Enbridge's Multi-Year DSM Plan Overview

EB-2015-0049

August 24th, 2015

Overview

- Provide a short background on activity before issuance of the Board's DSM Framework
- Outline how Enbridge developed its plan
- Discuss the approach to alternative budget and target scenarios
- Stakeholder input in Enbridge's planning
- Discussion of our DSM business cycle and target adjustment mechanism
- Overview of our 3 programs and 22 offers
- Outline of other items of note in the portfolio
- Board Considerations and Requests

Background

Enbridge has a track record of success in Demand Side Management for 20 years.....

- Designed and delivered successful energy efficiency programming since 1995
- A recognized leader in DSM in North America with innovative, cost effective programming & results over the past 20 years
- Built a track record of working with stakeholders towards mutually agreeable outcomes where possible
- Involved in continuous evolution of the DSM business with budgets increasing from $2.2 million in 1995 to $82.9 million by 2020
- Increased sophistication of offers to more complex and comprehensive approaches

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Development of Enbridge's Plan

Bottom up, top down plan development premised on the Framework

- In anticipation of the final Framework, initial development of the plan relied on a bottom up approach which took into consideration
  - Input from stakeholders, customers, channel partners, delivery agents, industry associations and levels of government
  - Historical results
  - Enbridge's experience in the marketplace and understanding of evolving trends
  - The Achievable Potential Study
- When the final Framework was received, Enbridge used the Guiding Principles and Priorities as foundational to update its portfolio structure and contents
- The plan was then tempered considering top down Framework guidance around appropriate rate impacts – an iterative process took place
- The portfolio was screened against the Total Resource Cost plus test and Program Administrators Cost test to ensure it met cost-effectiveness criteria

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Development of Enbridge's Plan

Considered three alternative scenarios developed to provide illustrative guidance

- Sensitivity analysis was considered at 75%, 125%, and 150% of the Plan's budget level
- Based on market knowledge, Enbridge identified which offer budgets could be scaled up to achieve more results and which could not
- Then, taking Plan targets premised on historical data and market experience Enbridge created an achievement per dollar spent
- Alternative target scenarios were then produced utilizing the achievement per dollar spent
- Since we know increased spend is not linear with increased targets, a "decay factor" was applied
- Further sensitivities ran during interrogatory process

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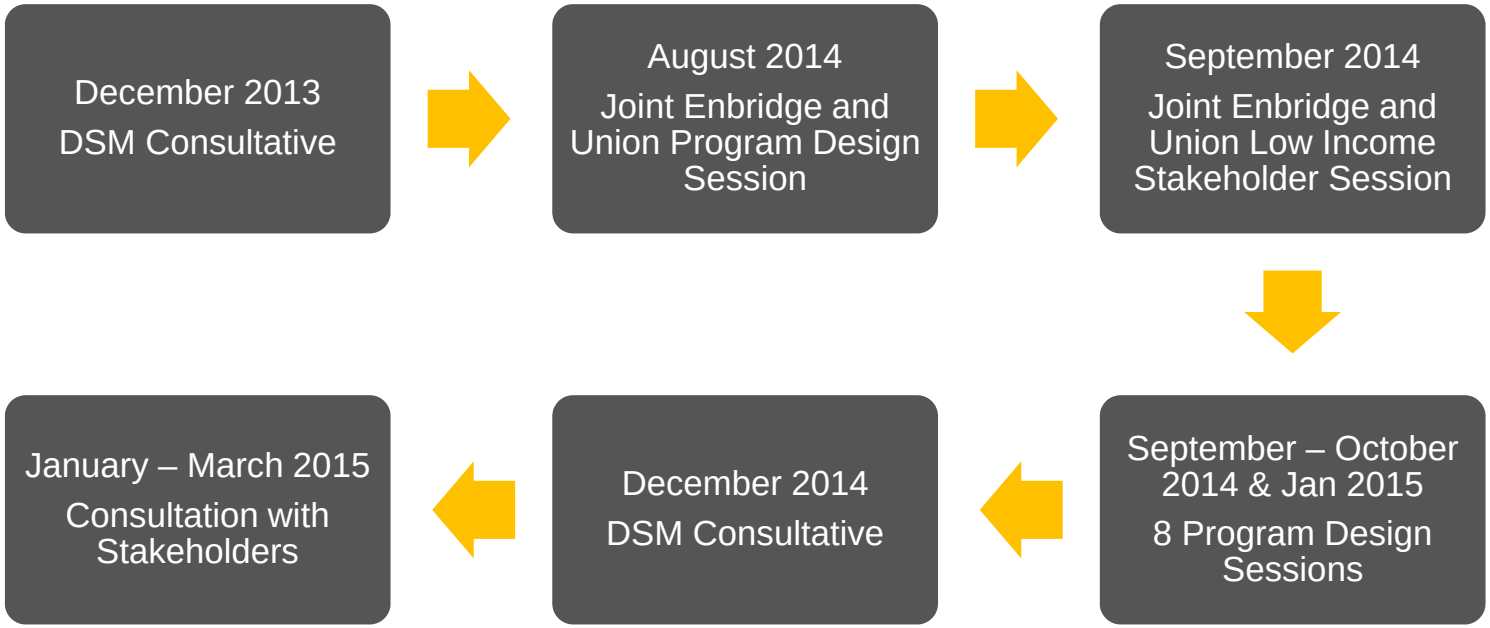
Enbridge's Stakeholder Activities

Comprehensive scope of activities Informing the 2015-2020 Multi Year DSM Plan



Ongoing discussions with the IESO, and LDCs throughout the planning term and stakeholder engagement at designated milestones through the Potential Study

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Full Plan Budgets & Targets

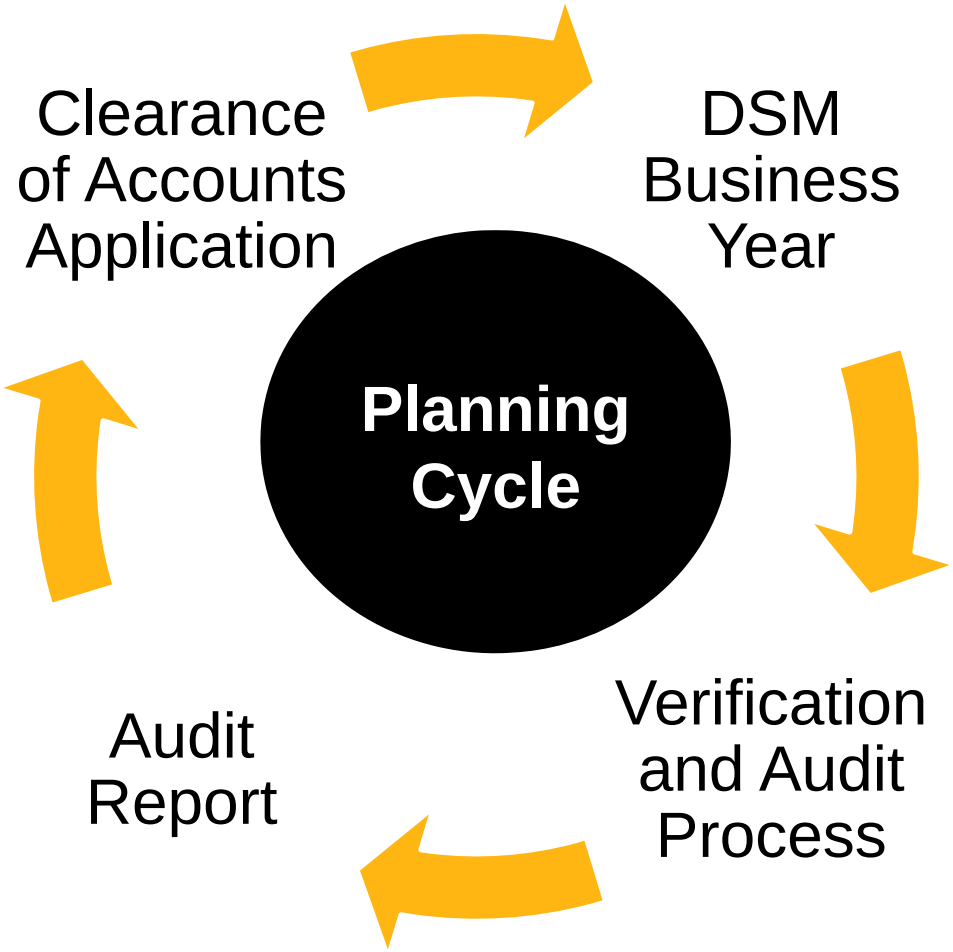
Budgets and targets driving to a 2020 Savings goal of $6.36 million cumulative cubic metres

Year	Budget ($ millions)	Cumulative Cubic Metres (CCM)
2015	$37,722,230	774,359,281
2016	$63,535,727	1,001,743,852
2017	$73,826,882	1,083,061,000
2018	$79,680,131	1,147,902,770
2019	$81,273,733	1,165,771,091
2020	$82,899,208	1,182,290,348
2020 Natural Gas Savings Goal		6,355,128,342

- Overall budget to increase roughly two-fold between 2015 to 2020
- Total Resource Cost Plus (TRC+) ratio for 2016-2020 is 2.4
- Program Administrators Cost Test (PAC) ratio for 2016-2020 is 4.0

The DSM Business Cycle

Verification, Audit and Reporting takes place in the year following the year in which results were achieved.



- Third Party Verification completed to consider year's results
- Auditor's Report produced as per RRR by end of June of the next year
- Audit Committee reviews and jointly determines implications of Auditor's Report
- Clearance of Accounts Application filed with the Board for previous year's results (Q3)

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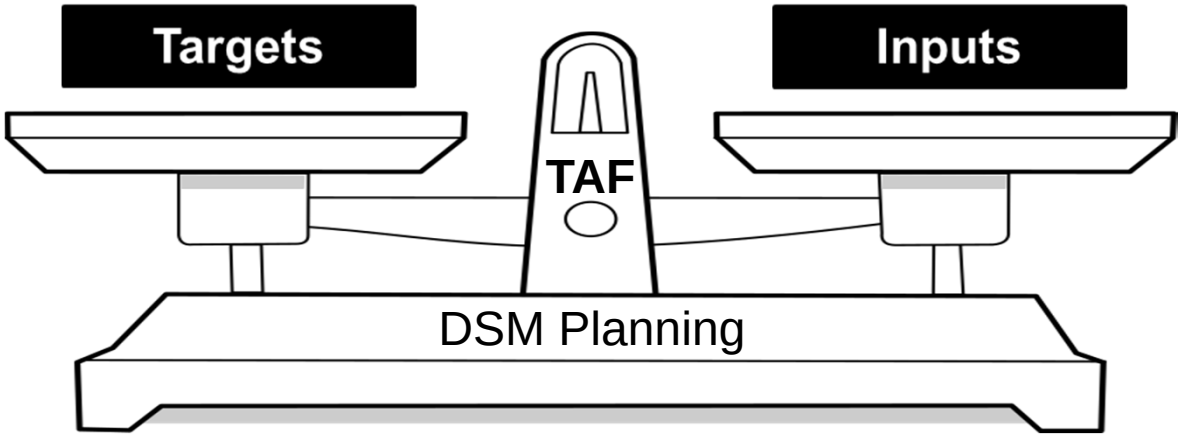
Target Adjustment Factor (TAF)

A balancing mechanism to ensure incentives are calculated on best available information as are targets

- **What?** Adjusts targets to account for changes in input assumptions
- **Why?** Ensures the integrity of the DSM planning process and protects the investment of all involved in this hearing in setting challenging but achievable targets.
- Enables the use of best available information as directed by the Framework
- Follows fair business principles, and is consistent with best practice as supported by Synapse



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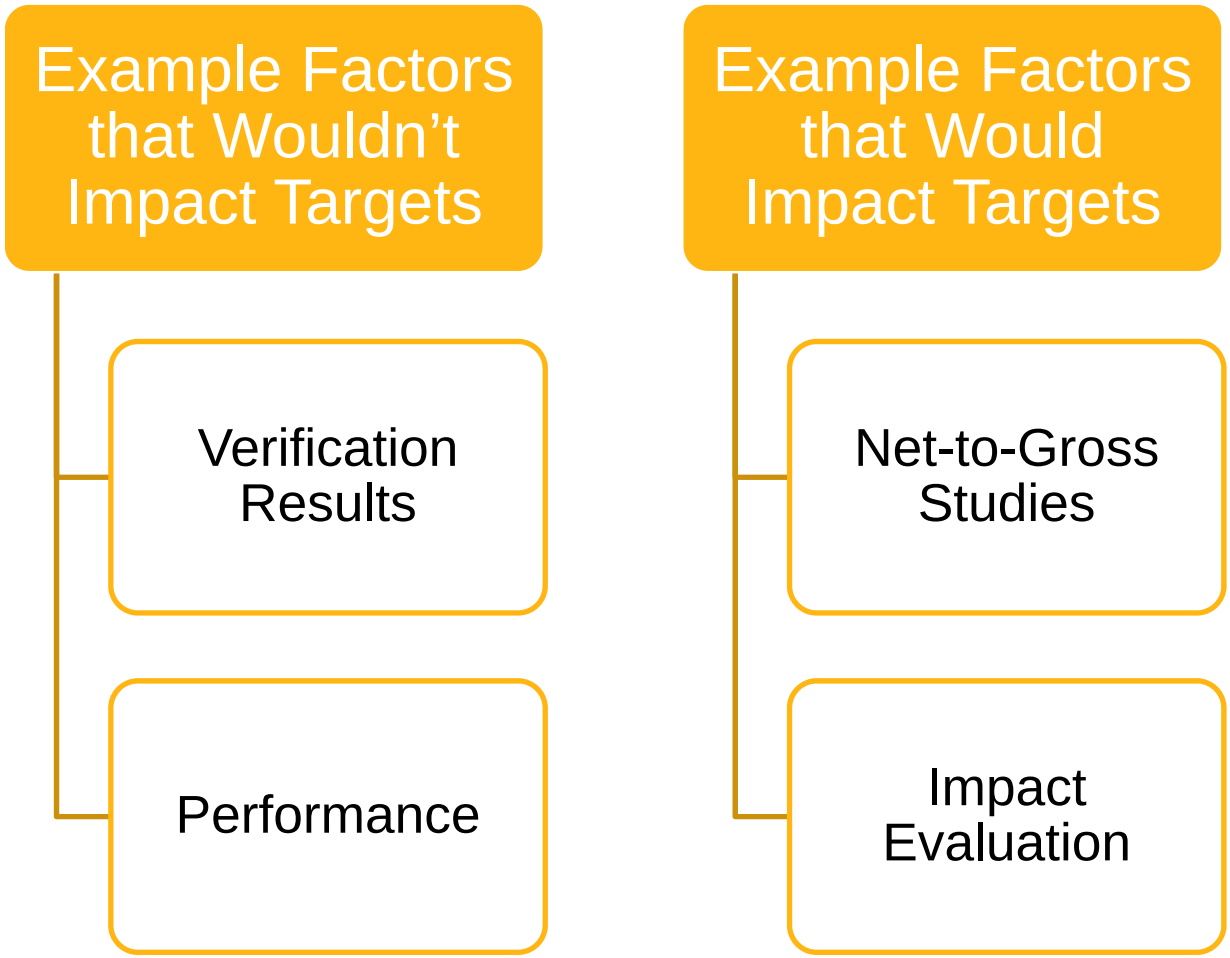
Target Adjustment Factor – What is Impacted?

Not all variations from plan will be factored into the TAF



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DSM Program Portfolio

A balance of innovative programming to meet Framework and Stakeholder needs & consistency for customers

	Resource Acquisition Program	
1	Custom Industrial	Evolved
2	Custom Commercial	Evolved
3	Commercial & Industrial Direct Install	New
4	Commercial & Industrial Prescriptive (Fixed) Incentive	Evolved
5	Energy Leaders	New
6	Home Energy Conservation	Evolved
7	Residential Adaptive Thermostats	New
8	Small Commercial New Construction	New
	Low Income Program	
9	Low Income Multi-Residential – Affordable Housing	Evolved
10	Home Winterproofing	Evolved
11	Low Income New Construction	New

	Market Transformation & Energy Management Program	
12	Savings by Design – Residential	Evolved
13	Savings by Design – Commercial	Evolved
14	New Construction Commissioning	New
15	My Home Health Record (Opower)	New
16	Home Rating	Evolved
17	Energy Compass	Evolved
18	School Energy Competition	New
19	Run it Right	Evolved
20	Small Commercial & Industrial Behavioural	New
21	Comprehensive Energy Management	New
22	Energy Literacy	New

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Resource Acquisition

This Program comprises roughly half of our total Portfolio budget for 2015 - 2020

- New and innovative offerings
  - C/I Direct Install; Energy Leaders; Adaptive Thermostats; Small Commercial New Construction;
- Evolved offerings
  - Enhanced incentives in custom programming
  - Expanded HEC offering to drive wide, and deep savings
- Offers to drive higher participation
- Increased scale of existing offerings
  - Sustained high CCM targets
  - Higher HEC participation
- Expansion of effort into traditionally ‘hard to reach’ markets
  - Scorecard focus to drive management attention
  - Specific offerings targeted to market segments

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Low Income

Continued and enhanced support of this important market segment

- New and innovative offerings
  - Low Income New Construction
- Evolved offerings
  - Expansion of efforts in the Private Sector Multi-Residential space
- Reduce missed opportunities by addressing new building stock
  - Instead of focusing exclusively on retrofit activity, expand efforts to encourage building highly energy efficient building stock
- Commitment to explore future opportunities
  - Partnering to include cost-effective furnace replacement measure
  - Track Health and Safety related issues; Potentially partner with others to remove Health and Safety as a barrier to energy efficiency
  - Aggressively pursue new measures that yield savings and are cost effective
  - Seek to continually enhance tenant comfort

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Market Transformation & Energy Management

Directly responsive to the Goals, Priorities and Principles of the Framework

- New and innovative offerings
  - New Construction Commissioning; My Home Health Record; School Energy Competition; Comprehensive Energy Management; Energy Literacy
- Evolved offerings
  - Changed eligibility for SBD Commercial
  - Redesign of Home Rating to be more effective
- New construction offerings to improve Ontario's building stock
  - Offerings geared to Residential, Small Commercial, and Commercial buildings
  - New approaches to reduce missed opportunities
- Innovative use of behavioural science to drive awareness, literacy, opportunity identification, and operational improvements
  - My Home Health Record; Small C/I Behavioural; Run it Right; School Energy Competition; Comprehensive Energy Management

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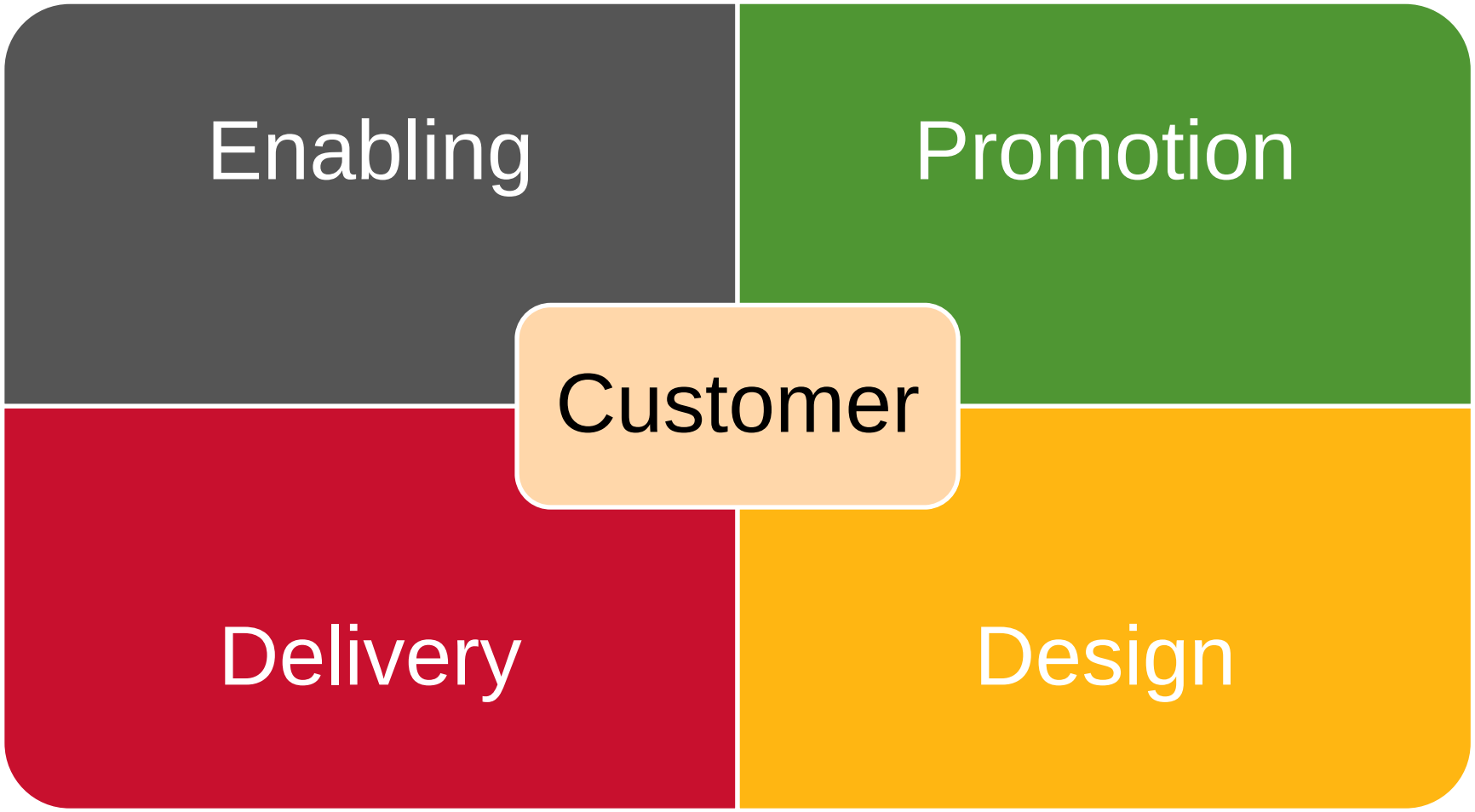
DSM and CDM Collaboration

For all offers, Enbridge continues to undertake and explore a wide spectrum of collaborative activity



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Other Initiatives of Note

Enbridge's multi-year Plan is a comprehensive plan with many facets

- Conservation First Implementation Committee and CDM Working Groups
- Green Button Participation
- On-Bill Financing/Financing
- Technical Resource Manual
- Net-to-Gross Study
- Boiler Base Case Study
- Potential Study & related Avoided Distribution Cost Study
- Integrated Resource Planning – Study Scope and Transition Plan

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IRP and the Utility: What are the utilities required to do?

As per the Framework, Enbridge to undertake the following related to Integrated Resource Planning

- ✓ By March 31 file with Multi-year Plan
  - ✓ "a preliminary scope of the study" … and
  - ✓ "a preliminary transition plan"
- – Conduct a Study to "determine the appropriate role that DSM may be able to serve in future system planning efforts"…..
  - Complete study in time for Mid-Term Review (June 1, 2018)

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Review of IRP Study Outline

In broad terms there are three “intersections” of IRP planning

- The primary focus of this study is on the relationship between Demand Side Management (“DSM”) and infrastructure planning
- The study will examine the three areas where DSM could potentially impact infrastructure planning:
  - Broad-based DSM impacts and long term planning forecasts of infrastructure investment (Passive Deferral)
  - Potential direct impact of DSM on subdivision planning through an expanded role by the utility in municipal planning (New System Design)
  - Potential direct impact through targeted DSM to achieve deferral of reinforcement projects (Active Deferral)
- Research methods are expected to include internal review, primary research, secondary research and case studies

Considerations for the Board

- The 15% adder is a reasonable proxy to the carbon avoidance cost estimate as carbon pricing is not yet known or in place and the TRC+ is used for screening purposes only. Review at the mid-term may be appropriate.

Total NPV Benefits (2018)	15% Adder	Calculated Cost of Carbon
$228,930,159	$29,860,456	$36,538,849
	% Difference in Total NPV Benefits	3%

15% adder calculated based on portion of total NPV benefits in TRC analysis associated with 15% non-energy benefit adder

"Calculated Cost of Carbon" calculated as Mr. Neme's NPV cost of carbon per annual m3 over a 16 year measure life reduced to account for price of $15.22CAD/tonne (as per GEC Cross Compendium Union Panel 1, p.20, 2018 Vintage, Mean Price) rather than $20USD/ton (equivalent of $28.73CAD/tonne)
Note: MTEM was not included in TRC Plus calculation and associated NPV benefits. For comparability MTEM annual m3 have been excluded from the "Calculated Cost of Carbon"

- Enbridge is amenable to some of the recommendations made by Synapse in their report

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Board Guidance

- Enbridge is seeking the following from the Board in this proceeding:

1. Approval of the 2015 “Transition Year” Budgets and Targets, including the Incremental Budget
2. Approval of the Budgets, Targets, and the Plan Elements that they comprise for 2016 to 2020, recognizing Enbridge has responded fully and appropriately to the Framework and Board’s priorities
3. Approval of other plan elements such as, but not limited to, new Deferral & Variance Accounts, Target Adjustment Factor, and the Integrated Resource Planning Study scope
4. Approval of the TRC plus screening and related avoided cost methodology, including the addition of a 15% non-energy benefit adder

Thank you

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