



**Alberta
Emerald
Foundation**

Emerald Youth Grants

Study Guides

Solar Alberta



30th Annual Emerald Award Recipient

Community Group or Non-Profit

Synocrude

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About the Alberta Emerald Foundation



We're Alberta's environmental good-news storytellers!

The Alberta Emerald Foundation (AEF) is nonprofit organization that showcases and inspires our province's environmental achievements through the annual Emerald Awards. Through our Sharing Stories Communications Strategy, the incredible work of Emerald recipients is highlighted and celebrated year-round. What began as the Emerald Awards in 1992 has evolved into an ongoing conversation.

The AEF empowers the next generation by providing grants to youth-led and youth-targeted environmental initiatives in our province. The Emerald Educational Engagement Grants Program funds up to 30 groups a year for their dream environmental project inspired by the Emerald Documentary Series, What On EARTH Can We Do? Podcast, and Emerald Speakers Series. After finding inspiration from this content featuring Emerald recipients, submit your pitch to us online. If it's accepted, you will receive \$750, thanks to our sponsor Syncrude Canada Ltd., to make your project a reality.

We encourage you to use this study guide as a resource to help you along in your project's journey. For more information, please visit

www.emerald.foundation.ca

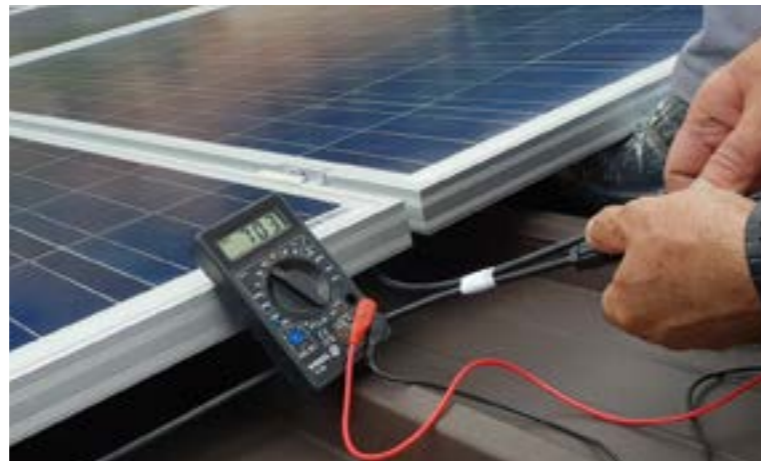
Overview

What they're all about

Mission: to advance community, collaboration, and understanding around Alberta's renewable energy resources and energy efficiency potential.

For 30 years, Solar Alberta (previously known as the Solar Energy Society of Alberta) has been providing public education about **renewable energy** and **energy efficiency** across the province. As a centre of information and resources, this **non-profit organization** promotes the many benefits of **solar power** as a form of **electricity**, while connecting homeowners, businesses, and individuals together with solar installation professionals. Solar Alberta invites people to connect, learn, and act.

Solar Alberta offers free and paid educational events for Albertans, including courses, workshops, and webinars, available in person across the province and virtually. To find out about events near you, see their [event calendar](#).



Solar Alberta shares the message that Alberta has an excellent, largely untapped **solar resource** that currently provides less than one percent of our electrical grid's makeup. By installing solar on your home, school, community buildings, or business you are making an investment in the future that goes beyond a measurable dollar value, and you are setting a leading example for Albertans to follow in our province's energy source shift to a **renewable future**. Solar Alberta's top reasons to "Go Solar!" include some of the following points:

- Alberta is a great place to install Solar, with the 2nd highest potential to produce **solar energy** in all of Canada (Saskatchewan being the highest yearly potential)
- You can save money using solar energy
- You can protect the environment by using solar energy, because using solar energy is **emission** free
- Solar energy can help to create jobs
- You can be a leader in **sustainability**, and set a good example for others

Key Terms

Know your lingo



Electricity: the flow of particles called electrons and protons. Energy is created when electrons flow from place to place, and then can be used to power things like light bulbs.

Emissions: something being released out into the open. Most commonly, gases or substances being released into the air, which can be harmful to the environment.

Energy: another word for power. Energy makes things move.

Energy efficiency: using less energy to do the same task. For example, using light from a window to make the room bright instead of using a light bulb.

Non-renewable energy: energy from a resource that cannot be replaced after they are used, because there is only a fixed amount available on Earth. Examples include: rocks, minerals, metals, and fossil fuels.

Nonprofit organization: also sometimes called a “charity”, these organizations do not exist to make a “profit”, or money, and work to help the public.



Renewable energy: energy from a resource that does not get “used up”, and that nature can replace. Examples include: wind, water, and sunshine.

Solar Power: light, heat, and other energy given off by the Sun, which can be used as heat and to make electricity.

Solar photovoltaics (solar panels): installed on roofs and other areas to capture energy from the sun (Solar Power), and then take that energy and “convert” it into useable energy.

Sustainability: meeting our needs and using natural resources in a way that we could keep doing for a long time. This can be done through reducing the amount of resources that we use.

The Sun: the star at the center of the solar system, which is a hot ball of gas that gives off energy to Earth through light and heat.



Conversation Questions

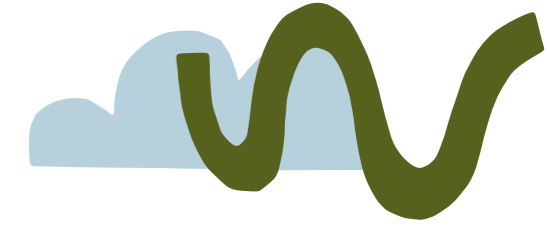
Let's talk about it

- What problem does Solar Alberta address? How do they address the problem?
- Have you ever seen a building with solar panels? What did it look like?
- What types of things could get in the way of solar panels working?
- What are some ways that you could use less energy in your home? How about in the classroom?
- Do certain colours absorb light more than others? Which colours and materials are better at reflecting light?
- What other types of technologies can help to keep a clean environment?
- What other things in our world use the sun for power?



Continuing Work

Inspiration for your Emerald Youth Grant



- For an experiment to see the power of the sun, take two ice cubes outside. Place one somewhere in the sun, and one in the shade. See which one melts more quickly.
- Count the number of items in your house that use electricity.
- Ask your school and/or community to install electric vehicle (EV) charging stations.
- Check and update your school or office's energy efficiency using an accredited guide, and do a fundraiser campaign to help install innovations to make your space more energy-efficient.
- Ask Solar Alberta to come speak at your school about the opportunities in the solar industry.
- Do a science project on a renewable energy source. See some ideas [here!](#)
- Go to an energy science conference, or host your own renewable energy fair.
- Do a fundraiser to install solar panels on your school or local community building.
- Hire an expert to teach you and your class how to build renewable energy projects.



Emerald Youth Grants

The AEF would like to thank Syncrude Canada Ltd. for their sponsorship of the Emerald Youth Grants Program. As well, we'd like to thank Hoopla Media for their work on the Emerald Documentary Series.

This study guide was created and written by AEF Summer Student, Katherine Rogers.

[Click to apply for an Emerald Youth Grant!](#)

