congestion and pollution on the rise, and drivers spending more hours idling in traffic, electric vehicles become a key weapon against climate change. To make these drivers feel secure, however, we must ensure that there is a reliable network of electric vehicle charging solutions.

There are now more than fifty thousand places to charge an electric vehicle in the United States, but Bloomberg New Energy Finance projects that there will be close to eleven million electric vehicles on the road by 2025—ten times as many as there are today. Given the changing landscape, municipal leaders may want to consider electric charging infrastructure as part of their planning process.

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After discussing electric vehicle charging infrastructure for several years, the Town of Arlington decided to install a two-port charger in a municipal parking lot last summer.

"We started to see more and more electric vehicles in town," says Town Manager Adam Chapdelaine, adding that the timing coincided with the rollout of the state's Electric Vehicle Incentive Program, which provided a grant to supplement a town appropriation.

Over the first ten months, during which there was zero downtime, Arlington's station dispensed 4.2 megawatt hours of electricity. The resulting reduction in greenhouse gas emissions is equivalent to planting forty-six trees and letting them grow for ten years, according to town data. On average, thirty different vehicles use the station each month.

Chapdelaine says the town is now installing two more chargers at a recently renovated school building and looking at whether to put them in other business districts.

The following are some key reasons why local leaders should consider electric vehicle charging stations:

1. Electric Vehicle Use Is Growing Fast

The first mass-market electric vehicle in the United States was launched just ten years ago. Today, nearly every major automobile manufacturer offers at least one electric vehicle, with more than thirty different models available to consumers. Many auto industry leaders have committed to adding a large number of new plug-in models in the years to come, and some are pledging to offer only electric vehicles within a decade.

There are currently more than two million plug-in vehicles on the road worldwide. Bloomberg New Energy Finance forecasts that electric vehicles will make up more than half of new car sales by 2040. Simply put, there's no shortage of consumers ready to drive electric. For municipalities, this momentum provides an opportunity.

2. Charging Stations Attract Customers

With electric vehicles experiencing such a high rate of growth, charging stations will be in demand by residents in most communities. A 2016 survey by

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Sustainable Enterprises Media Inc. of more than two thousand electric car drivers around the globe concluded that the average electric vehicle driver is environmentally conscious, well-educated and has a high level of disposable income. As more drivers turn to electric vehicles, it will be beneficial for businesses and communities to offer refueling options to attract consistent, high-quality consumers and residents.

3. Charging Stations Improve the Customer Experience

Charging without having to make an extra trip is a bonus for any electric vehicle-driving customer. With the right hardware and software, cities and towns can offer smart networked charging.

Instead of having residents and visitors wait for charging stations and having to check on their cars, municipalities can offer an enhanced guest experience with reservations, text message reminders, and even a digital waitlist. Users can use their mobile phone to get into a queue, enjoy their time in your city or town, and charge their cars without worrying. This functionality is only available with a select number of electric vehicle charging solutions, so it's important to choose the right provider. (As of December 2017, ChargePoint, Tesla and Blink Network owned the largest market shares of affiliated electric vehicle charging solutions.)

4. Charging Stations Achieve Sustainability Goals

Sustainability isn't just smart from a financial and logistical standpoint; it's becoming essential. Electric vehicles are a great way to curb greenhouse gas emissions. Each charging station can reduce emissions of CO_2 by ten metric tons per year, according to user data gathered by ChargePoint and published in a research report. Adding charging stations to your city or town is a way to support sustainability goals.

5. Charging Stations Provide a New Source of Revenue

In the right location, a charging station can be a new source of revenue. In an area where parking, charging stations and electrical power are at a premium, municipalities can generate revenue while still

The Town of Arlington installed a two-port electric vehicle charging station in a municipal parking lot last summer. Now the town is installing two more chargers at a recently renovated school building and looking into putting them in other business districts.

(Photos on this and previous page by Winslow Martin)

providing residents with a better way to charge. Making sure to install the right charging stations is key, however; not all stations come networked with services to allow for transactions with electric vehicle drivers.

In Arlington, the town designed its pricing structure to cover the cost of the electricity, administrative costs, the parking fee and a contribution toward the modest capital investment. Revenue wasn't the driving force, however, according to Chapdelaine.

"We acknowledged," he says, "that we wanted to provide this as local infrastructure that could incentivize people's consideration of shifting to electric vehicles." ✸