

A PRECARIOUS BALANCE: HASTE, MEDIOCRITY AND RISK IN EFFICIENCY MANITOBA'S 2020/23 PLAN

Closing submission of the Consumers Coalition,
presented by the Public Interest Law Centre on behalf of
Winnipeg Harvest and CAC Manitoba

January 27, 2020

A precarious balance: haste, mediocrity and risk

- Efficiency Manitoba has attempted to balance multiple statutory objectives, leading to programming for all customer segments:
 - The types of programs that are included in the Plan are typical of comprehensive energy efficiency portfolios and, if budgeted appropriately and implemented effectively, provide significant opportunities to increase the energy efficiency of homes and businesses in the province.
- **However, is this sufficient?**
 - Best case scenario – mediocrity – in light of missed opportunities in the development and content of the Plan
 - Substantial grounds to doubt ability to be resilient in the face of uncertainty – no risk mitigation strategy
 - Did not fulfill statutory duty on public engagement due to haste in Plan development

Mediocrity, haste and missed opportunities

- Efficiency Manitoba's plan misses significant opportunities in light of:
 - *good practice public and stakeholder engagement;*
 - *previous PUB findings regarding the importance of energy efficiency especially for low-income consumers;*
 - *previous PUB findings regarding Integrated Resource Planning and implications for future energy efficiency portfolio development and Efficiency Manitoba Plan reviews;*
 - *good practice in leading energy efficiency jurisdictions with respect to residential programming;*
 - *good practice relating to risk management and mitigation; and*
 - *the climate change crisis, electrification and emerging technologies.*

Risk and credibility


- Efficiency Manitoba's Plan raises credibility challenges because of risks relating to:
 - Staffing
 - The Customer Relationship Management tool
 - The procurement of third-party providers
 - Ramp-up of programs, participation and savings targets
 - Savings from Codes and Standards
- While it is possible that Efficiency Manitoba's goals in these areas will be met, the lack of a project management or risk mitigation framework provides no assurance to parties and the PUB that they are prepared to deal with any risks if they materialize.

Roadmap

- The Consumers Coalition and their experts
- This hearing matters for Manitobans
- Procedural challenges
- Statutory context overview
- Efficiency Plan must strike the balance between multiple objectives
- Public participation in the Efficiency Plan 2020/23
- Portfolio development and Integrated Resource Planning
- Portfolio content:
 - Cost-effectiveness
 - Project management and risk mitigation
 - Unreasonably conservative residential program offerings
 - Climate change and electrification
- Cost allocation

The Consumers Coalition Members

- Winnipeg Harvest 
 - Since 1984, a non-profit, community based organization committed to providing food to people who struggle to feed themselves and their families.
 - Seeks to maximize public awareness of hunger while working towards long-term solutions to hunger and poverty. Advocated for affordable access to financial services, transit, telecommunications, energy efficiency programming and heating and lighting.

- CAC Manitoba 
 - Since 1947, volunteer, non-profit, independent organization working to inform and empower consumers and to represent the consumer interest in Manitoba.
 - Over the past 28 years, rate regulation matters relating to Manitoba Hydro, Centra Gas, MPI, MTS, payday lending and the maximum cost of cashing government cheques. Also extensive and intersecting regulatory experience at the Canadian Radio-television and Telecommunications Commission.

Inter-disciplinary, highly qualified team of experts who have been there and done it

- Combined years of experience = approx. 110 years
 - Public participation – Dr. Fitzpatrick – 20 years of experience in studying and doing good practice public participation
 - Regulation of electricity utilities in regards to rates and resource planning – Mr. Harper – significant experience in the Manitoba and Canadian regulatory landscape
 - Energy efficiency planning and operations – Mr. Grevatt knows start-up challenges because he has been there
 - Analysis of markets for energy efficiency, demand response, renewable energy and strategic electrification measures and the design and evaluation of programs and policies to promote them – Mr. Neme has worked in 30 US states, 5 provinces, several European countries

- **Sources:**

Transcript January 14, 2020:

- Pages 1667-1672: Dr. Fitzpatrick
- Pages 1673-1676: Mr. Grevatt
- Pages 1676-1681: Mr. Neme
- Pages 1681-1684: Mr. Harper

Exhibits CC-1-5, CC-1-6, CC-1-7, CC-1-8

Consumers Coalition experts and Daymark = good practice versus legislative check list

- The Consumers Coalition expert consultants were asked to evaluate Efficiency Manitoba's Plan based on the PUB's issues list, and with respect to good practice in the energy efficiency sector and beyond.
- Daymark's evidence (Independent Expert Consultant) was helpful in assessing whether Efficiency Manitoba meets the legislative requirements.
- As demonstrated by the expert evidence filed on behalf of the Consumers Coalition, their analysis and recommendation is not limited to a legislative check list:
 - It is grounded in good practice from both within Manitoba and other jurisdictions, from the energy efficiency sector and other sectors; it also looked at how Efficiency Manitoba's Plan could be doing better and going further for Manitobans.
- **Sources:**
Exhibits CC-5, CC-6-1, CC-7, CC-8; Transcript January 13, 2020, pages 1389-1393:
Daymark

This hearing matters for Manitobans

- A well-designed, cost-effective energy efficiency plan can have positive implications for Manitoba Hydro ratepayers, including residential ratepayers, and for our environment.
- Positive implications can include:
 - Reduced or delayed capital expenditures, which could lead to lower rate increases for Manitoba Hydro ratepayers;
 - Increased energy available for export;
 - Reduction of wasted energy generally and reduction of greenhouse gas emissions from natural gas specifically;
 - More control over energy bills, which can disproportionately impact customers with limited income for whom energy bills make up a larger proportion of income;
 - Increased comfort in homes;
 - Improved indoor air quality;
 - Improved lighting quality;
 - Increased property value depending on the improvements that are made;
 - Reduced maintenance costs; and
 - Lower water consumption.

- **Sources:**

Transcript January 7, 2020, pages 586-588: Stocki; January 20, 2020, pages 2207-2211: Bowman; Efficiency Manitoba 2020/23 Plan, pdf pages 169-174.

Well-designed energy efficiency plan = choice, accessibility, awareness

- In order for customers to access the benefits that energy efficiency programming can offer, there must be:
 - Choice, given that customers all face and live in different circumstances (e.g. electricity/natural gas, rural/urban, northern/southern, house/condo/apartment, etc);
 - Accessibility, both physical and financial; and
 - Awareness, through diverse outreach, marketing and education initiatives.

- **Sources:**

Transcript January 7, 2020, page 588: Stocki; See also *Efficiency Manitoba Act*, s 4(3)(c), 11(4)(c) regarding accessibility

Poor filing, poor process combined with the importance of this inaugural 3-year Efficiency Plan has left parties and the PUB in a difficult position with respect to the outcome of this proceeding

- Compressed timeline, date of initial filing changed, no second round of Information Requests
- Lack of measure-level details
 - See Grevatt evidence Exhibit CC-7, pages 4-8; Grevatt direct Exhibit CC-18, slides 13-18; Transcript January 14, 2020, pages 1767-1771; PUB/COALITION - 7
- Changing numbers, a lack of detail and confusing data can lead to confusion, lack of confidence in the applicant and inefficiencies in the process
 - See for example Grevatt direct Exhibit CC-18, slides 19-20; COALITION/EM I-102; Transcript Jan 7, 2020, Page 603-606; Transcript January 15, 2020, pages 1915-1917: Grevatt
- Significant amount of information relating to marginal values considered confidential and not available for Interveners to review

Filing and process could be improved and more efficient

- Better filing in future proceedings could lead to a more efficient proceeding
 - See Transcript January 15, 2020, pages 1918-1919: Grevatt
- An improved process relating to confidential information could make the process more meaningful for all parties and be more aligned with processes in other jurisdictions
 - *THE CHAIRPERSON: But in those situations, can you test the assumptions? Can they be tested at the hearings or -- or are they basically put forward, here are the assumptions, you must go on the basis of those assumptions?*
 - *MR. CHRIS NEME: No, they -- I think it is quite common for them to be available to be tested, and in the sense that parties who don't believe the numbers or -- or think some modifications are appropriate can -- can make their case. That's -- I think that's actually quite -- quite common. And it's -- in -- in my experience, also it's quite common for those numbers not to be confidential.*
 - Transcript January 15, 2020, pages 1935-1937

Recommendations on future filings and processes

- The PUB should find that there was insufficient information and level of detail filed in the 2020/23 Efficiency Plan, especially measure-level details.
- The PUB should recommend that Efficiency Manitoba be directed to improve the level of detail provided in future filings, including for each program, a listing of the measures that result in the projected savings, by year, including:
 - Assumed quantity of each measure;
 - Assumed gross and net savings of each measure;
 - Assumed estimated useful life of each measure;
 - Assumed program incentive cost of each measure; and
 - Assumed customer cost of each measure.
- The PUB should recommend that future processes regarding confidential information be improved through collaboration between the PUB, Efficiency Manitoba, Manitoba Hydro and potential interveners.

Statutory Context

- *The Efficiency Manitoba Act*
- **Mandate**
- 4(1) The mandate of Efficiency Manitoba is to
 - (a) implement and support demand-side management initiatives to meet the savings targets and achieve any resulting reductions in greenhouse gas emissions in Manitoba;
 - (b) achieve additional reductions in the consumption of electrical energy or natural gas — including resulting reductions in the demand for electrical power — if the reductions can be achieved in a cost-effective manner;
 - (c) mitigate the impact of rate increases and delay the point at which capital investments in major new generation and transmission projects will be required by Manitoba Hydro to serve the needs of Manitobans;
 - [...]

Statutory Context (cont.)

- *The Efficiency Manitoba Act*
- **Plans to be submitted to PUB**
- [10](#) Subject to the regulations, Efficiency Manitoba must submit each of its efficiency plans to the PUB at the time and in the manner specified by the PUB.
- **Review and recommendation by PUB**
- [11\(1\)](#) The PUB must review an efficiency plan and make a report, with recommendations, to the minister as to whether the plan should be
 - (a) approved;
 - (b) approved with suggested amendments; or
 - (c) rejected.

Statutory Context (cont.)

- *The Efficiency Manitoba Act*
- **Mandatory considerations**
- [11\(4\)](#) In reviewing an efficiency plan and making recommendations to the minister, the PUB must consider
 - (a) the **net savings required to meet the savings targets and the plans to address any existing shortfall**;
 - (b) the **benefits and cost-effectiveness of the initiatives proposed in the plan**;
 - (c) whether Efficiency Manitoba is **reasonably achieving the aim of providing initiatives that are accessible to all Manitobans**; and
 - (d) any additional factors prescribed by the regulations. [emphasis added]
- **Optional recommendations**
- [11\(5\)](#) The PUB may recommend to the minister
 - (a) an increase in a savings target if it is reasonably satisfied that it is in the public interest for Efficiency Manitoba to achieve additional net savings; or
 - (b) a decrease in a savings target if it is reasonably satisfied that the existing savings target is not in the public interest.

Statutory Context (cont.)

- *Efficiency Manitoba Regulations*
- **Additional factors to be considered by PUB**
- 11 In addition to the factors set out in subsection 11(4) of the Act, the PUB must consider the following when reviewing an efficiency plan:
 - (a) the appropriateness of the methodologies used by Efficiency Manitoba to select or reject demand-side management initiatives;
 - (b) whether the plan adequately considers the interests of residential, commercial and industrial customers;
 - (c) whether, if it is practical to do so, at least 5% of Efficiency Manitoba's budget for demand-side management initiatives is allocated to initiatives targeting low-income or hard-to-reach customers;
 - (d) whether the portfolio of demand-side management initiatives required to achieve the savings targets is cost-effective;
 - [...]
 - (g) the impact of the efficiency plan on rates and average customer bill amounts;
 - (h) the reasonableness of the projected savings and Efficiency Manitoba's ability to meet the annual savings targets and the 15-year cumulative savings targets;
 - [...]
 - (j) whether the efficiency plan adequately considers new and emerging technologies that may be included in a future efficiency plan;
 - [...].

Balancing statutory objectives: cost-effectiveness is an important factor to consider because we will all pay for the 2020/23 Efficiency Plan

- *MR. MICHAEL STOCKI: Yeah. So there's -- for non-participating customers and participating customers, there'd be -- if you use the proxy of the life cycle revenue impact test, there'd be a rate increase associated with our activities, and certainly for participating customers there'd be corresponding bill savings associated with reduced energy consumption.*
 - Transcript January 7, 2020, page 589
 - See also Transcript January 20, 2020, pages 2205-2207: Bowman and Transcript January 10, 2020, pages 1181-1182: Clark
- Given that low-income customers pay a higher proportion of their income toward energy bills, they are likely to be disproportionately impacted by energy rate increases.

Cost-effectiveness determined using the PACT

- *Efficiency Manitoba Regulation* that cost-effectiveness is to be determined using the Program Administrator Cost Test (see s 12)
 - Comparing (a) the levelized cost to Efficiency Manitoba of the electrical energy net savings resulting from those initiatives with (b) the levelized marginal value to Manitoba Hydro of the net savings resulting from those initiatives
 - Comparing (a) the levelized cost to Efficiency Manitoba of the natural gas net savings resulting from those initiatives with (b) the sum of (i) the levelized marginal value to Centra of the resulting reduction or savings in the consumption of natural gas, and (ii) the natural gas transportation costs to the Manitoba border saved by Centra as a result of the gas not being *consumed*.

- **Sources:**

Efficiency Plan pdf 24; Harper Exhibit CC-6-1, page 32; Transcript January 20, 2020, pages 2220-2223

A cost-effective Plan means the benefits outweigh the costs – it does not mean lowest cost

- [...] *In my experience in energy efficiency parlance, cost-effective means -- it is a binary question. It's the benefits are greater than the costs or they're not.* (Transcript January 14, 2020, pages 1765-1766: Grevatt)
 - See also Transcript January 20, 2020, pages 2220-2223: Bowman; Grevatt direct Exhibit CC-18, slide 10
- The PUB is required to consider cost-effectiveness (*Efficiency Manitoba Act*, s 11(4(b)))
- But cost-effectiveness does not mean lowest cost (Grevatt direct Exhibit CC-18, slide 11)

Cost-effectiveness is one factor that must be balanced with multiple other statutory objectives

- *MR. MICHAEL STOCKI: That's correct. It's achieving an overall balance portfolio with – concerning multiple different considerations. (Transcript January 7, 2020, page 388)*
- Other objectives considered in the development of the Plan include:
 - Providing continuity of programs;
 - Energy savings targets;
 - Reducing overall costs;
 - Accessibility of the Plan to all customer segments;
 - Spending at least 5% of the budget on hard to reach customer segments;
 - Resulting GHG reductions;
 - Emerging technologies
 - Transcript January 8, 2020, pages 725-727: Stocki
- *MS. KATRINE DILAY: Thank you. And in essence, in developing an energy efficiency plan, there are a number of objectives that need to be balanced. You'll agree with that? MR. MICHAEL STOCKI: Yes, that's correct. (Transcript January 8, 2020, page 727)*
- **Sources:**

Transcript January 7, 2020, page 384-386: Stocki; January 20, 2020, pages 2214-2220: Bowman; *Efficiency Manitoba Act*, ss 4(1)(a), 4(1)(b), 11(4)(b), 11(4)(c); *Efficiency Manitoba Regulations*, s 11.

Efficiency Manitoba is not required to pursue a lowest cost portfolio, but rather a balanced portfolio

- *MR. MICHAEL STOCKI: It – it's a little bit difficult to take those in isolation. Say, for example, if you were to achieve the cheapest portfolio – for example, MIPUG had us run a scenario that removed three (3) different residential program bundles, and yes, that would be a cheaper alternative than delivering the portfolio that Efficiency Manitoba has – has proposed. But then again, there's tradeoffs. You're not going to hit your savings targets. You're going to sacrifice potentially reaching a large number of residential customers. So there's balance. With respect to the cost-effectiveness, certainly, there's also an independent balance there that has to be struck between, in our case, using the prescribed cost-effectiveness test, so trying to achieve a balance between the marginal values to Manitoba Hydro versus our – the costs of our - delivering our plan.*
- *MS. KATRINE DILAY: And so if we just walk through a few parts of that answer, you'll agree that Efficiency Manitoba did not necessarily pursue a lowest-cost portfolio, correct?*
- *(BRIEF PAUSE)*
- *MR. MICHAEL STOCKI: I'd say that's correct. I think we've hit a balanced portfolio, again, trying to take all the considerations into an appropriate balance.*
- *MS. KATRINE DILAY: And when you refer to that balance, would it be a balance between multiple objectives?*
- *MR. MICHAEL STOCKI: That's correct.*
- *[...]*
- *MS. KATRINE DILAY: But you'll agree that's not specifically a mandate to pursue a lowest- cost portfolio to reach a specific level of energy savings, correct?*
- *MR. MICHAEL STOCKI: That's correct.*
- *MS. KATRINE DILAY: And rather, there are multiple objectives that are contained in the Act and regulation in addition to cost-effectiveness, correct?*
- *MR. MICHAEL STOCKI: That's correct. Within the Act, within the regulations, within the mandate, absolutely. [emphasis added]*
- *(Transcript January 8, 2020, pages 727-730: Stocki; see also Transcript January 15, 2020, pages 1758-1760: Harper on the difference between cost-effective and least cost)*

Public participation in Efficiency Manitoba's 2020/23 Plan – PUB Issues list

- 3. Accessibility of Efficiency Plan to Manitobans, including consideration of:
 - a. the interests of residential, commercial and industrial customers, as well as hard-to-reach customers who may have disabilities or be Indigenous, rural, newcomers, renters, customers living in multi-unit residences, or older customers, including consideration of customer investments,
 - b. barriers to demand-side management uptake for Indigenous customers, including First Nations customers, and
 - c. the engagement strategy for low income and hard-to-reach customers, including First Nations customers

Public participation is a cornerstone of the development of good public policy

- *Efficiency Manitoba Act*, s 9: For the three-year period following the commencement date, and for each three-year period after that, Efficiency Manitoba must prepare an efficiency plan that includes the following information
 - (h) a description of the input that Efficiency Manitoba received from stakeholders — including the stakeholder committee established under section 27 — and the public in preparing the plan, and the process established for receiving the input
- Public participation can:
 - Add legitimacy to process and outcomes;
 - Strengthen public trust and confidence in the process;
 - Improve representativeness in deliberation, particularly when designed to ensure the interests of minorities are reflected in actions;
 - Build transparency surrounding costs, benefits and risks of different options; and
 - Enhance learning & Innovation by all involved
 - See Fitzpatrick evidence, Exhibit CC-5, pages 3-4; Fitzpatrick direct evidence, Exhibit CC-16, slide 3; Transcript January 8, 2020, pages 766-767: Kuruluk; Transcript January 14, 2020, pages 1687-1688: Fitzpatrick

Principles of meaningful public participation should be at the core of Efficiency Manitoba's engagement with stakeholders and the public

- Transparency: “to restore trust and confidence in processes, people must be able to see and understand how the process is being applied and how decisions are being made. Without this transparency, no process will be trusted.”
- Inclusivity: The policy process should take “into account the concerns of all parties who consider themselves or their interests to be affected by that” policy
- Informed: The record “...must be entirely based on evidence that is, and is seen to be, unbiased, accurate, accessible and complete.”
- Meaningful: “the process must be perceived by interveners to give them a real opportunity to be heard and to feel that they have had a chance to influence the ultimate decisions.”
 - Fitzpatrick evidence, Exhibit CC-5, page 4 (footnotes omitted); Fitzpatrick direct evidence, Exhibit CC-16, slide 4; Transcript January 14, 2020, pages 1689: Fitzpatrick

Recommended definitions can provide a helpful starting point:

- Public - the collective citizens and residents of a state, who may or may not be interested in, or may be affected by a particular issue
- Stakeholder - individuals or organizations with an interest in an issue, and therefore something at stake in a deliberation and decision. This does not include government authorities.
- Customer – uses the goods and or services provided by a company, agency, crown corporation, etc.
 - Fitzpatrick direct evidence Exhibit CC-16, slide 6; Transcript January 14, 2020, pages 1691-1692: Fitzpatrick

Lack of direct public engagement in the development of Efficiency Manitoba's 2020/23 Plan

- Insufficient evidence of public engagement conducted by Efficiency Manitoba during plan development (Transcript January 8, 2020, pages 769-774: Kuruluk; Transcript January 14, 2020, page 1693: Fitzpatrick)
 - *“Outside of the feedback received through EEAG members whom collectively represented all customer segments in the plan, there was no feedback received from the general public in advance of this first three-year Efficiency Plan (the Plan) being submitted to the Public Utilities Board (PUB).” (COALITION/EM I-125(c))*
- *MS. KATRINE DILAY: Thank you, Mr. Neme. Dr. Fitzpatrick, I have two (2) questions for you. The first one (1) arises from your discussion with my friend, Ms. Hart. In your opinion, recognizing the time line for the filing of the plan, has Efficiency Manitoba adequately engaged the public at large to date?*
 - *DR. PATRICIA FITZPATRICK: I would argue, no, there's been a missed opportunity, but I think that that could be remedied moving forward. (Transcript January 15, 2020, page 2088)*

Lack of direct public engagement in the development of Efficiency Manitoba's 2020/23 Plan (cont.)

- Efficiency Manitoba's stakeholder engagement model encompasses the “public” within the EEAG – no differentiation between stakeholders and the public; (Transcript January 8, 2020, pages 769-774: Kuruluk; Transcript January 8, 2020, pages 775-779: Kuruluk; COALITION/EM I-124(c))
- Efficiency Manitoba has conflated public participation and customer service (Transcript January 8, 2020, pages 779-780: Kuruluk; EM direct evidence Exhibit EM-21, slide 9)
- Efficiency Manitoba has relied, in part, on the Public Utilities Board process for public engagement, but:
 - the proposed Plan has already been developed and filed – too late in the process (Transcript January 15, 2020, pages 1972-1973: Fitzpatrick); and
 - the PUB does not conduct surveys, focus groups or workshops or provide plain-language explanations of the issues (Transcript, January 8, 2020, pages 774-775: Kuruluk)

Engaging directly with the public can lead to innovative ideas, grounded in lived realities

- For example, ideas that came from four ratepayers during the Coalition/MKO ratepayers panel included:
 - The desire for wood stoves to assist in lowering energy bills;
 - Installing solar powered security lights in order not to increase energy bills;
 - The need for more education about how to act on the principles of “reduce, reuse, recycle”;
 - Energy efficiency ads, similar to the MPI segments that appear on the news; and
 - The importance of education and awareness to teach about the impacts of energy efficiency and how to access these impacts
 - See Transcript January 24, 2020

Challenges regarding the EEAG and Stakeholder Survey

- The EEAG mandate is not clear (Fitzpatrick evidence, Exhibit CC-5, page 7; Fitzpatrick direct evidence, Exhibit CC-16, slides 9-10; Transcript January 8, 2020, pages 781-784: Kuruluk)
- EEAG members were not compensated for their time, which can be particularly challenging for First Nation, non-profit and community organizations (Fitzpatrick Evidence, Exhibit CC-5, page 7; Transcript January 15, 2020, pages 1880-1883: Fitzpatrick)
- The Stakeholder Survey had a low response rate and deficiencies in terms of tool design, delivery and analysis (Transcript January 14, 2020, pages 1697-1699: Fitzpatrick; Fitzpatrick direct evidence, Exhibit CC-16, slide 12; COALITION/EM I-128(d))
- Evidence demonstrated no specific interaction with Northern communities and First Nations, Metis or low-income consumers in the Stakeholder Survey (Transcript January 14, 2020, page 1701: Fitzpatrick; Fitzpatrick direct evidence Exhibit CC-16, slide 14)

The requirement in section 9(h) of the *Efficiency Manitoba Act* has not been met

- The PUB should conclude that Efficiency Manitoba has not clearly identified “input received from stakeholders – including the stakeholder advisory committee...- and the public, in preparing the plan, and the process established for receiving the input.
- The responsibility to engage with stakeholders and the public falls to the Crown corporation. (Transcript January 14, 2020, page 1712: Fitzpatrick)

Recommendations on public participation

- The PUB should find that Efficiency Manitoba did not seek sufficient input from the public and did not adequately seek and document input from stakeholders in the development of its 2020/23 Efficiency Plan. As a result, Efficiency Manitoba did not meet the requirement in section 9(h) of the *Efficiency Manitoba Act*.
- Efficiency Manitoba should be directed to develop a robust plan for engagement in program design, implementation, and in the evaluation process which should be initiated two years after implementation.
 - This plan should distinguish between the public, including low-income and hard-to-reach communities, and stakeholders.
- While EEAG members can be a good link to the public, the public must also be able to engage directly with Efficiency Manitoba through a variety of different media. (Transcript January 15, 2020, pages 1964-1965: Fitzpatrick)

Recommendations on public participation (cont.)

- Building in the principles of transparency, inclusivity, informed decisions and meaningful involvement, Efficiency Manitoba's engagement program must include:
 - specific mechanisms for public input into plan development, distinct from stakeholder engagement (for examples, see Transcript January 15, 2020, pages 2088-2089: Fitzpatrick; PUB/COALITION-15; MKO/COALITION I-1)
 - *And so, depending upon what information you're seeking and what is the size of the audience, there are different mechanisms that can be used to engage the public. I -- in my research, experience, and in my professional opinion, the more you can hear from the public, the better. And so, the idea of being swamped with five thousand (5,000) online answers fills my heart with joy. And I think of what I could do with that data to -- to get a better understanding of -- of what the potentials are.*
 - a transparent process for identifying how the input informed the original plan; and,
 - detailed plans about how stakeholder input, including that from the public, low-income and hard-to-reach communities will be received and responded to moving forward.

■ Sources:

Transcript January 14, 2020, page 1693: Fitzpatrick; Fitzpatrick direct evidence Exhibit CC-16, slide 20; Fitzpatrick evidence, Exhibit CC-5, page 19

Recommendations on public participation (cont.)

- In order to increase transparency, the EEAG's mandate should be clearly articulated with respect to membership, mandate, roles and responsibilities, including their expected contact or relationship with the public and how feedback from EEAG members is addressed. Consideration should be given to increasing the representativeness of customer groups on the EEAG, especially hard to reach customers. (Transcript January 14, 2020, pages 1695-1696: Fitzpatrick; Fitzpatrick direct evidence, Exhibit CC-16, slide 11; Fitzpatrick evidence Exhibit CC-5, page 7)
- EEAG members should receive appropriate compensation, in accordance with their mandate / responsibilities and in line with other types of similar advisory committees. (Transcript January 14, 2020, page 1697: Fitzpatrick; Transcript January 15, 2020, pages 1902-1903 & 1967-1970: Fitzpatrick; Fitzpatrick direct evidence, Exhibit CC-16, slide 11; PUB/COALITION-14)
- Efficiency Manitoba should be encouraged to employ a statistical analyst when developing surveys and analyzing results. (Fitzpatrick direct evidence, Exhibit CC-16, slide 13; Fitzpatrick evidence Exhibit CC-5, page 12)
- Moving forward, Efficiency Manitoba should use a more robust issues tracking table to track input received from the public and stakeholders. (Transcript January 14, 2020, page 1701: Fitzpatrick; Fitzpatrick direct evidence, Exhibit CC-16, slide 15; Fitzpatrick evidence Exhibit CC-5, page 10)

Recommendation on education and awareness: key to the success of energy efficiency programming

- As heard in the Coalition/MKP ratepayers panel on Friday January 24, 2020 and in Dr. Fitzpatrick's testimony, education and awareness, including for youth, are essential to assisting consumers in reducing their energy consumption.
 - *In my personal experience and, in fact, my research experience, the consumers of the future are able to understand the complexities of energy efficiency and climate change quite well, and they're quite passionate about thinking how to do better.*
 - Transcript January 14, 2020, pages 1714-1715: Fitzpatrick
- The PUB should recommend increased emphasis on education and awareness initiatives in the 2020/23 Plan as well as future efficiency plans, including relating to:
 - Decision-making and choices regarding energy consumption;
 - Energy efficiency programs and initiatives (i.e. what are the options, application process, eligibility, incentives, etc.); and
 - Financial and non-financial impacts from energy efficiency programs.

Efficiency Plan development and content: lack of transparency, missed opportunities and credibility challenges relating to risk

- Portfolio development process: Integrated Resource Planning Principles
- Portfolio content:
 - Cost-effectiveness methodology
 - Lack of project management or risk mitigation framework raises credibility concerns
 - Offerings for the residential customer segment are unreasonably conservative, raising questions about accessibility
 - The Plan misses opportunities to address the climate change crisis and electrification

Portfolio development – PUB Issues List

- 1. Reasonableness of projected electric and natural gas net savings to meet prescribed saving targets:
 - a. Reasonableness of methodology to project net savings including participant and Manitoba Hydro benefits
 - b. Electric and natural gas net savings compared to savings targets (both near-term and cumulative)
 - c. Appropriateness of the methods to select or reject demand-side management initiatives

- 8. The mandate for Efficiency Manitoba's activities and recommendations to government regarding net savings targets

Portfolio development – assessing how Efficiency Manitoba came up with its proposed plan

- There are multiple factors and statutory objectives that PUB has to take into consideration in reviewing the efficiency plan (Transcript January 14, 2020, page 1722: Harper)
- *Generally speaking, you'd agree that there is a number of different combinations of energy efficiency initiatives that Efficiency Manitoba could have selected to comprise its proposed portfolio in order to meet the legislative targets? (BRIEF PAUSE)*
 - *MR. MICHAEL STOCKI: In general, I'd agree. There's -- yeah, I'll leave it at that. Yes. (Transcript, January 7, 2020, page 607)*

Portfolio development – IRP provides a helpful lens through which to assess portfolio development methodology

- The NFAT review demonstrated that DSM measures were not equally weighted with other energy options: best practices for integrated resource planning involve placing every conceivable resource option on an equal footing. (Harper direct evidence Exhibit CC-17, slide 4; Harper evidence Exhibit CC-6-1, page 2; Transcript January 14, 2020, page 1719-1720: Harper)
- Similarities between Efficiency Manitoba statutory framework and Integrated Resource Planning:
 - Objective/target is linked to load requirement
 - Large number of options/alternatives available
 - Scope to consider alternative levels of DSM
 - Assessment involves multiple criteria
 - Cost effectiveness vs least cost
 - Preferred plan will be a combination of options/alternatives

- **Sources:**

Harper direct evidence Exhibit CC-17, slide 9; Harper evidence Exhibit CC-6-1, pages 7-8; Transcript January 14, 2020, pages 1722-1725: Harper

Portfolio development – IRP provides a helpful lens through which to assess portfolio development methodology (cont.)

- *As I note in my evidence, these similarities should come as no surprise, since DSM is actually one of the options that will be considered by Manitoba Hydro when it comes to develop its resource plan. And in particular in Manitoba Hydro's case, I strongly suspect that the DSM options that it considers were based largely on, if not entirely on -- on input from Efficiency Manitoba. (Transcript January 14, 2020, page 1724: Harper)*

Portfolio development – IRP provides a helpful lens through which to assess portfolio development methodology (cont.)

- The development of the Efficiency Plan is a micro version of Integrated Resource Planning just focused on DSM options and alternatives.
- As a result, it is appropriate and desirable to consider IRP principles in assessing portfolio development
- *When one couples this perspective with the Board's NFAT recommendation that integrated resource planning become a cornerstone for a new clean-energy strategy in Manitoba, in my view, a key consideration for the PUB in its review of Efficiency Manitoba's approach to developing its plan should be the extent to which the approach conforms with the principles of integrated resource planning. (Transcript January 14, 2020, page 1724-1725: Harper)*
- See also: EM/COALITION I-10

Integrated Resource Planning Principles and Components

- IRP principles

- All feasible options identified
- All options considered based on a common set of criteria
- Preferred portfolio reflects the best “balance”

- IRP components

- Identify plan requirements (i.e. resource/saving required)
- Identify evaluation criteria
- Identify feasible resource options
- Construct multiple “resource” portfolios
- Assess alternative portfolios vs evaluation criteria
- Select preferred portfolio

- Sources:

Harper direct evidence, Exhibit CC-17, slide 10; Harper evidence, Exhibit CC-6-1, page 8-9; Transcript January 15, 2020, pages 1725-1726: Harper)

- *As I noted in my interrogatory responses, determining the appropriate va -- balance is not a matter of applying weights and formula, but rather a matter of judgment, which is why plans are generally viewed by regulatory bodies such as yourselves. (Transcript January 14, 2020, page 1725: Harper)*

Integrated Resource Planning Principles and Components (cont.)

- The purpose of Integrated Resource Planning is not necessarily choosing the least cost option, but rather balancing a number of objectives and evaluation criteria
 - *MR. WILLIAM HARPER: Okay, you know, because I -- I think -- I think you were suggesting through your description that the purpose of integrated resource planning was to come up with the least cost plan where the lowest marginal cost and I don't think -- I don't think that's one (1) of the objectives of integrated resource planning is to consider costs, clearly cost considerations are -- are an important consideration. But as I said, **integrated resource planning involves looking at a number of evaluation criteria, and at the end of the day trying to balance those.** And I think it's fair to say that cost gets a material balance in that consideration, but it doesn't get 100 percent and everything else gets zero. And so then at the end of the day you're trying to come up with the plan that, you know, balances those -- balances those consid -- those considerations. It may not be the least cost plan, it -- it may -- it may well be but -- but -- but it may not. [emphasis added]*
 - Transcript January 14, 2020, pages 1758-1760: Harper

Identifying plan requirement: basis for electric targets

- Use of forecast values as a proxy for actual consumption reasonable
- HOWEVER:
 - Forecast values do not appear to align with the Efficiency Manitoba Act
 - Generation vs meter point
 - Metered sales vs total use
 - DSM adjustments do not include 2018/19 plan savings
 - Codes and Standards savings adjustment may double count impact of future Codes and Standards
- Sources:
 - Harper direct evidence, Exhibit CC-17, slide 11-12; Harper evidence, Exhibit CC-6-1, pages 9-21; Transcript January 14, 2020, pages 1727-1730: Harper

Identifying plan requirement: basis for electric targets (cont.)

- While Harper proposed adjustments do not materially change results for 2020/23 Plan, his approach aligns with the Act and reduces potential for future controversy:
 - *But in my view, the approach I've set out in my evidence is preferable, as -- as since it follow the requirements of the Act, it eliminates the potential for future controversy regarding how the savings targets are to be calculated. And also, as I understand from the testimony last week, it reflects how the calculations of savings versus targets will be done on an actual basis. (Transcript January 14, 2020, page 1729-1730: Harper, see also pages 1753-1754)*
- Efficiency Manitoba agrees that a consistent approach is preferable and does not appear opposed to Harper proposed adjustments:
 - *MS. DAYNA STEINFELD: And I take it from your earlier answer that Efficiency Manitoba accepts this methodology as valid as long as what you're doing throughout is consistent?*
 - *MR. MICHAEL STOCKI: That's correct. (Transcript January 8, 2020, pages 251-252)*

Identifying plan requirement: basis for natural gas targets

- Use of most recent actual sales and statutory adjustments reasonable
- No evidence that DSM adjustments are required. Impact on target calculation is minimal.
- PUB should consider natural gas both with and without interactive effects

- **Sources:**

Harper direct evidence, Exhibit CsC-17, slide 11; Harper direct evidence, Exhibit CC-17, slide 11-12; Harper evidence, Exhibit CC-6-1, pages 9-21

Identifying evaluation criteria – room for improvement

- Initial screening criteria reasonable
- Key evaluation criteria used:
 - Level of energy savings
 - Program costs
 - Cost-effectiveness (Transcript January 7, 2020, pages 613-614: Stocki; COALITION/EM I-14(b))
- A number of other factors could be included as evaluation criteria (i.e. customer rate impacts, Manitoba economic benefits, equity impacts, etc.) - use of stakeholder processes could assist in identifying criteria
- **Sources:**

Harper direct evidence, Exhibit CC-17, slides 14-15; Harper direct evidence, Exhibit CC-17, slide 11-12; Harper evidence, Exhibit CC-6-1, pages 21-26; Transcript January 14, 2020, pages 1732-1734: Harper; PUB/COALITION - 22

Identifying options – transparency and consistency concerns

- Pool of technologies and measures identified likely representative of those available.
- No central repository for options identified or consistent format for information collected raises transparency and consistency concerns.
 - *Efficiency Manitoba has no central repository where the information it gathers on potential DSM measures and technologies are stored, nor is the information collected on a consist -- in a consistent format. Ensuring comparable information is available for all options considered is important if they are all to be given equal weight and consideration and -- and evaluated on a common basis. (Transcript January 14, 2020, page 1735: Harper)*
- Sources:
 - COALITION/EM I-10(a); PUB/EM I-1a Transcript January 14, 2020, pages 1734-1739: Harper; Harper direct evidence, Exhibit CC-17, slide 16

Identifying options – Efficiency Manitoba open to improvement

- *MR. MICHAEL STOCKI: So in general, I can speak generally to the process and the lessons learned so far through going through this process. So certainly, Efficiency Manitoba takes the heart of some of the various criticisms that we've received with respect to the availability of information, whether or not it's containing CSI or not, whether or not it was provided in a timely enough manner. So all of that, we're taking in all that feedback. This is part of the ongoing process of continuous improvement. And so certainly with respect to the -- the central repository and having access to measure level detail, I don't think we fully appreciated going into this process the level of information that would be requested by every single Intervener. [...] And so -- I -- I mean, personally, as the VP of efficiency programs, that's something I would look to implement over the next couple years. And I -- I can't promise that we'd have that fully in place by the next three (3) year efficiency plan, but certainly for me personally, that'd be something I'd want to strive for. (Transcript January 7, 2020, pages 618-620: Stocki)*

Identifying options – lack of sensitivity analysis

- No sensitivity analysis considering alternative incentive levels as alternative options.
 - *MS. KATRINE DILAY: Thank you. But essentially what you were saying in this IR, and I believe what you agreed to, was that that sensitivity – sensitivity analysis rather, was not conducted or undertaken by Efficiency Manitoba in preparing its plan?*
 - *MR. MICHAEL STOCKI: That's correct. We didn't run multiples – different portfolios or develop multiple different portfolios to achieve the - - the same result. (Transcript January 7, 2020, pages 261-265: Stocki)*
 - *Another limitation with respect to Efficiency Manitoba's consideration of options is it did not consider alternative incentive levels when evaluating the measures to include in the plan. Incentive levels are critical in determining both the level of participation, and therefore savings, as well as critical in determining the overall level of program costs. As a result, it would be reasonable to view alternative incentive levels as alternative options when – when developing the plan. (Transcript January 14, 2020, page 1735-1736: Harper)*

- **Sources:**

Harper direct evidence, Exhibit CC-17, slides 16; Harper evidence, Exhibit CC-6-1, pages 26-28; COALITION/EM I-12(d); COALITION/EM I-19; COALITION/EM I-20(a)

Portfolio selection – lack of transparency

- Lack of transparency regarding development of preliminary portfolio (i.e. program design objectives)
 - *It's not understood what the objectives in the preliminary design were, and also if there was more than one (1) design objective, how they were balanced off. Since -- since -- when we look at the way the portfolio -- final portfolio was developed, the preliminary portfolio was effectively the foundation on which subsequent changes were made. And if we're going to understand how the final portfolio balances the various considerations, it's important mind -- in my mind to understand how that preliminary portfolio was constructed. (Transcript January 14, 2020, page 1736-1737: Harper)*
- Lack of transparency regarding refinements to arrive at preferred gas and electric portfolios
- **Sources:**

Harper direct evidence, Exhibit CC-17, slide 17; Harper evidence, Exhibit CC-6-1, pages 28-31; Transcript January 15, 2020, pages 2007-2008: Harper; COALITION/EM I-14(i)

Portfolio selection – no alternative portfolios

- No development of alternative portfolios to indicate trade-offs involved
 - *Another key component of integrated resource planning is development of alternative resource portfolios. In order to clearly show the differences that would arise, depending upon the weight given to -- to different evaluation criteria, therefore, allow parties, including the regulator, to consider the trade-offs that are involved. Indeed, the Energy Efficiency Advisory Group requested that alternative portfolios be included in the plan, however, Efficiency Manitoba indicated that there wasn't possible -- it wasn't possible due to time constraints. (Transcript January 14, 2020, page 1737-1738: Harper)*
- **Sources:**
 - Harper direct evidence, Exhibit CC-17, slide 17; Harper evidence, Exhibit CC-6-1, pages 28-31; Transcript January 15, 2020, pages 2007-2008: Harper

Recommendations on portfolio development process

■ DSM targets:

- The PUB should find that overall, there is lack of clarity and transparency in terms of how the target savings values have been determined and whether they have been determined appropriately.
- The PUB should find that in reviewing the planning targets for electricity savings, while the use of forecast values as the starting point is reasonable, there are distinct differences between the definition of consumption as set out in the Act and how it has been determined by Efficiency Manitoba. Efficiency Manitoba should be directed to revise its calculations, as per Harper's recommendation, for the 2020/23 Plan. The PUB should also consider if the DSM adjustments made by Efficiency Manitoba are appropriate.
- Regarding planning targets for natural gas, while using historical use as the starting point is reasonable, the PUB should similarly consider whether the DSM adjustments made by Efficiency Manitoba are appropriate or even required.
- In terms of actual target achievement, the PUB should find that Efficiency Manitoba's approach to calculating annual target achievements and cumulative progress towards the achievement of its 15 year target is reasonable.

■ Sources:

Harper direct evidence, Exhibit CC-17, slide 24; Harper evidence, Exhibit CC-6-1, pages 49-51; Transcript January 14, 2020, pages 1749-1753: Harper

Recommendations on portfolio development process (cont.)

■ Evaluation criteria:

- The PUB should find that the criteria used should extend beyond the level of budget and the mandatory considerations related to the energy savings targets and cost-effectiveness.
 - If practical considerations required a shorter list of evaluation criteria than suggested by the range of “considerations” set out in the Act/Regulation, then stakeholder processes should be used to identify what are considered to be the more important considerations to be used as evaluation criteria in determining the preferred plan.
 - Overall, Efficiency Manitoba’s choice/range of evaluation criteria is not consistent with what one would expect from an integrated resource planning process and the PUB should recommend that this process be improved in future filings.

■ Sources:

Harper direct evidence, Exhibit CC-17, slide 24; Harper evidence, Exhibit CC-6-1, pages 49-51; Transcript January 14, 2020, pages 1749-1753: Harper

Recommendations on portfolio development process (cont.)

■ Options considered:

- The “pool” of measures and technologies created is likely to be representative of those available. However, the lack of documentation and a central repository raises concerns regarding both the transparency and consistency in respect to how the options will be considered.
 - Going forward, the PUB should recommend that Efficiency Manitoba develop consistent documentation and a central repository in consideration of options. A potential study may assist with the development of a central repository.
- Assumptions regarding the level of incentives are likely to have a material impact on the level of participation and the annual savings that can be attributed to the measure. Efficiency Manitoba’s lack of consideration of options with different levels of incentives does not align with IRP principles as it means the portfolio development process has not considered all feasible options.
 - The PUB should recommend that Efficiency Manitoba consider options with different levels of incentives in future portfolio development processes.

■ Sources:

Harper direct evidence, Exhibit CC-17, slide 25; Harper evidence, Exhibit CC-6-1, pages 49-51; Transcript January 14, 2020, pages 1749-1753: Harper

Recommendations on portfolio development process (cont.)

- Preferred portfolio selection
 - The PUB should find that there is a lack of transparency in terms of the objectives underlying both
 - the development of the preliminary portfolio; and
 - how the considerations related to budget, energy savings and cost-effectiveness impact the development of the final portfolios.
 - The PUB should find that Efficiency Manitoba has not included alternative DSM portfolios and their subsequent assessment using multi-criteria analysis in its Plan due to time constraints. This is a standard component of an integrated resource planning process as it allows parties to clearly see the trade-offs associated with a proponent's proposed Plan.
 - The PUB should indicate that the development and presentation of alternative portfolios must be included in future plans and that these portfolio alternatives need to consider a wider range of considerations than just costs, energy savings and cost-effectiveness.

■ Sources:

Harper direct evidence, Exhibit CC-17, slide 25; Harper evidence, Exhibit CC-6-1, pages 49-51; Transcript January 14, 2020, pages 1749-1753: Harper; Transcript January 15, 2020, pages 2006-2007: Harper; Transcript January 20, 2020, pages 2441-2447: Bowman

Recommendation on Integrated Resource Planning

- The next Efficiency Manitoba Plan should be reviewed with the benefit of results from an Integrated Resource Planning process, involving collaboration between Efficiency Manitoba, Manitoba Hydro and other appropriate parties, as well as a process for public and stakeholder input.
 - Transcript January 15, 2020, pages 1989-1992: Harper; Bowman evidence Exhibit MIPUG-5-1, Recommendation 5; Transcript January 20, 2020, pages 2441-2447: Bowman; PUB/MIPUG I-13
- For portfolio development purposes, alternative portfolios that meet the same savings targets should be developed. However, for integrated resource planning purposes, it will likely be necessary to develop alternative portfolios that meet different savings targets.
 - *I'd just like to clarify that in my evidence I was talking about the first of these two (2) types of analysis, that is, alternative portfolios that meet the same savings target. Efficiency Manitoba claims that its plan strikes the appropriate balance between the various considerations involved. The inclusion of alternative portfolios that meet the same savings target would help parties, including the PUB, to understand the nature of the balance inherent in their proposed plan. However, in order to address the appropriateness of the targets and to assist Manitoba Hydro in its eventual resource planning, at some point in time it will also be necessary, in my mind, for Efficiency Manitoba to develop alternative portfolios that meet different savings target levels. (Transcript January 14, 2020, page 1738-1739: Harper)*
- See also Transcript January 15, 2020, pages 1844-1846 & 1869: Harper

Cost-effectiveness and rate impacts – PUB Issues List

- 2. Cost-effectiveness of electric and natural gas demand-side management program bundles and portfolio:
 - a. Reasonableness of methodology to evaluate cost-effectiveness
 - b. Comparison of levelized cost to Efficiency Manitoba of electricity energy net savings to levelized marginal value to Manitoba Hydro – limited to the marginal value as determined by Manitoba Hydro in its resource planning process
 - c. Comparison of levelized cost to Efficiency Manitoba of natural gas net savings to levelized marginal value to Centra Gas – limited to the marginal value as determined by Centra Gas
 - d. Rate impact and customer bill impacts for both participants and non participants and whether the bill impacts are reasonable - limited to lifecycle revenue impact analysis (one-time equivalent change in rates)
 - e. Consideration of the total resource costs of the initiatives proposed in the Efficiency Plan

Cost-effectiveness and rate impacts methodologies

- *Efficiency Manitoba Regulation* dictates use of Program Administrator Cost Test (PACT), using marginal values for the electric portfolio “as determined by Manitoba Hydro based on a methodology consistent with its resource planning process, taking into account the timing and duration of the savings” (*Regulation*, s 12; *Efficiency Manitoba Plan*, pdf p 24-27, 127-137)
- Efficiency Manitoba uses the Lifecycle Revenue Impact (LRI) metric as a simplified indicator of the rate impacts of the Plan (*Efficiency Manitoba Plan*, pdf p 27-29, 137-141)
- Efficiency Manitoba also calculates annual average customer bill savings (*Efficiency Manitoba Plan*, pdf p 30, 141-144)

Cost-effectiveness methodology shortcomings – PACT

- Marginal values:
 - There was no analysis by the Independent Expert Consultant of whether the marginal values provided by Manitoba Hydro were reasonable (Transcript January 13, 2020, pages 1388-1389: Daymark)
 - Not clear whether Manitoba Hydro resource plan / marginal values are “current”
 - No peak/off-peak marginal values for electricity
 - No explanation for lack of marginal values for gas transmission/distribution
- 30-year time frame reasonable
- Efficiency Manitoba uses Manitoba Hydro's discount rate of 6%: appropriate discount rate subject to debate (e.g. NFAT proceeding)
 - As a result, the sensitivity analysis relating to discount rates is important to consider

■ Sources:

Harper direct evidence, Exhibit CC-17, slide 18; Harper evidence, Exhibit CC-6-1, pages 34-39; Transcript January 14, 2020, pages 1740-1742: Harper; Transcript January 15, 2020, pages 1848-1851: Harper (why on/off peak marginal values are important); Transcript January 15, 2020, pages 2011-2013: Harper (why discount rate matters); Transcript January 8, 2020, pages 708-710: Stocki; Transcript January 20, 2020, pages 2129-2130: Bowman (regarding the problematic lack of on/off peak information)

Rate impacts methodology shortcomings – LRI

- Same shortcomings as PACT relating to marginal values and discount rate
- Use of 30 year time frame understates short-term rate impacts. Should also be calculated using a 10 year time frame.
- Lost revenue based on future rate increase equal to Consumer Price Index – may be reasonable for gas for not for electric. Should evaluate using 10 year time frame and 3.9%/annum.

- **Sources:**

Harper direct evidence, Exhibit CC-17, slide 20; Harper evidence, Exhibit CC-6-1, pages 41-44; Transcript January 14, 2020, pages 1744-1745: Harper; Transcript January 8, 2020, pages 711-719: Stocki (regarding rate increase assumptions for LRI); Transcript January 13, 2020, pages 1293-1298: Daymark (regarding time frame for LRI); CC/DAYMARK I-14 (Daymark did not test the inflation assumption used by EM)

Customer bill impact calculation shortcomings

- Bill impact calculations misrepresents impacts for participating customers – no recognition of upfront investments required
- Calculation uses 30-year NPV for customer bill savings and using Manitoba Hydro's discount rate:
 - Excludes cost that participating customers will incur
 - Discount rate should reflect customers' time value of money, not Manitoba Hydro's

- **Source:**

Harper direct evidence, Exhibit CC-17, slide 22; Harper evidence, Exhibit CC-6-1, pages 45-46; Transcript January 14, 2020, pages 1746-1747: Harper

Total Resource Cost Test – looks at all benefits to utility and participants

- In addition to the PACT, the Total Resource Cost test can be an important cost-effectiveness test to consider – considers impacts to utility and participants – but there are some methodological challenges to recognize
 - *But the reality is, even within those tests, the most common probably used by name is the Total Resource Cost Test, but of the maybe twenty (20) or twenty-five (25) jurisdictions that use that test, I'm not sure any of them actually computed exactly the same, and one (1) of the reasons for that is that those tests were kind of developed in abstract and not developed to reflect the real policy concerns that different states and provinces have. And so different states and provinces have then taken the -- the test -- the conceptual test, and then modified it so that it reflects their own jurisdictional policies. And if that's done well and -- and right, then that's -- that's a perfectly good thing to do. Unfortunately, it's rarely done right.*
 - *Conceptually, the TRC Test is supposed to address the combined impact to the utility system and program participants. That means if you're going to add the program participants' contribution to the cost of an efficiency measure, you need to add all the program participants' benefits, including things like improved health and safety, improved comfort, improved building durability, improved business productivity, et cetera. And that's sometimes a challenging thing to do.*
 - Transcript January 15, 2020, pages 1785-1790: Neme

Recommendations on cost-effectiveness – PACT

- PUB should find there are shortcomings with Manitoba Hydro's marginal values, and that these shortcomings should be remedied in future proceedings:
 - Electricity: confidential process should be improved for parties to examine the reasonableness of marginal values, clarification regarding how current the values are, peak/off-peak energy
 - Gas: transmission/distribution marginal values should be provided
- PUB should find there is uncertainty regarding the appropriate discount rate and consider the results of the sensitivity analysis.
- The PUB should consider the natural gas PACT with and without interactive effects.
- The PUB should find that the 30-year discount period used by Efficiency Manitoba is reasonable as is its treatment of Codes and Standards and Furnace Replacement Program costs.
- In addition to the PACT, Efficiency Manitoba should calculate and the PUB should consider results from the Total Resource Cost test

- **Sources:**

Harper direct evidence, Exhibit CC-17, slide 26; Harper evidence, Exhibit CC-6-1, pages 51-52; Transcript January 4, 2020, pages 1750-1753

Recommendations on customer impacts – Lifecycle Revenue Impact analysis

- The PUB should find that the PACT conclusions with respect to the marginal values and discount rate used are equally applicable to the LRI.
- The PUB's consideration of rate impacts should focus on the 10-year values as well as the longer term 30-year values.
- The PUB should find that the System Energy inputs used by Efficiency Manitoba in its LRI calculations are reasonable.
- The PUB should find that the electric rate increase assumptions used by Efficiency Manitoba are understated in the short term and lead to an understatement of the LRI results.
- The PUB should find that the Efficiency Manitoba treatment of Codes and Standards and Furnace Replacement Program costs in its LRI analysis is reasonable.

- **Sources:**

Harper direct evidence, Exhibit CC-17, slide 27; Exhibit CC-6-1, pages 51-52; Transcript January 4, 2020, pages 1750-1753

Recommendations on customer impacts – customer bill impacts

- Customer Bill Impacts

- The PUB should find that the customer bill impact calculations provide an incomplete picture of the impact on participating customers.

- As a result, the PUB should attach no significant weight to the results.

- Sources:

Harper direct evidence, Exhibit CC-17, slide 27; Exhibit CC-6-1, pages 51-52; Transcript January 4, 2020, pages 1750-1753

Risk and credibility challenges – PUB Issues List

- 1. Reasonableness of projected electric and natural gas net savings to meet prescribed saving targets:
 - a. Reasonableness of methodology to project net savings including participant and Manitoba Hydro benefits
 - b. Electric and natural gas net savings compared to savings targets (both near-term and cumulative)

- 7. Consideration of the demand-side management evaluation framework and plan proposed by Efficiency Manitoba

Risk and credibility challenges: lack of project management and risk mitigation

- While Efficiency Manitoba is assuring parties and the PUB that everything will go according to plan, until all items are completed, there still exists a certain level of uncertainty and risk.
- Efficiency Manitoba has not filed a project management or risk mitigation framework identifying the risks and possible mitigation strategies.
- This raises concerns regarding whether their plan as proposed can credibly be achieved.

What are the risks still facing Efficiency Manitoba?

■ Risks include:

- Whether the proposed Customer Relationship Management (CRM) tool and proposed Online Home Energy Questionnaire will be fully deployed and operational according to the expected timelines;
- Whether the significant savings that are projected to come from Codes and Standards will be verified by the independent assessor;
- Whether all the programs will ramp up according to plan and meet participation and savings targets within the proposed budgets;
- Whether the required staff transition from Manitoba Hydro will be successful and accomplished in a timely manner;
- Whether procurement for third party program implementers will be successful and accomplished in a timely manner; and
- Whether Efficiency Manitoba's long-term savings are reasonably achievable.

■ Sources:

Grevatt evidence, Exhibit CC-7, pages 9-21; Grevatt direct evidence, Exhibit CC-18, slide 33; Transcript January 14, 2020, pages 1775-1782: Grevatt; Daymark evidence, Exhibit DAY-3, page 27; Transcript, January 13, 2020, pages 1364-1366

While these risks may not materialize, and we all hope they do not, there still exists uncertainty

- The Consumers Coalition is not saying that these risks will definitely materialize, but rather that there still exists a certain level of risk or uncertainty because these items have not been finalized.
- *So I just want to talk a little bit about startup challenges -- I -- because in my evidence, I identified a number of risks to the startup and implementation of the programs. And staff hiring and transition, there's, you know, been some reassurances, I understand, during the hearing from Efficiency Manitoba, both about hiring and transition and -- and procurement of program implementors, which is reassuring, but I don't think it means that the risk is gone. And interestingly, as I've thought about this, you know, I think there's a sense that because the Efficiency Manitoba staff has experience, that means that we should rely on what they're saying and these things will be accomplished. **From my point of view, it's my experience that tells me these risks exist, and -- and if I were trying to do this launch, I would be much better off to identify the risks, acknowledge them, and think about how I would address them if they come up. And I also want to say that in going through that exercise, often, one might identify risks that -- hadn't thought of and think of ways to sort of cut them off before we get to the point where they're happening and we don't know what to do. So I think it's a really important tool in project management. But of -- of the -- I don't want to go through all of these. I -- I think that the point is simply that optimism is not the same as success [...]** [emphasis added] (Transcript, January 14, 2020, pages 1775-1776: Grevatt)*

Customer Relationship Management tool – foundational to the success of Efficiency Manitoba

- The CRM tool is going to be “foundational to the success of Efficiency Manitoba” and is “an integral and overarching strategy that will provide optimal performance of Efficiency Manitoba from both customer-facing and internal operations perspectives” (Transcript January 8, 2020, pages 634-635: Stocki; Efficiency Manitoba Application, pdf p 208)
- Given its importance to Efficiency Manitoba, a potential delay in its could have implications for Efficiency Manitoba's success:
 - Implications for transition between program launch and CRM implementation date (Transcript January 8, 2020, pages 637-639: Stocki)
 - Implications for tracking programs until the CRM is implemented due to changes between Manitoba Hydro's and Efficiency Manitoba's programs (Transcript January 8, 2020, pages 639-642: Stocki)
- See also Transcript January 13, 2020, pages 1374-1375: Daymark; Grevatt evidence, Exhibit CC-7, pages 15-16; Daymark evidence, Exhibit DAY-3, page 2, 27; CC/DAYMARK I-2

Customer Relationship Management tool – no risk mitigation plan filed

- *MS. DAYNA STEINFELD: Daymark has identified and the possibility for delay associated with just computer system development. Does Efficiency Manitoba agree that there is a risk around the procuring and -- and implementing of the CRM system?(BRIEF PAUSE)*
 - *MR. ROBERTO MONTANINO: With projects of these nature -- with projects of this nature, there of course is risk. We feel that we've implemented a - - a process that mitigates the risk. (Transcript January 6, 2020, pages 553-554)*
- Efficiency Manitoba acknowledges there is a risk but is confident that it has processes in place to mitigate the risk - no risk mitigation plan regarding the CRM was filed by Efficiency Manitoba

Savings from Codes and Standards

- Savings from Codes and Standards represent almost a quarter of electric savings and even more for natural gas, in the range of 32%. (Transcript January 7, 2020, pages 653: Kuruluk; Efficiency Manitoba Plan, pdf p 513, 507)
- Efficiency Manitoba will rely on its third party evaluator to implement the methodology to assess the success and impact of Efficiency Manitoba's participation in Codes and Standards committees
 - The third party evaluator will be independent and will not be bound by Efficiency Manitoba's projections.
 - Transcript January 7, 2020, pages 653-658: Kuruluk; DAYMARK/EM I-62(b)

Savings from Codes and Standards – no risk mitigation plan filed

- While Efficiency Manitoba asserts that it has been conservative in its projection of savings from Codes and Standards, there is no guarantee that the third party evaluator will agree – this remains a risk as the third party evaluator's report has not been completed.
 - *And this is also an area where I think there's some risk that independent evaluator may come in and says, We think those estimates of codes are -- savings from codes are a little optimistic, because, really, the standard has been -- I should say standard, sorry -- has been in place for a number of years. The market is shifting in that direction anyway, and we're not sure that the fact that there's a standard on the books is contributing materially to the savings anymore. I can't make that judgment, but it's an area that -- where -- where an independent evaluator could. (Transcript January 14, 2020, page 1773: Grevatt)*
- No risk mitigation plan was filed by Efficiency Manitoba regarding any unplanned results regarding the Codes and Standards
- **Sources:**

Transcript January 13, 2020, pages 1380-1384: Daymark; Grevatt evidence, Exhibit CC-7, pages 17-20; Grevatt direct evidence, Exhibit CC-18, slides 34-37; Daymark evidence, Exhibit DAY-3, pages 3, 114, 124-128

Staff transition – no risk mitigation plan filed

- *MS. DAYNA STEINFELD: And does Efficiency Manitoba accept that there are risks associated with transferring sixty (60) to seventy (70) employees to a new organization?*
 - *MS. COLLEEN KURULUK: I guess there potentially could be a risk that staff may not want to be employed by Efficiency Manitoba when it comes to what our offer looks like. (Transcript January 6, 2020, pages 296-297)*
- Efficiency Manitoba has not filed a plan identifying what it would do in the event that it is not fully staffed by the April 1st, 2020 implementation date. (Transcript January 7, 2020, pages 658-659: Kramps)
- See also: Grevatt evidence, Exhibit CC-7, page 10; DAY/EM I-81a-d

Third-party providers

- All third-party contracts have not yet been finalized.
- Efficiency Manitoba does not see this as a risk.
- However, even if Efficiency Manitoba is confident, there still exists uncertainty, and therefore a risk, because all contracts have not been executed.
- Efficiency Manitoba has not filed a plan identifying what it will do if it does not have all third-party contracts executed by April 1, 2020

- **Sources:**

Transcript January 7, 2020, page 662; COALITION/EM I-81(c); Efficiency Manitoba Rebuttal evidence, Exhibit EM-13, page 8; Grevatt evidence, Exhibit CC-7, page 11; Transcript January 13, 2020, pages 1375-1376: Daymark; Daymark evidence Exhibit DAY-3, page 2

Program ramp-up, participation and savings targets

- In the event of challenges in attaining the participation targets in the Plan, due to any number of factors, this could impact Efficiency Manitoba's ability to reach savings targets projected in the Plan (Transcript January 7, 2020, pages 665-669: Stocki)
- Efficiency Manitoba's acquisition costs for electricity and natural gas savings are already lower than Manitoba Hydro and lower than 2017 US average (Efficiency Manitoba Plan, pdf p 150, 533; Transcript, January 14, 2020, pages 1980-1982: Grevatt; Grevatt direct evidence, Exhibit CC-18, slide 38)
 - *So my concern is, if they don't get the codes and standards savings, there's no budget to -- to meet the savings goals. (Transcript January 14, 2020, page 1981: Grevatt)*
- Efficiency Manitoba is planning flexibility within its approved budget, but cannot increase its overall 3-year budget. (Transcript January 7, 2020, pages 643-644: Kramps; *Efficiency Manitoba Act*, s 125(3))
- See also Grevatt evidence, Exhibit CC-7, pages 11-14

No contingency fund for costs resulting from shortfalls in the plan or potential unexpected costs of a start-up organization

- *MS. KATRINE DILAY: And we can go there if you need, but you'll confirm that Efficiency Manitoba indicated on Monday that the contingency fund is not for unplanned costs resulting from shortfalls in the plan, correct?*
 - *MS. KYLA KRAMPS: That's correct.*
 - *MS. KATRINE DILAY: And you'll agree that similarly, Efficiency Manitoba does not have a contingency fund in its budget relating to potential, unexpected costs of a start-up organization?*
 - *MS. KYLA KRAMPS: There isn't -- that's right, there isn't a separate contingency budgeted line in our -- in our budget.*
 - *MS. KATRINE DILAY: And this is because the contingency fund that is contemplated is specifically for unplanned opportunities that Efficiency Manitoba may want to pursue, that you are - - that you were not aware of today, correct?*
 - *MS. KYLA KRAMPS: That's correct.*
 - Transcript January 7, 2020, pages 652-653

Efficiency Manitoba is projecting savings right at the legislated targets – ability to achieve projected targets will affect ability to achieve legislative mandate

- *MS. KATRINE DILAY: Thank you. So -- and so you'll agree that if Efficiency Manitoba, given that the savings are essentially at the target, if they are not -- if they do not achieve those savings, they will as a result not achieve the target in the Act?*
 - *MR. JOHN ATHAS: Correct.*
 - Transcript January 13, 2020, page 1369-1370
- Daymark's concerns are mostly relating to the first year. Daymark is not forecasting that Efficiency Manitoba will not achieve the savings targets – but it remains an uncertainty.

Long-term savings may be at risk

- Daymark noted a concern relating to long-term savings:
 - *“Taking into account the challenges posed by the significant role played in the first three years by measures with relatively short lives, and the possible adjustments that should be made to codes and standards savings projections, it is our assessment that, although Efficiency Manitoba has put forward a plan with substantial energy savings in the first three years, Efficiency Manitoba may not be on track, at this point, to meeting the fifteen-year reduction targets set out in the Plan”*
 - Daymark evidence, Exhibit DAY-3, page 3

No project management or risk mitigation framework filed by Efficiency Manitoba

- A risk management process/framework would include:
 - Risk identification
 - Risk evaluation
 - Risk mitigation
 - Contingency plan(s)
 - Transcript January 7, 2020, page 670-671: Stocki; Grevatt evidence, Exhibit CC-7, page 21
- Efficiency Manitoba confirmed that it did not file a risk management process or framework, taking the position that it was not required to do so under the *Efficiency Manitoba Act*:
 - *But just to confirm, Efficiency Manitoba has not filed a risk management process or framework, correct?*
 - *MR. MICHAEL STOCKI: That's correct, as Ms. Kuruluk mentioned that we -- we weren't required to. (Transcript January 7, 2020, page 672)*

Recommendation on project management and risk mitigation

- The PUB should find that Efficiency Manitoba has not adequately acknowledged or addressed the risks it faces in implementing its 2020/23 Efficiency Plan.
- The PUB should recommend that Efficiency Manitoba be directed to file a project management plan and risk mitigation strategy within 30 days of Plan approval to demonstrate that it will appropriately manage launch and implementation:
 - *So from my evidence the primary recommendations were that Efficiency Manitoba should provide a project management plan and risk assessment and mitigation strategies to the Board. And I want to be clear that, from my point of view, it's less important that parties have an opportunity to review this plan than that Efficiency Manitoba has it, because again from my experience, to try to do this kind of launch, you need to have a really clear idea of everything that needs to happen, when it needs to happen, what needs to happen first, what you're going to do if one of those things doesn't happen, and if that's not laid out, it really decreases the likelihood that the things that need to happen are going to happen. So that's just -- to me that's just sound project management and I would hope that they are developing such a plan. [emphasis added] (Transcript, January 14, 2020, p 1982: Grevatt)*
 - *See also Transcript January 15, 2020, pages 2056-2058: Grevatt (regarding what should be included in a project management plan) and PUB/COALITION - 9*
- The PUB should recommend that Efficiency Manitoba be directed to file an independent review of Codes and Standards savings assumptions within six months of Plan approval.

Unreasonable conservatism in residential programming

– PUB Issues List

- 1. c. Appropriateness of the methods to select or reject demand-side management initiatives
- 1. d. Consideration of new and emerging technologies that may be included in a future Efficiency Plan
- 3. Accessibility of Efficiency Plan to Manitobans, including consideration of:
 - a. the interests of residential, commercial and industrial customers, as well as hard-to-reach customers who may have disabilities or be Indigenous, rural, newcomers, renters, customers living in multi-unit residences, or older customers, including consideration of customer investments,
 - b. barriers to demand-side management uptake for Indigenous customers, including First Nations customers, and
 - c. the engagement strategy for low income and hard-to-reach customers, including First Nations customers
- 4. Consideration of the appropriate percentage of the demand-side management budget for income qualified and hard-to-reach customers, including specifically for Indigenous and First Nations customers, and whether, if practical, at least 5% of the demand-side management budget is set aside for these customers
- 5. Consideration of non-energy benefits of electric and natural gas demand-side management portfolios including environmental, economic development (including use of private sector and non-government organizations to deliver demand-side management initiatives)
- 6. Compliance of Efficiency Manitoba with directions from government through mandate and framework letters
- 9. Marketing of, and intake of participating customers for, loans or financing programs related to energy efficiency and energy conservation
- 10. Comparison of the costs and savings forecasts and achievements of past Manitoba Hydro or Centra Gas programs and budgets to Efficiency Manitoba's plan

Mediocrity and missed opportunities: unreasonable conservatism in residential program offerings

- In its review of the Efficiency Plan, the PUB must consider “whether Efficiency Manitoba is reasonably achieving the aim of providing initiatives that are accessible to all Manitobans” (*Efficiency Manitoba Act*, s 11(4)(c))
- The types of programs that are included in the Plan are typical of comprehensive energy efficiency portfolios and, if budgeted appropriately and implemented effectively, provide significant opportunities to increase the energy efficiency of homes and businesses in the province.
- However, Efficiency Manitoba is unreasonably conservative in the scope and scale of its proposed residential sector programs.

What does “accessible” mean – the Oprah analogy

- *When I look at something like this, I think, well, what does that mean, 'accessible'. And so, I go to the dictionary to understand what the term means, and 'accessible', available, easy to find, you know, it's not something that should be hard to do. And the analogy which I think dates me that I thought of is, if I was watching Oprah, for example, and Oprah said here's a book that I think everyone should read. And I thought, well, I'm going to down to the bookstore and find it. And I walked in the bookstore and said I want to find this book that Oprah recommended. And the person who's working there says, oh, yeah, we've got that, we've got one (1) copy, it's two hundred dollars (\$200) and I can't tell you which floor it's on or which section it's in, if you have the time and the money, you can go find it. Now, to me, that's not accessible. I would say, if I walked in the bookstore and there was -- I used to know what these are called, but you know the display when you walk right in that has bunches of copies of the book you're looking for and it's right there in front of you and you can just go and get it, that's accessible.*
- *So, when I look at this plan and think about whether the programs are reasonably accessible, especially to residential customers, it doesn't appear to me that they necessarily are.*
- Transcript January 14, 2020, pages 1764-1765: Grevatt

Residential customers can gain significant benefits from participating in energy efficiency programs

- *MS. KATRINE DILAY: And I believe Efficiency Manitoba agreed to this yesterday, but to confirm, you'll agree generally that having access to energy efficiency programs can be beneficial to residential customers?*
 - *MS. TRACY STERDAN: Yes, I agree with that.*
 - *MS. KATRINE DILAY: And one (1) reason for this would be because certain programs can assist customers in reducing their energy bills by conserving energy, correct?*
 - *MS. TRACY STERDAN: Yes, that is -- that is one (1) benefit, as well as other benefits that may include increasing the comfort of the home, things like that.*
 - *MS. KATRINE DILAY: And I believe some of those other benefits have been listed in your plan, correct?*
 - *MS. TRACY STERDAN: Yes, it is.*
 - *MS. KATRINE DILAY: And the benefits that you've outlined both in your response and in the plan would be one (1) of the reasons for Efficiency Manitoba to endeavour for programs to be accessible to all Manitobans, correct?*
 - *MS. TRACY STERDAN: Yes, I agree.*
 - *MS. KATRINE DILAY: And you'll agree generally that the Public Utilities Board has previously found that low income energy efficiency programs are important.*
 - *MS. TRACY STERDAN: Yes, that is the case.*
 - Transcript January 8, 2020, pages 674-675
- See also Transcript January 7, 2020, pages 586-588: Stocki; January 20, 2020, pages 2207-2211: Bowman; Efficiency Manitoba 2020/23 Plan, pdf pages 169-174.

Spending on the residential customer segment may need to be higher to overcome barriers to participation, especially for lower-income customers

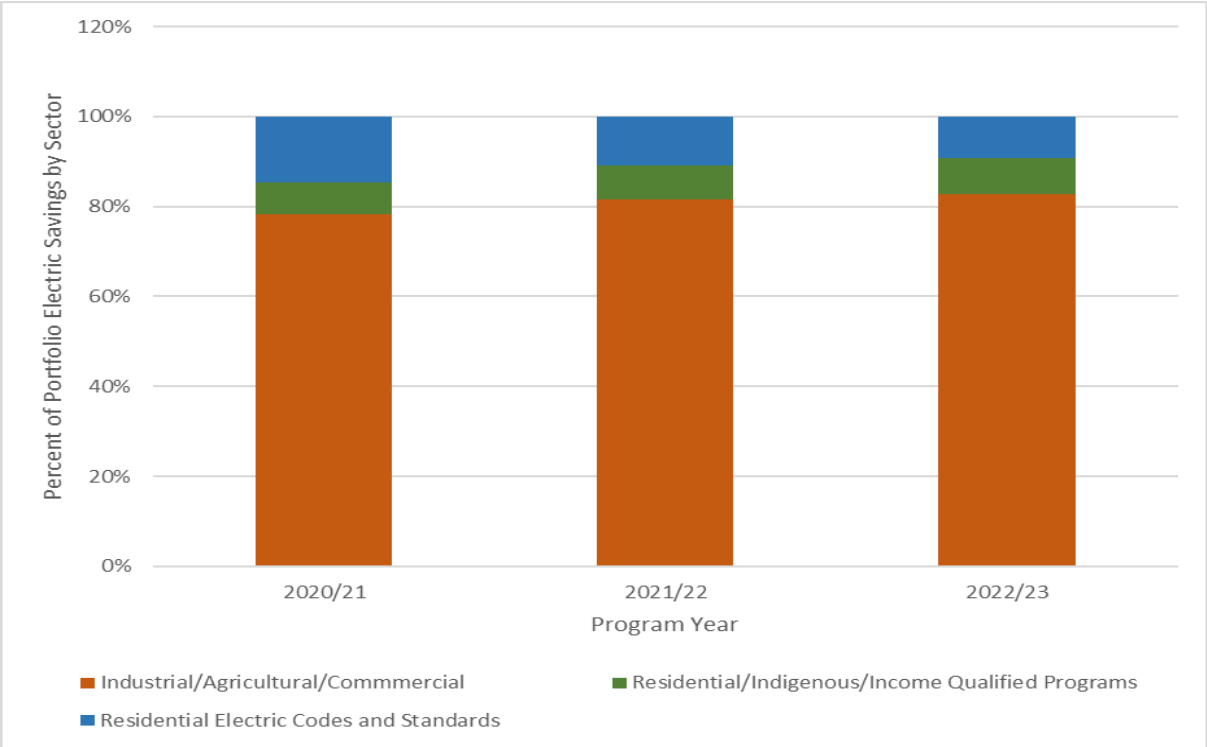
- There exists barriers to participation for low-income customers to participate in energy efficiency programs:
 - Insufficient income to pay for upfront costs, which financial incentives can help to remove or alleviate.
 - Many low-income customers are renters and may face challenges in accessing either energy efficiency upgrades or savings from energy efficiency due to the “split incentive” between landlords and tenants.
 - A positive initiative is that Efficiency Manitoba has indicated that through their program, landlords would have to transfer benefits to tenants – although this raises questions about how these benefits would be calculated (Transcript January 8, 2020, pages 704-705: Kuruluk)

■ Sources:

Transcript January 8, 2020, pages 698-701: Kuruluk; Transcript January 10, 2020, pages 1179-1181: Clark; Transcript January 20, 2020, pages 2213-2213: Bowman

Codes and Standards make up a large proportion of savings for the residential (including income-qualified and Indigenous) customer segment for both electrical and natural gas portfolios

■ Electric portfolio:



■ Grevatt direct evidence, Exhibit CC-18, slide 26

Codes and Standards make up a large proportion of savings for the residential (including income-qualified and Indigenous) customer segment for both electrical and natural gas portfolios (cont.)

- For electric portfolio, see also: Transcript January 8, 2020, pages 681-688: Stocki; Transcript, January 14, 2020, pages 1771-1773: Grevatt; Efficiency Manitoba Plan pdf pages 249, 250, 513; Grevatt evidence, Exhibit CC-7, pages 21-26; Grevatt direct evidence, Exhibit CC-18, slides 23-26.
- For natural gas portfolio, see also, Transcript January 8, 2020, pages 689-693: Stocki; Efficiency Manitoba Plan, pdf pages 252, 253, 507; Grevatt evidence, Exhibit CC-7, pages 26-29

Codes and Standards can make significant contributions to energy efficiency

- Codes and Standards can and do make significant contributions to energy efficiency, for example by:
 - Locking out energy inefficient products so that they cannot be installed; and
 - Enabling market transformation
 - *“as a result of programming being offered, or codes or standards or any combination thereof, availability of product, cost competitiveness of product, availability of – of installers familiar with product, availability of service people to repair products, all of those things can be changed, which can have an – an impact on the opportunity for any customer to install these various more efficient options even if that customer is not otherwise strictly caught by a code compliant upgrade or something of the like.”*
 - See Transcript January 20, 2020, pages 2232-2238: Bowman and Friesen

BUT benefits from Codes and Standards are not available to all customers

- Codes refer to building codes, which apply for new constructions and major renovations (with efforts under way to apply to lesser renovations) – in order to access energy efficiency benefits, customers would have to be building a new home, undertaking major renovations or, for renters, their landlord would have to undertake major renovations.
- Standards refer to specifications to, for example, appliances – in order to access energy efficiency benefits, customers would have to be purchasing a new appliance.
- Codes and Standards do not provide financial assistance to customers to build a home, complete renovations, undertake energy efficiency upgrades or buy new appliances.

- **Sources:**

Grevatt direct evidence, Exhibit CC-18, slides 27-29; Transcript January 8, 2020, pages 693-698; Kuruluk; Transcript January 20, 2020, pages 2232-2238; Bowman and Friesen; Transcript January 15, 2020, page 2063; Grevatt

BUT benefits from Codes and Standards are not available to all customers (cont.)

- *When we look at codes and standards and think about who benefits from those initiatives on the residential side -- somebody who's building a new home or undertaking a major renovation, somebody who's buying a new appliance that's covered by an appliance standard. But for people who are not doing those things, making those kinds of investments, codes and standards don't provide any direct benefit. They don't provide any opportunity for those residential customers who don't have the funds to make these investments to save energy. (Transcript January 14, 2020, page 1772-1773: Grevatt)*

Efficiency Manitoba can do more to provide meaningful opportunities for residential customers – this is in line with other jurisdictions

- *And going back to the importance of residential programs, and to echo the idea -- or, the question of accessibility or the requirement for accessibility, we look at the letter from the premier that says: "Efficiency Manitoba will do a better job lowering energy consumption, cutting emissions, and reducing costs for Manitoba ratepayers." When I think of how we use energy efficiency to reduce costs for ratepayers, there are certainly system-wide benefits from cost-effective investments, but for any individual customer who can participate in a program, that is probably the single best way to reduce costs. And so if there are opportunities – abundant, accessible opportunities for res – residential customers to participate – that's how we reduce costs for those customers. And again, to the cost-effectiveness question -- again, this is electric portfolio -- these programs are all cost-effective, and when we look at home renovation with a benefit-cost ratio of two point nine (2.9), that says to me, There's headroom there to do more of this and remain cost-effective, possibly not have the cost-effectiveness diminished depending on what's in the measure mix, which, again, I don't understand. [emphasis added] (Transcript January 14, 2020, pages 1774-1775: Grevatt)*

Efficiency Manitoba can do more to provide meaningful opportunities for residential customers – this is a missed opportunity

- *Now, you conclude here that: "Efficiency Manitoba does not propose to devote enough of its efforts to serve the needs of residential customers, especially those who currently use electricity to heat their homes." I'd like if we could see the first sentence on the -- there we go, perfect. Thank you, Ms. Schubert. And would you characterize this as a missed opportunity?*
 - *MR. JIM GREVATT: A missed opportunity in the plan, yes. (Transcript January 15, 2020, page 1920)*
- See also: Grevatt evidence, Exhibit CC-7, pages 30-31; Response to Undertaking 15, Exhibit CC-20; Grevatt direct evidence, Exhibit CC-18, slide 30

Recommendation on the residential (including income-qualified and Indigenous) customer segment

- Recognizing the significant benefits that residential customers can gain from energy efficiency programming (both financial and non-financial), as well as the barriers to participation that exist, especially for lower-income customers:
 - The PUB should recommend that the residential and income-eligible (both Income-qualified and Indigenous customer segments) budgets, savings and participation targets be increased, in line with other comparable jurisdictions, in order to meet the aim of providing initiatives that are accessible to all Manitobans.
 - Increased budget may include spending both on incentives, as well as on marketing and outreach to increase participation and savings.
 - See Grevatt evidence, Exhibit CC-7, page 32; Transcript January 14, 2020, page 1782: Grevatt; Transcript January 15, 2020, pages 1893 & 1920-1921 & 2062-2064: Grevatt; PUB/COALITION - 12
- Increasing the scope and scale of residential programming will benefit all customers, including those who fall in the income-qualified or Indigenous customer segments, and those who do not, including customers who fall just above LICO-125, First Nations customers living on and off-reserve, Metis customers, and rural/urban customers.

Climate change, electrification and energy efficiency – PUB Issues List

- 1. d. Consideration of new and emerging technologies that may be included in a future Efficiency Plan
- 3. Accessibility of Efficiency Plan to Manitobans, including consideration of:
 - a. the interests of residential, commercial and industrial customers, as well as hard-to-reach customers who may have disabilities or be Indigenous, rural, newcomers, renters, customers living in multi-unit residences, or older customers, including consideration of customer investments,
 - b. barriers to demand-side management uptake for Indigenous customers, including First Nations customers, and
 - c. the engagement strategy for low income and hard-to-reach customers, including First Nations customers
- 4. Consideration of the appropriate percentage of the demand-side management budget for income qualified and hard-to-reach customers, including specifically for Indigenous and First Nations customers, and whether, if practical, at least 5% of the demand-side management budget is set aside for these customers
- 5. Consideration of non-energy benefits of electric and natural gas demand-side management portfolios including environmental, economic development (including use of private sector and non-government organizations to deliver demand-side management initiatives)
- 10. Comparison of the costs and savings forecasts and achievements of past Manitoba Hydro or Centra Gas programs and budgets to Efficiency Manitoba's plan

Climate change, electrification and energy efficiency

- Electrification of buildings is essential to meaningfully address climate change – time is of the essence
- Efficiency Manitoba's Plan could advance electrification and increase electricity savings by expanding its proposed air source heat pumps program
- Efficiency Manitoba's proposal for counting fuel-switching impacts towards savings goals could create perverse disincentives to pursue electrification

Climate change and building electrification – time is of the essence

- Climate change is a serious environmental concern that cannot be ignored
 - See *Transcript January 8, 2020, pages 731-732: Kuruluk; Transcript January 24, 2020: presentations of Council of Canadians, Green Action Centre, Manitoba Energy Justice Coalition, Manitoba Eco-Network, Sustainable Building Manitoba*
- The *Efficiency Manitoba Act*, s 4(1)(a) recognizes as part of Efficiency Manitoba's mandate to achieve any resulting greenhouse gas reductions from demand-side initiatives
- At least 80% CO2 reduction required by 2050
- Decarbonization of building = required
- Electrification is the only realistic option
- Time is of the essence – transforming the building stock will take decades
- “Electrify Just About Everything” David Suzuki Foundation, “Zeroing in on Emissions: Canada’s Clean Power Pathways – A Review”, 2019
- **Sources:**

Neme evidence, Exhibit CC-8, pages 3-4; Neme direct evidence, Exhibit CC-19, slide 5; Transcript January 14, 2020, pages 1797-1798: Neme

Climate change and building electrification – time is of the essence (cont.)

- *So, let me start with the importance of building electrification to addressing the -- the global climate crisis. A number of years ago, scientists across the world reached the conclusion that we would collectively -- the grand we, need to reduce our carbon dioxide emissions, our greenhouse gas emissions by 80 percent by 2050 in order to stabilize global warming at about 2 degrees Celsius. More recently, scientists have suggested that that may not be aggressive enough; that if we're going to avoid the worst effects of -- of climate change, we probably need to stabilize the climate at about 1.5 degrees of warming and that that would likely require potentially something close to a hundred percent reduction in net carbon emissions by 2050. There have been a number of studies in Europe and North America, including in Canada, around what is it -- what it actually takes to get to those kind of levels of deep decarbonization. And all of them suggest that one (1) of the outcomes needs to be decarbonizing buildings, homes and businesses. That is that we need to dramatically reduce, if not eliminate, the consumption of fossil fuels, natural gas, oil, propane, et cetera, for space heating, water heating, and -- and other end uses. And those studies also suggest that the only realistic option for getting to that scale of decarbonization of buildings is electrification.*
- *Finally, one (1) last point that doesn't come from those studies, per se, but is my own perspective on this having spent decades working in the energy efficiency world and seeing what it takes to actually get residential customers, in particular, to engage in efficiency investments in their homes is probably going to take decades to transform our building stock to one that is electrified and -- and efficient. And, as a result, given the -- the scale of the challenge in front of us, we -- we can't wait to get started.*
 - Transcript January 14, 2020, pages 1797-1798: Neme

Electrification and energy efficiency go hand in hand

- The Expert Advisory Council to the Minister of Sustainable Development A Carbon Savings Account for Manitoba recommended in June 2019:
 - “Efficiency Manitoba has a key role in offering energy efficiency solutions to Manitoba businesses and consumers to reduce emissions. Ensuring this tool is used to its maximum potential in support of achieving the carbon emission reductions set out in the CSA is necessary. This will require ongoing coordination and alignment of approaches between the government’s CSA and Efficiency Manitoba.” (DAY/EM I-5, Attachment 1, p 211)
- Electrification can be energy efficient (e.g. heat pumps are more efficient than gas, propane and oil furnaces)
- Some electric efficiency measures also enable future electrification by developing the market
- Some gas efficiency measures, such as building envelope improvements, support future electrification by reducing capacity needs/costs
- **Sources:**

Neme evidence, Exhibit CC-8, pages 4-; Neme direct evidence, Exhibit CC-19, slide 7; Transcript January 14, 2020, pages 1798-2001: Neme

Climate change considerations should be considered as an objective of all efficiency plans

- “The primary objective of Efficiency Manitoba’s plan is to achieve its statutory savings targets of 1.5% annual electricity savings and 0.75% annual gas savings. That is an obvious and eminently reasonable starting point for a planning process. However, there are literally hundreds of different efficiency measures that efficiency programs can promote and numerous program and portfolio design options that efficiency planners can choose to utilize to promote them. Thus, there are myriad of combinations of efficiency measures and programs that could meet Efficiency Manitoba’s savings goals. The choices regarding which combination of measures and programs to pursue should be guided by relevant policy objectives.”
- “Put another way, if Efficiency Manitoba’s savings goals could be met in multiple ways, some of which advance electrification more than others and/or enable future electrification better than others, then all other things being equal, there should be a preference for the efficiency program combinations that further advance electrification over the next three years and/or better enable future electrification. Of course, all other things are rarely “equal”, so it will likely be necessary to consider trade-offs between objectives. The point here is simply that impacts on current and future electrification should be part of such trade-off considerations.”
 - Neme evidence, Exhibit CC-8, page 6

Building the heat pump market through electric efficiency: significant missed opportunity

- Potential to prepare the market for electrification
- Replace inefficient electric resistant heat, creating energy savings for those households, even in Manitoba weather
 - While our knowledge of cold climate heat pumps is still evolving, studies show approximately 55% average savings vs. Electric resistance heat for most of Manitoba

- **Sources:**

Neme direct evidence, Exhibit CC-19, slides 10-13; Neme evidence, Exhibit CC-8, pages 11-15; Transcript January 14, 2020, pages 1804-1809 & 1811-1817 & 1830-1832: Neme; Transcript January 20, 2020, pages 2261-2263: Friesen; PUB/COALITION - 3

Opportunity to electrify low-income customers on oil/propane through heat pumps

- Over 3200 customers w/incomes <\$25k heat with oil or propane
- Efficiency Manitoba is allowed to support low income fuel-switching from oil or propane
- 62%-82% savings possible
- But not being offered
- **Sources:**

Neme direct evidence, Exhibit CC-19, slide 15-16; Transcript January 14, 2020, pages 1809-1811: Neme

Efficiency Manitoba: a judicious approach to heat pumps or a missed opportunity?

- Efficiency Manitoba says it is taking a “judicious” approach to heat pumps – gathering information before pursuing more aggressively.
- *So, we understand that there -- there is a strong passion for these technologies in the northeast and the northwest, but, again, we want to balance it and make sure we're -- we're taking a judicious approach to that technology and not jumping in too aggressively.*
(Transcript January 8, 2020, page 743: Stocki)
- **Sources:**
Transcript January 7, 2020, pages 377-378: Stocki; Transcript January 8, 2020, pages 740-743

Efficiency Manitoba's proposal for air source heat pumps is a missed opportunity that we cannot afford

- Efficiency Manitoba is projecting installation of seven air source heat pumps over the 3-year plan – all through the Home Renovation Program, none available through the income-qualified program (COALITION/EM I-91(b))
- *But in terms of the volume of potential heat pump opportunities, the -- the bigger missed opportunity is in promoting heat pumps as a residential electric efficiency measure.* (Transcript, January 14, 2020, page 1811: Neme)
- Dunsky recognized cold climate air source heat pumps as a “quick hit” (PUB/EM I-2a – Attachment 1 at p 20 of 90, PUB/EM I-2b, Attachment 1 at p 24 of 28)

Efficiency Manitoba's proposal for air source heat pumps is a missed opportunity that we cannot afford (cont.)

- Efficiency Manitoba's "limited program" will not enable Air Source Heat Pump assessment before next plan:
 - Next plan to be filed summer 2022
 - Efficiency Manitoba only plans to install 3 air source heat pumps by then
 - Maybe not even have a full winter of data for any heat pumps by the time the next plan is filed
 - Not clear any of those would be ductless systems – most cold climate heat pumps are ductless
- Efficiency Manitoba did not consider a co-pay option for income-qualified customers
- **Sources:**

Neme direct evidence, Exhibit CC-19, slides, 17, 19; Transcript January 8, 2020, pages 743-750 & 759-760; Stocki & Kuruluk; COALITION/EM I-91(b); Transcript January 14, 2020, pages 1811-1817; Neme

Efficiency Manitoba's proposal for air source heat pumps is a missed opportunity that we cannot afford (cont.)

- Efficiency Manitoba is correct about some performance uncertainty for Manitoba climate – there is still information to be gathered – BUT studies show approximately 55% average savings vs. Electric resistance heat for most of Manitoba
- Concern about inadequate contractor capacity is speculative
 - No documentation of number of qualified contractors
 - Neme evidence that one contractor stated having 30 certified residential contractors in Manitoba
 - Even if that wasn't the case, capacity will not grow if technology is not promoted
- Other jurisdictions facing performance uncertainty launched programs (Transcript January 14, 2020, pages 1828-1830: Neme)
- Only way to better understand market, get performance data, inform future programs is to promote the program and get the technology installed
- **Sources:**
Neme direct evidence, Exhibit CC-19, slides 19; Transcript January 8, 2020, pages 753-757: Stocki (regarding potential for market to grow if technology is promoted); Transcript January 15, 2020, pages 2044-2047: Neme (on the difference between his and Efficiency Manitoba's proposal)

Reducing emissions in the MISO market should not be Manitoba's focus

- Neme and the Consumers Coalition are not proposing that fuel switching to electricity from natural gas and other fossil fuels be the focus of the 2020/23 Efficiency Plan.
- However, in the long term, “the suggestion that Manitoba should not fuel-switch from gas to electricity because the emission reductions from reduced gas consumption could be more than offset by higher emissions from nonManitoba generators (resulting from Manitoba’s reduced ability to sell its low carbon electricity) is misguided.”
 - “For a mixture of economic reasons (e.g. declining wind resource costs, lower costs of some natural gas generation relative to coal generation) and climate policy reasons, MISO’s generation mix has become cleaner over the past decade and is very likely to become even cleaner in the future.”
 - PUB/COALITION-1; see also Transcript January 13, 2020, pages 1385-1388: Daymark

Accounting for electrification impacts in savings goals = perverse disincentive

- EM's proposal
 - 100% of reduction in fuel displaced counts towards gas savings goal
 - 100% of increased electricity consumption treated as “negative electric savings”, making that goal harder to achieve
- Potential for Perverse Incentives/Disincentives
 - If behind on electric goal and on target for gas goal, disincentive to pursue electrification, even if it was otherwise good to do
 - If ahead on electric goal and behind on gas goal, incentive to pursue electrification projects that otherwise may not make sense

- **Sources:**

Neme direct evidence, Exhibit CC-19, slide 21; Neme evidence, Exhibit CC-8, pages 16-18; Transcript January 8, 2020, page 765: Stocki (regarding accounting of savings); Transcript January 14, 2020, pages 1817-1820: Neme

Alternatives to counting electrification impacts

- Restate goals in fuel-neutral terms
 - Would likely require statutory change
- Establish separate efficiency and electrification goals
 - Would likely require statutory change
- Treat electrification projects in two “steps”: (A) electrification step of fuel switch to standard electric efficiency; and (B) efficiency step of upgrade to higher electric efficiency
 - No “savings” from electrification step; electric savings from efficiency step
 - Illinois and Vermont approach
- Count site G_j reduction in kWh equivalents – electric savings only
 - California approach

- **Sources:**

Neme direct evidence, Exhibit CC-19, slide 22; Neme evidence, Exhibit CC-8, pages 17-18;
PUB/COALITION - 4

Recommendations on climate change and electrification

- The PUB should recommend that Efficiency Manitoba be directed to consider long-term climate & electrification needs when designing and implementing programs.
- The PUB should recommend that Efficiency Manitoba be directed to increase its emphasis/rebates for Air Source Heat Pumps in Home Renovation Program
- The PUB should recommend that Efficiency Manitoba be directed to offer heat pumps as an electric efficiency measure to Income Qualified Program.
- The PUB should recommend that Efficiency Manitoba be directed to include in its Plan heat pump incentives for oil/propane heat customers who qualify for Affordable Energy Fund.
- The PUB should recommend that Efficiency Manitoba be directed to count the impacts of electrification towards savings goals consistent with Illinois and Vermont approaches.
- The PUB should provide feedback to legislators on either establishing savings goals in fuel-neutral way, or having separate savings and electrification goals.
- **Sources:**

Neme evidence, Exhibit CC-8, page 19; Neme direct evidence, Exhibit CC-19, slides 24-25; Transcript January 14, 2020, pages 1820-1823: Neme; PUB/COALITION - 4

Cost allocation of corporate overhead and support costs – PUB Issues List

- 2. e. Reasonableness of Efficiency Manitoba's overhead budget, including the apportionment of Efficiency Manitoba's overhead costs not specifically related to gas initiatives and electric initiatives – limited to 2020/21 to 2022/23 planning horizon

Cost allocation of corporate overhead and support costs: why does it matter?

- Approximately \$3 million per year in corporate overhead and \$8 million per year in enabling strategy costs
- Who should pay for these costs: Manitoba Hydro or Centra ratepayers?
- **Sources:**

Harper evidence, Exhibit CC-6-1, page 46; Transcript January 14, 2020, page 1747: Harper

Cost allocation of corporate overhead and support costs – Efficiency Manitoba's approach

- Some Enabling Strategies costs predominantly electric focused are assigned to electric portfolio
 - First Nations support activities
 - Emerging Technologies supporting activities for solar photovoltaic and bioenergy.
- Balance of the costs associated with Enabling Strategies as well as Corporate Overheads allocated between the two portfolios by converting the net electricity savings and net natural gas savings forecast in the Plan to an equivalent measure (Gigajoule) and then allocating these joint costs based on each fuel's share of the total Gigajoule savings.
 - Same approach that has been used by Manitoba Hydro.
 - Results = 75/25 allocation between the electric and natural gas portfolios

- **Sources:**

Harper evidence, Exhibit CC-6-1, pages 46-48; Harper direct evidence, Exhibit CC-17, slide 23; Coalition/EM I-44 i); Daymark/EM I-16; Transcript January 14, 2020, page 1747-1748: Harper

Cost allocation of corporate overhead and support costs – Harper recommendation

- No explanation provided as to why the “Equivalent Gigajoule Saving” approach was adopted by Efficiency Manitoba and Manitoba Hydro – lack of transparency
- Administrative and support costs are typically allocated between lines of business or affiliated companies based on principle of “cost causation”
 - Cost drivers such as labour costs, OM&A costs and plant investment are commonly used.
 - This is the approach used by Manitoba Hydro to allocate common costs between its natural gas and electric utilities.

■ Sources:

Centra Gas Manitoba Inc., 2019/20 General Rate Application, Appendix 5.10; Harper evidence, Exhibit CC-6-1, pages 46-48; Harper direct evidence, Exhibit CC-17, slide 23; Transcript January 14, 2020, page 1747-1748: Harper

Cost allocation of corporate overhead and support costs – Harper recommendation (cont.)

- Details of Efficiency Manitoba's organization have yet to be determined and it is not possible to breakdown its forecast corporate overhead/staff by function.
- Two reasonable bases for allocating support costs related to enabling strategies and corporate overheads would be:
 - i) the total direct costs for the programs attributed to the natural gas and electricity portfolios; and
 - ii) the Efficiency Manitoba staff costs attributed to the natural gas and electricity portfolios.
- Both approaches yield close to the same result = 70/30 (electric/natural gas)
- When there are differences between approaches, it is common for utilities to take the average of the results.
- **Source:**

Harper evidence, Exhibit CC-6-1, pages 46-48; Harper direct evidence, Exhibit CC-17, slide 23; Transcript January 14, 2020, page 1747-1748: Harper; Transcript January 15, 2020, page 2029

Cost allocation of corporate overhead and support costs – why Harper recommendation is preferable

- *Is it your view that this approach is more cost/causal than the allocation approach that Efficiency Manitoba is using for these costs?*
 - *MR. WILLIAM HARPER: Yes, it is.*
 - *MS. DAYNA STEINFELD: And why is that?*
 - *MR. WILLIAM HARPER: Well, be -- because basically what you're looking at is, this is based on the premise that I've got direct program costs that -- that are involved and those direct program costs could be involved in people working on it. It could be involved in -- in incentive payments, and to some extent the support costs or the corporate overhead costs or things like HR, which is supporting the people in each case. It's -- it's IT, which is supporting the workstations in each case. It's probably a finance department that's helping issue invoices in each case, **which are all support – which is to some extent driven by the program costs.** And so I guess from – at a high level it's more related to – to cost/causation than the – than the other approach, which is clearly just based on savings.*
 - Transcript January 15, 2020, pages 2021-2023

Recommendation on cost allocation of corporate overhead and support costs

- Allocation of corporate overhead and supports should be based on a “cost driver approach”.
 - For the current Plan = allocation split of 70/30 to be used for electricity versus natural gas.
- This recommendation is based on the fact that the “cost driver approach” is a common utility practice for allocating support costs and corporate overheads and it is the approach used by Manitoba Hydro/Centra Gas to assign similar costs between its natural gas and electric utilities.

- **Sources:**

Harper evidence, Exhibit CC-6-1, pages 46-48; Harper direct evidence, Exhibit CC-17, slide 23

This is not a cost of service hearing – no cost of service issues should be determined

- Comprehensive cost of service hearing, with evidence from Interveners and Manitoba Hydro in 2016, leading to PUB Order 164/16 (116 pages)
- This Efficiency Manitoba proceeding is focused on the 2020/23 Efficiency Plan and **is not** a cost of service hearing.
 - The PUB does not have the benefit of evidence from interveners and Manitoba Hydro in this proceeding and cost of service was not included on the issues list
- The best forum to discuss cost of service issues will be in the next cost of service proceeding.
- **Source:**
Transcript January 20, 2020, pages 2238-2241: Bowman

Consumers Coalition recommendation on Plan approval

- The PUB should recommend approval of the first year of the 2020/23 Efficiency Plan, as filed.
- The PUB should recommend that Efficiency Manitoba be directed to file an amended Efficiency Plan for 2021/22 – 2022/23 that contains:
 - An update as to progress on public participation and stakeholder engagement;
 - Updated codes and standards savings projections based on review by the independent evaluator;
 - Increased savings for programs as required to at least meet targets;
 - Increased detail for all programs regarding proposed measures, measure quantities, incentive amounts, and expected savings; and
 - Increased residential, LICO-125, and Indigenous budgets, savings, and participation estimates, with a focus on long-lived measures that support provincial climate objectives, including:
 - Increased penetration of building shell improvements regardless of whether electric or gas is the primary heat source; and
 - Increased promotion of cold-climate heat pumps for homes that currently have electric resistance heating
- **Source:**
Grevatt direct evidence, Exhibit CC-18, slides 42-44.

Conclusion: important opportunity to forge the energy efficiency path ahead

- Inaugural 3-year efficiency plan – important to ALL Manitobans
- Efficiency Manitoba's plan attempts to balance multiple statutory objectives and has a good mix of programs
 - BUT, in part due to haste in portfolio development, there are significant missed opportunities in:
 - public participation
 - portfolio development process
 - residential programming
 - climate change and electrification
 - AND no recognition or addressing of risks raises credibility concerns
- Mediocrity and lack of risk mitigation is not enough: we can and should do better for all Manitobans and for our environment.
- The PUB, the Minister and Efficiency Manitoba should take this opportunity to make a lasting contribution that will forge the path ahead for energy efficiency in Manitoba



THANK YOU

