

**Illinois Energy Efficiency Stakeholder Advisory Group
Large Group Meeting – Day 1
Tuesday, June 16, 2020
10:30 am – 4:30 pm**

Teleconference Meeting

Attendee List and Meeting Notes

Meeting Materials – Tuesday, June 16 Meeting

- Meeting page: [Tuesday, June 16 Meeting](#)
- [Energy Efficiency Ideas Tracking Spreadsheet – Initial Utility Responses \(Excel\)](#)
- [Ameren Illinois Presentation on Market Effects](#)
- [Illinois Big Picture Evaluation Presentation \(Joint Presentation from Opinion Dynamics and Guidehouse\)](#)
- [TRC Non-Measure Level Inputs Spreadsheet \(All IL Utilities\)](#)
 - [ComEd Presentation: NEIs and Cost-Effectiveness](#)

Tuesday, June 16 Meeting Attendees (by webinar)

Celia Johnson, SAG Facilitator
Greg Ehrendreich, Midwest Energy Efficiency Alliance (MEEA) – Meeting Support
Alexis Allan, BRiO
Dean Alonis, Metropolitan Water Reclamation District
Jennifer Alvarado, Franklin Energy
Matt Armstrong, Ameren Illinois
Jean Ascoli, ComEd
Tyler Barron, Environmental Law & Policy Center
Bob Baumgartner, Leidos
Kathia Benitez, Franklin Energy
Jordan Berman-Cutler, ComEd
Shonda Biddle, Walker-Miller Energy Services
Nathan Bohne, Energy Resources Center, UIC
Janice Boman, Skill Demand
David Brightwell, ICC Staff
Kate Brown, Elevate Energy
Patrick Burns, Brightline Group
Ben Campbell, Energy Resources Center, UIC
James Carlton, People for Community Recovery
Lauren Casentini, Resource Innovations
Jane Colby, Apex Analytics
Salina Colon, CEDA
Andrew Cottrell, Applied Energy Group
Ryan Curry, 360 Energy Group
Mark Demonte, Whitt-Sturtevant, on behalf of Ameren IL
Kegan Daugherty, Resource Innovations
Erin Daughton, ComEd
Marty Davey, New Ecology
Larry Dawson, IL Association of Community Action Agencies
Leanne DeMar, Nicor Gas
Atticus Doman, Resource Innovations
K.C. Doyle, ComEd
Nick Dreher, MEEA
Julie Drennen, Center for Energy and Environment

Gabriel Duarte, CLEAResult
Allen Dusault, Franklin Energy
Deb Dynako, Slipstream
Wael El-Sharif, 360 Energy Group
Katherine Elmore, Community Investment Corp.
Lance Escue, Ameren Illinois
Jim Fay, ComEd
Jason Fegley, Ameren Illinois
Scott Fotre, CMC Energy
Paul Francisco, Indoor Climate Research & Training (U of Illinois)
Julia Friedman, Oracle
Mike Frischmann, Ecometric Consulting
Omy Garcia, Peoples Gas & North Shore Gas
Jenny George, Ameren Illinois
Jean Gibson, Peoples Gas & North Shore Gas
Stacy Gloss, Indoor Climate Research & Training (U of Illinois)
Laura Goldberg, NRDC
Jon Gordon, Enervee
Kevin Grabner, Guidehouse
Andrey Gribovich, DNV-GL
Mary Ellen Guest, Chicago Bungalow Association
Randy Gunn, Guidehouse
Vince Gutierrez, ComEd
Amir Haghighat, CLEAResult
Jan Harris, Guidehouse
Jim Heffron, Franklin Energy
Selenda Heise, BRiO
Dave Hernandez, ComEd
Travis Hinck, GDS Associates
Julie Hollensbe, ComEd
Nick Horras, Resource Innovations
Hannah Howard, Opinion Dynamics
Jim Jerozal, Nicor Gas
Amy Jewel, Elevate Energy
Kara Jonas, MEEA
Kristen Kalaman, Resource Innovations
Haley Keegan, Resource Innovations
Morgan Kelley, Resource Innovations
Mike King, Nicor Gas
Chester Kolodziej, Northern IL Summits and Expos
Larry Kotewa, Elevate Energy
Ryan Kroll, Michaels Energy
John Lavalley, Leidos
Bruce Liu, Nicor Gas
Molly Lunn, ComEd
Karen Lusson, National Consumer Law Center
Marlon McClinton, Utilivate
Adam McMurtrey, Exxon-Mobil
Brady McNall, DNV-GL
Rebecca McNish, ComEd
Nishant Mehta, Guidehouse
Mark Milby, ComEd
Cheryl Miller, Ameren Illinois
Abby Miner, IL Attorney General's Office
Zenia Montero, ICF
Bruce Montgomery

Jennifer Moore, Ameren Illinois
Jennifer Morris, ICC Staff
Sam Mueller, Nexant
Jackie Nagel, Nicor Gas
Chris Neme, Energy Futures Group, on behalf of NRDC
Rob Neumann, Guidehouse
Victoria Nielsen, Applied Energy Group
Lorelei Obermeyer, CLEAResult
Randy Opdyke, Nicor Gas
Antonia Ornelas, Elevate Energy
Briana Parker, Elevate Energy
Patricia Plympton, Guidehouse
Christina Pagnusat, Peoples Gas & North Shore Gas
Ashley Palladino, Resource Innovations
Ga-Young Park, U.S. EPA ENERGY STAR
Deb Perry, Ameren Illinois
Hanh Pham, Willdan Energy Solutions
Michael Pittman, Ameren Illinois
Jared Policicchio, City of Chicago
Reine Rambert, Harvard
Dara Reiff, Elevate Energy
Joe Reilly, Applied Energy Group
Alberto Rincon, Future Energy Enterprises
Zach Ross, Opinion Dynamics
Emma Salustro, ComEd
Marci Sanders, Resource Innovations
Anthony Santarelli, Smart Energy Design Assistance Center (SEDAC)
Elena Savona, Elevate Energy
Leah Scull, CLEAResult
Hardik Shah, Gas Technology Institute
Louise Sharrow, Elevate Energy
Kristol Simms, Ameren Illinois
Raman Singh, ICF
Jacob Stoll, ComEd
Mark Szczygiel, Nicor Gas
Rick Tonielli, ComEd
Taso Tsiganos, IL Attorney General's Office
Desiree Vasquez, Franklin Energy
Andy Vaughn, Ameren Illinois
Ted Weaver, First Tracks Consulting, on behalf of Nicor Gas
Shelita Wellmaker, Ameren Illinois
David Whittle, Leidos
Brittin Wood, Anura Energy
Nicholas Wood, Anura Energy
Ken Woolcutt, Ameren Illinois
Fred Wu, Aiqueous
Cate York, Citizens Utility Board
Angie Ziech-Malek, CLEAResult
Liz Zimmerly, ComEd
Brittany Zwicker, CLEAResult
Arvind Singh, DNV-GL
Chris Vaughn, Nicor Gas
Sara Wist, Cadmus Group

Opening & Introductions

Celia Johnson, SAG Facilitator

The purpose of the June 16 SAG meeting:

1. For utilities to provide an initial response to Energy Efficiency Idea proposals presented during the May 12 and June 3 SAG meetings.
2. To discuss market effects, raised during the Nov. 2019 SAG meeting on Cumulative Persisting Annual Savings (CPAS).
3. To discuss “big picture” energy efficiency evaluation.
4. To discuss Total Resource Cost test (TRC) non-measure level inputs.

Utility Responses to Energy Efficiency Ideas

- *Kristol Simms and Matt Armstrong, Ameren Illinois*
- *Molly Lunn, Jacob Stoll, and Mark Milby, ComEd*
- *Mike King, Nicor Gas*
- *Christina Pagnusat, Peoples Gas & North Shore Gas*

Idea: *Non-IQ MF Heat Pumps*

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Note: These are preliminary reactions and feedback; subject to change and discussion may be needed. Currently working on research project to id customers using electric resistance heat. Potential study will provide more information. Based on those two pieces will consider this idea as the Plan is developed. No further follow up required.
- **ComEd:** Already offer incentives on heat pumps, and recent pilot still wrapping up on CCHPs. Will use outcomes from that on future program design. No follow up required.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A: No questions

Idea: *Non-IQ SF Home Retrofits*

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Pilot in progress offering building envelope and mechanical upgrades as in this concept. Potential study will include some of these measures. As results come in, will think how to incorporate.
- **ComEd:** We did offer something like this in past, but sunset the offering. If gas utilities want to pursue, will talk about it, but would have to do further analysis on cost-effectiveness and scale – it wasn't cost-effective and we had concerns about uptake.
- **Nicor Gas:** Need to evaluate cost of approach and delivery compared to how we deliver other programs. Willing to look at this and think about options.
- **PG/NSG:** Largely in same position as Nicor and share same thoughts. Want to look more but have to think about how it impacts other program balance.

Q&A:

[Chris Neme] Molly, do you mean not cost-effective or not enough yield per dollar?

[Molly Lunn]: Both, we can share the TRC results.

[Chris Neme]: Nicor, can you talk more about the approaches...how are Nicor, or others, thinking about assessing how this idea fits in with overarching approach?

[Mike King]: This delivery method is more costly than our approach right now (yes, more savings) but have to think about customer touch points as well. Large time spent in each home. Customer experience and savings and cost to this method.

[Ted Weaver] Nicor's approach really isn't doing assessments to drive projects, projects are driven directly by contractors. Looking at CT approach and cost per therm delivered and we think we have a better approach that is cheaper and better for customers. You had proposed 20% of budget and we would have to look at that, would have to come out of something else and that's portfolio balancing.

[Chris Neme] Appreciate that this would require shifting money from other initiatives and would mean lower levels of first year savings because it is challenging cost-wise compared to other markets. But less likely to be procured on their own.

[Ted Weaver] Not just less therms, but other programs impacted.

[Chris Neme] On the approach/program design issue, my sense is that there has been low participation in previous years. If you can design program to get participation, we're all ears.

[Ted Weaver]: Happy to share delivery model and approaches.

Idea: All Electric Residential New Construction

Proposed by: NRDC

Utility Responses

- **Ameren IL:** This is one of a handful of electrification ideas; approach will be consistent for us on most of them because we are dual fuel. Looking at the best interest of the customer and that applies here. There may be more information required on some components.
- **ComEd:** Already have a pilot on this; planning to see what comes from results to determine how to move forward in plan. Looking into it right now.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Chris Neme] Happy to discuss cost-effectiveness; wouldn't necessarily characterize this as fuel switching.

Idea: Advanced Power Strips

Proposed by: Environmental Law & Policy Center

Utility Responses

- **Ameren IL:** Current offering matches what is put forth here.
- **ComEd:** Already offer rebates on power strips and are part of direct install (DI) programs. In terms of scale we have concerns because of evaluations on power strips like in-service rates, etc. Can't commit to the level at which this is proposed. Will determine what is feasible in portfolio.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Tyler Barron] Happy to talk more through this with ComEd if needed.

Idea: Duel Fuel Heat Pumps for Wx Programs (IQ and Non-IQ)

Proposed by: Indoor Climate Research & Training

Utility Responses

- **Ameren IL:** Similar to previous, we support best interests of our customers. We think more information is required. Putting it into the "blue" potential bucket for a pilot through Breakthrough Equipment and Devices but those resources are limited.
- **ComEd:** Related to different degrees of beneficial electrification. For those already not in our R&D pipeline, we're open to considering if it is submitted into our R&D process; will follow up to get it into that process.
- **Nicor Gas:** Prelim review – we don't believe it is best use of EE funds to install electric heat pumps.
- **PG/NSG:** We also have concerns on the fuel switching element.

Q&A:

[Paul Francisco] No questions to take time on today; will have team explore with Ameren and ComEd.

Idea: Solar Powered Split System Heat Pump Pilot

Proposed by: Indoor Climate Research & Training

Utility Responses

- **Ameren IL:** Needs more development and research; put in our potential for a project category.
- **ComEd:** Again, this is one where we would be happy to consider through R&D process but needs more research to determine potential for EE.

- **Nicor:** N/A
- **PG/NSG:** N/A

Q&A:

[Paul Francisco] As previous, happy to have further offline discussion. When developing, one manufacturer had a solar-ready unit but low demand and they stopped producing. Curious about potential for connection with manufacturers to figure out whether it could be brought back into product line – could manufacturers be part of discussion with utilities.

[Molly Lunn] Open to conversations with manufacturers but want to understand more about the potential for portfolio first.

Idea: On Bill Financing

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** --
- **ComEd:** [Joint response] All stakeholders know that we do have an active OBF program, recently relaunched. We are all interested working with stakeholders to improve and further develop the OBF offering. ComEd is interested in examples from other utility OBF programs. In general, we all understand the recommendations proposed and want to improve the program.
- **Nicor Gas:** --
- **PG/NSG:** --

Q&A:

[Cate York] I wasn't really looking at alternative programs in other states yet, but there are lots of examples to draw on. I was looking at the parameters of the law that created it and what isn't in current offering and better integration within the utility portfolios. Appreciate the willingness to discuss further. Would be great to have a more detailed discussion at a future SAG meeting.

[Chris Neme] In terms of examples of successful OBF, on small business direct install look at Connecticut.

Next step: OBF will be scheduled for future discussion at SAG (anticipated 2021).

Idea: Remote Monitoring and Optimization Program (ReMO)

Proposed by: Elevate Energy and New Ecology

Utility Responses

- **Ameren IL:** Concerned with savings potential given number of central heating domestic hot water systems in our service territory; potential study could provide more info.
- **ComEd:** Willing to look at this idea, not clear if there is much electric savings, happy to consider in R&D process.

- **Nicor Gas:** Similar to Molly, would have to go through our emerging technology program. Interested to see what is the technology and what it can do.
- **PG/NSG:** We think there may be some potential but not clear how it is different from some of the optimization offerings we already have.

Q&A:

[Marty Davey] Only question is across the board; we have loads of data that we can discuss; not clear from Boston market what the next step is to talk individually or collectively about what we know or research projects. What should we do as a next step?

[Mike King] Under our emerging tech program we can evaluate it now through application process on our website. That's our next step suggestion.

Idea: Virtually Assisted Self Installations

Proposed by: Google

Utility Responses

- **Ameren IL:** [Joint Response] We all spoke to this with the program shifts with COVID-19. Each utility is in a little different place in terms of deployment of virtual technologies. Depending on those outcomes from that, we will consider how we move forward as we develop the next plan.
- **ComEd:** --
- **Nicor Gas:** --
- **PG/NSG:** --

Q&A:

[Celia Johnson] Tyson reached out to let me know he is glad utilities are already working on virtually assisted options.

Idea: Next Generation Refrigerators

Proposed by: U.S. EPA ENERGY STAR

Utility Responses

- **Ameren IL:** --
- **ComEd:** [Joint Response with Ameren IL] Definitely interested in concept and already started to take next steps. Spoke with ENERGY STAR staff and working on approaches. Asked Midwest MT Collaborative to look at it as a regional effort. We're very interested and just have to figure out what a program looks like.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A: [no questions]

Idea: Commercial Tenant Space EE Initiative

Proposed by: U.S. EPA ENERGY STAR

Utility Responses

- **Ameren IL:** Has potential as a project; look forward to more research and digging into concept.
- **ComEd:** We're interested in considering it. We leverage the Energy Star recognition programs and are willing to look more at this one.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Zenia Montero] Any questions, please feel free to email me. Looking forward to talking about these initiatives.

Idea: Joint Program Implementation for Nonprofit Customers

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** Seems like a twist on current program design. Additional benefits from the structure would need to be quantified, would help determine whether we benefit from this design.
- **ComEd:** Currently offering something like this and will be looking over next year to determine whether to include in next Plan. Agree potential targeted outreach and design has been valuable.
- **Nicor Gas:** We already include outreach to nonprofits sector within business/small business programs. We tried a similar approach to what is proposed in PY1-PY2 and it wasn't as successful as we anticipated. Perhaps we can modify our current offering to get some more targeting.
- **PG/NSG:** We are also currently serving nonprofits through small business and other incentives. Looking at participation data to see if this is a gap for us. Based on that analysis we will understand our path forward.

Q&A:

[Dara Reiff] Some data and research on the market could help the utilities understand this more.

Idea: Water EE Measures

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** We have concerns with cost-effectiveness of measures and will need TRM addition. No further info needed at this time.
- **ComEd:** We partnered with Elevate on original TRM measure; potential for R&D study to find something cost-effective that can work in program context. Will continue to explore. Have research projects currently underway.

- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Larry Kotewa] Cost effectiveness point is definitely the factor that it isn't clear how we get over but want to continue working on it.

[Laura Goldberg] Are some of these water measures in TRM already?

[Mark Milby] Secondary savings factor for energy associated with water is in as an adder on water-relevant measures. There are also some cold water measures in the TRM as of this year, but have had issues with assembling a cost effective program.

Idea: Field Adjustable Streetlights

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** Additional research required to determine how to capture the final setting to claim savings.
- **ComEd:** We have looked at these before, and we see some challenges to be able to implement what is proposed here. Ability to meter the savings appropriately, rate perspective.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Larry Kotewa] What's been identified is the stumbling block – how to document the final settings. Would like to work to see if there is a way around that challenge.

Idea: Municipal Ambassador Program

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** We have a public sector energy advisor in place with marketing staff that offer SEM to municipalities. More info required to determine additional savings from this program design as pitched.
- **ComEd:** We have some existing outreach already to municipal customers and happy to keep doing that but think this is an interesting approach we can certainly consider. Trying to do an SEM cohort as well.
- **Nicor Gas:** We have some community affair representatives that we work with, and ICs that work with communities and public sector. Have an SEM cohort. Other ICs listed for all state projects led by procurement department for state. Lots of things already doing in this sector and the commercial space. Open to more information and discussion about how to better outreach to this sector.

- **PG/NSG:** Looks similar or has major components with SEM program. We just started doing that last couple of years. Interested but want to look at how it would work with current model/avoid overlap.

Q&A: [no questions]

Idea: Warming/Cooling Centers

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** Already serve facilities through existing programs. Can consider it as an idea; no further information needed.
- **ComEd:** Similar to Ameren, see this an outreach tactic for existing programs that already serve these customers. Can look at targeting more.
- **Nicor Gas:** Currently service these with outreach and incentives. Additional questions on how to define some budgets and scope. Have existing programs and incentives out there. Just need to talk a little more.
- **PG/NSG:** We are interested in this idea. Want to have conversations about how to fit in with what we are already planning.

Q&A:

[Larry Kotewa] Thank you for recognizing this need. May be more of a targeting/segmenting than a new program. Looking forward to talking.

Idea: C&I Networked Lighting Controls

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Have included measures in potential study, looking forward to results of ComEd's work. No further input needed at this time.
- **ComEd:** [Joint Response] Currently offering incentives for lighting controls through standard and small biz; getting significant savings. Question to extent of how much we can scale up will come from the economics in planning process and the alternatives to that budget. Have to see how we could scale up over the summer.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Chris Neme] What does the current offering for ComEd look like?

[Jim Fay] Incentives for controls in TRM; incentive for metered savings associated with lighting controls. Most of the savings come from basic control options of op sensors and daylight sensors but some savings beyond those basic controls as well.

[Chris Neme] The nature of our proposal is a little different. National uptake of occupancy sensors has not been great. Networked lighting controls have non-energy benefits that are beyond the basic op/daylight sensors. Networked

controls are far better way to go in long run. Regarding custom incentives based on metered reductions, that's a good first step but to take it to scale, it should go into a prescriptive/quasi-prescriptive. That's key to the market traction and would love to talk more.

[Andre Gribovich] Implementer for standard program – offering a two-method approach and have spoken to some of the examples you presented. Even Focus on Energy folks were more interested in our implementation rather than their \$/sq. ft. We offer a higher incentive up front for networked controls already as well as additional piece to capture data. Not only a custom approach, a two-tier approach to get the incentive and capture data where we can.

[Chris Neme] Sounds like there is a quasi-prescriptive incentive along with the performance incentive. That's great. Have you also found a need to engage with lighting vendors to train on how to sell/install?

[Mark Milby] We have a market survey underway right now with participants, vendors, supply chain to inform planning process and future activities. Trying to identify barriers and that the market survey will have some clear ideas on contractor engagement. Hope to have data soon.

[Chris Neme] Sounds consistent with what we were hoping. Seems like a way to overcome barriers to greater adoption is to get greater understanding among customers about the opportunity to take advantage of NEBs, are you working on any case studies, etc?

[Mark Milby] Not formal case studies, could look at that more. Researching NEBs as an adoption driver for promoting. Team is looking at and will take it back for consideration on how to formalize more.

[Chris Neme] If you could document with a grocery/retail enterprise some analysis of foot traffic or sales or whatever – get the word out through industry associations. Could help drive participation. Would like to talk more about what could be done.

Idea: Variable Refrigerant Flow

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Already offer through custom program. Needs to be included in TRM. Is in potential study and may be in next plan.
- **ComEd:** Area that we agree is big opportunity. VRF systems in new construction projects and custom. Probably a good area to focus on expanding and targeting. Team is working on research project and this proposal will help develop SOW and will work with Chris to develop.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A: [no questions]

Idea: Midstream-Upstream Approaches

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Working towards investigating pilot for a couple of measures – HP WH and HVAC using a midstream approach. Modeling out in potential study comparing downstream and midstream. Don't need further input on this.
- **ComEd:** For the mid-up approaches, have a variety of offers currently in portfolio. Big area of focus in next plan. Looking at what other measures we can move up to up-mid. Piloting currently on some measures in 2020. Looking closely at others that fit that mold. Definitely interested in continuing to review for next Plan.
- **Nicor Gas:** Currently doing a commercial food service midstream. Looking at other areas to see if there is a need/benefit and the funding associated with.
- **PG/NSG:** Also participating in commercial food service pilot through R&D.

Q&A:

[Chris Neme] Lots of good discussion at the recent Midstream-Upstream Working Group meeting, appreciate the positivity. Looking forward to fine-tuning.

Idea: Leveraging Other Initiatives

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Currently working on a couple of concepts that leverage funding. Have talked with Chris about NWA as an example. Looking forward to continued discussion on how to leverage funding sources.
- **ComEd:** Interested in leveraging other initiatives and funding where possible. Interested in continuing to discuss and evaluate opportunities.
- **Nicor Gas:** Same; always interested in finding ways to help customers take advantage. Pilot is leveraging other dollars to improve residential retrofits. See if we can use it elsewhere.
- **PG/NSG:** Something that we are constantly looking to do with customers and other organizations and will continue to do in the future.

Q&A:

[Chris Neme] Nicor can you discuss the pilot?

[Mike King] Eco-network approach targeting communities, working with ambassador. Wx approach will use hospital funds and other available funds to remove barriers through a healthy homes approach. Everyone within the community that we can work with to help a resident. Looking to train individuals through BPI courses and work with diverse contractors within program.

[Chris Neme] Are you looking at things like IQ customers who are on bill payment schedules or have LIHEAP support or customers getting solar rebates – operations outside of EE operations. Are you leveraging communications with customers with other parts of your utility to get integrated approaches?

[Mike King] Yes, working with other departments to drive into EE programs.

[Jacob Stoll] ComEd is also working on this. Will be some more discussion tomorrow. Similarly trying to bridge gap and coordinate.

[Cate York] On the Nicor pilot – is there information, details and reporting about those efforts? Only info I have is from presentation in November.

[Mike King] We can provide additional information.

Idea: Energy Efficient Hydraulic Oil & Gear Oil

Proposed by: Exxon-Mobil

Utility Responses

- **Ameren IL:** We have completed a few projects under custom and intend to include this in next portfolio.
- **ComEd:** We are interested and will follow this measure in the TRM process and review workpapers. We see potential here for inclusion in programs.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A: [no questions]

Idea: Advanced Power Strips for Medium to Large Commercial Office Buildings

Proposed by: Skill Demand

Utility Responses

- **Ameren IL:** This idea needs additions to TRM. Have included this measure in potential study, but need additional research. No further input required at this time.
- **ComEd:** We received a couple of proposals through emerging tech process for advanced commercial space power strips, including this one. Will review through our R&D process.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Janice Boman] Thank you for looking at this idea. Understand your question about looking at this in the TRM. That's one of the purposes for putting this through R&D or a pilot is to inform the TRM. Happy to follow up with more information if needed.

Idea: Centralized Resources

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** --
- **ComEd:** --
- **Nicor Gas:** [Joint Response] The utilities believe this is not an appropriate idea. Many of the ICs have proprietary tools. Using a statewide tool would be duplicative. From a policy perspective, the law supports the implementation on a utility territory approach. Would be a lot of work to get consensus on approach and tools from all the utilities.
- **PG/NSG:** --

Q&A: [no questions]

Idea: Conflict of Interest Rule

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** --
- **ComEd:** --
- **Nicor Gas:** --
- **PG/NSG:** [Joint Response] This proposed policy would unnecessarily limit some of the successful teaming arrangements we have seen over the years. We do not see this as a problem in our current portfolios that needs to be addressed.

Q&A:

[Cate York] Is there a way that the implementation contractor structures are identified in any public information & utility reporting, over the question of whether this is a problem?

[Christina Pagnusat] Information is certainly available. I'm not sure reports go into the detail on all of the contracts or subcontracts, but we can discuss.

[Kristol Simms] We provided a lot of this information in the ICC workshop process last year, hasn't changed much. Will check our quarterly reports. We did include some info last year in response to a request.

[Cate York] I recall information was available in an evaluation report from Ameren. Wanted to make a suggestion that this could be included in utility reporting across the board.

[Amy Jewel] Thanks for all the thoughtful responses and review of this idea. Supports the discussion about possibility of some reporting in the future.

[Karen Lussion] Question for utilities – I have heard subcontractors say that they have been in a position where they are providing information to potential competitors and that this is a legitimate problem – do the utilities ever sit down with the subcontractors and have the frank conversation with them? They

don't want to lose business and rock the boat by speaking up but problems may exist.

[Christina Pagnusat] I am aware of agreements between primes and subs on protecting intellectual property, that is very common.

[Kristol Simms] We would very much like to hear any specific concerns from any of our subs. We try to have discussions with all of our subs, especially the big programs. Have recently had 1:1 with all subcontractors about ideas and concepts to improve portfolio. We haven't seen the issue yet on our own and want to address if there is a problem. We are not far apart but don't agree with what has been proposed here necessarily.

[Molly Lunn] For ComEd, agree with Kristol. We are open to discussing concerns, but the proposal on the table is problematic – these arrangements can be to the benefit of a program. Open to talking to you and any subs about concerns they have.

[Laura Goldberg] There is some relationship between this proposal and the proposal we spoke to on the IQ side on some layers of contracting in IQ programs. Understand what utilities are saying about this specific proposal. We should have future discussion on decreasing layers and making sure that pairings are to everyone's benefits. Especially BIPOC lead organizations that need the opportunity to flourish.

[Chris Neme] Appreciate hearing the utility perspective. As a hard and fast rule, this is maybe not quite the right mechanism. No specifics except in 1:1 conversations, but there is potential for large firms in "positions of power" taking parts of the work that they are in a better position to argue for even if they aren't the best for it and the subs are in no position to argue. Potential concern to grapple with.

[Cate York] Agree with Chris, and also while this specific idea is not available as a course of action, there still remains the issue. How to best consolidate some of these processes, example QA/QC process by multiple contractors, different contractors causing problems for customer. Future discussions on streamlining would be helpful.

[Molly Lunn] It's a family of issues but distinct. Differences in how we contract and how we designate tasks.

Idea: Energy Communities

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** Ameren uses a personalized customer journey for C&I and thermostat and marketplace offerings on residential side. Haven't seen market confusion.
- **ComEd:** Loyalty program is interesting. Have other initiatives that drive these ideas already. Have done journey mapping, etc. extensively.

- **Nicor Gas:** Marketing strategy – use a predictive analytic tool to target customers who are likely to participate. Big into the customer journey and touchpoints to get them into EE programs. With the limited number of offerings, don't think this model is the best tool to use. Some of the recommendations are already on our site. Think we're at best practice now but interested in learning more to help our customers.
- **PG/NSG:** We are regularly evaluating the customer journey to improve experience. We're interested and will reach out.

Q&A: [no questions]

Idea: Loyalty Program

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** Seems to be based on behavior modification – short measure life and we're focusing on long life measures from CPAS.
- **ComEd:** Okay to evaluate the idea as a potential R&D opportunity. Have tried a few initiatives to date that touched this. May be something there. Team will reach out.
- **Nicor Gas:** Limited offerings available for gas customers – don't feel like this would be the best fit. Similar program designs in the past didn't have success and participation.
- **PG/NSG:** We have some questions and will reach out.

Q&A: [no questions]

Idea: Tiered Incentive Approach for MF

Proposed by: Elevate Energy

Utility Responses

- **Ameren IL:** View this as a delivery rather than a standalone program. Will weigh impacts in program modeling with incentives suggested here with the others being offered. No need further information needed at this time.
- **ComEd:** Similar response to Ameren's. Will need to evaluate and model against other areas of portfolio.
- **Nicor Gas:** Very similar as well. We have a suite for MF customers already as well as new central plant operations program with higher incentives. Current design provides best solution for our MF buildings and owners, we think.
- **PG/NSG:** In line with other utilities. Some questions on how it would fit in our portfolio and budget. We may be interested if we can make it work, but will have to go through modeling.

Q&A:

[Chris Neme] The utility responses are generally that they need to think about additional incentives taking money from other parts of portfolio; subtext seems to be that everything is working just fine. Seems that purposes as proposed was to drive more MF beyond just DI into more comprehensive treatment of buildings, and to get back to building owners to take the next step. Do we have data about the extent to which MF building owners are following through on more comprehensive recommendations to support the notion that you are

getting more uptake? Shouldn't we be trying to do something to enhance the uptake?

[Ted Weaver] For Nicor, getting comprehensive projects is a challenge (like it is for everyone in the country). But tiered incentives don't work – think about the customer journey. You can get DI and etc. for free, then everything else is prescriptive and custom. There is a structure. Open to suggestions but don't see how this tool fits with what we have.

[Chris Neme] Most important thing is how we get more comprehensive projects. If something other than tiered incentive approach, fine with that too. Want to have that conversation and know from program data how often some of the more major measures are not being followed through on. To think about alternative program design.

[Laura Goldberg] This is an approach we have seen other utilities take. Xcel/Centerpoint in MN has this. Tiered to level of savings, not measure specific. Tiers go up with savings. Initial challenges because the initial level was set too high. But this couples well with an approach that is comprehensive. Rather than the piecemeal prescriptive and custom, this would incentivize to package it all at once.

[Molly Lunn] We have the same feeling Nicor has. We want to see more comprehensive projects. It's an issue with the tier. On Income Eligible it is already one-stop shop with a single point of contact for in unit and common area and comprehensive measures. Not sure how you would tier incentives for just the deeper measures – providing the free DI and common area is how we get participation. We're not opposed to talking but don't think tiers make sense in our model.

[Laura Goldberg] The tiered idea is probably for market rate specifically [not income eligible]. If there isn't uptake this is a good strategy to consider piloting.

[Cate York] On the question over data, is that something that can the utilities point to anything publicly available about conversion rates or is there a conversation we can have about that reporting?

Follow-up discussion to be scheduled at SAG on multi-family considerations, including % of comprehensive project participation for current multi-family programs.

Idea: Website

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** Not specific measure or program, will consider ideas pitched in this as we move forward with implementation.
- **ComEd:** Appreciate the suggestions and recommendations and our teams are working on identifying some of this. Are working on connecting the dots.

- **Nicor Gas:** We reviewed this item by item. Most we are already doing but it depends on what you are looking for. There are EE links on bill payment pages and throughout site. Corporate communications organization owns the site, really, so we have to do our best to get EE information on all the pages we can. Green button doesn't apply. Storytelling strategies, implemented through community blog page with stories about savings, how to leverage technology. Can add some links to rebate pages that direct out to different blogs but don't want to make that section of the site too heavy with content – customers want to get right to the rebate application and eligibility requirements. Organization to eligibility we did by design on the site. EE education, the tips are available throughout our site not just the energy savings page. Including the blog mentioned earlier and a resources section with case studies, calculators, and off-links. Interactive maps are a good idea but not sure the investment would justify the engagement we would get out of it.
- **PG/NSG:** We're currently revamping our website. Working to connect the EE resources for customers. Incorporate those eligibility into "click here" buttons. Will follow up as we move forward with that to make sure we're touching all those points.

Q&A:

[Cate York] This does apply to marketing; wanted to use this as an opportunity to discuss how customers understand the programs. Residential vs business is not necessarily the full segmentation that could be available. Not clear what is available for Nicor as a rental customer with a separate account – not directly stated. Those kinds of details are in this proposal. Those little things add up to what people are actually understanding about the programs and what is available to them.

Idea: Utility Coordination

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** We have a partnership with Nicor in a pilot and continuing to explore other areas within service territory where fuels are provided by different entities. Will continue to explore offerings. Important in those areas.
- **ComEd:** Same for ComEd. Partner on a number of programs with Nicor and Peoples Gas/North Shore Gas. Definitely interested in keeping this top of mind.
- **Nicor Gas:** As has been said. Partnerships on IQ offerings and interested in continuing to provide those.
- **PG/NSG:** N/A

Q&A:

[Karen Lusson] Mike, how is IQ Weatherization coordination with ComEd going?

[Mike King] Still working with ComEd on some of the offerings we want to collaborate with. We would love to partner with contractor channels and kits and waiting on responses from ComEd.

[Molly Lunn] In terms of channels we are offering programs through, we're committed through IHWAP and Elevate for now. We're not interested in adding a third implementer at this time. Moving into next plan, we want to be as coordinated as possible. This is a good opportunity for us to find a path forward.

[Mike King] Agreed.

[Cate York] This highlights why considering implementation at this stage is relevant. Figure out these coordination issues before execution of the plan so things can move along efficiently.

[Karen Lusson] The Commission encouraged joint programs years ago, this should be a given.

[Laura Goldberg] Further discussion on how to share contractors in overlapping territories would be useful.

Idea: Renter Resources

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** Appreciate the identification of hurdles. Will consider ideas as we go forward.
- **ComEd:** Some renters eligible for some of our programs. Like and appreciate these concepts. Will be thinking about in next plan.
- **Nicor Gas:** Same. Additional information for renters will go on site. Renters also working through MF and market rate. More info will be available on site.
- **PG/NSG:** Also looking at ways to expand what we are doing for renters in next plan.

Q&A: [no questions]

Idea: Community Engagement

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** [Joint Response] We all value our community partnership engagement and all continue to deepen and expand. The outreach calendar in concept – some of us already offering in one or more ways. For the most part, we feel we are already there. Understand further development is always there.
- **ComEd:** --
- **Nicor Gas:** --
- **PG/NSG:** --

Q&A:

[Cate York] Can the utilities provide information on those calendars that are available if they are public – I haven't been personally able to navigate to those. Some components of this idea I haven't seen specifically addressed but we can have future conversations.

Idea: Demand Response

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** Will consider marketing DR program to customers already interacting on EE. Don't need any further information on this concept at this time.
- **ComEd:** Interested in cross-promoting all our programs wherever we can. Have marketed DR and pricing to EE participants. Continue to sync up those areas.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Cate York] It's clear that ComEd RTS found that marketing to peak time savings participants was pretty significant effect in drawing participation. Cross promotion will be very helpful to drive these programs.

[Jacob Stoll] We are incentivizing with thermostat to enroll in power smart pricing.

Idea: Heat Pump Performance Training

Proposed by: Indoor Climate Research & Training

Utility Responses

- **Ameren IL:** Not a standalone program. Could fit with delivery. As we go forward, we will consider. No further input, seems clear from info provided.
- **ComEd:** Nothing more to add on Matt's comment. If we see an increase in Heat Pump growth, we can consider training. Will be in touch with submitter.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A: [no questions]

Idea: Training and Education

Proposed by: Citizens Utility Board

Utility Responses

- **Ameren IL:** Contractors are aware of offerings and work toward engagement, but as we go through design and delivery, we will see how we can enhance.
- **ComEd:** We have a variety of training opportunities for contractors and providers, don't expect that will wane in the next plan. Example of home energy advisory program training and curriculum. Interested in continuing to look at how to do it in income eligible space where we are less connected to the subcontractors.
- **Nicor Gas:** We provide a lot information to our trade allies and assessors about all our offerings. Extensive list of materials, outreach team, etc. Feel we have this pretty well covered.
- **PG/NSG:** Similarly, we offer training in person and via webinars. Have trade ally portal with information and resources and updates. Planning to continue into next plan.

Q&A:

[Omy Garcia] We offer a summit for the trade allies to learn about programs and be ready for customer questions. Portal we are creating now will have even more information.

[Cate York] Is there information available on the training processes? Any public reports on when they took place, who was trained, what was included? Could it be reported on?

[Nicor Gas] Nicor could provide information on all of that

[ComEd] ComEd could report on that with help from marketing team

[PG-NSG] We could share, not publicly available but could share

[Ameren IL] Same. Not public right now but could share.

Idea: Equity Hiring

Proposed by: NCLC; NRDC; Blacks in Green

Utility Responses

- **Ameren IL:** Concept aligns with our NDI program, which we believe is an important component of portfolio. Looking for ways to develop the workforce and employ those vendors. We report quarterly and through SAG the successes in the ways we work toward equity and development of local diverse workforce.
- **ComEd:** We have also presented multiple times and will be happy to continue providing that information. We have and can continue to share information about contractors as we have done previously.
- **Nicor Gas:** We have many initiatives to work with diverse contractors. We encourage diverse contractors to participate. Working with Urban Efficiency Group with contractors and employees for IQ and market rate space.
- **PG/NSG:** Also have diverse contractor requirements across portfolio. Open to further discussion about our portfolio.

Q&A:

Next steps: SAG plans to discuss equity hiring later this summer (anticipated in late August).

Idea: Statewide IL State Agency Facilities Program

Proposed by: Smart Energy Design Assistance Center (SEDAC)

Utility Responses

- **Ameren IL:** --
- **ComEd:** [Joint Response] We feel the proposal here was a solution in search of a problem. When wrapping up with DCEO we thought there would need to be a focused need to continue on public sector to get participation. What we have seen in our existing programs, we have hit public sector customers very well. We have had to make adjustments and outreach to public sector customers, some tailored initiatives. We know

it is going well from the data and don't see another program necessary. There is less participation from state facilities and we can target outreach rather than a new program.

- **Nicor Gas:** --
- **PG/NSG:** --

Q&A: [no questions]

Idea: Condo PTAC/PTHP Pilot Conversion

Proposed by: Energy Resources Center, UIC

Utility Responses

- **Ameren IL:** Could be considered and explore results from other utilities to look at what concepts we could do as pilots.
- **ComEd:** Already part of our standard program incentives. Additional outreach and awareness might be beneficial. ERC has submitted this idea already through R&D. Will continue to work with them. Potentially in mid-stream roadmap for next plan as well.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Chris Neme] Is it a case where it is in portfolio as a time of replacement measure?

[Mark Milby] Yes, as both. Most popular in customer segments around lodging, hotels, condominiums.

[Chris Neme] There are a couple of important elements of this proposal. One of which is that if you offer a rebate to cover the incremental cost for a high efficiency system, may be missing opportunity to drive early replacement participation where pushing it could make sense for buildings with 100s at once with lower transaction costs. Not sure if program is set up to do that. Another part, market transformation element to this idea. Missed opportunities possible with extreme cold temperature systems. Elements to this proposal that aren't really what you are doing yet. Think about taking what currently doing, if my intuition is right, and expand it a little.

[Mark Milby] Agreed. Could be more blue than green here. It's in our program but the proposal talks about some interesting things. Contractor training, condo association outreach. Will need to see if MT is the strategy or a midstream approach. Part of our roadmap. Will be exploring this issue more. Acknowledge that it is likely underutilized program. Will look at technology in next TRM cycle.

[Chris Neme] Don't necessarily mean "MT" capitalized as a program but may be value in trying to do some cross-state collaboration to engage with manufacturers to get more of that on the market.

[Mark Milby] We're using "market adoption" now that "MT" has become a capital letter thing. Will evaluate that with program design.

[Nate Bohne] Echo Chris's sentiment and approach. That's what we're thinking as well. Leverage relationships with other entities to push the technology forward. About existing incentives – understanding is that the PTHC incentive is under small business and not sure how that would work with condos. Clarifying questions about technology and offerings for condo instance.

[Mark Milby] Happy to follow up with program managers and what is in our programs.

Idea: All Electric Retrofit Pilot

Proposed by: Indoor Climate Research & Training

Utility Responses

- **Ameren IL:** Given that it is an electrification retrofit proposal, as a dual fuel utility have to consider this more deeply and look to the best interest of the customer. More CBA required.
- **ComEd:** Electrification proposals will be treated as R&D process and will be in touch with submitters.
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Paul Francisco] Our group is not proposing major electrification approach. There are times when for some residents that this all electric approach is beneficial. Recognize that some want to go that route. How do we do it in the best way. Area where is most beneficial would be higher CBA in favor for propane heating residents. Encourage that to be part of considerations. Look forward to talking further.

Idea: Smart Meter Data

Proposed by: Indoor Climate Research & Training

Utility Responses

- **Ameren IL:** [Joint Response with ComEd] Use of AMI data is definitely a potential for pilots and R&D, will be more discussion as we go forward.
- **ComEd:** --
- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Paul Francisco] Agree that this is R&D and not something for portfolio. Look forward to discussion.

Idea: Municipal Building Performance Standards

Proposed by: NRDC

Utility Responses

- **Ameren IL:** We have talked in depth with Chris. Seems like a long-term process and project. More research and information needed.
- **ComEd:** Interested in idea and have a research project underway. Exploring code advancement concepts, this is part of that research project. Research project is joint with Nicor and Peoples Gas/North Shore Gas.
- **Nicor Gas:** Interested in this one, have co-compliance and stretch code. Considering the recommendations and looking at this.
- **PG/NSG:** No additional comments.

Q&A:

[Chris Neme] Thanks for the discussion. Remind me about research – is part of it to find municipalities to do outreach?

[Mark Milby] Yes. Though this is a sensitive time to do outreach. Will be working with Metropolitan Mayors Caucus and others to help identify municipalities that would want to discuss this.

[Chris Neme] Where MMC is with climate goals and focus on reduced building emissions, I think this is an important point of outreach. Glad to hear you will be talking to them. To the extent that you are reaching out to N. IL communities, wondering whether there are any aspects of the research that might make sense to engage Ameren as well where it isn't geographical.

[Kristol Simms] Maybe we can follow up on this after the call. Is there a general prohibition on adopting standards higher than statewide?

[Chris Neme] Correct as new residential construction; most cannot adopt more stringent codes. This idea isn't about new construction codes, this is about existing building performance standards so I don't think that provision of statute would apply here.

[Kristol Simms] We need more information. Have connected with Missouri/ St. Louis energy performance standards with MO USGBC. Will continue to look at it here. Where the savings lines up with gaps in our portfolio would be important.

Idea: Affordable Housing New Construction Third Party & MT

Proposed by: NRDC

Utility Responses

- **Ameren IL:** Feel like MT needs to be developed through TRM process with deemed savings.
- **ComEd:** Have an affordable housing new construction program. Team reviewed this and is interested to evaluate against our existing program design with additional conversation.

- **Nicor Gas:** N/A
- **PG/NSG:** N/A

Q&A:

[Chris Neme] Not sure why gas is N/A on this one – one component of this idea is for all utilities, including gas.

Follow-up: Nicor Gas + PG/NSG to review and provide a response to this idea; the idea was inadvertently tagged as “electric only.”

Cumulative Persisting Annual Savings Follow-Up

Matt Armstrong, Ameren Illinois

- SAG talked about CPAS challenges in November. One concept to further discuss was market effects – centered around whether we are capturing them or spillover without traditional evaluation.
- Definition of market effects from TRM v8.0 – *change in structure of market or behavior of market participants, causally related to market interventions.*
- Ameren has been working on project to explore market effects. TRM definition aligns with organizations across the US – the evaluation efforts if they can find data, then it can quantify the market effects.
- Market transformation and acquisition programs can both generate market effects. Data can show whether is a structure or behavior change in market.
- Review of market effects on supply side and demand side – program would ideally be able to measure both.
- Steps in determining market effects: Intention, Establish Baseline, Define Indicator, Identify Data Source, Measure Impact.
- Question: Should studies incorporate market effects outside of Ameren/ComEd in areas that don't have EE programs, can savings from market effects be claimed? Yet to be fully answered. Working to identify what data we can capture. Will have to talk through with stakeholders about how we can answer these questions.

[Chris Neme] Seems like two parts to this question. Can savings be claimed is one question. Unsure about the first part of the question.

[Matt Armstrong] Consideration of the baseline – would that consider markets outside of our territory in the baseline. And on the back end too as far as the effect of the program. Should we look at areas outside of the territory. Are we effecting the market on a broader basis? There may be multiple entities, so claiming outside our territory could have a double counting or attribution issue.

[Chris Neme] For second part, if you do something that causes savings to occur that wouldn't otherwise then my perspective you ought to be able to claim them. How you measure how much such savings occur and whether you look at other jurisdictions to confirm that, it's an evaluation question. We use data from other jurisdictions when we inform market share trajectories. It might be up to the evaluator. Might be separate from the question if you cause

savings to occur in a municipal savings territory in Illinois can you claim them, statutorily the answer is probably no.

[Randy Gunn] Can use data but cannot claim savings outside service territory.

[Matt Armstrong] As we go through considering market effects, have communicated with ODC and look forward to continued work on this.

[Chris Neme] Generally speaking in the industry, market effects savings are often not captured at all. Understated and underclaimed. If we can come up with a way to estimate in your service territory, I think it's great. We need to figure out how to get there. Don't want to have success in a current program changing contractors or consumers perceptions turning them into being considered a free rider next year.

[Jim Jerozal] This could be further discussed in market transformation group.

[Matt Armstrong] Agreed. Just have to make that distinction that it doesn't have to be a formal Market Transformation program to have market effects.

[Jim Jerozal] If you had an MT strategy and you are trying to move the market, show that market lift. If we do have a resource acquisition program incenting a widget and that also creates a market effect that we would add additional market effect savings along with widget savings?

[Matt Armstrong] That's how I'm seeing it.

[Jim Jerozal] In that case, the entire portfolio is having a market effect. SAG can talk about this as we go down the road. There are behavior programs, but portfolio in total is behavior changing.

[Kristol Simms] That's how this concept evolved for us. Potentially we are having a significant market lift after 10-12 years of programs and that's what this effort is meant to look at.

[Jim Jerozal] Has anyone seen an attempt to quantify the market effect of a portfolio, in other jurisdictions?

[Chris Neme] Not that I can remember.

[Ted Weaver] Navigant in Illinois tried to do some portfolio-wide spillover work that overlaps somewhat with this. I think in New England there has been some work in this area.

[Alexis Allan] We have taken a look at some of that with the Ameren team. Didn't find anything specifically but did find that New England had explored and Energy Trust of Oregon. Unable to find anything that had been completed.

Next step: Further discussion on market effects will be scheduled in the SAG Market Transformation Savings Working Group, if needed.

Energy Efficiency Evaluation: Big Picture

Zach Ross, Opinion Dynamics

- Overview: Will be presenting on coordination of work; what evaluations are completed; how evaluation is used in TRM process.
- ODC coordinates with Guidehouse. SAG meetings and workgroups. Ad hoc meetings and discussions on key items. Monthly coordination discussions. Collaborate as needed on statewide research efforts. Examples included in slides – e.g. COVID impacts, thermostats, statewide research. Talk about these things and collaborate as often as we can.
- Evaluations in IL: wide range of activities. Impact, NTG, Process, Market, Other topics as directed.
- Impact: conduct annually for all major programs & pilot development
- NTG: conducted once per cycle for all programs unless circumstances. May do more frequently for some programs.
- Process: regularly complete core process evaluations, more detailed specific ones for issues that need it. Differ across teams depending on programs in terms of cadence.
- Market Research: As needed and as budgets allow, Topic related. E.g. large customers in transition to FEJA for Ameren. Statewide market studies.
- Other topics: NEI research, EUL research, verified CBA annually, gas adjustable goals annually, support SAG and utility consideration of MT
- Evaluation research and IL-TRM: support updates to TRM wherever possible and is significant part of evaluation budget. Consider evaluation priorities list from TRM and work to address those whenever we can. Submit workpapers, participate in TAC and work group.

SAG Discussion Topics:

1. Opportunities for evaluation collaboration
2. Level of emphasis on different kinds of evaluation (where prioritized, should there be shifts)
3. Opportunities for better integration with IL-TRM update

[Zach Ross] Regarding #2: In practice over our time working in Illinois - Primary goal is to verify net savings for compliance. Others are all secondary objectives.

[Jim Jerozal] Impact including NTG – how much do we collectively spend to research and NTG work? Across the state? It seems like NTG changes have been very small for ongoing programs. Do we need to keep looking at well-established programs for NTG? Other evaluation work might be more useful.

[Zach Ross] I don't have a specific number, but it is non-trivial. Substantial portion. Often part of participant surveys that are also for other purposes. We have seen what you are talking about with general trends staying the same. There are also cases where that isn't true – startups, new measures, etc.

[Randy Gunn] Time, energy and money spent on NTG has gone down over the past 5 years. Estimate it's less than 10%. Several years ago, when hashing out the NTG policy we were doing NTG research for most programs most years. These days for most programs we are doing once per cycle, with some exceptions. It has scaled down a lot.

[Jim Jerozal] I think you are right. It has diminished from where it started. Maybe we should try to quantify this and look at it. There are places where it makes total sense, can't go away completely. Is it the right place to spend money?

[Chris Neme] It's a good question. Glad to hear Randy's answer. 5-10% range doesn't seem wildly out of range. It would be helpful to have some sense of numeric breakdown of these categories of work. TRM and evaluation work go part in parcel. Would be useful to have a breakdown – how much is annual savings, how much is NTG, how much is TRM, etc. Gut reaction to the question is that Impact evaluation work should be the biggest chunk of what we do. More evaluation and market research to inform how we can do better and find more opportunities would be a good too. Need to see numbers to see opportunities and how to move between buckets.

[Zach Ross] It would be helpful for us if there is some thought about what those buckets we want to know about are – lots of ways things can be combined or separated. If we had a clean categorization, we could support that.

[Chris Neme] Good suggestion. From a process perspective, could you propose what those buckets might look like and circulate it to react to?

[Zach Ross] Our buckets and Guidehouse might not be aligned, but we can put heads together.

[Cate York] You mentioned annual evaluator presentation and budget breakdown, opportunities for evaluators to talk about their budgets and performance.

[Zach Ross] Annual process is described in the Policy Manual – draft evaluation plans are presented mid-December, final plans by end of Feb. Last year we provided some high-level budget breakdowns. In our annual plans we list budgets down to the task level in programs. All public on SAG website.

[Cate York] Is there a 'looking backward' process to report on what was accomplished, what was spent, what was evaluated after the fact?

[Zach Ross] We provide annual evaluation reports and deliverables for SAG including summary reports. Not sure there is any budget reporting.

[Kristol Simms] We have our spend for the utility on evaluation costs included in our program costs for the TRC.

[Cate York] Why isn't energy usage data part of this in terms of cost effectiveness for prescriptive measures, where does it factor in?

[Zach Ross] Customer billing data? [yes] From ODC side, we commit to using AMI data as much as we can in evaluations. Some program designs really ask for it. E.g. home energy report, voltage optimization primarily evaluated using usage data. Presentation in August for SAG will cover AMI data usage. For prescriptive programs, TRM dictates what the claims utilities are allowed to make. We evaluate against the TRM. We use energy usage data to help refine for the TRM.

[Chris Neme] Hard to use AMI data or usage data – more relevant to impacts of some programs than others – retrofit is easy but prescriptive rebates for new products the consumption after can't be compared to before it should be compared to counterfactual of what it would have been otherwise. Could be variable.

[Randy Gunn] A few other programs use lots of billing data. SEM is a good example. Models are largely with billing data. On a customer-by-customer basis for custom programs often used to figure out what customer efficient process control measure for instance. Before and after consumption – isn't primary estimate but will be how we verify whether engineering estimates are reasonable. Quite a bit of use of billing data. We could do more with it. There are other kinds of programs we could evaluate more with billing data, e.g. small business programs. But TRM here, so much effort put into it (and excellent TRM) there isn't discomfort with estimates and if there was, we could use billing data to verify. Not a lot of clamor for that so far.

[Ted Weaver] Randy, on NTG research, Nicor does about 1 project a cycle. Is that true for electricians?

[Randy Opdyke] For small programs once per cycle, for big ones twice. Used to do it every year. Decided it wasn't worth money to keep doing it every year. For commercial new construction we do NTG every year because market varies a lot year to year.

[Zach Ross] Same is true for us. Standard and custom twice a cycle now, used to be more often. Otherwise it's once a cycle.

[Zach Ross] 2021 evaluation plans will have more of piloting that later this year.

[Kristol Simms] Comment about previous discussion about access and use of AMI data and future plans. Our team has undergone a data security internal audit which included ODC review of customer information and PPI and how that will change over time. Going forward as we implement next plan, restrictions and limitations and controls over customer data outside of Ameren will be more restrictive to the benefit of our customers. We will be looking to streamline the number of contacts made to our customers by evaluators on behalf of Ameren. Will work to implement in next cycle if not sooner.

[Kristol Simms] Interested in where we can increase or improve diverse contractors in evaluation.

[Zach Ross] We think we can increase the level of diverse vendors we use for evaluation. We added a few in this plan cycle, but it's still a smaller portion that we would like. Especially for on-site and local work on the ground as our top priority.

[Randy Gunn] Answer similar to Zach's – always looking for more diverse and women-owned firms to work with. Tracking statistics.

[Cate York] Along with request from earlier today for utility contractor info, is there info on this for evaluators or could it be made available?

[Zach Ross] We identify members of our team in our evaluation plans, not sure about the level of detail provided. [Randy Gunn: same for Guidehouse]

[Cate York] Wondering how reporting on that can be tracked?

[Randy Gunn] We haven't published it formally but we could.

[Kristol Simms] We can work with our evaluator to track and manage and will do so going forward. Commission staff is interested in this too. Information sharing, action items and progress doesn't sound overwhelming to expect from evaluators.

[Kevin Grabner] For gas companies we report our diverse spend monthly, through Nicor and Southern Company. Peoples and North Shore it is a different process, but we also report.

[Chris Neme] My observation is that there has been more coordination across evaluators than there used to be. Wondering whether there is more of it that might be possible. Some programs like custom C&I or annual verification activities need to be utility specific. Others like more mass-market programs maybe not. We ought to think about looking at every program on the table related to impact or TRM and ask could we do this as one study statewide instead of two different ones. Opportunity to save some budget to use to add to process or market research. Don't want to lose the voice of having multiple evaluator perspectives but having one evaluator do some evaluations and other evaluator doing more of the input and critique role, and some would be the other way around.

[Randy Gunn] Almost all of the statewide studies have been joint studies. E.g. residential lighting metering study, appliance recycling metering study. We do the big studies together. Most of the effort in evaluation is dealing with the individual utility data, not much economies of scale that can come out of it for example trying to evaluate a custom program on a statewide basis. Data, sets of forms, etc.

[Chris Neme] Agree on custom, C&I but others it might work for too.

[Zach Ross] Agree with what Randy said. For some programs might have similar program designs, but even there a lot of the work is the nuances of the specific data that utilities are providing. We heard from the tracking perspective that the utilities have issues with trying to do statewide consistency earlier today. Virtually no major research effort on either side that we don't have the opportunity to hear about it and discuss with our clients.

[Jennifer Morris] Agree with Chris that for some programs it might make sense to have a lead evaluator within the state. Like MT programs, BOC program that both Ameren and ComEd are having evaluated. Both evaluators aren't using the same approach.

[Chris Neme] I understand that there are unique aspects to each utility. Even if one evaluator could learn about issues from one utility that could help working with the other. Don't want to lose both voices. There is value in a big state like Illinois having more than one expert evaluator voice. Seems like there has got to be more economies we could gain by doing a little more. To Randy's point that would have to be project by project to identify those.

[Randy Gunn] We're open to working to try to figure out ways we can be more consistent and coordinate better.

Next steps: SAG Facilitator to follow-up with evaluation teams to share evaluation cost category breakdowns with stakeholders.

TRC Non-Measure Level Inputs

- *Joe Riley, AEG, on behalf of Ameren IL*
- *Jacob Stoll and Jim Fay, ComEd*
- *Randy Opdyke, Nicor Gas & Ted Weaver, on behalf of Nicor Gas*
- *Victoria Nielson, AEG, on behalf of Peoples Gas & North Shore Gas*

Ameren IL:

- *Gas and electric avoided costs. Not proposing any plan changes. Current inputs based on same sources as prior plans. [Specific details in spreadsheet].*
- *Inputs are largely consistent with prior plan but peak gas avoided cost pending, as raised by some stakeholders.*

[Chris Neme] Nothing different besides line losses?

[Joe Reilly] Yes, same sources just updated with new information.

[Chris Neme] In past used multiplier to translate line losses to peak losses, what is different?

[Joe Reilly] This time have hourly loss factors we can use to make a weighted average over certain time periods for energy and peak line losses can use peak hours, subset of hours. More granular data this time around and trying to make best use of that.

[Chris Neme] At one level that makes sense, but problem that this approach would only get weighted average or average at peak, not the marginal loss at time of peak.

[Joe Reilly] Will take that into consideration with this new dataset and will take that feedback to our analytics and account for the marginal effect in our analysis.

[Chri Neme] Potentially gas capacity issues like there is for electric. Potential cost is not as large as electric but not zero either. Question across all gas utilities.

[Ted Weaver] Nicor believes that they are pretty close to zero in Illinois. Lots of excess capacity and storage capacity. Working to confirm that. But effectively zero.

[Chris Neme] So no other pipe/distribution costs that are capacity related?

[Ted Weaver] Going to get supply people to respond but I think it is pretty low and not worth the effort.

[Chris Neme] Good that you are talking to supply people. Excess capacity today may not be indicative of where we are 10-20 years from now when EULs greater than 10 years.

[Jennifer Morris] Can you go over the carbon adder input?

[Joe Reilly] Our approach to the carbon adders is the same as last Plan. Dictated by IL Public Utilities Act using the \$16.50 per MWh that is in the legislation. Use the guidance of legislation to incorporate into analysis. No change there.

[Jennifer Morris] Don't know that value of \$16.50 is in legislation, can we get a citation on that? Want to discuss whether we think there will be a carbon adder, 2022 is it starting or 2030?

[Joe Reilly] I believe it increases every year over the course of analysis, can follow up with citation.

Follow-up: Ameren IL to add carbon adder citation to TRC inputs chart.

ComEd:

- Avoided costs updated every June. This year's costs will go into the plan. Moving to an annual average avoided costs and away from the hourly detail. NEIs for plan will be additional results from ongoing evaluator research for next plan.
- Costs and sources largely due to PJM power pool. [Details shown on slides] ComEd data used for some data. Current line losses data is 2017. Will escalate from EIA AEO.
- Inflation from treasury note; discount rate from TRM; proposed update for 2021 TRM will be proposed for plan 6. Not much changed from previous plan.

- Changing from DSMore to Analytica – move away from hourly detail. Will use same method as Guidehouse is using. Everyone else is using an aggregate avoided cost. Will be consistent with everyone else. Will help streamline process and increase flexibility in analysis.
- Looked at costs change from aggregate or hourly TRC – everything is within 10% accuracy change. Feel that the accuracy sacrifice can be absorbed.
- NEIs: benefits of quantifiable NEIs can improve TRC but measures have to compete within the portfolio on \$/kWh so additional NEIs can't be the only thing that allows measure into portfolio.
- Inputs and sources for NEIs from avoided gas costs, Chicago avoided cost water data, carbon adder based on EIA clean power plan scenario from 2018, current evaluator NEI research.

[Chris Neme] What do you mean by aggregate TRC analysis?

[Jim Fay] Average annual savings by annual avoided cost, rather than 8760 avoided costs. Single annual cost.

[Chris Neme] On capacity cost do you have a multiplier to account for PJM reserve margin requirements?

[Jim Fay] We use the actual auction capacity price which is what we would have paid for the next four years, rather than CONE + reserve margin.

[Chris Neme] Your reserve margin needs are already factored into that price?

[Jim Fay] I think they are. We can go back and look at any additional fees if we had to buy that capacity, but I think when they do that auction it is needs plus reserve margin.

[Chris Neme] Good to make sure if that is reflected.

[Chris Neme] Will there be results from the non-energy impact work in time to inform these analyses or not?

[Celia Johnson] Update on non-energy impact research will be in the July NEI Working Group meeting.

Nicor Gas:

- Supply cost forecast from Wood McKenzie.
- Add in adjustments and adders to cover T&D. Same approach with new values.
- Water costs weighted average cost across territory with a water index from BLS. If research comes up with useful NEIs will incorporate. Inflation using same inflation baked into supply cost forecast from W-M.
- AEO doesn't forecast carbon anymore, so using a Technical Reference document from federal agencies in 2016.

[Jennifer Morris] Interested in the utilities using the same source for carbon adder / future greenhouse gas emissions.

[Chris Neme] About line losses – description of avoided cost is Henry Hub with avoided costs associated with delivery are you suggesting those include line losses?

[Ted Weaver] Yes, they do.

Peoples Gas & North Shore Gas:

- For previous plan adopted Nicor and ComEd approach. Plan to remain consistent with Nicor and ComEd's approach.
- Will review both Nicor and ComEd approaches to confirm we are consistent.

Next step for TRC inputs: If there are further questions, discussion will be scheduled with non-financially interested parties.

Summary of Follow-Up Items and Next Steps

- ***Initial Energy Efficiency Idea Responses from Utilities:***
 - Energy Efficiency Portfolio Plans are currently in development by utility teams. If there are specific questions about EE Idea proposals, utilities will follow-up directly with idea submitters.
 - SAG Facilitator will follow-up with individual idea submitters to answer any questions.
 - OBF will be scheduled for future discussion at SAG (anticipated 2021).
 - Follow-up discussion to be scheduled at SAG on multi-family considerations, including % of comprehensive project participation for current multi-family programs (anticipated August 13).
 - SAG plans to discuss equity hiring later this summer (anticipated in late August).
 - Nicor Gas + PG/NSG to review and provide a response to the NRDC Affordable Housing New Construction idea; the idea was inadvertently tagged as “electric only.”
- ***Market Effects:***
 - Further discussion on market effects will be scheduled in the SAG Market Transformation Savings Working Group, if needed.
- ***Big Picture Evaluation:***
 - SAG Facilitator to follow-up with evaluation teams to share evaluation cost category breakdowns with stakeholders.
- ***TRC Inputs:***
 - Ameren IL to add carbon adder citation to TRC inputs chart.
 - ICC Staff is interested in the utilities considering using the same source on future avoided greenhouse gas emissions / carbon adder.
 - If there are further questions about inputs, discussion will be scheduled with non-financially interested parties.