EMISSIONS REDUCTION ALBERTA

ERA STEWARDSHIP UPDATE

MAY 2018

Figures accurate as of: May 8, 2018

Emissions Reduction Alberta (ERA) reports on its activities on a quarterly basis. Figures are updated following each ERA board meeting. For detailed information on projects and funding opportunities visit ERAlberta.ca

ALIGNED WITH ALBERTA'S CLIMATE LEADERSHIP PLAN GOALS

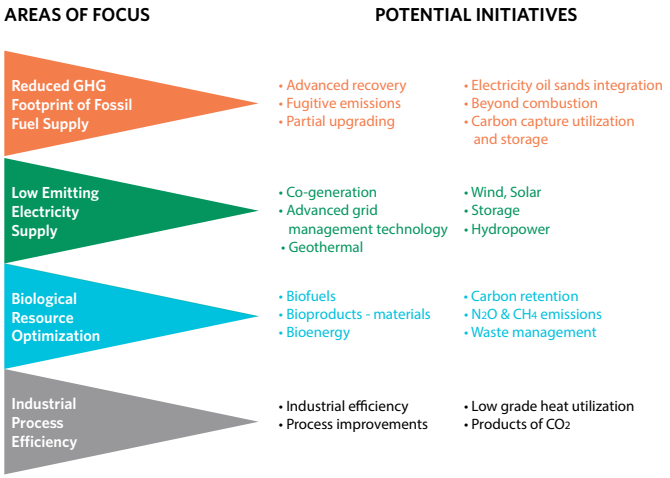
- ERA is a key partner in addressing Alberta's climate leadership priorities. We fund innovative technologies that reduce GHG emissions, and help Alberta build a sustainable economy that attracts investment, creates jobs, expands market access, and delivers improved environmental outcomes.
- Guided by Alberta's Climate Change Innovation and Technology Framework, our portfolio reflects the policy objectives of the province's Climate Leadership Plan.
- To date, we have committed $385 million in funding to 129 projects. Our projects have a combined total value of over $2.6 billion.
- ERA funded projects are estimated to produce cumulative reductions of 9 megatonnes by 2020 and more than 28 megatonnes by 2030.
- Each year, between now and 2030, ERA estimates its investments will result in emissions reductions of an average of two megatonnes per year. This is equivalent to reductions achieved by switching approximately 67 million incandescent light bulbs in homes to LEDs, or bringing 507 wind turbines on line.

SEEKING SOLUTIONS DEMANDED BY THE MARKET

- ERA has committed $189 million to reduce the GHG footprint of fossil fuel supply. This focus area includes projects from the ERA Oil Sands Innovation Challenge that have a combined total project value of more than $720 million.
- To date, ERA has committed $75 million to advancing technologies that support low emitting electricity supply. Renewable energy technologies in our portfolio currently provide the most significant near-term GHG emissions reductions.
- An additional $62 million supports biological resource optimization, including biofuel development, bio-power and projects to reduce GHG emissions from waste management.
- Industrial process efficiency includes initiatives like the ERA Industrial Efficiency Challenge and ERA Grand Challenge projects that reduce GHG emissions associated with production of concrete and cement. ERA has committed $52 million to this area to date.

CONVENING RESOURCES FOR COLLABORATION

- Government provides grants to ERA to enable us to fulfil our mandate. This funding comes from Alberta's large emitters who choose to pay into the Climate Change and Emissions Management Fund as a compliance option under Alberta's Carbon Competitiveness Incentive Program.
- We work with industry, government and technology developers to make Alberta a hub for innovative new ideas that reduce GHG emissions.
- By working collaboratively, we help provide complete solutions to successfully advance promising ideas towards commercialization. Complete solutions include the financing, policy, regulatory, program and business development tools required to successfully implement new technologies.
- With our stakeholders, we developed a Technology Roadmap to guide investment decisions and inform our portfolio mix. The Roadmap has four strategic focus areas. It helps to ensure that all partners are aligned to contribute to climate change and innovation goals that address GHG reductions.



Note: Some initiatives could fall under multiple areas of focus.

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1109, 10104 - 103 Avenue
Edmonton, Alberta
T5J 0H8

Phone: 780-498-2068
Email: info@eralberta.ca

www.ERAlberta.ca

Project summary by strategic area	# of Projects	ERA Funds ($Millions)	Total Project Value ($Millions)	Cumulative Project Emission Reductions by 2020 (Mt CO_2e)[1]	Cumulative Project Emission Reductions by 2030 (Mt CO_2e)[1]	# of Projects Complete	# of SMEs
Reduced GHG Footprint of Fossil Fuel Supply	49	189	1,194	2.6	6.2	21	28
Biological Resource Optimization	36	62	289	1.7	8.8	18	14
Industrial Process Efficiency	29	52	347	0.7	2.1	20	18
Low-Emitting Electricity Supply	12	75	840	4.2	11.2	6	8
Subtotal	**126**	**378**	**2,670**	**9.2**	**28.3**	**65**	**68**
Adaptation Program[2]	3	7	7	0	0	3	3
Total	**129**	**385**	**2,677**	**9.2**	**28.3**	**68**	**71**

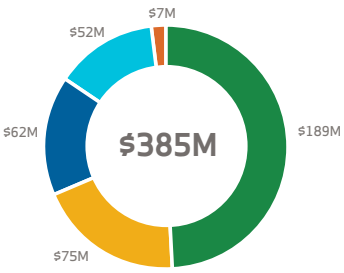
[1]We have estimated emission reductions for all projects with approved funding commitments and executed funding agreements and assumed the projects will continue successfully and as planned. Should circumstances change for these projects, emission reduction estimates may change materially.
[2]No new investments are planned for adaptation at this time. In 2012, ERA provided funding for 3 adaptation projects in consultation with Alberta Environment and Water (now Alberta Environment and Parks).

CREATING JOBS AND DIVERSIFYING THE ECONOMY

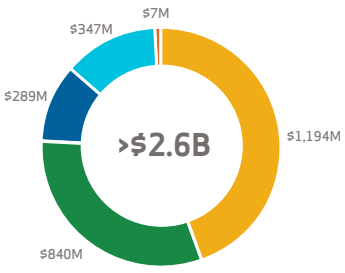
- Technology is the engine of environmental and economic opportunity.
- For every ERA dollar we commit to advancing new technologies, another $6 has been invested by funding partners.
- According to an analysis by Alberta Economic Development and Trade in 2017, our projects support an average of 1,400 jobs annually in Alberta from 2011 to 2021, with a total cumulative impact of over 15,000 person-year* jobs and add $1.8 billion to Alberta's GDP from 2011 to 2021.
- While we boost Alberta's economy, our impact can be felt across Canada as well. ERA projects will add $2.3 billion to the nation as a whole from 2011 to 2021 and increase employment to over 21,000 person-year jobs.

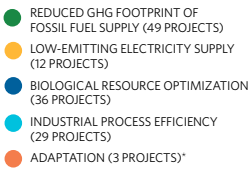
*A person-year is equal to one-year of employment for one individual.

ERA INVESTMENT BY STRATEGIC AREA
($ MILLIONS)



TOTAL PROJECT VALUE BY STRATEGIC INVESTMENT AREA
($ MILLIONS)





*In 2012, ERA provided funding for 3 adaptation projects in consultation with Alberta Environment and Water (now Alberta Environment and Parks).

INVESTING IN A DIVERSE PORTFOLIO

- ERA invests in transformative technologies that have the potential to dramatically reduce GHG emissions across sectors. We also fund demonstration and implementation projects that will result in substantial near-term emissions reductions.
- While industry innovators lead some of our projects, we have committed funding to 71 projects from Small and Medium Enterprises (SMEs), including four projects that ERA selected through a joint funding initiative with Sustainable Development Technology Canada (SDTC) to advance solutions from SMEs that are deployable in Alberta.

ERA GRAND CHALLENGE: INNOVATIVE CARBON USES

- ERA is moving carbon dioxide from a waste product to an asset through the $35 million ERA Grand Challenge: Innovative Carbon Uses. Alberta has reached out to the world to accelerate the development of critical carbon conversion technologies. In the first round of the competition, ERA made commitments to 24 projects. They were selected from 344 submissions from 37 countries.
- Four winners advanced in Round Two and are now competing for up to $10 million to help commercialize their technology in Alberta. ERA will announce the winner of Round Three in 2019.

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