

## Introduction

**What is the energy system?** The energy system is complex - it involves the development, transportation, and use of all energy. In Alberta, our energy system has relied primarily on fossil fuels for decades. The majority of electricity generation in Alberta is from the combustion of coal and natural gas. Meanwhile, the primary use of crude oil from our oil sands is gasoline and diesel, used to fuel the transportation sector.

Sources:

<https://www.cer-rec.gc.ca/nrg/ntgrtd/mrkt/nrgsstmprfls/ab-eng.html>

<https://www.canadasoilsands.ca/en/what-are-the-oil-sands/uses-fuels-and-consumer-products>

**What is the energy transition?** Fossil fuels are a finite resource, and there is a greater need and urgency to shift away towards low-emission methods of generating electricity and fuels. The energy transition is the shift towards lower carbon emissions, while maintaining economic and social success.

**What is the Energy Transition Game?** The Energy Transition Game is a simulation activity in which students play the role of a key player in the energy system in Alberta: an energy developer, influential stakeholder, or member of government. The purpose of the game is to promote energy literacy in the context of environmental education. This involves understanding the different forms of energy, how they are used, and their environmental and social impacts.

*We would like to acknowledge that an earlier version of this game was developed by Suncor Energy. ACEE has been given permission to adapt the game for a Grade 9 audience.*

## Objective

**The objective of the game is to encourage students to think about energy from multiple perspectives and consider the future of the energy system in Alberta.**

The game is designed to help students start to answer these additional questions:

- Why is it important for energy developers to work with stakeholders such as Indigenous Councils, community members, and environmental review boards?
- How can a low carbon energy system be achieved while meeting the energy needs of consumers?
- How can we change our behavior around energy use?
- In order to meet emission reduction targets as set out in the Intergovernmental Panel on Climate Change (IPCC), should all sectors such as oil & gas, transportation, electricity, and agriculture have to reduce emissions equally? Or do some sectors have a

lesser or greater responsibility than others?

- What do you think can be done to speed the energy transition to more clean energy technologies to lessen the impacts of climate change?
- What dictates how fast or slow an energy transition will take place?
- As of October 2019, two municipalities in Alberta have declared a climate emergency and so has the Government of Canada. What would that mean for the role you played in the game?