A+ FOR ENERGY

2025/2026 PROJECT SUMMARY WINNERS

1. Calgary Girls Charter School
Calgary

ENERGY & ENVIRONMENTAL IMPACT PROJECT | *$4,309*

This hands-on, interdisciplinary project will allow Grade 9 students to explore energy generation, its impact on biodiversity, and its chemical effects on the environment.

Students will:

- Build and test renewable energy systems (solar, wind, hydro).
- Study how energy production affects ecosystems and biodiversity.
- Conduct water and soil quality tests to measure environmental impact.
- Analyze the chemical effects of pollution from fossil fuels vs. renewables.
- Develop sustainable energy solutions to reduce ecological harm.

By integrating STEM with environmental science, students will evaluate real-world energy challenges and solutions while developing critical thinking and inquiry skills.

2. Chestermere High School
Rockyview County

GENERATOR BIKING ACROSS CANADA | *$4,317*

Our project involves joining two schools, Chestermere High School in Chestermere Alberta, and Clarenville High School in Clarenville, Newfoundland in a unique and engaging way. Joining together to bike a total of 6480 km (the distance between our schools) on a pair of generator bikes, promoting in-class healthy habits and simultaneously reducing our countrywide carbon footprint. This will support collaborative hands-on learning and encourage an unlikely nationwide collaboration between two schools separated by thousands of kilometres yet united with a vision of long term sustainability. By pedaling the generator bikes during class time and at lunch, students will generate electricity to charge their electronics—promoting a renewable energy mindset.

We each plan to publicly track our aggregate kilometres as well as assess our pedal-generated power with the goal to travel the 6480 km distance across the country before the end of the year. This will allow us to set short term daily goals, take on monthly or special challenges, and involve students in the classroom as well as the entire school community.

This initiative will bring key outcomes to life in nearly every course I teach, including all general Science courses and critical connections to Biology, Physics, Sports Performance, and Phys. Ed, reaching approximately 200–250 students per year in my classroom and perhaps hundreds more during lunchtimes and other community events. In addition to curricular outcomes related to work, power, and energy conservation, the project provides an outlet for students needing movement to create an optimal learning environment.

3. Chinook Winds Adventist Academy
Calgary

HARVESTING SUSTAINABILITY | *$4,000*

At Chinook Winds Adventist Academy, our greenhouse dream is about more than growing food. It is about growing hope, responsibility, and a deep connection to the world around us. We want our students to step into a space that breathes life into their learning, where they can see how their hands, hearts, and choices can make a real difference.

We are building a Wapitini greenhouse, a sustainable four-season structure powered entirely by the sun and the earth. Using solar energy and geothermal heat stored in a cold sink, this greenhouse will allow us to grow nourishing food year-round without electricity or fossil fuels. It is a simple, affordable, and deeply inspiring way to explore energy conservation, renewable energy, and climate action.

Students will engage in every stage of the process, from research and design to trench digging and data collection, making this a hands-on, curriculum aligned project rooted in real world energy learning. They will study thermal mass, passive heating, and insulation, track temperature data, and share their findings with peers and the broader community.

In a world facing environmental uncertainty, we believe it is vital to help students see themselves as part of the solution. This greenhouse will be a place of discovery, empowerment, and leadership, a space where students will learn to care deeply, act wisely, and leave a lighter footprint on the planet.

4. Clarenville High School
Newfoundland

WATT'S YOUR IMPACT? INSPIRING CHANGE THROUGH ENERGY, EDUCATION, AND COLLABORATION | *$5,000*

Our project involves installing an energy-generating bike in the classroom to support hands-on learning, promote sustainability, and encourage healthy habits. By pedaling the bike, students will generate electricity to charge phones and Chromebooks. This will reduce our carbon footprint and promote renewable energy. This initiative will bring key concepts to life from Physics 2204, Physics 3204, Science 1206, and Environmental Science, reaching approximately 200–250 students each year. Curriculum connections can also be made to concepts in all Math courses offered at our school. In addition to reinforcing curriculum outcomes related to work, power, and energy, the project encourages sustainable habits and a healthy lifestyle.

We are also partnering with Rocky View High School in Alberta to launch a friendly, cross-country competition to see which school can generate the most electricity which will foster cross canadian collaboration and student engagement. Through this collaborative, student-led initiative, we will demonstrate to schools across the country that youth have the power to create meaningful change and have a positive impact on the world around us.

5. Dr. Elliot School
Linden

PLANTS AND ECOSYSTEMS: OUR LIVING CONNECTIONS | *$5,000*

Plants and Ecosystems: Our Living Connections is a cross-curricular Grade 6 project that weaves together science, Indigenous knowledge, and environmental stewardship—with a strong emphasis on energy awareness, conservation, and Canada's energy future. Students investigate the roles plants play in climate regulation, carbon capture, food systems, and habitat sustainability. The project directly supports Alberta science curriculum outcomes related to climate, Earth systems, energy, and human impacts.

Through activities like growing food in a Tower Garden (an energy-efficient, soil-free system), analyzing photosynthesis, and tracking weather and climate data, students explore how solar energy powers plant life and supports ecosystems. Field trips to the Calgary Zoo and a local greenhouse help students connect energy use in animal habitats and agriculture to broader sustainability goals. A core focus is on reducing greenhouse gas emissions through local food production, composting, and smart energy use.

The project invites students to track their own energy conservation efforts, compare the energy use of traditional gardening versus hydroponic systems, and reflect on the importance of clean, renewable energy sources. Student-created ecosystem models and classroom-grown food (e.g., indoor tomato salsa) showcase how personal and collective actions can contribute to a more energy-efficient future.

6. École McTavish High School
Fort McMurray

MCTAVISH AQUAPONICS | *$5,000*

This year, we launched a new Agriculture program in our high school and have been spending this year exploring student-led initiatives. As part of this program, students began building and testing small aquaponics systems using two small fish tanks. These early models have been a learning experience, and we're continuing to improve them as we explore better system designs, energy efficiency, and plant yield.

With support from A+ for Energy, our goal is to scale up this project into a large, student-built aquaponics system located in a high-traffic common area of the school. This system will include a living vertical wall, irrigated with nutrient-rich water from fish tanks. The system will grow produce for our Breakfast Club and Foods classes, helping address food insecurity while giving students a real-world opportunity to engage in sustainable agriculture.

We also plan to integrate solar panels to power the system's pumps, aerators, and lighting—creating a hands-on demonstration of renewable energy and closed-loop food production. Smaller systems will be developed for classroom-based learning.

This project blends science, technology, agriculture, and sustainability. Students will collaborate across disciplines—Woodshop, Computer Science, and Agriculture—to design, build, and maintain a living system that not only feeds people, but inspires awareness, responsibility, and innovation in our school community.

7. École Père Kenneth Kearns Catholic Elementary School

Calgary

GREEN STEM LAUNCH | *$5,000*

Our school is launching a Solar-Powered Learning & Charging Station alongside a Sustainable Outdoor Learning Space to promote energy awareness and environmental stewardship among K-4 students. This project will provide hands-on learning opportunities that demonstrate renewable energy in action.

The Solar-Powered Learning & Charging Station will feature a small solar panel system that powers a device charging station for Chromebooks and tablets. It will also include an interactive display showing real-time energy generation, helping students understand the impact of solar energy in a tangible way. STEM kits with solar-powered devices (toy cars, fans, and lights) will allow students to explore how solar energy works through hands-on experiments.

The Sustainable Outdoor Learning Space will be enhanced with solar-powered lighting, eco-friendly seating, and interactive energy elements like wind spinners and a solar-powered fountain. This space will serve as an engaging outdoor classroom where students can explore sustainability concepts in a real-world setting.

By integrating renewable energy technology into everyday school life, this project will increase energy awareness and reduce electricity demand while inspiring students to think critically about sustainability. The project aligns with our new Green STEM program, which emphasizes environmental responsibility, energy conservation, and hands-on STEM learning.

8. École Secondaire Lacombe Composite High School

Lacombe

AGRIVOLTAICS | *$5,000*

The LCHS EcoVision Agrivoltaic Project is a student-led initiative that combines agriculture and solar energy to promote sustainability at École Secondaire Lacombe Composite High School. The project involves installing solar panels above garden beds to explore how renewable energy generation can coexist with crop production.

Its goals are to reduce the school's carbon footprint, enhance environmental education, and demonstrate innovative solutions to food and energy challenges. The project provides hands-on learning opportunities while producing both clean energy and fresh produce for the school and local community.

9. École St. Paul School
Fort McMurray

HARNESSING THE SUN: EXPLORING HYDROGEN FUEL CELLS AND SOLAR POWER | *$4,894*

This hands-on project will engage students in using the Solar Hydrogen Science Kit to design and create clean energy applications powered by solar energy and hydrogen fuel cells. Students will learn about renewable energy resources, including solar and hydrogen power, and how these technologies can reduce greenhouse gas emissions and promote energy efficiency.

Through building motorized systems powered by solar-generated hydrogen, students will develop problem-solving and design skills while exploring the environmental and economic impacts of sustainable energy solutions. The project will culminate in a public showcase where students present their designs, fostering connections with local energy experts and promoting awareness of renewable energy technologies.

10. Fort McMurray Composite High School
Fort McMurray

HARVESTING THE SUN: A COMPOSITE APPROACH TO GREENHOUSE ENERGY | *$5,000*

Our Composite Greenhouse Garden Project aims to create a year-round, solar-powered greenhouse at our school, promoting renewable energy and environmental sustainability. Inspired by our involvement with the Generate program, this project blends modern technology with traditional knowledge to support food literacy, healthy eating, and Indigenous cultural education

The greenhouse will focus on growing Indigenous berries, sweetgrass, and a variety of vegetables, guided by the wisdom of local Elders. This initiative will help students understand the connection between sustainable agriculture, cultural traditions, and climate action. A core goal is to eventually power the entire greenhouse using solar energy, showcasing a practical example of how clean energy can be integrated into daily life.

We are currently exploring the logistics, costs, and installation process for solar panels and battery systems. By seeking partnerships and funding, and attending events like the Cultivate Summit, we aim to strengthen our knowledge of sustainable agricultural practices and renewable energy systems.

This project will serve as a model for how schools can incorporate environmental stewardship and Indigenous perspectives into hands-on learning. It will also encourage youth to imagine a future where technology and tradition work together to create sustainable, resilient communities.

11. Georges P. Vanier School
Calgary

EVERGREEN GARDENS | *$4,720*

Our project is a geodesic growing dome that will provide our school and community with the ability to grow organic produce all year round, which will be used in both Georges P. Vanier and Ecole Routhier School food programs. It will also be a space used as a place for education within our science programs. Our entrepreneurship students will be creating a budget plan, applying for grants and sponsorships, coming up with a way to create and keep the dome functioning as well as our agriculture students will be planting/taking care of everything grown in the dome.

12. Mamawi Atosketan Native School
Ponoka

TINY HOMES, BIG LEARNING: A CROSS-GRADE 3D ENERGY PROJECT | *$4,990*

Mamawi Atosketan Native School (MANS) in Maskwacîs, Alberta will embark on "Tiny Homes, Big Learning" — a hands-on energy education project supported by an A+ for Energy grant. Students will design and build model tiny houses as a vehicle to learn about energy efficiency, sustainable building, and community well-being. This context is locally and culturally relevant: many Indigenous communities, including Maskwacîs, face housing challenges. By exploring how a well-insulated, energy-efficient small home retains heat and uses power, students connect classroom science to real-world issues of housing quality and energy use in their community. The project empowers them to apply learning in a meaningful way, addressing sustainability on a local scale.

This innovative project-based approach leverages student curiosity, modern technology, and cultural knowledge. 3D printing is a central tool: students assemble 3D printers and then fabricate custom parts for their mini-houses (frames, windows, etc.), bringing their designs to life. Each tiny house becomes a living lab for experimentation. For example, students can test how different insulation materials reduce heat loss or incorporate a small solar-powered light to understand electricity use. Throughout the process, theory meets practice – abstract concepts of heat transfer and electrical circuits turn tangible as students measure temperatures and power small devices in their models. The result is deeper energy literacy and hands-on skills in design and engineering. Equally important, the project fosters student empowerment and leadership: learners take charge of a complex project, work in teams, and ultimately share their knowledge to inspire others. The vision is to spark passion for sustainable living and give students the confidence that they can innovate solutions for their community.

13. Michael Strembitsky School
Edmonton

TECHNOLOG-E! | *$5,000*

The climate crisis has dominated much of the last decade and students are bombarded with conflicting narratives on a regular basis. Unfortunately this combination has led to a significant number of young people experiencing "climate anxiety" which leaves them feeling they have no control over what is happening from an environmental standpoint.

A project like Technolog-E will give them an opportunity to not only learn about how energy is generated in Alberta, but also to understand that there are changes that individuals can make that can have an impact. Students will collaborate throughout the school to gather information about concerns in order to better inform the project's end goal. In addition to helping calm their anxiety, this project hopes to harness the natural engagement that comes with hands-on, experiential learning by having students design, build and code model systems using a variety of climate action kits and other technological supplies.

14. Seven Persons School
Seven Persons

FORGING CHANGE: POWERING CHANGE THROUGH STUDENT ACTION | *$5,000*

Our Junior Kindergarten to Grade 9 student exhibition of learning, titled "Forging Change," will serve as a dynamic celebration of student-driven innovation and environmental learning within our school community. The goal is to highlight a diverse array of age-appropriate, curriculum-connected projects that focus on two critical global challenges: reducing greenhouse gas emissions and promoting energy efficiency and conservation.

At its core, "Forging Change" demonstrates how students, regardless of age or grade level, can engage meaningfully with real-world environmental issues through inquiry-based learning, design thinking, and collaborative problem-solving. Each project reflects not only the scientific and technical understanding appropriate to the student's developmental stage, but also creativity, critical thinking, and a sense of social responsibility in rural Southern Alberta.

From playful explorations in Kindergarten to sophisticated energy audits and digital solutions in Grade 9, students will research, design, test, and share practical solutions aimed at creating a more sustainable world. Our school and classroom will be transformed into innovation labs, where solar-powered prototypes, conservation campaigns, and carbon-reduction models come to life.

This project will support students gaining a deepen their understanding of energy systems and environmental science as well as building essential skills such as communication, teamwork, and leadership. Most importantly, they gain a sense of agency—understanding that their ideas and actions, no matter how small, can contribute to meaningful change. Students will be empowered as stewards of the land to become young environmental leaders, actively shaping a cleaner, more energy-conscious future for rural Alberta.

15. St. Benedict Elementary School
Edmonton

GREEN GUARDIANS: CODING FOR A SUSTAINABLE FUTURE | *$4,779*

The Green Guardians: Coding for a Sustainable Future utilizes the Climate Action Robotics Kit and Micro:bit coding to support Grade 5 students at St. Benedict School in their learning about energy, with a focus on renewable resources. This 3-month, hands-on learning initiative is designed to teach students about energy systems, conservation, and sustainability through coding, prototyping, and data analysis.

Aligned with the 2025 Alberta Grade 5 Science Curriculum, the project enhances understanding of renewable and non-renewable energy sources, energy transfer, and environmental impacts. Through collaborative problem-solving, creativity, and critical thinking, students will develop innovative solutions that promote energy conservation and environmental stewardship.

16. St. Catherine Catholic School
Grande Prairie

ENERGY-EFFICIENT LEARNING: THE POWER OF E-READERS | *$5,000*

This project aims to reduce energy consumption and paper waste by replacing traditional books and photocopies with e-readers in Grade 6 classrooms at St. Catherine School in Grande Prairie, Alberta.

Currently, as a Grade 6 teacher, I have had to print between 200 and 500 pages per student for research assignments, reading comprehension exercises, and novel studies. This is an unsustainable practice, leading to:

- Excessive paper waste and ink usage
- High energy consumption for photocopying and printing
- Significant carbon emissions from paper production and transportation

By incorporating e-readers, we can:

- Drastically reduce paper consumption and printing energy use
- Teach students about energy efficiency and conservation through real-world data collection
- Analyze and compare the carbon footprint of paper-based vs. digital learning resources
- Showcase results to the broader school and community to inspire sustainable learning practices
- Through student-led energy tracking and comparative analysis, this project will demonstrate how small technological changes can contribute to a more energy-efficient and sustainable future

17. St. Joseph High School
Coaldale

SOLAR POWERED GOLF CART SHED | *$5,000*

The purpose of the Solar Powered Golf Cart is for students to become more environmentally conscious by understanding the benefits and challenges of solar technology and how it works alongside conventional energy sources, and to inspire creative project-based learning. Students will design, build, test, and modify scale models of their shed designs until they are satisfied they have done their best to harness as much energy as possible. The leading design will then take shape as our full-scale solar shed that will be tasked to keep our solar golf cart out of the elements, locked up, charged, and ready to go!

18. St. Theresa Catholic School
Sherwood Park

PEDAL POWER: ALTERNATIVE FORMS OF ENERGY AND TRANSPORTATION! | *$5,000*

Alternative sources of energy and rapidly expanding options for daily transportation are topics that engage and excite people of all ages. Students will be responsible for searching out and discovering how various modes of transport have different environmental impacts and how renewable energy sources can help further affect change. Students will explore and discover how their personal transportation choices can affect the local community, provincial/federal decision making and even global economies/ecosystems.

Our project will enable students to create, track, and document the energy usage of various modes of daily transportation while exploring the fast-rising shift away from daily reliance on Internal combustion engine (ICE) vehicles. Students will have an opportunity to utilise electric bikes/scooters, both at school and at home. Students will research and engage in the balance between energy production, usage and conservation and make concrete connections to their own real world decisions about transportation and renewable energy.

Charging of the e-bikes using solar energy instead of fossil based energy will expand the students' knowledge base by bringing up topics of renewable energy sources, conservation and reducing greenhouse gas emissions. As students learn about their energy consumption habits, as well as more efficient products coming on the market, they will be able to make better decisions regarding their daily energy usage.

19. Strathmore High School
Strathmore

AUTOMATING SUSTAINABILITY – RETROFITTING OUR AQUAPONICS SYSTEM WITH FARMBOT | *$5,000*

Our student-led project aims to revolutionize our existing aquaponics system by integrating a FarmBot—an open-source, automated farming system. By merging aquaponics with precision robotics, we seek to create a smarter, more efficient, and self-sustaining food production model at SHS.

The project will involve students across disciplines—including robotics, environmental science, agriculture, and programming—offering hands-on experience in coding, engineering, sustainable farming, and system integration. We will design custom mounts and software modifications to align the FarmBot's functions with the unique layout and needs of our aquaponics system.

The goals are threefold: to increase crop yield through precision agriculture, to shift the workload our student team deals with just as shifts are occurring in the real world, and to showcase how emerging technologies can enhance sustainable practices. The automated system will also serve as an educational tool and demonstration model for our school and broader community, inspiring innovation in green technology.

This initiative highlights student innovation, teamwork, and the pursuit of a more sustainable future through the intelligent application of robotics in agriculture.

20. Visions West Outreach School

Rocky Mountain House

CULTIVATING SUCCESS: OPTIMIZING ENERGY CAPTURE BY ANALYZING THE INFLUENCE OF GROWTH MEDIUM AND HYDRATION ON CUCUMBER PHOTOSYNTHETIC PERFORMANCE | ***$5,000***

In the continuation of our energy project, "Cultivating Success: A Study on Plant Growth in Various Media", Visions West Outreach School will undertake further cross-curricular experimentation to determine the impact moisture has on vegetative crop yield and identify practices that can be utilized as droughts continue to plague our region.

This project investigates how different growing methods (hydroponics vs. soil with varying moisture) affect cucumber plants' ability to convert light energy into biomass through photosynthesis. By measuring photosynthetic rates, plant growth, and estimating carbon capture under these conditions within controlled grow tents, we aim to determine the most energy-efficient and productive approach for cucumber cultivation.

Our pursuit is not merely academic; it is rooted in the imperative to address pressing global challenges, including sustainability, resource optimization, food scarcity, and climate change. This student-designed project addresses questions generated from the results of the first project and will support genuine problem-solving skills for very real-world problems. The success of this inquiry can not only be seen through the data acquired, but also in the authentic and hopeful engagement of students; they are the key to a greener, more abundant tomorrow.