

# Tax Implications of Owning A Residential Solar Electric System - Our Power Wiki

[Edit](#)[Edit](#) Questions keep coming up about income tax implications of owning a solar electric system and selling your power back to the grid under Ontario's RESOP program, so this brief is intended to capture all of what is known about the topic so far. This page will be updated as more is learned.

The Government of Ontario acknowledges the value of generating safe, clean electrical energy and in 2006 took a very progressive step in creating "The Renewable Energy Standard Offer Program" (RESOP). Under the RESOP, homeowners and business owners were invited to apply for a 20 year RESOP contract, under which they were paid a premium price (\$.42 per kilowatt hour) for every bit of electricity they generated. The contracts were to be handled by the Ontario Power Authority (OPA). Note: As of this writing (April 9th) we are on the threshold of seeing the RESOP replaced by a new program called "The Green Energy Act", under which, the proposed revenues (to be called "Feed-in Tariffs" or "FITs") per kilowatt hour will jump to \$.803 (80.3 cents), provided that the solar system is less than 10 kilowatts in size. At the new rate, it will actually be profitable for people to install systems. In the example below, approximate figures are given for RESOP rates.

Since you are to be paid for your solar electricity sales, in the eyes of the Canada Revenue Agency, your contract with the Ontario Power Authority (OPA) makes you a business. This means that the income you earn from selling kilowatts is taxable. That's the bad news.

Now for the good news. There are a number of allowable deductions you can take against this income, which will reduce the resulting taxes payable to zero for many years of your 20 year contract with the OPA as follows:

1. The largest of these expenses is depreciation and a special provision of the tax act allows the homeowner to write off the cost of their system more quickly than would normally be the case. The result is that every bit of energy revenue earned, does not result in any taxable income until the point is reached where the amount of income from energy sales equals the cost of the system. The technical info: Solar PV systems are classified as "class 43.2 assets" for which, accelerated depreciation is allowed <sup>(1)</sup> at a rate of 50% declining balance per year. Unfortunately one can't use this as quickly as it first appears is possible.

Example: Say you paid \$30,000 for a 3 kilowatt system and you earn \$3,000 each year. You can bring the taxable portion to zero by deducting \$3,000 each year over 10 years, that is until the \$30,000 cost of the system has been fully depreciated. NOTE: The \$3,000 figure above was used for simple math. In fact, a properly installed system of 3 kilowatt size should generate about \$2,700 - \$2,800 in the first year, but then decline at about 0.5% to 0.75% per year due to panel degradation.

2. Loan interest for the purchase of the system.
3. Additional insurance premium paid (See note 2 below)
4. Repairs and maintenance (if any)

When completing your tax return, you should therefore claim as per the following example:

Energy sales Income \$3,000

Less expenses:

Interest expense on loan \$1,800 (6% on \$30,000 loan)

Additional insurance paid \$ 60

Share of property tax \$ 0 (See Property Tax below)

Depreciation \$1,015 (all that is left to reach the \$3,000 revenue)

Expense total \$3,000

Taxable income \$ 0 (yippee, while it lasts)

Note that once you have claimed depreciation totalling up to the value of the system, you will likely have to start paying some tax on the income, but rest assured that it won't likely be for more than a decade, particularly if you have loan interest expense to claim.

Additional information:

- Manual Income Tax preparation will be a real bear, but here are the forms you'll need:
  - T2125 Statement of Business or Professional Activities ...See sample form here: [Income Tax, Business Income](#)
  - T2125 Calculation or Capital Cost Allowance (CCA) Claim ...See sample form here: [Income Tax, CCA Claim](#)
- Personal Tax software would be better
- A professional Accountant will be the most pain-free except for his/her bill

Notes

1) Class 43.2 applies to purchases Feb 24, 2005 to Dec 31, 2011

Business Owners Take Note:

As per Tax Act regulation 1100(26), the CCA (tax depreciation) allowed cannot be deducted against general income of a business except income from energy production or sale, EXCEPT FOR manufacturing and processing companies, mining operations and energy sale/distribution businesses.

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## Property Tax

The Ontario Ministry of Finance has confirmed recently with us that there will be NO property tax implications resulting from installing small renewable energy systems in Ontario, including solar electric and solar thermal systems. See below for the specific definition of items that are exempt from property tax assessment.

[Assessment Act R.S.O. 1990, CHAPTER A.31](#)

Machinery for producing electric power

18. All machinery and equipment including the foundations on which they rest to the extent and in the proportion used for producing electric power but not including any buildings, structures, structural facilities or fixtures used in connection therewith.

Machinery for energy conservation

18.1 Machinery and equipment used for the purposes of energy conservation or efficiency and prescribed by the Minister for the purposes of this paragraph.

If you have any difficulty with MPAC or the Ministry of Finance, please notify us immediately at [jcohen@sentinelpowersystems.com](mailto:jcohen@sentinelpowersystems.com)

Disclaimer: This information is intended to make residential homeowners aware of residential solar electric system income tax implications as a guide only, but does not constitute an opinion and should not be relied upon as such. The advisability of any course of action mentioned above depends on your particular financial, tax and legal circumstances. Readers may wish to consult an accountant before implementing the suggestions made above.

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