



Ontario Federation of Agriculture

Ontario AgriCentre

100 Stone Road West, Suite 206, Guelph, Ontario N1G 5L3
Tel: (519) 821-8883 • Fax: (519) 821-8810 • www.ofa.on.ca

From

ONTARIO FEDERATION of AGRICULTURE

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Suggestions on Large Solar Installations for Ontario Farmers

General Considerations Ontario needs power and farmers need income. The Ontario Federation of Ontario (OFA) favours solar power on buildings, in fencerows, in small plots in yards or gardens, in otherwise vacant hydro corridors or roadsides. Yes, the power is expensive until the solar cells are paid for; but once a project is amortized, rates can become reasonable. And they are quiet and generally unobtrusive.

However, OFA is concerned that large scale solar development on good farm land is ill-suited to Ontario. In temperate farming areas OFA believes solar will cause erosion, bake the soil, disrupt carbon and nitrogen fixing, create habitat for noxious weeds, destroy habitat for many native creatures on farms including worms and frogs and needlessly remove good land from production. Ontario is blessed with great amounts of land, but less than 15% of the total is well suited for farming. If large land based solar installations are needed in Ontario, there are vast areas of land that are not particularly useful for farming or recreation, forestry or wildlife that could be used for solar farms. There is no need to sacrifice other potentials to have solar in Ontario. There are tens of thousands of kilometers of suitable power line, the sun shines for between 2,200 and 3,000 hours each year in all parts of Ontario varying with cloud cover and the price offered is more than sufficient to enable solar development on all but the most inhospitable sites. Accordingly, Ontario has opted to protect good farmland and not use it for solar power. This is a sound policy.

Larger Solar Farm Leases Classes 1 and 2 farm land is no longer available for solar farm development. Future large scale solar development in Ontario will be on class 3 or lower land. There are tens of thousands of square miles of such land with good access to power lines. OFA's opposition to solar farms on farm land arises from a belief that they cause erosion, disrupt carbon and nitrogen, reduce and change soil bacteria populations and promote weed growth.

In extremely dry areas solar farms do not appear to do severe harm to the land. In temperate areas soil cover is disrupted. All precipitation falls immediately below the south edge of the panels rather than on the whole area covered by the panel. Thus in an area that might normally get 0.75 meters of rain per year, the concentrated area gets over 3 meters and in that area a ½ inch rainfall which is heavy would be concentrated into 2 to 3 inch deluge. Yet immediately under the panels there would be no precipitation. Between the panels erosion will be severe, while under the panels it will be a permanent sunless drought. Forty years of this will utterly change the field.

Several firms in Ontario are offering long term leases (typically 40 years) to farmers who will rent land (usually 80 plus acres) for the purpose of a solar farm.

Solar farms with 10 mW of capacity require 80 to 100 acres and should yield gross income of \$ 8.5 to \$ 9.5 million per year depending on cloud cover. Rents in the range of \$ 40,000 to \$ 120,000 per year have been offered for 100 acre sites in Ontario. Rents have escalator clauses to address part (usually 10% to 20% of full inflation. So rents are effectively frozen for 20 to 40 years.

The initial rents appear generous. However, solar farms are destructive of the soil. After 40 years of solar panels on the land, it is very likely that the land will require a five to ten year period of reclamation. During that period yields will be low and the effort will be to re-establish soil health through a program of planting a



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mix of root crops, nitrogen fixing crops and then forage crops for intensive grazing to build the soil with manure. There is no reason to believe a prospective buyer for the land will pay full price 40 years from now, if the land won't be able to produce effectively for the first ten years. Land that is worth \$ 4,000 an acre now, might be worth \$ 20,000 to \$ 25,000 in 40 years. If it has a five to ten year establishment period though it will only be worth half. Having a solar farm in that case would reduce the future value of the farm by up to \$ 12,000 an acre. That would be 10 years of high rent or 30 years of low rent lost out of the forty.

A farmer who wants to continue farming would likely be better to sell his farm at a price that recognizes the short term high rents solar farm developers are offering compared to the economic rent of land in farming. (between \$ 150 and \$ 450 an acre for most grains in Ontario in recent years) Thus the solar farm developer should be willing to pay 1 ½ to 3 times normal market value if he really needs a particular farm because of its location near power lines or a transformer.

However people approaching farmers are rarely solar farm developers. They are land agents attempting to put together a package that they can sell to a genuine solar farm developer. These land agents cannot afford to buy the farm and they cannot afford to take the risk of buying it and not being able to sell it to a solar developer. These land agents can afford the \$ 1,000 to \$ 5,000 option payments they offer, but it is a very poor farmer that will be any better off for taking that paltry option payment.

Farmers should be wary of signing a solar farm lease as the following circumstances may arise:

- 1 **Legal costs** – The solar agent should pay your entire costs of getting a legal opinion, whether or not you sign.
- 2 **Transferability** – Add a clause that stipulates that the agreement cannot be transferred to any person or company without your approval.
- 3 **Option to Purchase/Right of First Refusal** – These are valuable and should not be included in a lease without separate valuation and payment. Inclusion can spoil sales or succession.
- 4 **Option Termination** – Add a clause that stipulates that the option ends on a precise date if construction has not started by that date. You need a clear end to the option.
- 5 **Option** – \$ 1 is an OK option payment on a good lease; \$ 10,000 won't make a bad one good.
- 6 **Rent** – Rent should be 3% for the first 8 to 10 years then 8% once bank loans etc. are covered. Rent should apply to all income from the project. A fixed rent is lower risk.
- 7 **Insurance** – Stipulate that the company must produce a valid certificate of insurance covering liability to the farm and others each year and that it assumes full liability for damages to the solar installation or contractors, consultants etc. The rent will not pay a lawyer if you are sued.
- 8 **Trees and Cutting** – Add a clause or map as an appendix to the lease indicating where trees may or may not be cut. Generally tree removal should not be needed.
- 9 **Other Development** – If the property may be valuable for other development in the next 30 years do not sign as you will be giving the wind company your future profits or capital gains.



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- 10 **Your Other Rights** – Some leases have clauses that appropriate your development rights for aggregates, ground water, top soil, sale outside of the family and even your right to speak in public on solar power questions. Any such clause should be removed from the agreement.
- 11 **Site security** – Do not accept any obligation, paid or unpaid, to provide security for the panels.
- 12 **Tenants Rights** – Stipulate that the company will have rights to do needed studies and to construct, operate and maintain the agreed facilities as well as required roads and wires, and to transfer electricity from the site to the grid.
- 13 **A Cooling Off Period** – have a clause that states that either party may cancel the agreement within 30 days without reason or penalty.
- 14 **Power Sales** – Stipulate that power must be sold to government or you get to approve any other contract. Without this, power can be sold to a subsidiary of the company and a 3% rent, will be 3% of very little.
- 15 **Conversion to Easement** – Do not allow a conversion from lease to an easement as it will be more difficult, perhaps impossible to discharge when the lease expires.
- 16 **Quitclaim** – ensure the lease provides for a clean end so the company cannot be released from the lease or recover funds from the escrow account without your approval and certification that they have met all their obligations including clean up.
- 17 **Solar Rights Only** – Do not allow any clause that gives the power company a right of first refusal or an option for any purpose other than the use of the sunlight. Such clauses encumber sales, wills, development of other businesses, etc.
- 18 **Term of Lease** – suggest 3 year option, 20 years for first term and 5 year renewals to follow.
- 19 **Assessment and Property Taxes** – the land owner is ultimately responsible for taxes – a clause to require the power company to pay taxes associated with their equipment and improvements is essential and it needs an enforcement clause – you cannot afford their taxes, without their income. In the case of default, you should get the licences to produce/sell power.
- 20 **Escrow Fund** – Require the tenant to have an escrow fund held with your lawyer or a trust company. This fund will be established with the start of construction and used to pay reclamation, arrears in taxes, and any maintenance that the company refuses to do.
- 21 **Registration of Surveys** – surveys should only be registered with your approval. The agreement should state that the tenant does not acquire a legal right of way or any privilege that could lead to shared or sole title. The tenant only acquires limited rights to use land for a period.
- 22 **Wait 'Til You Know Your Choices** – The government has a Feed in Tariff program. You can have your own solar project or you can find other firms or partners. You may do better than you might as a landlord. **Don't sign a lease until you have considered the choices and determined what is best for your farm operation for the next 20 plus years.**



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- 23 Increase your bargaining power** – apply to your local distribution company for the right to connect a generator yourself. The connection agreement is valuable. Own it yourself.

In a nutshell

Large scale solar on the ground will destroy soil and land value and undermine the value of the farm. But medium scale solar on a large roof can be a means to substantial income.

Each agreement should be studied carefully, but if it steers clear of the areas for caution, it may well be useful. And for large or medium scale solar leases a lawyer's opinion is essential.

No attempt should be made to use class one or class two land and in any event the lease should provide for ten years after the solar farm is gone to restore the land.