

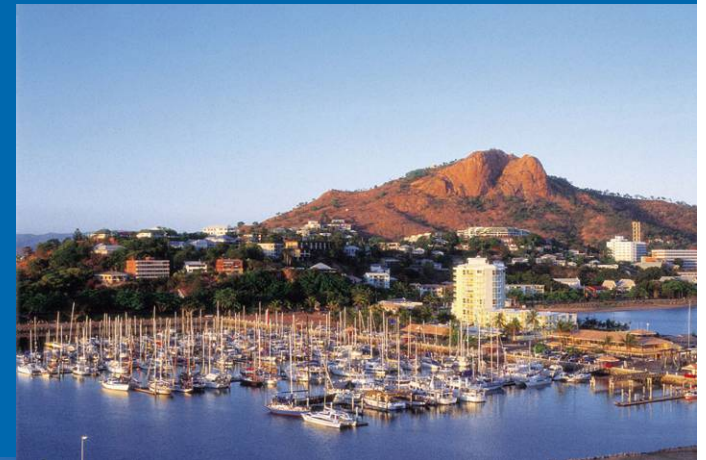
Townsville City Council

Cr. Vern Veitch,
Chair
Environment and Sustainability Committee

Environment and Resource Committee

•Energy Efficiency Challenges

Making old infrastructure sustainable is a bit like trying to make old humans fit again. It is not easy but if we are to be healthy, we have to find a way.



Townsville – “the Place”



The 3 Broad Townsville Environments

Tropical Savannas



Great Barrier Reef



Wetlands





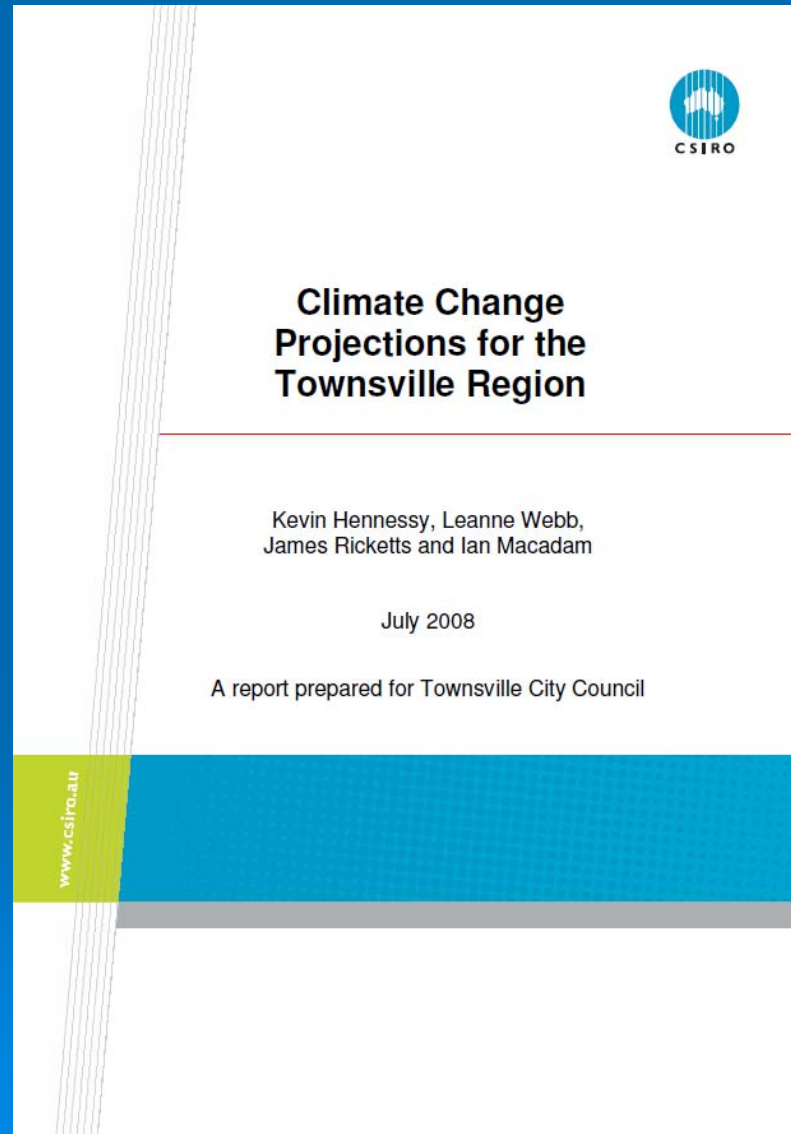
» Townsville is Queensland's largest regional city and the largest population in the GBR catchment. It is home to >170,000 people and covers a combined urban-rural area of c. 3700 km²



Talk to focus on energy efficiency in the Dry Tropics

- **Challenges** we face
- **TCC Greenhouse Emissions**
- Our **sustainability and carbon reduction** initiatives focussing on energy conservation
- **Council's - Office of Sustainability**

Understand the Risks



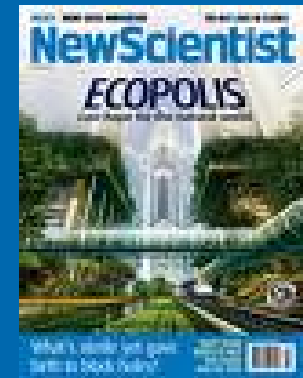


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Climate Change – Mitigation & Adaptation

Peak Oil, Increased Energy Costs & Ecological System Failures

Costs of Peak Demand Load & Infrastructure



So what to do?

We have to apply *new thinking, new ideas, new partnerships, create new systems, and redesign old systems* and set an example that will flow on to our community resulting in behavioural change in all areas of our community

SUSTAINABILITY

“Achieving sustainability does not mean slowing down our economy. It means speeding it up, and directing its energy toward the **redesign and redevelopment of the systems** that are the cause of our dilemma.”

Alan AtKisson, Believing Cassandra (1999)



Working with Ergon Energy (Corporate Sustainability & Innovation)

- Solar Cities (& MI Solar Suburb)
 - DSM (Demand Side Management)
 - Benchmarking Residential, Products & Cities
 - Linking energy and water (incl. wastewater)
 - Integrated waste-energy management (waste svcs)
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Townsville Network Demand Management Pilot

(Ergon Energy project with TCC and partners)

- multiple stakeholders
 - multiple business models/financing
 - multiple technologies
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What are we doing?

Working on :

- Methane capture and use from landfills
- Improving public transport, useable safer bikeways, ethanol & bio-diesel
- Developing **Carbon Townsville** model (including soil carbon sequestration and community benefit trust)
- **Energy** (alternative energy and demand reduction) e.g. Solar Cities – *which we won competitive bid for in 2006*, and base load renewable energy power supply
- **Water** – going beyond best practice in water and catchment management (e.g. reducing water use, effluent management and restoration of natural ecosystems and habitats)
- **Urban Nature** – commitments to local food markets, community greening, ecotourism and community-based partnerships and projects
- **Office of Sustainability** – to promote greater awareness and working across Council departments, business and community working towards a more sustainable practices

Landfill Methane Capture Generators



Projects

- Solar Cities and City Solar
- Network Demand Management Pilot (Ergon Energy)
- Rowes Bay house refurbishment
- Admin Buildings
 - energy audit and pending performance based contract (~15% reduction)
 - Thermal reflective paint and solar PV system
- Sewage and Water Treatment quality & efficiency upgrades
- “Eco-electricity tours” (WE ARE ENERGY ALREADY – a solar system)
- and now – “whole of city” integrated ecotours for water, energy and nature

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Solar Cities and Ergon Energy

- \$ 30 million (incl. Australian Government) Townsville: Queensland's Solar City
- Innovative Energy Model (PV)
- Citisolar: Community Capacity Building
- Solar commercial developments
- Solar learnscapes



Citisolar: Community Capacity Building (CCBP)

Involve the community and bring about a cultural change, behavioural change in adoption of solar technology, demand side management:

- **To encourage and empower** community to willingly embrace sustainable change
- Based on ***Community Based Social Marketing*** (Dr. Doug Mackenzie-Mohr) and ***Thematic Communication*** (Dr. Sam Ham)

Structural Components of the Citisolar CCBP

- Citisolar **Community-Based Social Marketing**
 - Citisolar **Education** – experiential, thematics & schools
 - Citisolar **Centre for Excellence in Tropical Design** (Sustainability and Innovation) – Solar Connect
 - Citisolar **Promotion** – high profile awareness and business
 - Citisolar **Incentives** – link with ecoBiz (EPA) & planners
 - Citisolar **Economic Policy/Instruments** – local govt
 - Citisolar **Monitoring/Evaluation** – communicate & transfer
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Amalgamating Councils have previously done a lot of work:

- **Thuringowa** – CCP Plus (highest grade); Sustainable Development Policy (Riverway); Fleet hybrid vehicles; natural area management; coastal management; sustainable energy
- **Townsville** – Reef Guardian Council; total water cycle; water-energy; solar cities (Citisolar); Fleet hybrid vehicles; Coasts & Urban Nature
- **Jointly** – Creek to Coral (C2C); Landcare and Community Environment Fund and Centre of Excellence in Tropical Design

THANK YOU

for the opportunity to share with you all a small insight into our integrated initiatives in greenhouse gas reduction, Solar Cities, water use efficiency, sustainability and innovative partnerships

