

IL EE Stakeholder Advisory Group

Monday, December 3, 2018

Tuesday, December 4, 2018

9:30am – 12:00pm

Teleconference Meetings

Attendee List and Meeting Notes

Day 1 – Monday, December 3, 2018 Meeting

Teleconference Attendees

Celia Johnson, SAG Facilitator

Nick Hromalik, Midwest Energy Efficiency Alliance (MEEA), meeting support

Laura Agapay-Read, Navigant

Josh Arnold, Navigant

Will Baker, Google

Tyler Barron, Environmental Law & Policy Center (ELPC)

Ingo Bensch, Evergreen Economics

Mike Brandt, ComEd

David Bryant

James Carlton, People for Community Recovery

Ian Champ, CLEAResult

Jonathan Cullar, Power Takeoff

Ryan Curry, 360 Energy Group

Erin Daughton, ComEd

Nicole DelSasso, Navigant

Wael El-Sharif, 360 Energy Group

Jeff Erickson, Navigant

Phil Flaherty, Bidgely

Julia Friedman, Oracle

Laura Goldberg, Natural Resources Defense Council

Kevin Grabner, Navigant

Andrey Gribovich, DNV-GL

Mary Ellen Guest, Chicago Bungalow Association

Randy Gunn, Navigant

Arturo Hernandez, ComEd

Travis Hinck, GDS Associates

Jonathon Jackson, Ameren Illinois

Rob Kelter, Environmental Law & Policy Center

Kristofer Kiszynski, Elevate Energy

Adam Knickelbein, Navigant

Chester Kolodziej, Sustain Rockford

Larry Kotewa, Elevate Energy

Jason Lai, Navigant

Kristin Landry, Navigant

Michael Li, U.S. Department of Energy

Karen Lusson, IL Attorney General's Office

Michael Marks, Applied Energy Group

Alex McGhee, Agentis Energy
Catherine Mertes, RCF Economics
Cheryl Miller, Ameren Illinois
Jennifer Morris, ICC Staff
Phil Mosenthal, Optimal Energy, on behalf of IL Attorney General's Office
Chris Neme, Energy Futures Group, on behalf of NRDC
Rob Neumann, Navigant
Theo Okiro, Future Energy Enterprises
Stacey Paradis, MEEA
Patricia Plympton, Navigant
Ryan Powanda, Navigant
Adam Roche, Franklin Energy
Zach Ross, Opinion Dynamics
Emma Salustro, ComEd
Kristol Simms, Ameren Illinois
Bryan Tillman, 360 Energy Group
Evan Tincknell, Opinion Dynamics
George Tolley, RCF Economics
Andy Vaughn, Leidos
Ted Weaver, First Tracks Consulting, on behalf of Nicor Gas
Shelita Wellmaker, Ameren Illinois
Angie Ziech-Malek, CLEARResult
Jonathan Feipel, ELPC
Arvind Singh, DNV-GL
Chris Vaughn, Nicor Gas
Gary Ambach, Seventhwave
Leane DeMar, Nicor Gas
Stefano Galiasso, Energy Resources Center, UIC
Stacy Gloss, U of I Climate Research Center
Katie Kaluzny, USGBC-Illinois
Ryan Kroll, Michaels Energy
Jennifer Moore, Ameren Illinois
Elena Savona, Elevate Energy
David South, West Monroe Partners
Ellen Steiner, Opinion Dynamics
Mark Szczygiel, Nicor Gas

Ameren Illinois 2019 Evaluation Plan

Zach Ross, Opinion Dynamics

Yearly impact and high-level process evaluation of initiatives for Ameren IL

- NTG research for each initiative conducted at least once.
- Detailed process evaluations as needed.
- Conduct ex post cost-effectiveness analysis.
- Non-energy impacts research.
- Assessment of economic and employment impacts from AIC programs.
- Collaborate with other evaluators to ensure consistency across the state.
- Use AMI data and randomized control trials/quasi-experimental design evaluation approaches where feasible.

IL Evaluation Collaboration

- Monthly coordination call.
- NTG Working Group and TRM TAC participation.

Budgets are split between initiative-specific and other evaluation efforts:

- Allocate budgets and resources toward the programs with the greatest savings.
- Budget also split between electric and gas evaluation activities since Ameren Illinois is a dual-fuel utility.

Two core programs: Residential and Business

- Voltage optimization not listed since not in either of these categories, but will be claiming savings for the first time this year.
- Retail products/3rd party: assuming it will look the same as 2018 but could have different results because the program will be offered by a 3rd party in 2019.
- Business Behavior Modification Pilot: new for 2019.
- Q: Are there any key changes for 2019?
 - A: The only thing changing is postponing the update to the midstream business slighting incentives program by one year, to 2020. This program design may be used to push a few more lighting measures; it may start this year and may ramp up in 2020. That is the reason for waiting.
- Q: Is budget information available?
 - A: Evaluation budget information for program and by activity – this information will be included in the written draft evaluation plan.

Business Program contains 4 core initiatives, as well as sub-programs:

- Standard: SBDI, online store, instant incentives
- Custom: Building Operator Certification (BOC)
- Retro-Commissioning
- Streetlighting
- Business Behavior Modification

Standard Initiative:

- Expect this to be the largest savings for the Ameren portfolio.
- Includes significant Small Business, Instant Incentives, and Online Store.

Custom Initiatives:

- Holding tank for incubator and smaller offerings for business customers
- 10 MWh industrial exclusion makes it difficult to garner significant savings in this space.

BOC Assessment:

- Delivers level 1 and level 2 building operator certification
- Began assessment of the program (process and baseline info) during 2018.
- Will be assessing impacts from the 2018 course participants and conducting pre-assessment activities and in-depth interviews with 2019 course participants.
- Working to assess what savings might have come from taken this training.
- Interested in more directly, causally linking their knowledge prior to taking the course, and then assess what has changed. This link is used to assess if actions taken actually linked to BOC and not just something participants would have done on their own.
 - Q: What is the reason for no savings in 2018?

- A: Classes were completed in Oct and Nov so in theory changes could have been implemented in one or two months, but unlikely. We will still account for those savings, in 2019.
 - Q: BOC has been around for a while with lots of evaluations, could using some of this help lower costs?
 - A: yes, we did leverage those publicly available instruments and collaborate with the other evaluators. BOC is not codified for IL, so we are working through the methodology.

Retro-Commissioning Program

- Much more standard evaluation than custom initiative, but smaller contributor to portfolio savings.
- Going after separate M&V for residential and business at ICC request.
- Q: Is onsite evaluation better for this program considering its size?
 - A: We always make an effort to minimize our onsite costs

Street Lighting Initiative

- Upgrades to EE street lighting to municipalities.
- Program adoption has been slow, so only a minor contributor to portfolio savings to date.
- There will be surveying in the future as the program ramps up.

Business Behavior Modification Pilot

- Pilot for non-residential customers launching in 2019.
- Not assessing savings of the online portfolio for 2019, very dependent on number of customers that touch the portal. However, if there is significant up-tick we can maybe evaluate potential savings in future years.
- We will do our typical assessment for core energy reports component. We will help the implementor do the randomization control and treatment assignment.
- Q: What EUL will be used?
 - A: This is still in discussion with the implementer Agentis. Not necessarily appropriate to use the residential value. May include in the TRM for future application.
 - Q: Has this program been evaluated in other jurisdictions?
 - A: This type of program is relatively uncommon but Opinion Dynamics is looking into this.
 - A: Jonathon Jackson would be happy to share more once they have information available.

Residential Program

- Same 2018 program offerings except for Retail Products, which is expected to be implemented the same but new in 2019 since it will be a 3rd Party program.

Retail Products Initiative

- Provides discounts for EE products

Income Qualified Initiative

- Pulling back on process evaluation, but will continue some interviews. Will do on-site reviews as well.
 - Q: Are you collecting the NEBs through interviews? How integrated or not?

- A: Included some questions as exploratory, but for 2019 likely not included since cannot extrapolate to savings yet.

Public Housing Initiative

- Process evaluations.

Behavior Modification

- Home energy audits.
- Randomly assigning newly selected 2019 cohort into treatment and control groups.
- Planning to track full 5-year decay by preserving past cohorts.

HVAC Initiative

- NTG research, participant research in 2019. Trade ally research will happen in early 2020.

Appliance Recycling

- Performing core evaluation process in 2019.

Multifamily Initiative

- Small contributor of overall portfolio savings.
- IQ multifamily is captured entirely in the IQ initiative; common areas will also be evaluated through IQ
- IQ initiative does not provide incentives for heating, etc.
 - Jonathon Jackson, Ameren Illinois will double-check
- Do Community Action Agencies touch multifamily?
 - No, it is primarily single family. There is a separate implementer that reaches multifamily. Opinion Dynamics will confirm.

Direct Distribution Initiative

- Toolkits given to students. This is a small initiative.
- Plan to use NTG for lighting via parent participant survey.
- Using a value not specific to Ameren, will evaluate this value and update in 2019.
- Q: Won't parents say "yes" to the survey questions no matter what?
 - A: This survey question is more about NTG then just if the bulb in the kit was installed.

Voltage Optimization

- This is new in the current EE Plan cycle for Ameren.
- Implemented at the distribution substation or circuit level to optimize voltage levels along distribution circuits to reduce electricity usage.
- Will use algorithmic approach for calculating savings
- Q: Are you considering any other approaches besides CVRf?
 - A: There was a lot of background research and we worked with Navigant to try to stay consistent with ComEd's approach but I need to. We will see what we get from this initial program and then readjust our evaluation.
 - A: VO leads are not on the phone; Opinion Dynamics will follow-up with Chris Neme, NRDC.

Other Key 2019 Evaluation Research Activities

- Non-Energy Impacts (NEI) Research.

- Working on methodology with other evaluators.
- There will be a whitepaper developed on negative Non-Energy Impacts.
- NEI research is still in process, but we plan to do utility assessments in 2019.

Economic & Employment Impact Study

- There is interest in discussing the draft job study methodology.
 - Opinion Dynamics is working with Navigant and will coordinate with Nicor Gas.
 - The draft job study methodology will be presented to the SAG Non-Energy Impacts Working Group. Anticipating an end of January teleconference meeting.

Advanced Thermostat Research

- Ameren distribution is wrapping up.
 - Goal was 30k; expectation is closer to 24-25k.
- Developing a study for Ameren, will present study to Thermostat Subcommittee before the end of 2018.
 - Goal was 30k; expectation is closer to 24-25k.

Tier 2 Advanced Power Strip Pilot Research

- A pilot will be implemented in 2019. Once pilot is finalized, the design will be made public.

Next steps: The draft Ameren Illinois EM&V work plan will be ready for review and comment in mid-December.

ComEd 2019 Evaluation Plan

Jeff Erickson, Navigant

Note: The draft ComEd EM&V work plan was already posted for review and comment; comments are due by December 14.

FEJA creates key changes and deadlines

- Final evaluation reports for 2018 are due by April 30th
- Tight timelines between data available and draft reports; tight timeline for review.
- To accommodate this timeframe, we are separating impact reports from process and NTG.

Evaluating at least 36 programs:

- There are pilot programs that are in various stages, including the review process.
- Doing Effective Useful Life (EUL) research in support of TRM.

Business and Residential Programs:

- Most of these programs were operating in 2018.
- Collection happening in Income Eligible Programs.
- Several Pilot Programs.
- Testing has already begun for ComEd's Voltage Optimization program.

Three types of impact evaluation approaches:

1. TRM-based
 - Used to evaluate that the TRM was used correctly
 - Majority of residential

- Quality Control Program tracking database review
- Project-level impact estimate
- Attempt to recreate the savings claimed given the inputs and the TRM formulas
- Verify installation via surveys and on-site
- This is applied to about ¾ of the programs
- 2. Custom and Model-based
 - Majority of business programs
 - Validate the formulas used, everything is up for evaluation (vs TRM where just assessing that TRM was correctly used)
- 3. Regression
 - Time-based Energy consumption data common approach
 - AMI-based analysis as well
 - Use controls vs participants and a randomly assigned trial
- If program is struggling, we will conduct a process evaluation

Quantifying non-energy impacts

- Looking at utility, participant and societal impacts.
- FEJA places a focus on Income Eligible, so we are also focused on this program, but not entirely.
- This work will likely be in draft form for public viewing end of 2019, but not finalized and formal until 2020.
- Income Eligible Programs is in Phase 1 – this will include primary research and evidence gathering of actual benefits.

Advanced Metering Infrastructure (AMI) Overview

- Used for residential advanced thermostats impact analysis.
- Used for weather-normalized bulk regression analysis, helps improve the need for deeper research (still needed).
- Used for small commercial programmable thermostats
- Q: What about using Bidgely?
 - A: We try to do RCT, but it is a quasi-experimental approach. It is a newer program.
 - A: The pilot was aimed at getting savings from Bidgely vs using it to evaluate the savings.
- Follow-up discussion with Rob Neumann, Navigant and Rob Kelter, ELPC offline. R. Kelter is interested in how Bidgely can be used to analyze savings from various program measures.

Budget

- Showed PY9 Net kWh by sector:
 - Residential 46%
 - Business 42%
 - Pilots 12%
- EMV budget:
 - Business 28%
 - Residential 14%
 - TRM updates 11%
 - Pilots 10%
 - Research 7%
 - NTG 5%

- Income Eligible 5%
- Cross-cutting 15% cross-cutting
- Voltage Optimization 1%
- Evaluating custom is expensive (why business is so expensive); we are taking a closer look and re-examining.

Additional Questions and Feedback

Q: What does cross-cutting refer to?

- A: Impact work that is involved in multiple programs, makes sure that project teams are using same approach.

Q: Is research carved out of business and residential?

- A: Sort of, but also part of the cross-cutting budget

Q: What are the costs for VO?

- A: Right now, it is a lot of data crunching, but once we get going it is all automated and not actually as big of a cost, which is more in line with the savings you get from VO.

Q: Have you gotten input from the Income Qualified Group?

- A: There is a survey circulating to the IQ North and IQ South Committees for feedback on 2018 topics.

Income Qualified Multi-Family Program

- General comment: Chris Neme suggests an IQ program focus on process evaluation, including the treatment of public sector buildings
- NRDC has an interest in how multifamily programs are going; MF is a unique program and it would be useful to understand what's working and what is not working
- Q on IQ MF initiative: Are those treatments captured in the IQ budget and savings numbers? Or are they captured in the business programs?
 - A: Vince Guterrez, ComEd, will follow-up when he is back in the office (Erin Daughton).

Day 2 – Tuesday, December 4, 2018 Meeting

Teleconference Attendees

Celia Johnson, SAG Facilitator

Nick Hromalik, Midwest Energy Efficiency Alliance (MEEA), meeting support

Laura Agapay-Read, Navigant

David Baker, Energy Resources Center, UIC

Tyler Barron, Environmental Law & Policy Center (ELPC)

Mike Brandt, ComEd

James Carlton, People for Community Recovery

Ian Champ, CLEAResult

George Cornwell, Resource Innovations

Ryan Curry, 360 Energy Group

Leane DeMar, Nicor Gas

Wael El-Sharif, 360 Energy Group

Jeff Erickson, Navigant

Phil Flaherty, Bidgely

Julia Friedman, Oracle
Omayra Garcia, Peoples Gas & North Shore Gas
LaJuana Garrett, Nicor Gas
Noelle Gilbreath, Community Investment Corp.
Laura Goldberg, Natural Resources Defense Council (NRDC)
Kevin Grabner, Navigant
Mary Ellen Guest, Chicago Bungalow
Randy Gunn, Navigant
Jim Heffron, Franklin Energy
Jim Jerozal, Nicor Gas
Cheryl Johnson, People for Community Recovery
Paige Knutsen, Franklin Energy
Chester Kolodziej, Coalition Rockford
Larry Kotewa, Elevate Energy
Jennifer Moore, Ameren Illinois
Phil Mosenthal, Optimal Energy, on behalf of IL Attorney General's Office
Chris Neme, Energy Futures Group, on behalf of NRDC
Rob Neumann, Navigant
Victoria Nielsen, Applied Energy Group
Randy Opdyke, Nicor Gas
Christina Pagnusat, Peoples Gas & North Shore Gas
Stacey Paradis, MEEA
Adam Roche, Franklin Energy
Zach Ross, Opinion Dynamics
Barb Ryan, Applied Energy Group
Elena Savona, Elevate Energy
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Mark Szczygiel, Nicor Gas
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Chris Vaughn, Nicor Gas
Gary Ambach, Seventhwave
Catherine Mertes, RCF Economics
Cheryl Miller, Ameren Illinois
Patricia Plympton, Navigant
David South, West Monroe Partners

Nicor Gas 2019 Evaluation Plan

Laura Agapay-Read, Navigant

Evaluation overview:

- Coordination with other evaluators in IL on an ongoing basis, and through participation in SAG, TRM, etc.
- Nicor Gas is deploying residential AMI 2018 through 2021; use of data will be addressed in next EE Plan cycle.
- Residential programs are almost all TRM-based.
- For multifamily, custom measures are used.

- Residential new construction uses calibrated simulation models
- Behavioral and Emerging Tech Pilots can use TRM, Custom, Regression, or simulation models, case by case.

Net-to-Gross Research

- Follow TRM NTG protocols, conduct free ridership and spillover research, although research may also be done separately.

Income Qualified Programs

- Conducting process research with 2018 participants.
- Findings from 2018 can then inform future research if needed.
- Q: Who is being interviewed?
 - A: Decision makers, building owners, but also occupants for income-qualified (in addition to property owners).

Residential Programs

- Research on Equipment Rebates in 2019-2020.
- Residential New Construction will conduct research in 2020, calibrated simulation conducted for impact evaluation.
- Q: What do you mean by quality maintenance with equipment rebates?
 - A: look at maintenance and making sure you are balancing systems (weatherization). Will follow-up with Chris Neme and make this information clear in our plans.
 - A: This is part of TRM version 7.0.
- Q: Will you look at comprehensive home evaluations?
 - A: Yes, as part of our process research.
- EEE, researching water heating fuel splits in 2020
- Energy savings kits, looking at water saving measures in 2020
- Q: Have there ever been billing analysis in IL before? Do we need to look at this again?
 - A: we don't believe such analysis exists, this is new research

Business Programs

- Equipment Rebates: pipe insulation secondary research
- Q: Will Combined Heat and Power (CHP) be a desk review?
 - A: For NTG it will be project-specific survey
- Conducting secondary research on programable thermostats, with specific study on gas savings for Nicor Gas (as well as study for ComEd).
- NTG research in 2019 with Joint Business New Construction.
- Coming up in 2019: steam traps, small business thermostats, emerging tech, water analysis.

Next steps: Draft Nicor Gas EM&V work plan anticipated in mid-December for review.

Peoples Gas North Shore 2019 Evaluation Plan

Kevin Grabner, Navigant

Evaluation overview:

- Similar coordination and participation as other evaluator presentations (see notes above).
- Q: How do you account for participation in the different TAC and SAG meetings? Do you have a person for each utility?

- A: We don't have multiple people, we assign an expert for each group.

Gross Impact Evaluation

- TRM, Custom, Billing usage regression analysis, calibrated simulation
- Q: Has the behavior test been consistent or sporadic from year to year?
 - A: There tends to be a level of consistency.
 - A: We have automated a lot of the analysis so the resource output is minimal.

Net to Gross Research

- Conduct research once per four-year planning cycle. We do this for mature programs, stable markets, large samples.
- Spillover and free ridership conducted for all programs.
- Q: This is conducted at the same time for participants?
 - A: Sometimes, we do free ridership closer to decision making time and participation, spillover we do a bit later.
- Q: Is spillover just participant, or do you also look at non-participants?
 - A: We will do non-participant, but it depends on the program and if there is a case to be made. Non-participant research has been reviewed with Trade Allies.

Income Qualified/Eligible programs

- All IQ programs are jointly evaluated with ComEd.
- Will be looking at service providers in 2018 and 2019. Participant surveys with Chicago Bungalow Association and IHWAP. Research with energy service providers that do the retrofits.
- Suggestion to talk to multifamily building owners, not just participants, but also others. Talk to those that understand barriers and what is working to overcome those barriers.
 - A: This is lined up for multifamily in 2019.
- Comment: All utilities have had challenges, so when talking to contractors and Community Action Agencies be sure that you are talking about barriers and what is working or not. Don't just talk to those that participated. Those that participate might not be the correct person to talk to about barriers.
 - A: In the written EM&V plans it will be spelled out who the evaluators are talking to; there is a list with questions and topics covered.

Residential Programs

- The thermostat study is being updated.
- Education and outreach track: no process research planned. Considering a persistence study for home energy reports.
- EEE: investigate water heating fuel split

Business Programs

- Also conducting research on public sector if 2019 population is big enough, separately from business (but would not consider legacy projects in NTG).
- Gas optimization program- will be doing NTG bi-annually (2019 and 2021 populations). In 2019 we will study service providers.

Next steps: Clean draft Peoples Gas & North Shore Gas EM&V work plan anticipated in mid-December for review (redline work plan was posted recently on the SAG website).