Workshop Outcomes 2: Scope of the Proposed Initiative and the Modellers' Perspective

Present workshops outcomes concerning these questions:

1. What are the benefits, opportunities, challenges and prospects of the proposed EMI for modellers?

2. What components/requirements should be included in a shared platform for energy systems modelling in Canada?

3. How can a shared platform lead to synergies and encourage collaboration?

4. What should the relationship/fit between the shared platform and proposed initiative look like?

What are the benefits, opportunities, challenges and prospects of the proposed EMI for modellers?

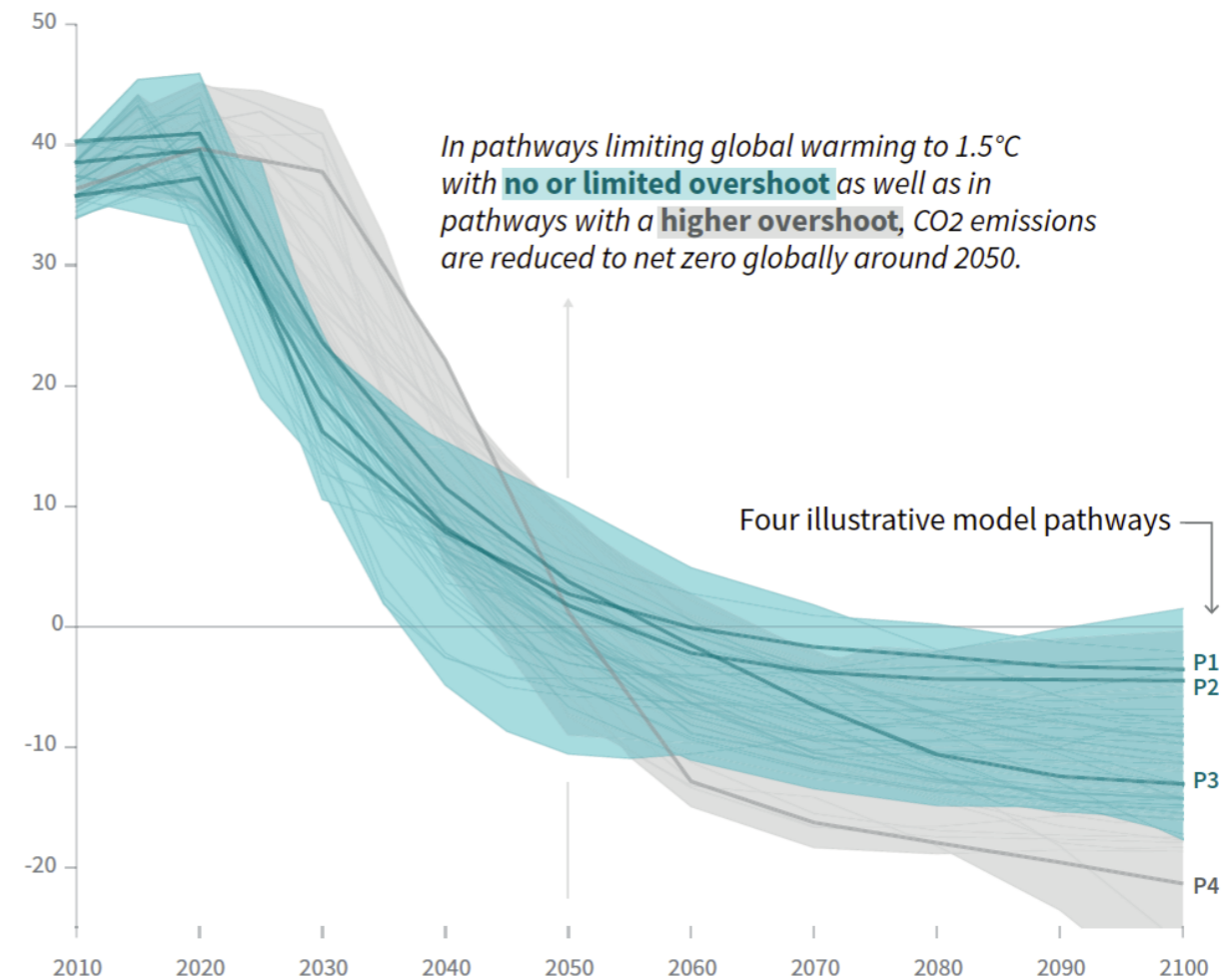"Modellers should build simple and user-friendly models to ease communication for policymakers."

- Participant, Atlantic Workshop

What are the benefits, opportunities, challenges and prospects of the proposed EMI for modellers?

- In pathways limiting global warming to 1.5°C with no or limited overshoot, global CO2 emissions are reduced to

  - about **1 to 2 tonnes per person by 2030**, and

  - **net zero around 2050.**

Global total net CO_2 emissions

Billion tonnes of CO_2/yr

In pathways limiting global warming to 1.5°C with **no or limited overshoot** *as well as in pathways with a* **higher overshoot**, *CO2 emissions are reduced to net zero globally around 2050.*
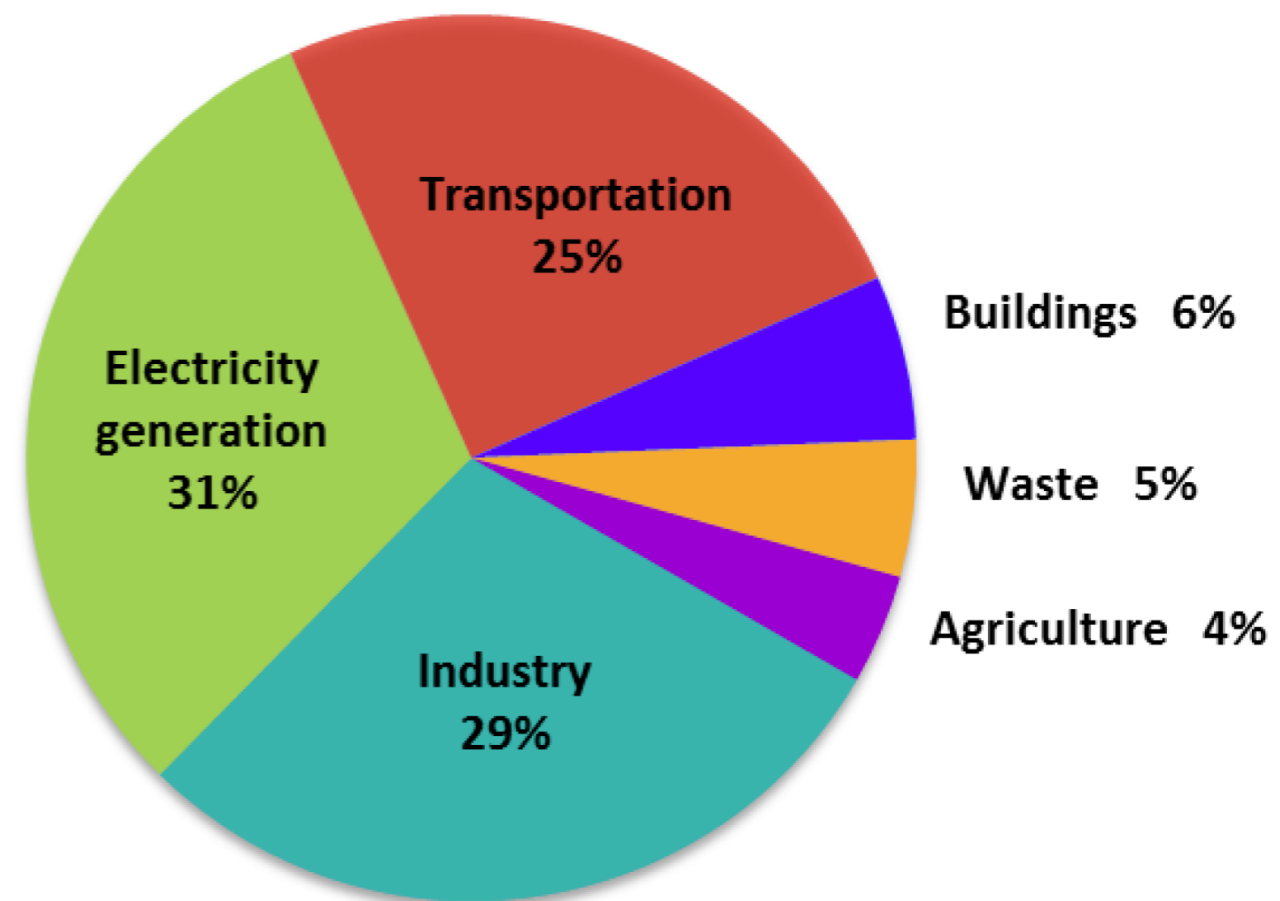
Four illustrative model pathways

P1
P2
P3
P4

IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. P.rtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. P.an, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

What are the benefits, opportunities, challenges and prospects of the proposed EMI for modellers?
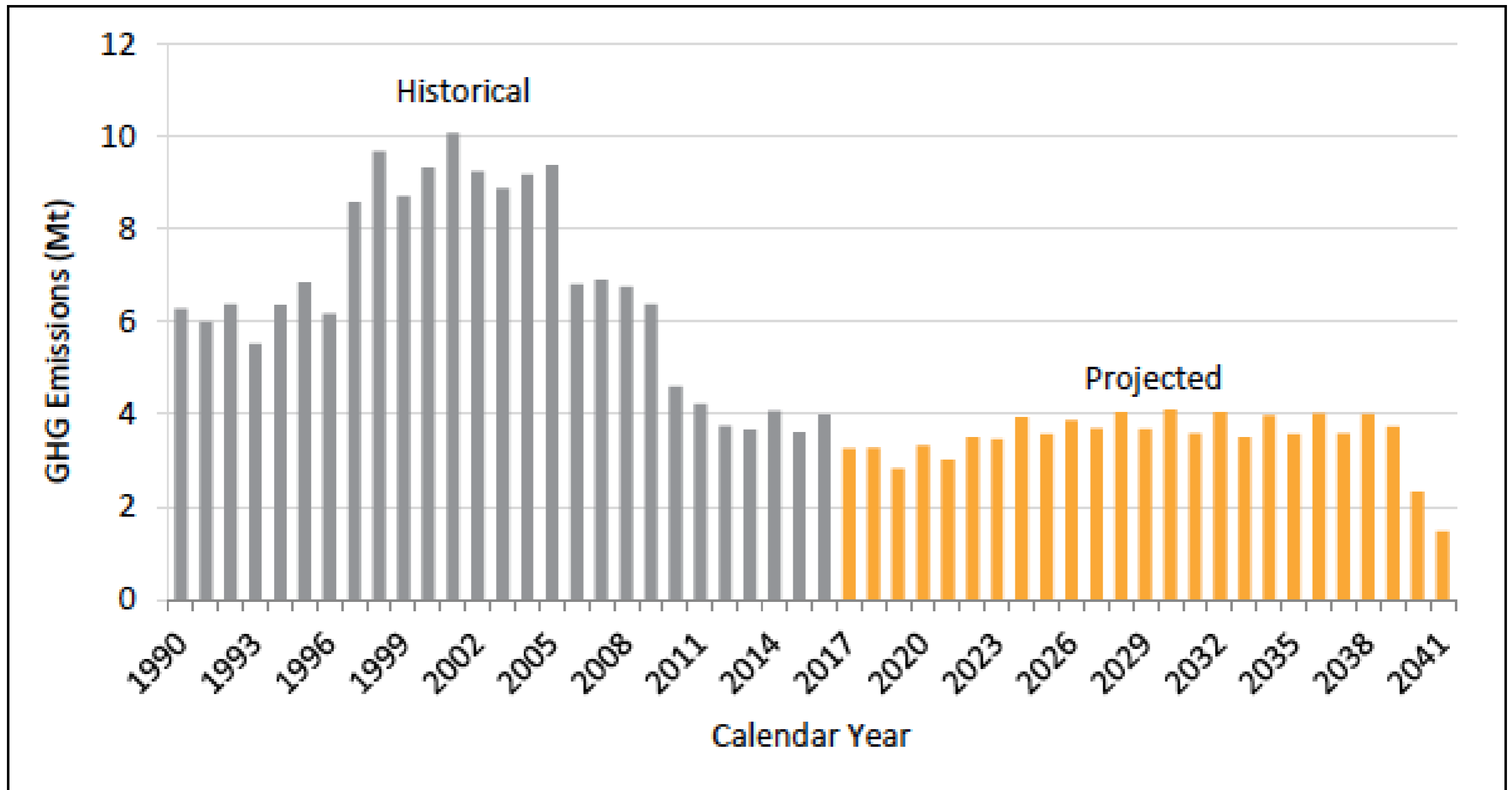
For the modelling exercise, presume New Brunswick has GHG emission reduction objectives of:

- 40% zero-emission personal automobile usage by 2040 and 80% by 2050;

- 80% net-zero energy buildings by 2050;

- 40% reduction in GHG emissions in waste, agricultural and industry sectors by 2030 and 80% reduction by 2050; and

- 80% reduction of GHG emissions in electricity generation by 2050.

2014 New Brunswick GHG Emissions

Transportation 25%
Buildings 6%
Waste 5%
Agriculture 4%
Industry 29%
Electricity generation 31%

Source: Final Report of the Select Committee on Climate Change

NB Power In-Province GHG Emissions from the Integrated Plan

What are the benefits, opportunities, challenges and prospects of the proposed EMI for modellers?
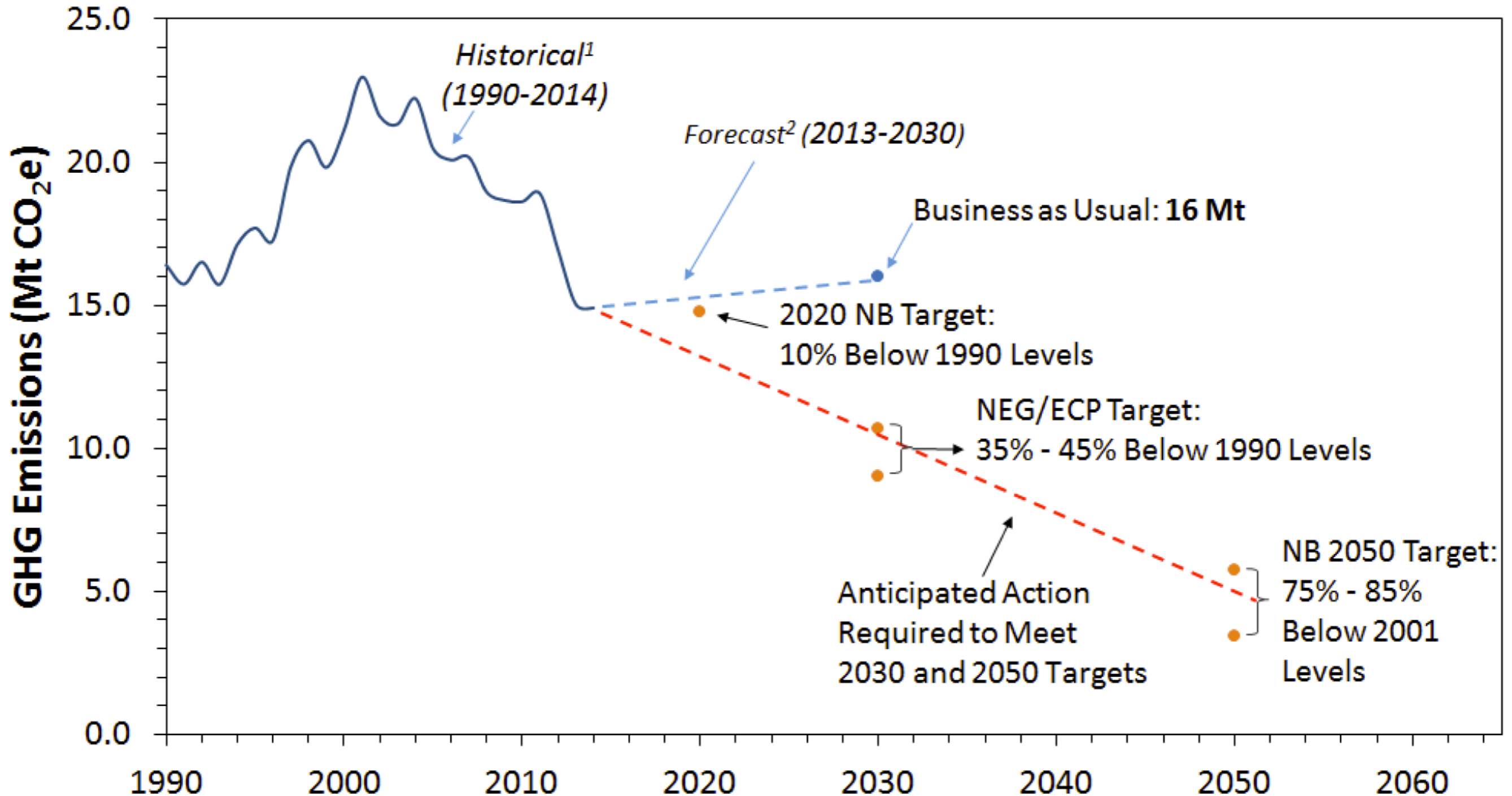
Source: NB Final Report of the Select Committee on Climate Change

What components/requirements should be included in a **shared platform** for energy systems modelling in Canada?

What is a **shared platform**?

1. Publicly available information from Statistics Canada

2. Shared platform from Statistics Canada

3. Privately available information under legally binding agreements

4. Other: sub-sections 3.2.1-3.2.4

What **components/requirements** should be included in a shared platform for energy systems modelling in Canada?

Forms of IP (Components)

- Data (3.2.2), data visualization (3.2.4), code, models (3.2.1), data, software, etc.

- IP, BIP & FIP, including improvements to models

- Policy questions, use cases (3.2.3)

- Know-how & services (3.2.1)

License Terms (Requirements)

- Non-exclusive right to use for a specific project or use for other purposes?

- Who owns knowledge products if co-creation occurs?

- Publication rights and obligations

What **components/requirements** should be included in a shared platform for energy systems modelling in Canada?

- Who are the parties to the agreement?

- What is the term of the agreement?

- How long is the term for confidentiality?

- How can new parties enter the agreement? How can parties depart the agreement.

What should the relationship/fit between the **shared platform** and proposed initiative look like?

- There are a **number of shared platforms**, not just one.

- What is wanted by the EMI modellers and policy makers?

How can a **shared platform** lead to synergies and encourage collaboration?

- Start with a shared platform of **policy questions**?

  - What investments should be prioritized for 2020-2025 to achieve IPCC decarbonization goals?

- Encourage modellers to collaborate on answering the question.