ENBRIDGE GAS INC.

First Tracks Consulting Service In. Answers to
Interrogatories from Green Energy Coalition (GEC)

Exhibit I.4.EGI.GEC.1

Please indicate whether all of the First Tracks report observations and recommendations are acceptable to Enbridge. If not, which are not accepted?

Response:

Enbridge Gas response:

Enbridge Gas wants to make clear it is confident that the Company's proposal as filed in its entirety, is most responsive to the direction provided by the OEB in its December 1, 2020 letter. The Company has proposed an updated DSM Framework, a comprehensive DSM Plan to span a five year term beginning 2023, and a performance incentive structure, collectively designed to address the objectives for DSM as communicated by the OEB. The Company's proposal is fully responsive to the OEB's clear guidance with regard to modest budget increases, while also addressing the various areas of focus outlined in the OEB's letter of direction. The proposal allows for an incentive structure that will provide both effective governance and the necessary motivation for the Company to pursue the OEB's collective aims.

The Company respects the thorough work Mr. Weaver has completed and believes the OEB will find his analysis of cost recovery considerations most helpful. With regard to the collective of Mr. Weaver's independent recommendations (which have been provided as he explains in response to varied, alternative proposals put forward by Optimal Energy and EFG), any support for those recommendations would be subject to further investigations and consideration to assess resulting impacts before any final decision on the merits of the recommendations can be made by the Company.

Exhibit I.4.EGI.GEC.2

Ref. p. 3 "I was first engaged by Enbridge in the summer of 2021, and completed most of my work over the autumn and early winter."

> Please describe the work for EGI referred to above. Please provide a copy of all communications and documents detailing the scope of your work for EGI then and since.

Response:

Enbridge Gas response:

Edward Weaver of First Tracks Consulting Services, Inc. (First Tracks) was initially referred to Enbridge Gas as a knowledgeable expert in the area of cost recovery/amortization of demand side management. Enbridge Gas's first communication with First Tracks was in June 2021. However, given the passage of time related to the OEB outlining procedural elements for this proceeding, First Tracks contract, including a scope of work, was not executed until October 28, 2021 (see Attachment 1 to this interrogatory response) which is when work commenced.

The scope of work included the following:

- Application of Amortization as a Cost Recovery Method in Ontario
- Impacts of Amortization as a Cost Recovery Method to Enbridge Gas Rates and Forecasts assuming DSM Spending is estimated at $140 million in 2023 and escalates by 5% (2% inflation and 3% growth) over the following five years
- Impacts/Considerations for Enbridge Gas
- The OEB has confirmed that OEB Staff is in the process of "developing expert evidence related to the experience of amortizing energy efficiency and conservation portfolio costs and the relationship to performance incentives throughout North America." Enbridge Gas is looking to engage a SME/consultant to provide comment and opinion on the expert evidence for the purposes of the hearing.

The first deliverable from First Tracks was a PowerPoint presentation to the DSM team on December 15, 2021 (see Attachment 2 to this interrogatory response). Also in December, OEB Staff (Optimal Energy) as well as GEC and ED (Energy Futures Group), provided expert evidence on December 1, 2021 addressing amortization and performance incentives in addition to putting forth a number of recommendations, findings and in some cases inconclusive comments regarding Enbridge Gas's application. Pursuant to the original scope of work for First Tracks, and in an effort to be helpful to the OEB and in a position to file a timely response if appropriate, Enbridge Gas asked First Tracks to proceed with compiling an independent report to be submitted as expert evidence to detail approaches and considerations to be assessed with amortization including associated earning opportunities. In addition, given the connectivity of topics and issues, First Tracks agreed to address assertions and recommendations of Optimal Energy and EFG and began work on the report. First Tracks was only able to complete its report once interrogatory responses from Optimal Energy and Energy Futures Group were filed. First Tracks report was filed on January 31st.

Beyond copies of the contract, scope of work and deliverables provided as attachments to this interrogatory response, Enbridge Gas does not believe there are any other correspondence of relevance to the issues in this proceeding.

Exhibit I.6.EGI.GEC.3

Ref. p.24 Re: Impacts of Higher Budgets

a. Does the author agree that a full consideration of bill impacts of DSM spending would include DRIPE (both on gas and electricity prices) and long-term T&D savings?

b. Does the author agree that widespread opportunity for participation in DSM programs over many years can mitigate concerns about rate impact as more customers enjoy reduced bills from DSM?

c. Does the author agree that placing emphasis on DSM for low income consumers can mitigate concerns about rate impact?

d. Does the author agree that focusing on DSM measures that are fuel neutral (that will remain of value if a customer electrifies load) would help ensure that DSM budgets are not wasted investments?

Response:

a. The scope of my evidence in Section 2 of my report is limited to helping the OEB understand the dynamics of amortization and responding to recommendations made by Optimal Energy and Energy Futures Group regarding the application of amortization in Ontario. Defining the level of rate/revenue increase that is appropriate for setting Enbridge DSM budgets, or how that rate/revenue increase should be calculated from specific costs or savings elements is beyond the scope of my evidence.

b. The scope of my evidence in Section 2 of my report is limited to helping the OEB understand the dynamics of amortization and responding to recommendations made by Optimal Energy and Energy Futures Group regarding the application of amortization in Ontario. Addressing how rate/revenue increases might be allocated among customer groups or programs is beyond the scope of my evidence.

c. See response to part b.

d. See response to part b.

Exhibit I.5.EGI.GEC.4

Ref. p.17 Re: regulatory assets: "If regulatory policies do actually transition away from natural gas in the future, some investors and regulators worry that a mismanaged transition could have negative consequences on customers and investors. For example, some regulators fear that large scale electrification could result in spiraling gas rates, as the fixed costs of the gas system are spread over fewer remaining customers. This is especially worrisome if higher income customers drive early electrification, leaving low income or other disadvantaged groups to shoulder ongoing costs."

a. Could concerns about low income customers being saddled with regulatory assets due to amortization as electrification occurs be addressed in part by programs to assist low income customers fuel switch?

b. Does the author agree that this concern about costs being borne by remaining gas customers (especially low income customers) as electrification occurs also arises for all depreciating gas distribution assets including pipeline investments?

c. Would the author agree that electrification may reduce customers' electricity rates due to fixed costs being spread among higher volumes and that all gas customers are likely to benefit to some degree from these offsetting electricity rate reductions?

Response:

a. My statement identified concerns that have arisen in other jurisdictions over the potential for a transition away from natural gas, and the use of reduced depreciation and amortization terms as one tool that might be employed if a transition were to occur. This has direct importance to the OEB in deciding how amortization could apply in Ontario. Other regulatory and programmatic responses to a potential transition are beyond the scope of my evidence in this proceeding.

b. See response to part a.

c. See response to part a.

Exhibit I.8.EGI.GEC.5

Ref p. 47-48, Re: Shareholder incentive multi-year components: "Obviously, if the OEB accepts EFG's recommendations and eliminates some offerings, those components should also be eliminated. However, evaluating the merits of those offerings is beyond the scope of my evidence in this proceeding."

a. Does the author agree that the utility has some incentive to invest its own funds in gas technology R&D and market transformation as a means of addressing the risks it faces from electrification of loads?
b. Does the author agree that DSM shareholder incentives should not conflict with stated government policy goals?

c. Does the author agree that DSM shareholder incentives should support stated government policy goals where possible?

Response:

a. The scope of my evidence in Section 3 of my report is limited to responding to recommendations made by Optimal Energy and Energy Futures Group regarding performance incentives. Defining the appropriate level of gas technology R&D and market transformation within utility DSM budgets or other utility activities outside of DSM is beyond the scope of my evidence.

b. Governments state and set goals for a range of policies, some of which may be in conflict. Stated federal, provincial, local, and other government policies may also be in conflict with one another. The OEB must balance those policy goals in setting regulatory policy in general and in making decisions on specific applications. For example, in Exhibit C to its application, Enbridge provides a DSM Policy Framework that builds on the 2015-2020 Policy Framework adopted by the OEB and incorporates direction from the OEB's December 1, 2020 letter outlining a Post-2020 Natural Gas Demand Side Management Framework. Enbridge summarizes some of these competing policy objectives on pages 1-2 of Exhibit D, Schedule 1, Tab1 of the application, including:

- The OEB's stated primary and secondary objectives for ratepayer funded natural gas DSM[1]
- OEB expectations for modest budget increases
- Incorporation of guiding principles including:
    - Delivery of programming to all customer groups appropriately tailored to encourage DSM participation over time to all segments of the market;
    - Targeting key segments of the market, including small volume, low-income and harder-to-reach market segments;
    - Improved identification of customers with significant efficiency improvement opportunity;
    - Minimization of lost opportunities and quest for long term energy savings;
    - Consideration of opportunities to coordinate delivery of DSM programs with electricity CDM programs or other external complementary activities; and
    - Support for technology development and market adoption of new and lower-carbon alternatives to enable longer term energy efficiency and carbon reductions.

[1] Enbridge further describes the OEB's primary and secondary objectives in Exhibit B, Tab 1, Schedule 1, Page 1. These include the primary objective of "assisting customers in making their homes and businesses more efficient in order to help better manage their energy bills". And the following secondary objectives:

- "Help lower overall average annual natural gas usage
- Play a role in meeting Ontario's greenhouse gas reductions goals
- Create opportunities to defer and/or avoid future natural gas infrastructure projects"

- Examination of existing programming and introduction of new programming to best meet identified needs of diverse customer groups
- Analysis and lessons learned from 2015-2020 DSM program delivery including annual evaluation reports, recommendations from the Evaluation Contractor, and feedback from the 2021 DSM Plan Rollover proceeding
- Incorporation of feedback from customers and input provided through stakeholder consultations, including OEB led Post-2021 Stakeholder Consultations (EB-2019-0003)
- Consideration of the 2019 Integrated Ontario Electricity and Natural Gas Achievable Potential Study
- Attention on cost-effectiveness through a renewed focus to increase total net resource benefits

c. See response to part b.

Exhibit I.8.EGI.GEC.6

Ref.: p. 53 Re: performance thresholds: "Enbridge would be directly penalized for delivering portfolio savings above 75%, unless it also maintained savings above 75% for every program group; it cannot access the incentive pools allocated to each program group until it meets the threshold floors."

a. Would the author agree that failure to earn a performance incentive should not be considered to be a 'penalty' if the level of performance is considered to be lackluster? If not why not?
b. Would the author also agree that there is a compensating "upside" in EFG's and Optimal's proposals because the company would not have to achieve potentially unachievably high levels of savings relative to goals to earn their maximum incentive for any given metric? If not, why not?

Response:

a. The full text of the paragraph states: "It is important to note that these other jurisdictions apply thresholds at the portfolio level, while Enbridge applies thresholds for individual offerings. In other jurisdictions, utilities have broad flexibility to shift funds among offerings to increase portfolio performance and thereby maximize incentives. Utilities can maintain portfolio savings above 75% of target while allowing savings for individual offerings to fall below 75% without being penalized through the incentive mechanism. With Enbridge's mechanism, on the other hand, if floors were raised to 75%, Enbridge would be directly penalized for delivering portfolio savings above 75%, unless it also maintained savings above 75% for every program group; it cannot access the incentive pools allocated to each program group until it meets the threshold floors."

In this example, compared to other utilities cited by Optimal Energy and Energy Futures Group that use a 75% threshold at the *portfolio* level, Enbridge could deliver the exact same portfolio savings, but would receive a lower incentive, because the Enbridge threshold applies at the *program* level. I assume that Optimal Energy and Energy Futures Group do not characterize these other utilities achieving *portfolio* savings above 75% to be lackluster.

b. I agree that there is an upside to the EFG and Optimal's proposals. I am not sure as to whether it fully compensates Enbridge for the downside.

<u>Exhibit I.5.EGI.GEC.7</u>

Ref.: On p. 14 of his report, Mr. Weaver states that the growing size of a regulatory asset associated with amortizing DSM "could be a concern to Enbridge investors and credit rating agencies…" and that "Since the asset is not backed by physical property, Enbridge is at risk if a future OEB Panel would ever decide to stop funding the ongoing cost recovery required to fully repay Enbridge's bondholders and shareholders."

1) Why would this concern be different for a DSM regulatory asset than for an asset associated with capital investment in the utility's distribution system, such as a larger underground pipe to serve a particular region of its service territory?
2) If the answer to part "a" of this question is that DSM does not involve physical assets whereas distribution systems do, why does the presence of a physical asset change the risk of a future Board deciding to stop "funding ongoing cost recovery"? Wouldn't the presence of a physical asset only be a risk mitigating factor if the Company could sell it to another party in the event that the Board stops allowing cost-recovery? If not, why not?
3) Would Mr. Weaver agree that for an underground gas pipe replacement project, the physical asset is unlikely to have any net salvage value to the Company in the event that it is no longer being used and/or paid for 10 or 15 years after its installation – i.e., it is unlikely that the utility could make any money by digging up and selling the physical asset (and that the market value of the asset may even be less than the cost of digging it up)?

<u>Response:</u>

a) Credit ratings agencies take regulatory assets into consideration when issuing credit ratings and credit outlooks for utility companies. For example, Moody's rating methodology for the utilities industry specifies: "Many of our metrics focus on Cash Flow from Operations Before Changes in Working Capital (CFO Pre-WC) because, unlike Funds from Operations (FFO), it captures the changes in long-term regulatory assets and liabilities."[2]

References to concerns over regulatory assets are also common in the literature among utilities and other commenters. For example:

- When Ameren Missouri ceased amortizing DSM program costs in 2011, the Ameren witness in that proceeding testified to the utility's concern for rising regulatory asset balances: "There will be ample opportunity for parties hostile to our interests to judge our results with the benefit of hindsight and attempt to whittle away at our recovery of legitimate costs. The larger the demand-side regulatory asset gets, the more tempting a target it becomes for such parties."[3]
- As one justification for South Carolina Electric & Gas to propose using a shorter (5-year) amortization term, a company witness stated concerns over regulatory asset balances: "Should the regulatory asset account on the balance sheet become too large, it may become a concern to rating agencies and adversely impact bond ratings, which constitute an additional risk to investors, especially to bond investors, who are seeking relatively safer returns than equity investors."[4]
- In a review of DSM amortization and shareholder incentive mechanisms used through the United States, the Cadmus Group stated: "Nonetheless, this regulatory asset is often seen as less firm than other physical assets. It might be treated differently for accounting and tax purposes. And some stakeholders have raised concerns that market conditions or changes in future rate recovery proceedings might render such regulatory assets unrecoverable."[5]
- In a presentation given through the American Council for an Energy Efficient Economy, Rich Sedano from the Regulatory Assistance Project stated that amortization can increase financial risk by delaying recovery and boosting recovery risk, with a net result that "can lead to increased debt costs, all things being equal, if the regulatory asset balances get too high or if the unrecovered balances appear at risk."[6]

These risks can also move beyond the theoretical. In 1999, the Minnesota Public Utilities Commission denied Northern States Power (now part of Xcel Energy) recovery of lost margins and amortized program costs that had previously been approved. The combined cost recovery amounts had grown to levels exceeding

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[2] Moody's Investor Services, *Ratings Methodology, Regulated Electric and Gas Utilities*, June23, 2017.
[3] Direct Testimony of Stephen Kidwell, Missouri Public Service Commission Docket ER-2010-0036. July 2009.
[4] Direct Testimony of Scott D. Wilson, South Carolina Public Service Commission Docket No. 2009-261-E. August 27, 2009.
[5] Brian Hedman and Jill Steiner. DSM in the Rate Case, Public Utilities Fortnightly. January 2013.
[6] Rich Sedano, The Regulatory Assistance Project and Dan York, American Council for an Energy Efficient Economy, *Aligning Utility Financial Incentives with Energy Efficiency Program Objectives: New Business Models for Energy Utilities*. September 17, 2009.

annual DSM expenditures, and the PUC denied recovery, based on proposals from a number of intervenors.[7] Northern States Power appealed the decision all the way to the Minnesota Supreme Court. Eventually, the Supreme Court ruled in favor of Northern States Power, allowing Northern States Power full recovery.[8] The Minnesota Public Utilities Commission subsequently changed the DSM incentive mechanism to a performance-based shared savings approach.[9]

b) See response to part a).

c) See response to part a).

Exhibit I.5.EGI.GEC.8

Ref: On p. 17 of his report, Mr. Weaver shows the unamortized regulatory asset for DSM growing to between a little more than $600 million in under a 5-year amortization approach and a little under $1.8 billion under a 16-year amortization approach.

How do those values compare to the current (2022) unamortized asset balance for all non-DSM investments Enbridge has made to date?

Response:

Enbridge Gas Response:

Enbridge Gas does not see how this interrogatory is relevant to this DSM proceeding. The basis for DSM investments is vastly different than all non-DSM investments and so comparing unamortized asset balances would not provide any value.

Exhibit I.5.EGI.GEC.9

Ref.: On p.17 of his report, Mr. Weaver states that "large regulatory balances create risks for Enbridge's investors should future OEB Panels change their policy supporting the natural gas utility industry in general."

Wouldn't the same regulatory risks also be a good reason to amortize capital investment in the Enbridge transmission and distribution (T&D) system over a time period much shorter than the technically useful life of such new assets? If not, why not? What is different about DSM relative to supply side investments –

[7] Order Disallowing Recovery of Lost Margins and Other Incentives and Requiring Revised Conservation Program Adjustment, Minnesota Public Utilities Commission Docket No. E-002/M-99-419, July 27, 1999.
[8] In the Matter of a Request by Northern States Power Company for Approval of its 1999/2000 Proposed CIP Adjustment, 1998 Demand Side Management Incentives, and 1998 CIP Status Report, State of Minnesota in Supreme Court, February 21, 2001.
[9] Minnesota Public Utilities Commission, Order Approving Demand Side Management Financial Incentive Plans, Docket No. E/G-999, /CI-98-1759, April 7, 2000.

in terms of risks to Enbridge investors – that would argue for shorter amortization period for DSM but not for capital investments in T&D?

Response:

Yes. As I state on page 18 of my report: "To mitigate these risks, some regulators are already recommending that gas asset lives be lowered to accelerate the draw-down of unamortized asset balances." On this point, my position is that regulators might consider shorter asset lives for DSM regulatory assets, as well as other physical and regulatory assets.

Exhibit I.5.EGI.GEC.10

On p. 23 of his report, Mr. Weaver lists three questions the OEB should address before moving forward with amortization. The third of these is "How should competing policy objectives be balanced, specifically, increases in DSM budgets, short- and long-term rate levels, and acceptable regulatory asset balances."

a) Would Mr. Weaver agree that significantly increased DSM savings, at least if it included significant measures and programs that would reduce winter peak hour usage, would lower and/or defer future capital investments in gas transmission and distribution infrastructure that would otherwise be necessary to meet growing peak demands (what is sometimes called "passive deferral" of T&D investment)? If not, why not?
b) Would Mr. Weaver agree that, all other things equal, greater DSM savings will reduce future regulatory asset balances associated with new T&D capital investments? If not, why not?
c) When considering tradeoffs between DSM budgets, rate levels and regulatory asset balances, should the OEB consider the reduction in future T&D regulatory assets resulting from passive deferral of T&D investments as well as increases due to amortization of DSM? In other words, should it consider the net impact on regulatory asset balances of DSM? If not, why not?

Response:

a) My understanding is that Enbridge's sales have been fairly flat for at least a decade, so I am not sure that Enbridge has substantial capital investments "necessary to meet growing peak demands"

b) In my evidence I make a distinction between regulatory assets, such as amortized DSM expenditures, and physical assets such as T&D capital investments. The concerns I raise are specific to regulatory assets.
c) See response to part b).

Exhibit I.3.EGI.GEC.11

Ref.: On p. 23 of his report, Mr. Weaver recommends that the OEB phase in a "substantial budget increase" over several years. Mr. Weaver further notes that "other jurisdictions that have phased in new and expanded portfolios over a period of three to four years.

a) How would Mr. Weaver define "substantial" in this statement?
b) Please provide examples of other jurisdictions that have phased in expanded portfolios over three or four years. In providing those examples, please indicate: (i) how many years the program administrator had been running programs prior to the expansion; (ii) the level of annual savings being achieved prior to the expansion; and (iii) the level of annual savings to which it ramped up.

Response:

a) There is not a specific number that applies in all situations. The appropriate phase-in period should be determined by the OEB based on the overall level of budget increase, the specific program and markets affected by the increase, and an assessment of the capacity of those markets to absorb more funding.

b) Please see response to Exhibit I.7.EGI.STAFF.3.

Exhibit I.6.EGI.GEC.12

Ref.: On p. 24 of his report, Mr. Weaver states that for the OEB "to continue to meet its historic guidance on rate impacts", DSM budget growth would need to be far lower than a doubling of Enbridge's proposed budgets. On pp. 24-25, he states that more modest budget increases of 20% would "track closer to the OEB's historic rate guidance."

a) In making these statements, did Mr. Weaver adjust the OEB's historic guidance for inflation?
b) In making these statements, did Mr. Weaver adjust for any rate reducing impacts of DSM?

Response:

a) My understanding is that the OEB has not provided specific guidance on inflation. My understanding is that the OEB's guidance for the 2015-2020 DSM Plan held budgets constant in nominal terms across the five years. My understanding is that the OEB's guidance for the 2023-2027 DSM Plan, as outlined in the OEB's December 1, 2020 letter outlining a Post-2020 Natural Gas Demand Side

Management Framework, was for “modest budget increases”. These modest increases were incorporated into Enbridge’s proposed budget, which is reflected in the analyses discussed on pages 24-25 of my report.

b) No.

<u>Exhibit I.9.EGI.GEC.13</u>

Ref.: On p. 48 of his report, Mr. Weaver states that EFG’s proposed performance target of 5% reduction in energy intensity would require Enbridge to reduce systemwide gas sales by 1.25% per year, or a level that far exceeds the Company’s proposed savings targets. Mr. Weaver goes on to state that if the OEB were to adopt an energy intensity metric, it should be based on levels that can be reasonably be achieved within the budgets approved.

a) Given that this is a five-year plan, wouldn’t EFG’s recommendation only require a 1.00% per year reduction?
b) Would Mr. Weaver agree that when determining a value of a potential energy intensity metric that is achievable within approved DSM budgets, it should consider not only the savings that would be counted towards resource acquisition savings targets, but also savings that could be achieved through customer education and potentially other market transformation initiatives? If not, why not?

<u>Response:</u>

a) Yes. Actually, with compounding, the recommendation would require a 0.98% per year reduction.

b) Yes, although even taking into consideration potential education and market transformation initiatives, I still believe that 5% targets by 2027 would be far too high a target for Enbridge within its proposed budget, and that, if the OEB does adopt an Energy Intensity component, it should set performance targets that can be reasonably achieved within the budget resources available to Enbridge.

<u>Exhibit I.9.EGI.GEC.14</u>

Ref.: On pp. 50-51 of his report, Mr. Weaver states that while the concerns raised by Optimal and EFG regarding first year or annual savings metrics (in comparison to lifetime savings metrics) are hypothetically valid, they are not a “practical concern with Enbridge’s actual portfolio” because the Company’s planned programs are dominated by long-lived and have very few short-lived measures.

a) What is Mr. Weaver's understanding with regards to the flexibility, after its plan is approved, that Enbridge has to add new measures and/or new programs without regulatory approval? What is the basis for that understanding?
b) Would Mr. Weaver agree that if the Company has the flexibility to add new measures or programs with much shorter lives, that having an annual savings goal rather than a lifetime savings goal could create an incentive to do so? If not, why not?

Response:

a) In Exhibit C, Tab 1, Schedule 1, page 15 of 66, Enbridge states: "Consistent with OEB direction in the 2015-2020 DSM framework, to help ensure that an appropriate balance among the guiding principles are maintained and that changes to the DSM plan are consistent with the other elements of the DSM framework, Enbridge Gas should apply to the OEB for approval if they decide to re-allocate funds from programs that have been approved as part of the multi-year DSM Plan application to new programs that are not part of their OEB-approved DSM Plan."

b) While an annual savings goal might provide Enbridge with an incentive to add measures with short lives, it is unclear that this would lead Enbridge to follow through and actually add measures that substantially change the lifecycle cost and savings balance of the portfolio. For example:
   - In the existing and proposed DSM frameworks, the OEB and Enbridge emphasize that "appropriate balance among the guiding principles [should be] maintained and that changes to the DSM plan [should be] consistent with the other elements of the DSM framework".
   - Other stakeholders would be provided a chance to provide feedback to Enbridge and the OEB regarding the proposed change.
   - It is my understanding that Enbridge has historically not added measures that substantially change the balance of the portfolio.
   - Enbridge has a mature, comprehensive, well-funded portfolio that provides a broad range of DSM measures to customers. It is unclear to me that there exist measures that Enbridge could add to the portfolio that would substantially change the lifecycle cost and savings balance of the portfolio. In other portfolios, the gas measures with short lives that provide substantial savings include behavior programs and low-flow faucets and aerators. It is my understanding that Enbridge and stakeholders agree that behavior programs are poor fits for Enbridge's current portfolio. It is also my understanding that due to past programs and building codes in Ontario, low-flow fixtures have already substantially saturated the market.
   - If a new short-lived measure is cheap enough to provide levelized cost per lifecycle cubic meter saved that is less than that for the entire portfolio, then the measure would actually improve the lifecycle performance of the portfolio over time.

If the OEB has concerns that somehow the annual savings metrics in the performance incentive mechanism would lead Enbridge to add short-lived measures to the portfolio, and that these additions would substantially change the portfolio lifecycle cost and savings balance, then the OEB could also institute policies that establish additional guard rails beyond the DSM framework policy guidance. For example, Illinois legislation sets annual savings targets for natural gas utilities, but, in the last two plan cycles, the Illinois Commerce Commission has approved provisions requiring utilities to maintain portfolio weighted average measure lives within pre-specified variances from those approved in the plan. The utilities are also allowed to adjust these variances through an annual process similar to the Ontario TAM process.

Exhibit I.9.EGI.GEC.15

Ref.: On p. 51 of his report, Mr. Weaver states that the need to multiply annual savings by an assumed equipment life creates an evaluation risk for Enbridge.

Other than the fact that it is a second assumption to be considered, how is the nature of that risk any different than for annual savings?

Response:

If evaluators use different measure life assumptions in measuring performance than the assumptions Enbridge used to develop the performance targets in its approved plan (or Enbridge used to develop performance targets through the annual TAM process), then this risk compounds any risk from changes to assumptions driving annual savings.

Exhibit I.9.EGI.GEC.16

Ref.: On pp. 51-52 of his report, Mr. Weaver states that Enbridge has already encountered issues related to evaluation risk associated with measure life assumptions or estimates and that experience "is partly behind their proposal to change for lifecycle to annual savings metrics."

Please list specific examples of such evaluations in which Enbridge assumptions on measure life were changed in ways that adversely affected its ability to reach savings targets. Please include in the examples provided the actual magnitude of the evaluation change as a percentage of the Company's total lifetime savings goal for a given year.

Response:

No such analysis was completed. Please see response to Exhibit I.8.EGI.STAFF.17

Exhibit I.9.EGI.GEC.17

Ref.: On p. 52 of his report, Mr. Weaver states that there are ways to mitigate evaluation risks associated with using lifecycle savings including (1) using TRMs to define measure lives and baseline adjustment rules; (2) applying changes to lifecycle calculations only prospectively: (3) limiting changes within plan cycles; and (4) defining savings goals that automatically adjust within plan cycles with measure lives or baseline adjustments change.

a) Would Mr. Weaver agree that Enbridge has historically been able to extensively rely upon TRM defined measure lives? If not, why not?
b) What is Mr. Weaver's understanding regarding how frequently measure life assumptions have been changed in the Ontario gas TRM? Please be specific, if you can, regarding the number of assumptions whose measure lives have changed in each of the last three TRM updates, the specific measures for which they were changes, how much of a change was made (i.e., as a percent of the previous measure life assumption), and what fraction of Enbridge's lifetime savings were associated with such measures.
c) Would Mr. Weaver agree that TRM assumption changes to which Enbridge has historically been tied have only been applied prospectively? If not, please explain why not.

Response:

a) See response to Exhibit I.8.EGI.STAFF.17

b) See response to Exhibit I.8.EGI.STAFF.17

c) See response to Exhibit I.8.EGI.STAFF.17

Exhibit I.9.EGI.GEC.18

Ref.: On p. 54 of his report, Mr. Weaver supports maintaining Enbridge's proposed TAM mechanism for adjusting annual savings goals.

Is Mr. Weaver aware of any other jurisdiction that has a mechanism that makes the savings goal for any given year an entirely formulaic function of what was achieved the previous year? If so, please identify all such jurisdictions and describe how their mechanisms are structured.

Response:

No.

Exhibit I.3.EGI.GEC.19

Ref.: On p. 59 of his report, Mr. Weaver cautions the OEB about using the benchmarks for leading gas utility DSM savings that were referenced in EFG's report, indicating that the jurisdictions "have very different regulatory environments, market conditions, and resources available to them."

a) What is Mr. Weaver's definition of "very different?"
b) Has Mr. Weaver conducted an in-depth analysis of the regulatory environments, market conditions, and resources for each of the utilities compared in the EFG report? If so, please provide the supporting evidence.
c) Would Mr. Weaver agree that comparing the savings as a percentage of sales across multiple gas utilities of varying regulatory environments, budget levels, and market conditions somewhat mitigates the impact of such factors on whether a utility is able to exceed 1% energy savings?
d) Would Mr. Weaver agree that Enbridge's proposed portfolio is achieving significantly lower savings than other gas utilities' energy efficiency portfolios in similar climates?

Response:

a) See, for example, the information provided in the bullets on page 59 of my report.

b) No, but I do have enough of a general understanding of the differences to point out the information provided in the bullets on page 59 of my report.

c) No. I believe that benchmarks from other jurisdictions should be appropriately adjusted for key changes in regulatory environments, budget levels, and market conditions before being presented as evidence of levels that could be achieved by Enbridge in Ontario.

d) I have not performed an in-depth analysis of other gas utilities' energy efficiency portfolios in similar climates. However, it is not obvious to me that Enbridge's performance, after adjustment for available budget, savings opportunities (from measures such as efficient furnaces, low flow plumbing fixtures, behavior programs, and code support), and evaluation approaches and policies, is significantly below that for other utilities. See, for example, my response at Exhibit 1.3.EGI.GEC.20.

Exhibit I.3.EGI.GEC.20

On p. 59 of his report, Mr. Weaver cautions the OEB about using the benchmarks for leading gas utility DSM savings that were referenced in EFG's report, citing the following differences between those jurisdictions and Enbridge:

- Xcel (Minnesota) tracks performance against gross savings rather than net
- Furnace efficiency standards in the U.S. are lower than in Canada
- National Grid, Eversource and Consumers have behavior programs that account for significant annual savings, "but much smaller lifecycle savings
- National Grid and Eversource can claim large savings from stretch building codes, while it is unclear that Enbridge would be allowed to do so
- National Grid and Eversource have budgets that are at least twice those proposed by Enbridge

a) With respect to the first bullet above, was Mr. Weaver aware that level of savings that EFG presented for Xcel Minnesota was an estimate of net savings (not gross), developed by applying a U.S. national average net-to-gross ratio for gas DSM used by ACEEE to Xcel's reported gross savings level (see EFG report footnote 15)? Does that not eliminate Mr. Weaver's first caveat? If not, why not?

b) With respect to the third bullet:
   i) Please confirm that Consumers Energy's 2019 Reconciliation report shows that its residential behavior program (Home Energy Reports) accounted for less than 8% of its gas savings (see PDF p. 74 at https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000CG3VcAAL).
   ii) Was Mr. Weaver aware that the EFG report acknowledged that Enbridge's savings portfolio had a longer average measure life (perhaps because of less reliance on shorter lived behavior program savings), but that even from a lifetime savings perspective leading gas utilities are saving about twice as much gas as Enbridge? Does Mr. Weaver have any basis for contesting that conclusion?

c) With respect to the fourth bullet:
   i) What does Mr. Weaver consider to be "large savings"?
   ii) What fraction of their annual savings in 2019 did National Grid and Eversource obtain from their stretch codes programs? If Mr. Weaver does not know, what is the basis for suggesting that such savings represent a "large" fraction of their total savings?
   iii) What is the basis for Mr. Weaver's suggestion that Enbridge might not be able to claim savings from supporting stretch codes in Ontario?

d) Would Mr. Weaver agree that even if one were to adjust for the first four of his five bullets – and not make any adjustments for situations that may make it easier to produce savings in Ontario – that the savings in the jurisdictions cited by EFG are significantly higher than recently achieved and then proposed for the future by Enbridge? If not, why not?

Response:

a) Adjusting Xcel gross savings by a U.S. national average net-to-gross ratio for gas DSM does not provide an appropriate benchmark for Enbridge. An appropriate benchmark for Enbridge would apply Enbridge's net-to-gross ratio to the Xcel gross savings values.

b)
   i. Not confirmed. Consumers Energy's 2019 Reconciliation report shows that its behavior programs (Home Energy Reports as well as Education and Awareness) accounted for more than 10% of its gas savings. And no, it does not eliminate my first caveat; in order for benchmarks from other jurisdictions to be useful to the OEB in setting goals in Ontario, they should first be adjusted for key changes in regulatory environments, budget levels, and market conditions before being presented as evidence of levels that could be achieved by Enbridge in Ontario.

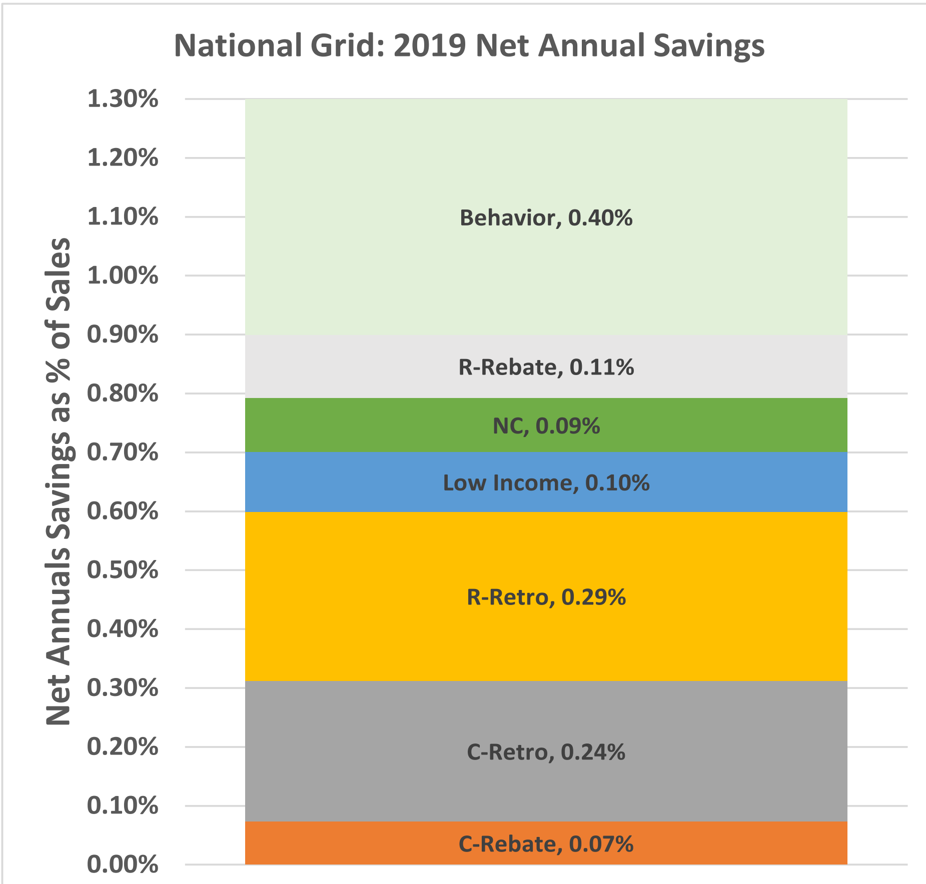
   ii. Yes I was aware that "the EFG report acknowledged that Enbridge's savings portfolio had a longer average measure life". I do contest that conclusion as it relates to EFG presenting savings from other jurisdictions as a basis for use in Ontario, because EFG has not appropriately adjusted those baselines for key changes in regulatory environments, budget levels, and market conditions.

c)
   i. See my response to part d).

   ii. I do not know the fraction of National Grid's or Eversource's savings from stretch codes, because these companies combine a variety of code support offerings with more traditional new construction programs in their reporting. However, see response to part d), below, regarding the contribution of new construction offerings in total compared to those included in Enbridge's plan.

   iii. See response to part d).

d) No. The graph below depicts National Grid's savings from its 2019 portfolio, breaking down total sales into program components.[10]



A "large" portion of National Grid's total savings (almost half) comes from programs that deliver large savings in Massachusetts, but will provide minimal or no savings in Ontario. For example:

- Over 30% of savings (0.40%/1.30%) come from a residential behavior program. It is my understanding that Enbridge does not offer a behavior program, a decision that many stakeholders has supported.
- Another 8% (0.11%/1.30%) of savings come from residential rebates, including rebates on residential furnaces. In Ontario, equipment standards set minimum efficiencies of 95 AFUE, far higher than standards set in the United States. It is my understanding that, for this reason, Enbridge only supports furnaces as part of comprehensive home retrofits, and this measure provides a minimal contribution to portfolio savings.

[10] Program savings data come from: Boston Gas Company and Colonial Gas Company each d/b/a National Grid, *2019 Energy Efficiency Plan-Year Report*. Massachusetts Department of Public Utilities 20-50. May 29, 2020.

- Another 7% (0.09%/1.30%) of savings come from new construction and code support programs. It is my understanding that while Enbridge provides its Savings by Design offerings, Enbridge does not count these gas savings in its 2023 scorecard. In addition, while Ontario will implement new stretch codes during the latter half of the Enbridge plan, it is unclear if Ontario evaluation policies will allow Enbridge to claim savings at levels allowed for National Grid. In any case, Enbridge has not factored these saving into its plan.

Taken together, these three program areas represent 46% of National Grid's savings; without these programs, National Grid's savings represent approximately 0.7% of annual sales. While this is still higher than Enbridge's target of 0.40% in 2023, most of this difference comes from two additional issues that should be considered before applying Massachusetts benchmarks to Ontario:

- Massachusetts has different evaluation approaches and outcomes than those in Ontario. For example, the net-to-gross factors used to calculate Enbridge's 2023 savings targets are lower than those achieved in Massachusetts due to a combination of factors: evaluation methods, customer mix (Enbridge has more sales and savings from larger customers who often experience lower net-to-gross ratios), and budget constraints (National Grid's portfolio does not have a budget constraint and so can afford to offer larger rebates, which drives down net-to-gross ratios).
- National Grid does not have a budget cap, and so has much higher budgets than Enbridge proportional to its service territory. Enbridge's 2023 budget represents approximately 3% of revenues, while National Grid spends approximately 9% of revenues, or about 3 times what Enbridge spends (or over 8 times if spending is expressed per unit of throughput). If Enbridge spent at National Grid's budget levels, it would need annual budgets of approximately $420 million (at a 3X scale up) to $1.1 billion dollars (at an 8X scale up).

ENBRIDGE

500 Consumers Rd
North York ON M2J 1P8

Deborah Bullock, Supervisor DSM Evaluation & Audit
Tel: 416-495-7228
Email: deborah.bullock@enbridge.com

October 28, 2021

FIRST TRACKS CONSULTING SERVICES, INC.
341 West 3rd Street
Nederland Colorado 80466

Dear Sir / Madam,

RE: Consulting Agreement with Enbridge Gas Inc.

Attached please find for signature our Consulting Agreement. Kindly arrange to have the Agreement and the attached Schedule signed. Please ensure you read and understand all of the terms and conditions of the Agreement, as well as the enclosed Statement on Business Conduct and Lifesaving Rules.

We will also require the following:

- A current clearance certificate or letter of exemption from the Ontario Workplace Safety and Insurance Board ("WSIB"). If your employees are in a jurisdiction other than Ontario, please provide equivalent proof of coverage, and new proof of coverage must be filed with us upon expiry/renewal of such proof of coverage.

Please return the applicable WSIB document noted above, together with a signed copy of the Consulting Agreement and a signed copy of the Schedule, promptly following receipt of this letter. Upon receipt of all the documents in our office, we will execute the Agreement and a PDF copy of the Agreement will be returned to you for your records.

If you have any questions, please contact me at the above-noted telephone number.

Sincerely,

Deborah Bullock
Supervisor DSM Evaluation & Audit

Encls.

CONSULTING AGREEMENT

THIS AGREEMENT made effective October 20, 2021.

B E T W E E N:

ENBRIDGE GAS INC.
("Enbridge")

- and -

FIRST TRACKS CONSULTING SERVICES, INC.
(the "Consultant")

WITNESSES THAT in consideration of the mutual covenants and agreements herein contained, the parties hereto covenant and agree as follows:

1. **Scope of Services**

(a) During the term hereof (as hereinafter defined), the Consultant shall provide consulting services (the "Services") to Enbridge, on the terms and conditions set forth below.

(b) The scope of work for specific projects to be undertaken by the Consultant at the request of Enbridge will be described in separate schedules and/or service/purchase orders (each a "schedule") referencing this Agreement, each of which shall become effective, be incorporated by reference and form an integral part of this Agreement upon the execution or acknowledgement of each such schedule by Enbridge and the Consultant. The schedule for each project may specify the names of key individuals, scope of Services, deliverables, commencement and completion dates, rate of compensation and payment terms applicable to such project. Each schedule described above shall be prepared using a form similar to the attached Schedule "A" or other forms as provided by Enbridge from time to time.

2. **Compensation**

In consideration of the Services and deliverables to be provided by the Consultant hereunder, and provided that the Consultant is not in default of its obligations hereunder, Enbridge shall remit to the Consultant all amounts required to be paid in accordance with the applicable schedule.

Consultant shall be responsible for charging, collecting and remitting all applicable federal and provincial sales, use and value-added taxes in respect of the fees paid or payable to Consultant and, in particular, the goods and services tax (“GST”) and harmonized sales tax (“HST”) imposed under Part IX of the Excise Tax Act (the “ETA”), the Quebec sales tax (“QST”) imposed under an Act respecting the Quebec Sales Tax (the “QSTA”) and any provincial sales taxes (“PST”); and such taxes, if applicable, shall be shown separately on all invoices. Where Consultant is required to collect any GST/HST, QST or similar tax, Consultant shall provide Enbridge with the documentary evidence as prescribed pursuant to the ETA or QSTA, any successor provision thereto or any similar provision of any other taxing statute as is required to entitle Enbridge to claim an input tax credit, input tax refund, rebate, refund or any other form of relief in respect of such taxes.

Where the Consultant is a non-resident of Canada for purposes of the Income Tax Act (Canada) (the "ITA"), with respect to the invoice or statement of Fees issued pursuant to any schedule, the Consultant will identify the location where the Services are provided, separate Services performed in Canada from Services performed outside of Canada, identify the number of days Services were performed in Canada (including travel days to/from Canada) and, for Services performed in Canada, identify the physical location, indicating city and province, where such Services were performed. Where the non-resident

Consultant has not obtained and provided to Enbridge a non-resident withholding tax waiver at such time as Enbridge makes any payment to the Consultant for Services, Enbridge shall withhold such percentage of any payment as mandated under the ITA with respect to the Services provided in Canada or on the full invoice or statement amount where the Consultant has not clearly separated the Services performed in Canada from Services performed outside of Canada. Enbridge shall remit the withheld amount to Canada Revenue Agency, or its successor, in the manner and at the time required by the ITA. For further clarification, it is the Consultant's responsibility to obtain the tax waiver, if available. In the event that Enbridge is assessed for any non-resident withholding taxes payable, the Consultant agrees to forthwith reimburse Enbridge for such amount together with applicable interest and penalties, if any.

3. **Term**

Subject to earlier termination as provided for herein, the term of this Agreement shall commence on the day set forth above and expire on January 1, 2023 (hereinafter the "Term").

4. **Termination**

(a) Enbridge may terminate this Agreement or any schedule to this Agreement for convenience upon giving two (2) weeks written notice to the Consultant.

(b) Either party may terminate this Agreement in case of a breach by the other party of its obligations hereunder, provided that the breach is not cured within five (5) days of written notification by the non-defaulting party to the defaulting party setting out the particulars of the breach.

(c) Either party may terminate this Agreement upon written notice to the other party, if: (i) the other party is subject to proceedings in bankruptcy, or insolvency, whether voluntary or involuntary, (ii) a receiver is appointed in respect of all or a substantial portion of the other party's assets; or (iii) the other party assigns its property to its creditors or generally becomes unable to pay its debts as they become due.

Upon any termination of this Agreement, the Consultant shall deliver to Enbridge the results of all Services provided as of the date of termination, including completed or uncompleted deliverables for which payment has been received in accordance with the terms of this Agreement.

5. **Facilities**

Enbridge shall provide to the Consultant use of such office facilities as may be required by the Consultant, acting reasonably, to perform the Services during the Term.

6. **Reimbursement for Expenses**

In addition to the payments to be made pursuant to Section 2 hereof, Enbridge shall reimburse the Consultant for all reasonable expenses properly incurred by the Consultant in connection with the Services provided to Enbridge hereunder and that have been pre-approved by Enbridge in writing, including, without limitation, reasonable travel and other costs and expenses in connection therewith. Such pre-approved reasonable expenses incurred by the Consultant in rendering Services shall be reimbursed by Enbridge net of GST/HST. GST/HST shall be charged, where applicable, by the Consultant on the expenses incurred, net of the input tax credits/reimbursements for GST/HST claimed by the Consultant. Concurrently with its delivery of invoices to Enbridge as contemplated by Section 2 hereof, the Consultant shall submit to Enbridge invoices and statements setting out in reasonable detail the nature and amount of the expenses or costs incurred by the Consultant for which the Consultant claims reimbursement, and Enbridge shall within sixty (60) days of the receipt of such invoices and statements reimburse the Consultant for all approved invoiced expenses and costs. The Consultant shall provide to Enbridge copies of all documentation in support of invoiced expenses as Enbridge may request from time to time during the Term hereof.

7. **Independent Contractor**

Notwithstanding anything to the contrary herein contained, the Consultant shall not, for any purpose, be or be deemed to be an employee of Enbridge during the Term or at any time during which the Services described in Section 1 hereof are provided to Enbridge nor shall anything in this Agreement create or be construed for any purpose as creating any relationship between Enbridge and the Consultant of employer and employee. Except as expressly provided herein, Enbridge shall not be liable to contribute to any employee benefit or pension plan or pay premiums for any policy or form of insurance whatsoever on behalf of the Consultant nor to pay any amounts or premiums on its behalf in respect of the Canada Pension Plan, Ontario Health Insurance Plan, Workplace Safety and Insurance Board or Employment Insurance, nor to deduct or withhold from source any amount from amounts payable by Enbridge to the Consultant hereunder in respect of any income tax obligation or liability payable by the Consultant to the Canada Revenue Agency. The Consultant agrees to indemnify and hold Enbridge harmless from and against any order, penalty, interest or tax that may be assessed or levied against Enbridge as a result of the failure or delay of the Consultant to file any return or information required to be filed by the Consultant by any law, ordinance or regulation relating to the Services performed by the Consultant herein.

8. **Confidential Information and Personal Information**

(a) For the purposes of this Section 8, the following definitions will apply:

(i) "Confidential Information", means all information pertaining to the business and affairs of Enbridge, its affiliates and subsidiaries, whether oral or written, furnished by Enbridge to the Consultant, its employees and representatives, whether furnished or prepared before or after the date of this Agreement, and includes all analysis, compilations, data, studies, reports or other documents prepared by the Consultant based upon or including any of the information furnished by Enbridge, but does not include information which:

A. is at the time of disclosure or thereafter becomes generally available to the public other than as a result of disclosure by the Consultant or anyone to whom the Consultant transmits the information;

B. is at the time of disclosure or thereafter becomes known or available to the Consultant on a non-confidential basis and not in contravention of applicable law from a source other than Enbridge that is entitled to disclose the information; or

C. is already in the possession of the Consultant or is lawfully acquired, provided that such information is not subject to another confidentiality agreement with, or obligations of secrecy to Enbridge.

(ii) "Person" includes individuals, partnerships, firms and corporations.

(b) Enbridge is furnishing the Confidential Information to the Consultant solely for the purpose of assisting the Consultant in the performance of Services which the Consultant provides to Enbridge. The Consultant shall not use the Confidential Information for any purpose other than the performance of Services provided to Enbridge.

(c) The Consultant acknowledges that the Confidential Information is the property of Enbridge, which is confidential and material to the interests, business and affairs of Enbridge and that disclosure thereof would be detrimental to the interests, business and affairs of Enbridge. Accordingly, the Consultant agrees that it shall maintain the confidentiality of the Confidential Information and that it shall not disclose the Confidential Information to any Person for any reason whatsoever except as expressly provided herein.

(d) The Consultant may disclose Confidential Information to the extent required by a court of competent jurisdiction or other governmental or regulatory authority or otherwise as required by applicable law, provided that the Consultant first give Enbridge prompt written notice (except where the governmental or regulatory authority has expressly ordered that no notice be given) and co-operate with and assist Enbridge in responding to the request or demand for disclosure.

(e) The Consultant acknowledges and agrees that Enbridge would be irreparably harmed if any provision of this Agreement is not performed by the Consultant in accordance with its terms. Accordingly, Enbridge shall be entitled to an injunction or injunctions to prevent breaches of any of the provisions of this Agreement and may specifically enforce such provisions by an action instituted in a court having jurisdiction. These specific remedies are in addition to any other remedy to which Enbridge may be entitled at law or equity.

(f) If in the course of performing Services hereunder, the Consultant obtains or accesses personal information about an individual, including without limitation, a customer, potential customer or employee or contractor of Enbridge ("Personal Information") the Consultant agrees to treat such Personal Information in compliance with all applicable federal or provincial privacy or protection of personal information laws and to use such Personal Information only for purposes of providing the Services hereunder. Furthermore, the Consultant acknowledges and agrees that it will:

(i) not otherwise copy, retain, use, modify, manipulate, disclose or make available any Personal Information, except as required by applicable law;

(ii) establish or maintain in place appropriate policies and procedures to protect Personal Information from unauthorized collection, use or disclosure;

(iii) implement such policies and procedures thoroughly and effectively;

(iv) except as required for purposes of providing the Services hereunder, will not develop or derive, for any purpose whatsoever, any products in machine-readable form or otherwise, that incorporates, modifies, or uses in any manner whatsoever, any Personal Information; and

(v) upon completion of its Services for or on behalf of Enbridge, will at Enbridge's direction: A. return; or B. destroy all Personal Information and all copies and records thereof in its possession.

9. **Indemnification**

The Consultant hereby agrees to and shall:

(a) be liable to Enbridge and its directors, officers and employees, for all claims, liabilities, damages, costs, losses and expenses whatsoever which Enbridge or any of its directors, officers and employees may suffer, sustain or incur; and

(b) indemnify and save harmless Enbridge, Enbridge's affiliated and subsidiary companies, and their directors, officers, agents, employees and representatives from and against any and all liabilities, claims, demands, damages, loss, costs and expenses (including without limitation all applicable solicitors' fees, court costs and disbursements, investigation expenses, adjusters' fees and disbursements) to or which any third party may suffer, sustain or incur,

in respect of all matters or anything which may arise out of any act or omission directly or indirectly related to any breach of this Agreement by the Consultant, its employees or representatives.

10. **Work Product**

(a) For the purposes of this Section 10, "Work Product" shall include any of the following, which are developed in the course of or arise from the Services provided by the Consultant to Enbridge hereunder throughout the Term: (i) any deliverables produced under any schedule to this Agreement together with any and all notes, reports, research information, compilations, data specifications, designs, programs, documentation, software (including object code and source materials), development tools, products and other materials or things; (ii) any and all knowledge, know-how, techniques, inventions, processes, trade secrets, methodologies, approaches and other intangible intellectual property rights; and (iii) all designs, patent applications, issued patents, industrial design registrations, design patents, trade-mark applications, registered trade-marks and copyright which may relate thereto.

(b) For the purposes of this Section 10, “Consultant Materials” comprises any of the following, which were developed by the Consultant, at its own cost and expense in advance of and independent of this Agreement and as proven by the Consultant to be the case in the event of a dispute concerning the same: (i) any and all notes, research, information, data, specifications, designs, programs, documentation, software (including object code and source materials), development tools, products and other materials or things; (ii) any and all knowledge, know-how, techniques, inventions, processes, trade secrets, methodologies, approaches and other intangible intellectual property rights; and (iii) all designs, patent applications, issued patents, industrial design registrations, design patents, trade-mark applications, registered trade-marks and copyright which may relate thereto.

(c) All right, title and interest in and to the Work Product shall be the property of Enbridge. The Consultant shall ensure that any agent or employee of the Consultant shall have waived in writing all of his or her moral rights over any such Intellectual Property. During and after the Term of this Agreement, the Consultant shall from time to time as and when requested by Enbridge execute all papers and documents and perform other acts as necessary or appropriate to evidence or further document Enbridge’s ownership of the Work Product and the intellectual property rights therein.

(d) The Consultant retains all right, title and interest in and to the Consultant Materials. The Consultant hereby grants to Enbridge a non-exclusive, perpetual, irrevocable, non-terminable, transferable, assignable and royalty-free license to copy, disclose, use, operate, maintain, repair, modify, enhance, make derivative works, license, sub-license and otherwise commercially exploit without limitation or restriction those Consultant Materials used in connection with the delivery of the Services or to the extent contained within any Work Product.

(e) The Consultant agrees to fully indemnify and hold harmless Enbridge from and against any and all: (i) claims, demands and actions; (ii) liabilities, damages or losses awarded by a court of competent jurisdiction or as agreed to as part of a settlement; and (iii) litigation costs and/or expenses (including reasonable legal fees and disbursements) reasonably incurred by Enbridge in connection with any claim that the Services or Work Product provided hereunder infringe any patent, copyright, trade secret or other right of any third party.

11. **Representations and Warranties**

(a) The Consultant represents, warrants and covenants with Enbridge that: (i) it will perform all Services in a good and workmanlike manner using reasonable care (at a level that is at least consistent with industry standards for the provision of similar services) and in accordance with the terms of this Agreement; (ii) it possesses the knowledge, skill and experience necessary for the provision and completion of the Services in accordance with the terms of this Agreement; and (iii) any deliverables provided hereunder shall conform to their relevant specifications as described in the applicable schedule.

(b) The Consultant agrees that under no circumstances will it interface a non-Enbridge computing device (including without limitation desktops, laptops, handheld device) with the Enbridge intranet or internet without obtaining the prior written approval of Enbridge. To the extent the deliverables produced hereunder involve the provision or development of any software application, interface or electronic data, the Consultant shall use commercially reasonable efforts to prevent the introduction of any virus to the hardware and computer systems upon which the application, interface or electronic data are to be installed. During the Term of this Agreement, the Consultant shall implement and run virus prevention and detection control procedures in accordance with industry standards.

(c) In addition to the policies described in Section 25, the Consultant shall ensure that it is familiar with and understands all of Enbridge’s current policies, procedures and standards that are pertinent to the activities associated with the Services and which have been provided to the Consultant in advance of the execution of this Agreement.

12. **Subcontractors**

The Consultant shall not enter into any agreement with any other party to assist in the provision of the Services described in Section 1 hereof (hereinafter described as a "Subcontract") nor shall the Consultant allow any other party to perform such Services or any part thereof without first obtaining the consent in writing of Enbridge, which consent may be withheld by Enbridge, acting reasonably. Notwithstanding any approval or consent that may be provided by Enbridge in connection with any Subcontract, the Consultant shall not be relieved of any of its liabilities and responsibilities hereunder. Any party which enters into a Subcontract with the Consultant shall be required by the terms of such Subcontract to comply with and be bound by the obligations and responsibilities of the Consultant described hereunder and without restricting the generality of the foregoing, any Subcontract which has been entered into without the prior written consent of Enbridge shall be null and void and without force and effect.

13. **Insurance**

Save and except where Enbridge specifies otherwise in writing, the Consultant shall at its own expense maintain and keep in full force and effect during the Term hereof and for a period of two (2) years following the expiry of the Term or other termination of this Agreement:

(a) Commercial General Liability insurance having a minimum inclusive coverage limit, including personal injury and property damage, of at least Five Million Dollars ($5,000,000) per occurrence. Enbridge Gas Inc. must be listed as the certificate holder and be added as an additional insured in the insurance policy, which should be extended to cover contractual liability, products/completed operations liability, owners'/ contractors' protective liability and must also contain a cross liability clause;

(b) Automobile Liability insurance on all vehicles used in connection with this Agreement and such insurance shall have a limit of at least Two Million Dollars ($2,000,000) in respect of bodily injury (including passenger hazard) and property damage inclusive of any one accident;

(c) Non-Owned Automobile Liability insurance and such insurance shall have a limit of at least Two Million Dollars ($2,000,000) in respect of bodily injury (including passenger hazard) and property damage, inclusive in any one accident; and

(d) such other insurance as Enbridge may in its discretion determine to be necessary, including, but not limited to, Professional Liability or Errors and Omissions insurance.

The Consultant shall forthwith after entering into this Agreement, and from time to time thereafter at the request of Enbridge, furnish to Enbridge a memorandum of insurance or an insurance certificate setting out the terms and conditions of each policy of insurance (all such policies of insurance being hereinafter described as the "Insurance Policies") maintained by the Consultant in order to satisfy the requirements of this section. At any time and from time to time at the request of Enbridge, the Consultant shall furnish Enbridge with one or more duly completed insurance certificates in the form requested by Enbridge to evidence the details of all the Insurance Policies. The Insurance Policies shall be arranged with insurers acceptable to Enbridge, acting reasonably, and shall contain such terms and conditions as are reasonably acceptable to Enbridge. The Consultant shall not cancel, terminate or materially alter the terms of any of the Insurance Policies without giving thirty (30) days prior notice in writing to Enbridge. The Consultant shall cause or arrange for any of its insurers under any one or more of the Insurance Policies to oblige itself contractually in writing to Enbridge to provide thirty (30) days prior notice in writing before cancelling, terminating or materially altering the Insurance Policies under which it is an insurer.

14. **Compliance with Laws**

The Consultant agrees to comply with the Occupational Health and Safety Act (Ontario) and the Workplace Safety and Insurance Act (Ontario) and with all other prevailing federal, provincial and municipal laws and regulations or any other laws or regulations in force in any jurisdiction where the Services are performed (the "Laws") and which are applicable to the Consultant, its subcontractors and the Services provided hereunder, and the Consultant shall familiarize itself and procure all required permits and licenses and pay all charges and fees necessary or incidental to the due and lawful prosecution of this Agreement, and maintain all documentation as may be required by the Laws, and shall indemnify and save harmless Enbridge, its directors, officers, agents and employees thereof against any claim or liability from or based on the violation of any Laws, whether by the Consultant, its officers, employees, subcontractors, representatives or agents. The Consultant shall, from time to time, if requested by Enbridge, furnish Enbridge with evidence of such compliance, and in particular: (i) evidence from the Workplace Safety and Insurance Board, or the equivalent thereof in any jurisdiction where the Services provided hereunder are carried out, that the Consultant and any party with which it has entered into a Subcontract are in compliance with and have paid all assessments and other amounts owing pursuant to the workers' compensation legislation of such jurisdiction; and (ii) evidence of the Consultant's compliance with any training requirements under the Laws including, without limitation, the provision of such statements or certificates pertaining to the Consultant's compliance in the form(s) prescribed by Enbridge from time to time.

Enbridge is committed to compliance with the Accessibility for Ontarians with Disabilities Act, 2005, O.Reg. 429/07 and O.Reg. 191/11, the Enbridge Customer Service Policy for Providing Goods and Services to People with Disabilities and the Enbridge Integrated Accessibility Standards Policy (collectively the "AODA"). The Consultant shall ensure that it is in full compliance with all of its obligations under AODA. Without limiting the generality of the foregoing the Consultant shall ensure that all of its employees, agents, volunteers, or others engaged by the Consultant in the delivery of services under this Agreement receive training in connection with the requirements of the AODA. If requested to do so, the Consultant shall provide Enbridge with copies of its policies, practices, procedures, training materials and training records including the dates on when the training is provided, and the names of the individuals trained, and confirmation the Consultant has reported its compliance to the Ministry of Community and Social Services or such other governmental authority as provided in the AODA.

The Consultant will ensure that any personnel it assigns to work in Canada, where they are not a Canadian citizen or Canadian permanent resident of Canada, will obtain and maintain the lawful ability to engage in commercial activities in Canada through the issuance of the appropriate documentation from Canada Border Services Agency and Citizenship and Immigration Canada. The Consultant's personnel where necessary will obtain lawful work permits to engage in business-related activities as temporary foreign workers and will notify Enbridge if any applications for work permits and work permit renewals are refused. The Consultant will not send personnel to any Enbridge-related work site if they do not possess the necessary lawful permission to work in Canada. The Consultant will take full responsibility to secure the necessary documentation and produce such documentation when entering a Canadian work site of Enbridge.

15. **Waiver**

Either the Consultant or Enbridge may, in writing, extend the time for performance by the other and waive non-compliance or non-performance by the other of any of the other's obligations, covenants and agreements under this Agreement and any compliance therewith or performance thereof. However, no such extension or waiver shall operate so as to waive, diminish or reduce the scope of or otherwise affect any obligation, covenant or agreement of such other which is not the subject matter of such extension or waiver or, except to the extent of such extension or waiver, of the obligation, covenant and agreement which is the subject matter of such waiver. No act or failure to act of either the Consultant or Enbridge shall be or be deemed to be an extension or waiver of timely or strict performance by the other of the other's obligations, covenants and agreements under this Agreement except to the extent notice thereof is given to the other.

16. **Notice**

Any notice or other communication to be given under or pursuant to the provisions hereof or in any way concerning this Agreement shall be sufficiently given if reduced to writing and delivered to the person to whom such communication is to be given or sent by electronic internet communication, addressed to such person at the address set forth below:

If to Enbridge:

ENBRIDGE GAS INC.
500 Consumers Rd
North York ON M2J 1P8
Attention: Deborah Bullock, Supervisor DSM Evaluation & Audit
Phone: 416-495-7228
Email: deborah.bullock@enbridge.com

With a copy to: Law Department
Email: egilawcontracts@enbridge.com

If to the Consultant:

FIRST TRACKS CONSULTING SERVICES, INC.
341 West 3rd Street
Nederland Colorado 80466
Attention: Edward Weaver, President
Phone: 720-272-8100 Ext.
Email: weaver_t@mindspring.com

or at such other address as may be specified therefor by proper notice hereunder. A notice or communication shall be deemed to have been sent and received on the day it is delivered personally or by courier or by electronic internet communication. If such day is not a business day or if the notice or communication is received after 5:00 PM (at the place of receipt) on any business day, the notice or communication shall be deemed to have been sent and received on the immediately following business day.

17. **Interpretation**

This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein. Headings used herein are for the convenience of reference only and shall not be considered in construing or interpreting this Agreement. The words "herein", "hereunder", "hereof" and other similar words refer to this Agreement as a whole and not to any particular paragraph. Any provision herein prohibited by law shall to the extent prohibited be ineffective without invalidating any other provisions hereof. All references to amounts of money in this Agreement and any schedule shall mean lawful currency of Canada.

18. **Assignment**

The Consultant may not assign this Agreement in whole or in part without the express prior consent in writing of Enbridge. This Agreement shall be binding upon and enure to the benefit of the successors and assigns of Enbridge.

19. **Use of Enbridge Name and Logo**

The Consultant shall not use or display Enbridge's name or any symbols, signs, trademarks and other marks denoting and identifying Enbridge in any manner whatsoever without the prior written authorization of Enbridge.

20. **Time of Essence**

Time shall be of the essence in the performance of the Services.

21. **Survival**

All warranties and indemnities contained in this Agreement, and the obligations contained in Section 8, shall survive the termination of this Agreement irrespective of the time of or party responsible for such termination, and such warranties, indemnities and obligations shall remain in full force and effect and be binding on the Contractor notwithstanding such termination.

22. **Further Assurances**

Each of the parties shall, from the time of the written request of the other party, do all such further acts and execute and deliver or cause to be done, executed or delivered all such further acts, deeds, documents, assurances and things as may be required, acting reasonably, in order to fully perform and to more effectively implement and carry out the terms of this Agreement.

23. **Entire Agreement**

This Agreement, including any schedules attached hereto, constitutes the entire agreement between the parties with respect to the subject matter set out herein and replaces any prior understandings or agreements, whether written or oral, regarding such subject matter. No change or modification of this Agreement is valid unless it is in writing and signed by both parties. No disclaimers, purchase order documents, invoices or other documents of the Consultant shall be binding upon Enbridge.

24. **Audit**

The Consultant shall, following no less than seven (7) business days advance notice in writing, provide to such auditors (including external auditors and Enbridge's internal audit staff or agents) as Enbridge may designate in writing, supervised access to the data, records and supporting documentation maintained by the Consultant with respect to the Services solely for the purpose of: (i) performing audits and inspections to enable Enbridge to satisfy applicable regulatory requirements or certify compliance with applicable laws; and (ii) to confirm that the Services are being provided in accordance with the terms of this Agreement. Enbridge and its auditors shall use commercially reasonable efforts to conduct such audits in a manner that will result in a minimum of inconvenience and disruption to the Consultant's business operations. In the event that if any such audit reveals any: (a) errors or deficiencies in the completion of the Services or invoicing of the Services; or (b) overpayments to the Consultant by Enbridge, then the Consultant shall forthwith correct such errors or deficiencies, including if applicable refunding any overpayment to Enbridge. The Consultant shall retain all records for ten (10) years from the date of expiration or earlier termination of this Agreement, or such longer period as Enbridge may require having regard to the nature of the Services.

25. **Enbridge Policies**

The Consultant acknowledges receipt of a copy of each of Enbridge Inc.'s Statement on Business Conduct for Enbridge Inc. and its Subsidiaries and Lifesaving Rules, each as amended from time to time (the "Policies"). The Consultant agrees to comply with the Policies in connection with its delivery of the Services described in this Agreement, and agrees that, if requested by Enbridge, it will ensure all personnel delivering the Services herein attend training on the Lifesaving Rules.

26. **ISNetworld Requirement**

If required by Enbridge, the Consultant shall subscribe with ISN Software Corporation as a registrant of ISNetworld ("ISN") or any successor service mandated by Enbridge from time to time, and maintain a performance grading within ISN that is acceptable to Enbridge (the "ISNetworld Requirement") and shall: (a) provide all records and information as required by ISN or Enbridge, including, but not limited to, training and qualification data of the Consultant personnel, including subcontractors and employees, relating to the Services; and (b) maintain compliance with the ISNetworld Requirement during the currency of this Agreement.

[remainder of page intentionally left blank]

27. **Counterparts and Execution**

This Agreement may be executed by the parties in separate counterparts, each of which when so executed and delivered will be deemed to be an original, and all such counterparts will together constitute one and the same instrument. Delivery of a signature by electronic transmission, including by email delivery of a "portable document format" ("pdf") document, shall create a valid and binding obligation. This Agreement may be executed using electronic signatures.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

FIRST TRACKS CONSULTING SERVICES, INC.	**ENBRIDGE GAS INC.**
By: Edward M Weaver	By: Craig Fernandes Craig Fernandes (Nov 17, 2021 13:40 EST)
Name: Edward M. Weaver	Name: Craig Fernandes
Title: President	Title: Manager DSM Policy
By:________________	By: ________________
Name:	Name: * *
Title:	Title: *
(Please print name and title of Signing Officer)	

Witness:________________

Name:

(Witness required if Contractor is a Sole Proprietor)

SCHEDULE A

TO THE CONSULTING AGREEMENT BETWEEN
ENBRIDGE GAS INC. AND FIRST TRACKS CONSULTING SERVICES, INC.
Dated October 20, 2021

This Schedule is made under the above referenced consulting agreement (the "Agreement") between ENBRIDGE GAS INC. ("Enbridge") and FIRST TRACKS CONSULTING SERVICES, INC. (the "Consultant").

1. **SCOPE OF SERVICES**

The Consultant will undertake the following Services:

The consultant, who is a subject matter expert in amortization as a cost recovery method, will provide advice for the application of this principle in Ontario.
Specifically, beyond research already completed by Enbridge Gas last year (previously supplied to the Consultant), the Company is seeking a higher understanding in the following categories, which may include, but are not limited to:

1. Jurisdictional Review Update
2. Application of Amortization as a Cost Recovery Method in Ontario
3. Impacts of Amortization as a Cost Recovery Method to Enbridge Gas Rates and Forecasts assuming DSM spending is estimated at $140 million in 2023 and escalates by 5% (2% inflation and 3% growth) over the following five years)
4. Impacts/Considerations for Enbridge Gas
5. The OEB has confirmed that OEB Staff is in the process of "developing expert evidence related to the experience of amortizing energy efficiency and conservation portfolio costs and the relationship to performance incentives throughout North America." Enbridge Gas is looking to engage a SME/ consultant to provide comment and opinion on the expert evidence for the purposes of the hearing.

As more fully described in the attached Scope of Work document.

A description of Services and key personnel to be provided by the Consultant is set forth in the proposal dated October 13, 2021 prepared by the Consultant, which is attached as Attachment 1 to this Schedule (the "Proposal") and incorporated by reference herein. In the event of a conflict between the terms and conditions set out in the Proposal and those set out in this Agreement, the terms and conditions in this Agreement (including this Schedule) will govern and take precedence.

2. **DELIVERABLES**

The Consultant will provide the following deliverables:

The consultant is expected to provide their recommendations/conclusions in a final Powerpoint presentation intended for internal consumption. Potential additional deliverables could include a Powerpoint presentation intended for external consumption, stakeholder/regulatory support and the consultant may also be asked to provide testimony as an expert witness in an OEB Oral Hearing on behalf of the Company

3. **TERM AND COMMENCEMENT AND COMPLETION DATES**

This Schedule shall be effective as of October 20, 2021 and expire December 10, 2021, or such other date as the parties may mutually agree in writing.

4. **KEY PERSONNEL**

The Consultant will provide the following personnel to deliver the services set out above under Scope of Services:

Edward Weaver, President.
Mendota Group, as appointed by the Consultant.

5. **FEES AND PAYMENT TERMS**

Fees: The services will be provided at an estimated not to exceed budget of [redacted]

Expenses: N/A

The above fees and expenses cannot be exceeded without prior written approval from Enbridge.

Fees are payable by Enbridge within sixty (60) days of receipt from the Consultant of an appropriate invoice setting out in reasonable detail the nature of the services provided.

[Remainder of page intentionally left blank; signature page to follow]

Dated as of October 20, 2021.

FIRST TRACKS CONSULTING SERVICES, INC.	**ENBRIDGE GAS INC.**
By: Edward M Weaver	By: Craig Fernandes Craig Fernandes (Nov 17, 2021 13:40 EST)
Name: Edward M. Weaver	Name: Craig Fernandes
Title: President	Title: Manager DSM Policy
By:________________	By:________________
Name:	Name: * *
Title:	Title: *
(Please print name and title of Signing Officer)	

Witness:________________

Name:

(Witness required if Contractor is a Sole Proprietor)

ATTACHMENT 1, Proposal is attached at the following pages.

Scope of Work (Ted Weaver/First Tracks Consulting) **September 2021**

This Scope of Work has been drafted to guide the consultant's research on the topic of amortization/capitalization as an energy efficiency cost recovery approach for demand side management.

The Ontario Energy Board (OEB) is exploring capitalizing energy efficiency spending and Enbridge Gas would like support in an upcoming proceeding (OEB File No.: EB-2021-0002) on this topic. Enbridge Gas is seeking a consultant who is a subject matter expert in amortization as a cost recovery method to provide advice for the application of this principle in Ontario.

Specifically, beyond research already completed by Enbridge Gas last year (previously supplied to the Consultant), the Company is seeking a higher understanding in the following categories, which may include, but are not limited to:

1. Jurisdictional Review Update
   a. Which jurisdictions in North America are amortizing (capitalizing) energy efficiency spending, how and why (policy drivers, historical context)? Please provide an overview regarding how each jurisdiction applies amortization as a cost recovery method (% of total cost amortized/term/earnings opportunity/relationship to IRP)?
   b. Have there been any notable recent developments in other jurisdictions (for example new adopters or decisions to cease/adopt this approach)?

2. Application of Amortization as a Cost Recovery Method in Ontario
   a. Would the benefits, challenges or lessons learned by other jurisdictions be relevant to Ontario including from both from a ratepayer and utility point of view?
   b. Is there any specific reason why amortization would be more or less applicable to Ontario, with respect to the local legislative/regulatory/policy landscape?

3. Impacts of Amortization as a Cost Recovery Method to Enbridge Gas Rates and Forecasts assuming DSM spending is estimated at $140 million in 2023 and escalates by 5% (2% inflation and 3% growth) over the following five years)
   a. How would capitalizing energy efficiency spending affect rate payers (short/medium and long term impacts)?

4. Impacts/Considerations for Enbridge Gas
   a. How might the regulator direct the utility in terms of tying performance metrics to an amortization cost recovery model (e.g. can cost of capital (ROI) earnings be combined with other incentive opportunities, how might not achieving targets potentially impact earnings)?
   b. How can future potential risks to the utility be safeguarded regarding the ability to recover costs in the long term, particularly in the event that DSM activities end, yet there are still amortized costs left to be recovered?
   c. Other opportunities, impacts, or considerations for Enbridge Gas.

5. The OEB has confirmed that OEB Staff is in the process of "developing expert evidence related to the experience of amortizing energy efficiency and conservation portfolio costs and the relationship to

performance incentives throughout North America."[1] Enbridge Gas is looking to engage a SME/ consultant to provide comment and opinion on the expert evidence for the purposes of the hearing.

Deliverables:

The consultant is expected to provide their recommendations/conclusions in a final Powerpoint presentation intended for internal consumption. Potential additional deliverables could include a Powerpoint presentation intended for external consumption, stakeholder/regulatory support and the consultant may also be asked to provide testimony as an expert witness in an OEB Oral Hearing on behalf of the Company.

Timing:

Target completion of First Powerpoint report: December 10, 2021

[1] EB-2021-0002 OEB Procedural Order NO. 2 (June 22, 2021).

First Tracks Consulting Service, Inc.
PO Box 1484
Nederland, CO 80466
720-272-8100

October 13, 2013

Deborah Bullock
Enbridge
500 Consumers Road
North York, ON M2J 1P8
Deborah.Bullock@enbridge.com

Deborah,

The table below outlines my budget estimate for advising Enbridge on the use of amortization as a cost recovery method for demand side management portfolios.

I have divided the scope of work we agreed on earlier into two phases. The first phase includes the first four research tasks, including a deliverable of an internal presentation to key Enbridge staff on the key issues and outcomes surrounding amortization. The second phase provides additional support to Enbridge in future stakeholder and regulatory proceedings, including providing comments and potential testimony.

It is difficult to precisely estimate the costs that will be required to complete this assignment, especially the support required in Phase 2. I will only charge Enbridge for actual costs incurred in completing the assignment and will keep Enbridge informed of project progress to ensure that you have adequate spending oversight.

I have secured The Mendota Group to help me complete the project. They will provide cost-effective support, primarily focusing on Task 1 researching application of amortization policies in other jurisdictions. The Mendota Group will be a subcontractor to First Tracks on the project, and I will ensure that they meet all of the requirements of the Consulting Agreement between Enbridge and First Tracks.

[redacted]

Thank you for considering First Tracks for this exciting project. We look forward to working with you.

Sincerely,

Edward M Weaver

Edward M. Weaver
President

First Tracks Consulting Service, Inc.

Shareholder Incentives for Utility Energy Efficiency Portfolios

Presented to: Enbridge

December 15, 2021

Overview

- Comprehensive Shareholder Incentives
- Amortization
- Performance Incentives
- Review of Optimal Energy Report
  - Amortization Considerations
  - Performance Incentive Recommendations

Comprehensive Shareholder Incentives

Shareholder Disincentives for Energy Efficiency

	Potential Shareholder Disincentive	Potential Mitigation Strategies
Cost Recovery	No/Under Recovery of Actual Expenses	Rider Recovery Balancing Account Forecast Test Year Expense or Asset Treatment
Lost Revenue/ Margin	Lost Margins on Foregone Sales	Lost Revenue Adjustment Mechanism (LRAM) Revenue Decoupling Straight Fixed/Variable Rates
Lost Investment Opportunity	No Earnings from Lost Investment	Performance Incentives EE Capitalization/Regulatory Asset

Cost Recovery Structures

What's the issue? Base rates may not fully cover costs to operate energy efficiency functions, especially as portfolios launch and grow.

Potential Solutions:

- Rate riders to track actual costs
  - ✓ Most jurisdictions track all costs in rider
  - ✓ Some jurisdictions track costs over and above base rate expenses in rider
- Balancing accounts to true up actual costs and actual revenue collection
- Carrying costs to compensate utility and shareholders for delays in expenditures or collection
- Forecast test years to better align costs and collection

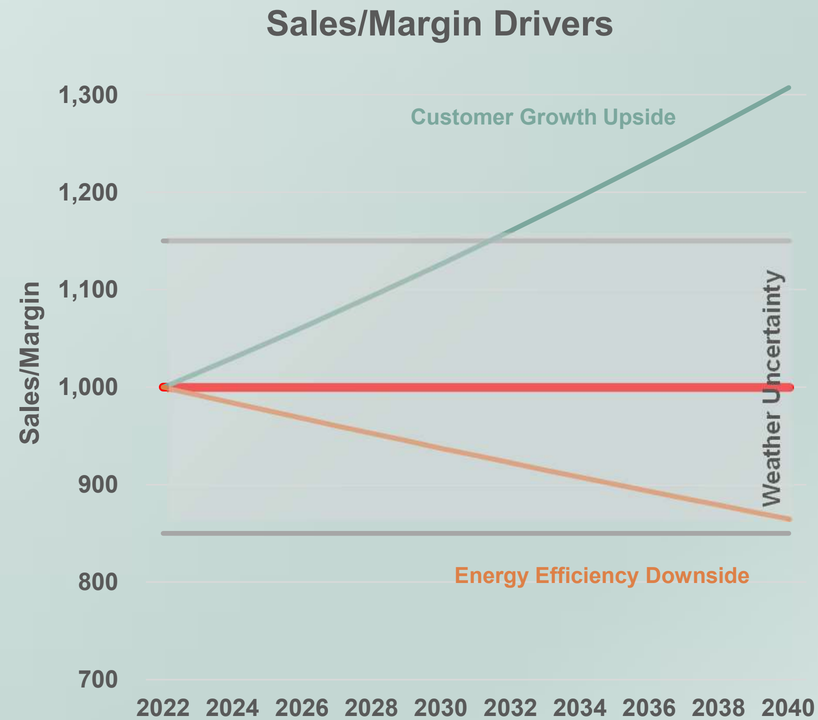
- Applies to both expense or asset recovery

Lost Margin Structures

What's the issue? No profit margin on sales foregone through energy efficiency.

Potential Solutions:

- **Decoupling**
  - Can offset most sales variability
    - ✓ Customer growth upside
    - ✓ EE downside
    - ✓ Weather variability
  - Can be applied selectively
    - ✓ Only to some rate classes
    - ✓ Only to variable tariff charges
    - ✓ Revenue per customer
- **LRAM**
  - Isolates lost margins from Energy Efficiency
- **Other**
  - Straight fixed-variable (SFV) rate structures lowers margin risks



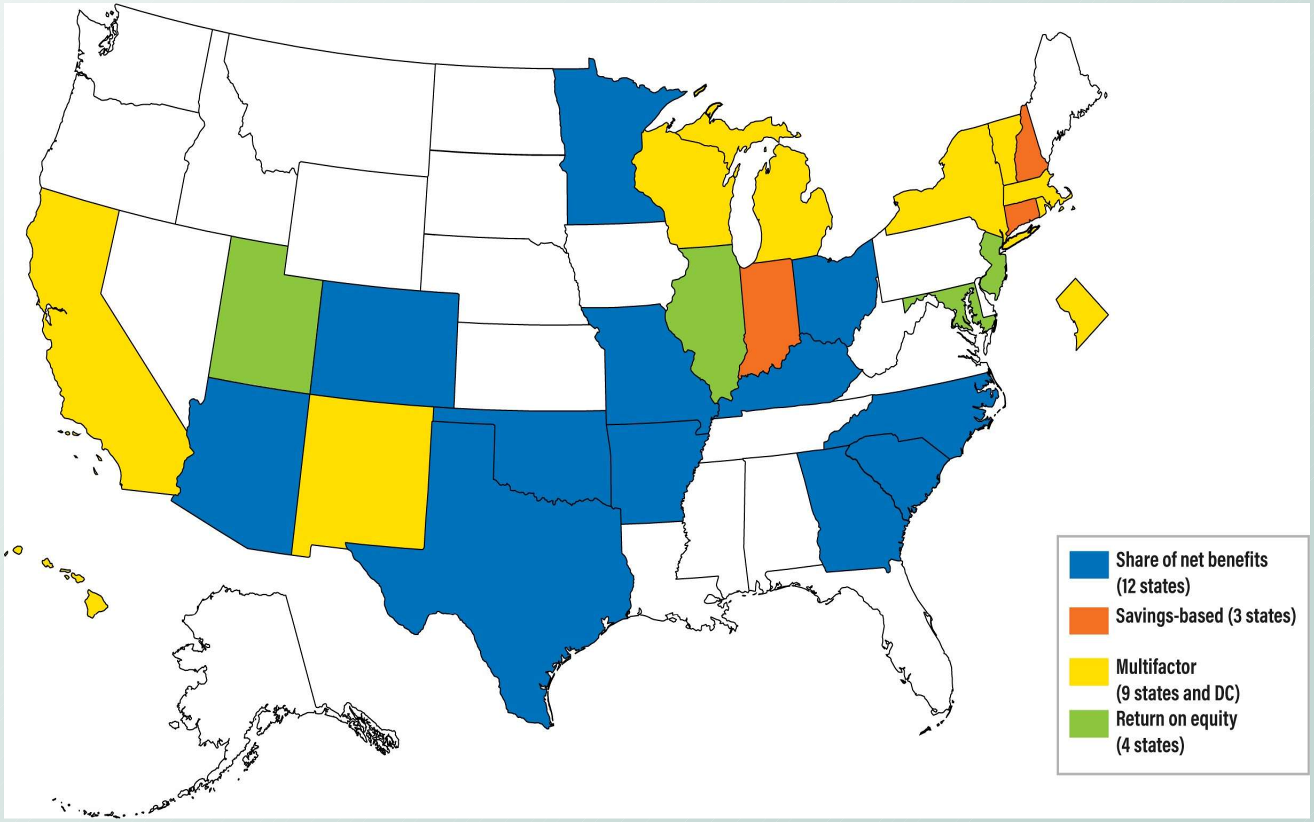
Performance Incentive Structures

What's the issue? Lost opportunity for earnings on supply investments serving load growth. Need to align utility financial interests with state/commission goals.

Potential Solutions:

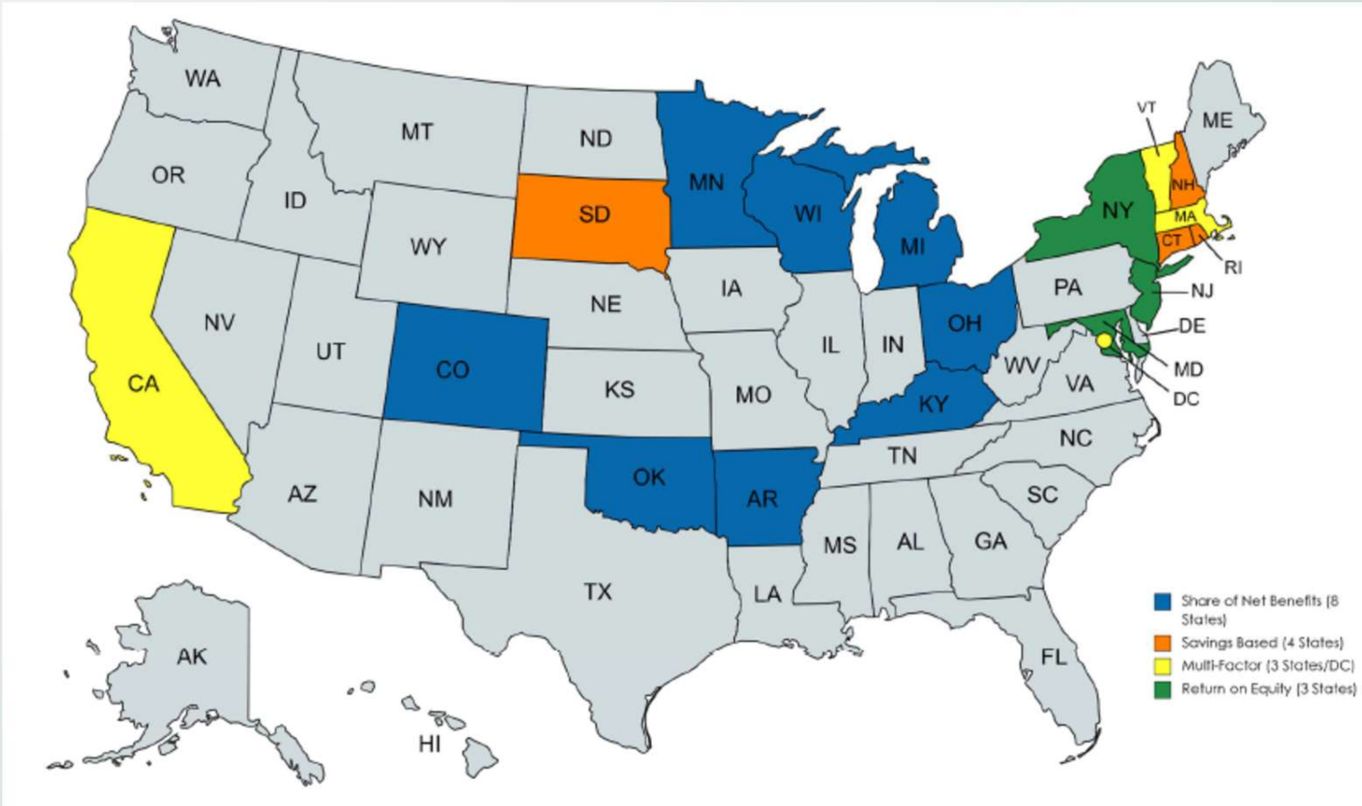
- ACEEE identifies four broad categories of Performance Incentive Mechanisms:
  - Three providing "bonus" approaches:
    - ***Share of Net Benefits:*** Incentives set at share of net benefits generated
    - ***Savings Based:*** Incentives set at percentage of spending, tied to savings performance metrics
    - ***Multifactor:*** Incentives set at a percentage of spending, tied to multiple metrics (e.g., energy savings, demand savings, net benefits, customer service, hard to reach spending/performance)
    - "Bonus" structures mirror gross margins used to manage a **service business model**.
  - One providing ***Return on Equity*** through "amortization" of regulatory assets
    - Rate of return can also be adjusted based on savings or other performance factors
    - "Amortization" structures mirror return on equity used to manage an **asset business model**.
- Other mechanisms also been used:
  - Incentives tied to spending rather than performance ("management fee")
  - Different structures for different investments and policy goals (e.g., shared savings for savings; % of budget for other goals)

Electric Performance Incentive Approaches in U.S.



Source: ACEEE, Snapshot of Energy Efficiency Performance Incentives for Electric Utilities, 2018

Gas Performance Incentive Approaches in U.S.



Source: ACEEE State Policy Database; Internal Analysis

Enbridge Shareholder Incentives

	2018-22 Decision	2023-2027 Proposal
Cost Recovery	Expense treatment Separate rider Recovery begins in year after expenditures Carrying costs compensate for lag in recovery True up aligns actual recovery with actual costs	Expense treatment Separate rider Recovery begins in year after expenditures Carrying costs compensate for lag in recovery True up aligns actual recovery with actual costs
Lost Margin	LRAM Included in cost recovery rider Recovery begins in year after expenditures Carrying costs compensate for lag in recovery True up aligns actual recovery with actual costs	LRAM Included in cost recovery rider Recovery begins in year after expenditures Carrying costs compensate for lag in recovery True up aligns actual recovery with actual costs
Performance Incentive	Annual bonus payment	Annual bonus payment
Performance Metrics	Lifecycle savings/participation performance • Annual targets, by program/segment • Mostly lifecycle savings • Minimum/maximum bonus at 75%-125% of target	Annual savings/participation performance (~60%) • Annual targets, by program/segment • Mostly annual savings; also some participation • Minimum/maximum bonus at 50%-150% of target Share of lifecycle TRC benefits (~30%) • Graduated performance scale Low carbon Transition (~1%) Long term GHG goal (~9%) • 5-year cumulative goal • Annual savings X GHG factor X 1.15 stretch factor

Risks Also Matter

- **Policy Drivers**
  - Are portfolios required by legislation or volunteered by utilities?
  - Constraints defined in legislation or outside of plan proceeding
    - Overarching policy goals
      - e.g., acquire all cost-effective savings
    - Overall budget constraints
    - Market segment minimum requirements
      - e.g., low-income, public sector, multifamily, business/residential mix
    - Other policy support
      - e.g., C/E tests, evaluation, fuel switching
  - Guidance or specifics on shareholder incentive mechanisms
    - Cost recovery
    - Lost margin
    - Performance incentives
- **Goal Setting/Achievement Risk**
  - How aggressive?
  - How changeable?
    - Set in legislation or decided/negotiated in regulatory proceeding
    - Modifications from legislated targets allowed
  - How flexible?
    - Budget flexibility across programs and years
    - Savings/target flexibility across programs and years
  - How complicated?
  - Mechanism parameters
    - e.g., caps, floors, penalties, symmetry
- **Evaluation Risk**
  - Evaluation policies
    - Technical reference manuals
      - Savings calculations, measure costs, useful lives
      - Locking down assumptions by year or by plan cycle
    - NTG policy
      - Gross savings targets (or fixed NTG)
      - Prospective by year or across plan cycle
    - Adjustable savings goals
      - Measure "actual" savings with updated inputs assumptions, but adjust goals
  - Evaluation processes
    - Rigor
    - Evaluation cycles and speed
    - Independent evaluators and auditors
    - Contested proceedings
- **Other Regulatory Risks**
  - Prudence review
  - Contested cost recovery proceedings

Amortization

Amortization Basics

- Amortization can be used for BOTH cost recovery AND performance incentive

Ratemaking 101

- Utilities recover costs for managing their business (and for deploying supply resources) by:
  - Recovering investments in assets through:
    - ✓ **Depreciation** (or **Amortization**) to recover cost **OF** investment
    - ✓ **Return** to recover cost **ON** investment to pay investors
      - Bondholders
      - Equity shareholders
      - Other minor investment (short term debt; ratepayer balancing accounts)
  - Recovering operating costs through:
    - ✓ **Expenses** to recover cost **OF** operation
    - ✓ Passed through dollar for dollar (absent regulatory lag)

Amortization Pros and Cons

Advantages

- Aligns costs and benefits of DSM investment
  - Customers benefitting over long term pay over long term
- Lowers rates for customers in near term
- Creates earnings stream for shareholders
- Consistent with treatment used to recover and incentivize utility supply investments
  - **"Asset" business model**

Disadvantages

- Increases rates for customers in long term
- Earnings grow with unamortized balances, rather than performance
  - Utilities can receive *higher* earnings in years with *worse* performance
  - Year-on-year earnings growth is highest in early years
- Creates risk for shareholders by building up regulatory asset balance
  - Will it be fully recoverable, if future commissions cease to support energy efficiency?
  - May affect utility credit rating
- "Bonus" approach is consistent with treatment used to manage and incentivize companies delivering energy efficiency in competitive markets
  - Analogous to gross margin (or net markup)
  - **"Service" business model**

Amortization Finance Review

Modeling Conventions

- **Portfolio and utility assumptions**
  - Budgets reflect Enbridge 2023 proposed portfolio
    - $142.3M, growing annually at 3% real and 2% inflation through 2027
    - Budgets increase at inflation after 2027
    - 108M cubic meters savings growing annually at 3% per year through 2027
    - Constant savings after 2027
  - Enbridge capital structure and returns (approximately)
    - 66.7% debt/33.3% equity
    - 4% debt returns; 9% equity returns
- **Discounting conventions**
  - BOY cash flows (i.e., first year undiscounted)
  - No intra-year interest/discounting
  - No AFUDC for costs carried into next year
- **Tax conventions**
  - Earning calculated pre-tax
  - No gross up in revenue requirement
  - No tax implications of regulatory asset
- **Business models**
  - O&M: All costs expensed; no earnings
  - Asset: Amortized regulatory asset
  - Service: All costs expensed; bonus in following year

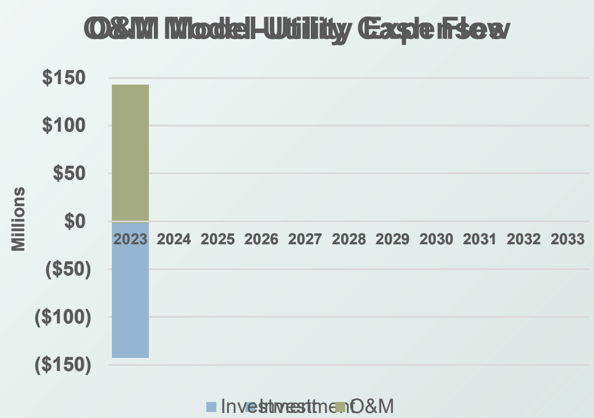
Key Input Drivers

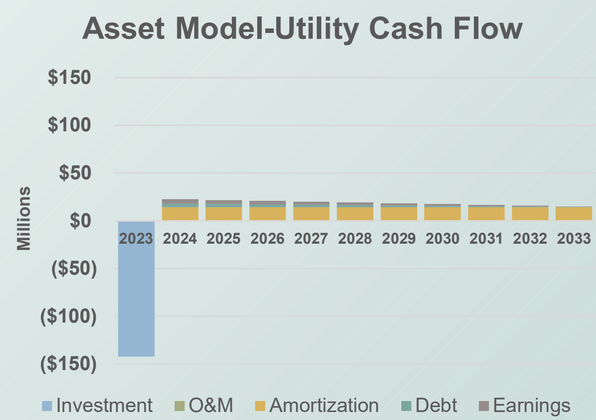
- Amortization
  - All costs assumed to be amortized
  - Term
  - Cost of capital
- Service Model Bonus
  - Bonus level (as % of budget)
- Portfolio Duration
  - 1-year portfolio
  - 5-year portfolio
  - 20-year portfolio
- Discount rates
  - Utility
  - Customer
  - Society

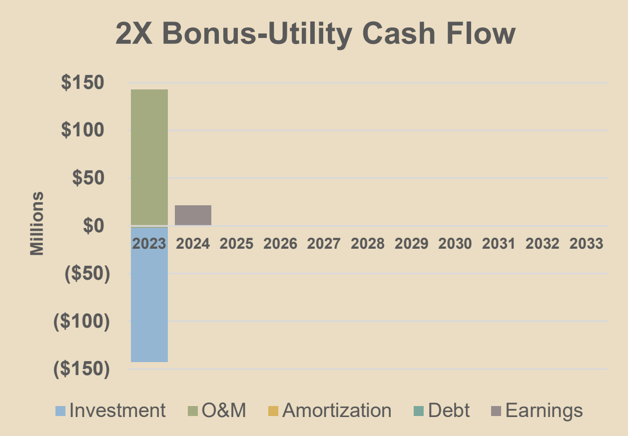
Key Outcomes

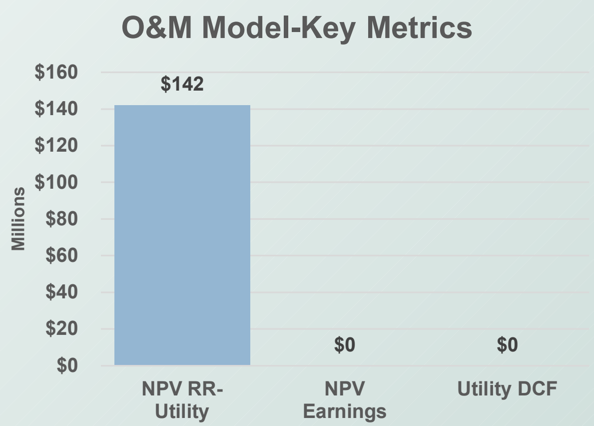
- Revenue requirements
- Earnings
- Discounted cash flow
- Unamortized asset balance

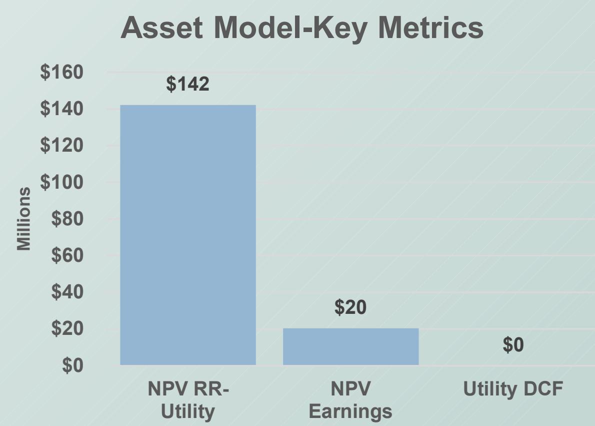
Cost Recovery and Performance Incentive Models

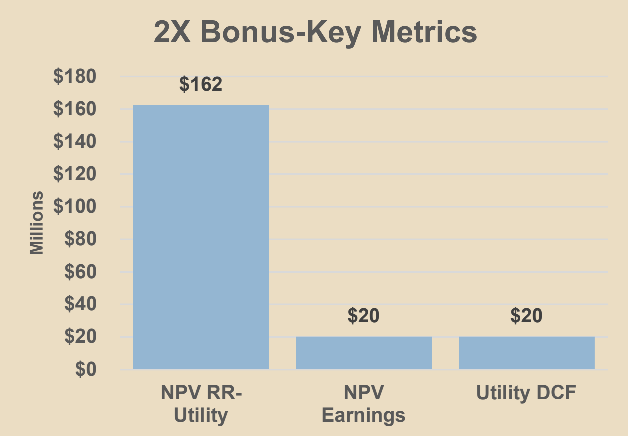








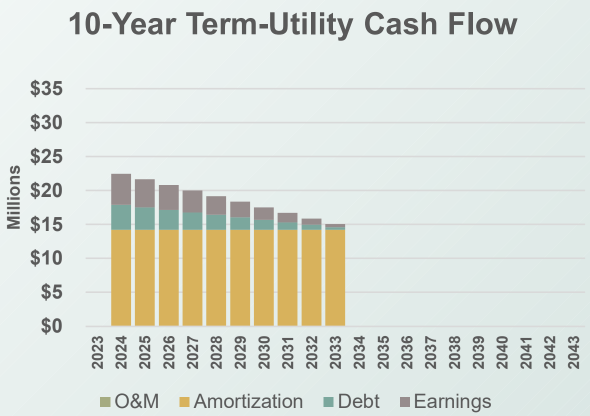


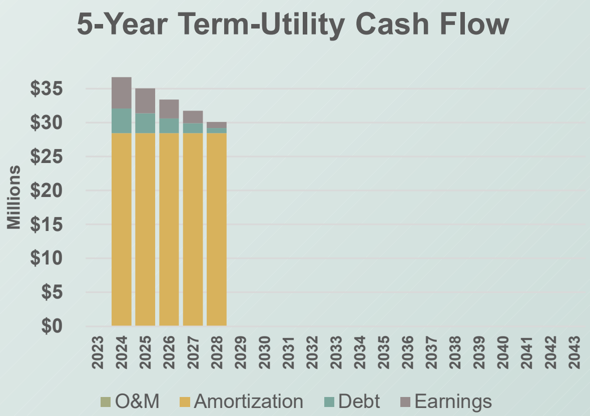


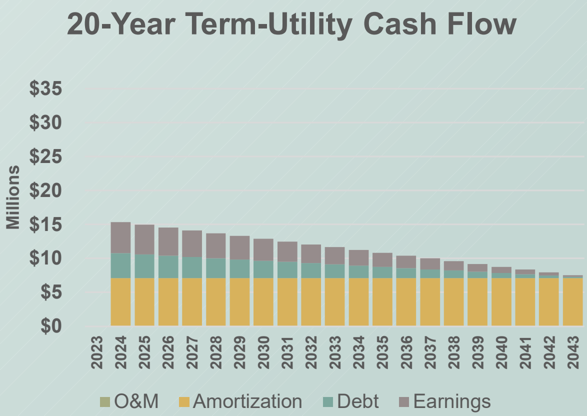
Amortization Drivers

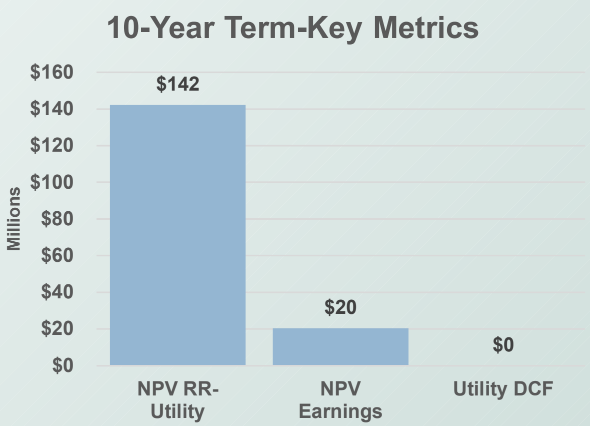
- **Which costs are covered?**
  - Most jurisdictions include all costs for delivering EE portfolio.
  - **Maryland**
    - Some electric utilities exclude demand response costs from amortization
    - Started excluding Behavior program and Utility Administrative costs from amortization in 2021
  - Some jurisdictions amortize tangible assets required to deliver EE portfolio (e.g., load management devices; IT systems)
    - Usually tiny share of portfolio budget; especially for gas utilities
- **How long is the amortization term?**
  - Measure useful life approach is consistent with supply-side investments
  - Most jurisdictions apply round numbers (e.g., 5 years; 10 years)
  - **Illinois**
    - Applies weighted average measure life (WAML) of installed equipment
    - Around 11 years for ComEd's 2021 portfolio
    - Tracks measure lives precisely; adjusts asset lives as measures expire
    - Another approach would be to lock in approximate WAML each year
  - **New Jersey**
    - Applies shorter term for IT assets
  - **Fortis BC**
    - 2018 requested increase from 10 years denied by BCUC
      - Requested 16 years to match portfolio WAML
      - Other parties supported change
      - Commission found WAML to uncertain and changeable
- **What is the cost of capital and return on equity?**
  - Most jurisdictions apply utility weighted average cost of capital
    - Capital structure authorized in most recent rate case
    - Cost of debt and cost of equity authorized in most recent rate case
    - Consistent with supply-side investments
  - **Illinois**
    - Uses formula rate structure to define cost of equity, consistent with non-EE formula ratemaking
  - **Maryland**
    - Some Maryland stakeholders have proposed applying cost of debt
    - Utilities oppose
    - No formal proposal or Commission decision
  - **Missouri**
    - Optimal reports that Missouri applies cost of short-term debt
    - Utilities currently expense all costs, with multivariate bonus and LRAM
    - Utilities apply short-term debt to track short-term imbalances
    - Utilities may have used amortized cost recovery earlier in 2010s…?
    - Needs additional research
  - **Illinois/New Jersey/New York**
    - Apply a bonus/penalty to the return on equity to create additional performance incentives
    - Covered more in next section on performance incentives

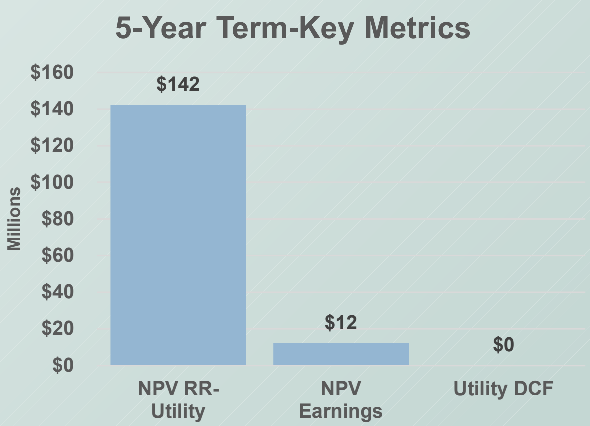
Amortization Term Analysis

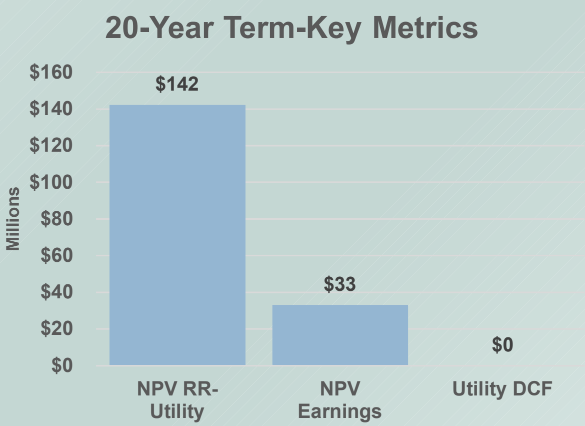




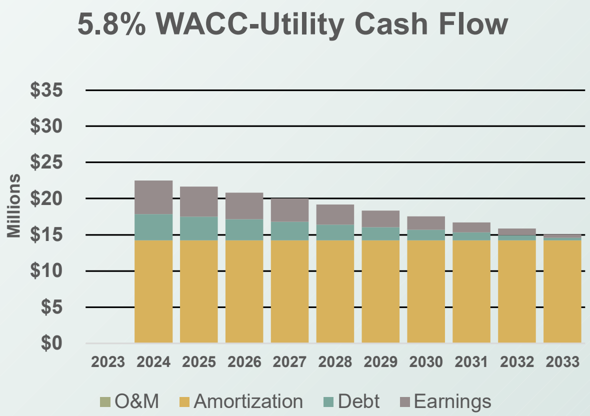


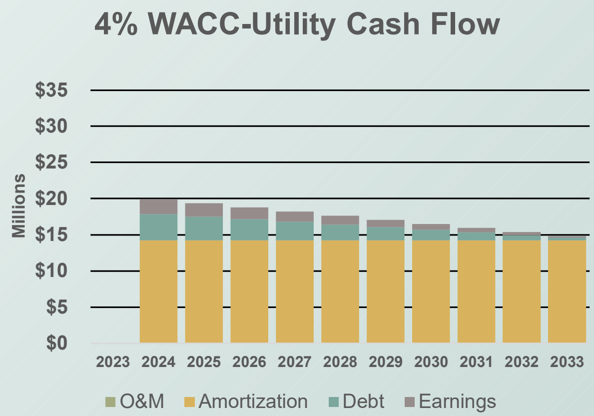


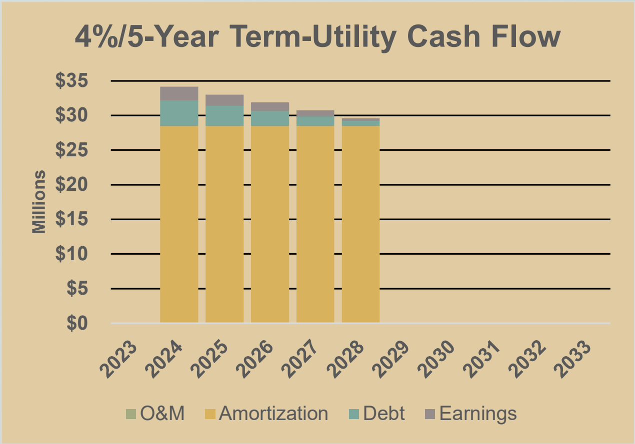


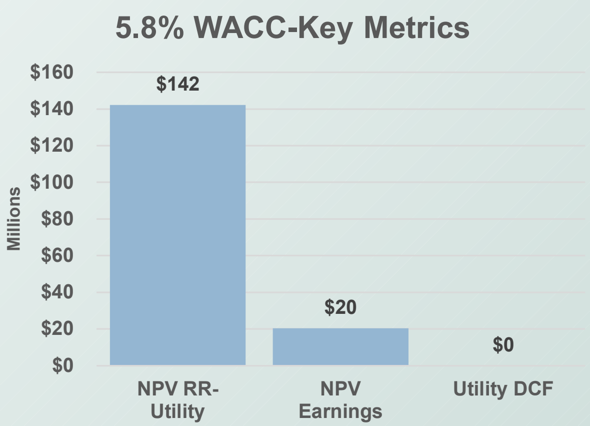


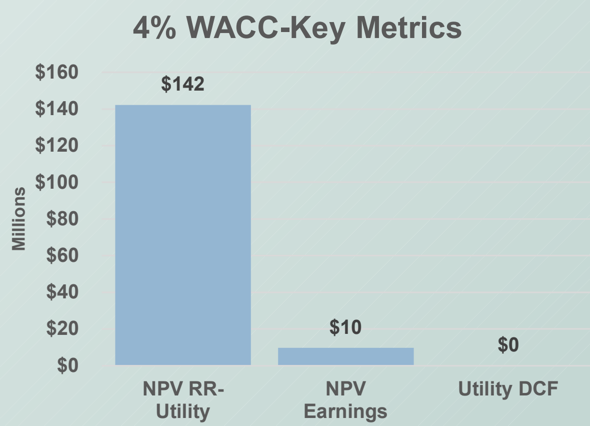
Amortization Cost of Capital Analysis

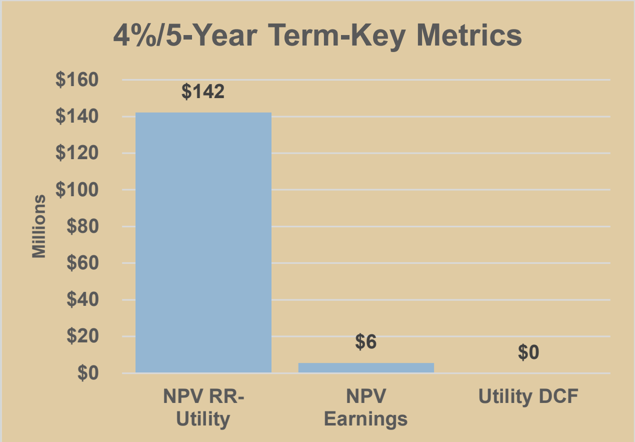






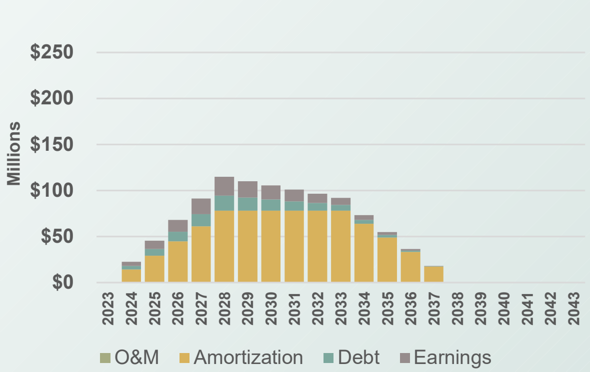




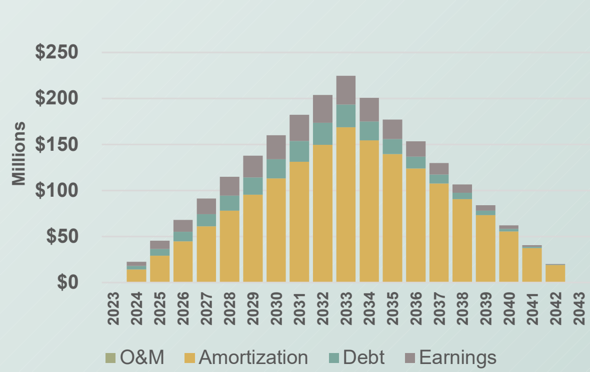


Amortization Portfolio Horizon

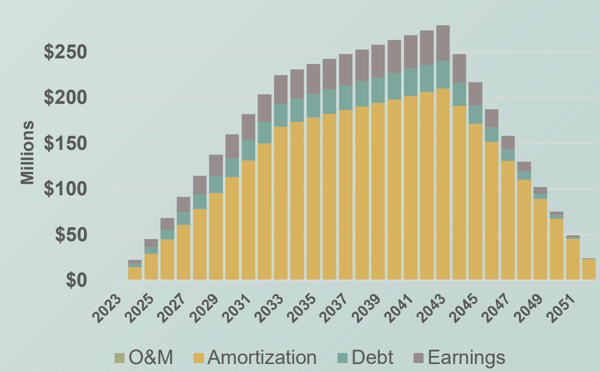
5-Year Portfolio; 10-Year Term



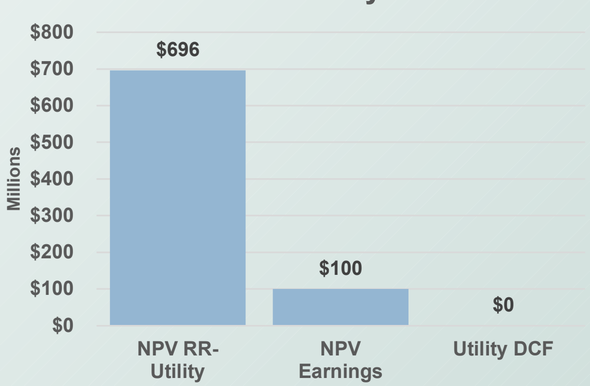
10-Year Portfolio; 10-Year Term



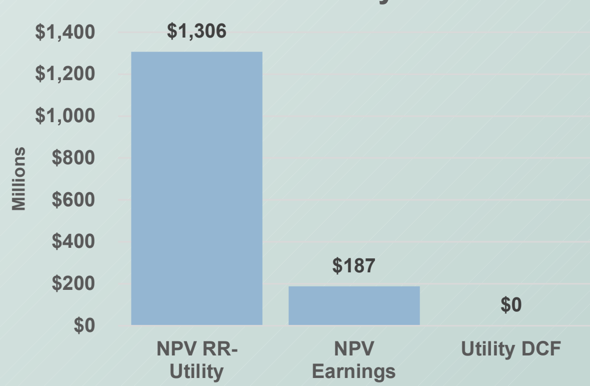
20-Year Portfolio; 10-Year Term



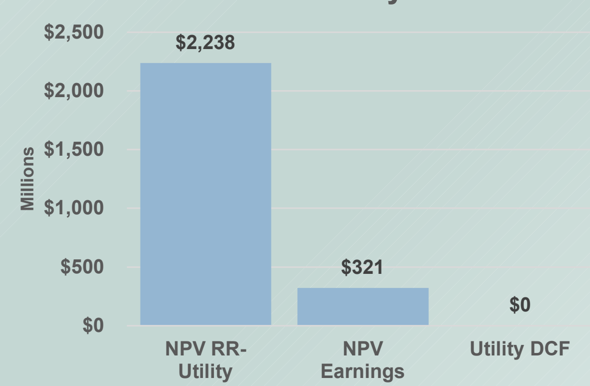
5-Year Portfolio-Key Metrics



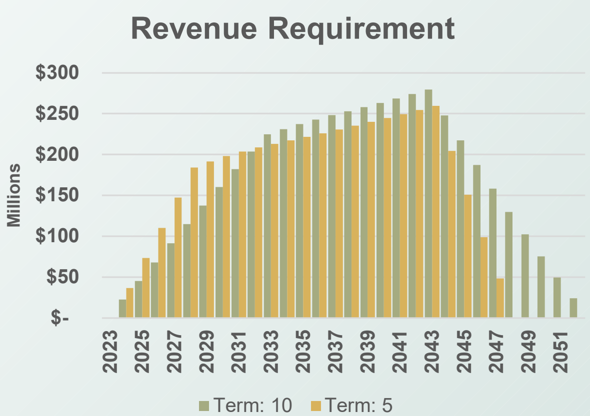
10-Year Portfolio-Key Metrics

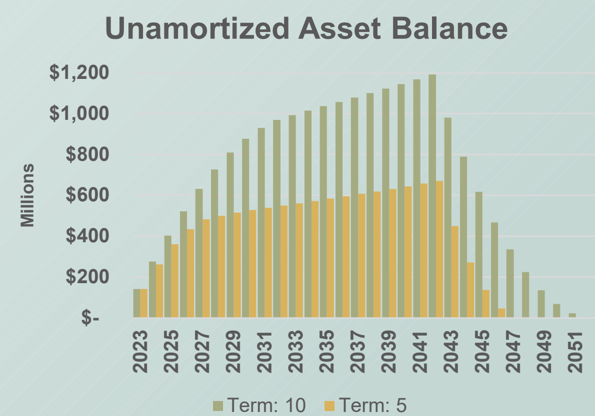


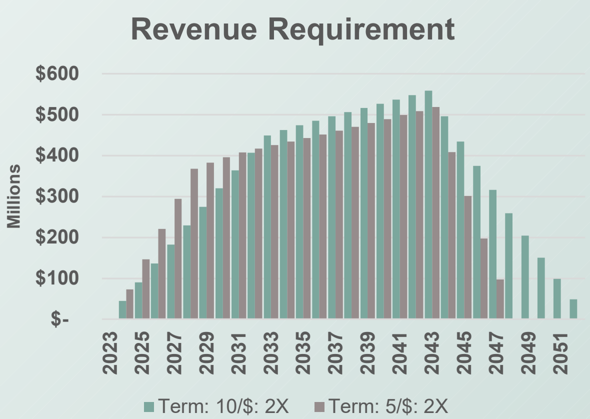
15-Year Portfolio-Key Metrics

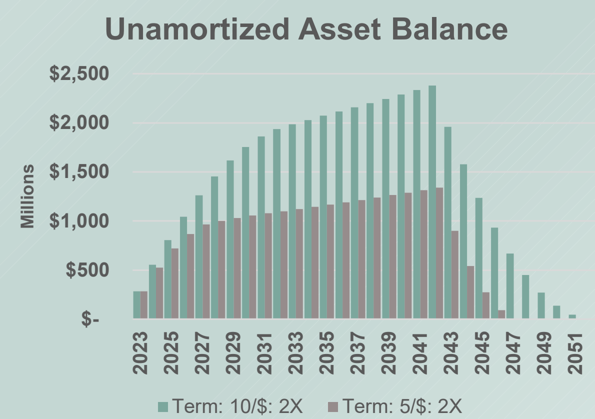


Amortization Rate and Earnings Impact

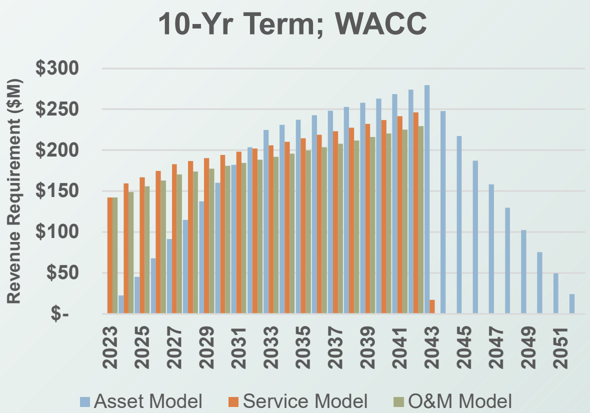


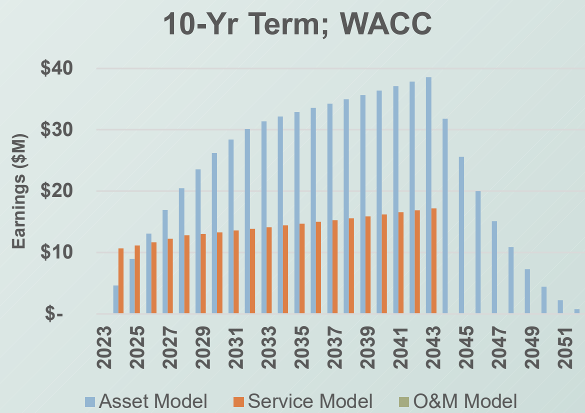


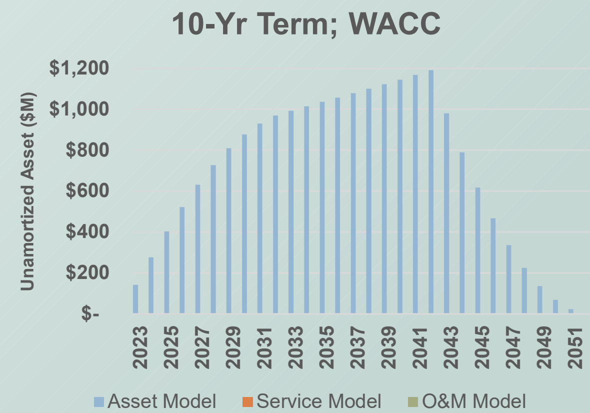


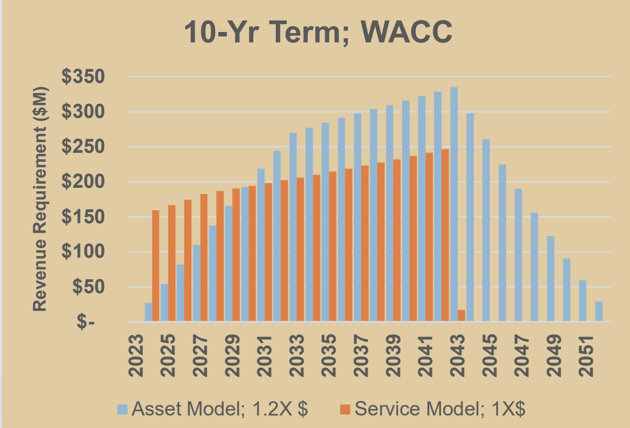


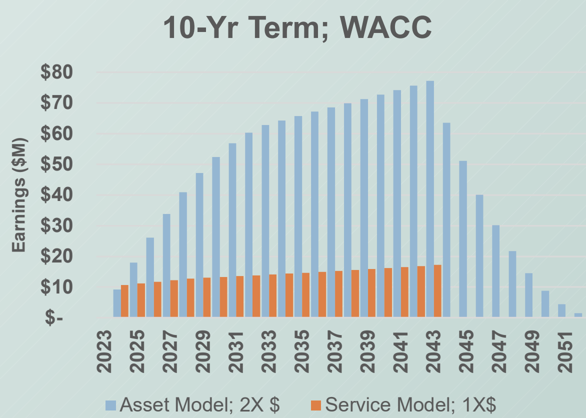
Rate and Earnings Impacts, By Term and Business Model

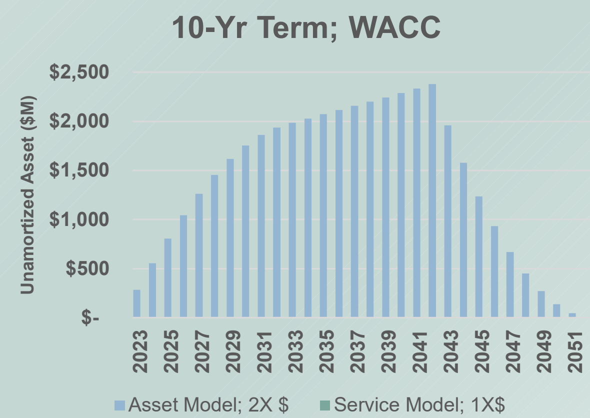




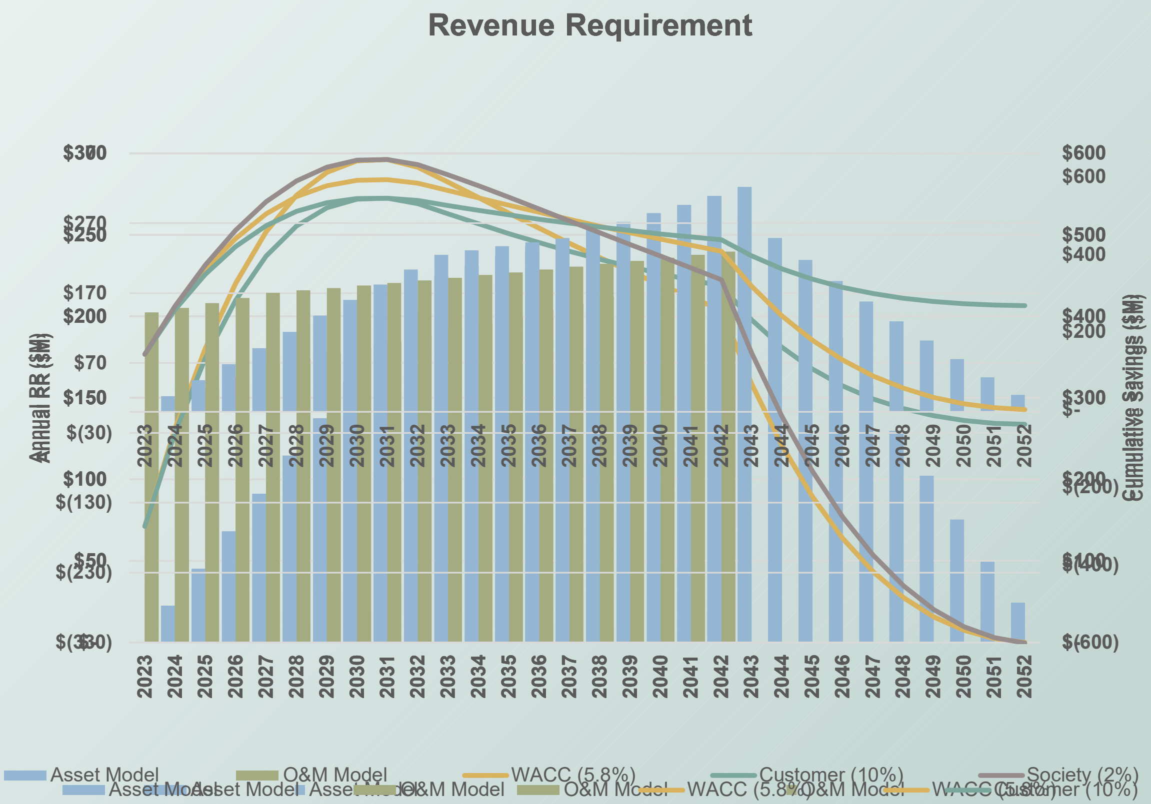








Amortization: Cumulative Customer Savings



Expense vs. Amortization: Key Take Aways

Cost Recovery (Amortization vs. O&M Business Models)

- Expense and amortization return same NPV of revenue requirement
  - At utility's discount rate
- Expense treatment provides no profit to shareholders
  - Amortization provides an earnings stream to shareholders.

Shareholder Incentive (Amortization vs. Service Business Models)

- Amortization provides:
  - EPS: Positive earnings
  - DCF: Zero NPV
  - Earned over amortization period
- Bonus provides:
  - EPS: Positive earnings
  - DCF: Positive NPV (equal to positive earnings)
  - Earned immediately
- Incentive mechanisms can be tuned so that bonus and earnings structures identical earnings
  - Amortization earnings vary widely year to year
  - Structures can be adjusted to produce same NPV across a defined period
- Both approaches provide:
  - Shift in profits from upstream producers to downstream distribution utility

Amortization Mechanics: Key Take Aways

- **Term**
  - Best theoretical approach is to match term to measure lives
  - Best practical approach may be shorter life to limit regulatory asset balance
  - Longer terms:
    - ✓ Lower rates dramatically in near term
    - ✓ Increase rates modestly in long term
    - ✓ Increase NPV of earnings to shareholders

- **Cost of capital**
  - Best theoretical approach is to match to utility's marginal cost of capital
  - Hard to understand how lower cost of capital provides fair rate of return
  - Lower costs of capital:
    - ✓ Lower rates in all years
    - ✓ Lower earnings to shareholders in all years
  - Adjustments to cost of capital:
    - ✓ Drop directly to earnings (debt investors paid regardless of performance)
    - ✓ Have large impact on earnings; relatively small impact on rates (across reasonable ranges)

- **Across reasonable ranges**
  - Reduction in term from 10 to 5 years drops NPV of earnings by around 40%
  - Reduction in WACC from 5.8% to 4% drops NPV of earnings by around 50%

Amortization: Impacts on Enbridge

- **At current budget trajectory:**
  - Amortization lowers rates in near term
    - ✓ Perhaps allowing larger budgets
    - ✓ But raises rates in long term, limiting budget increases
  - Amortization provides an earnings stream
    - ✓ Reaching ~$18M to ~$30M per year by 2033, then growing at inflation
    - ✓ Accruing NPV of $190M to $320M
  - Amortization creates a regulatory asset
    - ✓ Reaching $550M to $1B (depending on term) by 2033, then growing at inflation ($700M to $1.2B by 2042)

- **If amortization leads to higher budgets**
  - At 2X budget:
    - ✓ Rates will reach current “service” model levels by year 4
    - ✓ Rates will grow to reach more than 2X current “service” model levels
    - ✓ Regulatory asset will reach $1.1B to $2B by 2033
  - At 1.2X budget, rates will
    - ✓ Rates will reach current “service” model levels before 2030
    - ✓ Rates will grow to more than 1.2X current “service” model levels
    - ✓ Regulatory asset will reach $660M to $1.2B by 2033

Which Approach is Best?

- Neither amortization nor expense treatment approach is better. They have different features and tradeoffs

- For **customers**, amortization:
  - Lowers revenue requirements in near term
  - Increases revenue requirements in long term
  - Long term impacts are tempered if amortization is a permanent switch (asset balances need never get paid off)
  - Customers with high discount rates are better off with short-term/long-term tradeoff

- For **shareholders**, amortization:
  - May prove attractive for utilities with few investment options and surplus capital/cash available (or attainable) to invest
    - ✓ Amortized DSM provides earnings stream
    - ✓ Similar to core business model of investing in supply additions that provide fair return on capital
  - May crowd more profitable investments at utilities with many investment options or limited capital/cash available
    - ✓ Amortized DSM “only” provides returns at cost of capital

- For **society**, amortization:
  - May provide short term rate benefits that allow higher investment in EE, which will lower overall carbon emissions
  - Increases costs overall of delivering EE (at societal discount rate)

Amortization: State Profiles

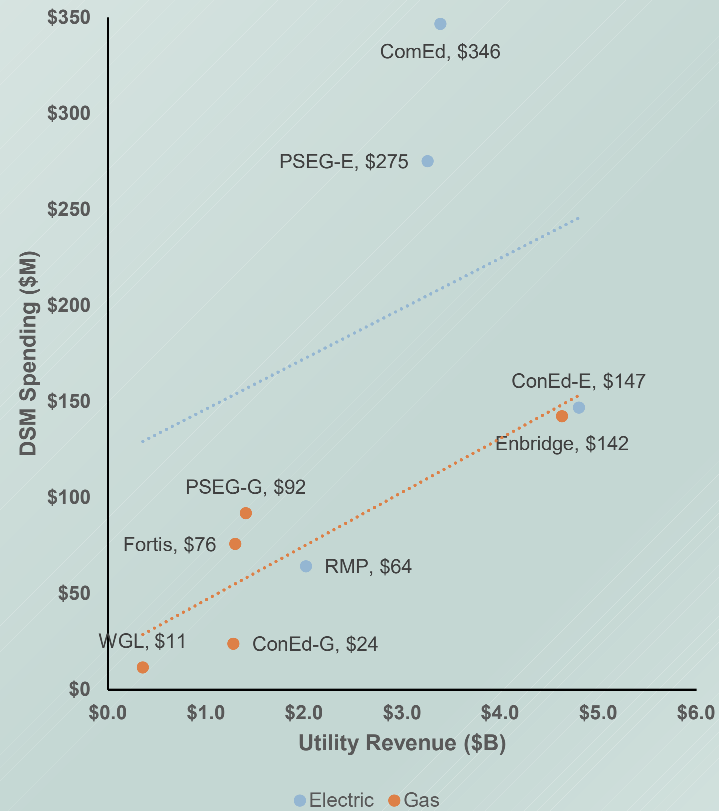
Jurisdictions/Utilities Profiled

Amortization Jurisdictions

- Illinois/ComEd
- New Jersey/PSEG
- Maryland/Washington Gas Light
- New York/ConEd
- Utah/Rocky Mountain Power
- BC/Fortis BC

Utility Data on Operations and DSM Portfolios

	ComEd	RMP	PSEG	ConEd	WGL	Fortis	Enbridge
Jurisdiction Data							
Fuel	Electric	Electric	Both	Both	Gas	Gas	Gas
Jurisdiction	IL	UT	NJ	NY	MD	BC	ON
Utility Operating Data							
Year	2020	2020	2020	2020	2020	2020	2020
Revenue (Billions)	$3.4	$2.0	$4.7	$6.1	$0.4	$1.3	$4.6
Electric Sales (TWh)	28	25	22	21			
Gas Sales (TBtu)			175	101	33	313	957
Customers (Millions)	2.9	1.0	2.1	2.9	0.4	1.1	3.8
DSM Portfolio Data							
Year	2020	2020	2021	2020	2020	2020	2023
Spending (Millions)	$346	$64	$367	$170	$11	$76	$142
Annual Savings (GWh)	1,827	357	TBD	678			
Annual Savings (BBtu)			TBD	67	164	979	3,767
Rankings							
ACEEE Electric Utility Rank	4	34	42	29			
ACEEE Gas State Rank			13	7	28		
EC Gas Province Rank						3	6



Amortization and Shareholder Incentive Features

	ComEd/IL	RMP/UT	PSEG/NJ	ConEd/NY	WGL/MD	Fortis/BC
Shareholder Incentives						
Cost Recovery	Rider	Rider	Rider	Base Rates/ Deferral Account	Rider	Base Rates / Deferral Account
Lost Margin	Decoupling via formula rates	None	LRAM, w/ROE cap	Decoupling via RDM	Decoupling	Decoupling
Earnings Incentive	ROE Adjustment	None Beyond Amortization	ROE Adjustment; Potential Penalty	$ payments according to ROE basis point awards	None Beyond Amortization	None Beyond Amortization
Performance Metrics	Applicable Annual Incremental Goal (Cumulative Savings Progress + Replaced Expired Savings)	N/A	2021/22 Annual Energy LC Energy Additional in 2023-25 Annual Demand Long-Term Demand UC Net Benefits LI LC Energy SB LC Energy Penalty 0.75% of base rate revenue for weighted performance <50%	Electric-Only Electrification DER Utilization Peak Reduction LSRV Load Factor Cross-Commodity Gas LC $ savings Deeper EE	N/A	N/A
Amortization Approach						
Costs Excluded (Beyond Disallowances)	None	None	None	None	Behavior; Admin; Some Electric DR	None
Amortization Life	WAML (~11)	10	10 5 for IT assets	10	5	10
Cost of Capital	WACC	WACC	WACC	WACC	WACC	WACC
Return on Equity	Formula ROE + penalty/bonus	Authorized ROE	Authorized ROE + penalty/bonus	Authorized ROE + bonus	Authorized ROE	Authorized ROE

Illinois/ComEd

Jurisdiction:	IL
Parent:	Exelon
Fuel:	Electric
Year:	2020
Utility Operating Data	
Revenue:	$3.4 Billion
Sales:	28 GWh
Customers:	2.9 Million
DSM Portfolio Data	
Spending:	$346 Million
First-Year Savings:	1,827 GWh
Lifecycle Savings:	19,367 GWh
DSM Earnings Data	
Equity Incentive Earned:	$30 Million
Min Earnings Available:	$19 Million
Max Earnings Available:	$33 Million

Regulatory Environment

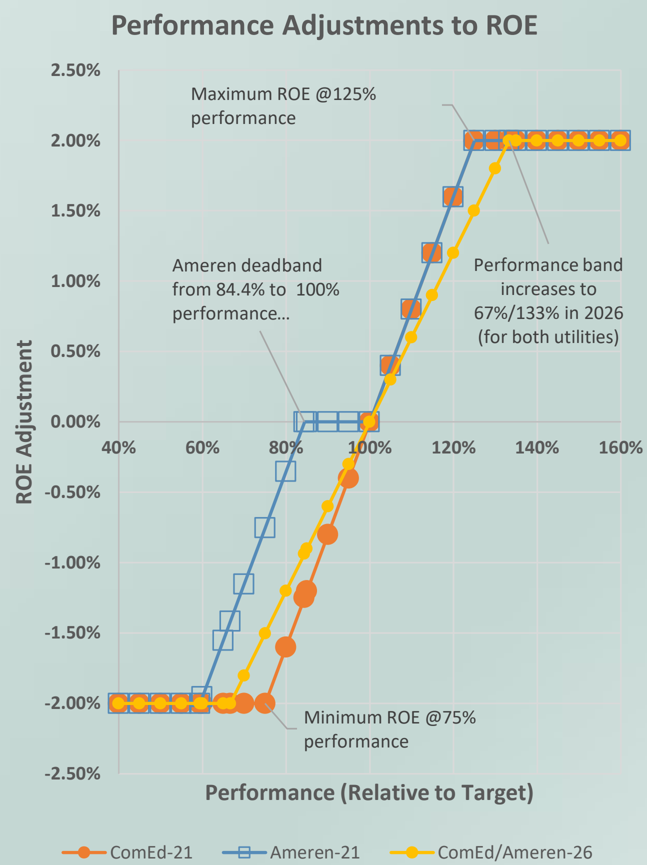
- **Aggressive goals**
  - Set in legislation
  - Provision for modified goals, but incentives tied to legislative goals
- **Stringent EM&V**
  - Independent evaluator
  - TRM and NTG policy set prospectively one year in advance
  - Utilities absorb risk of changes between plan approval
- **Regulatory Requirements/Allowances**
  - $40M/year for low income (with stakeholders calling for higher spending)
  - 10% of budget for public sector
  - 3% of budget for EM&V
  - ≤4% of budget for R&D

Shareholder Incentive Structure

- **Cost Recovery:**
  - Amortized regulatory asset
  - Rider, with annual true up for costs and revenue
- **Lost Margin Recovery**
  - Decoupling (mostly)
  - Through base formula rate structure
- **Earnings Incentive**
  - Amortization earnings
  - Bonus/penalty ROE

Amortization Structure

- **Amortization Life:**
  - Weighted average measure life
  - 10.6 years for 2020 portfolio
  - Detailed asset tracking by measure
- **Return:**
  - WACC
  - Formula ROE, consistent with other formula rates
    - Tied to US Treasuries + risk premium
- **Incentive:**
  - ROE adjustment
  - +/-200 basis points
  - ComEd and Ameren have different incentive structure through 2025
  - Performance band increases in 2026
- **Performance Metrics:**
  - Applicable Annual Incremental Goal (AAIG)
  - Cumulative savings increment plus expired savings replaced
  - Targets defined in statute (modifications possible)
- **Costs Covered:**
  - All expenses
  - All capital assets
  - Subject to prudence review



New Jersey/Public Service Electric & Gas (PSEG)

Jurisdiction:	NJ	
Parent:	PSEG	
Fuel:	Electric	Gas
Year:	2020	
Utility Operating Data		
Revenue ($B)	$3.30	$1.40
Sales (GWh,TBtu):	21.8	183
Customers (million):	2.1	1.78
2021 DSM Portfolio Data		
Spending $M):	367	
First-Year Savings (GWh, BBtu):	TBD	TBD
2021 DSM Earnings Data		
Equity Incentive Earned ($M):	$0	$0

Regulatory Environment

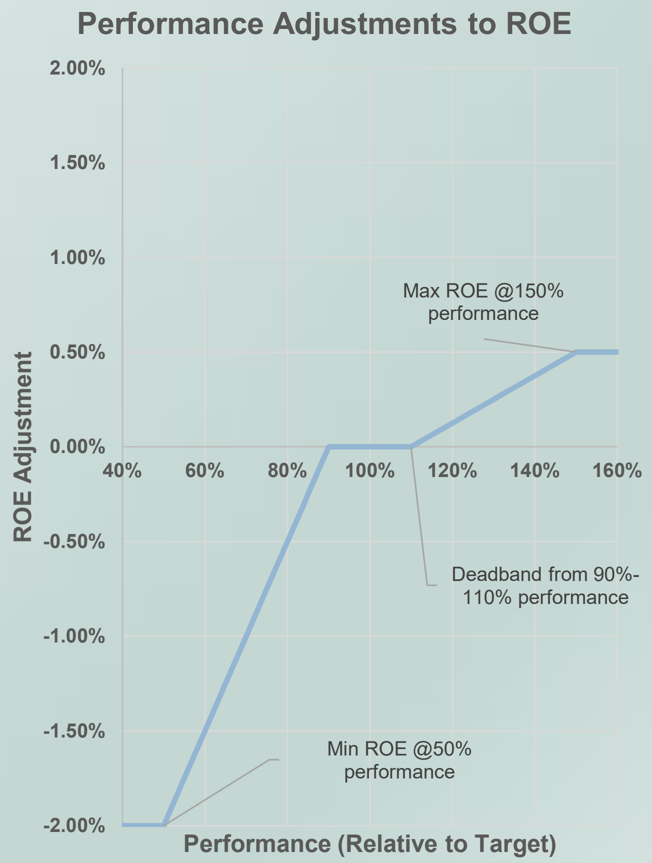
- **Aggressive goals**
  - Clean Energy Act of 2018 sets annual savings of 2% (electric)/0.75% (gas)
  - Savings ramp up by Program Year 5
  - Set 3-year goals for PSEG, starting in October 2020.
- **Marked Change from 2018 Program**
  - Sets 3-year goals based on market potential
  - Promoted heavily from PSEG corporate
  - Still early in execution (goals adopted 9/23/20)
  - Data not yet available for PY1 (Oct. 2020 – Sep 2021)

Shareholder Incentive Structure

- **Cost Recovery:**
  - Amortized regulatory asset
  - Rider with true ups for costs and recovery
- **Lost Margin Recovery**
  - LRAM ("Conservation Incentive Program")
  - ROE test – if exceed ROE by 50 basis points, LRAM suspended for year
- **Earnings Incentive**
  - Amortization earnings
  - Bonus/penalty ROE

Amortization Structure

- **Amortization Life:**
  - 10 years for all but IT (IT is 5-year)
- **Return:**
  - WACC
- **Incentive:**
  - ROE adjustment
  - +50/-200 basis points
  - Not implemented until Plan Year 5
  - Penalty for weighted performance <50%
    - 0.75% of base rate revenue
- **Performance Metrics:**
  - Quantitative Performance Indicators (QPI)
  - 2021/22
    - Annual Energy
    - LC Energy
  - Additional in 2023-25
    - Annual Demand
    - Long-Term Demand
    - UC Net Benefits
    - LI LC Energy
    - SB LC Energy
  - Set for each year of 3-year program.
  - File annually post-performance year.
- **Costs Covered:**
  - All expenses
  - All capital assets
  - Subject to prudence review



Maryland/Washington Gas Light

Jurisdiction:	MD
Parent:	AltaGas
Fuel:	Electric
Year:	2020
Utility Operating Data	
Revenue:	$0.4 Billion
Sales:	33 TBtu
Customers:	0.4 Million
DSM Portfolio Data	
Spending:	$11 Million
First-Year Savings:	164 BBtu

Maryland Stakeholder Committee

- **Issue**
  - Concern by ratepayer advocates over regulatory asset balances (>$800M USD statewide by 2019)
- **Committee History**
  - Began in 2018; initial report in 2019
  - External consultant report in 2020; No firm recommendations
- **Analysis of Options for 2021-23 or Beyond**
  - Status quo: Amortization; 5 years; WACC (~9%)
  - Accelerated recovery
    - Over 5 years; cost of debt (~4%)
    - Acceleration over 5 years; WACC
    - Over 10 years; 8%/7%/6%
    - Over 10 years, 7%; +Bonus (shared savings; ROE bonus)
- **Outcome**
  - All scenarios require rate increase to pay down amortization balance while maintaining programs
  - Recommendations tabled due to rate stress from pandemic
  - Behavior/ admin shifted to expense treatment for 2021-23

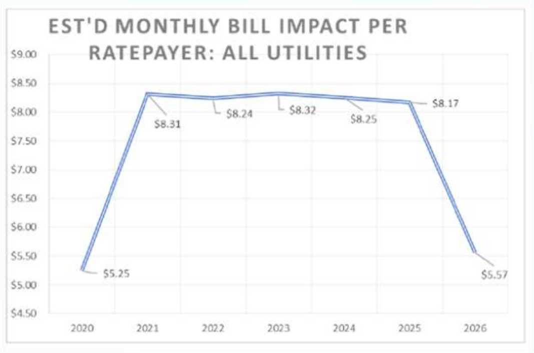
Shareholder Incentive Structure

- **Cost Recovery:**
  - Amortized regulatory asset
  - Rider, with annual true up
- **Lost Margin Recovery**
  - Decoupling
- **Earnings Incentive**
  - Amortization earnings
  - No bonus/penalty ROE

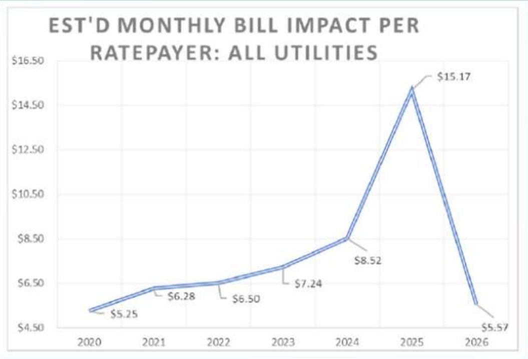
Amortization Structure

- **Amortization Life:**
  - 5 years
- **Return:**
  - WACC
  - Authorized ROE
- **Incentive:**
  - No additional performance incentive
- **Performance Metrics:**
  - No performance metrics
- **Costs Covered:**
  - No behavior programs or utility administrative costs
  - Some electric utilities expense demand response programs
  - Subject to prudence review

5 Year Buy Down



5 Year Acceleration Buy Down



New York/ConEdison

Jurisdiction:	NY	
Parent:	ConEd	
Fuel:	Electric	Gas
Year:	2020	2020
Utility Operating Data		
Revenue ($B)	$4.80	$1.28
Sales (GWh,TBtu):	20.5	101
Customers (million):	2.9	0.95
DSM Portfolio Data		
Spending $M):	$147	$24
First-Year Savings (GWh, BBtu):	678	67
2020 DSM Earnings Data		
Performance Bonus Earned ($M):	$35	$6.0
Min Earnings Available ($M):	$7	$2
Max Earnings Available ($M):	$50	$12

Regulatory Environment

- **Aggressive goals**
  - 2018 NYPSC Order Adopting Accelerated Energy Efficiency Targets: New Efficiency: New York (NE:NY)
  - EE Performance Incentive mechanism adopted as part of broader Performance-Based Ratemaking (PBR) in 3-year rate case
  - PBR includes incentives for EE, reliability, customer service, etc.
- **Diverse Portfolio under Same Umbrella**
  - EE, DR, Electrification
  - Statewide collaboration with NYSERDA and other utilities, but individual utility implementation

Shareholder Incentive Structure

- **Cost Recovery:**
  - Amortized regulatory asset
  - Included in base rates
  - Deferral account tracks costs in excess of base rate amounts
  - Deferral account accrues AFUDC and adds to rate base in next rate case
- **Lost Margin Recovery**
  - Decoupled electric and gas
  - Reconciles on trailing 6-month
- **Earnings Incentive**
  - Annual performance bonuses
  - Tied to EE performance metrics
  - Calculated as basis points on ConEd entire rate base
  - Plus shared savings portion
  - Paid as annual bonuses

Amortization Structure

- **Amortization Life:**
  - 10 years for elements included in most recent rate case
  - Reset in next rate case (every three years)
- **Return:**
  - WACC
  - Formula ROE, consistent with other formula rates
- **Incentive:**
  - Annual bonus
  - Calculated from basis points on entire rate base
  - Also shared savings mechanism
- **Performance Metrics:**
  - 7 categories of items
  - Some electric, some gas, some cross-commodity
  - 3-year targets set through joint agreement with stakeholders
- **Costs Covered:**
  - All expenses
  - All capital assets
  - Subject to prudence review

Cross-Commodity EAMs

	Level	2020	2021	2022
Share the Savings	Minimum	30% of $ / Lifetime MMBtu Savings applied to acquired non-LMI EE savings		
	Midpoint			
	Maximum			
Deeper Energy Efficiency	Minimum	2	2.5	3
	Maximum	11	12 + BP Carryover from 2020[1]	13 + BP Carryover from 2021[1]

Electric-Only EAMs

	Level	2020	2021	2022
Beneficial Electrification	Minimum	2	2	2
	Midpoint	5	5	5
	Maximum	10	10	10
DER Utilization	Minimum	3	3	3
	Midpoint	5	5	5
	Maximum	10	10	10
Electric Peak Reduction	Minimum	3	3	3
	Midpoint	5	5	5
	Maximum	8	8	8
LSRV Load Factor	Minimum	1	1	1
	Midpoint	3	3	3
	Maximum	5	5	5

Gas-Only EAMs

	Level	2020	2021	2022
Gas Peak Reduction	Minimum	3	3	3
	Midpoint	5	5	5
	Maximum	8	8	8

Value of an EAM basis point	Rate Year 1	Rate Year 2	Rate Year 3
Electric ($ million) [RY_x $ BP Electric]	$1.45	$1.53	$1.60
Gas ($ million) [RY_x $ BP Gas]	$0.48	$0.53	$0.58

Performance Incentives

Performance Incentives

Savings-based/multivariate structures

- Most jurisdictions with large portfolios have moved to multivariate structures
- All jurisdictions providing performance incentives through ROE adjustments use savings/multivariate structures
- Savings-based are conceptually the same as multivariate (i.e., univariate)
  - ✓ Savings-based jurisdictions also may use minimum budget requirements or other directives to ensure performance on other key objectives (e.g., low-income spending)

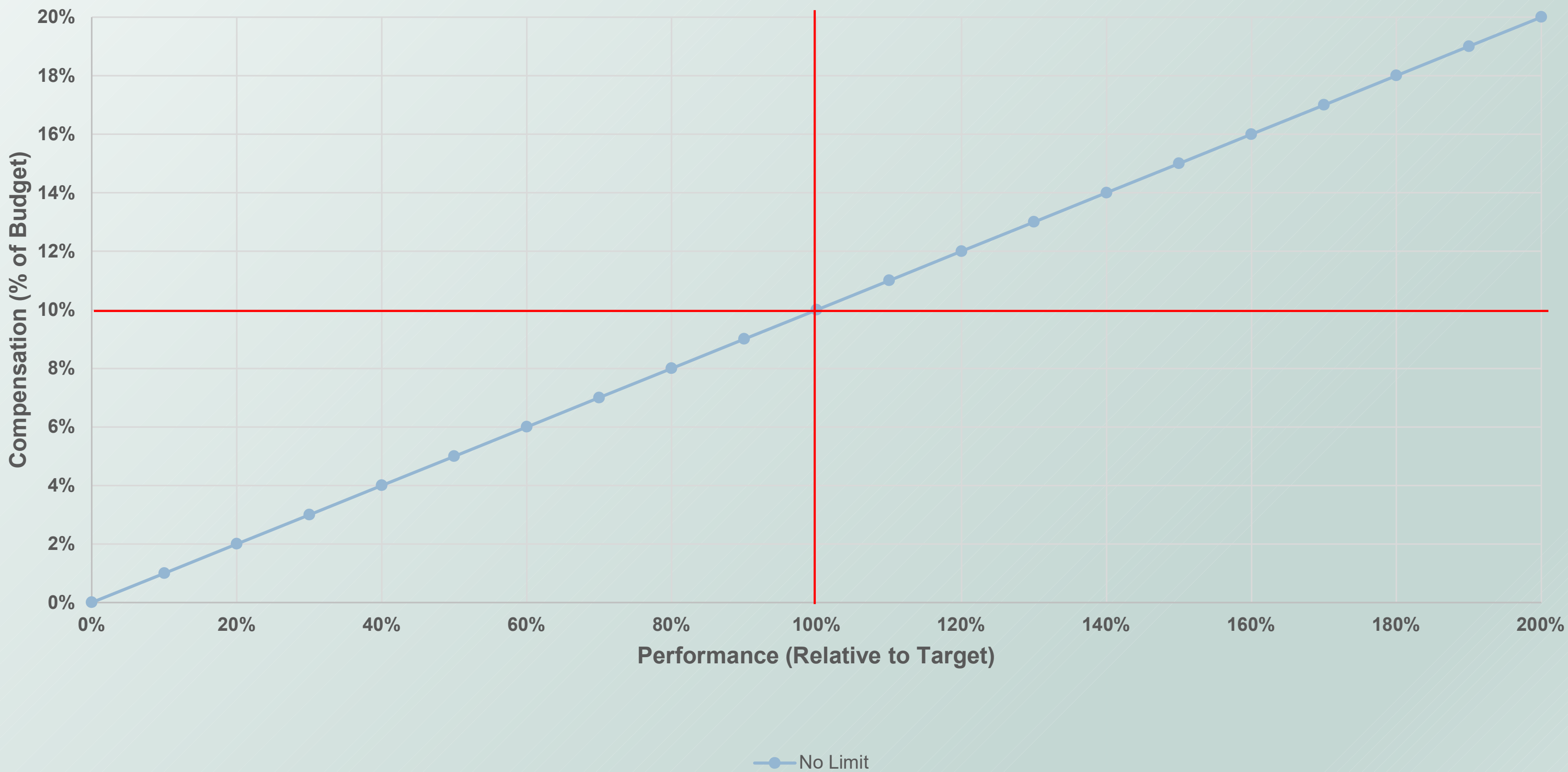
Shared savings structures

Savings-Based and Multivariate Structures

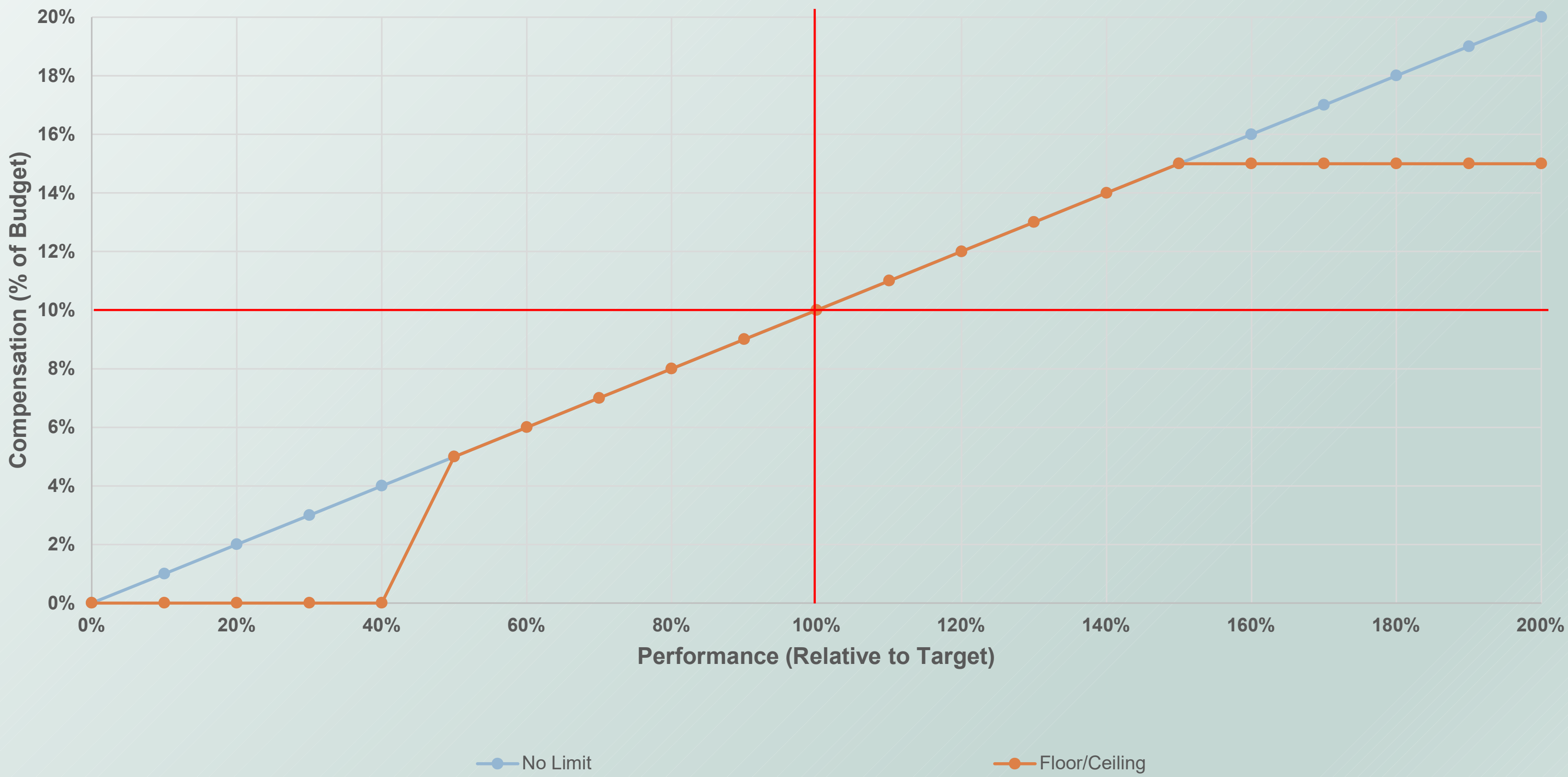
- ***Metrics*** set the targets for measuring performance.
- ***Parameters*** set the relationship between performance and compensation.
- Structure is conceptually the same for ROE adjustments in amortization jurisdictions.

Common Metrics		Common Parameters
Savings	**Targeted "countervailing" offerings**	***Performance*** **parameter**
Annual savings	Individual program spending/performance	% of target metric
Lifecycle savings	*Low income/hard to reach*	***Compensation*** **parameter**
Cumulative savings to date	*Electrification*	% of budget
Peak savings	Individual Segment targets	% of net benefits
Net benefits	*Multifamily/renters*	ROE adjustment
TRC NPV	*Comprehensiveness*	**Parameter** ***constraints***
UC NPV	*Geographies*	Floors and ceilings on performance
Total system benefits	Innovation/market transformation	Slope/Inflections/Deadbands/Discontinuities
	Operational metrics	Penalties
	Customer service/satisfaction	**Overall constraints**
	Job creation	Cap on recovery
		% of budget
		$ amount

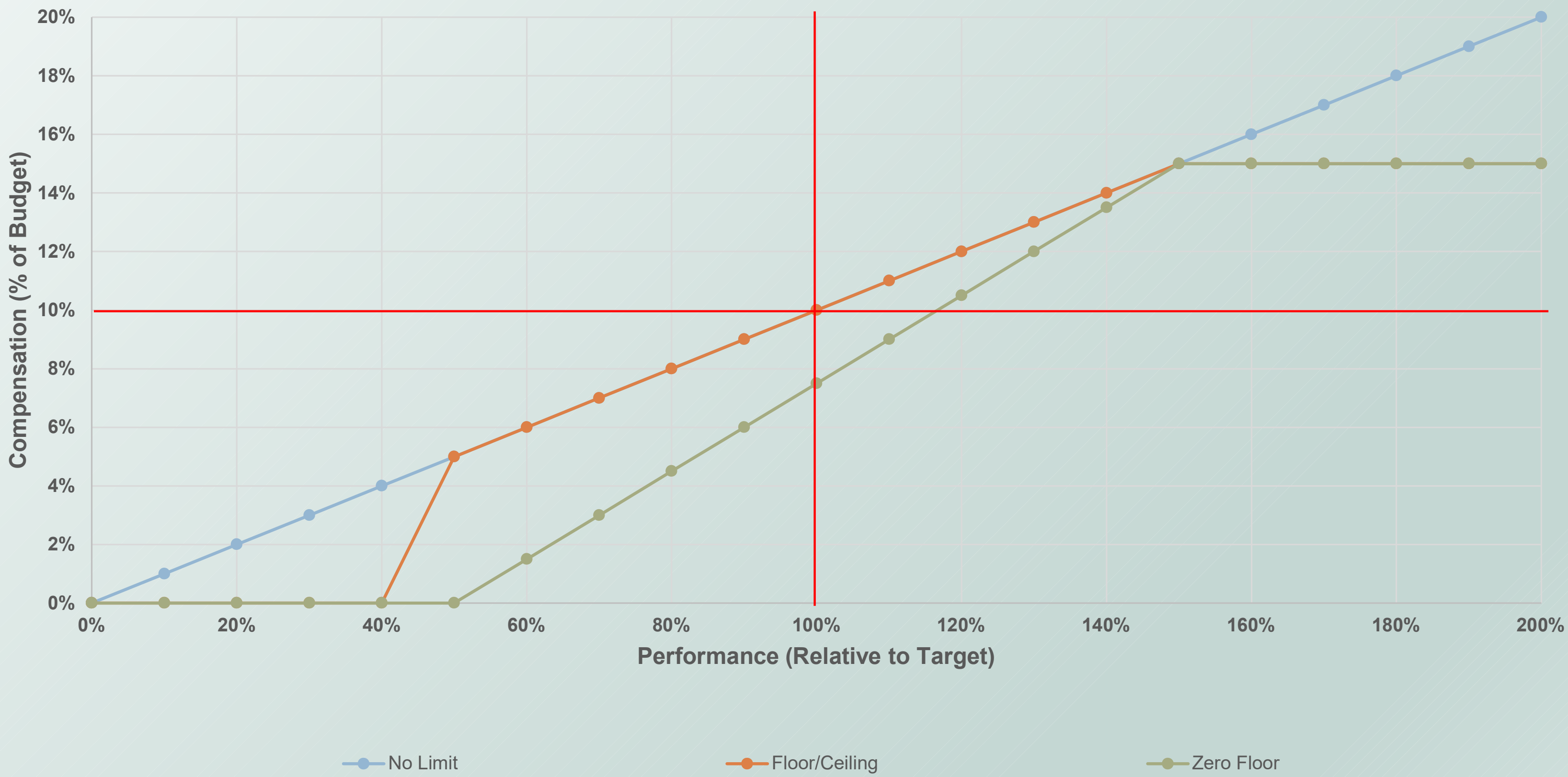
Performance Incentive Mechanics



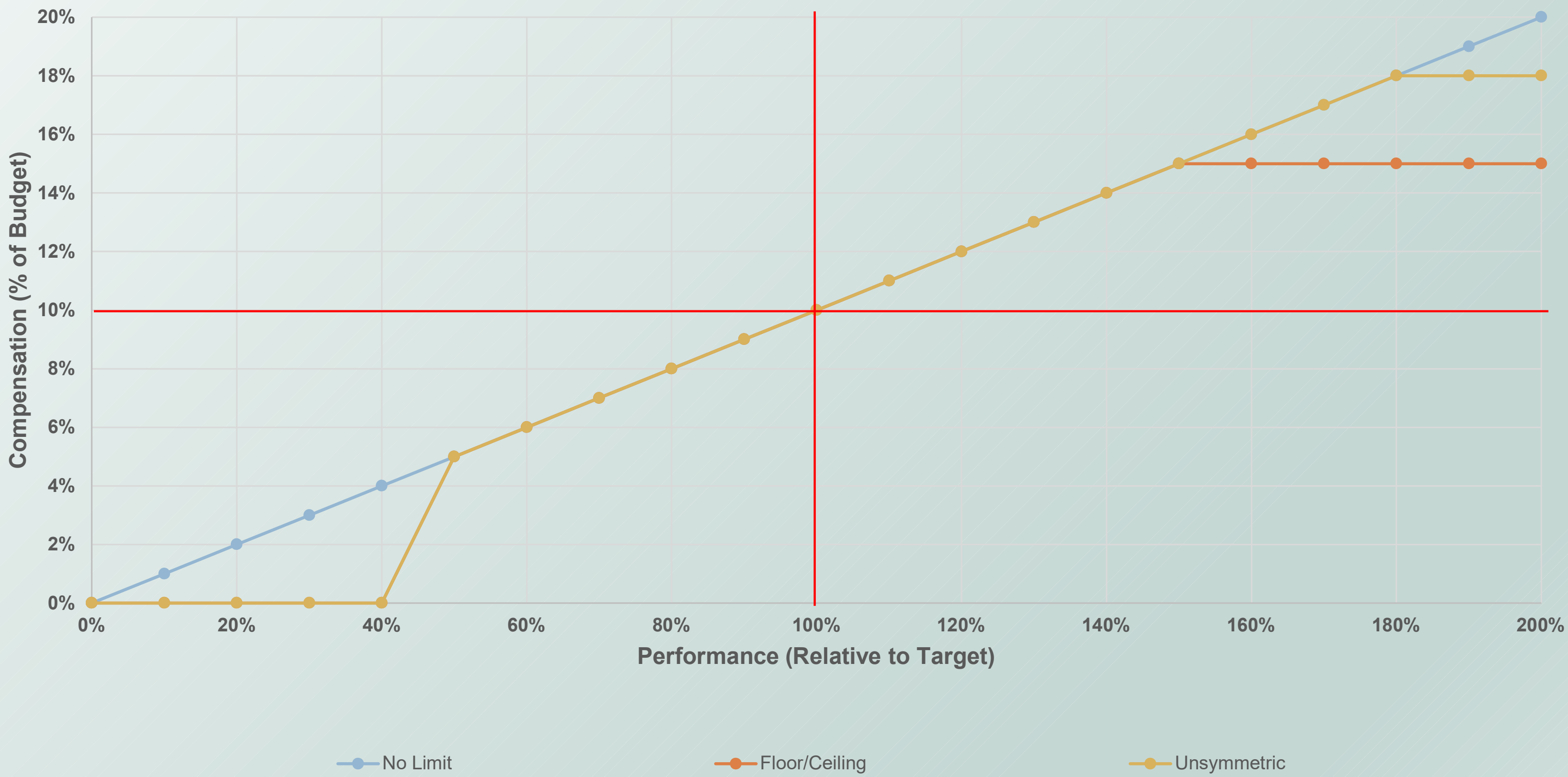
Performance Incentive Mechanics: Add Floors and Ceilings



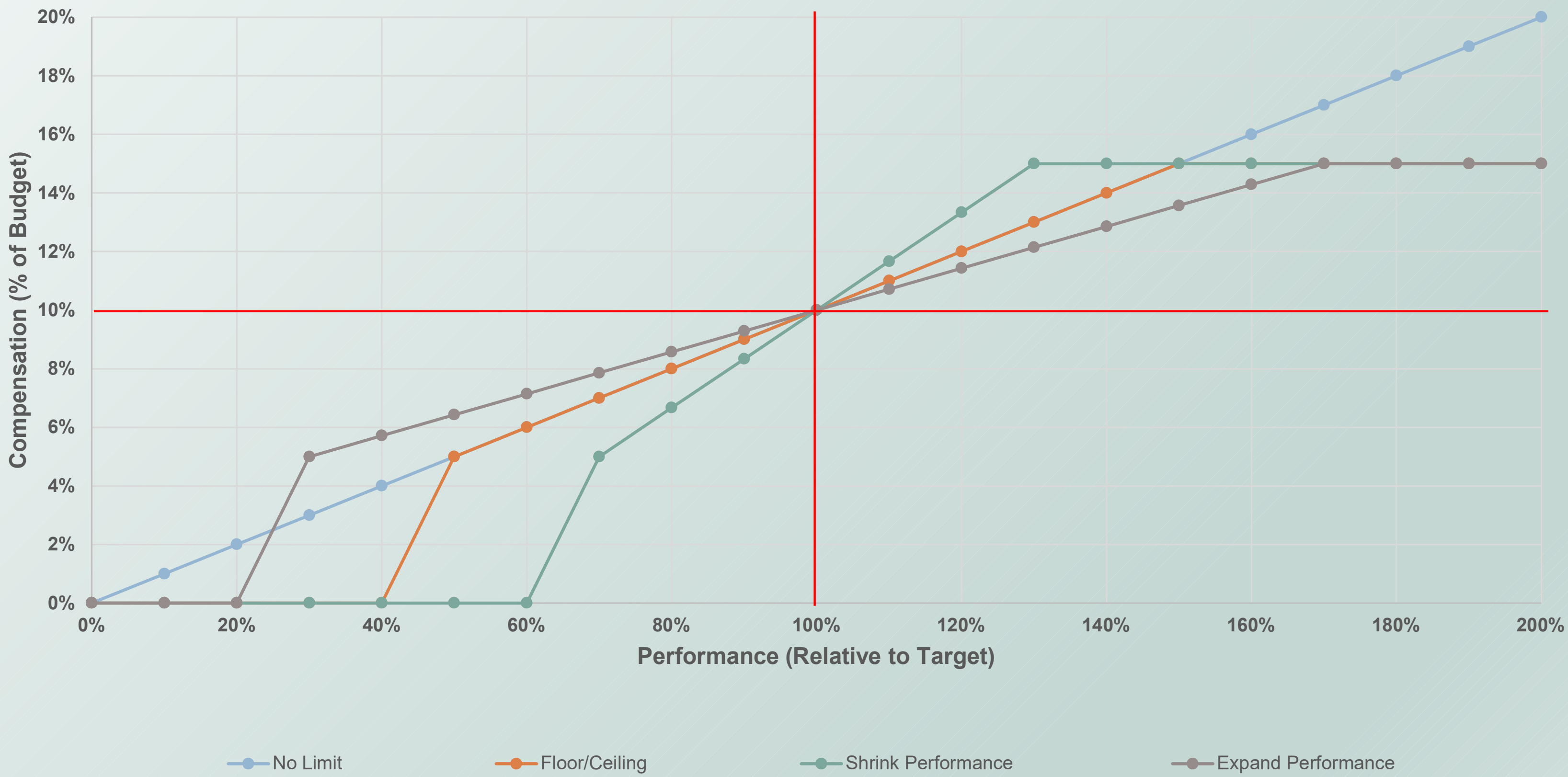
Performance Incentive Mechanics: Set Floor to Zero



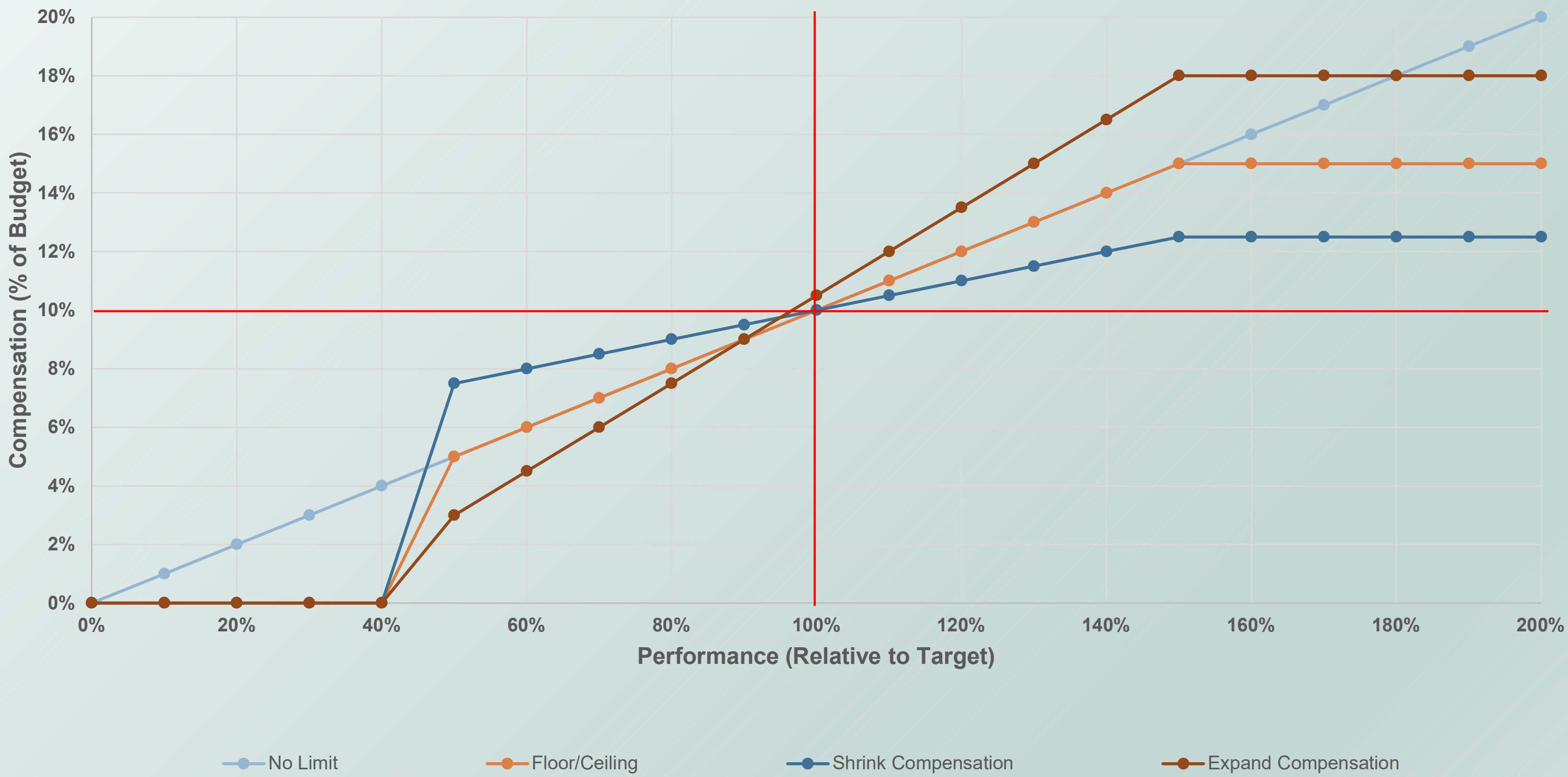
Performance Incentive Mechanics:
Remove Symmetry



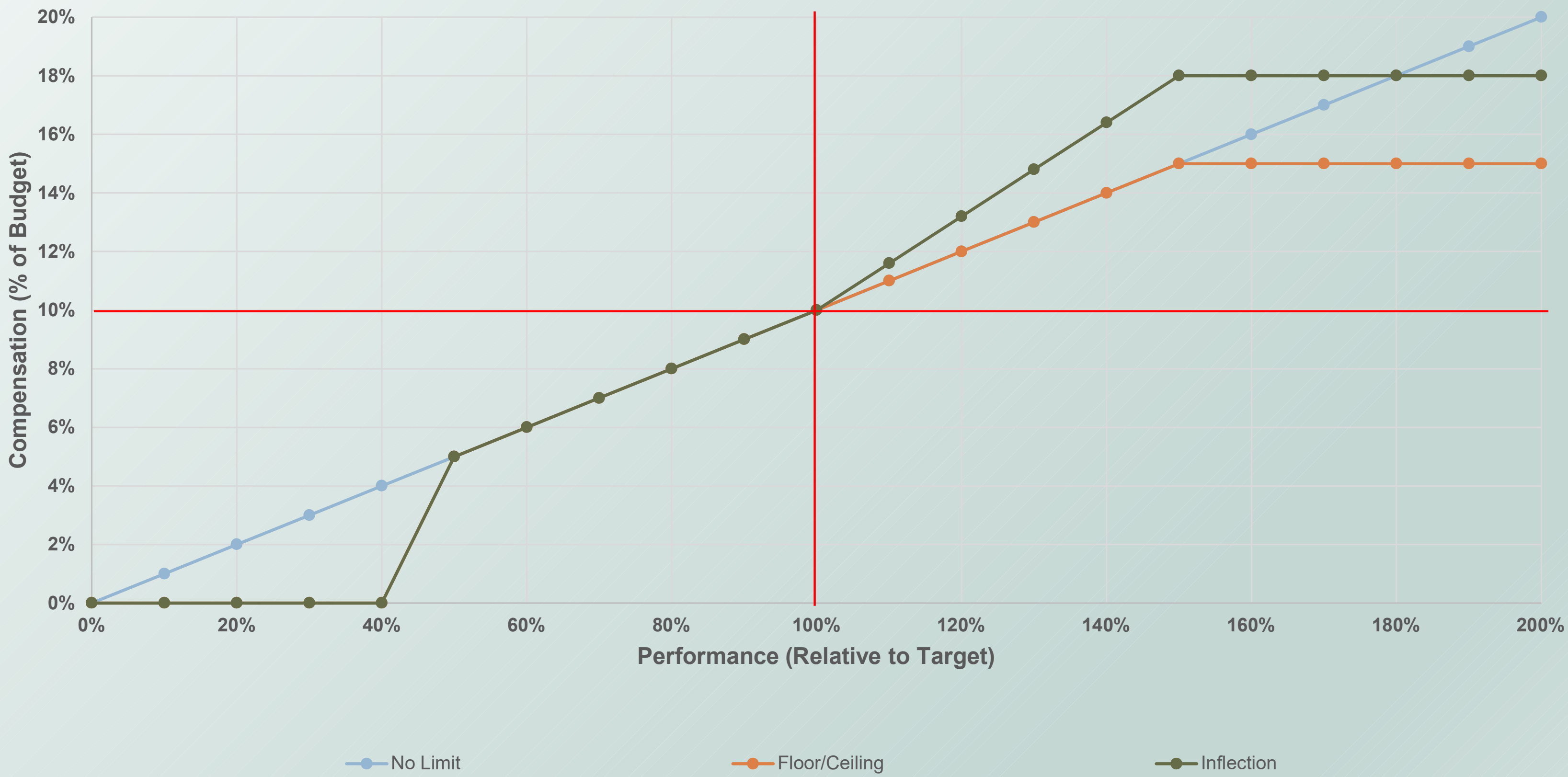
Performance Incentive Mechanics:
Change Performance Band



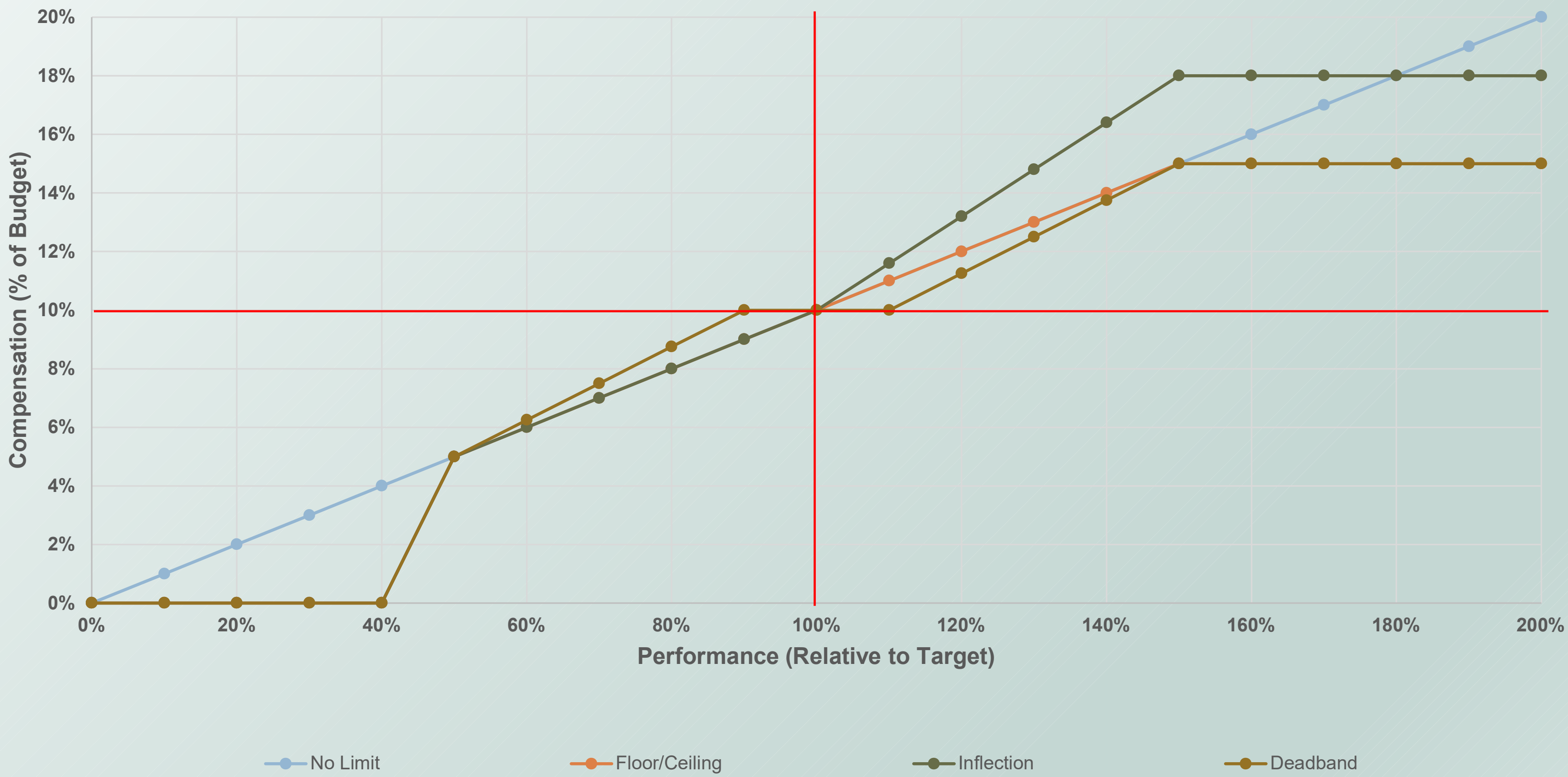
Performance Incentive Mechanics:
Change Compensation Band



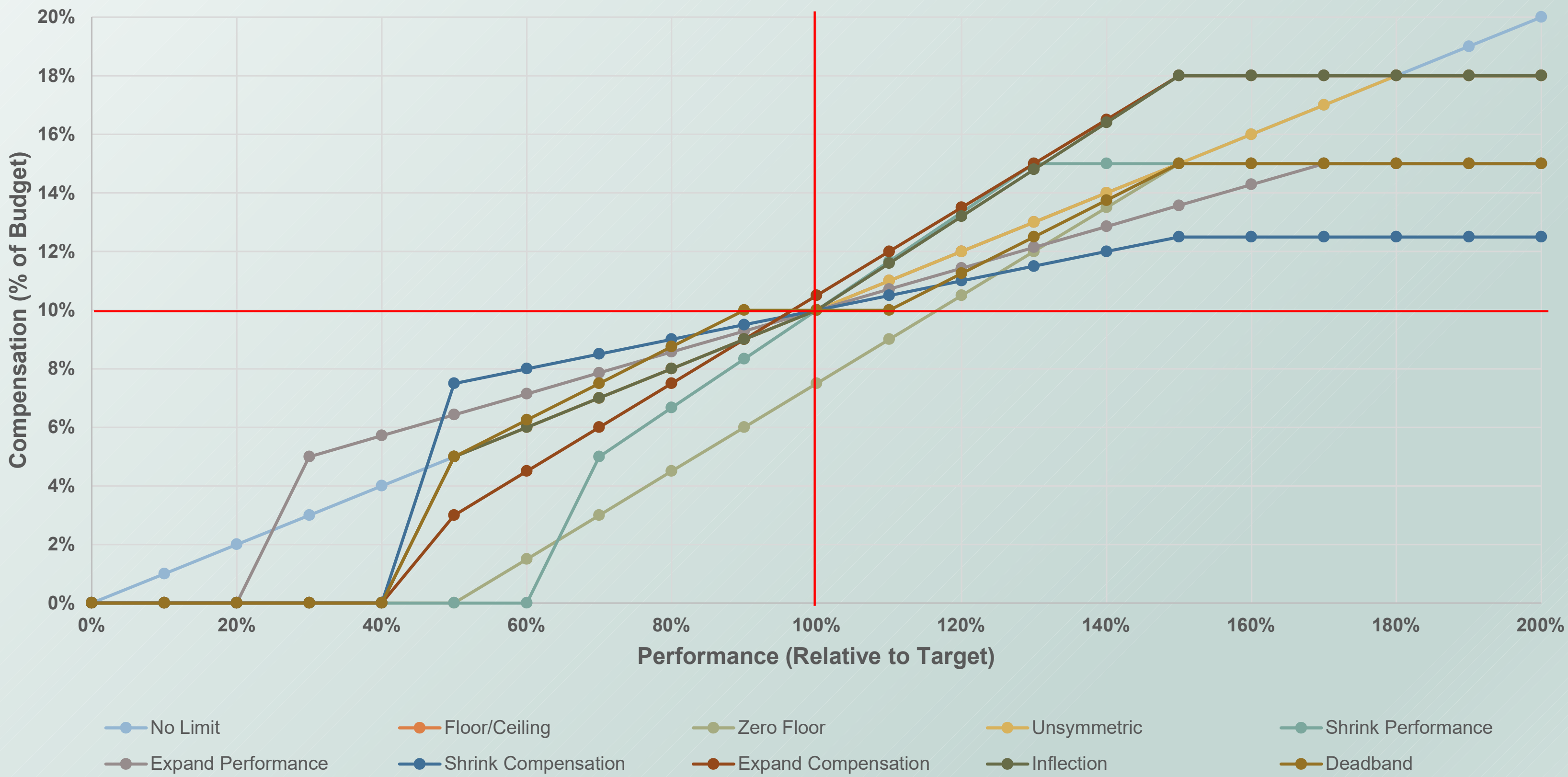
Performance Incentive Mechanics:
Add Inflection Point



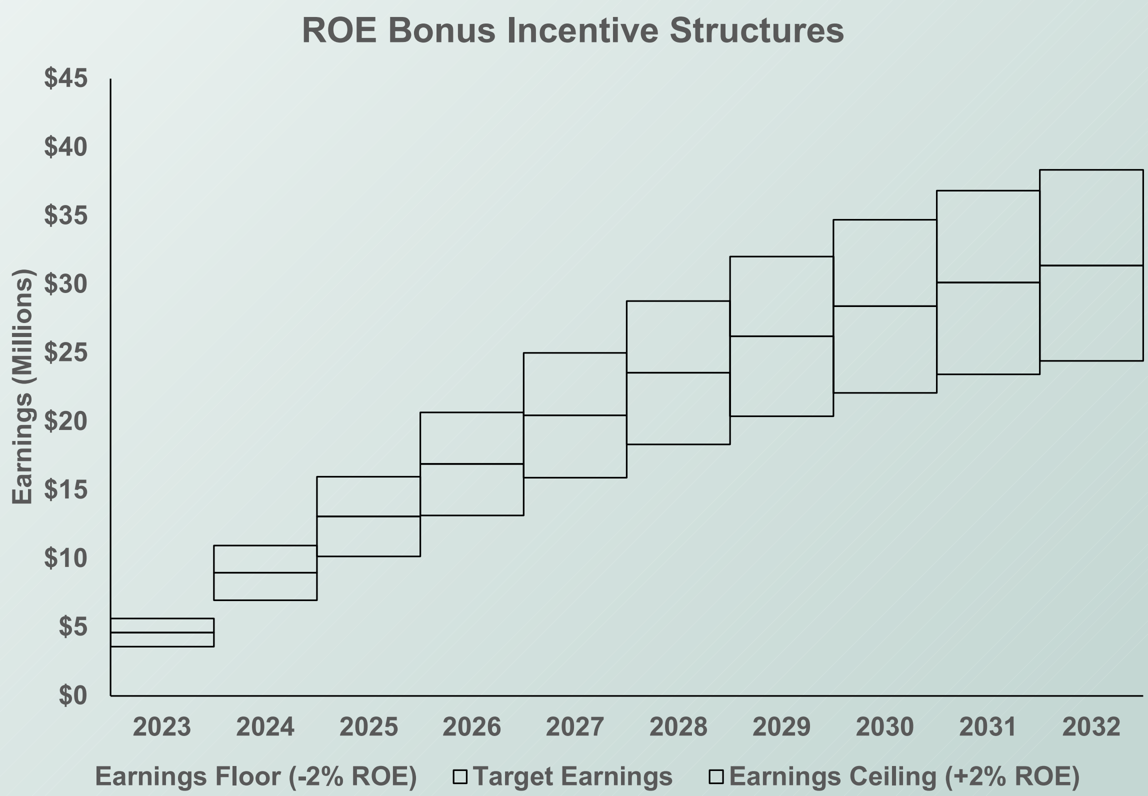
Performance Incentive Mechanics:
Add Deadband



Performance Incentive Mechanics: The Full Range



ROE Bonus/Penalty Incentive Structures



Shared Savings Structures

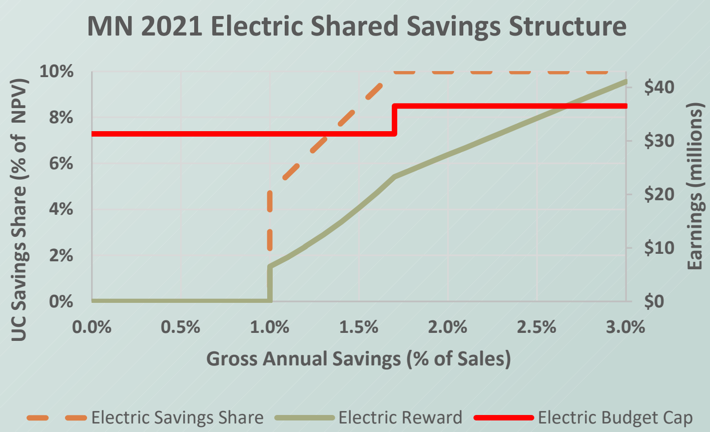
- ***Metrics*** set the targets for measuring performance.
- ***Parameters*** set the relationship between performance and compensation.

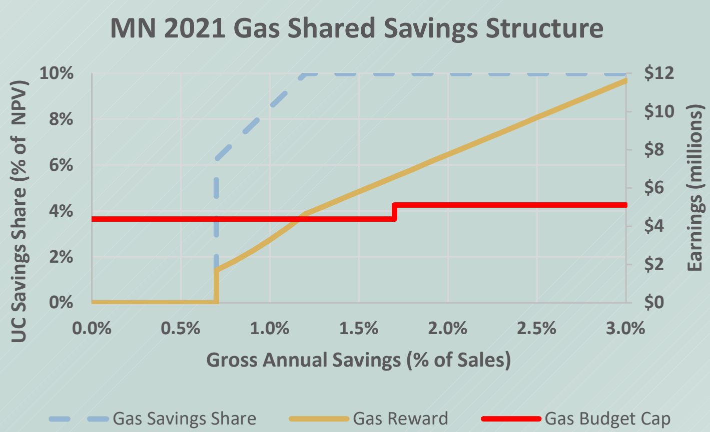
Common Metrics	Common Parameters
Cost Effectiveness Perspective NPV of Net Benefits *Total Resource Cost* *Utility Cost* *Societal Cost* **Adjustments to NPV Calculations** Adders for GHG, NEI, etc.	***Performance* Parameter** Net Benefits ***Compensation* Parameter** Share of savings Graduated scale (higher shares at higher performance) **Parameter *Constraints*** Minimum/maximum performance thresholds Penalties implicitly excluded **Overall Constraints** Cap on recovery *% of budget* *$ amount*

Shared Savings Mechanics

Minnesota

- Shared savings approach for electric and gas
  - Share of UC NPV net benefits
- Floor and ceiling on shared savings percentage
  - No earnings below floor
  - Earnings $ increase beyond ceiling as NPV benefits increase
- Overall earnings capped
  - Prior to 2017
    - ✓ Electric utilities earned ~40% to >110% of budgets
    - ✓ Gas utilities earned ~35% to >60% of budgets
  - Cap has varied by year
    - ✓ 2017; 40%
    - ✓ 2018: 35%
    - ✓ 2019-20: 30%
    - ✓ >2021: 30%, increasing to 35% at high savings
  - Since 2017
    - ✓ Budget cap has driven final earnings calculation
- Avoided costs vary from plan to plan
  - In latest plan cycle:
    - ✓ Electric costs increased 30% to 50%
    - ✓ Gas costs increased ~25%





Performance Incentives
Key Takeaways: Overall Guidance

- **Multiple Levers Available**
  - Range of approaches used in other jurisdictions; no best approach
  - Multiple approaches can achieve similar results
- **Profitability**
  - If provincial policy prioritizes energy efficiency, then DSM should be more profitable and/or less risky than other investment opportunities
- **Context**
  - Voluntary vs. mandatory portfolios
  - How long has portfolio been in operation?
  - How uncertain/risky are savings and cost goals?
- **Simplicity**
  - If managers can't:
    - Understand the dynamics of the mechanism, or
    - Explain mechanism to their VP, CFO, or regulator, then
    - The mechanism isn't actually incentivizing performance
  - So:
    - Simple metrics
    - Simple relationships between metrics and outcomes
    - Fewer metrics
      - Focus on key outcome
      - Balance with necessary countervailing metrics (or budget constraints)
- **Flexibility**
  - Allow low performance in one year to be made up in following year
  - Provide budget flexibility across years
    - Multi-year budgets
    - Target spend with upside flexibility each year
- **Fairness**
  - Provide fair opportunity for utility earnings delivering business model of DSM
  - So:
    - More symmetry
    - No penalties
      - Costs are always subject to prudence review
      - A lack of positive incentive is a penalty
- **Predictability**
  - No penalties or rewards for changes outside of utility control
  - Measure performance consistent with how goals were set
    - Savings algorithms
    - NTG
    - EUL
    - Avoided costs
  - Or create adjustable goals that reflect changes in approach

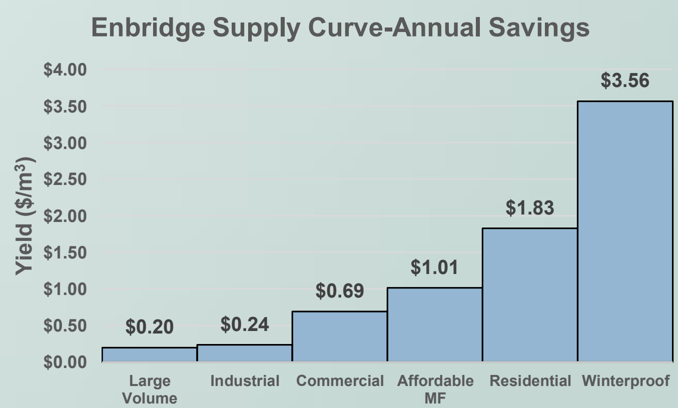
Performance Incentives
Key Takeaways: Primary Metrics

- Most primary metrics are driven by energy savings
  - *Annual Savings*
  - *Lifecycle Savings* = *Annual Savings* X Lifetime
  - *Lifecycle GHG Savings* = *Lifecycle Savings* X GHG factor
  - *UC+GHG Net Benefits* = *Lifecycle Savings* X Gas Avoided Costs + *GHG Avoided Costs* X GHG Costs – Delivery Costs – Incentives Costs
  - *TRC Net Benefits* = *UC Net Benefits* – Incentive Costs + Participant Costs
  - And:
    - UC/TRC may need to address water and cross fuel savings
    - TRC may also use different discount rate

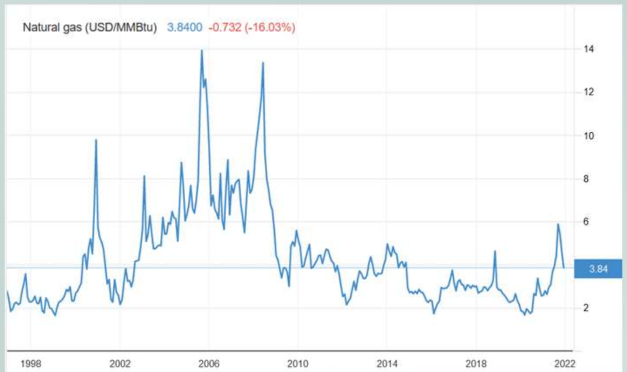
- So:
  - Annual savings is the simplest performance driver
    - But can skew investment to shorter lived measures (behavior, electric lighting)
  - Lifecycle savings fundamentally drives most planning objectives (GHG reduction; UC/TRC cost reduction)
  - More complicated metrics:
    - Create additional measurement issues and risks
    - Rely on factors changing within plan cycles and out of utility control
    - Create additional opportunities for conflict and portfolio management risk
    - Without substantially improving management incentives
  - Lifecycle savings is (Ted's) preferred metric
    - Requires clear assumptions and algorithms for useful lives, mid-life adjustments, etc.
    - Or lifecycle GHG savings, to capture electric benefits of key measures
    - Or annual savings, with constraints on individual programs (embedded somewhat in Enbridge proposal)

Performance Incentives
Key Takeaways: Driving Cost Effectiveness

- Net benefit metrics *do not* substantially increase incentives to improve cost effectiveness.
  - Perhaps counter intuitive, since UC/TRC Net Benefits are, by definition, cost effectiveness tests
  - But savings metrics also include incentives to improve cost effectiveness
  - Portfolio management 101:
    - ✓ Calculate marginal yield ($/therm) for each resource
    - ✓ Rank resources by marginal yield
    - ✓ Shift investment to highest yielding resources
    - ✓ Maximizes ***yield*** for portfolio
    - ✓ Maximizes ***reward*** for utility
    - ✓ Also maximizes ***cost effectiveness*** of portfolio



NYMEX Natural Gas Futures



- Net benefit metrics *do* add substantial uncertainty, risks, and conflict from additional factors
  - How high are avoided costs?
  - How much do avoided costs change year to year? Plan to plan?
  - How much are participant costs?

Performance Incentives
Key Takeaways: Additional Metrics

- Additional metrics/targets may be necessary for activities that:
  - Counter primary metric
  - Are small, but important
  - Are different, but important
- **Higher cost offerings**
  - Low income
  - Small business
- **More difficult options**
  - Comprehensive savings
  - Electrification
- **Innovation and long-term investment**
  - Market transformation
  - Code compliance
  - Other “seed” investments
- **Peak savings**

Optimal Energy Report
Initial Response

Amortization Considerations

	Optimal Consideration	Initial Response
1	**Accounting Treatment** Amortize all costs Don't mix expense/amortization	Agree with consistent treatment for all costs Unless current accounting approach singles out capital assets Amortization is still up for debate
2	**Cost of Capital** Set "interest" to cost of short-term borrowing	Disagree Doesn't provide utility with fair rate of return on investment No actual precedent in other jurisdictions
3	**Term** Set to weighted average measure life of installed measures Consider shorter life to limit regulatory asset and earnings	WAML is best economic policy Shorter life may be better, considering long term regulatory risks facing gas industry
4	**Performance Incentive** Separate from amortization	Agree in principle Need clarification on mechanics (IR sent)
5	**Lost Revenue** Continue existing LRAM	Agree

Performance Incentive Recommendations

	Optimal Recommendation	Initial Response
1	**Cumulative Targets** Set cumulative targets across 5-year period	Agree for flexibility across years. Also recommend budget flexibility.
2	**Annual Targets** Set annual milestones to drive annual incentives Possibly tied to estimated “verified” savings (rather than fully evaluated)	Agree that annual targets are needed to drive annual incentive Recommend allowing flexibility to recover from poor year Agree to verification protocols
3	**Eliminate Annual Target Adjustment Mechanisms** Instead set cumulative targets with annual milestones True up in final year	Agree, to cumulative targets, per above Disagree with inability to adjust goals (see #6) Need to understand true up mechanism
4	**Midterm Target Modification** Agrees with Enbridge mid-point assessment	Agree in principle, especially for 5-year portfolio Need to understand filing and approval mechanism
5	**Set Minimum Targets for Midterm Modification** Do not allow to fall below initial year	Disagree Midterm modification improves market knowledge from original plan

Performance Incentive Recommendations

	Optimal Recommendation	Initial Response
6	**No Target Modifications for EM&V Changes** Do not incorporate changes to NTG or other EM&V parameters in setting future targets (which Enbridge propsed)	Disagree Set and measure goals using same yardsticks - Update goals to incorporate updated NTG, etc. - Or fix planning inputs for use in measurement - Or incorporate "adjustable savings goals" - Also extend to EUL, avoided costs, etc. - Also consider use of TRM, real-time EM&V, etc.
7	**Primary Target of UC NPV + GHG (~70% of Reward)** Set primary target to net benefits plus carbon Avoids need to estimate participant costs in TRC Captures cost efficiency, capacity, savings longevity Highly correlated with lifecycle savings Lock down avoided costs	Disagree Avoided costs are highly unstable year to year and plan to plan Lifecycle savings simpler and provides equal cost efficiency Or lifecycle GHG target also capture electric savings But need certainty on EUL and midlife adjustments Enbridge annual savings—by program/segment—can also work
8	**Or Use Lifecycle Savings as Fallback**	Mostly agree, per above

Performance Incentive Recommendations

	Optimal Recommendation	Initial Response
9	**Fix Avoided Cost Assumptions**	Agree, for net benefits target But net benefits targets will require new parameters in each plan cycle, so more contentious
10	**Countervailing Targets (~30% of Reward)** Independent objectives Harmful to primary metric	Probably agree No specific recommendations made
11	**Consider Eliminating GHG Target** Extension of annual savings	Probably agree Lifecycle GHG target may capture most objectives in single target
12	**Propose Savings Targets for SBD/LCTP** So stakeholders assured contributing to overall objectives	Probably disagree Small but important offerings
13	**Set Minimum Threshold to 75% of Target** Increase from Enbridge 50% proposal Consistent with Enbridge current approach	Probably agree Should also lower maximum to 125% for symmetry Need to understand aggressiveness/risks of target goals

Performance Incentive Recommendations

	Optimal Recommendation	Initial Response
14	**Set Earnings to $0 at 75% Performance** Consistent with current approach Conceptually consistent with Enbridge proposal	Probably agree Need to understand entire package
15	**Lower Maximum Performance to 110% to 125%** If keeping current approach Higher percentage of maximum at 100% of performance	Probably agree Need to understand entire package Especially maximum target and reward
16	**Set Linear Shared Savings Targets** If keeping Enbridge Shared Savings metric Enbridge proposed higher shares with higher savings	Agree that linear approach is simpler Probably prefer lifecycle savings or GHG as long-term metric Need to understand entire package
17	**Establish Incentive Target as % of Net Benefits** Set in advance Higher goals/lower costs make performance tougher, but increase incentive pot	Probably disagree Likely to create unintended consequences