

# Aligning Canada's Electricity Systems with Net Zero

## Overview

The Canadian Institute for Climate Choices is undertaking a project focused on policy for preparing Canadian electricity systems to play a key role in the country's transition to net zero. Non-emitting electricity and electrification are “safe bets” and are critical to all the potential pathways to net zero, as identified in the CICC report [Canada's Net Zero Future](#) and similar analyses. However, Canadian electricity policy, markets and systems will need to evolve significantly to meet this ongoing challenge.

The goal of this project is to **develop specific policy recommendations that can help drive systemic transformations in Canada's electricity sector necessary to support net zero**. These policy interventions will focus on both making Canadian electricity production non-emitting and meeting demand for electricity on the path to net zero as more and more energy end uses become electrified (e.g., building heating, personal transport).

## Project Objectives

- Provide a clear picture of how Canada's electricity systems will likely have to evolve for Canada to be on track with its new 2030 GHG target and its net zero by 2050 target.
- Identify key barriers (whether market, policy/institutional, social or technical) likely to impede or obstruct the necessary changes.
- Recommend a core set of interventions that can help overcome these barriers and facilitate broader system transformation.
- Analyze barriers and interventions in terms of their distributional costs and impacts, to identify ways of creating fair outcomes for ratepayers.

## Primary Audiences

- Provincial, territorial and federal policy makers
- Regulatory bodies (e.g., utility commissions)

## Secondary Audiences

- Electric utilities (across generation, transmission, distribution)
- Municipal policy makers
- Indigenous governments
- National Indigenous Organizations (NIOs), and other representative organizations
- Relevant industry associations
- Civil society (climate-focused environmental NGOs, regional organizations focused on clean energy, organizations focused on environmental justice, etc.)
- Unions and other labour organizations
- Researchers and academics in the fields of climate, energy and electricity-systems analysis and modelling

## Approach

- Use literature review, expert input, and (potentially) modelling to explore the general type and magnitude of evolution in Canada’s electricity systems that is likely necessary for Canada to meet its 2030 and 2050 climate targets.
- Commission a series of white papers to explore various technical, institutional, regulatory, market, social, and political dimensions of the challenge.
- Inventory the various barriers that exist to the transformation of Canada’s electricity systems and narrow the list to the most critical ones.
- Solicit input from a range of stakeholders on this triaged list of barriers and potential corresponding policy interventions that could help overcome them.
- Identify a core set of recommended policy interventions for overcoming barriers and driving transformation of Canada’s electricity systems.
- Detail the actions required to implement these interventions and the actors responsible (i.e., be they elected officials; provincial, territorial, federal, municipal, or Indigenous governments; regulators; utilities; or a combination of these)
- *Note: The interventions considered may include measures that help better manage demand (e.g., developing system infrastructure that can time and sequence EV charging to avoid a costly build-out of distribution infrastructure). However, policy measures for directly driving increased electrification (such as increased deployment and uptake of heat pumps and electric vehicles) will be entirely out of scope for this project.*

## Timeline

