



2020/23 Efficiency Plan Review
Final Submissions

January 27, 2020

Outline

1. Statutory Mandate and Filing Requirements;
2. Doing More with Less;
3. A Three Year Approval;
4. Stakeholder/Public Engagement;
5. Efficiency Manitoba's Role in an Integrated Resource Plan;
6. Summary.

The Plan Meets the Mandate

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Efficiency Manitoba is proud of the 2020/23 Efficiency Plan ("the Plan") that it has presented for review by the Public Utilities Board as part of these public proceedings.

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- a) Meets Regulation and Act requirements;
- b) Balances costs, savings and budget;
- c) Builds on existing energy efficiency programming;
- d) Provides new programs.

The Plan Meets the Mandate

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Section 4(1)

- a) implements and supports DSM initiatives that meet the savings targets and achieve any resulting reductions in greenhouse gas emissions in Manitoba
- b) achieve additional reductions (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

Implement and Support DSM Programming

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Customer Segments:

- Residential
- Residential Income Qualified
- Indigenous
- Commercial
- Industrial
- Agriculture



Implement and Support DSM Programming

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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	Metis 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

The Savings Targets

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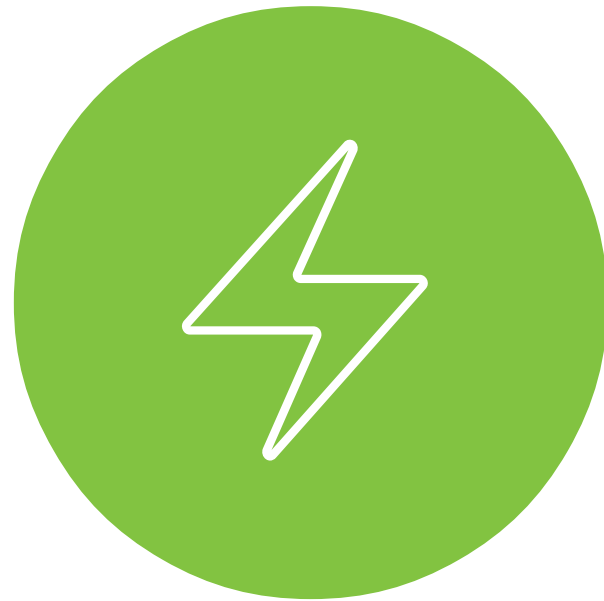
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Reduce Manitoba's
electricity consumption

by **1.5%**



Reduce Manitoba's
natural gas consumption

by **0.75%**

Mitigate Rate Impact

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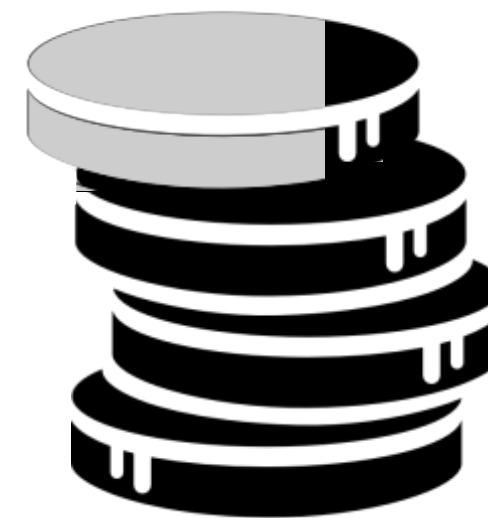
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\$1.00

spent on energy efficiency
by Efficiency Manitoba in
the **electric portfolio**

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\$3.27

in value to Manitoba
electric ratepayers

Mitigate Rate Impact

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\$1.00

spent on energy efficiency
by Efficiency Manitoba in
the **natural gas portfolio**

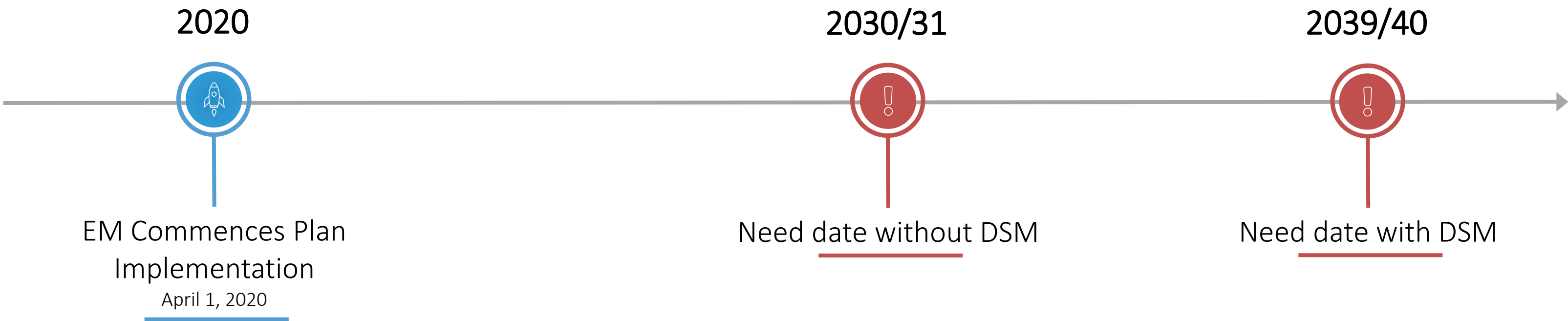
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\$1.24

in value to Manitoba
natural gas ratepayers

Delay Need for Manitoba Hydro Capital Investment



“Without the forecasted DSM that Manitoba Hydro is projecting, their need date for next resources would be 2030/31. With DSM included at that point in time, their need date was moved out to 2039/40.”

Page 1009, Line 23 to Page 1010 Line 1

Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 9(a) Description of demand-side management initiatives

Compliant

Section 3.2 – Customer Focused Programming Appendix A - Section A4 through A9

Section 9(b) Description of Educational Initiatives

Compliant

Appendix A - Section A6
Appendix A - Section A9.2.5 and 9.26

Section 9(c) Description of Additional Initiatives

Not applicable for 2020/23 Efficiency Plan

Section 9(d) Cumulative net savings shortfall

Not applicable for 2020/23 Efficiency Plan

Section 9(e) Resulting greenhouse gas reductions from 9(a) to 9(d)

Compliant

Section 6.3.3 – Environmental Benefits
Attachment 3 – Technical Tables

Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

Section 9(f)(i) Net Savings and cost-effectiveness of each initiative

Section 9(f)(ii) Overall Net Savings and cost-effectiveness

EFFICIENCY MANITOBA SUBMISSION

Compliant

Appendix A - Section A3 through A8

Compliant

Section 3.1.1 - Achieving the mandated energy savings
Section 5.1 – Efficiency Manitoba uses the Program Administrator Cost Test (PACT) to Measure the Cost- Effectiveness of the Plan as prescribed in Regulation

Section 6.1.2 – Customer Segment Considerations

Cost-Effectiveness at the Portfolio Level

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Electric Portfolio



PACT ratio

3.27

PACT Levelized Cost

2.24¢/kWh

Natural Gas Portfolio



PACT ratio

1.24

PACT Levelized Cost

14.96¢/m³

Program Administrator Cost Test (PACT)

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The Program Administrator Cost Test (PACT) has been used to evaluate the investments required to deliver the portfolio of energy efficiency programs and the resulting respective electric or natural gas benefits to Manitoba Hydro resulting from those savings.

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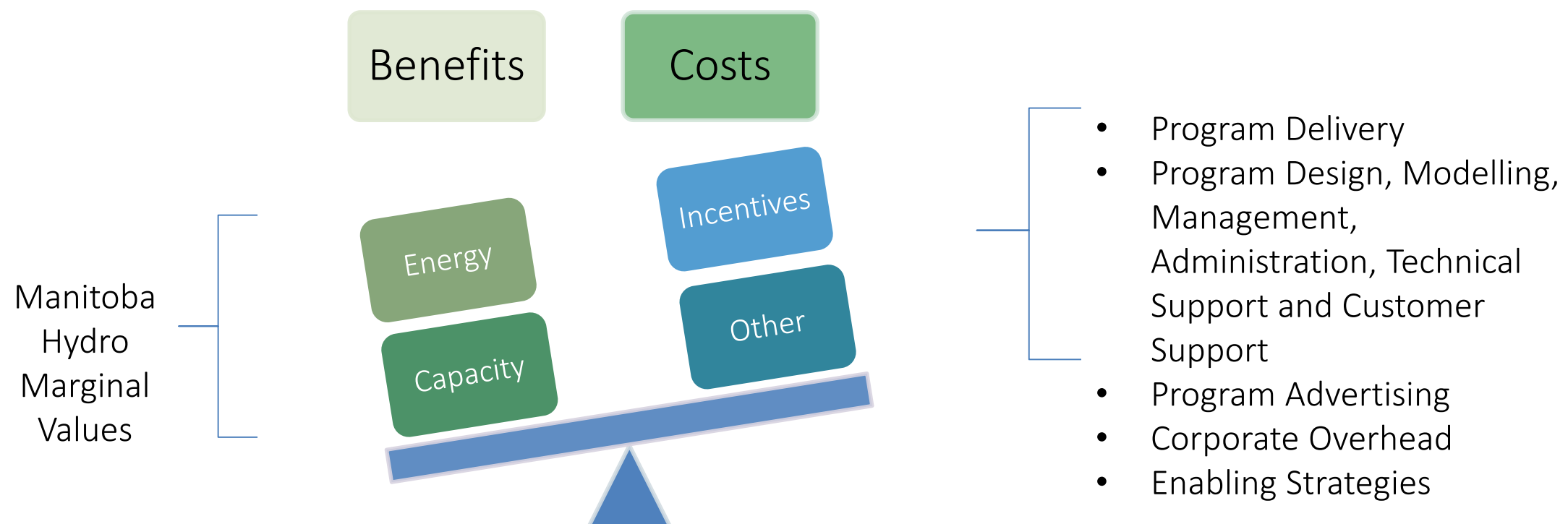
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Electric Program Administration Costs Test (PACT)



Program Administrator Cost Test (PACT)

1

The Program Administrator Cost Test (PACT) has been used to evaluate the investments required to deliver the portfolio of energy efficiency programs and the resulting respective electric or natural gas benefits to Manitoba Hydro resulting from those savings.

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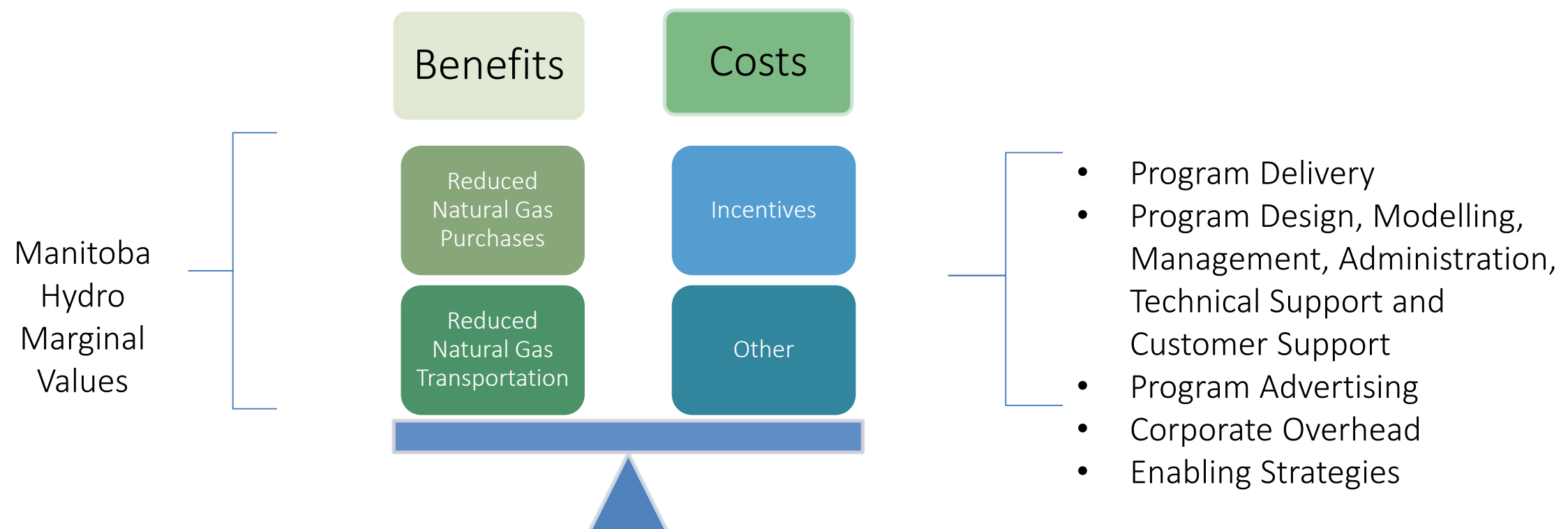
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Natural Gas Program Administration Cost Test (PACT)



Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 9(g)(i) Participant Benefits

Compliant

Section 5.5.1 – Electric customer bill impacts

Section 5.5.2 – Natural gas customer bill impacts

Section 6.3.1 – Social benefits

Appendix A - Section A4 through A8

Section 9(g)(ii) Manitoba Hydro Benefits

Compliant

Section 5.1.2 – PACT Energy Benefits

Section 5.1.3 - Efficiency Plan PACT

Metrics Appendix A – Section A2.2.2

Appendix A – Section A3.3

Section 9(g)(iii) Benefits to all Manitobans

Compliant

Section 6.3 – The Plan provides significant social, economic and environmental benefits to Manitobans

Appendix A - Section A4 through A8

Bill Impacts- Electric Bill Savings

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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

Bill Impacts- Natural Gas Bill Savings

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

Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 9(h) Stakeholder Input

Compliant

Section 3.3 – Comprehensive engagement
Appendix A - Section A2.4
Attachment 2 – Energy Efficiency Advisory
Group Reporting

Section 9(i) Impact of initiatives on 15- year
Efficiency Manitoba plan

Compliant

Section 3.1.1 - Achieving the mandated energy
savings

Section 9(j) Plan addresses required
prescribed factors for PUB

Compliant

Section 2.4.1 – The Efficiency Manitoba Act

Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 9(k)(i) Interest Rate for loan/financing programs

Compliant
Appendix A - Section A4.4

Section 9(k)(ii) Eligibility Criteria for loan/financing programs

Compliant
Appendix A - Section A4.4

Section 9(k)(iii) Expected dollar amount to be loaned/financed through initiatives

Compliant
Appendix A - Section A4.4

Section 9(l)(i) 3-year projected cost of each initiative and timeline for costs incurred

Compliant
Section 4.1 - Portfolio Budget Summary
Section 4.4 - Portfolio Budget Analysis
Appendix A - Section A3.2
Appendix A - Section A4 through A8

Statutory Requirements of the Plan - Section 9

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 9(l)(ii) 3-Year Projected administrative and overhead costs

Compliant

Section 4.1 - Portfolio Budget Summary
Section 4.4 - Portfolio Budget Analysis

Section 9(l)(iii) Contingency Fund required

Compliant

Section 7.4 – Efficiency Manitoba is prepared for emerging technologies and contingencies

Section 9(l)(iv) Proposed Sources and amount of funding

Compliant

2.3.1 The Efficiency Manitoba Act
2.3.2 Practical application of the Act
Appendix A - Section A3.2

Section 9(l)(v) Schedule of required funds over 3 years

Compliant

Appendix A - Section A3.2.5

Statutory Requirements of the Plan - Section 9

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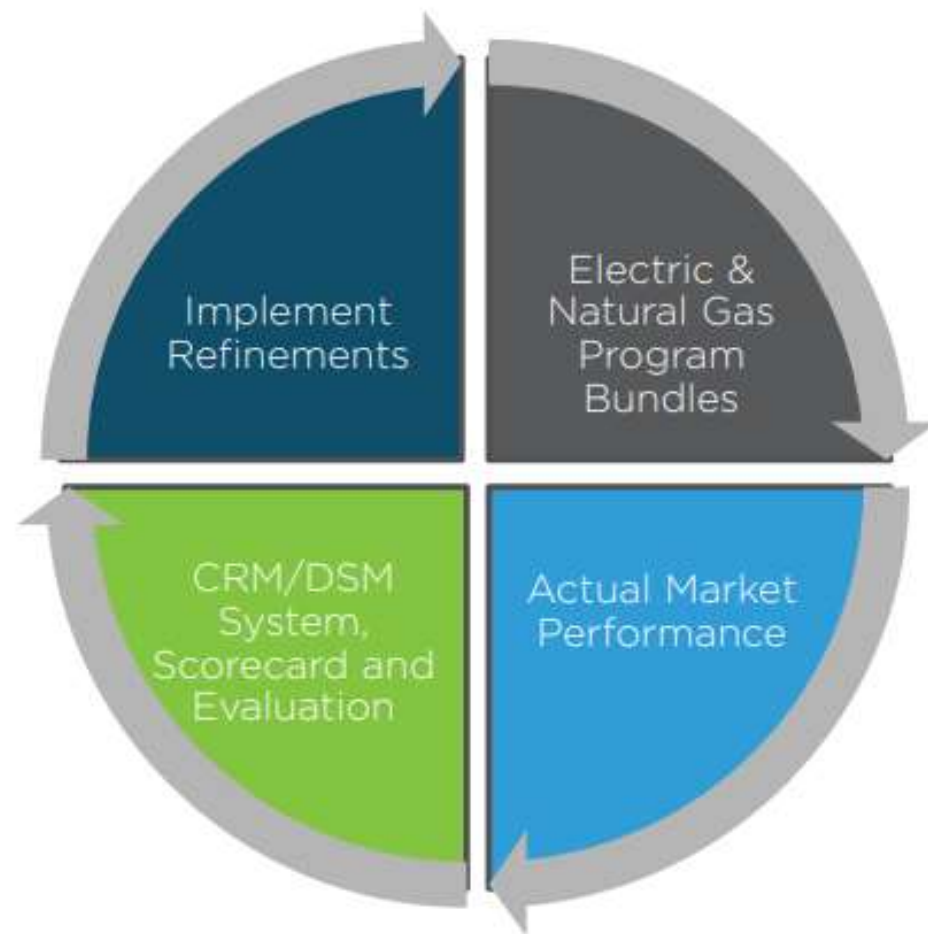
EFFICIENCY MANITOBA ACT

Section 9(m) How outcomes are achieved and proposed performance measures

EFFICIENCY MANITOBA SUBMISSION

Compliant

Section 7 –Comprehensive Approach to Monitor, Evaluate Performance and Continuously Improve Attachment 5 – Evaluation Framework and Planning Report



Mandatory Considerations of Review - Section 11

1

EFFICIENCY MANITOBA ACT

EFFICIENCY MANITOBA SUBMISSION

Section 11(4)(a) the net savings required to meet the savings targets and the plan to address any existing shortfall

PDF Page 58 & 60 to 62

Section 11(4)(b) the benefits and cost-effectiveness of the initiatives proposed in the Plan

Section 5.2 of the Plan

Section 11(4)(c) whether Efficiency Manitoba is reasonably achieving the aim of providing initiatives that are accessible to all Manitobans

Appendix A - Section A4 through A8

Additional Mandatory Considerations (Regulations)

1

EFFICIENCY MANITOBA REGULATION

EFFICIENCY MANITOBA SUBMISSION

Section 11(a) the appropriateness of the methodologies used by Efficiency Manitoba to select or reject demand-side management initiatives

Efficiency Manitoba has outlined the three (3) step process utilized to develop its portfolio as outlined in the Plan at Section 2, 3, 4, 5 and 6 as well as Section A2.

Section 11(b) whether the plan adequately considers the interests of residential, commercial and industrial customers

Efficiency Manitoba introduced ten (10) new programs as part of the Plan as well as over 30 new technologies or measures to enhance existing programs that will be continued.

Section 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;

Efficiency Manitoba has dedicated 6% of its annual budget to hard to reach customers (Sections 4 & 6 of the Plan)

Energy Savings & Budget Dollars by Customer Segment

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	Customer Segment					
	Industrial	Agricultural	Commercial	Residential	Income Qualified	Indigenous
Annual Average	Electric Portfolio					
Energy Savings (%)	39%	3%	35%	22%	1%	0.5%
Budget (%)	20%	4%	36%	19%	3%	3%
Annual Average	Natural Gas Portfolio					
Energy Savings %	29%	1%	25%	37%	7%	0.3%
Budget (%)	9%	1%	27%	21%	30%	2%

Additional Mandatory Considerations (Regulations)

1

EFFICIENCY MANITOBA REGULATION

Section 11(d) whether the portfolio of demand-side management initiatives required to achieve the savings targets is cost-effective;

EFFICIENCY MANITOBA SUBMISSION

See Slide 13
Section 3.1.1 - Achieving the mandated energy savings
Section 5.1 – Efficiency Manitoba uses the Program Administrator Cost Test (PACT) to Measure the Cost- Effectiveness of the Plan as prescribed in Regulation
Section 6.1.2 – Customer Segment Considerations

Section 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;

Not applicable for 2020/23 Efficiency Plan

Additional Mandatory Considerations (Regulations)

1

EFFICIENCY MANITOBA REGULATION

EFFICIENCY MANITOBA COMMENT

Section 11(f) whether Efficiency Manitoba's administration budget is reasonable when compared to similar organizations;

Efficiency Manitoba's total average annual costs are 9% lower than Manitoba Hydro. Comparison to other jurisdictions- see Daymark Direct Evidence Presentation.

Section 11(g) the impact of the efficiency plan on rates and average customer bill amounts

Efficiency Manitoba has demonstrated the long term benefits to participating customers

Electric Portfolio

Natural Gas Portfolio

2.24 ¢/kWh

Low Levelized Costs

14.96 ¢/m³

3.27

PACT

1.24

\$14,900,000 (Annually)

Customer Bill Savings

\$3,000,000 (Annually)

Additional Mandatory Considerations (Regulations)

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EFFICIENCY MANITOBA REGULATION

Section 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

EFFICIENCY MANITOBA SUBMISSION

Efficiency Manitoba has established a plan with reasonable and achievable projected savings to meet the short term and long term targets.

Section 11(i) Efficiency Manitoba's use of private-sector enterprises and non-governmental organizations to deliver demand-side management initiatives

A network of private sector delivery partners including contractors, retailers, suppliers, consultants, and industry associations is already established in Manitoba. Maintaining and continuing to strengthen these relationships is paramount to ensure the success of Efficiency Manitoba. See Appendix A- Section 2.

Additional Mandatory Considerations (Regulations)

1

EFFICIENCY MANITOBA REGULATION

Section 11(j) whether the Efficiency Plan adequately considers new technologies

EFFICIENCY MANITOBA SUBMISSION

The Plan provides for an Enabling Strategies budget that supports research and development/pilot programming for emerging opportunities that are at an early stage, and an Emerging Technologies budget that moves forward technologies that are reasonably at the past pilot stage but face barriers to implementation that need to be explored further— such as solar and bio-mass and customer cited bio-mass technologies support under the current Plan.

Section 11(k) for any Efficiency Plan after the first one, the reasonableness of retrospective performance

Not applicable for 2020/23 Efficiency Plan.

Section 11(l) whether Efficiency Manitoba has reasonable attempted to comply with the directions of Government

Efficiency Manitoba has carefully considered and complied with the directions of Government.

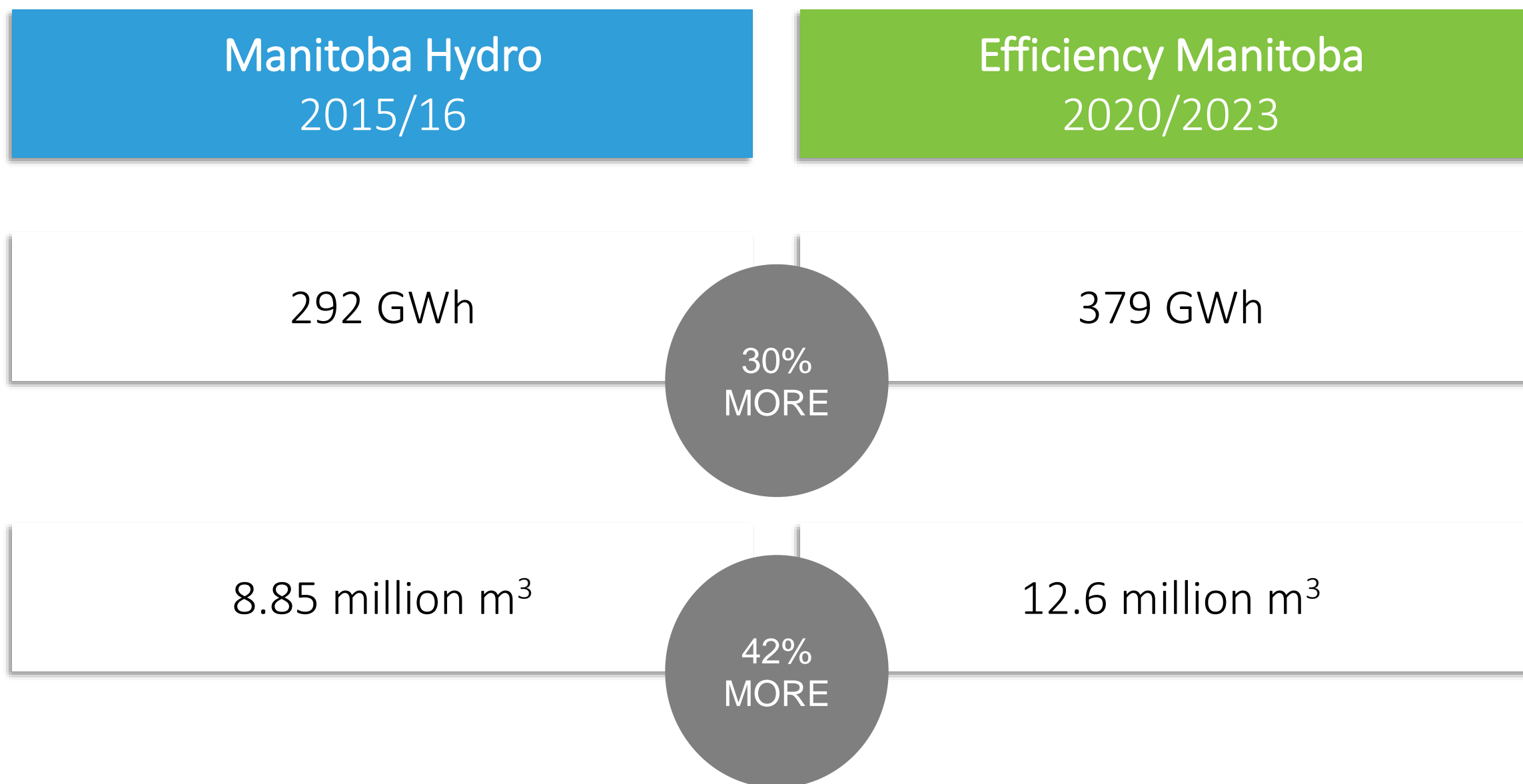
Doing More With Less

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Manitoba Hydro 2015/16		Efficiency Manitoba Annual Average 2020/23 Efficiency Plan
\$49,329,000	INCENTI VE COSTS	\$45,247,000 ↓ 8%
\$9,927,000	PROGRA M COSTS	\$13,765,000 ↑ 39%
\$14,949,000	STAFF COSTS	\$9,375,000 ↓ 37%
\$2,190,000	OVERHE AD COSTS	\$1,495,000 ↓ 32%
\$76,396,000	TOTAL COSTS	\$69,881,000 ↓ 9%

Doing More With Less

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Doing More With Less

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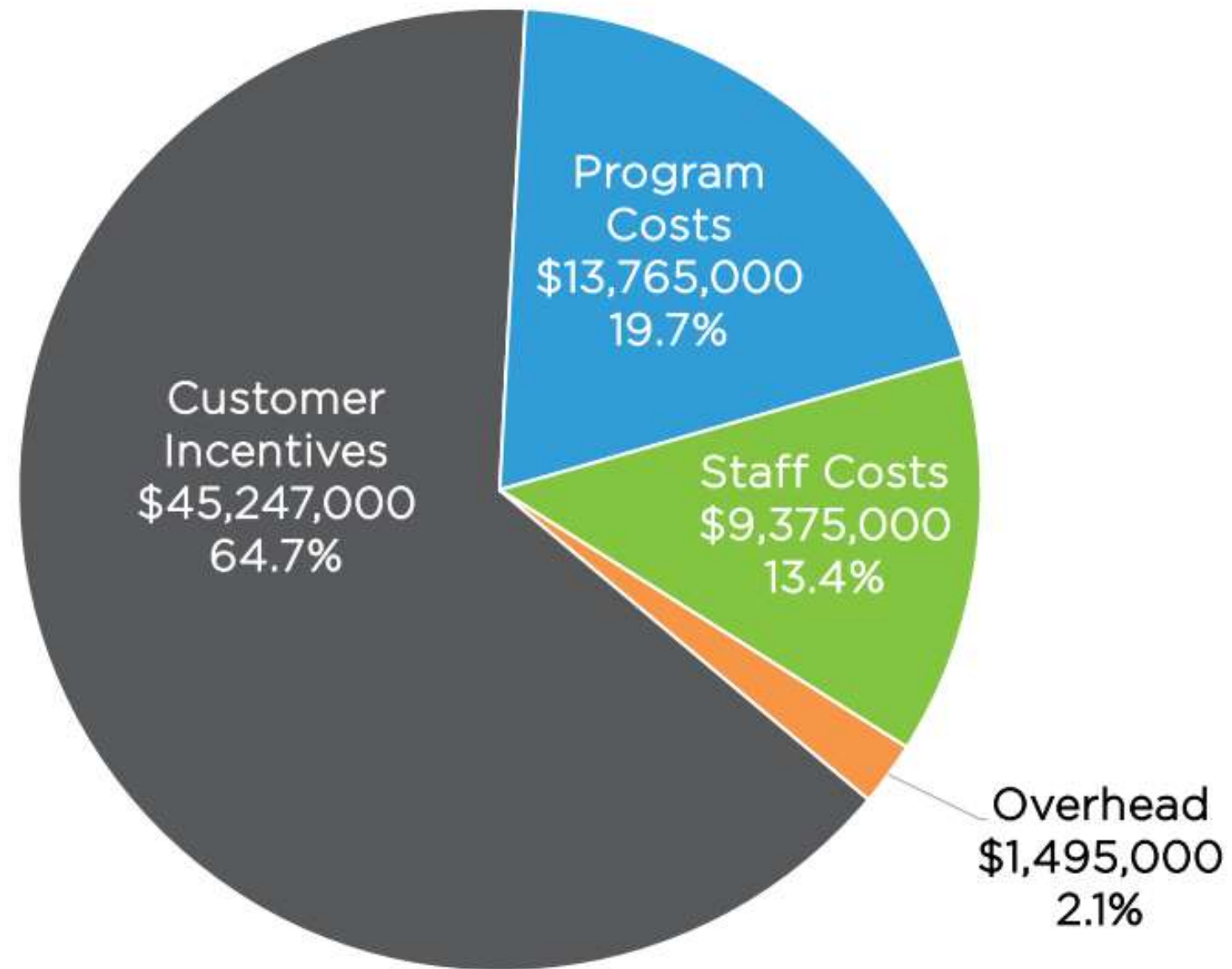
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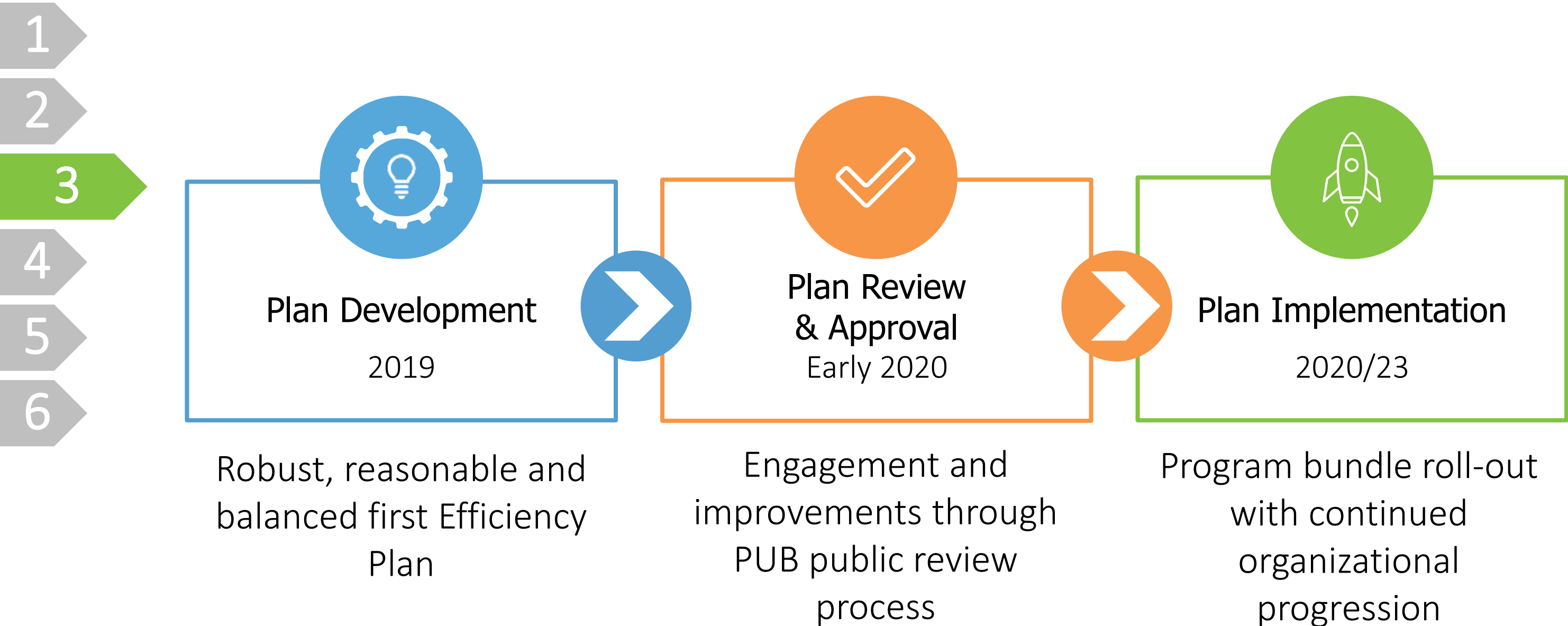
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Annual Average Overall Portfolio Budget Summary
Annual Average Budget: \$69,882,000

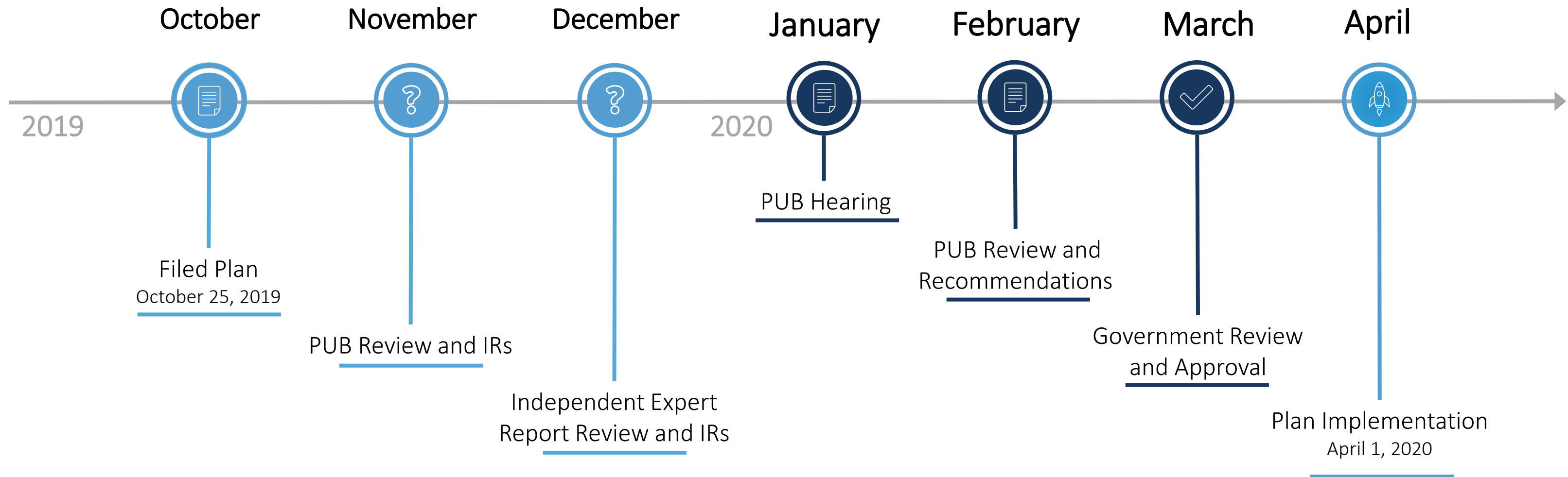


Note. Program costs include private sector program delivery, program administration, program advertising and enabling strategies budget items.

A Three Year Plan Approval



Efficiency Plan – Review of Milestones



Flexibility - Section 12(5)

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Adjustments under approved plan

- 12(5) For certainty, 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 the adjustments
 - a) are reasonably required to maximize the amount or cost-effectiveness of the net savings to be achieved under the approved plan; and
 - b) do not result in Efficiency Manitoba's total costs exceeding the total costs specified in the approved efficiency plan.

Annual Reporting Section 32(1)

The Annual Report must include:

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- (a) Efficiency Manitoba's audited financial statements for the fiscal year;
 - (b) for the plan year that ends in the fiscal year, Efficiency Manitoba's comparison of the net savings attained in the plan year with the projected net savings for that plan year that were set out in the applicable approved efficiency plan, together with an explanation of any significant discrepancy between the two;
 - (c) if any portion of the contingency fund was used in the applicable plan year, as provided for in sub-clause 9(l)(iii),
 - (i) a description of the initiatives for which the contingency fund was used,
 - (ii) an assessment of the net savings and other benefits realized as a result of those initiatives,
 - and
 - (iii) an analysis of the cost-effectiveness of those initiatives; and
 - (d) a description of any operational adjustments Efficiency Manitoba made during the fiscal year, as provided for under subsection 12(5).

A Three Year Plan Approval

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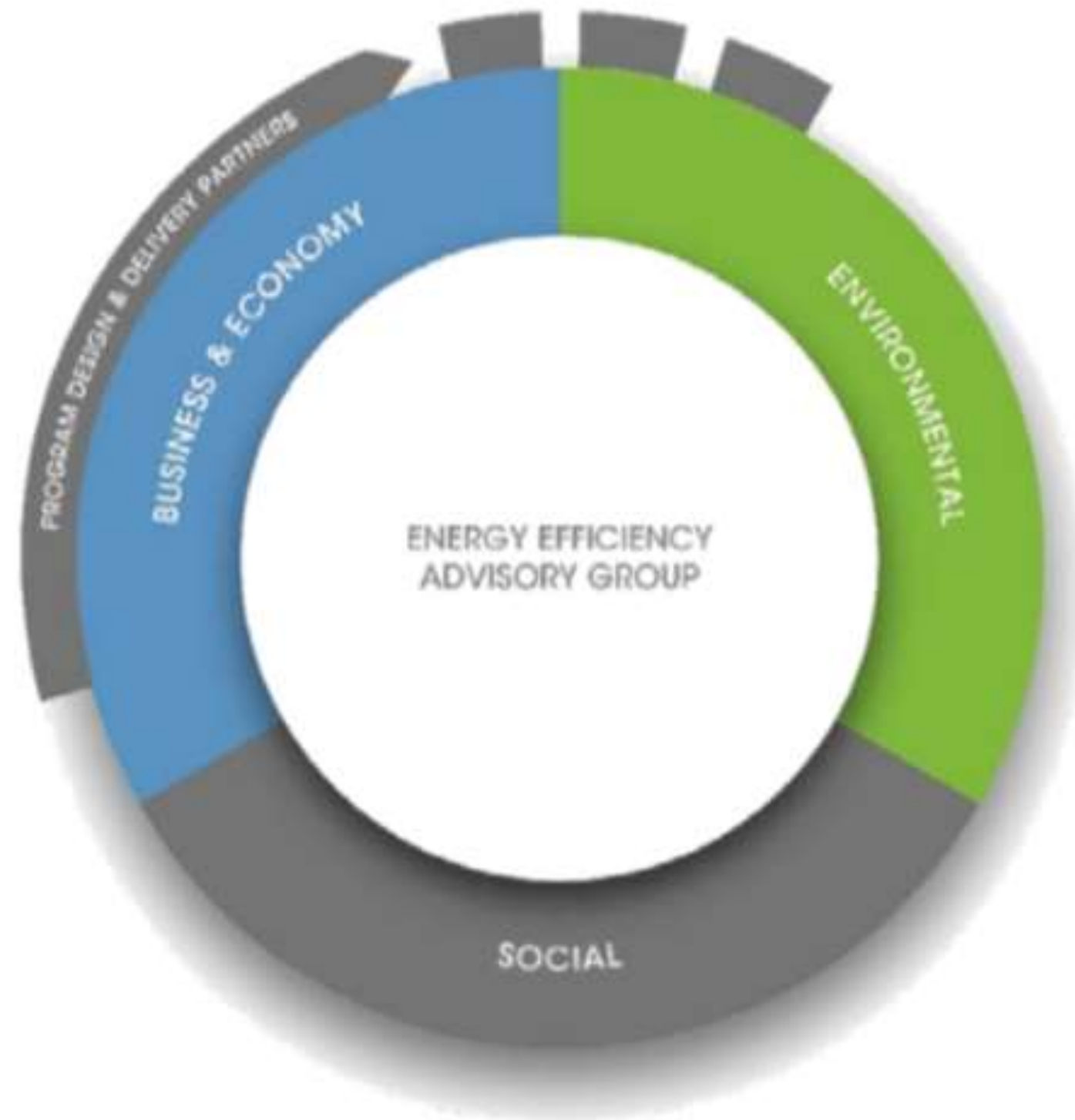
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“--there are no fatal flaws here. There are just things to keep an eye on. And they – we are well aware that Efficiency Manitoba knows they’re there. They have the history with programs. And they have plans in place to monitor as they go through to do that, but I wanted to make sure that you were aware of those kind of concerns”

Page 1323 of the Transcript, Lines 8 to 14

Stakeholder & Public Engagement

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Stakeholder & Public Engagement

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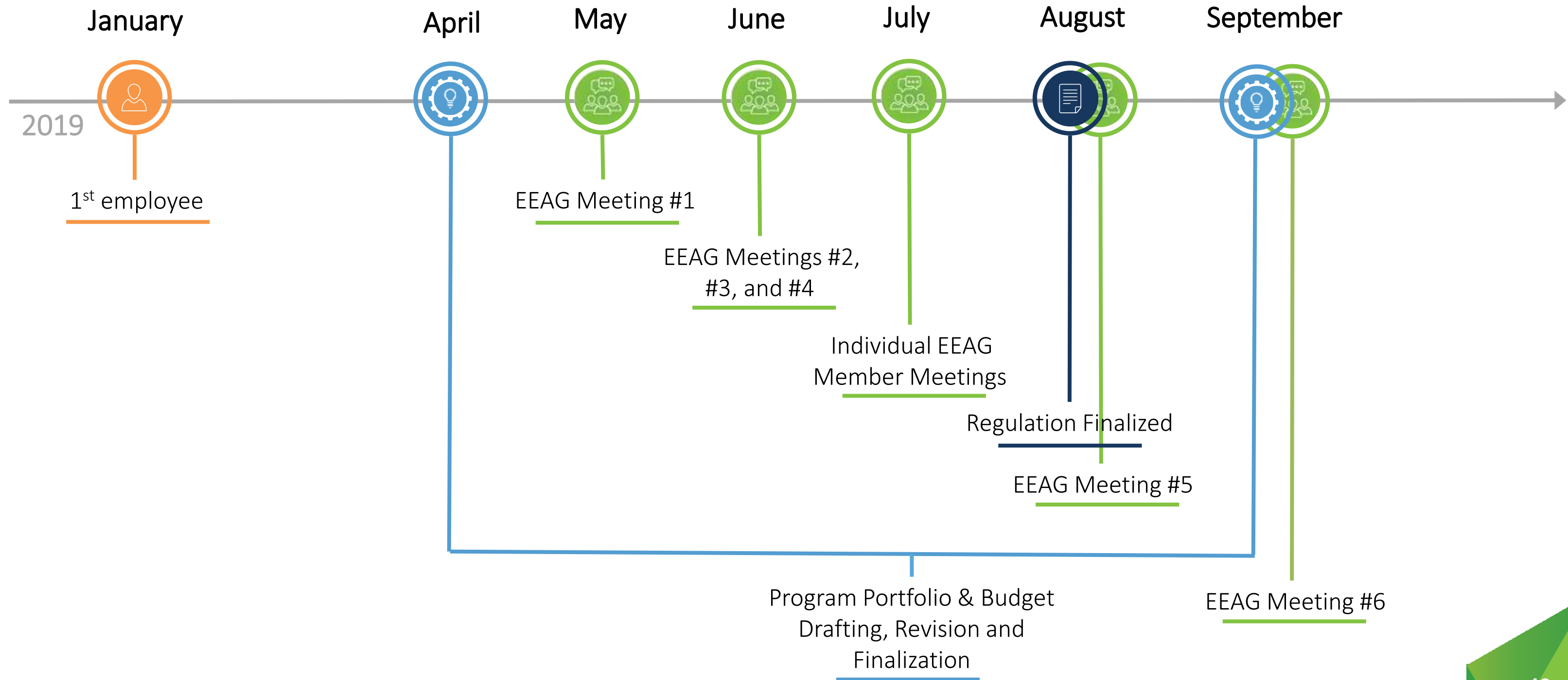
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- Customer focused delivery strategy for Manitobans
- Engage customers on media they are familiar with
- Bundling offers to fit specific market segment will enhance customer experience and drive participation
- Benefits include:
 - Simplified marketing and communications
 - Increased cross-promotion of additional offers
 - Increase efficiencies with streamlined internal processes
 - Cost-effective strategy to include measures which require support



Efficiency Plan – Review of Milestones



Efficiency Manitoba Act Regulation s. 12(2)

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Determining cost-effectiveness

12(1) For the purpose of clause 11(d), the cost-effectiveness of the portfolio of electrical energy demand-side management initiatives included or under consideration to be included in an efficiency plan 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.

Summary

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Reasonableness

- Projected electric and natural gas net energy savings meet the prescribed energy targets
- Development process and methodologies are documented

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Cost-effective

- Electric and natural gas DSM program bundles are evaluated using prescribed performance tests
- Rate impact and customer bill impacts are analyzed

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Accessible

- Focus on residential, income qualified, indigenous, commercial, industrial and agricultural customers
- Details and performance results provided for all customer segment programming

6

Non-energy benefits

- Considers the additional social, environmental and economic benefits of energy efficiency

Evaluation

- Proposed evaluation framework and plan to assess performance of the electric and natural gas portfolios

Summary

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One of the most important features of the Plan is the flexibility of the Plan. Efficiency Manitoba stated during its evidence that:

“The key to our continuous improvement strategy will be the ability to be both nimble and flexible. Flexibility is crucial to Efficiency Manitoba to deliver on its mandate.”

- Page 176 of the Transcript, Lines 11 to 14



January 27, 2020