

## Western Port Greenhouse Alliance Agricultural Emissions Project

Idea No: 7

Footprint Rating:



### Solar Pump

**Description:** The amount of solar energy that the earth's atmosphere absorbs in one hour is approximately equal to the consumption of energy used globally in one year. Photovoltaic panels are used to capture energy from the sun and convert it into electricity. An electric pump then converts this electricity into hydraulic work, enabling water to be lifted to the required level needed for watering.

#### Environmental Benefits as opposed to the current system

|                                   |       |
|-----------------------------------|-------|
| % reduction in GHG emissions:     | 2.30% |
| % increase in water efficiency:   | 0.00% |
| % reduction in waste to landfill: | 0.00% |
| % increase in production:         | 0.00% |

**Benefits:** Reduced energy costs and emissions.

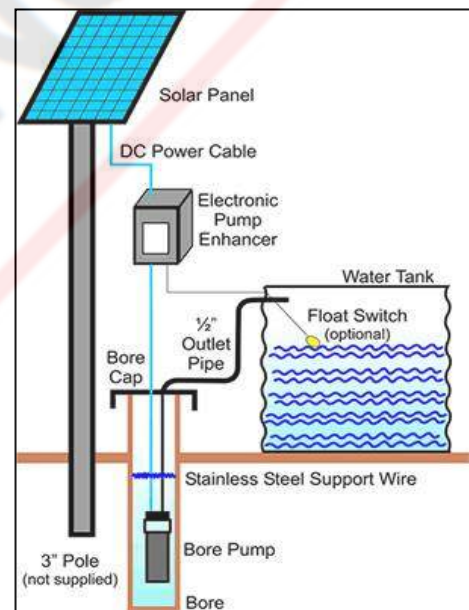
**Costs:** Pump - \$6000  
(\$3000 more than petrol/diesel option)

**Savings:** Petrol/Diesel cost reduction of \$2904 and 5t CO2 per year.

#### Implementation/Monitoring/Reporting

Once installed, the solar pump is easy to run. It requires very little maintenance and does not run out of fuel as a diesel pump would.

The power obtained from the PV is dependent on the weather conditions.



For more information see the following websites:

- <http://www.energymatters.com.au/>
- [http://www.solarpumps.com.au/category18\\_1.htm](http://www.solarpumps.com.au/category18_1.htm)
- [http://www.solarpumping.com.au/pdf/lorentz\\_ps1800\\_c\\_en.pdf](http://www.solarpumping.com.au/pdf/lorentz_ps1800_c_en.pdf)
- [http://en.wikipedia.org/wiki/Solar\\_energy](http://en.wikipedia.org/wiki/Solar_energy)

[http://www.sundriven.com.au/images/diagram\\_solar\\_pump.gif](http://www.sundriven.com.au/images/diagram_solar_pump.gif)

[http://www.solarpumps.com/150BLQ40\\_Syst\\_2\\_28\\_07resized.JPG](http://www.solarpumps.com/150BLQ40_Syst_2_28_07resized.JPG)

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