

**Introduction:**

Views expressed during Impact Café are those of the panelists and do not represent the views of Franklin Energy or AM Conservation Group. Welcome again to Impact Café, a podcast from Franklin Energy and AM Conservation Group that is dedicated to discussing all things related to energy innovation and impact in communities across North America. Our latest installment discusses transportation electrification, what utilities can do to support infrastructure, and where EV demand is expected to go from here. Developing widespread electrification is one of the most significant keys to building a sustainable future, yet government officials, private organizations, and utilities alike are struggling to create a viable path towards establishing the infrastructure necessary for widespread electrification, including that of the vehicle industry. Today's episode features a great discussion between Scott Barrios of Entergy, Rishi Sondhi from National Grid, and April Bolduc of S Curve Strategies as they provide their own insights on the importance of establishing infrastructure, options for moving forward, and how recent success and failures will help chart the path to success. Enjoy the conversation.

**Jim Madej:**

Excited to welcome everybody to our Impact Café. I'm Jim Madej, I'm the CEO of Franklin Energy and AM Conservation Group. I'm really excited to have a knowledgeable group of panelists to discuss EV infrastructure and different aspects of how to advance the EV economy. It's a really hot topic right now with states across the country trying to deal with varying levels of adoption, certainly not a one-size-fits-all solution. We've seen policymakers, regulators, and private organizations along with utilities all struggling to create a viable path towards establishing the infrastructure necessary for widespread electrification. Although it's exciting to see continued news and progress, including Ford's announcement of an EV pickup truck, which I think I saw had about 50,000 pre-orders in the first 24 hours or so. So I'm excited for the topic and excited to welcome this great group of panelists. So without further ado, I'll turn it over to Marisa Uchin, our chief commercial officer at Franklin, to take everybody through the discussion. Thank you all.

**Marisa Uchin:**

Super. Thank you, Jim. Indeed we have a great panel assembled today for an exciting topic. We are joined today by April Bolduc, Scott Barrios, and Rishi Sondhi. And I'll introduce each of them before we get underway. April is the founder and president of S Curve Strategies where she helps utilities build strong EV teams, develop strategic plans, and implement their EV customer experience efforts. She also works with state agencies to create DC fast-charging quarters and strong EV policies. Prior to forming S Curve Strategies, April led San Diego Gas and Electric's EV customer experience.

Scott is the senior account manager for Entergy's electric technology program and the lead electric mobility catalyst—I love that title—for Entergy's innovation hub called KeyString Labs. In these roles, Scott focuses on developing, delivering electrification solutions from industrial processes to transportation to meet the needs of customers. Prior to joining Entergy, he was the director of special projects with the US Special Operations Command. He serves on the executive board of the Louisiana Clean Fuels, which is a US Clean Cities Coalition. And he is a member of the Environmental Affairs Committee with the Southwest Louisiana Economic Development Alliance.

And Rishi Sondhi is the manager of clean transportation at National Grid, where he leads a team of product managers who develop offerings for residential customers. Rishi led the development of National Grid's electrification transportation filing in Massachusetts, serving also as an expert witness for the company. He's also served as part of the Alliance to Save Energy's 50 by 50 Transportation Commission.

So, I think this hour is going to go pretty quickly given this robust topic we have here. So I just wanted to remind the audience, if you have a question that you would like us to ask or at least consider, please use the chat feature. We will be monitoring it throughout and do our best to weave them into the discussion. So let's stage this conversation for just a moment. This year ACEEE released their first ever state transportation electrification scorecard. And one clear takeaway is that there is definitely momentum, both on state policies as well as on utility planning and programs. For example, 23 states have comprehensive planning for more EVs and EV charging, 15 states have utility funding to spur EV and EV charging adoption, 36 states have utility programs that offer lower electric rates for preferred times for EV charging at the level two charging level. Just a few examples of what we're seeing all around the country.

**Marisa Uchin:**

Yet we know there's so much more to be done and I think even many of the utilities who are joining us on the call today are probably just getting going. So hopefully this conversation will enable us to share some learnings and experiences that can help us all move this forward even quicker than we have historically. So Rishi, I'm going to ask the first question to you. National Grid has set forth its 80 by 50 plan. Within that, there's this Northeast 80 by 50 pathway which definitely includes a focus on transportation electrification. Can you talk a little bit about what some of the goals are that are included in that pathway and how National Grid is progressing?

**Rishi Sondhi:**

Yes. And thanks Marisa firstly for this opportunity to be on the panel, really excited to be here today. The analysis that you are talking about was a few years old when we looked at opportunity in the Northeast. And actually I'm pleased to report that since then, we've actually increased that goal and now it is a net zero goal by 2050, actually in line with the three states that we operate in Massachusetts, New York, and Rhode Island, all have a very aggressive net zero by 2050 goals. So what does that mean for us? That means that we will have net zero emissions by 2050. That includes our own operations and the emissions that result from the sale of electricity and gas to our customers.

So that's a pretty ambitious goal and we've developed a framework to address that that has 10 different strategies, things that you would expect like energy efficiency, renewables and decarbonizing our gas network. But importantly, clean transportation is one of them, and a big one at that. As you may know, transportation sector accounts for over 40% of the greenhouse gas emissions in the Northeast and in the states that we operate in. So it is the largest sector and a critical one for us to target if we were to achieve these ambitious goals.

**Marisa Uchin:**

Super. That's very helpful. And yes, I think what you just shared about the goals being established and then maybe just within a couple of years the bar is raised, actually I think what we need to really move things forward. Thanks for sharing that. April, for utilities that are just getting started in transportation electrification planning, what would you say are the top two or three things you think that they should keep in mind as they approach this?

**April Bolduc:**

I would definitely say, especially as you heard my background is customer experience, that keeping a positive customer experience the focus is probably my number one. The reason for that is if you think about at the end of your EV program implementation, you've taken a customer all the way through to

the end, let's say you've been a fleet customer, that means that if they have a positive experience, that means that it was easy for them to learn about the program, it was easy for them to sign up for the program, it was easy for them to get all the approvals that they need, was easy to go through permitting, it was easy to do construction, it was easy to teach their fleet managers how to operate the equipment, the vehicles were available. So those are a lot of pieces that need to fall into place to ensure that the customer has a positive customer experience. So that's why that is so important.

I would also say another one would be to keep it simple, especially when you are targeting your customers to sign up for your programs and then also having them sign up for your programs. Because I learned the hard way that there's a lot of things that us, as a utility, we would want to do and know about our customer. What we learned is there were things that they were getting hung up on [when] getting to yes. We want the customer to get to yes really quickly because now utilities are more turning into salespeople in a sentence instead of what we were used to doing traditionally. So we need to go out and find these customers.

Then lastly, I would think about the fact that with fleet customers, they need that white glove service, so advisory services are really key. Some utilities that I work with want to really decouple those advisory services, but if we want to be the EV resource for our customers, then we need to be able to have a really well-educated team that can help those customers through that process. Some utilities are implementing advisory services in that role, which I think is going to really benefit them exponentially. Again, that really gets back to that customer experience because you want to get the customer to yes and you want to have them move through your program pretty quickly. Then in the end, they will act as a testimonial for you.

**Marisa Uchin:**

Can I ask a question on this customer experience, which is really interesting. As you pointed out, there are so many different touch points and places where that experience could be great or could fall down. Where are you finding in utilities or how are you advising how that is managed? So who owns that in utility? And how do we infuse that and make sure that these different parts of the utility are actually really helping to drive that so that everybody's on the same page?

**April Bolduc:**

Typically, in my experience, it's the EV team that owns it. But each of those parts touch many different departments. So you want to rely on the expertise of your internal departments. So for me, it was about, "Okay if I'm talking about developing an application or doing permitting, those are two separate departments." So really being in line with your public policy and your government affairs team can help you streamline permitting and then really being aligned with your customer programs because they can help you target segments. So again, it's not expecting that the EV team has all the knowledge of the entire company, but leverage those experts in your company so that then you can put together a better program.

**Marisa Uchin:**

Scott, is that your experience at Entergy? Is that how you're approaching it as well? Or do you have anything to add to that from the customer experience perspective?

**Scott Barrios:**

Absolutely, Marisa. From energy's perspective and to up what April said, in our innovation process, everything is done through a customer-centric lens. We want to approach everything we're doing with

customer centricity at the heart of it. We're one of those utilities that you mentioned that we're very early in our stage but we've been in the EV space for over 10 years now. Various different programs, not centrally synchronized. And that's something we've started in the past year, a year plus is synchronizing all our different efforts, what does the customer need? And we're operating geographically in four different states, five different regulatory groups, or seven different regulatory groups technically, so we have to make sure we can meet the customer needs and all those and aligning internal resources to do that has been a big learning point for us.

One thing that we did, so one big takeaway, was we always talk about education and outreach for customers, we had to do that internally as well too. We had to develop an EV one-on-one curriculum that we shopped around. And I personally gave that to over 1,000 employees within engineering groups, customer service groups, key account groups, regulatory affairs. And every one of those has a different take on it. So it helped us understand, as we're building our own business plans even developing that, what's important to those different groups, so we can best develop these programs for our customers.

**Marisa Uchin:**

That's a perfect segue actually to the next topic that I wanted to touch on, which is around building that business case for EV programs, which it's table stakes to be able to get through that process. So I'd love to hear from each of you, if you can share your experience of what's worked well about building that business case, both as you were just saying, Scott, to get it through the internal approval, but then also to get through the regulatory approval. Rishi, you had talked about... I introduced you as having been an expert witness and leading the filing in Massachusetts, do you want to share what it took for you at least to get through your first successful filing?

**Rishi Sondhi:**

Happy to. So as you mentioned, Marisa, there's two aspects of it, the internal and the external side. So on the internal side, I think it's very helpful if the company has some overall objectives around net zero or the sustainability objectives that you can align with because then it fits in with that corporate principles. And that was easy for us because of our ambition in that space already. Then additionally, the ability to show that there is a market need for these programs and develop something that will provide perhaps a profitable opportunity as well for the company. I think it's all important points that go into that internal stakeholder engagement and buy-in.

**Rishi Sondhi:**

And then externally, I think it's also important to show the alignment with the state goals and how our proposals or our programs will specifically help the state achieve those goals, I think that's an important thing to show. Then related to that is stakeholder engagement. So as you know, EVs are a hot topic and there are several groups that are interested in utility programs and proposals. What we've seen can be very helpful is getting that early engagement and almost a collaboration with the different stakeholders so as we go into our filing process, we're going in with a lot of stakeholders support into the proceeding itself.

**Marisa Uchin:**

Right. Just like you would do in a normal case, build that support where you can.

**Rishi Sondhi:**

That's correct.

**Marisa Uchin:**

Scott, April, any other words of wisdom for what it takes to get through internal and regulatory approval?

**April Bolduc:**

I think too it's also understanding what your customer base is. So for example from a fleet stand point, really knowing where your fleets are located, how many fleets that you have because they are going to be your next big customer. And right now it's interesting because with every utility starting out a program and especially a fleet electrification program, fleets are just not on the radar because they're not a large customer. So it's flipping that way that you think about that customer as to, okay these are the next large customer and where are they located? And really understanding what your grid is like around those areas because you'll probably find pretty quickly that there are some upgrades that need to be made. I think when you start talking about it in that way, especially to your executives, even just pitching it internally, that type of new information and this new customer base, I think is really key to that understanding.

**Scott Barrios:**

To that again, it all comes back to customer centricity here. The conversations that you need to build the case is, what type of rates do, let's say, a national company that's made goals that they're going to electrify their fleet by X number of years. Well, they're working with 100 different utilities around the US perhaps. So we're having those conversations with them. Okay, what do you desire from rate design? What do you desire from a line extension policy perhaps? And taking those findings going back and building that business case. This is what we're hearing directly from our customers. This is what's going to entice them whether to come invest into our territory to speed up that investment in our area, as well as going to the regulators, this is what we're hearing and building that testimony for that potential rate case. And really keeping that customer at the center of everything is what the desires you'd want to make sure we have a strong business case around that.

**Marisa Uchin:**

Great. [crosstalk 00:19:56]. Go ahead.

**April Bolduc:**

I heard a statistic too that a billion dollars a day is spent on oil and gasoline. So when you translate that into our industry of electrification, that's a huge opportunity for us, especially as utilities and as regulators to electrify, so that's exciting.

**Marisa Uchin:**

Yeah, it is. That's a great statistic, I hadn't heard that one before. So then just in general, what do we think is working well from a policy perspective to accelerate transportation electrification? Each of you, I think April, you work across perhaps more states than anyone here. But Scott and Rishi, you both have your utilities operating in multiple jurisdictions. What seems to be working well on the policy side, whether regulatory or legislatively, that's moving things along in your states?

**Scott Barrios:**

So, where we're at in the Gulf Coast, our state policies, I think, are a little behind in some aspects. So one thing that recently just passed was the City of New Orleans just passed, it's a renewable and clean energy portfolio—just last week in fact. So we're excited about that. And that's setting net zero by 2040 and complete zero by 2050. With that, the electrification to helping those offsets to gain momentum, to help meet the 2040 goal. So it's good that it's all aligning a lot of these different entities, different stakeholders with the city. Now, we're hoping the states come on board with that as well too. But we're excited about that initial step that the City of New Orleans is taking.

**Scott Barrios:**

And on the national level, with all the new announcements coming out, it's starting to align states, cities to have these conversations that we've never had before. So it's good to have a unified voice there both from the public and the private sector here and that those policies that are becoming for people are starting to get ready for them now, I'll say both on the fleet side. Let's say on the corridor infrastructure side for fast charging interstates, people know that the infrastructure is coming. So we're having conversations with identifying those key stakeholders to prep that right now, and that's been very successful to at least begin those conversations so when the policy comes out we're not surprised by it and now scrambling to find the partnerships that we need.

**Rishi Sondhi:**

And Marisa, if I can add. On a similar theme, and I think we have the benefit of operating in states that are progressive with these policies. So I think the net zero announcements have been really positive and have created a momentum in that direction in our jurisdiction. So I think that has been very helpful. Then one other thing that I'll point out is that sometimes these goals can seem too far out, 2050 is still a long time out. But I think what has been encouraging is other efforts to start operationalizing that goal and creating roadmaps. So as an example in Massachusetts, we have a 2030 plan that's being developed. And so they'll really make it more urgent and present in terms of what strategies, what policies are needed now so that the state is on a trajectory to meet those goals. So I think that has been very helpful because that really mobilizes action rather than pushing it out and saying 2050 is still a long way out.

**Marisa Uchin:**

Right. April, I'm curious your perspective, operating in so many parts of the country where you're seeing good examples of policy that are, even just to what Rishi just said, moving things along sooner rather than later.

**April Bolduc:**

It's interesting because what's been really great for states that do have policies like the ZEV mandate can sometimes hinder states that don't have policies in maybe unforeseen ways. So a perfect example of that is states that have goals of the number of cars that they need to electrify as well as emissions goals. So what that means to automakers is that the only way for them to meet those emissions goals is for them to produce a vehicle that is zero emission. So when you have states that don't have those types of policies, it can be more difficult for customers to find available electric vehicles in those states. And that's because the automakers with the supply of electric vehicles that they have are pushing those towards the states that actually have the policies so that they can meet their goals. So hopefully eventually we'll have policies in all states.

**April Bolduc:**

I think that as you've seen because the headlines tell the story, that's where automakers are going. Ford's going to electrify all their vehicles, Chevy, Volkswagen, you name it, down the line. It's exciting to see that. And especially that just follows right in line with now what the potential federal policy will be.

**Marisa Uchin:**

Yeah, absolutely. Talking a little bit more on the programmatic side, I'm curious if you are finding the focus on pilot programs versus full-scale programs to be the way to get things going for your utilities and why, so if you've taken the approach of one over the other.

**April Bolduc:**

I know that what I'm seeing is that all utilities start off with some type of a pilot program. However, some, I think, too have been closer to not just focusing on pilot programs. Because you know how you can spend years and years and years doing a pilot program. I think now what you see utilities doing is really leveraging and looking at, for example one roadmap that I helped to build for New York is, okay, what are all the other utilities doing? What is the benchmark that's taken place now? Because then you can leverage those learnings either to help streamline your pilot or to help streamline your actual program.

**Marisa Uchin:**

I think that is the beauty of this industry, there's so much collaboration and shared ideas, shared learning. EEI certainly brings together the utility to do that and many other organizations. So Scott, Rishi, curious your perspective of you on the crawl, walk, run, pilot to full scale or have you gone full-scale out of the gate in any of your jurisdictions?

**Scott Barrios:**

Different cases and different ones for us. I'm in the process of launching a pilot right now for a fleet electrification project. So for something like that, we're looking at piloting just because there's a lot of unknown still. Again, it goes back to when you look at EV adoption rates, our territory is behind the rest of the US. So the business case that we made to test it out as a pilot program initially launching. Again, we have to base that again on the different regulatory groups as well too and their appetites for taking it. So where we're piloting that is where our regulators are more apt, have already expressed interest in some type of electric vehicle, electric transportation. So that's something that we're looking at and piloting those there first.

Now, we are going full-scale on some other projects as well too. On the public charging side, in 2018 we filed a rate case with the City of New Orleans of investing in half a million dollars in level two charging with the city, so we're about to launch that. What that's going to give us is 50 or so level two chargers around the City of New Orleans with an express intent to go more and more. So we've already, again, I'll go back to the customer research, the pilot program, I guess, for that was we've been donating level two chargers around the states and campuses for the past several years. But this will be, in this one case, starting early next year, level two chargers will start going into the ground owned by New Orleans on city property for free to use for the public. So we're going fully invested into that case.

**Marisa Uchin:**

Interesting. How about you Rishi at National Grid?

**Rishi Sondhi:**

Something similar, I would say, in the sense that as it relates to the public charging infrastructure, where we have the most experience, we are now scaling up all programs and partially because that's what's needed to achieve these ambitious goals and we have sufficient experience there in deploying that infrastructure. So really going full-scale there. In some cases where perhaps there's a new solution, new technology that we want to test, we are looking at some pilot or demonstration scale projects. So, one example I'll bring up is charging stations on utility poles as a new idea that addresses some unique customer needs, especially for drivers that may not have access to at-home parking. So that can provide a really unique solution. So that's one we're looking to test out in more communities. But in others, whether it's public or workplace charging, that's an area where we have a lot of experience and now we're just looking to scale that up by a significant magnitude.

**Marisa Uchin:**

I know in this industry it's not uncommon for a regulator to want to see it proven out locally, even if it may have been done in many other places previously. Have you found a way or would you give advice to any of your career colleagues from the industry on the line of how to make the case to the regulator to be able to go full program and not have to test things out jurisdiction by jurisdiction?

**Rishi Sondhi:**

That's a tough one, Marisa. I would say that it depends on the regulatory environment in each state. I would say where we've been successful is to show our experience in other jurisdictions that we operate. So it's our team and we may have experience in New York, for example, that we can bring to Massachusetts and vice versa, and I think that has been successful.

**Marisa Uchin:**

That's helpful. I'm curious if you could share what's been a really key learning moment. Each of you has been working in this space now for a number of years, and I'm sure there've been a number of aha moments for you and for your utility in this journey to support electrification transportation. If you could share one or two of those learning moments, an aha again, to help the others on this webinar just know, all right, don't waste your time here or this was really useful accelerate there. What would those be?

**April Bolduc:**

I would say one of the biggest learning moments for me was really seeing firsthand that transportation electrification programs have a higher customer touchpoint than other typical utility programs. What I mean by that is working with the one customer, and it doesn't matter if you're installing him a multifamily, community, a workplace, or for fleet because the technology is new, and then because you also need an external purchase of another piece of technology, which is the vehicle to make the whole system work. Customers have a lot of questions about all of those pieces and parts. So what typically you would explain to a customer and they would, just go online and fill out the application and sign up. They're wanting you to have two or three calls, come on for a site visit once or twice, especially if you're working with the actual municipalities and helping them, for example, with their employees, as well as their fleets.

So understanding that there's going to be a lot more questions because if you talk to the fleet owner, they need to get internal approvals for installation of charging as well. So what you would think would, maybe you budget three months, in some cases can go six months, and in some cases depending on the number of internal approvals required by that customer can go as much as a year. So that's what I mean



by the number of touch points can significantly increase with transportation electrification programs. So it's to prepare for that. Then how do you streamline your program is key.

**Scott Barrios:**

I will say the biggest aha moment for the utility is you've got to practice as you preach. So April mentioned site assessments, going out to visit sites. For utility, if you're trying to convince a customer to electrify their fleet, you have to have electric vehicles in your own fleet. For a while, we were operating our customer outreach teams go and visit customers talking about electric vehicles or public charging not going in electric vehicles. Customers take notice of that. The biggest aha moment of when I got my electric vehicle a while back, I went to do a survey on a customer site and I pull up in my electric vehicle. My electrician, who's one of our consultants that we work with engineering consultants specializes in EV infrastructure, he pulls up in his Tesla, our Clean Cities partner pulls up in their Tesla as well too. All three of us show up at the same time, the customer notices that. They take notice of that and now they know you're serious about having those conversations about the benefits of electric vehicles.

**Marisa Uchin:**

How about you, Rishi?

**Rishi Sondhi:**

Marisa, one thing I would add is that this is still an emerging market, still nascent, and customer needs are changing. So one thing that I think is critical, at least for us, is ability to have some flexibility in the program implementation. So the reason I'm bringing that up is sometimes we're required to provide exact targets. For example, for charging station by segments or things like that. Which again, I think are useful for planning purposes but the actual demand might be once we start implementation. So having the ability to be able to shift investment between segments, for example. So if you're seeing more demand from retail locations, we can allocate more funding there compared to workplaces and other segments. So having that flexibility can really help us be nimble, especially if you're planning for programs that are three to five years duration.

**April Bolduc:**

I'll tell you something too, that Scott said, which is interesting because this literally came up with a utility that I'm working with it just came up last week. It's that point about I was doing a train the trainer, so Scott's done these internal trainings. So an EV 101 and you're training the utility employees really how to talk to customers about electric vehicles and their program. None of them actually had an electric vehicle. And so they were a little bit nervous about doing the training because of course that's going to happen. No one expects that everyone when you're starting off has an electric vehicle. But what you can do is you can go to your dealership, you can ask utility if they have at least one fleet electric vehicle.

There are things that you can do to at least say, "Hey, I've driven one and I know the excitement of it. I know the amazing..." Blow your hair back fast so that you can at least talk intelligently about having had some experience with an electric vehicle. Is one way to mitigate that when your program is just up and you don't have employees that have electric vehicles. So we thought that was a good solution.

**Scott Barrios:**

I'll add to that too. The great thing about electrifying your own fleet, it's an internal pilot right there. The conversations we're having with our fleet services group, both from the vehicles, there's been some hard lessons learned. But also on the charging infrastructure, when we're designing charging

infrastructure at various service centers and how to incorporate it into backup generation, which in our region is very important to have backup or vehicle fueling mechanisms packed up into a power outage events. So we need the backup generation to support that. So our own fleet is our own lab for us to experiment with learning lessons from and take those learnings to customers as well too.

**Marisa Uchin:**

Yeah, absolutely. Absolutely that's very well said. Scott, you and I were talking about some of the work that you've done on the dealership side. I'm curious, what's your perspective on the role utilities can play with the EV dealerships?

**Scott Barrios:**

That's a great topic. Now, I will say that the dealership is—when you look at consumer buying electric vehicles—is one of the main hindrances. Vehicle availability on site, knowledge of the sales staff there. Studies also show that the motivation for a local dealership to sell an electric vehicle is just not there, it takes twice as long to sell an electric vehicle than selling the comparable internal combustion engine. Teslas sell all the time, I've visited a lot of dealerships, the conversations I had, let's say pre-COVID, a year and a half ago, I never had a positive experience minus Porsche, Jaguar, dealerships like that, you expect a certain level of salesman knowledge.

It wasn't until recently when I started going back out in the dealerships talking to Ford, Volkswagen, that it's been refreshing—the level of knowledge I'm seeing at the sales team. They're looking at a utility to help train their sales team, that's the impression that I'm getting. Because their manufacturers are saying, "yes, we're going to do all electric by X date, and we're only going to manufacturer, sell electric." So now they realize, "Okay, we have to learn more about electric vehicles, so we prepare them for that." One of the great ways we've been using to build that trust and relationship with the dealers is they have to install electric vehicle charging infrastructure at their dealership. So our role utility to help them get ready for the charging infrastructure.

For example, one pager brand of a manufacturer has dictated that all their dealerships will have, in this case, a mandatory of five electric vehicle charging stations; they can go up to seven. One of those has to be a 24 KW/DC fast charger, the rest can be level two. Even dictating specifically where they're at in the dealership. So that brand invited me out to a couple of different dealerships and walk through with them and talk about, "Where can we best do this? Can we serve it as a utility as well too? What type of upgrades are going to be needed to service that?" It's developing that trust with them and now they know they can lean on the utility to help them gap that knowledge of battery electric vehicles.

**Marisa Uchin:**

[crosstalk 00:41:09]. Go ahead, April, please.

**April Bolduc:**

I was going to say it's interesting because I talked to some utilities that say, "Oh, well it's not our job to be dealership salespeople." It just gets back to the same thing that we've been saying is, it is in a sense because, and as Scott says, it's part of that customer experience. They're a key cog wheel to ensuring that your customers have a positive experience that when you're promoting electric vehicles and you're asking them to participate in EV charging station rebate, that when they go to the dealership that it's easy for them to actually purchase a car and that the dealer isn't trying to talk them into being a gasoline vehicle. I've done many trainings at dealerships, and what I found when we did one survey was interesting because the results came back completely different than I thought they were.

One of the questions on the survey was would you like the training to be shorter? It was just right? Or would you like it to be longer? And 90% of them said they wish that it was longer. The reason why is because they wanted to actually physically go out and look at the cars and they also appreciated learning about electricity rates. Because they didn't realize how easy it was when given the talking points to explain a utility rate. It was just something that they wouldn't touch before, they were really afraid of it, they didn't know how to communicate about it. So we can help dealers streamline this process. Again, that just adds to that customer experience and it gets them to yes more quickly, meaning yes, I'm going to go purchase an electric vehicle.

**Marisa Uchin:**

Dealerships are interesting element, I guess, if you were to think about a partnership ecosystem. What are other partners that the utility should be working with to accelerate successful transportation electrification?

**April Bolduc:**

I would definitely say that working with municipalities on streamlining permitting. What I've found, especially in the territory that I was in for a utility, is that we had 29 jurisdictions within our territory and we had two cities next to each other. One was charging \$100 to install a charging station or to permit and another was charging \$1,000 just right next door. The thing was, they just didn't know. So we did a survey of all of the municipalities within our territory and we went to each of them talking about it and then provided them actual way to actually streamline that process. So then we started seeing the cost of permits come down to install charging. So that was really, I think, a key piece in helping to move that forward.

**Marisa Uchin:**

Rishi, Scott, have you built some partnership ecosystem to help with your planning?

**Rishi Sondhi:**

Yeah, that is a critical piece, Marisa. If the programs have to be scaled up and really meet those goals, we need that ecosystem in place. So in addition to the ones that we already spoke about, I'll mention a few more that we are working on and one of them is charging station installers. So building that capability to really scale these installations and it's also part of a workforce training, if you will. And getting those qualified installers at customer sites helps with the customer experience as well, when these projects get done correctly. Now as we look to enter the residential space to install EV chargers at home, there's another component of electrician training that needs to be done. So that the next level of residential EV customers get that experience that is needed. In addition to that, we're also working closely with charging providers and OEMs where, again, we've seen a lot of interest from OEMs as they look to promote their new vehicles. So those are just a few that I'll mention. And there's definitely others that need to be part of this ecosystem.

**Scott Barrios:**

I'll just say everything that they said is an absolute. But another piece is advocacy groups, so non-profits groups that are trying to do the same thing you are. They're trying to promote free electrification, they're trying to promote EV adoption. Enabling those groups to do their job, that's something we find very successful. Our Clean Cities Coalition partners have been very huge in our projects for us in all of our territories.

**Marisa Uchin:**

And speaking about some of these stakeholders, another question that's come in and I think it is really relevant, particularly with the current administration in Washington. That is thinking about how you add equity into building out charging infrastructure certainly I would think of a number of partners and stakeholders really very much care about. Can you touch on how that is being factored into the charging infrastructure plans that you're putting forward?

**April Bolduc:**

I think one of the key things around equity is focusing on transportation electrification as a whole and not just from the standpoint of, in order to participate in transportation electrification you need to purchase a vehicle. So what are some of the ways that we can have transportation electrification for everyone? That is the electrification of your city buses, electrification of school buses. So from just the use case perspective, that's really key. Ensuring that multifamily communities, for example, the city that I live in, 50% of our region is multi-family communities. So ensuring that, because it is more difficult to install charging in multifamily communities, but ensuring that there are ways that we can do that and other ways that we can help facilitate that. So again, it's just a focus of transportation electrification as a whole and that clean air is good for every neighborhood, I think is typically the approach that I like to take.

**Scott Barrios:**

And I agree with April that the clean air aspect here is huge, and I'll give one example from electrification transportation. So we recently completed, they got their bus this week in fact, a small town electric buses for their transit. Now, this is a town right on the Gulf Coast. It's also home to the largest oil refinery in the United States. So they've electrified 10 of their transit buses. And the reason why we worked this with them is to provide clean air to the community. And that's what we're looking at as the equitable aspect of this, to ensure that there is whenever we can do to lower the emissions of that area, and that's what we're striving to do. Now, it gets difficult to public charging as well to the, you can't just put chargers in areas where no one's going to use them, so you have to approach it from... It's a difficult business choice at this point.

But we want to ensure that once the secondhand market starts coming around for electric vehicles and there's more available at cheaper prices, that's what we really want to strive for, is equitable access to clean transportation, electric transportation, and they have easy access to charging as well too. Like April mentioned, multifamily units don't have necessarily dedicated parking spaces. So making sure we have the right policies in place at the state level or city level that will allow ease of permitting for that.

**Rishi Sondhi:**

I'll agree with everything that was just said, but to add that equity is a big piece of our program design, it's actually one of our guiding principles. So our focus has been that any new offering that we produce should have an equity component in it. So we're really operationalizing that guiding principle. I would say that while the first generation of the programs were really focused on putting X number of charging stations in environmental justice community areas, and that obviously has benefits. But as it has been pointed out, there's other things that we can do. So just as an example of what we're doing with the latest set of programs that we're looking to propose in Massachusetts, is that there's an equity angle, equity component in our residential offering. So even though the adoption may not be very high, we want to build programs that make it easy for all customers to participate, including customers that fall in either low income category or happen to be in an environmental justice community.

Then finally, we know that not all of our customers have a personal vehicle or rely on a personal vehicle. So we are very much focused on fleet programs where again, the benefit of those electrification can extend to obviously all customers, especially to environmental justice communities or communities of color, which have been overburdened and underserved. So our programs include offerings like electrifying the public transit fleet, school buses which again would operate in those communities. So that's part of our programs now. And again hopefully you see that thread across all the programs that we are designing and now we'll be implementing.

**Marisa Uchin:**

Do you also think about rural versus more inner suburban in your planning? Is the focus for now more around population centers or is there a part of your plan and your programs supporting rural customer needs?

**Rishi Sondhi:**

I would say in our case the focus is definitely on the environmental justice communities. And some of them do have a pretty good overlap with rural communities, so that's certainly one way that we can address it. Additionally, what we'll be doing is working with some of the stakeholders in identifying locations for public charging or for the electrification opportunities. So that's another way that we can target some of those communities to that stakeholder engagement.

**Marisa Uchin:**

Scott, what about for Entergy, certainly in your region, you are across many states that have definitely a significant rural area as you do suburban and urban, is there an element of your planning that is focused on rural?

**Scott Barrios:**

Absolutely. So if you're looking at the corridors that move through our state, no, we're not only looking at the interstate systems that are moving a lot of people, connecting a lot of different communities. But from a rural perspective again, one of the nuances of living on the Gulf Coast is supporting evacuations for hurricanes. We have to be able to support the rural communities that live right on the coast to get out of the way to support mass evacuation events, our mass outage events as well too. So we're looking at that working with state entities and planning on how we can support that from electric vehicle charging. So again, goes back to equitable access. So everyone needs to leave the area they know that they have a place to charge at wherever, working with those plans for evacuation.

**Marisa Uchin:**

That's such an interesting perspective. I hadn't really thought about that but it makes a lot of sense. I think Entergy, you were a part of, is it like a Southern corridor that was announced for charging?

**Scott Barrios:**

Correct. Yeah, we're one of the founding members of that and National Grid actually just joined us a week or two ago, I believe.

**Rishi Sondhi:**

That's correct.

**Marisa Uchin:**

So why does the utility do that? You just gave a great case study, Scott, in terms of evacuation. What's the interest? What's the focus for utility to join these corridor coalitions for building out infrastructure?

**Scott Barrios:**

One would be we look at the corridors are very wide, there's a lot of overlap maybe between various different utilities. So by joining this corridor, it gives us a planning mechanism to ensure we're using our resources the best available way that we can. So as people are passing through a corridor, our interstate highways, they have a place to charge. The last thing we want to do is where one utility begins and one ends on, let's say, an interstate, there's not chargers right next to each other. One day that might happen, but where resources are limited right now, let's plan the best way we can to space that infrastructure out to build confidence that people have when they're moving on that interstate, that corridor, they have a place to charge.

So we've had great planning so far and we're working very well with our adjacent utilities, ADP Southern Company, TVA as well to make sure that we're looking at where we're all putting chargers and taking that into consideration. Plus it's again, we mentioned this earlier, in this case, utilities are definitely sharing lessons learned. We're all in different stages of putting in charging infrastructure. Some have learned some hard lessons on what's working and what's not. So we're all sharing the lessons learned with that when it comes to the DC fast-charging infrastructure.

**Marisa Uchin:**

[crosstalk 00:56:55]. Go ahead April.

**April Bolduc:**

I was just going to say another perfect example of that too is the West Coast Clean Corridor Transit Initiative, which focuses on fleets. So in that project, we got together all of the utilities along the West Coast, and it was to look at how could infrastructure then support heavy-duty and medium-duty electric transportation from the Canadian border down to the Mexican border. It's really interesting because when you think about these significant loads that these vehicles will be meeting, is what needs to happen in this particular area if we space out charging every 50 miles or higher? Where exactly would we need to upgrade? And then what does that look like? And getting a real understanding of what heavy-duty and medium-duty vehicles will need in order to support that whole transition. So it's great seeing the utilities getting together in these coalitions.

**Marisa Uchin:**

Yeah, absolutely. I know we're just about out of time, but, Rishi, I just wanted to give you a chance if you wanted to chime in on the corridor piece since National Grid just joined. I didn't want to cut you off there.

**Rishi Sondhi:**

No, I think Scott covered it. But I would just say that that's a critical element to bring in customer confidence. Because we know for EVs to be a primary vehicle, not the second car, customers need that certainty and confidence to be able to complete those long journeys. Initiatives like this coalition can really help do that so that customers know that they will have access to reliable charging for those journeys.

**Marisa Uchin:**

Perfect. Well, I knew the hour would go fast. Thank you. I'm going to turn it back over to Jim Madej to close us out. Thank you again.

**Jim Madej:**

Thank you, Marisa, really well done as usual. And thank you to April, Scott, and, Rishi for a very good conversation. I hope, as everybody can see, it's a really complex topic with a lot of moving parts. For me as always in this industry, when we figure out ways to work together, then we can make things happen quicker, faster, better than if we worked separately and don't learn lessons as you guys just described. So thank you all very much. I hope everybody has a happy and safe Memorial holiday weekend. Thank you.

**Conclusion:**

Thank you for joining us for Impact Café. Franklin Energy delivers more than 100 turnkey energy efficiency and grid optimization programs for utility partners across North America. We work alongside our sister company AM Conservation Group who manufactures and supplies more than 300 energy efficiency and water conservation products. We help our energy partners achieve goals with solutions implemented by more than 1,300 energy experts. Watch out for our next Impact Café to join our ongoing conversation. To make sure you're always a part of the conversation, follow Franklin Energy on LinkedIn and Twitter for updates. See you at the next Impact Café.