

Turning Awareness into Action: Community-Based Solar Education and Demonstration Projects in New Brunswick

Project: EDF-CA-2022a003



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Janie Brooks, Climate Change Projects Manager

EOS Eco-Energy Inc.
P.O. Box 6001, 43D Main Street
Sackville, NB E4L 1G6
www.eosecoenergy.com



ECO - ENERGY
ÉCO - ÉNERGIE

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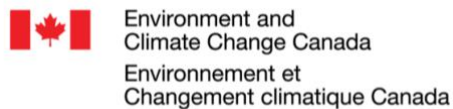
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- The Tantramar Wetlands Centre
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Introduction

The accumulation of greenhouse gases in the atmosphere is a major driver of human-caused climate change. Atmospheric CO₂ is the highest it has been in 2 million years (IPCC, 2023). The nine-year period between 2015 and 2023 consist of the nine hottest years on the global record since temperatures were first recorded 174 years ago, with 2023 being the hottest of them all (WMO, 2023). High emissions are dramatically changing the planet, intensifying Earth's weather systems and causing sea levels to rise. New Brunswick has already been greatly impacted by severe weather including flooding along the Saint John River and many other rivers and brooks, dangerous ice storms in the Acadian Peninsula, and coastal flooding from storm surges has impacted the Bay of Fundy and Northumberland coastlines. The rural, low-lying Tantramar region in southeast New Brunswick is located between the head of the Bay of Fundy and the Northumberland Strait. It is one of the most vulnerable regions in the province to climate impacts. This area has seen an increase in coastal and inland flooding, hurricanes, windstorms, and droughts. It also faces increasing risk from sea level rise. This region forms part of the Chignecto Isthmus, the narrow land bridge that connects Nova Scotia with the rest of Canada and sees an estimated \$50 million in goods transported daily. It is critical to greatly reduce emissions as quickly as possible. Improving energy efficiency, energy conservation and implementing renewable energy (such as solar) are all ways to reduce emissions. Increased awareness and education about emissions reduction methods is critical for New Brunswick residents to transition to more sustainable energy practices.

In this project, EOS Eco-Energy worked to educate youth and adults in the Tantramar-Strait Shores-Memramcook region about solar energy. This was achieved by coordinating the installation of a large solar array at the Port Elgin Regional School, providing Marshview Middle School and Dorchester Consolidated School with a portable solar panel and battery pack, coordinating a solar project with Tantramar Regional High School and the Tantramar Wetlands Centre, hosting educational webinars, and conducting hands-on educational activities with both youth and adults about solar energy.

Goals and Objectives

The project had the following overall goals:

1. Use community-based initiatives to share knowledge and create the tools and skills needed to increase the uptake of solar energy in New Brunswick.

2. Reduce barriers to "going solar" in communities that face climate risk and obstacles to engaging in climate action.
3. Reduce greenhouse gas emissions in the Tantramar region.

The goals were achieved through the following objectives:

1. Host free public workshops on a variety of energy efficiency and solar energy topics open to all New Brunswickers to increase their awareness and understanding of solar energy.
2. Add features and tools to the Renewables NB website (such as energy efficiency information, new renewable energy profiles, add to the business directory, etc.) to help New Brunswickers go solar.
3. Install solar energy demonstration sites at three or four community schools for educational purposes and public engagement.
4. Develop hands-on renewable energy activities for youth using the solar demonstration sites.
5. Host public site tours of the installed solar panels.

Methodology

Year 1 of the project (2023-2024):

1. Post-secondary summer student hired to help with the project.
2. Project Committee Meetings: Met with project partners to plan workshops, solar projects at schools, community outreach, etc.
3. Organized, promoted, and hosted solar workshops: Workshops (or webinars) in French and/or English on solar power and related topics. Promoted across NB.
4. Further developed EOS lesson plans and activities related to renewable energy: Use and promote EOS lesson plans at schools, summer camp(s), etc.
5. Educated staff and students about solar energy.
6. Coordinated the selection, design, installation and promotion of solar demonstration projects at first 2 schools: Port Elgin Region School and Marshview Middle School.
7. Used solar panel demo site for school and community awareness raising: EOS and students create educational trilingual signage with funder logos; Track power generation, emissions reduced. Conduct experiments, monitor power generation, etc. Promote solar and the demo sites to the public during social media posts and site tours or video, etc.

8. Climate and Renewable Energy (CARE) Week: Building off successes with CARE Week 2023, in partnership with the Renewables NB network: coordinated, hosted and promoted a week of events.

9. Communications for Year 1: Promoted project and funders, workshops, solar demonstration site(s), RNB website, etc. via EOS website, social media sites, PRs, etc.

Year 2 of the project (2024-2025):

1. A post-secondary summer student was hired to help with the project.

2. Project Committee Meetings: Met with project partners to plan workshops, solar projects at schools, community outreach, etc.

3. Organized, promoted, and hosted solar workshops: Workshops (or webinars) in French and/or English on solar power and related topics. Promoted across NB.

4. Used and promoted EOS lesson plans at schools, summer camp(s), etc.

5. Educated staff and students about solar energy.

6. Coordinated the selection, design, installation and promotion of solar demonstration projects at third and fourth schools: Dorchester Consolidated School and Tantramar Regional High School.

7. Used solar panel demo site for school and community awareness raising: EOS and students

create educational trilingual signage with funder logos; Track power generation, emissions

reduced. Conduct experiments, monitor power generation, etc. Promote solar and the demo sites to the public during social media posts and site tours or videos, etc.

8. Climate and Renewable Energy (CARE) Week: Building off successes with CARE Week 2023, in partnership with the Renewables NB network: coordinated, hosted and promoted a week of events.

9. Communications for Year 2: Promoted project and funders, workshops, solar demonstration

site(s), RNB website, etc. via EOS website, social media sites, PRs, etc.

Solar Schools

As a result of this project, four schools gained solar equipment: Port Elgin Regional School, Marshview Middle School, Dorchester Consolidated School, and Tantramar Regional High School (including the Tantramar Wetlands Centre).

Port Elgin Regional School

Site Description

Port Elgin Regional School is a Kindergarten - Grade 8 public school located at 33 Moore Road, Port Elgin, New Brunswick. Port Elgin Regional School is a part of the Anglophone East School District. The school serves Port Elgin and the surrounding areas. There are approximately 170 students and 22 staff members. The school aims to give their students hands-on learning experiences through their four-season greenhouse, teaching kitchen, food forest, media room, and forest classrooms.

Planning

EOS Session with Port Elgin Regional School Teachers and Staff: Leading up to the solar installation at Port Elgin Regional School, EOS staff met with Port Elgin teachers to hear their feedback on what they would want from a non-profit wanting to help enrich their science curriculums and expand their students' understanding of climate change and renewable energy. EOS staff collected feedback and contact information from 8 teachers and administrative staff.

EOS and the Port Elgin planning team selected Fundy Solar as the solar installer to design and install the system because he is very local to the region. EOS and Fundy Solar staff met with the principal, teachers and students at Port Elgin Regional School numerous times throughout the winter and spring to plan the project, select the site, size the system and apply for the permits. The system was installed in the summer and contains twenty-four 450-watt panels and is ground mounted. It will power a supplementary heating system for the 30 x 60 ft greenhouse, saving an estimated 6,900 kWh of power per year and allowing them to continue to grow greens and vegetables for the school cafeteria, culinary classes and the local food bank at Pedvac. The system is south facing toward the rear of the school near a food forest and protected a bit from easy view and hopefully from vandalism in the future.

Installation

Fundy Solar began the installation in late spring/early summer once the permits from NB Power had been approved. Concrete footings were poured and moved into place. The structure for the solar panels was then mounted to the concrete and the panels, inverters and wiring were then installed. The system was hooked up to a net meter and was in operation in early fall 2023. Net-metering allows any additional power generated by the panels to go back into the grid and creates credits that the school can use in the winter. The long-term plan is to make the solar system off grid so that the greenhouse can be powered even during power outages resulting from winter storms.



Scoping out the project location with EOS staff, Fundy Solar, school principal and students. Photo: Amanda Marlin.



Concrete footings were installed in early July 2023 to mount the solar system at Port Elgin Regional School. Photo: Woody Thompson of Fundy Solar.



Solar array went up in July to power the nearby greenhouse. Photo: A. Marlin.



Solar array was finally connected to the greenhouse and net metered in early October so that excess power is delivered to the grid. Photo: A. Marlin.

Signage

Educational signage was designed and installed in spring 2024 for the solar array at Port Elgin Regional School (PERS). Students helped brainstorm ideas and layouts for the sign during the November 9th session. Staff also had some input. They wanted to create an easy-to-understand sign that explained what the solar system is powering, how it works, how much energy it is generating, how to read the data from the inverter and provide a visual diagram of the system.



Students design the sign for their school's solar project. Photo: A. Marlin.

EOS staff worked with designer Graeme Mesheau to design the following signage in consultation with school staff and Woody Thompson of Fundy Solar. The signage was installed in spring 2024. There is a sign for the general greenhouse, and another for the net-metering box which explains how to read the wattage data from the inverter.

WELCOME – BIENVENUE – P'JLASI

THIS GREENHOUSE IS POWERED BY A SOLAR SYSTEM!

Behind this greenhouse there are 24 solar panels, each capable of harnessing 450 watts of power from the sun. They power the greenhouse's geothermal fans and allow veggies to be grown year-round on completely renewable, clean energy. This system is net-metered, meaning any energy not used by the greenhouse goes to the electrical grid.

CETTE SERRE FONCTIONNE GRÂCE À DE L'ÉNERGIE SOLAIRE.

Derrière la serre se trouvent 24 panneaux solaires, chacun pouvant produire 450 watts d'énergie provenant du soleil. Ces panneaux alimentent les ventilateurs de la serre, ce qui permet de cultiver des légumes à la longueur de l'année grâce à de l'énergie complètement propre et renouvelable. Ce système est sujet à une entente de mesurage net, ce qui signifie que tout surplus d'énergie produite est envoyé au réseau.



SOLAR PANEL

When the sunlight hits the panels, a DC electric current is generated.

PANNEAUX SOLAIRES

Lorsque les rayons du soleil frappent les panneaux, ceux-ci génèrent un courant électrique.



INVERTER

The inverter receives the current and converts it from Direct Current (DC) to Alternating Current (AC), the most used form of electricity.

L'ONDULEUR

L'onduleur reçoit le courant électrique et convertit le « courant continu » (CC) en « courant alternatif » (CA), qui est la forme d'électricité la plus courante.



BREAKER BOX

The AC electricity flows from the inverter to the breaker box, which directs the current to the geothermal system's fans to power the school's greenhouse.

BOITE DISJONCTEURS

Le courant CA se rend de l'onduleur à la boîte des disjoncteurs, qui dirige le courant vers les ventilateurs qui alimentent la serre de l'école.



ENERGY METER

The meter records information about how much electricity has been drawn into and exported from the system.

COMPTEUR D'ÉNERGIE

Le compteur enregistre de l'information sur le montant d'électricité consommé et exporté par le système.



ENERGY GRID

Any energy not used by the greenhouse goes to the electrical grid.

RÉSEAU ÉLECTRIQUE

Toute énergie qui n'est pas consommée par la serre est envoyée au réseau électrique.

ENERGY FLOW



FLUX D'ÉNERGIE



SOLAR ARRAY PARTNERS



This project was undertaken with the financial support of the Government of Canada.
Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.



The sign that went on the front of the greenhouse, designed by Graeme Mesheau showing how the solar system works.



The sign on the side of the inverter box that describes how to read the solar data from the inverter.

Renewable Energy Activities with PERS Students

EOS staff used our previously developed lesson plans on renewable energy, along with materials provided through our partnership with the Gaia Project, with local teachers and classes to help promote renewable energy and explain how it works.

Kindergarten – grade 2: Storybook reading, solar simulation game and scavenger hunt: On June 19th, 2023, EOS summer interns visited Port Elgin Regional School. The interns had pictures of some appliances including a fridge, washing machine, oven, hair dryer, and a lamp. They asked kids to compare appliances and guess which used the most energy and explained the process of solar panels. The kids enjoyed playing a solar panel simulation game. They visited a grade 2 class with 17 students and 3 teachers/educational assistants. They started by mentioning the school's solar panels to power their greenhouse, then read a short story explaining the process of solar panels and the uses of solar energy. The kids were curious and asked many questions about solar energy. In pairs, the kids did a scavenger hunt that involved looking for certain textures, colours and engaged their senses by asking questions about what they could hear and smell. They repeated these same activities with a kindergarten/grade 1 class that had 14 students and 3 teachers/educational assistants.



Reading a story about solar power to Port Elgin students. Photo: Kyla Wilkinson.

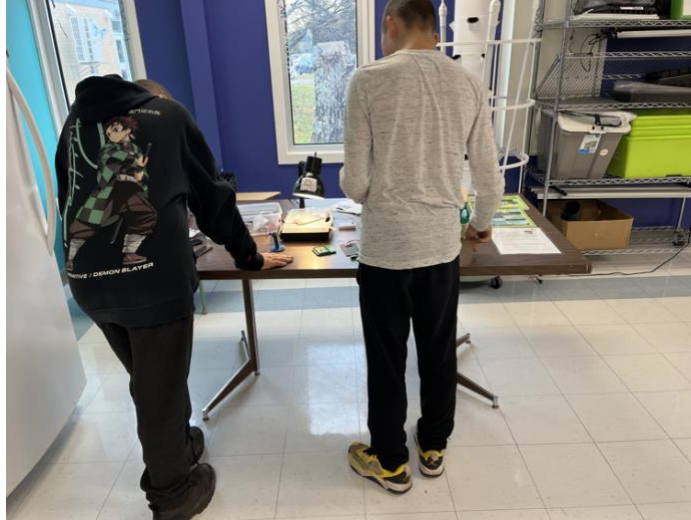
Grades 5-8 – Solar race cars: On October 17th, 2023, EOS staff visited a class of grade 5-8s at Port Elgin Regional School to celebrate the final hook up of their new solar array! 11 students and 3 staff participated. The interns read a story about how solar power works which helped to explain what photons are, how they hit photovoltaic (PV) panels, what electrons are and how they dance down electrical wires and how solar

panels generate electricity. They explained the difference between thermal panels and PV panels. They then immersed themselves in science! One student was the sun, throwing photons (small yellow foam balls) to the solar panels (two students with tin foil dishes), who collected the light particles and transferred them to their teams of electrons who got excited and ran down their wires (yellow ropes) to power a variety of household appliances (represented by other students holding images of fridges, hair dryers, computers, lamps, etc.). The first team to power all their appliances won! Once students had a better idea of how solar works, they got to work building solar powered cars from kits we purchased from Flinn Scientific. They then raced their cars. Due to it being a rainy day, we brought our indoor sunshine to power the cars. The students and staff took their cars outside the next sunny day.



Racing solar cars at Port Elgin Regional School. Photo: A. Marlin.

Renewable energy stations activity: On November 9th, 2023, EOS staff visited PERS again with 4 activity stations. 9 students and 1 staff member took part in the one-hour activity. There was a solar power station and students got to experiment and see what they could power with the sun and light. There was a station about wind power and students got to design a wind turbine and see if they could power a buzzer, fan and small light by experiments with the number of blades, angles, etc. Another station allowed students to find out how much power different household and school appliances need. Using kilowatt meters, the students tested the power usage of lamps, vacuums, hair dryers, radios, a freezer, kettle, etc. They were surprised to find out that the kettle took more power than the large vacuum. The final station involved creating a drawing for the educational sign for their school's new solar array.



*Port Elgin students experimenting for thermal solar and photovoltaic solar energy.
Photo: A. Marlin.*

Energy Detectives Lesson at Port Elgin Regional School, Grade 4 Class: On January 31, 2025, Janie visited Port Elgin Regional School to teach lessons about energy efficiency and renewable energy. They spent 1.5 hours with a Grade 4 class that had 21 students and 2 school staff. The lesson consisted of a 15-minute interactive presentation about what energy is, the different types of power plants in New Brunswick, and what energy conservation and efficiency means. The students played a game where they were shown a list of devices ranging in size and function and were asked what device they thought used the most energy, while also discussing their reasoning. Janie then set up a hand-crank powered light bulb system built by the Gaia Project staff. Each student took a turn hand-powering an incandescent light bulb vs. an LED light bulb and was asked to describe the differences they noticed between the two light bulbs. For the rest of the class, there were discussions of the differences between renewable and non-renewable energy, as well as reflections of what the students learned, and answering questions about energy production. Several students provided feedback and said the lesson was very exciting, especially with the hand cranked light bulbs they all took turns powering.

Energy Detectives Lesson at Port Elgin Regional School, Grade 1 Class: On January 31, 2025, Janie spent 1.5 hours teaching a grade 1 class with 19 students and 4 school staff about energy efficiency, and they discussed how the school's solar array produces energy to power the school's greenhouse. The class discussed what energy and solar energy were before breaking up into 4 groups. These groups were then asked to draw what the school's solar array looked like in each of the 4 seasons (each group with one season), before coming back together to show off and explain their drawings. Janie

then set up the hand-crank light bulb activity, and each student took a turn to power the incandescent light bulb followed by an LED bulb. The students were asked what differences they noticed between the two types of light bulbs, and to describe how the activity demonstrates energy efficiency.

Site Tours

In January 2024, recently hired Project Coordinator Janie Brooks received a tour of the solar array and the greenhouse from Cristoph Becker, the Port Elgin School Principal. They discussed potential activities that can be done with kids to track the solar power generated by the array and the location of educational signage for the project.



On February 10th, 2024, EOS Eco-Energy hosted a solar panel site tour at Port Elgin Regional School. From 11:00-12:00 pm, 6 participants met in front of the greenhouse to learn about the solar meter from solar installer Woody Thompson of Fundy Solar. They walked down to the solar panels to learn more about the inverter and the solar panels themselves.



Learning from installer Woody Thompson about how the Port Elgin Regional School solar array works and how to read the data from the inverter. This was the last event of CARE Week 2024. Photos: Kyla Wilkinson and Janie Brooks.

In early summer 2024, project coordinator Janie Brooks gave a site tour to new EOS interns Brianna MacEachern and Rachel Francis and showed them the recently installed signage.



The Port Elgin Regional School solar array and greenhouse with new educational signage about solar. Photo: Janie Brooks.



The signage on the inverter box describing how to read the data from the inverter inside the box. Photo: Janie Brooks.

In February 2025, Janie gave a tour of the site to ECCC funding officer Gisèle Savoie and discussed the process of coordinating the installation and tracking wattage produced by the array.



The solar array in February 2025 after a time of heavy snow. Photos: Gisèle Savoie.

In February 2025, Principal Christoph Becker gave the Tantramar Regional High School Principal Susan Lafford, two TRHS teachers, and Environmental Club member Josh Mullens a tour of the solar array, greenhouse, and the school’s teaching kitchen that uses vegetables from the greenhouse. The TRHS team shared updates on their own school’s solar project plan and discussed how the two schools can collaborate on providing education and increasing awareness about solar energy in the region.

Power Production Since Installation

The solar array installed at Port Elgin Regional School in the first year of this project has produced 6,899 kWh of solar energy as of mid-April 2025, reducing the school's GHG emissions by 2.07 tonnes in its first 18 months since installation.

Port Elgin Regional School solar array electricity production* in each season (2023-2024) and for the full year from January 2024 to January 2025.

Season (two months from each season)	Energy produced by solar array (kWh)	Energy consumed by greenhouse (kWh)	Greenhouse gas emissions reduced**
Winter (Dec 13, 2023 - Feb 14, 2024)	653	1,562	196 kg (0.2 tonnes)
Spring (March 13, 2024 - May 13, 2024)	1436	1,551	431 kg (0.43 tonnes)
Summer (June 11, 2024 - Aug 14, 2024)	1636	635	491 kg (0.49 tonnes)
Fall (Sept 12, 2024 - Nov 15, 2024)	364	927	109 kg (0.11 tonnes)
Production over 12 months (Jan 12, 2024 - Jan 15, 2025)	5,622	6893	1,687 kg (1.69 tonnes)

**Emissions calculation based on current New Brunswick [GHG equivalency \(source\)](#) being 0.3 Consumption Intensity.

*Calculated from the January 2025 net-metering report from NB Power, shown below:



Netmetering Summary

Customer Name: DEPT OF EDUCATION
 Account number: 6583664-6 meter # 1010314
 Email Address: climatechange@eosecoenergy.com; christoph.becker@nbed.nb.ca
 Premise Address: PORT ELGIN, 33 MOORE RD GREENHOUSE

Read Date	NB Power Reading	NB Power Supply - kWh	Customer Reading	Customer Supply - kWh	Net - kWh	Cumulative Carry forward Credit kWh	Billed kWh	Customer supply / credit applied to bill
9/13/2023	19,422							
10/12/2023	20,329	907						
10/12/2023	0		0.00					
10/13/2023	0	907	0.00	0	907	0	907	0
11/14/2023	545	545	380.00	380	165	0	165	380
12/13/2023	1,558	1,013	677.00	297	716	0	716	297
1/12/2024	2,137	579	1,003.00	326	253	0	253	326
2/14/2024	3,120	983	1,330.00	327	656	0	656	327
3/13/2024	3,879	759	1,774.00	444	315	0	315	444
4/12/2024	4,736	857	2,353.00	579	278	0	278	579
5/13/2024	5,430	694	3,210.00	857	(163)	163	0	694
6/11/2024	5,949	519	4,166.00	956	(437)	600	0	519
7/12/2024	6,316	367	5,152.00	986	(619)	1,219	0	367
8/14/2024	6,584	268	5,802.00	650	(382)	1,601	0	268
9/12/2024	6,636	52	6,142.00	340	(288)	1,889	0	52
10/15/2024	6,881	245	6,376.00	234	11	1,878	0	245
11/15/2024	7,563	682	6,506.00	130	552	1,326	0	682
12/13/2024	8,248	685	6,551.00	45	640	686	0	685
1/15/2025	9,030	782	6,625.00	74	708	0	22	760
2/14/2025	9,968	938	6,677.00	52	886	0	886	52
3/14/2025	10,612	644	6,821.00	144	500	0	500	144
4/11/2025	11,390	778	6,899.00	78	700	0	700	78

Net-metering summary from NB Power for the Port Elgin School solar array. Source: Janie Brooks. GHG emissions savings calculations in table by Janie Brooks.

Marshview Middle School

Site Description

Marshview Middle School is a Grade five - eight public school located at 19 Queen’s Road, Sackville, New Brunswick. Marshview Middle School is a part of the Anglophone East School District. The school serves Sackville and the surrounding areas. There are approximately 310 students and 30 staff members. The school prides itself on having a very supportive and active Parent School Support Committee.

Planning

There were four planning meetings held with staff and students at the Marshview Middle School (MMS) about this project:

On April 11, Amanda met with Marshview Middle School's Eco Club and World Issues Club to discuss solar project and brainstorm possibilities, which included a solar popcorn maker, solar workstation, solar lighting, and a solar water fountain. This discussion involved 20 students and 2 teachers.

On May 9th student intern Kyla and Amanda visited Marshview Middle School's Eco Club for an hour. 2 EOS staff, 4 adult community members, 3 teachers and roughly 15 students were present. Leanne Larecey read a story about an Indigenous child to the Eco Club members. They discussed what they wanted to see planted in the urban forest. Nicole Porter from Amlamogog First Nation had some input about incorporating native plants, the four sacred colours, the four directions and having a cedar tree dedicated to residential school survivors. Kyla went outside with the project's permaculture consultant Estelle Drisdelle and community member Steve Scott, to go over the boundaries for the land that needs to be tilled and fencing details.

On May 23rd student intern Kyla and Amanda returned to Marshview Middle School's Eco Club for an hour. 2 EOS staff members, 3 teachers, 1 community member and roughly 10 students were present. The Marshview teachers asked students who were interested in helping move soil and plant on the days when EOS staff were at the school in June and confirmed dates. Steve Scott answered questions about staking and fencing installation. Kyla shared with students and staff different options and pricing for their solar funding. This included a parabolic solar cooker and "Whirley-Pop" popcorn maker for approx. \$800, lighting from the garden- small light stakes \$2 or motion sensor lamp posts \$155-279, solar stand-up charging stations \$4,343-6,615, solar irrigation system for the garden \$150, solar radio \$20, solar fairy house ~\$20, solar drinking fountain, and solar water fountain. Students added an additional idea of indoor solar powered lighting, with a cost of \$17-66 for a lightbulb with a small solar panel attached.

Meetings were again held in the fall with staff during "Meet the Teacher" night and during students' Care Club meeting in October with 1 staff and 10 students. Another meeting was held with three staff members on October 27th to discuss a mobile battery pack and foldable solar panel that can power up to 3000 watts (6000 watts of surge power). It can power a popcorn maker and many other things and is easily transportable around the school property for different experiments and uses. The school decided to go with this option, which was then ordered on October 31st.

Equipment Deliveries & Demonstrations

Solar Lighting: Twelve solar lights were installed in the courtyard in June 2023. They can run for 8 hours on a solar charge and feature a rechargeable battery and 1 LED light (10 lumens).



These outdoor solar-powered lights bring beautiful lighting to the school courtyard, where several events and staff gatherings are held. Photos: Janie Brooks.

Mobile Solar Power Station: A Hybrid Power Solutions Power Station was delivered on March 25th, 2024. This bundle consists of a portable, foldable solar array and a portable lithium ion battery. The system provides 3000 watts of surge power and can function in a wide range of weather conditions, while also being safe for indoor use. Upon delivery, Annie from Vertex Solar Solutions explained how to use the equipment to 2 EOS staff and 3 school staff for 30 minutes. Unfortunately, it was found that the equipment was faulty and Annie had to send it back to the manufacturer to be fixed.



*The portable solar array and battery pack after demo at Marshview Middle School.
Photo: Janie Brooks*

Solar Popcorn Equipment Demo at Marshview Middle School: On September 4th, 2024, Annie from Vertex delivered the fixed solar array and batteries. Students and staff were shown the operation of the popcorn machine using solar energy. Annie showed 6 students and 2 staff how to use the solar equipment, while Janie taught about energy units, why an inverter is needed, and the difference between DC and AC. Marshview Middle School continues to use its solar powered popcorn machine for school events and fundraisers.



Annie, a solar installer from Vertex Solar Solutions, showing EOS and school staff how the battery pack works.

Solar Popcorn Making Machine:

On September 4th, 2024, Janie delivered a popcorn machine (as requested) to Marshview Middle School, and showed how the popcorn machine connects to the solar battery pack.

Equipment Decal

The Project Coordinator designed and delivered stickers with the funder logos to go on panel and battery pack.



The sticker with funders' logos was placed on the side of the battery pack and on the side panel array. Photos: Janie Brooks

Renewable Energy Activities with MMS Students

EOS staff organized a variety of solar power and renewable energy activities at Marshview Middle School.

Solar race car activity with Marshview's Eco Club: On April 25th, 2023, EOS staff met with the school Eco Club to read a story about solar power, and then the group built 4 solar cars and tested them outside in the courtyard. The 1-hour activity included 15 students in grades 5 through 8 and 2 teachers. This helped them to see how solar power works and what it can be used for.



Making and testing solar cars at Marshview Middle School. Photos: Amanda Marlin.

Climate Labs: Energy Detectives – energy production in New Brunswick: On February 28, 2024, Project Coordinator Janie Brooks helped Jimmy Therrien from the Gaia Project lead an interactive lesson about electricity production to a group of 4 students from grades 5 through 8. 4 youth and 4 adults participated in this 1.5-hour activity. This lesson involved the “Become a Human Power Plant” activity, which demonstrates the difference in efficiency between an incandescent light bulb and an LED light bulb by having the kids take turns powering them each via a hand crank. In the second half of the lesson, kids chose three devices around the school to plug-in to kilowatt meters for testing their predictions about how much energy the devices use over a 24-hour period.

Climate Labs: Energy Detectives – the connection between energy production and climate change: On March 13th, 2024, Project Coordinator Janie Brooks led an interactive lesson about greenhouse gases, the greenhouse effect and climate change. 3 youth and 4 adults participated in this 1.5-hour activity. While learning, the kids drew on colouring pages featuring renewable energy systems and discussed several reflective discussion questions.

Intro to Solar Equipment at Marshview Middle School: On April 18, 2024, Janie went to Marshview Middle School to test out the school's new portable solar equipment with students and school staff. Unfortunately, the equipment was faulty and had to be sent back to the manufacturer to be fixed. The experience, however, still provided an engaging opportunity for students to help troubleshoot the equipment issues, and to learn more about how the solar panels and battery pack should function. The students learned about why the solar panels should be propped up at a 45 degree angle and should be kept south-facing. We also discussed their plans to use it to make "Solar Pop" sustainable popcorn for students to enjoy every few weeks at lunch time.



Marshview students and staff admiring their new solar equipment after setting it up in the school's courtyard on April 18th. Photos: Janie Brooks

Energy Detectives at Marshview Middle School: On March 12th, 2025, Janie led an activity with Marshview's Solar Pop ENGAGE session. Janie brought kilowatt metres and the students tested how many kWh the large popcorn machine consumes during one hour of making popcorn. Janie also gave a presentation on how energy is produced in New Brunswick and how the number of solar projects in NB is rapidly increasing each year.

Renewable Energy Stations at Marshview Middle School: On March 19th, 2025, Amanda Marlin from CLIMAtlantic (previous EOS ED and parent of a Marshview student in the class) and Janie Brooks did a lesson about energy and how energy production relates to climate change. For the first 10 minutes, Amanda showed the ENGAGE group two short videos about climate change (one describing it at a global scale and one about climate change impacts in the provinces of Atlantic Canada) and discussed the videos with the students. Amanda then described 3 activity stations that had been set up around the classroom, and handed out prediction and reflection sheets to go to each group: A wind turbine power station, a kilowatt meter with various devices station, and a solar power station with solar cars and a solar power circuit board for the kids to experiment with. The students were split into three groups, and each group spent 15 minutes at each station. For the last 10 minutes of the class period, Amanda and Janie asked the students to describe what they learned at each station and if their predictions about what would happen at each station were accurate.

Power Production

Large popcorn machines use a lot of energy due to the amount of heat they require. In early spring 2025, Janie showed a group of Marshview students how to measure the energy consumption of the popcorn machine using a kilowatt meter. The class plugged the popcorn machine through the kilowatt meter and made popcorn continuously for one hour to make popcorn for other students around the school. After one hour, the reading on the kilowatt meter was 0.18 kWh. The students have held three "Solar Pop" popcorn sales in the school cafeteria so far, which would total about 0.54 kWh of energy being used by the solar equipment to make popcorn.

While this number is not very high, this activity provides engaging opportunities for students to learn about kilowatts and energy consumption and learn about how it relates to GHG emissions depending on where the energy is coming from.

Dorchester Consolidated School

Site Description

Dorchester Consolidated School is a Kindergarten - Grade 8 public school located at 18 Harrop Avenue, Dorchester, New Brunswick. Dorchester Consolidated School is a part of the Anglophone East School District. The school serves Dorchester and the surrounding areas. The school has approximately 100 students and 25 staff members. The school prides itself on providing a welcoming and nurturing learning environment for all students.

Planning

On May 7, 2024, Janie and Brianna met with school principal June Leger and school custodian Charles Cormier at the school to discuss potential collaborations and gauge the school's interest in receiving solar demonstration equipment for students. They expressed great interest in a small, portable solar system (like the system picked out by Marshview Middle School) as a science classroom educational tool. They also expressed interest and excitement about EOS staff visiting and teaching kids about solar energy.

Equipment Delivery & Demonstration

November 25th, 2024: Upon Vertex Solar Solutions' delivery of the equipment, Janie and Annie (Vertex solar installer) presented to Lisa Wells' middle school science class of 23 students. We demonstrated how to use the portable solar battery pack and answered the students' questions about the equipment and solar energy in general. 5 school staff were also present, including the school principal, teachers and EAs.



Vertex solar installer Annie Haddad and Dorchester science teacher Lisa Wells demonstrating to students how the solar equipment works to power devices such as a popcorn popper from Lisa Wells' classroom. Photos: Janie Brooks.

Renewable Energy Activities with DCS Students

Energy Detectives at Dorchester Consolidated School, Grades 5-6 Class: On May 27th, 2024, Janie and Brianna did the EOS-modified Energy Detectives lesson/activity with a class of 15 kids in grades 5 and 6 for 1.5 hours. The lesson consisted of a combination

of Gaia’s Energy Detectives days 1 and 3 presentations, with the kilowatt meter activity. The kids went around the school and plugged various devices into the meters and left them there for 45 minutes, then compared how much energy each device consumed. They learned about how energy is generated in New Brunswick, the difference between renewable and non-renewable energy, other pros and cons of different energy sources, and how electricity generation has contributed to climate change by producing greenhouse gases.

Energy Detectives at Dorchester Consolidated School, Grades 7-8 Class: On May 27th, 2024, Janie and Brianna did the EOS-modified Energy Detectives lesson/activity with a class of 17 kids in grades 7 and 8 for 1.5 hours. The lesson consisted of a combination of Gaia’s Energy Detectives days 1 and 3 presentations, with the kilowatt meter activity. The kids went around the school and plugged various devices into the meters and left them there for 45 minutes, then compared how much energy each device consumed. They learned about how energy is generated in New Brunswick, the difference between renewable and non-renewable energy, other pros and cons of different energy sources, and how electricity generation has contributed to climate change by producing greenhouse gases.

Equipment Decal

The Project Coordinator designed stickers with the funder logos to go on panel and battery pack.

Tantramar Regional High School: Tantramar Wetlands Centre

Site Description

The [Tantramar Wetlands Centre](#) is a community-based hub of wetland education that specializes in experiential programming for public school students and teachers. The Tantramar Wetlands Centre is located within the Tantramar Regional High School at 233 Main Street, Sackville, New Brunswick. The centre was established in 1998 by Ducks Unlimited Canada, the Canadian Wildlife Service, New Brunswick’s Department of Natural Resources, the Town of Sackville and the School District, to promote wetland conservation through education. The Centre has a 37-acre site that serves as an outdoor classroom for local schools. The staff and students involved at the Centre do a great amount of trail and outdoor classroom maintenance with regular trimming and pruning of the trails and spaces. These trails are used a lot by community members from all over the region, as they are located within the Sackville Waterfowl

Park where hundreds of people go every year to enjoy nature and see many species of birds and other wildlife.

Planning

In a conversation in February 2024 with Tantramar Wetlands Centre Executive Director Melanie Ball, Janie found out that the TWC's shed ("the Crake Barn") has rooftop solar panels installed a few years ago, but the solar array has not been in use. The solar batteries to accompany the array had not been working for a couple years, and the Wetlands Centre has not had the funds available to replace the battery to get the system functioning again. Melanie explained how the shed's solar panels were installed for the function of powering electric trimmers for trail maintenance, various custodial tools used at the school, and to demonstrate renewable energy directly to high school students. Janie described the EOS project and discussed with Melanie the potential for EOS to assist the TWC in replacing the batteries for the shed's solar system. Melanie was very excited about this prospect and grateful for the opportunity to collaborate on this project.

On June 6, 2024, Janie met with Melanie Ball to plan and discuss replacing their solar system battery so their panels can be functional again. On July 17, 2024, Janie met with Melanie Ball on-site to look at the solar equipment that needs replacing and get more information about the system's non-functioning batteries.



The Crake Barn solar panels belonging to the Tantramar Wetlands Centre. Photo: Janie Brooks.

Installation

On October 17th, 2024, 6 students and 2 school staff watched Woody Thompson of Fundy Solar install the battery for the Tantramar Wetlands Centre shed. The students and staff asked Woody several questions about the batteries and how they work, and they also were curious to learn more about Woody's career as a solar installer and the path he took to become one.

Signage & Equipment Decal

The Project Coordinator designed stickers with the funder logos to go on panel and battery pack.

Tantramar Regional High School

Site Description

Tantramar Regional High School is a Grade nine - twelve public high school located at 233 Main Street, Sackville, New Brunswick. Tantramar Regional High School is a part of the Anglophone East School District. The school accepts students from Dorchester Consolidated School, Marshview Middle School and Port Elgin Regional School. The school has approximately 544 students and 62 staff members.



Tantramar Regional High School in mid-winter. Photo: student Josh Mullens

Planning & Coordination

In April 2024, Janie met with the 8 students in the high school's Environmental Club to discuss their hopes in terms of getting a solar array and talk about why solar energy is beneficial and on the rise.

In early September 2024, Janie met with TRHS student and school environmental club leader Josh Mullens about applying for matching funding through Now for Net-Zero to help the school get a large solar array. On September 12th, 2024, Janie assisted Josh in completing and submitting the application and project budget to the Now for Net-Zero program. On September 25th, 2024, Janie and Josh met on Zoom with Sophia and Jess from the Now for Net-Zero team. Sophia and Jess confirmed funding for the project, and discussed project logistics and funding amount.

On October 4th, 2024, Janie and Josh met to discuss the project timeline and coordinate a meeting with the high school principal, a few teachers interested in being involved in the project, and solar installer Alex Lissandro from TruSun.

On October 30th, 2024, Janie, Josh, Principal Susan Lafford, 3 high school teachers, and Alex Lissandro from TruSun met to discuss project plan, budget and timeline, and how to proceed with logistics of school district approval, etc.

Janie and Josh met with the Now 4 Net-Zero funding team once a month between October 2024 and March 2025 to discuss project progress. Janie and Josh met virtually several times throughout the year to navigate challenges with getting in touch with the school district and update the budget with new details. On April 8th, 2025, Janie met with school principal Susan Lafford to discuss the timeline for installation this summer and to coordinate another meeting with TruSun Solar to go over the system design they proposed.

Installation

The installation of the school's solar system will be in late summer/early fall 2025 by TruSun's team of solar installers.



The ground region outside the school where the solar panels are to be installed.

Photo: student Josh Mullens

Renewable Energy Education with TRHS Students (including students involved in the Tantramar Wetlands Centre):

Tantramar Regional High School Climate Education Day: On May 18, 2023, high school student Quinn MacAskill coordinated a climate change education day for her peers, during which local environmental organizations such as EOS Eco-Energy,

Nature NB and Ducks Unlimited presented to students at display tables highlighting climate action projects and initiatives. Approximately 150 youth and 5 adults participated. (Link to Our Canada Project article here).



Project Intern Kyla Wilkinson describing EOS's projects to Tantramar Regional High School students. Photo: Brittany Cormier.



Tantramar Regional High School student Quinn MacAskill presenting to high school students on Climate Education Day. Photo: Brittany Cormier.

Presentation to Tantramar Regional High School Environmental Science Class: On December 4, 2024, Janie and Kyla delivered a 1-hour presentation to the Environmental Science class at Tantramar Regional High School. They introduced EOS and described their current projects of efficiency and renewable energy education, climate change adaptation, and watershed monitoring. They also described environmental science career options with a focus on the non-profit sector, and explained ways high schoolers can get involved in local environmental non-profits like EOS.

Signage

EOS prepaid signage designer, printer and installer Graeme Mesheau to help the school students, staff and EOS coordinators create more in-depth educational signage about the shed's solar system in late spring 2025.

Other Outreach and Education

Solar Activities with Youth

Apart from the activities done at Port Elgin Regional School, Marshview Middle School, Dorchester Consolidated School, and Tantramar Regional High School, EOS conducted additional solar energy activities with other groups of students during the two years of this project.

Sackville Nature Camp 2023: On Monday, June 26th, 2023, EOS staff visited the annual Silver Lake nature camp for an hour. They divided the kids into 3 groups by age. The youngest group had 13 kids. They read a book about renewable energy that explained what solar energy is and why it is important. The kids then drew a city with the things they read about in the book: forests, rivers, solar panels, wind turbines, etc. The middle group had 14 kids. They learned about energy efficiency and tested out the different wattage small home appliances use. The older group had 12 kids. They got to design and build their own solar cars. EOS staff also talked about the town's EV charging stations with them. When the cars were complete, they raced them down the roads of the city the other kids had drawn.

Junior Einstein Summer Camp 2023: On August 1st, 2023, EOS staff visited Sackville's Junior Einstein camp at the Bill Johnstone Memorial Park in Sackville, NB. There were 5 campers from kindergarten to grade 4 for the 1-hour activity. We started off by reading a book about renewable energy and solar energy. EOS staff brought out the

solar oven, which had been heating up in the sun all morning. The kids took turns scooping cookie dough onto the pan. They set the cookies inside the oven to bake. EOS staff helped the kids assemble solar powered cars and the kids enjoyed racing them.



Drawing a community and racing solar powered cars. Photos: K. Wilkinson.



Solar cookies and cars at summer camp. Photos: Kyla Wilkinson.

Solar race cars with Sackville Cub Scouts: On January 16th, 2024, Project Coordinator Janie Brooks and Intern Kyla Wilkinson led an activity for a group of Sackville Cub Scouts. It was during a heavy snowstorm, so attendance was lower than anticipated, but the eight kids who were able to come were enthusiastic and engaged with the 1.5-hour activity. After Kyla read a storybook about the different forms of renewable energy to the group, they were given large sheets of paper and markers to draw a renewables-focused community and road for the solar cars. Most of the time was spent building solar cars and testing different methods to make them move faster under the UV light bulb. 8 kids and 5 adults participated.



Cub scouts racing solar cars. Photo: Janie Brooks.

Salem Outdoor Education Day: On June 7th, 2024, EOS staff Janie, Brianna, and Caitlyn visited Salem Elementary School for their outdoor education day to do 20-minute solar car activities with students from grades 1-4. In total, 296 students and 16 teachers participated. Students rotated in groups to different educational activities and Janie, Brianna, and Caitlin did the activity with 13 different groups of around 20 students. When students arrived at EOS's solar car activity, they were asked about their previous knowledge of solar energy and were then instructed to design their very own race track on a long piece of paper. The students were then able to race solar powered cars down the racetrack that they had designed, after learning how the sun's energy was able to power their cars!



EOS staff overseeing kids draw sustainable town for the solar cars to drive on at Salem's Outdoor Education Day in June 2024. Photo: Caitlin McNamara.

Shad Canada Student Presentation Competition at Mount Allison University: On July 16th, 2024, Janie helped give feedback and then judged (July 23rd) the final projects of the Shad Canada students at Mount Allison University. Shad is a month-long, Canada-wide program for grade 10's and 11's to participate in hands-on learning, collaborate in design teams, and explore post-secondary institutions. The projects were to come up with an entrepreneurial plan to answer the question, "How might we help people in Canada integrate affordable and reliable green energy sources into their everyday lives to create more sustainable communities?" The students gave their "elevator pitches" for the judges to provide feedback on before delivering their final presentations.

Junior Einstein Summer Camp Visit: On July 30th, 2024, Kyla and Brianna visited the Tantramar Junior Einstein Camp at the Bill Johnstone Memorial Park. There were 6 kids in attendance who learned about the different forms of renewable energy. They drew with chalk to create a race track and a town that had forms of renewable energy. Their drawings included wind mills, solar power, and people wearing solar powered backpacks. Afterwards, the kids were provided with hand-made solar cars and shown how they worked. They then enjoyed an activity of racing the solar cars along the race track that they had drawn.



Summer campers using chalk to draw a race track for solar cars.

Halloween Outdoor Education Day at Salem Elementary School: On October 31st, 2024, Caitlin, Kyla, and Kal held activity sessions for 7 different classes (100 kids total) of grades 1-2 at Salem Elementary School. The activity involved reading a book titled "Energy Island," which is about the Danish island that became independent of nonrenewable energy sources. Following that, the students did a 'spot the difference' activity of two haunted houses, one of which had eco-friendly elements and one that used nonrenewable resources. They then discussed why one house was more sustainable, including the sources of renewable energy.



EOS staff reading "Energy Island" to students at Salem's Halloween Outdoor Education Day 2024. Photo: Brianna MacEachern.

Solar Webinars and Workshops for Adults

Webinar – Solar energy subsidies and tax incentives available for businesses: In July 2023, Jeff McAloon Chief Development Officer/Co-Owner of The Smart Energy Company presented on solar energy, tax incentives and subsidies available to business owners in New Brunswick during a July webinar hosted by EOS Eco-Energy. There were 6 participants in this 1-hour long webinar. The recording of the webinar on Youtube has 66 views as of April 2025. (Link to recording [here](#)).

Webinar – The Importance of Bringing New Technologies to Underserved Communities: Hope

Blooms is a non-profit organization based out of Halifax. EOS partnered with Veronica Gutierrez, Manager of Growth and Sustainability, to host a webinar in August 2023 about bringing new technologies to underserved communities in Halifax. Veronica spoke about their Global Kitchen, Fair Food Market, community garden and the Green Labs Educational Community Program that teaches youth about environmental stewardship, renewable energy among other things. She also showed attendees the solar awnings over picnic benches installed in Halifax's Uniacke Square. The electricity produced from these awnings facilitates Hope Blooms programming. There were 9 participants in the 25-minute webinar, and as of April 2025 there are 35 views of the webinar recording on Youtube. (Link to recording [here](#)).

Webinar – Solar energy with Woody Thompson of Fundy Solar: On February 6th, one of the most experienced and knowledgeable solar installers in Atlantic Canada, Woody Thompson, gave a 1-hour webinar to 10 people. There was high engagement from attendees, who had many questions they were eager to discuss after Woody presented. It was hosted by EOS staff member Janie Brooks. The webinar recording was uploaded to Youtube the same day and has 40 views as of April 2025. (Link to recording [here](#)).

Webinar (in French) – Solar energy with Alexandre Lissandro of TruSun: On February 8th, 2024, Alexandre Lissandro from the solar company TruSun Solar Energy gave a 1-hour webinar in French about new solar technology, recent projects and different types of solar equipment available. 6 people attended live. The webinar was hosted by Roland Chiasson, the Renewables NB Coordinator. Nearly all attendees asked questions and provided insightful discussion points after Alexandre presented. Everyone learned a lot about new and innovative technologies, such as bifacial solar panels. The webinar recording was uploaded to Youtube on Feb 23rd and has 31 views as of April 2025. (Link to recording [here](#)).

Solar Panel Bulk Order Information Session in Memramcook (French): On August 22, 2024, EOS hosted an in-person info-session in French with Alexandre Lissandro from TruSun Solar Energy in Memramcook. The information session was about solar energy technology and the upcoming EOS/TruSun solar panel bulk purchase program. It included a 2-hour presentation from Alexandre, and attendees asked questions throughout. The attendees were very engaged with the presentation, and everyone provided their contact information to receive further information about the 2024 bulk purchase. 10 people attended. This info session was widely promoted on EOS social media and newsletter, physical posters throughout Memramcook, Dieppe and Shediac, and shared on Village of Memramcook Facebook page. 5 participants completed the post-workshop survey.



Left: Promotional poster for the Memramcook info session. Right: Solar installer and owner of TruSun, Alex Lissandro, presenting at the info session. Photo: Janie Brooks.

Solar Panel Bulk Order Information Session in Sackville (English): On October 26, 2024, EOS hosted an in-person info-session in English with Alexandre Lissandro from TruSun Solar Energy at the Sackville Commons. The information session was about solar energy technology and the upcoming EOS/TruSun solar panel bulk purchase program. It included an 1-hour presentation from Alexandre, and an 1-hour Q&A period. The attendees were very engaged with the presentation, and several aimed to participate in the bulk order. 16 people attended. EOS widely promoted this event on local radio (CHMA story), EOS social media and email newsletter, physical posters throughout Sackville, Dorchester, Port Elgin, and Moncton. 8 participants completed the post-workshop survey.



Solar installer and TruSun owner, Alex Lissandro, presenting at the Sackville info session. Photo: Janie Brooks.

Energy Efficiency Workshop at Open Sky Co-op: On February 4, 2025 (as part of CARE Week), Janie and Kyla delivered a 2-hour workshop about energy efficiency to 15 participants at Open Sky. Using the facilitation training that they had received for working with neurodivergent individuals, Janie and Kyla thoughtfully and respectfully presented the workshop, introducing EOS and its various climate projects. EOS had created energy efficiency kits and distributed them to local libraries for renting in 2023-2024, the purpose and contents which were explained at the workshop. The participants were asked why energy efficiency matters, and the energy pyramid was explained. Participants also had the chance to rotate through 3 different stations, 1) using the energy-producing hand crank and looking at the contents of the energy efficiency kits, 2) using the thermal imager to detect heat loss around the space, and 3) using a kilowatt meter to observe the energy use of common appliances. Participants were given the option to provide verbal or written feedback, and were also given LED light bulbs to take home with them or to use at Open Sky. 7 participants completed the post-workshop survey.

Project Promotion

Websites

The EOS and [Renewables NB](#) websites were both updated at a technical level and with updated information about current projects.

[The EOS website](#) is a valuable tool for community and organization members to keep up-to-date and informed on EOS projects, as well as being a source for environmental resources and information. This past year (2024), the EOS website has been under construction and receiving major updates for improved organization and usability. While the website had been unavailable over much of the past year, EOS had relied heavily on providing updates and materials through its newsletter, social media platforms, and email. With the new website now complete (January 2025), EOS can continue to provide up-to-date news and information on the environment, as well as share upcoming events with the new EOS Event Calendar found on the home page.

CARE Week was advertised on the EOS website, with all of the events and their times being displayed on the EOS Event Calendar and on the Events page.

Newsletters

In Year 1 of this project, EOS provided project updates in the EOS email newsletter. This was before EOS transitioned to using MailChimp to send out newsletters, so we do not have exact statistics on how many people viewed the newsletter in year 1, but there were a few hundred people subscribed.

In Year 2 of the project, 8 newsletters were sent out to the 451 EOS email subscribers promoting this project's activities and outcomes. The average percentage of subscribers that opened emails from these newsletters was 43.8%, meaning for each of the 6 newsletters, around 198 people learned about this project's activities. EOS also promoted the project (particularly the solar panel bulk order and solar energy information sessions) in 8 newsletters sent by the Municipality of Tantramar. The monthly Municipality of Tantramar newsletters typically reach over 600 people. See screenshots of newsletter header samples below.



Solar panel bulk purchase 2024 - EOS is currently gathering participants for this year's solar panel bulk purchase from TruSun Solar Energy. Located in Beresford, New Brunswick, Trusun(www.trusun.ca) is a bilingual solar panel installer and founding member of Green Economy New Brunswick. TruSun offers systems tailored to all needs, from small off-grid installations to industrial setups, and their team will support you from project inception to final connection. This bulk purchase can help people get up to 10% discount on a solar array, and any home, business or municipality located in New Brunswick can participate! For more information, please [fill out this form](#) and you will be contacted soon.



A sampling of EOS newsletter content.

Youtube & Social Media

In Year 1 of the project, student intern Kyla Wilkinson made and uploaded 4 feature videos (each between 1 and 1.5 minutes long) for people to learn about solar activities and sites of different solar arrays in Tantramar (example of one video here). The videos have cumulatively had 380 views on Youtube and Instagram. 16 posts about this project were uploaded to EOS social media (Instagram, Facebook, LinkedIn). Recordings of the 4 online solar educational webinars were uploaded to the EOS Youtube channel so people can continue to learn from the webinars about solar energy.

In Year 2 of the project, 10 posts about this project were uploaded to EOS social media. The solar panel bulk order program was promoted on several local Facebook groups for communities across southeast New Brunswick.



A sampling of EOS social media posts from 2024-2025.

Info Booths

EOS Annual General Meeting (AGM) 2024: On June 5, 2024, EOS staff presented on projects completed in the 2023-2024 fiscal year and those currently being worked on in 2024-2025, as well as hosted an information booth about projects for members and participants. The AGM was held on top of the Sackville Town Hall building, within the green roof gardens.

Indigenous Peoples Day Event in Amlamgog (Fort Folly) First Nation: On June 21, 2024, Brittany, Caitlin, Brianna, Rachel, and Janie hosted an EOS information booth at Amlamgog's Indigenous Peoples Day celebration and medicine trail reopening. Several people from the community and other groups and organizations stopped at the booth to learn and discuss current EOS projects. EOS also had efficient LED light bulbs available, which attendees were free to take. The day finished with guided tours of the medicine trail, which has new audio components and signage.

Canada Day Event in Sackville: On July 1, 2024, Brianna and Rachel hosted an EOS information booth at the Bill Johnstone Memorial Park Canada Day event. Multiple groups of people stopped at the booth to learn about the current projects. Some attendees took brochures, and many free energy-efficient LED light bulbs were given out along with free stickers and pens.

Port Elgin Farmers Market: On July 19, 2024, Janie and Rachel held an information booth at the Port Elgin Farmers Market where people inquired about our services and projects. They also gave out some brochures and pamphlets, energy efficient light bulbs and some EOS branded stickers and pens.

Sackville Farmers Market: On August 3, 2024, Rachel, Brianna, and Janie held an information booth at the Sackville Farmers Market where people inquired about our services and projects. They also gave out some brochures and pamphlets, energy efficient light bulbs and some EOS branded stickers and pens.

Sackville Fall Fair: On September 21, 2024, EOS staff held an information booth at the Sackville Fall Fair. People signed up for the EOS newsletter, asked questions about our services, purchased EOS merch and took pamphlets about our projects.

Sackville Seniors' Day for Climate Action: On October 1, 2024, Janie and Brittany held an information booth at the Senior's Day for Climate Action event at the Bill Johnstone

Memorial Park. Community members visited the booth to discuss EOS projects, general questions and concerns about solar energy and the use of panels as well as the home flood risk assessments. A membership fee was paid and there was a sign up for the newsletter.

Dorchester Harvest Market: On October 9, 2024, Janie and Brianna held an information booth at the Dorchester Veterans Community Centre, at the pop-up Harvest Market organized by the Greater Dorchester Moving Forward Co-op. Dorchester community members visited the booth to look at EOS merch and discuss EOS projects.

Sackville's Moonlight Madness: On December 6, 2024, Kyla and Brianna held an information booth at the evening market for Sackville's Moonlight Madness community event. Several shoppers stopped at the booth to chat about EOS projects and look at the resources we provide.

Sackville Winter Farmers Market: On February 1, 2025, Janie and Kyla held an information booth as part of CARE Week at the Sackville Farmers Market with many EOS resources about all current EOS projects. 42 people stopped at the booth to talk and learn about EOS projects.

Broader Project Components

Lesson Plans

Project Year 1:

EOS Intern Kyla Wilkinson created and shared a lesson plan for the solar race car activity. This can be found on the project website. In January and February, 3 EOS staff members received training on how to deliver the Gaia Project's Energy Detectives curriculum, which they thoroughly digitized and catalogued at the start of the Covid-19 pandemic. With the Gaia Project's permission for EOS to use and modify this curriculum to share widely with our regional communities of Tantramar-Strait Shores-Memramcook, Renewables NB Coordinator Roland Chiasson has been working on implementing the EOS efficiency kit into this lesson plan. The Climate Labs and Energy Detectives educational programming offered currently by the Gaia Project is booked at capacity province-wide, demonstrating the large demand from teachers

and students for assistance in learning and navigating energy efficiency and renewable energy education.

Project Year 2:

EOS received a hand crank light bulb system and lesson from Gaia Project that demonstrates the concept of energy efficiency. EOS staff also created a lesson plan for teaching adults about energy efficiency and the energy pyramid. This lesson was used at Open Sky Co-op and specifically tailored to be an activity inclusive to neurodivergent and/or disabled adults. In 2024-2025, EOS continued using previous lesson plans such as the solar race cars and solar hot water.

RenewablesNB

Year 1:

The following updates were made to the Renewables NB website:

- Corrected some of the French translations and added them to the French side of the website
- Updated the Incentives section in French and English (5 new entries)
- Update the Directory section in French and English (5 new entries)
- Added 3 new case studies
- Added 7 new resources as links

The Renewables NB Coordinator answered 19 questions directly related to Renewables NB; filtered out about 10 junk mail inquiries. People sent inquiries to the RNB email regarding the following topics:

- Geothermal
- Masonry furnace
- Solar incentives
- Home energy savings
- Solar panels
- Residential solar system installers
- Seeking work as a solar installer
- Wind energy
- Heat pumps
- Recommendations for a solar installer
- Building new home with solar in mind

The Renewables NB Coordinator contacted twenty-one different organizations to develop partnerships around renewable energy implementation in NB. The aim of developing these partnerships was to develop a large community of interest and support for community energy opportunity delivery.

Year 2:

The RenewablesNB website is currently undergoing a major update to be more modern and user-friendly. No new case studies have been added this year because the website was under construction for a long period of time, but several email inquiries were received and answered about the RenewablesNB network, and several meetings were held regarding the website, new solar projects in the province, and potential collaborations with more small businesses and solar installers on future projects in the works.

During this project year, EOS staff connected with SolarNBSolaire, a similar organization to RenewablesNB, and a mutually beneficial partnership was formed. RenewablesNB and SolarNB have started collaborating on a project through the Atlantic Canada Opportunities Agency (ACOA) that would benefit small business owners across New Brunswick eager to transition to solar energy.

CARE Week 2025 was promoted through EOS to the RenewablesNB network of homeowners, business owners, and solar installers throughout the province.

CARE Week 2024

EOS Intern Kyla Wilkinson planned, coordinated and promoted 7 events for Climate and Renewable Energy (CARE) Week 2024, which took place February 3rd-10th. The events themselves were hosted by several EOS staff members and two university student volunteers. CARE Week 2024 involved 4 webinars, 1 in-person workshop, 1 solar array site tour, and 1 EOS info booth at a public event.

Permaculture Workshop with Understory Farm & Design: To start off CARE week on February 3rd, Estelle Drisdelle with Understory Farms led a 3.5-hour permaculture workshop for community members to learn permaculture's benefits and best design practices. The workshop featured a presentation from Estelle followed by a hands-on design activity. She brought raspberry and nettle herbal tea harvested from Understory Farm for participants to enjoy. There were 9 participants.

National Sweater Day 2024: On February 4th, EOS promoted National Sweater Day on social media, encouraging people to turn down their thermostat and wear their favourite cozy sweater for a day to express their awareness of their regular energy consumption from heating. The Instagram post was seen by 120 accounts and liked by 13 people.

Webinar – Solar energy with Woody Thompson of Fundy Solar: See page 42 for webinar description.

Webinar – Restoring coastal ecosystems with Dr. Justin Liefer: On February 7th, Dr. Justin Liefer from Mount Allison University presented on coastal restoration with a focus on local coastlines of the Maritimes. This webinar was hosted by two Mount Allison student volunteers, Martina Berko and Emily Blakeman. 31 people attended live. Mount Allison University professor and EOS board member Dr. Barb Clayton livestreamed the webinar to her in-person class of 15 students. The webinar recording was uploaded to Youtube on February 8th and has 15 views as of April 20th. (Link to recording [here](#)).

Webinar (in French) – Solar energy with Alexandre Lissandro of TruSun: See page 42 for webinar description.

Webinar – Chat with Southeast NB’s Regional Resiliency Coordinator Gwen Zwicker: On February 9th, Gwen Zwicker did a 1-hour webinar, hosted by EOS Executive Director Brittany Cormier. As the Regional Resiliency Coordinator for Southeast New Brunswick, Gwen is passionate about building community strength and resilience in the face of climate change. She spoke of how there are extra challenges in rural areas due to geographical distance, transportation issues, and communication barriers. There were some technical difficulties with Zoom that resulted in some people being unable to join the call, but 5 people attended live and the recording was uploaded to Youtube on February 23rd and has 5 views as of April 20th. (Link to recording [here](#)).

EOS info booth and kids colouring pages: From 9:00am until noon on Saturday, February 10th, two EOS staff and an EOS board member held an information booth at the Sackville Farmers Market. At the booth, solar colouring pages were available for kids. At least 21 people stopped to chat and learn about what EOS does, including 5 kids who took colouring pages home.

Port Elgin Regional School solar array site tour: See page 17 for site tour description.

CARE Week 2025

Info booth at the Sackville Farmers Market: On February 1st, Janie and Kyla held an info booth at the Sackville Farmers Market with many EOS resources to read and distribute about current EOS projects. 42 people stopped at the booth to talk and learn about EOS projects.

World Wetlands Day 2025 Celebration at the Tantramar Wetlands Centre: On February 2nd, Janie, Kyla, and Brianna hosted a celebratory gathering for World Wetlands Day 2025 at the Tantramar Wetlands Centre. Snacks and refreshments were provided by the local Dorchester business Ketchup With That. Wetlands-themed art from environmental science students at the Tantramar Regional High School was displayed for viewing. Attendees were able to socialize and learn more about the work done by EOS and the Tantramar Wetlands Centre in conserving and restoring the wetlands of Tantramar.

Sustainable Clothing Swap at Mount Allison University: On February 3rd, Janie, Kyla, and Caitlin set up a clothing swap in the Mount Allison University Student Centre. Clothes that had been donated by students and other community members were laid out on tables, categorized by clothing type and size. Some attendees brought clothing to be donated, and almost everyone who attended left with some new-to-them clothing. After the event, any remaining clothes were donated to PEDVAC, a charitable nonprofit in Port Elgin.

Energy Efficiency Workshop at Open Sky Co-op: See page 44 for workshop description.

Perennials & Pollinators Webinar: On February 4th, Kyla hosted an 1.5-hour Pollinators for Perennials webinar hosted by local permaculturist Estelle Drisdelle, who runs Understory Farm and Designs. Estelle discussed the importance of perennials for supporting pollinators and went into detail of both the beneficial plants and pollinators to look for locally. The recording of the webinar was uploaded to the EOS Youtube channel in early March so more people can learn from Estelle's presentation. (Link to recording [here](#)).

Canning Workshop at Station8: On February 5th, Caitlin hosted a free beginner canning and preserves workshop. The class was for community members to have an opportunity to further learn how to use and extend the lifespan of fresh produce. The

workshop was instructed by local community member Emilie McBride, and took place at Station8 in Dorchester, NB. Participants learned how to hot water bath can, and made both a pickle and a jam from start to finish using locally produced root vegetables and blueberries, that they then got to take home with them. The feedback from this workshop was overwhelmingly positive, as participants felt much more comfortable to continue using this skill on their own.

Equity, Diversity, Inclusion & Reconciliation (EDIR) Training for Youth (14-30): This two-day (February 8-9th) program was designed and facilitated by the Tamarack Institute; funded by the Sackville Commons Co-op; and coordinated, promoted, and hosted by EOS Eco-Energy for CARE Week. Caitlin coordinated this train-the-trainer program which sought to empower high school and post-secondary students, leaders, and volunteers from community and non-profit sectors to facilitate workshops and lead initiatives around equity, diversity, inclusion, and reconciliation (EDIR). The program consisted of two virtual interactive workshops aimed at developing change-makers to help them find the language needed to activate their voice, take control of the narrative, and integrate EDIR into their schools and work. Participants learned how to handle difficult conversations and design inclusive policies for decision-making in their communities.

Performance Measurements

All but the last of the performance indicators were met or exceeded in this project. For the number of tonnes of GHG emissions, there is a significant discrepancy because the target number that was set (1085) was a miscalculation by a previous EOS staff member. The actual number that we calculated is 200 metric tonnes of GHG emissions saved (over the duration of 25 years - the common lifespan of solar panels). This number includes estimated 25-year kWh production by the Port Elgin Regional School's solar array, the system to be installed in summer 2025 at Tantramar Regional High School, the small portable solar arrays being used by Marshview Middle School and Dorchester Consolidated School, and 8 homeowners/participants in solar workshops between 2023-2025 who EOS assisted with getting solar arrays for their homes or businesses.

Performance Indicator	Target	Actual
Number of participants in the project activities	2000	2424 (Year 1: 1050,

		Year 2: 1374) Target exceeded.
Number of events	44	53 Year 2: 11 educational activities at solar demo sites, other schools and summer camps; 7 CARE Week events; 2 public solar info sessions.
Number of social media posts	24	26 16 during year 1 and 10 during year 2.
Number of types of outreach	14	14
Number of research and evidence-based resources used	4	4
Tonnes of GHG emissions reduced	1085	200

Summary and Conclusions

This project achieved its objectives, demonstrating the powerful impact of integrating solar technology and renewable energy education in rural communities. Solar technology and solar energy generation were successfully integrated into 4 public schools in the rural Tantramar-Strait Shores region of New Brunswick. Over 1,000 youth participated in engaging lesson plans about solar energy.

Beyond schools, the project reached the broader community through 6 free public workshops/information sessions on solar energy that were held for adults, and an improved RenewablesNB website which now features renewable energy case studies

across New Brunswick. Additionally, the solar school demonstration sites have been widely promoted on social media, in-person tours, EOS newsletters and websites, and through information booths at local community events.

The solar array installed at Port Elgin Regional School in the first year of this project has produced 6,899 kWh of solar energy as of mid-April 2025, reducing the school's GHG emissions by 2.07 tonnes in its first 18 months since installation. This solar array powers the school's greenhouse and allows it to grow vegetables year-round. Meanwhile, Marshview Middle School and Dorchester Consolidated School received portable solar arrays to be used as classroom tools and to demonstrate solar energy at school and community events. These portable solar units are fostering continued solar education and awareness in classrooms and community spaces.

As a result of this project, another ground-mounted solar array is soon to be installed on the grounds of Tantramar Regional High School, next to the trails of the Sackville Waterfowl Park and the Tantramar Wetlands Centre. This shows growing momentum and interest in local clean energy solutions.

The positive results of this project show the power of solar infrastructure when paired with local education and community outreach regarding Canada's transition toward renewable energy. Investing in awareness and education in a rural community creates lasting change and empowers future generations to continue working towards the uptake of renewable energy systems and advocacy for a rapid green energy transition.