

NORTHSTAR'S CALGARY ASPHALT SHINGLES REPROCESSING FACILITY TAKES SHAPE

Every year, tens of thousands of tonnes of asphalt shingles are hauled to Calgary landfills. It is the unavoidable byproduct of a booming construction sector, and for decades, disposal was the only outcome for the material. However, one Calgary company is demonstrating there is a way to transform this waste into something valuable.

Northstar Clean Technologies has developed a patented process that reprocesses discarded shingles into reclaimed asphalt, fibre, limestone, and aggregate ready for use in new roofing products and other commercial applications.

In November 2025, the company opened its Empower Calgary Facility. As Canada's first asphalt shingle reprocessing plant, it represents a major step forward in turning industrial byproducts into market-ready materials, fully supporting a circular economy.

"With 16.5 million tonnes of shingles destined for the landfill in North America each year, which has an oil content of over 20 million barrels, our solution could scale across the entire continent," said Aidan Mills, President and CEO of Northstar.

A new five-year contract with the City of Calgary is also helping to advance the facility's success. Beginning in April 2026, all shingles accepted at the Spy Hill, East Calgary, and Shepard waste management sites will be redirected to the facility.

ERA supported the project through its Circular Economy Challenge, investing \$7.1 million to help design, build, and launch the facility. Northstar recently reached a major milestone by processing over 80 tonnes of shingle feedstock per day.

"This is a flagship investment in Alberta's circular economy," said Justin Riemer, CEO of ERA. "It is a proven technology that cuts emissions, diverts waste, and positions the province as a leader in asphalt shingle recycling and shows significant potential for deployment across North America."

ERA's support helped turn the technology from a promising concept into a commercial-scale reality.

"With the support of ERA and the Government of Alberta, we're transforming what was once a landfill problem into a circular economy solution," Mills adds. "This facility proves what's possible when government, industry and innovators come together to make environmental progress that also drives economic growth." is paving the way for reduced emissions, strengthened local economies, and continued leadership in renewable fuel production."

OTIPEMISIWAK MÉTIS GOVERNMENT GETS ENERGY EFFICIENT

The Otipemisiwak Métis Government knew their aging buildings needed an upgrade—not just for energy efficiency, but for the well-being of their Citizens.

As the oldest continuous Métis government in Canada, they have represented Métis Albertans since 1928 and now serve over 73,000 Citizens across the province. They own a portfolio of facilities and service centres, heavily centred in the Edmonton area, also called the North Saskatchewan River Territory.

To improve their environmental sustainability and meet community needs, the Otipemisiwak Métis Government signed up for ERA's Strategic Energy Management for Industry (SEMI) program.

"Everything our government does is to support the Métis in Alberta. All the programs we develop are grounded in community," says Mary Pupo, Energy and Sustainability Manager, Otipemisiwak Métis Government. "Stewardship of the land is inherent to Métis culture, and the reason why we prioritize energy and sustainability programs."

Through SEMI, the government conducted a Facility Readiness Assessment to understand their energy usage at a few key facilities. From there, they targeted three buildings: the Youth

Centre in Edmonton, the Region 2 office in Bonnyville, and the Kingsway Professional Centre in Edmonton, which will house their provincial offices.

Through SEMI's Capital Retrofits offering, they plan to access funding to replace windows and doors, upgrade to high-efficiency LED lighting, upgrade an HVAC system, and enhance roof insulation.

Beyond capital retrofits, six team members in the Environment and Climate Change and Facilities and Building Operations departments are participating in Strategic Energy Management (SEMI) training, as well as other SEMI activities like Energy Management Information Systems, Energy Assessments and Audits. Their goal is to share their lessons learned with maintenance and support staff and build stronger sustainability practices for the whole organization.

"Capacity building through the SEMI program is very important to our government. People think energy efficiency is technical, but in fact, our work with SEMI is answering community needs with cultural sensitivity," says Pupo. "We work from a Métis worldview, so projects like this focus on all aspects of climate. There isn't one solution, which is why we're taking advantage of all that SEMI has to offer."



NORTHSTAR TECHNOLOGIES INC. SECURED A 5-YEAR DEAL WITH THE CITY OF CALGARY TO RECYCLE SHINGLES WITH SUPPORT FROM ERA.

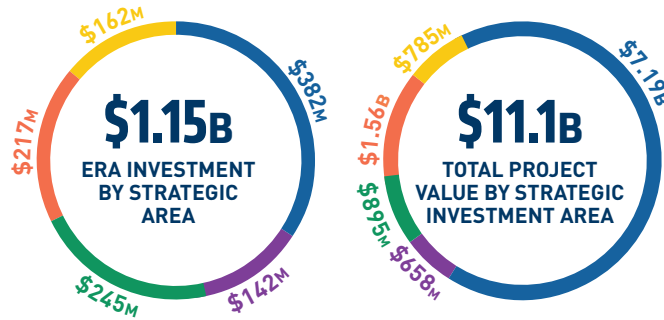


THE OTIPEMISIWAK MÉTIS GOVERNMENT IS UPDATING AGING BUILDINGS TO BE MORE ENERGY EFFICIENT THROUGH ERA'S SEMI PROGRAM.

INVESTMENT IN TECHNOLOGY INNOVATION

351 Projects*

- ▶ **EMERGING ENERGY**
(72 Projects)
- ▶ **CIRCULAR ECONOMY**
(44 Projects)
- ▶ **IMPROVED EFFICIENCY**
(97 Projects)
- ▶ **INDUSTRIAL DECARBONIZATION**
(56 Projects)
- ▶ **CARBON MANAGEMENT**
(79 Projects)



5.0:1 LEVERAGED FUNDING FROM PUBLIC AND PRIVATE INVESTORS

*In 2012, ERA provided \$7 million in funding for three adaptation projects worth \$7 million in consultation with Alberta Environment and Parks.

Note: To ensure accuracy of the leverage ratio, projects with high project costs are capped at \$1B as these are considered an outlier.

CUMULATIVE PROJECT EMISSION REDUCTIONS

Note: GHG claims are subject to the disclaimer provided below.



Note: GHG claims are subject to the disclaimer provided below. 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.

ENERGY EFFICIENCY PROGRAMS



PROJECTS 2300
INVESTED \$61 MILLION
JOBS CREATED 1585
AB GDP CONTRIBUTION \$201.7 MILLION
ESTIMATED EMISSIONS REDUCED 4.48 Mt

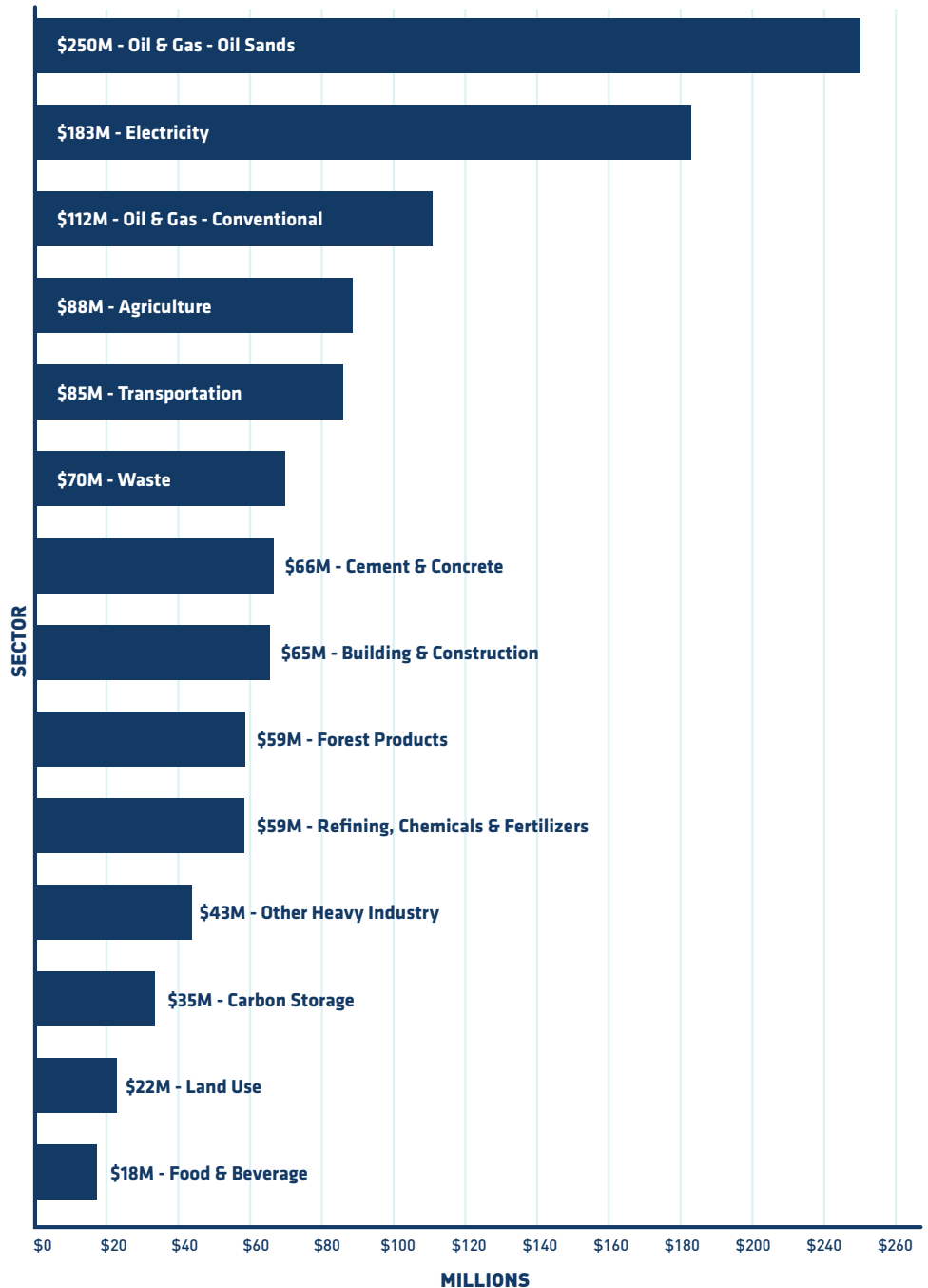


ALL PROJECTS



**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.

FUNDING BY SECTOR



Disclaimer: ERA presents consolidated portfolio information and forecasted information that relies on proponent assumptions and scenario analysis. Project and operating data used to prepare assumptions that are used in the methodology to calculate GHG emissions are determined by the project recipient and reviewed for reasonableness by ERA. While ERA makes every effort to ensure claims related to emissions performance are accurate, it does not audit underlying information or verify all source data and is not responsible or liable for any environmental claims, environmental performance metrics, or any representations, statements, or claims regarding emissions or emissions reductions contained in this Stewardship Report, or any assumptions or methodologies underlying any such claims.