



**INVESTING IN THE ENERGY TRANSITION
ALBERTA'S COMPETITIVE ADVANTAGE**

THE GLOBAL ENERGY TRANSITION AND ACCELERATED GROWTH IN THE CLEAN TECH SECTOR OFFERS ENORMOUS OPPORTUNITIES FOR INVESTMENT IN ALBERTA.

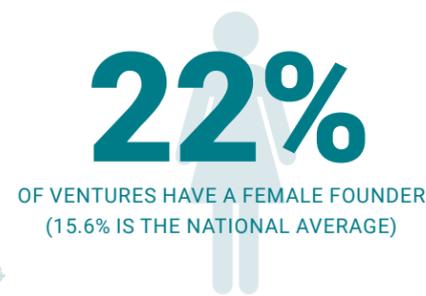
Present State

A Strong and Growing Cluster

- Today, Alberta is home to 947 cleantech companies employing more than 14,600 people
- Clean tech companies in the region serve a wide variety of industries. From the traditional energy industry, to power and utilities, to manufacturing and agriculture, to emerging opportunities like hydrogen

Over two-thirds of ventures are undertaking hardware-based rather than software-based plays, enabled by innovation in chemical processes, manufacturing, nanotechnology or genomics.

Diversity



Access to Capital

- Approximately three-quarters of the ventures who reported seeing public and/or private funding were successful

Future State

The energy transition in Alberta could:

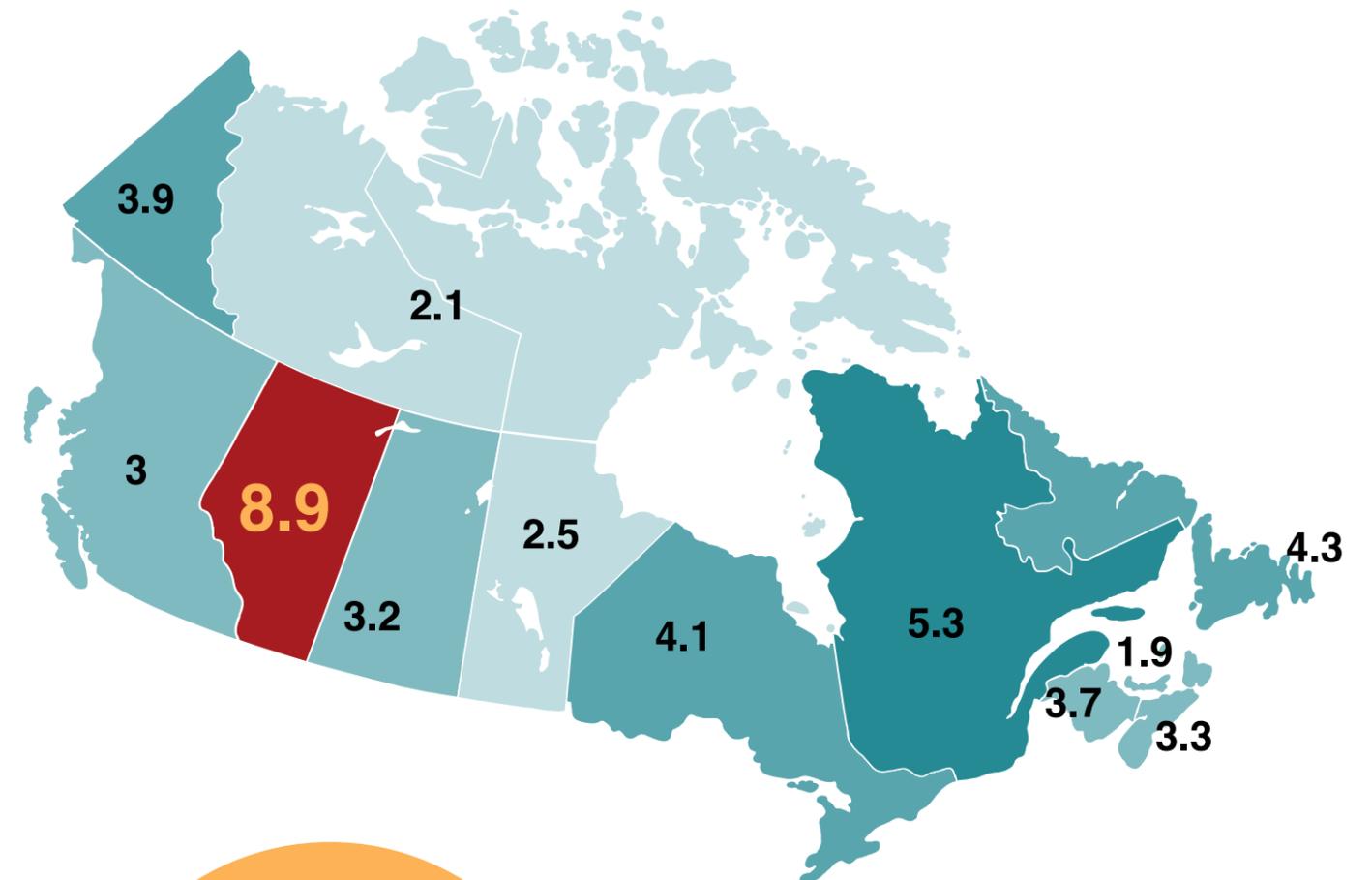
- Create nearly 170,000 new clean energy jobs
- Contribute \$61 billion to Alberta's GDP
- Position Alberta as a world leader in building a low-carbon future

JUST WHAT IS THE SIZE OF THE ENERGY TRANSITION PRIZE FOR ALBERTA'S FUTURE ECONOMY?
BILLIONS
OF DOLLARS OF ECONOMIC OPPORTUNITIES FOR INVESTORS

Alberta's Unique Value Proposition

Talent – energy sector skills are highly transferable to the clean tech sector

- Alberta has the most engineers per capita than any other province in Canada.
- 9 engineers per 1000 people – almost twice the national average



A FOUNDATION OF COLLABORATION

Proven track record of using collaboration, capital deployment and resource mobilization to execute large-scale transformational projects

World-Class Research & Development, Laboratories and Test Centres

- Water Technology Development Centre (WTDC)
- Alberta Clean Energy Technology Accelerator
- C-FER Technologies
- Centre for Grid Innovation
- CanmetENERGY Devon Research Centre
- University of Alberta
- Alberta Machine Intelligence Institute

The Alberta Advantage

Existing Infrastructure and Assets

- The region has complex transportation and pipeline systems and world-class infrastructure in Alberta's Industrial Heartland.
- Proven best in class CCUS infrastructure with massive capacity
- Existing H₂ pipelines and CO₂ pipelines
- Alberta is home to four of the world's 30 commercial CCUS projects including the world's largest CO₂ pipeline

Technology and Innovation Infrastructure

- Emerging 5G network buildout
- Existing supercomputing infrastructure
- Strong and growing nanotechnology cluster

Alberta's Industrial Heartland has attracted +\$45 billion in capital investment

Quality of Life



AFFORDABLE REAL ESTATE



HIGH STANDARD OF LIVING



WORLD-CLASS RECREATION OPPORTUNITIES



CLEAN ENVIRONMENT

Unique Electricity and Utility Markets

- Alberta's 'open market' electricity sector is the most dynamic in the country for renewables and energy storage
- Existing regulatory framework to facilitate new competitors in the power sector

A Leader in the Low-Carbon Economy

- Alberta has had an industrial carbon pricing system in place since 2007 – the first jurisdiction in North America
- Over 15 megatonnes of carbon credits have been traded in Alberta since its creation.

A Skilled and Ready Workforce

Clean tech job seekers are forecast to be greater than job openings throughout the next decade. This is an important indicator for cleantech companies looking to relocate or grow in Alberta, as there appears to be a ready and willing labour force for clean technology development in the province.

We Want You Here

The Edmonton Metropolitan Region is actively seeking to attract forward-looking companies to invest in clean technologies. We're creating a business-friendly environment that includes:

- Strong public funding programs for emerging technology
- Leading research institutions and test facilities – accelerating commercialization
- Initiatives that demonstrate a commitment to decarbonization
- The Edmonton region is home to Canada's first and largest hydrogen hub – an initiative working to coordinate the growth of the supply and demand for hydrogen and accelerating the build out of a regional hydrogen economy

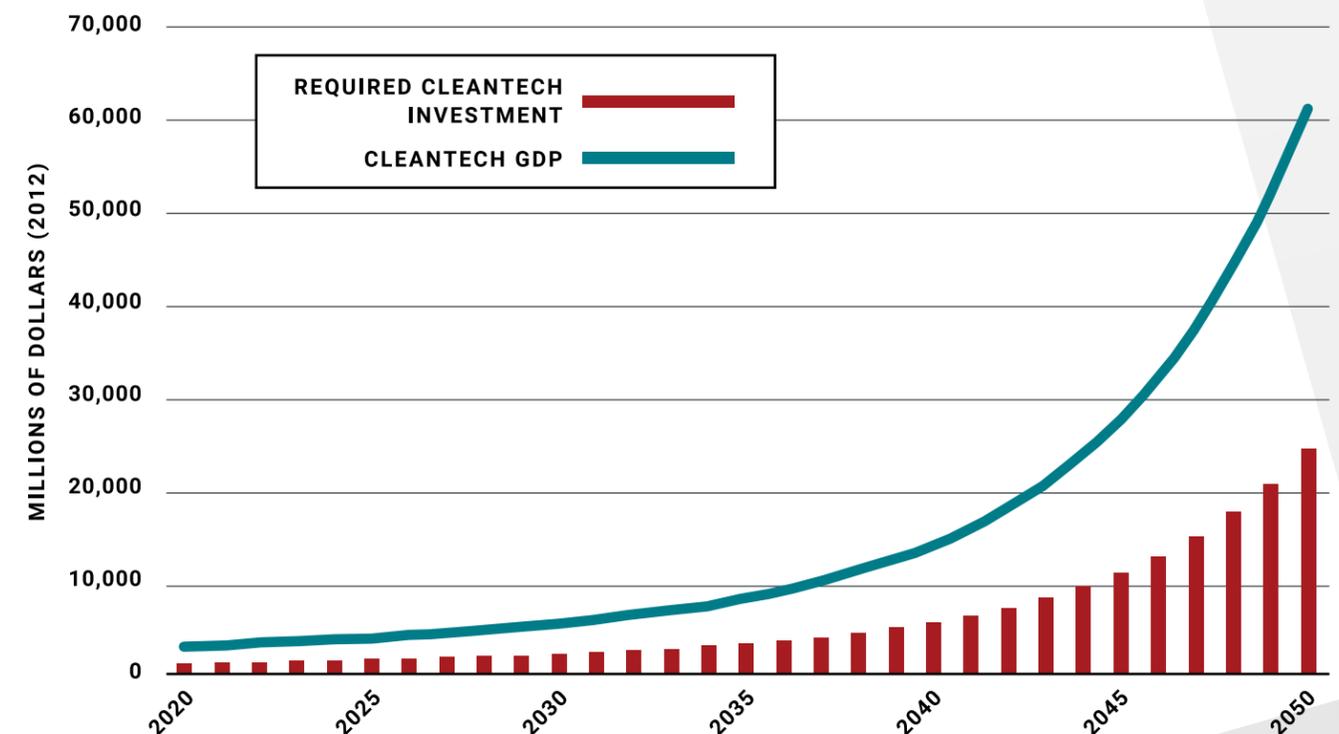
LOW TAX RATES

8%

AT 8%, ALBERTA HAS THE LOWEST CORPORATE TAX RATE IN CANADA

Potential Impact of Investment

Clean tech has a strong return on investment – close to three fold by 2050



Investment Ready Opportunities in Clean Tech

The following opportunities were recently identified as priority investment areas for the Edmonton Metropolitan Region

Hydrogen Production and Utilization

- The global market is an estimated \$2.5 trillion opportunity
- The Edmonton Metropolitan Region is home to Canada's first and largest hydrogen hub and already produces 60% of Canada's hydrogen
- The Edmonton region will become a global epicenter for the hydrogen economy

Digitalization

- The decreasing cost of computing power, sensors, and a rapid pace of innovation in communications technology has made grid digitalization more accessible than ever – there is an opportunity to leverage emerging innovation from research institutes such as the Alberta Machine Intelligence Institute (Amii) and the University of Alberta Energy Digitalization Lab.

Other Opportunities to Invest in Clean Tech in the Edmonton Region

Ag-tech and Agriculture

- Alberta has unique resources (land, water resources, availability of key feedstocks and established research programs) to support investments in the plant protein market, which is estimated to be value

Carbon-Capture Utilization and Storage

- The International Energy Agency names CCUS as one of the four "key pillars" of global energy transitions and the market is estimated to reach \$3.5 billion by 2025
- Alberta has access to large-scale industrial processes, offering collaborative opportunities for innovators to pilot technologies and for incumbents to invest further in current operations and access knowledge.

Electrification

- The market for electric vehicle charging infrastructure is set to expand through this decade to a market size of \$150 billion by 2030. Alberta is rich in renewable energy resources including wind, solar, geothermal, hydro and bioenergy- all of which will be important resources to enable the global trend of electrification

Energy Efficiency

- The global market for waste heat recovery and reuse alone is estimated at \$50 billion, and the market for energy efficiency in buildings is already over \$100 billion

2030 Outlook in Alberta



Ag-Tech and Agriculture

By 2030, the ag-tech sector could employ 2,400 people and contribute \$229 million to Alberta's GDP



Carbon-Capture Utilization and Storage

By 2030 the CCUS sector could employ over 1,700 people in Alberta and contribute more than \$379 million in provincial GDP



Digitalization

By 2030 the digitalization sector could employ over 2,300 people in Alberta and contribute \$540 million in provincial GDP



Electrification

By 2030 the electrification sector could employ 3,000 people in Alberta and contribute more than \$526 Million in provincial GDP



Energy Efficiency

By 2030 the energy efficiency sector could employ over 9,500 people in Alberta and contribute \$1.4 billion in provincial GDP



Hydrogen Production and Utilization

By 2030 the hydrogen sector could employ more than 1,000 people in Alberta and contribute \$403 million in provincial GDP

The materials presented in this document are based on recent work commissioned by Edmonton Global and Calgary Economic Development for an Energy Transition Study



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