



Frequently Asked Questions about Feed-in Tariffs

Ontario's Feed-in Tariff Program for power generation from renewable energy sources is 2 years old. On October 31, 2011, the Ontario Power Authority announced a review of the Program and its individual tariffs. This is a regularly scheduled review under the Green Energy Act and is not being carried out as a response to the debates on the tariffs and wind farms in the recent Ontario Election. However, there are still many who do not understand how the feed-in tariff concept works so we have put together a series of FAQs to help.

What is a Feed-in Tariff?

A feed-in tariff is the price paid to generators of electric power from renewable energy sources when they feed this power into the Ontario grid. This price, in cents per kWh, is based on what it costs today to generate power from a new power plant using renewable energy sources. The price is guaranteed for 20 years under a Feed-in Tariff (FIT) contract between the generator and Ontario Power Authority (OPA). The cost of paying the feed-in tariffs – like all new power acquisitions by the OPA - is shared among all ratepayers.

How is this different from how we pay for power from other energy sources?

With a feed-in tariff, generators are paid only when they deliver electricity to the grid. This is called “Pay for Performance” pricing. Generators must build the power plant with their own funds, get connected to the grid, and commission their power plant before being paid – and then only for each kWh delivered. With most conventional power plants like hydro, coal or nuclear, generators are paid up front during construction before they start producing power.

What do Feed-in Tariffs achieve?

Right now, power from renewable power sources usually costs more than power from new conventional power plants. The objective of feed-in tariffs is to encourage investment in renewable energy power plants in Ontario by paying what it costs now to generate power from different renewable energy technologies. **This has the effect of developing a manufacturing industry and driving down the cost of renewable energy technology through economies of scale.**

Every two years the tariffs for new FIT contracts are reduced until no tariff is needed.

Since the costs of conventional power plants and their fuels are going up, renewable power sources could be competitive or cheaper than conventional power sources within a decade.

Are there different Feed-in Tariffs for different renewable energy technologies?

Yes, feed-in tariffs are set so that individuals, community enterprises, and renewable energy companies can make a reasonable return (around 7%) on an investment in the technology of their choice. Any price less than these tariffs would mean that no-one would invest in renewable power. Smaller systems also cost more than larger ones so that tariffs for small systems are higher. The first feed-in tariffs that were set in 2009 are as follows:

Solar Ground:	44.3 – 64.2 cents/kWh	Solar Roof:	64.3 – 80.2 cents/kWh
Landfill Gas:	10.3 – 11.1 cents/kWh	Biogas:	10.5 – 19.5 cents/kWh
Wind:	13.5 cents/kWh	Biomass:	13.0 – 13.8 cents/kWh
Hydro:	12.2 – 13.1 cents/kWh		

These feed-in tariffs seem really high compared with current power prices – especially for solar. How can this be sustainable?

Feed-in tariffs are lowered every two years as the costs of renewable technologies come down. In the case of solar, the cost of panels has come down significantly over past 20 years. It is still high but is also dropping quickly as countries around the World encourage development through policies like feed-in tariffs and large manufacturing plants come on line.

The current OPA review of feed-in tariffs should show that the cost of solar panels and other renewable technologies in Ontario has dropped since 2009 and therefore the OPA will set lower tariffs for new feed-in tariff contracts starting in 2012. Every two years the tariffs will be reviewed again until no tariff is needed.

The feed-in tariffs are also for power from new renewable energy projects built today so they should not be compared with price of power from existing conventional power plants built thirty years ago. The reason for this is that these existing power plants were built when the costs of labour, materials, and fuels were much lower. We know that we cannot compare the cost of a vehicle purchased today with one purchased twenty years ago; why would we make the same mistake with power generation?

I read that the price paid to nuclear power generators is only 6 cents/kWh. Why are the feed-in tariffs so much higher?

Over the past thirty years nuclear power plants have been supported by subsidies and huge amounts of public debt to cover cost overruns and unexpected repairs. The price currently paid for power from nuclear plants is the price after the provincial debt from these cost overruns has been paid by Ontario tax payers and ratepayers. That is what the “debt retirement charge” on your power bill is for. In Ontario, we have also not properly dealt with any of our nuclear waste, or the end-of-life disposal of a nuclear generating station, so these are not included in the price either.

We do not really know what the cost of building and operating new nuclear power plants in Ontario will be, including the large costs now required to insure these plants. All we know is that the latest quote caused “sticker shock” in the Provincial Cabinet, so it is safe to say that these costs will be far higher than the rates currently paid by consumers and higher than many of the feed-in tariffs paid for renewable power.

But won't these Feed-in Tariffs still have a big impact on my electricity bills?

Right now the amount of renewable power being fed into the grid is small, so that the impact of the feed-in tariffs is low. As the amount of renewable power we use grows, the feed-in tariffs will come down, so the impact will remain small. Power from any new conventional power plant will cost much more than we pay now, so the feed-in tariffs for renewable power sources will not contribute to future electricity rates any more than other new power sources will. In fact the addition of renewable power to the mix will actually temper these increases as the grid will rely less on more and more expensive fossil and nuclear fuels.

Why have my power bills gone up so much in the last 2 years?

Most of the recent increases in electricity bills have resulted from major investments by the Province in upgrading Ontario's aging grid infrastructure – some built more than a century ago. The OPA also has some long term power purchase and power plant refurbishment contracts with conventional power producers that have to be honoured. Finally HST was added to electricity bills in 2010 and time of use rates were put in place in 2011.

Solar and wind cannot be relied upon to provide power whenever we need it. How can we base our future grid on these variable power sources?

Ontario's hydro resources are the perfect complement to wind and solar. As demand for power varies their power output can be controlled and matched to solar and wind generation. When the solar and wind generation is producing excess power, the hydro-electric dams can be regulated so as to save water for a later period when the sun is not shining or the wind is not blowing. This is an extremely efficient way of storing energy. New power storage technologies like pumped water storage, large scale batteries, and compressed air and water systems are starting to be used with solar and wind plants to provide on-demand power at any time. Finally the so called “smart grid” will manage and co-ordinate demand and supply.

Solar and wind outputs also match Ontario's peak demand very well – in summer solar output coincides with the air conditioning peak while winter peaks are higher on windy days. At peak periods when demand is the highest, local power distribution utilities must pay the spot price for electricity generated by natural gas fired plants that only run at peak times. These prices are often actually higher than the feed-in tariffs paid for solar power - sometimes as high as \$2.00 per kWh.

What happens if our local grid does not have the capacity to absorb more FIT projects?

All prospective FIT projects must show that they meet the technical and safety standards of the grid. All projects other than small MicroFIT projects must also undergo a connection test to see if there is sufficient local grid capacity. If the projects meet these conditions, the local utility must connect them to the grid. If there is insufficient capacity, like in some parts of Eastern Ontario, then the projects join a queue and local utilities work with the OPA to upgrade the grid so that they can be connected in the future.

Won't lowering tariffs every 2 years discourage investors and defeat the whole idea?

Feed-in tariff contracts signed between 2009 and 2011 will not be affected by new lower tariffs – only new ones. Lower FIT rates in the future will be matched by lower production costs so the return for investors will remain the same. Ratepayers will benefit as well by getting a higher proportion of renewable power at lower electricity prices.

Has the Feed-in Tariff policy worked anywhere else?

Studies have found that feed-in tariff policies achieve larger deployment of renewable power at lower cost than other policies such as quotas, direct incentives or voluntary goals — making feed-in tariffs the most efficient and cost effective policy to procure renewable energy.

Germany has had feed-in tariffs for the past 15 years and is now the World leader in solar and wind power. The German tariffs have brought down the cost of renewable power significantly to the point where the country is planning to make the transition away from nuclear power to renewable sources in the wake of the Japanese Fukushima nuclear disaster. Germany will make its next reduction in its tariffs effective January 2012 – for example, lowering the cost of solar by 15% to match the latest reductions in solar panel costs.

Over 50 other countries around the World also use feed-in tariffs – including France, Spain, the UK, and Italy, as well as smaller countries like Sri Lanka and Malaysia.

And in Ontario - what benefits have we seen here so far?

As of November 2011, since the launch of the Green Energy Act and Feed-in Tariff (FIT) Program in 2009, the province has:

- Offered contracts and connected 2,500 medium and large renewable FIT power projects and over 11,000 smaller “MicroFIT” projects. This represents enough electricity to power almost 1.2 million homes.
- Created more than 20,000 jobs in 40 new manufacturing plants for solar and wind power systems – over 8,000 jobs in solar alone. Renewable energy development produces three times the number of jobs per kWh than conventional power plants.
- Helped Ontario shut down eight of 19 coal units with the remaining units to close by the end of 2014.
- Established Ontario as the new North American leader in renewable energy manufacturing.

- Stabilized the grid and made it more secure by having more points of power generation in all parts of the Province.

Why was there so much controversy about Wind Farms in the recent Ontario election?

Wind turbines are large machines and therefore elicit quite varied responses from those who live near them. Unfortunately, some wind farms were built without enough community input and built closer to homes than many people wanted. Many wind farms are also privately owned by outside companies – without the local ownership that characterizes wind farms in countries like Denmark and Germany.

Health concerns associated with wind energy is not an issue anymore in Germany which is leading the world in wind power production. Local ownership of wind and solar farms has provided profit for rural residents along with strong support.

What role can ordinary citizens play in the OPA Feed-in Tariff Program review?

Start off by learning the facts about the Feed-in Tariff program and its benefits to date. Ask your MPP and utility to make sure the new tariffs are set based on lower costs of renewable power technologies and not political pressures. You can also submit your own views to the OPA.

Can anyone participate in the Feed-in Tariff Program?

Yes, there are several options. If you are home owner or organization that owns its own property, and you have a suitable roof or plot of land, you can install your own small solar power system and obtain a MicroFIT contract without too much red tape. FIT contracts for larger renewable energy projects require much higher investment and involve significant project development costs and fees. These projects are normally owned by renewable energy cooperatives and private companies who often lease space on roofs and land for the projects. Renewable energy coops like the Ottawa Renewable Energy Co-operative sell shares to their members so that there is an opportunity for everyone to invest in renewable power projects.

For more information visit the OREC web site www.ottawarenewableenergycoop.ca