

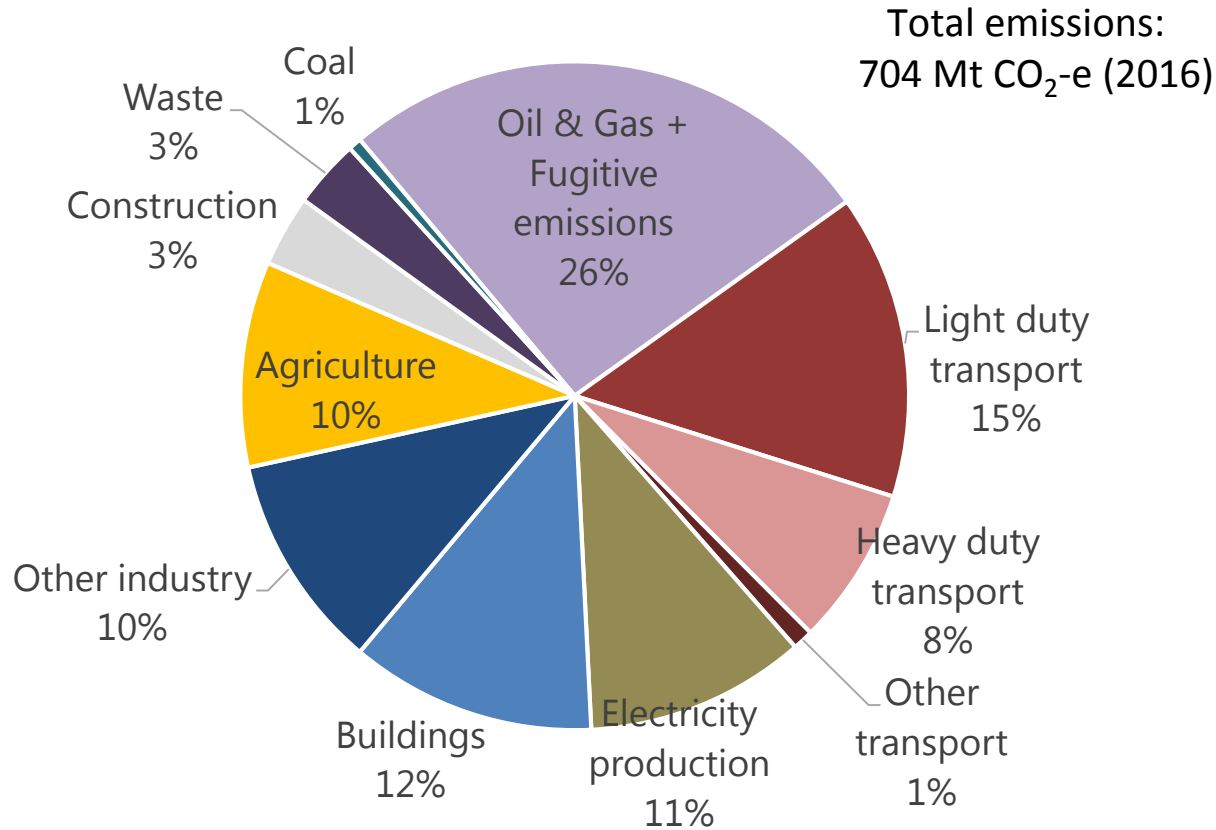
# Transforming Canada's transport sector

## Impacts of electrification and increased biofuel use

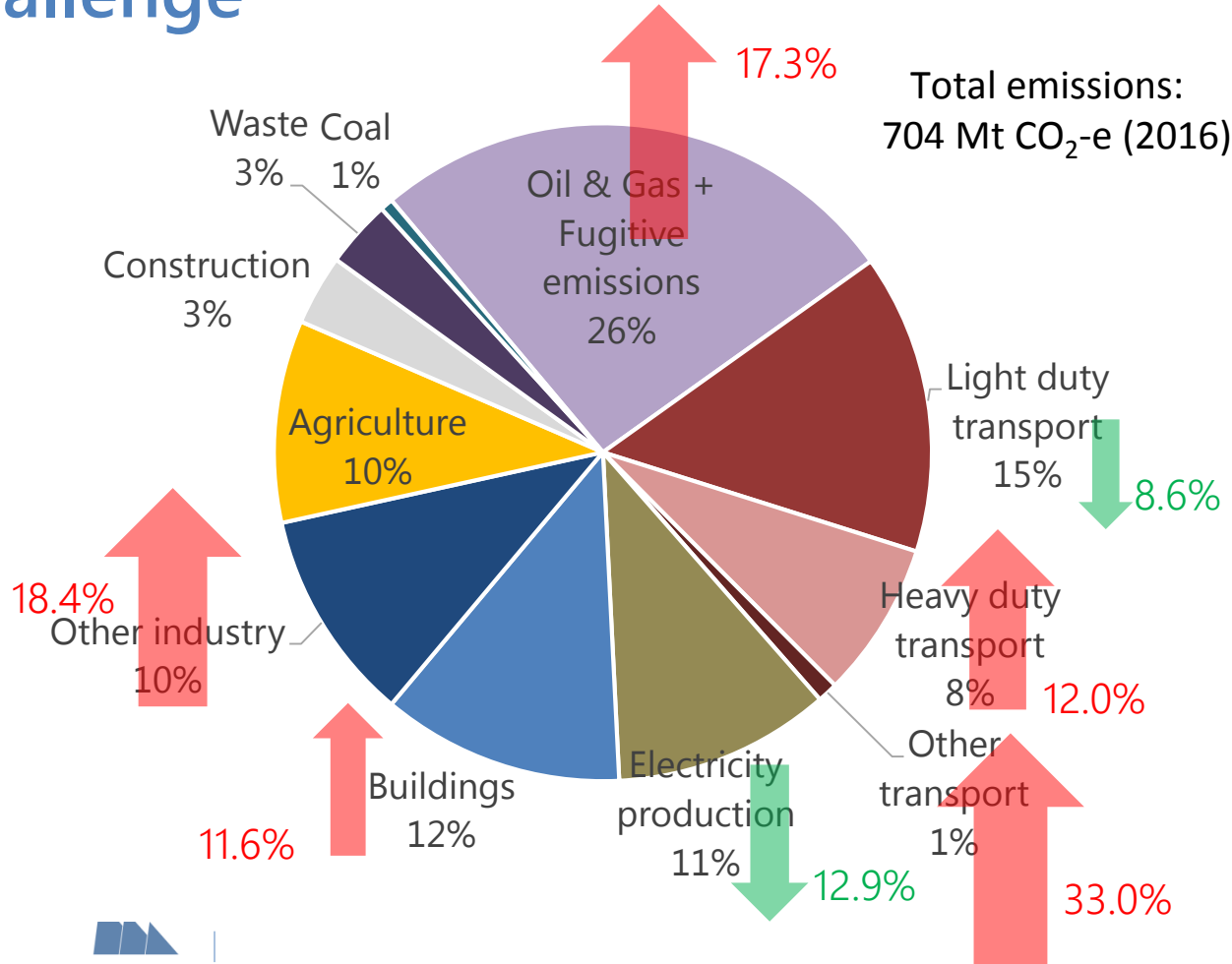
Warren Mabee, Chris Schwartz

ACW All-Team Meeting, Toronto, Canada 11 November 2018

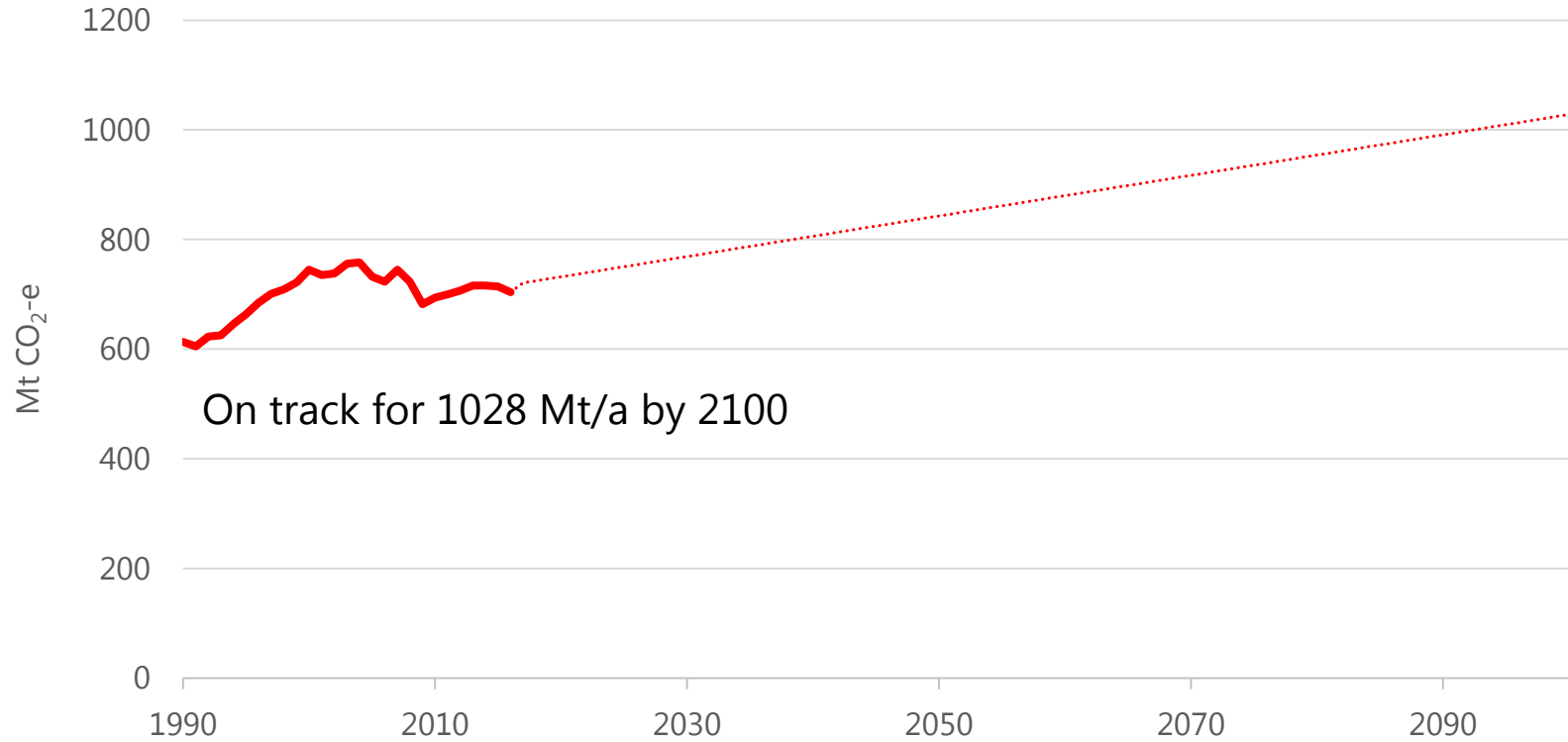
# The challenge



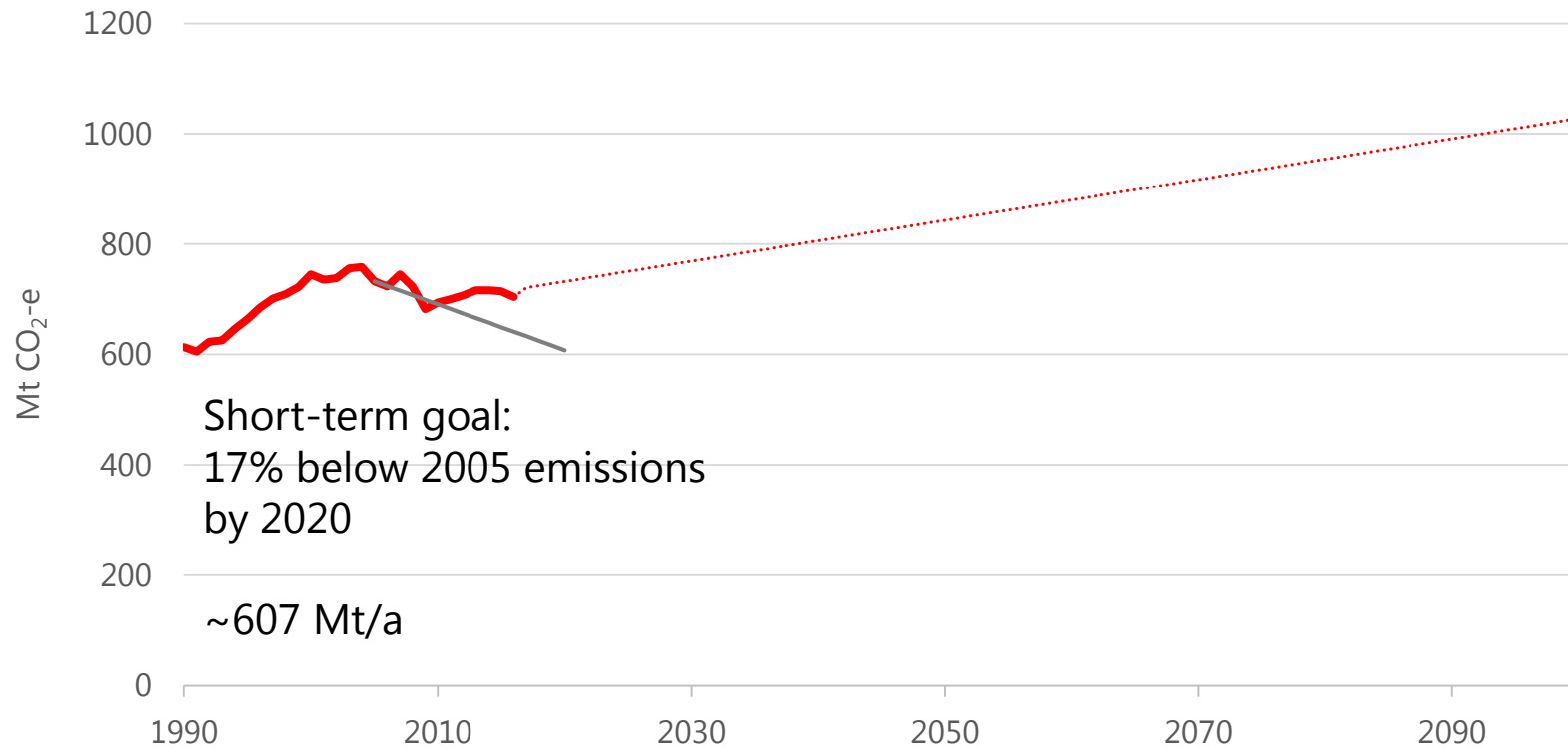
# The challenge



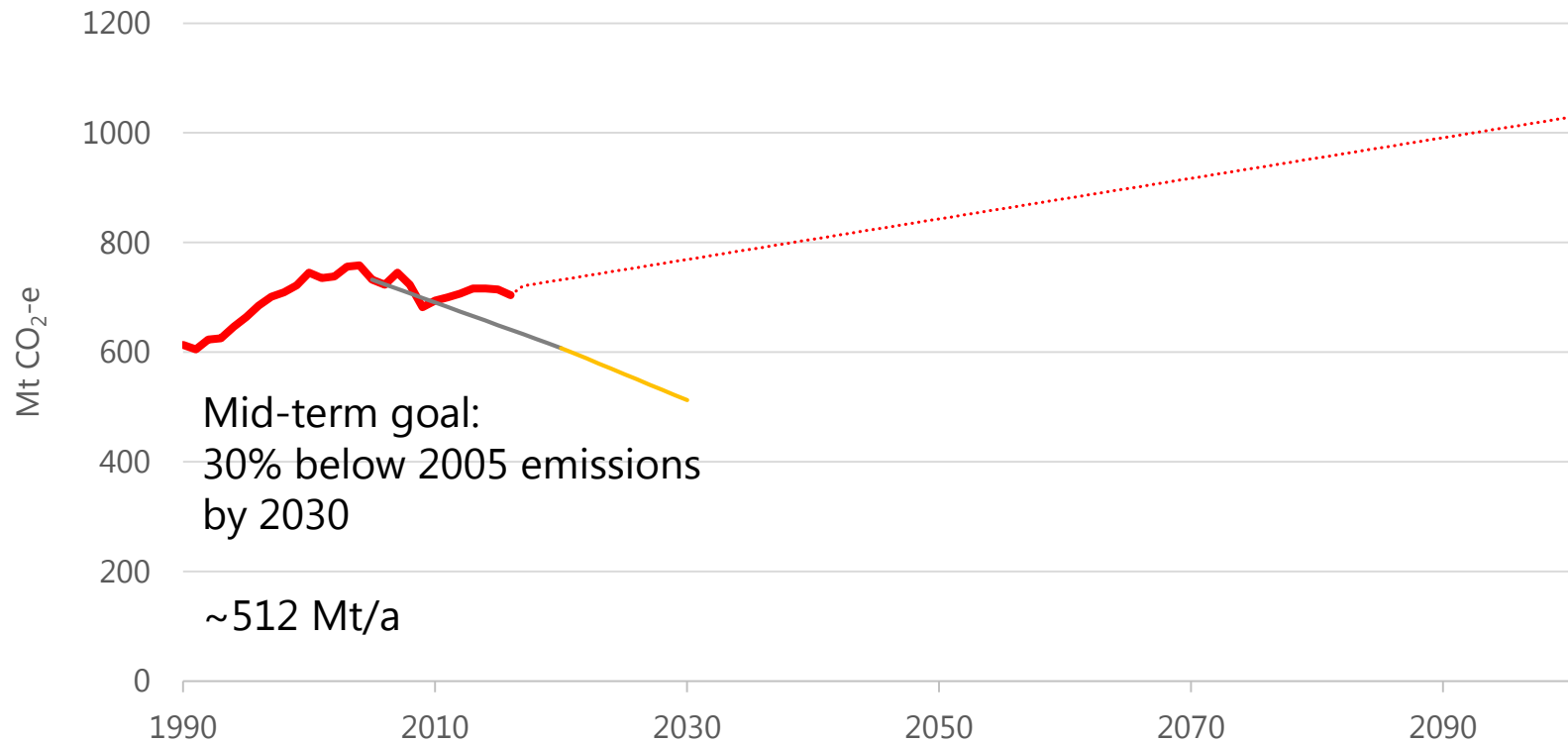
# Emissions trends



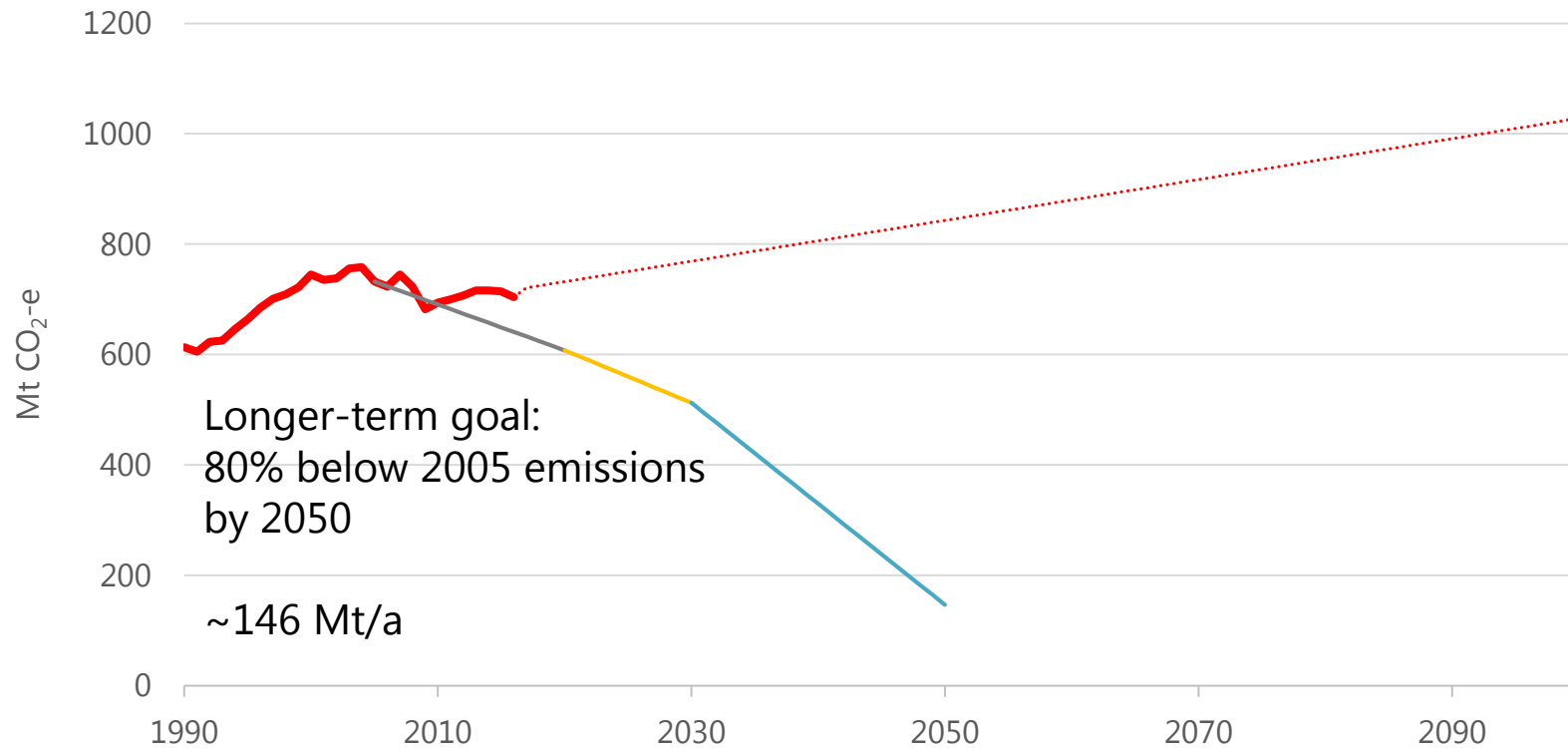
# Emissions trends



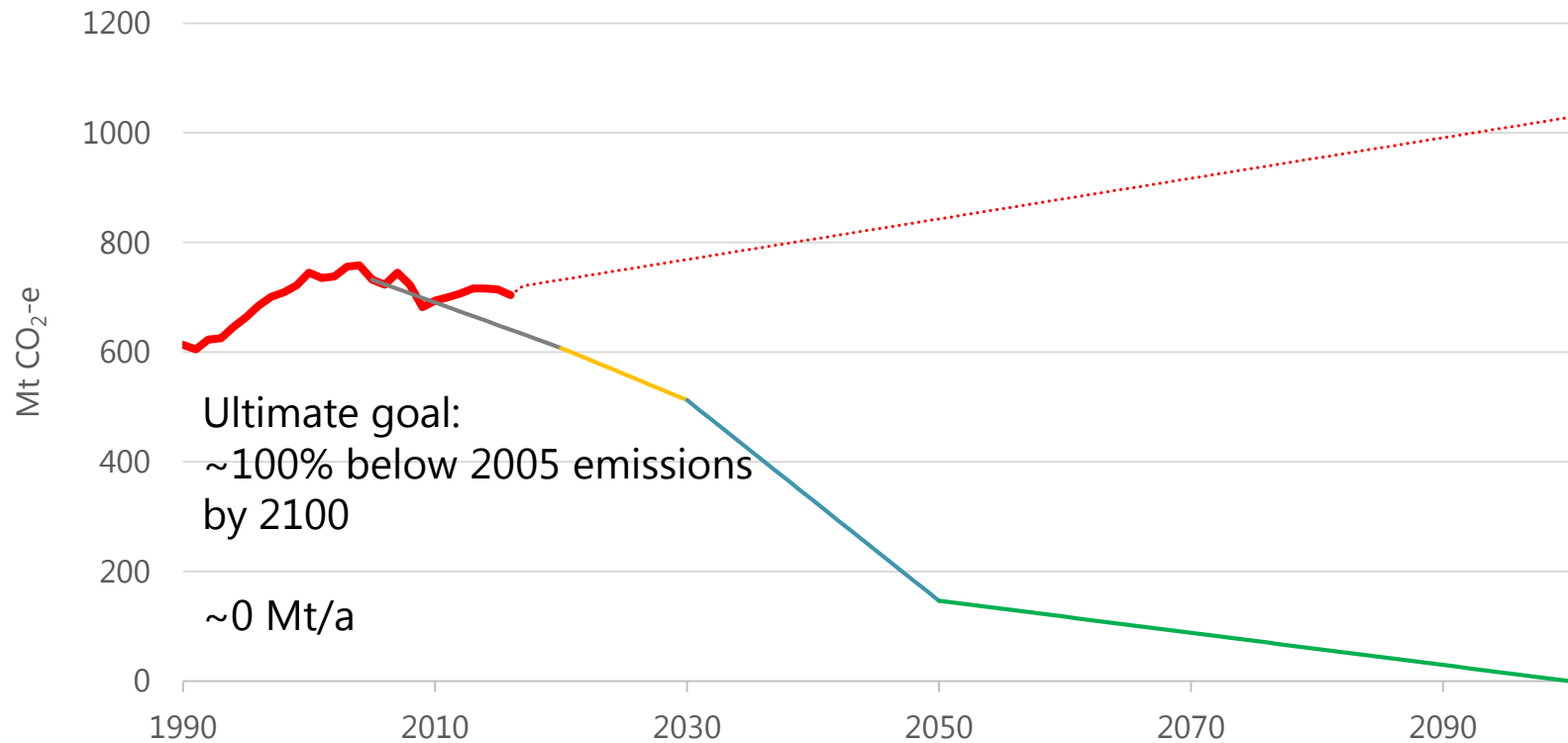
# Emissions trends



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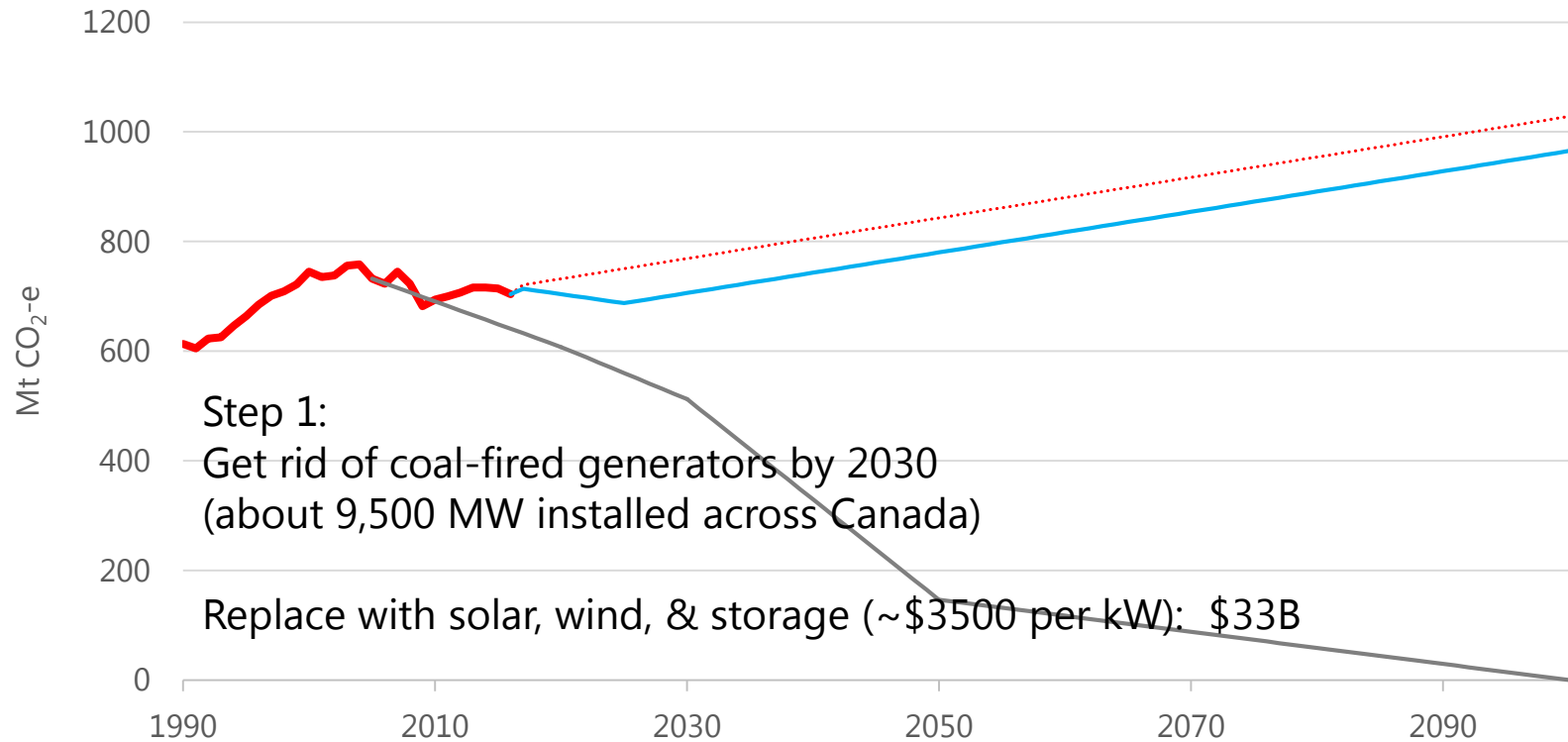


# Emissions trends

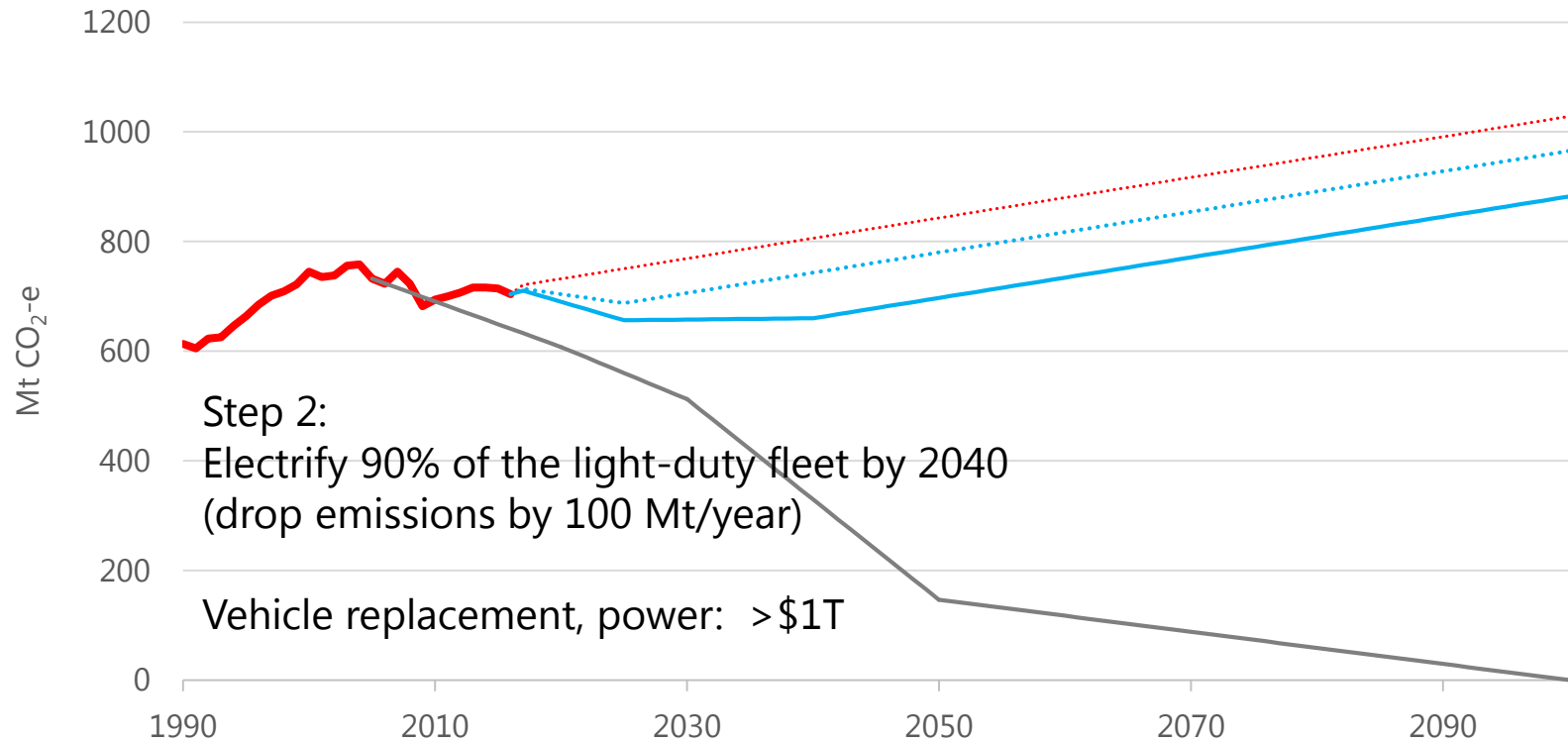




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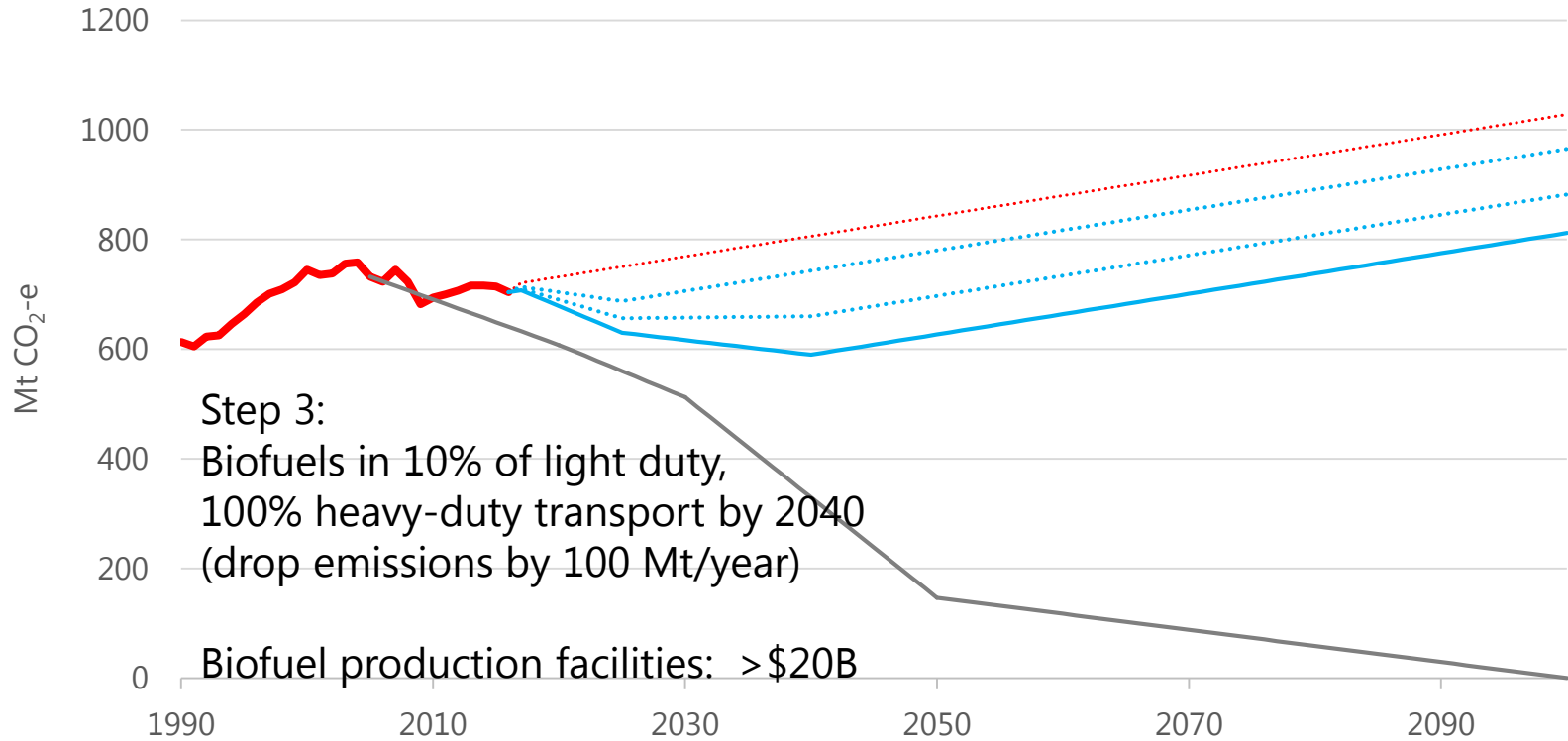
# Emissions trends



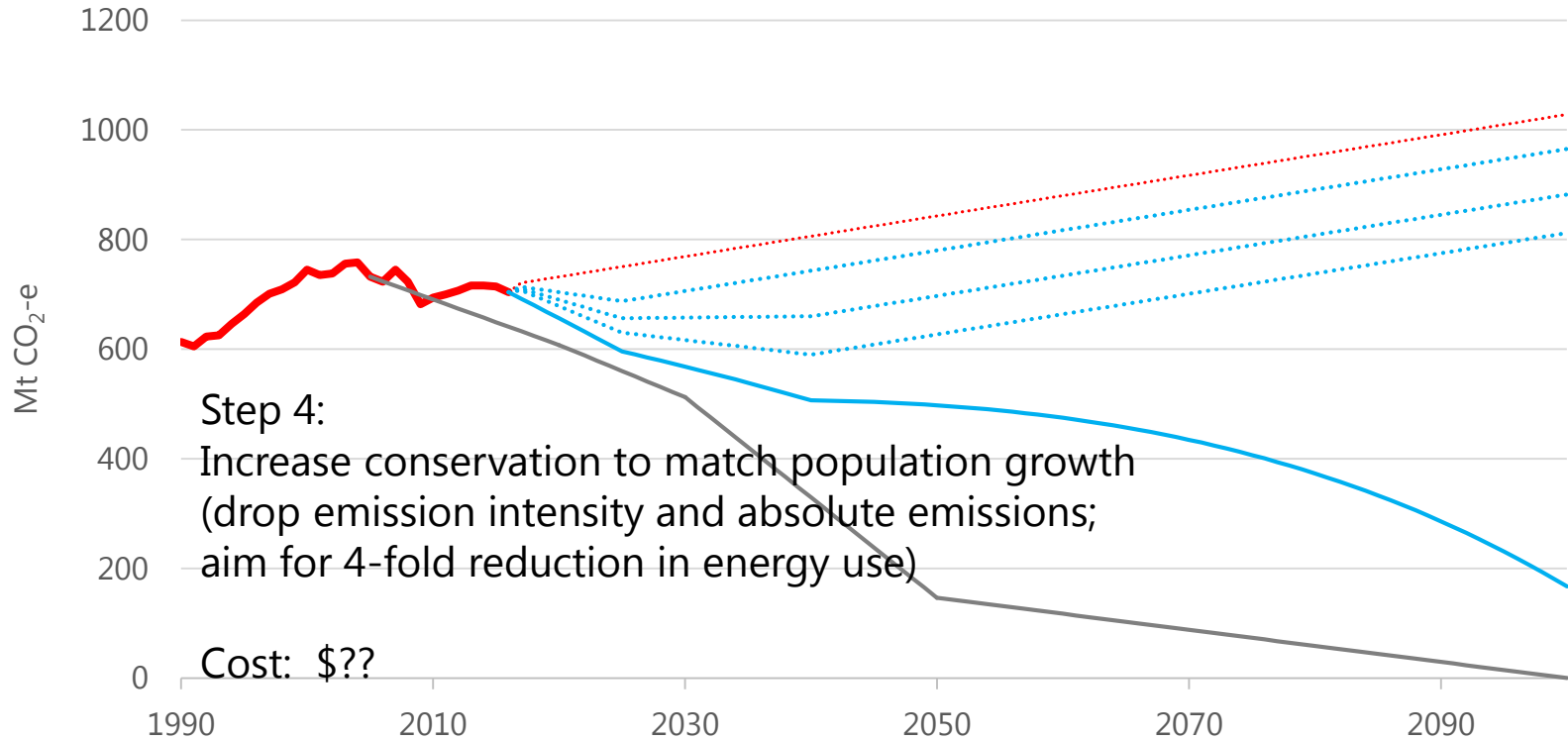
Step 2:  
Electrify 90% of the light-duty fleet by 2040  
(drop emissions by 100 Mt/year)

Vehicle replacement, power: >\$1T

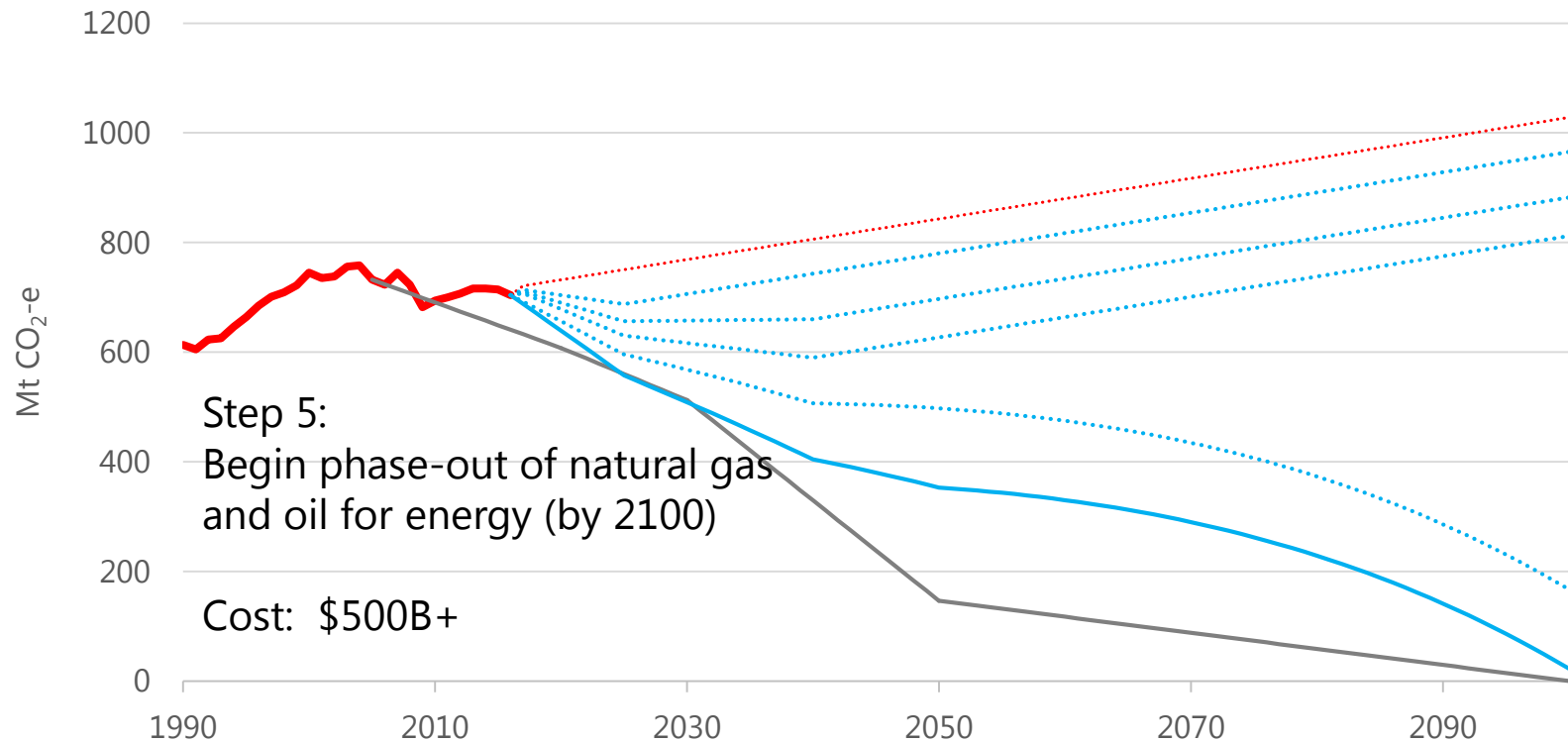
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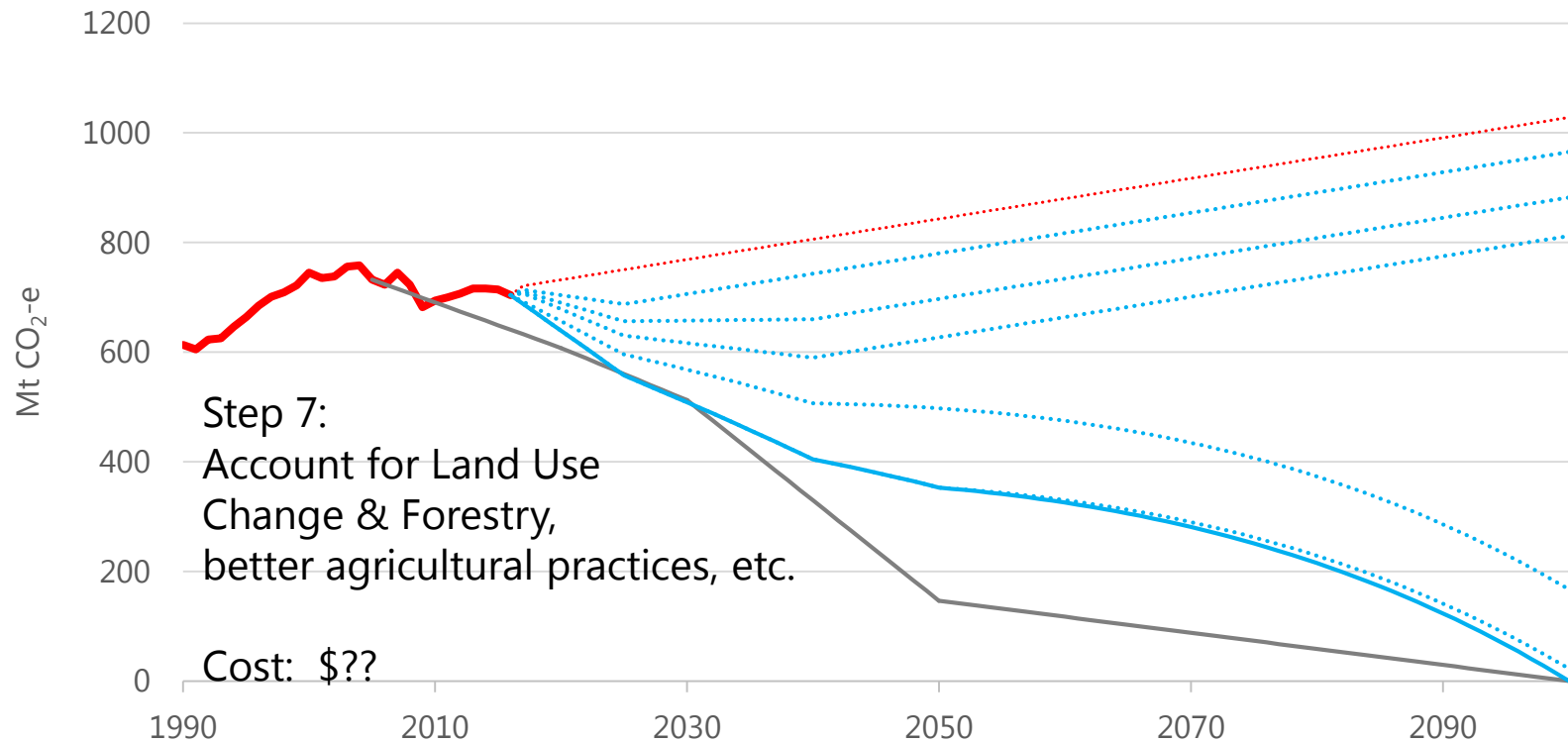
# Emissions trends



# Emissions trends



# Emissions trends



# Electric charging stations at Canada Post offices

# Political, social and technological conjecture of CUPW

Historic focal point in each community was, and still is, the Post Office

Since 2006, letter volumes have fallen in Canada

Parcel volumes have grown rapidly, especially since 2012

2017 (approx.) revenues: \$3B letters, \$2B letters and \$1B admail

Quandary: reimaging a public service in a digital society facing climate catastrophe

Big question for the labour movement: what does a just transition look like, especially for low-carbon industries being affected by massive technological changes.



# Delivering Community power

Postal banking: as financial tool for Canada Post to support its transition

As technically and operationally feasible: gradual transition of Canada Post's fleet to electric vehicles

Post Offices as community hubs, providing more services

Electric vehicle charging stations – for the public

# What CUPW did

CUPW: Had a need, following *Delivering Community Power*, to try and flush out some of the ideas into more practical “where and why” type answers than larger ideas

Wanted to see: might these ideas actually have some traction in reality. Not sure how to do so on our own.

Canada Post: is an obstacle to re-imagining the Post Office. We’ve therefore had to work around this – which was the value of the ACW.

- Helped us to frame the question, think about what we were asking and how to go about thinking it more.

# Why charging stations at Canada Post?

It is public, and it is staffed by respected public employees

Most already have parking with lighting

Corporate offices are either owned or long-term leased by the government

Proximity – to the rest of the community within walking distance

Scalability: would be easier for government to manage one national contract with Canada Post than hundreds of small ones

Often the only presence of “the government” in smaller communities

# Project steps

All of Canada and Quebec: too large to do in a first step

Selected 3 maritime provinces. Factors:

- Economic reliance on tourism from central Canada, most arriving by car,
- Paucity of chargers and electric vehicle ownership
- High ownership of EVs in Ontario and Quebec
- Policy: bit behind, perhaps some room to shape discussion
- Maritimes are more rural

# Proposed approaches

Implement rapid-charging stations (levels 2 & 3) in key locations:

1. Tourist-based approach – with charging stations on major routes
2. Urban focused approach – stations clustered around major cities
3. Fill the gaps – provide broad-based coverage across the province

# Electric vehicle charging stations

Level 1: Simply requires a standard wall outlet (120 V); takes 8-16 hours to full charge

Level 2: Most public charging stations are Level 2 (240 V); takes 6-8 hours to full charge

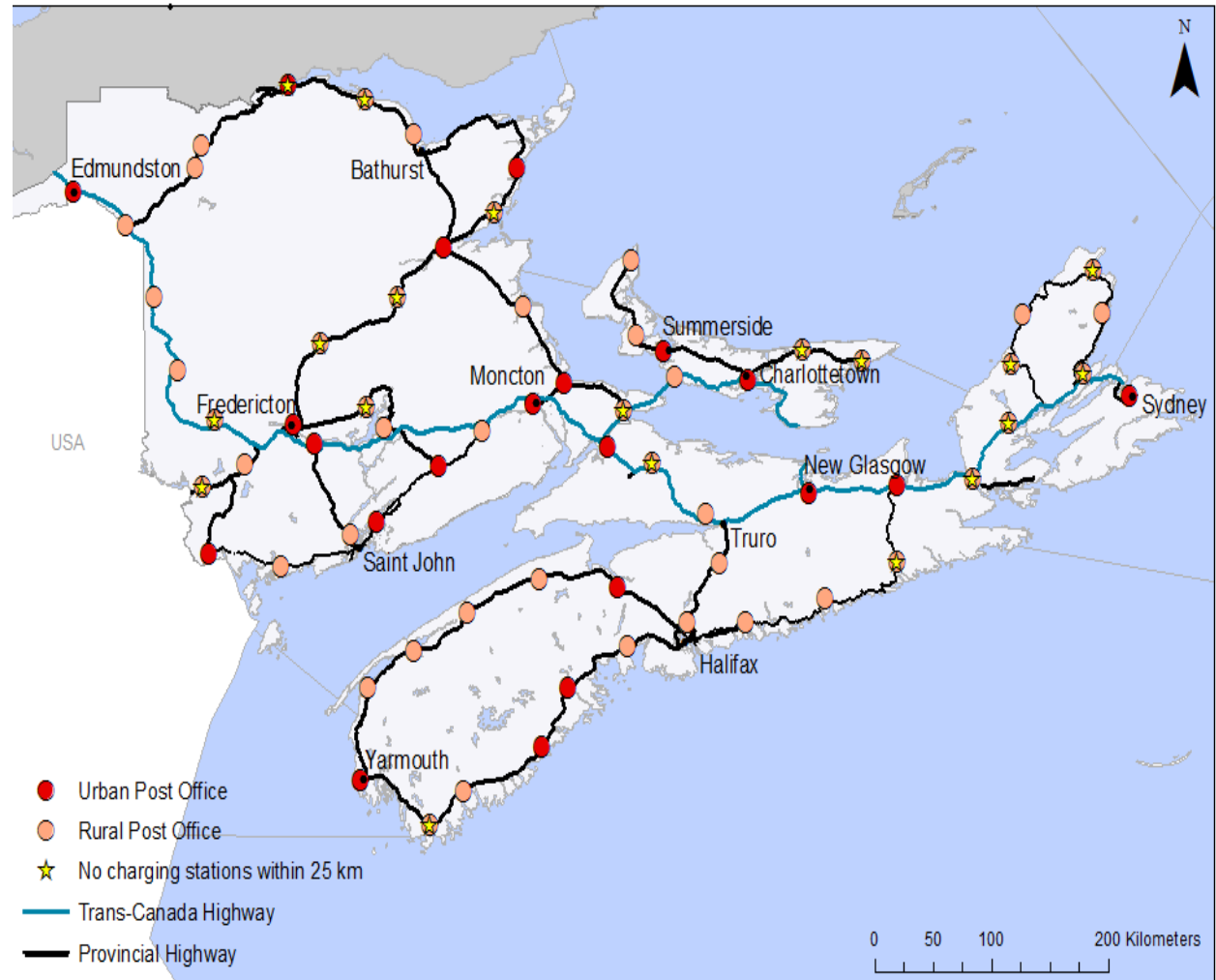
Cost: \$4-10K per station

Level 3: Rapid charging (480 V); takes 20-30 minutes to charge to 80% capacity

Cost: \$50-100K per station

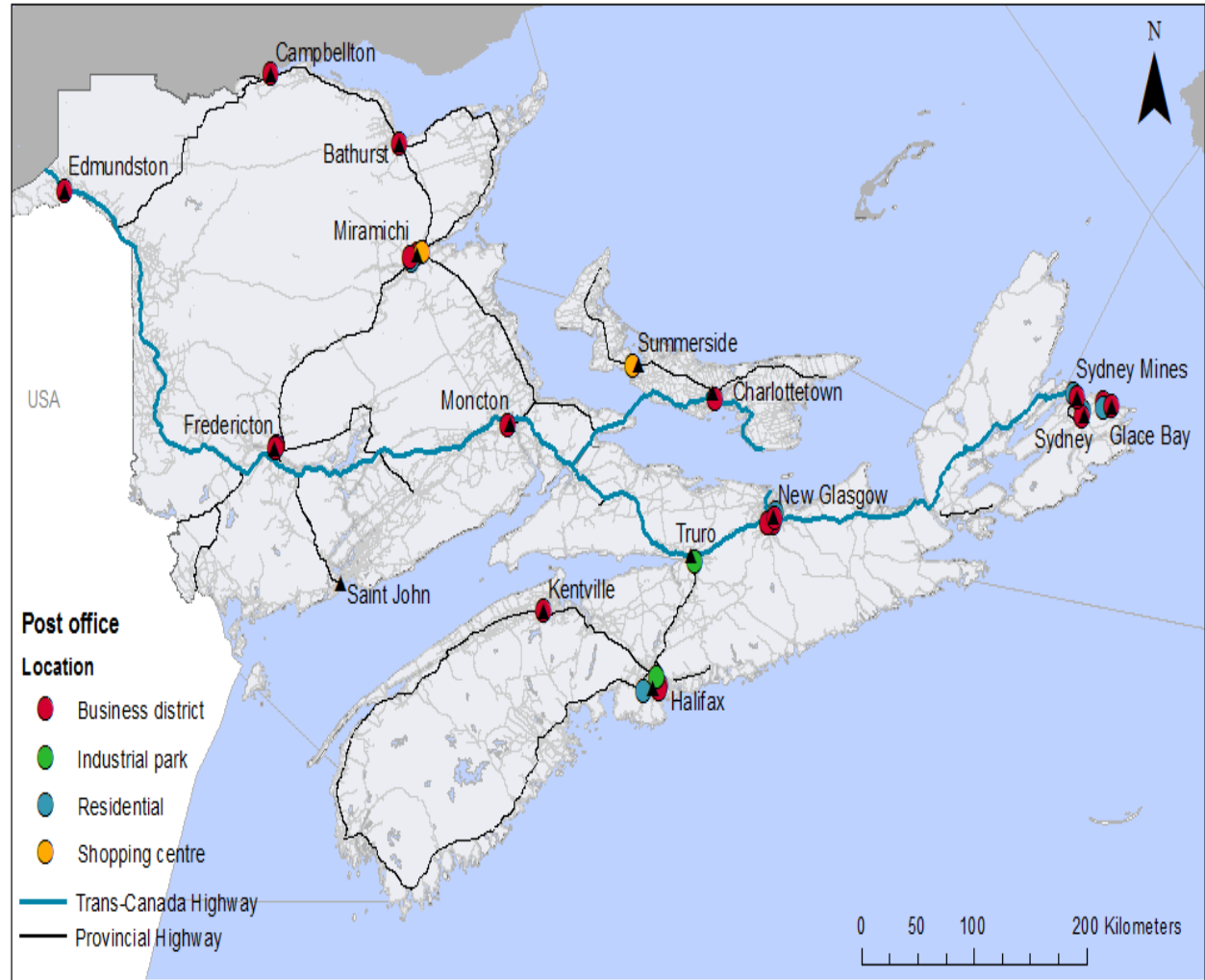
# Tourists approach

- 19 high priority locations
- 67 priority locations



# Urban deployment

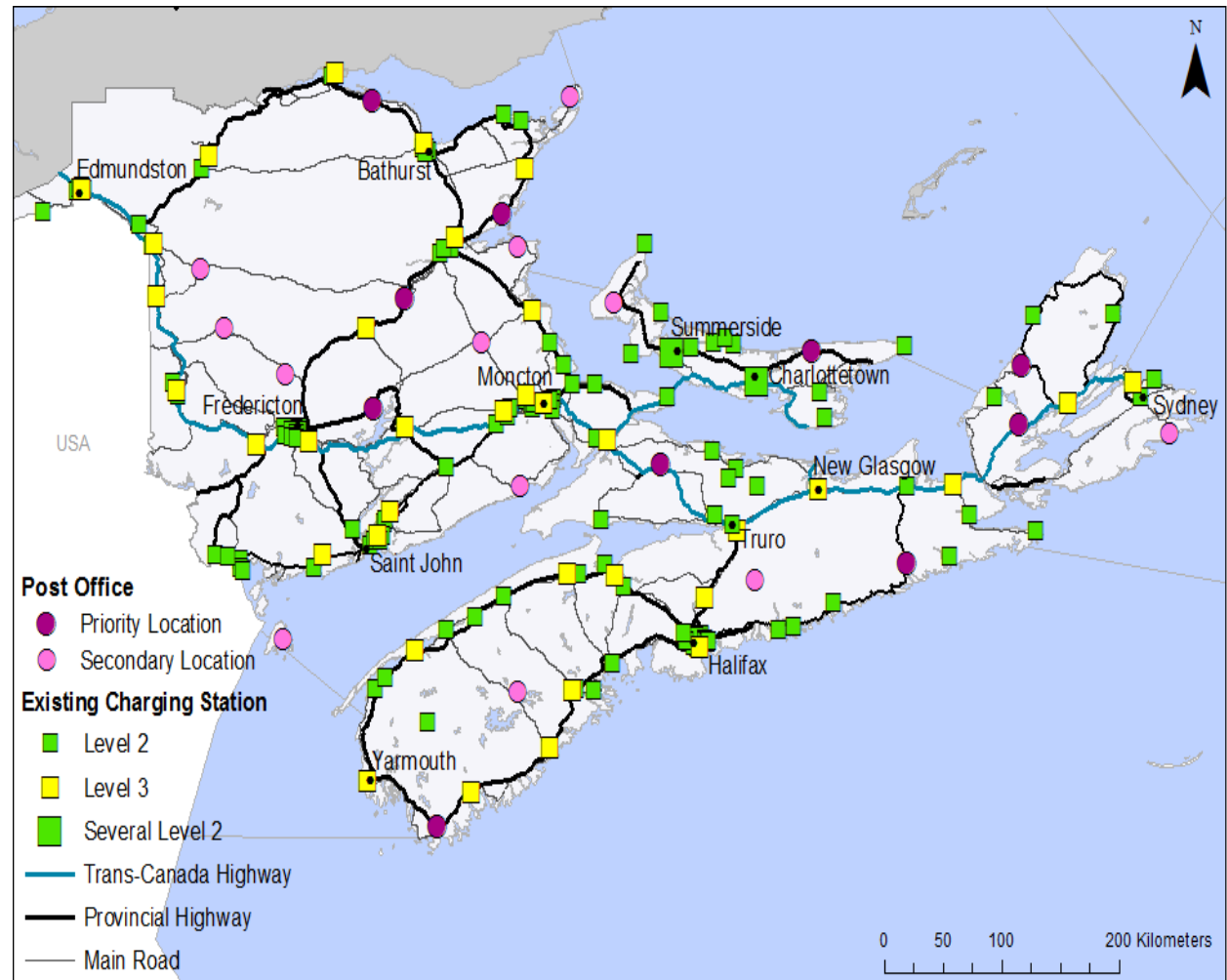
- 29 priority locations





# Filling the gaps

- 10 priority locations
- 12 secondary locations



# Member consultation

Key to the ACW process: speaking with those workers affected

3 events, in collaboration with CPAA:  
Charlottetown PE, Moncton NB, Truro NS

About 20-30 workers at each event

# What we heard

Members liked the idea of charging stations

Saw potential (beyond just charging stations) for new services

We broke up into smaller groups – worked through a series of questions

Members preferred level 3 charging stations

New services:

- Offered the potential of extended time with customers, tourist bureau, online/green shopping hub.
- Could focus on higher value items for tourists to send home.
- Leveraging charging stations as part of a community hub.

Clear: anything like this would require training, but also leveraging local knowledge and customization (Canada Post is a service with an emphasis on uniformity)

# Next project – congestion & deliveries

Lots of cities have implemented congestion pricing – Singapore first, followed by Rome, London, Stockholm, Milan...

Can be a pay-per-entry system (users can pay multiple times per day), daily fee (as in London), or restricted entry based on license plate (Beijing)

In some cases hybrids and electric vehicles may be exempt (Milan)

Creates a different role for corporations such as Canada Post; combine electric charging strategy with electric delivery vehicles

# Team and partners

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**FFABnet**

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**ACW** | Adapting Canadian Work and Workplaces

