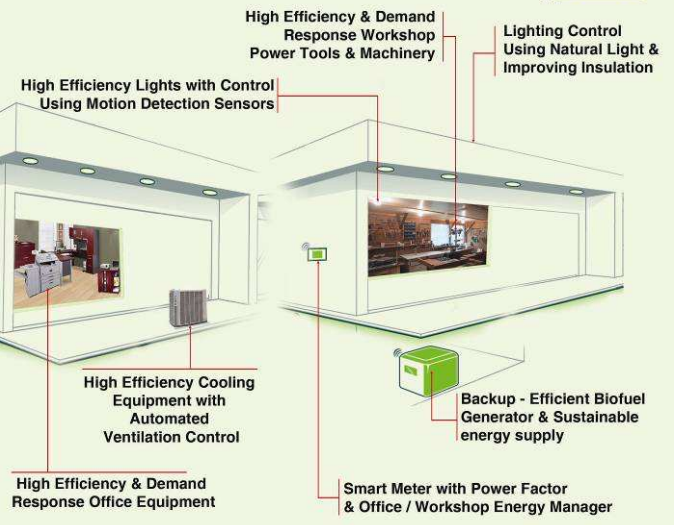


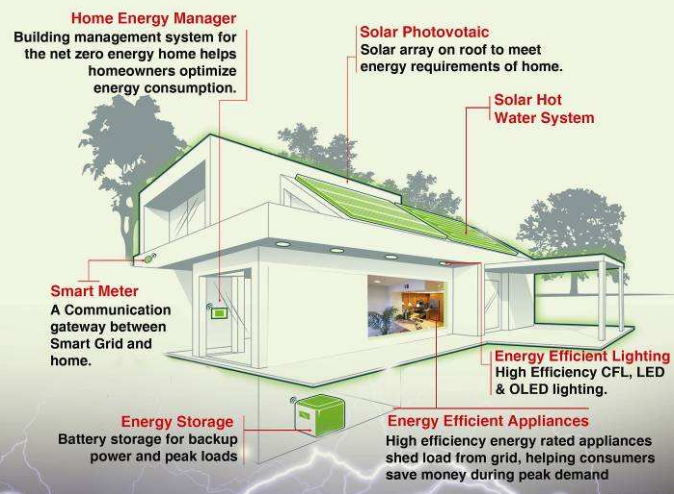
Energy Efficiency

Energy Efficiency complements energy conservation and sustainable energy and is applied to any technology or equipment to reduce energy consumption.

Office/ Workshop



Home



LOAN APPLICATION PROCEDURE:

- Get a quotation from any supplier or manufacturer either locally or overseas
- Apply for the loan at FDB or ANZ bank together with their relevant documents (for suppliers, a copy of your Business Plan has to be forwarded to DOE)
- DOE will check the technical specifications of your equipment before providing 50% guarantee on your loan
- Once the bank approves your application they will arrange for the release of the fund

Loans are only available for quality sustainable energy equipment according to the World Bank's Product Catalogue.

For further details please contact:
 Department of Energy,
 43 Foster Road, Walu Bay, Suva;
 P. O. Box 2493, Government Buildings, Suva;
 Phone: 3386006, 3386677, 3386355 or 3386885;
 Fax: 3386301;
 Email: energy@govnet.gov.fj
 Web: www.energy.gov.fj



NEED FINANCIAL ASSISTANCE for CHEAPER & CLEANER sources of LIGHTS & ELECTRICITY such as SOLAR, HYDRO, COCONUT OIL FUEL and ENERGY EFFICIENCY EQUIPMENTS?

Loans with partial guarantees available at approved local banks.
 Loans available to suppliers, businesses, communities, villages and individuals

For further details contact the
 Fiji Department of Energy, Box 2493, Government Buildings, Suva;
 Ph: 3386006; Email: energy@govnet.gov.fj
 Web: www.energy.gov.fj

Sustainable Energy Financing Project - A Global Environment Facility project with the World Bank and the Fiji Department of Energy



SOLAR

Solar is the energy captured from sunlight. This is done by using the panel to capture the sunlight, convert it to electricity and passes it through the controller to be stored in the battery. When you switch on a light or an appliance, the stored electricity flows from the battery through the controller/inverter and to the light or appliance.

Examples of solar energy

1 Simple solar lantern with mobile charger

2 DC solar system for lights and appliances

Panel absorbs sunlight & converts it to electricity → Controller regulates charging of battery & supply of electricity → Battery stores electricity



3 AC solar system for lights, appliances & equipments

Panel absorbs sunlight & converts it to electricity → Controller / inverter regulates charging of battery & supply of electricity → Battery stores electricity



HYDRO

Hydro is the energy captured from flowing water. Water is trapped in a reservoir and passed through a pipe and drops to a turbine few meters below. The force of water flowing down due to gravity turns the turbine which is connected to a generator and produces electricity.

Examples of hydro

1 High head pico-hydro

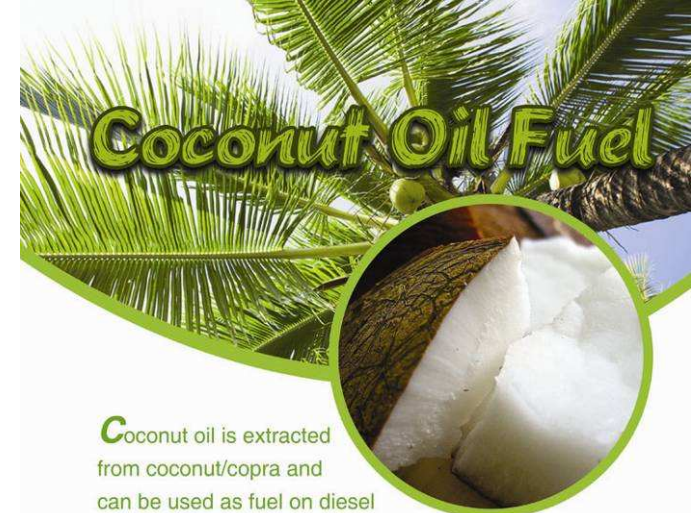
Dam stores water & passes it through pipes to turbine → Force of water turns the turbine & generator to produce electricity

2 Low head pico hydro

Water passes through the channel down the pipe turning the turbine & the generator to produce the electricity

3 High head micro hydro

Dam stores water & passes it through pipes → Pipes deliver water from dam to turbine → Force of water turns turbine & generator to produce electricity → Hydro electricity for village



Coconut oil is extracted from coconut/copra and can be used as fuel on diesel engines. They can be used alone with temperature control, mixed with diesel and additives or Trans-esterified and blended with diesel.

Coconut Oil Production

1 CUTTER Cuts copra into smaller pieces
2 EXPELLER Squeezes oil out from copra
3 FILTER Filters dirt out of the oil
4 PRESSURE FILTER Further filters oil to finer grade
5 TANK Mix & Store fuel

Examples of Coconut Oil Fuel Usage

1 PURE COCONUT OIL

Some diesel engines are designed to run on pure coconut oil → Most diesel engines can be fitted with a dual fuel kit so they can also run on pure coconut oil

2 RENEWABLE DIESEL

MIXING TANK Mix coconut oil & diesel with additives → BOWSER TO ENGINE Fill direct into diesel engine → Some diesel engines can run on coconut renewable diesel (R20)

3 BIODIESEL

ESTERIFICATION Coconut oil is esterified → MIXING TANK Mix biodiesel & diesel → BOWSER TO ENGINE Fill direct into diesel engine → All diesel engines can run on coconut biodiesel (B5)