



# Timber Queensland Bio-energy Seminar 1 July 2010

Greg Nielsen  
Chief Officer  
Office of Clean Energy

*Toward*   
Tomorrow's Queensland

 **Queensland Government**  
Office of Clean Energy



# ClimateSmart Queensland

- Climate Smart 2050 Queensland climate change strategy 2007: a low carbon future
- Queensland Government committed to address climate change issues by:
  - Engaging in national and international efforts to establish emissions trading
  - Reducing our greenhouse gas emissions by investing in technological innovation in clean coal and renewable energy resources
  - Supporting Queenslanders to lower their emissions and conserve water at home, at work and in their local communities.



# National target for renewable energy

- CPRS alone will not be sufficient to support widespread deployment of renewable energy
- Commonwealth increase the Renewable Energy Target (RET) to 20 per cent by 2020
- Target defined as 45,000GWh over the period 2010 to 2020
- Up from approx 15,000GWh of existing renewable generation

# The Office of Clean Energy

- advise Government on the appropriate policy frameworks supportive of clean energy initiatives
- identify, map and source potential renewable energy locations around the state
- remove regulatory barriers to renewable energy industry development
- develop partnership programs to encourage private sector investment and start-up in the clean energy industry inc R&D
- work with the electricity industry to assist demand side innovation and energy efficiency.
- assist deployment of renewable energy infrastructure.

# OCE Triple Bottom Line approach to Energy

- A resilient internationally competitive economy based on a secure relatively diverse energy mix, including increasingly low emissions and renewable sources;
- An adaptive highly skilled workforce with capacities relevant to future technologies and industries;
- A significant contribution to protecting the environment through carbon emissions abatement from energy generation, distribution and consumption.



# OCE core business

1. Accelerating deployment of renewable energy
2. Securing demand side management and systems innovation
3. Facilitating energy efficiency and conservation
4. Engaging the community in the clean energy opportunity

# The Renewable Energy Plan

- Providing the right incentives to encourage industry to move beyond business as usual and look for new opportunities.
- The Queensland Government estimates that successful implementation of the Plan will help to leverage up to \$3.5 billion in new investment, create up to 3,500 new jobs and reduce greenhouse gas emissions by more than 40 million tonnes by 2020.

# Renewable energy

- Renewable energy is a clean energy source that can be replenished naturally, and used to produce electricity with minimal or nil greenhouse gas emissions.
- It includes energy generation from sources such as the sun, wind, biomass, hydro and heat from beneath the earth's surface.

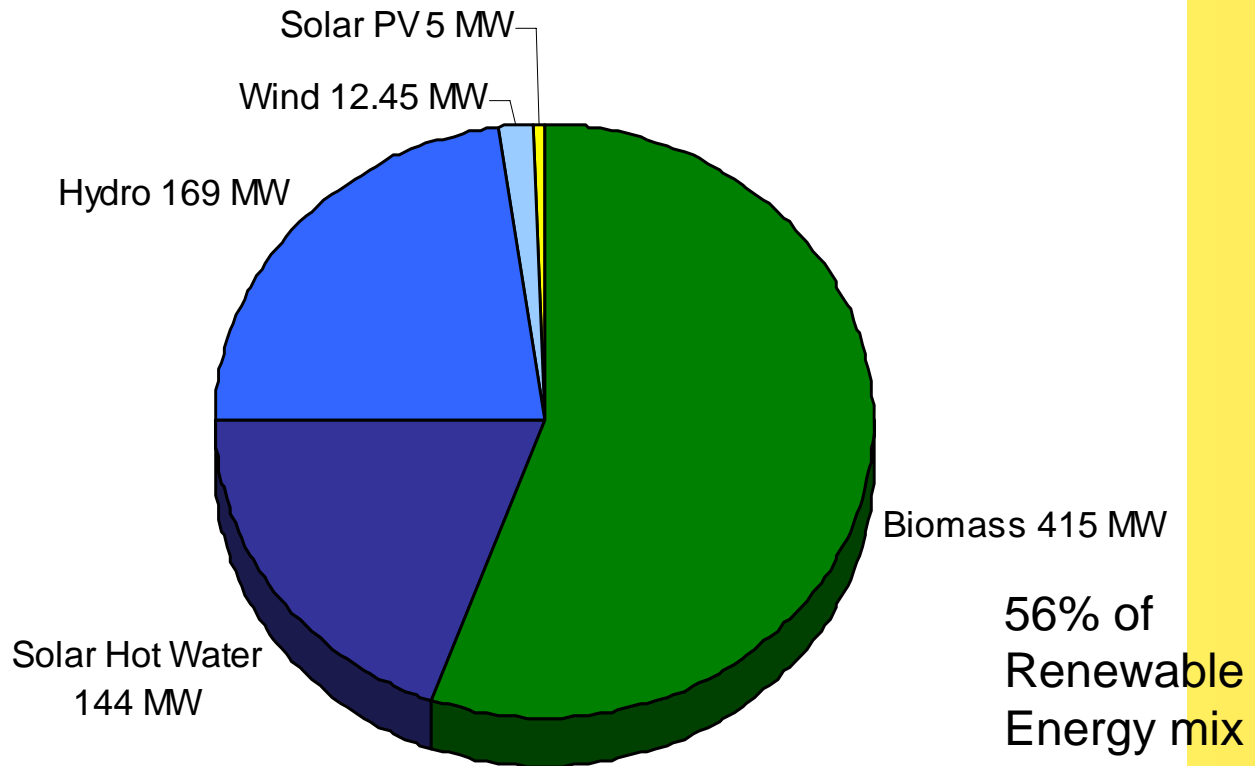
# Renewable in Queensland

- In 2008, renewable energy accounted for approximately 6 per cent or almost 750 megawatts of Queensland's total installed generating capacity of more than 12,500 megawatts (including solar hot water systems).
- Hydroelectricity provides 169 megawatts and solar hot water systems around 144 megawatts.
- Wind, solar photovoltaic and geothermal sources provide only small amounts of electricity.

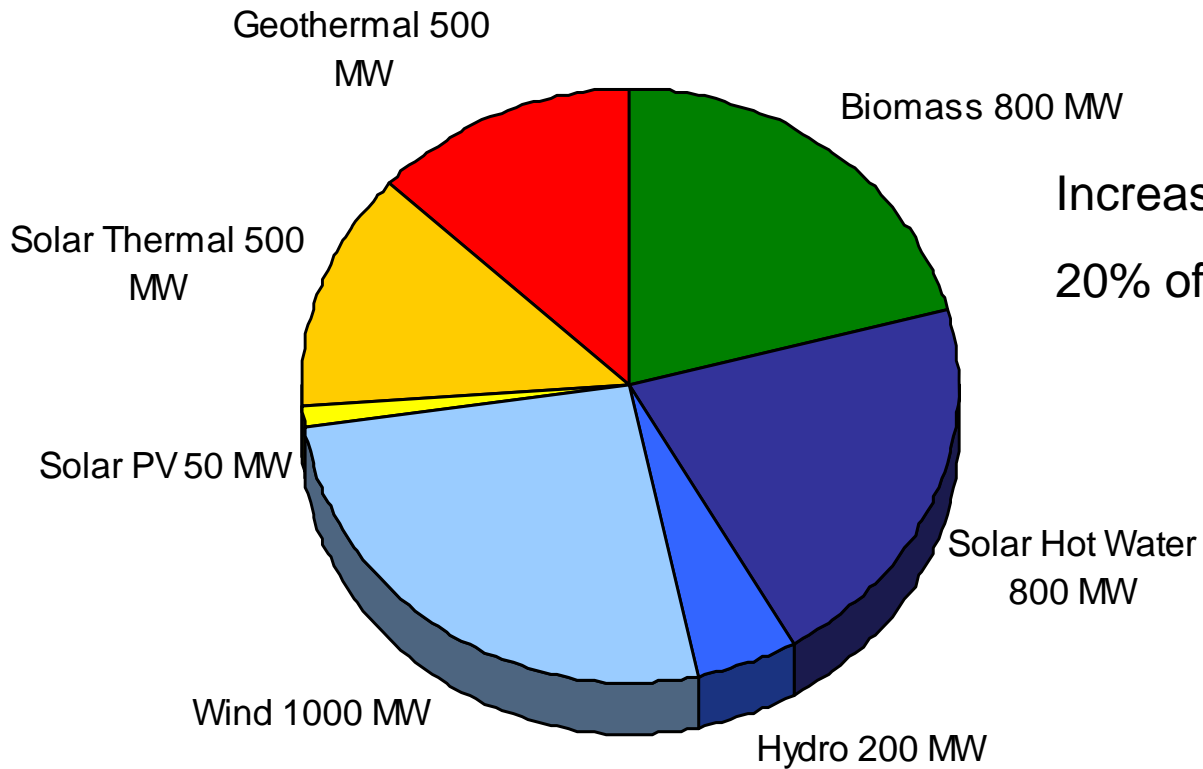
# Bio-energy

- Bio-Energy is energy derived from Biomass.
- **Biomass co-generation (primarily from bagasse) is the major renewable energy source in Queensland and provides 415 megawatts of the state's renewable energy capacity.**
- **Biomass co-generation can be an individual endeavour**
- Feedstock available are
  - Bagasse
  - Animal/Municipal waste
    - Landfill gas
    - Waste from water treatment plants, manure ponds
  - Woody feedstock
    - **Products derived from sawmills**
    - Forestry industry wastes
    - Potentially, new fibrous crops (Mallee tree, elephant grass...)

## 2009 Renewable Energy Mix Total: 745.76 MW



## 2020 Renewable Energy Mix Total: 3,850 MW



Increased by 92%  
20% of the Mix

# Opportunities for the wood industry

- Market diversification for industry by-products,
- Increased demand for biomass derived feedstock to meet renewable energy targets,
- Like sugar mills, resort to co-generation to meet some of the industry energy needs?

# Challenges

- R&D is needed to increase energy density of biomass feedstock.
  - Liaise with OCE and Universities
  - Individually or through industry peak body
  - Dr Phil Hobson, Industrial Bioprocessing QUT research on torrefaction of biomass
  - Industry mapping of resources
  - Industry strategy to alternative use of by-products?
- Co-generation units are heavy capital investments
- End customer/Market risk
- Fuel supply risk

# Department of Employment, Economic Development and Innovation assistance schemes

- **Business and Industry Transformation Incentives (BITI)**

Projects with potential to:

- be transformational at a business as well as an industry level
- forge change, lift standards and drive substantial improvements for customers and/or suppliers
- raise competitiveness in priority industries, and ultimately in the Queensland economy

Incentives of \$30,000 to \$250,000, matched by industry

2010 round 3 (July 23<sup>rd</sup>); round 4 (October 1<sup>st</sup>)

- **Smart Future Fund**

- A competitive fund dedicated to innovative close-to-commercialisation partnership between research and industry
- \$200,000 and \$2 million over one to three years, matched by partners funding
- 2010 round is closed, dates for 2011 not published yet.

- **Sectoral assistance, decided on a case-by-case basis. Consult with OCE**

# Key Messages

- Consider
  - mapping resources and
  - a strategy at industry scale
- Develop key partnerships
- Address fuel supply and end customer risk
- Do the business case
- Talk to State and Federal agencies