



Renewable Energy in Victoria

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DEPARTMENT OF
PRIMARY INDUSTRIES | energy

Presentation Overview

- Victoria's energy policy objectives
- The regulatory landscape: How we got here
- Investment patterns to date
- Future trends
- The role of the State

Victoria's Energy Policy Objectives

- Ensure our energy supply is:
 - Efficient and secure
 - Reliable
 - Affordable
 - Safe
 - Sustainable
- National Electricity Objective – long term interests of consumers



The regulatory landscape: How we got here – *Victorian reforms*

- Prior to mid 1990s – largely a vertically integrated, state owned monopoly
- Corporatisation
- Disaggregation
 - Retail and distribution
 - Transmission
 - Generation
- Privatisation
- Statutory bodies – safety regulation (ESV), economic regulation (ESC), market operation, transmission planning (VENCorp), ombudsman (EWOV)

The regulatory landscape: How we got here - *national reform*

- Formation of National Electricity Market (NEM)
- National Electricity Law and Rules
- National bodies:
 - MCE (Ministerial Council on Energy) – energy policy
 - AEMC (Australian Energy Market Commission) – rule maker
 - AER (Australian Energy Regulator) – regulatory oversight
 - AEMO (Australian Energy Market Operator) – market operator, transmission planner

The regulatory landscape: How we got here – *Greenhouse Challenge for Energy*

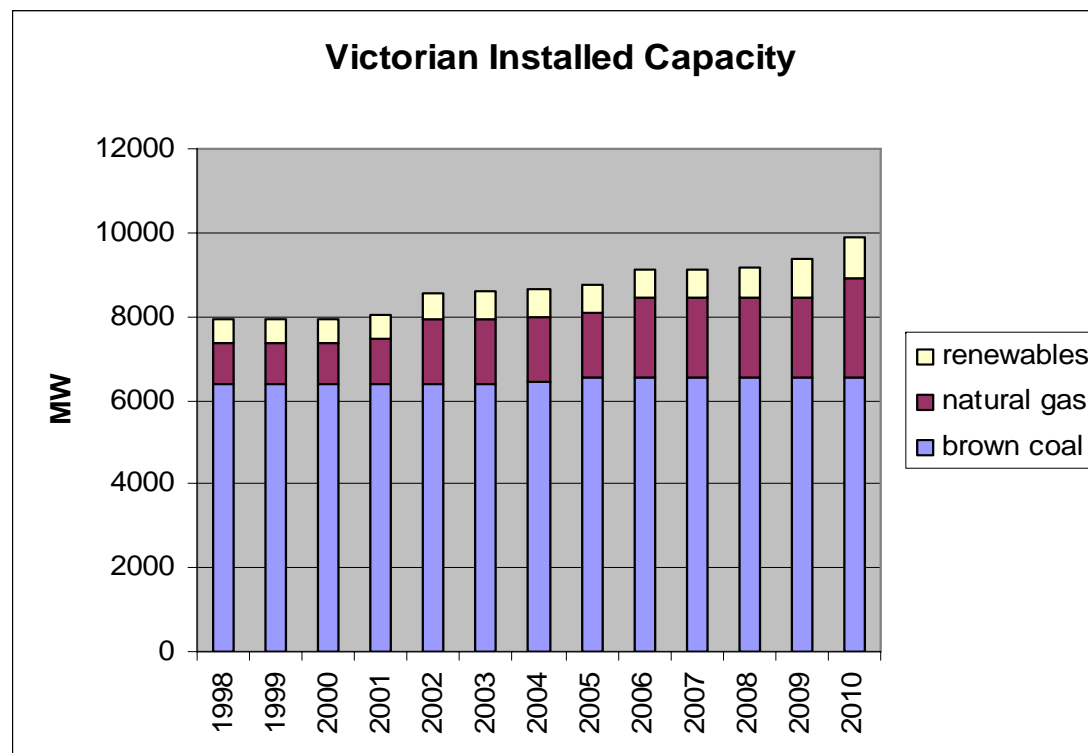
- Victoria's electricity supply highly reliant on brown coal
- Over 50% of Victoria's greenhouse gas emissions from electricity generation
- Greenhouse Challenge for Energy
 - Support for a national emissions trading scheme
 - Support for low emissions technologies
 - Support for renewable energy
 - Support for energy efficiency

Future Trends

- National emissions trading scheme
 - Carbon Pollution Reduction Scheme (CPRS)
- Low emissions technologies
 - Victoria – Energy Technology Innovation Strategy (ETIS)
 - National – CCS Flagships
- Renewable energy
 - Victoria
 - Victorian Renewable Energy Target (VRET)
 - ETIS
 - Large scale solar
 - National
 - Expanded Renewable Energy Target (RET)
 - Solar Flagships
- Energy efficiency
 - Victoria – Victorian Energy Efficiency Target (VEET)
 - National – National Framework for Energy Efficiency

Investment patterns to date - Victoria

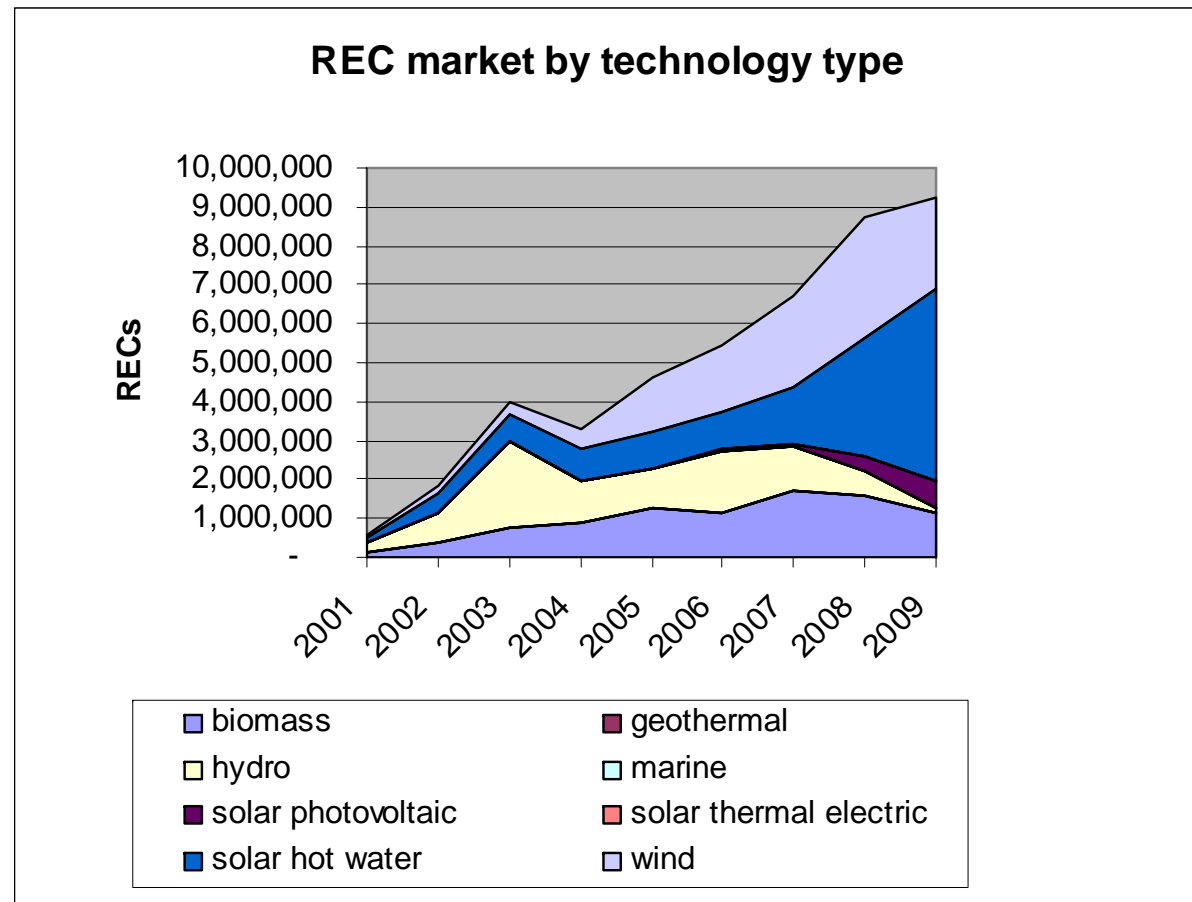
- Past decade of investment is the outcome of energy market reform and existing RET
 - 3% increase in brown coal capacity
 - 137% increase in gas capacity
 - 71% increase in renewable energy capacity



Renewable Energy to date

Market data, 2001-2009

- Strong increase in solar hot water, wind
- Biomass levelling off
- Sharp decline in hydro - *drought*
- No geothermal, no marine
- Solar photovoltaic growing strongly from a small base
- No large scale solar yet



Role of the State in renewables

Promote the competitive advantages of Victoria

- Proven world-class renewable energy resources
- Transmission infrastructure servicing the entire State
- Privatised, competitive market

Remove residual barriers to investment

- Efficient network augmentations
- Secure property risks
- Mitigate technology risk
- Assist deployment of new technologies
- Engage the community

Property rights

- Geothermal Energy:
 - Victorian *Geothermal Energy Act 2005* establishes exploration licences, retention leases over geothermal energy
 - 7 companies now exploring 70% of State
 - Work programs valued at \$400m
- Marine Energy:
 - Crown land – including seabed and foreshore – is the responsibility of State Government
 - Process now in place to establish allocation of seabed to prospective marine energy projects
 - Consultation with stakeholders to commence by end of 2009



Technology risk

- Energy Technology Innovation Strategy (ETIS)
 - \$72 million for pre-commercial, sustainable technologies with technical risk
- Funding provided on competitive basis as a grant
- All renewable energy technologies eligible
- Assessment underway for current funding round
- Co-funding with Commonwealth welcome

Assisted deployment – large scale solar

- Utility-scale solar currently not competitive
- \$100 million to develop a 330GWh/a solar electricity generator in the State by 2015
- Co-funding being sought from \$1.5 billion Commonwealth Solar Flagships, private investors



Further information: www.dpi.vic.gov.au/largescalesolar

Engage the community: potential neighbours, potential co-investors

- Active engagement through planning framework to facilitate large-scale renewable projects
- Standard feed-in tariffs for renewable energy generators <100kW
- Premium feed-in-tariffs for photovoltaic systems <5kW
 - *11-fold increase in PV installations in past decade*
- Incentives & regulatory requirements for domestic solar hot water – *3-fold increase in past decade*



Further information

www.dpi.vic.gov.au/energy