# Illinois EE Stakeholder Advisory Group
# Market Transformation Savings Working Group
# Small Group Meeting #2

**Wednesday, November 30, 2022**
10:00 am – 12:00 pm
**Teleconference**

**Attendees and Meeting Notes**

**Meeting Materials**

- SAG Market Transformation Savings Working Group Webpage
- Posted on the Market Transformation Small Group Webpage:
    - November 30, 2022 MT Small Group Agenda
    - SAG Facilitator Presentation: SAG Market Transformation Small Group Process Update
    - ComEd MT Small Group Presentation

**Attendees (by webinar)**

Celia Johnson, SAG Facilitator
Greg Ehrendreich, Midwest Energy Efficiency Alliance (MEEA) – Meeting Support
Allen Dusault, Franklin Energy
Chris Neme, Energy Futures Group, representing NRDC
David Brightwell, ICC Staff
David Weaver, Citizens Utility Board
Elizabeth Horne, ICC Staff
Jane Colby, Apex Analytics
Jason Christensen, Cadmus Group
Jeannette LeZaks, Slipstream
Jim Fay, ComEd
John Lavallee, Leidos
Kegan Daugherty, Resource Innovations
Maddie Koolbeck, Slipstream
Mark Milby, ComEd
Michael Frischmann, Ecometric Consulting
Mike King, Nicor Gas
Paul Wasmund, Opinion Dynamics
Rachel Marty, Guidehouse
Randy Opdyke, Nicor Gas
Rick Tonielli, ComEd
Rita Siong, Resource Innovations
Ryan Wall, Guidehouse
Stacey Paradis, MEEA
Ted Weaver, First Tracks Consulting, representing Nicor Gas
Vincent Gutierrez, ComEd
Wayne Leonard, Guidehouse

## Opening & Introductions

*Celia Johnson, SAG Facilitator*

**Purpose of the meeting:**

1. To discuss follow-up from the first MT Small Group meeting in October;
2. To introduce MT Savings Framework Questions;
3. To introduce MT Policy Resolution questions; and
4. To identify volunteers to draft IL-TRM Attachment C edits and/or policy options for the group to consider at the December meeting.

## Follow-up from October MT Small Group Meeting

*Jim Fay, ComEd*

- Summary of Small Group Meeting #1 "Preponderance of Evidence"
    - Two presentations (NEEA & Apex) provided background on theory-based evaluation and how it supports MT programs. Three elements were focused on. Standard of proof for MT is different than RA programs. The Preponderance of Evidence burden of proof is the requirement – that would be a "just over 50%" threshold but evidence needs to be stronger. Evidence can be qualitative and we should expect that.
    - Attachment C is consistent with Theory-Based Evaluation. Need to diversify methods away from just experimental design – bias toward programs we know how to evaluate. Suggestions to diversify – small sample verifications, expert judgment panels, other methods that could apply to MT programs. A toolbox that needs to have more tools in it. Trying to combine different research pathways and assess in the aggregate – multiple approaches to gather evidence of impacts.
    - Where do we go from here? With the still vague definition of Preponderance of Evidence, focus should move from the standard of proof to what we're going to do to gather evidence. If current research is inconclusive, what additional research is needed. Focus is on the evaluation plan and what activities are proposed to meet the standard of evidence in the plan. That becomes important as we go forward. This can be custom and tailored to the market and data availability of each program.

*[Chris Neme] Generally agree. I think the last point is spot-on – almost certain the evaluation approach will have to be custom for each initiative. I know we have discussed MT initiatives and whether successful, you come up with market indicators to track to verify whether the logic model is working as planned. Some of those indicators in the early years may not tell us much directly about how many savings are being produced. May show other important factors. We have a challenge thinking through whether and how we should do the savings attribution.*

- When I said we are inconclusive, that has to do with the indicators. When I suggest we need more methods, that will strengthen our confidence in the market indicators. In terms of the savings, that is within the energy savings framework. We've been discussing where adjustments for attribution are important for an MT initiative, including what the market would have done anyway within the natural market baseline. No clear answer on where other attribution adjustments should be made other than when a new code or standard is enacted – utility or RPP program is responsible for that. Already producing net savings out of the energy savings framework. If we lack confidence in the market indicator research, that doesn't warrant an adjustment in the savings but that we have to do a better job of evaluation research to increase our confidence in the preponderance of evidence.

*[Chris Neme] To the extent that we have a parallel energy savings framework along with market transformation indicators, then okay. The market indicator research is serving a different purpose than estimating savings. In some MT initiatives there may be near term indicators of market progress that if we didn't have a savings framework, we'd have a hard time assigning savings until we move further down the indicator chain. If we have a savings framework from the get-go then I agree on that.*

*[Jason Christensen] I think our main questions are the interactions between the savings framework and the MT indicators. In theory a well-developed savings framework can tell us pretty well what the market would have done, then we discuss attribution separately. Need to keep in mind that some of the progress indicator research might suggest that there are other things going on that aren't captured in the baseline. What is the mechanism to take things from one to the other – are they separate or is it appropriate to think about how they interact?*

- *[Jim Fay] We will revisit in upcoming slides. This relates to the question "when do we determine that the energy savings framework has deviated from the market and we need to update it?" I think the results from the market progress indicator research may be what suggest the savings framework needs to be revised.*

*[Celia Johnson] You suggested MT evaluation plans should be presented to SAG to determine whether the proposed approach reaches PoE. Are you suggesting draft plans, or at what point the group should be discussing those?*

- *[Jim Fay] I think final draft evaluation plan is the right place for that discussion with the MT Working Group. Example with RPP program: ComEd received a progress indicator memo mid-summer. On a key market progress indicator, memo suggested it was inconclusive whether the program was acting as predicted for that indicator. What additional research needs to be done to make it conclusive? Need to come together as stakeholders to make a determination whether the research proposed will meet the PoE standard or whether there is more evidence that will be needed.*

## Small Group Topic #2 – MT Savings Framework

*Jim Fay, ComEd*

- Energy Savings Framework - Clothes Washer Illustration
    - Consistent with Att C and the framework laid out in the TRM.
- RPP Energy Savings Framework (ESF) is a memo ComEd received in October. The memo combines what we know about market history of clothes washers and refrigerators and projects into the future. A timeline of over a decade. Drills down past sales to model sales – specific efficiency models being incented. Top load vs front load washers, top/side/bottom freezer. Characterizes the market for each model.
    - It accounts for the impact of two programs that incentivize at different intervention points in the supply chain. RPP works with national retailers, and retail program works with individual stores. Energy Savings Framework sorts out impacts of both of those.
    - It's been a long process. Will revise and expect to share with SAG for review in January. The document includes where we think savings come from, and what we think the natural market baseline is.
- Graph – picture of the market for top loading clothes washers.

- Per Att C we have to look at the total market units minus the natural market baseline units. Green is the total. Grey is the total Energy Star sales market that would have happened without program (NMB).
- The two components of total sales with programs and net RPP influenced change in market (brown) and retail program (blue). This includes the impact of both programs in the energy savings framework. In our evaluation, evaluator breaks down into the free riders and those influenced by the program. What we have done is taken the free riders from the downstream and those are part of the natural market baseline. This is the extent we have to break down the market data to sort through where the impacts are coming from. This is history and projection.
- This is just applied sales, we're interested in the energy savings. That translates into Slide 9 – at least the brown piece that is the RPP influence. This entire set of installs is what RPP is trying to create in the marketplace. We're about to evaluate the 2022 program. The 2022 program would consist of the red here, the actual sales, and the anticipated impact that results in additional installs in additional program years. This is what the details of Att C suggest is what the program impact is. The challenge is that this is not a historical program year where we can count actual incentives applied to appliances, it's a projection. That creates challenges that I will address. It is consistent with Att C.

*[Allen Dusault] On Slide 8, you have a trajectory over 10 years. Is the implication of this – we have historical data to benchmark against – and it might be that where we apply this intervention is best done with an existing product where we have historical sales data and can reasonably forecast? Versus introducing a new measure. Does that suggest for a new product we need a much longer time horizon and some sales data before we can really accurately and qualitatively ascertain the delta on the MT over baseline?*

- *[Jim Fay] One question is what is the appropriate timeframe. We struggle with that and it is documented in the Energy Savings Framework. Our approach to the forecasted timeframe is to think about the product cycle of an efficient product – endpoint is a code or standard change. When we reach that saturation level, we expect a change to the standard. That's how we approached the duration. Your second question was how much history with an individual product is necessary to make a projection. I really don't have an answer for that. In the products we looked at, there was some history with them. We did have some challenges with the inflection point you see in the chart. That would be more challenging with a new product without that market history.*
- *[Allen Dusault] One of the questions anyone will have is where to focus the effort on a MT program. It seems at least starting with an existing product is the safest bet compared to a new product which would introduce more uncertainty from that forecast. That's riskier.*
- *[Jim Fay] Agreed. I should note that this distinguishes it from the typical RA program – developing that Energy Savings Framework takes significant time and resources to get to that point. It needs to be considered in an MT program – that upfront investment in the framework.*
- *[Allen Dusault] Also when is the payoff that you can claim those savings.*

- CPAS MWH savings – we recommend that this is in evaluation reports.
- There are two ways the projected savings could change. First one is two parts – first part is to adjust to the total ComEd market accounting for non-participating retailers who are

a fraction of the market, and second part we need to revise projected sales to reflect actual sales for the actual year after it is completed.

- The participating retailers have to be adjusted to reflect the entire market. The non-participating retailers – small appliance stores mostly – right now we get credit for 50% of those. We do have an influence on those and the evaluation says 50%. So there is that adjustment. In addition, there is the actual sales data from the end of the year. We have to compare that to the projection. We know that will be off, and it could be either direction. In this case I'm showing it as slightly lower. What doesn't change is the NMB from the Energy Savings Framework. Evaluations will use the adjusted actual market data to determine savings. This whole post-year adjustment is very analogous to the realization rates we use for the other RA programs.
    - Those are the two adjustments that are made to the data that is for the just completed program year.
    - Upcoming in March this will be applied to the 2022 RPP evaluation. Those adjustments are done now, just now codified in Att C.
    - The other question that we have that could change those projected energy savings is when it is clear to us that the Energy Savings Framework is no longer consistent with what we see in the market. If there is a departure, that suggests the Energy Savings Framework needs to be updated.
- One aspect of updating the Energy Savings Framework is a quantitative measure of how close the anticipated EE sales compares to actual sales observed after the program year.
    - If we establish a range of adjustments, we can decide it's close enough to not need to revisit the Energy Savings Framework.
    - This threshold criteria helps us determine whether the Energy Savings Framework is still applicable.
    - We're proposing a +/- percent as a starting point that should be proposed by the MT working group for including in ILTRM Att C.
    - It's a necessary component of revisiting the Energy Savings Framework but still need more to determine if the Energy Savings Framework needs to be changed.
    - There are two parts of determining whether the Energy Savings Framework reflects the market still. Quantitative trigger I mentioned. Also needs a narrative component of the rationale – what are the changes we observe in the market and do the nature of those unforeseen events big enough to affect the projections? If we have to come up with a new Energy Savings Framework, how much does it change?
- The original Energy Savings Framework process took time and a lot of research. Updating an ESF would take a process to come up with a new framework - shared an example timeline:
    - For a 2022 PY evaluation, we'll know by April whether we hit that quantitative trigger and if we are sufficiently off to revisit the applicability of the Energy Savings Framework.
    - Also need to look at what has changed in the market and add the qualitative component. Will need estimated 9 months to do the research on that, then have to revise and create and review a new Energy Savings Framework. The point is that it will take up to two years, even if we believe the ESF in 2023 doesn't reflect the market. What do we do for 2023, then? Until we have a new ESF, I suggest we apply the old one until we have a new one. Hopefully that doesn't take two years, but it could.

- Overview of what is currently in Att C – this profile of energy savings impact from MT programs. We're trying to accelerate the adoption of efficient equipment. This is the projection in CPAS terms, the CPAS lens on the framework. What we propose is that this CPAS characterization is incorporated into evaluations going forward subject to the forward looking provisions we discussed here.
- Shared slide including ComEd's suggested list of recommendations for revising Att C. Next steps would be to work on the language for review by the Small Group.
    1) MT evaluations should include projected savings
    2) MT evaluations should apply a realization rate
    3) MT evaluations should apply a threshold criteria for reopening the Energy Savings Framework
    4) SAG should determine whether a new Energy Savings Framework should be developed
    5) Existing Energy Savings Framework should apply until a new one is completed. Savings should be revised only prospectively.
    6) Evaluation plans should propose evidence gathering to meet the PoE standard.

*[Chris Neme] Question about the recommendation on the threshold criterion. There are a variety of variables on calculating savings – per unit savings for a clothes washer, the assumed NMB market share for Energy Star products, the volume of annual sales, percentage of market sales through participating retailers – it seems some of those should just be part of an ongoing correction. If TRM finds a clothes washer saves more or less than forecast, that shouldn't cause a revisiting of the savings framework it's just an engineering adjustment we make on a forward basis. Not sure sales changes would trigger a change in the framework, just a true-up. What part of the savings calculation would open up that framework?*

- *[Jim Fay] We're trying to answer the question, when is the Energy Savings Framework no longer relevant. We know we can quantitatively measure how close we were to the projection compared to the actual market. We don't know how much of that is natural variation in the market vs a more fundamental change that would need a change to the Framework. That's why we wanted that qualitative component to see if things really have shifted. If TRM determines savings have changed, that goes into the Framework when the TRM applies. A group of adjustments could be made. If we can determine beforehand what those adjustments should be, that would enhance our picture and our understanding of how it would work.*
- *[Chris Neme] Which metric are you suggesting that we focus on for the threshold criterion? If you forecast sales perfectly but per unit savings went down, that doesn't mean any change to the Framework is needed. Similarly, if you are off by 20% on sales but market share is close to what was forecast in the ESF, not sure that would mean anything either except a numerical adjustment. If Market Share changed dramatically that could be a trigger. Is that the criterion? Your framework as laid out makes sense but key is the criterion for #3.*
- *[Jim Fay] I get your point on market share. It's a minor additional step to do that calculation and we can look at both sales and market share. One would tell us about activity in the market, and the other about the relative strength of appliances.*
- *[Chris Neme] Need to be clear and careful about what indicator we choose for #3 and it could be different for different programs.*
- *[Jim Fay] Will need to consider what conditions means the threshold is exceeded. I like the idea of looking at both.*
- *[Chris Neme] Will need to discuss what the trigger is for those metrics.*

- *[Kegan Daugherty] Could those be defined in the Framework and allow the flexibility within there? Nicor would feel comfortable with that approach.*
- *[Chris Neme] Att C could identify the need to consider a trigger without being specific about what it is, then the specificity could go in the Framework.*
- *[Jim Fay] We need to come up with a way to determine if the Framework needs to be updated.*
- *[Chris Neme] Agreed. The Framework could say that they vary by initiative and will be documented in the Framework for each initiative.*
- *[Randy Opdyke] I think Chris brought up a good point – potentially Att C related to unit savings and engineering type things that could change in the TRM. Similar to what we do today, that could lead into adjustable savings goals. If there is an engineering adjustment for example.*
- *[Chris Neme] Where there is an existing adjustable goal, engineering adjustments could be included but I don't want to say that MT savings can create an adjustable savings goal where one doesn't already exist.*
- *[Randy Opdyke] That's reasonable.*
- *[Jason Christensen] Leaving some flexibility in Framework is largely in line with our thinking. To clarify with what Jim proposes there is both a quantitative and qualitative metric – one might be necessary but not sufficient. Would you have to find both at the same time, or could either one of them suggest a change needed?*
- *[Jim Fay] Back to Chris's point – there could be a lot going on looking at either changes in equipment sales or market share. That's why I said 'necessary but not sufficient' – we'd expect to see a quantitative difference but because of the uncertainties we need some assessment of the changes to the fundamentals of the market that isn't incorporated in the Framework. We need some understanding at the fundamental market level what changes underly what we see quantitatively. It's that "something else" and I wish I could be more specific. Something independent from the quantitative analysis to show the market is really shifting in an unexpected way.*
- *[Jason Christensen] If we haven't seen a quantitative change, do we have to wait to see that before we say an adjustment is needed? Following up to #4, SAG should determine…would we have to go into a process to submit, would that be part of the evaluation cycle, or do we build those into the Framework and leave the evaluators to make recommendations for the next year?*
- *[Jim Fay] I think so. And as a result of the research, that could suggest whether the Framework is updated.*
- *[Kegan Daugherty] Is that qualitative change not tied to the indicators, or how is it defined? Is that the qualitative component ComEd is suggesting, is it just non-qualitative MT indicators or some standalone trigger from market conditions?*
- *[Jim Fay] I think we would try to answer that question with the body of evidence we have, and maybe new research would be needed. A lot of the research from the MT indicators should be used to determine whether we think the market is heading in a new direction. But it might not be sufficient without additional research.*
- *[Ted Weaver] Quantitative trigger – we explain why it is different. It could also trigger on its own. We have to make sensible changes – don't force changes that aren't necessary. Once in a while we might need to change the Framework but not every year. About projections, is it what we think the market will be next year, or out over the CPAS timeframe for lifecycle savings. Not sure how that is used.*
- *[Jim Fay] Projection itself is in the Framework – there is historical context and forecast. Evaluator steps in with actual data and looks at how the projection compares to the*

*actual data. The comparison over time of how it compares to what we observe in the market.*

- *[Ted Weaver] If you have data on what the market was for the year, one more year of total sales. That says how many were sold this year compared with what you thought. Then do you true up and reproject for the future?*
- *[Jim Fay] Those would go into the final savings for the preceding year and finalize that number. Then we do it again the next year and so on. It includes a projection of sales and how much is due to the program and then the savings for the program. We're suggesting they be included in the evaluation report. Then what we propose is that for the projection to change we have to revise the Framework. It becomes a default as we go forward until we update the Framework to replace it. Once the Framework is accepted, we use those projections until we have the rationale to change it. That's different than the plan numbers that we change every program year.*
- *[Chris Neme] Those projections are from different variables. The natural market share number is the one that is truly the different thing for market transformation. It makes sense to lock that in until in needs to change. But per unit savings is fundamentally different, as is number of actual product sales. We need be really clear about which parts are locked in. You aren't locking in the number of sales, so how is that different from the forecast. If you are adjusting for actual sales and the engineering adjustments from the TRM, so it's just the NMB locked in?*
- *[Jim Fay] Agreed. From a portfolio planning perspective, we're trying to get as much certainty and recognition of the risk for MT. We're trying to make all of the assumptions that we make for RA programs a component of this – adjusting for actual sales and savings per appliance. When the TRM is changed, then we incorporate that into the Framework which is the same as we do for RA programs. The big difference is locking in that natural market baseline until we know the market has changed enough to revise it.*
- *[Chris Neme] I don't think the expected savings in the ESF is locked in then – the only default assumption to change on a forward basis is the natural market baseline.*
- *[Jim Fay] Yes. We can't measure the natural market baseline; we can only estimate it. Then establish criteria which we think are reasonable for when we change it. When we look at the MT programs and the up-front investment with out-year savings, we know there is more risk than RA programs. We're trying to do the best we can to estimate the savings for those programs and be able to compare with the portfolio to make those decisions. This set of rules will give us what we need to assess how these deliver within the portfolio. The key is that natural market baseline is the reference point until we know it needs to be changed. When the TRM changes, that is applied as soon as it is applicable. If the number of non-participating retailers changes, we want to incorporate that. Without having to meet a threshold. We make those changes as they occur.*
- *[Ted Weaver] I think that's right. The key is the natural market baseline. Depending on the market, we have to look at each program and the dynamic there. Beyond the natural market baseline there are some attribution issues that maybe need to be locked down, maybe some features of other programs.*
- *[Chris Neme] That's a good point. It highlights that for each Framework, there should be very clear which aspects of the formulas are modified based on data/TRM/etc. and which are subject to the criteria. There is probably more than just the natural market baseline and it will vary from initiative to initiative.*
- *[Ted Weaver] Also is it worth the effort to gather the data on whatever it is. It's both is it MT and how hard is it to change, how big is it. If it's hard and small, then it's easier to set aside.*

- *[Jane Colby] Criteria may be specific to a program and part of the evaluation plan. There are some overriding macro factors that could be part of any program – changes in economy, population that affect the NMB. Maybe Att C should list some of these things? Who determines what the criteria are and when are they met? Is that all up front or is it in the evaluation plan?*
- *[Jim Fay] There are issues beyond the quantitative criteria. We don't have any hard criteria to apply right now to determine whether to reopen the Framework. This group can continue to discuss how the criteria might work. What we've proposed here is how the quantitative check might work and that's the easy part but we have to come up with more guidance for ourselves how the larger correction to the Framework will take place and whether the investment in changing it is warranted. I think it relates to what we think the magnitude of the change is in the market, we can benefit from more time and thought on how that guidance might look. I agree it needs more thought and detail especially on the qualitative side and how we determine whether it is warranted.*

## Closing & Next Steps

*Celia Johnson, SAG Facilitator*

- Writing volunteers will work on edits to IL-TRM Attachment C, to be reviewed at the next meeting on December 20:
    - Jim Fay and Rick Tonielli, ComEd
    - Rachel Marty, Guidehouse
    - Kegan Daugherty, Resource Innovations
- Following the December 20th meeting, there will be an opportunity for written feedback on IL-TRM Attachment C edits.