



GreenFutures

Loan Program

Project Examples and Opportunities

Ideas and example projects to help your business go green.

Introduction

The Green Futures Program helps local businesses explore practical, sustainable, and innovative ways to reduce their environmental impact.

This guide highlights example projects and estimated ranges to help you understand what's possible. These examples are intended to spark ideas, not limit creativity or define exact costs. Your project may look entirely different — and that's encouraged. Whether it's an efficiency upgrade, renewable energy system, or a modernized process, if it supports a greener and more resilient local economy, it could be eligible under the Green Futures Program.

Each project requires a vendor quote and will be reviewed for eligibility, environmental impact, and regional benefit.

Disclaimer

All cost ranges, payback periods, and project assumptions provided through the Green Futures Program are estimates based on average small- to medium-sized businesses in Lac La Biche County and surrounding communities. Figures are intended for planning and illustration purposes only.

Actual project costs, energy savings, and timelines will vary depending on site conditions, equipment selection, vendor pricing, and installation requirements. Applicants are required to submit official vendor quotes for final approval. Community Futures Lac La Biche does not guarantee the accuracy of cost estimates or the performance outcomes of individual projects.

Renewable Energy & Power Systems

Supports the adoption of clean, self-sustaining energy sources such as solar, wind, and energy storage. Projects in this area help businesses generate their own power, reduce reliance on the grid, and contribute to a cleaner local energy mix through Alberta's renewable interconnection framework.

Energy Efficiency & Building Upgrades

Focuses on improving how buildings use and retain energy. Projects in this category reduce waste, lower utility bills, and improve comfort through lighting upgrades, insulation, efficient heating systems, and weatherproofing. These changes make existing spaces greener and more cost-effective without requiring new construction.

Clean Transportation

Encourages businesses to transition toward low-emission or zero-emission transport solutions. Projects include installing EV chargers, upgrading to hybrid or electric fleet vehicles, and integrating clean engine technologies. These initiatives reduce operational emissions while modernizing transportation assets.

Process Innovation & Modernization

Focuses on upgrading equipment, systems, or production lines to improve efficiency and sustainability. Projects may include efficient motor replacements, process automation, or clean technology retrofits. These improvements enhance productivity, reduce emissions, and prepare businesses for long-term competitiveness.

Resource & Waste Management

Promotes circular economy practices — using resources efficiently and reducing waste. Projects include recycling and composting systems, waste heat recovery, water reuse, and smart monitoring to reduce consumption. The goal is to lower environmental impact while cutting long-term operating costs.

Digital & Smart Technology

Advances energy and resource efficiency through automation and data-driven management. Projects involve smart meters, sensors, and control systems that optimize lighting, HVAC, irrigation, and production. This helps businesses make smarter decisions with real-time data and predictive insights.



Renewable Energy & Power Systems

Example Project	Description / Purpose	Estimated Cost Range	Expected Payback Period	Potential Benefits
Small Rooftop Solar PV (10KW)	25–30 panels installed on a small building roof, offsetting a portion of daytime electricity use	\$25,000 – \$40,000	7 – 10 years	Reduced utility bills (15–25%), energy independence, lower emissions
Medium Rooftop Solar PV (25 kW)	System for medium-sized retail, office, or agribusiness roofs; produces ~30,000 kWh per year	\$70,000 – \$100,000	8 – 11 years	Major long-term utility savings, visible sustainability investment
Ground-Mounted Solar PV (25–50 kW)	Ground array near facility or on adjacent land, ideal for businesses with open space	\$90,000 – \$150,000	9 – 12 years	Larger generation capacity, scalable for expansion
Battery Energy Storage (10–30 kWh)	Install a small battery bank to store solar or off-peak energy for later use	\$15,000 – \$35,000	6 – 9 years	Improves power reliability, demand management, and resilience
Hybrid Solar + EV Charging Combo	Combine rooftop solar (10–20 kW) with one or two Level 2 EV chargers	\$50,000 – \$90,000	6 – 10 years	Clean fleet charging, strong public visibility as green leader
Small-Scale Wind Turbine (5–10 kW)	Install turbine for rural or agribusiness sites with >5 m/s average wind	\$60,000 – \$120,000	10 – 15 years	Renewable power generation, possible grid-tie credits



Energy Efficiency & Building Upgrades

Example Project	Description / Purpose	Estimated Cost Range	Expected Payback Period	Potential Benefits
LED Retrofit Lighting	Replace fluorescent or halogen bulbs with high-efficiency LED fixtures throughout small to medium commercial spaces	\$5,000 – \$15,000	1 – 3 years	50–70% energy reduction, reduced maintenance, improved lighting quality
Smart Thermostat & HVAC Controls	Install programmable thermostats and occupancy sensors to optimize heating and cooling	\$8,000 – \$20,000	2 – 4 years	Lower utility bills, consistent comfort, remote monitoring capabilities
Door & Window Weatherproofing Upgrade	Enhance the building envelope by adding high-performance weatherstripping, insulation, and caulking to reduce air leakage and improve energy retention	\$10,000 – \$25,000	3 – 5 years	Up to 25% energy savings, reduced drafts, lower heating/cooling demand, and improved comfort
Triple-Glazed Window Replacement	Replace standard double-pane windows with triple-glazed units to enhance insulation	\$40,000 – \$120,000	5 – 10 years	Reduced energy loss, noise reduction, enhanced property value
High-Efficiency Boiler or Furnace Upgrade	Replace aging systems with 95%+ AFUE-rated units suited for small commercial buildings	\$50,000 – \$150,000	4 – 8 years	Reduced fuel use, improved reliability, lower emissions
Building Envelope & Insulation Retrofit	Upgrade wall and roof insulation and air sealing for better overall thermal performance	\$100,000 – \$250,000	6 – 10 years	Significant heating/cooling savings, increased comfort, long-term durability



Clean Transportation

Example Project	Description / Purpose	Estimated Cost Range	Expected Payback Period	Potential Benefits
EV Charger Installation (Single Level 2)	Install one commercial-grade Level 2 charger for customers or fleet vehicles	\$8,000 – \$15,000	3 – 6 years	Enables EV use, attracts eco-conscious customers, futureproofs business operations
Dual-Port EV Charger Setup (2–4 Ports)	Expand charging capacity for small business fleets or tenants	\$20,000 – \$35,000	4 – 7 years	Reduces fleet fuel costs, supports shared charging access
Vehicle Hybrid or Retrofit Conversion	Replace or retrofit one light-duty vehicle to a hybrid model	\$30,000 – \$50,000	5 – 8 years	Lower fuel consumption, reduced GHG emissions, improved mileage
Fleet Electrification (EV Van or Truck)	Purchase or lease one fully electric light-duty vehicle for commercial use	\$45,000 – \$80,000	6 – 9 years	Zero tailpipe emissions, reduced fuel and maintenance costs
Truck Engine Upgrade to Clean Technology	Retrofit or replace diesel engines with certified low-emission or hybrid systems	\$60,000 – \$120,000	6 – 10 years	Lower emissions, quieter operation, potential for future carbon credit eligibility
Solar-Assisted EV Charging Station	Combine solar canopy installation with EV charging infrastructure	\$75,000 – \$150,000	8 – 12 years	Generates clean power for vehicle charging, visible sustainability investment



Process Innovation and Modernization

Example Project	Description / Purpose	Estimated Cost Range	Expected Payback Period	Potential Benefits
Smart Building Controls	Integrate automated controls for lighting, HVAC, and security to reduce energy use	\$10,000 – \$30,000	3 – 6 years	10–25% energy savings, improved occupant comfort, remote system management
IoT Energy Monitoring System	Install sensors and analytics to track and optimize energy, water, or fuel usage	\$8,000 – \$25,000	2 – 5 years	Data-driven efficiency, identifies waste, supports sustainability reporting
Smart Metering & Submetering	Add submeters for energy-intensive zones or equipment to pinpoint inefficiencies	\$5,000 – \$20,000	3 – 6 years	Better operational control, improved maintenance planning, reduced costs
Building Management System (BMS) Integration	Combine existing HVAC, lighting, and energy systems into one smart platform	\$20,000 – \$60,000	4 – 8 years	Real-time control, predictive maintenance, reduced downtime
Smart Irrigation or Water Controls	Install soil and weather-based irrigation controllers for landscaping or agribusiness operations	\$10,000 – \$25,000	3 – 5 years	Water conservation, lower operating costs, improved resource efficiency
AI-Driven Predictive Maintenance	Use AI software and sensors to detect inefficiencies and prevent equipment failure	\$25,000 – \$75,000	5 – 9 years	Avoided equipment downtime, lower maintenance costs, reduced waste



Resource & Waste Management

Example Project	Description / Purpose	Estimated Cost Range	Expected Payback Period	Potential Benefits
Equipment Modernization with Efficient Motors	Replace outdated machinery or motors with newer, energy-efficient models	\$15,000 – \$60,000	3 – 6 years	Reduced energy use, lower maintenance, improved productivity
Variable Frequency Drives (VFD) for Motors	Install VFDs to regulate motor speed and power use for compressors, pumps, or fans	\$5,000 – \$25,000	2 – 5 years	Energy savings up to 40%, improved equipment lifespan, quieter operation
Compressed Air System Optimization	Upgrade or redesign compressed air systems to reduce leaks and improve performance	\$10,000 – \$40,000	3 – 5 years	Lower electricity use, reduced equipment wear, consistent pressure control
Process Automation or Control System Upgrade	Integrate digital control systems or robotics to improve process flow and energy efficiency	\$25,000 – \$100,000	4 – 8 years	Increased output, reduced waste, better quality control
Heat Recovery or Thermal Efficiency Upgrade	Capture waste heat from industrial or mechanical systems for reuse	\$50,000 – \$120,000	5 – 9 years	Lower heating demand, reduced emissions, long-term energy savings
Clean Production Line Retrofit	Replace outdated production or packaging systems with cleaner, energy-efficient technologies	\$75,000 – \$150,000	6 – 10 years	Reduced emissions and waste, higher output efficiency



Digital & Smart Technology

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