

# 12<sup>th</sup> International Riversymposium

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**Water / Energy / Climate Change**

## **Queensland Perspectives**

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# Topics

1. Water Planning – Energy Factors
2. Clean Energy – Water Factors
3. CC Mitigation – Geological & Forest Storage
4. Water /Energy Demand Management
5. Integration of Ministerial Portfolios in QLD



# Water Resource Planning

- Climate Change Response
  - It is an adaptive management system
  - Generation 2 planning will:
    - Use climate change scenarios based on standard methodology
    - Assess sensitivity of environmental flow and water supply reliability to the climate change scenarios
    - Include strategies where necessary in response to the sensitivity analysis particularly for critical needs



# Water Supply Planning

- SEQ Grid
  - Multiple water sources (dams, desal, recycle)
  - Regional mix provides security and efficiency
- Regional Water Supply Strategies
  - Plans to meet water needs at regional level
  - Climate change scenarios used to assess demand
  - Strong focus on water use efficiency



# Energy - Gas Source

- Gas fired power is greener than conventional coal. Future gas production in QLD underpinned by coal seam gas (CSG) development.
- But, CSG production impacts on water resources.
  - Protection of groundwater and beneficial use of produced water is an area of current policy development in Qld



# Energy - Geothermal Source

- Geothermal power plants are clean, but.. they can consume water
- Geothermal Energy Bill 2009 provides:
  - Water required by geothermal plants is to be managed under the Queensland Water Act 2000
  - The grant of geothermal tenure will not create a right to water used to carry heat.



# Mitigation - Geosequestration

- Carbon capture & storage in geologic formations potentially affects water resources.
- The Greenhouse Gas Storage Act 2009 provides:
  - Tenure holders need work programs and development plans
  - Work programs and development plans cannot be approved unless the Minister administering the Water Act is satisfied potential impacts on groundwater have been addressed



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# Mitigation - Forests

- Forests store carbon but forest development can significantly affect runoff from rainfall events and thereby affects both environmental flows in watercourses and the reliability of water supplies.





# Energy Efficiency

- Consumer energy efficiency initiatives tend not to interact with water efficiency. eg:
  - ClimateSmart Home Service
    - energy audit service on home appliances (\$50M)
  - Solar Hot Water Program
    - subsidy to convert to solar



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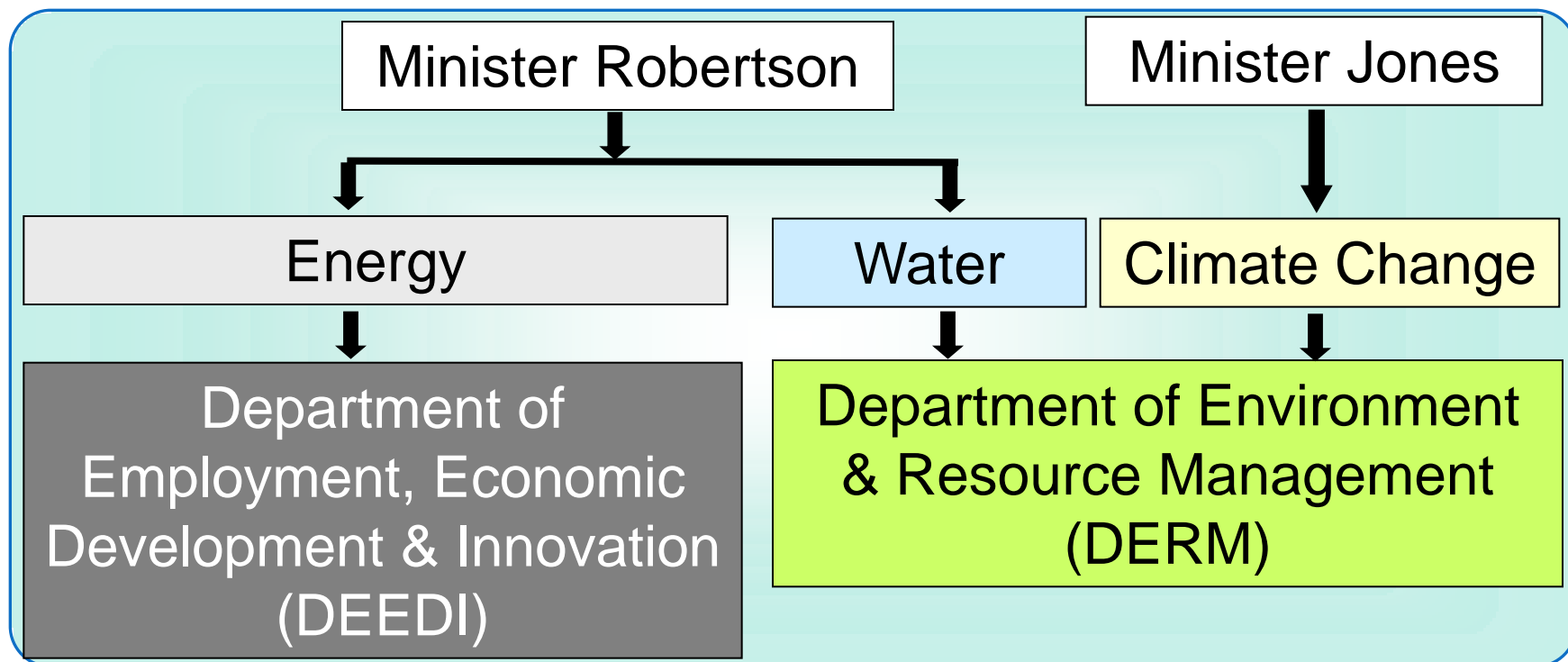
# Water Efficiency

- Water efficiency initiatives tend to support energy efficiency. eg:
  - Home WaterWise Service
    - retrofit of water efficient appliances
  - Home & Garden WaterWise Scheme
    - subsidy to install tanks and grey water recycle
  - Education
    - 'target 140'
    - water use information for tenants
  - Permanent Measures. EG:
    - Changes to building code
  - Rural Water Use Efficiency Initiative
    - Tools to drive efficiency in rural industries





# Governance Coordination





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# Questions?