

ECO Act EV Sales Guidelines Working Group
November 16, 2021, 10 – 11:50 a.m. Central

Attendance:

Adam Zoet, MN Dept. of Commerce
Adway De, MN Dept. of Commerce
Alex Skelton, Connexus Energy
Amalia Hicks, Cadmus
Anna Roberts, Otter Tail Power
Bob Miller, Wright-Hennepin Cooperative
Electric Assn
Brandon Kirschner, Xcel Energy
Bridget Dockter, Xcel Energy
Christopher Allen, Xcel Energy
Christopher Davis, MN Dept. of Commerce
Edward Webster, Franklin Energy
Ethan Warner, CenterPoint Energy
Grey Staples, The Mendota Group, LLC
Jamie Fitzke, Center for Energy and Environment
Jamie Stallman, Great River Energy
Jason Grenier, Otter Tail Power Company
Jeffrey Haase, Great River Energy
Jeremy Petersen, Xcel Energy
Jessica Burdette, MN Dept. of Commerce
Jill Eide, Great River Energy
John O'Neil, SMMPA
John Pantzke, Stearns Electric Association
Josh Quinnell, Center for Energy and Environment

Justin Partee, Connexus Energy
Katelyn Bocklund, Great Plains Institute
Kent Sulem, MMUA
Kevin Lawless, The Forward Curve LLC
Kurt Hauser, Missouri River Energy Services
Kyle Schleis, Connexus Energy
Lisa Beckner, Minnesota Power
Lisa Lancaster, Slipstream
Luke Meech, Otter Tail Power Company
Matt Gluesenkamp, Cadmus
Mike Bull, MREA
Rachel Sours-Page, The Mendota Group, LLC
Robbin Nisbet, Wright-Hennepin Cooperative
Electric Assn
Rodney De Fouw, Great River Energy
Ryan Rooney, Runestone Electric Association
Stephanie Pederson, Dakota Electric
Tom Sagstetter, Elk River Municipal Utilities

Grey kicks off and walks through intro slides.

Intro slides provide context for ECO Act and the EV Sales Guidelines provisions. Shows statutory language. Provides aggressive timeline. Dep. Commissioner decision by 12/31/21.

Mike Bull (MREA): Purpose of this part of statute is to decouple. State policy promotes electrification and another part promotes EE. Want utilities to feel comfortable promoting EVs and not get higher CIP goals from it. Important to coops and municipal utilities.

Jessica Burdette (DOC): Would add – as we understand how EV charging is incorporated into CIP, it evolves into traditional end-use technology. May be reason to allow goal to increase with EV sales. That's part of justification for having a sunset on the provision.

Mike: Agreed. For this 10-year period we wanted to decouple the two policy goals, at which point EVs will likely be more ubiquitous. We wanted to take these 10 years of sales out of the equation forever. Then any sales beyond that would be incorporated.

Jamie Fitzke (CEE): Something to be said (for accuracy): this policy developed to entice and not punish utilities.

Rodney De Fouw (Great River Energy): How will existing EV loads be viewed?

Jessica: We have some questions about it in the discussion today. Looking at this as a prospective policy to be established. Sales, depending on how they are verified or included as part of rates, tariffs, etc. that we would be looking at beginning in 2022 inclusion of those sales. Also recognizing that in development of CIP goals, looking at historical 3-year weather-normalized. Sales beginning in 2022, would start being incorporated in weather-normalized for future years.

Kyle Schleis (Connexus): What would have to be provided to show that EV load is participating in a program?

Jessica: All to be determined as a collective group of stakeholders.

Kevin Lawless (The Forward Curve): Any reason COUs couldn't subtract 2021 EV charging sales when filing 2022 plans?

Grey Staples (The Mendota Group): Good question. We had said 2022 based on our understanding, but folks could take a different position.

Jessica: Sales could be verified for 2021 and then incorporated.

Grey: That's a question we have - how in fact one would calculate that number.

John O'Neil (SMMPA): Because COUs don't report 2022 energy sales in 2022 reporting.

Jessica: only reporting 2021 sales.

John: We won't have the sales for 2022 until after 2022.

Grey: Kevin is saying why not include 2021 as part of start year.

John: As I interpret ECO, it's not allowing us to go back. If we go back one year, why couldn't we go back three years? We haven't established the guidelines yet. I think it's from 2022 forward.

(From Chat – John O'Neil)

EV Charging kWh Sales

Number of EVs in MN by county: <https://www.dot.state.mn.us/sustainability/electric-vehicle-dashboard.html>

Annual Miles per Vehicle (MN) = 11,361 miles/year

<https://www.fhwa.dot.gov/ohim/onh00/onh2p11.htm>

EV Charger kWh per Mile = 0.3 kWh/mile (2022 Illinois TRM version 10 Volume 3 – page 400;

<https://www.icc.illinois.gov/programs/illinois-statewide-technical-reference-manual-for-energy-efficiency>)

Example - Olmsted County, MN:

2021 EV Charging kWh Sales = 604 EVs * 11,361 miles/year * 0.3 kWh/mile = 2,058,613 kWh

Electric Vehicles - Sustainability and Public Health - MnDOT

MnDOT sustainability resources and contacts

www.dot.state.mn.us

Jessica: Agree with that. I don't think we can go back and look at historical.

Kevin: I think that's true, John, but if you wait until you have 2022 sales, then nothing will happen until 2023. Yes, there's a 10-year window. I propose subtracting 2021 and call that verifiable meter data from customers with specific EV charging rates and to subtract those out of gross sales for 2022 plan.

Jessica: We're getting a chicken and egg problem. Points well taken. Monitoring chats. Let's talk about world of verifiable sales. Two utilities have verifiable sales.

Kent Sulem (MMUA): The law technically applies to all sales before December 31, 2032, provided it meets the criteria. So if a program can show the sales before 2022 they could be backed out. But if there is no way to measure past sales, then they couldn't be included. Agree with Jessica's comments.

Mike: In 2033 it's those sales that appear incremental above your 10 year sales.

Jessica: Yes, avoid creating a cliff in 2033.

Kevin L: Problematic if EVs and chargers have gotten a lot more efficient. Situation where sales decline. Somewhat unlikely, but not out of realm of possibility.

Jessica: I don't understand why that's a problem.

Kevin L: I'm not saying it's a bad thing but there would be a deduction in what CIP requirement.

Jessica: Saying there'd be a negative that would lower the goal?

Kevin L: Chargers, batteries, and cars will get more efficient. Public transit will impact all of this. There's the possibility that we could hit a declining sale particularly with wildly successful utilities in getting EVs introduced.

Jessica: Let's cross that bridge when we come to it.

Grey: Everyone should provide comments.

Jason Grenier (Ottertail Power): Very simple approach to be considered is: We know the number of EVs for each utility. Would we want to put in TRM and say each EV is worth x kWh? All charging on one of our tariffs. Not precise, but simple approach.

(From Chat – Tom Sagstetter)

The PUC has data on its website that you can download here:

As I read the statutory language my take is that it was written to be measurable and not apply a TRM. Will the method we outline be used as part of the fuel switching conversation in another working group.

Grey: You said DOC gives number of EVs?

Jason: PUC staff gives from DOT or DVS or whoever. So we know number of EV. We could estimate miles, and kWh/mile. Cadmus does their studies and develops TRM savings for many EE measures. Throwing that out there.

(From Chat – Katelyn Bocklund)

The PUC has data on its website that you can download here:

<https://mn.gov/puc/activities/economic-analysis/electric-vehicles/>

Hanna Terwilliger is the contact for EV data: hanna.terwilliger@state.mn.us

(From Chat – Rodney De Fouw)

<https://minnesota.maps.arcgis.com/apps/webappviewer/index.html?id=95ae13000e0b4d53a793423df1176514/>

Grey: In essence a deemed value.

Kurt: Do they do that for all utilities? Never seen for munis.

John: Yes, all utilities are required to use the TRM for consistency. I had the same thing in mind. Reported by county. If reporting by utility, even better. A lot of our measures in our TRM are based on Illinois and they have an EV measure in 2022. Simple.

Kurt: How are they getting that sort of resolution? How do you tell city vs rural electric?

Stephanie Pederson (Dakota Electric): PUC uses the x data and overlays on utility maps. Gets sent after private registrations taken out.

Kyle: How do they record leased vehicles?

Stephanie: Issue in past, Hannah's (PUC) email says has the correct info for 2000+ leased vehicles in the state. That was the cause for delayed data.

Jamie: Counterpoint: in some of the metro areas, there are those that live in one service territory, but work, shop, travel to another. Would be a disservice to those utilities.

Jason: Isn't 85% of charging done at home? We could have separate tiers for hybrid vs all EV.

Jessica: This would be in lieu of verifiable sales?

Grey: Before you answer, it seems the answer is that you're taking a more expansive view to try to align all EV charging in a service territory, correct? Going down that path to say yes, and how you do it reliably.

Jason: Yes, in lieu of verifiable sales, where we can.

Jessica: Thinking of governance aspect. We can rally around simplicity but what would make me nervous is many utilities doing this. Wouldn't want to have a lot of one-offs. Struggle with magnitude of impact and balancing all of this. And broad vs narrow interpretation. I like the idea of leveraging the TRM.

Kevin L: Are you open at the DOC to using a broad-based? It's not perfect for the first round of plans and after that using a different plan, such as metered-data supplemented by market and load research? I think you're right in the beginning here, last I looked on the dashboard there are 20K EVs in the state – for now not a big number. Might be a big number for specific utilities.

Jessica: Historically I've been averse to big asterisks indicating that we changed methodologies. That said, I appreciate that there are a lot of moving pieces. I wouldn't want to close the door to adjusting course if we're able to get to a more refined method. I recognize we need guidance out by 12/31. Might make sense to keep it simple. Doing that and then modifying methods could work. Not unreasonable.

John: I think you're right. Point of TRM is to establish that consistency. But we do look at that on an annual basis. We review and could change in there.

Grey: Are you talking baseline?

Jessica: I think the TRM is the vehicle. I don't know that we'd use it to establish a baseline and algorithm for quantifying savings. A place to conduct the work and define the mechanism.

Jason: Place to start and as we get more sophisticated change.

(In Chat – Jason)

if the vehicle is registered the data exists on non-residential. maybe we can work with the MPUC and other agencies to get the non-residential ones.

Josh Quinnell (CEE): You mentioned scale, Jessica, what we do in first year is 100x less impactful than what we do in 10th yr. We should expect 1000s of 1000s of EVs. The benefit to utilities may represent an entire year worth of sales. Need to balance simplicity vs accuracy. TRM is always wrong. Which side do we err? 20-30% difference is meaningful. Can leverage attributes of EVs – easy to meter. We want high visibility EVs on system. Integral to grid resiliency. Metering EVs when, where they use energy prepare us to use EVs as a substantial grid asset.

Jessica: Great points. Reinforces Jamie's comment about this being an incentive to establish good practices for metering. Can you remind me when we're due for next major overhaul of TRM?

Amalia (Cadmus): This year. I don't know that it has to be either or. We can with the TRM, come up with measure that makes sense. Can continue to measure, meter, CARD grant, those results can get rolled into TRM later. We need to agree on when / where to start.

Jessica: I have to leave. I like the idea of something simple now and then moving this convo to the TRM to revise as we go.

Grey: If one were to read the statute to confine to program rates or tariffs: 1) are utilities confident that program rates and tariffs readily capture information? 2) if focus on those, what percent of EV charging is covered by those? Is it 60-70%? Something to think about as well.

John: From a muni perspective, we do not currently have EV charging rates in place. No mechanism in place to track those sales. For the smaller utilities, broader perspective makes more sense. As those programs get developed, we'll have more ability to do that.

Rodney: Wrinkle: conversation thus far has focused on road vehicles. Will construction and UTVs, etc. be included in this?

Grey: Good question.

Mike: I don't think we defined in ECO what an EV is. Seems to suggest it should be broadly construed. Not limited to road.

Josh: We have looked at alternative (non-road) vehicles. Would be exceptionally difficult to characterize in the TRM due to variety of operating conditions. Would need to meter.

Grey: What percent of vehicles or consumption would that be? Do you think road vehicles would be 95% of total?

Josh: No feel for that.

Grey: Trying to get a sense of magnitude that wouldn't be included. If larger number, how to estimate.

(From Chat – Kevin)

Over the road truckers are generally not registered in MN relative to the amount of charging they will use.

Josh: Maybe less than 10% of vehicle market, but pure speculation.

Kurt: Far more electric forklifts going in than EVs at this time in our service territory.

Mike: I wonder if Rodney had additional thoughts on how to characterize load from non-road EVs.

Rodney: No perfect method. Highly variable on workload and usage. Some sort of hours of operation in new TRM. Load profile. Could be done simply with measure in TRM.

Lisa Beckner (Minnesota Power): Two comments: one of fleets, maybe a separate tier. Second highlight Kurt's note about whole home ToD – many EVs could be charging on that. Could be leaving out a lot of sales. A very low percentage of our EV charging would be on separate rate.

Jamie: Appreciates John's comment about some utilities not having programs or metering capabilities. Would be good to know which utils have metering capabilities and rates/programs so that we can understand what to include in future requirements. Want to be flexible and accommodating to all utilities.

Grey: The later part of this invites folks to inform the discussion further. Discuss slide 11.

5-minute break.

Grey explains slide 12, requesting that stakeholders upload information to the SharePoint and the EV Sales WG folder.

Rodney: 90% of charging happens at home (Jason). Splitting credits is folly. Just as imperfect as simply approach.

- John O'Neill agreed with Rodney. Knowing that vehicles travel between service territories. Call that a wash and trying to split utilities is as imperfect as trying to put all sales in the utility's service territory.
- Lisa Beckner: Agrees with this and Jason's thoughts re: charging at home.

Jeremy Peterson (Xcel): Statute doesn't discuss recover of CIP costs through and counting EV EE achievements in CIP

- Mike wants to hear more (discussing in EV fuel switching)
- Jeremy – Not like a CIP exempt, correct?
- Grey – This is different from CIP exempt in that CIP exempt customers do not pay CIP and their sales are removed from WN sales. IOUs can't claim savings for exempt customers. Is this synonymous. No. Can still offer CIP programs for EVs and count the savings.
- Mike – IOUs can submit Efficient Fuel Switching programs and costs are recovered. The savings are separate.
- Jeremy – As programs and opportunities arise that improve EV efficiency such that EVs are treated like another end use, could those be funded by CIP?
- Grey – Yes, these should be allowed and funded by CIP.
- Mike – Makes sense to me.
- Kevin: There is a White Paper on the Electrification website that covers suggestions regarding how CIP programs targeting high efficiency vehicles and chargers can be

fostered. Link is: <https://michaelsenergy.com/wp-content/uploads/2021/11/Integration-of-Electric-Transportation-and-CIP.pdf> Forward Curve did study. Are large differences in efficiencies between vehicles (by a factor of almost 100% from lowest to highest) and chargers as indicated by ENERGYSTAR having certified chargers. This will change a lot. Just residential. Not even include fleets. Be careful that CIP doesn't foster lots of inefficient EVs.

- Grey: Expansive language in ECO that allows incentives for gasoline vehicles to EVs. Different from most states and their definitions of efficiency.
- Jamie: Also considered in load optimization. Many areas that need to consider EV charging.
- Grey: Xcel filed for a program in CIP for EV charging. Characterized as demand response.
- Jamie: Part of the reason ECO came to be.

(From Chat – Kevin)

As we consider using average numbers, In looking at EPA MPGe ratings, currently available EVs range from around 65 MPGe to over 120 MPGe, so there is quite a range in terms of efficiency.

Slide 15 – Invite WG members to add to spreadsheet on SharePoint and upload memos with responses to questions and support for positions to the EV Sales WG folder.

Slide 16 – Repeat of questions posed earlier in the presentation.

Slide 17 – Shows schedule and request that members provide memos/information by Nov. 22 COB. We'll follow with a combined response by Nov. 24. Ask that members provide additional feedback by Dec. 1. Creating a loop. Finalize and distribute to WG and CC on Dec. 3

End.