

Green Energy Act Alliance

Myths about Renewable Energy and FAQs about the Green Energy Act

Myths about Renewable Energy

Myth – Renewable energy is unreliable.

Fact – Renewable energy is VERY reliable.

Ontario already relies heavily on renewable energy from hydro power and it is VERY reliable. For instance, we use most of our energy during the daytime, when it is sunny and solar panels can feed energy directly into our homes and offices. When it's cloudy or cold, many solar panels are still generating electricity. While wind isn't blowing at the same site all the time, across Ontario wind is always blowing somewhere. Energy from wind and solar sites can also be stored for use at a later time or sent to others parts of the province where energy is needed.

Myth – It is too cold in Canada for solar.

Fact – Cold does not mean lack of sunshine.

In fact, in the populated areas of Canada the annual solar energy average exceeds that of the two countries that are world leaders in solar energy use – Germany and Japan. Germany now installs 40 MW a month. Solar energy is now a \$15 billion/year industry worldwide– and is growing by 35% annually. Canada, too, can get in on the act. It is true that solar panels do not produce electricity or thermal heating without the sun. But the advantage of solar technologies is that solar produces power during periods of peak energy demands (day-time) thereby reducing the need of expensive peaking power plants often powered by high CO2 emitting fuels.

Myth – There is not enough sunshine to heat water throughout the year.

Fact – Yes, there is plenty of sunshine to heat water in Canada throughout the year.

Because the sun shines every month of the year, solar hot water can be made every month of the year. Naturally more hot water is generated in summer months, but modern collectors, whether

they be evacuated tubes or flat plate collectors, are designed to operate even on the very coldest days of winter. All that is needed is sun! Will a solar system produce all the hot water a household needs, even in the depths of a Canadian winter? No, not likely, but since solar hot water systems are designed to work in tandem with a conventional hot water tank, this isn't an issue.

Myth – Renewable energy is expensive.

Fact – The cost of renewable energy is competitive and puts us at a competitive advantage. The true cost of coal, gas and nuclear power is much more than we are currently paying.

For decades Ontario has relied on renewable energy from hydro power. At the time when hydro projects were built, these investments were very expensive, but they have since paid for themselves many times over. Electricity in Ontario has been heavily subsidized for many years and the true cost of coal, gas and nuclear power has not been passed along to consumers. While renewable technologies require significant investment in their construction, they do not have rising fuel costs – the fuel is essentially free. The cost of many of these technologies differs and will change as the technologies advance. Having these technologies built in Ontario creates jobs and feeds the economy.

Myth – Renewable energy is intermittent and cannot be part of a reliable electricity system.

Fact – By using diverse technologies and projects of different sizes spread over the entire province based on their best compatibility, the problem of intermittency will be addressed.

Although this would be a valid concern if we were talking about one wind turbine or solar panel in one specific area, it becomes less of an issue when we consider the all-engaging nature of the proposed Green Energy Act. The proposed act suggests that several different technologies of different sizes will be included in the existing power network. As for wind, for example, the output of one turbine varies but the output of several wind farms over a wide geographic area is consistent. Accurate wind forecasting can also ease wind integration. More importantly, wind farms must adhere to grid codes that ensure they contribute to overall grid stability and reliability. This means that wind project developers should work with utilities on grid codes and wind integration studies. The sharing of knowledge and expertise from grid integration studies in Canada and the U.S. would also play an important part in the improvement of our electricity system. What is true for wind is also true for all other forms of renewable technologies. It is important that the utility sector and energy producers work together to achieve the goal.

Myth – Wind turbines are unsafe.

Fact – Wind turbines are one of the safest energy technologies and have an outstanding health and safety record.

In North America there has never been a recorded death from ice thrown off a turbine or a blade flying off. Many turbines are programmed to shut down automatically when there is a

mechanical problem or ice is detected on the blade. Turbine parts have globally recognized certification standards and their parts do not simply fall off. By comparison, fossil fuel power stations directly contribute to the deaths of thousands every year from pollution and have damaging long term health effects to tens of thousands of others.

Myth – Wind turbines are noisy.

Fact – At reasonable distances, sound from turbines is similar to a whisper.

Yes, wind turbines produce sound. However, all projects must meet regulatory requirements for sound. Acceptable separation distances for sound are between 300 and 600 meters. At these distances, the sound generated from turbines is similar to a whisper. While conditions differ, the sound is often masked by background noise or the wind itself. Modern turbines are so quiet that it is possible to carry on a normal conversation at the base.

Myth – Renewable energy is ugly.

Fact – Beauty is in the eye of the beholder.

No two people agree on what is beautiful. Studies show that those living closer to turbines have a more positive opinion about them than those living further away. Further, research and anecdotal evidence indicates that wind developments do not negatively influence the viewscape. On the contrary, they have been found more than often to be a positive influence on tourism.

Myth – Wind turbines have a negative impact on human health.

Fact – There is little evidence that wind turbines are a human health concern.

There is no peer reviewed scientific literature that has found evidence linking wind turbines to negative human health impacts. Tens of thousands of people live and work around turbines and few claim any adverse health effects. Wind turbines do not produce infrasound at levels detectible by humans or that has been shown to have any health impacts. There is no evidence that the “flicker” or “strobe” effect produced by the shadow of the blades has any effect on humans or animals. By comparison, fossil fuel power stations directly contribute long term health issues, specifically to children and the elderly.

Myth – Wind turbines kill birds and bats.

Fact – Properly sited, turbines kill very few birds and bats compared to other human activities.

Birds and bats can die as a result of colliding with wind turbines. New technologies and regulations for turbine construction sites can reduce the likelihood of collisions. When compared to other causes of death that are a result of human activities, turbines are far down the list. Buildings, communications towers, cats, automobiles, pesticide and power lines kill over ¾ billion birds annually in the United States (buildings alone kill over 500 birds and cats kill roughly 100 million), while bird deaths attributed to turbines are only 25 thousand birds annually.

For this reason, the National Audubon Society “strongly supports” wind power as a clean source of renewable power.

Myth – Renewable energy creates stray voltage and will effect equipment and public health.

Fact – Renewable energy is not the cause of stray voltage, but its visibility makes it an easy target.

Stray voltage mainly occurs with improper grounding or a change in current patterns. Renewable energy technologies such as turbines and solar panels are not themselves the root of the problem. Like all power sources, proper inspection is required to maintain the systems. Smart grid technologies can mitigate stray voltage from every source.

Myth – Wind turbines will diminish my property value.

Fact – There is no evidence that a commercial wind farm within sight of a property will decrease its value.

Studies suggest that people living closer to turbines often tend to have a more positive opinion about them than those living further away. A study in Madison New York found no connection between wind turbine visibility and property value even when concentrating on homes located within a mile and sold immediately following the announcement of a new wind farm. In fact, the local tax base and many local residents benefit financially from wind farms.

Myth – Renewable energy will interfere with agricultural production.

Fact – Renewable energy sources are an added source of income to farmers and can keep farms economically feasible.

Turbines occupy a very small amount of land on farms, leaving the rest for traditional uses. Solar panels can be placed on the roofs of barns and buildings not disrupting the agricultural process. This, and other sources of renewable energy like biomass, provides an additional source of income to farmers and is supported by agricultural federations in the U.S. and Canada. Farm machinery is able to function properly around wind turbines and solar panels.

FAQs about the Green Energy Act

Question – How do we implement the Green Energy Act in a practical manner?

The GEA Alliance urges the government to implement proper regulations to create a streamlined and harmonized process that will allow municipalities to process and approve renewable energy projects in a timely and efficient manner. These regulations should include matters such as zoning, siting and environment assessment. In order to ensure that the GEA reflects the needs and

wishes of the people in the province, OSEA is currently traveling throughout Ontario holding public meetings and getting together with stakeholders to discuss the proposed act and listen to local concerns. Furthermore, OSEA and the Green Energy Act Alliance have been collecting feedback to the first Draft of the GEA proposal, which was published on the GEA website. These efforts have been undertaken to ensure that, when it is implemented, the Ontario Green Energy Act will be the most progressive act possible, making Ontario a global leader in the production of clean, renewable energy, conservation, and “green job” creation, which will in turn bring economic prosperity and energy security to the province and help protect the global climate.

Question – Why do we need to implement a right to connect and priority grid access?

Currently the process in Ontario is lengthy, expensive, and does not guarantee approval, access and permission to use the grid. Smaller energy producers (ie. individuals and community projects) are unable to afford the long and costly process, which denies them access from the beginning. Hence, if it is our goal to increase the portion of renewable power, it is essential to provide the potential producers (especially community power producers) with priority grid access as well as the right to connect. Considering the amount of initial investment necessary for renewable power projects, producers of green energy need to be assured that as long as they build their facility and it passes the appropriate environmental assessment, the project will get access to the grid and be connected before anyone else.

Question – Are Feed-in Tariffs just another subsidy?

Feed-in tariffs are not subsidies. They do not subsidize the cost of the equipment used to produce renewably generated electricity, like solar panels or wind turbines, nor do the payments come from taxpayers. Instead, feed-in tariffs are simply payment for the generation of electricity. Society decides whether it wants a certain form of renewable energy, then it decides what it costs to pay for it. That’s all there is to it. Some technologies, such as solar photovoltaics, cost more than other technologies and, thus, they must be paid more for their electricity than, say, the electricity from wind turbines.

For more information and sources visit:

Green Energy Act Alliance. www.greenenergyact.ca

Ontario Sustainable Energy Association. www.ontario-sea.org

www.wind-works.org