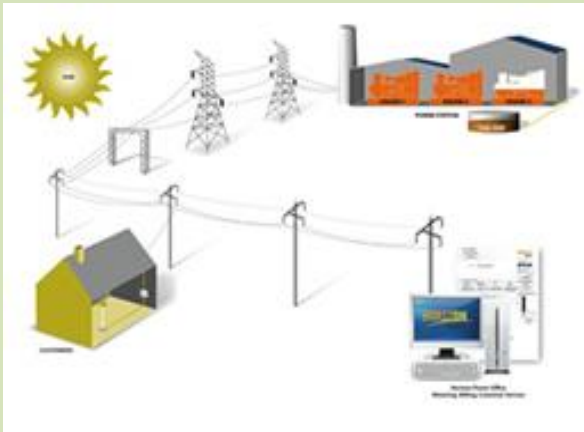


HOW RENEWABLE ENERGY WORKS

How renewable energy works

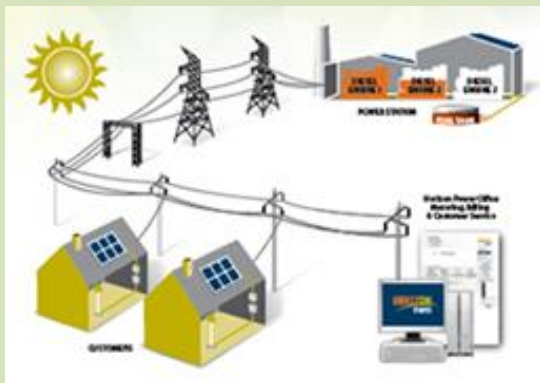
It may be helpful and interesting to have an understanding of how renewable energy works on our electricity system. This will give you an insight to our agreement and buyback price, eligibility rules, technical requirements and the significance of your town's hosting capacity.



Although it seems that electricity is available at the flick of a switch, it takes a lot of work and money to get power to your home or business.

Solomon Power generates electricity at a power station, distributes this across electricity networks to the meter box, makes sure the network meets safety and reliability standards and then retails this to customers.

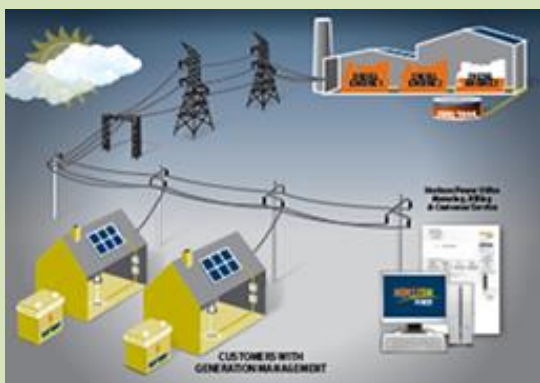
There are costs associated with all of these activities, which are partly recovered through the price customers pay for electricity.



As more homes install renewable energy systems, the demand on the power station decreases.

On bright sunny day, solar panels (photo-voltaic) generate electricity that can be used in the home, with any excess fed back to Solomon Power.

The power station now has to do less work to meet the electricity demand unless the daytime weather changes eg cloud cover.



Generation management devices (such as a battery with a controllable output), reduce the demand on the power station by providing short-term power to the electricity system when renewable energy installations stop generating electricity.

The generation management device will supply electricity for enough time to allow the power station to adjust to the increased electricity demand. The device will recharge from the solar panels until the device has sufficient energy stored to meet the renewable energy generation requirements.

HOW RENEWABLE ENERGY WORKS



When a cloud covers the sun, the houses with solar panels may reduce the amount of electricity they are generating.

This can place a very sharp demand on the power station which then needs to quickly compensate for the sudden loss in electricity generated by the solar panels. Any engines not operating will need to start generating power again. This takes time though and the power station may be unable to generate enough electricity to meet the demand on the network.

In this situation, the reliability and security of power supplies to all customers may be affected and customers may experience an unplanned power interruption.