

Committee on Energy Resources and the Environment

Presentation by
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Missouri Public Service Commission



NARUC

Seattle, Washington

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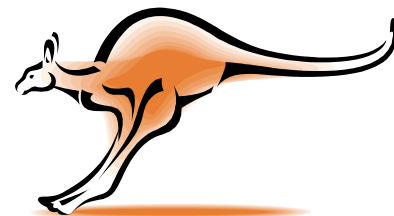


Introduction

- 2009 Eisenhower Fellowship
- Month in Australia studying energy and economic development
- <http://gunninaustralia.blogspot.com/>

AUSTRALIA

- Land mass is 85% of U.S.
- Only 21 million people
- Majority of population lives on the coasts
- Largest coal producer and exporter
- Cheap electricity 7-8¢ per Kwh (similar to Missouri)
- Coal is ↑ in carbon emissions
↓ in SO_x NO_x





Australian Response to Climate Change

- Carbon Pollution Reduction Scheme
 - <http://www.climatechange.gov.au/whitepaper/index.html>
- Renewable Energy Target
 - <http://www.climatechange.gov.au/renewabletarget/>
- Research and Development
 - Carbon Capture and Storage
 - Geologic
 - Biologic
- Solar Rebate (Solar PV and Solar Hot Water)
- Feed-inTariffs (State)



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Case Study:

Solar City Project – Magnetic Island



Australia's Solar Cities

www.environment.gov.au/settlements/solarcities/index.html

- Seven cities: Adelaide, Alice Springs, Blacktown, Central Victoria, Moreland, Perth and **TOWNSVILLE**
- Each uniquely integrates energy efficiency measures, solar technologies, cost reflective pricing and community education
- Purpose:
 - Demonstrate environmental and economic effects of combining cost reflective pricing with the use of energy efficiency, solar technology and smart meters.
 - Determine what barriers exist and test ways to overcome barriers.



Solar Cities

- \$94 million initiative by Australia Govt.
- Cities selected on a competitive basis beginning in 2006
- First five cities selected between August 2006 and July 2007
- After 2007 Federal Election, program was expanded to include two more cities
- Data scheduled to be collected until 2013.

Townsville – Magnetic Island



- 5K off the cost of Townsville in Queensland
- 2,500 households
- 300 sunny days a year
- Majority of island a National Park
- Served by Ergon Energy

Magnetic Island and Mainland



Why Magnetic Island?

- Population small enough for pilot project
- Peak demand mirrors typical peaks
 - Evening 6 pm – 9 pm
 - Increased peaks at Easter and Christmas
- Required to have sufficient capacity to cover peak demand 24 hours a day, 365 days a year even though only utilized on a few occasions.
- As population grows, makes financial and environmental sense to use less electricity or shift to non-peak times.

Elements of Solar City Initiative

\$32 Million

- Create *Smart Lifestyle Centre*



Elements of Solar City Initiative (cont'd)

- Install 500 Ergon Energy solar PV systems
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- Energy goes directly into the grid, not the home

Elements of Solar City Initiative (cont'd)

- Install 1,700 smart meters
- Offer participants free ecoMeter in-house displays



Elements of Solar City Initiative (cont'd)

- Conduct free energy “assessments” of homes and businesses
 - Assessments – not “Audits”
- Rate houses on Australia’s 6-star system
- Print out of measures to take to improve rating
- Replace all light bulbs with CFL’s
- Provide low-flow hose nozzles and shower heads
- Rebate program (removal of refrigerators, solar hot water, etc.)

Elements of Solar City Initiative (cont'd)

- Work with hotels and recreational facilities to get buy-in from tourists
- Handouts (bags, pens, stickers, shower timers, etc.)
- Self-identification as a participant
- Savings calculators
- Energy guides
- Paint roofs white



Consortium Members

- Ergon Energy
- Queensland Government
- Townsville City Council
- Ampy Metering - smart meters
- Kyocera Australia - PV supplier
- James Cook University
- Centre for Excellence in Tropical Design
- Honeycombes Property Group (Developers)
- Delfin Lend Lease (Real Estate Services)
- Cafalo Pty Ltd. (Commercial)



QUESTIONS??