

Information Meeting Solar Unlimited Network

**A Project of Go Green Together
Tuesday, December 7, 2010**



microFIT (Feed-In Tariff)

- For solar PV projects 10 kW and less
- Power from your roof mounted panels is fed into the grid at 80.2 cents per kWh (64.2 cents for ground mounted) based on a 20 year contract; you buy power at the normal rate from the grid



microFIT (cont'd.)

Program overview can be found at:

<http://microfit.powerauthority.on.ca>

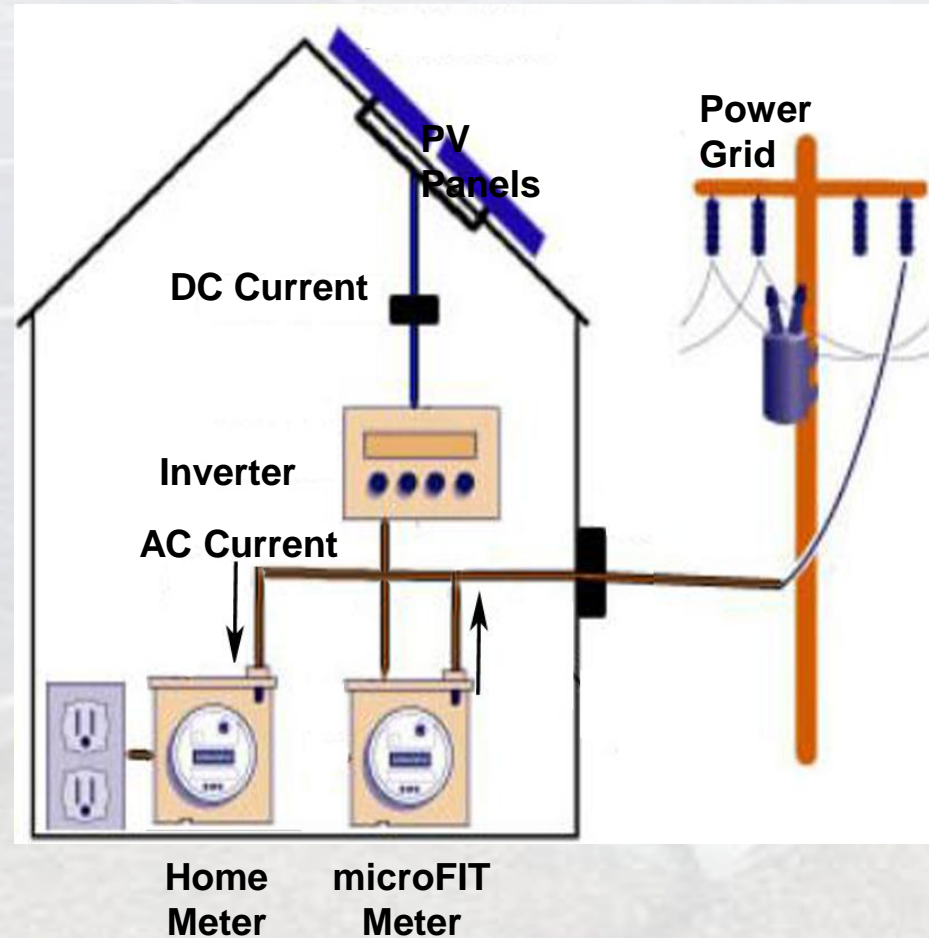
- You must apply to the program online
- You must arrange connection and metering with the Local Distribution Company (LDC) (Lakefront Utilities, Veridian, and Hydro One)
- Once you install your project, you must complete an electrical safety inspection and work your with local distribution company to finalize your connection.

microFIT (cont'd.)

- Once you have completed your connection to the grid, your local distribution company will contact the OPA with information about your project so that the OPA can prepare and offer you a contract.
- The OPA will send you a notice of your microFIT contract offer by e-mail. Contracts are executed electronically through a secure OPA website.
- Payments will be made to you by your Local Distribution Company over 20 yrs. on the behalf of the OPA for all the electricity produced by your microFIT project.

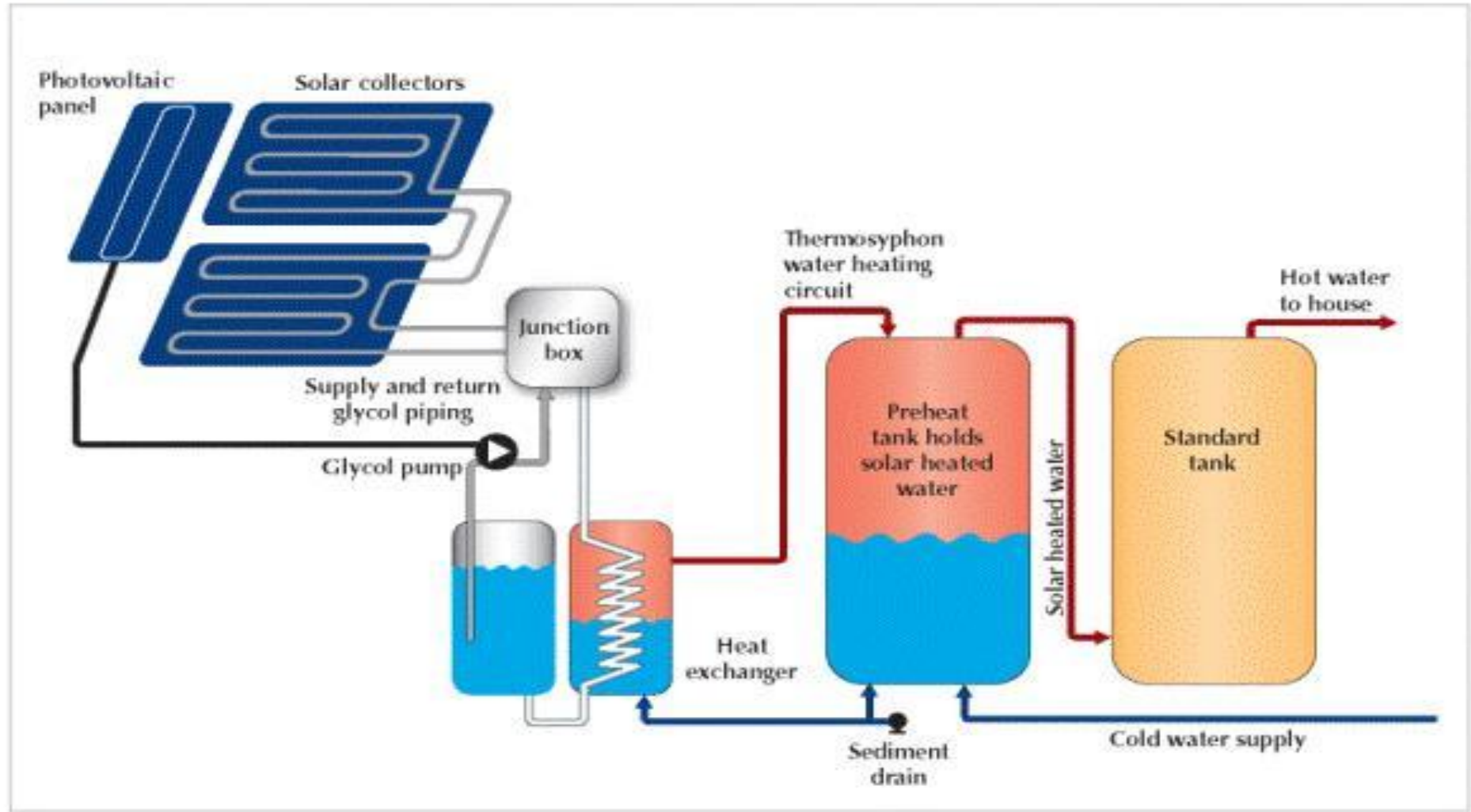
Solar Electric (PV) Technology

- Photovoltaic Panels (1 to 10 kW)
- Mounting Rack (flat / pitched roof; can also be ground mounted)
- Grid-tie inverter
- Electrical disconnect, cable, connectors, and installation hardware
- Installation
- Safety inspection
- Connection and meter from Local Distribution Company (LDC)



Solar Energy (Hot Water)

RETScreen



Assessing Your Site

- **South facing roof**
- **Adequate space**
- **Little or no shading (time of year, future tree growth)**
- **Roof structure, condition**
- **A preliminary assessment will be done by the Solar Buying Group and a final site assessment by the solar Installer**

Roof Area Required

Kilowatts Roof Area Required

(Approximate)

1.8kW	170-200 sq. ft.
2.88kW	255-300 sq. ft.
4.86kW	425-500 sq. ft.
6.48kW	595-700 sq. ft.
7.92kW	765-900 sq. ft.
10.8kW	935-1100 sq. ft.

Prices from First SUN Group

Costs of Solar PV (Electric)

- Prices are for a connection ready system (turnkey contract)
 - depends on size and design of system
- Additional Local Distribution Company (LDC) costs include:
 - connection charge and meter cost (minimum \$678)
 - Periodic admin fee (~\$6 each cheque)

Prices from 2nd SUN Group

Price of Solar Electric (PV) including HST

KW	Cost	Cost/KW	Type
1.80	16,900	9,389	Sloped Roof
2.88	22,736	7,894	“
4.86	34,362	7,070	“
6.48	42,752	6,598	“
10.80	65,900	6,102	“
5.40	42,338	7,840	Ground Mounted
10.80	74,450	6,894	“

A 3% to 10% volume discount is added depending on volume of the Solar Buying Group.

Information Gathering

SBG

Procurement

RFP

Contracts

Installation

Government Incentives

■ Solar Thermal

- Ontario Home Energy Savings programs grants of up to \$1,250 for residential system

■ Solar PV

- microFIT (Feed-in Tariff—80.2 cents/kwh for rooftop systems; 64.2/kwh for ground mounted systems)
- Accelerated CCA (Class 41.3)

Financial Return for Solar

Solar Electric (photovoltaic)

(Based on today's prices and microFIT rate)

1. The simple payback for a solar electric system is approx. 8 to 10 yrs.
2. The internal rate of return (IRR) is approx. 8% to 10% (depending on system size and price)

Solar Hot Water (thermal)

1. There are too many factors to provide a simple payback estimate. Solar thermal is most economic for households that consume more hot water.
2. Solar thermal systems are generally not recommended for space heat

Financing Options

- **Cash**
- **Loan**
 - **such as a Home Equity Line of Credit**
 - **Depending the system, the loan interest may be less than the rate of return from the solar income.**

Organizing a 3rd Solar Buying Group (SBG)

- 1. Those interested apply to the 3rd SBG membership**
- 2. Members pay fee of \$25 to Go Green Together**
- 3. SBG determines number and type of systems, including preliminary site assessment by SBG**
- 4. SBG members apply to microFIT**

Solar Buying Group Benefits

- 1. Information sharing**
- 2. Group support**
- 3. Problem solving**
- 4. Identifying reliable Installer**
- 5. Savings from volume discounts**

Other Solar Groups

- SolarShare
- Sustainable Ottawa
- OurPower
(www.ourpower.ca)
 - WISE (Toronto)
 - RISE (Toronto)



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Pre-Qualifying an Installer

SBG pre-qualifies Installers to provide prices based on the following:

- 1. # of years in business providing solar**
- 2. Size of company (# of solar installers)**
- 3. Credentials of key individuals**
- 4. Credentials of installers**
- 5. Current status with WSIB**
- 6. Liability insurance coverage**
- 7. Number, location, and examples of solar systems previously installed (within last 3 years)**
- 8. References**

Selecting an Installer (Request for Proposals)

SBG issues a Request for Proposals (RFP) to Pre-Qualified Installers and selects an Installer based on the following:

- Proposed costs and designs of Reference Systems
- Proposed Volume Discount
- Customer Service Statement
- Warranties
- Technology - Efficiency
- Ability to deliver a turnkey solution
- Compliance with submission requirements

Note: 5 Installers submitted to 2nd SBG RFP

Signing a Contract with an Installer and microFIT

- 1. SBG member should receive microFIT Conditional Offer before signing contract with Installer**
- 2. Each SBG member signs their own contract with Installer**
- 3. Depending on the volume (KWs) of all Installer contracts signed by SBG members, a volume discount will be applied to the contract price (3%-10%)**

Signing a Contract with an Installer and microFIT

- 1. Once installation is complete, an Electrical Safety Authority (ESA) inspection must be completed.**
- 2. ESA report goes to LDC**
- 3. If ESA report is acceptable to LDC, LDC notifies microFIT**
- 4. microFIT then prepares microFIT Contract and notifies SBG member**
- 5. SBG member signs microFIT Contract online.**

Solar Installation and LDC Coordination

- 1. Solar Installation typically begins a month or two after signing the Installer contract**
- 2. Installation typical takes 4 to 7 days**
- 3. Either SBG or Installer coordinates connection process with the LDC**
- 4. After signing Installer contract, the SBG member applies for LDC connection and pays connection fee (\$678+)**

Payment from LDC and Monitoring of Production

- 1. LDC will install a production meter to record the amount of power produced (in KWHs)**
- 2. LDC will send payment by mail, monthly or bi-monthly**
- 3. Inverter will record daily and total amount power produced**
- 4. SBG may wish to install a monitoring device (extra cost)**

Thank You!

Question & Comments



Contact

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