Stewardship Report September 2021

Figures accurate as of September 10, 2021

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.



From left to right: Minister of Environment and Parks, Jason Nixon; Canary Biofuels CEO, George Wadsworth; MLA for Lethbridge-East, Nathan Neudorf, MLA for Taber-Warner, Grant Hunter; Reeve for Lethbridge County, Lorne Hickey; ERA CEO Steve MacDonald.

CANARY BIOFUELS TO TURN AGRICULTURAL WASTE INTO BIODIESEL

In the race to reduce the impact transportation fuels have on the environment, Canary Biofuels is in the midst of upgrading a facility that will produce 70 million litres of high-value renewable biofuel.

Located in Lethbridge, the facility will be the firstof-its-kind in Canada, turning local agricultural waste, inedible animal fats, and used cooking oil into biodiesel fuel and glycerin. ERA committed \$4.7 million to the \$23.8 million project; Minister of Environment and Parks, Jason Nixon, made the funding announcement on July 27, 2021.

"Alberta is home to world-renowned expertise on cutting agricultural emissions, and the Canary Biofuels facility is another world-class project Alberta's government is supporting to diversify the economy and create jobs. I'm pleased to see the expansion of another groundbreaking Alberta-based technology that is cutting emissions and getting Albertans back to work," said Jason Nixon, Minister of Environment and Parks.

Canary Biofuels will buy more than \$375 million of local feedstock from farmers over the next five years, generating about \$500 million in revenue and supporting up to 130 local jobs in fields like engineering, construction, and transportation. It will also cut about 224,000 tonnes of emissions each year—the same as the amount of electricity used by 41,000 homes.

"Canary is excited to lead the way in abating emissions through sustainable waste-based biodiesel production that supports the energy and agriculture industries in Alberta and the Prairies," said George Wadsworth, CEO of Canary Biofuels.

The facility's biodiesel will have up to one-third the carbon intensity of petroleum diesel. The renewable fuel produced has been pre-sold to a leading Canadian supplier of biodiesel whose customers include fuel retailers, wholesalers, distributors, and fleet managers across Canada and the United States.

Carbon-neutral and carbon-negative liquid fuels, such as biofuel, are critical to helping the world reduce its emissions over the next 30 years. According to Advanced Biofuels Canada, biofuels can reduce emissions by more than 50 per cent below gasoline and diesel and are made from renewable feedstock, which absorbs carbon from the atmosphere before releasing it back into the atmosphere when it's used as fuel.

This circular process helps to reduce the amount of emissions vehicles produce. Thanks to this process, biofuels now provide the majority of greenhouse gas (GHG) emissions reductions achieved in renewable fuel regulations and low carbon fuel standards in Canadian provinces.

"Canadian canola is used in biofuel production around the world because it's a low-carbon, sustainable and renewable resource. We are excited to see more investment in Lethbridge that will directly benefit canola farmers and Alberta's agriculture value chain," said Brad Orr, director, Canola Council of Canada.



NEW PROGRAM HELPS ALBERTA BUSINESSES CUTS COSTS AND EMISSIONS

For the last 30 years, The Ice Cream Depot has been the Guinness World Record holder for largest sundae, just shy of 55,000 pounds; now they boast the seventh largest rooftop solar project in Western Canada.

In March, the family-run business opened up a new facility in Leduc County's Nisku Business Park that has 30,000 square feet of deep frozen (-30 Celsius) space, along with 20,000 square feet of refrigerated and dry storage capacity.

To help drive their energy costs down, the company took advantage of ERA's Energy Savings for Business program, which helped it install 1,860 solar panels on the facility's roof.

"As a small business, if you are going to front the entire cost, you really begin to look at your return on investment. With the funding from this program, our ROI will only be 10 years," said Jessica Rogiani, Finance Manager, The Ice Cream Depot.

The solar project is expected to generate over 14,000 megawatt hours (MWh) and save 7,600 tonnes of GHG emissions.

To help companies like The Ice Cream Depot invest in high-efficiency technology, ERA launched its \$55 million Energy Savings for Business program in February 2021.

Seven months later, it has supported almost 900 projects, reduced lifetime GHG emissions by over 900,000 tonnes, and created in excess of 600 total job years.

Bonduelle, Canada's leading frozen vegetable manufacturer, also took advantage of the program and installed 11 new variable frequency drives (VFDs) at its Lethbridge facility. The technology will reduce the amount of electricity it uses to freeze peas and corn, which are then packaged and sent to grocery stores or foodservice providers across Canada.

The new technology will reduce the amount of horsepower required to operate a series of fans in its cooling tunnel by 15 to 18 per cent, saving Bonduelle roughly \$25,000 annually in electricity costs. The VFD's are also expected to save 3,300 tonnes of GHG emissions.

"One of the things that we are focusing on is reducing our carbon footprint and these VFDs will allow us to reduce our electricity consumption," said Geoff Smart, Bonduelle's Regional Project Engineer for Alberta and Ontario.

Mount Norquay Ski Resort also installed a new VFD on its four-person Cascade Chairlift. The updated system has the ability to lower its rotational speed and operate efficiently when there are less passengers on the lift. The investment is expected to reduce 915 tonnes of GHG emissions.

This piece of machinery has been around for 20 years and this new technology will make it run smoother and use less electricity," said Andre Quenneville, General Manager, Mount Norquay. "Without a program like this, we wouldn't get out of the gate on this project."



746, 10104 103 Avenue Edmonton, Alberta T5J 0H8 #1110, 444 5th Avenue SW Calgary, AB T2P 2T8 OFFICE 780 498 2068 EMAIL info@eralberta.ca WEBSITE www.eralberta.ca

ERA is a legal tradename of the Climate Change and Emissions Management (CCEMC) Corporation

COMMITTED TO ACTION

> ERA is a key partner in addressing Alberta's climate and economic priorities. We fund and de-risk latestage technologies to reduce GHG emissions and help grow and create competitive industries in Alberta.

CONVENING RESOURCES FOR COLLABORATION

- Since 2009, ERA has been investing revenues from the carbon price paid by Large Final Emitters (LFEs) to accelerate the development and adoption of innovative and clean technology solutions.
- > We work with industry, government, and technology developers to make Alberta a hub for innovative ideas that reduce GHG emissions and improve economic competitiveness.
- ▶ We convene resources and facilitate strategic partnerships with industry, government, business, academia, and other funders to foster a suite of policy, regulatory, program, and business innovation tools that will help address barriers to commercialization.
- ▶ With our stakeholders, we developed a Technology Roadmap that guides investment decisions and informs our portfolio mix.

FUNDING OPPORTUNITY	WHAT'S IT ABOUT?	ERA FUNDING	HIGHLIGHTS		
GRAND Challenge	Technologies to transform CO_2 from waste to value-added	\$30M	2 projects awarded \$5M each in the final round		
METHANE Challenge	New methane detection and reduction technologies	\$23M	M 11 projects funded worth \$60M in total value		
OIL SANDS INNOVATION	Late-stage, GHG-reducing technologies to help Alberta's oil sands industry remain competitive	\$56M	8 projects funded worth \$567M in total value		
INDUSTRIAL EFFICIENCY CHALLENGE	Technologies to increase efficiencies for LFE industrial facilities	\$59M*	9 projects funded worth \$235M in total project value		
BEST Challenge	GHG-reducing technologies in biotechnology, electricity, and sustainable transportation	\$76M	13 projects funded worth \$283M in total value		
NATURAL GAS CHALLENGE	Unlocking innovation across Alberta's natural gas value chain	\$58M	20 projects funded worth \$156M in total project value		
FOOD, FARMING, AND FORESTRY CHALLENGE	Accelerating innovation for sustainable growth	\$33M	17 projects funded worth \$105M in total value		
SHOVEL-READY Challenge	Support for companies ready to implement leading-edge technologies in applications for both greenfield and brownfield operations	\$176M*	16 projects funded worth over \$2B in total value		
PARTNERSHIP INTAKE PROGRAM	Evaluating promising GHG-reducing projects referred to ERA by Trusted Partners	\$66M*	18 projects funded to date worth over \$1.3B in total value		
ENERGY SAVINGS FOR BUSINESS	Support for small- and medium- scale industrial and commercial businesses for cost-saving and emissions reducing projects	\$55M*	Applications open February 1, 2021; 47% of available incentives requested		

*These funding opportunities are funded in part by the Government of Canada's Low Carbon Economy Leadership Fund.

INVESTING IN A DIVERSE PORTFOLIO

221 Projects



CUMULATIVE PROJECT EMISSION REDUCTIONS

6.1 Mt CO2e Total by 2020			42.3 Mt CO2e Total by 2030				
3.4 Mt CO₂e	1.8 Mt C0₂e	0.6 Mt CO ₂ e	0.3 Mt CO ₂ e	9.7 Mt CO ₂ e	12.9 Mt C0 ₂ e	11.1 Mt C0₂e	8.6 Mt CO₂e

Note: 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. These projections do not include the Energy Savings for Business program.

LEVERAGING FUNDING AND CREATING JOBS

Technology is the engine of environmental and economic opportunity. For every ERA dollar we commit to advancing new technologies, \$7 has been invested by funding partners.





*A person-year is equal to one-year of employment for one individual. Please note: economic impact is reported on a calendar year basis, not fiscal year.



746, 10104 103 Avenue Edmonton, Alberta T5J 0H8

#1110, 444 5th Avenue SW Calgary, AB T2P 2T8

OFFICE 780 498 2068 EMAIL info@eralberta.ca WEBSITE WWW.eralberta.ca