

Illinois DEA Case Study Work Group
Meeting #5: Apply DEA Metrics to Priority Populations + Present and
Interpret DEA Results, Part 1
December 13, 2024
Meeting Notes

Attendee List

Agnes Mrozowski, Ameren Illinois
Peter Millburg, Ameren Illinois
Mark Minden, Ameren Illinois
Camille Minns, Clean Energy Works
Jim Fay, ComEd
Kyle Danko, ComEd
Theodora Okiro Quarles, EcoHealth Strategies
MeLena Hessel, Elevate
Curt Stokes, Environmental Defense Fund (EDF)
Grey Staples, Mendota Group
Kit White, Midwest Energy Efficiency Alliance (MEEA)
Shelby Smith, Office of the Illinois Attorney General
Hannah Howard, Opinion Dynamics
Deb Dynako, Slipstream
Boratha Tan, Vote Solar
Dr. Stephanie Means, Walker-Miller Energy Services

Kevin Dick, 389NM, LLC

Meeting Recording

[IL DEA Case Study - Work Group Meeting #5 - Zoom](#)

Note: Post-meeting responses to WG questions are in **blue**.

WG = work group; the Illinois DEA Case Study Work Group

ICC = Illinois Commerce Commission

Welcome, Introductions, Background (Slides 2-10)

Overview of Ameren Beneficial Electrification Portfolio and Programs (Slides 11-15)

- Ameren's Beneficial Electrification portfolio emphasizes transportation electrification and supporting installation of electric vehicle charging infrastructure.
- Most of the discussion today will be about ChargeReady and ChargeSmart
- Most of the metric data comes from utility data from the benefit-cost analysis.

Metrics Results (Slides 16-34)

Participation

Slide 17

- **WG member asked:** Did Ameren give any reasoning as to why the participation rate for EIEC/LI is lower than the customer base?
 - **Project team noted:** We have asked Ameren about the 25% participation factor and are awaiting a response.

Slide 20

- Key takeaway: a quarter of all ChargeSmart participants are predicted to be EIEC/LI. Overall, the EIEC/LI participation rate is slightly less than other customers.
- **WG member asked:** Is that a significant difference from a statistical standpoint?
 - Thinking about participation rates. Is that a meaningful difference between 1.6% and 1.2%? Asking for context to think of that difference, is that huge or a little.
 - **Project team noted:** We haven't run any statistical analysis on this data. This is general data from the BCA workbook, which just provides totals for all EIEC customers vs standard customers, didn't have individual datapoints.
- **Ameren representative noted:** There are some questions that have been asked that are for our subject matter experts. Folks on this call weren't involved in the development of the plan, we are researching that and will respond to the team. Our purpose is to provide data for this analysis. BE is an ongoing program approved by the Commission and meets the

Commission's definitions of equitable. The BE Plan is public, folks can look at it for themselves.

- **WG member asked:** Could we have a link that shows what the ChargeSmart rates are? I'm just curious how the costs are different from a typical customer's rate schedule
 - **Ameren representative shared:** Information on the ChargeSmart program is at <https://www.ameren.com/illinois/residential/electric-vehicles/chargesmart>
<https://www.ameren.com/-/media/rates/files/illinois/aie121rdevcp.ashx>

Slide 24

- **WG member asked:** What is the geography you are looking at here?
 - **Project team noted:** Census tracts. Distance measured from the center of the census tract.
- **WG member asked:** You may not be able to answer this, how often are these darker census tracts 50 miles away from a charger and how many are more like 20 miles?
 - **Project team noted:** We will have you get back to you on that.

Project team response: We heard a question about the type and number of census tracts that are >25 miles from the nearest charger. Table 1 will provide this information

Table 1. Census Tracts Histogram - miles from a public EV chargers

Category	Miles to nearest charger				
	0-10	10.1-20	20.1-30	30.1-40	40.1-50
EIECs	221	22	10	4	1
Non-EIECs	243	48	15	5	0
All Ameren	455	99	42	10	1

Slide 27

- **WG member asked:** Wondering if Ameren has plans laid out on how they are going to engage the communities for the EV chargers to get public engagement.
 - **Project team noted:** My understanding is that the communities and customers apply, Ameren reviews those applications and determines who gets funding.
 - **Ameren representative noted:** Correct. What needs to be remembered is that this is occurring in the context of the Multi-Year Integrated Grid Plan. The Grid Plan involves continuous dialogue with communities about their needs relating to renewable energy. The question of how we will engage will need to be reviewed in that context. We have worked with our communities on electric and gas service. We are doing outreach on our own. One thing in the Multi-Year Grid Plan is that our communities didn't know what to ask for, so part of what we do is education on what is renewable energy, what do EV programs entail. That point is critical, this won't work unless communities are active. If a community isn't interested or engaged, we work with other folks. One other clarification about proposed public chargers – Ameren is not owning or installing EV chargers, we are providing infrastructure, we aren't owning the charging stations, other groups will be owning those.

- **Ameren representative noted:** Outreach and education will be key to adoption of electric vehicles, and obviously charging infrastructure. A large part of our plans is about education and outreach. We do that in a few ways, through the BE Plan's Community Engagement & Consultation (CEC) program we are able to build an EV electrification plan one-on-one with the EIEC and LI communities, and there is financial assistance to get those plans started.
- **Project team asked:** If I could follow up on the CEC program, how many communities are participating, and how many are planned?
- **Ameren representative noted:** We have 30 plans in development, and 17 are in EIEC and LI and will receive direct financial assistance. The goal is to have 80 by the end of 2025. Community means town/city/municipality, any jurisdiction that has governance of an area.
- **Project team asked:** Can CEC money be used for directly reimbursing cost of EV?
- **Ameren representative noted:** We collaborate with communities to develop the plan, for EIEC areas there is financial assistance, that can be used for EVs, charging infrastructure, etc.
- **Ameren representative shared:** Here is a draft map made of the communities participating in the CEC program for reference.

2024 CEC Program Plans in Development



WG member asked: It occurs to me that Ameren's territory does not really look like a map of southern and central IL given the prevalence of munis and, in particular, coops. Was that taken into account in any way through this analysis?

- **Project team noted:** We did not look into separate munis and coops. We have asked Ameren about whether they offer BE programs in munis and co-ops and are awaiting a response.
- **Ameren representative noted:** To Melena's concern, we do have co-ops and munis in our territory. Ameren serves 800 communities with electric service, 26 co-ops and munis, biggest is Springfield. Co-ops primarily serve rural areas. I would not want you to overlay munis, as it would be a messy picture. The communities themselves are served by Ameren. The vast majority of urban areas are served by Ameren. The big picture is that Ameren serves most of the communities downstate.

ICC representative noted: Wondering if you should take into account Ameren isn't doing it all. The state transportation department is awarding stuff along highways. Might be important to see/overlay that. Some places Ameren and the DOT might be in sync.

- **ICC representative shared:**
<https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/transportation-system/planning/drive-electric/IDOT%20NEVI%20Awards%20-%20First%20Round.pdf>
- **Project team noted:** Yes, we were just focusing on Ameren's offerings, there are many other programs at the state and federal level for EV programs.

Project team noted: And another thing to note, that there are residences and private entities that have chargers that are not included in this data, which is not publicly available.

Response to ICC representative: We heard a request to see the counts of other proposed EV chargers under different state or federal programs. The Illinois Department of Transportation plans funds from the national electric vehicle infrastructure (NEVI) program to add an additional 230 chargers by 2024 (see Table 2).¹ Totals for EIEC and non-EIEC communities exclude NEVI chargers since easily accessible geospatial data was not available.

Table 2. Proposed publicly accessible EV chargers

Count of publicly accessible EV chargers in Ameren Territory				
Timeframe	Non-EIEC	EIEC	Total	% Chargers in EIECs
Current chargers (2024)	340	497	837	59%
Ameren proposed public chargers (BE Plan #2)	36	24	60	40%
NEVI program	-	-	230	-
Total Chargers (1/1/2029)	376*	521*	1127	58%

**Total excludes NEVI program chargers*

Utility investment

Slide 28

- Key takeaway: EIEC/LI customer segment receives more utility investment than standard customers.

Emissions

Slide 29

Note: The project team identified a unit conversion error in the emissions calculations. The emissions calculations have been corrected and are shown in the below slide image and in the corrected version of the slides.

¹ Data source | Electric Vehicle Infrastructure Plan - State of Illinois. Illinois DOT. (Sept 2023). Available at <https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/transportation-system/planning/drive-electric/illinois-state-electric-vehicle-plan-2023-update-approved.pdf>

Emissions

Ameren's BE plan leads to **emissions savings*** from replacing gasoline and diesel vehicles with battery and plug-in hybrid vehicles.

- 87% of NOx and 50% of CO₂ emissions reductions are due to vehicles driven by EIEC/LI customers who participate in ChargeSmart and ChargeReady.

Emissions reductions from switching to EVs, lack a **spatial** component.

- We know *which* customer type is participating (EIEC/LI or other) but not *where* the emissions reductions are occurring.
- For example, an EIEC/LI participant may live in one community but do all driving in another area. Emissions reductions would materialize in the community *where the driving is occurring* (this type of data is not available)

Ameren is conducting a neighborhood level emissions assessment in 2025.

* Includes avoided emissions from replacing combustion vehicles, increased emissions from more energy generation, and avoided emissions from load shifting during peak periods.

Figure 1. Net NOx emissions changes (2026-2028)

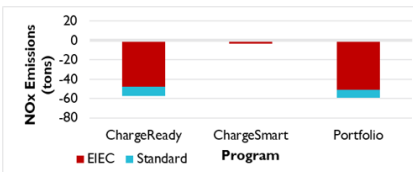


Figure 2. Net PM_{2.5} emissions changes (2026-2028)

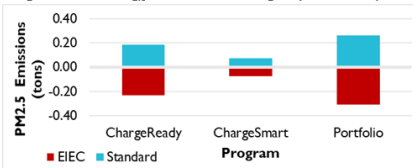
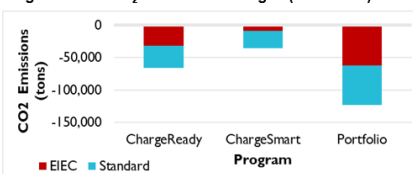


Figure 3. Net CO₂ emissions changes (2026-2028)



29

WG member asked: What assumptions were used to determine the information in the asterisk (e.g. Ameren system)?

- WG member asked:** Curiosity about the generation side. Is it a MISO number or Ameren number in terms of increased emissions?
- Project team noted:** I don't want to answer right now, I might get it wrong on the fly, I can follow up if that is ok, unless someone from Ameren knows.
- Project team asked:** Clarifying question – is the question related to what is the load and emissions profile for the generation in the location? What data was used?
- WG member noted:** That would be a challenging thing to have. You probably don't have load shape information. I was assuming it was something like load increases by X MWh and then you multiply that increase by a value of tons CO₂/MWh, I wanted that emissions factor.
- Project team noted:** We can get back to you on that. We have compiled meeting notes for meetings, can provide responses to some of these questions in the notes.
- ICC representative:** To [that] point, wondering is it MISO or Ameren, but also average or marginal emissions rates is important, the more you can spell that out would be great.
- Project team noted:** We are hearing interest in background assumptions for emissions analysis, we can come back to that.
- Ameren representative noted:** I was tangentially involved in the group that developed baseline emissions in the Multi-Year Integrated Grid Plan. We have a standard set of information out there. Ameren doesn't own any power plants, so we buy all of our power. That might be in Multi-Year Integrated Grid Plan, we can see if we can provide a link.
 - WG member commented:** Ameren ILLINOIS does not own any power plants. Ameren Missouri (a different entity) does.

WG member noted:

I recommend we identify location-based emissions (e.g., eGRID or MISO data) versus market-based emissions (e.g., Ameren-only) and the year we are using and be consistent. I also agree that marginal emissions can be used, especially if we are incentivizing time of use. I suggest using WattTime. That can be used for market-based emissions, which are generally more accurate than location-based emissions.

Response to WG member: We asked Ameren to confirm if they are using the locational marginal emission rate or average emission rate in the calculation of avoided power plant emissions. We are awaiting a response.

Project team response to general comments about emissions methodology: We heard interest from multiple work group members in better understanding the Ameren BE Plan's from avoided emissions benefits calculations. This calculation is broken down in further details below using information from Ameren testimony submitted in July, 2024.² The majority of the BE plan's emissions benefits are due to the avoided emissions from the replacement of gasoline and diesel vehicles with plug-in hybrid electric vehicles (PHEV) and electric vehicles (EV).

Avoided emissions include:

1. Avoided emissions from gasoline or diesel fuel combustion, from replacing those vehicles with EVs or PHEVs. Ameren relies on 2023 EIA data for CO2 emission factors³ and data from Argonne National Laboratory's AFLEET tool for other emission factors.⁴
2. Increased emissions from electric power plants due to increased electric consumption from EVs and PHEVs. Ameren relies on data from their 2023 Environmental Disclosure Statement⁵ and EPA 2020 and 2022 eGRID emission factors and kWh increase in electricity data^{6,7}
3. Decreased emissions from load shifting (shifting energy consumption from peak to off-peak hours, since high-emitting power plants tend to come online during hours of higher peaks).^{8,9}

² *Direct Testimony of Andrew. W Cotrell – Submitted on Behalf of Ameren Illinois Company (d/b/a Ameren Illinois)*. Ameren Exhibit 3.0 (July 1, 2024). Available at <https://www.icc.illinois.gov/docket/P2024-0494/documents/352385/files/616709.pdf>

³ Energy Information Agency (EIA). *Carbon Dioxide Emissions Coefficients* (2023) https://www.eia.gov/environment/emissions/co2_vol_mass.php

⁴ Argonne National Labs. *AFLEET* (2024). Available at <https://afleet.es.anl.gov/home/>

⁵ AEP Energy. *Ameren Service Territory Environmental Disclosure Statement – July 2023 – June 30 2024* (July 2024). Available at <https://www.aepenergy.com/wp-content/uploads/2024/10/Ameren-Environmental-Disclosure-2Q24.pdf>

⁶ Environmental Protection Agency (EPA). *eGRID with 2022 Data* (Jan 2024). Available at <https://www.epa.gov/egrid/download-data>

⁷ Environmental Protection Agency (EPA). *eGRID 2020* (Jan 2022). Available at <https://www.epa.gov/egrid/historical-egrid-data>

⁸ Environmental Protection Agency (EPA). *eGRID with 2022 Data* (Jan 2024). Available at <https://www.epa.gov/egrid/download-data>

⁹ Environmental Protection Agency (EPA). *eGRID 2020* (Jan 2022). Available at <https://www.epa.gov/egrid/historical-egrid-data>

4. The monetized benefits from avoided emissions were derived using dollar (\$) benefit/ton emission factors from Public Act 102-0662¹⁰ for CO2 and ANL's AFLEET Tool for PM, NOx, and SOx.¹¹

Ameren representative noted:

Thanks for sharing the information on the Environmental Disclosure Statement which addresses generation fuels behind the power & energy that Ameren supplies to our customers. Please be aware that a very large amount of electric power and energy is provided to our customers by retail electric suppliers (RES's - currently about 50%.) We don't know what fuels power the generation that RES's use for their customers, which is why we landed on the MultiYear Integrated Grid Plan methodology referenced previously.

Slide 30

- **ICC representative:** Seems like you include the impacts of increased electricity usage and emissions related to the switch to electricity?
- **Project team noted:** Yes.
- **ICC representative:** There is a locational perspective there: if the increase in electricity causes coal plants to run more, that community might be affected by that as well, which is another issue, and might be also impossible to track.
- **Project team noted:** Yes, great point

Project schedule and next steps (Slides 34-38)

- Tentatively aiming for next work group meeting in February 2025.
- Our team will finalize Ameren metric results and analyze forthcoming ComEd data for metrics to present at the next meeting.
 - Our team will work with Ameren staff on bill impacts with the goal to share results at the next meeting
- Please reach out to the team with any questions/comments following this meeting

¹⁰ Public Act 102-0662. General Assembly of Illinois (Feb 2020). Available at <https://www.ilga.gov/legislation/publicacts/102/102-0662.htm>

¹¹ Argonne National Labs. AFLEET. (2024) Available at <https://afleet.es.anl.gov/home/>