A Green Powered Canada

The respondent's email address (**michelle.liang3@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Solar energy.

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

One of the benefits of solar power is that it is 100% clean power energy source. It doesn't produce carbon or pollution into the atmosphere. According to investopedia.com they say that solar panels are stainable. Since the sun is always there then we don't need to refill for something. Another benefit of solar power is that it reduces your electricity bills. The power of the sun generates and makes electricity that gives the power we need. Those are some of the benefits of solar panels.

Drawbacks *

One of the drawbacks is that it doesn't always work. It depends on the weather for the solar energy to work. If it is really cloudy and there is no speck of sunlight then, you can't use solar energy. According to greenmatch.co.uk it says that solar panels takes up a lot of space. If you don't want solar panels on your roof and you choose the ground. Then you would have to live somewhere else where you are pretty far from other people. Or else it wouldn't fit. Another drawback of solar power is that making the panels have an impact on the environment says solarreviews.com. You need the materials to build the panels. That means that you need to collect the materials to make it. That could hurt the environment. Those are some of the drawbacks of solar power.

How is this energy source being used in Canada? *

How solar energy is being used in Canada is that it is used to heat water in buildings. According to google they say that there are solar panels on the roof of buildings that help heat up water. It goes into a water cylinder where you can boil it to the temperature you want. Another way solar energy is being used in Canada is to generate electricity. The sunlight is absorbed by solar panels that give homes and farms electricity. That allows people to watch TV, play games, do work, etc. That is how solar energy is being used in Canada.

What role could this energy source have in the future? *

Solar panels would probably be the most important source of electricity says google. The prices for solar panels have decreased a lot. According to sitn.hms.harvard.edu/ they say that there are solar cells converting light into electricity. Now the technology is great but think about it 10 years from now. They say that designing a new design would let there be more light captured and being turned into electricity. That could be a big source of electricity for us. That is why solar panels would probably be the most important source of electricity in the future.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://en.wikipedia.org/

This link tells us about solar power. It also talks about electricity production. How sunlight is turned into electricity. It gives us a further understanding of solar power and it's uses. This is what this link tells us about.

https://www.smithsonianmag.com/

This link tells us about the history of solar panels. How it came to be. From a young physicist to worldwide now. They started creating things and studying things. That is what this tells us about.

A Green Powered Canada

The respondent's email address (**joshua.miller@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Wind

Type of Resource *

- (•) Renewable
- ( ) Non-Renewable

Benefits *

The biggest benefit is probably that it's usually always running. Since it runs on wind, it still looks like it always runs. If you have home made little ones, you would find that there has to be wind or a gust of air. Another benefit is that it doesn't take up that much space. If it's like a city with tall buildings, maybe it's a waste of space but it's a skinny pillar and has a wide turbine. Those are benefits of the wind renewable source.

Drawbacks *

The down sides of the wind source is that they could fall. Since the pillar is kind of small, it could fall down. I saw a video of one falling and since it's tall, it has to be falling in a direction with no buildings. They also cost a lot. Each windmill cost about 2-4 million dollars. That is a lot of money but since it's renewable, it shouldn't run out. It may also stop spinning for a while. That's the downsides of the wind source.

How is this energy source being used in Canada? *

How wind is used in Canada is like any other place. Since windmills are like the main wind source they could be found in a lot of places. When it is spinning, it generates energy so it's renewable. It's a well known renewable energy and I have seen some in Canada. That's how the wind source is being used in Canada.

What role could this energy source have in the future? *

The role that this could have in the future could be big. Since a couple other renewable energy sources may be gone. I said 'may.' Windmills might be depended on because that seems like something that would stay for a decent amount of time due to it being made by humans. It might also get way cheaper and since it might be cheaper then other renewable energy sources, it would be used more. That is the role it might have in the future.

Provide two reliable sources for people who would like to learn more about this energy source: *

1.https://www.conserve-energy-future.com/various-wind-energy-facts.php

This link talks about some facts about wind energy. It has 35 facts which are pretty cool as it does talk a little bit of how it works.

2. https://www.energy.gov/eere/wind/how-do-wind-turbines-work
This article talks deeper about how wind energy works. Since the other article is about facts and and a little bit on how wind energy works, this expands more.

A Green Powered Canada

The respondent's email address (**warden.hua@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Solar energy

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

It can be used constantly everyday in daylight

Drawbacks *

It doesn't work in night time.

How is this energy source being used in Canada? *

there are solar panels in canada being used to power homes

What role could this energy source have in the future? *

this energy source might be used to power electric cars in the future.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://en.wikipedia.org/wiki/Solar_energy#:~:text=Solar%20energy%20is%20radiant%20light,power%20plants%20and%20artificial%20photosynthesis.

https://www.seia.org/initiatives/about-solar-energy

A Green Powered Canada

The respondent's email address (**rebecca.win@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Solar Energy.

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

One benefit is it doesn't waste electricity. For example, some phone chargers use electricity so instead, you could use solar power. Also it's eco friendly so it won't hurt the environment.

Drawbacks *

Some drawbacks are sometimes it is not sunny, so you can't use the solar-powered item. When it is night time you can't use it either. With Electricity you can use it any time you want. Solar panels also cost more than electricity.

How is this energy source being used in Canada? *

Solar energy is used by gets sunlight from the sun then converts it into energy that you can use from your house or items. It could replace electricity but there will be some issues like, when it is not sunny, it wouldn't work.

What role could this energy source have in the future? *

Solar energy's role in the future can be by replacing electricity in the future since solar energy is evolving more and more, and one-day solar energy may be affordable and replace electricity.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://www.toronto.ca/services-payments/water-environment/environmental-grants-incentives/solar-to/

This link talks about solar power used in Toronto. It talks about how solar panels work, supporting them, energy storage, and more.

https://www.greenmatch.co.uk/blog/2014/07/7-reasons-why-you-should-use-solar-power

It talks about the benefits of solar energy as for example, it leaves a smaller carbon footprint compared to electricity, solar power can create more jobs by fixing and making solar panels.

A Green Powered Canada

The respondent's email address (**charlotte.dupuis@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Wind power

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

Benefits: Ever lasting and No air pollution.

Drawbacks *

Drawback: High cost.

How is this energy source being used in Canada? *

It's used to make energy.

What role could this energy source have in the future? *

It's role of energy source could be help because their will be little fossil fuel

Provide two reliable sources for people who would like to learn more about this energy source: *

Water and wind power.

A Green Powered Canada

The respondent's email address (**lin.ju@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

wind

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

do not make greenhouse gas's. it also clean energy and... its good for the environment

Drawbacks *

low efficiencies, high cost, intermittency and there have to be wind

How is this energy source being used in Canada? *

The primary source of Green Powered energy in Canada comes from moving water In 2018.

What role could this energy source have in the future? *

cleaner and more efficient energy.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://greenenergydoorsopen.ca/2019/02/09/what-are-the-pros-and-cons-of-wind-energy/ this link is saying the pros and cons about wind energy and it also include a ted ed video.

https://www.fraserinstitute.org/article/wind-and-solar-power-the-myth-of-green-energy this link talks about the the myth of 'green' energy and when it says that it just mean green powered energy. it also talks about Wind and solar power.

A Green Powered Canada

The respondent's email address (**alan.cheung@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Biomass Energy

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

Some benefits of biomass energy include it is widely available, because the organic materials that are used to produce biomass energy are infinite, since our society consistently produces waste such as garbage, wood and manure, it is less expensive than fossil fuels, because fossil fuels require expensive equipment such as oil drills and many more benefits. Those are some benefits of biomass energy.

Credit: https://www.syntechbioenergy.com/blog/biomass-advantages-disadvantages

Drawbacks *

Some drawbacks are biomass energy may cause deforestation, because wood is one of the most used source of biomass energy and vast amounts of wood and other waste products have to be burned to produce the desired amount of power and also biomass plants need a lo of space. Those are some drawbacks of biomass energy.

Credit: https://www.syntechbioenergy.com/blog/biomass-advantages-disadvantages

How is this energy source being used in Canada? *

Bioenergy is about 4 percent of Canada's total energy supply, and is the country's second largest source of renewable energy after hydroelectricity. Historically, use of bioenergy was very important for home energy use, as Canadians burned wood for heating and cooking. That is how this energy source being used in Canada.

What role could this energy source have in the future? *

I think we will be needing biomass and all other kinds of renewable more because we are depleting more and more of are non-renewable energy sources. But also biomass energy is very expensive so it might be used less or not be used at all. That is what role could this energy source have in the future.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://www.eia.gov/energyexplained/biomass/

This link talks about what biomass energy is and how much it is being used. That is what this link talks about.

https://energyiq.canadiangeographic.ca/energy/biomass/

This link talks about how it is produced and what it is. That is what this link talks about.

A Green Powered Canada

The respondent's email address (**nalina.holdsworth@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

The energy source i am is Non-Renewable

Type of Resource *

- ○ Renewable
- ◉ Non-Renewable

Benefits *

some of the benefits are that Non-Renewable sources are that it is cheap and easy to use I also found that they are considered cheap when converting from one type of energy to another.

Drawbacks *

Some drawbacks are things like Non-renewable sources will expire someday and we have to use our endangered resources to create more non-renewable sources of energy.

How is this energy source being used in Canada? *

I found that Non-Renewable energy takes accounts for 90 percent of Canada's primary energy production. It also uses fossil fuels, Crude oil, coal, Uranium and Phosphate.

What role could this energy source have in the future? *

I found a mini-article that says that renewable fuels are expected to grow faster than fossil fuels, although fossil fuels will account for more than three-quarters of world energy consumption through 2040. Natural gas is expected to be the fastest-growing fossil fuel in the future, with global natural gas consumption increasing by 1.4% per year.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://www.altenergymag.com/article/2019/07/what-is-the-future-of-non-renewable-resources/31346 This link talks about some of the natural resources the Non-Renewable source uses which I think is pretty cool it also talks about how By 2040, one-in-four cars in China will be electric. Yet by 2030, China will overtake the United States as the largest consumer of oil. And this link is talking about where non-renewable energy comes from and what it is here is the link https://www.nationalgeographic.org/encyclopedia/non-renewable-energy/ it says things like Burning fossil fuels also upsets Earth's "carbon budget," which balances the carbon in the ocean, earth, and air. When fossil fuels are combusted (heated), they release carbon dioxide into the atmosphere. Carbon dioxide is a gas that keeps heat in Earth's atmosphere, a process called the "greenhouse effect." The greenhouse effect is necessary to live on Earth but relies on a balanced carbon budget.

A Green Powered Canada

The respondent's email address (**yusuf.hashi@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Solar Energy

Type of Resource *

- (•) Renewable
- ( ) Non-Renewable

Benefits *

1) A major benefit of solar energy technology is that it is a sustainable alternative to fossil fuels. Drawbacks include that it is costlier than other clean energies.

2) With the growing threat of climate change due to the excessive release of carbon emissions, many nations are looking to clean energy alternatives to replace traditional fossil fuels.

3) Of all the clean energy alternatives, solar has arguably been the most expensive though prices have been declining. However, after considering the pros and cons along with the expectation that prices will continue to decline, the future of solar energy is looking rather bright. By the way, they are all from the link and the link is.https://www.investopedia.com/articles/investing/053015/pros-and-cons-solar-energy.asp

Drawbacks *

1) Disadvantages of Solar Energy
2) Cost. The initial cost of purchasing a solar system is fairly high. ...
3) Weather-Dependent. Although solar energy can still be collected during cloudy and rainy days, the efficiency of the solar system drops. ...
4) Solar Energy Storage Is Expensive. ...
Uses a Lot of Space. ...
Associated with Pollution.

How is this energy source being used in Canada? *

1) Solar energy is used today in a number of ways:
2) As heat for making hot water, heating buildings, and cooking.
3) To generate electricity with solar cells or heat engines.
4) To take the salt away from sea water.
5) To use sun rays for drying clothes and towels.
6) It is used by plants for the process of photosynthesis.

What role could this energy source have in the future? *

Maybe it could be used for something like basic like using a toaster. Because we don't even know what we don't know cause we don't even know what it is every tricky.

Provide two reliable sources for people who would like to learn more about this energy source: *

1) https://www.nationalgeographic.com/environment/global-warming/solar-power/

2) https://www.seia.org/research-resources/solar-research-links

A Green Powered Canada

The respondent's email address (**hasti.moradian-nezhad@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Wind energy

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

A benefit of wind energy is that it helps to not harm the environment and animals instead of killing them. Another benefit is that it is a cheaper way to get energy and plus it saves money too, it also helps to save money in the pandemic because a lot of people are losing their jobs and so it also helps to save money in the pandemic too so instead of giving lots of money for a non-friendly system we can save our money and make it an environmentally friendly system.

Drawbacks *

A drawback for it is that the number of birds and animals might get low because if we use the one that is expensive and not environmentally friendly it can harm the animals, they would either leave or they would die because of the polluted air. Another drawback is that people can die because of the air too because first of all humans cant stay healthy if they spend every day at home and plus when the air is polluted and with lots of germs outside, it can make you really sick because polluted air can make you cough.

How is this energy source being used in Canada? *

This source is used in Canada. This wind energy system was built in Canada, between 2009 to 2019. After, other country's and other places were using wind energy after 2019.

What role could this energy source have in the future? *

I think it would grow because since wind energy is cheaper and because of the pandemic a lot of people are losing their jobs or there might be a different virus that is similar to the COVID-19 it would help save money and spend it on important stuff that usually doesn't put discounts and that they are important. I mean a lot of people are struggling so they would use wind energy than the expensive one. Plus the expensive one isn't even environmentally friendly.

Provide two reliable sources for people who would like to learn more about this energy source: *

-https://www.nationalgeographic.com/environment/global-warming/wind-power/
This link talks about some facts and information about the wind energy system. Except that it was also talking about how the wind energy system works and
the wind energy industry and it also talked a little bit about wind power.

-https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy

This link talks about some challenges and some advantages of wind energy. So it just listed some topics that can be an advantage and then it puts a list of challenges for wind energy. It also shows a picture to show how the turbines can make electricity for the utility grid.

A Green Powered Canada

The respondent's email address (**zachery.rafle@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Solar power.

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

Maybe we could stop wasting a ton of energy, because the company GMC is going to make all of there mobiles electric by the time 2035. So probably cars will be the same when we use them, and we could stop that problem before it's to late. We could also win the energy diet challenge for Cresthaven public school and that will help us a lot!

Drawbacks *

The drawbacks is that solar power takes time to use like when you dry your clothes outside and hang them up, that takes time. Like when flowers use the sun's energy doesn't that take a while. And we don't have much on earth time and some people are impatient and there most likely to act impatient.

How is this energy source being used in Canada? *

Well, Canada use of solar power is when they dry their clothes, and what flowers make food out of like sunlight also know as photosynthesis. And flowers are the reason that we have honey, fruits and vegetables, and flowers consumes carbon dioxide and cleans part of our earth.

What role could this energy source have in the future? *

I think the role that this will have in our lives is when GMC makes all of their vehicles electric and to stop burning up oil/fossil fuel and less carbon dioxide. And same with cas most likely and that is the role that I think it will play.

Provide two reliable sources for people who would like to learn more about this energy source: *

https://www.seia.org/initiatives/about-solar-energy#:~:text=Solar%20power%20is%20energy%20from,into%20thermal%20or%20electrical%20energy.&text=Solar%20technologies%20can%20harness%20this,%2C%20commercial%2C%20or%20industrial%20use.
https://www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/renewable-energy/about-renewable-energy/7295.

A Green Powered Canada

The respondent's email address (**sumaya.ali3@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

wind mill

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

the reason why the windmills are a good type of energy resource because it's sustainable energy source and it's a clean fuel source

Drawbacks *

it could be harmful to the the wild life
it doesn't work when wind isn't blowing
it could be very noisy to people

How is this energy source being used in Canada? *

Well I think wind mills are used in farms and wind mills are used to pump water or grinding grains so that it can produce electricity

What role could this energy source have in the future? *

since it is a sustainable energy source and it's a clean fuel source I think it will have a positive change in the environment

Provide two reliable sources for people who would like to learn more about this energy source: *

https://kids.britannica.com/kids/article/windmill/400203
https://www.axionpower.com/knowledge/wind-energy-101/

I think these sources can be good for students and people who don't know a lot about windmills.

A Green Powered Canada

The respondent's email address (**omar.edirisinghe@student.tdsb.on.ca**) was recorded on submission of this form.

Energy Source *

Wind

Type of Resource *

- (●) Renewable
- ( ) Non-Renewable

Benefits *

Doesn't emit any gases. Unlike the fossil fuel trio and others Wind power emit's little to no gases.

Drawbacks *

Takes time to build wind mills. Windmills are a threat to birds and bats because the blades go round' round and bird + anything spinning = death.

How is this energy source being used in Canada? *

t

What role could this energy source have in the future? *

t

Provide two reliable sources for people who would like to learn more about this energy source: *

t