

Illinois Energy Efficiency Stakeholder Advisory Group
Large Group Meeting
Tuesday, March 10 and Wednesday, March 11, 2020
Teleconference Meetings

Attendee List and Meeting Notes

Meeting Materials – Tuesday, March 10 Meeting

- [Overview Page](#)
- [Agenda](#)
- Presentations & Materials
 - [SAG Facilitator Portfolio Planning Process Presentation](#)
 - [2020 SAG Project Plan](#) (final, updated March 4, 2020)
 - [2020 SAG Portfolio Planning Process Schedule Flowchart](#) (final, updated March 4, 2020)
 - [ComEd EE Portfolio Presentation](#) (Molly Lunn, Mark Milby, and Jacob Stoll, ComEd)
 - [Peoples Gas/North Shore Gas EE Portfolio Presentation](#) (Christina Pagnusat, Jean Gibson, and Omy Garcia, Peoples Gas & North Shore Gas)

Tuesday, March 10 Meeting Attendees (by webinar)

Celia Johnson, SAG Facilitator
Greg Ehrendreich, Midwest Energy Efficiency Alliance (MEEA) – Meeting Support
Foluke Akanni, Citizens Utility Board (CUB)
Matt Armstrong, Ameren Illinois
Jean Ascoli, ComEd
Kathia Benitez, Franklin Energy
Jordan Berman-Cutler, ComEd
Brian Bowen, Uplight
David Brightwell, ICC Staff
Madeline Caldwell, CLEARResult
Lauren Casentini, Resource Innovations
Craig Catalo, Franklin Energy
Jane Colby, Apex Analytics
Andrew Cottrell, Applied Energy Group
Kegan Daugherty, Resource Innovations
Erin Daughton, ComEd
Larry Dawson, IL Association of Community Action Agencies (IACAA)
Leanne DeMar, Nicor Gas
Mark DeMonte, Whitt-Sturtevant, on behalf of Ameren IL
Shaun Dentice, CLEARResult
Atticus Doman, Resource Innovations
Julie Drennen, Center for Energy and Environment
Gabriel Duarte, CLEARResult
Allen Dusault, Franklin Energy
Wael El-Sharif, 360 Energy Group
Katherine Elmore, Community Investment Corp.
Jim Fay, ComEd
Jason Fegley, Leidos
Julia Friedman, Oracle

Omayra Garcia, Peoples Gas & North Shore Gas
Lauren Gage, Apex Analytics
Margie Gardner, Resource Innovations
LaJuana Garrett, Nicor Gas
Jean Gibson, Peoples Gas & North Shore Gas
Kevin Grabner, Guidehouse
Andrey Gribovich, DNV-GL
Walid Guerfali, ICF
Mary Ellen Guest, Chicago Bungalow Association
Randy Gunn, Guidehouse
Kelly Gunn, ComEd
Vince Gutierrez, ComEd
David Hernandez, ComEd
Jim Heffron, Franklin Energy
Travis Hinck, GDS Associates
Jim Jerozal, Nicor Gas
Kristen Kalaman, Resource Innovations
David Kalensky, Gas Technology Institute
Mike King, Nicor Gas
Larry Kotewa, Elevate Energy
Bruce Liu, Nicor Gas
Molly Lunn, ComEd
Adam McMurtrey, Exxon-Mobil
Brady McNall, DNV-GL
Rebecca McNish, ComEd
Samarth Medakkar, MEEA
Tim Melloch, Future Energy Enterprises
Mark Milby, ComEd
Abigail Miner, IL Attorney General's Office
Zenia Montero, ICF
Jennifer Morris, ICC Staff
Phil Mosenthal, Optimal Energy, on behalf of IL Attorney General's Office
Kelly Mulder, ILLUME Advising
Denise Munoz, ComEd
Jennifer Muss, City of Chicago
Chris Neme, Energy Futures Group, on behalf of NRDC
Rob Neumann, Guidehouse
Victoria Nielsen, Applied Energy Group
Randy Opdyke, Nicor Gas
Antonia Ornelas, Elevate Energy
Briana Parker, Elevate Energy
Patricia Plympton, Guidehouse
Christina Pagnusat, Peoples Gas & North Shore Gas
Lauren Pashayan, IL Attorney General's Office
Hanh Pham, Willdan
Michael Pittman, Ameren Illinois
Jared Policicchio, City of Chicago
Alberto Rincon, Future Energy Enterprises
Zach Ross, Opinion Dynamics
Emma Salustro, ComEd
Leah Scull, CLEAResult

Shelita Wellmaker, Ameren Illinois
Kristol Simms, Ameren Illinois
Raman Singh, ICF
Jacob Stoll, ComEd
Mark Szczygiel, Nicor Gas
Brian Tomkins, Metropolitan Mayor's Caucus
Taso Tsiganos, IL Attorney General's Office
Andy Vaughn, Leidos
Ted Weaver, First Tracks Consulting, on behalf of Nicor Gas
Tiffany Welch, ICF
Selena Walde Worster, Erthe Energy Solutions
Angela Ziech-Malek, CLEAResult
Arvind Singh, DNV-GL
Chris Vaughn, Nicor Gas
Sara Wist, Cadmus Group
Mary Johnson, Resource Innovations
Marisa Joyce, Elevate Energy
John Lavalley, Leidos
Fernando Morales, Ameren Illinois
Andrea Salazar, Michaels Energy

Meeting Notes

Follow-up questions indicated **in red**.

SAG Portfolio Planning Process Kick-Off

Celia Johnson, SAG Facilitator

- Administrative notes
 - Check your spam filter & put SAG emails on the “safe sender” list with IT if you find any in the junk mail folder
 - Draft evaluation materials for PY2019 are available for review on the website: <https://www.ilsag.info/evaluation-documents/draft-evaluation-materials/>
- SAG goals review
- Portfolio planning process – focus for 2020
 - Consensus seeking on 2022-25 plans
 - Plans filed by March 1, 2021
 - Foundational issues – budgets, objectives, ideas, design
 - Process: forward-thinking; includes stakeholder EE ideas & IQ advisory committee EE ideas; 7-step process (we are on Step 1)
 - Timing – Addl meetings through Nov; Negotiations begin mid-Nov.
 - As needed will do teleconference rather than in-person (i.e. due to coronavirus disruption)
- Participation in SAG meetings & working groups open to all parties, exc. w/ financial conflict; 3 active 2020 Working Groups – Market Transformation, Midstream-Upstream, Non-Energy Impacts Working Group
- IQ Committees are outside of SAG, SAG will coordinate with those committees
 - Joint meetings w/ IQ North – scheduled for May, June, Oct, Nov
 - IQ Facilitation Team will work with IQ South participants to get ideas and feedback
- EE Ideas
 - Stakeholder ideas due by 4/1/2020

- Opportunity to present ideas & innovations for utilities to consider in 3 buckets: changes to current portfolio, stakeholder ideas, utility & advisory group ideas
- Review committee will meet in April, ideas shared in May
- Q: (Chris Neme) Is 4/1 deadline for non-IQ ideas or is it the same?
- A: Deadline is by organization type – SAG participants are 4/1; community-based orgs have diff deadline because IQ Committee process has not been presented yet
- Q: (Chris Neme) If there is more discussion in April of IQ might generate more ideas from stakeholders
- A: (Molly Lunn) There will not be new materials from what is presented to SAG today
- SAG Working Group Activities overview
 - NEI Working Group
 - NEI and economic impact research that began in 2018
 - Methodology & preliminary results have been discussed
 - May discuss incorporating into TRM or CET
 - 2020 activities
 - Discussion of CET in 2022-25 plans
 - Review prelim IQ NEI studies
 - Discuss how reporting will go
 - Market Transformation Savings Working Group
 - MT savings evaluation & estimation
 - MEEA & RI working on some issues to present
 - Goal to reach savings protocols for TRM
 - 2020 quarterly meetings
 - Midstream-Upstream Working Group
 - New WG to discuss opportunities to develop programs
 - Identify successful programs & lower-cost measures
 - 3 teleconferences scheduled in 2020, coinciding with planning process steps
- SAG Process Guidance Document – provides an overview of
 - Q: (webinar) Definition of financially interested parties?
 - A: Celia will circulate the definition; it is available in the Project Plan and Process Guidance Document
 - Q: (Kristol Simms): Should we anticipate some kind of COVID-19 impacts (e.g. travel restrictions on on-site visits) - could we check in in a few weeks?
 - A: (Celia Johnson): Yes, that may impact activities, will follow-up on how to address.

ComEd Portfolio Overview

- Agenda: 2019 results & 2020 implementation; R&D update; plan 6 overview

Molly Lunn, ComEd

- Quarterly report has the details, we will go higher-level overview
- 2019 achieved 105% savings (ex ante), 100% budget (<0.01% over)
 - Income eligible was way over goal (lighting!)
 - IQ budget included some programs that were under public & third-party as well – total on all income-eligible was over \$46M (without R&D) - more than was stipulated and caught up the 2018

Q: (Chris Neme) Does that include portfolio level costs?

A: I think it excludes those, check the quarterly spreadsheet – these are just from the first tab in the spreadsheet

Q: (Neme) \$48 million including portfolio level costs & R&D?

A: Yes, that's right, the \$42M is the stipulated amount without those, \$48 with

- C&I programs were a little under
 - Discontinued CHP because of lack of participation
- Meeting mandate on public, though looking for deeper savings
- Third party over-achieved on filed goal. Many of those were pre-existing strong programs and helped get over the goal. The rest were in a growth year in 2019 and under-performed. Expect all will achieve in 2020. Dropped New Manufactured Homes program – no production and no pipeline
- Market Transformation, Demand Response and Portfolio Level – costs only no savings
- Volt Optimization expected to be at 90%, capital lights overachieved goal under budget, maxed out on therm conversion. Some lighting carryover.

Q: (Chris Neme) Therm conversions – that's what you were allowed to claim, even though you actually generated more - what was the order of magnitude difference?

A: Yes, about double

Q: (Kristol Simms) For therm conversion, are you doing it through joint programs or all-electric (B-25)?

A: I think that we are claiming all the therm conversion from low income programs. (Jacob Stoll) - Following IE, then joint, then everything else – Guidehouse will go through all the portfolio and assign which ones we are coming from

Q: (Chris Neme) in 2018 gas savings were double what you could claim; calculation included both types of programs Kristol talked about; both are being counted but you then go through the protocol that Jacob laid out?

A: Yes, that's accurate

Q: (Phil Mosenthal) What share of streetlighting is Chicago?

A: Savings were 77% Chicago, I can get incentive numbers

Q: On non-Chicago street lighting, is there a diverse range of municipalities participating?

A: 61 participating municipalities, range of sizes

Q: Is there any [lighting system] redesign being done? Or is it just pole for pole swap?

A: Will follow-up.

- Will be discussing residential from the customer facing perspective.
- Residential offerings overview from 2019
 - New construction discontinued for 2020
 - Non-Income Eligible Weatherization phased out for 2020 because of high cost per kWh
 - Highlights
 - Home Energy Report target rank pilot – more impactful than "worse than neighbor" - final report due end of Q1
 - Process improvements – e.g. Reduced call volume and cancellations with online scheduling; improved processing time on rebate applications & reduced rejections; text reminders for FF recycling
 - Decreased incentive level

Q: (Kristol Simms) What is your incentive for appliance recycling?

A: \$35 (reduced from previous)

- 2020 Res Updates

- Added & removed measures; shifted some measures; reviewed implementers & programs

Q (Chris Neme): Is participation in HERs same in 2019 as 18? Same in 2020?

A: Will be about the same in 2020 as in 2019; we think we've hit the right balance on that program

Q: Dropped from 2018 to 2019, how much?

A: First year savings is about 60k MWh

Q: About a ¾ drop from 2018 then. You met savings & spending goals- those were first year savings; how did that do in 2019?

A: Anticipating about 108%

Q: (Phil Mosenthal) Did you eliminate all omnis?

A: Only on market rate, not on IQ

- Income Eligible Overview

- Food Bank/Pantry & Kits – 3rd party programs
- Whole building programs
 - Discontinued New Manufactured Homes (lack of production)
- Product discounts

Q: How have savings broken out between whole building and other initiatives?

A: Predominantly it's the product discounts, then food bank; lots of the therms come out of the SF/MF program

- 2019 Highlights/2020 Overview

- Serving 34 counties
- Staffing capacity survey
- CAAs met with utilities to discuss mods to utility portion to drive lower costs & higher savings – incorporate into 2020 planning (will be presented tomorrow)
- MF from Elevate has been most cost-effective \$0.31/kWh
- New public housing authorities participating
- About 30% of product discount sales through independent retailers

Q: (Chris Neme) Public housing – is the nature of engagement similar to LI MF – assessment & promote whole building perspective then treat; or is it help with procurement & etc.?

A: To date has been focused on former but there has been some meeting on long-term planning with PHAs including possible procurement in the future

- 2020 IE updates

- Reduced omnis, increased specialties & power strips & door sweeps
- Partner w/ gas utils maybe later this year
- Shifted budget from SF to MF because more customers
- MF homes program needed shifts to improve customer experience & participation
- Removed LED omnis from big box, removed window AC, etc.

Q: On SF/MF are those all joint with gas?

A: Some joint, depends on jurisdiction (in/outside of Chicago)

Q: Why joint only in city?

A: It was right for us but not necessarily for other utilities; I can't speak for

others

Q: (Jennifer Morris) Any plans to start collaborating with Nicor on income eligible?

A: We collaborate on the utility-only portion through IHWAP but work through CBA and Elevate we have talked about it but have not reached an agreement on a joint program so far.

Q (Chris Neme): For MF component through CAAs – is it all CAAs in territory or do only some CAAs serve MF?

A: Some portion. There are a number of them and we can follow up. Will provide an appendix to the ComEd slides with a recent IQ North presentation.

- C&I Overview

- Assessments & studies; Incentives, DI & Kits; Instant discounts
- Most of the incentives, etc. were new for 2019
- 2019 Highlights
 - Process improvements in many places
 - Online intake has been big improvement on several offerings

Q: (Jared Policicchio) What do you mean by 24% increase in the Standard offering public sector projects?

A: Number of public sector projects, numbers in filed table

- Lots of potential in virtual commissioning
- Lots of success with Compressed Air Fix it Now program
- Startup year for third-party C&I – pipeline for 2020 is built

Q (Phil Mosenthal): On compressed air – are you providing education process to detect leaks, etc.?

A: I believe we go in and identify leaks and look for other opportunities – can have industrial system lead provide more detail

Q (Chris Neme): What do you mean by virtual commissioning?

A: Will have to defer to retrocommissioning team on this, will follow up

- 2020 Updates
 - Small biz kits expanded to small public sector
 - Strong pipeline for nonprofits – trying to get beyond lighting
 - Outreach network of providers; centralized management of providers to reduce market confusion
 - Benchmark against other utilities – we aren't getting the same participation from our large customers need to drive engagement

Q (Chris Neme): Can you tell us what percentage of top 100/1000 large customers are participating?

A: Will follow up

Q: (webinar) Are there savings from DR?

A: We did not claim the savings from DR or count in 2018 and won't be counting for 2019 I think. Those programs haven't been evaluated in several years.

Q: (Chris Neme): Have you explored integrated EE/DR delivery (with DR funded elsewhere) to share customer acquisition costs, drive engagement, one stop shop?

A: Will be talking about for the next plan. EE is part of a team with solar, DR, future EVs, etc. – and we will be trying to work through how we integrate that with the right cost allocation & prudence

Q: (Jared Policicchio) Is the City lighting project considered a custom C&I project? Is it in the public portion of C&I?

A: No, it's street lighting and it's included in there

Q: ComEd's Quarterly Report uses it as an example for public custom

A: That is the controls portion, replacement of actual lamps is in street lighting

Mark Milby, ComEd - R&D Update

- Snapshot of activity
 - Active Projects (29 emerging, 4 MT)
 - Completed (21 emerging, 9 MT)
 - 38 active partners
 - 218 proposals since 1/1/18 - formal review process now (online portal)
- Report summary in ComEd quarterly report attachment and ComEd website: <https://www.comed.com/SmartEnergy/InnovationTechnology/Pages/EmergingTechnologies.aspx>
- Project updates
 - Emerging
 - Industrial Energy Management Information Systems (EMIS)
 - Leidos
 - Customizing EMIS to customer needs
 - Focus on direct customer process use - get beyond compressed air & lighting
 - Potential overlap to enhance SEM

Q (Phil Mosenthal): Are you testing both with people doing SEM already and those that aren't?

A: Yes, probably not a statistical sample but we are trying to do some spread to get at best practices

Q: Interesting to see if some of the savings are the same as in SEM or if they get at different savings

A: Yes, and whether we can reach a new class of customers as well

- Electric New Homes
 - Retired Res New Const program; team researching new vision for that program model to get past barriers
 - If it is reinvented as a high-performance electric only new homes program targeted at builders – change set of measures
 - Very small market currently - ~30 homes per year by boutique builders – will be a very small program when it is developed but optimistic that there is long-run potential.
 - Less of a new tech pilot, more about program design and market adoption
 - Could also promote other things outside of EE space (rates, EV, solar, etc.)

Q: (Jared Policicchio) Is there any MF aspect, or only SF?

A: Only SF at this time with the pilot

Q: (Chris Neme) Are you only looking at market rate builders or doing anything with recruiting affordable housing developers? (e.g. Michigan DTE & Consumers)

A: We have an AH New Construction that is very active, these models could feed into that as well, but not through this pilot which is just SF market rate. But transferable to that path.

Q: Does AH New Const have both SF and MF?

A: Yes, and we are talking with that team whether there is a path for the very high-performance projects. Still funds at a higher level than the market rate programs.

Q: (Chris Neme) is there a report on that 2019 research?

A: If it is public shareable, I will check on that

- Networked lighting controls market research
 - Not launched yet
 - Strong growth potential forecast by DOE, etc. for NLC
 - Might need more work to get on the forecast track
 - Market study to ID barriers, reasons for not participating, etc. To design interventions to really get at true market potential

Q: (Jennifer Morris) Vendor or in-house?

A: Mostly in house but also our emerging tech vendor, but no signed agreement yet. Will use 3rd party for interviews probably because of lack of staff capacity

Q: (Kristol Simms) We might want to follow up with you on that

Q (Chris Neme): My colleague Dan Mellinger has insights on some of this research, could help with a head-start, feel free to reach out. His analyses regionally and nationally are forecasts of the potential that could be gone after rather than what we expect, lots of balance and tradeoffs.

A: Yes, based on his presentation to SAG in September, we are taking a closer look at networked lighting, we will want to get his feedback on the survey

- Emerging Technologies under investigation (NOT exclusive)
 - Absorbent air cleaning - pilot
 - Ductless heat pumps - pilot
 - Switched resistance motors - modeling
 - Thermal energy storage - research
 - Smart valves – recruiting for pilot
 - Propane refrigerant display cases - testing
 - Pressure optimization on water distribution – considering
 - Automated chiller tube leaning – considering
 - Magnetic bearing chiller compressors – considering

Q: Ductless heat pumps – just traditional ones or VRF?

A: Cold climate single or multi-head systems

A: (Jean Ascoli) We have done projects with VRF in some of the Affordable Housing space

A: Focus on cold climate because we want to look at retrofit for existing buildings – most opportunity here right now. Already in TRM, not really emerging, but lots to learn about performance, customer experience, etc.

- ENERGY STAR retail products platform
 - National mid-stream program from ES
 - True MT program
 - ComEd will bring the total US market addressed up to 20%
 - Help to understand MT evaluation methods

Q: (ICF) We're excited. Wonder if you plan to join starting in April?

A: Yes, basically mid-year; working with NEEA on this as a partner to help us navigate the process

Q: What will happen to downstream incentives?

A: Planning to keep in place, will have to work with Guidehouse; probably

will subtract out downstream from this but have to figure that all out
Q: (ICF) Are there plans to show which offerings will be impacted by each of the ideas? Is there a timeline?

A: If it impacts/overlaps with an existing program then the implementer and program manager are included from the beginning to avoid surprises. We only test with a clear logic model and research questions. We don't want to have surprising implications. We plan to look across the portfolio to make sure everyone is informed. We don't plan to list on the website any program implementation impacts, that will be in consultation with all involved parties.

Molly Lunn, ComEd – 2020 Planning

- Combine/condense programs – over 40 programs currently
- Program Design
 - 3rd party programs – lessons learned from last RFP
 - Income eligible – metrics such as energy burden; refining communication style and content; pooling resources to streamline; strengthen community partnerships
- Streetlights – potential for next plan?
- Voltage optimization – geographical aspects, other tech, etc.
- Maximize online channels – online intake, marketplace, etc. Customers are opting for those channels and we need to leverage that
- New opportunities
 - Upstream (& still midstream)
 - MT
 - Lighting – interconnected & networked
 - R&D pipeline new measures
 - Baseline & potential studies
 - Water nexus energy savings - hasn't saved as much as we wanted in past
 - Financing mechanisms e.g. On-bill, PACE, perf. contracting

Peoples Gas/North Shore Gas Portfolio Overview

- Agenda: Goals/Priorities; Budgets; 2019 results; MT and R&D; 2020 outlook

Christina Pagnusat, Peoples Gas/North Shore Gas

- Budget review 2018-2021
- 2019 results
 - 103% goal; 98% budget (PGL)
 - 102% goal; 96% budget (NSG)

Jean Gibson, Peoples Gas/North Shore Gas

- Business sector programs
- Services: Studies & Rebates – custom & prescriptive incentives; SEM, etc.
- Review of customer counts from 2019 and spends – C&I portfolio was very cost-effective and there are public sector opportunities
 - Q: (Jared Policicchio) How do you define public customers? Are there actually 43 entities in Chicago?*
 - A: Will follow-up; this may be separate projects/buildings rather than separate accounts*
- Cost-effective C&I programs and strong performance
 - PGL: 85% goal, 72% spend

- NSG: 88%,65%
 - Q: (Chris Neme) Why the dramatically different cost per therm depending on utility territory?*
 - A: Will follow-up*
- Strategies – C&I; Small & Midsize
 - S&M trade ally engagement is important
 - Restaurant kits were successful
- SEM highlights
 - 322k therms in 2019
 - 2020 "alumni" cohort – 360k therms projected
 - Capital project improvements
 - Q: (Chris Neme) What is the measure life for those savings?*
 - A: We can get back to you but it's a variety of measures depending on the project*
 - Q: (Chris Neme) Is it new activities for the pipeline or does it include counting again?*
 - A: New opportunities*
- Public Sector
 - Key customers: CPS, City, Cook, CTA, Park District
 - Remove financial barriers
 - Support Retrofit Chicago
 - Future Energy Champions – partnership with student group Citizens Climate Lobby. Students participating in school energy audits.
- Customer Engagement –
 - Qualawash example
 - Customer appreciation luncheons

Omayra Garcia, Peoples Gas/North Shore Gas

- Residential programs
- Services: Jumpstart assessments & DI, Rebates (custom & prescriptive), Education (HERs, 5th graders)
 - Q: (Chris Neme) Does Jumpstart looks at major measures, blower door test?*
 - A: Does not include blower door test but does include inspection of unit & attic & etc. Revisit if necessary. Some recommendations for what to do next after the DI.*
- Review of customer counts & therm savings
 - Q: On Weatherization project, are those all from the Jumpstart program?*
 - A: No, the Weatherization could be contractor driven or visit driven. It's a mix.*
 - Q: Do you offer the same rebate measures in both territories?*
 - A: Yes*
 - Q: (Chris Neme) Can you speak to Peoples HEJ homes – what percent was there an envelope measure identified?*
 - A: Will follow-up*
 - Q: Interested in both utilities and % of follow-through*
- Portfolio Performance
 - PGL: 141% save /122% spend
 - NSG: 132% save /126% spend
 - Q: (Chris Neme) Do you have a Home Energy Reports program?*

A: Yes

Q: *What fraction from HER for each utility?*

A: *Will follow-up*

- Residential strategies
 - SF customer satisfaction, ally outreach
 - MF trade allies for pipe insulation; update rebates for DHW controls
- Q4 highlights MF
 - Exceeded forecasts
 - Pipe insulation and stem traps
 - Trade allies, property managers, outreach
- Income Eligible
 - CBA, IHWAP, Elevate, Slipstream partners on various programs (SF, MF, Public, Affordable New Const.)
 - All jointly offered with ComEd
 - 2019 highlights
 - Action year, improved on 2018
 - LIHEAP kit gas only
 - 5000 sent out
 - More for 2020, maybe a joint effort
 - Work with IQ North
 - Portfolio results
 - PGL 66% save / 105% spend
 - NSG: 42% save / 102% spend
 - Customer counts & budgets by program

Q: *(Kristol Simms) What is the window kit?*

A: *Plastic for the windows*

Q: *For LIHEAP grant recipients – is there a way to screen them to see if they are people that haven't yet been served by IHWAP program?*

A: *Income verification was a challenge, but LIHEAP guidelines means that they are already qualified if they got a grant – already verified – but not sure they are all IHWAP measures so I don't think that this was compared to that list.*

Q: *Maybe confer with DCEO next time for more info*

A: *Yes, good idea*

Q: *(Kristol Simms) Who conducts the survey?*

A: *Our evaluator*

Q: *(Abby Miner) Can customer get 1 kit only? Any diff in kits between utilities?*

A: *One per customer account.*

- Outreach highlights
 - 80 events = 900 HEJ leads (3 top events)
 - Annual holiday giveaway to 3 customers referred by community orgs
- On-Bill Financing
 - Up and running as of Q4
 - Slipstream

Christina Pagnusat, Peoples Gas/North Shore Gas

- MT and R&D projects
 - Art Institute Dehumidification
 - Upstream Food Service

- BOC

Q: (Chris Neme) For the Art Institute project producing that level of savings- is that unique to the building or applicable elsewhere?

A: Microsoft machine learning to help control areas of the museum that were being heated and cooled at the same time to create conditions for artwork. Worked to reduce that simultaneous heat/cool. Probably other museums or other similar facilities that need the same kind of heat/cool previously would be candidates.

Q: Could be electric savings also.

A: Yes, we have had some conversations with ComEd and working on collaborations.

Q: Any case study?

A: Writeup is being worked on with all parties, to figure out what is shareable.

- R&D side

- Open Source building sensors
- Venturi steam traps
- GTI funded projects (UTD program)

Q: (Phil Mosenthal) Open source sensors – old radiators – is that thermostatic control valves?

A: (Allen Dusault) It's more interesting – it's a sensor that has a servo to adjust valve depending on room temp. Can sense occupancy or be pre-programmed. Will provide more info.

- 2020 Outlook

- RES: Drive participation; monitor higher cost programs
- IE: customer partner relationships; leverage trade allies; create awareness & engagement
- BIZ: pipeline of identified projects; low/no cost measures; dry cleaners market segment; increase NSG public and private sector outreach; successful implementation for key public sector customers
- Overall: Explore new measures/progs for 2021; 2022-25 planning process

Summary of Follow-Up Items – March 10 (Day 1 Meeting)

SAG Portfolio Planning Process:

1. SAG Facilitator to circulate definition of “Non-Financially Interested Parties”

ComEd follow-up items:

1. Streetlighting Program
 - a. What share of Streetlighting is from Chicago?
 - b. Is there any [lighting system] redesign being done? Or is it just pole for pole swap?
2. Multi-family Weatherization through Community Action Agencies – is this offered by all CAAs in ComEd's service territory or only certain Agencies?
3. C&I Programs
 - a. On compressed air – are you providing education process to detect leaks, etc.? Interested in additional information.
 - b. Describe virtual commissioning vs. retrocommissioning.
 - c. What % of top 100 and top 500 customers are participating?
4. Electric New Homes – is there a report available on the 2019 research?

Peoples Gas/North Shore Gas follow-up items:

1. Public Sector Customers – how is public customer defined? The presentation showed 43 customers in Peoples Gas service territory, which seemed high. What type of entity is included in that number?
2. C&I Program – why is the cost per therm so different for Peoples Gas vs. North Shore Gas?
3. SEM – what is the measure life for these savings?
4. Home Energy Jumpstart – for what % of customer participants was an envelope measure identified and what % of customers followed through with a project (for both Peoples Gas and North Shore Gas).
5. The % of savings from Home Energy Reports, split for Peoples Gas and North Shore Gas.
6. Additional information about open source building sensors.
7. Art Institute Dehumidification Project – will follow-up if a whitepaper is made available.

Illinois Energy Efficiency Stakeholder Advisory Group

Large Group Meeting
Wednesday, March 11, 2020 – Day 2
10:30am-4:00pm

Meeting Materials – Wednesday, March 11 Meeting

- [Overview Page](#)
- [Agenda](#)
- Presentations/Materials
 - [Nicor Gas Portfolio Overview Presentation](#) (Randy Opdyke, Nicor Gas)
 - [Utility-Only Weatherization Presentation](#) (Ashley Palladino, Resource Innovations)
 - [Program Overview Matrix: Northern IL CAA Offering Funded Solely by Utilities](#)
 - [Ameren Illinois Portfolio Overview Presentation](#) (Kristol Simms, Ameren Illinois)
 - [Cannabis Cultivation Presentation](#) (Nick Collins, Energy & Resource Solutions)
 - [Open SAG Cannabis Questions for Discussion](#)

Wednesday, March 11 Meeting Attendees (by webinar)

Celia Johnson, SAG Facilitator
Greg Ehrendreich, Midwest Energy Efficiency Alliance (MEEA) – Meeting Support
Jake Ahrens, VEIC (IL-TRM Administrator)
Matt Armstrong, Ameren Illinois
Jean Ascoli, ComEd
David Baker, Energy Resources Center, UIC
Robert Baren, IL Department of Agriculture
Jordan Berman-Cutler, ComEd
Joseph Birschbach, Leidos
David Brightwell, ICC Staff
Tisha Burnside, Resource Innovations
Ben Campbell, Energy Resources Center, UIC
Craig Catalo, Franklin Energy
Nick Collins, Energy & Resource Solutions
Andrew Cottrell, Applied Energy Group
Larry Dawson, IL Association of Community Action Agencies (IACAA)
Leanne DeMar, Nicor Gas
Sam Dent, VEIC (IL-TRM Administrator)
Atticus Doman, Resource Innovations
Julie Drennen, Center for Energy & Environment
Wael El-Sharif, 360 Energy Group
Per Ellingson, Ameren Illinois
Katherine Elmore, Community Investment Corp.
Larry Erwin, Leidos
Jim Fay, ComEd
Jason Fegley, Leidos
Scott Fotre, CMC Energy
Julia Friedman, Oracle
Zachary Froio, Applied Energy Group
Omayra Garcia, Peoples Gas & North Shore Gas

Lauren Gaikowski, Franklin Energy
Jenny George, Ameren Illinois
Jean Gibson, Peoples Gas & North Shore Gas
Kevin Grabner, Guidehouse
Molly Graham, MEEA
Andrey Gribovich, DNV-GL
Mary Ellen Guest, Chicago Bungalow Association
Randy Gunn, Guidehouse
David Hernandez, ComEd
B.J. Hanson, Franklin Energy
Travis Hinck, GDS Associates
Julie Hollensbe, ComEd
Nick Horras, Resource Innovations
Hannah Howard, Opinion Dynamics
Nick Hromalik, MEEA
Michael Ihesiaba, ICF
Tamaira Jackson, Ameren Illinois
Jim Jerozal, Nicor Gas
Mary Johnson, Resource Innovations
Katherine Johnston, Green Homes IL
Kevin Johnston, Green Homes IL
Marisa Joyce, Elevate Energy
Kristen Pratt Kalaman, Resource Innovations
David Kalensky, Gas Technology Institute
Mike King, Nicor Gas
Jonathan Kleinman, Aiqueous
Larry Kotewa, Elevate Energy
Ed Kriz, Nicor Gas
John Lavallee, Leidos
Bruce Liu, Nicor Gas
Molly Lunn, ComEd
Karen Lusson, National Consumer Law Center
Damien Markiewicz, Resource Innovations
Adam McMurtrey, Exxon-Mobil
Brady McNall, DNV-GL
Rebecca McNish, ComEd
Samarth Medakkar, MEEA
Tim Melloch, Future Energy Enterprises
Cheryl Miller, Ameren Illinois
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Anne Mitchell, Jenner & Block, on behalf of Nicor Gas
Zenia Montero, ICF
Fernando Morales, Ameren Illinois
Jennifer Morris, ICC Staff
Phil Mosenthal, Optimal Energy, on behalf of IL Attorney General's Office
Denise Munoz, ComEd
Chris Neme, Energy Futures Group, on behalf of NRDC
Rob Neumann, Guidehouse
Dantawn Nicholson, ComEd
Victoria Nielsen, Applied Energy Group
Randy Opdyke, Nicor Gas

Antonia Ornelas, Elevate Energy
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Ted Weaver, First Tracks Consulting, on behalf of Nicor Gas
Cate York, Citizens Utility Board
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Mark DeMonte, Whitt-Sturtevant, on behalf of Ameren Illinois
Wayne Leonard, Guidehouse
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Lauren Casentini, Resource Innovations
Kimberly Johnston, Slipstream
Edith Makra, Metropolitan Mayors Caucus
Kelly Mulder, ILLUME Advising
Patricia Plympton, Guidehouse
Selena Walde Worster, ErtheEnergySolutions.com

Meeting Notes

Follow-up questions indicated **in red**.

Nicor Gas Portfolio Overview

- Agenda: Overview of current EE; progress for 2018-19 & outlook for 2020-21; Emerging Tech & MT Update

Randy Opdyke, Nicor Gas

- Portfolio design objective – 7 aspects: budget (statutory constraints, rate classes); cost-effectiveness; savings (annual, lifecycle); fairness; diversity; market; econ dev
- Structure: Biz, Res, IQ – some are joint with ComEd or Ameren, reduced coordination in 2020 on RNC prog
- Review of portfolio 4-year budgets & goals (some caps or stipulated minimums on spend dep. on segment of portfolio)
 - Cost-recovery ONLY – no incentives
- Program overview – program by program review (offerings, challenges)
 - Biz sector
 - BEER – 2019 still in *ex ante*

Q: (Chris Neme) *Helpful graph; between 2018 and 2019, spending went up a 10%, savings went up a 150%. Why?*

A: *Details will come in a minute*

- BEER (cont) – approx. halfway to 4-year goal

Q: (Jennifer Morris) *Are these goals adjusted by the adjustable savings goals or do these match what was in original plan?*

A: *These are adjusted to the adjustable savings goals – which went down a little bit – according to what is filed every year*

Q: *Forecast for 2020-2021 do those represent the adjusted savings, or have you shifted funds around and is that reflected?*

A: *There will be shifts depending on how the program is delivered but everything is under our policy and everything for dollars is within our filings. What you will see is that some programs underproduce and some overproduce and it's about managing our measure mixes. That's high-level portfolio.*

- BEER (cont) – 2019 had a large increase in terms, predominantly from a steam trap bonus that increased that program success; challenges in 2020-21 relate to pipe insulation. Longer WAML for those programs and we did some incentive adjustment to hopefully increase average WAML for the program. Incentive level was impacting participation.

Q: (Chris Neme) *WAML at 6.7 is actual?*

A: *That's over the 2018-2019 period*

Q: *How did 2019 compare with plan, did it change or lower the WAML?*

A: *Incentive adjustment was late 2019 and we haven't seen that impact really yet but will shift in 2020*

Q: *Was WAML close to what you planned?*

A: *Steam traps have a 6-year WAML and it brought it down (pipe wrap has 15)*

A: (Jim Jerozal) *WAML is a snapshot in time and we expect that as we balance the total portfolio WAML that is part of how we shift things around. Later years, more longer-life WAML. We anticipated this though our filing showed it flatter.*

- Small Biz (SB) – already over 4-year goal; great participation from public and dry cleaner steam trap
- Biz Custom – big surprise in 2019, engaged lots of customers; pipeline filled with projects; higher WAML; engagements with CHP and RCx; challenge is long lead time

- Biz New Const – joint with ComEd; hope in 2020-21 that we see higher participation in these projects; more challenging but also has long WAML and we value that
- SEM – 3 cohorts last year; great low-cost/no cost performance; over 4-year goal; challenges are timing of starts and savings calcs
- Res sector
 - HEER – trade ally partnerships/contractor circle; stacked rebates with ComEd; challenges is maintaining participation bc of smart therm delivery method, need more options, also gas furnace participation needed incentive increase esp for highest efficiency

Q: (Chris Neme) Does HEER program provide envelope rebates?

A: No, will go through that program next

Q: (Karen Lussion) When you say challenges for thermostat participation delivery option can you explain?

A: Right now, working with ComEd marketplace but participation there isn't as high as we like and delivery from marketplace might be changing so we are looking at some trade ally offerings and incentives for example

Q: If you work with trade ally partners esp. in IQ, do you assess smart vs. programmable for fit?

A: We try to provide smart if there is a fit for it, that's predominant

Q: How do you determine if the customer is a right fit?

A: We'll jump into low income after res and add more info then.

Q: (Phil Mosenthal) About SEM, are those just behavioral savings or do they get rebates for hardware too?

A: Those are just low-cost/no cost (e.g. Thermostat turn down) and if they do measures those go into those programs

- HES – 2018-19 was fully joint with ComEd; 2020 air sealing will be just Nicor which will decrease participation levels because of budgets; Home energy assessment remains joint with ComEd

Q: (Chris Neme) HEA DI component – is that also identifying customers where it makes sense to do the ASI – is there a pipeline from HEA to ASI?

A: Yes, the partner that does the assessment provides info to customer about opportunity and then it is the customer's choice to participate in ASI. Assessment provides info and access to trade ally network.

Q: Does assessment include blower door?

A: No that is through ASI program, not HEA/DI side of things. Recommend if there is a need.

Q: Are they looking at attic, basement walls, other aspects?

A: All aspects related to air sealing and insulation

Q: Of 10k homes over 2 years, what fraction recommended insulation/air sealing?

A: Good question, Guidehouse did some process review recently. I think 14% but we can get back to you on that.

Q (Phil Mosenthal): Would that indicate that everyone did measure if recommended?

A: Not every ASI goes through HEA first, so that's probably not quite right.

Comment (Chris Neme): I'd be surprised if 86% of homes had no need for insulation or air sealing, if that is percent, might be missed opportunities

A: Might have mistaken that number – that is the conversion rate, not the

recommendation rate, I think.

Q: Can you provide the recommendation rate?

A: Will follow-up

Q: Is OBF available for ASI measures?

A: We just got a new vendor and we hope to take advantage of that if it is an opportunity

A: (Jim Jerozal) Anything EE can be put on OBF, and we're happy to have a new vendor that we can get that to happen

Q: (Chris Neme) Transaction costs on customer for making that conversion, wonder if there is some way to hook them up with a vendor and increase that conversion rate

A: It's a good thought and opportunity

A: (Jim Jerozal) We do some CX journey mapping through the program and will think about those handoffs and transition pathways, maybe we can remove some of those burning hoops to jump through

Q (Chris Neme): This could be part of the process evaluation to understand why they didn't convert

Q (Karen Lusson): I received an email this morning about a local Agency that completed a weatherization project, but the customer just had a new furnace and A/C installed through on-bill financing and is now paying 10 years for those measures, instead of receiving for free through the weatherization project. This needs to be addressed so this doesn't happen.

Q: (Chris Neme) Reason they are pulling out of this is that when all the heating is gas there isn't as much savings per dollar available for them, assuming that is the reason have you talked with ComEd for some alternative form of program where you can sell the first year kWh to the customer? (Electric savings from AC from the air sealing/insulation job – could they sell to ComEd at a reasonable price as part of their portfolio)

A: As long as there isn't double counting, which would be the issue.

A: (Jim Jerozal) We had to pivot pretty quickly, but we're open to that idea

A: (Molly Lunn) We can talk about it but it's all a matter of cost-effectiveness and low production – dollars per kWh was pretty high, but we can explore

Q (Phil Mosenthal) Related to one-stop-shopping, customer handhold, do you recommend measures and then commit rebate dollars / pre-approve measures for rebates, or is the customer on their own?

A: The assessment explains incentive levels and rebates and provides trade allies suggestions, but doesn't prequalify

Q: (Chris Neme) There are some good examples of high conversion rates from other jurisdictions – this one is ripe for more conversation

A: (Jim Jerozal) Excellent input, let's work on it together in the next plan cycle

Q: (webinar) Who is vendor for OBF?

A: Slipstream, for all of the IL utilities.

- Outreach & Education – late launch in 2019 (kits were in market but behavior didn't launch until late 2019)
- MF – assessment and DI joint with ComEd and some solo prescriptive rebates; new CPOP program to incentivize trade allies
- Res New Const – new prescriptive for 2018-19; was joint with ComEd but not for 2020-21; challenge is to maintain stability and continuity

with builders; program redesign; less HERS rater focus, more prescriptive paths for builders

Q: (Karen Lusson) Why is this no longer joint with ComEd?

A: (Molly Lunn) For us it was a high dollar per kWh with low volume, opportunity for us was to support all-electric homes pilot instead

- IQ Program – Some of it is joint with ComEd; challenge is the cost per therm – way higher than we planned; only at 12% of goal; planning for spending increase and looking at opportunities; coordinated plans to partner on savings kits, Chicago Bungalow Assn. opportunities, deeper dive into harder to serve areas.
- Higher level Portfolio look
 - Overall, at 58% of 4-year goal; spend is 20% on IQ and 9% on public; WAML is 13.6 for 2018-2019. Higher lift in 2020 to balance out.
 - By sector review of stats (Res, biz, IQ, portfolio costs) – biz most savings
 - Review of cost per therm by sector – IQ is approx. 7X more per therm compared with res and 20X compared to biz; twice what we expected
 - Review of program spend – IQ is highest spend, then HEER, the Custom, HES, BEER. Most savings through Custom, BEER, HEER.
 - Program costs per therm – IQ, then RNC, HES, BNC, etc. IQ is 3X RNC.

Q: (Chris Neme) For the IQ initiative, how many homes have participated for SF and MF?

A: I have a slide on participation, but I don't have the SF/MF split, but we can follow up

Q (Phil Mosenthal): \$16 per therm on IQ spend is double than planned? Why?

Q: Did Plan assume that all IQ would be joint with ComEd?

A: Yes, we had joint efforts with ComEd in our Plan. [IHWAP] numbers from DCEO weren't accurate from a cost perspective, so we had to make shifts in our portfolio.

We have achieved therm savings to make up difference, but our original planning assumptions were not accurate to what is truly happening in that market

Comment (Phil Mosenthal): Yes, those DCEO numbers were low, I remember they were 50%

Q: (Karen Lusson) Whether or not Nicor and ComEd plan to make adjustments to make those utility-only programs joint? I still don't understand why Nicor has utility only programs still that aren't joint with ComEd. My understanding was that there was a conversation in January and discussions are ongoing, but maybe that is a way to reduce cost and get measures of both types to customers

A: (Mike King) Conversations are still ongoing – we have an open line of communication with ComEd and we are looking for more opportunities. We hope to have an approach for 2020-21 and we're excited to work together

Q: (Chris Neme) Is exploring the Chicago Bungalow Program part of that?

A: Yes, and working with a new contractor Urban Efficiency Group

Q: (Karen Lusson) What are the barriers to coordination? It's about getting people better programs that get them all the measures.

A: Yes, and we've got the communication going

Comment (Karen Lussion): I'm interested in further discussing offline.

- Participation review – unique accounts participating (not by account by year) – about 6% of customer share
- IQ participation – 6k of 875k customers participated

Q: (Chris Neme) Who participated?

A: More units related to MF. Majority are energy savings kits and they are the avenue to build trust with the customers.

Q: What portion of those 6300 participants were kits?

A: About 2/3, but majority of savings from Weatherization

Q: So about 4000 were kits, and 2000 were whole building, would a MF building be one customer or each apartment in the building?

A: Not counting per apartment unit, counting per customer account

Q: Total 875k customers would include number of units?

A: No those are unique accounts

Q: So, if it is a master-metered building is it households?

A: About 37% of our customer accounts are IQ

Comment (Jim Jerozal): If we have a MF building with 20 units and it is master-metered, do we count 20 or do we count 1? If 20 individually metered in same building, do we count 20 or 1? Each meter is an account, regardless of whether they are in the same building.

Q (Chris Neme): Is it possible to separate out kits, single family, multifamily, etc. – I'm interested in the number of housing units that got served with weatherization, and also split by SF/MF

A: Will discuss with the team and follow-up

- Econ impact & jobs – IMPLAN – NEI working group call was similar method. \$69M in economic output, \$25M in wages, 548 jobs; mostly from Res

Q (Chris Neme): ComEd/Ameren NEI reports had direct, indirect, induced jobs – are these just direct?

A: IMPLAN is direct & indirect & induced, but also their spend is much higher than ours

Q (Phil Mosenthal): How is wages supported different than jobs?

A: Will follow-up with more detail behind the IMPLAN analysis, if needed

A (Ted Weaver): Wages is \$, jobs are counted

Q: Are those wages for those jobs?

A: Yes, they are different units and related

- Emerging Tech & MT

- Ideas to measures – site has idea submission portal & we have a scoring process; this is one of our pipelines

Q: (Chris Neme) What is “value to the portfolio”?

A: How do those therm savings touch sectors. Equity. Policy goals. Other non-savings benefits.

Q (Abby Minor): Is Nicor considering measuring health impacts?

A: I think we are working within the SAG NEI working group process

Q: (Chris Neme) You are funding along with ComEd and Ameren the IQ portion?

A: Yes, electric side started first and we're coming in. Guidehouse is leading that effort

- Review of emerging technologies program – apps, pilots completed, active pilots, etc.

- Review of 2019-2020 pilots – venturi steam traps joint with Peoples Gas and Southern Cali Gas; submitted one pilot to TRMv10; windows joint with ComEd; review of technologies that are being piloted for 10 different pilot programs; GTI manages most of the pilots
- MT update
 - Working together with other utilities to leverage resources
 - Midwest and North American collabs
 - Review of Midwest MT timeline 2016-2019 and ongoing to 2021
 - 7 utilities over 3 states in Midwest
 - Review of MT definition – we think we are in the early stages
 - Activities & initiatives (2020 & beyond)
 - SAG MT Working Group
 - Initiatives
 - BOC with MT
 - Code compliance
 - Midstream food service
 - Gas HPWH
 - Gas HP combi units
 - Condensing rooftop units

Q: (Chris Neme) Great that you are engaged in MT with other utilities. One item not on use and want to pitch, is triple glazed high-perf windows. Lots of emphasis in water heating in your list but we have to focus some attention on building envelope measures and with MT windows is somewhere it can work

A: Yes, that is an effort in the MW MT Collab at the ‘opportunity brief’ stage and there are opportunities for that, low-E window pilot, etc.

Q: (Karen Lusson) Protocol question after all presentations – how do we go about getting answers to all of these questions that are asked?

A: (Celia Johnson) We are taking notes and will be looking open questions and working with utilities to get those answers back to the group

Q: (Jennifer Morris) Are there currently any changes Nicor is thinking about for next plan cycle – any sneak peaks?

A: Currently in that initial planning process

Utility-Only Weatherization Overview

Ashley Palladino, Resource Innovations

- Program summary – goal & program description – Community Action Agencies (CAAs) delivery to IQ customers not otherwise eligible for IHWAP – this provides similar services that are “over income” for IHWAP to reach a broader section of customers
- January SAG meeting in Springfield – focused on IHWAP-braided programs, and discussed building capacity at Agencies

Q: (Karen Lusson) Can you speak about role of RI or utilities in determining how an Agency does or doesn’t have ability to increase capacity (more workers, homes, MF buildings)?

A: At a high level, through our role as the implementation contractor we are partnered with the IL Assn of CAAs and we promote their success especially the utility portion. Our role working collaboratively with our subcontractor is to assist the Agencies to identify opportunities to

increase capacity. Agencies differ / have their own way of adapting operations to IHWAP, their own staffing and markets and contractors. Not specific to the presentation today but can talk more. Have been working with utilities to figure out how to support all the Agencies.

Q (Karen Lusson): I'm not sure I have a clear understanding of how the utilities or RI goes about determining whether weatherization is done through this program or through the Chicago Bungalow Program or Elevate MF efforts.

A: I can't speak on behalf of the utilities, since this presentation is specific to the utility only portion of Community Action Agency weatherization

- Review of program ramp up (2017-2018 dev & launch; 2019 refinement, increase activity, revisions and customer experience; 2020 right-sizing budgets and capacity, emphasis on more braiding, implementation of revised guidelines)

Q: (Karen Lusson) Did you work with Agencies on new guidelines & protocols?

A: Agencies were involved in those discussions and we listened to their feedback. We did not institute any rule changes without input and buy-in. There were some Agencies that weren't 100% happy but we are keeping communication open. Trying to be collaborative with real-world situations. Learning, adapting, staying flexible.

- Program Detail (as included in supplemental Excel file shared)
 - The only diff between IHWAP and utility-only is income eligibility
 - Special exceptions for some customers that are IHWAP eligible on income but not for other reasons e.g. "re-weatherization" – serve customers that aren't otherwise being served

Q: (Karen Lusson) Can you explain how that works? Do you go to each Agency's waiting list?

A: Each Agency manages their own list, with consideration of the utility-only program. Some customers have come back, and agencies are aware they exist and they can put in pipeline for utility-only. The utilities have the intel on their customers that can help the agencies, but the agencies select.

Q: What about Agencies that only do braided or don't do Weatherization but have customers that want Weatherization?

A: For Agencies that aren't part of utility-only side, we haven't run into a situation of a backlog of customers that can't be served. But that certainly is a possibility that might be an opportunity for the Agency to refer.

A: (Nick Horras) I work with all 18 agencies in N. Illinois. Some agencies are capacity limited or haven't got a high demand. They have provided some market rate program info to customers over 200% to go into other programs, and there is a short list of those over 200 that they are trying to serve.

Q: (Chris Neme) Coming back to mechanics of how this works. My understanding is that customer under 200% wouldn't be on a waiting list because they didn't qualify to be on the waiting list because they received Weatherization back in the 90's – am I misunderstanding?

A: I wouldn't consider re-Weatherization customers as "waiting list" customers but there can be customer inquiries. If Agency has backlog of IHWAP qualified customers with lower priority, a lot at the bottom of the list might take years to get to on waiting list but if there is an urgent need the utility-only could serve that. Due to benefit from sharing funding with

IHWAP we pull more of the special exception customers.

Q: 2 categories of under-200% customers – after cut-off date re-Weatherization customers not eligible under rule; 2nd category is rare exceptions where customer would be eligible but is so far down on list and has urgent need. Is that right?

A: Exactly. And those are fairly low volume.

- Measure details
 - Use IHWAP guidelines though there are some select baseline changes for utility only – some qualification required for some installs
 - Incentives are all no-cost to customer. Admin adder for contractor pricing agreements as per IHWAP.
 - Same measures offered (though some baseline differences) – exception that utilities offer only fridge replacement (braided has fridge & freezer)

- Considerations
 - Partnership has provided ability to serve new segment and growth for agencies
 - Some leveraging of IHWAP operations and guidelines & some utility specific differences from existing IHWAP/CAA operations
 - Goal to increase diverse business participation as contractors

Q: (Karen Lusson) Any specific discussion of a more regional approach to price negotiation?

A: We may have touched on this at last SAG meeting; this is under discussion

- FY vs CY funding cycles; working on expanding & capacity building
- Participation
 - Review of SF numbers (2018-19 actual, 2020 plan)
 - Lower incentive budget for 2020 plan – right-sizing
 - A big more cost-effective on spend per home so dollars will stretch a bit further

Q (Karen Lusson): Significant increase from 18 to 19 for SF util-only, but only modest for IHWAP portion. It all involves the Agencies. So how does that impact the Weatherization effort? Why such a modest jump in Weatherization braided but huge jump in utility only?

A: Good question. To be clear, all numbers are for CAA-delivered. Braided started mid-year, agencies increased braided at different paces at end of 2018, so limited customers served through utility-only CAA in 2018. So as much as we could do with that late start. Modest increase here on braided side, the full 12 months of activity on the utility only side has filled in gap periods. Are planning for an increase in braided homes in 2020.

Q: So, who assumes the role to make sure Weatherization effort (fed funded) isn't being short-changed to ensure that the utility-only program is focused on? Trying to understand that dynamic. Ideally all utility dollars would be channeled into low income Weatherization and maximize the leverage with federally funded program because that is where the most need is.

A: I think utilities would agree. We are prioritizing braided jobs over utility-only. Agencies are managing spending their full IHWAP budgets and we are working to make sure utility-only isn't overburdening them. Not every Agency is doing utility-only, so we work with those who are unable/burdened are not required to do so.

Q: (Karen Lusson) I think that is an important concept that each utility has to be committed to. Even though they have goals and more control over

the utility only, but funding should be maximized in federally funded Weatherization

Comment: (Chris Neme) The way I read these, there is an incentive to do that – utilities have an incentive to maximize braided. Incentives are utility only cost is much higher.

A: Changes in 2020 were to do that – making changes without impacting customer benefits, health, safety, etc. Bring cost per home in line with tenable long-term. Relatively conservative forecast. Expect to achieve better results.

Q: (Chris Neme) This is labeled incentive spend. Does that include audit & delivery costs?

A: Yes, material and labor and all costs incurred by CAAs as shown on previous slide

- Review of MF numbers - MF side has similar trends as SF. Emphasis on braiding as many dollars as possible. Increase MF participation.
- Review total spend (SF & MF) numbers – fairly even on homes served between 2019 and 2020 even with a budget reduction.

Q: (Karen Lusson) Q for Nicor Gas- can Nicor explain decision to allocate for braided vs this program vs non-joint program?

A: Noting that how we determine braided vs utility-only comes from agreement with the Agencies' input

A: (Mike King) Basically the shortfall from the spending first year when there was money left over, we fully funded 19-21 but still had money to spend so we designed another channel to help benefit customers in that space to receive services just through Nicor gas, while still fully funding IHWAP space.

Q: So, Agencies told Nicor that they can only take X amount of money from Nicor for Weatherization/utility-only program?

A: No, how IHWAP was funded was fully funding the forecast. Forecast for 2018 wasn't hit so it was re-forecasted. Slow start to 2018 production left surplus 2018 budget left-over. We fully funded the 2019 capacity the Agencies wanted, so we started up a contractor channel to benefit IQ customers and still funded all the other programs at 100%.

*[Continued unresolved discussion on funding allocation and joint weatherization work; **Action:** SAG Facilitator will follow up with Karen Lusson to clarify any remaining questions. **Follow-up item: Karen Lusson is interested in an update on utility coordination on weatherization initiatives]***

Ameren Illinois Portfolio Overview

Kristol Simms, Ameren Illinois (with Matt Armstrong and Deb Perry)

- Portfolio Overview
 - Review of 2019 results – 98.4% electric, 127.1% gas (pending eval)
 - Most successful: IQ, Biz Standard
 - 7X increased diverse vendor spend & contractors
 - Consistent with yesterday discussion with COVID-19 some of our activities are changing – more web-based outreach rather than large events, looking at how retail products programs will go, and talking about DOE requirements – looking for more creative ways to serve customers with EE as things change
- Q (Chris Neme): For the \$108.8M spend, what was the overall budget?

- A: About \$114 between two, but that will include some portfolio costs. Overall, about \$2M under-spend.

Deb Perry, Ameren Illinois

- Residential Initiatives
 - Behavior mod – discontinued mid-year 19, not offered in 20
 - Direct distribution – school kits – 59% low income areas – phenomenal feedback
 - Retail products – very successful, significant portion of portfolio (58% of res goal, half of that in budget)

Q (Karen Lusson): Why was thermostat free if not LI?

A: Offering was in areas where there wasn't another opportunity to obtain product

- HVAC – achieved goal; in 2020 will have more focused on ductless mini-split and HPWH

Q: (Chris Neme) ASHP numbers those are general centrally ducted systems?

A: Not cold climate or ductless – as you said the standard offering

- Appliance recycling – met goal & distributed EE kits along with to LI/MI customers; no participation challenges; significant pipeline (3 weeks scheduling)
- IQ – 4 channels (SF, CAA, MF, Smart Savers); website & specialists
 - IQ Registered Program Ally - SF households; met goals, lots of demand; partnered with Nicor to serve an overlapping community (just starting)

Q (Karen Lusson): Is this the CAA Weatherization program?

A: No this is our market-driven program, targeted at 200-300% that aren't served by Weatherization

Q (Cate York): Is smart savers active in 2020?

A: Yes, we will address in a few slides

Q: (Karen Lusson) This is 200-300% customers not 200% to 80% AMI?

A: Yes

- IQ CAA – braided funding channel; achieved goals; successful; worked closely with agencies and overcame some of our early forecasting and reporting hurdles; work-in-progress but good to date
- IQ MF – achieved goal; outreach coordinator was wildly successful; change for 2020 – long measure life weatherization items added to focus on long-term savings

Q: (Karen Lusson) Can you talk about the measures installed? No MF braided with agencies?

A: Correct, our Agencies have not had any interest in offering MF so far

Q: Can you describe diff between IQ Prog Ally vs Braided?

A: IQ PA channel no doors, windows, roofs or refrigerators – only approved measures in plan. Weatherization can do other things, we fund what is in our plan through braided.

Q: Can you compare the measures?

A: (Kristol Simms) We can send a list that compares all the measures

Q: (Chris Neme) MWh savings per house for braided is 2500 kWh per home, trade ally channel is 4000 – much higher. Sense of why? More electric heated homes?

A: Will take that to our technical review team to put together an answer

- IQ Smart Savers – thermostats – met goal; satisfied customers; pilot in 2018 and went full this year; local and diverse delivery allies; very happy

Comment (Kristol Simms): Anticipate good Q2-Q4 run pending response to pandemic

Q (Chris Neme): Any DR program outside of EE?

A: No

A (Kristol Simms): We have our real-time pricing program for customers to react, but it isn't the same as some of the utility DR programs

Q (Karen Lusson): These were actual installs by Ameren implementers?

A: Local and diverse allies were used to do the installs

Q: (Karen Lusson): Do you have protocols to determine where it makes sense to install a smart thermostat? E.g. Elderly at home all day, other issues. Can you talk about whether installer has protocol to determine the right fit?

A: (Kristol Simms) Customer choice program – can be installed by customer or they can choose to have it installed by ally. Doesn't require wifi connection. Customer can choose to participate. We are just making it easier for 6000 LI customer to take advantage of smart thermostat technology

Comment (Karen Lusson): NCLC issued a position paper on this that I'm happy to share.

- Public Housing – smart thermostats needed some education on value but that is ticking up; outreach coordinator is excellent

Q: (Chris Neme) Can you explain the building envelope project?

A: Air sealing & insulation – only MF channel we were able to do building envelope work in 2019 & hope to change that and get it in more channels

Q: *Terms per building – only about 400 per building, seems small*

A: *Can look into it and verify numbers with you*

- Multifamily – non-IQ channel
- Residential Changes for 2020
 - OBF program up and running (highest denial reason – past bankruptcy; credit score hasn't been a barrier so far but are monitoring)

Comment (Karen Lusson): Should add a protocol to ensure OBF recipient is not a LI customer who would otherwise get for free

A: Understood

- New Initiatives (HPWH, HVAC res, building envelope, retail products platform)

Comment (Kristol Simms): Retail product platform as noted yesterday by ComEd and we're interested in that too

- Workshop agreements (mini split, window AC, market survey on resistance heat replacement with ASHP, one-stop shop)

Q: These workshop agreements are all IQ related?

A: Yes

Comment: (Phil Mosenthal) Good to identify electric heat plus central air – good for standard ASHP

Comment: (Chris Neme) *This is all IQ so if they ASHP could replace furnace and AC and get both savings*

Comment: (Phil Mosenthal) *If they have ducts, then they could use a traditional system*

Comment (Ameren): *Will provide more information*

- Focus on savings with >10-year measure life – long-term savings to meet CPAS

Comment (Chris Neme): NRDC appreciates the 2020 changes and all of

these are improvements to portfolio

Kristol Simms, Ameren Illinois

- Business programs
 - Standard – Jarvis Electric ally exceptional & shared some info; one ally performed 267 projects for example
 - Custom – focus in 2020; underperformed in 2019 but momentum and traction; Energy Analyzer pilot using AMI data; CLIP program building a pipeline that could go through 2021
 - RCx – not much to report on additional highlights beyond the slide
 - Street lighting – successful and growing; municipal and Ameren-owned; potential is somewhat limited over next few years; community benefits beyond savings
 - Biz initiative changes for 2020
 - Increase electric custom savings (50% higher)
 - Focus continues on standard and small biz (long measure life)
 - Workshop agreements (process energy advisor pilot, EE as a service pilot)
 - Energy Analyzer (Agentis) tool
 - Exploring virtualCx offering (Power Take-Off)
 - Leveraging financing partners

Q (Phil Mosenthal): On increasing custom savings, do you have any particular strategies to talk about

A: Yes, process energy advisors are definitely working toward increasing that custom projects segment. Also working with wastewater treatment plant opportunities. And CLIP program increased incentive for large projects has brought us a huge pipeline. Building momentum. Dollars have shifted to the custom program to help pilot some of these initiatives.

Q: (Chris Neme) Through prescriptive or another channel, what uptake on demand control ventilation?

A: (Andy Vaughn): Will look into this

Comment (Chris Neme): The reason I ask, my sense from other jurisdictions is that market penetration is low and savings potential is large. Lots of reasons customers don't adopt them but it's something to think about for future efforts, even a MT type initiative.

A: (Kristol Simms) We can follow up more about that, thanks

- Potential Energy pilot – customer education online pilot
- Pursuing quantification of market effects – claim savings where we are impacting the market without incentives

Matt Armstrong, Ameren Illinois

- Market Development Initiative
 - Market development, diversity, economic empowerment
 - Goals: Increase participation & engagement by customers & communities; increase local, diverse candidates for jobs; expand or launch new local and diverse businesses in EE space
 - MDAP – market dev action plan – diagnostic attributes, help focus efforts & partnerships
 - 6X increase in diversity program delivery efforts compared to pre-FEJA
 - Outreach efforts

- Senior Services; Neighborhood EE Day; Bill Pay assistance events with kits for bill credit eligible customers (LIHEAP & seniors); internships & scholarships; case studies
- Residential
 - Customer kits – CAAs target LIHEAP customers & seniors
 - Accessibility pilot [Video presentation of customer case study]

Comments (Kristol Simms): For the accessibility pilot – partnered with Google and with local agencies to find families; served 11 so far and 19 planned for 2020; looking for reasonable ways to scale up. Families like this need connections with our programs.

- Workforce development research – with SEDAC; offering jobs board with them; working toward a summit and a pilot
- Participation metrics for MDI – diverse vendors, local and diverse program allies, interns, scholarships, CBO projects
- MWBE program allies – review of numbers; growth between 18 and 19 – 7.9% overall increase; looking to promote other sectors including LBTQIA

Q (Chris Neme): Can you speak to what is driving the growth – what is it about MDI initiative that contributes as compared to other parts of portfolio? How are you tracking whether MDI is driving this?

A: (Kristol Simms) We are partnered with Walker-Miller to do a specific effort to impact these allies – we have a list of potential allies and when we refer potential allies to W-M for evaluation and outreach, then refers back to Ameren with recommendations. They serve as the advocate and screening for working with those companies. We have provided some other support such as a staffing grant to companies willing to commit to serving more of our portfolio. We make clear to our implementer that we need significant outreach from them for local and diverse contractors for installs as well. That was launched through MDI and will move into the larger portfolio.

Q: Walker-Miller is funded through MDI?

A: Yes

Kristol Simms, Ameren Illinois

- Budget shift – 2020
 - Compare to filing – can review this slide on your own
 - Compared to 2019 implementation plan
 - Biggest electric variances: IQ program spend reduction; increase biz custom; adding OBF and a customer co-pay for some customers

Q (Karen Lusson): How does OBF trigger a 34% IQ reduction?

A: Budget was a lot higher on IQ than planned, we modeled with some OBF and co-pay in there; Now that we do a portion of the cost is covered by customer instead of just for program

Q: (Chris Neme) is this just for 200-300%?

A: All IQ

Comment (Karen Lusson): I am concerned about impact to IQ customers

A: This shift lines up the budget with our Commission-approved plan

A: If a customer can participate in IHWAP, that is better, but if they participate in an Ameren program then there is a co-pay

Q: How do you make sure a customer isn't accidentally going into an Ameren program?

A: Customers choose to participate. We would happily share education

materials with customers to help understand why they would participate.
Comment (Karen Lussion): I look forward to talking more offline

- PY 19 success stories included for your own review

Cannabis Energy Efficiency Opportunities

Recent SAG Discussions on Cannabis

Celia Johnson, SAG Facilitator

- Recent SAG discussions on Indoor Ag/Cannabis:
 - [November 2019 SAG Meeting](#)
 - [February 10 SAG Teleconference](#)
- Following recent discussions, a list of initial SAG cannabis questions was created: [Open SAG Cannabis Questions for Discussion](#)
- IL Dept of Ag will discuss responses to initial SAG questions
- ERS will discuss Massachusetts experience

IL Department of Agriculture

Robert Baren, IL Dept of Agriculture

- Currently receiving applications for growers; deadline is Monday
- Will be more opportunities to talk more broadly after we're past this application/licensing phase [note: licensing will be finalized July 1]
- #1-2 Definition of "canopy space"
 - Yes, it's a moving target
 - Includes all space within boundaries
 - Anticipated area is leaves of mature plants but could include stacking
- #3 Rules requirements for greenhouse #3
 - Do not anticipate
- #4 – Can producer change facility after licensing, what are requirements?
 - Changes have to be submitted and approved – including submitting new documents
- #5 – How often will the grower need to provide reports on production weights?
 - Constant – seed-to-sale electronic monitoring through BioTrack
- #6 – Can the Department share a list of facilities applying or permitted to grow cannabis with the utilities (specifically craft growers)?
 - Will grant 40 craft licenses by July 1, 2020, and that info will be public at that time
- #7-8 – HVAC compliance
 - Important for application scoring, therefore cannot go into detail at this time
- #9 - Ongoing monitoring
 - Must meet reqs of application and enforcement is at discretion of Dept.
 - Current hiring ramp-up for on the ground oversight
- #10 – Medical vs Recreational Facilities
 - Two acts that cover this
 - Department has licenses for 21 Compassionate Use of Cannabis Act growers – they got ability to an early application license for recreational. All 21 did apply. Requirements were based on the CUCA which meant there were not new requirements under these licenses
 - Craft grow facilities cannot produce for medical.

- Guidelines for medical are part of the rules through the Compassionate Use Act so no change at this point
- #11 – Water
 - Licensees must meet requirements of application
- #12 – Expansion
 - Must be approved and meet requirements of law
- Additional comments
 - Some limitations and guidance placed in law for energy efficiency. Willing to explore and work with licensees on more efficient methods. There are some bright lines there, but folks should feel free to work with licensees to identify more efficient practices for those licensees. Deviation from initial application has to be approved by Department.

Q (Zach Ross): On Q9 enforcement – you didn't mention EE specifically here, I imagine enforcement will extend beyond EE and might be a priority. What extent will EE consider in enforcement? It would be great to continue to discuss with the Department.

A: Can't comment right now due to open application process. Right to assume that a product for human consumption (esp. federally listed one) a process has to make sure the product moves through the legal IL system in such a way that it makes it way 100% intact to consumer. That should not be viewed as limiting any other enforcement or review.

Q (Phil Mosenthal): Is approval for changes going to be easy or involved?

A: Everything involves process; it has not been a complaint from previous licensees on the speed of review process even with spooling up a new industry. Delays create problems and we want to avoid that. Has to be deliberative process.

Q (Chris Neme): Follow-up; if a grower works with utility to come up with changes to their plan so they would exceed EE standards, there would need to be a review at the Dept to re-sign off on proposal?

A: Yes

Q (Chris Neme): If utilities were able to come up with a prescriptive package of modifications to the type of equipment that is installed under the EE requirements, could there be some pre-approval in concept of a prescriptive path for 'automatic' approval?

A: Will discuss internally with legal.

Q: (Celia) After July 1, can we have another conversation?

A: Absolutely

Q: (webinar) Is there any way for group to follow updates?

A: Cannabis licensing website through Dept of Ag website, lots of information

Next steps:

1. SAG Facilitator to schedule a follow-up discussion with IL Department of Agriculture on cannabis following July 1st licensing.
2. SAG Facilitator to follow-up with IL Department of Agriculture on the concept of 'prescriptive EE package' suggested during meeting.
3. For additional information from the IL Department of Agriculture, visit the Adult Use Cannabis page of the Department's website:
<https://www2.illinois.gov/sites/agr/Plants/Pages/Adult-Use-Cannabis.aspx>

Massachusetts Baseline Study

Nick Collins, Energy & Resource Solutions (ERS)

- Background about ERS & presenter
- MA and IL regulations
 - Lighting power density
 - MA – loose definition of canopy, broadly defined – confusion in calculations; recently updated but didn't add clarity really. Is clear definition that lighting is across full facility so can vary in areas
 - MA alternate path – DLC qualified product list (slightly better than) – LED only meets this.
 - MA – is possible to meet facility level req using industry standard HPS lamps because of nebulous canopy definition. Avg density 512.08 μmol . Could also reduce plant area and use HPS and same canopy by definition – light intensity goes way up to 775 μmol but LPD is functionally compliant.
 - MA – cultivators are sacrificing production space to keep using HPS and still meet reqs. Really reluctant to give it up.
 - MA – others are using LEDs – easier to transition non-flower parts of production to LED and lower energy intensity. Everything on LED except flower rooms, and flowers are checkerboarded with LED/HPS.
 - IL – definition is still somewhat nebulous about canopy though what I just heard might help that. Definition will require all LED, nothing else can meet that efficacy. Need more clear definitions.
 - HVAC
 - MA – meet building code (and none specifically apply...hard on the engineers). Surveys are conclusive that the regulations have not influenced HVAC design
 - IL – interesting callouts for ductless splits & variable refrigerant flow – but not actually a good fit for indoor ag facilities. Sensible Heat Ratio – sensible heat/load over total heat/load. Ratio shows how much dehumidification you need.
 - IL – SRH of mini-split and VRF are 0.7-0.9 so cooling not dehumidifying. Flower room SHR is 0.4-0.8 so mismatch between equipment and load it is asked to serve. [Supplemental dehumidification always needed in MA with splits, 30% of VRF.]

Q (Jim Jerozal): Dehumidification is one thing, what about heat to maintain temperature in grow space e.g. polar vortex. Will that be an issue as well for this type of product and how long can it withstand a temperature dip?

A: Great question, a few thoughts. Generally, cannabis facilities even in cold climate are exothermic. Especially with staggered flower room operation which has a flat, consistent load profile. Low heating needs even in cold climates because fixtures with HPS produce so much lighting heat.

Q: Is that high-eff lighting?

A: No, standard HPS. Even those converting to LED just need less cooling but still not any additional active heating. Another point in cold climates are packages unitary or split systems locking up without a low-ambient kit. Off the shelf equipment running year-round may just freeze up the unit even in normal winter. Overheat in short order in a normal winter.

Q: *Is cannabis tolerant of heat/humidity changes?*

A: *Fairly tolerant. Borders on frost tolerant. Can tolerate heat for a while. Humidity is the biggest issue – mold, mildew, pests.*

Q: *What is done to mitigate typically when those systems freeze up? Does it vary tolerance dep on strain?*

A: *Quality of plant can be affected by any brush with bad conditions and some strains are heartier than others. Typically, rooms will overheat with a freeze up, so they either run the “house lights” fluorescent strip lights to maintain the photo period somewhat even with lower intensity as long as the period stays consistent.*

- MA Baseline Study

- Funded by utilities/PAs. Trying to understand the facilities and how to evaluate these programs in ex post evaluation
- Interview based approach
- CCC regulations for lighting are a challenge based on industry standard practice (double ended HPS 1000W)
- Technical baseline and regulated power density definition don't match – not equivalent light delivery
- CCC knows about the ambiguous canopy definition and won't do anything about it right now so they only have to “fix it once” when the figure it out
- It will be a component of review and enforcement but not clear yet how that will come out.
- Compliance paths currently: More LED or sacrifice production space
- Photosynthetic Photon Flux Density (PPFD) has to be equivalent – amount of light the plant is getting at the surface of the leaf.
- Regulations have not impacted HVAC design. Broadly, smaller facilities use DX HVAC – mini-splits are very common. Large facilities are using chiller-based systems (gas fired is common)
- Initial memo issued regarding retrospective evaluation for immediate resolution; prospective report has been intentionally delayed for some more information development from CCC. Will be out to PAs the 25th for review and out sometime in April.

Q: *How many facilities in study?*

A: *In MA baseline study, there were interviews with architects, engineers, etc. who worked on just over half of the operating facilities in MA. 14 out of 28, perhaps.*

Q: *If there is an area with LED and flowering area with HPS, does state take into consideration that HPS is not used for 100% of production hours?*

A: *If you are checkerboarding, then it's looking to model that design for PPFD and the input wattage to get lighting density.*

Q: *(Celia Johnson) Will you be able to share that final baseline study report with SAG when it is available?*

A: *Need to clear this with the MA utilities but have heard they are eager to share it with Illinois.*

Summary of Follow-Up Items – March 11 (Day 2 Meeting)

Nicor Gas follow-up items:

1. Of 10k homes served over 2 years in the Home Energy Savings Program, what % received a recommendation for insulation/air sealing? What % followed through with a project?
2. For the IQ initiative, how many homes have participated for SF and MF?
3. Is it possible to separate out IQ initiative participation by kits, single family, multifamily, etc.? Also separate out the number of housing units that were served with weatherization, split by SF/MF.
4. Can you provide an update on coordination with ComEd on weatherization initiatives?

Ameren Illinois follow-up items:

1. Income Qualified Program Ally Weatherization vs. IHWAP-braided – can Ameren IL provide a list that compares the measures offered?
2. The MWh savings per house for braided is 2500 kWh per home, while the Trade Ally channel is 4000 – much higher. Any specific reasons why? Are there more electric-heated homes?
3. Multi-Family Building Envelope Work (air sealing & insulation) – 400 therms per building seems small, Ameren IL to verify numbers.
4. Through prescriptive or another channel, what is the uptake on demand control ventilation?
5. Resistance Heat Replacement with ASHP: stakeholders are interested in additional information.

Indoor Agriculture/Cannabis follow-up items:

1. IL Department of Agriculture Presentation –
 - a. SAG Facilitator to schedule a follow-up discussion with IL Department of Agriculture on cannabis following July 1st licensing
 - b. SAG Facilitator to follow-up with IL Department of Agriculture on the concept of 'prescriptive EE package' suggested during meeting.
 - c. For additional information from the IL Department of Agriculture, visit the Adult Use Cannabis page of the Department's website:
<https://www2.illinois.gov/sites/agr/Plants/Pages/Adult-Use-Cannabis.aspx>
2. Energy & Resource Solutions Presentation – Nick Collins will follow-up with MA utilities on whether baseline study report can be shared with SAG when finalized.