

Bonnyville Mayor Elisa Brosseau

4917 – 49 Avenue Bag 1006

Bonnyville AB T9N 2J7

May 14, 2025

Dear Mrs. Elisa Brosseau,

My name is Makayla Chemerika, a concerned and committed grade 9 student attending Bonnyville Centralized High School. I'm emailing you today regarding sustainable energy within Bonnyville, Alberta. Our town's current primary sources of energy are oil and gas, with a strong reliance on heavy oil and natural gas. While these sources of energy production are efficient and uncostly (due to the abundance of the resource), they are unsustainable towards a clean, prosperous future for Bonnyville, and Alberta in general. The use of heavy oil and natural gas can contribute to significant environmental disturbances, including the ruin of vegetation and habitats to find and extract the crucial resources, the inadvertent production of large amounts of contaminated water while fracking, prominent green-house gas emissions, contributing to 33% of all emissions, and the issues regarding them being non-renewable resources. A shift towards sustainable and renewable solar and wind energy is a crucial step towards the creation of a better future for all Albertans.

Alberta is often called the Sunshine Province due to the large amount of sunlight we receive, which averages about 312 days of sunlight per year, making the replacement of our current

energy sources with solar energy far more viable. Solar energy is the heat and light produced by the sun, which we then turn into solar electricity and power through intricate processes, the most common among them being solar panels. The process of turning light into useful energy first requires a solar panel containing a semiconductor being exposed to photons of sunlight, releasing electrons, creating an electric charge. This charge is then captured by the wiring in solar panels, converting the direct current into alternating current—the electrical current that is most useful in our everyday lives. Solar panels are long lasting, environmentally friendly, and leave minimal carbon footprint. With the abundance of open land, the use of solar farms in the large stretches of land could generate enough electricity to power most of the area. The renewable resource is cost-effective, due to its wide reach, as well as its ability to work in cloudy conditions. The increasing use of solar panels within Bonnyville will reduce electricity costs, while effectively supplying clean power to everyone in need. Within the short time frame of only an hour and a half, enough sunlight reaches the Earth to power the world for an entire year. With the ability to harness even a fraction of this energy, we have the power to revolutionize energy production.

In addition to solar power, wind power is an abundant and reliable source of energy for Alberta. Southern Alberta—particularly Calgary and Lethbridge—are characterized by their strong winds, earning them the title of Canada's windiest regions, making wind energy a viable option.

Electricity generated from wind is primarily sourced from large wind turbines, which use blades to accumulate the wind's kinetic energy. As wind flows over the turbine blades, it creates lift and causes them to spin, turning a generator that creates electricity. The fast-growing power source is quickly establishing itself as one of the most effective forms of clean energy. Unlike natural gas and heavy oil, our current energy sources, wind power has an inexhaustible supply, allowing the

building of wind turbines to be a cost effective addition and replacement. Wind energy turbines have come to be one of the most cost effective energy sources available today, saving everyone money in the process and aftermath of its creation. With the ability to create hundreds of thousands of jobs, economic growth is a crucial factor wind energy accompanies with it, creating good-paying jobs through wind turbine creation, maintenance, and upkeep. The resource does not emit toxic contaminants into the atmosphere, making it environmentally friendly, as well as renewable. Reducing the use of fossil fuels and energy imports, we are able to help further our steps towards creating a cleaner Alberta. Investing in wind energy is a crucial step towards a cleaner, more sustainable Alberta—one that benefits both our environment and future generations.

Thank you so much for taking time out of your busy schedule to read this email. On behalf of our future generations, I sincerely hope you will consider expanding the use of wind and solar energy alongside our current power sources. These renewable options offer a vital path towards a cleaner, brighter, and more sustainable future for all. Thank you for your time, have a fantastic day!

Sincerely,

Makayla Chemerika

## Sources

*Solar power part:*

[NationalGrid](#)

[Energy.Gov](#)

*Wind power part:*

[Eia](#)

[Acciona](#)

[Energy.Gov](#)