Illinois EE Stakeholder Advisory Group Large Group SAG: NTG Meeting #2

Monday, September 13, 2021

10:00 am - 12:00 pm

Attendee List and Notes

Meeting Materials

- Posted on the <u>2022 NTG page</u>:
 - o Monday, September 13, 2021 SAG Agenda
 - NTG Recommendation Spreadsheets:
 - Draft Evaluator Ameren Illinois NTG Recommendations for 2022 Meeting 2 (updated 9/13)
 - Draft Evaluator ComEd NTG Recommendations for 2022 Meeting 2 (updated 9/13)
 - <u>Draft Evaluator Nicor Gas NTG Recommendations for 2022 (notes from Meeting 1)</u>
 - <u>Draft Evaluator Peoples Gas & North Shore Gas NTG Recommendations</u> for 2022 – (notes from Meeting 1)

Attendee List

Celia Johnson, SAG Facilitator

Greg Ehrendreich, Midwest Energy Efficiency Alliance (MEEA) - Meeting Support

Brian A'Hearn, CLEAResult

Laura Agapay-Read, Guidehouse

Matt Armstrong, Ameren Illinois

Nancy Barba

Bob Baumgartner, Leidos

Anthony Brown, Ameren Illinois

Susan Buck, ComEd

Amy Buege, Verdant Associates

Ben Campbell, Energy Resources Center, UIC

Andrew Carollo, Cadmus

Michael Chimack, ICF

Kumar Chittory, Verdant Associates

Jane Colby, Apex Analytics

Hannah Collins, Leidos

Andrew Cottrell, Applied Energy Group

Erin Daughton, ComEd

Gabriel Duarte, CLEAResult

Allen Dusault, Franklin Energy

Jeff Erickson, Guidehouse

Jennifer Fagan, Verdant Associates

Jim Fay, ComEd

Scott Fotre, CMC Energy

Mike Frischmann, Ecometric Consulting

Diana Fuller, IACAA

Omy Garcia, Peoples Gas & North Shore Gas

Jenny George, Ameren Illinois

Jean Gibson, Peoples Gas & North Shore Gas

Heidi Gorrill, Slipstream

Kevin Grabner, Guidehouse

Andrey Gribovich, DNV-GL

Walid Guerfali, ICF

Mary Ellen Guest, Chicago Bungalow Association

Randy Gunn, Tierra

Vince Gutierrez, ComEd

Amir Haghighat, CLEAResult

Mark Hamann, ComEd

Travis Hinck, GDS Associates

Jim Jerozal, Nicor Gas

Haley Keegan, Resource Innovations

Anna Kelly, Power Takeoff

Larry Kotewa, Elevate Energy

Ryan Kroll, Driftless Energy

Wisit Kumphai, ComEd

John Lavallee, Leidos

Brady McNall, DNV-GL

Rebecca McNish, ComEd

Abigail Miner, IL Attorney General's Office

Jennifer Morris, ICC Staff

Phil Mosenthal, Optimal Energy, on behalf of IL Attorney General's Office

Sharon Mullen, Guidehouse

Rob Neumann, Guidehouse

Dantawn Nicholson, ComEd

Victoria Nielsen, Applied Energy Group

Gregory Norris, Aces 4 Youth

Lorelei Obermeyer, CLEAResult

Randy Opdyke, Nicor Gas

Christina Pagnusat, Peoples Gas & North Shore Gas

Michael Pittman, Ameren Illinois

Patricia Plympton, Guidehouse

Zach Ross, Opinion Dynamics

Clayton Schroeder, Resource Innovations

Cynthia Segura, Citizens Utility Board

Tyler Sellner, Opinion Dynamics

Cherlyn Seruto, Guidehouse

Arvind Singh, DNV-GL

Jacob Stoll, ComEd

Mark Szczygiel, Nicor Gas

Eric Van Orden, Copper Labs

Andy Vaughn, Ameren Illinois

Marques Vaughn, Ameren Illinois

Ted Weaver, First Tracks Consulting, on behalf of Nicor Gas

Peter Widmer, Power Takeoff

Jayden Wilson, Opinion Dynamics

Ken Woolcutt, Ameren Illinois

Hameed Yusuf, Resource Innovations Qianmin Zhang, ComEd Jason Fegley, Ameren Illinois Katie Parkinson, Apex Analytics

Meeting Notes

Follow-up items marked in red.

Purpose of Meeting: To discuss follow-up on Net-to-Gross (NTG) recommendations for the 2022 program year, on items flagged during NTG meeting #1.

Ameren Illinois NTG Values

Zach Ross, Opinion Dynamics

Business

o Business Standard

Flagged during meeting #1 for core lighting value; IL AG's office may want to discuss. Follow-up in meeting #3.

Small Business

Made one change to small business since meeting #1. Adjusted recommended refrigeration to align with other ratios – initiative wide ratio now for 2022.

Midstream Lighting

Will discuss lighting in meeting #3.

[Andy Vaughn] Midstream lighting – do you recall what it was in 2020?

[Zach Ross] This is a new result, but it was very close. 92%.

o Custom

Flagged because comments are still open on the research, discuss in meeting #3.

Virtual Retro-Commissioning (VCx)

Open item on NTG for VCx based on draft ComEd research. PowerTakeoff recommended flagged until that memo was finalized. Discuss in meeting #3.

Retro-Commissioning

No objections to marking this as consensus.

Building Operator Certification, Market Transformation, Street Lighting

No objections to marking as consensus.

Residential

Retail Products

Added gas ratios for Energy Star electric dishwashers mirroring electric. Otherwise, no retail products changes. Discuss LED Lighting in meeting #3.

[Jennifer Morris] Was that based on research?

[Zach Ross] No that is the default value, only a handful of these have been done so far.

[Phil Mosenthal] Advanced t-stat – is it a default value? Do we have commercial research?

[Zach Ross] We went through this in-depth last year, we have some comparable research but it doesn't really accurately represent Ameren program so chose default for cooling impacts which need a free-ridership adjustment. The heating impact study that supports that is between net and gross as previously discussed.

[Phil Mosenthal] No other Illinois-specific?

[Zach Ross] It was challenging to do any retail research this last year because of customer purchase behavior in pandemic but hope to study in near future.

Efficient Choice Tool

This is a non-rebate tool with product info; estimate additional products bought without incentives due to tool. Recommended in Meeting #1 to continue with pilot retrospective application. Recommend 0.65 at program level which is in line with what we have seen in the ComEd and Ameren programs. Not a direct research output but an assumed value we think will make sense for 2022 while we do more research. That value will be added to the spreadsheets.

Follow-up in Meeting #3.

IQ and Public Housing

No changes.

Market Rate Single Family

Added midstream HVAC ratios as per meeting #1.

- Market Rate Multi-Family
 - Direct Install LEDs (in unit)

Follow-up in meeting #3.

Common Area Lighting LEDs

Follow-up in meeting #3.

- Heat Pumps
- Whole Building Measures

Still finalizing research as proxies for these values – don't have an update on those today. Follow-up in meeting #3.

[Andy Vaughn] After considering, we feel like this is part of the one-stop-shop approach which is different from the standard in the past. We dug up for some comparable programs but didn't find anything so far. We think the default would probably be better.

[Zach Ross] I concur, it's how we have done it previously. This is a different program design. Will update the recommendation for Heat Pump and Whole Building for the default value but will leave the DI values which are from dated primary research.

[Phil Mosenthal] Is the Direct Install just screw ins and tubular LEDs?

[Zach Ross] Will look at that. We tried to look at the plan for the changing portfolio and combine with our past recommendations. Might be some overlap here. Not sure what the distinction is either.

Direct Distribution School Kits

Targets low income, no further discussion.

o Other (Breakthrough Equipment and Devices): Smart Home Engagement

Only change here was an IQ recommendation for Smart Home if it becomes that kind of program.

Ameren Illinois NTG values to follow-up on in meeting #3:

Business

- Standard
 - Lighting
 - Remaining research updates
- Midstream Lighting
 - LED fixtures and lamps
- Custom
- Virtual Retro-Commissioning

Residential

- Retail Products: LED Lighting
- Efficient Choice Tool
- Market Rate Multi-Family
 - Direct Install LEDs (in unit)
 - Common Area Lighting LEDs
 - Heat Pumps
 - Whole Building Measures

ComEd NTG Values

Laura Agapay-Read, Guidehouse

Income Eligible

Small Business Nonprofit Offerings

[Erin Daughton] This is under business, not income-eligible. A lot of those measures are going to be in midstream and small biz, some may be in standard.

Residential

Starting with programs with the same values as last year.

Elementary Ed

Every measure except LED is 1.0.

[Jennifer Morris] Any LED night light research? Aren't most night lights already LED?

[Laura Agapay-Read] Our note on that is Itron (now Verdant) looked at the NTG ratios for LED night lights and couldn't find any research on upstream LED night lights. Ultimately, we advised 1.0 because we interpreted SAG deeming of 1.0 for elementary ed would trump the default SAG 0.8 from the TRM.

[Jennifer Morris] What is an LED voucher?

[Vince Gutierrez] Will check on this question.

LED vouchers and LED specialty in addition to night lights – discuss in meeting #3.

Appliance Rebates

These were TRM default or primary research from 2018 participants.

Single Family Assessments

We have new values for LEDs. Otherwise, they are old values. Should we flag this LED as well?

[Jennifer Morris] I'm fine going with the primary research there.

[Phil Mosenthal] Okay with it too. What are we using for multifamily market rate? Might be worth using the single family for that if it's an old number.

[Laura Agapay-Read] We will follow up and see if it is in-unit, common area or both. Follow up in Meeting #3.

Home Energy Report

NTG does not apply because the evaluation incorporates it.

Residential HVAC

Midstream heat pumps & ductless mini split- Secondary research wasn't comparable. We recommended the TRM default. Any concerns on residential HVAC?

[Phil Mosenthal] You didn't find anything different, or comparable?

[Laura Agapay-Read] We looked at all the NTG ratios that are documented. Some of them were just deemed, others were primary research but fundamentally different in ways that made it not applicable. We have a memo on that.

[Phil Mosenthal] Should we indicate for reference that this is the default value – the notes make it seem like it is a researched value.

[Laura Agapay-Read] Will revise source notes to indicate it is a default value.

Residential Lighting

Didn't highlight any of these to discuss. Do we need follow-up in Meeting #3?

[Phil Mosenthal] Those are probably reasonable.

[Jennifer Morris] Probably fine. Here for the night lights there is a 0.8 value, might want to consider that with the ones above before the next meeting.

[ComEd] There is a difference in how those are delivered – one is a kit and the other is a purchase.

[Jennifer Morris] Was concerned that elementary ed wasn't a 1.0, seems like there is an abundance of LED night lights out there.

[Phil Mosenthal] 0.8 might make more sense. Some people might not have a night light at all and start using it, increasing load.

[Laura Agapay-Read] Argument for 1.0 is because SAG wanted to do that for Elementary Ed. Will discuss in meeting #3.

Business

Any questions on anything besides linear and screw in LED?

[Phil Mosenthal] What does the kwh mean for data centers?

[Laura Agapay-Read] Sometimes we find that the free ridership is different if we weight by savings or by kW, so the values are different. That shows a different number for kW than for kWh. In the evaluation report we will apply both values to the verified gross. They are in red font because we found it needed an update. These are the free ridership values found for recent

research. Based on participants from 2018-2020. This value is the values of 3 years of research combined. Similar to the non-res new construction where the f-r is from recent research but the NTG is a multi-year average. In the case of custom, it isn't a simple average it is a value over the 3 year period having to do with the different segments. Treat the period as one.

Custom

Any discussion on Custom?

[Erin Daughton] The last draft recommended either a two-year compilation of projects or a three-year compilation. We preferred the three-year and that's what's in the column right now.

[Phil Mosenthal] 3 surveys, or one study surveying all participants?

[Erin Daughton] Three surveys. Single year had relatively few projects, we asked if we could move to that average which we felt was more representative. Guidehouse recommended 2- or 3-year and we like the larger population.

[Jeff Erickson] This smooths out better over time than the 2-year average would have as well.

[Erin Daughton] Would like to see if we can agree on this one today.

[Jennifer Morris] No concerns with this.

[Phil Mosenthal] Okay with it as well.

Industrial

This was the result of recent research.

[Erin Daughton] Research was conducted last year, it's very stable, established program. We're asking that Guidehouse cut back on annual research on this and RCx.

[Erin Daughton] SEM in row 22 is called "Behavior – BP" (Business Public) and the NTG program is behavior. So that's like down on row 37 – it's in two places.

[Phil Mosenthal] Isn't that 1.0 by default because of the method of determining savings through regression analysis?

[Jennife Morris] My impression was that it was a billing analysis or something.

[Laura Agapay-Read] Not sure if it was a randomized control design.

[Phil Mosenthal] Some programs out there that estimate a baseline usage – vary by production level or such and then do a regression analysis.

[Laura Agapay-Read] Sounds like everyone agrees on the NTG of 1.0 and we need to use the Behavior Biz-Public name instead of targeted systems. Will delete that row.

o LED Streetlights

Those are part of Standard.

[Erin Daughton] It's called incentives but it is part of the standard cohort.

[Phil Mosenthal] So should row 19 be deleted/inactive?

[Laura Agapay-Read] We can mark that.

[Erin Daughton] There are some coming through custom.

[Phil Mosenthal] They're the same as the non-ComEd ones anyway, it's fine to leave it.

New Construction

[Erin Daughton] We are trying to get some additional interviews for three projects. Would like to follow-up in meeting #3.

[Phil Mosenthal] You have some current values but you are diverging to a longer-term average?

[Laura Agapay-Read] Simple 4-year average we have been doing for several years. What's in question is the result of this year's analysis.

[Phil Mosenthal] Any code changes in the last 4 years?

[Erin Daughton] Program adopts latest IECC a year after it rolls out, so it updates every three years and gets more stringent. It's a challenge for the program but I don't think it changes free-ridership.

[Erin Daughton] Seems to be some confusion about meeting code vs qualifying for program (which is above code). Need to work on how we educate on that.

[Laura Agapay-Read] Projects often also span a program year on those. We will wait to see what the additional research turns up. Can talk about it in Meeting #3.

Facility Assessments

Used to be operational efficiency program – same as last year.

Retro-Commissioning

New research but same value as last year's.

Virtual Retro Commissioning

Waiting on resolution of a question. Follow-up in meeting #3.

Small Business

Same values as last year for most of them. TRM savings for t-stats are between net and gross and adjusted for half of free ridership plus spillover and comes out to 1.0.

Small Business Kits

[Erin Daughton] Guidehouse wanted to take another look to see if a program level NTG was more appropriate than measure level because of the small numbers. Waiting on that recommendation.

Any additional questions on non-lighting or thermostat?

[Phil Mosental] The thermostat is like others – between net and gross?

[Laura Agapay-Read] Yes. Between net and gross so we halve the free ridership and add the spillover. From last year's discussion.

[Erin Daughton] Only thing updated was the service provider spillover.

 Any other questions or comments on business – is everything not green consensus?

[Erin Daughton] Current third-party programs which are targeted sector programs, some of those measures are going to be included in the incentive programs under Plan 6. Should those NTG be used for those measures? They are pretty close to the standard recommendation right now. Should we track them separately? In the case of deemed measures, esp. nonprofit, most of those are going into midstream some are going into small business where things make sense. How should we be accounting for those?

[Jeff Erickson] There won't be a nonprofit program – all its measures will be distributed?

[Erin Daughton] Not all of them. All the current measures are small biz or midstream, a few in standard. They will all still be offered. We would have to track who the customer is that is getting them if we want to track the NTG separately

[Phil Mosenthal] Not clear evidence that nonprofits are different from for profit or public sector. I wouldn't worry about it.

[Erin Daughton] What about something like agriculture where the measures are only used by an agricultural customer – should that fall under standard or be its own category?

[Jeff Erickson] Will there be any third-party program?

[Erin Daughton] Consolidation of measures under standard, small business, midstream.

[Phil Mosenthal] Bundle any of the non-lighting ag into standard.

[Erin Daughton] Ag and grocery are standard. Telecom will be moving into custom.

[Phil Mosenthal] Arguably there are all kinds of segments we could research but traditionally we just do a program level NTG.

[Jeff Erickson] Research when it was done was on measure in a third party program. Now if the delivery is different in standard, that's something.

[Phil Mosenthal] Incentives might be different, delivery is different. In my opinion they are just part of standard.

[Erin Daughton] Can you pull up telecom?

[Laura Agapay-Read] They will have a lower NTG under custom.

[Phil Mosenthal] If third party program goes away and they are just another business participating, then they ought to have that NTG.

[Q] Will those telecom projects roll into the custom 3-year average, then?

[Jennifer Morris] It looks like just the default.

[Phil Mosenthal] Might not even get any telecom next year. Long term average will reflect whatever customers participate.

[Erin Daughton] So we're going to roll up all those third party measures into their new program NTG?

[Phil Mosenthal] That's what I would support.

[Laura Agapay-Read] We could consider researching it in the future if there are very large values.

[Jeff Erickson] We will follow-up with ComEd to make sure we have all the changes on those and address at future meeting.

[Erin Daughton] We've had a fair amount of participation in telecom, so I'll look more at that until we talk.

[Andrey Gribovich] Question on the carryover programs – are there projects that started this year or last that might get paid next year in third party programs. How will those be treated?

[Jennifer Morris] Programs that were in third party and being transitioned to the regular programs. Could be like the DCEO transition. If a party comes in next year, then it just goes to custom or whichever. But if previous projects get pulled in and being claimed under custom even though they were third party, I don't have a problem claiming it that way.

[Laura Agapay-Read] Makes sense.

[Phil Mosenthal] Are there legacy projects that haven't closed yet?

[Erin Daughton] It's likely that we do have some, I can check.

[Jennifer Morris] If Guidehouse can update the ComEd spreadsheet and note for the legacy projects that they will apply the previous NTG.

[Zach Ross] Any legacy projects for Ameren?

[Andy Vaughn] I don't think so from our perspective.

ComEd NTG values to follow-up on in meeting #3:

Residential

- Elementary Education
 - LED Vouchers
 - ComEd (Vince Gutierrez) will follow-up to explain this measure in the next meeting.
 - LED Specialty
 - LED Nightlight
- Multifamily
 - LED Linear (Common Area)
 - LED Omnidirectional
 - Guidehouse (Laura Agapay-Read) to follow-up: Is LED Omnidirectional for in-unit, common area or both?
 - LED Specialty
- Residential HVAC
 - Guidehouse (Laura Agapay-Read) to revise the source, to indicate the secondary research ultimately recommended the default value.
- Efficient Choice

Business

- Midstream/Upstream
 - LED fixture
 - LED screw-in
 - Linear LED (TLED)
- Nonresidential New Construction
- Virtual Commissioning
- Small Business
 - Kits
- Standard Lighting
- Third Party
 - Guidehouse will update the NTG spreadsheet
 - ComEd will check whether there are legacy projects; DNV-GL will follow-up with Guidehouse

Nicor Gas NTG Values

Kevin Grabner, Guidehouse

Income Qualified

No objections.

Residential:

Advanced t-stat

Carry over from last year. No objections.

Furnace and Boiler

Follow-up in meeting #3.

Residential Home Energy Savings

Most of the values were carried over from 2021 and no questions were raised. Are those carry over values consensus? No objections.

On the one new value of the leave-behind kit, we proposed a value similar to the self-install measure. Any questions or concerns there? No objections.

Weatherization

Carry over values, no questions raised. Consensus? No objections.

Energy Smart Kits

New research for 2021. No questions raised. No objections.

Elementary Education

For the gas companies, NTG of 1 for the water savings measures. Is that carryover value consensus? No objections.

Behavioral Savings (Home Energy Reports)

No value – net comes out of the randomized control trial. Consensus? No objections.

Residential New Construction Advanced T-stat

Same value we had. No objections.

Residential new construction

Carryover value from 2021. No objections.

Multifamily

New program path of direct install by the customer maintenance folks. Do we have consensus on keeping the 2021 values and applying them to this distribution method?

[Phil Mosenthal] Is that assuming an in-service rate?

[Kevin Grabner] Yes there is an in-service rate applied to that. There is tracking of how many go in. We will have to look at what the TRM in-service rate guidance is.

Comprehensive measures for multifamily

These are rebated measures. Continuing the 2021 values. No objections.

Business and Public Sector

Small Business

New research. No objections.

Optimization and Business rebates including t-stats

Same 2021 values. No objections.

o Custom

New research this year. No questions raised last week. This is not a rolling average. We don't do the NTG every year. We do it once a cycle. This is the value from the participants in 2020. No objections.

Combined Heat & Power

[Phil Mosenthal] If there is a free-rider for a CHP project, what happens?

[Kevin Grabner] The idea is that you conduct research early on in the project otherwise the default of 0.8 is used. We had one small project and used the default.

[Laura Agapay-Read] When a new measure comes to be, we conduct primary research as soon as it makes sense to and it's clear that it is achieving enough savings to merit the cost of research. Until then we try to do secondary research that we could apply, and then if we have none, we recommend the default value.

[Phil Mosenthal] If you are talking to a customer when they aren't approved yet, they would have an incentive to say they did it because of the program. But I'm okay with how you are doing it.

[Kevin Grabner] Could there be a partial free rider? If you do the primary research, is it just a binary 1 or 0? Could some of the protocols allow an individual to not be all free-rider or all not free-rider? Primary research could provide a number that is different.

[Phil Mosenthal] Maybe should do it after the fact, so we don't discriminate by not approving someone who might be a free-rider.

[Kevin Grabner] Everyone is paying in, so we don't discriminate that way. We inform people that answers are confidential and don't reflect on any rebates they will receive.

[Phil Mosenthal] That makes sense.

Strategic Energy Management

Went through that on electric. No objections.

Joint Non-Residential New Construction Program

We are still discussing. Follow-up in meeting #3.

Virtual Commissioning

We are still discussing. Follow-up in meeting #3.

Retro-Commissioning

New value. No objections.

Market Transformation – Pilot specific

No objections to values.

Food service

No objections to values.

Direct install

No objections to values.

Nicor Gas follow-up items for meeting #3:

- Residential
 - o Furnace and Boiler
- Business and Public Sector
 - Joint Non-Residential New Construction Program
 - Virtual Commissioning

Peoples Gas & North Shore Gas NTG Values

Kevin Grabner, Guidehouse

 Income qualified No objections.

Residential

Home Energy Jumpstart

No objections.

Kits

New value for 2022 based on self-install similarity, there is an in-service rate. No objections.

Home Energy Rebate

Follow-up in meeting #3

Residential Weatherization

Same NTG value as Nicor. No objections.

Advanced T-stat

No objection.

- Multifamily
 - Multifamily DI and rebates: Carry over values; No objections
 - Multifamily Comprehensive: Carry over value; No objections
- Gas optimization: New research; No objection
- Home Energy Reports: No objections
- Elementary Education: No objections

Business:

- C&I non-public energy jumpstart and prescriptive rebates: No objections
- Public sector energy jumpstart and prescriptive rebates: New research and slightly different values; no objections
- o **C&I custom:** Carry over from 2021 with no new research; no objections
- Public sector custom: New research to cover both prescriptive and custom; no objections

[Phil Mosenthal] Will want to think about pooling multiple years there in surveys since it is a small sample size of 4 customers.

[Kevin Grabner] This represents ¾ of the annual savings among those customers.

[Phil Mosenthal] Maybe try to do recent three years since we don't want to do a study on this every year probably.

[Kevin Grabner] We would agree. Will note that.

- Gas Optimization: Small number of large projects; new value; no objections
- RCx: New value; same as Nicor; no objections
- SEM and CHP: No objections
- Small Biz: New research with question raised on the nature of the rebates.

[Phil Mosenthal] Is it bulk savings from furnaces and boilers?

[Kevin Grabner] Steam traps, boiler tune ups and quite a few other measures – furnaces and boilers at time of sale, plus ventilation, pipe insulation, etc.

[Phil Mosenthal] I'm okay with that. It's similar to other results.

• The remaining final items are the same for Nicor; no objections.

Peoples Gas & North Shore Gas follow-up items for meeting #3:

- Residential
 - o Home Energy Rebate
- Business and Public Sector
 - o Joint Non-Residential New Construction Program
 - o Virtual Commisioning

Closing & Next Steps

• NTG meeting #3 rescheduled for Wednesday, Sept. 22 (9:30 am – 12:30 pm).