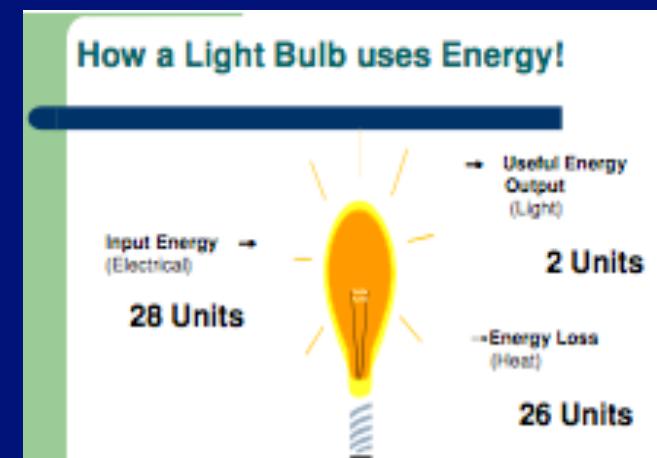
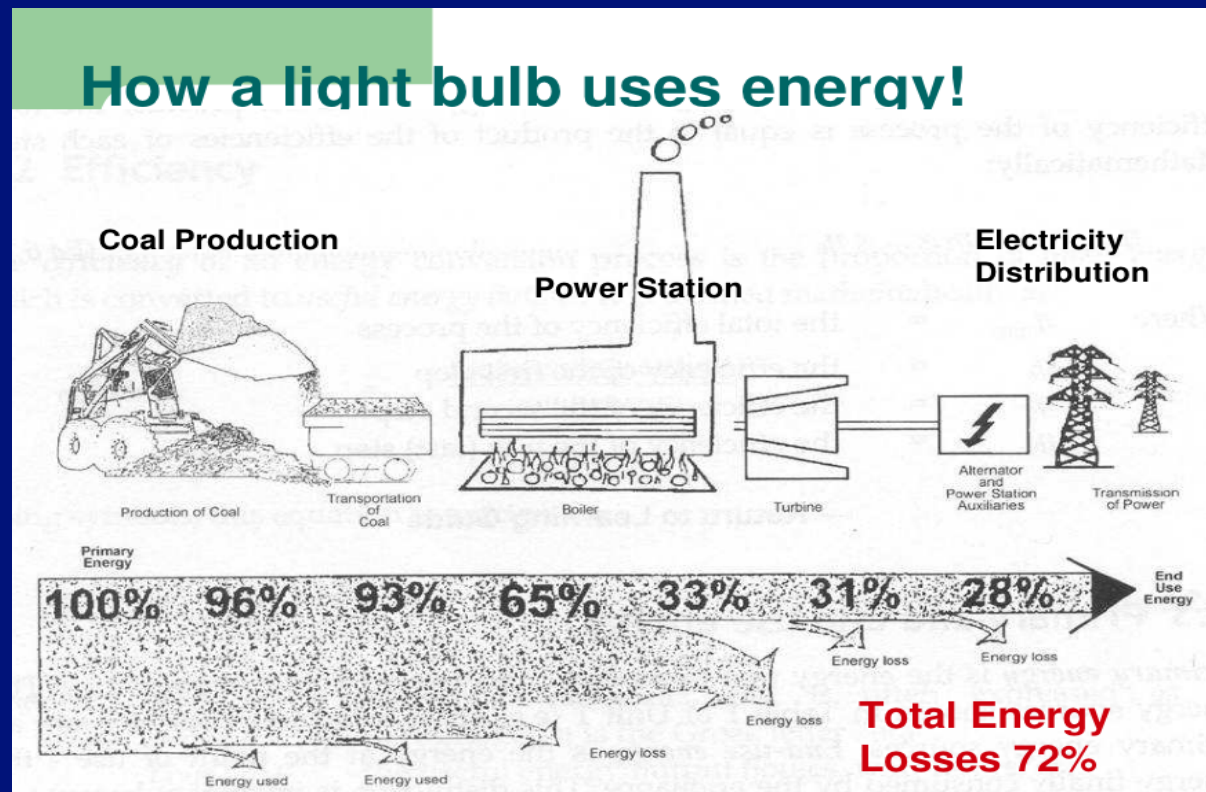


# Energy – Practical options for decentralised alternative energy solutions

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# Traditional centralised energy generation

- 15% of the network in South East Queensland is used for less than 100 hours a year.  
Source – Qld government Feb 2010
- Network reinforcement is expensive for short duration demand peaks – is this the optimal use of scarce capital Source – Energex
- In USA More than 210 billion kWh per year is lost in the delivery of electricity from power plant to end use devices Source – EPRI



# Decentralised option

- 1) local electrical loads are served most economically by local efficiency;
- 2) new capacity can be added incrementally without needing to build new transmission lines;
- 3) as land becomes more scarce, siting is best accommodated on or in existing structures;
- 4) Decentralised energy is installed on a progressive basis, therefore in an environment of rapid improvement the effect of older less efficient systems is ultimately marginal



# Magnetic Island Solar Suburb (Qld) Ergon Energy

- Project cost \$30million (over 5years)
- Planning 500 solar PV systems (approximately one megawatt of solar power) across selected residential and business premises, at no cost to the owner
- 1<sup>st</sup> year 22% reduction in peak demand resulting from a predicted 15% increase & 7% saving of energy
- Two thirds of residents have received energy assessments
- 100 PV Solar systems installed



Photo courtesy of EcoSavvy

## Woking Borough Council (UK)

- 15 year living example
- Raised substantial capital through energy efficiency measures
- 60+ local generators, cogeneration, photovoltaic arrays and a hydrogen fuel cell station, to power, heat and cool municipal buildings and social housing
- 99.85% self-sufficient with Island mode option
- Geographic advantages with integrated Electricity/heat

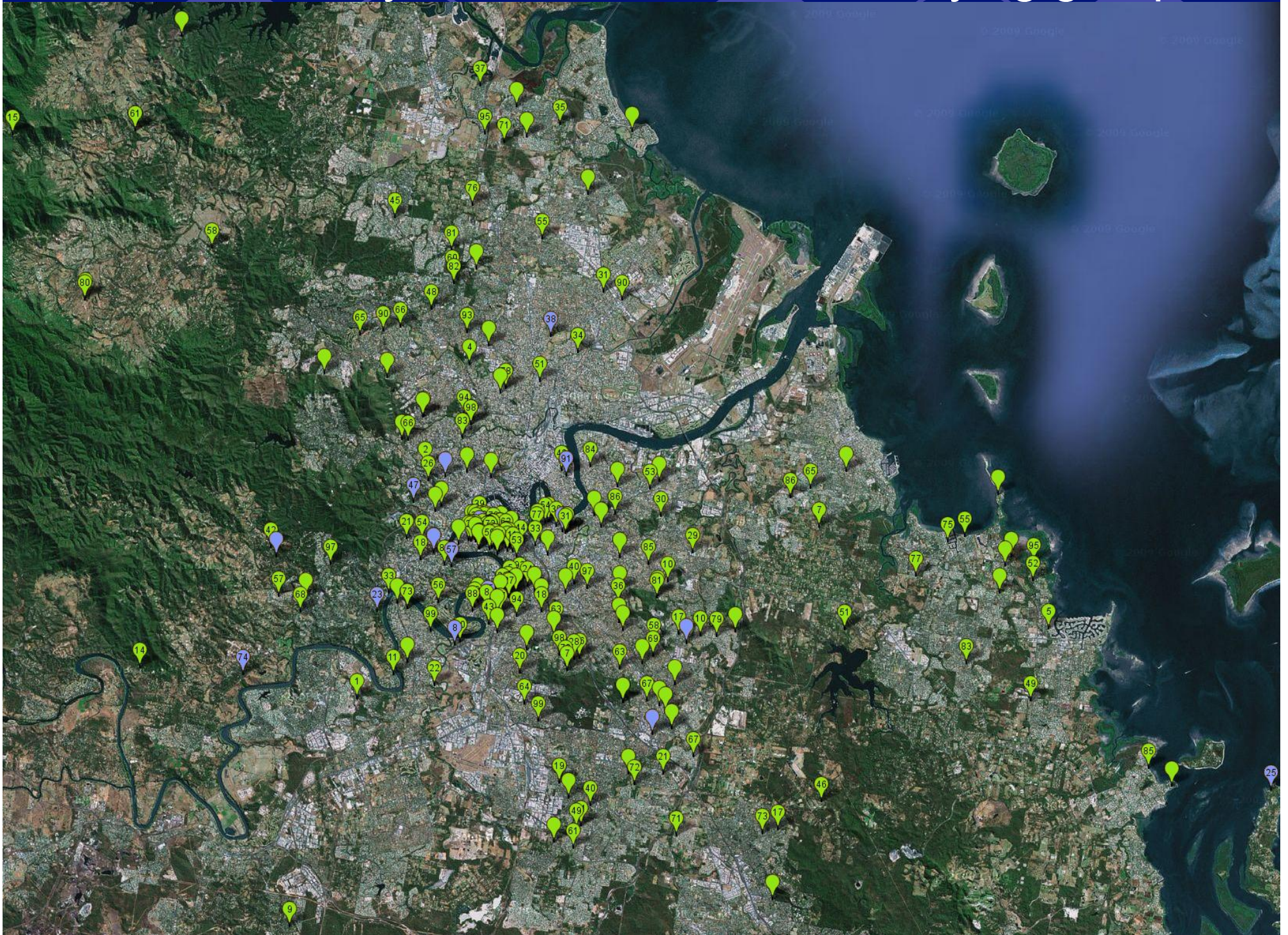


# Local solutions Now

## Local Power community buying group projects

- Not for profit community group, No margin on components (transparent fee)
- Quality components (sharp)
- Good prices due to
  - Install them close to each other
  - Buy lots of components
- Encourage urban localities to embrace the concept of local energy production
- 450 homes = 650kW = for each kW installed 5000 litres of water/year saved from what a coal fired power station would use

# 450 PV Solar systems in Local Power buying groups



# Electricity price rises

## Powerful forces double your bills

If you think this month's 15 per cent plus increase in electricity prices is shocking, just wait.

Australia's power generators predict that retail prices could double by 2020 because of the Federal Government's proposed carbon pollution reduction scheme and planned renewable energy targets.

The Federal Government disagrees, but even its own studies point to a 20-25 per cent increase "in the initial years" of the new regime, scheduled to begin in 2011.

And the State Government, despite its claims that it is doing all it can to keep price rises to a bare minimum, is actually adding to the upward price pressure.

Courier Mail Saturday 4 July 2009. Electricity prices could double by 2020 due to combination of RET, CPRS and \$9 Billion in electricity grid (transmission & distribution) investments in Queensland over the next 5 years by Energex, Ergon & Powerlink (grid charges are around 40% of the retail bill)





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