

Finance Committee Meeting AGENDA

06, April, 2021 – 9:00 a.m.

1. CALL TO ORDER

1.1. Mi'kma'ki Territorial Acknowledgement

2. ANNOUNCEMENTS, ACKNOWLEDGEMENTS, RECOGNITION

3. PUBLIC INPUT (15 Minutes)

4. APPROVAL OF AGENDA (as circulated)

5. APPROVAL OF MINUTES – March 2, 2021

6. BUSINESS ARISING FROM MINUTES

7. PRESENTATIONS/SCHEDULED TIMES - Nil

8. CONSIDERATION OF CORRESPONDENCE – Nil

9. REFERRALS FROM COUNCIL, COMMITTEES & BOARDS - Nil

10. STAFF REPORTS

10.1. **Planning Department**

10.1.1. Corporate Greenhouse Gas Emissions Reduction Target 1-21

11. MAYOR'S/DEPUTY MAYOR'S/COUNCILLORS' MATTERS

12. ADDED ITEMS

13. IN CAMERA

14. ADJOURNMENT



Municipality of the District of Lunenburg

Report to Finance Committee

Report To:

Submitted By: Zachary Thompson

Date: April 6th 2021

Re: PCP Milestone 2 Corporate GHG Reduction Target

Milestone 2 of the PCP program requires Council to set a greenhouse gas reduction target. Previously two meetings have been held on setting a target ranging from 30% to 45% with the general consensus appearing to favour a target of either a 40% or 45% reduction below 2019 levels by 2030. Staff was directed to prepare a report showing the financial costs of these targets which have been attached below.

The 45% reduction target is estimated to cost \$1,500,000 with an expected savings of \$1,525,299 over the projects lifetime (20 years solar, 7 years vehicles). The 40% target is estimated to cost \$1,385,000 with a savings of \$1,390,462 over the projects lifetime (20 years solar, 7 years vehicles).

The draft 5-year capital plan includes \$2,280,000 for climate change and adaptation projects. It also includes monies for EV fleet replacement at a budgeted cost differential of \$130,000.

Staff is still recommending that the target be set at 45% because preliminary costing demonstrates this is achievable in our 5-year financial plan.

____Zachary Thompson Sustainability Committee_____
Print Name & Position

/xxx
Attachments

PCP Milestone 2

Finances

- ▶ Have priced out Solar Projects
- ▶ EV's
- ▶ MARC Retrofits

► Solar Costs

Project	Cost	Yearly Savings	20 year Savings Total
Office Solar	\$280,000	\$12,627.34	\$325,574.84
New Germany WWTP Solar	\$280,000	\$12,718.49	\$327,924.95
Hebbeville Solar	\$100,000	\$4,409.64	\$113,695.08
Pump station 20 Solar	\$80,000	\$4,016.46	\$103,557.72
MARC Solar	\$250,000		

- ▶ Electric Vehicles
- ▶ Yearly fuel Savings of \$20,104
- ▶ \$1.20 per litre of fuel
- ▶ \$0.15 per KWH electricity
- ▶ Cost of \$200,000 for additional chargers
- ▶ Vehicle prices in yearly plan

MARC

- ▶ Currently uses 12,902 litres fuel oil for heating
- ▶ Cost ~ \$13,947.06
- ▶ 30,046 KWH Electricity
- ▶ Cost \$5,981.17
- ▶ Retrofit to close to Net Zero (All electric heating, Insulation, Windows, Doors)
- ▶ Energy Audit RFP for summer
- ▶ Est Cost to retrofit \$180,000
- ▶ Plus solar \$250,000

- ▶ 40% Target
- ▶ Cost \$1,385,000
- ▶ Savings \$1,390,462

- ▶ 45% Target
- ▶ Cost \$1,500,000
- ▶ Savings \$1,525,299

Project	Lifetime	Lifetime Savings	Cost	Lifetime Net
Office Solar	20 Years	\$ 325,574.84	\$ 280,000.00	\$ 45,574.84
New Germany Solar	20 Years	\$ 327,924.95	\$ 280,000.00	\$ 47,924.95
Hebbeville Solar	20 Years	\$ 113,695.08	\$ 100,000.00	\$ 13,695.08
Pump Station 20 Solar	20 Years	\$ 103,557.72	\$ 80,000.00	\$ 23,557.72
MARC Retrofits and Solar	20 Years	\$ 513,815.88	\$ 430,000.00	\$ 83,815.88
Vehicle (per Vehicle)	7 Years	\$ 15,636.83		
Total Vehicles	7 Years	\$ 140,731.50	\$130,000	\$ 10,731.50
Chargers		\$ -	\$200,000	\$ (200,000.00)
Total		\$ 1,525,299.96	\$ 1,500,000.00	\$ 25,299.96



Municipality of the District of Lunenburg

10 Allée Champlain Drive, Cookville, Nova Scotia, Canada, B4V 9E4
Phone: 902.543.8181 Fax: 902.543.7123 Web Site: www.modl.ca

March 16, 2021

To Chair & Members of the Finance Committee
of the Municipality of the District of Lunenburg

Dear Members:

The Policy & Strategy Committee, in session on Tuesday, March 16, 2021, made a motion to refer Options A and B of the Corporate Greenhouse Gas Emissions Reduction Target to the Finance Committee for further discussion and debate when more information is provided on costs for same.

Respectfully submitted,

Chairman and Members
Policy & Strategy Committee

/jp
Attachment



Municipality of the District of Lunenburg

Request for Decision

REPORT TO: Policy and Strategy Committee
SUBMITTED BY: Zach Thompson
DATE: 16/03/2021
RE: Corporate Greenhouse Gas Emissions Reduction Target

RECOMMENDATION

That the Policy and Strategy Committee recommend that council choose Option A and set a greenhouse gas emissions reduction target of 45% below the 2019 inventory levels by 2030, as well as make a statement of support for reducing emissions from the LCLC.

DISCUSSION

Council declared a climate emergency in October 2019 and joined the Partners for Climate Protection Program (PCP) to help reduce GHG emissions within the municipality. Milestone 1 of the PCP program was achieved in September 2020 and council now needs to set a GHG reduction target in order to achieve milestone 2.

There are three options available to the Policy and Strategy committee to recommend to council: Option A a 45% reduction, Option B a 40% reduction, and Option C a 30% reduction. All options use the 2019 GHG inventory as the baseline year from where GHG emission reductions will be measured. Furthermore, council may make a statement supporting GHG emissions reductions at the LCLC while recognizing that it is not include within the MODL corporate inventory.

Option A is recommended by staff as setting a GHG reduction target of 45% will ensure that MODL is aligned with the goals of the Paris Accord and is doing its part to help limit warming to 1.5°C.

Once approved the GHG reduction target will need to be signed by council and sent to the Federation of Canadian Municipalities to be recorded.

BUDGET IMPLICATIONS

None. Projects requiring a budget will be brought to council on an annual basis.

STRATEGIC PLAN

Reducing emissions aligns with councils Climate Emergency strategic priority.

ALTERNATIVES

Recommend Option B a reduction of 40%

Recommend Option C a reduction of 30%

CONCLUSION

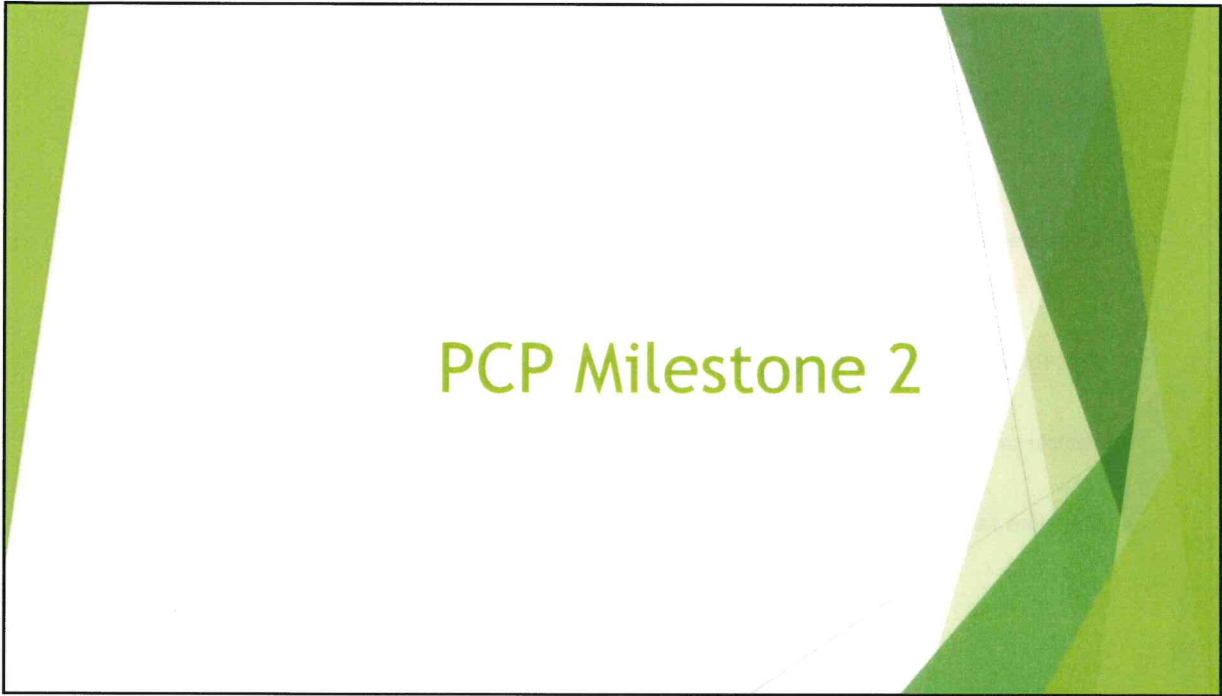
MODL must set a GHG reduction target to achieve Milestone 2 of the PCP program. Staff recommends a reduction target of 45% below the 2019 inventory by 2030 to align MODL with the Paris accord and the overall goal of limiting warming to 1.5°C.

Department:

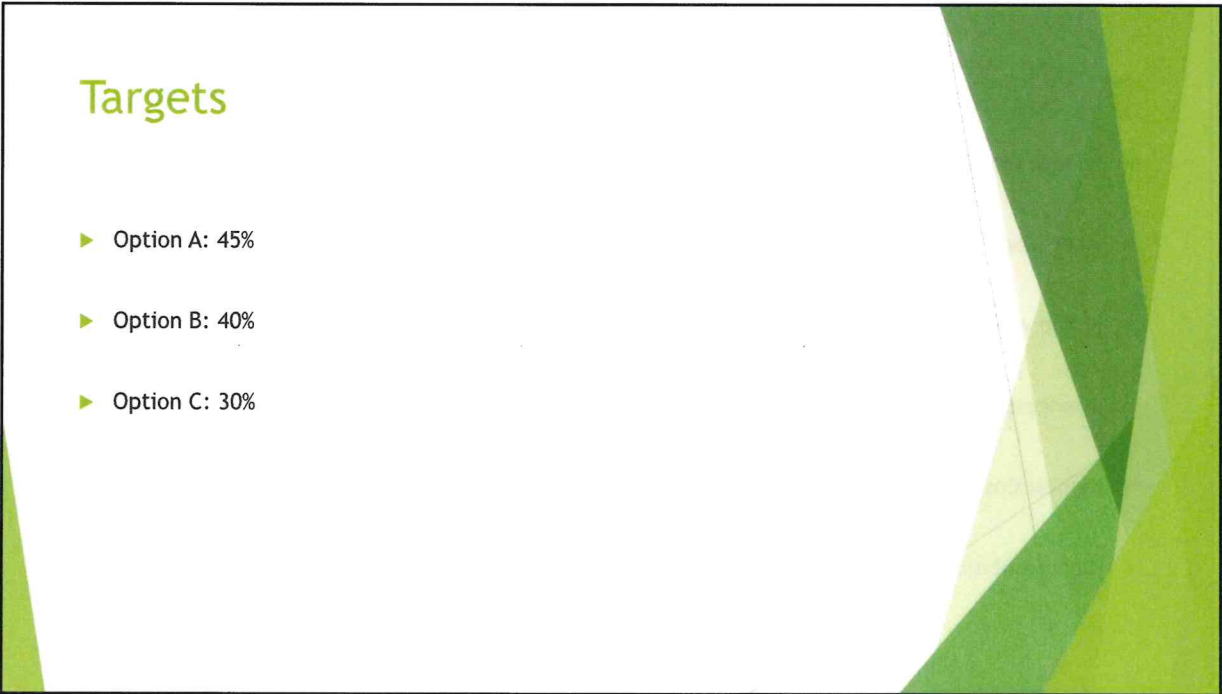
Report Prepared By: Zach Thompson Date:16/03/2021

Report Approved By: Date:

Reviewed By CAO: Date:



1



2

Assumptions

- ▶ Costs are based on estimates from EnergyHub
- ▶ <https://www.energyhub.org/nova-scotia/>
- ▶ Cost for solar \$2.43 - \$2.68 per watt
- ▶ Vehicle savings based on gas \$0.96 per litre
- ▶ Emissions factor 484 g CO₂e per KWH

3

Option A

- ▶ Reduce emissions by 45% below 2019 inventory by 2030
- ▶ Meets Paris accord
- ▶ In line with doing our part
- ▶ Strongest doable option
- ▶ Highest Cost
- ▶ Highly Ambitious

4

Includes

► Solar:

Location	Size in KW	Cost Low	Cost High	Savings Per Year
Office	100	243	268	18,000
MARC	80	194.4	214.4	14,808
New Germany WWTP	100	243	268	13,827.86
Hebbeville Sewer	40	97.2	107.2	6,152.65
Pump 20 (Sewer pump Jubilee Road)	33	80.19	88.44	5,738.99

5

► Vehicles

► Replace all vehicles with EV's

Vehicle	Fuel Savings Per year	Lifetime
2011 Ford Escape	1600	9600
2014 Chev Express	1200	6000
2014 Ford Truck	1350	8100
2016 Escape	1300	7800
2016 Nissan Frontier	1350	8100
2019 Dodge Truck	1300	7800
2019 Jeep	1300	7800
2019 Jeep	1300	7800
Toyota Truck	1600	9600

6

- ▶ Retrofits
- ▶ Retrofit MARC to full electric heating (or geothermal)
- ▶ Cost ~\$180,000 est
- ▶ MARC achieves net zero emissions with solar panel

7

- ▶ Waste Trucks fully EV by 2030
- ▶ Corporate waste reduced by 10%

8

Total Costs and Savings

Projects	Cost	Savings per year
Solar	857.79 - 946.04	58,528
EV's	-180,000	12,300 in fuel
Retrofits	-180,000	13,000
Totals	1,306,000	83,528

9

Option B

- ▶ Reduce emissions by 40% below 2019 inventory by 2030
- ▶ More Achievable
- ▶ Flexibility
- ▶ Does not meet Paris Accord

10

Includes

► Solar


Location	Size in KW	Cost Low	Cost High	Savings Per Year
Office	100	243	268	18,000
MARC	80	194.4	214.4	14,808
New Germany WWTP	100	243	268	13,827.86
Hebbeville Sewer	40	97.2	107.2	6,152.65

11

Replace most vehicles with EV's


Vehicle	Fuel Savings Per year	Lifetime
2011 Ford Escape	1600	9600
2014 Chev Express	1200	6000
2014 Ford Truck	1350	8100
2016 Escape	1300	7800
2016 Nissan Frontier	1350	8100
2019 Jeep	1300	7800
Toyota Truck	1600	9600

12



- ▶ Retrofits
- ▶ Retrofit MARC to full electric heating (or geothermal)
- ▶ Cost - \$180,000 est
- ▶ MARC achieves net zero emissions with solar panel

13



- ▶ Waste Trucks fully EV by 2030
- ▶ Corporate waste reduced by 10%

14

Total Costs and Savings

Projects	Cost	Savings per year
Solar	777,600 - 857,600	52,789
EV's	-140,000	9,700 in fuel
Retrofits	-180,000	13,000
Totals	1,177,600	75,489

15

Option C

- ▶ Reduce emissions by 30% below 2019 inventory by 2030
- ▶ Easy to achieve
- ▶ Low cost
- ▶ Low target
- ▶ Does not meet Paris Accord

16

Includes

► Solar

Location	Size in KW	Cost Low	Cost High	Savings Per Year
Office	100	243	268	18,000
MARC	28	68	75	5,183.85
New Germany WWTP	100	243	268	13,827.86
Hebbeville Sewer	40	97.2	107.2	6,152.65

17

Replace most vehicles with EV's

Vehicle	Fuel Savings Per year	Lifetime
2011 Ford Escape	1600	9600
2016 Escape	1300	7800
2019 Jeep	1300	7800
Toyota Truck	1600	9600

Waste Trucks Natural Gas by 2030

Corporate waste reduced by 10%

18

Total Costs and Savings

Projects	Cost	Savings per year
Solar	651,200 - 718,200	43,164.50
EV's	-80,000	5,800 in fuel
Totals	937,600	48,964.50

19

LCLC

- ▶ All options can include a statement about LCLC that we will help to reduce emissions from the LCLC.
- ▶ Energy Audit found that a reduction of ~18% was possible.
- ▶ Total LCLC emissions in 2018 were 2540 tonnes of CO₂e
- ▶ I.E Council sets a Corporate GHG emissions reduction target of 45% below the 2019 GHG inventory level by 2030, as well as endorses funding GHG reduction projects at the LCLC.

20