
Alberta Emissions Reduction and Energy Development Plan

Kate Rich
Environment and Protected Areas
October 4, 2023



Emissions Reduction and Energy Development Plan

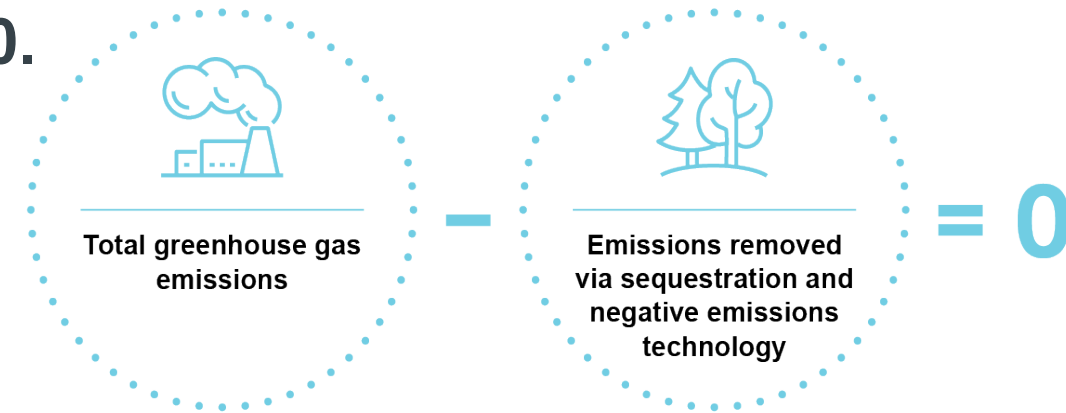


Find online at: <https://www.alberta.ca/emissions-reduction-and-energy-development-plan>

Aspirational goal

Our aspiration is to achieve a net zero by 2050.

- Reduce domestic and global emissions
- Maintain energy affordability, reliability and security for Albertans, Canadians, and the world.



To build achievable pathways to reduce emissions across all sectors requires:

- working in partnership with industry, businesses, Indigenous organizations, municipalities, ENGOs, labour groups and others
- supporting the advance of new technologies and innovation
- supporting policy frameworks and sustainable finance

Strategic Directions and Principles

An Alberta plan based on practical, achievable pathways

Delivering Alberta energy to the world while reducing emissions

Affordability and reliability

Energy security

Partnerships with Indigenous communities and organizations

Industrial policy and systems approach

Sustainable finance

Conservation protection and enhancing our nature-based solutions

Emissions reduction policy leadership

Cross-cutting approaches to emissions reductions in all sectors of our economy, which are fundamental to Alberta achieving emissions reductions in the past and in the future:

- Indigenous leadership
- Industrial carbon pricing and emissions trading system – TIER
- Incenting reductions across all sectors through Alberta's emission offsets
- Clean technology and innovation
- Carbon capture, use and storage

Indigenous leadership

- Engage and explore partnerships with Indigenous organizations and communities regarding implementation of this plan, including establishing an Indigenous Knowledge Keepers Committee to provide strategic advice as we move forward.
- Alberta remains committed to supporting the exercise of Treaty rights by First Nations.
- Evaluate increased supports for Indigenous participation and investment in clean technology and energy projects.

Industrial carbon pricing and emissions trading - TIER

TIER Regulatory System Amendments for 2023 forward:

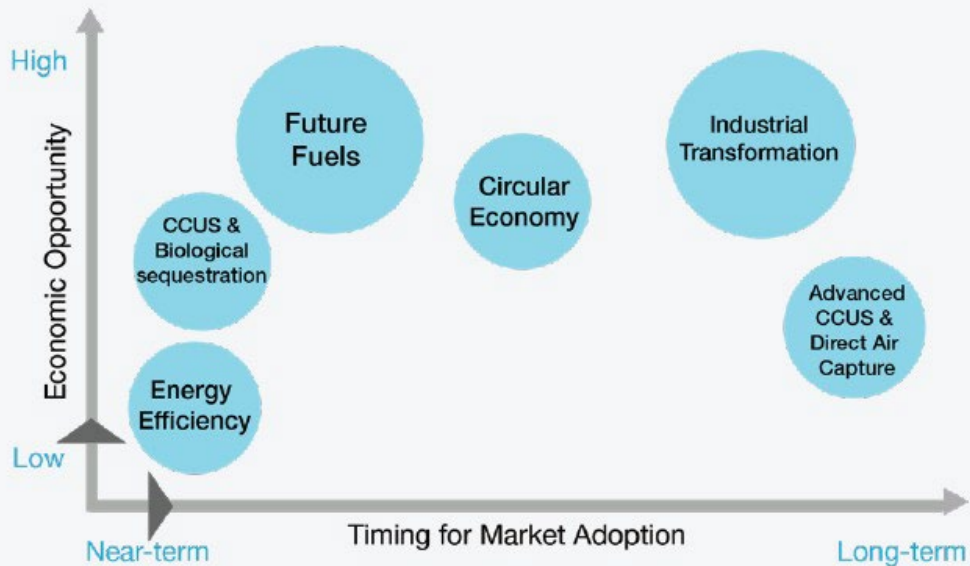
- Increasing carbon price schedule (\$65/tonne in 2023 rising to \$170 in 2030)
 - Tightening of facility specific and high performance benchmarks, 2% and Oil Sands 4% in 2029 and 2030.
 - Ongoing compliance flexibility, including EPCs, offsets, and payments at carbon price
 - Annual credit use limit, 60% in 2023, rising gradually to 90% in 2026
 - Credit expiry period, reduced to 5 years for 2023 forward
 - Enable new CCUS credit types, including allowing stacking with federal CFR
 - Continued investment of TIER Funds in clean technology
- Through Budget 2023, invest \$800 million in TIER funding across multiple sectors over the next three years (2023-24 to 2025-26) in programs that will support jobs, reduce emissions and help Albertans adapt to climate change.
 - Review the TIER Regulation by the end of 2026 to ensure the policy is delivering the intended outcomes of emission reductions while protecting competitiveness.

Incenting reductions across all sectors through emission offsets

- Continue to share Alberta's expertise in emissions trading and carbon offsets with other provinces and jurisdictions to support national and global emission reductions.
- Investigate a framework for a voluntary credit market in Alberta for activities or sectors, including objectives that support Paris Agreement Article 6 and a Carbon Offsetting and Reduction Scheme for International Aviation objectives.
- Explore partnerships in emissions trading and market linkages with other provinces and jurisdictions, such as British Columbia, to support CCUS and clean LNG.

Clean technology and innovation

Clean technology opportunities



Adapted from Emissions Reduction Alberta (2022), Technology Roadmap – fourth edition

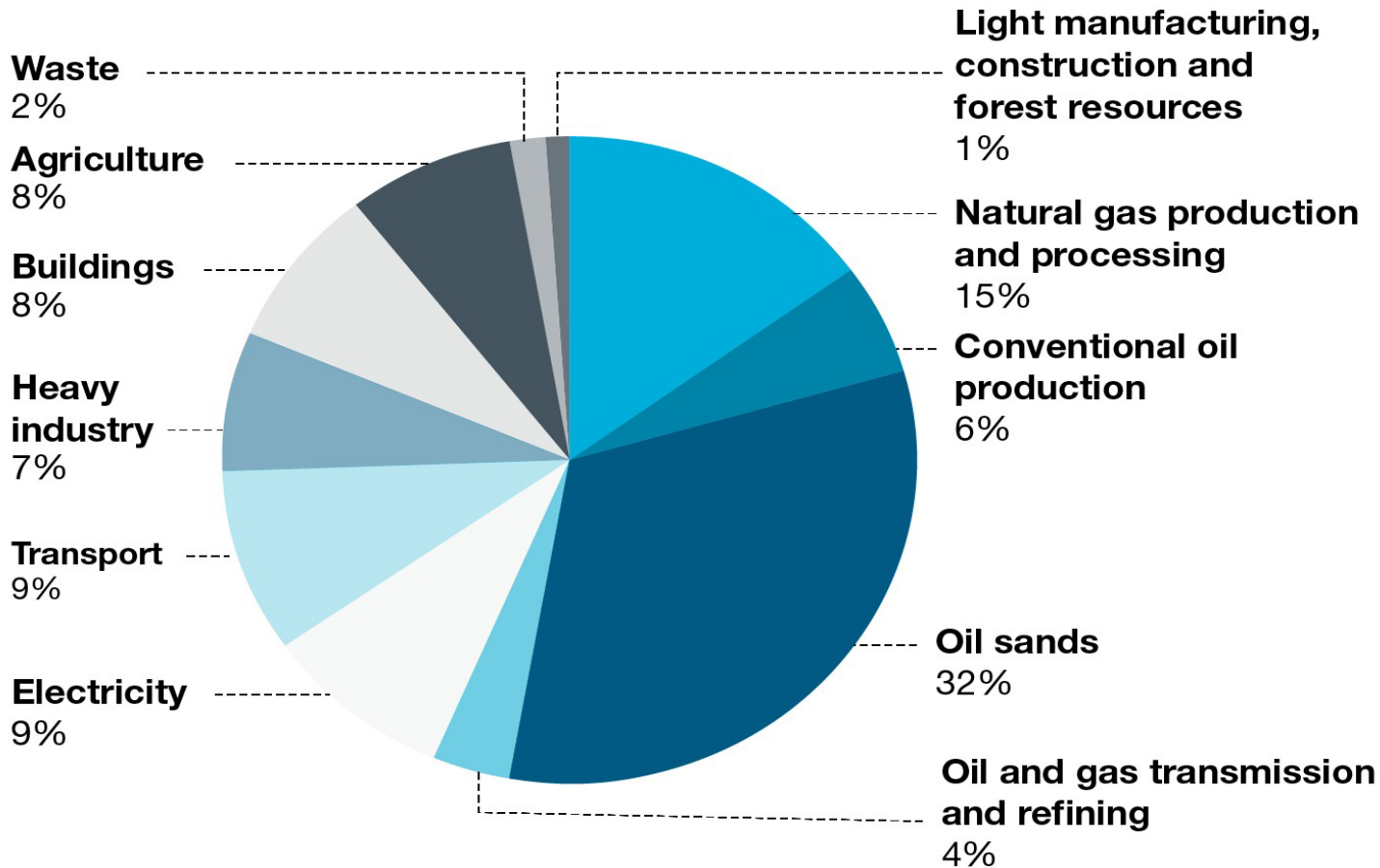
- Complete comprehensive assessments of technology pathways and barriers with industry and experts for each sector.
- Invest \$225 million over the next four years in Emission Reduction Alberta to continue to support the development of clean technology adoption.
- Working with partners such as Emissions Reduction Alberta, Alberta Innovates and the Alberta Enterprise Corporation, support commercialization of innovative technologies

Carbon capture, utilization and storage

- Continue to share Alberta's expertise and experience in Alberta, Canada and internationally to reduce global greenhouse gas emissions, including investing \$3 million to establish a new hub to share CCUS knowledge, led by the International CCS Knowledge Centre. This centre will help to assess and identify best practices and frameworks to get CCUS projects to final investment.
- Work with the federal government on a coordinated approach for CCUS incentives. Through Budget 2023, allocate the \$387 million reserved over five years for investments in future CCUS projects.

Emissions reductions across the economy

Total Emissions in 2021 – 256 Mt



- Oil and Gas – Conventional Oil Sands, Bitumen Beyond Combustion
- Electricity
- Geothermal
- Hydrogen
- Critical Minerals
- Circular Economy and Waste
- Bioenergy, Transportation and Buildings
- Agriculture
- Forestry
- Heavy Industry
- Land and Nature-based Solutions

Emissions reductions across the economy – examples of new actions and opportunities

Oil and Gas:

- Engage stakeholders, Albertans, and Indigenous organizations to assess potential pathways to achieve a provincial 75 to 80% methane emission reduction target from the conventional oil and gas sector by 2030 (from 2014 levels).
- Explore reducing the provincial legislated oil sands emission limit and implementing regulations that align with the Pathways Alliance targets to reduce net emissions in the sector for 2030, 2040 and to achieve neutral carbon emissions by 2050.
- Explore means to support bitumen beyond combustion research and development, including technology development and policies regarding demand for bitumen beyond combustion products, such as carbon fibre and strong, resilient asphalt.

Oil sands emissions reduction technology path

Process and Energy Efficiency Improvements

Cogeneration/Steam Generation Efficiency and Carbon Capture, Utilization and Storage

Solvent Technology, Electrification, Biofuels

Small Modular Nuclear Reactor and Direct Air Capture

Bitumen Beyond Combustion

2007 – Today

2030 – 2050

Emissions reductions across the economy – examples of new actions and opportunities

Bioenergy, Transportation and Buildings:

- Engaging with stakeholders, the Alberta government will explore the establishment of a low-carbon gaseous minimum blend rate for utility natural gas, and also the development of policy to achieve this blend rate without risks to affordability, reliability and safety.
- Engage stakeholders to review the Renewable Fuels Standard Regulation, looking at increases to minimum requirements for blending for ethanol and bio-based diesel and for fuel emission intensity reductions, as well as changes to policy architecture and expanding the regulation

Emissions reductions across the economy – examples of new actions and opportunities

Land and Nature-based Solutions:

- Alberta will develop a nature-based solutions policy framework that will include various tools to support conserving biodiversity, adaptive capacity and other ecosystem and cultural benefits as well as climate mitigation and resilience.

Other initiatives supporting environmental outcomes

- Consider creating an advisory group on sustainable finance to support innovation in Alberta.
- Collaborate with employers, industry associations and our post-secondary community to ensure that the skills being developed will meet the needs of the economy.
- Continue to work collaboratively with partners to design effective policy and programs to support implementation of the plan.
- Establish a youth advisory group to provide perspectives on addressing environmental issues
- Establish policies and programs that are evidence-based, including understanding of the environmental, social and economic impacts of policy choices.
- Publish reports documenting the progress and outcomes of the actions taken as part of the plan.

Questions