NAVIGANT

150 N Riverside Plaza
Suite 2100
Chicago, IL 60606
www.navigant.com

To: Erin Daughton, ComEd
Christina Pagnusat, Omy Garcia, Jean Gibson, Kathia Benitez, Katie Baehring, Victoria Nielsen, Peoples Gas & North Shore Gas
Randy Opdyke, Bruce Liu, Steve Grzenia, Scott Dimetrosky, Katie Parkinson, Nicor Gas

CC: Jennifer Morris, ICC Staff; Randy Gunn, Jeff Erickson, Rob Neumann, Kevin Grabner, Jeff Erickson, and Laura Agapay-Read, Navigant

From: Jake Millette, Jayden Wilson, and Ardasher Khashimov, Opinion Dynamics

Date: October 24, 2019

Re: Coordinated Utility Non-Residential New Construction CY2018 Process Findings Memo

INTRODUCTION

This memo presents the results of the process evaluation of the Coordinated Utility Non-Residential New Construction Program (New Construction Program) on behalf of ComEd, Nicor Gas, Peoples Gas, and North Shore Gas companies. The evaluation covers CY2018 from January 1, 2018 through December 31, 2018. Throughout the memo, each paragraph with the findings will be followed by an example of a verbatim response that summarizes the findings. A complete list of verbatim responses relevant to each key finding are included in the appendix.

METHODOLOGY

Given the program's maturity and historically high participant satisfaction, the Navigant team limited the CY2018 process evaluation to activities that provided information on participant characteristics, program implementation changes, and program challenges.

The evaluation of the New Construction Program for CY2018 sought to answer the following questions related to the program's implementation processes:

1. What design or implementation changes, including changes to the gas portion of the program, occurred in CY2018, and how has this, if at all, changed the way the program is offered?
2. What is the level of participation for the different program tracks?
3. How do participants' experience with the program differ for the different program tracks?
4. What challenges did the program face over the course of the program year and how did the program respond to them?

Overview of Data Collection Activities

Program Manager Interviews

In CY2018, the Navigant team conducted program manager interviews on an ongoing basis through monthly meetings with program management, including both ComEd and the program implementer. Using these meetings, the Navigant team stayed informed on CY2018 program operations and challenges as well as any strategic implementation adjustments made during the program year. During these meetings, the Navigant team also asked clarifying questions about the program as they arose.

Program Participant Interviews

The Navigant team collected and reviewed qualitative data from 33 in-depth interviews with program participants to assess program processes and implementation from the participants' perspective. The Navigant team conducted these interviews in conjunction with our NTG research and, therefore, included only the participants that were in or beyond the program's reservation phase.[1] The evaluation team sought to speak with key decision makers for the project. In most cases, the primary project contact was the key decision maker, but we verified this as part of the interview and asked to be referred to the appropriate contact if necessary.

Review of Program Materials

The Navigant team reviewed program documentation, including project-specific documentation, to gain additional perspective on program processes and any updates in CY2018. The team used project documentation at times to tailor program participant interviews to project specifics and to confirm or repudiate self-reported information.

RESULTS

The evaluation team reviewed the New Construction Program tracking data for projects completed in CY2018. The program completed fewer projects (75) in CY2018 than in EPY9/GPY6 (99), but EPY9/GPY6 was 19 months long and the program completed a similar number of projects in EPY8/GPY5 (76). Despite the lower number of projects, the number of projects completed with claimed gas savings remained steady, with 43 in CY2018 compared to 42 projects in EPY9/GPY6. The average verified gross electric savings per project declined in CY2018 to 475 MWh per project from 649 MWh per project in EPY9/GPY6, while the average verified gross gas savings also declined slightly to 12,005 therms per project from 12,753 therms per project in EPY9/GPY6. The decrease in savings is largely due to the decrease in building area, which dropped from an average of 270,308 square feet in EPY9/GPY6 to 216,204 in CY2018. It should be noted that code changes possibly played a role in lower savings in 2018 compared to PY9. Both years include a variety of codes (depending on the specific project) with 90.1-2010/IECC 2012 being the predominant code in both years. However, it should be clear that PY9 only had a few projects that used 90.1-2013/IECC 2015. CY2018 had approximately 1/3 of the projects that use this code. Without really digging into this much though it is unclear what the magnitude of this impact was on overall program savings

Similar to the EPY9/GPY6, approximately three-quarters (53 out of 75) of completed projects involved organizations who are repeat participants. Projects that involved repeat participants were somewhat larger in terms of area compared to first-time participants, averaging 225,240 square feet compared to 194,435 square feet. Notably, repeat participants had, on average, similar electric savings per project compared with first-time participants (494 MWh per project compared to 490 MWh per project) but double the gas savings per project (11,981 therms per project compared to 5,545 therms per project for first-time participants). Further, repeat participants saved nearly twice the gas savings per square foot compared to first-time participants (0.05 therms per sq. ft comparted to 0.03 therms per sq. ft.)

Based on program participant interviews (n=33), participants most commonly first learned of the New Construction Program through colleagues (8 out of 26 respondents) or through outreach from the program implementer (6 out of 26 respondents). Further, the program appears to have succeeded in reaching participants earlier in the design process, as most respondents indicated their project first engaged with the New Construction Program before 50% of design was completed (16 out of 22

[1] [1] As in prior years, this approach allows projects which will not be completed until after current program year to be included in the current year's Net to Gross and process analysis.

respondents) or at least six weeks before design was completed (4 out of 22 respondents)[2]. Respondents suggested expanding direct outreach to clients, architects, and engineers, providing higher incentives to design teams, providing minor incentives for early engagement, and streamlining the application process as strategies for increasing participation earlier in the design process.

"[...] I think that [the program] need[s] to make sure that what they are doing when they encourage projects to get in at that early stage of design, that the analysis and the recommendations they are making are relevant for that stage of design. So otherwise, it is kind of penalizing projects that don't get in that early or when they do get in that early, they aren't making themselves as relevant as they could be."

Program Awareness

Fewer than half of respondents (13 out of 30) were aware of the different program tracks the New Construction Program offers. We interviewed four respondents being served through the program's Expedited Assistance track, and only one of them, a repeat participant, knew they were in a specialized program track.

The vast majority (28 out of 32 respondents) indicated that the program requirements were clearly explained to them. Respondents offered several suggestions to improve the participation process, including, adding a digital checklist to the application, providing guidance on when in the design process they should engage with the New Construction Program, and creating a system of regular reminders for deadlines and deliverables as ways to make the program easier to understand.

"[The program] could focus a little bit more on just the bolded checklist instead of on the application including so many terms and conditions. Make it a separate document and let people read that because once you are in the program it is easy to just check the boxes, fill in the data and move on. Just simplify it. The programs are almost over explained in my opinion"

Participant Decision-Making Process

Two-thirds of respondents (18 out of 27) indicated incentives were the main reason for their participation in the program. One-fifth of respondents (5 out of 27) indicated operation and maintenance cost savings as the reason for their participation in the program. When asked to rate the likelihood that their project would have included the same level of energy efficiency had their project not been involved with the New Construction Program, respondents gave an average rating of 7.7 out of 10 (on a scale from 0 to 10, where 0 corresponds to "Not at all likely" and 10 corresponds to "Extremely likely").

"The operations and maintenance portion of [participating in EE programs] is huge.[...] So you know the more that I can implement energy efficient programs, projects, equipment the more that [money] can actually go towards [other purposes] and not just in buildings to keep the lights on."

Participant Satisfaction

Overall, the New Construction Program continues to operate effectively and in accordance with the program model. Similar to previous program years, participants report a very high level of satisfaction with the program overall. Respondents provided an average satisfaction rating of 8.4 out of 10 (n=32) on a scale from 0 to 10, were 0 corresponds to "not satisfied at all" and 10 corresponds to "extremely satisfied."

[2] The remaining two respondents did not know at what point their projects engaged with the program. Our review of project documentation shows that both projects engaged with the program at least six weeks prior to finalizing their design.

Respondents who reported lower satisfaction scores (lower than 7 out of 10) listed administrative burden, low incentives, and lack of outreach among the reasons for their dissatisfaction.

The technical assistance component of the program continues to be highly regarded. Over half of respondents (18 out of 30) characterized their interaction with program technical staff as positive. Respondents who found the energy model helpful cited the usefulness of third-party models in illustrating the projected energy and associated monetary savings of different design elements, especially to clients, as well as providing an independent, third-party verification of in-house or consultant-built energy models. When asked to rate the likelihood that third party data would have been available to support the team's design vision had the program not been available, respondents gave an average rating of 3.7 out of 10 (on a scale from 0 to 10, where 0 corresponds to "Not at all likely" and 10 corresponds to "Extremely likely"), but responses were mixed, ranging from 0 to 9. Most respondents ranked overall communication with program staff as good (26 out of 29) and indicated that they would participate in the program again (29 out of 33 respondents).

"Not every organization has the capability financially of hiring the skilled designing instruction teams that we get to hire [...]. [Third-party modelling] is really valuable because it is a second opinion and we get to compare it to the models that we have and what the expectations were and how the third party being ComEd used the model as opposed to how our internal model looks and that is really valuable because it [...] validates it for us."

There were not enough participants in the reservation stage served through the Expedited Assistance, Design Replication, Public Sector, or Accelerate Performance tracks for the Navigant team to make meaningful comparisons of program satisfaction results. Differences in participant experience across program tracks is an important topic for program administrators, and we will explore any potential differences in future evaluations.

Program Opportunities

The post-reservation interviews highlighted the degree of free ridership in the program. Over half of respondents (19 out of 33) indicted the rebated measures their project included are beginning to become standard practice in the industry or that one or more of the rebated measures would have been included in their specific project regardless of their participation in the New Construction Program. Only one-fifth of respondents (6 out of 33) highlighted the importance of gas and electricity prices to their energy efficiency decision-making process. One-quarter of the respondents (8 out of 33) suggested program administrators tailor the program timeline and recommendations depending on the nature and stage of each project and customize the measures and incentives to meet the needs of each project. Finally, 5 out of 33 respondents reported a general lack of awareness of the Program in the design community and recommended program administrators increase program outreach to architects, engineers, and other design professionals.

"I wanted to make sure that [the project] was extremely energy efficient and I didn't want the same mistakes to happen on this building that happened on the other. And whether their ComEd incentives were there or not we were going to make this thing energy efficient. And it just so happened that it coincided with the ComEd incentives."

Similarly, many respondents discussed non-program factors which they identify as influential in their decision to install the energy efficiency measures rebated by the program which reveal that the new construction market in ComEd's service territory may be experiencing an increase in naturally-occurring or market-driven energy efficiency. For instance, 4 of 33 respondents indicated that current building codes were an important factor in the installation of program-rebated measures.

Therefore, there may be opportunities for the program to better serve participants who already plan to install many energy efficiency measures in their project. The underlying sentiment was that design teams who already plan to build an energy efficient building need technical assistance that the program already provides but of which participants may not take full advantage. This could be useful to projects teams who have to meet strict city building codes or who are planning to apply for LEED certification. Going down this path, all else equal, is likely to increase gross savings as well as increase the NTG. By achieving deeper savings in projects that already plan to build an efficient building the program generates more claimable savings that are, at the margin, 100% attributable to program intervention. Overall, this is promising news for the program's new Accelerated Performance program, which is likely to be well received by program participants. In addition, it highlights the importance of the program's growing focus on small businesses and public-sector buildings which may not yet exhibit high levels of energy efficiency in their initial design.

APPENDIX

Verbatim Responses

Below we highlight the verbatim responses that highlight some of the themes in our findings.

Topic	Quote
Engaging the industry earlier	[...] in Ohio, [another utility] offer[s] like a small financial incentive for having a few early kickoff meetings. And that helps to get things on the table, so that everybody knows exactly what and when has to happen. It's by no means like a big reward in any sense, but it just kind of covers the cost of the meeting time and clients like it."
	"[...] I think that maybe there might be an opportunity if there was a more routine engagement process or check-in sort of a process. There's a greater potential that we would be able to engage earlier. [...] I think that if [the program] potentially reached out to existing participants on a more routine basis and said, 'Hey, we're still out here. Don't forget. What's coming down the horizon?' they might be able to capture people a little bit earlier."
	"If [the program] need[s] to increase the incentives for the design teams or just also do some outreach a little bit more to engage them and let them know that [the program] is something that makes them look good pitching this to their customers and helping them out. So I think really versus trying to do more for the customers I think it has to be more on the design partners. Since they are controlling all the other elements of design this kind of naturally just kind of fits within that."
	"I think that the timeline needs to be more realistically aligned with how things actually happen and instead of how ComEd thinks they should. So, I think just recognizing that you shouldn't be penalizing customers for contacting them just slightly later in the game as long as the customer is willing to work with the recommendations provided by the service provider. [...] Being realistic about what naturally happens in design, you are asking for an application prior to fifty percent complete design, but what is there to talk about really at that point?"
	"[...] I think that [the program] need[s] to make sure that what they are doing when they encourage projects to get in at that early stage of design, that the analysis and the recommendations they are making are relevant for that stage of design. So otherwise, it is kind of penalizing projects that don't get in that early or when they do get in that early, they aren't making themselves as relevant as they could be".
	"I think maybe explaining a little bit better exactly when to engage ComEd and why. I think each project is a little bit different and depending on what stage you are in, it sometimes is hard to know – ok, do we reach out to you guys before anybody has even been involved in terms of the architects starting their first set of drawings, you know that kind of thing."
Making the program easier to understand	"[The program] could focus a little bit more on just the bolded checklist instead of on the application including so many terms and conditions. Make it a separate document and let people read that because once you are in the program it is easy to just check the boxes, fill in the data and move on. Just simplify it. The programs are almost over explained in my opinion"
	"Maybe like a digital checklist [could improve the application] so I can check if they go along, because we have a lot of projects going on, so sometimes you forget where you left off on one, so just to have a thing to refer to, you know and kind of like that sense of completion, ok, check this box we did this, we did this. Otherwise I am going back on emails and going 'Ok, where did we leave off?'"
	"The only thing is obviously with projects like this, reminders of different deadlines coming up or different deliverables based off the understood project schedule are always appreciated"
Customizing the program	"Based on the way the incentive structure is calculated and communicated, it fundamentally becomes just an incentive program for essentially what we would already have planned to do. […] The way it should work, and it doesn't work this way currently, is we need to see what the incentives would be if we did all these additional things. [...] So it has the potential to both pay out more incentives to developers to get them more excited about it and also improve the energy efficiency of the buildings beyond what you would do anyway, and currently I don't think [the program] really accomplishes that goal. [...] I think it's great you get money for doing stuff that we would already do, but I think that there's the potential to make it much better"
	"Probably [the program should be] more simplistic and just maybe tailor[ed] to the type of product that is being built really is all that – it just seemed like a lot of information for one and then [...] the program didn't really alter to kind of personalize it to each building."
	"I feel like there is more limitations now on what is incentivized and then the incentive values are lower. You know I believe there is merit to looking against ASHRAE and saying, hey, you know this is where we need to be in order to incentivize you, but sometimes there are efficiency gains that are outside the box, so I wish they kind of would look at the project outside of the very narrow scope of ASHRAE only. [...] There is just nuances in every project and ASHRAE doesn't address nuances, it is a code and it is what it is."
The role of the O&M costs	"The operations and maintenance portion of [participating in EE programs] is huge.[...] So you know the more that I can implement energy efficient programs, projects, equipment the more that [money] can actually go towards [other purposes] and not just in buildings to keep the lights on."
	"...[F]rom our perspective as an owner or development manager, is we are always pushing our engineers to look at ways we can reduce our operating cost and determine ways that we can be competitive in the marketplace. [...] [Project clients] are always looking for ways to reduce their annual operating expense because that's where they are spending most of their money"
The reasons for dissatisfaction	"From a marketing standpoint in terms of ComEd and [Slipstream], I don't know how they are getting the word out to the people who could participate in the program. The users don't know about it. I am not hearing about it from my mechanical engineers who would be the likely group to tell me about it if they knew about it."
	"We always planned on using energy efficient measures everywhere we can. The fact that we got, that the owner gets extra money for it, that has something to do with it, but most energy efficiency measures incentives that you get from the utilities don't cover the cost of adding the incentives."
	"[...] if you weren't part of the Illinois Energy Conservation Code and you weren't required to be stringent you wouldn't necessarily make this decision and the decision to upgrade to some of these energy efficient aspects [because it] costs more than the ComEd program is giving us back and so it's a hard tradeoff."

Topic	Quote
The value of the program	"I would say that [technical assistance was] very helpful in helping us evaluate it. I mean like I said a lot of the stuff we were planning to do anyways, but it was helpful on our end to be able to quantify that to the client and help sell them that that is what we need to do and plus you get this extra bonus from the incentive."
	"Not every organization has the capability financially of hiring the skilled designing instruction teams that we get to hire [...]. [Third-party modelling] is really valuable because it is a second opinion and we get to compare it to the models that we have and what the expectations were and how the third party being ComEd used the model as opposed to how our internal model looks and that is really valuable because it [...] validates it for us."
Decision-making process	"[W]hat the City of Chicago requires for new buildings is pretty stringent and high in terms of what they are going to make us install, it is almost – you know we are going to earn incentive points from the ComEd Energy Incentive team just by building what is recommended or code for the City of Chicago. So when we heard that we were like ok, so basically we are going to submit things or suggest things that we either A) are already planning to do; or B) likely going to need to do because the City of Chicago is going to require us to do them."
	"Well regardless of what happened or if I was notified by anybody, my thought process was I would still be going all [efficient measures], that was still going to happen. And on the ComEd or whoever the company you said we are dealing with, the benefit is obviously the financial incentive at the end of it because we're doing it anyway."
	"On past projects I've utilized the program and used some of these same measures and it has been successful, so yeah, I stand by that. But it doesn't mean that we wouldn't – we would likely include the majority of these measures whether there was a ComEd program or not."
	"I wanted to make sure that [the project] was extremely energy efficient and I didn't want the same mistakes to happen on this building that happened on the other. And whether their ComEd incentives were there or not we were going to make this thing energy efficient. And it just so happened that it coincided with the ComEd incentives."
	"Illinois energy conservation code is very stringent to begin with and so everything that we did that the ComEd efficiency program specified we were already doing so we didn't have any need to really tweak based upon the energy model you gave us. [...] Maybe some things would have slipped through the cracks [without the program], but I think we would still have been pretty energy efficient."
	[...] a lot of these measures were going to be in the design regardless. The lighting and energy recovery wheels were going to be in there. Really whether there is going to be incentive or not and so the incentive was just a nice byproduct of that. And [a few measures] were likely going to be added anyways, but it was just nice to have the reinforcement of hey if we do these things, we can get the incentive that is associated with them. [...] The incentives helped justify. We probably would have done a lot of these things whether there were incentives or not."