**The Public Utilities Board**

# Report on Efficiency Manitoba's 2020/21 to 2022/23 Efficiency Plan Submission

**February 28, 2020**

BEFORE: Robert Gabor, Q.C., Board Chair
Marilyn Kapitany, B.Sc., (Hon), M.Sc., Vice-Chair
Hugh Grant, PhD, Member
Irene Hamilton, Q.C., Member

# MESSAGE FROM THE PANEL

The Public Utilities Board is pleased to submit its report and recommendations on Efficiency Manitoba's first Efficiency Plan to the Government of Manitoba, as required by the provisions of *The Efficiency Manitoba Act*. The Board's report and recommendations are based upon the written evidence filed by Efficiency Manitoba and expert witnesses in the proceeding, as well as the sworn evidence of witnesses who testified at the January, 2020 public hearing.

The Report is the product of a public and transparent process that allowed for engagement by stakeholders and members of the public, testing of information in an open forum, and the involvement of expert witnesses from across the continent.

The Board thanks all the witnesses who testified on behalf of Efficiency Manitoba and approved interveners, members of the public who presented, as well as the independent expert consultant appointed by the Board. The Board also thanks the Board advisers and Board staff.

Respectfully submitted, Winnipeg, February 28, 2020

Robert Gabor, Q.C., Board Chair

Marilyn Kapitany, B.Sc., (Hon), M.Sc., Vice-Chair

Hugh Grant, PhD, Member

Irene Hamilton, Q.C., Member

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# 1.0 Review of Efficiency Manitoba's 2020/21 to 2022/23 Efficiency Plan

## 1.1 Introduction

This Report follows a public hearing process for the Public Utilities Board of Manitoba ("Board") review of Efficiency Manitoba's first three-year Efficiency Plan, for the fiscal years 2020/21 to 2022/23 (the "Plan"). *The Efficiency Manitoba Act* (the "Act") requires that the Board review each efficiency plan prepared by Efficiency Manitoba and provide to the Minister a report, with recommendations, as to whether the efficiency plan should be approved, approved with suggested amendments, or rejected.

As detailed in this Report, the Board recommends that the Minister approve the Plan with amendments.

The Plan consists of Efficiency Manitoba's proposed portfolios of demand-side management ("DSM") programs for electric and natural gas energy. DSM is the reduction of energy consumption through targeted energy efficiency and demand response initiatives, and can include the adoption of alternative energy resources or technologies that may result in energy reductions. DSM programs are implemented on the demand-side, or customer-side, of a utility system.

Electric and natural gas demand-side management measures have been, and continue to be, offered by Manitoba Hydro and Centra Gas Manitoba Inc. ("Centra"). Until recently, these programs were offered under the "Power Smart" brand and pursuant to a DSM plan prepared by Manitoba Hydro. For DSM programs offered by Manitoba Hydro, there were no legislated mandatory energy savings targets. The implementation of an approved efficiency plan will transfer responsibility for DSM programming from Manitoba Hydro to Efficiency Manitoba.

The genesis of Efficiency Manitoba was in the recommendations of the Board's Report in the Needs For and Alternatives To ("NFAT") proceeding, a review of Manitoba Hydro's

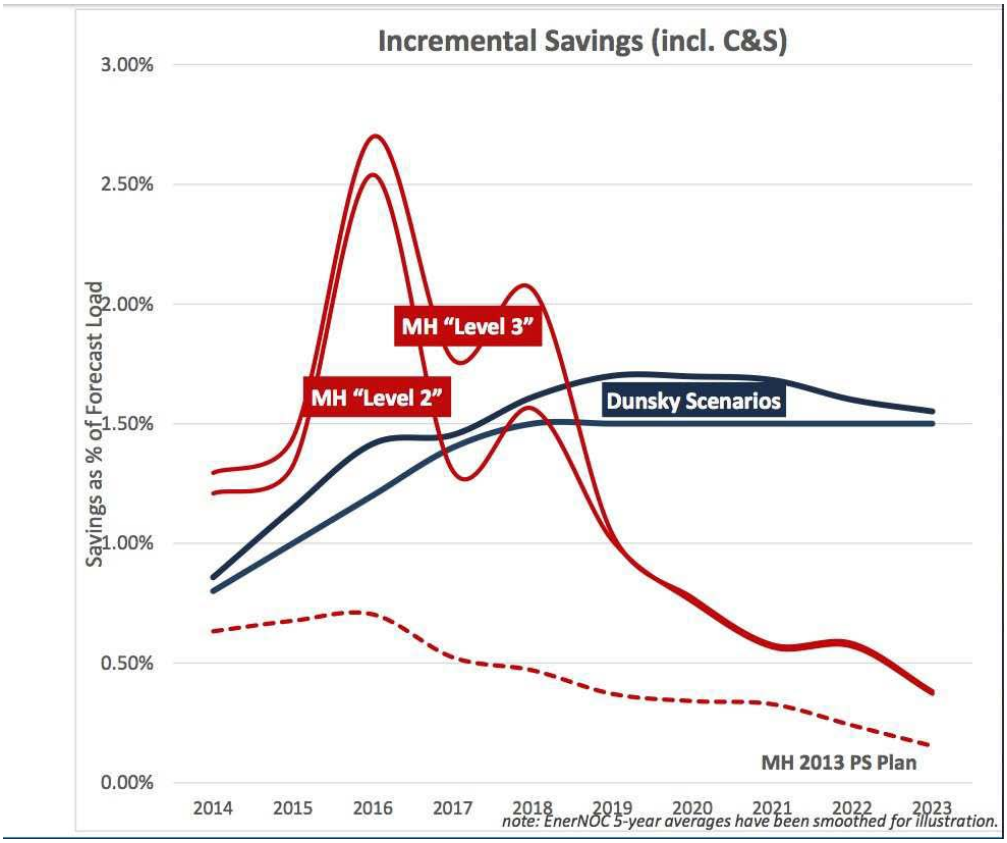
electric preferred development plan held in 2013 and 2014. As stated in the debates of the Legislature:

> *Bill 19 will provide the authority to establish a stand-alone demand-side management or DSM Crown corporation to deliver energy efficiency initiatives. The creation of a new DSM framework for our province is consistent with the Public Utility Board's recommendations to strengthen demand-side management efforts. These recommendations emerged from the needs for and alternatives to, or NFAT, review of Manitoba Hydro's preferred development plan.*

During the NFAT review process, the Board heard extensive evidence from several experts on DSM as an asset in resource planning. This included how DSM can be designed to offset or delay the need for new generation investments, through reducing consumption by achieving energy savings. The evidence was that Manitoba Hydro's 2013 Power Smart DSM plan had a rapid increase in new savings, followed by an equally steep decline and then a downward trend.

One Intervener expert witness in the NFAT review process, Philippe Dunsky of Dunsky Energy Consulting, provided an alternative view for a DSM scenario. This scenario presented more gradual growth in new energy savings beginning in 2014 at less than 1% increasing to 1.5% (including savings from building codes and appliance standards) by 2018, followed by more stable DSM savings of 1.5% thereafter, as depicted in the figure below:

**NFAT Incremental Savings – Manitoba Hydro DSM Levels 2&3 vs DSM Scenarios**




Source: NFAT Report pg 78

Specifically, Mr. Dunsky's evidence in the NFAT proceeding was that annual average energy savings at the level of 1.1% from utility incentive programs (1.3% including codes and standards) could be achieved in the years 2014 to 2023 under a "cautious" DSM scenario and 1.3% (1.5% including codes and standards) under a more aggressive approach to DSM.

In the NFAT Report, the Board detailed evidence that it heard about the importance of DSM in Manitoba's energy future and how DSM can have a "profound impact on the date when new energy resources are needed." The Panel noted that "DSM is a powerful resource that can bring value to resource planners, ratepayers, the economy, and the environment" and considered how DSM can "bring that value" by looking at the role of DSM in resource planning. More specifically, with respect to the value of DSM to ratepayers, the Board noted that "Customers who access DSM programs and choose to

participate can benefit from reduced energy consumption and thus reduce their annual energy bills. Customers who do not participate in DSM programs and therefore do not reduce their energy consumption will potentially pay more for their electricity."

The Board concluded in the NFAT Report that Manitoba Hydro had not weighed DSM measures equally with other energy options and that significantly higher levels of DSM than originally proposed by Manitoba Hydro were both achievable and economic. The Board found that Manitoba Hydro's DSM targets appeared to be overly aggressive in the short term and overly conservative in the long term, with incremental DSM savings ultimately tailing off after the first few years of the plan.

In the NFAT Report, the Board recommended that an entity independent of Manitoba Hydro be established to implement DSM initiatives to achieve, into the future, reductions in energy consumption:

> *There is an inherent conflict of interest when a utility acts as both a seller of electricity and a purveyor of energy efficiency measures. Therefore, the Panel concludes that the planning and provision of DSM services should be divested from Manitoba Hydro.*
>
> *Jurisdictions such as Vermont that have established independent arm's-length entities to deliver DSM programs have had considerable success in reducing energy consumption and maintaining program performance. The Panel notes that Manitoba Hydro has a long and for the most part successful history with DSM, but in recent years has seen DSM initiatives scaled back and spending reduced. While Manitoba Hydro is to be commended for the new DSM initiatives in its latest Power Smart program, the Panel believes from the evidence before it that the energy savings will not be sustained at levels it considers achievable over the long term. The Panel is also concerned that the utility's renewed focus on DSM may not be continued into the future, in the face of cost constraints and other corporate priorities.*

> *Therefore, in addition to supporting the creation of long-term DSM targets, the Panel also sees great value in establishing an entity independent of Manitoba Hydro to implement DSM programs.*

In the NFAT Report, the Board also recommended that the performance of DSM programming should be monitored and that such performance evaluation be carried out independently from the provider of the DSM programs.

The Board's recommendations in the NFAT Report led to the Legislature's introduction of *The Efficiency Manitoba Act* (the "Act"), which came into force on January 24, 2018. The Act defines the following as the mandate of Efficiency Manitoba:

> *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;*
>
> *(d) if any of the following are prescribed as being subject to demand-side management under this Act, carry out the prescribed duties in respect of them:*
>
> *(i) demand for electrical power in Manitoba,*
>
> *(ii) potable water consumed in Manitoba,*
>
> *(iii) fossil fuels consumed in the transportation sector in Manitoba; and*
>
> *(e) promote and encourage the involvement of the private sector and other non-governmental entities in the delivery of its demand-side management initiatives.*

The Board's mandate with respect to Efficiency Manitoba is derived from the Act and the Regulation, and is informed by the Board's powers and authority as contained in *The Public Utilities Board Act* (the "Board Act"). The Act provides that:

> *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.*

The *Efficiency Manitoba Regulation* (the "Regulation") was registered on August 9, 2019, and establishes the commencement date for the Plan as April 1, 2020. In addition, the Regulation defines when savings can be counted toward Efficiency Manitoba's savings targets, establishes the methodology for determining "cost-effectiveness", and mandates additional factors to be considered by the Board in the review of an efficiency Plan. Specifically, in its review of the Plan, the Board is required to consider the following:

> *11(4) 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;*

*(e) if the plan includes demand-side management initiatives in excess of those required to achieve the savings targets, whether those initiatives are cost-effective;*

*(f) whether Efficiency Manitoba's administration budget is reasonable when compared to similar organizations;*

*(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;*

*(i) Efficiency Manitoba's use of private-sector enterprises and non-governmental organizations to deliver demand-side management initiatives;*

*(j) whether the efficiency plan adequately considers new and emerging technologies that may be included in a future efficiency plan;*

*(k) for any efficiency plan after the first one, the reasonableness of Efficiency Manitoba's internal retrospective performance assessment;*

*(l) whether Efficiency Manitoba has reasonably attempted to comply with the directions of the minister.*

Appendix 1 to this Report contains a table that identifies the legislated mandatory considerations for the Panel and where discussion of those considerations is located in this Report. In addition, each substantive section of this Report commences with a table that identifies the legislated mandatory considerations that are discussed in that section.

## 1.2 Establishment of Efficiency Manitoba, Development of the Plan, and Submission to the Board

The Act established Efficiency Manitoba as a new non-share capital provincial Crown corporation. The Act requires Efficiency Manitoba to prepare an efficiency plan for the first three-year period commencing on the prescribed date of April 1, 2020, and for each three-year period thereafter.

Following the coming into force of the Act, the Efficiency Manitoba Board of Directors was appointed in May 2018. Between January and May of 2019, the Board of Directors hired

Efficiency Manitoba's Chief Executive Officer, Vice-President of Efficiency Programs, and Vice-President of Finance and Corporate Performance.

The Act provides that, in designing or delivering its initiatives, Efficiency Manitoba is authorized to collect information from Manitoba Hydro and that Manitoba Hydro is required to provide the information requested from Efficiency Manitoba.

In developing the Plan, Efficiency Manitoba relied on research from Dunsky Energy Consulting that was contracted by Manitoba Hydro in 2017. Efficiency Manitoba also retained Dunsky Energy Consulting to provide additional consulting assistance prior to the submission of the Plan to the Board.

In May of 2019, pursuant to the requirement in the Act to establish a stakeholder committee as an advisory body, Efficiency Manitoba established the Energy Efficiency Advisory Group ("EEAG") to provide input and advice into the development of the Plan. Efficiency Manitoba also surveyed stakeholders of Manitoba Hydro's energy efficiency programs, specifically contractors, suppliers, installers, consultants, engineering firms, architectural firms, government departments, and associations, to gain feedback on the programs and services offered and to generate ideas for future programming.

The Act mandates that each efficiency plan contain specific information, as enumerated in section 9 of the Act. Efficiency Manitoba is required to submit each of its efficiency plans to the Board for review and report, with recommendations, to the Minister. The Regulation initially prescribed a deadline of October 1, 2019 for the submission of the Plan to the Board; however, on October 2, 2019, the Regulation was amended to provide for a November 1, 2019 deadline for the Plan submission so that the Government could work with Efficiency Manitoba to "gain greater clarity on comparisons to program delivery under the former Power Smart program and the whole-of-government implications on summary budgeting."

The Plan was submitted to the Board on October 25, 2019. Under the Act, the Board is required to review the Plan and Part I of *The Public Utilities Board Act* applies as if the review of the Plan were an application under that Part.

As of the dates of the oral hearing for the Board's review of the Plan, Efficiency Manitoba had five full-time staff members. A further five employees were seconded from Manitoba Hydro to Efficiency Manitoba in November of 2019.

Although the Act provides that Manitoba Hydro is entitled to be heard or make submissions on the Board's review of an efficiency plan, Manitoba Hydro chose to not participate in the review process.

## 2.0 Overview of Efficiency Manitoba's Plan

Under *The Efficiency Manitoba Act* (the "Act") and the Regulation, Efficiency Manitoba is tasked with reducing energy consumption in Manitoba by achieving savings targets of 1.5% and 0.75% annual reductions in electrical and natural gas energy, respectively.

Efficiency Manitoba developed the Plan based on two portfolios – an electric portfolio and a gas portfolio – each of which is made up of the entire collection of programming for all customer segments for the respective energy sources. Each portfolio contains a number of single, specific energy efficiency technologies, referred to variously as initiatives, measures, or offerings.

In the Plan submission filed on October 25, 2019, Efficiency Manitoba projected achievement of the following energy savings at a portfolio level:

**2020/23 EFFICIENCY PLAN – ELECTRIC PORTFOLIO SAVINGS**

| | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Annual electric savings (GWh) | 373 | 403 | 403 | 393 |
| Savings as a percent of electric load | 1.43% | 1.55% | 1.56% | 1.51% |
| Annual capacity savings (MW) | 85 | 93 | 93 | 90 |

*Note:* Electric energy and capacity savings determined at generation.

**2020/23 EFFICIENCY PLAN – NATURAL GAS PORTFOLIO SAVINGS**

| | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Annual natural gas savings (million $m^3$) | 11.7 | 12.8 | 13.2 | 12.6 |
| Savings as a percent of natural gas volume | 0.72% | 0.79% | 0.82% | 0.78% |
| GHG savings (tonnes $CO_2e$) | 22,200 | 24,200 | 25,200 | 23,900 |

*Note:* After accounting for electric programming interactive effects.

Source: Plan Submission, Section 1, page 7

In the course of responding to Information Requests from the Board, Efficiency Manitoba identified an error in its calculation of the electric portfolio savings in the years 2021/22 and 2022/23 and provided a revised projection of electric energy savings. With this revision, the Plan is now projected to achieve savings of 1.48% in 2021/22 and 1.45% in

2022/23, with the average savings over the three Plan years projected to be 1.46%, and not 1.51% as originally filed.

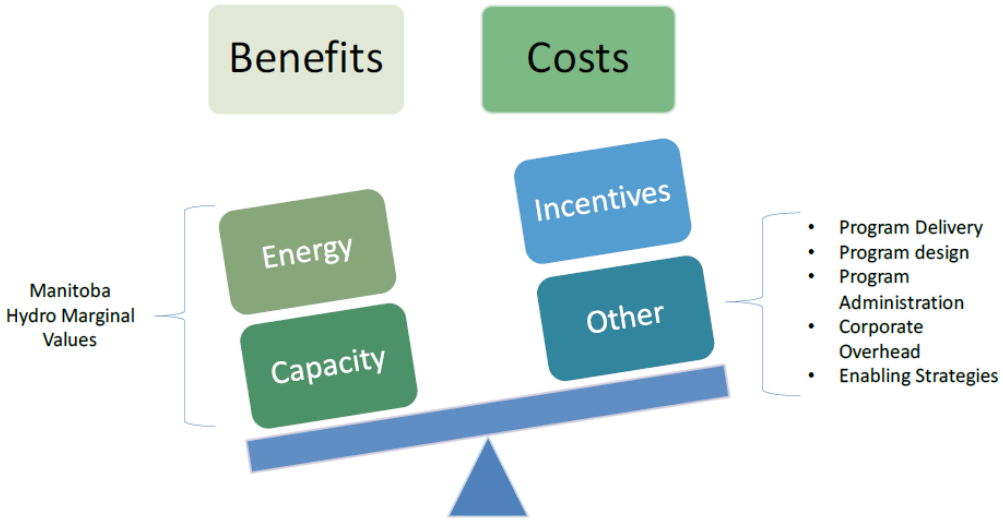
In the Plan, Efficiency Manitoba has designed DSM initiatives for six customer segments – Residential, Residential Income Qualified, Indigenous, Commercial, Industrial, and Agricultural – which group customers by their characteristics and energy consumption patterns and are intended to be inclusive of all Manitobans. Programs are designed for each customer segment, with marketing and engagement efforts and delivery based on the needs of the customer segment. The Plan further groups individual DSM initiatives into "program bundles" for each customer segment:

| CUSTOMER SEGMENT | PROGRAM BUNDLES | | | |
|---|---|---|---|---|
| RESIDENTIAL | Direct install Offers | Product Rebate Offers | Home Renovation Offers | New Homes & Major Renovation Offers |
| | Home Energy Efficiency Kits & Education | Emerging Technology Offers | | |
| RESIDENTIAL INCOME QUALIFIED | Income Qualified Offers | | | |
| INDIGENOUS | Insulation & Direct Install Offers | Métis Income Qualified Offers | Small Business Offers | Community Geothermal Offer |
| COMMERCIAL, INDUSTRIAL & AGRICULTURAL | Small Business Offers | In-Suite Efficiency | Renovation Offers | HVAC & Controls Offers |
| | New Construction & High-Performance Buildings | Custom Offers | Load Displacement Offer | Emerging Technology Offers |

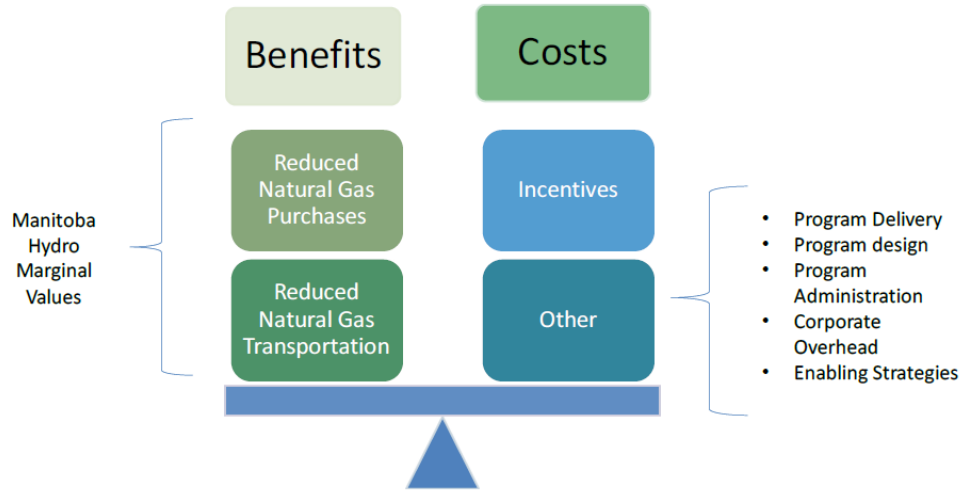
In the Plan, Efficiency Manitoba uses the Program Administrator Cost Test ("PACT") to measure the cost effectiveness of the program bundles and overall electric and natural gas portfolios. The PACT is intended to be consistent with the requirement in the Regulation that cost effectiveness be determined through a comparison of the costs to Efficiency Manitoba of achieving the savings with the marginal value to the utility resulting

from the savings achieved, with the marginal value defined as the value determined by Manitoba Hydro:

**ELECTRIC PROGRAM ADMINISTRATOR COST TEST ILLUSTRATION**



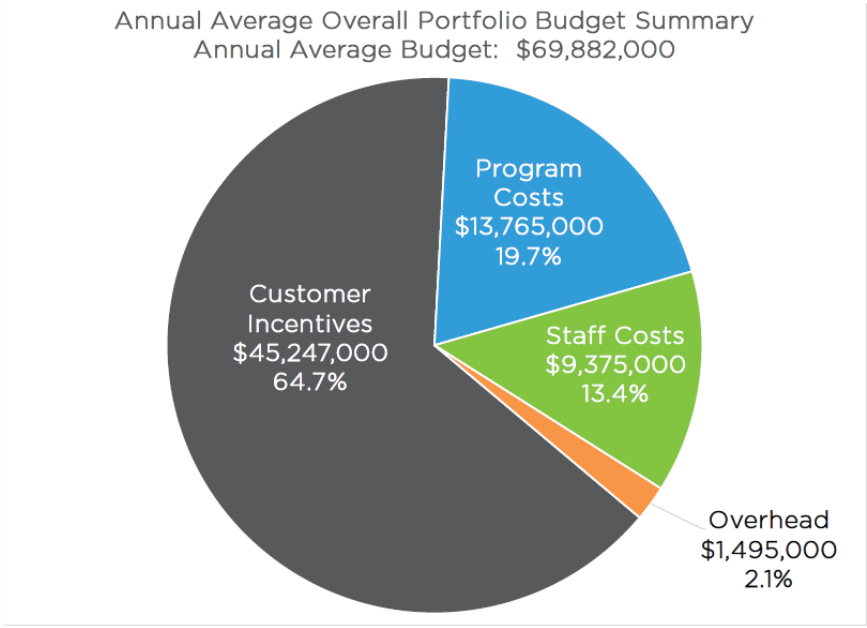

**NATURAL GAS PROGRAM ADMINISTRATOR COST TEST ILLUSTRATION**




The electric portfolio has a PACT ratio of 3.27 for the three-year Plan while the natural gas portfolio has an overall PACT ratio of 0.99. This means there are $3.27 of benefits to

Manitoba Hydro's electric operations for every $1 of cost to Efficiency Manitoba as well as $0.99 of benefits to Centra's gas operations for every $1 of cost to Efficiency Manitoba.

To achieve its objectives and carry out its mandate, Efficiency Manitoba budgeted an average of $49 million annually for the electric portfolio and $21 million annually for the natural gas portfolio. The budget includes customer incentives, private sector program costs, Efficiency Manitoba staff costs (program and corporate overhead labour), and corporate overhead components.




*Note.* Program costs include private sector program delivery, program administration, program advertising and enabling strategies budget items.

Source: Plan Submission, Section 1, page 12

Within the overall budget, Efficiency Manitoba forecasts six percent of the electric efficiency budget and 32 percent of the natural gas efficiency budget toward hard-to-reach customers in the Income Qualified and Indigenous customer segments.

The Plan outlines the public input received by Efficiency Manitoba, primarily through the Energy Efficiency Advisory Group ("EEAG"). The Plan also includes Efficiency Manitoba's approach to ongoing monitoring and evaluation of its performance. An overarching strategy in this regard is the procurement and implementation of a customer relationship management ("CRM") and DSM system (the "CRM/DSM system"). This tool will be used

by vendors and customers, including for program applications, and also for internal operations to monitor and report on savings and investments at the measure and program bundle level.

Efficiency Manitoba will also monitor portfolio and corporate performance through a DSM Scorecard that has been developed to be used as a benchmark against other energy efficiency program administrators. In addition, Efficiency Manitoba will use an average of 1.7% of the annual portfolio budget to complete independent savings and cost-effectiveness verifications of every program annually and full impact evaluations on every program at least once during the three-year Plan period.

The Plan submission can be viewed in full on the Board's website at www.pubmanitoba.ca.

## 3.0 Organization of the Report

As discussed above, *The Efficiency Manitoba Act* (the "Act") and Regulation set out a number of considerations for the Public Utilities Board Panel in reviewing the Efficiency Manitoba Plan. This Report has been organized to address each of these considerations.

The Report first considers how Efficiency Manitoba has approached the legislated savings targets and whether the prescribed savings targets should be adjusted. It then addresses the details of how Efficiency Manitoba developed its Plan, the objectives intended to be achieved through the design of the Plan, and the costs and budgets projected for implementing and delivering the Plan and Efficiency Manitoba's activities.

The Report then considers the consequences of the Plan, turning first to potential deliverability risks of the Plan, followed by the rate and bill impacts of the Plan, and then how the progress of the delivery of the Plan and achievement of the targets will be monitored, tracked, and evaluated.

As required under the legislation, this Report considers the Plan's compliance with ministerial directives.

Lastly, the report sets out the Panel's recommendations with respect to the approval of the Plan with suggested amendments, the implementation of the Plan, the development and submission of future energy efficiency plans, and amendments to the legislation.

# 4.0 Meeting Legislated Savings Targets

| | | |
|---|---|---|
| *Act* | *s. 11(4)(a)* | *In reviewing an efficiency plan and making recommendations to the minister, the PUB must consider the net savings required to meet the savings targets and the plans to address any existing shortfall* |
| *Regulation* | *s. 11(h)* | *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: the reasonableness of the projected savings and Efficiency Manitoba's ability to meet the annual savings targets and the 15-year cumulative savings targets* |

## 4.1 Annual Savings Targets

Subsection 7(1) of *The Efficiency Manitoba Act* (the "Act") requires Efficiency Manitoba to achieve savings in electricity consumption at least equal to 1.5% of the previous year's electric consumption and savings in gas consumption at least equal to 0.75% of the previous year's gas consumption. There are no greenhouse gas emissions savings targets prescribed in the legislative framework; however, Efficiency Manitoba's legislated mandate requires it to implement and support DSM initiatives to meet the savings targets and achieve any resulting reductions in greenhouse gas emissions in Manitoba. In other words, while there are no greenhouse gas emissions savings targets, reductions in the consumption of gas through DSM programs will directly correlate to reductions in greenhouse gas emissions.

In order to determine whether the savings targets have been achieved, the first step is to determine the consumption baseline against which the 1.5% and 0.75% savings targets are compared. To effect this, the consumption baseline must be calculated in accordance with the Act. Electricity consumption is defined by the Act as the electrical energy, on a weather-adjusted basis, that is metered and sold to a customer in Manitoba. Adjusting consumption for weather is necessary as colder-than-normal weather increases consumption of electricity and gas in Manitoba (and vice versa for warmer-than-normal weather). If the baseline consumption was not weather-adjusted, then the target savings would change based on changes in weather, which is not desired because it could require greater or fewer savings than are justified. Gas consumption is defined as the amount of

gas metered and sold to a customer in Manitoba that is not used as a feedstock or ingredient in the manufacture of a product. The Regulation further defines the "previous year" as being the previous fiscal year, which for Efficiency Manitoba, Manitoba Hydro, and Centra is April 1 to March 31.

The consumption of electricity or gas in the preceding year is referred to as the consumption baseline, and 1.5% and 0.75% of the consumption baseline determines the amount of savings required for electricity and gas, respectively, to meet the savings targets. Thus, the consumption in fiscal year 2019/20 becomes the consumption baseline used to set the 2020/21 savings target, the consumption in fiscal year 2020/21 becomes the consumption baseline for 2021/22, and the 2021/22 fiscal year consumption becomes the consumption baseline for 2022/23.

Because the consumption for 2019/20, 2020/21, or 2021/22 was not known at the time Efficiency Manitoba prepared its Plan, Efficiency Manitoba used a forecast for electricity consumption based on Manitoba Hydro's 2018 Electric Load Forecast, with adjustments. The Electric Load Forecast provides forecasts of consumption at generation as well as sales of electricity at the customers' meters for 2018/19 and beyond. In the determination of the consumption baseline, Efficiency Manitoba used the Electric Load Forecast's gross firm energy at generation. Gross firm energy is the total amount of electricity required to serve Manitoba Hydro's customers in Manitoba, excluding Diesel Zone[1] customers. It includes transmission and distribution losses, construction power used for major projects like Keeyask, and station service. Gross firm energy does not include electricity exported extra-provincially. The Electric Load Forecast is prepared based on normal weather, so no weather adjustment is required.

Manitoba Hydro's Electric Load Forecast includes reduced consumption from building or construction codes and appliance standards ("codes and standards") savings. However, the Electric Load Forecast does not include reductions to consumption arising from other

[1] The Diesel Zone communities are those communities not connected to Manitoba Hydro's integrated system and instead have electricity service provided by diesel electric generators. These communities are Shamattawa, Tadoule Lake, Brochet, and Lac Brochet.

DSM programs. It follows that to obtain the most accurate forecast of consumption in 2019/20 and subsequent years, reductions to consumption resulting from other DSM programs must be included. Hence, an additional adjustment to the Electric Load Forecast is required to take into account expected DSM savings in 2019/20. Efficiency Manitoba reduced the 2019/20 gross firm energy in the Electric Load Forecast by the expected savings in Manitoba Hydro's 2019/20 DSM Plan (which includes savings arising from codes and standards), with a further adjustment to ensure that codes and standards savings were added back since these savings had already been effectively deducted twice from the Electric Load Forecast. In addition, Efficiency Manitoba also reduced the consumption for 2020/21 and 2021/22 within the Electric Load Forecast by the expected DSM savings from Efficiency Manitoba's Plan.

Unlike for the electricity consumption baseline, Efficiency Manitoba did not use the forecast gas consumption for 2019/20 and subsequent years as these values are commercially sensitive to Centra. Instead, Efficiency Manitoba used the actual, non-weather-adjusted gas consumption for 2017/18 as this was the most current publicly available value at the time the Plan was prepared.

Because subsection 7(1) of the Act excludes gas used as a feedstock (or ingredient) in a manufacturing process from the determination of the consumption baseline, Efficiency Manitoba deducted gas used as an input to industrial production as well as gas used to generate electricity.

Efficiency Manitoba made similar adjustments to the gas baseline as to the electric baseline, namely the expected savings from Manitoba Hydro's 2019/20 DSM Plan were deducted from the forecast for each year. Savings from Efficiency Manitoba's Plan for the years 2020/21 and 2021/22 were also deducted.

Consumers Coalition witness William Harper disagreed with Efficiency Manitoba's calculation of the consumption baselines and thus the savings targets for both electricity and gas. Mr. Harper noted that the definition of consumption in the Act specifies that it is the electrical energy "metered and sold". According to Mr. Harper, gross firm energy is

the energy at generation and thus is not a measure of the electricity metered and sold. Gross firm energy includes:

- construction power, which is used in the construction of Keeyask Generating Station,
- station service, which is electricity used internally by Manitoba Hydro's generating stations and is not sold,
- sales to certain customers that are not metered, such as to Area and Roadway Lighting customers (for sentinel and street lighting) and flat rate water heating customers, and
- Transmission and distribution line losses which are incurred as electricity is transmitted from remotely located generating stations to the load centres (communities and cities) throughout Manitoba.

Conversely, as noted in Mr. Harper's evidence, gross firm energy excludes metered sales to customers in the four communities served by Manitoba Hydro's diesel-fueled generation, known as the Diesel Zone.

The net effect of adjusting for the definitions in the Act is to reduce the electric consumption baseline. Mr. Harper recommends adjusting the consumption baseline and resulting savings targets to align with the definitions in the Act.

Mr. Harper also noted that the 2018 Electric Load Forecast incorporates actual consumption up to 2017/18 and forecasts for 2018/19 and beyond. According to Mr. Harper, the forecast values for each year need to be adjusted not only for the incentive-based DSM savings from Manitoba Hydro's 2019/20 DSM Plan but also from the 2018/19 DSM Plan.

In Mr. Harper's view, Efficiency Manitoba's use of the 2017/18 actual gas consumption is a reasonable solution to not being able to use commercially sensitive gas consumption forecasts as the baseline to determine the gas savings target. Mr. Harper also agrees that the elimination of gas used by industrial processes and to generate electric power is

appropriate. However, if actual 2017/18 gas consumption is used, Mr. Harper questions Efficiency Manitoba reducing the consumption baseline to account for Manitoba Hydro's 2019/20 DSM Plan, since the objective of the baseline is to estimate what the gas consumption in 2019/20 and future years will be. It is reasonable for Efficiency Manitoba to assume that actual 2017/18 consumption is a proxy for future consumption including impacts of any DSM programs. No adjustments are required as the baseline already takes into account DSM reductions achieved in 2017/18. Unlike the adjustments to the electric baselines which are required because the forecasts do not have DSM reductions included in future year consumption, when 2017/18 gas consumption is used it already has DSM savings included. Mr. Harper notes that retrospectively, Efficiency Manitoba will use the actual weather-adjusted consumption provided by Centra to determine the consumption baseline and to determine whether the achieved savings meet the savings targets.

## 4.2 Projected Achievement of Annual Savings Under the Plan

Once the electric and gas consumption baselines have been calculated, the next step in considering whether the saving targets have been achieved is to determine which energy savings from the DSM programming counts toward the savings targets.

Projected Electric Savings

Efficiency Manitoba's Plan as originally filed proposed annual electric savings of 373, 403, and 403 GWh for each of the Plan years. Using the consumption baselines discussed above, these projected savings are 1.43%, 1.55%, and 1.56% of the respective consumption baselines for each year. The average over the three Plan years is 1.51%.

Efficiency Manitoba recognizes that the projected savings for Year 1 are below the target set in subsection 7(1) of the Act. Subsection 7(2) allows shortfalls in achievement of the target to be made up in subsequent years. Accordingly, Efficiency Manitoba plans to achieve additional electricity savings in Years 2 and 3 such that over the three Plan years the 1.5% target is achieved.

In the course of responding to Information Requests in the Plan review process, Efficiency Manitoba identified a data entry error that resulted in overstatement of projected electric savings in Years 2 and 3. The data entry error resulted from counting savings from codes and standards cumulatively in Years 2 and 3 as opposed to incrementally. Originally, Efficiency Manitoba did not limit the savings that it counted from the Residential General Service Lighting Standard to just those from new lighting installations in each of the second and third years of the Plan, but instead counted persisting savings from all installations in the previous Plan years. With this correction, Efficiency Manitoba's Plan no longer meets the legislated savings target as shown in the table below.

| Plan Electric Savings | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Original Plan Savings (GWh) | 373 | 403 | 403 | 393 |
| Original Savings % | 1.43% | 1.55% | 1.56% | 1.51% |
| Revised Plan Savings (GWh) | 373 | 386 | 377 | 379 |
| Revised Savings % | 1.43% | 1.48% | 1.45% | 1.46% |

Projected Gas Savings

There was no data entry error identified for the gas codes and standards savings, so the projected savings are as shown in the original Plan and the table below:

| Plan Gas Savings | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Plan Savings (million $m^3$) | 11.7 | 12.8 | 13.2 | 12.6 |
| Savings % | 0.72% | 0.79% | 0.82% | 0.78% |

As with the electric savings, Efficiency Manitoba recognizes that the projected savings for Year 1 are below the target set in s. 7(1) of the Act. Efficiency Manitoba plans to achieve additional gas savings in Years 2 and 3 such that over the three Plan years the 0.75% target is achieved.

## 4.3 Counting Savings Toward the Annual Savings Targets

Pursuant to s. 7 of the Act, the annual savings that Efficiency Manitoba is required to achieve are known as "incremental" savings, which are the savings generated by new DSM initiatives installed that year and which are over and above those resulting from existing measures previously implemented. It is expected that most DSM initiatives will have savings that persist over time, reducing customers' energy consumption for many years. In subsequent years, those savings are not counted toward the savings targets. For example, an LED lightbulb installed in Year 1 of the Plan will count toward the savings target for Year 1. That same lightbulb will continue to save electricity in each of the Plan years but it is not counted toward the savings targets in Years 2 or 3 or any subsequent year. The savings from DSM initiatives in prior years that persist contribute to the benefits achieved by the Plan, but these savings are not counted toward the s. 7(1) 1.5% electric savings target.

"Persistence" is the proportion of DSM measures that remain in use in any given year. For example, LED lightbulbs may be expected to last 10 years, but some lightbulbs burn out early, meaning the savings achieved by the group of lightbulbs installed in Year 1 will be greater than the savings of that same group of lightbulbs in Year 5.

Further, under s. 7(3) of the Act, net energy savings are to be determined in accordance with the regulations. Subsection 8(1) of the Regulation specifies when energy savings may be counted toward meeting the electric and gas savings targets. That provision states that net savings in the consumption of electrical energy or natural gas count toward the respective savings targets if the net savings are reasonably attributable:

> *(a) to a demand-side management initiative undertaken by Efficiency Manitoba or on its behalf;*
>
> *(b) to incremental savings results from a demand-side management initiative undertaken by Manitoba Hydro if*
>
> *(i) the initiative is included in an approved efficiency plan; and*

*(ii) Efficiency Manitoba provides operational support or an operating incentive in respect of the initiative that is necessary to achieve the incremental savings;*

*(c) to a code, standard or regulation to which Efficiency Manitoba or Manitoba Hydro has made a material contribution; or*

*(d) to a rate to which Efficiency Manitoba has made a material contribution.*

In the course of the proceeding, four issues arose with respect to how annual savings should be counted toward the annual savings targets: load displacement projects, interactive effects, codes and standards, and price elasticity effects. In the first three cases, Efficiency Manitoba explained that it will rely on the evaluation and verification of the independent assessor to determine the progress toward meeting the savings targets.

Load Displacement

Customer-sited load displacement projects rely on low- or no-cost waste or biomass fuel streams to fuel electricity generators located at customer premises. These are sometimes referred to as “behind-the-meter generation”. For example, a customer may install a boiler and steam turbine generator which is fuelled by biomass material. Load displacement projects reduce the customers’ requirements for electricity purchased from Manitoba Hydro. This reduction has a similar effect on Manitoba Hydro’s load as Efficiency Manitoba’s other energy efficiency measures, as it reduces the consumption of electric energy produced or provided by Manitoba Hydro.

There are three load displacement projects included in the Plan. One project was installed with financial support from Manitoba Hydro prior to the Efficiency Manitoba Plan commencement date of April 1, 2020 and is currently operating. Since the specific details of this project are commercially sensitive, and since this was the first of three load displacement projects described in the Plan, it was referred to as “Project 1” in this proceeding. A substantial portion – 26% – of the electric savings in the Plan are from this

single customer-sited load displacement project. Efficiency Manitoba counts the savings from Project 1 as incremental in each year of the Plan and thus the 99 GWh of savings count toward meeting the savings target in all three Plan years. As part of the 15-year contract with the Project 1 customer, Efficiency Manitoba pays an annual incentive to offset costs related to fuel procurement and handling. Efficiency Manitoba's approach to counting the energy savings arising from Project 1 is based on its understanding of s. 8(1)(b) of the Regulation, which states that incremental savings resulting from a demand-side management initiative undertaken by Manitoba Hydro may be counted if Efficiency Manitoba provides operational support or an operating incentive in respect of the initiative that is necessary to achieve the incremental savings.

The other two load displacement projects in the Plan each have their savings count only once toward achieving the savings target, in the first years of their operations, respectively. Efficiency Manitoba explained that the savings from these two projects are treated differently than Project 1 because the incentives Efficiency Manitoba must contribute to facilitate these two projects are strictly capital in nature. There are minimal ongoing operating costs that would require an ongoing incentive from Efficiency Manitoba to motivate these customers to continue generating electricity and displacing load supplied by Manitoba Hydro, which is in contrast with Project 1.

According to the Independent Expert Consultant retained to review the Plan, Daymark Energy Advisors ("Daymark"), the savings from Project 1 should only be counted once. The way Efficiency Manitoba is counting the savings each and every year is analogous to a DSM measure with a one-year lifespan that is installed year-after-year. In Daymark's view, the way incentives are paid should not affect the way the savings from a measure are counted and measures should only be counted in one year.

Interactive Effects

As indicated above, s. 8(1) of the Regulation prescribes when net savings can be counted toward energy targets. "Net savings" has a defined meaning under the Act: it means, in respect of a change in the consumption of electrical energy or natural gas in Manitoba,

the savings that occur after taking into account any other adjustments in consumption that are attributable to, or influenced by, the change. These adjustments are called interactive effects.

Efficiency Manitoba's evidence explained their understanding of the net savings definition as that the electric and gas savings arising from certain DSM measures must be reduced or discounted by the resulting interactive effects. In general, when electric DSM measures are installed in homes and businesses, less electricity is consumed and thus there is less waste heat given off by the efficient, new technology compared to the old technology. For example, energy efficient light bulbs and appliances give off less heat to the surrounding home or business than non-energy efficient bulbs and appliances. During the heating season, the space heating system in the home or business must provide additional heat to make up for less heat given off by the efficient lighting and appliances. This is known as the interactive effect of installing a DSM measure.

When these electric DSM measures are installed in gas-heated premises, the electricity consumption decreases but the gas consumption increases. When these electric DSM measures are installed in electrically-heated premises (except for those heated by geothermal or air source heat pumps), no electricity savings are realized from the measures during the heating season because the electric heating system must provide more energy to compensate for the interactive effects. However, additional savings are realized as an interactive effect during the summer season as the cooling requirements are reduced.

In accordance with its understanding of the definition of "net savings", Efficiency Manitoba addresses interactive effects in its Plan by reducing or discounting the electric savings of certain DSM measures when they are installed in electrically-heated premises. When certain electric DSM measures are installed in gas-heated premises, the full electric savings are counted but the increase in gas consumption is counted against the gas savings target at the portfolio level. The gas interactive effect is thus separately identified

while the electricity interactive effect is embedded in the electric savings. The gas savings before interactive effects are as shown in the table below:

| Interactive Effects | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Plan Savings without Interactive Effects (millions $m^3$) | 13.82 | 14.60 | 14.85 | 14.423 |
| Savings % without Interactive Effects | 0.85% | 0.90% | 0.92% | **0.89%** |
| Interactive Effects | (2.12) | (1.85) | (1.62) | (1.86) |
| Plan Savings with Interactive Effects (millions $m^3$) | 11.70 | 12.75 | 13.23 | 12.56 |
| Savings % with Interactive Effects | 0.72% | 0.79% | 0.82% | **0.78%** |

As seen in the table, interactive effects decrease the gas savings and cause Efficiency Manitoba to include additional gas DSM measures in order to meet the savings target.

There are also interactive effects for electrically-cooled, or air conditioned, premises. In these situations, the decreased cooling requirements are added to the reduction in electricity consumption from the DSM measure. Certain electric DSM measures thus have an additional beneficial effect during the summer season.

Daymark accepts Efficiency Manitoba's treatment of interactive effects. Daymark noted that interactive effects should not be a deterrent to pursuing electric efficiency measures, only that they be considered when planning for gas savings. According to Daymark, in an economic analysis of gas savings, it would be incorrect to factor in the additional consumption due to interactive effects. To do so would skew the costs and cost effectiveness of gas DSM. This should be avoided because it may incorrectly suggest not undertaking gas DSM because of the skewed cost effectiveness. Instead, the reduction in gas savings benefits due to interactive effects should reduce the benefits – in dollar terms – accruing to the electric portfolio.

Codes and Standards

Efficiency Manitoba counts savings from codes and standards toward meeting the savings target in instances where either Efficiency Manitoba or Manitoba Hydro has made a material contribution to the development of the code or standard, as permitted by paragraph 8(1)(c) of the Regulation.

In this proceeding, “codes and standards” refer to energy-related building codes and to lighting and appliance energy efficiency standards. Efficiency Manitoba explained that when a new building is constructed or an appliance is installed during the Plan year, the electric or gas savings related to the improved technology required by the code or standard compared to the previously allowed non-energy efficient technology is counted toward meeting the savings target.

These codes and standards fall into the following categories:

- Residential building codes,
- Residential general lighting standards,
- Residential appliance standards,
- Other residential equipment standards,
- Commercial building codes,
- Commercial general lighting standards, and
- Other commercial equipment standards.

Codes and standards comprise 23% of the Plan’s electric savings and 32% of the gas savings, on average. In its Plan, Efficiency Manitoba explained the contributions made by Manitoba Hydro and the contributions expected to be made by Efficiency Manitoba to the savings it proposes to claim.

Daymark’s view is that codes and standards can be an excellent path to improving energy efficiency and that Efficiency Manitoba should not bias their offerings in favour of incentive-based programs at the expense of codes and standards savings. Daymark’s assessment of Efficiency Manitoba’s approach to codes and standards is that Efficiency Manitoba did not properly discount or reduce the claimed savings due to naturally occurring market adoption. Efficiency Manitoba also overstated the codes and standards savings because of the way codes and standards “age”, meaning that the more efficient technology becomes the default technology, irrespective of the code or standard. According to Daymark, the codes and standards savings in the Plan are based on a liberal interpretation of their eligibility to be counted. However, Daymark cautions that it would

not be a beneficial situation to have any disincentive to Efficiency Manitoba to pursuing codes and standards savings. If there were “sunset” timeframes applied to codes and standards, such that after being in force for a set number of years the savings were no longer counted, then there would be few codes and standards savings to be applied toward the savings targets. On the other hand, without adjustments and without sunsetting of any codes or standards, over time the codes and standards may come to dominate the savings in the portfolio. Daymark stated that as codes and standards become a greater proportion of the savings, it may make sense to increase the savings target so that not all the savings are achieved through codes and standards at the expense of program-based DSM measures. Daymark does not recommend the appropriate balance between savings from programs and savings from codes and standards.

## 4.4 Cumulative Savings Targets

Subsection 7(2) of the Act requires Efficiency Manitoba to achieve cumulative savings over the 15-year period of 22.5% for electricity and 11.25% for gas. Efficiency Manitoba’s interpretation of these targets is that the simple sum of the annual percentage savings must equal or exceed 22.5% for electricity (that is, 15 years times 1.5) and 11.25% for gas (15 years times 0.75).

Another approach is to interpret the cumulative savings targets to account for both the lifespan and the persistence of the DSM initiatives.

Each DSM measure has an expected lifespan. For example, an LED lightbulb has a much shorter lifespan than an insulation upgrade to a home, as the LED bulb will burn out before the insulation breaks down or ceases to be effective.

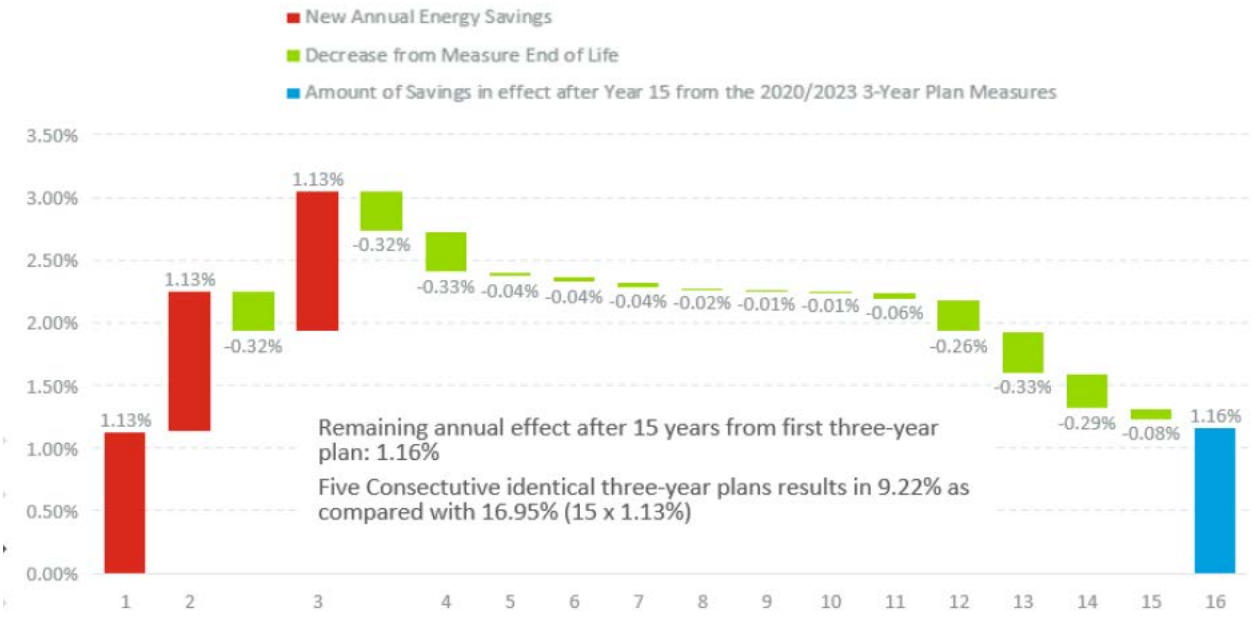
Thus, since Efficiency Manitoba’s approach does not account for lifespan and persistence, the savings target in s. 7(2) may be met as a simple sum of the annual targets, but there will not be actual cumulative savings of 22.5% and 11.25% in Year 15. Rather, Efficiency Manitoba will have achieved 22.5% and 11.25% of incremental savings

over those 15 years. An analogy presented by the expert witness for the Manitoba Industrial Power Users Group, Patrick Bowman, helps explain this. If the DSM savings are a “bucket”, then the annual incremental savings are analogous to putting 1.5 cups of water into the bucket each year. However, because the bucket has a leak – due to short measure lifespans and the persistence effect – after 15 years of putting 1.5 cups of water into the bucket, the bucket does not hold the expected 22.5 cups of water, but instead less. If a large portion of the savings has measure lifespans less than 15 years, or if persistence is low, then the cumulative savings in Year 15 will be much less than 22.5% – the bucket will hold much less than 22.5 cups of water.

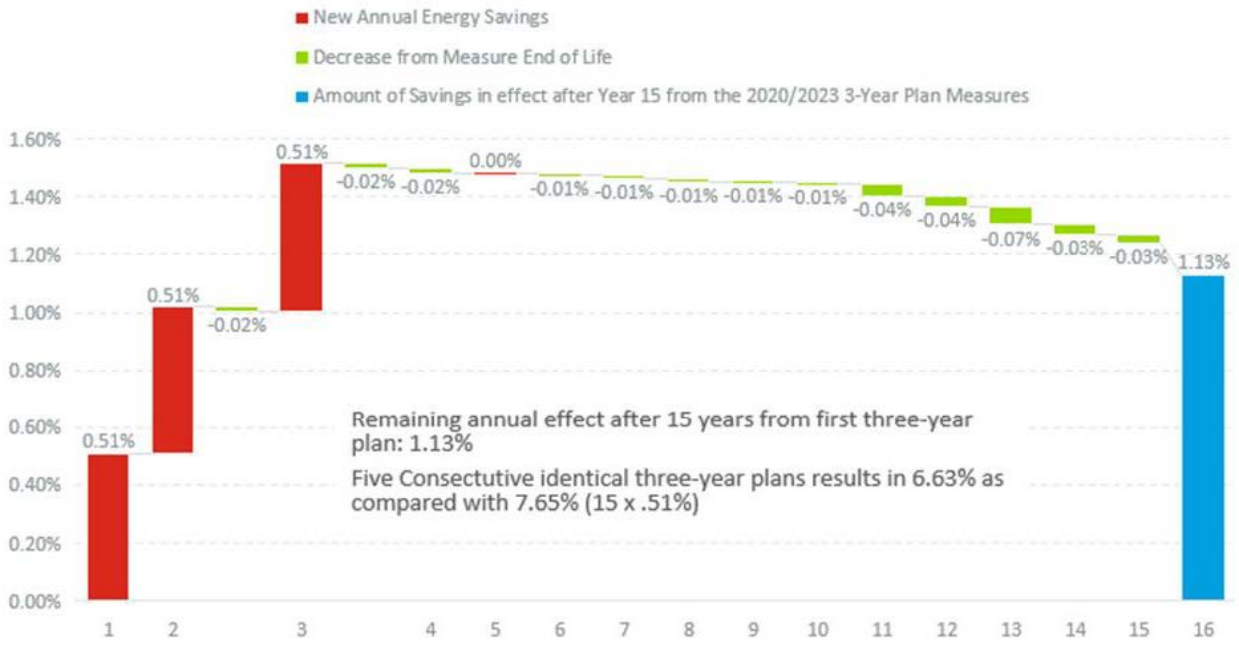
Daymark presented evidence that showed that the lifespan of the electric and gas measures was such that many of the savings achieved in the Plan years do not persist for the full 15-year planning period contemplated by the Act. For example, 93% of the total electricity savings of the DSM measures installed during the three Plan years have lifespans of 15 years or less. The gas measures have savings that persist longer, such that of the total gas savings of the DSM measures installed during the three Plan years, only 22% have lifespans of 15 years or less.

Daymark also explained that because many DSM measures, especially the electric measures, have lifespans shorter than 15 years, the cumulative savings that persist in Year 15 will not be the sum of the annual savings achieved.

To demonstrate, Daymark considered the savings from incentive-based electric programs – that is, savings excluding codes and standards savings – which total approximately 1.13% in each Plan year. According to Daymark, the three Plan years will achieve approximately 3.4% of electric savings from incentive-based programs (1.13% times 3). However, because many of the electric measures have lives of less than 15 years, at the end of 15 years the cumulative persisting savings only total 1.16%, or about one third of the savings generated from the Plan. This is depicted in the following graph:




The gas measures, which on average have longer lives, have cumulative savings of 1.13% after 15 years, compared to the three Plan year totals of approximately 1.53%, meaning two thirds of the gas measures persist beyond 15 years. This is depicted in the following graph:




## 4.5 Party Positions

Efficiency Manitoba

Efficiency Manitoba's view is that it will meet the savings targets in the Act for both electricity and gas, notwithstanding the Plan electric savings are on average 1.46% of the consumption baseline. Efficiency Manitoba explains that its Plan is flexible enough that it still expects to achieve savings over the three Plan years that meet the legislated savings targets.

Efficiency Manitoba does not dispute the changes proposed by Coalition expert witness Mr. Harper with respect to the consumption baselines, but notes that these adjustments do not significantly alter the savings targets. Efficiency Manitoba is agreeable to Mr. Harper's approach, so long as a consistent approach is maintained.

Efficiency Manitoba states that Project 1 qualifies to have its savings count toward meeting its savings target, even though the project was initiated by Manitoba Hydro prior to the first Plan year, because this is consistent with paragraph 8(1)(b) of the Regulation.

Furthermore, Efficiency Manitoba counts the 99 GWh of savings from Project 1 toward the savings target for each year of the Plan. Because an annual incentive payment is required by the customer to continue to operate Project 1, Efficiency Manitoba considers the electricity savings from this project to be re-earned and thus may be counted toward the savings targets each year of the Plan, again consistent with 8(1)(b).

Efficiency Manitoba counts the interactive effects from electric DSM measures against the gas savings at the portfolio level because of the definition of "net savings" in the Act. Efficiency Manitoba's position is that a reduction in the consumption of electrical energy from some DSM measures causes an increase in gas consumption and that this must therefore be included in the determination of net savings. Efficiency Manitoba agrees with Daymark that it is appropriate to show the gas portfolio Program Administrator Cost Test ("PACT") ratio, net present value, and levelized cost with and without interactive effects. The levelized cost is the cost per unit of energy saved, with the costs and savings "levelized" over a 30-year period by taking the net present value of the costs and savings. Efficiency Manitoba states that it would not be appropriate to convert the increased gas consumption from interactive effects into an equivalent amount of electricity because this would not reflect the actual energy consumption change that is occurring and it would not accurately reflect the actual net savings achieved by the portfolio. The approach taken by Efficiency Manitoba is consistent with the approach previously used by Manitoba Hydro.

According to Efficiency Manitoba, savings from codes and standards are legitimately counted toward meeting the savings target.

Consumers Coalition

The Consumers Coalition adopts the evidence of its expert witness, William Harper. Mr. Harper recommends adjusting the electric consumption baseline and resulting savings targets to align with the definitions in the Act. Mr. Harper accepts the use of the actual 2017/18 gas consumption to establish the gas baseline, but states that no adjustments are needed to account for DSM savings arising from the 2019/20 DSM Plan or Efficiency Manitoba's Plan.

The Consumers Coalition recommends that the Panel consider gas savings both with and without the impact of interactive effects when assessing Efficiency Manitoba's Plan.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group recommends that Efficiency Manitoba not be required to achieve additional gas savings above 0.75% in order to offset interactive effects. Interactive effects should also not lead to any assignment of gas program costs to electricity ratepayers, which in Manitoba Industrial Power Users Group's view would be an inappropriate cross-subsidization of the two utility services.

According to the Manitoba Industrial Power Users Group, Efficiency Manitoba should be entitled to count savings from all codes and standards, not just the ones to which Manitoba Hydro or Efficiency Manitoba made a material contribution. Codes and standards savings provide cost-effective energy savings.

The Manitoba Industrial Power Users Group asserts that, in assessing whether the savings targets have been achieved, the independent assessor should take into account rate change impacts that can serve to reduce energy consumption. If energy prices increase from large rate changes, the actions toward conservation by customers will naturally increase, which is termed a price "elasticity effect". A price elasticity effect occurs when demand for a product decreases in response to a higher price, or increases in response to a lower price. In addition, when there are large rate changes, customer sensitivity to energy costs increases and rate increases caused by DSM programming would be least easily absorbed by customers in this period. For these reasons, the Manitoba Industrial Power Users Group suggests that conservation effects arising from Manitoba Hydro rate changes and efficiency rate structures adopted by Manitoba Hydro, such as conservation rates, should count toward the savings targets. Other jurisdictions such as British Columbia include conservation from price elasticity effects as part of their DSM plans.

Pursuant to s. 8(1)(d) of the Regulation, savings reasonably attributable to a rate to which Efficiency Manitoba has made a material contribution count toward the savings targets under s. 7 of the Act. The Manitoba Industrial Power Users Group states that the PUB should recommend that this provision be clarified to state that all conservation or price elasticity effects from general electricity price increases, changes to rate structures, or changes to rate designs be included in the calculation of the savings target.

The Manitoba Industrial Power Users Group's position is that Efficiency Manitoba must be flexible with the timing of its industrial DSM programs and availability of incentives. This flexibility should extend to meeting savings targets such that savings are achieved and targets met over longer periods of time of at least three years. Mr. Friesen noted the importance of having flexibility in meeting annual savings targets as industrial customers are sensitive to timing of large efficiency projects. Industrial customers cannot usually justify production interruptions to install efficiency measures. Instead, installation of efficiency measures must be timed with production interruptions or shutdowns related to maintenance or other upgrades.

The Manitoba Industrial Power Users Group noted that many customers, particularly industrial customers, will reinstall the same technology when the DSM measure's lifespan ends. That is, a DSM measure that is part of the Plan will, when it stops working, be replaced "like-for-like" with the same technology, even if there is no future incentive from Efficiency Manitoba. In the Manitoba Industrial Power Users Group's view, this re-investment should be considered by Efficiency Manitoba in its Plan.

The Manitoba Industrial Power Users Group also recommends that measures with greater persistence should be given priority as these measures contribute more toward the long-term DSM resource and energy savings.

## 4.6 Conclusions of the Panel

### 4.6.1 Annual Savings Targets

Electric Consumption Baseline

The Panel concludes that different consumption baselines than those proposed by Efficiency Manitoba should be used to evaluate whether the Plan will reasonably achieve the savings as required by s. 11(h) of the Regulation. The Panel recommends that the Plan be amended to use the consumption baseline accepted by the Panel in this Report as follows.

The Panel accepts the evidence of Mr. Harper that the electric consumption baseline should be based on electricity metered and sold in Manitoba and thus should be based on the general consumer sales in the Electric Load Forecast. The definition of consumption in the Act of "electrical energy that is metered and sold" excludes electricity used for construction power, station service, losses, as well as unmetered sales such as those made to Area and Roadway Lighting class customers and flat rate water heating customers. Manitoba Hydro's load forecast shows the metered sales values and thus these values are easily determined.

The Panel also agrees with Mr. Harper that an adjustment to the 2018 Electric Load Forecast values to account for the savings in Manitoba Hydro's 2018/19 DSM Plan is required.

The calculations of the electric consumption baselines and targets were set forth by Mr. Harper in response to a Board Information Request and were agreed to by Efficiency Manitoba.

| Electric Energy At Meter (GWh) | 2019/20 Baseline for 2020/21 | 2020/21 Baseline for 2021/22 | 2021/22 Baseline for 2022/23 |
|---|---|---|---|
| MH 2018 Electric Load Forecast – Total Sales* | 22,917 | 23,199 | 23,420 |
| Less Roadway Lighting, Flat Rate Water Heating | 91 | 91 | 89 |
| Less 2018/19 DSM | 316 | 316 | 316 |
| Less 2019/20 DSM | 310 | 310 | 310 |
| Less EM Plan Cumulative Savings | - | 331 | 674 |
| Plus 2018/19 Cumulative Codes & Standards | 140 | 196 | 244 |
| Baseline Consumption for setting savings targets | 22,340 | 22,347 | 22,275 |
| Target Savings (1.5%) | 335 | 335 | 334 |

* Table 6 of 2018 Electric Load Forecast

The Panel considers the determination of the savings targets in the above table to be the most accurate and correct values available at this time for the purpose of projecting the achievement of the savings targets. The actual consumption in each of the years preceding each Plan year will determine the actual consumption baseline, the achievement of which will be determined at the time the independent assessor conducts the retrospective evaluation.

Gas Consumption Baseline

The gas consumption baselines proposed by Efficiency Manitoba do not align with the Act and the Regulation. The 2017/18 actual gas consumption proposed to be used by Efficiency Manitoba is not weather-adjusted and thus does not agree with the definition of consumption in the Act. Furthermore, the Regulation specifies that the consumption baseline used for the targets is to be based on the preceding fiscal year.

The Panel recommends that the gas consumption baselines be determined in a similar way as the electric baselines. The Panel recommends that the Plan be amended to use the consumption baselines calculated based on Centra's forecasts of gas consumption for the years preceding the Plan years (that is, 2019/20, 2020/21, and 2021/22), adjusted

for expected DSM savings in the 2018/19 and 2019/20 DSM Plans, as well as adjusted for removing consumption used for industrial processes and the generation of electricity.

### 4.6.2 Projected Achievement of Annual Savings Under the Plan

Projected Electric Savings

While Efficiency Manitoba posited that the changes recommended by Mr. Harper make little difference to the savings target, the Panel finds the changes to be significant. If the consumption baseline recommended by Mr. Harper is used, then Efficiency Manitoba's Plan – with the downward revision to savings due to correction of the codes and standards savings – will achieve the legislated savings targets, on average, over the three Plan years, as shown in the following table. By contrast, using the consumption baseline put forth by Efficiency Manitoba, Efficiency Manitoba falls short of the savings targets over the three Plan years.

| Electric Energy At Meter (GWh) | 2020/21 | 2021/22 | 2022/23 | Average |
|---|---|---|---|---|
| Panel Recommended Baseline Consumption for setting savings targets | 22,340 | 22,347 | 22,275 | - |
| Plan savings @ generation | 373 | 386 | 377 | 379 |
| Plan Savings @ meter | 331 | 343 | 335 | 336 |
| Target Savings (1.5%) | 335 | 335 | 334 | 335 |
| Plan Savings % of Panel Recommended Baseline | 1.48% | 1.53% | 1.51% | 1.51% |
| Plan Savings % of EM Proposed Baseline | 1.43% | 1.48% | 1.45% | 1.46% |

Projected Gas Savings

Even though the Panel recommends changes in how the gas consumption baseline is determined for the Plan years, the recommended gas consumption baselines are similar to the baselines proposed by Efficiency Manitoba, resulting in similar savings percentages.

Forecast gas consumption has been accepted as commercially sensitive information. For the next efficiency plan submission, the Panel expects that forecast gas consumption will be made publicly available in the calculation of the gas consumption baseline.

Centra also considers weather-adjusted actual consumption to be commercially sensitive. When future evaluations are made as to whether Efficiency Manitoba has met the legislated savings targets, the Panel expects Efficiency Manitoba will publicly specify the savings achieved and the percentage of those savings of the consumption baseline, which will be weather-adjusted. Thus, it appears that the actual, weather-adjusted gas consumption will become publicly known.

### 4.6.3 Counting Savings Toward the Annual Savings Targets

Load Displacement Projects

The Panel concludes that Efficiency Manitoba is following the legislation in counting the savings from Project 1. There is an argument that the use of the word “incremental” in paragraph 8(1)(b) of the Regulation is intended to limit the savings that are counted to only incremental savings, which would prevent Efficiency Manitoba from counting the savings from Project 1 after the first year. However, the specific language of paragraph 8(1)(b) leads the Panel to conclude that the Legislature intended to have the savings from Project 1 count toward the electric savings target in each year. In particular, the details incorporated in this paragraph appear precisely aimed at the factual circumstances of Project 1. In this regard, the Panel notes that if the Government did not intend for Project 1 to be counted as incremental savings in subsequent years, the Plan would fall even further short of meeting the electric savings targets in years two and three.

However, it is the view of the Panel that, although permitted under paragraph 8(1)(b) of the Regulation, repeatedly counting the same Project 1 savings year-after-year does not further Efficiency Manitoba’s mandate as set out in the Act at paragraph 4(1)(c), which is to delay the point at which capital investments in major new generation and transmission projects will be required. Like any other efficiency measure, Project 1 provides a one-time

decrease to the load that must be supplied by Manitoba Hydro. Also like other efficiency measures, Project 1 has a defined lifespan. In this case, the lifespan is the contract term, which Efficiency Manitoba reported is 15 years. If Efficiency Manitoba counts the savings from Project 1 year-after-year, this means that approximately 25% of the savings target is met without any incremental savings. This is akin to Efficiency Manitoba delivering 1.1% of new electricity savings year-after-year instead of the expected 1.5%.

It appears to the Panel that there is an inconsistency between paragraph 4(1)(c) of the Act and paragraph 8(1)(b) of the Regulation. If the Legislature wishes the objective of deferring capital investments to have priority, then the Panel recommends that the Regulation be amended so that the savings from Project 1 cannot be counted toward the achievement of the savings target in each year after Year 1. The Panel notes that, if adopted, the Panel's recommendations with respect to integrated resource planning, discussed in detail in section 5.0 below, should address the Project 1 concern.

Interactive Effects

The Panel agrees with Efficiency Manitoba's interpretation of the definition of net savings, which is that interactive effects are an adjustment to consumption that is attributable to the change in consumption. The reduced electricity consumption from certain electric measures results in increased gas consumption and thus is attributable to the change in electricity consumption; therefore, these adjustments to gas consumption must be factored into the achievement of the gas savings target.

Likewise, in the Plan the cost effectiveness of each portfolio is affected: the electric portfolio cost effectiveness improves while the gas portfolio cost effectiveness declines. This is due to the fact that each utility experiences changes to its costs through realization of the marginal benefits in the case of Manitoba Hydro and erosion of marginal benefits in the case of Centra (due to an increase in gas consumption, which is the inverse of the marginal benefits achieved through gas savings).

The Panel concludes that Efficiency Manitoba's treatment of interactive effects in the Plan is appropriate at this time, although as recommended by Daymark and the Consumers Coalition, the gas portfolio should be considered both with and without interactive effects. Considering the gas portfolio without interactive effects yields a more accurate assessment of the cost effectiveness of the gas DSM measures and whether it is reasonable to achieve greater or reduced levels of savings.

However, while Efficiency Manitoba has correctly interpreted the legislation, this raises questions about how interactive effects relate to Efficiency Manitoba's mandate and how interactive effects should be treated in future efficiency plans. For example, an electric measure that decreases electricity consumption is aligned with Efficiency Manitoba's mandate to delay the point at which capital investments in major new generation and transmission are required. However, the interactive effects of certain electric measures increase gas consumption which in turn increase local greenhouse gas emissions. This is in conflict with Efficiency Manitoba's mandate to achieve reductions in greenhouse gas emissions in Manitoba.

The approach currently in legislation also has other shortcomings, as identified by intervener experts. There may be a disincentive to pursue certain electric measures if the interactive effects cause the gas portfolio to become less cost effective. Put another way, why should the gas portfolio be penalized for an electric DSM measure?

To provide clarity, the Panel recommends that the Government articulate its policy goals, such as giving greater or less emphasis to the objectives of reducing greenhouse gas emissions or delaying construction of new generation and transmission resources, that will form the basis of integrated resource planning ("IRP"). IRP is discussed in greater detail in section 5.0 of this Report. If the priority is to reduce greenhouse gas emissions, then the treatment of interactive effects should account for the need to achieve more gas savings to offset any increase in gas consumption due to electric measures. The approach in the legislation whereby increased gas consumption from certain electric measures is factored into the achievement of the gas savings target is consistent with this

objective. However, if the primary objective is to defer major new electric generation and transmission projects, then it may not be necessary to approach interactive effects in a way that effectively penalizes the gas portfolio for the implementation of electric measures. If necessary, the definition of “net savings” could be amended by the Legislature following the IRP process.

The Panel’s recommendation that the objectives and priorities that form the basis of integrated resource planning should inform the treatment of interactive effects also applies with respect to electrification. If the Government sets objectives for new resources as an input to an IRP, then Efficiency Manitoba can act on the output from the IRP to encourage or discourage electrification; the former will advance the need for new resources which could advance new investments in generation and transmission, while the latter will bypass an opportunity to reduce local greenhouse gas emissions.

Codes and Standards

The Panel concludes that Efficiency Manitoba has met the requirements in paragraph 8(1)(c) of the Regulation for counting codes and standards savings; however, the Panel concludes that the qualification for counting the savings – that Manitoba Hydro or Efficiency Manitoba has made a “material contribution” to the development of the code or standard – is too subjective.

The Panel sees a role for Efficiency Manitoba in the development of future codes and standards. The Panel agrees with the evidence of the expert witnesses for the Manitoba Industrial Power Users Group that Efficiency Manitoba need not be required to make a material contribution in order for Efficiency Manitoba to be motivated to develop new or improved codes and standards.

The Panel recommends that the requirement for Efficiency Manitoba or Manitoba Hydro to make a material contribution to the development of the code or standard be removed from the Regulation. In addition, Efficiency Manitoba’s mandate could be amended such that it be required to participate in the development of codes and standards. This would

compel Efficiency Manitoba to participate in codes and standards development but would remove a subjective evaluation of how those savings are counted.

Price Elasticity Effects

With respect to whether price elasticity effects[2] arising from Manitoba Hydro or Centra rate changes or efficiency rate structures adopted by Manitoba Hydro should count toward the savings targets, the Panel notes that under s. 8(1)(d) of the Regulation, savings reasonably attributable to a rate to which Efficiency Manitoba has made a material contribution count toward the savings targets under s. 7 of the Act. In addition, the definition of demand-side management initiative under the Act includes rates designed to reduce the consumption of electrical energy or gas.

The Panel acknowledges that rate changes can have conservation effects and that if a rate increase or conservation rate were attributed to Efficiency Manitoba, the Regulation contemplates that energy savings resulting from the rate would count toward the savings targets. In the context of large rate increases, there will be a decline in energy consumption arising from the increased price for energy. In addition, the Panel accepts the Manitoba Industrial Power Users Group's argument that when there are large rate increases, customers are sensitive to energy costs and are least able to absorb rate

[2] While Efficiency Manitoba has not taken into account price elasticity effects in its measurement of the impact of DSM programs, Efficiency Manitoba does consider "rebound effects": the possibility that a DSM program that reduces the bills of participating ratepayers may lead to a subsequent increase in energy consumption if a portion of the saved income is then spent on goods that consume energy. Its treatment of rebound effects, however, appears to be limited to the "partial equilibrium" effects. It may be appropriate for Efficiency Manitoba to also consider the "general equilibrium" effects, wherein any income saved from a more energy-efficient furnace lead homeowners to increase their spending on a range of consumer goods that involve greater energy consumption. The latter involves a consideration of the income elasticity of energy consumption, as reflected in Manitoba Hydro's load forecast estimates.

increases from DSM programming. Accordingly, it is important to consider price elasticity effects when evaluating whether the savings targets have been met.

However, the Panel determines that the record is insufficient to direct that price elasticity effects should be taken into account by Efficiency Manitoba when assessing whether the savings targets have been met. There is not enough information in the evidence before the Panel regarding how this analysis would be conducted. The Panel recommends that Efficiency Manitoba consider and evaluate how price elasticity effects could be taken into account when counting energy savings toward the savings targets, including how the independent assessor should address price elasticity effects in its assessment. A summary of the results of this evaluation should be included in the next efficiency plan submission.

### 4.6.4 Cumulative Savings Targets

The Panel accepts Efficiency Manitoba's interpretation of s. 7(2) of the Act regarding how the cumulative targets are to be met. Specifically, the Panel concurs that the cumulative savings targets will be met if the annual savings in each of the 15 years add up to 22.5% and 11.25% for electricity and gas, respectively.

However, the concepts of DSM measure lifespan and persistence have implications with respect to the mandate of Efficiency Manitoba as set out in paragraph 4(1)(c) of the Act, which is to delay the point at which capital investments in major new generation and transmission projects will be required by Manitoba Hydro.

As discussed previously in this Report, since Efficiency Manitoba's interpretation of the legislation does not account for lifespan and persistence, the cumulative savings target in s. 7(2) does not mean that 22.5% and 11.25% savings will be realized in Year 15. Rather, Efficiency Manitoba will have achieved 22.5% and 11.25% of incremental savings over those 15 years.

An approach that tries to account for the lifespan and persistence of DSM measures is more administratively complex, but it is more relevant in the context of deferring new

investments in generation and transmission, as explained further in the section 5.0 of this Report on integrated resource planning.

As detailed by Daymark, if Efficiency Manitoba implemented five similar efficiency plans to the current Plan, fifteen years of 1.13% savings from incentive-based electric programs should mean arithmetically that there are 16.95% savings after Year 15. However, Daymark estimates that five similar three-year efficiency plans will result in only 9.22% of electric savings persisting beyond 15 years due to short measure lives. Continuing Mr. Bowman's bucket and water analogy, instead of the bucket having 16.95 cups of water after 15 years, it only has 9.22 cups.

A DSM measure with a lifespan of 10 years that is installed in Year 1 of the Plan will not help to defer new generation and transmission investments if those new investments are not expected to be needed for 15 years. As such, the Panel recommends that the savings targets be revisited, as detailed in section 5.0 of this Report.

## 5.0 Changes to the Legislated Savings Targets and Integrated Resource Planning

| | | |
|---|---|---|
| *Act* | *s. 11(5)* | *The PUB may recommend to the minister*<br>*(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*<br>*(b) a decrease in a savings target if it is reasonably satisfied that the existing savings target is not in the public interest.* |

In the course of the Efficiency Manitoba proceeding, the question arose whether the 1.5% electric savings target was the appropriate target or whether Efficiency Manitoba should strive to achieve a different level of savings. If a different savings target is justified, how should such a target be established?

Mr. Bowman gave evidence that the Plan and the 1.5% electric savings targets have not been justified because new resources are not needed now or for many years. If there is no need for the power that would be freed up by DSM, then the justification for doing it should be based on the opportunity to do something beneficial. Such beneficial action may include reducing rates charged to customers.

The same applies to the 0.75% gas savings target.

The Panel heard evidence that, instead of prescriptive savings targets included in the legislation, savings targets should be established through integrated resource planning ("IRP"). IRP is a utility planning process that seeks to determine the optimal set of resources required to meet the energy needs of a utility's customers in the future. IRP is based on one or more defined objectives; the optimal set of resources is the set that best meets those objectives. The resources considered in the integrated resource planning process include both supply-side resources, such as new generating stations and imported energy from neighbouring jurisdictions, as well as demand-side resources, such as energy efficiency, demand response, and customer-sited generation projects.

According to Mr. Bowman, the current proceeding does not permit consideration of the appropriate levels of DSM in the context of an IRP. Mr. Bowman's observation from Efficiency Manitoba's evidence is that the Legislature has imposed the savings target without regard to any IRP concepts and abandoned the link between DSM and resource planning. It is Mr. Bowman's view that this was a fundamental criticism of Manitoba Hydro made by the Public Utilities Board ("Board") in the NFAT Report.

In the course of the NFAT review of Manitoba Hydro's Preferred Development Plan, the concept of IRP was prominent. Two of the Board's conclusions related to IRP:

> *15. The Panel recommends that integrated resource planning become a cornerstone of a new clean energy strategy for the Province of Manitoba.*
>
> *16. The Panel recommends that the Government of Manitoba not approve the construction of any generating facilities, nor approve the beginning of the required infrastructure work for any generation facility, beyond the Keeyask Project, unless such facilities are justified through an integrated resource planning process. The integrated resource planning process must include public consultation.*

The following excerpt from the Board's NFAT Report provides additional information related to IRP:

> *Integrated resource planning is a regular practice in many jurisdictions. An integrated resource plan determines what supply side and demand side resource mix is in the best interest of electricity customers. The Panel heard evidence that the best practices for integrated resource planning involve placing every resource option on an equal footing and a public consultative planning process. In contrast, Manitoba Hydro prepares an annual Power Resource Plan that is not developed through a public integrated resource planning process.*

> *The NFAT Review demonstrated that DSM measures were not equally weighted with other energy options as they would have been if Manitoba Hydro had used an integrated resource planning process framework.*
>
> *The effectiveness of integrated resource planning in determining least-cost combinations of resources cannot be overestimated.*
>
> *By failing to offer an analysis of conservation measures as a stand-alone energy resource competitive with other generation resources, Manitoba Hydro presented an analysis of conservation measures that was neither complete, accurate, thorough, reasonable, nor sound.*
>
> *The NFAT Review demonstrated that DSM measures were not equally weighted with other energy options. It was only in the course of the NFAT hearing that it became clear that significantly higher levels of DSM than originally proposed by Manitoba Hydro were both achievable and economic.*

As indicated above, *The Efficiency Manitoba Act* (the "Act") was enacted in response to the recommendations by the Board made in the NFAT Report. Under the Act, one component of Efficiency Manitoba's mandate is to implement and support demand-side management initiatives to meet the legislated savings targets. However, another component of its mandate is to "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". In the debates that followed the second reading of Bill 19, which was subsequently enacted as the Act, the Minister of Crown Services quoted extensively from the NFAT report, including the following:

> *DSM is a powerful tool, as it can defer the need for new generation and has the potential to be as economic, if not more economic, than new generation. […]*

> *…the annual dependable energy savings from the Power Smart Plan exceed 85 per cent of the dependable energy output from the proposed Conawapa Project. To achieve these electricity savings, Manitoba Hydro budgets $822 million, which is less than 8 per cent of the $10.7 billion cost of building Conawapa.*

The Minister indicated that Bill 19 was intended to position DSM as a stand-alone energy resource for resource planning purposes, as was recommended by the NFAT Report:

> *And this is directly from the NFAT […] 'Manitoba Hydro treats DSM as a reduction in load forecast demand, rather than as an alternative resource to meet demand projections. This approach was criticized by an independent expert and several Interveners. In their view, DSM should have the same status as generation sources, and be evaluated as such for planning purposes. The panel shares that view'. And thus Bill 19.*

In Board Order 59/18 following the 2017/18 & 2018/19 Manitoba Hydro General Rate Application, the Board provided further support for the need for Manitoba Hydro to incorporate IRP, specifically that:

> *The Board agrees with the Manitoba Industrial Power Users Group that the level of demand side management spending included in the financial forecast should be consistent with integrated resource planning…*
>
> *Finally, the interrelationship between demand side management, the need for new generation resources, and the cost of those resources reinforces the recommendation in the NFAT Report that integrated resource planning be implemented in Manitoba.*

In this proceeding, Mr. Bowman testified that, even though the Act sets out legislated savings targets as opposed to prescribing that such targets should be determined through an IRP, the Act can still be interpreted to operate within an integrated resource planning framework. He points out that under the Act, the savings targets do not appear to be "fixed". Subparagraph 4(2)(b)(i) of the Act permits Efficiency Manitoba to provide advice to government, Manitoba Hydro, and others on matters related to "the appropriateness of the savings targets and the ways of integrating net savings attributable to demand-side management initiatives, both current and forecasted, into the electricity planning process". In addition, s. 11(5)(a) and (b) of the Act provides that the Board can recommend an increase in a savings target if it is reasonably satisfied that it is in the public interest or a decrease in a savings target if it is reasonably satisfied that the existing savings target is not in the public interest. However, as Mr. Bowman points out, the current proceeding is too narrow to consider savings targets from an IRP perspective.

Mr. Bowman stated that a common output of IRP is the development of multiple alternative resource plans. Each alternative should meet the IRP objectives although the weighting of each objective may differ between the alternatives.

Daymark gave evidence that it is a best practice to use IRP to set the savings targets for DSM program administrators like Efficiency Manitoba. When savings targets are determined by an IRP, the appropriate level of spending for DSM programming is also determined through the IRP. In some jurisdictions, the levels of spending determined in an IRP are used as spending targets but that is not a best practice. One of the outputs from IRP would be a set of procurement instructions for Efficiency Manitoba to acquire certain levels of DSM savings with certain attributes, such as peak demand savings, longevity, or cost. Another benefit of IRP is that rate impacts from various resource plans can be compared. This would allow comparison of rate impacts from DSM as well as new generation and transmission investments.

Daymark further advised that IRP should look at a long-term resource planning horizon, not just the next resource or other short-term needs. To address this, Efficiency

Manitoba's three-year efficiency plans would need to be extended to at least a 15-year efficiency plan, although without the same level of detail in the later years. As a long-term planning process, IRP should not be done only when new resources are on the immediate horizon. According to Daymark, many utilities and jurisdictions wait too long before initiating the IRP process. An IRP is about managing resource acquisition costs all along the resource procurement process, including managing rate impacts.

Daymark also testified that Manitoba Hydro has a role in IRP because of its modelling and forecasting processes, including export markets, export sales, domestic load forecasts, and hydrology forecasts. Efficiency Manitoba also has a necessary role in IRP since Efficiency Manitoba is expected to provide DSM costs as an input to the process.

Similarly, the Panel heard evidence from the expert witness for the Consumers Coalition, Mr. Harper, that IRP is a regular practice in many jurisdictions. In Mr. Harper's view, the purpose of IRP is to determine what mix of resources is in the best interest of consumers by examining a full spectrum of possible supply-side and demand-side options and measuring them against a collective set of objectives and criteria. One of the outputs from the IRP process is a long-term plan of resources, including DSM resources, which then informs the savings targets. This contrasts with traditional methods of utility resource planning which emphasize supply-side options such as building new generation, transmission, and distribution facilities. IRP, done as a public process, also tends to be more transparent than traditional resource planning. Setting of particular savings targets through legislation is not consistent with IRP.

Mr. Harper explained that the IRP process follows three major steps: 1) establish the objectives of the IRP and identify the timing and need for new resources; 2) identify all feasible alternatives to meeting the need, including DSM; and 3) identify a preferred plan.

## 5.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba submits that Manitoba Hydro's resource planning process is not in scope for this proceeding and that Efficiency Manitoba is not in a position to lead an IRP process as it is not a utility. If the Government desired to implement integrated resource planning processes in Manitoba, Efficiency Manitoba agrees that it would have a role to play and would be a willing participant in an IRP that is led by Manitoba Hydro, but states that Efficiency Manitoba's participation would require amendments to the legislation. Efficiency Manitoba identifies some practical concerns about the timing of an IRP and the subsequent development of its next three-year efficiency plan.

Consumers Coalition

The view of the Consumers Coalition is that the purpose of IRP is not necessarily choosing the least-cost option for the program administrator or utility, but rather balancing a number of objectives and evaluation criteria. The objectives and evaluation criteria could include rate impacts, economic benefits to Manitobans, and equity amongst ratepayers. The Consumers Coalition recommended that the next efficiency plan should be reviewed with the benefit of the results from an IRP process. This process should involve collaboration among Efficiency Manitoba, Manitoba Hydro, and other appropriate parties, as well as include a process for public and stakeholder input.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group supports Mr. Bowman's view that savings targets should be based on the output of an IRP. According to the Manitoba Industrial Power Users Group, Efficiency Manitoba should be directed to amend its Plan to put greater emphasis on the programs and measures that meet the resource planning needs of Manitoba Hydro. One of the long-term purposes of the Act is to achieve rate benefits for customers through the deferral of new generation resources. The Manitoba Industrial Power Users Group argues that, without providing alternative scenarios of resources

through an IRP process, the Panel is unable to conclude the Plan properly addresses the deferral of new generation resources, a priority mandate of Efficiency Manitoba.

The Manitoba Industrial Power Users Group identifies several components of an IRP process. Certain information is required, such as the inputs required to develop Manitoba Hydro's marginal values as well as an inventory of potential DSM measures along with their savings and costs. The IRP process should develop alternative saving and spending plans so that they can be compared in a public process.

## 5.2 Panel Conclusions

The Panel concludes that the establishment of savings targets without the benefit of being informed through an IRP process is not in the best interests of Manitoba ratepayers. Subsection 11(5) of the Act states that the Board may make recommendations to increase or decrease the savings targets if in the public interest; however, the Panel's view is that it is unable to define the public interest in this context without the appropriate level of DSM resources having first been determined through an IRP process. An IRP process with appropriately identified objectives will identify the optimal amount of DSM resource which translates into optimal savings targets. Without an IRP process, there is a risk that too few DSM savings are acquired, resulting in suboptimal acquisition of supply-side resources, or too much DSM resource is acquired at unnecessary expense. Further, the Government will define and prioritize the objectives that are to be achieved through the acquisition of new resources, which forms the basis of the IRP process.

The Panel notes that the Board's NFAT Panel recommended a DSM electric savings target of 1.5%. That recommendation was made based on the evidence in a proceeding that was a type of resource planning process and was informed by the expert testimony from Manitoba Hydro, independent expert consultants, and intervener experts. The 1.5% target was premised on a slow ramp-up to savings of 1.5%, at which point the annual incremental savings would be consistent into the future. However, this does not mean that a 1.5% annual target is still the appropriate target for Efficiency Manitoba.

The 1.5% target was recommended by the NFAT Panel at a time when the need date for new resources was less than ten years from the NFAT review and when the marginal benefits of conserved electricity to Manitoba Hydro were greater than they are today. In this proceeding, there was no definitive evidence as to the need date for new resources but with Keeyask set to commence service and assuming past levels of DSM under Manitoba Hydro, the need date is greater than ten years away and may be near 2040.

Another reason why the NFAT Panel's 1.5% electric savings target may no longer be appropriate is that, because paragraph 12(1)(b) of the Regulation stipulates that the marginal value to Manitoba Hydro is to be determined by Manitoba Hydro, there was no opportunity to investigate the constituent components of the marginal values. The marginal values, and Manitoba Hydro's participation in an IRP process to validate the marginal values, are critical to establishing an appropriate savings target.

The gas savings target was not considered in the NFAT review. There was no information in the current proceeding as to how or why the 0.75% target was established and it does not appear that the savings target resulted from a resource planning process.

An IRP process is the vehicle that most appropriately determines the need date, the resources required, and the marginal values to the utility. Setting the savings targets for Efficiency Manitoba as one output from an IRP process is a best-practice approach to optimizing value for money in the context of DSM programming. The Panel cannot overstate the importance of determining the appropriate marginal values in an IRP process, with input of Manitoba Hydro and Centra, in order to establish the optimal savings targets for electric and gas.

The Panel recommends that an IRP process be initiated and led by Manitoba Hydro and Centra. Efficiency Manitoba should participate as Efficiency Manitoba is the most appropriate party to identify the costs of demand-side resources: Efficiency Manitoba can answer the question "how much does a certain amount of DSM cost?" As in many jurisdictions, the IRP should be a public process with input from stakeholders.

Historically, Manitoba Hydro, Centra, and the government have performed resource planning in Manitoba. The opportunities for stakeholder involvement have been limited. In many cases, external expert perspectives, and their attendant benefits to an informed and transparent process, have not been sought. The NFAT was an exception, but in that case the review was influenced by the extensive work already completed on Keeyask and commitments that were already made. IRP is not a capital approval exercise in the strict sense, but it does identify the best mix of resources, many of which are capital in nature.

The IRP should focus on establishing long-term savings targets. Efficiency Manitoba should be mandated to work toward long-term targets, not short-term targets. The Act already contemplates a long-term target in that it sets the electric savings target at 22.5% and the gas savings target at 11.25% with provisions for carrying forward surpluses or making up shortfalls. Focusing on annual savings targets ignores the reality that major DSM programs, such as for industrial customers, may require lead time for planning and education, such that the implementation and resulting savings may not be realized for several years.

The Manitoba Industrial Power Users Group's recommendations related to customers' tendency for reinvestment in the same efficient technology ("like-for-like") and a focus on measures with greater persistence discussed elsewhere in this Report also have implications for IRP. Acquiring a large amount of short-term savings does not necessarily delay major generation and transmission investments if those savings expire prior to the need date for the new investments. IRP will properly consider the longevity of DSM savings and market transformation benefits in ways that the short-term annual savings targets do not. Considering Mr. Bowman's leaky bucket analogy discussed in Section 4.4 of this Report, IRP will consider how full the bucket is at the end of the planning period, not how much was put into the bucket in total.

Another important benefit of IRP is that it determines the marginal values to the utility and consequently the marginal benefits of DSM savings. Efficiency Manitoba's mandate in paragraph 4(1)(c) – to delay the point at which capital expenditures are made for major

generation and transmission – prejudges what the most economic resource plan is, or at least what that plan does not include (i.e. hydroelectric generation). While it is clear that major new generation on the scale of Keeyask is an expensive resource, the marginal values of electricity to Manitoba Hydro should inherently reflect the value of deferring capital investments. Similarly, the importance of establishing the marginal values of gas to Centra underscore the need for IRP. This is one of the fundamental benefits of IRP – that it can compare resource alternatives on a level playing field to arrive at the most economic resource plan. The IRP process will determine which resources provide the greatest economic benefits as well as the resources that best fulfill the other objectives of the IRP.

Should the Panel's recommendation that the Government initiate an IRP process be accepted, the Panel envisions an IRP process that begins with input from Government in terms of energy policy and objectives for electricity and gas. While there may be separate, joint, or parallel processes for electric and gas resource plans or plans, it is important that the objectives established not be contradictory.

It is the Panel's view that one of the most important aspects is for the Government to set objectives that will form the basis of the IRP. These objectives can be established by Government energy policy. However, there is also a role for stakeholders to have input into the objectives. In some jurisdictions, this input is through a stakeholder committee. These objectives become the basis for how the various resource options are evaluated within the IRP. Objectives can relate to accessibility, cost, environment, social aspects (such as economic development), reconciliation with Indigenous peoples, and others. For example, the objectives could include greenhouse gas reductions, which would then feed into an IRP process that would consider ways to fuel-switch to alternative energy sources. In this example, it may be accepted that increased electrification, which would give rise to increased electric consumption, should be pursued as it is consistent with the objective of reducing greenhouse gas emissions. Establishing the objectives will also assist in determining how interactive effects will be addressed.

The Panel recommends that the respective utilities would lead the process as the applicants and would propose resource plans and several alternatives. Efficiency Manitoba would participate and would assist the utilities with the IRP filing by providing, as an input to the development of the alternative resource plans, the costs of various levels of DSM resource. Stakeholders and the public would have opportunities to participate as interveners or presenters just as they would in other Public Utilities Board proceedings. The Board would make a report to Government with recommendations on the optimal long-term savings targets and mix of resources.

With savings targets approved by the Minister following the IRP, Efficiency Manitoba can proceed to develop its next efficiency plan. The specific measures, customer segments, and budget details are the subject of Efficiency Manitoba's efficiency plan, not the IRP. In a sense, the output of the IRP is akin to the utilities requesting Efficiency Manitoba acquire a certain amount of DSM resource (savings) with certain attributes (cost effectiveness, accessibility or inclusiveness, longevity, geographic location, season, time of day, energy or capacity or both) from among the feasible DSM options identified by Efficiency Manitoba. Efficiency Manitoba is then tasked to acquire these savings according to the requirements set out in legislation for its efficiency plans.

Legislative changes are required in advance of initiation of an IRP process in Manitoba, particularly to require that Manitoba Hydro and Centra undertake an IRP process and to allow for Efficiency Manitoba's activities to include participation in an IRP process. It will take time for the utilities to develop the IRP process and the IRP process itself may take approximately six months or longer. The entire IRP process may therefore not be completed in keeping with Efficiency Manitoba's timeline for developing the next efficiency plan for 2023-26. With the understanding that new DSM savings targets are required to inform Efficiency Manitoba's next efficiency plan, the Panel expects this efficiency plan to be delayed. The Panel is of the view that it is preferable to extend the programs in the current Plan until such time as new savings targets resulting from an IRP are established, as opposed to developing a new efficiency plan based on the current legislated targets of 1.5% for electricity and 0.75% for gas.

The Panel envisions these major milestones:

- The Minister approves, rejects, or amends Efficiency Manitoba's 2020-23 Plan;
- Following consultation with Manitoba Hydro, Centra, Efficiency Manitoba, the Public Utilities Board, and stakeholders, the Legislature implements changes to legislation to adopt IRP;
- The utilities file proposed IRP(s) with the Board;
- The Public Utilities Board holds the IRP review process(es) and tables report(s) with the Minister;
- The Minister reviews the Board's report(s), then approves IRP and savings targets; and
- Efficiency Manitoba develops its next efficiency plan to meet savings targets.

The Panel reiterates, and cannot stress enough, the importance of setting savings targets through IRP. IRP should be the starting point or primary input into any efficiency plan. Without an IRP process, it is not possible to know whether Efficiency Manitoba's planned spending and projected energy savings are prudent undertakings toward the achievement of particular goals, including objectives set out within the Act and Regulation. Most significantly, without an IRP, Manitobans cannot have certainty that the least-cost combinations of resources are being pursued to meet the energy needs of the province, and if not, that the reason is the achievement of another identified objective.

## 6.0 Measure Selection Process

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| *Regulation* | *s. 11(a)* | *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: the appropriateness of the methodologies used by Efficiency Manitoba to select or reject demand-side management initiatives.* |
| *Regulation* | *s. 11(j)* | *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: whether the efficiency plan adequately considers new and emerging technologies that may be included in a future efficiency plan.* |

To select measures for the development of its DSM portfolio, Efficiency Manitoba followed a three-step process.

At the first step, Efficiency Manitoba considered an initial inventory of DSM measures that could potentially be included in the Plan. Of this initial inventory, Efficiency Manitoba rejected several measures on the basis that they were not currently viable in Manitoba. For example, Efficiency Manitoba rejected some measures for the reason that the potential market in Manitoba was too small, the technology was not designed for use in Manitoba's climate, or the technology was in the early stages of development and would need more refining before adoption. The remaining measures made up the preliminary portfolio.

At the second step, Efficiency Manitoba placed individual DSM measures within "program bundles", which are groupings of DSM measures. For example, the Home Renovation "bundle" consists of a group of several individual DSM measures, such as rebates for building envelope improvements and appliances as well as loans for custom energy efficiency projects, that Efficiency Manitoba expects would be considered by residential customers undertaking home renovations. Efficiency Manitoba conducted background research into energy efficiency technologies and product and market channels. Based on this research, Efficiency Manitoba then developed preliminary program design parameters by considering a variety of factors, including sales, life expectancy, costs, any barriers to purchase or installation, energy savings, and possible rebate or incentive

levels. Efficiency Manitoba's intent at this second stage was to achieve the savings targets set out in the Act.

At the third stage, Efficiency Manitoba assessed the preliminary portfolio according to a "multi-criteria decision analysis". This analysis was informed by Efficiency Manitoba's understanding of requirements set out in the Act and the Regulation. As indicated above, the Act and Regulation set out multiple mandatory considerations for the Board in reviewing the Plan.

Pursuant to s. 9(j) of the Act, Efficiency Manitoba must include in the Plan a description of how the Plan addresses the prescribed factors set out above that the PUB must consider. In addition, under s. 9(h) of the Act, Efficiency Manitoba is required to receive input from stakeholders and the public in preparing the Plan.

Efficiency Manitoba's "multi-criteria decision analysis" is intended to reflect these legislative considerations and requirements. It consists of both quantitative and qualitative criteria. With respect to quantitative criteria, Efficiency Manitoba examined (1) the costs of the programs, (2) the level of energy savings achieved per year, (3) rate and customer bill impacts, and (4) the cost effectiveness of the programs. The cost effectiveness of the portfolio was a key consideration, much more so than the cost effectiveness of individual programs.

To measure cost effectiveness, Efficiency Manitoba applied the Program Administrator Cost Test ("PACT"), which compares the benefits to Manitoba Hydro of the energy savings of the DSM programs with the costs of providing the DSM programs. Under the PACT, the benefits are the present value of the marginal values of the DSM programs to Manitoba Hydro and Centra.

With respect to the electric DSM portfolio, the marginal value is based on the value to Manitoba Hydro of the electricity conserved by the DSM programs. Manitoba Hydro receives value from conserved electricity by having more electricity available to export, potentially under long-term firm contracts, as well as due to the deferral of future

transmission and distribution investments as a result of reduced load growth and consequent reduced capacity requirements. The value of exported electricity is based on the season (winter or summer) when the DSM measures conserve electricity and whether the DSM measures reduce capacity, energy, or both. Manitoba Hydro provides a forecast of generation, transmission, and distribution marginal values for a 30-year period.

With respect to the gas DSM portfolio, the marginal value of those DSM programs is equivalent to Centra's avoided costs of purchasing and transporting gas from western Canada to Manitoba. In its marginal values provided to Efficiency Manitoba, Centra does not attribute value to the deferral of future transmission and distribution investments, unlike Manitoba Hydro's approach.

On the costs side of the PACT analysis, the costs are those incurred by Efficiency Manitoba in providing the DSM programs. Under s. 18(2) of the Act, Manitoba Hydro is responsible for providing Efficiency Manitoba with the amounts necessary to fund its DSM programming, so these costs are effectively costs to the utility.

Importantly, the PACT measures the costs and benefits of DSM programming only for the utility. The PACT does not include the costs and benefits experienced by customers participating in the programs or more broadly by society. Other cost-effectiveness tests, however, do include these costs and benefits. For example, the Total Resource Cost Test ("TRC") measures the total benefits and costs of DSM programming as an energy resource, irrespective of the amounts paid by the utility and the customer to acquire the measure. On the benefits side, in addition to the marginal values to Manitoba Hydro, the TRC includes the benefits of reduced greenhouse gas emissions and water consumption. On the costs side, in addition to the costs to the utility of providing the DSM programs, the TRC also includes the costs incurred by customers participating in the programs.

Other cost-effectiveness tests focus specifically on the cost effectiveness of DSM programming to the participating customer. The Participant Cost Test ("PCT") measures only the benefits and costs to participants in DSM programming. Under the PCT, the benefits are the utility bill savings obtained by the participants and the costs are those

incurred by the participants. The Customer Payback Test calculates the length of time it will take for customers to realize a return on their investments in a DSM measure.

Although Efficiency Manitoba calculated TRC metrics for its DSM programming, these metrics were not a factor in selecting DSM measures. Efficiency Manitoba did not examine any metrics of cost effectiveness other than PACT metrics in selecting DSM measures because the Regulation prescribes that the cost effectiveness of DSM programming must be determined by comparing its costs and benefits to the utility. Pursuant to s. 12(1) of the Regulation, the cost effectiveness of the portfolio of electrical energy DSM measures must be determined by 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, 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.*

Likewise, under s. 12(2) of the Regulation, the cost effectiveness of the portfolio of gas DSM measures must be determined by 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 of the Manitoba border saved by Centra as a result of the gas not being consumed.*

Consistent with its adoption of the PACT test as the only indicator of cost effectiveness, Efficiency Manitoba did not consider quantifiable non-energy benefits, such as reduced water consumption and greenhouse gas emissions, in measure selection.

Further, Efficiency Manitoba did not consider cost effectiveness at a measure level. In other words, Efficiency Manitoba did not examine PACT metrics for each individual measure, but instead analyzed cost effectiveness at the level of program bundles and the overall portfolio.

As with the quantitative criteria, the qualitative criteria that Efficiency Manitoba examined under its multi-criteria decision analysis were also informed by the legislative considerations and requirements set out above. Efficiency Manitoba considered whether the preliminary portfolio provided programs for all Manitobans, including programs that would be accessible specifically to lower-income and “hard-to-reach” customers, as is discussed further in Section 7.0 of this Report. Efficiency Manitoba also assessed whether the programs reached all customer segments, which it defined as Industrial, Commercial, Residential, Agricultural, Indigenous and Income Qualified, and whether emerging technologies were adequately addressed. In addition, Efficiency Manitoba also incorporated feedback from stakeholders, which included the importance of ensuring continuity of programs from Manitoba Hydro and reducing the administrative effort – or red tape – in applying for programs.

As a result of the multi-criteria decision analysis, Efficiency Manitoba made refinements to the preliminary portfolio. These refinements included rejecting two measures, adding a program bundle, revising the budgets for several measures, adjusting an incentive level for a measure, and revising estimated participation rates for several measures. This became the final portfolio.

Efficiency Manitoba testified that the final portfolio amounted to a balance of the legislative considerations and requirements set out above. In selecting the DSM measures according to the three-step process, however, Efficiency Manitoba did not screen out any measures based on consideration of the benefits versus the costs specific to each measure. In selecting DSM measures for inclusion in the Plan, Efficiency Manitoba also did not develop any alternative portfolios with different savings levels, incentive levels, or cost-effectiveness or accessibility metrics for comparison purposes.

In addition to considering the appropriateness of the methodologies used by Efficiency Manitoba to select or reject DSM initiatives, the Regulation requires the Board to consider whether the Plan adequately considers new and emerging technologies that may be included in a future Plan.

Under the Plan, Efficiency Manitoba has two emerging technologies programs: the Solar Energy Program, which will begin in the last year of the Plan, and the Customer Sited Bioenergy Program. The Solar Energy Program will offer incentives to customers who install an approved grid-connected solar photovoltaic system to an existing building or premise. Under the Customer Sited Bioenergy Program, Efficiency Manitoba will provide financial and technical support for installed wood pellet and wood chip heating systems to Manitoba Hydro customers.

Efficiency Manitoba also offers incentives for air source heat pumps under its Home Renovation Program within the Residential customer segment. Although air source heat pumps are not included as an emerging technology under the Plan, Efficiency Manitoba acknowledges that air source heat pumps are an emerging technology in the Manitoba market. Under the Home Renovation bundle, Efficiency Manitoba will provide incentives for air source heat pumps and expects that seven will be funded and installed over the three years of the Plan.

Efficiency Manitoba has also budgeted for an innovation and research fund that will provide funding for pilot projects and research partnerships “with the aim of reducing common barriers to emerging technologies that could be adopted in Manitoba” (the

"Innovation and Research Fund"). The Innovation and Research Fund has a budget of $2,645,000 over three years. Efficiency Manitoba plans to "develop strategies to best use this fund", and will also hire a service provider to complete a DSM market potential study. A DSM market potential study identifies the technical, economic, and achievable energy savings that are possible within a jurisdiction.

Efficiency Manitoba has also identified a three-year contingency fund for the purpose of pursuing unanticipated DSM opportunities. Unanticipated DSM opportunities may arise due to the increased affordability and availability of efficiency technologies, large industrial savings opportunities from new plants or plant expansions, or new load displacement installations not contemplated, and therefore not budgeted for, in the Plan.

## 6.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba states that the methodology it used to select DSM programs and measures was appropriate and carefully considered. By applying the three-step methodology, Efficiency Manitoba appropriately developed electric and gas portfolios that balance multiple objectives. In Efficiency Manitoba's view, the only measure of cost effectiveness that should be examined when selecting DSM programs is the PACT, because the legislation mandates that the cost effectiveness of DSM programming must be determined by the PACT, and only at the bundle or portfolio level. Efficiency Manitoba asserts that applying non-prescribed cost-effectiveness screens may restrict its ability to satisfy the legislated energy savings targets or provide equitable and accessible programming.

Efficiency Manitoba also takes the position that, in selecting DSM measures, there was no need to consider alternative portfolios that meet the same savings targets, but with different incentive levels, cost effectiveness, or accessibility metrics. Efficiency Manitoba believes that alternative portfolios that meet the same savings targets would contribute

little practical value, as the final portfolio contemplates adjustments being made and Efficiency Manitoba will be able to make those adjustments that need to be made.

With respect to the selection of emerging technologies, Efficiency Manitoba asserts that the Plan provides for the identification of emerging technologies through pilot projects and research and contains flexibility to capitalize on unanticipated DSM opportunities through the contingency fund.

The expert witness for the Consumers Coalition, Mr. Neme, recommended air source heat pumps as a DSM measure. For these heat pumps, Efficiency Manitoba believes that it has adopted a reasonable and prudent approach. Efficiency Manitoba notes that there is a lack of information available with respect to the operating performance of air source heat pumps in extreme weather zones as typically found in Manitoba and that only 0.2% of Manitobans use them as their primary space heating system.

Consumers Coalition

The Consumers Coalition submits that it is unclear which objectives drove the development of the preliminary portfolio and how considerations related to budget, energy savings, and cost effectiveness of DSM programs affected the development of the final portfolio.

In addition, the Consumers Coalition asserts that alternative portfolios for portfolio evaluation purposes should be included in future efficiency plans, as they would allow the Board to clearly see the trade-offs associated with a preferred efficiency plan. These alternative portfolios should consider a wider range of considerations than just costs, energy savings, and cost effectiveness.

With respect to air source heat pumps, the Consumers Coalition views Efficiency Manitoba's proposal as a significant missed opportunity and argues that the Panel should recommend that Efficiency Manitoba increase its rebates for air source heat pumps as well as offer this technology in the Income Qualified program bundle.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs takes the position that non-energy benefits should be considered in the selection of DSM measures. These non-energy benefits could be assessed through use of the Total Resource Cost test during the selection process. The Assembly of Manitoba Chiefs asserts that the Total Resource Cost test can quantify benefits such as customer bill reductions, reduction in energy poverty levels, and calculation of economic benefits. In the Assembly of Manitoba Chief's view, Efficiency Manitoba should consider the Total Resource Cost test along with the Program Administrator Cost Test in selecting DSM measures.

The Assembly of Manitoba Chiefs also submits that First Nations and Métis programs should be "unbundled" into separate programs in recognition of their distinct customers.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group does not support increased investment in air source heat pumps.

## 6.2 Conclusions of the Panel

The Panel concludes that the methodology used by Efficiency Manitoba to select DSM measures was appropriate for this Plan, but as discussed below, the Panel recommends changes for the next efficiency plan. Efficiency Manitoba used a methodology that permitted it to select measures to meet a variety of mandated objectives under the Act and the Regulation.

The Panel determines that in addition to the PACT, Efficiency Manitoba should also use the TRC and other customer-centric tests, such as the Participant Cost Test and the Customer Payback Test, in selecting DSM measures for future efficiency plans. Efficiency Manitoba should also consider the cost effectiveness of DSM programming at the measure level in applying these tests, as opposed to simply at the program bundle or portfolio level.

The Panel acknowledges that the legislation prescribes that the cost effectiveness of DSM programming must be determined by the application of the PACT; however, the legislation also directs the Board to consider whether the Plan reasonably achieves the aim of providing programs that are accessible to all Manitobans, whether the Plan adequately considers the interests of residential, commercial and industrial customers, and 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 lower-income or hard-to-reach customers. Tests like the TRC that assess the overall cost-effectiveness of proposed DSM measures, or other customer-centric tests, would provide useful information about the accessibility of particular DSM measures and whether these measures further customer interests. This information would assist Efficiency Manitoba in selecting DSM measures that advance the legislated objectives.

The Panel notes that the TRC is used as a supplement to the PACT in other jurisdictions. Both Ontario and British Columbia use the TRC in addition to the PACT. In New Brunswick, the Participant Cost Test is used to supplement the PACT.

For measures that are cost ineffective, Efficiency Manitoba should provide specific justification for including these measures in future efficiency plans. Efficiency Manitoba stated that the resulting portfolio of DSM measures was the result of a balance of multiple objectives. However, as discussed above, in selecting the DSM measures, Efficiency Manitoba did not screen out any measures based on consideration of the benefits versus the costs specific to each measure. Also, the Plan did not provide details which justify the inclusion of cost-ineffective measures in the portfolio. For future plans, the Panel determines that Efficiency Manitoba should outline the specific reasons for including cost-ineffective measures within the final portfolio.

In addition, measure-level information should be included in future efficiency plans, including cost-effectiveness metrics for individual measures. The Panel notes that Efficiency Manitoba has committed to providing measure-level detail in future efficiency plan submissions. As discussed in section 12.0, given that cost-effectiveness metrics on

a measure level may be deemed to be commercially sensitive information, the Panel determines that future efficiency plans should be filed in a timely manner so that the Panel can make an appropriate determination regarding intervener access to confidential information.

In order to provide cost-effectiveness metrics on a measure level, Efficiency Manitoba must resolve a technical issue within its workpapers. Efficiency Manitoba assigned program administration costs to one measure within a bundle, rather than allocating them across all measures within that bundle. This created a barrier to disclosure of accurate cost-effectiveness metrics on a measure level. For future efficiency plans, Efficiency Manitoba should allocate program administration costs across all measures, instead of assigning them to one measure within a bundle.

The Panel determines that for future efficiency plans, Efficiency Manitoba should develop a preferred efficiency plan and two alternative plans and file these plans with the Board, to allow better analysis of the relative benefits of the plan. The Panel notes that under s. 10 of the Act, Efficiency Manitoba must submit each of its efficiency plans to the PUB "at the time and in the manner specified by the PUB". The Panel notes further that Efficiency Manitoba has committed to completing a DSM potential study. The Panel accepts Efficiency Manitoba's position that this DSM potential study will include consideration of fuel switching options if it is not cost prohibitive to do so.

The Panel directs that one of the alternative efficiency plans should consist of a portfolio of DSM measures that are more cost effective but less accessible than those in the preferred efficiency plan. The other alternative efficiency plan should consist of a portfolio of DSM measures that are less cost-effective and more accessible than those in the preferred efficiency plan. The Panel accepts the Consumers Coalition's assertion that alternative portfolios can illustrate the trade-offs between certain objectives, such as accessibility and cost effectiveness. Considering these trade-offs will assist Efficiency Manitoba in selecting DSM measures and in justifying the inclusion of these measures. In addition, the review of alternative portfolios will assist the Panel in its determination of

whether the preferred efficiency plan amounts to a reasonable balance of the legislated requirements.

The Panel accepts the Assembly of Manitoba Chief's recommendation that the Plan be amended to "unbundle" the Métis and First Nations programs into separate bundles to reflect distinct customers segments. Efficiency Manitoba also accepted this recommendation and it was not opposed by any party.

With respect to new and emerging technologies, the Panel concludes that Efficiency Manitoba has not adequately identified in the Plan how new and emerging technologies will be assessed through pilot projects and research. Efficiency Manitoba has included in its budget the Innovation and Research Fund, which consists of $2,645,000 over three years, to consider and develop emerging technologies for adoption in Manitoba through pilot projects and research partnerships. Efficiency Manitoba stated that it will develop strategies to "best use this fund". In addition, the contingency fund will be available for any unanticipated DSM opportunities. However, Efficiency Manitoba has not identified specifically in the Plan how it intends to engage in pilot projects and use research partnerships to pursue emerging technologies.

The Panel accepts Efficiency Manitoba's assertion that a gradual approach should be adopted for emerging technologies like air source heat pumps that have not been proven to be viable within the Manitoba market. However, despite acknowledging that it needs more information regarding the viability of air source heat pumps in Manitoba's cold climate, Efficiency Manitoba has budgeted for only seven air source heat pumps over three years. These limited numbers of installations may not generate enough information to understand the limits or barriers to the wider adoption of this technology and how such barriers could be mitigated.

To be clear, the Panel does not recommend that Efficiency Manitoba increase its budget with respect to incentives for air source heat pumps. However, research into this technology is clearly needed to assess whether it is viable in Manitoba. Efficiency Manitoba has not allocated any part of the Innovation and Research Fund toward the

evaluation of air source heat pumps as an emerging technology in Manitoba. The Panel recommends that a portion of the Innovation and Research Fund should be used by Efficiency Manitoba to assess the barriers to the expansion of air source heat pump technology in a way that is realistic and appropriate in the Manitoban context.

The Panel recommends that the Plan be amended to specifically set out how Efficiency Manitoba intends to research, engage in pilot projects, and otherwise pursue new and emerging technologies, such as air source heat pumps. The Plan should contain more detail regarding Efficiency Manitoba's strategies for evaluating and pursuing emerging technologies over the three years of the Plan and how it intends to incorporate emerging technologies in future efficiency plans.

## 7.0 Cost Effectiveness and Accessibility/Inclusivity of the Plan

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| *Act* | *s. 11(4)(b)* | *In reviewing an efficiency plan and making recommendations to the minister, the PUB must consider the benefits and cost-effectiveness of the initiatives proposed in the plan* |
| *Act* | *s. 11(4)(c)* | *In reviewing an efficiency plan and making recommendations to the minister, the PUB must consider whether Efficiency Manitoba is reasonably achieving the aim of providing initiatives that are accessible to all Manitobans* |
| *Regulation* | *s. 11(b)* | *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: whether the plan adequately considers the interests of residential, commercial and industrial customers* |
| *Regulation* | *s. 11(d)* | *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: whether the portfolio of demand-side management initiatives required to achieve the savings targets is cost-effective* |
| *Regulation* | *s. 11(e)* | *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: if the plan includes demand-side management initiatives in excess of those required to achieve the savings targets, whether those initiatives are cost-effective* |

As discussed in section 6.0 of this Report, the Board is required to consider the cost effectiveness of Efficiency Manitoba's electric and gas portfolios, with the determination of cost effectiveness based only on the Program Administrator Cost Test ("PACT") metric. A finding of cost effectiveness is not a pre-condition to a recommendation that an efficiency plan be approved.

In the Plan, the PACT ratio for the total electric portfolio is 3.27, meaning that for every dollar spent by Efficiency Manitoba to achieve the savings targets, the marginal value to Manitoba Hydro resulting from the savings achieved is projected to be $3.27. The PACT ratio for the total gas portfolio is projected to be 0.99, meaning that for every dollar spent by Efficiency Manitoba to achieve the net savings targets, the value to Centra resulting

from the net savings is $0.99. The gas portfolio PACT ratio of 0.99 factors in reductions in gas savings and thus reductions in benefits when interactive effects are included. When interactive effects are not included, the gas portfolio PACT ratio is 1.24. In achieving those ratios at the overall portfolio level, Efficiency Manitoba includes in the Plan a mix of programs that range in the degree of cost effectiveness, including programs that are cost ineffective by the PACT ratio, meaning that the costs to Efficiency Manitoba outweigh the benefits to the utility, as shown by a ratio of less than 1.0.

With respect to the program bundles that Efficiency Manitoba has developed to group program offerings for each customer segment, all of the electric program bundles are cost effective by the PACT metric except for the Indigenous Small Business program bundle, which has a PACT ratio of 0.57. Of the gas program bundles, eight are cost ineffective on the PACT metric (with ratios for these bundles ranging from as low as 0.41 to as high as 0.89), while six are cost effective. As with the overall portfolios, each bundle includes a mix of programs that range in the degree of cost effectiveness, including programs that are cost ineffective.

As discussed above, in developing the Plan, Efficiency Manitoba considered the cost effectiveness of the overall portfolios; Efficiency Manitoba did not eliminate or screen individual measures in isolation for cost effectiveness. Efficiency Manitoba's understanding is that the Regulation does not require cost effectiveness at the measure level unless a three-year efficiency plan includes DSM initiatives in excess of those required to achieve the savings targets, which is not the case for the current Plan. However, Daymark provided a listing of individual measures with PACT ratios of less than 1.0. This listing shows that there are 63 individual electric measures (21 Commercial, 2 Income-Qualified, 10 Indigenous, 3 Industrial, and 27 Residential measures) and 44 individual gas measures (14 Commercial, 8 Income-Qualified, 7 Indigenous, 1 Industrial and 14 Residential) with PACT ratios of less than 1.0, out of 209 electric measures and 109 gas measures. Efficiency Manitoba noted in its evidence that the results provided by Daymark are skewed due to Efficiency Manitoba's approach in its workpapers to assigning the amount of program costs to individual measures, which sometimes was

based on assigning all of the costs to a single measure within a program bundle. However, the listing provides an approximate sense of the varying degrees of cost effectiveness of the individual measures included in the Plan.

When measures that have a PACT ratio of less than 1.0 are removed from the Plan, the savings that result from the electrical portfolio decrease from an average of 1.46% over the three years of the Plan to an average of 1.42%. While the savings decrease, this also results in $9.8 million less being spent over the three years. Similarly, the savings that result from the gas portfolio decrease from a three-year average of 0.78% to 0.67%, while the costs decrease by $13.5 million over that time period.

However, in addition to consideration of cost effectiveness of the electrical and gas portfolios, another mandatory consideration for the Board is whether Efficiency Manitoba is reasonably achieving the aim of providing initiatives in its efficiency plans that are accessible to all Manitobans. The Regulation further prescribes that the Board must consider whether the Plan adequately considers the interests of residential, commercial, and industrial customers. The legislative framework does not prescribe the use of a particular metric or test for evaluating the achievement of accessibility, other than the requirement that, where it is practical to do so, at least 5% of Efficiency Manitoba's budget be allocated to initiatives targeting lower-income or hard-to-reach customers. This budget requirement is discussed further in section 8.0 of this Report.

Daymark's evidence noted that, where there are programs with cost-effectiveness results below 1.0, those programs increase the cost of electric or gas service in Manitoba, to the extent that all the benefits are incorporated into the analysis. However, the Independent Expert Consultant also advised that:

> *even if there are no additional benefits, it does not mean that measures should be removed from the Plan just based on the PACT or TRC cost-effectiveness. It would make sense to consider whether these measures are driven by other reasons, such as strategic market transformation; social; energy or environmental policy; or assuring access to the broad*

*cross section of Manitobans before making any recommendation as to whether to include or exclude them from the Plan.*

Daymark presented an analysis that showed only 4% of the electric savings arise from electric measures which are not cost effective, according to a cost-effectiveness test developed by Daymark. The gas portfolio is not as cost effective, with 25% of the gas savings arising from gas measures which are not cost effective. The cost-effectiveness test developed by Daymark is similar to the Total Resource Cost test but it excludes program administration costs, which are the costs to develop and implement the DSM programs (excluding incentives). This was done because Efficiency Manitoba had not allocated program administration costs at the individual measure level, instead assigning them only at the bundle level.

Although measures that promote the objective of having programming that is accessible to all Manitobans are not necessarily cost ineffective, the Board heard that there may be a conflict between the goals of cost effectiveness and accessibility. Eliminating cost-ineffective programs from the Plan may result in reducing the accessibility of the programming in the Plan. The balance struck by Efficiency Manitoba between these two potentially conflicting objectives is at the heart of the Board's review of the mandatory considerations of whether the portfolio of initiatives is cost effective and whether the Plan reasonably achieves the aim of providing initiatives that are accessible to all Manitobans.

Efficiency Manitoba also has access to the Affordable Energy Fund which can further the objective of providing accessible DSM programming. The Affordable Energy Fund was created by *The Winter Heating Cost Control Act* and is continued under *The Efficiency Manitoba Act* (the "Act"). The Affordable Energy Fund can be used to fund efficiency measures and conservation in the use of home heating fuels other than electricity or gas. Efficiency Manitoba intends to use the Affordable Energy Fund for initiatives in the Diesel Zone communities but has not included specific savings or spending in the Plan. Under s. 18(4) of the Act, Manitoba Hydro is to make available to Efficiency Manitoba amounts

in the Affordable Energy Fund where Efficiency Manitoba undertakes initiatives consistent with the legislative requirements for use of the Affordable Energy Fund.

## 7.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba submits that, while a limited number of measures within bundles are arguably not as cost effective as others, those measures serve an important purpose in meeting Efficiency Manitoba's overall regulatory obligations and mandate. Efficiency Manitoba further argues that, although Efficiency Manitoba is required to analyze the cost effectiveness of each initiative proposed under the Plan, in the Board's review of the Plan, cost effectiveness is to be determined at the portfolio level only. At the portfolio level, cost effectiveness is a guiding factor, but still is only one factor. Cost-ineffective programs are required to meet the savings targets and may be required to meet the goal of accessibility.

Efficiency Manitoba's position is that eliminating programs based on isolated cost-effectiveness screens would serve to unbalance the portfolio and introduce risks regarding achievement of savings targets.

Efficiency Manitoba accepts the position of Manitoba Keewatinowi Okimakanak that, for the purposes of reviewing whether the Plan is "accessible to all Manitobans", "accessible" means financially accessible and physically accessible, meaning affordable and available.

Efficiency Manitoba argues that the Plan reasonably achieves the aim of being accessible and disputes the position of the expert witness for the Consumers Coalition, Mr. Jim Grevatt, that residential programs are not accessible. Efficiency Manitoba states that it plans to continue offering popular programs with previous high participation with adjustments and enhancements to include new measures, revised delivery models, and an easier, more streamlined application process. Efficiency Manitoba also states that it is working to increase access to its programming for First Nations customers, including the reduction of administration and paperwork requirements and improving financial

accessibility. As well, Efficiency Manitoba confirmed that First Nations on-reserve customers will have access to all Efficiency Manitoba programs, in addition to the dedicated programming for the Indigenous customer segment.

Efficiency Manitoba testified that the participation rates in the Plan for First Nations programming are based on actual Manitoba Hydro numbers, but confirmed that participation for this programming is not capped. Efficiency Manitoba states that, if there are opportunities to increase participation in First Nations programs, Efficiency Manitoba will pursue them.

Efficiency Manitoba acknowledges that hard-to-reach customers extend beyond those in the Income-Qualified and Indigenous customer segments and could also include apartment-dwellers, seniors, rural, and small business customers. Efficiency Manitoba states that there are strategies within the Residential programs to target hard-to-reach customers beyond those in the Income-Qualified and Indigenous customer segments.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs argues that Efficiency Manitoba has not established that the Plan is accessible for First Nations ratepayers and suggests that Efficiency Manitoba appears to consider accessibility as being based on the existence of programming rather than the robustness of programming. The Assembly of Manitoba Chiefs argues that “accessible” should not be defined as “available”, but rather “able to be easily obtained or used”. This Intervener states that, as the Plan is not accessible in an equitable manner for First Nations customers, Efficiency Manitoba is not advancing reconciliation and runs the risk of further exacerbating inequalities between First Nations and non-First Nations populations.

The Assembly of Manitoba Chiefs relies on evidence provided by its expert witness, Dr. Timothy Clark, that First Nations on-reserve customers consume 4% of annual electric energy, but the Plan projects only 0.5% of electric energy savings will be achieved from the Indigenous customer segment, while Indigenous electric programming constitutes 3%

of the overall budget. Noting that the Indigenous customer segment includes both First Nations and Métis customers, the Assembly of Manitoba Chiefs submits that the electric savings targets for First Nations programs should be increased. Increasing First Nations savings targets will contribute to the reduction in the inequitable distribution of energy burdens and will assist with recognition of the Treaty rights of First Nations and First Nations' contributions to the development of Manitoba's energy system. The Assembly of Manitoba Chiefs argues that the Act permits a balanced approach to energy efficiency programs that can consider overall cost effectiveness in tandem with principles of equity.

The Assembly of Manitoba Chiefs argues that Efficiency Manitoba should be directed to:

- collect data in relation to off-reserve First Nations programs and to consider the creation of an off-reserve First Nation Income Qualified Program;
- provide evaluation for electric programming using the Total Resource Cost test, alongside the PACT, at the review of the next three-year efficiency plan;
- set targets for economic participation for First Nations and First Nations citizens;
- add clear programming targets for the participation of First Nations on-reserve customers in the First Nations-specific and general programming; and
- expand enabling strategies like the Community Energy Program and allocate to these strategies stable funding to reflect the reality that there are 63 First Nations in Manitoba that should all have equitable access to energy efficiency programming.

Consumers Coalition

The Consumers Coalition argues that, while cost effectiveness is an important factor to consider, it must be balanced with multiple other statutory objectives – including accessibility. This Intervener states that there is a distinction between accessibility and inclusiveness, and defines "inclusive" as programs being available to all types of customers and "accessible" as the ease of customer participation in the programs.

The Consumers Coalition submits that the offerings for the Residential customer segment are unreasonably conservative. In this regard, the Consumers Coalition states that the savings targeted to be achieved from the Residential customer segment are too reliant on codes and standards savings, which are not available to all customers as they only provide financial assistance to customers who build a new home, complete renovations, undertake energy efficiency upgrades, or buy new appliances. The Consumers Coalition argues that the Board should recommend that the Residential and Income Qualified budgets, savings, and participation targets be increased, in order to meet the aim of providing initiatives that are accessible to all Manitobans.

This Intervener further argues that, in addition to the PACT, Efficiency Manitoba should calculate and the Board should consider results from the Total Resource Cost test. The Consumers Coalition also recommends that the Board find that there are shortcomings with Manitoba Hydro's marginal values and that these shortcomings should be remedied in future proceedings.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group submits that the overall legislative objective is to meet the savings targets with the most cost-effective programs and questions the weight given by Efficiency Manitoba to other objectives such as targeting lower-income or hard-to-reach customers. It argues that Industrial programs are among the most cost effective and as such, result in reduced customer bills that will improve the competitiveness of industrial businesses and the Manitoba economy. The Manitoba Industrial Power Users Group argues that the Board should recommend that Efficiency Manitoba be directed to amend its Plan by minimizing spending on programs that exhibit unfavourable economics and, if possible, increasing prioritization on programs that exhibit very favourable economics, such as Industrial custom initiatives. This Intervener suggests that reducing DSM programming and the resulting achievement of savings below the 1.5% electrical target are acceptable outcomes.

Manitoba Keewatinowi Okimakanak

Manitoba Keewatinowi Okimakanak submits that “accessible” should be defined as financially accessible and physically accessible – meaning both affordable and available. It argues that the Plan is not necessarily accessible to citizens of northern First Nations. Manitoba Keewatinowi Okimakanak identifies this as a concern because all Manitoba ratepayers will pay for the costs of Efficiency Manitoba’s programs and operations, and any resulting rate increase will be a challenge for First Nations ratepayers on- and off-reserve due to factors of high energy consumption rates, challenges with housing stock, and high rates of poverty, specifically energy poverty. This Intervener identifies barriers to accessibility of programming for First Nations, including the availability of reliable internet access and a lack of clarity regarding the availability of Residential programs to First Nations on-reserve residential customers, including those with Manitoba Hydro accounts in arrears.

## 7.2 Conclusions of the Panel

The Panel concludes that the electric and gas portfolios are cost effective under the PACT metric. The benefits of the electric portfolio outweigh the costs by a factor of 3.27 times. While the gas portfolio PACT ratio is 0.01 below unity, the Panel considers this to be marginal, particularly as the gas portfolio PACT ratio without interactive effects is 1.24.

The parties did not dispute that, using the PACT metric, the electric and gas portfolios are both at or above unity. The issue of contention between the parties was the balance struck by Efficiency Manitoba between cost effectiveness and accessibility and which objective should be given more weight. One view is that the savings targets should be met only with the most cost-effective programs, while the other view is that cost effectiveness does not override the goal of achieving accessible programming.

In considering this issue, the meaning of “accessible” is important. The Panel accepts the definition proposed by Manitoba Keewatinowi Okimakanak that accessible means both affordable and available. This definition takes into account the context of the Manitoba

market, including the reality of geographic differences and income disparities, and barriers to participation associated with these realities.

With the accepted meaning of “accessible” and within the current legislative framework, the Panel concludes that Efficiency Manitoba has reasonably struck the right balance between cost effectiveness and accessibility. The legislation does not establish a hierarchy of objectives, nor does it mandate achievement of a particular level of cost effectiveness or accessibility; rather, the existing framework sets out a number of objectives that must be taken into account and trade-offs may be required where those objectives are in conflict. In this regard, the Board recognizes Efficiency Manitoba’s dedication of 3% of its electric portfolio budget and 2% of its gas portfolio budget to Indigenous programming.

The Panel notes that although a significant number of the gas and electric measures have PACT or TRC ratios less than unity, Daymark showed that the majority of the savings arise from cost-effective measures, at least according to the cost-effectiveness test developed by Daymark. Thus, there are more savings coming from cost-effective measures than from cost-ineffective measures. This is particularly the case for the electric measures. The Panel concludes that despite the inclusion of cost-ineffective measures that are necessary for accessibility, most of the savings expected to be achieved by the Plan are cost effective.

Efficiency Manitoba has not yet implemented any DSM programming. While it acknowledges potential barriers to participation, particularly for lower-income and hard-to-reach customers, it also has developed the Plan to try to remove those barriers to the extent possible. Without programming having been implemented and without data to track whether barriers are being overcome, there is not enough information to conclude that the Plan should be amended to increase customer segment budgets and program participation targets. It is simply not known if these changes will enhance accessibility for Manitobans, but it is known that these changes would alter and potentially reduce the cost effectiveness of the portfolios. The Panel’s view is that it is not reasonable to make

such changes at a time when it is not known if the changes will succeed in making the programming more financially and physically accessible.

The Panel acknowledges that there are particular challenges associated with achieving accessibility of DSM programming for First Nations on-reserve customers and notes that participation targets set by Manitoba Hydro for First Nations customers were not achieved. The Panel heard extensive evidence about barriers to participation for First Nations on-reserve customers, including the fact that First Nations reserves are located throughout Manitoba with many in remote locations, the fact that there are administrative burdens experienced by First Nations, and limits on the availability of and access to information and educational programming.

The Panel concludes that it will be important for Efficiency Manitoba to closely monitor and track participation and whether its programs are achieving the goal of being affordable and available, particularly for First Nations, Métis, lower-income, and other hard-to-reach customers. The Panel accepts that, to achieve accessibility in this Plan, Efficiency Manitoba must collect and compile information throughout the implementation of this Plan, so that it can be responsive to any areas where adjustments are required to be successful in overcoming barriers to participation during this Plan. This information will also be necessary in designing the next three-year efficiency plan. This will include giving consideration to how the funds from the Affordable Energy Fund will be used in the Diesel Zone communities, to the potential for emerging technologies and unplanned opportunities in First Nations communities, and to how program design and marketing can be developed and improved for hard-to-reach customers.

The Panel does not accept the recommendation of the Assembly of Manitoba Chiefs that Efficiency Manitoba be directed to report on measures of equity for future efficiency plans and in the evaluation of implemented efficiency plans. The Panel concurs with Efficiency Manitoba that while the principles of equity identified by the Assembly of Manitoba Chiefs' expert witness, Dr. Clark, are important, these principles have not been applied in any other jurisdiction to DSM programming to Dr. Clark's knowledge. The Panel is also

concerned that these principles may be difficult for Efficiency Manitoba to measure in practice. However, as detailed in this Report, the Panel expects that Efficiency Manitoba will work directly with First Nations communities to meet the needs of First Nations customers and overcome barriers to participation. The recommendations of the Panel regarding tracking and responding to participation rates will facilitate progress in this regard.

The Panel also supports Efficiency Manitoba's commitment to re-evaluate the saturation of the market for efficiency programs on-reserve, such as the Direct Installation program, identified in the information provided to Efficiency Manitoba by Manitoba Hydro. The Panel concludes that Efficiency Manitoba's participation rates may be conservative due to the reliance on Manitoba Hydro data and notes that Efficiency Manitoba intends to achieve greater uptake than projected in the Plan. The Panel recommends that Efficiency Manitoba revisit the individual First Nations communities in order to effectively evaluate the degree of saturation of the market.

The Panel emphasizes the close relationship between collecting the necessary information to track and react to participation rates and customer engagement. Robust consultation with stakeholders and customers, including with individual First Nations and First Nations advocacy organizations, will allow Efficiency Manitoba to gain better insight into the opportunities that are available in particular locations and circumstances, and to more fully evaluate the potential costs and projected participation. In this regard, the Panel notes that Efficiency Manitoba has accepted the recommendation of the Assembly of Manitoba Chiefs that Efficiency Manitoba should:

- conduct additional research to consider potential benefits or disadvantages to moving to a dedicated funding model for each First Nation and track the issue for consideration at the next efficiency plan review,
- conduct research and direct engagement on the gaps between bill savings for the First Nations insulation and direct install programs compared to the bill savings in

other Income Qualified programs to determine what further can be done to reduce the gap and increase bill savings for more First Nations on-reserve customers, and
- engage directly with First Nations governments and citizens.

Efficiency Manitoba has also accepted the recommendation of Manitoba Keewatinowi Okimakanak that the Plan be amended to explicitly set out that:

- All residential programs are accessible to Indigenous residential customers – and that the Indigenous residential programs are available in addition to the residential programs;
- All small business programs are accessible to Indigenous small business customers in addition to the Indigenous small business programs; and
- Energy Efficiency Loans are available to customers whose accounts are in arrears, including First Nation on-reserve residential customers within the Indigenous customer segment whose accounts are in arrears.

As Efficiency Manitoba has accepted these recommendations and no other party opposed these matters, the Panel concludes that these recommendations should be pursued. It is the Panel's view that the Plan does not need to be amended to address these recommendations of the Assembly of Manitoba Chiefs and Manitoba Keewatinowi Okimakanak; rather, the expectation is that Efficiency Manitoba will follow through on its acceptance of these recommendations and will report on its progress in the reporting recommended in this Report as well as in the filing of the next three-year efficiency plan. The Panel expects that Efficiency Manitoba will ensure that the matters raised by Manitoba Keewatinowi Okimakanak will be made clear in its education, marketing, and outreach processes.

## 8.0 Efficiency Manitoba's Budget

| | | |
|---|---|---|
| *Regulation* | *s. 11(c)* | *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: 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* |
| *Regulation* | *s. 11(f)* | *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: whether Efficiency Manitoba's administration budget is reasonable when compared to similar organizations* |
| *Regulation* | *ss. 11(i)* | *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: Efficiency Manitoba's use of private-sector enterprises and non-governmental organizations to deliver demand-side management initiatives* |

In a letter to the Chair of Efficiency Manitoba dated April 24, 2019, the Minister of Crown Services set out a series of directives for Efficiency Manitoba. Two of these directives relate to Efficiency Manitoba's budget:

1. Establish the structure of the new corporation ensuring a leaner, more streamlined organization to deliver energy efficiency programs; and
2. Find ways to obtain the same or better outcomes as formerly obtained under the "Power Smart" program, but at a significantly smaller percentage of the cost and materially less labour costs.

As discussed below in section 12.0, pursuant to s. 11(l) of the Regulation, the Board must consider whether Efficiency Manitoba has reasonably complied with the directions of the Minister.

The Regulation also specifically directs the Board to consider two other factors related to Efficiency Manitoba's budget when reviewing the Plan:

- Whether Efficiency Manitoba's administration budget is reasonable when compared to similar organizations; and

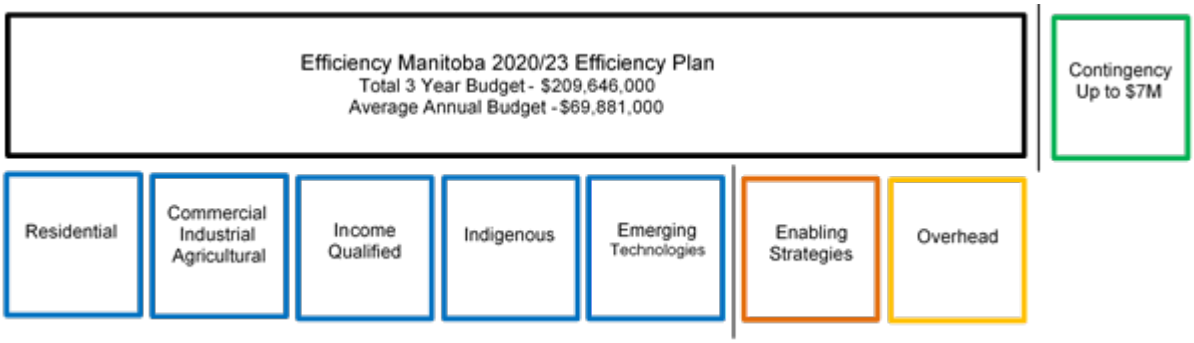
- Whether, if it is practical to do so, at least 5% of Efficiency Manitoba's budget for demand-side management initiatives is allocated to initiatives targeting low-income or hard-to-reach customers.

In addition, s. 11(i) Regulation directs the Board to consider Efficiency Manitoba's use of private-sector enterprises and non-government organizations to deliver demand-side management initiatives.

Efficiency Manitoba has budgeted a total of $209,646,000 for the electric and gas DSM portfolios over the three years of the Plan. The average budget for each year of the Plan is $69,881,000. Efficiency Manitoba's budget consists of allocations to the following categories:

- Residential customer segment;
- Commercial, Industrial and Agricultural customer segments;
- Indigenous customer segment;
- Income Qualified customer segment;
- Emerging Technologies;
- Enabling Strategies; and
- Corporate Overhead

Efficiency Manitoba depicts its operating budget as follows:




The customer segment budget categories and the Emerging Technologies budget category consist of costs related to customer incentives for DSM measures, costs for

external delivery and implementation of DSM programming, and Efficiency Manitoba staff costs associated with designing and modelling DSM programs and administering DSM programming. The Emerging Technologies budget consists of costs associated with two specific technologies that have cleared the pilot project stage.

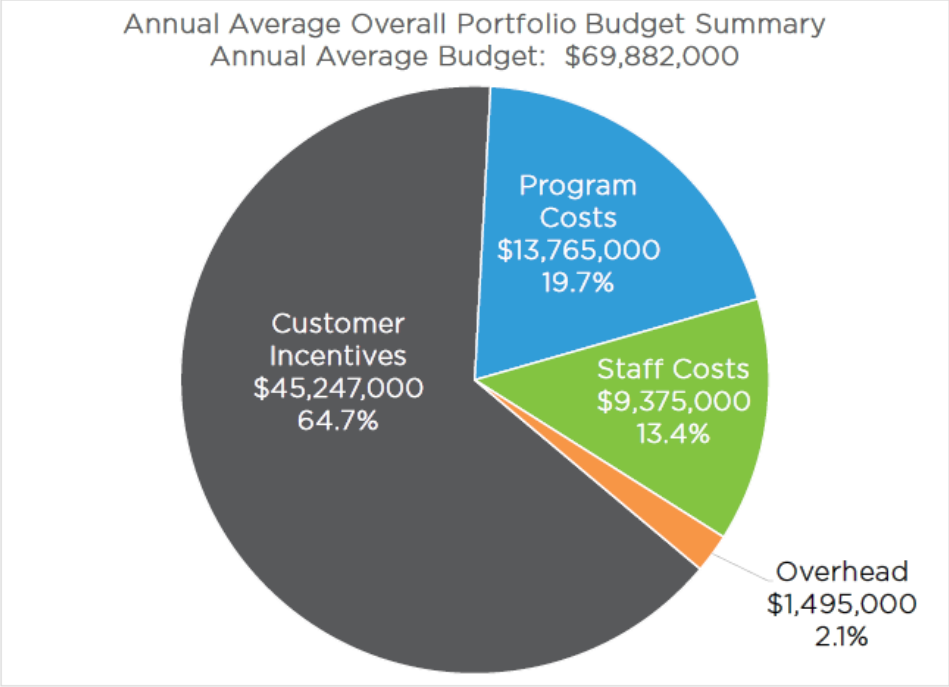
The Enabling Strategies budget category includes the costs of general energy efficiency support activities that are not specific to a program or measure, such as engagement activities (including branding, the CRM/DSM system, and engagement activities with the Energy Efficiency Advisory Group and other stakeholders), and the development of energy efficiency codes and standards. The Enabling Strategies budget also consists of costs associated with the research and development of emerging technologies that are not yet ready for the Manitoba market.

The Corporate Overhead category includes leadership and general administration staff costs. This budget also includes regulatory costs, legal and consultant costs, and expenses related to office space rental, furniture, and corporate information technology services.

The customer segment budget categories and Emerging Technologies budget category consist of DSM program-related costs that are directly attributable to either the electric or gas DSM program portfolios. However, the Enabling Strategies budget category contains energy efficiency support activities that are not predominantly gas or electric focused, but are rather directed toward both portfolios. In addition, the Corporate Overhead budget category consists of costs that are attributable to both the electricity and gas portfolios.

These costs were allocated by Efficiency Manitoba on the basis of the respective share of the gas and electric portfolios of the total energy savings. Efficiency Manitoba converted the net electricity savings and net gas savings forecast in the Plan to equivalent units of energy (gigajoules) and then allocated the joint costs within the Enabling Strategies and Corporate Overhead categories based on each fuel’s share of the total gigajoule savings. This results in 75% of the joint costs being allocated to the electric portfolio and 25% to the gas portfolio.

The following graph illustrates the percentage of Efficiency Manitoba's operating budget allocated to customer incentives, staff costs associated with the design and administration of DSM programming, program costs related to program delivery, advertising and enabling strategies, and corporate overhead costs:




Under the Plan, private-sector organizations and businesses will implement and deliver DSM programs, perform advertising services for DSM programs, and engage in enabling strategies (namely, general energy efficiency support activities that are not specific to a program or offer).

The graph above illustrates that 19.7% of Efficiency Manitoba's average annual budget will be spent on private-sector DSM program delivery, advertising, and enabling strategies.

Efficiency Manitoba also identified a total contingency budget of $7 million for the three years of the Plan. Under section 9(l)(iii) of *The Efficiency Manitoba Act* (the "Act"),

Efficiency Manitoba may budget for a contingency fund for the specific purpose of pursuing emerging DSM opportunities not otherwise addressed in the Plan. The contingency budget is not included within Efficiency Manitoba's annual average operating budget, or within the cost-effectiveness analysis in the Plan. If Efficiency Manitoba wishes to use amounts from the contingency fund, it will require funding for these amounts from Manitoba Hydro. Efficiency Manitoba states that it will use the contingency fund for unplanned and unbudgeted DSM opportunities that arise during the Plan years. Unplanned DSM opportunities include technologies that have become market-ready earlier than anticipated or emerging energy efficiency opportunities that were not budgeted or planned. Efficiency Manitoba testified that it will not use the contingency fund to make up shortfalls in meeting the legislated savings targets within the Plan.

Therefore, Efficiency Manitoba has budgeted to spend an average of $69,882,000 per each year of the Plan, and may spend up to an additional $7 million of the contingency fund on emerging DSM opportunities across all three years of the Plan.

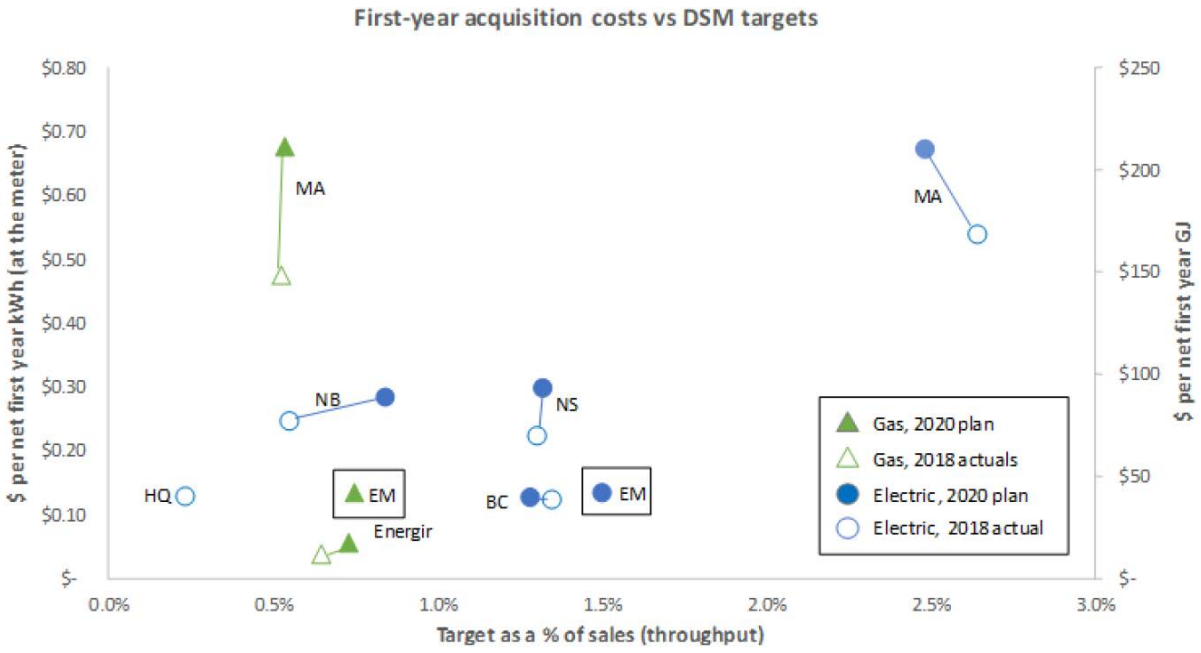
As discussed above, pursuant to s.11(c) of the Regulation, the Board must consider whether, if practical to do so, at least 5% of Efficiency Manitoba's budget for DSM programming is allocated to programs targeting lower-income or hard-to-reach customers.

Efficiency Manitoba states that its operating budget allocates 6% of the electric efficiency budget and 32% of the gas efficiency budget to the Indigenous and Income Qualified customer segments. It defines both customer segments as consisting of "hard-to-reach" customers.

As noted above, the Minister has directed that Efficiency Manitoba Find ways to obtain the same or better outcomes as formerly obtained under the "Power Smart" program, but at a significantly smaller percentage of the cost and materially less labour costs. The following chart compares the costs of the Plan with those of Manitoba Hydro's 2015/16 Power Smart DSM program ("2015/16 Power Smart Program"):

| Manitoba Hydro 2015/16 | | Efficiency Manitoba Annual Average 2020/23 Efficiency Plan | |
|---|---|---|---|
| $49,329,000 | INCENTIVE COSTS | $45,247,000 | 8% ↓ |
| $9,927,000 | PROGRAM COSTS | $13,765,000 | 39% ↑ |
| $14,949,000 | STAFF COSTS | $9,375,000 | 37% ↓ |
| $2,190,000 | OVERHEAD COSTS | $1,495,000 | 32% ↓ |
| **$76,396,000** | **TOTAL COSTS** | **$69,881,000** | 9% ↓ |

The legislation also requires consideration of whether Efficiency Manitoba's administration costs are reasonable when compared to other jurisdictions. One way of depicting this is through a comparison of first-year acquisition costs. First-year acquisition costs represent the cost of procuring DSM first-year savings. The following chart within the Plan compares the Plan's first-year acquisition costs with those in other jurisdictions:




The comparators in the graph are those jurisdictions[3] that have similar savings targets, policy environments, and climate as Efficiency Manitoba, as well as readily available data.

Daymark gave evidence that the percentage breakdowns by budget category of Efficiency Manitoba's total budget are very similar to average electric energy efficiency program budgets in other Canadian and U.S. jurisdictions. The following graph prepared by Daymark represents this visually:

[3] BC Hydro, Efficiency NS (Nova Scotia), Énergir (Quebec), Hydro Quebec, Massachusetts, NB Power (New Brunswick)

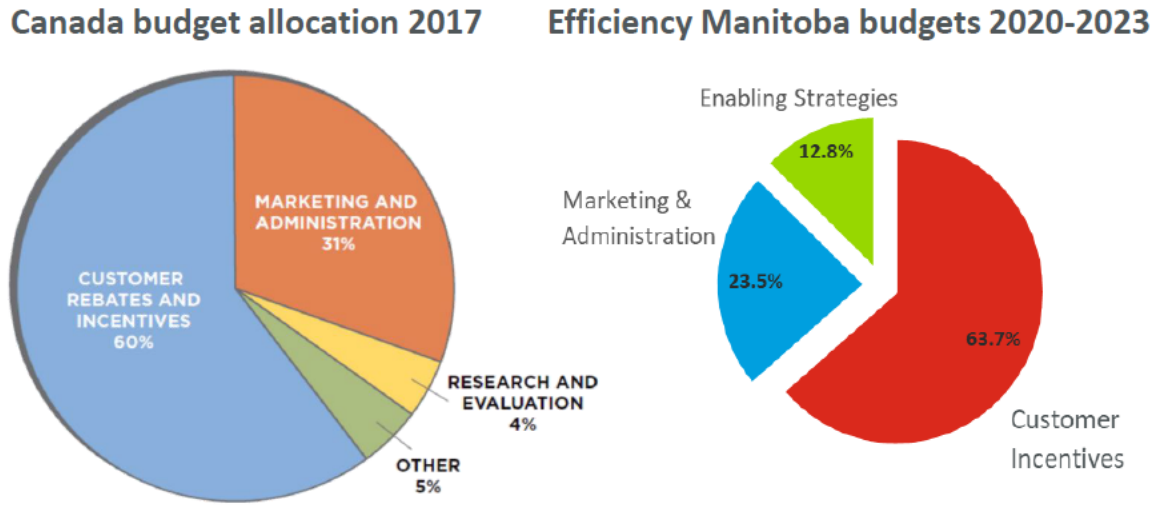



**Figure 3:** Cost Breakdowns Efficiency Manitoba Electric Program
Consortium for Energy Efficiency (CEE) 2018 Annual Report, May 2019, reflects data for 302 utility and nonutility program administrators operating efficiency programs in all 50 US States, the District of Columbia, and eight Canadian provinces.

Daymark stated that Efficiency Manitoba's slightly higher spending on customer incentives in the electric portfolio reflects Efficiency Manitoba's effort to drive higher participation rates in its programs compared to the 2015/16 DSM program.

With respect to the gas portfolio budget, the percentage breakdowns by budget category are nearly identical to average gas energy efficiency budgets in other jurisdictions in Canada and the United States. The following graphs prepared by Daymark represent this visually:

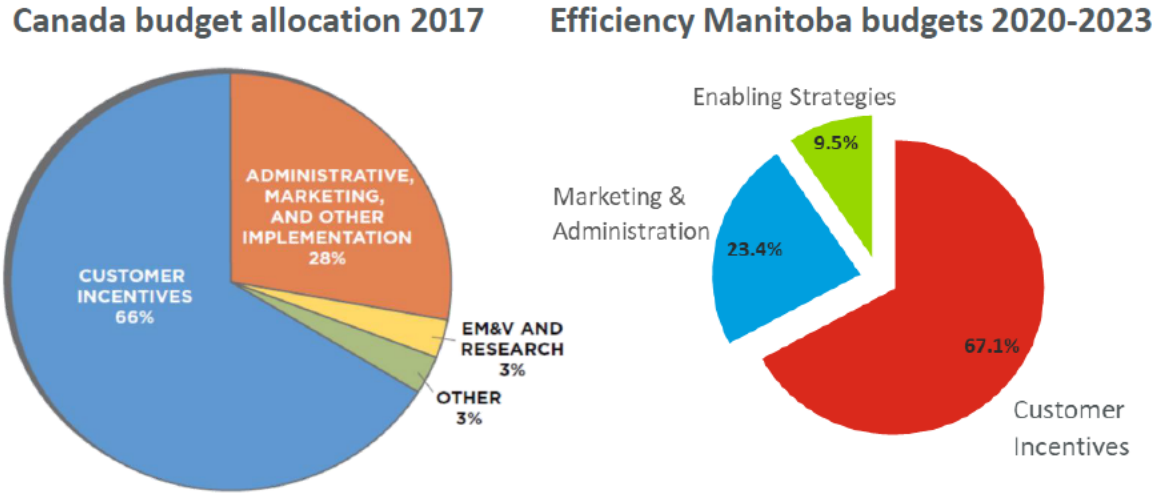



**Figure 4:** Comparison of Budgeted Expenditures – Natural Gas
Consortium for Energy Efficiency (CEE) 2018 Annual Report, May 2019, reflects data for 302 utility and nonutility program administrators operating efficiency programs in all 50 US States, the District of Columbia, and eight Canadian provinces.

Under s.12(5) of the Act, in implementing an approved efficiency plan, Efficiency Manitoba may adjust the activities to be undertaken during the three-year period of the efficiency plan, provided that (a) the adjustments are reasonably required in order to maximize the amount or cost effectiveness of the net savings to be achieved under the approved efficiency plan and (b) do not result in Efficiency Manitoba's total costs exceeding the total costs specified in the approved efficiency plan.

This provision prescribes that Efficiency Manitoba cannot overspend its operating budget and contingency fund once the Plan is approved by the Minister. However, it can make adjustments to its budget if these adjustments are reasonably required in order to maximize the amount or cost effectiveness of net savings under the Plan.

Efficiency Manitoba states that it will monitor actual spending during the Plan years and track participation rates in DSM programming at both the bundle and measure level. Should participation rates vary from those anticipated for certain measures, Efficiency Manitoba may determine that adjustments are necessary to its operating budget.

Efficiency Manitoba states that adjustments to the budget will be made in accordance with the following considerations:

- If there are unspent budget dollars remaining within a program, Efficiency Manitoba may transfer these dollars to another program within the same customer segment in the same Plan year. Efficiency Manitoba anticipates that most variations and resulting adjustments will be accommodated in this manner.
- If Efficiency Manitoba has exhausted a program budget within a customer segment, Efficiency Manitoba will consider transferring money allocated to that customer segment in the next Plan year in order to achieve projected or additional energy savings in the current Plan year.
- If neither of the options above is feasible, Efficiency Manitoba may consider transferring unspent budget dollars from the Enabling Strategies budget category.
- In the event all other options are not viable, Efficiency Manitoba may consider shifting budgets between customer segments. However, Efficiency Manitoba states that it will not reduce the budgets for the Indigenous or Income Qualified customer segments.

## 8.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba takes the position that its operating budget provides for greater savings at less cost than Manitoba Hydro's Power Smart DSM program, as was directed within the Minister's letter to the Chair of Efficiency Manitoba. Efficiency Manitoba states that, although Efficiency Manitoba has increased its program costs by 39% compared to those of the 2015/16 Power Smart Program, Efficiency Manitoba's overall annual budget is $6 million less than that of the 2015/16 Power Smart Program, which results in a 9% decrease from the 2015/16 Power Smart Program total budget.

Efficiency Manitoba asserts that the operating budget of the Plan should be compared to that of the 2015/16 Manitoba Hydro Power Smart Plan because that plan predates the enactment of the Act, which contemplated the transfer of the responsibility for DSM programming from Manitoba Hydro to Efficiency Manitoba. Staffing and DSM planning at Manitoba Hydro in the years following the enactment of the Act have reflected the pending transfer of responsibilities and therefore more recent Power Smart plans would not provide an appropriate comparator to the Plan.

Efficiency Manitoba also takes the position that its operating budget is reasonable compared to DSM programming budgets in other jurisdictions. As depicted in the first-year acquisition costs chart, the Plan's first-year acquisition costs are comparable to or lower than those of most other jurisdictions in the graph.

With respect to cost structure, Efficiency Manitoba is of the view that its cost structure is reasonable because the percentage of its budget spent on customer incentives is comparable to that of other jurisdictions. DSM programs in other jurisdictions allocate 69 to 76% (Massachusetts), 47-54% (Oregon) and 60% (Nova Scotia) of their total budgets to customer incentives, respectively. Efficiency Manitoba spends 64% of its electric portfolio and 67% of its gas portfolio on customer incentives.

In addition, Efficiency Manitoba asserts that it has budgeted at least 5% of its overall DSM budget for hard-to-reach and lower-income customers. Under the Plan, 6% of the electric portfolio and 32% of the gas portfolio has been budgeted for the Income Qualified and Indigenous customer segments.

Consumers Coalition

The Consumers Coalition asserts that the costs within the Enabling Strategies and Corporate Overhead budget categories applicable to both portfolios should not be allocated on the basis of the respective share of the total energy savings. In the Plan, the proposed allocation proportion is 75% toward the electric portfolio and 25% to the gas portfolio. Instead, the Consumers Coalition submits that administrative and support costs

are typically allocated based on the principle of cost causation, which commonly involves applying “cost drivers” such as labour costs, operating, maintenance, and administrative costs, or plant investment in order to allocate costs.

With respect to allocating Enabling Strategies and Corporate Overhead joint costs, the Consumers Coalition takes the position that there are two reasonable “cost driver” approaches: (1) the DSM program costs attributed to the gas and electricity portfolios and (2) Efficiency Manitoba staff costs attributed to the gas and electricity portfolios. These two approaches yield close to the same result: an allocation split of 70/30 for the electricity versus gas portfolios.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs does not dispute that the Plan achieves the 5% budget threshold for hard-to-reach and lower-income customers.

However, the Assembly of Manitoba Chiefs asserts that a very minimal component of the 5% budget threshold is spent on on-reserve First Nations DSM programming. Efficiency Manitoba has allocated 6% of the electric efficiency budget and 32% of the gas efficiency budget to the Indigenous and Income Qualified customer segments. However, none of the gas efficiency budget is available to on-reserve First Nations. In addition, only 3% of the electric budget is allocated to the Indigenous customer segment, which consists of both First Nations and Métis customers. This means that less than 3% of the electric budget is spent on on-reserve First Nations programming.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group argues that Efficiency Manitoba should use the contingency fund to address emerging opportunities and particularly for cost effective opportunities in the Industrial segment. Contingency funding should be available for added allocation to programs that may already have budget allocated.

## 8.2 Conclusions of the Panel

The Panel concludes that the Plan forecasts greater savings at less cost, including materially less labour costs, than under the 2015/16 Power Smart Program. This is consistent with the direction of the Minister. The Plan is projected to achieve additional electric energy savings of 35% and gas energy savings of 42% when compared to the 2015/16 Power Smart Program. The total average budget under the Plan is $6 million less than the 2015/16 Power Smart Program. Efficiency Manitoba has also budgeted to spend 37% less on staff costs than the 2015/16 Power Smart Program.

Furthermore, the Panel determines it was reasonable for Efficiency Manitoba to use the 2015/16 Power Smart Program as a comparator to assess whether it was doing more with less, instead of more recent Power Smart programs. Since the enactment of the Act, due to the expected transfer of responsibilities from Manitoba Hydro to Efficiency Manitoba, Manitoba Hydro's DSM programming has been in a "status quo" position. As such, the 2015/16 Power Smart Program, which was designed and implemented prior to the enactment of the Efficiency Manitoba Act, is an appropriate comparator.

Even if compared to the most recent Manitoba Hydro DSM Plan for 2019/20, the Plan expects to generate 8% more electric savings with 21% less budget. The Plan also expects 52% more gas savings, albeit with 84% greater budget for gas programming than projected for Centra's DSM budget.

The Panel is also satisfied that Efficiency Manitoba's use of private-sector contractors to implement and deliver its DSM programming is reasonable, pursuant to s. 11(i) of the Regulation. As indicated above, 19.7% of Efficiency Manitoba's average annual budget will be spent on private-sector DSM program delivery, advertising, and enabling strategies, and it has decreased internal staff costs by 37% compared to the 2015/16 Power Smart Program.

The Panel concludes that Efficiency Manitoba's operating budget is reasonable compared to those in other jurisdictions, based on the comparisons made by Daymark.

In addition, the Plan has comparable or lower first year acquisition costs to those of other jurisdictions.

The Panel determines that Efficiency Manitoba's proposed use of the contingency fund for unplanned and unbudgeted DSM opportunities that arise during the Plan years is reasonable. Pursuant to s. 18(2) of the Act, Manitoba Hydro must provide Efficiency Manitoba with all amounts necessary for it to implement the Plan. The Panel interprets the Act to require that Manitoba Hydro is obliged to fund Efficiency Manitoba's operating budget, as well as any amounts it requires from the contingency fund. While Efficiency Manitoba requested that the Panel comment on the $7 million amount of the contingency fund for the three Plan years, there was no evidence in the proceeding to suggest that a different amount would be more appropriate. As the use of the contingency fund is a matter required to be included in Efficiency Manitoba's annual reports, the Panel expects that this evidence will be available at the next efficiency plan review proceeding.

The Panel does not agree with the submission of the Manitoba Industrial Power Users Group that the contingency fund should be used to increase the allocation to programs that already have budget allocated including to remove caps on the amount of incentives paid. The Panel does not accept that, under the legislative framework, the contingency fund can be used for such purposes. The contingency fund use is appropriately restricted to unplanned and unbudgeted DSM opportunities.

The Panel also concludes that the Plan allocates at least 5% of its overall DSM programming budget to hard-to-reach and lower-income customers, pursuant to s.11(c) of the Regulation. Efficiency Manitoba projects spending 32% of its gas budget and 6% of the electric budget on the Income Qualified and Indigenous customer segments, which exceeds the 5% threshold.

Furthermore, the Panel determines that Efficiency Manitoba's plan for addressing budget variances within an approved efficiency plan is reasonable. Under this Plan, Efficiency Manitoba will attempt to address budget variances by transferring unspent budget dollars from a program to another program within the same customer segment; transferring

money allocated to a customer segment in the next Plan year to a program within that same customer segment that has exhausted its budget; or transferring unspent amounts from the Enabling Strategies budget category. Only if these options are not feasible will Efficiency Manitoba transfer unspent budget amounts between customer segments in order to maximize energy savings. However, Efficiency Manitoba has stated that it will not reduce the budgets of the Income Qualified and Indigenous customer segments.

The Panel notes that the legislation does not preclude Efficiency Manitoba from transferring budget amounts between years of the Plan, or between efficiency plans. This ability to transfer budget dollars between Plan years and between efficiency plans gives Efficiency Manitoba the necessary flexibility, particularly as staff and programs are moved from Manitoba Hydro in the first year of the Plan, to ensure that budget dollars can be transferred between years of an efficiency plan or carried forward into subsequent efficiency plans. For example, if Efficiency Manitoba commits to a project in Year 3 of an efficiency plan, but the project is not installed until Year 4 (the first year of the subsequent efficiency plan), it needs to have the ability to carry forward budget amounts between efficiency plans in order to fund the project. While it is correct that Efficiency Manitoba could include the budget for the delayed project in the new efficiency plan, it may not know that the project will be delayed from Year 3 to Year 4 at the time that its next efficiency plan is prepared and reviewed. Thus, it is important for Efficiency Manitoba to have the flexibility to carry forward unspent budgets between efficiency plans. Efficiency Manitoba will need to track and identify these carried-forward budgets so that the spending in a given year matches with the incremental savings achieved such that the portfolio cost effectiveness is properly calculated.

The Panel recommends that the legislation be amended, for clarity and transparency, to explicitly give Efficiency Manitoba the authority to transfer budget amounts between Plan years and carry forward unspent budget amounts to the next efficiency plan. The Panel's view is that ability of Efficiency Manitoba to do so will be critical to its success.

The Panel accepts the submission by the Consumers Coalition that the costs within the Enabling Strategies and Corporate Overhead budget categories that are not predominantly gas- or electric-focused, but are rather applicable to both portfolios, should not be allocated on the basis of the respective share of the total energy savings (that is, 75% to the electric portfolio and 25% to the gas portfolio). The Panel recommends that the Plan be amended to allocate these joint costs on the basis of cost causation using a "cost driver" approach, which is Manitoba Hydro's method for allocating common costs between its gas and electric utilities. The Panel notes that allocation of these costs between the electricity and gas portfolios is significant for ratepayers, because it dictates the proportion of the costs for which Manitoba Hydro ratepayers and Centra ratepayers will be responsible.

The Panel determines that the two alternative "cost driver" approaches recommended by the Consumers Coalition, which are (1) the total direct costs of the DSM programs attributed to the gas and electricity portfolios and (2) Efficiency Manitoba staff costs attributed to the gas and electricity portfolios, are reasonable. Taking the average of these two approaches, the joint costs within the Enabling Strategies and Corporate Overhead budget categories should be allocated 70% to the electric portfolio and 30% to the gas portfolio in the current Plan.

## 9.0 Deliverability Risks

| | | |
|---|---|---|
| *Regulation* | *s. 11(h)* | *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: the reasonableness of the projected savings and Efficiency Manitoba's ability to meet the annual savings targets and the 15-year cumulative savings targets* |

Pursuant to subsection 11(h) of the Regulation, the Panel is required to make an assessment of whether Efficiency Manitoba will be able to deliver the DSM savings necessary to meet the savings targets.

The Plan continues many of the existing DSM programs previously offered by Manitoba Hydro. Existing successful programs that have robust delivery channels will be prominent in the first months following the April 1, 2020 commencement date. Newer programs that may need additional development of technical or market details, or that may be relying on the functionality from the new customer relationship management and DSM system ("CRM/DSM"), have had launch dates pushed back into the latter part of the three-year timeline.

The CRM/DSM system, which Efficiency Manitoba describes as being foundational to its success, is expected to be introduced in phases beginning August 2020 and completed in November 2020. At the time of the hearing, Efficiency Manitoba was in the process of developing and releasing a request for proposals for the development of the CRM/DSM system. This is a two-week delay from the timeline contemplated in the Plan, although Efficiency Manitoba expects the initial roll-out in August 2020 will occur on time. The CRM/DSM system will be based on an existing tool with existing functionality and will only require configuration to make it work with existing Efficiency Manitoba databases and systems. This differs from customization, which would require development of the software tool. In the event of delays in the implementation of the CRM/DSM system, Efficiency Manitoba would continue to rely on legacy Manitoba Hydro enrollment and tracking systems.

Efficiency Manitoba has implemented a governance structure to successfully develop and implement the CRM/DSM system, including an executive steering committee comprised of Efficiency Manitoba executives and information technology staff from Manitoba Hydro. Efficiency Manitoba also has a business working group to articulate objectives and desired functionality of the system and a technical working group to address data migration, privacy, and security details.

To facilitate a smooth launch of its programming, Efficiency Manitoba expects to continue to use many of the same delivery partners used by Manitoba Hydro to deliver DSM programs. In anticipation of Efficiency Manitoba's eventual assumption of the DSM programming in Manitoba, transferability clauses have been built into the existing delivery contracts Manitoba Hydro has with third parties when new requests for proposals have been issued or when renewals have been exercised.

In evaluating the ability of Efficiency Manitoba to achieve the legislated targets, the Independent Expert Consultant, Daymark, explained that there are no fatal flaws in the Plan that would indicate that it will have little chance of success in meeting budgets, savings, or deliverability targets. That said, Daymark identified several risks to Efficiency Manitoba's ability to deliver the targeted savings:

1) Efficiency Manitoba has committed to increase energy savings with a substantially lower budget compared to the existing Manitoba Hydro program;

2) Efficiency Manitoba plans to achieve these savings goals with 30% less staff than Manitoba Hydro assigned to DSM program development and implementation. Efficiency Manitoba must therefore rely on delivery partners to achieve its savings targets;

3) Efficiency Manitoba will not be able to meet its natural gas savings target for the first year;

4) Efficiency Manitoba relies on new or updated sources for estimating participation, including consultations with delivery partners, survey data, and

recent permit applications, which may produce a step change increase in the level of saving expected for existing programs. Daymark identified that participation estimates produce large increases in savings estimates;

5) Efficiency Manitoba's CRM/DSM system remains under development at this time and is untested;

6) Efficiency Manitoba has yet to secure agreements with all the delivery partners required for proposed new measures to serve hard-to-reach customer segments;

7) Codes and standards and load displacement savings are dependent on independent assessment;

8) The Plan relies upon immediate and effective collaboration with First Nations leadership to successfully deliver programs to First Nations on-reserve customers; and

9) Some programs are not clearly distinguished from each other, which may lead to confusion for customers, limit participation, and reduce achieved savings.

Daymark identified a reporting process as a way that these deliverability risks can be mitigated. Specifically, Daymark advised that, through a reporting requirement, Efficiency Manitoba would assess the risks to its success, determine whether the risks are being addressed, and would then inform the Board as to whether the risks are being successfully mitigated. Daymark's view is that such reporting is also a means of enhancing transparency. As Daymark expects that the Energy Efficiency Advisory Group will be getting progress reports from Efficiency Manitoba on a regular basis, Daymark does not see report filings with the Board as being an additional burden.

The Panel also heard from the Consumers Coalition expert witness, Jim Grevatt, that there are concerns with Efficiency Manitoba's ability to launch the new corporation and deliver the projected savings. Mr. Grevatt identified several risks:

- Whether the required staff transition from Manitoba Hydro will be successful and accomplished in a timely manner;
- Whether procurement for third-party program implementers and delivery partners will be successful and accomplished in a timely manner;
- Whether all the programs will ramp up according to plan and meet participation and savings targets within the proposed budgets;
- Whether the proposed CRM/DSM system and proposed Online Home Energy Questionnaire will be fully deployed and operational according to the expected timelines; and
- Whether the significant savings that are projected to come from codes and standards will be verified by the independent assessor.

## 9.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba's position is that the continuation of Manitoba Hydro programs and reliance on experienced Manitoba Hydro staff who have been delivering efficiency programs for years mitigates the risks identified by Daymark and Mr. Grevatt. Efficiency Manitoba also highlights the flexibility inherent in the Plan as a reason that it will be able to deliver the programs and savings in the Plan.

The transition of DSM staff and programming from Manitoba Hydro to Efficiency Manitoba is supported by Manitoba Hydro. Efficiency Manitoba notes that Manitoba Hydro has a vested interest in supporting the successful transition of staff and programming to Efficiency Manitoba because Manitoba Hydro is the sole funder and a significant benefactor of the DSM programming. Efficiency Manitoba may be a new organization, but states that it is building on a legacy of energy efficiency programming started by Manitoba Hydro 30 years ago.

According to Efficiency Manitoba, the support it has received and expects to continue to receive from Manitoba Hydro puts Efficiency Manitoba in a unique position as a new

organization: it already has established infrastructure, experienced staff, and a large number of DSM programs spanning several customer segments. These established systems and infrastructure significantly reduce the implementation risk that would otherwise face a new DSM organization. As an example, Efficiency Manitoba and Manitoba Hydro have collaborated to transfer existing third-party program implementation and delivery contracts from Manitoba Hydro to Efficiency Manitoba. This will ensure that the delivery of DSM programs is not interrupted during the transition of programs to Efficiency Manitoba.

Efficiency Manitoba states that it is taking reasonable and prudent steps to manage the acquisition and implementation of its CRM/DSM system. Existing and legacy systems put in place by Manitoba Hydro and Efficiency Manitoba will address any delays to the implementation of the CRM/DSM system.

Efficiency Manitoba recognizes that the independent assessor will verify the savings from codes and standards that are to be counted toward meeting the savings targets. There is a risk that not all of the savings claimed by Efficiency Manitoba will be counted by the independent assessor, but it is also possible that the assessor may identify additional savings. In response to concerns expressed by Daymark that savings from codes and standards should be discounted, Efficiency Manitoba explained that its methodology for counting codes and standards savings already addresses this and discounts the savings for market conditions and known issues with compliance by builders.

Efficiency Manitoba indicated that it has not claimed all of the savings arising from commercial appliance and equipment standards as it has not developed methodologies to identify and count these savings. Savings from these commercial standards represent an opportunity for Efficiency Manitoba to claim additional savings in future plans.

Assembly of Manitoba Chiefs

In the view of the Assembly of Manitoba Chiefs, Efficiency Manitoba's engagement strategy with First Nations contains unmitigated risks. To achieve the savings in the Indigenous segment, Efficiency Manitoba will be required to engage directly with individual First Nations at more than a preliminary or cursory level. However, Efficiency Manitoba plans to have only one First Nations energy advisor which will be insufficient to engage with 63 First Nations in Manitoba. The Assembly of Manitoba Chiefs also expresses concern that the funding and support for the development of Community Energy Plans are insufficient as Efficiency Manitoba is only targeting two to three communities with the funding in the Plan. Community Energy Plans are developed in collaboration with interested First Nations and focus on the efficiency measures that may be retrofitted into a First Nations community and help the community meet sustainability goals.

Consumers Coalition

In the Consumers Coalition's view, the Plan attempts to balance multiple statutory objectives and has a good mix of programs, but it was prepared in haste and does not recognize or address risks. The Consumers Coalition recommends that the Panel should find that Efficiency Manitoba has not adequately acknowledged or addressed the risks it faces in implementing the Plan. The Plan raises credibility challenges because Efficiency Manitoba has not filed a project management plan or risk mitigation framework identifying the risks and possible mitigation strategies to address the risks identified by the Consumers Coalition's expert witness, Jim Grevatt.

The Consumers Coalition adopted the recommendation of Mr. Grevatt that Efficiency Manitoba be required to develop and file with the Board a project management plan that identifies the critical milestones and processes for achieving them and the risks to the launch and implementation of programs and achievement of savings. According to the Consumers Coalition, based on the evidence of Mr. Grevatt, the lack of a project

management plan or risk mitigation framework provides no assurance that Efficiency Manitoba is prepared to deal with any risks if they materialize.

The Consumers Coalition recommends that Efficiency Manitoba should be directed to file a project management plan and risk mitigation strategy within 30 days of Plan approval. The Panel should also recommend that Efficiency Manitoba be directed to file an independent review of codes and standards savings assumptions within six months of Plan approval.

The Consumers Coalition identifies a risk that the independent assessor will not verify and count all the savings anticipated by Efficiency Manitoba toward the savings targets, which could leave Efficiency Manitoba short of meeting its savings targets. This Intervener also notes that Efficiency Manitoba did not prepare or file a risk mitigation plan to address the event that not all of the savings are counted. To address this risk, the Consumers Coalition recommends Efficiency Manitoba file with the Board an independent review of its proposed codes and standards savings assumptions within six months of Plan approval. The Consumers Coalition is supportive of Efficiency Manitoba pursuing codes and standards savings as they make significant contributions to energy efficiency and transform the market for efficient technologies.

## 9.2 Conclusions of the Panel

The Panel anticipates that it will be difficult for Efficiency Manitoba to meet the savings targets in the early years of its existence, which could extend to all three years of the Plan. The Panel notes that legislation appears flexible enough to allow Efficiency Manitoba to recover in future years. However, there is a concern that customer participation in certain programs will become saturated, such that it becomes more difficult to generate savings from those programs. This can be thought of as Efficiency Manitoba “picking the low hanging fruit” first.

The Panel concludes that Efficiency Manitoba is underestimating the challenges with starting up the new Crown corporation. The Panel sees many issues related to corporate

structure and governance which still need to be addressed. These issues include lack of an organization chart, lack of staff position descriptions, the fact that the transition of approximately 60 employees from Manitoba Hydro to Efficiency Manitoba has yet to occur, and a number of human resources issues that may delay the transition of employees. The Panel also notes that there is no dispute resolution mechanism, legislated or otherwise, to address disputes that may arise between Manitoba Hydro and Efficiency Manitoba as employees and programs are transferred to Efficiency Manitoba. Given that Efficiency Manitoba continues to rely on support from Manitoba Hydro and as Manitoba Hydro has financing obligations to Efficiency Manitoba, such a mechanism may be necessary.

Efficiency Manitoba explained it will have a new culture, presumably one that differs from Manitoba Hydro, and that this culture will help it succeed. In the Panel's view, it will take time to integrate the former Manitoba Hydro staff into this new culture. In so far as Efficiency Manitoba is counting on having its transitioned employees embrace the new culture in order for Efficiency Manitoba to succeed and meet its savings and budget targets, this is another risk to the Plan. The Panel expects that Efficiency Manitoba will require the balance of 2020 to reach its full staff complement and have the corporation focused on delivering efficiency programs, as opposed to staff transition and start-up issues.

The CRM/DSM system is a multi-faceted information technology system that will manage customer enrollment in programs, contractor and delivery partner management, and facilitate tracking and reporting of savings and spending. The Panel understands that configuring an off-the-shelf software package is still a complex undertaking. Information technology projects are frequently delayed and over budget. The Panel expects the CRM/DSM system will experience some type of delay or cost overrun. Since Efficiency Manitoba considers the CRM/DSM system to be foundational to its improved delivery of DSM programs and increased customer participation, delays to its roll-out have the potential to negatively affect customer participation and achievement of the savings targets. Efficiency Manitoba does not have an information technology department, instead

relying on support from Manitoba Hydro. This leaves Efficiency Manitoba exposed to the risk of competing priorities within Manitoba Hydro for its information technology staff and resources.

Without a project management plan and risk management strategy, the Panel is of the view that Efficiency Manitoba is not prepared for the launch of the corporation and to address the risks identified above.

The Panel recommends that Efficiency Manitoba prepare a project management plan and risk management strategy as their highest priority and, if necessary, that Manitoba Hydro be directed to second to Efficiency Manitoba personnel to assist in this regard. The Panel does not consider this to be required as an amendment to the Plan, but instead recommends that the Minister direct that Efficiency Manitoba develop the project management plan and risk management strategy in tandem with, or in advance of, Plan approval. The project management plan should address the steps needed to launch Efficiency Manitoba, such as the transition of staff from Manitoba Hydro, the establishment of governance structures, and development of information technology systems. The risk management strategy should address the risks that any of the steps in the project management plan are delayed, over budget, or otherwise negatively affected, including participation in programs by hard-to-reach customers.

The Panel recommends the project management plan and risk management strategy be filed with the Minister and publicly with the Board for transparency purposes. The Panel further recommends quarterly reporting to the Minister, to be simultaneously publicly filed with the Board, for the first fiscal year of the Plan. The Panel suggests that the Minister should then decide whether such quarterly reporting need continue beyond the first fiscal year, and so direct if required. The quarterly reports should identify:

- progress toward meeting the milestones in the project management plan,
- any updates to the timelines in the project management plan,
- ongoing actions to mitigate the risks in the risk management strategy,
- any risks that materialize and their impacts,

- steps taken or planned to be taken to address the risks that have materialized,
- projected versus actual budget,
- achievement of the steps in the public engagement program, as detailed elsewhere in this Report, and
- achievement of the steps included in the First Nations Direct Engagement Strategy, as detailed elsewhere in this Report.

The Panel does not accept the Consumers Coalition recommendation that there be an independent review of codes and standards savings assumptions within six months of Plan approval. There is a risk that additional administrative processes would add to, rather than mitigate, the deliverability risks that may be faced by Efficiency Manitoba, particularly given the significant number of items that must be completed in the early months after Plan approval. The Panel notes that the independent assessor will evaluate the savings from codes and standards counted by Efficiency Manitoba and that Efficiency Manitoba has advised that the independent assessor's report can be filed within six months of the end of its fiscal year.

Further, the Panel does not accept the recommendations made by the Assembly of Manitoba Chiefs and Manitoba Keewatinowi Okimakanak regarding increasing the number of First Nations Energy Advisor positions. The Panel views this as an operational decision that is within Efficiency Manitoba's purview. While it is important that Efficiency Manitoba be aware of the risks to achieving success in participation in its programs by First Nations customers, it is not the Panel's role to determine operationally how that success will be achieved. If Efficiency Manitoba monitors participation by First Nations customers as is recommended by the Panel, then Efficiency Manitoba will be able to respond and adapt operationally to mitigate risks to success in this area.

While the Panel concludes that Efficiency Manitoba must address a number of start-up and transition issues, the Panel also notes the progress made to date by Efficiency Manitoba in launching the corporation and developing the Plan. With limited staff and a short timeline, Efficiency Manitoba has accomplished much to date. The Panel also

recognizes that Manitoba Hydro has made significant contributions to launching Efficiency Manitoba and hopes that the support provided to Efficiency Manitoba from Manitoba Hydro to date continues beyond the commencement date of April 1, 2020. Without the support of Manitoba Hydro, Efficiency Manitoba will struggle to successfully launch the corporation and to meet its savings targets.

## 10.0 Rate and Bill Impacts

| | | |
|---|---|---|
| *Regulation* | *s. 11(g)* | *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: the impact of the efficiency plan on rates and average customer bill amounts* |

A mandatory consideration in the Panel's review of the Plan is the impact of Efficiency Manitoba's activities on customer rates and average bill amounts.

Efficiency Manitoba presents the rate and bill impacts of the Plan using a lifecycle revenue impact ("LRI") measure. The LRI is the one-time rate increase needed to balance the additional costs from DSM spending and the lost revenue from DSM resulting in reduced energy consumption with the benefits arising from avoided costs (the marginal benefits). The LRI is calculated by Efficiency Manitoba based on levelizing the benefits from the Plan over 30 years. In other words, this LRI measure provides an indication of the rate increase that would be required to balance all of the costs and benefits from the three-year Plan when the benefits and lost revenues are considered over a thirty-year time period.

Efficiency Manitoba's LRI calculation results in a directional one-time equivalent rate increase for the electric portfolio of 0.019 ¢/kWh and for the gas portfolio of 0.23 ¢/$m^3$. The electric and gas LRI measures are for the current Plan only – the LRI measures for future three-year efficiency plans will be in addition to those for the current Plan.

The Panel heard evidence from Daymark and the expert witness for the Consumers Coalition, William Harper, that 30 years is not the appropriate period to use for the LRI calculation. Daymark gave evidence that, as Efficiency Manitoba's LRI is a theoretical rate impact that is in place for 30 years, it is based on a period that continues long after many of the measures in the Plan have expired. Mr. Harper testified that the use of a 30-year period understates the rate adjustments required by Manitoba Hydro over the shorter-term to balance revenues, benefits, and costs.

Noting that it is not known precisely how Manitoba Hydro will recover the funds paid to Efficiency Manitoba over the three-year Plan period, Mr. Harper identified Manitoba Hydro's current practice as being amortization of DSM costs over a 10-year period. As a result, Mr. Harper suggested that the Panel's consideration of the rate impacts should focus on the 10-year value as well as the longer-term 30-year value. Using a 10-year period for the calculation, the electric LRI for the Plan is 0.062 ¢/kWh and the gas LRI for the Plan is 0.45 ¢/$m^3$.

Daymark suggested a different approach to the calculation of the LRI, which groups the measures in the Plan by measure lives of 1 - 5 years, 6 - 10 years, 11 - 15 years, 16 - 20, years, 21 - 25 years, 26 - 30 years and over 31 years. The LRI is then calculated for each group over the longest period in the group. For example, the 1 - 5 year group has the LRI calculated over five years, while the 6 - 10 year group has the LRI calculated over ten years. Once the LRIs for each group have been calculated, the composite LRI for years 1 - 5 is comprised of the sum of the LRIs for all the groups. The composite LRI for years 6 - 10 years is then comprised of the sum of the LRIs for all the groups except the 1 - 5 year group. This is because there is no longer any effect of the expired measures (those with lifespans of 1 to 5 years) on the benefits and lost revenue beyond year 5.

Using Daymark's approach, the electric LRI for the year 1 - 5 grouping of measures is 0.059 ¢/kWh, declining to 0.031 ¢/kWh for the year 6 - 10 grouping. The gas LRI for the year 1 - 5 grouping is 0.41 ¢/$m^3$, declining to 0.24 ¢/$m^3$ for the year 6 - 10 grouping. Daymark gave evidence that this approach to the calculation of the LRI more accurately reflects the rate impacts that would result from a more detailed rate study, but that it does not identify the precise rate impact from the Plan.

Regardless of the time period used for the calculation of the benefits, the LRI measure is not equivalent to the effective average rate increases needed by Manitoba Hydro or Centra in the year corresponding to the year of the Plan in order for the utilities to maintain their projected net incomes taking into account Efficiency Manitoba's costs recovered from the utilities, lost revenue from decreased energy sales, and benefits from reduced

consumption. In the absence of an updated resource plan and integrated financial forecast, including a rate strategy, from Manitoba Hydro and Centra, Efficiency Manitoba does not have the necessary data inputs to calculate the actual rate impacts from the Plan.

The expert witness for Manitoba Industrial Power Users Group, Patrick Bowman, concludes that, for this reason, any effort to isolate the short-term rate impacts arising from the Plan – the rate increase needed in each of the three Plan years, if any, arising solely from the costs, reduced revenues, and benefits of the Plan – provides only general guidance. Further, Efficiency Manitoba would have to make assumptions about Manitoba Hydro's amortization period for Efficiency Manitoba's costs and the applicable interest rate. Even with the necessary data inputs from Manitoba Hydro, the actual rate increase would be difficult for Efficiency Manitoba to determine as the costs of Efficiency Manitoba's DSM programs will not necessarily be equally distributed across the different customer classes, but instead allocated based on the cost of service studies of the respective utilities.

Mr. Bowman provided in his evidence an estimate of the isolated electric rate impact associated with the Plan, all else being equal in the sense of maintaining the inputs last publicly filed by Manitoba Hydro for all other factors, other than those directly attributable to Efficiency Manitoba, that would affect Manitoba Hydro's rates. Mr. Bowman described this as a "coarse estimate" that provides a directional sense of the rate impact from the Plan, but should not be taken as a precise identification of the rate impact. Further, these rate impacts provide a comparison to the rates that would be needed if Manitoba Hydro did not incur any DSM expenditures in the complete absence of Efficiency Manitoba programming, a scenario not likely to arise. Mr. Bowman's calculation results in an electric rate impact of 2.0% for Residential customers and 3.7% for General Service Large 30-100 kV customers, or 1.5% and 2.6% respectively if the cessation of the amortization of prior Manitoba Hydro DSM expenditures is accounted for.

Customers who participate in Efficiency Manitoba's DSM programming, whether electric or gas or both, will realize annual bill reductions based on their energy savings. Participating gas customers will also experience bill decreases associated with reductions in the federal carbon charge. The annual average bill savings for participating electric customers total $14.9 million and the annual average bill savings for participating gas customers, including projected savings related to the federal carbon charge reductions, total $3.0 million. The customer segment-specific bill impacts projected by Efficiency Manitoba are shown in the tables below:

**Bill Impacts-Electric Bill Savings**

| Customer segment / program bundle | | Annual average electric bill savings | Total annual electric bill savings |
|---|---|---|---|
| Indigenous | Homes | $470/house | $147,000 |
| | Small business | $900/business | |
| Income qualified | | $410/house | $203,000 |
| Residential | | $80/house | $1,769,000 |
| Commercial, industrial & agricultural | Small business | $1,000/business | $12,567,000 |
| | Suites | $60/suite | |
| | Other business | $4,300/business | |
| Emerging Technology Programs | | $1,500/project | $171,000 |
| **Total annual electric customer bill savings** | | | **$14,857,000** |

Source: EM-34 page 17

**Bill Impacts-Natural Gas Bill Savings**

| Customer segment / program bundle | | Annual average natural gas bill savings | Total annual natural gas bill savings |
|---|---|---|---|
| Indigenous | | $300/house | $14,000 (natural gas)<br>$4,000 (carbon charge)<br>$18,000 |
| Income qualified | | $290/house | $287,000 (natural gas)<br>$82,000 (carbon charge)<br>$369,000 |
| Residential | | $20/house | $426,000 (natural gas)<br>$131,000 (carbon charge)<br>$557,000 |
| Commercial, industrial & agricultural | Small business | $70/business | $1,452,000 (natural gas)<br>$567,000 (carbon charge)<br>$2,019,000 |
| | Suites | $20/suite | |
| | Other business | $3,800/business | |
| Emerging Technology Programs | | < 10 projects | $23,000 (natural gas)<br>$9,000 (carbon charge)<br>$32,000 |
| **Total annual natural gas customer bill savings** | | | **$3,000,000** |

Source: EM-34 page 17

While all Manitoba Hydro and Centra customers will bear the costs of Efficiency Manitoba's operations and programs, customers who participate in programs will see their bills decrease. As the energy charge on customer bills is a rate applied to the amount of energy consumed by a customer, reductions in consumption through DSM measures will, in nearly all cases, result in lower bills; however, customers who do not participate will not realize energy savings and will therefore experience bill increases due to the costs associated with Efficiency Manitoba and its programs.

## 10.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba argues that the LRI is a valid methodology for representing rate impacts arising from the Plan. It states that the LRI metric was selected because it uses the same components as the PACT, with the addition of the lost utility revenue in the calculation of the LRI. It is Efficiency Manitoba's position that the LRI test indicates the

direction and magnitude (measured per unit of energy) of the expected change in utility rate levels attributed solely to the Plan. Efficiency Manitoba states that the LRI is a proxy that approximates the rate implications of its Plan. Efficiency Manitoba also notes that Daymark concluded that the LRI can provide useful information that is more indicative of the actual impacts that will result than will other commonly used metrics, such as the Rate Impact Measure.

Efficiency Manitoba states that it cannot estimate the short-term rate impacts arising from the Plan because Manitoba Hydro and Centra do not have up-to-date Integrated Financial Forecasts and updated resource plans, which Efficiency Manitoba says are needed to identify the revenue and cost implications of the Plan. Efficiency Manitoba communicates that Manitoba Hydro advises that it will not have a current Integrated Financial Forecast or rate strategy in place until the strategic planning and independent review processes at Manitoba Hydro are complete. It is Efficiency Manitoba's position that any preparation of estimated short-term rate impacts without this information from Manitoba Hydro would render the output unreliable to such an extent that no accurate conclusions could be drawn or substantiated from the output. However, Efficiency Manitoba further states that it has been advised by Manitoba Hydro that "any near term rate and bill impacts of Efficiency Manitoba's three-year Plan are not anticipated to be material when compared to the rate impacts resulting from the recent significant investments projects such as Bipole III, Keeyask and the Manitoba-Minnesota Transmission Project and the rate impacts of those projects coming into service."

Efficiency Manitoba explains that it used a 30-year period in calculation the LRI because that aligns with Efficiency Manitoba's approach to the PACT cost-effectiveness measure. This is consistent with the fact that the marginal values used in both the LRI and PACT measures are meant to be long-term values to represent deferral of capital investment over the longer-term. However, Efficiency Manitoba acknowledges that the savings-weighted average measure life for measures in the electric Portfolio is 8.8 years and, for gas measures, 19.5 years. Efficiency Manitoba accepts Daymark's approach of calculating the LRI based on groupings of measures by measure lives as a reasonable

refinement to the LRI methodology, even though this gives rise to higher LRI results in the short-term.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs argues that the impacts from rate increases associated with the Plan will have a disproportionate impact on First Nations customers. The Assembly of Manitoba Chiefs' position is that energy efficiency programs should strive to benefit First Nations so as to contribute to the reduction in the inequitable distribution of energy burdens and in recognition of the Treaty rights of First Nations. This Intervener submits that comprehensive approaches that improve energy efficiency for First Nations on-reserve homes and buildings should be expanded in order to have the most impact in mitigating the rate increases associated with DSM programming costs.

Consumers Coalition

The Consumers Coalition argues that the LRI should be calculated using a 10-year time frame as the 30-year period used by Efficiency Manitoba underestimates the short-term rate impacts. The Consumers Coalition further argues that, as lower-income customers pay a higher proportion of their income toward energy bills, those customers are likely to be disproportionately affected by energy rate increases. As well, this Intervener states that the bill savings calculations misrepresent the impacts for participating customers as there is no recognition of the upfront investments required by customers to obtain those savings.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group submits that short-term rate impacts are important in considering each of Efficiency Manitoba's plans to ensure that overall planned spending is beneficial for customers. Further, the Manitoba Industrial Power Users Group states that the potential rate impacts are of particular importance due to the capital investment being undertaken by Manitoba Hydro, which will put upward pressure on electric rates.

The Manitoba Industrial Power Users Group argues that the Efficiency Manitoba LRI measure has two major weaknesses. First, a long-term rate impact is not sufficiently informative to understand trade-offs, particularly tied to near-term rate impacts. Second, the measure is inappropriately simplified as it is based on a 30-year period when many or most of Efficiency Manitoba's programs are expected to provide no benefit beyond five to 15 years. As a result, the Manitoba Industrial Power Users Group submits that the Panel should reject Efficiency Manitoba's calculation of an electric LRI of 0.019 ¢/kWh, and notes that the Independent Expert Consultant calculates a LRI with a value three times higher, at 0.059 ¢/kWh. The Manitoba Industrial Power Users Group states that the use of long-term benefits in the calculation is inappropriate given that any very long-term benefits are still uncertain due to the lack of assessment undertaken on marginal values, lack of Integrated Resource Planning and general lack of review of alternatives. In contrast, the Manitoba Industrial Power Users Group says that what is known is that spending undertaken by Efficiency Manitoba in the next three years will be recovered from ratepayers.

This Intervener states that, in order to address the rate impacts, a full analysis by Manitoba Hydro in an Integrated Financial Forecast would be required, particularly if one was to consider accurate impacts by class; however, Manitoba Industrial Power Users Group's position is that reliable estimates were provided by its expert witness, Patrick Bowman, that show more significant rate impacts. This is particularly the case when considering that the costs, and related rate impacts, for the next three-year efficiency plans will be added to the costs and rate impacts for this Plan.

The Manitoba Industrial Power Users Group argues that the Board should recommend that revisions be made to the Plan following future investigation at a Manitoba Hydro hearing involving consideration of more refined estimates of the rate impacts of Efficiency Manitoba's costs. The Manitoba Industrial Power Users Group also argues that rate impacts should be a material component of future Efficiency Manitoba efficiency plan reviews, including near-term rate impacts reflecting proper analysis of Manitoba Hydro's accounting for Efficiency Manitoba's costs.

## 10.2 Conclusions of the Panel

The Panel has considered the evidence and positions of the parties regarding Efficiency Manitoba's presentation of the rate and bill impacts arising from the Plan. While Efficiency Manitoba used a 30-year timeframe for calculating the benefits, the Panel notes the acknowledgement of Efficiency Manitoba that a calculation that more closely reflects the length of the lives of the measures in the Plan is a reasonable refinement.

The Panel concludes that the 30-year timeframe is not a useful presentation of the LRI and has the potential to be misleading, particularly as it understates the short-term rate impacts. Significantly, 93% of the electric savings in the Plan are from initiatives that have measure lives that end within 15 years. While it is understandable that Efficiency Manitoba used the 30-year timeframe to be consistent with the approach to the PACT measure calculation, it is important that, to the extent possible, the rate impacts associated with the Plan be identified not only in a manner that is transparent and understandable, including from the perspective of ratepayers, but that approach the likely impact to be experienced by ratepayers.

Manitoba Hydro and Centra currently use the Board-approved amortization period of 10 years for DSM expenditures. The Panel concludes that using a 10-year time period in calculating the LRI more closely approximates the likely treatment of the costs by Manitoba Hydro, which therefore more closely aligns with the rate impact that customers will experience. The use of a 10-year period also better reflects the fact that the measures in the Plan will, particularly for electric measures, not have lives beyond 15 years. It is important that the short-term rate impacts not be understated, particularly in the absence of a Plan developed as part of an integrated resource plan that would identify trade-offs between short- and long-term goals and rate effects.

Therefore, the Panel recommends that the Plan be amended to incorporate the calculation of rate impacts using the 10-year LRI, in addition to using the 10-year LRI in future efficiency plans.

The Panel emphasizes, however, that there are shortcomings with all of the approaches to calculating the rate and bill impacts presented in the hearing. All of the approaches discussed in the review proceeding were estimates that could only provide general or order of magnitude information about the extent of the rate and bill impacts arising from the Plan. The Panel further notes that there would have been a rate impact had DSM continued to be provided by Manitoba Hydro. The rate impacts presented in the hearing must be understood in that light as, while the rate impacts for continued DSM programming by Manitoba Hydro are not known, those arising from Efficiency Manitoba's Plan ought not to be compared to a no-DSM programming scenario.

As detailed above, using a 10-year period for the calculation, the electric LRI for the Plan is 0.062 ¢/kWh and the gas LRI for the Plan is 0.45 ¢/$m^3$. The Panel concludes that these LRI results are acceptable.

However, the Panel concurs with the Assembly of Manitoba Chiefs and Consumers Coalition that any rate increases arising from the Plan will disproportionately affect lower-income and First Nations customers as these customers already pay a higher proportion of their income toward energy bills. This highlights the fundamental importance of Efficiency Manitoba closely monitoring its progress on making its programs accessible to all Manitobans, including these hard-to-reach customers, and making adjustments to the implementation of the Plan to address issues in this regard. Otherwise, lower-income and First Nations customers will be non-participants, not by choice but by circumstance. Non-participants will not realize energy savings from DSM programs and therefore will not reduce their bills.

Efficiency Manitoba must be proactive in ensuring that its programs are reaching all Manitobans so that customers most affected by rate increases will not be non-participants for reasons beyond their control. The Panel views this as a matter requiring diligent tracking and appropriate, timely, and responsive action by Efficiency Manitoba, but does not see amendments to the Plan as being required.

## 11.0 Evaluation, Measurement and Verification

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| *Regulation* | *s. 11(h)* | *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: the reasonableness of the projected savings and Efficiency Manitoba's ability to meet the annual savings targets and the 15-year cumulative savings targets* |

Pursuant to s. 9(m) of *The Efficiency Manitoba Act* ("Act"), Efficiency Manitoba must include within the Plan a description of the manner in which the outcomes achieved under the Plan are to be addressed, including the proposed performance measures to be used.

Efficiency Manitoba has set out three methods by which the outcomes achieved under the Plan will be monitored, tracked and evaluated: (1) the CRM/DSM system, (2) a DSM Scorecard, and (3) the assessment performed by the independent assessor, which will be based on Efficiency Manitoba's Evaluation, Measurement and Verification ("EM&V") Framework.

First, with respect to the CRM/DSM system, Efficiency Manitoba will monitor energy savings and budgets at the measure and program bundle level using this system, which is described in detail in section 9.0 of this Report. The CRM/DSM system will report key parameters regarding the DSM programs and measures, including energy savings, greenhouse gas reductions, budget expenditures, and participant information. The CRM/DSM system will be operational between August and November 2020, which is midway through year one of the Plan. Efficiency Manitoba will continue to use a "legacy" tracking system from Manitoba Hydro until the CRM/DSM system is fully operational.

Second, Efficiency Manitoba will use a DSM Scorecard to evaluate the Plan's performance, as well as its own corporate performance, and compare it to energy efficiency programs in other jurisdictions. The DSM Scorecard was developed by Dunsky Energy Consulting. The DSM Scorecard evaluates performance across three categories: operations, planning, and results. "Operations" includes DSM program design, customer participation, stakeholder engagement, employee satisfaction, leadership, transparency, and culture. "Planning" examines program equity, data use and sharing, future energy

savings targets, and emerging technologies. “Results” consists of the following considerations: depth of incremental electric and gas energy savings, average overall acquisition costs, achievement of energy savings targets, and maximization of both benefits and value to Manitobans. The DSM Scorecard will be updated annually.

Finally, pursuant to s. 16(1) of the Act, Efficiency Manitoba must appoint an independent assessor to assess the results obtained by Efficiency Manitoba under an approved efficiency plan, the cost effectiveness of obtaining those results, and any other matter prescribed by regulation and prepare a report on the assessment. In addition, Efficiency Manitoba must submit the assessment report to the Board as well as publish the report on its website or through other public means (s. 16(3) of the Regulation). Efficiency Manitoba testified that it will be able to submit the report six months after the end of the fiscal year.

Efficiency Manitoba contracted with an energy consulting firm, Econoler, to develop the EM&V Framework that will be used as the basis for Efficiency Manitoba’s request for proposals to contract for the independent assessor. With input provided from the Energy Efficiency Advisory Group (“EEAG”), Efficiency Manitoba will develop a request for proposals for an independent assessor that will be based on the EM&V Framework. Efficiency Manitoba plans to develop the request for proposals within the first half of 2020/21, such that data collection and key assessment activities may commence in advance of 2021/22.

Efficiency Manitoba will also work with the EEAG to select the independent assessor. A detailed Evaluation, Measurement and Verification plan will be developed by the independent assessor and will be based on the EM&V Framework.

The EM&V Framework sets out the following four different evaluation methods to assess the Plan:

1. Full impact evaluation and savings verification:

a. A full impact evaluation establishes the energy savings, peak demand savings, and non-energy benefits that result from a program. Peak demand savings are determined for a specific measure based on the measure's effect on the reduction of power consumption over the peak period in Manitoba, which occurs during winter months. Non-energy benefits include water savings, as well as environmental, health, economic development and energy security benefits, such as improved indoor air quality, higher property value, and better lighting quality.

   Full impact evaluations will be conducted on every program at least once during the Plan years. Econoler recommends conducting the full impact evaluation during the first year of the Plan as much as possible to ensure that the evaluated results are used during the rest of the Plan and therefore allow for more precise forecasting of the program impact results. Under the EM&V Framework, with the exception of the residential solar photovoltaics program and the commercial solar photovoltaics program, all programs are forecast to have full impact evaluations in one of the first two Plan years.

b. A savings verification consists of verifying the energy savings of a measure or program. This verification will be conducted at a minimum annually on every program.

2. Process evaluation: A process evaluation assesses a program's effectiveness in achieving its objectives and whether its implementation is proceeding as planned. Econoler states that a process evaluation is not required for every program or for every year of a program, but should be considered for new programs, after major program changes have been made, or for programs with identified risks. Under the EM&V Framework, certain programs have been identified to receive process evaluations during specific years of the Plan.

3. Market evaluation: A market evaluation assesses a program's influence on a market or sector by examining the market evolution of energy efficiency products and supply chains. Econoler states that a market evaluation is not required for every program or for every year of a program, but should be conducted to inform program design or for programs involving fast-evolving technologies or quick uptakes.

4. Cost-effectiveness analysis: This analysis examines the relationship between the value created by the benefits of a measure or program and the costs incurred to achieve those benefits. It assists in assessing whether the measure or program is effective overall; whether some costs or incentives are too high or too low; the effect on energy rates; and the adjustments that need to be made to improve the cost-benefit ratio. Pursuant to s. 12 of the Regulation, the primary cost-effectiveness metric that will be used will be the PACT. The TRC will be applied as a secondary cost-effectiveness analysis, and the Rate Impact Measure test may also be used. A cost-effectiveness analysis will be conducted for every program every year using the verified savings.

The independent assessor will also determine the savings that can be counted toward the energy savings targets from codes and standards. Econoler recommends that to determine these savings, the evaluation should begin with developing a baseline, then estimating the achievable level of compliance with the codes and standards, and finally estimating the net energy savings that result from the enforcement of the energy efficiency codes and standards.

Daymark noted that the EM&V process engaged in by the independent assessor is crucial for the successful delivery of the Plan and any future energy efficiency plans. The savings targets estimated by Efficiency Manitoba under the Plan are based on assumptions concerning hours of usage, unit savings, market studies, and historical data. It is possible that the actual incurred savings will differ from the estimated savings, and therefore a rigorous EM&V process is necessary so that the actual savings can be identified.

Daymark recommended that program bundles that offer a large share of portfolio-level energy savings should undergo annual full impact evaluations. Furthermore, although full impact evaluations will be done on all programs at least once in the Plan period, the results of those evaluations in Year 3 will not be available to inform the development of the next efficiency plan. For this reason, Daymark advised that Efficiency Manitoba should try to complete full impact evaluations of all programs within the first two years. Daymark also suggested that, in addition to setting out the timelines for the impact and process evaluations, the EM&V Framework should also set out which programs will receive market evaluations.

With respect to assessing energy savings from codes and standards, Daymark recommended that the evaluation method for counting savings from codes and standards should be fully developed and reviewed by the EEAG.

## 11.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba states that the Plan is compliant with the requirement set out in s. 9(m) of the Act as the Plan includes a comprehensive approach to monitoring, evaluating, and continuously improving performance.

Efficiency Manitoba argues that the savings projected in the Plan from codes and standards are conservative and will be independently evaluated by the independent assessor. Efficiency Manitoba views it is entirely possible that the independent assessor will identify additional savings from commercial product standards.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs asserts that the DSM Scorecard adopted by the Plan evaluates equity of programming for First Nations simply on the basis of whether any programs for First Nations exist. By contrast, in scoring program equity for lower-income customers, the DSM Scorecard assesses the degree of savings achieved and how much

was spent on the program's implementation. The Assembly of Manitoba Chiefs submits that the DSM Scorecard needs to include measures of robustness in its evaluation of First Nations programming, as it does for lower income programming.

Consumers Coalition

The Consumers Coalition submits that, once Efficiency Manitoba has appointed the independent assessor, Efficiency Manitoba should request an independent review of its assumptions regarding codes and standards savings. This review is to identify areas of potential concern so that Efficiency Manitoba can adjust other program savings levels as necessary to ensure it can meet its annual savings targets. The Consumers Coalition recommends that this independent review be filed with the Board within six months of the approval of the Plan.

Manitoba Keewatinowi Okimakanak

Manitoba Keewatinowi Okimakanak recommends that Efficiency Manitoba be directed to file progress reports that should clarify the independent assessor appointment process, whether evaluation criteria have been established by the independent assessor, and the timeframe within which the independent assessor's report will be submitted to the Board and published publicly.

## 11.2 Conclusions of the Panel

The Panel concludes that Efficiency Manitoba's description of the three methods for assessment meets s. 9(m) of the Act, which requires Efficiency Manitoba to include in its efficiency plan a description of the manner in which the outcomes achieved under the plan are to be assessed, including the proposed performance measures to be used.

The Panel agrees with Daymark that the EM&V process engaged in by the independent assessor is crucial for the successful delivery of the Plan and any future energy efficiency plans. Further, the Panel recommends that program bundles that offer a large share of portfolio-level energy savings should undergo annual evaluations and that evaluations of

all programs be completed within the first two years. The Panel also notes Daymark's suggestion that the EM&V Framework should set out which programs will receive market evaluations and expects that Efficiency Manitoba will consider this suggestion.

The Panel accepts the recommendation from the Assembly of Manitoba Chiefs, also accepted by Efficiency Manitoba, that the DSM Scorecard adopted by Efficiency Manitoba should include a robustness metric for the evaluation of program equity for First Nations. In order to include a robustness metric, the DSM Scorecard could be amended to assess the degree of savings achieved by First Nations programs and how much was spent on their implementation, as the DSM Scorecard does with respect to programming for lower-income customers.

The Panel determines that, in the event that the Regulations do not prescribe a timeframe, Efficiency Manitoba should provide the report by the independent assessor to the Board within six months of the end of Efficiency Manitoba's fiscal year. The Panel notes that Efficiency Manitoba testified that this timeline was feasible.

## 12.0 Ministerial Directives to Efficiency Manitoba

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| *Regulation* | *s. 11(l)* | *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: whether Efficiency Manitoba has reasonably attempted to comply with the directions of the minister.* |

The Panel is mandated to consider whether Efficiency Manitoba has reasonably attempted to comply with the directions of the Minister. In the context of the current Plan under review, the directions of the Minister were provided in a mandate letter sent from the then-Minister to the Chair of the Efficiency Manitoba Board on April 24, 2019.

The mandate letter sets out the following expectations of Efficiency Manitoba:

- deliver services in a fiscally sustainable, predictable, transparent, and reliable manner;
- ensure accurate and timely financial reporting to government;
- develop an organizational structure ensuring a more streamlined and leaner organization;
- establish compensation practices that reflect the principles of responsible fiscal management and protect the sustainability of services to customers and ratepayers;
- integrate the red-tape reduction processes and reporting into the processes of the Efficiency Manitoba Board;
- limit advertising to responsible, mandate-focused advertising considered essential to successfully perform Efficiency Manitoba's core business;
- develop and submit for review and approval the initial 3-year plan for DSM initiatives to meet mandated savings targets, while optimizing value for money;
- work with the Public Utilities Board to develop streamlined processes, in an effort to reduce overall costs to ratepayers of regulatory hearings;

- find ways to obtain the same or better outcomes as formerly obtained under the "Power Smart" program, but at a significantly smaller percentage of the costs and materially less labour costs;
- contribute to reconciliation in interactions with Indigenous communities and individuals;
- ensure procurement practices are more transparent; and
- develop a Respectful Workplace Policy.

In the Plan submission, Efficiency Manitoba specifically details how it has met and continues to, or will, meet four of these priorities set out by the Minister:

1) Establish the structure of the new corporation ensuring a leaner and more streamlined organization to deliver energy efficiency programs;
2) Develop and submit for review and approval Efficiency Manitoba's three-year plan for demand-side management initiatives to meet Efficiency Manitoba's mandated savings targets, while optimizing value for money;
3) Work with the Public Utilities Board to develop streamlined Review processes; and
4) Find ways to obtain the same or better outcomes as formerly obtained under the "Power Smart" program, but at a significantly smaller percentage of the cost and materially less labour costs.

## 12.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba states that the Plan is consistent with the mandate letter from the Minister. It argues that it has carefully considered the directions from Government as articulated in that correspondence and that the Plan meets the requirements of the Act, the Regulation, and the mandate letter.

In particular, in respect of the four priorities identified in the mandate letter specifically addressed by Efficiency Manitoba in the Plan submission, Efficiency Manitoba states as follows:

1) *Establish the structure of the new corporation ensuring a leaner, more streamlined organization to deliver energy efficiency programs.*

   Efficiency Manitoba highlights that the Plan budgets for up to 75 full-time equivalent staff, a reduction of 30 percent from the average of 110 full-time equivalent positions at Manitoba Hydro. The Plan also includes procurement of the CRM/DSM system, which will streamline historically manual processes.

2) *Develop and submit for review and approval your three-year plan for demand-side management initiatives to meet your mandated savings targets, while optimizing value for money.*

   The Plan was submitted in October of 2019 and includes a portfolio of programs that Efficiency Manitoba states are cost effective and return value to Manitobans.

3) *Work with the Public Utilities Board to develop streamlined Review processes.*

   Efficiency Manitoba states that it worked with the Board's staff prior to submitting the Plan to proactively develop a public notice, preliminary issues list, and a draft hearing schedule for consideration of the Panel and stakeholders.

4) *Find ways to obtain the same or better outcomes as formerly obtained under the "Power Smart" program, but at a significantly smaller percentage of the cost and materially less labour costs.*

   As discussed in section 8.0 of this Report, Efficiency Manitoba submits that the Plan achieves additional electrical energy savings of 35 percent and natural gas energy savings of 42 percent when compared to Manitoba Hydro's 2015/16 DSM plan. The total average budget for the Plan is $70 million, compared with the Manitoba Hydro 2015/16 DSM plan of $76 million.

While the Plan does not expressly speak to the principle of reconciliation, Efficiency Manitoba submits that the Plan and Efficiency Manitoba's evidence in the review hearing reflect that Efficiency Manitoba has committed to collaboratively work with Indigenous communities, consistent with the principle of reconciliation.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs argues that the mandate letter from the Minister includes direction to Efficiency Manitoba to contribute to reconciliation in its interactions with Indigenous communities and individuals. Further, this Intervener states that, as an agent of the Crown, Efficiency Manitoba is mandated under *The Path to Reconciliation Act* to advance reconciliation with First Nations in Manitoba. Noting that the term "reconciliation" does not appear in the Plan, the Assembly of Manitoba Chiefs submits that, in future efficiency plans, Efficiency Manitoba should be directed to report on the substantive actions that have taken place and will be taking place to advance reconciliation. An example given by the Assembly of Manitoba Chiefs is setting targets for reducing energy poverty gaps between First Nations on-reserve customers and other customer segments in Manitoba, with a corresponding obligation to report on the achievement of these targets. The Assembly of Manitoba Chiefs submits that the ministerial directives given to Efficiency Manitoba and *The Path to Reconciliation Act* support the argument that Efficiency Manitoba should be seeking a balance between efficiency and equity in its DSM programming.

Consumers Coalition

The Consumers Coalition identifies process concerns that suggest that the objective of a streamlined process was not achieved. In particular, the Consumers Coalition notes the compressed timeline from the filing of the Plan submission to the date of the Panel's report. The position of the Consumers Coalition is that the content of Efficiency Manitoba's filing was poor and, combined with the relatively short process, all parties and the Panel were left in a difficult position. In the view of this Intervener, this difficulty was compounded by there not being time in the schedule for a second round of Information

Requests, a lack of measure-level details, issues with changing numbers, confusing data, and the lack of detail in Efficiency Manitoba's evidence. Further, the Consumers Coalition notes that significant information relating to marginal values was confidential and not available for Interveners to review.

The Consumers Coalition argues that these issues led to a lack of confidence in Efficiency Manitoba and to inefficiencies in the process. The Consumers Coalition submits that, in the future, both the filing and the process could be improved to lead to a more efficient proceeding and a more meaningful review.

The Consumers Coalition recommends that the Panel find that there was insufficient information and detail, particularly measure-level details, in the Plan. Further, the Consumers Coalition recommends that Efficiency Manitoba be directed to improve the level of detail provided in future filings, including measure-level detail. This information should be included in the initial efficiency plan filing in a consistent manner and available for all parties to review to increase efficiencies and meaningful participation by all parties. The Consumers Coalition also recommends that future processes regarding confidential information be improved through collaboration between the Board, Efficiency Manitoba, Manitoba Hydro, as well as potential interveners. The Consumers Coalition notes that, in other applications filed with the Board, the processes for confidential information have been streamlined and improved, which can provide guidance as to good practices for future Efficiency Manitoba review proceedings.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group argues that the Plan has not given sufficient weight to the legislative and ministerial intention of creating an efficiency plan which optimizes value for money, due to the fact that programs that have greater value for money, such as the Custom Industrial program, have been restricted through caps on incentives. The Manitoba Industrial Power Users Group submits that Efficiency Manitoba has not explored the extent to which programs that have more cost-effective metrics could be used to achieve mandated savings targets at a lower cost. Therefore, it is Manitoba

Industrial Power Users Group's position that Efficiency Manitoba has not discharged its onus to demonstrate that it has complied with the directive from the minister that it optimize value for money.

Manitoba Keewatinowi Okimakanak

Manitoba Keewatinowi Okimakanak argues that the Panel should conclude that the Plan does not explicitly comply with the direction from the Minister to contribute to reconciliation. Manitoba Keewatinowi Okimakanak's position is that the Plan should be amended to expressly set out Efficiency Manitoba's commitment to reconciliation between Indigenous and non-Indigenous peoples in Manitoba, specifically in relation to *The Path to Reconciliation Act* principles of reconciliation, which are respect, engagement, understanding, and action.

## 12.2 Conclusions of the Panel

The Panel concurs with Efficiency Manitoba that, with respect to the four items explicitly addressed in the Plan submission, Efficiency Manitoba has reasonably attempted to comply with the directions of the Minister. The details included in the Plan demonstrate Efficiency Manitoba's reasonable efforts to address these four matters.

The Panel agrees with the Consumers Coalition that there were shortcomings in the review process that led to inefficiencies in the exchange of information, which resulted in the need for more oral hearing days to clarify and complete the record; however, the Panel concludes that these shortcomings were not due to any failure of Efficiency Manitoba to reasonably attempt to comply with the direction to develop streamlined processes. Rather, these shortcomings arose from factors outside of Efficiency Manitoba's control.

In particular, Efficiency Manitoba had significantly compressed timelines and limited resources, including having only five Efficiency Manitoba employees and five staff seconded from Manitoba Hydro, to develop the Plan submission and complete the procedural steps in the review process. The review process itself was also subject to

compressed timelines, necessary to allow the review to conclude in time for this Report to be provided to the Minister in advance of the April 1, 2020 commencement date. The Panel concludes that these factors led to the Plan submission lacking sufficient detail, to an Information Request process that was rushed and did not fully provide complete and clear responses in all cases, no time in the schedule for a second round of Information Requests that could have addressed the shortcomings in the first round, and limitations on the ability of the parties and the Board to collaborate on a process for access to confidential information. In other words, having less time did not promote the achievement of a streamlined process.

This Review was the first under the new legislative framework for Efficiency Manitoba. It was therefore an opportunity to learn how there can be improvements in future reviews. The Panel concludes that, despite the best intentions of all involved, the existing legislative framework gave rise to unanticipated challenges that hindered rather than promoted the objective of achieving a streamlined process. The Panel views these unanticipated challenges as stemming from three aspects of the legislative framework: first, the lack of transition period for the period before the approval of the first three-year efficiency plan; second, the timing mandated for the submission of the Plan to the Board; and third, the participation of Manitoba Hydro in the Review being at the discretion of Manitoba Hydro, rather than being mandatory.

First, regarding the lack of transition period, the Panel heard evidence that Efficiency Manitoba faced difficulties in establishing the organization and staffing at necessary levels because it does not yet have an approved efficiency plan. However, having an established organization and necessary staffing is important to completing the steps necessary to arrive at an approved efficiency plan. It appears to the Panel that having express provision in the legislation for the period before the implementation of the first efficiency plan would have assisted in avoiding these difficulties; however, so long as Efficiency Manitoba is able to move forward with its intention to be fully staffed and resourced as of April 1, 2020, these same challenges should not be present at the time of the submission of the next three-year efficiency plan.

Second, the Regulation initially established a deadline for the submission of the Plan of October 1, 2019, which was then revised to November 1, 2019, with the commencement date remaining as April 1, 2020 throughout. The Panel concludes that, even if the six-month period for the Review process had been maintained, the timeline for the Review would have been compressed. This is at least in part due to the fact that the period for the Review must also include the time for the Panel to prepare its Report and for the Minister's receipt and review of the Panel's Report prior to the commencement date. As a result, the entire public review process had to take place over a period of only three months.

As discussed above, the compressed timelines led to inefficiencies and challenges in the process. It is the Panel's view that having more time built into the legislative framework for the Review process will streamline the regulatory process. It will allow for a more robust exchange of information, including a second round of Information Requests that can be used to clarify information provided in the first phase of the written discovery process. This will facilitate the process for the development of expert evidence while minimizing the need for procedural motions related to compelling the provision of more information and the need for extensions for written filings. The Panel expects that this will result in a more streamlined oral hearing and reduce the number of days required for the hearing.

In addition, the Panel acknowledges that the participation of Interveners in the process was challenged by limits on the access to confidential information filed in the proceeding, including measure-level detail that would disclose Manitoba Hydro and Centra confidential information. Efficiency Manitoba supports the use of an independent expert consultant to review confidential information and provide public information in aggregated form. The Panel views the role of the Independent Expert Consultant as beneficial, allowing for a process for the testing of confidential information while limiting procedural disputes with the two utilities over access to their information. However, the Panel also accepts that the participation of Interveners may be enhanced through access to confidential information. Having more time for the review process will allow time for

Efficiency Manitoba, the Interveners, Manitoba Hydro, Centra, and the Board to collaboratively develop a workable process for access to confidential information. This relates to the final issue of the participation of the utilities in the process.

Finally, the Panel found that there were challenges in the exchange and testing of information due to the decision of Manitoba Hydro (and Centra) to not participate in the review process. In particular, this was because information foundational to the legislated mandatory considerations for the Board is Manitoba Hydro's and Centra's information, including marginal value, load forecast, resource planning, and rate impact information. While the current legislative framework leaves the decision to participate in the review process in Manitoba Hydro's and Centra's discretion, the Panel concludes that the process would be improved through participation by the utilities.

Therefore, the Panel recommends that the legislation be amended to provide for a minimum of a six-month time period between submission of Efficiency Manitoba's efficiency plan to the Board and the Panel's provision of its report to the Minister. Any time required for the Minister to consider the Panel's report would be in addition to this six-month period. The Panel further recommends that the legislation be amended to require the participation of Manitoba Hydro and Centra in the review process.

With respect to the remaining directives from the Minister, the Panel concludes that the Plan does not expressly detail how the Plan is responsive to these specific directives. The Panel expects Efficiency Manitoba will reasonably attempt to comply with all of these directives, and recommends that the details of how it is doing so be included in the progress reporting that is recommended elsewhere in this Report. Except as discussed below, the Panel concludes that it is not necessary for the Plan to be amended to address these matters.

The Panel is concerned that reconciliation is not expressly addressed in the Plan. The Panel accepts that Efficiency Manitoba intends to incorporate the principles of respect, engagement, understanding, and action in all of its interactions with Indigenous communities and to work collaboratively with Indigenous communities consistent with the

principles of reconciliation. However, the details of how Efficiency Manitoba intends to do so are not included in the Plan. Due to the importance of reconciliation, as reflected in the Minister's mandate letter and *The Path to Reconciliation Act*, express statements of how Efficiency Manitoba will work toward advancing reconciliation are required. This is particularly so in light of the evidence the Panel heard about the levels of energy poverty experienced by First Nations on-reserve customers and the barriers to participation in DSM programs for Indigenous customers. These disparities require concrete planning and while the Panel accepts Efficiency Manitoba's good faith intentions, the Panel concludes that the statement of intentions made during the public hearing process do not meet the threshold of reasonably attempting to comply with the Minister's directive to advance reconciliation. Therefore, the Panel recommends that the Plan be amended to specifically address how Efficiency Manitoba will advance reconciliation. The Panel also recommends that Efficiency Manitoba's progress in this regard be included in the reporting recommended elsewhere in this Report.

## 13.0 Recommendations

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| *Act* | *s. 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*<br>*(a) approved,*<br>*(b) approved with suggested amendments; or*<br>*(c) rejected.* |

The Panel recommends that the Plan be approved with suggested amendments. The preceding sections of this Report outline the Panel's conclusions on the mandatory considerations in the Act and the Regulations, which lead to the Panel's recommendation that the Plan be approved with suggested amendments.

As detailed below, the Panel recommends that the entire Plan be approved with suggested amendments, and does not accept the submissions of Interveners that a one-year interim approval be recommended. However, the Panel discusses below the importance of regular reporting to ensure that Efficiency Manitoba is on track with the implementation of the Plan and successfully mitigating deliverability risks.

In addition to discussion of the overarching recommendation that the Plan be approved with suggested amendments, this section summarizes all of the Panel's recommendations to the Minister, including those discussed in the preceding sections of this Report as well as those discussed in more detail below. An enumeration of the recommendations is also provided in Appendix 2.

### 13.1 Party Positions

Efficiency Manitoba

Efficiency Manitoba's position is that the Plan should be accepted, as presented. It argues that the Plan sets the foundation to achieve aggressive savings targets and reduce Manitoba's electricity and gas consumption. It submits that the portfolio achieves the requirement of cost effectiveness at the portfolio level as required by the legislation. While the measures within program bundles are not all cost-effective, Efficiency Manitoba states

that these measures serve an important purpose in meeting Efficiency Manitoba's overall regulatory obligations and mandates. To this end, Efficiency Manitoba argues that the Plan creates programs for as many Manitobans as possible to participate and that accessibility is a key feature of the Plan. It submits that the Plan accomplishes these objectives at lower costs than Manitoba Hydro's previous DSM plans.

Efficiency Manitoba submits that any rejection of the Plan would be a significant lost opportunity to achieve savings and reduce energy consumption and would defer other Plan goals. Further, Efficiency Manitoba argues that there should be approval of the three-year Plan. Any shorter term would increase, rather than streamline, the regulatory process and would also lead to practical impediments to Efficiency Manitoba's success. It states that, if there was approval of only one-year with another review process before the rest of the Plan is implemented, resources would have to be redirected from operations and programming to regulatory compliance. Efficiency Manitoba argues that this would be impractical and would affect the implementation of the Plan. However, Efficiency Manitoba advises that, during the three-year period of the Plan, it may be able to report on program implementation should interim reporting be required.

Efficiency Manitoba therefore requested in its closing argument that the Panel recommend approval of the Plan as filed as it meets the mandate of the Act and delivers key outcomes. However, in its reply submissions, Efficiency Manitoba expressly accepted the following recommendations made by Interveners in the proceeding:

- to amend the Plan to include a concrete requirement that all employees document all interactions with First Nations;
- to amend the Plan to explicitly set out that:
    - all Residential programs are accessible to Indigenous residential customers and that the Indigenous residential programs are available in addition to the Residential programs,

  - all small business programs are accessible to Indigenous small business customers and that Indigenous small business programs are available in addition to the small business offers, and
  - energy efficiency loans are available to customers whose accounts are in arrears, including First Nations on-reserve residential customers within the Indigenous customer segment whose accounts are in arrears;
- that, for the purposes of reviewing whether the Plan is "accessible to all Manitobans", that "accessible" means financially accessible and physically accessible, meaning affordable and available; and
- to "unbundle" First Nations and Métis customer programs into separate bundles in recognition of the distinct customer segments.

In its reply submissions, Efficiency Manitoba also accepted the following recommendations from Interveners relating to implementation of the current Plan:

- to use a more robust issues tracking table for input from stakeholders and the public;
- to allow for flexibility in terms of timelines on participation for industrial-focused programming;
- to participate in an integrated resource planning process if one is initiated by Manitoba Hydro or the Government;
- to collect data for First Nations off-reserve customers and create an Income Qualified Program for First Nations off-reserve customers;
- that the cumulative savings targets in the legislation should be based on a simple sum of the annual target;
- to conduct research and direct engagement on the gaps between bill savings for the First Nations Insulation and Direct Install programs compared to the bill savings in other Income Qualified programs to determine what further can be done to reduce the gap and increase bill savings for more First Nations on-reserve customers;
- to engage directly with First Nations governments and citizens;

- to include measures of robustness in its DSM scorecard evaluation of First Nations programming moving forward;
- to collect more information and data about energy consumption and use of energy efficiency programs by First Nations customers; and
- to populate the post-approval implementation iteration of the Energy Efficiency Advisory Group ("EEAG").

Finally, in its reply submissions, Efficiency Manitoba accepted the following recommendations from Interveners relating to the development of future efficiency plans:

- to provide measure-level detail;
- to develop a standardized methodology for consistently reporting on the projected energy savings targets;
- to provide Total Resource Cost results, provided there is an understanding that the legislation requires cost effectiveness be determined based on the PACT;
- to include a calculation of the Lifecycle Revenue Impact on a 10-year basis;
- to calculate savings for new industrial customers compared to baselines of technologies that would have been reasonably adopted absent Efficiency Manitoba's programming;
- to include clear programming targets and reporting for access by First Nations on-reserve customers to general programming;
- to conduct additional research to consider potential benefits or disadvantages to moving to a dedicated funding model for each Fist Nation and to track the issue for consideration at the next hearing; and
- to set clear plans and targets for economic participation for First Nations and First Nations citizens and report on the same at the next application.

Assembly of Manitoba Chiefs

The Assembly of Manitoba Chiefs submits that the Panel should recommend that the Plan be approved with amendments. As summarized elsewhere in this Report, the Assembly of Manitoba Chiefs argues that the following amendments should be made to the Plan:

- Increase electric energy savings targets for First Nations programs and establish clear programming targets for the participation of First Nations on-reserve customers in the First Nations-specific programs as well as general programming;
- Provide for a more significant and stable funding package for First Nations on-reserve customers to meet the additional proposed savings targets;
- Create an engagement strategy that better serves First Nations and include meetings with Chiefs and Councils, public discussions with First Nations citizens, as well as possible retention of community liaisons;
- Create a project management plan for First Nations customers;
- Incorporate the collection of data by Efficiency Manitoba in relation to off-reserve First Nations programs and consider the creation of an off-reserve First Nations Income Qualified program;
- Increase the number of First Nations Energy Advisor positions from one to at least two positions that are regionally based;
- Expand enabling strategies like the Community Energy Program and allocate more stable funding;
- Unbundle First Nations and Métis customer programs into separate programs; and
- Incorporate additional research and analysis by Efficiency Manitoba which considers the potential benefits or disadvantages of moving to a dedicated funding model for each First Nation, instead of a global funding amount. Additional research and analysis should also consider the gaps between bill savings for the First Nations Insulation and Direct Install programs compared to other income qualified programs.

The Assembly of Manitoba Chiefs also argues that Efficiency Manitoba should be directed to include specific information in future efficiency plans, including:

- the extent to which First Nations programming has met measures of equity and how proposed efficiency plans compare with different levels of equity. Efficiency Manitoba should include a comparison of energy savings that will be achieved by Efficiency Manitoba's programming versus energy consumption of the First Nations ratepayers, a comparison of program participation with share of customers (adjusted for household size), and the percentage of bill savings compared with the share of energy bills,
- the extent to which targets for participation of First Nations on-reserve customers have been met,
- evaluation of electric programming using the Total Resource Cost test and inclusion of metrics for average customer bill reduction and quantifiable economic benefits,
- evaluation of electric programs using measures of robustness, and
- the extent to which targets for economic participation of First Nations and First Nations citizens have been met.

Consumers Coalition

The Consumers Coalition submits that the Panel should recommend approval of the first year of the Plan, as filed, and should further recommend that Efficiency Manitoba be directed to file an amended Efficiency Plan for 2021/22 to 2022/23 that contains the following:

- an update as to progress on public participation and stakeholder engagement,
- updated codes and standards savings projections based on review by the independent assessor,
- increased savings from programs as required to at least meet the savings targets,
- increased detail for all programs regarding proposed measures, measure quantities, incentive amounts, and expected savings, and

- increased Residential, Income Qualified, 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 the building's primary source of heat), and increased promotion of cold-climate heat pumps for homes using electric resistance heating.

The Consumers Coalition further recommends that the participants in the EEAG receive compensation and that the EEAG's mandate should be clearly articulated with respect to membership, mandate, roles, and responsibilities, including the EEAG members expected contact or relationship with the public and how feedback from EEAG members is addressed.

Manitoba Industrial Power Users Group

The Manitoba Industrial Power Users Group submits that the Panel recommend approval of the Plan with the following amendments:

- eliminate the 1.5% electrical energy savings target, which should not be required at this time, or in any specific future year,
- minimize spending on programs that exhibit unfavourable economics, with this amendment being primarily absorbed by reducing the achievement of the 1.5% target,
- remove barriers to participation for programs that are more cost effective, including caps on industrial programming,
- make contingency funding available to address any opportunities not included in the original efficiency plan, including in particular cost-effective industrial programming for new or expanding plants, and
- approve Efficiency Manitoba's budgets on an interim basis, subject to the above amendments and to recommendations for revision form the Panel following future investigation by the Board at a Manitoba Hydro hearing. In the alternative, Manitoba Industrial Power Users Group would also support approving Efficiency Manitoba's budgets on a shorter horizon subject to further review by the Board, if

the Board were to convene an integrated resource planning or similar process within the three-year horizon.

For future efficiency plans, the Manitoba Industrial Power Users Group submits that Efficiency Manitoba should be instructed to undertake an energy efficiency potential study to consider the longer-term opportunities for acquiring persistent energy savings. Further, this Intervener states that Efficiency Manitoba should be directed to work with Manitoba Hydro in the intervening years before the next efficiency plan to identify regional needs and develop programming that specifically addresses these needs. As well, alternative efficiency plans should be available to consider and adopt in lieu of Efficiency Manitoba's main proposed efficiency plan, including efficiency plans that achieve alternative savings targets as well as different priorities, programming bundles, and spending levels among customer groups. The Manitoba Industrial Power Users Group also argues that rate impacts should be a material component of future efficiency plan reviews, including near-term impacts reflecting proper analysis of Manitoba Hydro's accounting for Efficiency Manitoba's costs.

Manitoba Keewatinowi Okimakanak

Manitoba Keewatinowi Okimakanak argues that neither approval nor rejection of the Plan as presented would be in the public interest. Instead, it is the position of Manitoba Keewatinowi Okimakanak that the Panel should recommend approval of the Plan on a one-year interim basis, with amendments. The Panel should further recommend a requirement that Efficiency Manitoba file a progress report with the Board that would be reviewed in a written process prior to recommendation to the Minister as to whether the remaining two years of the Plan should be approved on a final basis.

Manitoba Keewatinowi Okimakanak submits that the Panel should recommend the following amendments to the Plan:

- explicitly state Efficiency Manitoba's commitment to contributing to reconciliation between Indigenous and non-Indigenous peoples in Manitoba, including an

express statement in regard to the principles of reconciliation as set out in *The Path to Reconciliation Act*,

- include a concrete requirement that all Efficiency Manitoba employees document all interactions with First Nations,
- specify a budget within enabling strategies for compensation for participation on both the EEAG and the Indigenous Energy Efficiency Working Group,
- specify that all Residential programs are available to Indigenous residential customers, all small business programs are available to Indigenous small business customers, and energy efficiency loans are available to customers whose accounts are in arrears, and
- increase the budget for overhead costs to account for an increase in regulatory costs arising from the review of the progress report.

Manitoba Keewatinowi Okimakanak further argues that the Panel should recommend that the Minister direct Efficiency Manitoba to file, within no more than one month of the approval of the Plan, a First Nations Direct Engagement Strategy with respect to all 63 First Nations in Manitoba that includes the following:

- the proposed method of, and timeline for establishing, a two-way transparent, inclusive, informed, and meaningful engagement with customers and the public in each First Nation in Manitoba,
- the timeline for Efficiency Manitoba representatives to complete a schedule for travelling to each First Nation to hold community meetings, with such schedule being prepared in coordination with each First Nation,
- a list of specific information that will be shared with each First Nation, which at minimum must include information specific to Plan and program development, implementation, and evaluation,
- a list of specific information that will be requested from each First Nation, and
- an issues tracking table.

## 13.2 Recommendations for Plan

This section summarizes all of the Panel's recommendations to the Minister, including those discussed in the preceding sections of this Report as well as those discussed in more detail below. The reasoning for each recommendation is set out, followed by the specific recommendation to the Minister.

### 13.2.1 Recommendation for Approval of three-year Plan with Amendment

The Panel recommends that the three-year Plan be approved with suggested amendments, and does not accept the submissions of Interveners that a one-year interim approval only be recommended. A one-year interim approval would contribute to the deliverability risks faced by Efficiency Manitoba in implementing the Plan as it would add additional regulatory obligations in the crucial early months of the Plan. The Panel does not accept that Efficiency Manitoba should be focusing on developing a revised efficiency plan for 2021/22 and 2022/23 at the same time as it is implementing the first year of its first ever efficiency plan, while also transitioning staff from Manitoba Hydro and addressing major procurement requirements with third-party contractors and the CRM/DSM system. Rather, as detailed below, the Panel is satisfied that approval of the full three-year Plan with the Panel's suggested amendments and with a reporting requirement will address concerns raised by the Interveners and is in the public interest.

**1. The Panel recommends that the Minister approve the three-year Plan with the Panel's suggested amendments.**

For the reasons detailed in section 4.0 of this Report, the Panel recommends that the Plan be amended to use the electric consumption baseline calculated based on the definition of general consumer sales in the Electric Load Forecast and adjusted for the savings in the Manitoba Hydro 2018/19 DSM Plan. In addition, the Panel recommends that the Plan be amended to use the gas consumption baseline calculated based on

Centra's forecasts of gas consumption for the years preceding the Plan years, adjusted for expected DSM savings in the 2018/19 and 2019/20 DSM Plans and Efficiency Manitoba's Plan, while continuing to remove consumption used for industrial processes and generation of electricity.

The Panel also recommends that the Plan be amended to specifically set out how Efficiency Manitoba intends to research, engage in pilot projects, and otherwise pursue new and emerging technologies, such as air source heat pumps, over the three years of the Plan, and how it intends to incorporate emerging technologies in future efficiency plans.

The Panel accepts the Assembly of Manitoba Chief's recommendation that the Plan be amended to "unbundle" the Métis and First Nations programs into separate bundles to reflect distinct customers segments. This recommendation was accepted by Efficiency Manitoba.

As discussed in section 8.0 of this Report, the Plan should be amended to allocate the costs within the Enabling Strategies and Corporate Overhead budget categories using the cost driver approach, such that 70% is allocated to the electric portfolio and 30% is allocated to the gas portfolio in the current Plan.

The Panel also recommends, as detailed in section 10.0 of this Report, that the Plan should be amended to calculate the Lifecycle Revenue Impact analysis over a 10-year period, in addition to using the 10-year Lifecycle Revenue Impact analysis in future efficiency plans.

Finally, due to the importance of the principle of reconciliation and the direction from the Minister in regards to reconciliation, the Panel recommends that the Plan be amended to specifically address how Efficiency Manitoba will advance reconciliation.

### 13.2.2 Recommendations for Public and First Nations Engagement

The Panel heard evidence from the expert witness for the Consumers Coalition, Dr. Fitzpatrick, that the mandate of the EEAG as constituted and employed by Efficiency Manitoba is unclear. In this regard, the Panel notes that Efficiency Manitoba appears to see the EEAG as providing expert views on efficiency matters, while also viewing the EEAG as a forum for both stakeholder interests and public engagement. The Panel recommends that the mandate of the EEAG be clarified.

The Panel concludes that engagement and consultation should occur with energy efficiency experts, stakeholders (including third-party program delivery contractors), interest groups and organizations, individual First Nations, and the broader public, including ratepayers. Efficiency Manitoba should clearly define how this engagement and consultation will be done and through what mechanisms. The EEAG is not necessarily the appropriate forum to accomplish all aspects of this.

**2. The Panel recommends that Efficiency Manitoba clarify the mandate of the EEAG and clearly define how broader consultation and engagement will be accomplished.**

**3. The Panel recommends that the Efficiency Manitoba Board populate the post-Plan approval iteration of the EEAG.**

This review proceeding identified limitations on participation in the EEAG due to funding gaps. The Panel recommends that the Efficiency Manitoba Board consider this information and determine whether funding should be provided to participants in the EEAG.

**4. The Panel recommends that the Efficiency Manitoba Board consider providing compensation for participants in the EEAG.**

The successful implementation of the Plan, and particularly of the goal of making the Plan accessible to all Manitobans, will require Efficiency Manitoba to engage with the public. While the Panel accepts that the limited time and resources available to Efficiency Manitoba in the development of the Plan prevented Efficiency Manitoba from completing broad engagement beyond the EEAG, a commitment to engagement will be necessary throughout the Plan years.

The Panel concludes that engagement through the EEAG is not equivalent to, or a substitute for, full public engagement, nor is it a substitute for engagement with individual First Nations and First Nations citizens. The Panel agrees with the submissions of the Assembly of Manitoba Chiefs and Manitoba Keewatinowi Okimakanak that engagement with First Nations advocacy groups is not a substitute for direct engagement with individual First Nations.

The Panel notes that Manitoba Keewatinowi Okimakanak's recommendation that the Plan include a concrete requirement that all employees document all interactions with First Nations was accepted by Efficiency Manitoba. The Panel concludes that it is not necessary to amend the Plan to include this requirement; rather, the Panel expects that this will be done by Efficiency Manitoba.

The Panel views effective engagement with customers as especially important for Efficiency Manitoba's achievement of participation targets for hard-to-reach customers, including for First Nations on-reserve programs. The Panel accepts the evidence of the expert witness for the Consumers Coalition, Dr. Fitzpatrick, that the design of a meaningful process of public participation should be guided by the following four principles:

- Transparency, meaning that people must be able to see and understand how the process is being applied and how decisions are being made,
- Inclusivity, meaning that the process should take into account the concerns of all parties who consider themselves or their interests to be affected,
- Informed, the record must be 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.

The Panel recommends that Efficiency Manitoba's public engagement process should inform the development of the next three-year efficiency plan, prior to any submission of that efficiency plan to the Board. The Panel recommends that Efficiency Manitoba develop a public engagement program or strategy to incorporate public consultation into development of the next efficiency plan. The public engagement strategy should be filed with the Board within the first six months after the commencement date. As well, the regular reporting recommended by the Panel in this Report should detail Efficiency Manitoba's achievement of the steps in the public engagement program. Future efficiency plan filings should address how learnings from public engagement are incorporated into those efficiency plans.

The Panel emphasizes that, including for the reasons related to accessibility and reconciliation discussed elsewhere in this Report, Efficiency Manitoba should design and execute an engagement strategy that directly involves First Nations, including meetings with Chiefs and Councils, public discussions with First Nations citizens, as well as possible retention of community liaisons.

The Panel concludes that the First Nations Direct Engagement Strategy proposed by Manitoba Keewatinowi Okimakanak provides a useful framework for Efficiency Manitoba to employ as it moves forward with implementing the Plan. However, given the many transitional items that will need to occur leading up to and immediately following the

commencement date, including the transition of approximately sixty employees from Manitoba Hydro and the procurement of the CRM/DSM system, the Panel determines that a one-month timeframe for completing the development of a First Nations Direct Engagement Strategy is not realistic. The Panel recommends that Efficiency Manitoba develop this strategy and file it with the Board within the first six months after the commencement date. The Panel further recommends that Efficiency Manitoba's achievement of the steps included in the strategy should be detailed in all future progress reports, as well as in Efficiency Manitoba's next three-year efficiency plan submission.

5. **The Panel recommends that Efficiency Manitoba should seek input from members of the public beyond the EEAG in implementing this Plan and in developing the next three-year efficiency plan, and should report on the steps taken in the regular reporting recommended by the Panel.**

6. **The Panel recommends that Efficiency Manitoba develop a public engagement program to incorporate public consultation into development of the next efficiency plan. The regular reporting recommended by the Panel in this Report should detail Efficiency Manitoba's achievement of the steps in the public engagement program, and future efficiency plan filings should address how learnings from public engagement are incorporated into those efficiency plans.**

7. **The Panel recommends that Efficiency Manitoba develop a First Nations Direct Engagement Strategy within the first quarter after implementation of the Plan.**

8. **The Panel recommends that Efficiency Manitoba's achievement of the steps included in the First Nations Direct Engagement Strategy be detailed in the progress reports recommended by the Panel, as well as in Efficiency Manitoba's next three-year efficiency plan submission.**

### 13.2.3 Recommendations for Efficiency Manitoba Implementation of the Plan

It is the view of the Panel that regular reporting by Efficiency Manitoba is required to ensure that Efficiency Manitoba is on track with the implementation of the Plan and successfully mitigating deliverability risks. As detailed in section 9.0 of this Report, the Panel recommends that the Minister direct that Efficiency Manitoba develop a project management plan and risk management strategy within the first quarter of the fiscal year. The project management plan should address the steps needed to launch Efficiency Manitoba, such as the transition of staff from Manitoba Hydro, the establishment of governance structures, and development of information technology systems. The risk management strategy should address the risks that any of the steps in the project management plan are delayed, over budget, or otherwise negatively affected, including hard-to-reach participation in programs. The Panel recommends the project management plan and risk management strategy be filed with the Minister and publicly with the Board for transparency purposes.

**9. The Panel recommends that Efficiency Manitoba be directed to develop a project management plan and risk management strategy by no later than June 30, 2020 and to file these documents with the Minister and the Public Utilities Board. The Panel recommends that, if necessary, Manitoba Hydro be directed to second personnel to Efficiency Manitoba to assist in this regard.**

The Panel further recommends quarterly reporting to the Minister, to be simultaneously publicly filed with the Board, for the first fiscal year of the Plan. The Panel suggests that the Minister should then decide whether such quarterly reporting need continue beyond the first fiscal year, and so direct if required. The quarterly reports should identify:

- progress toward meeting the milestones in the project management plan,
- any updates to the timelines in the project management plan,

- ongoing actions to mitigate the risks in the risk management strategy,
- any risks that materialize and their impacts,
- steps taken or planned to be taken to address the risks that have materialized,
- projected versus actual budget,
- achievement of the steps in the public engagement program, as detailed elsewhere in this Report, and
- achievement of the steps included in the First Nations Direct Engagement Strategy, as detailed elsewhere in this Report.

**10. The Panel recommends that the Minister direct Efficiency Manitoba to file with the Minister, and simultaneously publicly file with the Public Utilities Board, quarterly reports for the first fiscal year of the Plan.**

The Panel has identified the importance of Efficiency Manitoba closely monitoring participation as it implements the Plan, particularly for First Nations, Métis, lower-income, and other hard-to-reach customers. To ensure that the accessibility goal of the Plan is achieved, this information must be collected throughout the implementation of the Plan, so that Efficiency Manitoba can be responsive to the need for adjustments to overcome barriers to participation during the years of this Plan. Broadly, Efficiency Manitoba must be proactive in ensuring its programs are reaching all customers so that customers most affected by rate increases will not be non-participants for reasons beyond their control. This information will also be important in designing the next three-year Plan.

**11. The Panel recommends that Efficiency Manitoba monitor and track participation in its programs particularly for hard-to-reach customers so that it can be responsive to adjustments that need to be made to overcome barriers to participation during the years of this Plan**.

In its evidence, Efficiency Manitoba explained its commitment to re-evaluate the saturation of the market for efficiency programs on-reserve, such as the Direct Installation

program, identified in the information provided to Efficiency Manitoba by Manitoba Hydro. The Panel concludes that Efficiency Manitoba's participation rates may be conservative due to the reliance on Manitoba Hydro data, and notes that Efficiency Manitoba intends to achieve greater uptake than projected in the Plan. To best confirm the data, Efficiency Manitoba should directly engage with individual First Nations to assess the degree of market saturation.

**12. The Panel recommends that Efficiency Manitoba directly engage with individual First Nations communities in order to effectively evaluate the degree of saturation of the market.**

Efficiency Manitoba has accepted the recommendation of the Assembly of Manitoba Chiefs that, during the implementation of this Plan, additional research and direct engagement will be conducted regarding a dedicated funding model for each First Nation and on gaps between bill savings for First Nations on-reserve and Income Qualified programs.

The Panel recommends that Efficiency Manitoba take steps to address these matters during the implementation of this Plan, and report on its progress as well as detailing its progress in the next three-year efficiency plan submission.

In addition, Efficiency Manitoba accepts the recommendation from the Assembly of Manitoba Chiefs that the DSM Scorecard should include a robustness metric for the evaluation of program equity for First Nations.

The Panel does not accept the recommendation of Manitoba Keewatinowi Okimakanak that Efficiency Manitoba conduct research into internet availability on northern First Nations, but notes that the issue of internet availability adds to the importance of the Panel's recommendations that Efficiency Manitoba engage directly with individual First Nations and respond to barriers to participation.

**13. The Panel recommends that Efficiency Manitoba conduct additional research and direct engagement on use of a dedicated funding model for each First Nation and on gaps between bill savings for First Nations on-reserve and Income Qualified programs. The Panel recommends that Efficiency Manitoba report on its progress in the reporting recommended in this Report, as well as in the next three-year efficiency plan submission. This recommended tracking should include a robustness metric in the DSM Scorecard for the evaluation of program equity for First Nations.**

Efficiency Manitoba has also accepted the recommendation of Manitoba Keewatinowi Okimakanak that the Plan be amended to include explicit statements that all Residential programs are available to Indigenous residential customers, all small business programs are available to Indigenous small business customers, and energy efficiency loans are available to customers whose accounts are in arrears. The Panel concludes that the accessibility of these programs and availability of energy efficiency loans is included in the Plan and it is not necessary to amend the Plan. However, the Panel recommends that Efficiency Manitoba enhance the clarity of these matters in its implementation of the Plan through education, marketing, and outreach processes.

**14. The Panel recommends that Efficiency Manitoba address the accessibility of all Residential and small business programs to Indigenous Residential and small business customers as well as the availability of energy efficiency loans to customers with accounts in arrears through clear education, marketing, and outreach processes.**

The Act mandates that Efficiency Manitoba provide the independent assessor's report to the Public Utilities Board and requires that Efficiency Manitoba do so "within the prescribed time"; however, the timing for the provision of the report to the Board has not yet been prescribed in the Regulation. As such, unless a time frame is prescribed, and

consistent with the timeframe accepted by Efficiency Manitoba in its evidence, the Panel recommends that the independent assessor's report be provided to the Public Utilities Board within six months of the end of Efficiency Manitoba's fiscal year.

**15. The Panel recommends that, in the absence of a prescribed timeframe, the independent assessor's report be filed with the Public Utilities Board within six months of the end of Efficiency Manitoba's fiscal year.**

As suggested by Daymark, the Panel recommends that program bundles that offer a large share of portfolio-level energy savings should undergo annual evaluations and that all programs be evaluated within the first two years of the Plan.

**16. The Panel recommends that program bundles that offer a large share of portfolio-level energy savings should undergo annual evaluations and that all programs be evaluated within the first two years of the Plan.**

Finally, while Efficiency Manitoba has not expressly detailed how the Plan is responsive to all of the directives from the Minister, the Panel understands and expects that Efficiency Manitoba will reasonably attempt to comply with those directives in implementing the Plan. The Panel further recommends Efficiency Manitoba detail how it is doing so in its regular reporting.

**17. The Panel recommends that Efficiency Manitoba reasonably attempt to comply with all directions of the Minister in implementing the Plan and report on its progress in this regard in the regular reporting recommended by the Panel**.

### 13.2.4 Recommendations for the Development and Submission of Future Plans

Efficiency Manitoba has accepted the recommendation made by the Manitoba Industrial Power Users Group that future efficiency plans calculate savings achieved by new customers in the Industrial customer segment through a comparison to the baseline of what technologies and standards would have been adopted by those new customers in the absence of Efficiency Manitoba's activities. No party opposed this recommendation and the Panel therefore recommends that this be incorporated into future efficiency plans.

**18. The Panel recommends that future efficiency plans calculate savings achieved by new Industrial customers through a comparison to the baseline of what technologies and standards would have been adopted by those new customers in the absence of Efficiency Manitoba's activities.**

The Regulation contemplates that if a rate increase or conservation rate is attributed to Efficiency Manitoba, energy savings resulting from the rate count toward the savings targets. The Panel acknowledges in the context of large rate increases, there will be a decline in energy consumption arising from the increased price for energy. Accordingly, it is important to consider price elasticity effects when evaluating whether the savings targets have been met.

The Panel recommends that Efficiency Manitoba consider and evaluate how price elasticity effects could be taken into account when counting energy savings toward the savings targets, including how the independent assessor should address price elasticity effects in its assessment. A summary of the results of this evaluation should be included in the next efficiency plan submission.

**19. The Panel recommends that Efficiency Manitoba evaluate how price elasticity effects can be taken into account when counting energy savings**

**toward the savings targets and include a summary of the results of this evaluation in the next efficiency plan submission.**

Efficiency Manitoba did not examine any metrics of cost effectiveness other than PACT metrics in selecting DSM measures. The PACT measures the costs and benefits of DSM programming only for the utility, and does not include the costs and benefits experienced by customers participating in the programs or more broadly by society.

In selecting measures for future efficiency plan, the Panel recommends that in addition to the PACT, Efficiency Manitoba should also use the TRC and other customer-centric tests, such as the Participant Cost Test and the Customer Payback Test.

**20. The Panel recommends that in addition to the PACT, Efficiency Manitoba should also use the TRC and other customer-centric tests, such as the Participant Cost Test and the Customer Payback Test, in selecting measures for future efficiency plans.**

Efficiency Manitoba did not consider cost effectiveness at a measure level, but instead analyzed cost effectiveness at the level of program bundles and the overall portfolio. The Panel recommends that Efficiency Manitoba consider the cost effectiveness of DSM programming at the measure level, as opposed to simply at the program bundle or portfolio level.

In addition, Efficiency Manitoba did not screen out any measures based on consideration of the benefits versus the costs specific to each measure, and the Plan did not provide details which justify the inclusion of cost-ineffective measures in the portfolio. For future efficiency plans, the Panel recommends that Efficiency Manitoba should outline the specific reasons for including cost-ineffective measures within the final portfolio.

**21. The Panel recommends that in future efficiency plans, Efficiency Manitoba should consider cost effectiveness at a measure level and should outline the specific reasons for including cost-ineffective measures in the final portfolio.**

Efficiency Manitoba has committed to providing measure-level detail in future efficiency plan submissions. Given that cost-effectiveness metrics on a measure level may be subject to CSI, the Panel recommends that future efficiency plans should be filed in a timely manner so that the Panel can make an appropriate determination regarding intervener access to confidential information.

**22. The Panel recommends that measure-level information should be included in future efficiency plans, including cost-effectiveness metrics for individual measures, and that future efficiency plans should be filed in a timely manner so that the Panel can make an appropriate determination regarding intervener access to confidential information.**

Efficiency Manitoba assigned program administration costs to one measure within a bundle, rather than allocating them across all measures within that bundle, which created a barrier to disclosure of accurate cost-effectiveness metrics on a measure level. For future efficiency plans, the Panel recommends that Efficiency Manitoba should allocate program administration costs across all measures, instead of assigning them to one measure within a bundle.

**23. The Panel recommends that in order to provide cost-effectiveness metrics on a measure level, Efficiency Manitoba should allocate program administration costs across all measures, instead of assigning them to one measure within a bundle.**

In selecting DSM measures for inclusion in the Plan, Efficiency Manitoba did not develop any alternative portfolios with different savings levels, incentive levels, or cost-effectiveness or accessibility metrics for comparison purposes.

For future plans, Efficiency Manitoba should develop a preferred efficiency plan and two alternative plans and file these efficiency plans with the Board. The Panel recommends that one of the alternative efficiency plans should consist of a portfolio of DSM measures that are more cost effective, but less accessible than those in the preferred efficiency plan. The other alternative efficiency plan should consist of a portfolio of DSM measures that are less cost effective and more accessible than those in the preferred efficiency plan.

**24. The Panel recommends that for future efficiency plans, Efficiency Manitoba should develop and file with the Board a preferred efficiency plan; an alternative efficiency plan that is more cost effective, but less accessible than the preferred efficiency plan; and a second alternative efficiency plan that is less cost effective and more accessible than the preferred efficiency plan.**

Further to the Panel's recommendation that, in implementing the current Plan, Efficiency Manitoba use education, marketing, and outreach processes to clarify the availability of general Residential and small business programs to Indigenous customers, the Panel also accepts the recommendation made by the Assembly of Manitoba Chiefs that there be targets for the participation of First Nations on-reserve customers to general programming.

**25. The Panel recommends that Efficiency Manitoba establish programming targets for access by First Nations on-reserve customers to general Residential and small business programs and report on the progress toward those targets in future efficiency plans.**

**26. The Panel recommends that Efficiency Manitoba set targets for economic participation for First Nations and First Nations citizens in the delivery of First Nations programs and report on progress toward those targets in future efficiency plans.**

## 13.3 Recommendations for Legislative Amendments

This review is the first under the new legislation that established Efficiency Manitoba and that provides for submission of Efficiency Manitoba's three-year efficiency plans to the Board for review in a public process. As the record in the proceeding developed and in the course of the oral hearing process, parties and expert witnesses identified and commented on potential legislative amendments. As may be expected with embarking on an entirely new process under a new legislative framework, engagement in the process led to an understanding of parties and the Panel as to areas where the legislative framework could be improved. Therefore, in this Report, the Panel makes recommendations for specific legislative amendments. The context and bases for these recommendations are provided in detail in the preceding sections of this Report. The Panel also enumerates these recommendations for legislative amendments below.

It is the view of the Panel that, although permitted under paragraph 8(1)(b) of the Regulation, repeatedly counting the same Project 1 savings year-after-year does not further Efficiency Manitoba's mandate as set out in the Act at paragraph 4(1)(c), which is to delay the point at which capital investments in major new generation and transmission projects will be required. It appears to the Panel that there is an inconsistency between paragraph 4(1)(c) of the Act and paragraph 8(1)(b) of the Regulation. If the objective of deferring capital investments is to be given priority, then the Panel recommends that the Regulation be amended so that the savings from Project 1 cannot be counted toward the achievement of the savings target in each year after year one. The Panel notes that, if adopted, the Panel's recommendation with respect to integrated resource planning – specifically the setting of appropriate long-term savings targets – should address the Project 1 concern.

**27. The Panel recommends that, should the objective of deferring capital investments be given priority, the Regulation be amended so that the savings from the Project 1 load displacement project cannot be counted toward the achievement of the savings target in each year after the first year of the Plan.**

The Panel concludes that the qualification for counting codes and standards savings – that Manitoba Hydro or Efficiency Manitoba has made a "material contribution" to the development of the code or standard – is too subjective. The Panel recommends that the requirement for Efficiency Manitoba or Manitoba Hydro to make a material contribution to the development of the code or standard be removed from the Regulation.

**28. The Panel recommends that the legislation be amended to remove the requirement for Efficiency Manitoba to make a "material contribution" to the development of codes and standards in order to be able to count the savings from the codes and standards toward the achievement of the savings targets.**

The Panel concludes that the establishment of savings targets without the benefit of being informed through an integrated resource planning ("IRP") process is not in the best interests of Manitoba ratepayers. Subsection 11(5) of the Act states that the Board may make recommendations to increase or decrease the savings targets if in the public interest; however, the Panel's view is that it is unable to define the public interest in this context without the appropriate level of DSM resources having first been determined through an IRP process. An IRP process with appropriately identified objectives will identify the optimal amount of DSM resource which translates into optimal savings targets.

An IRP process is the vehicle that most appropriately determines the need date, the resources required, and the marginal values to the utility. Setting the savings targets for Efficiency Manitoba as one output from an IRP process is a best-practice approach to optimizing value for money in the context of DSM programming. The Panel cannot overstate the importance of determining the appropriate marginal values in an IRP process, with the input of Manitoba Hydro and Centra, in order to establish the optimal savings targets.

The Panel recommends that the IRP process begin with direction from Government on energy policy objectives and priorities. The IRP process would then be led by Manitoba Hydro and Centra. Efficiency Manitoba should participate as Efficiency Manitoba will be the most appropriate party to identify the costs of demand-side resources. As in many jurisdictions, the IRP should be a public process with input from stakeholders. The IRP should focus on establishing long-term savings targets and Efficiency Manitoba should be mandated to work toward long-term targets, not short-term targets.

Legislative changes are required in advance of initiation of IRP process(es) in Manitoba, particularly to provide for the requirement that Manitoba Hydro and Centra undertake an IRP process and to allow for Efficiency Manitoba's activities to include participation in a utility-led IRP process. It will take time for Manitoba Hydro and Centra to develop the IRP process and the IRP process itself may take at least six months. The IRP process may therefore not be completed in keeping with Efficiency Manitoba's timeline for developing the next efficiency plan for 2023-26. With the understanding that new DSM savings targets are required to inform Efficiency Manitoba's next efficiency plan, the Panel expects this efficiency plan to be delayed. The Panel is of the view that it is preferable to extend the programs in the current Plan until such time as new savings targets are established, as opposed to developing a new efficiency plan based on the current legislated targets of 1.5% for electricity and 0.75% for gas.

**29. The Panel recommends that legislative changes be made in advance of initiation of an IRP process, particularly to require that Manitoba Hydro and**

**Centra undertake an IRP process and to allow for Efficiency Manitoba's activities to include participation in an IRP process. The Panel recommends that the process begin with direction from Government on energy policy objectives and priorities. Manitoba Hydro and Centra would then be required to lead a review process before the Public Utilities Board and would propose resource plans and several alternatives. Efficiency Manitoba would also be required to participate in the review process and assist Manitoba Hydro and Centra in regards to DSM resource inputs into the plans. The Public Utilities Board would provide a report to Government with recommendations on the optimal long-term savings targets and mix of resources and the Minister would then approve the savings targets for Efficiency Manitoba, which Efficiency Manitoba would use in developing its next efficiency plan.**

The Panel recommends that the objectives and priorities set by the Government for the integrated resource planning process inform the treatment of interactive effects in calculating net savings and cost effectiveness. If necessary, the Government could consider amendments to the legislation to address the treatment of interactive effects.

The Panel's recommendation to address interactive effects through the objectives and priorities that form the basis of Integrated Resource Planning also applies with respect to electrification. If the Government sets objectives for new resources to be used in Integrated Resource Planning, then Efficiency Manitoba can act on the output from that process to encourage or discourage electrification.

**30. The Panel recommends that the treatment of interactive effects in future three-year plans be informed by the objectives and priorities that form the basis of the integrated resource planning process, and that, if necessary, the Government consider amendments to the legislation to address the treatment of interactive effects. This recommendation also applies with respect to electrification.**

**31. The Panel recommends that legislative amendments be made to allow for Efficiency Manitoba to participate in utility-led integrated resource planning processes.**

**32. The Panel recommends that the programs in the current Plan be extended beyond the third year of the Plan until such time as new savings targets are developed through an integrated resource planning process.**

The Panel notes that the legislation does not preclude Efficiency Manitoba from transferring budget amounts between years of the Plan, or between efficiency plans, but the ability of Efficiency Manitoba to do so is not explicit in the legislation. The Panel recommends that the legislation be amended so that Efficiency Manitoba is given the explicit authority to transfer budget amounts between years of an efficiency plan and carry forward unspent budget amounts to subsequent efficiency plans.

**33. The Panel recommends that, for clarity and transparency, the legislation be amended to explicitly provide Efficiency Manitoba with authority to transfer budget amounts between Plan years and carry forward unspent budget amounts to the next efficiency plan.**

This Review was the first under the new legislative framework for Efficiency Manitoba. It was therefore an opportunity to learn how there can be improvements in future reviews. The Panel concludes that, despite the best intentions of all involved, the existing legislative framework gave rise to unanticipated challenges that hindered rather than promoted the objective of achieving a streamlined process.

The Panel concludes that, even if the original six-month period for the Review process had been maintained in the Regulation, the timeline for the Review would have been

compressed. This is at least in part due to the fact that the period for the Review also includes the time for Panel to prepare its Report and for the Minister's receipt and review of the Panel's Report prior to the implementation date. As a result, the entire public review process had to take place over a period of only three months.

The compressed timelines led to inefficiencies and challenges in the process. It is the Panel's view that having more time built into the legislative framework for the Review process will streamline the regulatory process as it will allow for a more robust exchange of information, including a second round of Information Requests that can be used to clarify information provided in the first phase of the written discovery process. This will in turn facilitate the process for the development of expert evidence while minimizing the need for procedural motions related to compelling the provision of more information and the need for extensions for written filings. The Panel expects that this will all allow for a more streamlined oral hearing process, including the potential that fewer days of oral hearing will be required.

**34. The Panel recommends that the legislation be amended to provide for a minimum of a six-month time period between submission of Efficiency Manitoba's efficiency plan to the Board and the review Panel's provision of its report to the Minister. Any time required for the Minister to consider the Panel's report would be in addition to this six-month period.**

The Panel found that there were challenges in the exchange and testing of information due to the decision of Manitoba Hydro (and Centra) to not participate in the review process. In particular, this was because information foundational to the legislated mandatory considerations for the Board is Manitoba Hydro's and Centra's information, including marginal value, load forecast, resource planning, and rate impact information. While the current legislative framework leaves the decision to participate in the review process in Manitoba Hydro's discretion, the Panel concludes that the process would be improved through participation by the utilities.

**35. The Panel recommends that the legislation be amended to require the participation of Manitoba Hydro and Centra in efficiency plan review processes.**

## APPENDIX 1: TABLE OF CONCORDANCE

The table below identifies the mandatory considerations for the Public Utilities Board Panel in its review of efficiency plans submitted under *The Efficiency Manitoba Act* and where the discussion of those considerations is located in the Panel's Report.

| **Act** | | |
|---|---|---|
| *Section* | *In reviewing an efficiency plan and making recommendations to the minister, the PUB must consider* | *Location in Report* |
| *s. 11(4)(a)* | *the net savings required to meet the savings targets and the plans to address any existing shortfall* | *Section 4.0* |
| *s. 11(4)(b)* | *the benefits and cost-effectiveness of the initiatives proposed in the plan* | *Section 7.0* |
| *s. 11(4)(c)* | *Whether Efficiency Manitoba is reasonably achieving the aim of providing initiatives that are accessible to all Manitobans; and* | *Section 7.0* |
| *s. 11(4)(d)* | *any additional prescribed by the regulations.* | *As identified below* |
| *s. 11(5)* | *The PUB may recommend to the minister*<br>*(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*<br>*a decrease in a savings target if it is reasonably satisfied that the existing savings target is not in the public interest.* | *Section 5.0* |
| ***Regulation*** | | |
| *Section* | *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:* | *Location in Report* |
| *s. 11(a)* | *the appropriateness of the methodologies used by Efficiency Manitoba to select or reject demand-side management initiatives* | *Section 6.0* |
| *s. 11(b)* | *whether the plan adequately considers the interests of residential, commercial and industrial customers* | *Section 7.0* |
| *s. 11(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* | *Section 8.0* |

| | | |
|---|---|---|
| *s. 11(d)* | *whether the portfolio of demand-side management initiatives required to achieve the savings targets is cost-effective* | *Section 7.0* |
| *s. 11(e)* | *if the plan includes demand-side management initiatives in excess of those required to achieve the savings targets, whether those initiatives are cost-effective* | *Section 7.0* |
| *s. 11(f)* | *Whether Efficiency Manitoba's administration budget is reasonable when compared to similar organizations* | *Section 8.0* |
| *s. 11(g)* | *The impact of the efficiency plan on rates and average customer bill amounts* | *Section 10.0* |
| *s. 11(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* | *Section 4.0*<br>*Section 9.0* |
| *s. 11(i)* | *Efficiency Manitoba's use of private-sector enterprises and non-governmental organizations to deliver demand-side management initiatives* | *Section 8.0* |
| *s. 11(j)* | *whether the efficiency plan adequately considers new and emerging technologies that may be included in a future efficiency plan* | *Section 6.0* |
| *s. 11(k)* | *for any efficiency plan after the first one, the reasonableness of Efficiency Manitoba's internal retrospective performance assessment* | *Not applicable as this is the first efficiency plan* |
| *s. 11(l)* | *whether Efficiency Manitoba has reasonably attempted to comply with the directions of the minister.* | *Section 12.0* |

# APPENDIX 2: SUMMARY OF RECOMMENDATIONS

## Recommendations for Plan

1. **The Panel recommends that the Minister approve the three-year Plan with the Panel's suggested amendments.**

2. **The Panel recommends that Efficiency Manitoba clarify the mandate of the EEAG and clearly define how broader consultation and engagement will be accomplished.**

3. **The Panel recommends that the Efficiency Manitoba Board populate the post-Plan approval iteration of the EEAG.**

4. **The Panel recommends that the Efficiency Manitoba Board consider providing compensation for participants in the EEAG.**

5. **The Panel recommends that Efficiency Manitoba should seek input from members of the public beyond the EEAG in implementing this Plan and in developing the next three-year efficiency plan, and should report on the steps taken in the regular reporting recommended by the Panel.**

6. **The Panel recommends that Efficiency Manitoba develop a public engagement program to incorporate public consultation into development of the next efficiency plan. The regular reporting recommended by the Panel in this Report should detail Efficiency Manitoba's achievement of the steps in the public engagement program, and future efficiency plan filings should address how learnings from public engagement are incorporated into those efficiency plans.**

7. **The Panel recommends that Efficiency Manitoba develop a First Nations Direct Engagement Strategy within the first quarter after implementation of the Plan.**

**8. The Panel recommends that Efficiency Manitoba's achievement of the steps included in the First Nations Direct Engagement Strategy be detailed in the progress reports recommended by the Panel, as well as in Efficiency Manitoba's next three-year efficiency plan submission.**

**9. The Panel recommends that Efficiency Manitoba be directed to develop a project management plan and risk management strategy by no later than June 30, 2020 and to file these documents with the Minister and the Public Utilities Board. The Panel recommends that, if necessary, Manitoba Hydro be directed to second personnel to Efficiency Manitoba to assist in this regard.**

**10. The Panel recommends that the Minister direct Efficiency Manitoba to file with the Minister, and simultaneously publicly file with the Public Utilities Board, quarterly reports for the first fiscal year of the Plan.**

**11. The Panel recommends that Efficiency Manitoba monitor and track participation in its programs particularly for First Nations and other hard-to-reach customers so that it can be responsive to adjustments that need to be made to overcome barriers to participation during the years of this Plan.**

**12. The Panel recommends that Efficiency Manitoba directly engage with individual First Nations communities in order to effectively evaluate the degree of saturation of the market.**

**13. The Panel recommends that Efficiency Manitoba conduct additional research and direct engagement on use of a dedicated funding model for each First Nation and on gaps between bill savings for First Nations on-reserve and Income Qualified programs. The Panel recommends that Efficiency Manitoba report on its progress in the reporting recommended in this Report, as well as in the next three-year efficiency plan submission. This**

**recommended tracking should include a robustness metric in the DSM Scorecard for the evaluation of program equity for First Nations.**

14. **The Panel recommends that Efficiency Manitoba address the accessibility of all Residential and small business programs to Indigenous Residential and small business customers as well as the availability of energy efficiency loans to customers with accounts in arrears through clear education, marketing, and outreach processes.**

15. **The Panel recommends that, in the absence of a prescribed timeframe, the independent assessor's report be filed with the Public Utilities Board within six months of the end of Efficiency Manitoba's fiscal year.**

16. **The Panel recommends that program bundles that offer a large share of portfolio-level energy savings should undergo annual evaluations and that all programs be evaluated within the first two years of the Plan.**

17. **The Panel recommends that Efficiency Manitoba reasonably attempt to comply with all directions of the Minister in implementing the Plan and report on its progress in this regard in the regular reporting recommended by the Panel**.

18. **The Panel recommends that future efficiency plans calculate savings achieved by new Industrial customers through a comparison to the baseline of what technologies and standards would have been adopted by those new customers in the absence of Efficiency Manitoba's activities.**

19. **The Panel recommends that Efficiency Manitoba evaluate how price elasticity effects can be taken into account when counting energy savings toward the savings targets and include a summary of the results of this evaluation in the next efficiency plan submission.**

**20. The Panel recommends that in addition to the PACT, Efficiency Manitoba should also use the TRC and other customer-centric tests, such as the Participant Cost Test and the Customer Payback Test, in selecting measures for future efficiency plans.**

**21. The Panel recommends that in future efficiency plans, Efficiency Manitoba should consider cost effectiveness at a measure level and should outline the specific reasons for including cost-ineffective measures in the final portfolio.**

**22. The Panel recommends that measure-level information should be included in future efficiency plans, including cost-effectiveness metrics for individual measures, and that future efficiency plans should be filed in a timely manner so that the Panel can make an appropriate determination regarding intervener access to confidential information.**

**23. The Panel recommends that in order to provide cost-effectiveness metrics on a measure level, Efficiency Manitoba should allocate program administration costs across all measures, instead of assigning them to one measure within a bundle.**

**24. The Panel recommends that for future efficiency plans, Efficiency Manitoba should develop and file with the Board a preferred efficiency plan; an alternative efficiency plan that is more cost effective, but less accessible than the preferred efficiency plan; and a second alternative efficiency plan that is less cost effective and more accessible than the preferred efficiency plan.**

**25. The Panel recommends that Efficiency Manitoba establish programming targets for access by First Nations on-reserve customers to general Residential and small business programs and report on the progress toward those targets in future efficiency plans.**

**26. The Panel recommends that Efficiency Manitoba set targets for economic participation for First Nations and First Nations citizens in the delivery of First Nations programs and report on progress toward those targets in future efficiency plans.**

## Recommendations for Legislative Amendments

**27. The Panel recommends that, should the objective of deferring capital investments be given priority, the Regulation be amended so that the savings from the Project 1 load displacement project cannot be counted toward the achievement of the savings target in each year after the first year of the Plan.**

**28. The Panel recommends that the legislation be amended to remove the requirement for Efficiency Manitoba to make a "material contribution" to the development of codes and standards in order to be able to count the savings from the codes and standards toward the achievement of the savings targets.**

**29. The Panel recommends that legislative changes be made in advance of initiation of an IRP process, particularly to require that Manitoba Hydro and Centra undertake an IRP process and to allow for Efficiency Manitoba's activities to include participation in an IRP process. The Panel recommends that the process begin with direction from Government on energy policy objectives and priorities. Manitoba Hydro and Centra would then be required to lead a review process before the Public Utilities Board and would propose resource plans and several alternatives. Efficiency Manitoba would also be required to participate in the review process and assist Manitoba Hydro and Centra in regards to DSM resource inputs into the plans. The Public Utilities Board would provide a report to Government with recommendations on the**

**optimal long-term savings targets and mix of resources and the Minister would then approve the savings targets for Efficiency Manitoba, which Efficiency Manitoba would use in developing its next efficiency plan.**

**30. The Panel recommends that the treatment of interactive effects in future three-year plans be informed by the objectives and priorities that form the basis of the integrated resource planning process, and that, if necessary, the Government consider amendments to the legislation to address the treatment of interactive effects. This recommendation also applies with respect to electrification.**

**31. The Panel recommends that legislative amendments be made to allow for Efficiency Manitoba to participate in utility-led integrated resource planning processes.**

**32. The Panel recommends that the programs in the current Plan be extended beyond the third year of the Plan until such time as new savings targets are developed through an integrated resource planning process.**

**33. The Panel recommends that, for clarity and transparency, the legislation be amended to explicitly provide Efficiency Manitoba with authority to transfer budget amounts between Plan years and carry forward unspent budget amounts to the next efficiency plan.**

**34. The Panel recommends that the legislation be amended to provide for a minimum of a six-month time period between submission of Efficiency Manitoba's efficiency plan to the Board and the review Panel's provision of its report to the Minister. Any time required for the Minister to consider the Panel's report would be in addition to this six-month period.**

**35. The Panel recommends that the legislation be amended to require the participation of Manitoba Hydro and Centra in efficiency plan review processes.**

## APPENDIX 3: APPEARANCES

| PARTY | LEGAL COUNSEL |
|---|---|
| The Public Utilities Board | Dayna Steinfeld, Kate Hart |
| Efficiency Manitoba | Jessica Schofield, Nicole Merrick |
| Daymark Energy Advisors | William Haight, William Gardner |
| Assembly of Manitoba Chiefs | Carly Fox, Emily Gugliemin |
| Consumers Coalition | Katrine Dilay, Danielle Morrison (articling student) |
| Manitoba Industrial Power Users Group | Antoine Hacault |
| Manitoba Keewatinowi Okimakanak | Jared Wheeler, Markus Buchart |

# APPENDIX 4: PARTIES OF RECORD AND HEARING WITNESSES

| PARTY | WITNESSES |
|---|---|
| Efficiency Manitoba | Colleen Kuruluk, Chief Executive Officer, Efficiency Manitoba;<br><br>Michael Stocki, Vice-President, Efficiency Programs, Efficiency Manitoba;<br><br>Kyla Kramps, Vice-President, Finance and Corporate Performance, Efficiency Manitoba;<br><br>Roberto Montanino, Commercial Programs Lead, Efficiency Manitoba;<br><br>Cheryl Pilek, Energy Efficiency Lead Evaluation and Planning, Efficiency Manitoba;<br><br>Tracy Sterdan, Residential and Income Qualified Programs Lead, Efficiency Manitoba;<br><br>Amy Tuck, Indigenous Programs Lead, Efficiency Manitoba; |
| Assembly of Manitoba Chiefs | Dr. Timothy David Clark, Principal, Willow Springs Strategic Solutions; |
| Consumers Coalition | Dr. Patricia Fitzpatrick, Professor, University of Winnipeg;<br><br>Jim Grevatt, Managing Consultant, Energy Futures Group;<br><br>Chris Neme, Principal, Energy Futures Group;<br><br>William O. Harper, Independent consultant;<br><br>John Dillon;<br><br>Hans Gorter;<br><br>Rita Hermkens; |

| | |
|---|---|
| Manitoba Industrial Power Users Group | Patrick Bowman, Principal and Consultant, InterGroup Consultants Ltd.;<br><br>Dale Friesen, Senior Consultant, InterGroup Consultants Ltd.; |
| Manitoba Keewatinowi Okimakanak | John Ross; |
| Independent Expert Consultants | John Athas, President and Principal, Daymark Energy Advisors;<br><br>Kathleen A. Kelly, Vice-President and Principal, Daymark Energy Advisors;<br><br>Dr. Suman Gautam, Economist and Senior Consultant, Daymark Energy Advisors. |

# APPENDIX 5: SUMMARY OF REVIEW PARTICIPANTS AND PROCESS

## Review Participants

### Efficiency Manitoba

As the entity submitting the Plan, Efficiency Manitoba had "applicant" status for the review proceeding. It was Efficiency Manitoba's Plan that was analyzed by the Panel.

### Interveners

Organizations and entities granted Intervener status in a proceeding held by the Board are parties to the proceeding. Interveners represent the perspectives of affected stakeholders not otherwise represented on issues that are within the scope of the proceeding. Through active efforts, Interveners assist the Board in the hearing process, including in advancing the Board's understanding of the in-scope issues.

The Board granted Intervener status to the following four organizations:

- Assembly of Manitoba Chiefs
- Consumers Association of Canada (Manitoba) Inc. and Winnipeg Harvest (the "Consumers Coalition")
- Manitoba Industrial Power Users Group
- Manitoba Keewatinowi Okimakanak Inc.

Assembly of Manitoba Chiefs is the political and advocacy coordinating body that represents 62 of 63 First Nations in Manitoba. Assembly of Manitoba Chiefs represents a diverse community of First Nations people under Treaties 1 through 6 and 10, who live throughout Manitoba, including the most rural, southerly and northern areas in Manitoba. All member First Nations of the Assembly of Manitoba Chiefs, the institutions associated with and operated by First Nations, and the Assembly of Manitoba Chiefs Secretariat are Manitoba Hydro ratepayers and rely on Manitoba Hydro for their electrical power. The Assembly of Manitoba Chiefs represents both residential and general service ratepayers,

as well as First Nations and individuals living in remote communities, including First Nations and individuals with limited means and who may face housing insecurity and energy poverty. Assembly of Manitoba Chiefs has previously intervened in applications before the Board, including in the Manitoba Hydro 2017/18 & 2018/19 General Rate Application.

The Consumers Coalition is comprised of the Consumers' Association of Canada (Manitoba) Inc. and Winnipeg Harvest. The Consumers' Association of Canada (Manitoba) Inc is a volunteer, non-profit independent organization working to inform and empower consumers, and to represent the consumer interest in Manitoba. Winnipeg Harvest is a non-profit, community-based organization committed to providing food to people across Manitoba who struggle to feed themselves and their families. The Consumers has long-standing experience with matters relating to rate-setting across five industries and has been an active participant in Manitoba Hydro rate-setting proceedings for a number of years, including on issues of demand-side management and bill affordability.

Manitoba Industrial Power Users Group is an association of companies which are substantial users of power in the General Service Large rate classes (including all three voltage classes). Manitoba Industrial Power Users Group members also include gas rate users in rate classes encompassing High Volume Firm, Main Line Firm, Large General Service, Interruptible, and Special Contract service. Collectively, Manitoba Hydro and Centra Gas customers within the industrial sector account for more than 35% of Manitoba's domestic electric consumption and nearly 40% of gas consumption. Manitoba Industrial Power Users Group has intervened in nearly every Manitoba Hydro Application since the late 1980s and a subset of its members have also intervened in the most recent Centra Gas General Rate Application.

Manitoba Keewatinowi Okimakanak represents more than 65,000 treaty First Nation citizens in northern Manitoba. It has operated for more than 35 years as a non-profit advocacy organization. Manitoba Keewatinowi Okimakanak explores ways to strengthen

and promote the interests of First Nations in northern Manitoba with respect to all areas that affect the lives of northern First Nations' citizens. Manitoba Keewatinowi Okimakanak has intervened in previous regulatory matters before the Board and other decisionmakers, including in matters relating to Manitoba Hydro.

**Independent Expert Consultants**

The Board retained an Independent Expert Consultant, Daymark Energy Advisors ("Daymark") to assist it in the review of the Plan. The detailed Scope of Work for Daymark's engagement is publicly available on the Board's website.

Daymark was engaged as an independent, arm's-length expert to provide an impartial, independent review of the matters assigned to it within its Scope of Work. Daymark had its own independent legal counsel and communications between Board staff, legal counsel and technical advisors, other than those of a purely administrative nature, were through Daymark's legal counsel. The Board did not review any draft reports prepared by Daymark and Daymark's report was subject to an information discovery process in the form of Information Requests posed by Efficiency Manitoba, approved Interveners, and the Board.

Daymark had access to confidential information in the proceeding and part of Daymark's scope of work was to review and test that information in the course of preparing its public report.

**Presenters**

The Board also heard from Presenters.

Presenters appeared before the Board to make oral presentations during the oral public hearing. Presenters provided sworn evidence and were subject to cross examination by the parties. Summaries of the Presenters' presentations are contained in Appendix 6.

Members of the public could also submit comments about the Plan and the review proceeding on the Board's website.

## The Hearing Process

### Procedural History

On October 25, 2019, Efficiency Manitoba filed its Plan submission with the Board. Following a Pre-Hearing Conference conducted in writing, the Board issued Procedural Order 162/19. By that Order, the Board approved Interveners, established the issues included in the scope of the hearing, and established a process and timetable for the orderly exchange of evidence and the conduct of the hearing.

All parties, the Board, and the Independent Expert Consultant, Daymark, had the opportunity to file written Information Requests of Efficiency Manitoba. Efficiency Manitoba provided its written responses to these Information Requests, some of which were refiled after discussion with the Interveners regarding responses that were alleged to be unresponsive or incomplete.

The Assembly of Manitoba Chiefs, the Consumers Coalition, and the Manitoba Industrial Power Users Group retained expert witnesses to provide evidence in the proceeding. Between these three Interveners, seven expert witnesses were retained: Dr. Timothy David Clark of Willow Springs Strategic Solutions (Alberta), William Harper an independent energy consultant (Ontario), Dr. Patricia Fitzpatrick of the University of Winnipeg, Chris Neme of Energy Futures Group (Vermont), Jim Grevatt also of Energy Futures Group, Patrick Bowman of Intergroup Consultants (Winnipeg), and Dale Friesen, also of Intergroup Consultants.

The seven Intervener expert witnesses and Daymark filed pre-filed evidence in the form of seven separate written expert reports. All parties, including Efficiency Manitoba, the Board, and Daymark had the opportunity to pose written Information Requests on the pre-filed evidence. Responses to these Information Requests were filed prior to the start of the oral public hearing.

A second Pre-Hearing Conference was held on December 16, 2019, with the resulting Procedural Order 191/19 identifying the issues for oral evidence and the process for the oral evidentiary hearing and closing submissions.

On January 2, 2020, Efficiency Manitoba filed written rebuttal evidence, responding to the pre-filed evidence filed by Intervener experts and Daymark.

The evidentiary portion of the oral public hearing began on January 6, 2020 and concluded on January 24, 2020. Closing submissions from all parties were heard on January 27 and 28, 2020, and Efficiency Manitoba's reply argument was presented on January 28, 2020.

**Commercially Sensitive Information**

The Board obtained access to and considered commercially sensitive information ("CSI") to ensure that it was fully informed in reaching its conclusions and recommendations.

In order to conduct a transparent and public process while also respecting the commercially sensitive nature of some of the information provided during the process, the Board endeavored to find ways to make as much information publicly available as possible.

Pursuant to the Board's Rules of Practice and Procedure, documents filed with the Board by a party to a proceeding are placed on the public record. However, under Rule 13(2), the Board may receive information in confidence on any terms it considers appropriate in the public interest when the test under Rule 13(2) is met.

The Board retained Daymark to act as an Independent Expert Consultant in the proceeding. Daymark signed a non-disclosure agreement with Efficiency Manitoba and had full access to all information filed as CSI in the proceeding, including information relating to Manitoba Hydro's and Centra's marginal values. The Board also had full access to the CSI.

Daymark's scope of work included preparing and filing a public report that provided its assessment and supporting analysis, including providing in aggregate form to the extent possible the CSI information reviewed by Daymark and Daymark's conclusions based upon that review. All parties had the opportunity to pose Information Requests to Efficiency Manitoba and Daymark regarding matters arising from information accepted as CSI, although responses that revealed CSI were provided only to Efficiency Manitoba, Daymark, and the Board.

While this report does not contain or make direct reference to specific CSI, the Panel's conclusions and recommendations are informed by CSI evidence filed with the Board and provided to Daymark during the review proceeding.

# APPENDIX 6: SUMMARY OF PRESENTER EVIDENCE

The summary of presenter evidence below is provided in the order in which presenters appeared in front of the Board

**Consumers Coalition and Manitoba Keewatinowi Okimakanak Panel**

***Ms. Rina Hermkens***

Ms. Hermkens resides in Winnipeg. Ms. Hermkens states that information regarding energy efficiency programs, including education materials, should be widely available and distributed via multiple channels (e.g. web, television, call centres, and physical locations). Furthermore, the enrollment process should be simple and user friendly.

***Mr. John Ross***

Mr. Ross is from Pimicikamak Cree Nation (also known as Cross Lake) in northern Manitoba. Mr. Ross states that an effective way to promote energy efficiency programming in his community is through social media, electronic mail, and through information available at the Band office. Mr. Ross also suggests that Efficiency Manitoba should offer incentives for window replacements and the installation of wood stoves.

***Mr. John Dillon***

Mr. Dillion resides in Winnipeg. Mr. Dillion indicates that energy efficiency programming should be easy to access, supported by education materials (available online and at physical locations), and have simple enrollment processes. Mr. Dillion also suggests that Efficiency Manitoba should offer more programs for renters and have more geothermal efficiency offerings, especially for larger homes.

***Mr. Hans Gorter***

Mr. Gorter resides in Otterburne, Manitoba and operates two dairy farms. Mr. Gorter states that enrollment in energy efficiency programs should be simple and as short as

possible so as to minimize approval and project implementation delays. Furthermore, promoted products or technologies should continue to operate and provide savings in all Manitoba weather conditions and be offered over a long term so as to facilitate customer participation and build local industry product support (especially for commercial measures requiring high upfront customer investment). Mr. Gorter also suggests that Efficiency Manitoba should offer incentives for renewable technologies such as solar generation.

**Manitoba Industrial Power Users Group Panel**

***Mr. Richard Denton, Co-Chair, Manitoba Industrial Power Users Group***

Mr. Denton states that Manitoba's power supply must remain reliable and economically sustainable, with energy rates that are stable, predictable and cost-based. Mr. Denton raises the concern that short-term rate impacts of the Efficiency Manitoba Plan will affect the competitiveness of industry in Manitoba relative to outside markets, and disproportionately affect those unable to participate in demand-side management programming. Mr. Denton also states that Efficiency Manitoba's 15-year mandated targets are the most aggressive in Manitoba's history and are not linked to a demonstrated need. Mr. Denton points out that while Efficiency Manitoba's Plan expects significant industrial participation, individual customer factors such as existing facility efficiency levels, capital investment priorities, and project implementation timelines, including facility shutdowns, can make industrial take-up of demand-side management programming a complex and challenging undertaking. Going forward, the cost implications of the Plan should be minimized through targeted savings based on Manitoba's energy needs. As well, Efficiency Manitoba's portfolio should encourage flexibility in target program spending between rate classes to achieve optimal and cost-efficient outcomes with minimal rate impacts for all ratepayers. Efficiency Manitoba should also not cap incentives for economic industrial projects or programs as these are generally the most cost-efficient savings in the Plan.

***Mr. Christopher Parker, Canadian Manufacturers and Exporters Association***

Mr. Parker states that the Canadian Manufacturers and Exporters Association believes that the Efficiency Manitoba Plan may hinder Manitoba's competitive position, especially if unnecessary rate impacts negatively influence energy rates, which have been a differentiator for Manitoba businesses for attracting and retaining investments. Mr. Parker further states that the Plan must be cost-effective, and reflect the needs of Manitoba Hydro and its ratepayers. Efficiency Manitoba should also be offering more incentives to industry to further grow Manitoba's economy.

***Mr. Don Boonstra, Chemtrade***

Mr. Boonstra states that Chemtrade's products are entirely exported out of Manitoba and that electricity consumption at its Brandon plant is its largest raw material input cost. As such, electricity rate increases directly affect the plant's competitive position. Mr. Boonstra also identifies other jurisdictions where electricity costs are declining and provides examples where Chemtrade's competitors recently relocated or expanded to capitalize on regional cost advantages. As a result, Mr. Boonstra indicates that in order to prevent the erosion of Manitoba's historically low electricity rates, Efficiency Manitoba should target opportunities that balance the greatest benefit with the lowest acquisition cost. Ultimately, the bill savings obtained from participation in demand-side management should at least be cost neutral with the rate impacts of Efficiency Manitoba's Plan. Mr. Boonstra also points out that customer capital investment as well as project implementation timing can be barriers to program participation as these investments are constrained and have to compete against other corporate initiatives.

***Mr. Christopher Parker, Winpak***

Mr. Parker states that Winpak's facility in Winnipeg is a significant user of electricity and gas but that it has a target to reduce its specific energy consumption (i.e. total energy per tonne of product sold) by 10% by the end of 2025. Mr. Parker states that as a customer completes increasingly more complex demand-side management projects, the project

payback period typically increases and as such, the financial incentive offered by Efficiency Manitoba becomes a critical factor for whether a project moves forward or not. Mr. Parker also states that both Winpak and Efficiency Manitoba must balance energy reduction and careful spending in order to reach the mutual goal of increasing energy efficiency. Efficiency Manitoba should also collaborate with Manitoba Hydro to better attract new business to Manitoba.

**Oral Public Presentations**

***Mr. Dennis LeNeveu, Council of Canadians (Winnipeg Chapter)***

Mr. LeNeveu raises the concern that growth in gas consumption will always outweigh savings from Efficiency Manitoba's efficiency measures, consistent with Jevons Paradox. As a result, Efficiency Manitoba's annual gas savings target of 0.75% of load is optimistic, inconsistent with historical Demand Side Management gas efficiency savings in Manitoba, and will not significantly reduce Manitoba's total greenhouse gas emissions. Mr. LeNeveu also states that Efficiency Manitoba's plans should promote transition away from all fossil fuels, including gas, and that incentives should be provided for the installation of heat pumps instead of more efficient gas heating appliances.

***Mr. Kenneth Klassen***

Mr. Klassen raises the concern that repeated delays in launching Efficiency Manitoba have caused a significant loss of momentum in achieving energy savings in Manitoba. Mr. Klassen states that Efficiency Manitoba's gas savings target is far too low and should be adjusted upwards, from 0.75% to about 3%, in order to reflect the current climate crisis. Furthermore, Efficiency Manitoba's participation in national building code development should not be limited to its own staff and that sponsoring the participation of external experts should be considered. Efficiency Manitoba should also strengthen its support for community energy planning as its proposed Plan commitments regarding this offering are modest and vague. Additionally, Efficiency Manitoba's Plan should include an energy innovation summit to identify and refine priorities and strategies for supporting local

research and development. Finally, Mr. Klassen states that Efficiency Manitoba's Plan should identify additional measures that the Manitoba Government can take to enhance Efficiency Manitoba's effectiveness (e.g. tax shifting and tax incentives to promote renewable energy sources, as well as adopting net zero energy policies for publicly funded building projects).

***Ms. Patty Rosher, Keystone Agricultural Producers***

Ms. Rosher states that agriculture in Manitoba is an energy-intensive industry with varied and unique electrical and gas demands depending on the market segment being served (e.g. hog farms vs. field crop combination farms). As a result, reasonably priced energy is critical to the long-term success of the industry. Ms. Rosher further states that the Keystone Agricultural Producers support Efficiency Manitoba's mandate as energy-saving initiatives will reduce energy bills and help farmers' bottom lines. The Keystone Agricultural Producers has participated in Efficiency Manitoba's Advisory Group and appreciates agriculture being recognized as its own customer segment in the Plan. However, the effects of weather changes and changing requirements for animal welfare may lead to energy consumption changes and therefore affect whether Efficiency Manitoba achieves its savings targets for the agriculture customer segment. Moreover, members of the Keystone Agricultural Producers are seeking additional gas capacity in rural Manitoba to provide added economic and competitive benefits to producers. Since this will have a bearing on Efficiency Manitoba's gas savings targets, Ms. Rosher questions whether Efficiency Manitoba's mandated savings targets have enough flexibility to account for instances where energy savings may not necessarily lead to beneficial outcomes for the agricultural sector.

***Dr. Peter Miller, Green Action Centre***

Dr. Miller agrees with Mr. Neme that Efficiency Manitoba's accounting of electrification in the proposed Plan potentially creates perverse incentives that could thwart climate change mitigation and electrification initiatives. Dr. Miller also points out that, pursuant to the roles identified in *The Efficiency Manitoba Act*, Government could, at any time, task

Efficiency Manitoba with promoting electric vehicles or other technologies that promote beneficial electrification (i.e. reduce emissions or otherwise provides economic benefits to Manitoba). As a result, Dr. Miller states that the Board should ensure that when Efficiency Manitoba promotes beneficial electrification, any resulting increase in electrical consumption should not be counted as negative electrical savings. Instead, the increase in electrical consumption from beneficial electrification should, at minimum, be simply recognized as an increase to base load (i.e. not discounted against savings), but it could also be counted as a cross-fuel efficiency measure as suggested by Mr. Neme. Dr. Miller further states that the promotion of electric vehicles should not be postponed due to the short timelines available for greenhouse gas reductions and the net financial benefit to Manitoba Hydro as a result of increased domestic electrical consumption from the electrification of Manitoba's transportation. To this end, Dr. Miller suggests that Efficiency Manitoba and Manitoba Hydro should develop marketing plans to address barriers to electric vehicle adoption in Manitoba.

***Mr. Dennis Woodford and Dr. Scott Forbes, Manitoba Energy Council***

Mr. Woodford points out that with Keeyask and terminating U.S. export contracts, Manitoba Hydro will have surplus electric energy for the foreseeable future. Furthermore, any further reductions to Manitoba's electric load as a result of Efficiency Manitoba's Plan will accelerate the need for Manitoba Hydro to export excess power at significantly lower opportunity prices than domestic sales. As a result, Manitoba Hydro will be significantly more adversely affected than Efficiency Manitoba's estimate of the rate impact of its proposed Plan. To address this issue, Mr. Woodford proposes that Board recommend the Efficiency Manitoba Regulation be amended to require Efficiency Manitoba to undertake initiatives with respect to electric demand, potable water, and fossil fuels in the transportation sector in Manitoba. Mr. Woodford suggests that the acceleration of electrification in Manitoba would improve Manitoba Hydro's business case and would also support significant economic growth.

***Mr. Daniel Friesen, Manitoba Energy Justice Coalition***

Mr. Friesen raises the concern that climate change is not a central aspect of Efficiency Manitoba's Plan and that this is a glaring omission. To that end, Mr. Friesen recommends the Board make recommendations to Government that no new buildings or major renovations utilize gas, that no new investment be made in gas infrastructure, and that Efficiency Manitoba emphasize incentives for building owners to transition off gas. Mr. Friesen further argues the implementation of these regulatory changes may achieve Efficiency Manitoba's 0.75% gas savings at no cost to Government. Mr. Friesen also states that the solar rebate program must be reinstated as a part of the Efficiency Manitoba Plan and invested in to create a stable base of installers. Moreover, the creation of a rotating green fund and the expansion of Manitoba Hydro's Pay as You Save financing program, especially to prioritize the lowering of a building's carbon footprint, will lower the cost of Efficiency Manitoba's green energy projects and minimize consumer upfront investments.

***Mr. Glen Koroluk, Manitoba Eco-Network***

Mr. Koroluk states that Efficiency Manitoba has the potential to play an important role in Manitoba's fight against climate change. Given section 4(1)(a) of *The Efficiency Manitoba Act*, and Manitoba's Climate and Green Plan, Mr. Koroluk asserts that the exclusion of electric vehicles and other related policy and regulatory elements from the current Plan review is troubling. As a result, Mr. Koroluk supports Green Action Centre's position that electrification should be within the scope of Efficiency Manitoba and therefore supports recommendations to amend Efficiency Manitoba's Regulation in that regard. Moreover, the switching from fossil fuel heat to green heat options will provide both long term savings and local economic benefits. Mr. Koroluk also states that Efficiency Manitoba should have stronger mandated savings targets to better support the achievement of international climate targets. Efficiency Manitoba should also seek further engagement with the public and Manitoba's environmental organizations to ensure more focus on the climate and environmental impacts of its Plan. Mr. Koroluk supports Dr. Fitzpatrick's

recommendations on this issue. Furthermore, Mr. Koroluk recommends a broader approach to community energy planning such that these efficiency plans are not solely focused on energy efficiency and are also not just offered to Indigenous communities. Additionally, Mr, Koroluk supports more funding for lower-income retrofits, as well as programming for new Canadians.

***Grand Chief Jerry Daniels, Southern Chiefs Organization***

Grand Chief Daniels states that the Southern Chiefs Organization was not consulted nor engaged in the creation of Efficiency Manitoba, which is not ideal for working together and creating a strong foundation toward mutual success and mutual benefits. Furthermore, the Southern Chiefs Organization was not involved in any final decision making regarding how the Plan would be executed in the regions of its member Nations. While First Nations people are specifically included in Efficiency Manitoba's Plan, it is not clear how the Plan was specifically informed by input from First Nations people. While the Southern Chiefs Organization participated in Efficiency Manitoba's Advisory Group, only engaging the organization through the Advisory Group is not adequate and does not replace direct and meaningful engagement with either the organization or its member First Nations. Going forward, the Efficiency Manitoba Advisory Group should afford additional opportunities and resources for organizations such as the Southern Chiefs Organization to conduct internal reviews of the information shared within the Advisory Group. Efficiency Manitoba should also have meaningful and direct engagement with First Nations communities in order to address specific challenges and barriers that they face. Additionally, Grand Chief Daniels states that to ensure the Plan's success in relation to Indigenous people, it is incumbent on Efficiency Manitoba to collaborate and partner with Indigenous people and representative organizations. This is consistent with the calls to action of the Truth and Reconciliation Commission.