

# Energy & Cleantech

Alberta is a global powerhouse in energy and is creating pathways for companies to tap into renewable energy, clean tech and petrochemicals.

A world leader in carbon capture, utilization and storage, Alberta has been using CCUS on a commercial scale since 2015. Continuing to develop CCUS will help Alberta diversify the energy sector, support the shift towards a net-zero energy grid, capitalize on emerging opportunities, such as clean hydrogen production,

and reduce emissions across the energy sector and other hard to abate industries such as power generation, petrochemicals, concrete, steel and fertilizer production.

Alberta is the largest producer and consumer of hydrogen in Canada and in 2021, the province launched its Hydrogen Roadmap as well as Canada's first hydrogen hub – the Edmonton Region Hydrogen Hub. Alberta has been producing hydrogen for over 50 years and Alberta's industries and workforce know how to produce, handle, and use hydrogen safely at an industrial scale.

## The Numbers



**134k+**  
Workforce in the Alberta energy industry



**\$134B**  
Energy sector contribution to Alberta's nominal GDP (2022)



**133**  
Number of countries Alberta exports to



**945**  
Cleantech companies



**4<sup>th</sup>**  
Highest capital investment per capita among all provinces and US states

## Areas of Focus

### Renewables

Alberta's competitive and deregulated energy market, make it ideal for corporate power purchase agreements (PPAs). As a result, the PPA market in Alberta is thriving with 2.57 gigawatts of known cumulative capacity procured as of mid-2023.

Several international companies are already beginning to invest hundreds of millions into decarbonizing the province's energy production.

### Net-Zero

Many of Alberta's energy companies are committed to entirely offsetting emissions by the year 2050.

Battery energy storage, carbon capture use and storage, and other advanced energy technology will be increasingly in demand.

## The Opportunity



**23%**  
Alberta's combined federal-provincial business tax rate is lower than that of 44 US states.



**\$100B**  
Estimated value of Alberta's hydrogen industry.

## Company Spotlight



Heidelberg Materials to develop the cement industry's first global full scale CCUS facility in Edmonton.



\$1.3 billion investment to build the world's largest net-zero hydrogen network, including the only liquid hydrogen production facility in Western Canada.



Amazon is investing in its first Canadian wind farm in Vulcan County. Partnering with Copenhagen Infrastructure Partners, this 495MW capacity wind farm is expected to be operational by December 2024.



Greengate Power Corporation's Travers Solar Project, the largest solar farm in Canada, is operational in Alberta. Amazon is one of the companies that is purchasing power from the project.

## Energy & Cleantech

The electrification of heavy industries will require ample investment into battery storage technology and cleantech. Alberta's sector expertise and abundant supply of clean energy and critical minerals create an opportunity for cleantech clusters to form.

Alberta is home to leading commercial CCUS projects, including Alberta Carbon Trunk Line and Shell's Quest project. The province will lead the way for the commercialization of CCUS as carbon off-setting becomes a necessary feature for future hydrogen and other carbon emitting industries.

### Why Alberta?

#### Young & Educated Talent



##### Educated

Alberta has the highest number of engineers per capita in North America. The University of Alberta is ranked eighth globally for energy research and third globally for AI research.

#### Sustainable



##### Accessing Clean Energy

Alberta is home to Canada's only deregulated, energy-only power market which enables companies access to clean energy through virtual power purchase agreements (VPPAs). VPPAs can be negotiated directly with renewable energy developers to achieve sustainability goals while creating long-term stability and certainty on the price of power.

#### Access to Key Markets



##### Globally Connected

Alberta's world-class infrastructure supports business development and growth. The Edmonton region is the province's pipeline node—connecting major pipelines to a 373,000 km regional network and delivering oil, natural gas, hydrogen, and CO<sub>2</sub> products throughout North America. The region serves as a major transportation hub with CP Rail and CN Rail.

The province's market access, internationally integrated airports, and telecommunication network make it a hub for companies looking to do business worldwide.

#### Industry & Political Commitment



##### Pathways Alliance

The six largest oil sands companies have a shared goal to achieve net zero greenhouse gas emissions from oil sands operations by 2050.



##### Emissions Reduction

The Governments of Alberta and Canada are committed to achieving net-zero emissions by 2050.

#### Speed of Doing Business



##### Red Tape Reduction

Alberta has received the best grade in Canada for regulatory accountability, regulatory burden, and political priority. The Government of Alberta has prioritized reducing over-regulation. Through over 500 red tape reduction initiatives, the province sees faster approvals and cost savings for investors.



##### Designated Industrial Zone

Alberta is home to a Designated Industrial Zone which benefits from consistent, coordinated regulatory approvals and shared access to infrastructure and resources.

**Big. Bold.**  
Alberta.