ComEd's Income Eligible Electrification Workshop 1 Meeting Minutes

Facilitator: Molly Graham, Midwest Energy Efficiency Alliance

Participants introduced themselves.

Molly shared an overview of the workshop goal: To support the design of a program strategy to implement electrification measures for single-family (SF) and multi-family (MF) income eligible customers. Not an electrify everything strategy – strategic process to electrify homes that are a good fit. Determining who is a good fit, and how we target them is a topic that this workshop will address. What are the tools, resources and strategies that need to be discussed to consider and ultimately design an implementation plan?

Stacey Paradis (MEEA) shared an overview of CEJA's electrification language.

- Increased investment in IE programs
    - Whole-building retrofit requirements; dedicated health and safety funds; certain amount of electrification investment must go to income eligible sector
    - Re-formed Income Eligible Accountability Committee
- Electric utilities can claim limited savings for gas conversions (electrification)
    - Overall bill impacts cannot be increased (stipulation requirement, not explicit in CEJA)
    - Customers must receive estimate of impacts on monthly bills prior to installation
    - 5% of savings goals can be procured through electrification for Plan 6

Mark Milby (ComEd) shared ComEd's goals, preliminary plans and program guidelines.

- Shared review of law
    - Law requires demonstration of site energy use reduction in Btus. The law does not specify that bill impacts have to be reduced, rather ComEd's stipulated agreement includes a bill reduction for income eligible customers who electrify their homes
    - Income Eligible Electrification: Something we need to do because of equity, goals, and it helps unlock customer savings in non-IE residential, commercial and industrial sectors
- Revised Plan 6
    - Included some new electrification measures (family of heat pumps and C&I forklifts, new measures can be added as they are developed)
    - Requirement for estimated bill impact – this is new. There are some program approaches today where ComEd communicates bill impacts, but for electrification, this will be a challenge
    - We can add more offerings and measures as they are developed in Illinois
- Stipulation agreement
    - This is where IE electrification goals reside. Targeted $10 million annually on average. Not expecting to spend $10 mil this year. Forecasting a steep ramp up over the next 4 years for SF and MF
    - Electrification program will be limited to instances where combined measure installation will reduce bills
    - Stipulation outlines the process for calculating energy reductions
    - Support complete electrification when possible; eliminate fixed portion of gas bill for the customer
    - Integrate space heating electrification & weatherization to allow for the rightsizing of the HVAC load
    - Cover ancillary costs such as electrical panel upgrades – possible exception for multifamily property owners

    - Transition to an appropriate rate
    - Coordinate with stakeholders going forward
- ComEd launched a Working Group focused on development of EE electrification measures
    - Terminology – beneficial electrification is referring to transportation in IL. ComEd adopted energy efficient electrification (or triple E) to describe measures targeting buildings under the EE programs
    - Launched a working group to allow the pivot from legislative planning phase. We have the goals now pivoting to the program design and implementation phase
    - ComEd's five workstreams:
        - Income eligible, residential, C&I program delivery, facility assessments & outreach, and portfolio support
            - Each workstream has tasks, milestones and dates
            - Unique opportunity to implement a suite of measures cutting across portfolio
            - Need to stay aligned and coordinated – synchronization is key
    - Key amount of related work already underway:
        - Research and pilot initiatives
        - Evaluation coordination and engagement with Guidehouse
        - TRM measure development
        - Customer bill impacts methodology
        - Stakeholder engagement

Jim Fay (ComEd) shared guidance on workshop participation:

- A new market for ComEd. Tech and applications are largely new to the entire Northern IL market. Many solutions have not been proven in the marketplace – ComEd looking for creative insights needed to understand potential and where the uptick in the market is and how ComEd can pursue that opportunity.
- Consider in this discussion: many new measures and their performance and program design can be tested in the marketplace. If there's a new idea that you're not sure if it works, direct your comments and discussion that can help us pilot to prove out these ideas
- We know technology and solutions are new to business partners. If we need to provide necessary info, training on technology, or other support, ComEd would like participants' thoughts on necessary support
- We want to point out that adjustments to existing programs likely won't be fruitful. Want to emphasize there are new program channels that need to be identified and pursued to meet goals. New program delivery channels will be important
- Electrification solutions are expensive and involve significant upfront investment, it will be especially challenging for IE customers. Overall economics presents unique challenges in emphasizing this IE sector.
- Reminder: increasing incentives to meet goals is a limited approach here. Be creative; provide thoughts, insights and solutions that go well beyond increasing incentives.

Scott Smith (NYSERDA) presented on NYS Clean Heat:

- NY Governor Hochul's action plan includes 1 million electric homes/apartments by 2030, with another 1 million being electrification-ready
    - At least 800,000 of the 2 million homes must be low-to-moderate income
    - NYSERDA working with other state agency partners (NYSERDA handles all the income-eligible homes for NY)
- Low-income housing presents their own unique challenges for electrification
- NYS Clean Heat Program:
    - $454 million statewide heat pump incentive program led by the utilities

    - $230 million in market development initiatives to support the heat pump incentive program, led by NYSERDA
        - $31 million carve out for electrification of LMI customers
            - Includes research & analysis, pilots & demonstrations, short-term incentives, and customer education
    - 48% of all housing units in New York are LMI
    - Spending a lot of time working on consumer protections to keep costs from shifting to the customers – interplay with rent regulations
- Conducted qualitative research to identify four sets of barriers to electrification, which from a high level are categorized as technical barriers, knowledge barriers, policy/institutional barriers, and economic barriers
- Exploring opportunities that don't include incentivizing everything, including thermal as a service and community thermal energy networks
- Working on a LMI heat pump demonstration study
    - 430 single family homes
    - 30 multifamily buildings
    - Has demonstrated an appetite from LMI customers to electrify
    - NYSERDA fully subsidizing of heat pumps and other related measures for low-income customers. Partially subsidizing for moderate income and there has been less participation – demonstrates the difficulty of being able to meet electrification goals without subsidizing everything
    - Over 85% of homes required some make-ready work, including 17% requiring electrical panel upgrades
        - Required a certain efficiency performance baseline to be eligible for a heat pump
    - Most contractor business models can't accommodate energy efficiency plus heat pump work
    - Average costs across single family projects:
        - $20,000 for whole home air source heat pump
        - $8,000 for envelope improvements
        - $2,000 for panel upgrades when needed
        - Costs vary significantly between single family contractors with no real trend
    - Still learning and determining trends for multifamily projects
    - Single family electrification focused on delivered fuels and existing electric heating sources to safeguard against increased bills for homes who have existing natural gas heating

Nick Dirr (Association for Energy Affordability) presented on CA's Multifamily Income Eligible Weatherization

- AEA manages several types of multifamily electrification programs
- Buildings with existing AC easiest pathway to electrification in CA, replace with heat pump with same form factor
- Adoption rate of heat pumps for space heating outpacing water heating in CA
- CA state licensing board now allows C20 contractors (HVAC) to install unitary heat pump water heaters (previously had to be plumbers), curious to see if HVAC contractors build them into their business models
- At least 50% of MF buildings in CA have central water heating systems, instead on in-unit
- Takes a while for property owners to wrap their heads around central heat pump water heaters, but adoption is increasing
- Lack of a product for commercial heat pump clothes dryers
- CA focusing on electrification + energy efficiency
    - Reducing loads to make equipment smaller, easier, and cheaper (equipment and electrical infrastructure)

        - High performance envelope and ventilation systems for smaller heat pumps
        - Efficient plumbing fixtures and distribution systems
        - Smaller renewable energy systems to offset overall energy use
    - Key program features:
        - Similar best-practices for EE programs. Critical to do these things well, given other challenges of electrification programs
            - Streamlined & simple
            - Single point of contact/one-stop-shop
            - Flexible and adaptable (end up omitting several potential energy efficiency opportunities/solutions if programs get overly prescriptive)
            - Strong customer support and technical assistance
    - Program rebate structures:
        - Higher incentives for in-unit measures (forces the landlord to consider tenant spaces when looking at building level projects to navigate split incentive)
        - Balance higher incentives for greatest GHG/Energy savings with costs/complexity to do the work
        - Higher incentives for affordable MF – lack of capitol and ownership reserves
        - Layering incentives anywhere and everywhere possible (utility incentives, federal $, air regulation $), no single program can have the budget to support the scale of the work needed
    - Driving program participation
        - Persuasion and education – technical assistance for the property owner and contractors
            - Pair electrification measures with existing or new solar PV
            - Cleaner air, safety
            - Bill savings with fuel oil or propane
            - Equity
            - 2-for-1 when replacing A/C
            - Removal of gas meters (one utility to manage)
            - Buildings are always going to have electricity
            - Early adopters
            - Take advantage of higher rebates
            - Future regulations inevitable (more sticks in the future, lots of subsidies available now, get in now and hedge your bets)

Small Group Breakouts: refer to Miro boards

Single family: https://miro.com/app/board/uXjVO80rKmQ=/

Multifamily: https://miro.com/app/board/uXjVO7yd6QQ=/

Full group reconvened and reported out on Key Takeaways

- Kristin Kalaman, Single-family Group:
    - As we were reflecting on post-its, we collectively noted a lot of orange ones. Recognized a lot of work to be done in the pre-launch phase. Group noted that though those are orange stickies, many have a teal tinge to them. They need to be built on existing processes; contractor knowledge; calculating savings.
    - We had a good discussion on new ground regarding how customers will perceive this initiative. Customers generally welcome improvements we've made to their homes. Think there's a lot of space for customer education on operating equipment and fit for customers. Wondering what this should look like. For

contractors, they have strong thoughts on appropriate technologies. We need to bring diverse perspectives through a workgroup.
    - Talked about which customers to reach out to.
- Kara Jonas, Multifamily Group:
    - We discussed a pre-launch activity; touching base with equipment suppliers. They understand our goals and state of the supply chain.
    - We questioned who would do this? Rely on contractors or the program team, or combination of both?
    - Talked about the contractor network.
        - How do we want to survey existing networks to identify current opportunities and gaps?
        - Talked about needing to identify the existing, and next tier of contractors who are a good fit in the future. Need to train them up in tandem.
    - Talked about needing to identify good building types that are a good fit. Assessment may need to be tweaked for equipment chosen.
    - Talked about communicating bill impacts
        - A little tricky when building owner and tenant paying different parts of the bill.
        - Spoke about the types of contractors that would be needed and what that looks like. There could be lessons learned from other programs.
    - Spoke about the importance of customer education. Huge impact on savings is behavior. Consider education throughout tenant turnover
- Dave Hernandez, Multifamily Group
    - Mentioned that it's a good idea to get a network of contractors to provide insight and knowledge throughout planning and preparing the program.
    - Also discussed approach to community targeting.

Molly Graham and ComEd shared next steps:

- This was the ideation phase. In the next workshop, we will dig into the orange sticky notes. Consider what we didn't talk about today. The Miro board is still available for people to read and contribute to. Share thoughts or ideas on the next workshop with Molly via email.

Major Themes from Miro Boards:

- Multifamily:
    - Need for contractor certification and training
    - Need to figure out how to quantify bill impacts AND communicate those with the customer/building owner/tenant
    - Additional make ready funding likely needed
    - Ensuring suppliers/distributors are aware of the program to mitigate equipment shortages
    - Assessing capabilities and gaps of existing contractor network and recruiting additional contractors
    - Developing screening/eligibility criteria – can some predictive modeling for building types be created to help?
    - Determine set of measures that will allow for reduced energy usage – does solar need to be included to make the math work?
    - Additional training for maintenance staff needed on new equipment types
    - Create new data collection protocol for ALL energy assessments including information on electrical service, panel, and plug locations and potentially lifestyle questions to identify health & safety considerations

- Single Family:

- Contractor education
- Supply chain partnerships to train contractors and ensure equipment availability
- Identify strategic partnerships where electrification can positively influence health impacts for target populations – asthma patients? Seniors? Children? EJ communities? (this is more of a targeting criteria change)
    - Include lifestyle questions, as well as electrification data protocol, in energy assessment, more of a whole-home/whole-person approach (this is more of a data collection change)
- Establish bill savings calculation methodology
- Identify existing installers with measure-specific and fuel conversion experience/capabilities
- Develop criteria for eligible ideal customer, ex -renters and owners, existing home conditions, existing equipment & fuel source
- Develop tiered approach for electrifying in phases
- Customer measure-level benefits overview & training
- Post retrofit analysis on true bill impacts and energy performance (any increased level of monitoring or follow-up above and beyond traditional EE programs?)
- Develop relationships and outreach strategies with community groups