

# Electrification

A market transformation role for  
*Efficiency Manitoba*  
in buildings and transportation

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# Who Is Green Action Centre?

- ▶ A charitable ENGO
- ▶ Vision - All Manitobans Living Green, Living Well
- ▶ Educate about ecological sustainability and promote practical green solutions - e.g. sustainable transportation and waste reduction
- ▶ Advocacy and policy responses to sustainability issues including Manitoba Hydro hearings before the PUB since 2002.
- ▶ Champions of effective climate action and policy along with conservation, efficiency, fairness, and low-income affordability.
- ▶ Focus of this presentation - securing EM's role in electrification

# Building on Chris Neme's Thesis

- ▶ Climate and electrification needs should be supported, not thwarted, by program design, implementation, measurement and evaluation in EM's 3-year efficiency plan.
- ▶ The EM Act has hard targets for gas and electricity savings, but multiple criteria for selecting paths to savings, including service to low-income customers, GHG reductions, and promotion of new technologies.
- ▶ Mr. Neme recommended expanding heat pump programs where most cost-effective (electric heat customers) and advantageous to AEF qualified low-income households using propane and oil.
- ▶ Building envelope improvements prepare for more cost-effective heat pump installations in the future.
- ▶ Mr. Neme criticized EM's accounting of electrification as "negative electrical savings" for creating potential perverse incentives or disincentives and he proposed alternatives.

# EM's Multiple Roles

- ▶ Delivering a 3-year efficiency plan paid for by Manitoba Hydro is only one of EM's roles.
- ▶ The EM Act gives EM a potential mandate to achieve savings in respect of demand for electrical power, potable water and fossil fuels consumed in Manitoba's transportation sector [4(1)(d)].
- ▶ The EM Act gives EM the power to undertake other DSM initiatives on behalf of governments, agencies, persons or organizations and undertake prescribed activities related to efficiency, conservation or the reduction of greenhouse gas emissions in Manitoba [6(3)(a,b)].
- ▶ The EM Regulation permits EM "to reduce the consumption of fossil fuels other than natural gas in Manitoba" although not as part of the MH-funded efficiency plan unless qualifying for the AEF (6).

# EM and Transport Electrification

- ▶ At any time, EM could be tasked with promoting EVs.
- ▶ Government could add this to EM's mandate by regulation; or
- ▶ Manitoba Hydro may conclude that, with Keeyask coming online and surplus power available, there's a business case for selling it to EV owners for 9 cents/kWh rather than to opportunity export customers for 4 cents/kWh. MH might then commission EM to promote sales; or
- ▶ The City of Winnipeg might commission EM to promote EVs as part of its Climate Action Plan; or
- ▶ The David Suzuki Foundation might do likewise.

# Beneficial Electrification & Efficiency

- ▶ *Beneficial electrification* increases electrical usage to attain benefits like emissions reduction, overall energy efficiency, or economic benefits for MH, its customers and the Province.
- ▶ Heat pumps and electric vehicles (a) reduce GHGs when they replace propane, heating oil, diesel and gasoline, (b) are much more efficient than their fossil fuel counterparts, and (c) spend fuel dollars in Manitoba rather than sending them to Alberta.

# Key Recommendation



The PUB should ensure that, when EM promotes beneficial electrification, any resulting efficient increase in electrical consumption should NOT be counted as “negative electrical savings.”



Without such a provision, EM’s multiple roles become antagonistic, with conflicting goals, rather than synergistic.



A minimum non-antagonistic treatment would count the increase in electrical load from beneficial electrification as an increase in baseload, like service to a new building - not as negative savings.



A more synergistic treatment would measure and credit increased energy efficiency from electrification in addition to measuring GHG reductions.

# Supplemental Slides



# Supplement:

## The case for EM to promote EVs now

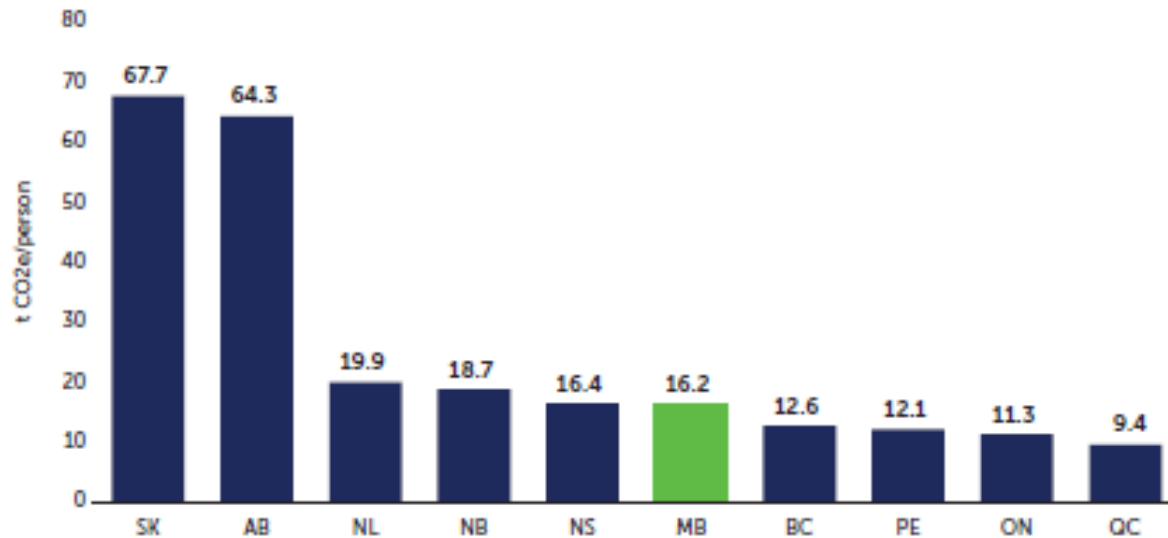
- ▶ **Climate urgency** - Canada's climate emergency, Manitoba's competitive vision, transportation GHGs + available EVs → action
- ▶ **More EVs are available** - Most manufacturers, multiple types and models, longer ranges and more to come.
- ▶ **Manitoba Hydro benefits** - EV charging @ 8.74¢/kwh retail earns 4.74¢/kwh more than opportunity exports @ ~4¢/kwh → higher Hydro revenues → lower rate increases.
- ▶ **Province of Manitoba benefits** - If EV customers pay PST on transport electricity and a road fee equivalent to fuel tax, Manitoba's economy and Treasury will benefit.
- ▶ **Efficiency Manitoba mandate** - conditional mandate to reduce transportation fossil fuel use + Power Smart experience in market transformation → **EM is well-positioned to respond to climate challenge.**

# Why EV marketing should not be postponed

- ▶ Most urgent is the short timeline for GHG reductions.
- ▶ Postponement negates the Climate and Green Plan Vision that “Manitoba will be Canada’s cleanest, greenest and most climate resilient province.”
- ▶ The cumulative emissions accounting that underlies Manitoba’s Carbon Savings Account means that additional GHGs accumulate in the atmosphere when savings opportunities are postponed.
- ▶ With EV adoption a net benefit to Manitoba Hydro and its customers and the provincial economy and treasury, postponement means an economic loss to Manitobans. [Also a loss to Manitoba innovation and branding.]
- ▶ Without augmentation from a marketing campaign in Manitoba, fewer federal EV rebates will accrue to Manitobans vs. other provinces.

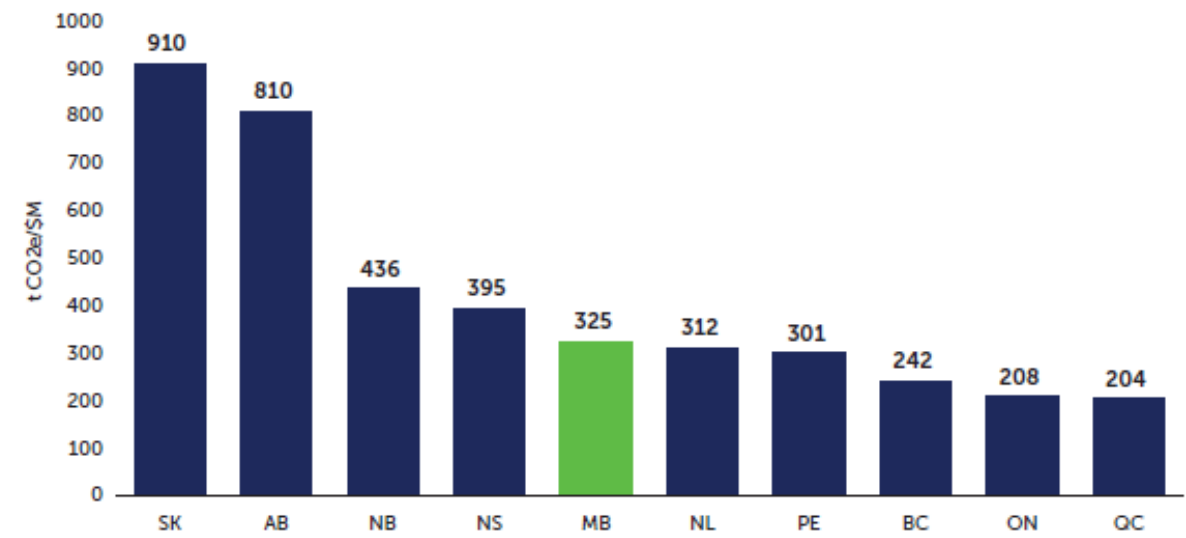
# Climate urgency: How does Manitoba compare?

2017 GHG Emissions per Capita by Province



Data Source: 2019 National Inventory Report & Statistics Canada Table: 17-10-0005-01

2017 GHG Emissions-Intensity of Provincial Economies



Data Source: 2019 National Inventory Report & Statistics Canada Table: 36-10-0222-01

**MB's GHGs are 6<sup>th</sup> highest per capita and 5<sup>th</sup> highest in GDP intensity. MB's GHGs are 1.7 X QC's per person and 1.6 X QC's per million dollars GDP. CONCLUSIONS: MB has a long ways to go to be cleanest and QC isn't standing still.**

**Transportation is MBs greatest opportunity to reduce emissions.**

# Needed: A Plug and Drive EV Information and Demonstration Hub for Manitoba

- ▶ Provinces with higher EV adoption rates, like BC, QC and formerly ON, have multi-pronged programs, including dealer requirements to stock EVs, incentives for vehicles and chargers, public charging infrastructure and marketing programs.
- ▶ Marketing programs like Plug In BC, Ontario's Plug'n Drive and Quebec's Running Electric provide, in addition to up-to-date web-based information, knowledgeable advisors to answer questions and opportunities to view and drive EVs.
- ▶ Marketing plans should address barriers to EV adoption.
- ▶ An initiative within the EV marketing campaign could be a Focus on Fleets as a cost-effective way to ramp up early EV adoption.
- ▶ EM + MH between them have developed a plethora of marketing tools and strategies for accelerating market penetration of new clean technologies.