

# STUDY GUIDE

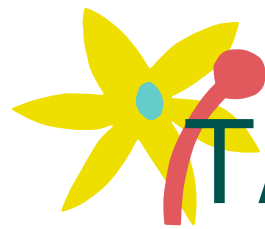
Emerald Youth Grants



**City of St. Albert**

**29th Annual Emerald Award Recipient**  
Government Institution

**Synocrude**



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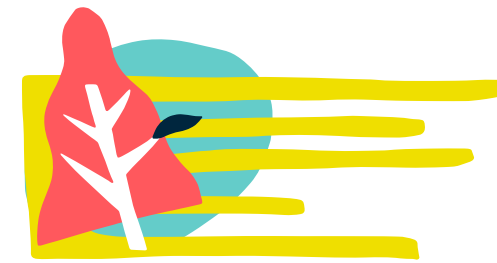
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# THE AEF

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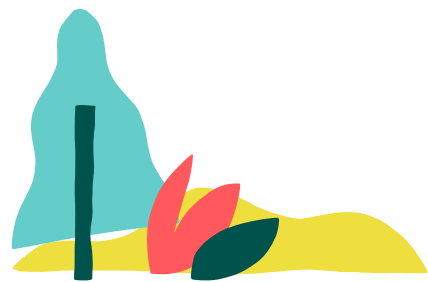
Who We Are.

The Alberta Emerald Foundation (AEF) has been the good-news environmental storytellers since 1991. We are a 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 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 [emeraldfoundation.ca](http://emeraldfoundation.ca).





# OVERVIEW

What they're all about.

**Mission:** to meet the economic needs of the city while exploring innovative environmental and conservation opportunities

The City of St. Albert has the vision to grow as a Smart City by creating new technologies that support environmental and economic growth through innovation and collaboration. In 2014, the city began to develop electric bus technology and test its performance in both summer and winter. They learned that electric buses would contribute to a greener and more **sustainable** public transportation system. Soon after, they were operating 7 electric buses. To reduce their **carbon footprint** even more, the city installed 753 **solar photovoltaics panels** on the roofs of the buses for a sustainable source of power.



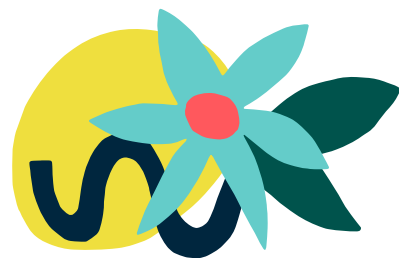
Electric buses have endless environmental benefits. Most notably,



an electric bus reduces **greenhouse gas (GHG) emissions** by 51% compared to a similar sized **diesel** bus. In 2019, they reduced their total amount of GHG emissions by 222,034 kg, or equal to 741 trees!

St. Albert is the first Canadian city to use electric long-range buses and helps educate other cities about their experiences. You can easily spot these buses with their vibrant green colours. They serve as a major steppingstone to creating a sustainable future for the community.





# KEY TERMS

Know your lingo.

**Sustainable:**

practices and actions that people can take to avoid the depletion of our natural resources and ensure that future generations' environmental, social, and economic needs can be met long-term.

**Carbon Footprint:**

the amount of greenhouse gases, for example carbon dioxide, that is released into the environment by a particular individual, event, or group.

**Solar photovoltaics panels:**

a form of renewable energy technology that is able to convert sunlight into electricity.

**Greenhouse Gas (GHG) emissions:**

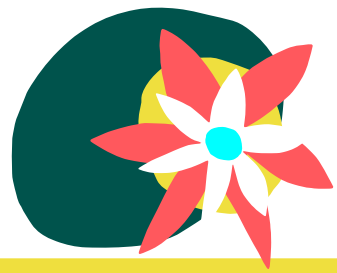
gases that are released from the combustion of fossil fuels to produce electricity. The gases absorb heat into the earth but do not let it out. It traps this heat on the earth and leads to global warming.

**Diesel:**

a type of fuel that produces harmful emissions when it's burned and is a major contributor of pollutants.







# CONVERSATION QUESTIONS

Let's talk about it.

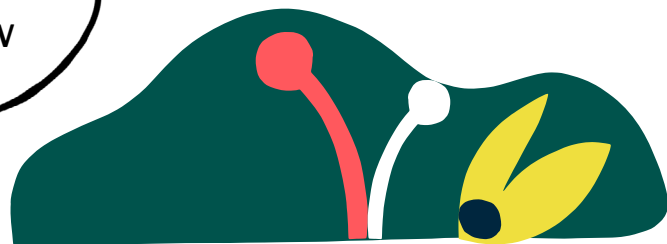
Why is it important that we start switching away from the use of fossil fuels? What is the environmental impact of fossil fuels?

Do you know your carbon footprint? If not, calculate it using an online tool. Does the number surprise you? How can you or others reduce their carbon footprint?

Sunlight is a great example of renewable energy. What other forms of renewable energy can you think of?

What does your city do for the environment? How can you make change in your city?

Why is it important to research and implement new technologies?



# CONTINUING WORK

Inspiration for your EEG project.

Try going a week without using fossil fuels. Was it difficult? Write about your experience and what you learned.

Host an Environment Fair to showcase renewable energy practices and sustainable technologies.

Research your city or town's environmental and/or sustainable strategy. None in place? Write to your city counsellors.

With a group, fundraise to implement sustainable technology in your school or community.

Start a campaign at your school to reduce its carbon footprint.





## RESOURCES

Click to discover.

[Read About The St. Albert Electric Buses](#)

## Edmonton's Plans for Electric buses

## Benefits of Electric Transportation

## Global Charts on Fossil Fuels

## Intro to Renewable Energy

## Canada's Use of Renewable Energy

## Fundraising Basics

## 75 Fossil Fuel Uses in Daily Life



# NOTES

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# 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** and **Studio Hazel** for making our content look so good.

This study guide was written and designed by AEF summer student Leslie Guo.

**Click to apply for an  
Emerald Youth Grant!**

Let's get social!

