

Local Power Griffith University EcoCentre

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- Types of Solar Power
- How it works
- How it fits
- PV take-up
- What Local Power is doing
- Pricing & Buying Group Offer
- Questions?

Types of Solar Power

- "Traditional Solar"
 - OClothes line, sunroom, drying food...
 - OSolar hot water



PV Solar (photovoltaic)

Convert sunlight directly to electricity





How it works

Local Power - PV solar system diagram (simplified conceptual only)



2) DC cabling from array to the inverter One or two "strings" of cabling, depending on the inverter model and size of the panel array

1) Solar panels array on the north facing roof generating power when the sun is shining 6 (1kW), 9 (1.5kW) or 12 (2kW) panels mounted on aluminum rails which are in turn mounted on the roof



5) Energex meter
Second energex meter in
your meter box measures
how much solar electricity
has been generated and will
reduce your electricity bill

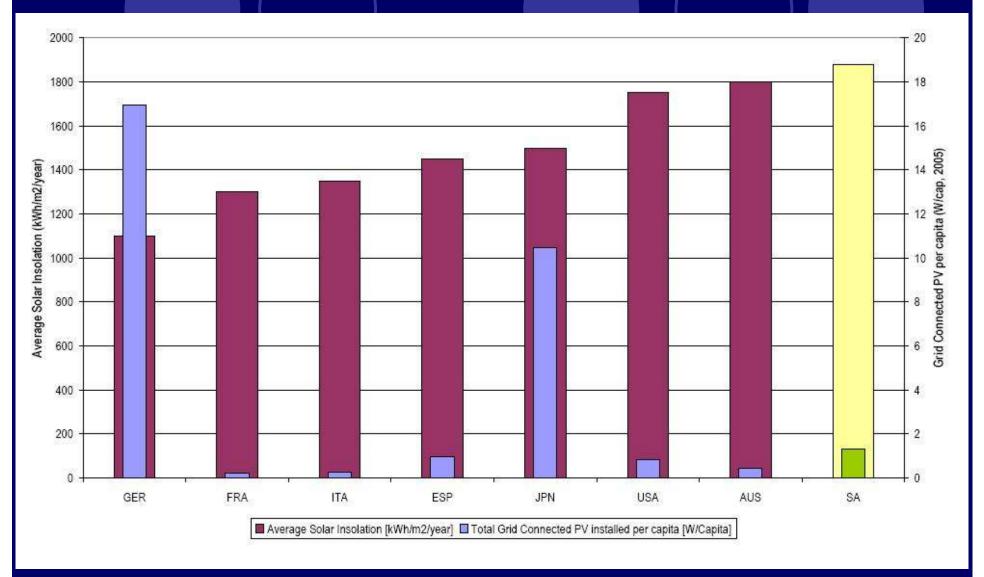
3) PV Inverter

Located inside or under your home the inverter converts DC power to 240V AC power.

4) 240V AC cabling from inverter to energex meter

Power can now be used in your home or "exported" to the grid

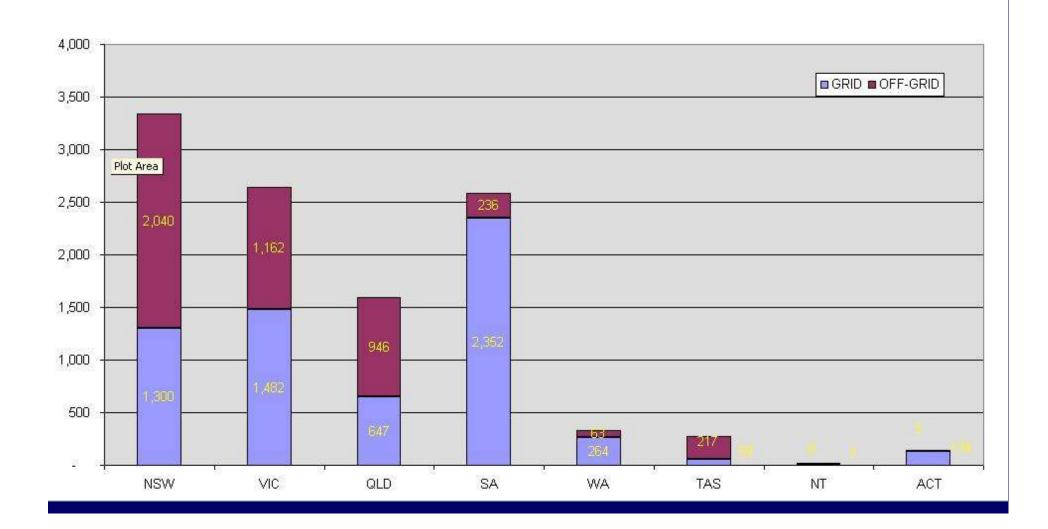
PV solar take-up globally per capita



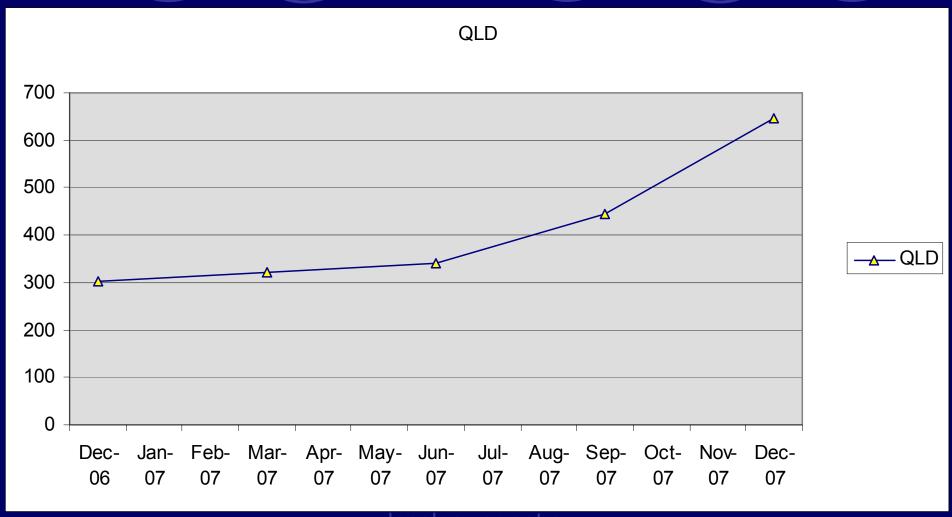
PV solar take-up in Australia



Number of Systems Installed by State to December 2007



PV solar take-up in Queensland



What is Local Power doing with PV Solar

- A not for profit community based project with a buying group to aid:
 - Best quality PV solar systems installed at a reduced price with good quality after sale service (no marketing costs or quoting costs)
 - Reducing travel time (& CO2) for installers/suppliers with a greater concentration of installs in the one area
 - Streamlining paperwork with Energex, AGO and Installers for the community
 - Providing certainty for a developing industry
- Decentralising power generation, moving it closer to the end user & reducing transmission loss
- Engaging with Local & State Governments including community groups

Typical 1kW PV solar system price

- around \$4500 after rebates & incentives
- generates around 1464 kWh/year or 4kWh/day
- save around 2 tonnes of CO2/year = leaving an average car in the garage for 4.6 months
- save 4850 litres of water/year which the coal fired power station would have used

Local Power Buying Group Offer

fully insta	lled cost*	without PV	RP financii	ng fee				
				total		cost	cost less	cost less
system	cost of	deposit	balance	upfront	PVRP	less	PVRP and	PVRP and
name	system	payment	payment	payment	rebate	PVRP	REC at \$15	REC at \$89
1kW	\$10,461	\$1,500	\$8,961	\$10,461	\$8,000	\$2,461	\$2,146	\$1,642
1.5kW	\$14,906	\$2,500	\$12,406	\$14,906	\$8,000	\$6,906	\$6,426	\$5,658
2kW	\$19,100	\$3,500	\$15,600	\$19,100	\$8,000	\$11,100	\$10,455	\$9,423
3kW	\$26,361	\$5,500	\$20,861	\$26,361	\$8,000	\$18,361	\$17,386	\$15,926
fully insta	lled cost*	with PVRP	financing f	ee				
			***	total		cost	cost less	cost less
system	cost of	deposit	balance	upfront	PVRP	less	PVRP and	PVRP and
name	system	payment	payment	payment	rebate	PYRP	REC at \$15	REC at \$39
1kW	\$10,626	\$1,500	\$1,126	\$2,626	\$8,000	\$2,626	\$2,311	\$1,807
1.5kW	\$15,071	\$2,500	\$4,571	\$7,071	\$8,000	\$7,071	\$6,591	\$5,823
2kW	\$19,265	\$3,500	\$7,765	\$11,265	\$8,000	\$11,265	\$10,620	\$9,588
3kW	\$26,526	\$5,500	\$13,026	\$18,526	\$8,000	\$18,526	\$17,551	\$15,991

What uses most of my electricity?

- Electric hotwater systems
- Lack of energy efficient design (e.g. passive cooling, ventilation, eaves, insulation etc.) leading to inefficient heater and air-conditioner use
- Pool pumps
- Multiple fridges
- Downlights
- Standby power TVs, computers, phone chargers, etc.

