Australian Government

Bureau of Resources and Energy Economics

Major Electricity Generation Projects

November 2011

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Clare Stark, Kate Martin and Kate Penney

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Postal address:
Bureau of Resources and Energy Economics
GPO Box 1564
Canberra ACT 2601

Phone: +61 2 6276 1000
Email: info@bree.gov.au
Web: www.bree.gov.au

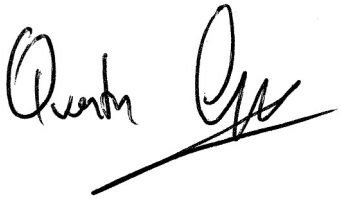
From 1 July 2011, responsibility for resources and energy data and research was transferred from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) to the Bureau of Resources and Energy Economics (BREE).

Foreword

The Bureau of Resources and Energy Economics (BREE) is a professionally independent, economic and statistical research unit within the Department of Resources, Energy and Tourism. Key mandates of BREE are to provide high-quality data, forecasts and research on resources and energy for Australia from an economic perspective.

Major Electricity Generation Projects is an annual publication of BREE that provides a list of major projects that covers all significant areas of electricity generation including renewable and non-renewable sources. The data in this authoritative and up-to-date publication comes from a wide variety of sources and provides a snapshot of the state of play in terms of advanced and less advanced stages of development. This publication is made possible by the valuable input from the companies involved in these development projects.

If you are interested in other publications or further information about BREE and its activities, please contact us at www.bree.gov.au.



Quentin Grafton
Executive Director/Chief Economist
Bureau of Resources and Energy Economics

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An accessibility version of the report and the major projects list are located on the BREE website, bree.gov.au.

Data sources

The information contained in the BREE major electricity generation projects list is obtained from project websites, company reports and/or media releases. Where possible, this information was verified with the project proponents. Other data sources such as the Australian Energy Market Operators' (AEMO) Proposed Generation Project list and government websites were also consulted.

Energy and electricity related statistics are sourced from the Australian Energy Statistics, previously published by ABARES and now maintained and updated by BREE.

Abbreviations and acronyms

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AEMO	Australian Energy Market Operator
BREE	Bureau of Resources and Energy Economics
C	Construction
ESAA	Electricity Suppliers Association of Australia
GWh	Gigawatt hours
MW	Megawatt
O	Operating
TWh	Terawatt hours

Overview

- As at the end of October 2011, there were 19 major electricity generation projects at an advanced stage of development with a total generating capacity of 2668 megawatts (MW) and planned capital expenditure of around $4.8 billion.
- The combined capacity of the advanced projects is equivalent to around 5 per cent of Australia's existing generating capacity.
- There were a further 167 projects at a less advanced stage of development.

BREE's list of major electricity generation projects

The list of major electricity generation projects covers all significant areas of electricity generation, including black and brown coal, oil, gas and renewable energy sources (solar, wind, hydro, biomass, geothermal and ocean). The information draws predominantly on publicly available sources and information provided directly by companies.

The BREE list provides details of each announced project where the expected capacity is more than 30 megawatts. By setting a threshold of 30 megawatts, a number of electricity generation projects are underrepresented on the list, including small scale solar and biomass facilities. While small-scale electricity generation units have an important role to play in Australia's electricity supply, it is not feasible to obtain a comprehensive list of all these projects.

In general, the included projects are at relatively advanced stages of planning; that is, they range from 'planning approval underway' through to 'under construction'.

This major electricity generation projects list contains information on 186 projects, with the following details:

– project name
– location
– expected start-up date
– capital cost of the project in nominal terms
– proponent company or joint venture
– project status
– additional output capacity
– additional employment at the construction and operating stages, where available.

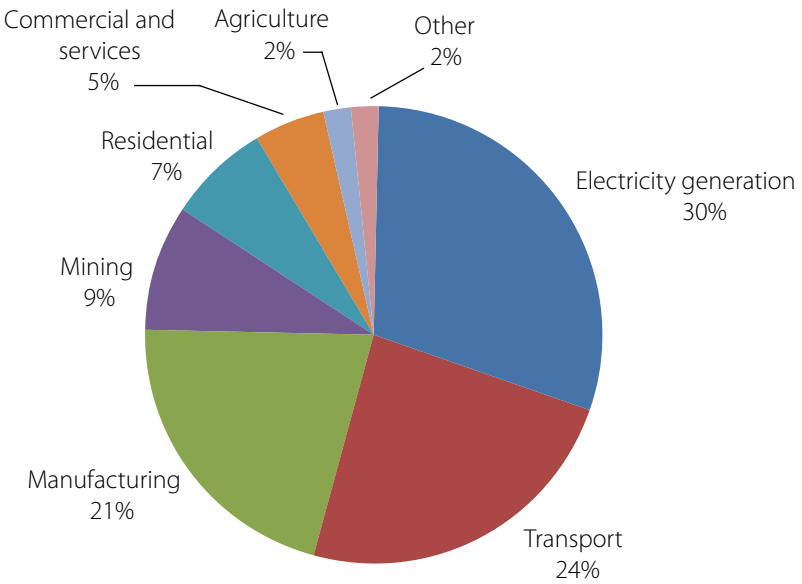
BREE's list of major electricity development projects is in the appendix at the end of this report. The list is also available in excel format on the BREE website, at bree.gov.au/publications/energy/index.html

In the list, projects at more advanced stages of planning (those identified as 'committed' or 'under construction') are grouped together and listed first within each principal energy source. These projects appear in the blue-shaded areas of the list. Projects at less advanced planning stages (for example, those at 'planning approval' stage) follow within each energy source and appear in the yellow-shaded areas. The list includes new greenfield projects as well as the expansion of existing projects.

Electricity generation and consumption

Australia's electricity generation sector is a major energy user that accounted for approximately 30 per cent of total energy consumption in 2009–10 (figure 1). Other sectors that accounted for a significant proportion of energy consumption were transport (24 per cent) and manufacturing (21 per cent).

Figure 1: Australia's energy consumption, by industry, 2009–10

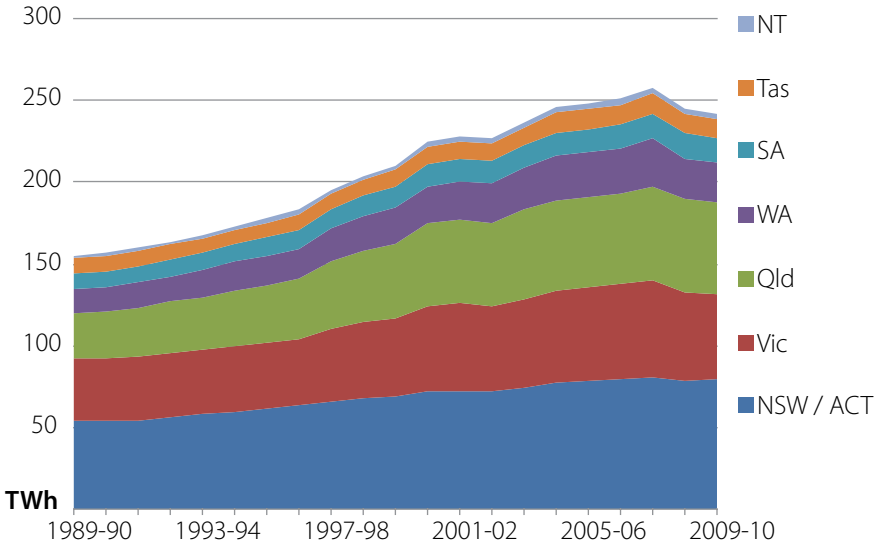


Source: ABARES 2011, Table B

Note: In the electricity generation industry energy consumption is based on energy used for conversion and distribution of electricity.

In 2009–10, Australia's consumption of electricity was 242 terawatt hours. Around 78 per cent of electricity is consumed in New South Wales, Victoria and Queensland, because of the large population base in these states (figure 2). Annual growth in electricity consumption was an average rate of 2.8 per cent in the decade ending 2007–08. A slight 1.2 per cent decrease in 2009–10 consumption compared with 2008–09 is attributable to unseasonal weather patterns, which may have temporarily reduced electricity demand.

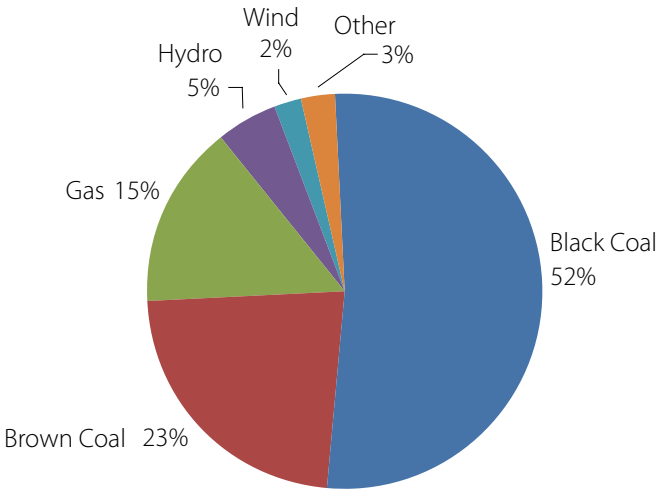
Figure 2: Australia's electricity consumption, by state



Source: ABARES 2011, Table I

The bulk of Australia's electricity is produced using coal, which accounted for 75 per cent of total electricity generation in 2009–10 (figure 3). This reflects the low-cost of coal relative to other energy sources and the abundance of coal reserves along the east coast of Australia, where most electricity is generated and consumed. Gas-fired generation accounted for 15 per cent of total generation and renewable energy about 8 per cent.

Figure 3: Australia's electricity generation, by energy source, 2009–10



Source: ABARES 2011, Table O
Note: Other includes oil, bioenergy and solar PV.

Over the medium to longer term, market dynamics, technology improvements and government policy are expected to change Australia's electricity generation mix. Policies such as the Renewable Energy Target and the introduction of a carbon price are expected to lead to significant increases in the share of renewables in the electricity generation mix (see box 1). These policy initiatives are also expected to result in substitution to less carbon-intensive non-renewable energy sources, particularly gas. Relative energy prices and technological developments will also affect the choice of energy source for electricity generation.

While electricity generated from renewable energy sources is expected to expand, there are some potential constraints to be considered. For instance, some prospective renewable energy resources are located in remote areas, which are a considerable distance from existing transmission lines and consumption centres.

The intermittent nature of many renewable energy sources can also present challenges for their integration in the electricity grid. However, the development of smart-grid technologies combined with improved forecasting accuracy of renewable energy supply will play a role in addressing some of these challenges.

Box 1 Government policies and electricity generation

Government policies will play a role in shaping the electricity generation industry over the medium to longer term, including energy sources used for generation, investment opportunities and electricity prices.

The Renewable Energy Target (RET), which aims to achieve 45 000 gigawatt hours of electricity generation from renewable energy sources by 2020, was introduced to stimulate investment in renewable energy generation. In 2011, the RET was split into two components—the Large scale Renewable Energy Target (LRET) and the Small scale Renewable Energy Scheme (SRES). The LRET consists of legislated annual targets for the amount of electricity to be sourced from renewable sources to ensure 41 000 gigawatt hours are achieved by 2020. Small businesses and households are anticipated to provide more than the additional 4000 gigawatt hours required to meet the target through the SRES. These targets have contributed to the rising number of renewable electricity generation projects under development.

The Australian Government released its Clean Energy Future Plan earlier this year, which includes a three year fixed carbon price that will transition to an emissions trading scheme. Imposing a price on carbon will affect the relative costs of electricity generation technologies, which, in turn, is expected to influence investment decisions in the electricity sector and electricity prices.

The Clean Energy Future Plan also includes a number of other initiatives designed to encourage a shift in the electricity generation fuel mix towards less emission intensive technologies. These include funding directed towards research and development in renewable energy, energy efficiency and low emissions technologies.

Recently completed projects

During the 12 months to October 2011, two electricity generation projects were completed (table 1). This compares with 11 completed in the year to October 2010 and 17 in the year to October 2009. A number of projects scheduled to be commissioned over the past year were delayed, owing to several factors including difficulties in negotiating fuel inputs to generation and in finalising financing arrangements. The completed projects in 2011 have a total generation capacity of 179 megawatts and a capital cost of around $488 million.

AGL Energy and Energy Infrastructure Investments commissioned the Hallet 4 wind farm, also known as North Brown Hill Wind Farm, in South Australia. This project added 132 megawatts to the capacity of the National Electricity Market and was constructed at a capital cost of $341 million. AGL Energy is developing 420 megawatts of wind-powered generation at the Hallet complex, which includes a number of existing and proposed wind farms. Following the commissioning of Hallet 4, 71 per cent (298 megawatts) of the new capacity under development at the complex has been completed.

Acciona Energy's Gunning Wind Farm added 47 megawatts of capacity to the Yass-Goulburn transmission line in New South Wales and was completed at a capital cost of $147 million.

Table 1: Major electricity generation projects completed, year to October 2011

energy source	project	location	company	capacity MW	capital expenditure A$m
Wind	Hallet 4	SA	AGL/Energy Infrastructure Investments	132	341
Wind	Gunning	NSW	Acciona Energy	47	147
total				**179**	**488**

Advanced projects under development

As at October 2011, there were 19 projects at an advanced stage of development. These projects are either committed or under construction and have a total capacity of 2668 megawatts, using a range of energy sources (figure 4, table 2). This is equivalent to 5 per cent of Australia's total generating capacity as at June 2010 (ESAA 2011). The location of projects is widespread, with at least one project in each jurisdiction except Tasmania and the Australian Capital Territory (figure 5, map 1).

Figure 4: Capacity of advanced projects, by energy source, October 2011

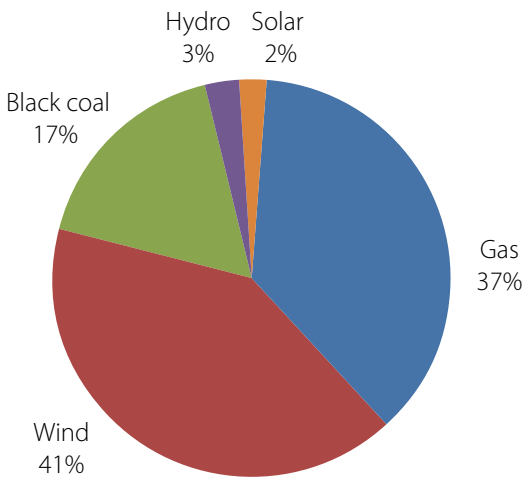
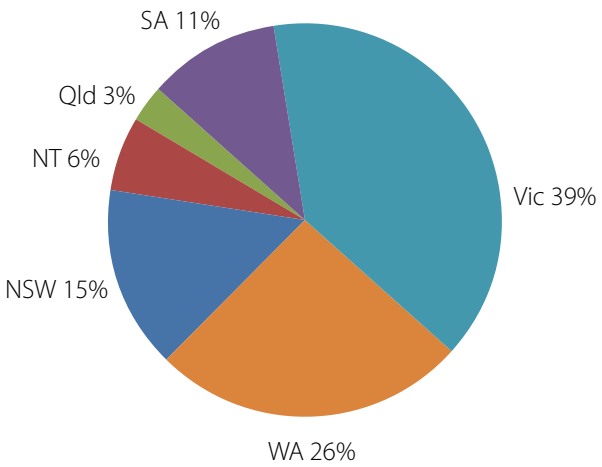


Table 2: Advanced projects, October 2011

	non-renewable projects			renewable projects			total		
	number	capacity	cost	number	capacity	cost	number	capacity	cost
		MW	A$m		MW	A$m		MW	A$m
ACT	0	0	0	0	0	0	0	0	0
NSW	2	269	287	3	138	150	5	407	437
NT	3	166	296	0	0	0	3	166	296
Qld	1	30	35	1	44	105	2	74	140
SA	0	0	0	2	303	668	2	303	668
Tas	0	0	0	0	0	0	0	0	0
Vic	1	550	735	2	487	1 200	3	1 037	1 935
WA	2	420	413	2	261	950	4	681	1 363
total	**9**	**1 435**	**1 766**	**10**	**1 233**	**3 073**	**19**	**2 668**	**4 839**

Figure 5: Capacity of advanced projects, by state, October 2011



Non-renewable electricity projects

At the end of October 2011, non-renewable electricity generation projects accounted for nine of the 19 projects at an advanced stage of development, and around 54 per cent (1435 megawatts) of committed capacity (figure 6). Gas-fired projects account for more than two-thirds of the announced capacity of advanced non-renewable electricity projects, with black coal-fired projects accounting for 32 per cent.

The largest non-renewable project at an advanced stage of development is the first stage of Origin Energy's Mortlake Power Station Project in Victoria. This project has an announced gas-fired generation capacity of 550 megawatts and is scheduled for completion in late 2011 at a capital cost of $735 million. Another large gas-fired generation project is the refurbishment of

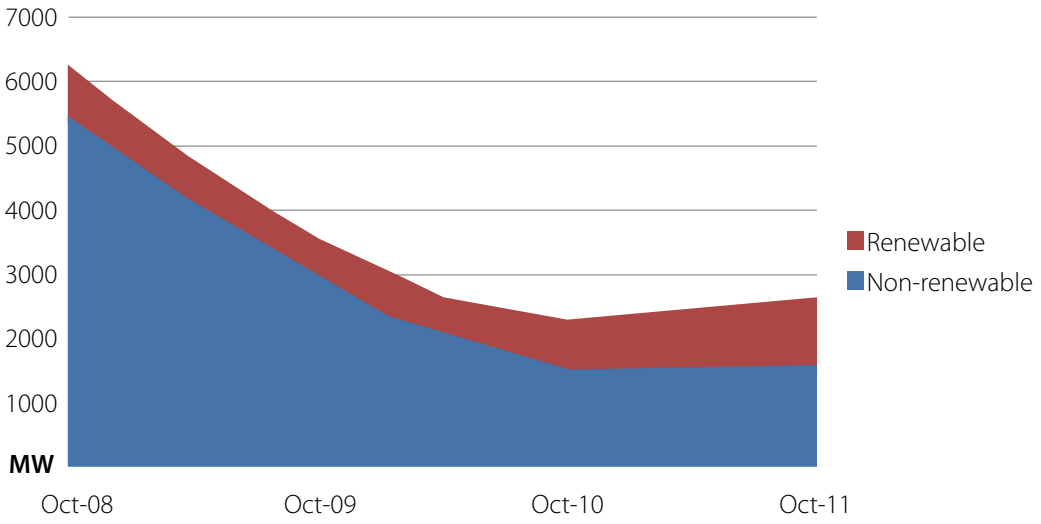
Verve Energy's Kwinana Power Station in Western Australia, which will expand output capacity by 200 megawatts in 2012 at a capital cost of $263 million.

Three gas-fired projects are being developed by the Power and Water Corporation in the Northern Territory. The Owen Springs Power Station has an announced capacity of 33 megawatts at a capital cost of $126 million. Included in the capital cost of the Owen Springs expansion is the upgrade of existing transmission and distribution infrastructure. The Weddell Stage 3 expansion is scheduled to add 43 megawatts to existing capacity in 2012 at a capital cost of $50 million. The Channel Island Power Station expansion will add 90 megawatts of capacity in the Northern Territory in late 2011 at a capital cost of $120 million.

Construction has commenced on the expansion of Eraring Energy's Eraring Power Station that will increase coal-fired capacity by 240 megawatts and involve the construction of a cooling water reservoir. The project is scheduled for completion in 2012 at a capital cost of $245 million. Verve Energy and Inalco Energy's 220 megawatt coal-fired Muja Power Station A and B refurbishment project is expected to be commissioned in late 2012 at a capital cost of $150 million. The Muja Power Station refurbishment will include the installation of emissions control equipment to reduce particulate emissions.

Bow Energy is developing the 30 megawatt coal seam gas-fired Blackwater Power Project in Queensland at an estimated capital cost of $35 million which is scheduled to be completed in 2012. Eastern Star Gas and Santos are developing the 29 megawatt Wilga Park B coal seam gas-fired project in New South Wales at an estimated capital cost of $42 million. The first 6 megawatts of the project are scheduled to be commissioned in 2012.

Figure 6: Capacity of advanced projects, October 2011



Renewable electricity projects

At the end of October 2011, 10 renewable projects were at an advanced stage of development. Seven of these projects are wind-powered, representing 89 per cent of the announced capacity for advanced renewable electricity projects. Hydro powered projects account for a further 7 per cent of planned capacity, and a solar thermal powered project accounted for the remaining 4 per cent.

AGL Energy and Meridian Energy's Macarthur Wind Farm in Victoria is the largest renewable project at an advanced stage in terms of capacity and capital expenditure. The project has a planned capacity of 420 megawatts and is expected to be commissioned in 2013 at a capital cost of $1 billion. The expansion of TrustPower's Snowtown wind farm (stage 2) in South Australia is scheduled to add 250 megawatts to existing capacity in 2013 at a capital cost of $550 million.

Construction has been completed on UBS International Infrastructure Fund and the Retail Employees Superannuation Trust's Collgar Wind Farm and generation is expected to begin towards the end of 2011. This project will add 206 megawatts of capacity to the South West Interconnected System in Western Australia at an expected capital cost of $750 million. AGL Energy's Hallet 5 wind farm, also known as the Bluff, is scheduled to add 53 megawatts of capacity to the 298 megawatts currently installed at the Hallet complex in South Australia at a capital cost of $118 million. AGL Energy is also involved in the $200 million Oaklands Hill Wind Farm project in Victoria with a planned capacity of 67 megawatts. Infigen Energy is constructing the Woodlawn Wind Farm in New South Wales with a planned capacity of 48 megawatts at an expected capital cost of $102 million.

Snowy Hydro is responsible for two advanced hydro powered projects. The Tumut 3 upgrade in New South Wales is expected to be completed later this year, adding 50 megawatts to existing capacity at an estimated cost of $28 million. The Upper Tumut expansion will add a further 40 megawatts of capacity from 2013 at a capital cost of $20 million.

The only solar project at an advanced stage is CS Energy's Kogan Creek Solar Boost expansion. This hybrid generation project will add 44 megawatts to existing coal-fired capacity and is scheduled to be completed in 2013 at a capital cost of $105 million. This is an example of increasing investment in hybrid electricity generation (box 2).

Box 2 Hybrid electricity generation

A growing area of innovation and investment in electricity generation is hybrid generation. Hybrid generation involves the use of two or more energy sources to produce electricity on the same site.

Hybrid generation can include any energy type; common non-renewable fuels are gas, diesel or coal, combined with renewable sources such as solar photovolatics, solar thermal, biomass or wind-powered generation. Hybrid generation can also include the use of two non-renewable fuels. The electricity generated through hybrid systems may be for on-site consumption, or may be fed into one of the major grid systems.

Typical applications and advantages of hybrid electricity generation

Hybrid electricity generation has many applications. In Australia, early hybrid plant installations have been used in remote areas not serviced by the major electricity systems. The combination of isolated demand, available wind or solar energy sources and high transport costs for conventional fuels has encouraged the development of a number of solar/diesel and wind/diesel plants, particularly in the Northern Territory and Western Australia.

Other hybrid generation plants around Australia may have been motivated by an effort to increase generation capacity or lower emissions. Diversified energy sources can also improve energy security by increasing the reliability of electricity supply. The close proximity of some resources, including renewable energy sources and potential gas generation capacity, may encourage new hybrid generation investments.

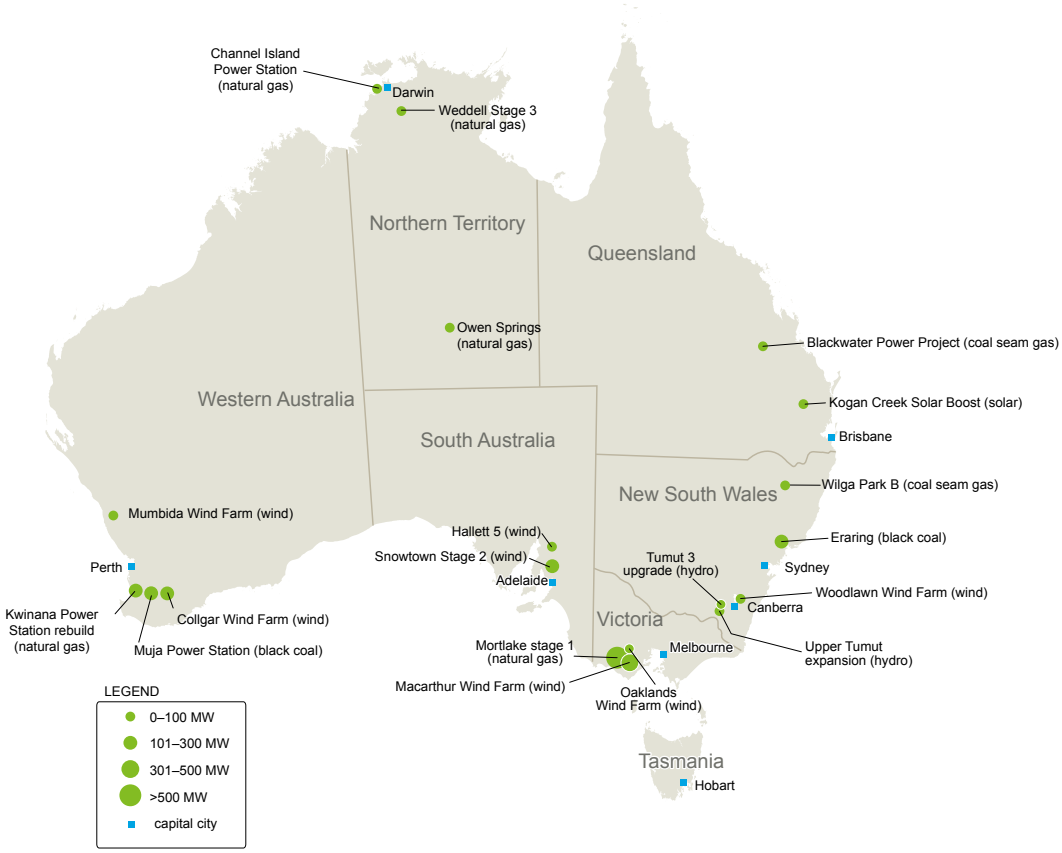
Hybrid generation provides an opportunity to integrate renewable energy technologies while overcoming the variability in energy supply from these technologies. Generation facilities can be designed to use renewable powered generation first, which may have lower running costs or preferred environmental attributes. Generation can then revert to non-renewable fired generation when necessary, to maintain the flow of electricity supply.

Flexibility in the generation mix allows generators to cater for both base load and peak demand. When demand spikes, utilising higher-cost options can be viable and help achieve delivery standards. This quick-start generation capacity provides a natural hedge for electricity retailers. Growing demand for electricity in Australia, with particularly strong growth in peak demand, offers a role for renewable electricity generation that can be supported by reliable non-renewable generation.

Hybrid projects

Several commercial scale hybrid plants are currently proposed in Australia. The Solar Dawn project in Queensland proposes a 250 megawatt solar thermal-gas hybrid plant, expected to be operational in 2015. This project is aimed at maintaining constant electricity generation and optimising energy use, with a low emissions profile. Solar Dawn is being pursued by the Solar Dawn consortium that includes AREVA Solar, CS Energy and Wind Prospect.

Map 1: Advanced electricity generation projects, October 2011



Less advanced projects under development

A total of 167 projects or 90 per cent of BREE's major electricity generation projects are at less advanced stages of development. Projects in the less advanced category are either still undergoing a feasibility study (in some cases, a pre-feasibility study) or are not subject to a definite decision on development following the completion of a feasibility study. Some of these projects may not proceed for several years. Others may confront changes in economic conditions or may target the same emerging market opportunities that will necessitate rescheduling, while some less advanced projects may fail to materialise if the developers fail to secure adequate financing.

Table 3 contains a summary of the numbers and input source distribution by state of the less advanced projects, which together account for an increase of 47 187 megawatts of potential capacity. This is significant considering installed capacity as at June 2010 was approximately 53 529 megawatts (ESAA 2011).

Table 3: Number of less advanced projects, October 2011

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	total	potential capacity MW
non-renewable	**0**	**20**	**0**	**14**	**4**	**0**	**7**	**8**	**53**	**26 886**
Black coal	0	0	0	1	0	0	0	3	4	1 646
Brown coal	0	0	0	0	3	0	1	0	4	1 760
Gas	0	17	0	13	1	0	6	5	42	19 330
Oil	0	1	0	0	0	0	0	0	1	150
To be determined	0	2	0	0	0	0	0	0	2	4 000
renewable	**0**	**35**	**1**	**10**	**22**	**5**	**34**	**7**	**114**	**20 301**
Biomass	0	0	0	1	0	1	0	0	2	265
Geothermal	0	0	0	0	2	0	2	0	4	245
Hydro	0	0	0	1	0	0	0	0	1	37
Ocean	0	0	1	0	0	1	1	0	3	786
Solar	0	7	0	1	1	0	2	1	12	1 270
Wind	0	28	0	7	19	3	29	6	92	17 698
total	**0**	**55**	**1**	**24**	**26**	**5**	**41**	**15**	**167**	**47 187**

Non-renewable electricity projects

Non-renewable projects represent around one-third of all projects at a less advanced stage, but more than half of planned capacity. At the end of October 2011, there were 53 non-renewable electricity generation projects at a less advanced stage, the majority of which (42) are gas-fired. There is increased interest in the development of gas-fired generation because it is a relatively low-cost, mature technology with a lower emissions intensity than some other non-renewable options.

The two largest less advanced non-renewable projects; Macquarie Generation's Bayswater B project and TRUenergy's Mt Piper expansion, are being developed at existing coal-fired power stations. Both projects have a planned capacity of 2000 megawatts. The choice between coal and gas as an energy source for these projects is yet to be made. Bayswater B is associated with Macquarie Generation's Bayswater coal-fired power station, which is one of the largest power stations in Australia with an installed capacity of 2640 megawatts.

TRUenergy's Blackstone and Aldoga Power Stations in Queensland are the largest gas-fired projects at a less advanced stage of development, with a potential capacity of 1500 megawatts each. Both projects will have an initial capacity of 500 megawatts. At full capacity these projects will represent 16 per cent of the proposed capacity of gas-fired projects at a less advanced stage of development and 6 per cent of total proposed capacity.

Renewable electricity projects

There were 114 less advanced renewable energy projects as at the end of October 2011. Of this total, 92 are wind-powered and account for 87 per cent of the proposed addition to renewable electricity capacity. The large number of proposed wind-powered electricity projects reflects, in part, government policy measures to support the expansion of renewable energy sources and the cost competitiveness of wind relative to other, less mature renewable energy technologies.

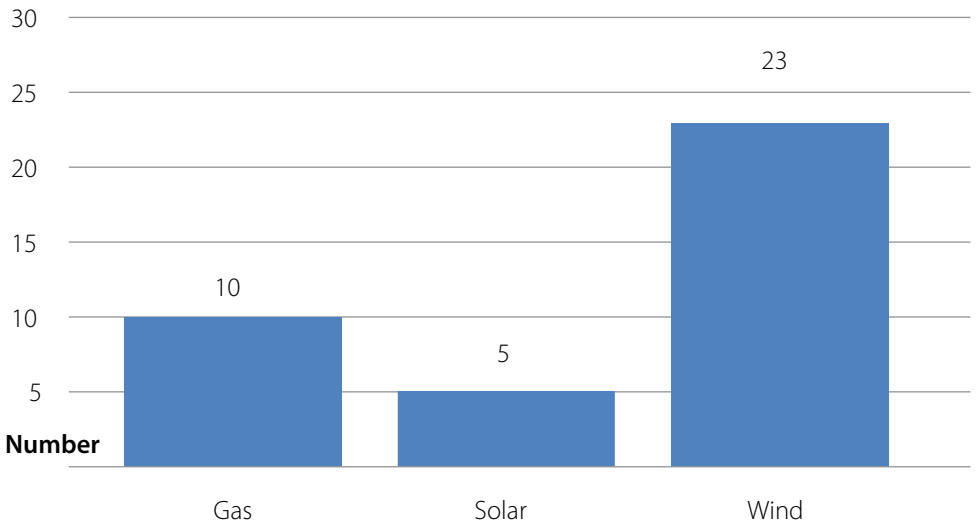
The largest wind energy project, in terms of capacity and capital expenditure, is Silverton Wind Farm Developments' Silverton Wind Farm in New South Wales. The project has a planned capacity of 1000 megawatts at an estimated capital cost of $2.2 billion. One of the Silverton Wind Farm Developments' joint venture partners, Epuron, is developing the Liverpool Range Wind Farm in New South Wales with a planned capacity of 1000 megawatts. When developed, these wind farms will be among the largest onshore wind projects in the southern hemisphere.

Aside from wind-powered projects, the largest expansion is proposed to occur in ocean energy. Tenax Energy's Clarence Strait Tidal Energy Project in the Northern Territory has a planned capacity of 450 megawatts and is scheduled for completion in 2013. Another Tenax Energy project, the Banks Strait Tidal Energy Facility in Tasmania has a planned capacity of 302 megawatts and is scheduled for completion in 2015.

Projects new to BREE's list

There are 38 projects that have been added to the list since October 2010, with wind projects accounting for around 61 per cent of new projects, followed by gas (26 per cent) and solar (13 per cent) (figure 7). The number of projects is comparable with the 36 new projects added in the year to October 2010 and 44 projects added in the year to October 2009.

Figure 7: Projects added to list, year to October 2011



The largest of the non-renewable projects is Origin Energy's Kerrawary gas-fired power station, located 60 kilometres north east of Goulburn, New South Wales. The facility will have a capacity of 1000 megawatts, and will provide base load power to the National Electricity Market.

Four of the new gas-fired projects are located in Western Australia. These include ERM Power's Neerabup 2 expansion (330 megawatts) and Three Springs project (330 megawatts); Horizon Power's South Hedland project (120 megawatts); and Alinta Energy's Port Hedland Power Station conversion project (100 megawatts). The remaining five projects being developed in Queensland include: APA Group and AGL Energy's Diamintina power station (242 megawatts); ERM Power's Braemar 4 expansion (550 megawatts); and Westlink's Westlink Power project (200 to 300 megawatts).

In the year to October 2011, 23 wind-powered projects have been added to the list. Epuron's Liverpool Range Wind Farm in New South Wales is the largest renewable powered addition to the listing. When developed, it will have a planned capacity of 1000 megawatts at an estimated capital cost of $2 billion.

Almost half of the wind-powered projects new to the list are located in New South Wales. Total planned capacity for these projects is 3543 megawatts, with an average capacity of 322 megawatts. Projects include CBD Energy's Adjungbilly Wind Farm (39 megawatts), Suzlon Energy and Windlab Development's Rugby Wind Farm (290 megawatts), and Wind Prospects Uungula Wind Farm (495 to 1122 megawatts).

The two new wind farms in Western Australia have a total capacity of 514 megawatts and include Wind Prospect's Yandin Wind Farm (320 megawatts). There are four wind projects being developed in Queensland with a total capacity of 1155 megawatts, including Windlab's

Kennedy Wind Farm (750 megawatts). In South Australia, the three wind farms being developed have a total capacity 350 megawatts and include Acciona Energy's Exmoor wind farm (150 to 225 megawatts). There are three projects in Victoria that have a total capacity of 1138 megawatts and include RES's Penshurst wind farm (758 megawatts).

Since October 2010, five solar projects have been added to the major electricity generation projects list—two in New South Wales and one in Queensland, Victoria and Western Australia, respectively. These projects have a total capacity of 640 megawatts. The Queensland based Solar Dawn project is the largest solar project in terms of capital expenditure and planned capacity. The Solar Dawn project is being developed near the Kogan Creek Solar project in southwest Queensland by the Solar Dawn consortium. The project has a planned capacity of 250 megawatts at a capital cost of $1.2 billion.

In New South Wales, new solar projects to the list include AGL Energy's Nyngan Solar Farm (100 megawatts) and Broken Hill Solar Photovoltaic Power Project (50 megawatts). Infigen Energy's Mildura Solar Farm with a planned capacity of 100 to 180 megawatts is the only solar-powered project in Victoria added to the list. In Western Australia, Investec Bank Australia has added the Chapman Solar Power Station with a 100 megawatt capacity (50 megawatts solar and 50 megawatts diesel) to its development portfolio.

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Appendix

BREE's list of major electricity generation projects November 2011

Note: Projects that are under construction or committed are shown in the blue shaded areas. Less advanced projects are shown in the yellow shaded areas.

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Electricity Generation - non-renewable								
Brown coal								
Arckaringa Phase 1	Altona Energy/ CNOOC	200 km N of Coober Pedy, SA	New project, Feasibility study under way	na	560MW	na	800	**O**
Arckaringa Phase 2	Altona Energy/ CNOOC	200 km N of Coober Pedy, SA	Expansion, Feasibility study under way	na	560MW	na	800	**O**
Dual Gas Demonstration Project	HRL Development	Morwell, Latrobe Valley, Vic	New project, Environmental approval under way	2013	600MW	$1.1b	350	**C**
							35	**O**
Kingston Lignite (formerly FuturGas) project	Strike Oil	Kingston, SA	New project, Feasibility study under way	2016	40MW	na		
Black coal								
Eraring	Eraring Energy	40 km SW of Newcastle, NSW	Expansion, Committed	2012	240MW	$245m	600	**C**
Muja Power Station (Stages A and B)	Verve Energy/ Inalco Energy	200 km SE of Perth, WA	Refurbishment, Under construction	late 2012	220MW	$150m	200	**C**
Bluewaters stage 3	Kansai Electric Power/ Sumitomo Corp	5 km NE of Collie, WA	Expansion, Environmental approval under way	2013	208MW	na		
Bluewaters stage 4	Kansai Electric Power/ Sumitomo Corp	5 km NE of Collie, WA	Expansion, Environmental approval under way	2015	208MW	na		
Coolimba	Coolimba Power	20 km S of Eneabba, WA	New project, Government approval received	2014	450MW Coal, 380MW Gas	$1.6b	600	**C**
							100	**O**
Galilee Power Project	Waratah Coal	300 km W of Rockhampton, Qld	New project, Prefeasibility study under way	na	400MW	$1.25b	1000	**C**
							60	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Gas								
Blackwater Power Project	Bow Energy	15 km NE of Blackwater, Qld	New project, Under construction	2012	30MW	$35m	45	**C**
							2	**O**
Channel Island Power Station	Power and Water Corporation	Channel Island, NT	Expansion, Under construction	late 2011	90MW	$120m		
Kwinana Power Station rebuild	Verve Energy	Kwinana, WA	Refurbishment, Under construction	2012	200MW	$263m		
Mortlake Stage 1	Origin Energy	12 km W of Mortlake, Vic	New project, Under construction	late 2011	550MW	$735m	250	**C**
							10	**O**
Owen Springs	Power and Water Corporation	Alice Springs, NT	New project, Under construction	2012	33MW	$126m		
Weddell stage 3	Power and Water Corporation	40 km SE of Darwin, NT	Expansion, Under construction	2012	43MW	$50m		
Wilga Park B (Two Stages)	Eastern Star Gas/Santos	Narrabri, NSW	Expansion, Committed	2012 (initially 6MW)	29MW	$42m	30	**C**
							2	**O**
Aldoga Power Station	TRUenergy	Gladstone, Qld	New project, Government approval under way	na	500MW initially (1500MW ultimately)	$1.8b		
Bamarang stage 1	Infratil	7 km SW of Nowra, NSW	New project, Government approval received	na	250-300MW	na	100	**C**
							18	**O**
Bamarang stage 2	Infratil	7 km SW of Nowra, NSW	Expansion, Government approval received	na	100-150MW	$130m	200-300	**C**
							18	**O**
Blackstone Power Station	TRUenergy	Ipswich, Qld	New project, Government approval under way	na	500MW initially (1500MW ultimately)	$1.8b		
Braemar 3	ERM Power	40 km SW of Dalby, Qld	Expansion, Government approval received	2014	550MW	$550m		
Braemar 4	ERM Power	40 km SW of Dalby, Qld	Expansion, Feasibility study under way	na	550MW	na		
Centauri 1	Eneabba Gas	8 km E of Dongara, WA	New project, Government approval received	2013	168MW	$150m		
Dalton Power Station	AGL Energy	70 km W of Goulburn, NSW	New project, Government approval under way	post 2014	500MW (1500MW ultimately)	$250-800m (up to $1.5b ultimately)	250	**C**
							6	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Darling Downs Power Station 2	Origin Energy	250 km W of Brisbane, Qld	Expansion, Government approval under way	2012	500MW	na		
Diamintina power station (Two Stages)	APA Group/ AGL Energy	6 km S of Mount Isa, Qld	New project, Project financing underway	2013	242MW	$500m	300	**C**
							18	**O**
Hanging Rock stage 1	Loran Energy Products	20 km SW of Moss Vale, NSW	New project, Government approval under way	na	300MW	$360m	150	**C**
							15	**O**
Hanging Rock stage 2	Loran Energy Products	20 km SW of Moss Vale, NSW	Expansion, Government approval under way	na	300MW	$240m	150	**C**
							15	**O**
Kerrawary Power Station Project	Origin Energy	60 km NE of Goulburn, NSW	New project, Feasibility study under way	na	1000MW	na		
Leafs Gully	AGL Energy	65 km SW of Sydney, NSW	New project, Government approval received	post 2014	360MW	$250m	200	**C**
							5	**O**
Marulan Gas Turbine Facility	TRUenergy	40 km NE of Goulburn, NSW	New project, Government approval received	na	350MW	$280m	150	**C**
							12	**O**
Marulan Gas Turbine Facility stage 1	TRUenergy	40 km NE of Goulburn, NSW	New project, Government approval received	2013-14	250-350MW	$280m	150	**C**
							12	**O**
Marulan Gas Turbine Facility stage 2	TRUenergy	40 km NE of Goulburn, NSW	Expansion, Government approval received	2013-14	100-150MW	$235m	200	**C**
							8	**O**
Mortlake stage 2	Origin Energy	12 km W of Mortlake, Vic	Expansion, Environmental approval received	na	450MW	na	20	**O**
Munmorah rehabilitation	Delta Electricity	Munmorah, NSW	Expansion, Government approval received	na	100MW	$795m	150	**C**
Narrabri 1	East Coast Power	Narrabri, NSW	New project, Planning approval under way	2013	30MW	$150m (incl. stages 1 and 2)		
Narrabri 2	East Coast Power	Narrabri, NSW	New project, Planning approval under way	2014	180MW	$150m (incl. stages 1 and 2)	100	**C**
							12	**O**
Neerabup 2	ERM Power	40 km N of Perth, WA	Expansion, Feasibility study under way	na	330MW	na		

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
NQ Peaker	AGL Energy	Townsville, Qld	New project, Prefeasibility study under way	post 2015	360MW	$250-320m	200	**C**
							5	**O**
Port Hedland Power Station Conversion Project	Alinta Energy	13km S of Port Hedland, WA	Expansion, Environmental approval under way	2014	100MW	na		
Port Kembla Steelworks Co-generation plant	Bluescope Steel	Port Kembla, NSW	New project, Environmental approval under way	na	220MW	$750m	300	**C**
							30	**O**
Richmond Valley Power Station and Casino Gas project	Metgasco	East Casino, NSW	New project, Government approval received	na	30MW	$40m	50	**C**
							10	**O**
SEQ1	AGL Energy	Ipswich, Qld	New project, Prefeasibility study under way	post 2015	360MW	$252-324m	200	**C**
							5	**O**
SEQ2	AGL Energy	Kogan, Qld	New project, Prefeasibility study under way	post 2014	1150MW	$805-1035m	300	**C**
							10	**O**
Shaw River stage 1	Santos	30 km N of Port Fairy, Vic	New project, Environmental approval received	2012	500MW	$880m (incl. 105 km pipeline from Pt Campbell)	600	**C**
							85	**O**
Shaw River stages 2 & 3	Santos	30 km N of Port Fairy, Vic	Expansion, Environmental approval under way	na	1000MW	na	30	**O**
South Hedland Power Station	Horizon Power	13 km S of Port Hedland, WA	New project, Pending approval, Environmental approval under way	2016	120MW	$420m	15	**O**
Spring Gully stage 1	Origin Energy	80 km N of Roma, Qld	New project, Government approval under way	na	500MW	na	200	**C**
							15	**O**
Spring Gully stage 2	Origin Energy	80 km N of Roma, Qld	Expansion, Government approval under way	na	500MW	na	200	**C**
							15	**O**
Swanbank F	Stanwell Corporation	Ipswich, Qld	Expansion, Feasibility study under way	na	400MW	na	400	**C**
Tallawara stage 2	TRUenergy	13 km S of Wollongong, NSW	Expansion, Planning approval received	2015	500MW	$500m	200-400	**C**
							3-20	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Tarrone	AGL Energy	300 km SW of Melbourne, Vic	New project, Government approval under way	post 2014	550MW initially (900MW ultimately)	$350-600m	250	**C**
							6	**O**
Three Springs	ERM Power	270 km N of Perth, WA	New project, Environmental approval received	na	330MW	na		
Torrens Island Power Station (TIPS)	AGL Energy	Torrens Island, SA	Expansion, Government approval received	post 2015	700MW	$800m	250	**C**
							12	**O**
Valley Power Station Augmentation project	Snowy Hydro	Latrobe Valley, Vic	Expansion, Government approval received, on hold	na	50-100MW	$80-100m	50	**C**
Wellington	ERM Power	4 km N of Wellington, NSW	New project, Government approval received	2015	550-660MW	$700m	400	**C**
							10	**O**
Westlink Power Project	Westlink	2 km N of Gatton, Qld	New project, Government approval under way	2012 (Stage 1)	200-300MW	$200m	200	**C**
Yallourn Power Station	TRUenergy	Latrobe Valley, Vic	New project, Government approval under way	2015	1000MW	na		
Oil								
Buronga Peaking Power Plant	International Power	3 km NE of Mildura, NSW	New project, Government approval received	na	150MW	$110m	120	**C**
							4	**O**
To be determined								
Bayswater B	Macquarie Generation	Muswellbrook, NSW	New project, Concept approved	na	2000MW	na		
Mt Piper expansion	TRUenergy	17 km NW of Lithgow, NSW	Expansion, Concept approved	2015-16	2000MW	$2.5-5.0b	950	**C**
							50	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Electricity Generation - renewable								
Wind								
Collgar Wind Farm	UBS IIF/REST	25 km SE of Merredin, WA	New project, Construction completed	late 2011	206MW	$750m	150	C
							10-20	O
Hallett 5 (The Bluff)	AGL Energy	12 km SE of Jamestown, SA	Expansion, Under construction	2012	53MW	$118m	120	C
							4-5	O
Macarthur Wind Farm	AGL Energy/ Meridian Energy	230 km W of Melbourne, Vic	New project, Under construction	2013	420MW	$1b	400	C
							30	O
Mumbida	Verve Energy/ Macquarie Capital Group	40 km S of Geraldton, WA	New project, Under construction	2012	55MW	$200m	100	C
							6	O
Oaklands Hill Wind Farm	AGL Energy/ Oaklands Hill Pty Ltd	3 km S of Glenthompson, Vic	New project, Under construction	2012	67MW	$200m	140	C
							5	O
Snowtown stage 2	TrustPower	5 km W of Snowtown, SA	Expansion, Under construction	2013	250MW	$550m		
Woodlawn Wind Farm	Infigen Energy	40 km S of Goulburn, NSW	New project, Under construction	late 2011	48MW	$102m	150	C
							5	O
Adjungbilly Wind Farm	CBD Energy	350 km SW of Sydney, NSW	New project, Planning approval under way	na	39MW	$75m	20	C
							20	O
Allendale	Acciona Energy	18 km S of Mt Gambier, SA	New project, On hold	2012-13	69MW	$175m	50	C
							11	O
Ararat Wind Farm	RES	7 km N of Ararat, Vic	New project, Government approval under way	2013	225MW	$350m	40	C
Archer Point Wind Farm	Archer Point Wind Farm/NP Power	12 km S of Cooktown, Qld	New project, Prefeasibility study completed	na	100-120MW	na		
Badgingarra Wind Farm	APA Group	200 km N of Perth, WA	New project, Feasibility study completed	na	130MW	na		
Bald Hills Wind Farm	Mitsui & Co Australia	170 km SE of Melbourne, Vic	New project, Government approval received	2013	104MW	$300m	155	C
							11	O
Bango Wind Farm	Wind Prospect	20 km N of Yass, NSW	New project, Environmental approval under way	2015	150-340MW	$700m	120	C
							15	O
Barn Hill	AGL Energy	Barn Hill, SA	New project, Government approval received	2014-15	130-185MW	$350-450m	150	C
							8-10	O

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Baynton	Ratch Australia	80 km N of Melbourne, Vic	New project, Feasibility study under way	2013-14	130MW	na	100	**C**
							8	**O**
Ben Lomond Wind Farm	AGL Energy	62 km N of Armidale, NSW	New project, Government approval under way	na	150MW	$375m	100	**C**
							5	**O**
Ben More	Ratch Australia	150 km NW of Melbourne, Vic	New project, Feasibility study under way	2014	90MW	na		
Berrybank Wind Farm	Union Fenosa Wind Australia	60 km E of Mortlake, Vic	New project, Government approval received	2013	178-248MW	$480m	210	**C**
							25	**O**
Birrema Wind Farm	Epuron	30 km W of Yass, NSW	New project, Planning approval under way	2014	150-200MW	$300-400m	100	**C**
							10	**O**
Boco Rock Wind Farm	Wind Prospect	10 km SW of Nimmitabel, NSW	New project, Government approval received	2013	270MW	$750m	100	**C**
							15	**O**
Bodangora	Infigen Energy	25 km SE of Dubbo, NSW	New project, Planning approval under way	na	70-100MW	na		
Capital 2 Wind Farm	Infigen Energy	near Bungendore, NSW	New project, Planning approval under way	na	70-100MW	$180m	100	**C**
							10	**O**
Carmody's Hill Wind Farm	Pacific Hydro	18 km N of Mt Misery, SA	New project, Government approval under way	na	140MW	$350m	500	**C**
							6	**O**
Carols Ridge Wind Farm	Epuron	Yass region, NSW	New project, Planning approval under way	2014	30MW	$60m	50	**C**
							5	**O**
Cattle Hill Wind Farm	Cattle Hill Wind Farm	5 km E of Lake Echo, Tas	New project, Government approval received	2013	240MW	$500m	80	**C**
							10	**O**
Cherry Tree	Infigen Energy	10 km N of Shepparton, Vic	New project, Planning approval under way	na	35-50MW	na		
Collector	Ratch Australia	50 km NE of Canberra, NSW	New project, Feasibility study under way	2013	200MW	$500m	100	**C**
							10	**O**
Conroy's Gap Wind Farm	Origin Energy	17 km W of Yass, NSW	New project, Government approval received	2016	30MW	$100m	70	**C**
							5	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Cooper's Gap Wind Farm	AGL Energy	180km NW of Brisbane, Qld	New project, Planning approval under way	2014-15	350MW	$800m	200	**C**
							20-25	**O**
Crookwell 2	Union Fenosa Wind Australia	14 km SE of Crookwell, NSW	New project, Government approval under way	2013	92MW	$238m	55	**C**
							10	**O**
Crookwell 3	Union Fenosa Wind Australia	15 km SE of Crookwell, NSW	New project, Environmental approval under way	2013	54-102MW	$102m	40	**C**
							6	**O**
Crowlands Wind Farm	Pacific Hydro	30 km NE of Ararat, Vic	New project, Government approval received	na	126MW	$150m		
Crows Nest Wind Farm	AGL Energy	43 km N of Toowoomba, Qld	New project, Government approval received	na	150MW	$375m	100	**C**
							5	**O**
Crudine Ridge Wind Farm	Wind Prospect	45 km S of Mudgee, NSW	New project, Environmental approval under way	2014	165MW	$300m	75	**C**
							15	**O**
Crystal Brook Wind Farm	Origin Energy	200 km N of Adelaide, SA	New project, Feasibility study under way	2017	80MW	$250m	70	**C**
							5	**O**
Darlington Wind Farm	Union Fenosa Wind Australia	5 km E of Mortlake, Vic	New project, Feasibility study under way	2015	270-345MW	$720m	250	**C**
							32	**O**
Drysdale Wind Farm	Wind Farm Developments	3 km N of Purnim, Vic	New project, Government approval received	na	26MW	$60-100m	100	**C**
Exmoor	Acciona Energy	23 km N of Naracoorte, SA	New project, Environmental approval under way	na	150-225MW	$500m		
Flyers Creek Wind Farm	Infigen Energy	20 km S of Orange, NSW	New project, Planning approval under way	2014	120MW	$160-200m	50	**C**
							3	**O**
Forsayth Wind Farm (previously Qld Wind)	Infigen Energy	100 km SW of Townsville, Qld	New project, Planning approval under way	2013	70-80MW	na		
Glen Innes Wind Farm	Glen Innes Wind Farm	Waterloo Range, NSW	New project, Government approval received	2012	62.5MW	$150m	40	**C**
							4	**O**
Golspie Wind Farm	Wind Prospect	50 km N of Goulburn, NSW	New project, Environmental approval under way	2015	150-340MW	$700m	120	**C**
							15	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Gullen Range Wind Farm	Gullen Range Wind Farm	25 km NW of Goulburn, NSW	New project, Government approval received	na	248MW	$250m		
Hallett 3 (Mt Bryan)	AGL Energy	Hallett, SA	Expansion, Planning approval under way	2013-14	99MW	$216-232m	120	**C**
							6-7	**O**
Hawkesdale Wind Farm	Union Fenosa Wind Australia	35 km N of Point Fairy, Vic	New project, Extension for government approval under way	2013	62MW	$150m	50	**C**
							7	**O**
High Road	Ratch Australia	70 km SW of Cairns, Qld	New project, Feasibility study under way	2012	50MW	$90m	80	**C**
							5	**O**
Kennedy Wind Farm	Windlab	290 km SW Townsville, Qld	New project, Government application to be submitted Dec 2011	2014	750MW	$1.5b	240	**C**
							40	**O**
Keyneton	Pacific Hydro	10 km SE of Angaston, SA	New project, Environmental approval under way	na	130MW	na		
Kongorong	Ratch Australia	30 km SW of Mt Gambier, SA	New project, Prefeasibility study under way	na	120MW	na		
Kulpara	Ratch Australia	100 km NW of Adelaide, SA	New project, Prefeasibility study under way	na	100MW	na		
Kyoto Energy Park	Pamada	10 km W of Scone, NSW	New project, Government approval received	na	113MW	$190m	183	**C**
							12	**O**
Lal Lal Wind Farm	West Wind Energy	25 km SE of Ballarat, Vic	New project, Government approval received	2012	150MW	$350m	50	**C**
							12-15	**O**
Lexton Wind Farm	Origin Energy	44 km NW of Ballarat, Vic	New project, Government approval received	2013	38MW	$110m	70	**C**
							5	**O**
Lincoln Gap Wind Farm	Lincoln Gap Wind Farm	near Port Augusta, SA	New project, Government approval received	2013	177MW	$350m	70	**C**
							10	**O**
Liverpool Range Wind Farm	Epuron	370 km N of Sydney, NSW	New project, Planning approval under way	2015	1000MW	$2b	500	**C**
							40	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Milyeannup Wind Farm	Verve Energy	20 km E of Augusta, WA	New project, Feasibility study under way	na	55MW	$160m		
Moorabool Wind Project	West Wind Energy	32 km SE of Ballarat, Vic	New project, Government approval received	2014	321MW	$600m	100	**C**
							30	**O**
Mortlake Wind Farm	Acciona Energy	5 km S of Mortlake, Vic	New project, Government approval received	2016	144MW	$432m	100	**C**
							21	**O**
Mount Emerald	Ratch Australia	Mt Emerald, Qld	New project, Planning approval under way	na	220MW	$560m	100	**C**
							10-15	**O**
Mount Gellibrand Wind Farm	Acciona Energy	15 km NE of Colac, Vic	New project, Government approval received, on hold	2014	232MW	$696m	200	**C**
							25	**O**
Mount Hill	Ratch Australia	80 km NE of Port Lincoln, SA	New project, Prefeasibility study under way	na	100MW	na		
Mount Mercer Wind Farm	Meridian Energy	30 km S of Ballarat, Vic	New project, Government approval received	na	150MW	$320-360m	120-200	**C**
							10-12	**O**
Musselroe	Hydro Tasmania	Cape Portland, Tas	New project, Government approval received	2012	168MW	$386m	50-100	**C**
Naroghid Wind Farm	Wind Farm Developments	10 km N of Cobden, Vic	New project, Government approval received	2012	42MW	$80-120m	100	**C**
Nilgen Wind Farm	Pacific Hydro	9 km E of Lancelin, SA	New project, Government approval under way	na	100MW	$280m		
Paling Yards	Union Fenosa Wind Australia	84 km N of Goulburn, NSW	New project, Environmental approval under way	2014	165-198MW	$165m	65	**C**
							11	**O**
Penshurst	RES	23 km SW of Hamilton, Vic	New project, Government approval under way	2015	758MW	$1.2b		
Portland stage 4	Pacific Hydro	Cape Nelson North and Cape Sir William Grant, Vic	New project, Government approval under way	na	54MW	na		

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Robertstown Wind Farm	TRUenergy	123 km N of Adelaide, SA	New project, Planning approval under way	2014	75MW	$173m		
Rugby Wind Farm	Suzlon Energy/ Windlab Developments	50 km N of Yass, NSW	New project, Environmental approval under way	2014	290MW	$390m	150	**C**
							20	**O**
Ryan Corner Wind Farm	Union Fenosa Wind Australia	10 km NW of Port Fairy, Vic	New project, Extension for government approval under way	2013	134MW	$327m	110	**C**
							14	**O**
Rye Park Wind Farm	Epuron	N of Yass, NSW	New project, Planning approval under way	2015	250MW	$500m	150	**C**
							20	**O**
Salt Creek Wind Farm (Woorndoo)	NewEn Australia	100 km SW of Ballarat, Vic	New project, Planning permit received	na	29.9MW	$49m		
Sapphire Wind Farm	Wind Prospect	Inverrel, NSW	New project, Government approval under way	2014	356-485MW	$925m-$1.25b	150	**C**
							20	**O**
Sidonia Hills Wind Farm	Hydro Tasmania	10 km NE of Kyneton, Vic	New project, Planning approval under way	2014	80MW	$184m		
Silverton Wind Farm	Silverton Wind Farm Developments	25 km NW of Broken Hill, NSW	New project, Government approval received	na	1000MW	$2.2b	700	**C**
							120	**O**
Stockyard Hill Wind Farm	Origin Energy	35 km W of Ballarat, Vic	New project, Government approval received	2016	300-450MW	$1-1.4b	440-665	**C**
							30	**O**
Stony Gap Wind Farm	TRUenergy	120 km N of Adelaide, SA	New project, Planning approval under way	2013	123MW	$283m		
Taralga	CBD Energy	3 km E of Taralga, NSW	New project, Government approval received	2013	124-186MW	na		
Tarrone	Union Fenosa Wind Australia	25 km N of Port Fairy, Vic	New project, Environmental approval under way	2014	60MW	$110m	30	**C**
							5	**O**
The Sisters Wind Farm	Wind Farm Developments	12 km S of Mortlake, Vic	New project, Planning approval under way	2013	24MW	$63m	24	**C**
							2	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Tungketta Hill Wind Farm (Elliston) Stage 1	Ausker Energies	25 km S of Elliston, SA	New project, Government approval received	na	55MW	$110m	30-40	**C**
							5-6	**O**
Tungketta Hill Wind Farm (Elliston) Stage 2	Ausker Energies	25 km S of Elliston, SA	Expansion, Government approval received	na	120MW	$200-240m	100	**C**
							10-12	**O**
Tungketta Hill Wind Farm (Elliston) Stage 3	Ausker Energies	25 km S of Elliston, SA	Expansion, Government approval received	na	145-185MW	$290-370m	100	**C**
							10-12	**O**
Uungula Wind Farm	Wind Prospect	20 km E of Wellington, NSW	New project, Environmental approval under way	2015	495-1122MW	$1.3b	250	**C**
							40	**O**
Waddi Wind Farm	Wind Prospect	170 km N of Perth, WA	New project, Government approval under way	2014	194MW	$360m		
Walkaway 2	Infigen Energy/ National Power Partners	20 km SE of Geraldton, WA	New project, Planning approval received	na	94MW	na		
Walkaway 3	Infigen Energy/ National Power Partners	20 km SE of Geraldton, WA	New project, Planning approval received	na	300MW	na		
White Rock Wind Farm	Epuron	Glen Innes, NSW	New project, Planning approval under way	2013	240MW	$480m	150	**C**
							21	**O**
White Rock Wind Farm	Eureka Funds Management	100 km NE of Launceston, Tas	New project, Environmental approval under way	2015-16	440MW	$1.2b	200-300	**C**
							15-20	**O**
Willatook Wind Farm	Wind Prospect WA	between Hawkesdale and Orford, Vic	New project, Feasibility study under way	2014	350MW	$750m	90	**C**
							15	**O**
Willogoleche Hill Wind Farm	International Power	4km W of Hallett, SA	New project, Feasibility study under way	2015	78-111MW	na		
Winchelsea	International Power	35km W of Geelong, Vic	New project, Feasibility study under way	2015	30MW	$80m		
Woakwine	Infigen Energy	10 km E of Robe, SA	New project, Planning approval under way	2015	450-540MW	na		
Woolsthorpe Wind Farm	Wind Farm Developments	2 km W of Woolsthorpe, Vic	New project, Government approval received	2012	40MW	$60-100m	100	**C**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Yaloak South Wind Farm	Pacific Hydro	35 km SE of Ballarat, Vic	New project, Government approval under way	na	30MW	$130m	160	**C**
							3	**O**
Yandin Wind Farm	Wind Prospect	170 km N of Perth, WA	New project, Government approval under way	2014	320MW	$444m		
Yass Valley Wind Farm	Origin Energy	20 km W of Yass, NSW	New project, Government approval under way	2016	222-420MW	$551m	120	**C**
							10	**O**
Hydro								
Tumut 3 upgrade	Snowy Hydro	Talbingo, NSW	Expansion, Under construction	late 2011	50MW	$28m		
Upper Tumut expansion	Snowy Hydro	Cabramurra, NSW	Expansion, Committed	2013	40MW	$20m	35	**C**
Burdekin Hydro Power Station	Stanwell Corporation	100 km SW of Charters Towers, Qld	New project, Feasibility study under way	na	37MW	na		
Ocean								
Banks Strait Tidal Energy Facility	Tenax Energy	Banks Strait, Tas	New project, Government approval under way	2015	302MW	na	40	**C**
							10	**O**
Clarence Strait Tidal Energy Project	Tenax Energy	Clarence Strait, NT	New project, Government approval under way	2013	450MW	na	15	**C**
							5	**O**
Port Phillip Heads Tidal Energy Project	Tenax Energy	Port Phillip Heads, Vic	New project, Government approval under way	2014	34MW	na	25	**C**
							5	**O**
Biomass								
Bell Bay Power Plant	Gunns	48 km N of Launceston, Tas	New project, On hold	na	180MW	na		
North Qld Bio-Energy Plant	Nth. Qld. Bio-Energy Corporation Ltd	4 km S of Ingham, Qld	New project, Government approval under way	2014	80-85 MW	$425m		
Solar								
Kogan Creek Solar Boost Project	CS Energy	near Chinchilla, Qld	Expansion, Committed	2013	44MW	$105m	120	**C**
Broken Hill Solar Photovoltaic Power Project	AGL Energy	Broken Hill, NSW	New project, Prefeasibility study under way	post 2014	50MW	$200m	150	**C**
							3	**O**

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Capital Photovoltaic Solar Farm	Infigen Suntech Australia	10 km N of Bundendore, NSW	New project, Planning approval received	na	50MW	$150m	50	**C**
							5	**O**
Chapman Solar power	Investec Bank Australia	14km NE of Geraldton, WA	New project, Environmental approval under way	2013	50MW Solar, 50MW Diesel	$200m		
Mallee Solar Park	TRUenergy	near Mildura, Vic	New project, Feasibility study under way	2015	180MW	na	200	**C**
							20	**O**
Manildra Photovoltaic Solar Farm	Infigen Suntech Australia	5 km NW of Manildra, NSW	New project, Planning approval received	2013	50MW	$150m	50	**C**
							5	**O**
Mildura Solar Farm	Infigen Energy	near Mildura, Vic	New project, Government approval under way	na	100-180MW	na		
Moree Photovoltaic Solar Farm	Infigen Suntech Australia	5 km SE of Moree, NSW	New project, Planning approval received	2012-13	60MW	$180m	50	**C**
							5	**O**
Moree Solar Station	Moree Solar Farm Consortium	near Moree, NSW	New project, Government approval received	late 2015	150MW	$600-700m	300-400	**C**
							10-15	**O**
Nyngan Photovoltaic Solar Farm	Infigen Suntech Australia	2 km S of Nyngan, NSW	New project, Planning approval received	na	100MW	$300m	50	**C**
							5	**O**
Nyngan Solar Farm	AGL Energy	7.6 km west of Nyngan, NSW	New project, Prefeasibility study under way	post 2014	100MW	$350m	150	**C**
							3	**O**
Solar Dawn (hybrid solar-gas power plant)	Solar Dawn	near Kogan Creek, Qld	New project, Government approval under way	2015	250MW	$1.2b	300	**C**
							25-30	**O**
Whyalla Solar Oasis	Wizard Power	2 km N of Whyalla, SA	New project, Feasibility study under way	2012	40MW initially	$230m	200	**C**
Geothermal								
Geelong Geothermal Power Project	Greenearth Energy	Geelong, Vic	New project, Project financing and approvals underway	2015 (initial 12 MW)	12MW intially (140MW ultimately)	$854m	50-55	**C**
Koroit	Hot Rock	15 km NE of Port Fairy, Vic	New project, Prefeasibility study under way	2013 (initial pilot)	50MW	na		

Project	Company a	Location	Status b	Expected Startup	New Capacity	Capital Expend. c	Employment d	
Moomba stage 2	Geodynamics	Moomba, SA	Expansion, Feasibility study under way	2013	25MW initially	na		
Paralana	Petratherm/ Beach Petroleum/ TRUenergy	Moomba, SA	New project, Feasibility study under way	2013 (initial 4-7MW)	30MW	$200m		

For further information contact: Clare Stark clare.stark@bree.gov.au

a Principal operating companies. **b** Type of project and stage of development – categories of the former include: 'new project' and 'expansion'; categories of the latter include: 'feasibility study under way', 'feasibility study completed', 'committed' and 'under construction'. **c** Total capital expenditure as reported by the company in current dollars. Includes cost of development, plant and equipment. **d** Reported employment. Where possible, project employment has been shown at both the construction phase (shown as '**C**' against the employment numbers) and in the operational phase (shown as '**O**'). **na** Not available.