



# State and Local Government Experiences with Workplace Electric Vehicle (EV) Charging

Webinar Questions and Answers

March 12, 2019

## *I. Questions Answered during the Webinar*

### **How many staff or full time employees (FTEs) are devoted to your respective programs?**

Maria DiBiase Eisemann: Hi, this is Maria. I would say that it was a part of our team. Each person on the team did a little bit with Wired Workplaces but it's a fraction of we do a lot here and so it's really just a fraction of three peoples' times.

Michelle Finchum: Yeah. I think we're in the building the case mode for an actual FTE to be focused on EVs. We're not there yet. We have currently two staff, myself included who have this on their work plan in addition to other duties, certainly not full time FTE. And we have an inter-departmental team, different staff from transportation, utilities, etcetera who touch it and meet on a quarterly basis and meet actually at the state level and participate in some of those conversations there. So zero FTE but that's kind certainly and we're definitely tracking it that we can build the case one day to have a more dedicated staff.

### **How many vehicles a month or charges a month correspond to your top ten kilowatt hour users? How much do the users pay to use those charging stations?**

Zach Owens: Sure, this is Zach. You know, I would need to go back to our actual database to pull and correlate number of unique charging events but I can certainly do that post-webinar and follow-up if that's possible.

In terms of payment, we do not mandate a payment strategy for any of our grantees so it's a little bit of - we put the impetus on the grantees to form a payment strategy. Over time now we have been able to evaluate who's doing what and we started to put a best practices document together that's currently in draft form.

I think we see a variety of ways that workplaces handle this. Many provide it as a free benefit for their employees so they're not charging to charge. Some like I believe Hewlett Packard actually puts in a fee after four hours to encourage folks to move their car to help manage the queue. We see some charge a very nominal fee, just direct kilowatt-hours or a small price per hour. It really does vary across workplaces. Maria, do you have any other thoughts on that?

Maria DiBiase Eisemann: No, but the state of Colorado is currently finalizing a policy for our employees on whether or not to charge a fee.

**Regarding Charge Ahead Colorado, how you did conduct outreach to workplaces? Was there any hesitancy from cities or schools or workplaces? What was the process?**

Zach Owens: Well I think our main avenue has been Refuel Colorado that Maria manages, so encouraging our Refuel Coaches to target workplaces. In addition to that, it's just getting the word out any way we can. Umbrella organizations like Building Owners and Manufacturers Alliance (BOMA) who have building managers as members that have worked places within them, capitalizing on launch and learn opportunities and webinar opportunities to get the word out is a big priority for us as well. Maria, do you have other thoughts?

Maria DiBiase Eisemann: Yeah I was going to say, we really get the word out through our Refuel Colorado program and I'd just like to give a shout out to Clean Cities because three of our Refuel Coaches are Clean Cities coordinators and they leverage their extensive mailing list. Whenever we announce a funding round or whatever, it'll go out through their networks as well. So that is a great way that we can get the word out about what we're doing and our programming.

**How does Fort Collins deal with fringe benefits with respect to providing free electricity? Is there a payment model or a charge to use the workplace chargers?**

Michelle Finchum: Great question and one that we're still wrangling with in the name of equity and making sure that benefits are equitable across the organization; just because you happen to own an EV, do you get extra benefits? It's a great question and I would say the jury still out for us as far as what that looks like right now.

We only have two charging stations that are consistently used by employees and we're picking up the tab for the electricity. But, as we move forward with our EV Readiness Roadmap, that is certainly one of those hard conversations that we're going to have to end to and solve. So I am happy whoever asked that question to talk to you about that more and find out if anybody wants to form like a working group on how to tackle that, I am all in.

**For the pool cars, the city fleet vehicles that are EVs, have there been any efforts to get feedback from employees that are driving those cars, particularly with regard to range anxiety or any other issues that they're having while driving those vehicles?**

Michelle Finchum: I'm so glad - that was one of the little things I forgot to mention that we have. And looking right now, I think it's 23 right now, so we've increased our pool car significantly. And feedback, definitely feedback and often times the feedback comes in the form of, whoa, I drove out to Denver and didn't realize I was in an EV then got stranded. So there's just more outreach and knowledge from the fleet services that are renting out pool cars. Are you aware that you're in an EV? Do you know what to do? So, we learned that the hard way. I feel like you had two parts to your question, I only answered the first part.

Andrea Denny: Did you conduct any systematic process to get feedback?

Michelle Finchum: Yes, we did and as a result, we continue to buy more and more EVs; when we retire a vehicle that is always our first option. And we help the different departments who are in need of a new vehicle explore all other options including EVs and hybrids, not just replace it with whatever they had before.

## II. Questions Unanswered during the Webinar

### Where on the ENERGY STAR website can I find a list of all the certified chargers?

Peter Banwell: The easiest way to find our list is to search the ENERGY STAR page about [Electric Vehicle Supply Equipment](#) (EVSE). Click on the [Product Finder](#) which will take you to a list of certified products.

### Has anyone done calculations showing air pollution reductions for the installation of EV chargers?

Andrea Denny: While it can be difficult to directly quantify the air quality benefits of EV chargers, some tools and studies are available that quantify the air quality benefits of electric vehicles. Fueleconomy.gov offers a [Beyond Tailpipe Emissions tool](#) to quantify the greenhouse gas benefits of electric vehicles.

Argonne National Labs has developed the [Greenhouse gas, Regulated Emissions, and Energy use in Transportation \(GREET\) model](#). One example of a published study is The Southwest Energy Efficiency Project (SWEET) 2013 analysis of [Air Quality Benefits of Electric Vehicles in Arizona](#).

### For ENERGY STAR, are there expectations that the Level 1/2 certification specifications will be changing? If so, how and when?

Peter Banwell: We are working on a revision to the specification right now. The pending changes will add direct current (DC) fast charging to the program and will be completed by early 2020.

### How did Colorado determine its funding levels for Level 2 (L2) and direct current fast charge (DCFC) charging stations?

Zach Owens: The Colorado Energy Office began the Charge Ahead Colorado Program in 2013 in partnership with the Regional Air Quality Council. Our incentive levels for L2 were originally \$6,260 and for DCFC were \$16,000. We saw tremendous uptake with L2 stations and were able to analyze the costs over time, and last year we updated the incentive level to \$9,000 which is aligned with 80% of actual project costs. For DCFC, we did not see much uptake at the \$16,000 level and as the state was developing our Volkswagen Beneficiary Mitigation Plan we heard from stakeholders that \$30,000 would be a more appropriate level aligned with 80% of project costs, so we made this change. (Note: we require a 20% project match).

### How many vehicles a month or charges a month correspond to your top ten kilowatt hour users?

Zach Owens:

1. Hewlett Packard, Fort Collins workplace L2: 1,119 kWh per a month
  - Station 1: 97 average users a month
  - Station 2: 86 average users a month
  - Station 3: 143 average users a month
  - Station 4: 154 average users a month
2. Mountain Valley Development Services, Glenwood Springs workplace L2: 1,064 kWh per a month
  - Does not track user or charging events
3. Broadcom, Fort Collins workplace L2: 1,021 kWh per a month

- 109 average users a month
- 4. Eagle County Government, Eagle municipality building L2: 926 kWh per a month
  - 86 average users a month
- 5. City of Colorado Springs, Colorado Springs parking garage L2: 918 kWh per a month
  - 100 average users a month
- 6. Powder-Copper Mountain, Copper Mountain leisure destination L2: 899 kWh per a month
  - 18 average users a month
- 7. City of Aspen, Aspen leisure destination L3: 741 kWh per a month
  - Average of 55 users a month
- 8. City of Colorado Springs, Colorado Springs parking garage L2: 715 kWh per a month
  - 102 average users a month
- 9. City of Glenwood Springs, Glenwood Springs parking garage L2: 701 kWh per a month
  - 87 average users a month
- 10. Town of Carbondale, Carbondale municipality building L2: 688 kWh per a month
  - 37 average users a month

**What has been city-level participation? Partners, facilitators, etc.?**

Zach Owens: Local governments including counties and municipalities have participated in the Charge Ahead Colorado program and now own and operate chargers for the public and their fleets.

**We think Charge Ahead Colorado and the subsequent recognition program is a great way to promote and incentivize EV charging in the workplace. We are just curious how you performed this outreach to workplaces and what steps it involved. Was there hesitancy from particular cities, schools, or workplaces regarding implementing EV's? Also, do you see value in interactive EV events (like in Fort Collins) to promote EV charging?**

Maria DiBiase Eisemann: We conducted outreach on the Wired Workplaces program through events and webinars at which we spoke, Charge Ahead Colorado, social media and especially through our Refuel Colorado program. We have a flyer with the steps involved on the program. The hesitancy or questions on the value of the recognition part came from within our organization due to the resources that were required to order plaques and have staff present around the state for the award ceremonies. We see great value in interactive EV Events like the ones on Fort Collins and often did use those events to promote Wired Workplaces.

**How did the City of Fort Collins determine which infrastructure to choose? Do you operate and maintain it?**

Michelle Finchum: We are currently trying to figure this out. We have a couple of different chargers right now so it's confusing. This is mainly because different departments chose what to purchase. We only operate and maintain a few, but this will change, so it is in our Readiness Roadmap to figure this piece out.

**Regarding the Fort Collins chargers, what is the payment model now that the two year pilot is over?**

Michelle Finchum: We are trying to figure this out with municipal budgets. The work ahead of us is to have a solid strategy then revisit our policy.

**Are chargers available first come first serve or are they assigned? Are employee stalls assigned? Are the chargers per employee or a communal charger?**

Michelle Finchum: This is something that many companies deal with. Right now, we have a friendly group of EV owners that simply communicate directly with each other to share the chargers. It's not ideal, but it works for now. As more EV owners need to charge at work, we will need to explore other communication options. I know some smart phone applications have communication groups to send alerts or notification.

**How do you arrange for multiple people to use the chargers? Does a car stay in the parking space all day?**

Michelle Finchum: We do not have this issue yet. I do know that some businesses in town have this issue. I believe there are smart phone applications that can help with communication.

**What is the actual level of usage for the charging stations? How many events per charger per week?**

Michelle Finchum: There is one charger that is consistently used daily 8 am-5 pm. The others in the garage get less use, but we do have data available. I know of at least two employees that consistently charge in the garage. Again, there is not much demand, yet!

**Was it difficult to get car dealer involvement? What incentive did you provide?**

Michelle Finchum: No, the car dealers are eager to partner and have the City help them navigate this new territory (and help them sell cars). We do have to build a relationship with each dealership and since we are government; we need to make sure we do the same outreach opportunities to all dealers selling EVs.

**Do you have incentives for multi-unit dwellings?**

Michelle Finchum: We are currently looking at changing our code to require new multi-unit dwellings to be "EV ready."

Maria DiBiase Eisemann: Colorado does not, but we are exploring the idea.

**How can we get best practices updates?**

Andrea Denny: EPA's State and Local Energy and Environment Program includes transportation related resources in our newsletters. We encourage you to sign up for the "State, Local, and Tribal Energy Newsletter" or the "State and Tribal Energy Policy Newsletter" to learn more about new resources and recent policy related to vehicle electrification. You can sign up at our [Newsletter page](#).

**Do the chargers have software to allow for reservations? What is being done to reduce drivers' risk/fear of a charger not being available?**

Michelle Finchum: Smart phone applications can help with this. You can also set the chargers to help. This is a good question that perhaps ChargePoint can answer. On a personal note, I use the ChargePoint application to check availability along my route prior to leaving the house and I usually only choose places with Level 3 option (knowing it's a quick charge). This is definitely a developing story!