



Australian Government
Australian Renewable
Energy Agency

Bioenergy and the renewable energy agenda

Bioenergy Australia 2012 conference



26 November 2012

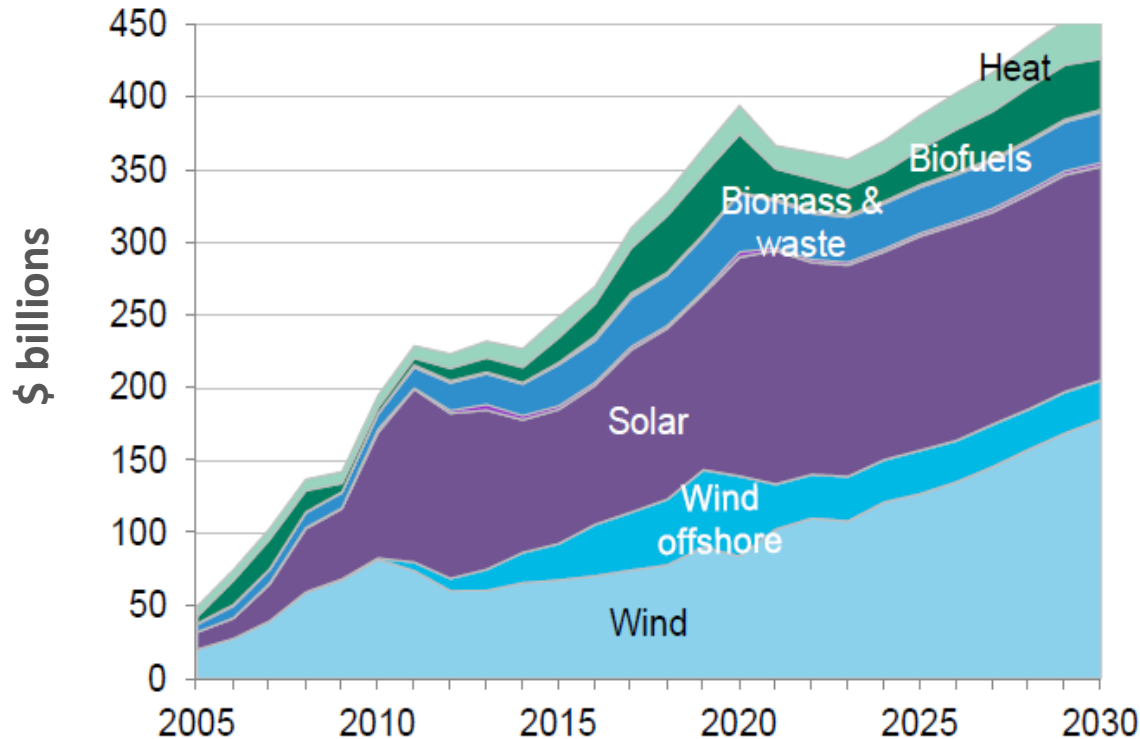
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1. Renewable Energy – A Global Growth Industry



Global Investment in Renewables

Annual Renewable Energy Investment



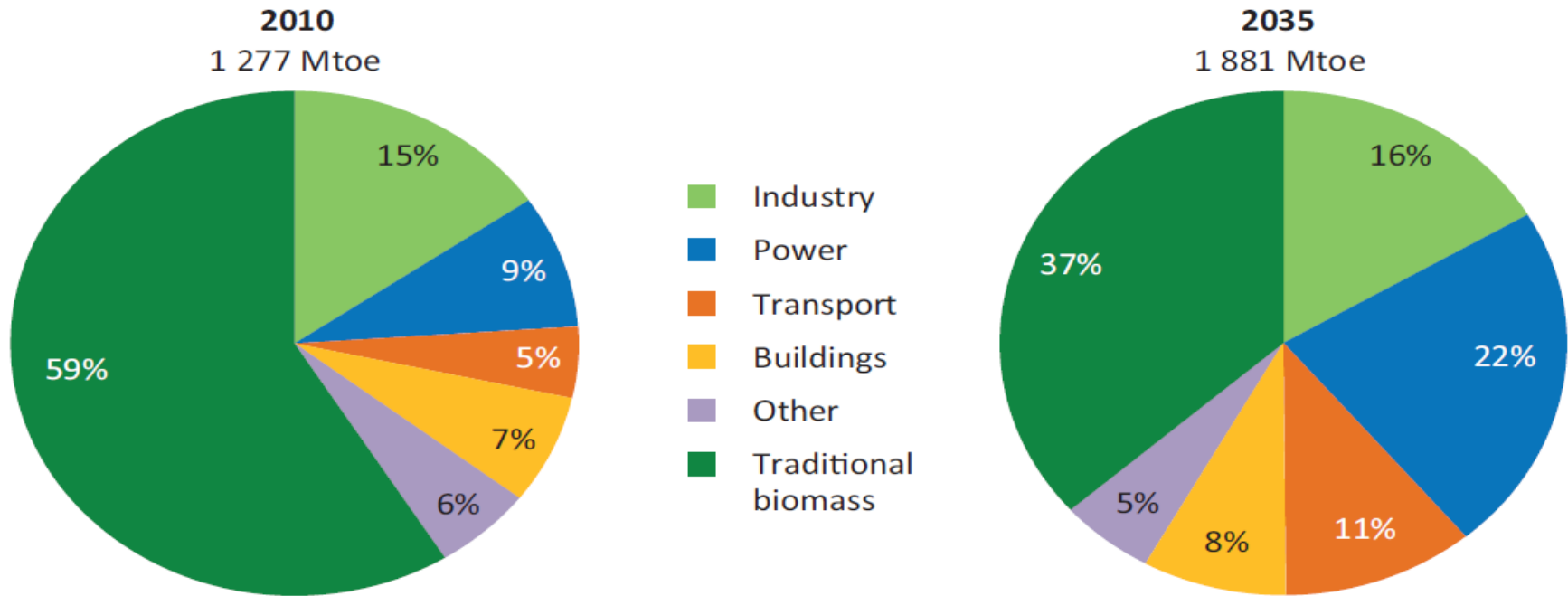
Source: Bloomberg New Finance (2011)

This diagram shows the annual renewable energy investment by technology from 2005 to 2030. The overall trend is an increase in investment in renewable energy.

Source: Bloomberg New Finance (2011)



World Bioenergy Use in IEA New Policies Scenario



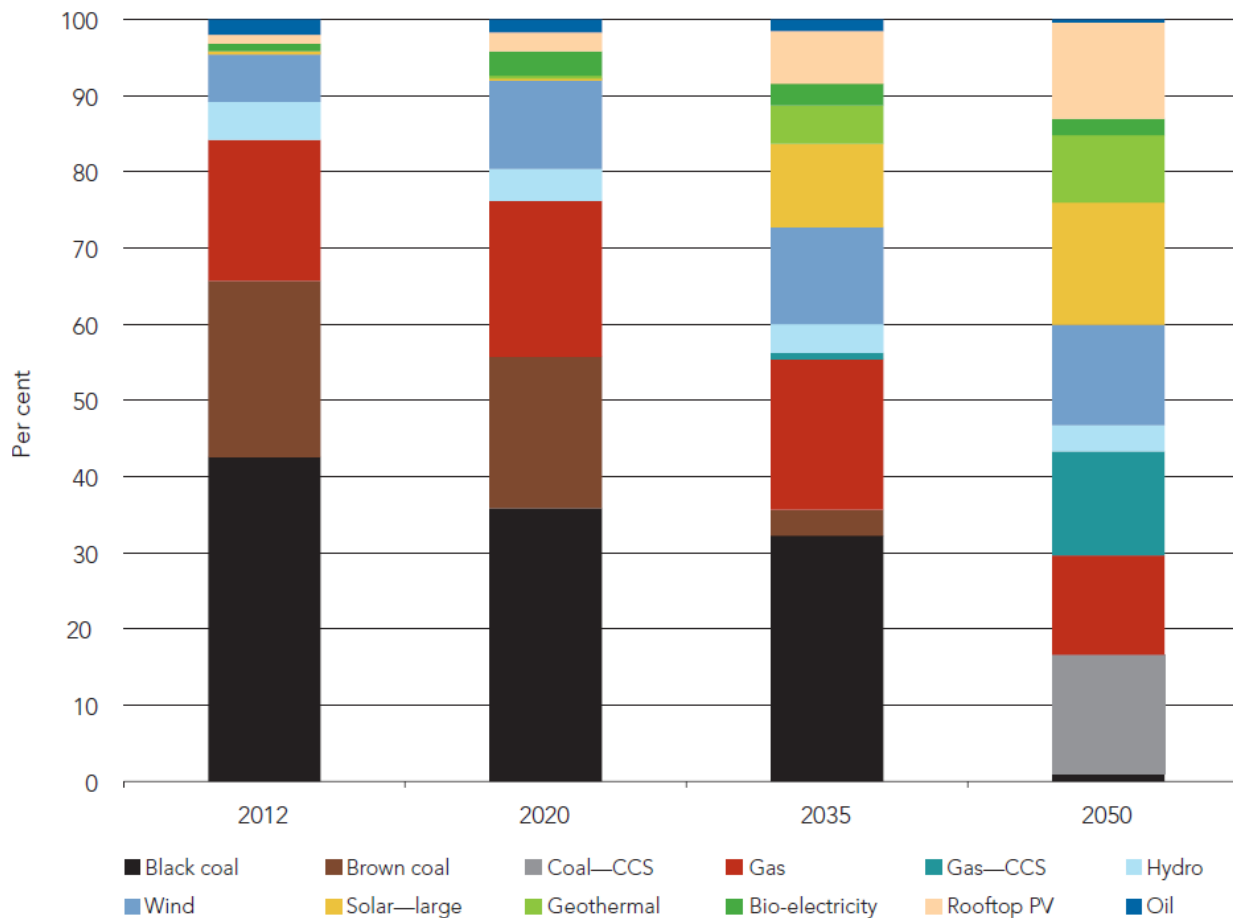
These two pie charts show the percentage of world bioenergy use in 2010 and 2035.
Source: World Energy Outlook 2012.



2. The Australian Renewable Energy Landscape



Bioenergy in Australia's 2050 electricity mix



This chart shows the percentage usage of traditional non-renewable and renewable energy in Australia in 2012, 2020, 2035 and 2050.



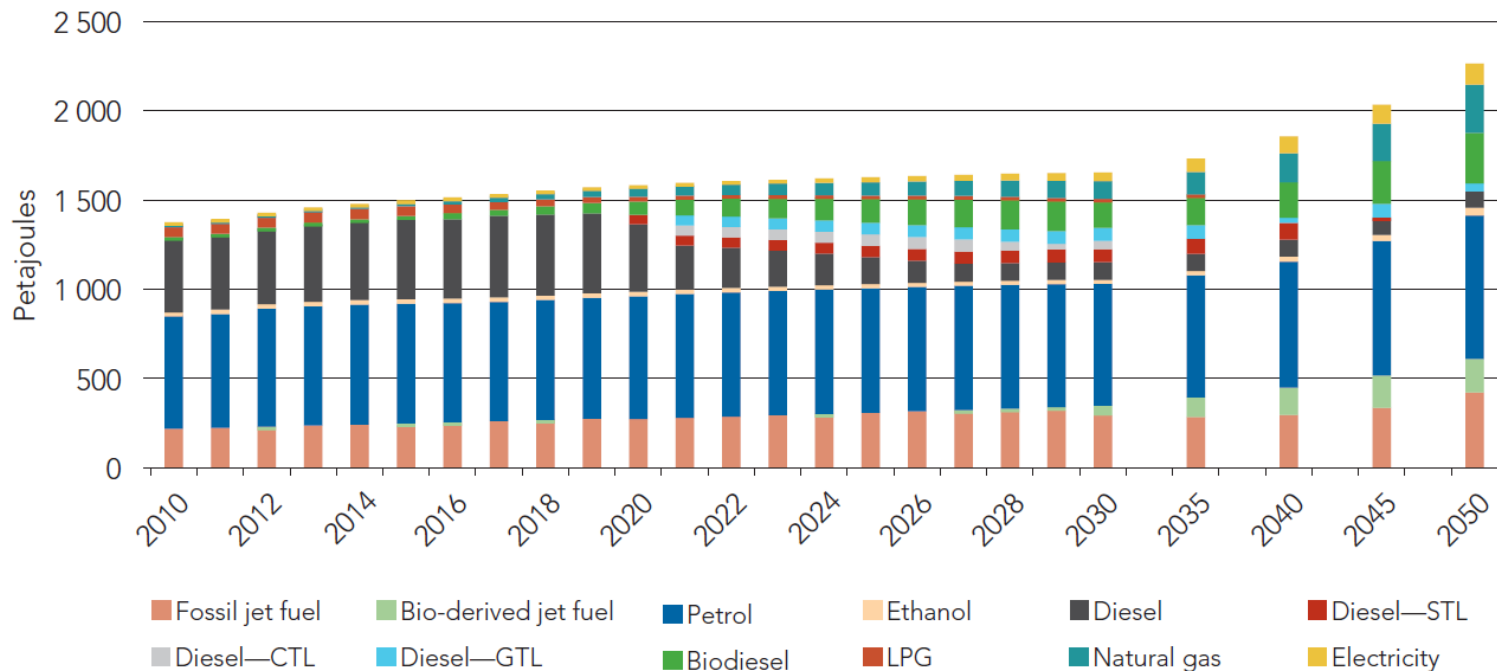
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Source: BREE (2012d)

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Bioenergy in Australia's 2050 fuel mix

Figure 8.7: Modelled transport fuel mix to 2050, by fuel type (PJ)



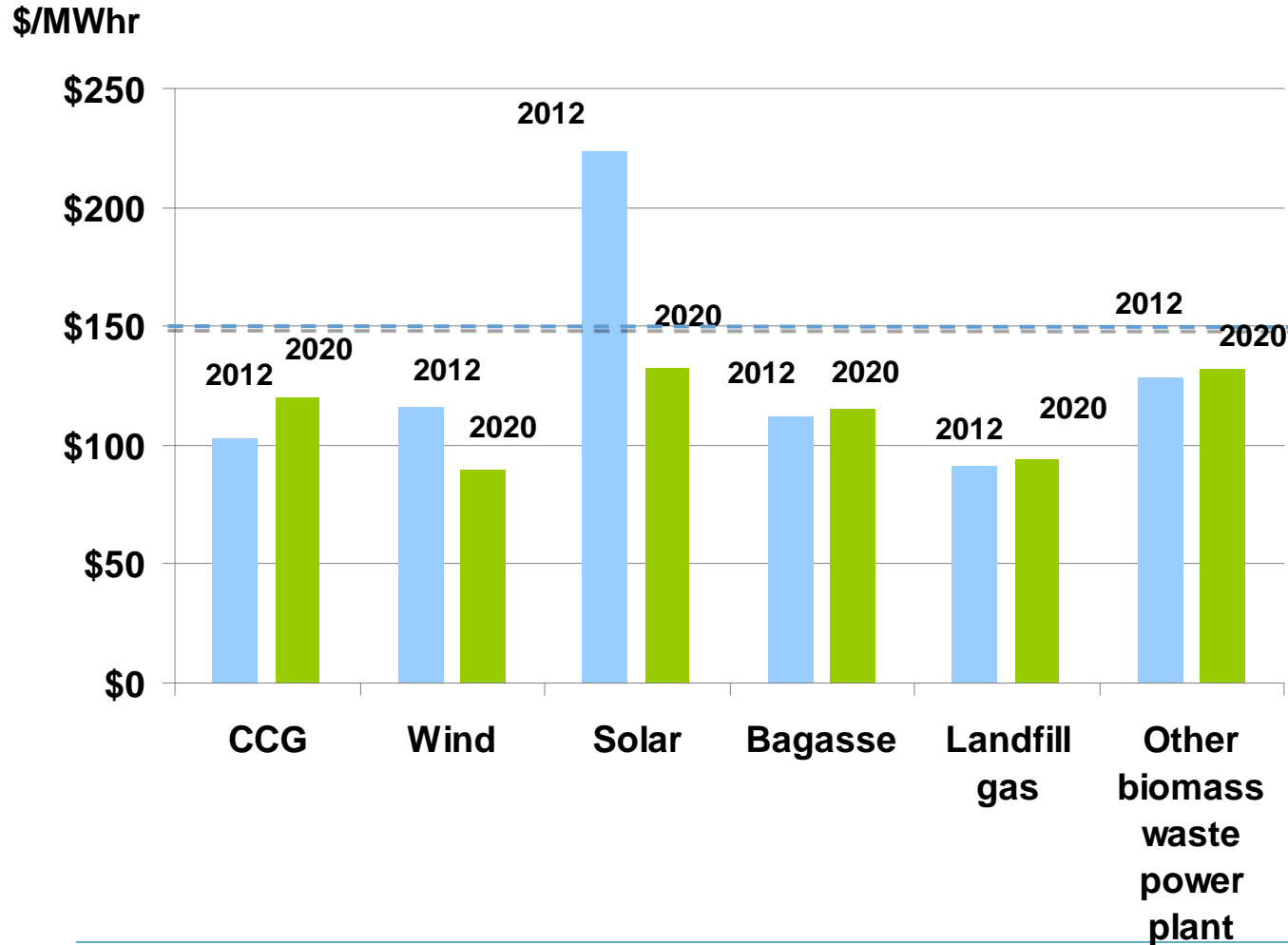
GTL = gas-to-liquids; CTL = coal-to-liquids; STL = shale-to-liquids.

This chart shows the transport fuel mix to 2050 by fuel type.

Source: CSIRO (2011C: Scenario 2) Energy White Paper 2012.



Levelised Energy Costs in 2012 and 2020

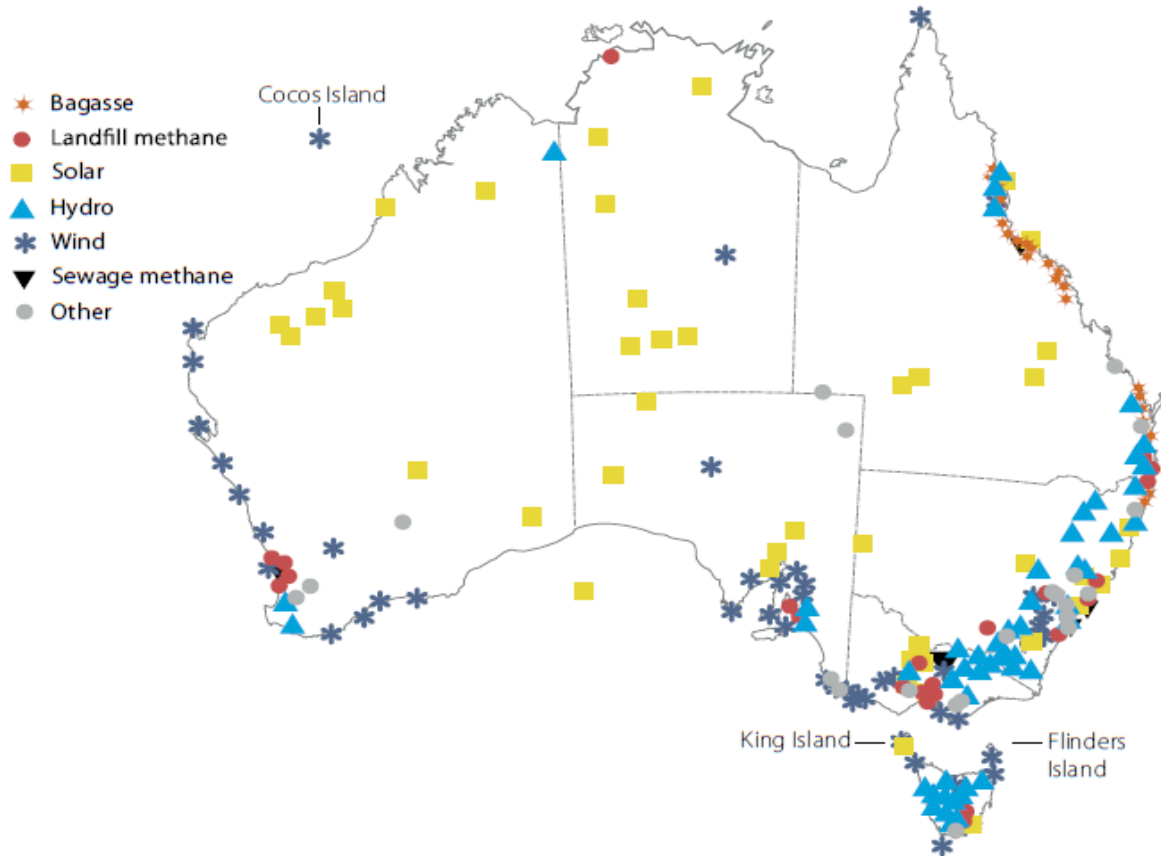


This chart shows a comparison of levelised energy costs by technology in 2012 and 2020.

Source: BREE, Australian Energy Technologies Assessment 2012.



Location of Renewable Energy Capacity



This map shows the location of Renewable Energy by technology across Australia.

Source: BREE (2012) *Energy in Australia 2012*.

Source: BREE (2012) *Energy in Australia 2012*

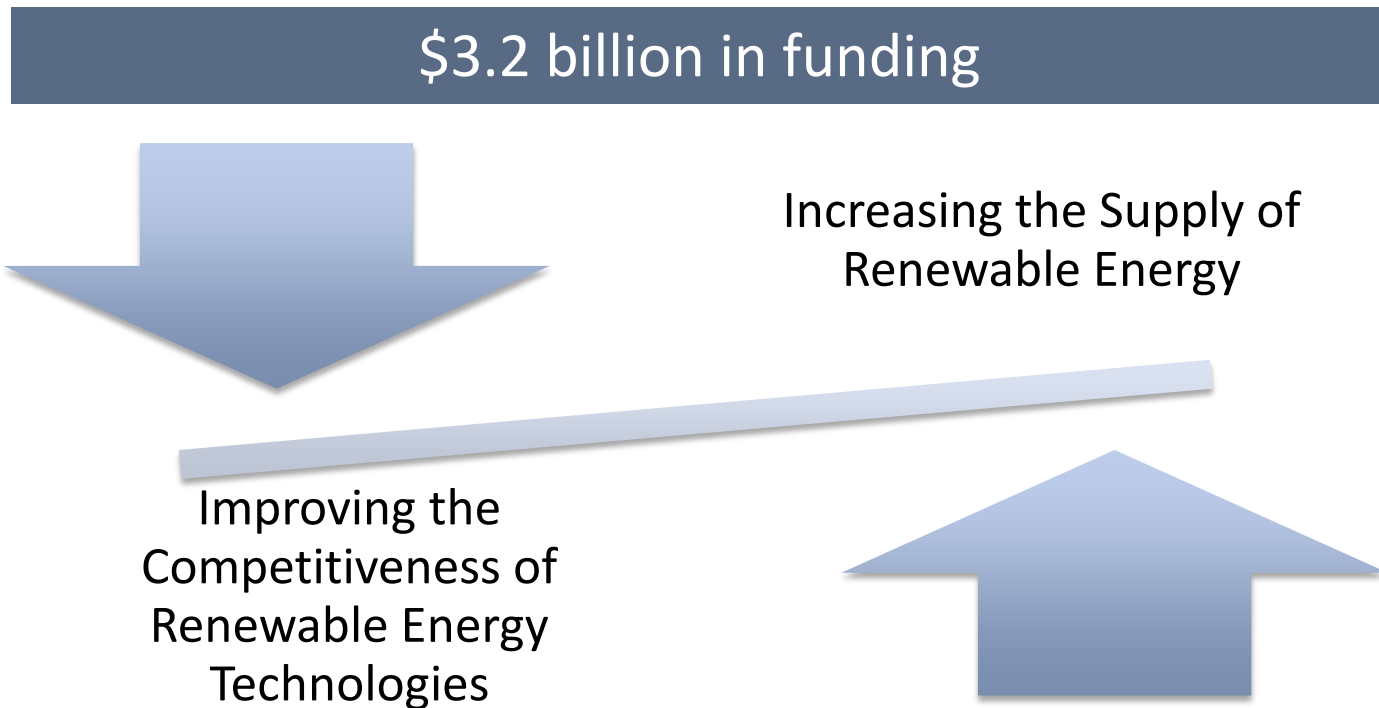
Source: BREE (2012) *Energy in Australia 2012*



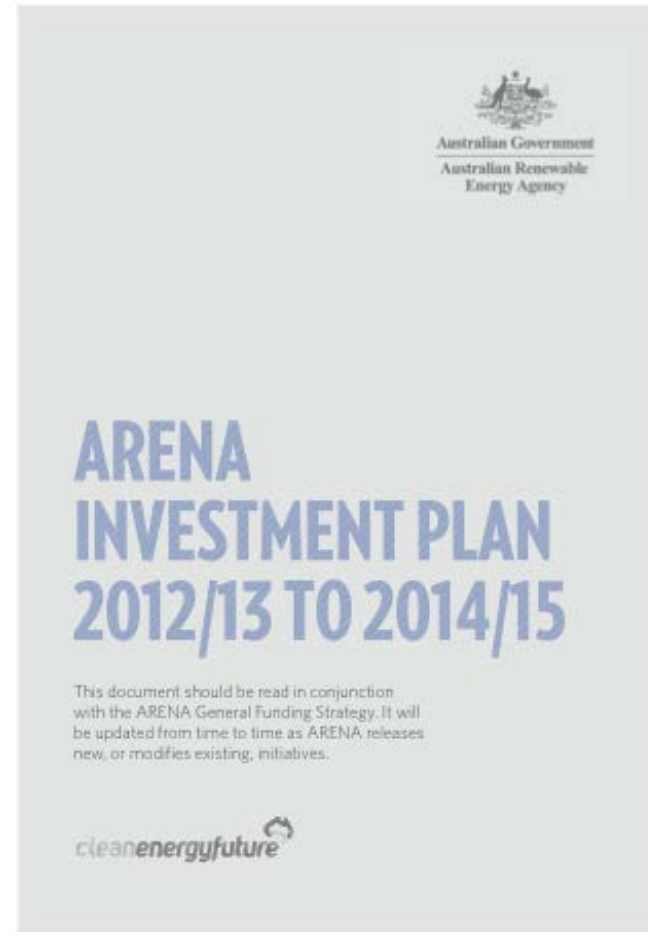
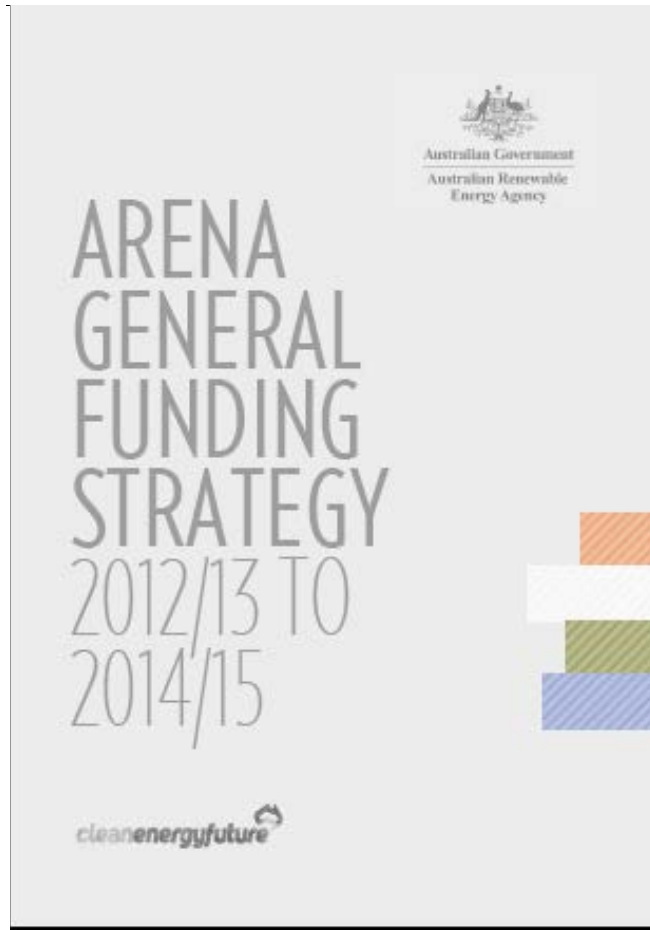
3. ARENA's Role



ARENA's role



General Funding Strategy and Investment Plan



General Funding Strategy

GENERAL PRINCIPLES

COMPLEMENTARITY
CONFIDENCE BUILDING
DIVERSITY

ALONG THE WHOLE INNOVATION CHAIN

RESEARCH (basic and applied)
DEVELOPMENT
DEMONSTRATION
COMMERCIALISATION

INVESTMENT PLAN

STRATEGIC INITIATIVES
SUPPORTING INITIATIVES
COMPLEMENTARY INITIATIVES



Investment Plan

STRATEGIC INITIATIVES
are larger in scope and scale
and typically fund market-
oriented, near commercial,
demand pull projects

- Regional Australia's Renewables (*Consultation underway*)
- Deploying utility scale renewable energy

SUPPORTING INITIATIVES
more limited in scope and
address specific roadblocks
to the success of a strategic
initiative

- Removing roadblocks for regional and remote renewable energy
- Building Australia's next generation solar

COMPLEMENTARY INITIATIVES
provide ARENA with the
flexibility to do those things
necessary to fulfil all of its
functions

- Supporting High value Australian Renewable Energy knowledge (SHARE)
- Continuing programs such as ERP and REVCF



4. Support for bioenergy



Support for bioenergy

Approximately \$15 million
for range of bioenergy
research, development and
deployment projects

Emerging Renewables
Program and Southern
Cross Renewable Energy
Fund are open for business



5. Summary



Summary

- ◆ ARENA is a key part to unlocking commercial financing
 - ◆ Range of different grant structures
- ◆ Flexible, responsive and open for business
- ◆ We're interested in your views
 - ◆ arena@arena.gov.au

