



Solar Energy



There are two ways to use energy from the sun.

1. **Passive solar energy:** The easiest way to utilize the sun's energy requires no wires, panels, or technology just windows! It's as easy as opening the curtains to let the sunshine heat the room. If a home is designed carefully (with south facing windows) it can get most of its light and up to 60 per cent of its annual heating requirements from the sun.

2. **Active solar energy:** This method involves implementing technology to utilize heat from the sun.

•Photovoltaic (PV): Panels are placed on the roof or sides of a building to turn sunlight into electricity. It can be used as either AC or DC power within the building, or redistributed to the grid for the community to use.

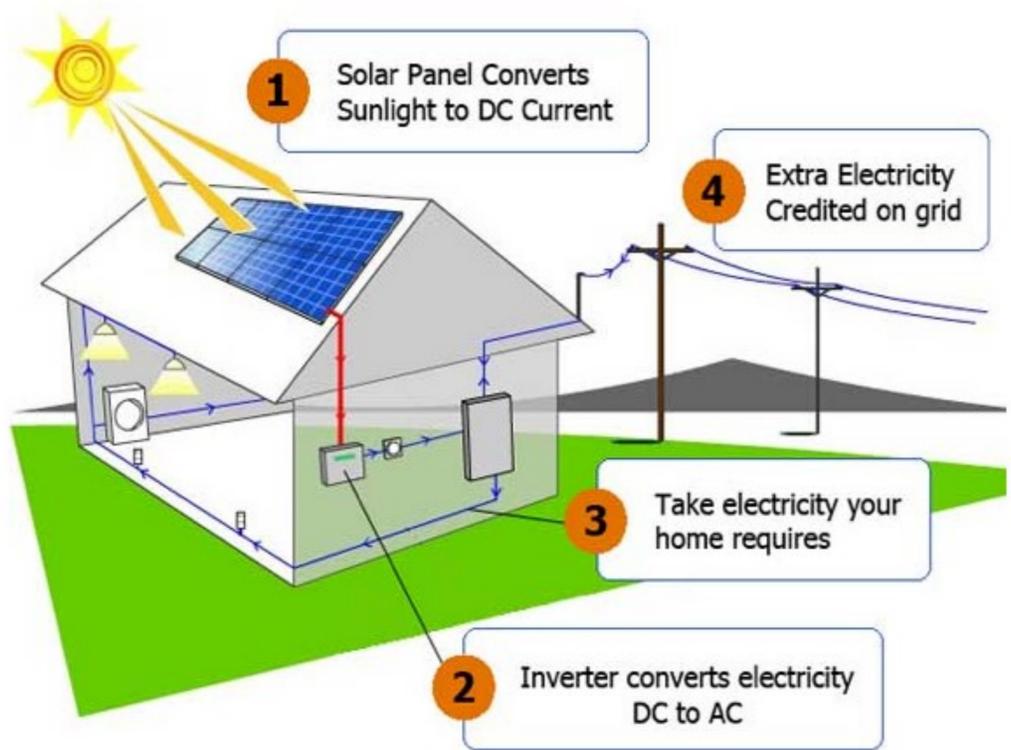
•Solar Thermal systems

⇒Solar Hot Water: Water is warmed by solar panels consisting of flat plates or evacuated tubes and circulates throughout a building to heat the space or just the domestic hot water. Pools can also be heated this way.

⇒Solar Hot Air: Air is warmed by solar collectors and circulates throughout a building to heat the space.

What Are The Advantages of Solar Power?

- The energy to run the systems (the sun) is **completely free**. It was estimated that in 2007, residents of Bridgewater paid **\$12,000,000** in energy bills, before taxes.
- The solar panels are **highly durable** which means maintenance and repair costs will be kept at a minimum.
- You can start with just a few panels and get more if your energy needs or budget allow
- Solar panels are a much quieter alternative to wind turbines.
- Solar panel systems produce **no harmful emissions**. In 2007, It was estimated that the residential energy use accounted for about **28%** of the **250,000 tons** of greenhouse gases produced by Bridgewater



What Are Some Of The Disadvantages?

- Initial cost
- Needs good exposure to the sun
- May increase re-roofing costs.



What Can Solar Energy Be Used For?

- It can be used to heat your hot water heater. Small 1 or 2 panel systems are great for pre heating hot water for the home. Larger systems of 4 panels or more can be used to power in-floor heating or for commercial or industrial uses.
- It can be used to create electricity to power all of your appliances
- If you are producing more energy with your solar panels than you need, you can redistribute that energy to the main grid and help to provide energy for your neighbours. Nova Scotia Power will pay you for any power you redistribute to the grid through the Enhanced Net Metering program.