



CANADIAN INSTITUTE FOR
CLIMATE CHOICES

Defining pathways to net-zero by 2050

SPI Symposium

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Feb 28, 2020

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Outline

Who are we?

Project: Defining net-zero pathways to 2050 for Canada

Research gaps and questions

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Who are we?

About the Institute

Collaborative Research. Integrated Climate Policy. Better Choices.

- What are the **challenges and opportunities** along the path to 2050?
- How can we **measure success** along the way—across multiple dimensions?
- What **choices** do we have, and what are their **implications**?

Who We Are

- Independent **Board of Directors**
- 30+ **Expert Panelists** well known in their fields
- **Advisory Group** provides strategic insight
- Professional secretariat focused on **research, engagement, and communications**
- **A network of partners**

Leveraging partnerships



INTACT CENTRE
ON CLIMATE ADAPTATION



National Consortium for
Indigenous Economic Development



ACT Adaptation to
Climate Change Team



LABRADOR INSTITUTE



McConnell

IVEY FOUNDATION



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Project: defining pathways to net-zero by 2050 in Canada

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Objectives

- Provide a touchstone for conversations; “broaden the mitigation tent”
 - Frame pathways beyond decarbonization alone
 - Transitions narratives reflecting different perspectives
 - Use scenario analysis to inform pathways and understand trade-offs
- Highlight key policy challenges and opportunities
 - Identify key decision-points on the road to 2050, across scenarios
 - Identify short-term policies that align (or don't) with the long-term goal

Value-added of this work

- Define “net-zero” (or at least frame a discussion)
- Scenarios define broad, integrated narratives of transition (beyond GHGs and economic costs)
- Unpack key global and domestic drivers of possible pathways, lay out key choices for Canada
- Communications and engagement aims to target broader audience to help shape awareness and influencers’ perceptions

Fundamental approach

- Define key outcomes, or future “states of the world” to test (e.g., natural resource extraction continues, even as Canada achieves net zero)
- Determine a set of internally consistent assumptions and outcomes that describe each scenario
- Develop an overarching qualitative narrative around each scenario

* Use gTech model possibly other modeling tools to inform, shed light, not tell truth

Scenarios

	Canada “transforms”	Canada “transitions”
Rest of world follows	#1	#2
Rest of world lags	#3	#4

- Canada meets net-zero in 2050 in all scenarios
- Substantial changes in Canada’s economy take place in all scenarios: one key difference is the reliance on carbon dioxide removal (land-use management, bioenergy carbon capture and storage, direct air capture)



Research gaps & questions

Research gaps and questions

- What is the role of carbon dioxide removal/negative emissions in meeting net-zero in Canada? (land use, BECCS, DAC)
 - Technical capacity, cost profiles, social acceptability, governance and accounting structures needed to deploy at scale
- Where are the degrees of freedom in defining different pathways to net-zero by 2050? (ie. Are there that many different ways to reach that goal?)
- What communication techniques can best frame different pathways to “broaden the tent” and reduce polarization?
- How can policy and governance frameworks be designed to support continued progress towards net-zero in Canada?
 - Alignment of short-term policy to long-term goals
 - Alignment of financial flows consistent with net-zero
 - Need for R&D, on what, at what stages of innovation, in what form?
 - Addressing governance issues specific to Canada’s federation

Canadian Institute for Climate Choices

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