



Shire of Denmark

Administration Building Solar Photo Voltaics

Frequently Asked Questions

BACKGROUND INFORMATION

- 140 Solar Photo-Voltaic panels are now operating after the new installation.
- 110 new panels were added.
- 32.5 kW, in bright sunshine, of power is generated by the new integrated solar PV system.
- Estimated \$13,500 per annum savings in electricity charges (this figure will increase as electricity charges per unit increase).
- Cost of Panel upgrade was \$75,000.
- The project return on investment (capital cost recovery for installation) is 7 years approximately.
- The actual construction of the expanded solar PV take took 3 weeks.
- The average energy output is predicted to be 117 kilowatt hours a day - allowing for local Denmark weather patterns.
- The Solar PV system will produce excess power – mainly over weekends due to minimal power usage during these days and this power will be fed back into the local power grid.

THE KEY BENEFITS OF AND WHY WE CHOSE TO UPGRADE THE SOLAR PV SYSTEM

- To reduce costs of running the shire administration building.
- Reduce carbon footprint.
- Limit the impact of future electricity price rises.
- Solar PV battery bank is an active back up for computer server during blackouts.

HOW DOES A SOLAR PV SYSTEM OPERATE

- Sunlight hitting the panels is converted into electricity which is in turn converted into 240 volt AC by a bank of inverters ready for use by the shire.
- The solar system will produce approximately half the energy during winter in comparison to summer.
- The power output is dependent upon level of sunlight intensity and ambient temperature and is affected by even high level cloud. The average output takes all this variation into account.

For technical specifications of the system and components installed go to:

<http://dashboard.greensense.com.au/shireofdenmark/adminbuilding/#www.GreatSouthernSolar.com.au>