AltEnergy

PROJECT TALLY (February)
Number of projects = 538
- 215 Generating
- 323 In Development

Total Capacity = 79,051.5 MW
- 21,704.5 MW Generating
- 57,347 MW In Development

Project Update

Week ending 23 February 2018

Solar and storage combine to provide reliable power in Far North Queensland

19 February

Construction of Australia's first co-located large-scale solar and battery project to be connected to the electricity grid is now complete.

Federal Leichhardt MP Warren Entsch said the project would provide reliable power to more than 3,000 households living on the grid's fringe in Cape York.

"This is fantastic news for communities in Cape York. There is no reason why they should not have access to reliable power simply because of their location," Mr Entsch said.

"The Government, through the Australian Renewable Energy Agency, provided more than $17 million to the $42.5 million Lakeland Solar and Storage Project, located near one of the most remote National Electricity Market substations in Australia.

"The 10.8MW solar photovoltaic plant and 1.4MW/5.3MWh lithium-ion battery will demonstrate providing energy to the local regional community autonomously for several hours."

Federal Environment and Energy Minister Josh Frydenberg said the Government was committed to delivering affordable and reliable power for all Australians.

"For the people of Lakeland, who live on the fringe of the electricity grid where transmission is generally less reliable, this project helps ensure the lights stay on, even when the sun isn't shining," Minister Frydenberg said.

"It is yet another example of the Coalition Government delivering practical solutions for communities facing energy challenges.

"Combining solar generation and battery storage means energy generated throughout the day can be captured and stored for use when it's needed overnight or during peak usage times.

"The overall reliance of the community on the grid is reduced and smart controller software manages energy intermittency to create reliable power generation.

"The project will serve as a great example for other regional communities on the fringe of the electricity grid."

Source: Federal Government

(Click on relevant project links to go to online Project Database)

Conergy flicks the switch on Australia's first grid-connected, utility-scale solar and battery facility in Far North Queensland

19 February

Australia's first grid-connected, utility-scale solar and battery facility – 13MW Lakeland Solar & Storage Project on Queensland's Cape York Peninsula – has started feeding electricity into the grid, providing certainty of summer power supply for Far North Queenslanders.

While 'flicking the switch' to connect Lakeland I to the grid, project developer and owner Conergy announced Lakeland Stage II, following approval by Cook Shire Council.

When completed, Lakeland I and II, will deliver a total of 30MW of solar electricity to the grid and provide local power storage to supply Far North Queensland homes and businesses.

Lakeland Solar & Storage Project, which was made possible through $17.4M funding support from the Australian Renewable Energy Agency (ARENA), is located near the town of Lakeland, in the Cook Shire, which is more than 240km north west of Cairns.

Conergy Managing Director Christopher West said as Asia Pacific's largest downstream solar company, Conergy was excited to be delivering reliable, renewable power to FNQ.

"It's great news for the people of Queensland, and it's a milestone for Conergy as we bring this facility on line – the first solar and storage project of its scale connected to the grid in Australia," he said.

"The region is abundant in solar resource, so it's an ideal place to deliver solar projects like Lakeland and now Lakeland II.

"Once completed, Lakeland and Lakeland II will provide 30MW of local solar generation, with storage.

"Imagine powering up approximately 4,015 average home air-conditioning units and running them all at the same time for eight hours through the heat of the day.

"That's the combined production output capacity of Lakeland I and II. And better still, the energy is cleaner and more reliable for the people of Far North Queensland."

Mr West said, "We are excited to continue our expansion of solar power capacity in Queensland, in the context of the continuing 50 per cent renewable energy target and the broader Powering Queensland Plan.

"Having locally-based energy generation in these more remote areas reduces power losses caused by lengthy transmission distances from power stations outside the region.

"Extreme heat in summer can also compromise the efficiency of the network, making local, dispatchable generation even more important.

"The summer months are obviously a challenging time for the network, but with the addition of the power feeding in from the Lakeland project, people in the region can look forward to more stable and reliable supply, even in times of peak demand."

Cook Shire Mayor Peter Scott said the Council was looking forward to working with Conergy again to deliver even more stable and secure power resources for local residents.

"We are very pleased to be able to approve Lakeland stage two, both for the fact that it again improves supply reliability in our region but also because this is an energy solution which is cleaner and sustainable.

"Cook Shire is very keen to continue our commitment to green alternative energy

solutions and Lakeland I and now II are certainly an expression of that."

Conergy ultimately aims to deliver one gigawatt of solar and storage for Australia, on the back of its global development of more than 3GW.

"Australia, and Far North Queensland in particular, have the challenge of a geographically dispersed network." Mayor Scott said.

"This is what makes the solar and storage opportunity so exciting.

"Cook Shire is pleased to be alongside Conergy at the forefront of this new-generation energy industry.

Source: Conergy

Stellata Energy drives forward energisation of largest solar farm in Western Australia with key developments

19 February

Stellata Energy ('Stellata'), and its joint venture partner, Ingenious Infrastructure, today announces it has successfully reached several milestones in the development of the largest solar project in Western Australia (WA), Merredin Solar Farm (132MWp). Firstly, the Company has entered into a grid connection contract with Western Power. The deal, signed on 19 December, secures the Interconnection Works Contract (IWC) and Electricity Transfer Access Contract (ETAC) for the project. During the same month, an Electricity Generation Licence was also granted by the Economic Regulation Authority, making the project the largest solar farm in WA to have reached this point. Merredin has also now received Certified Reserve Capacity level with AEMO and is expected to sign its EPC contract in March this year. Successfully reaching these milestones ensures that construction remains on track to commence in June 2018, with energisation anticipated for June 2019.

The development of Merredin Solar Farm positions Stellata as one of the leading solar developers in WA, whose partnership with Ingenious commits to funding a pipeline of utility scale solar farms across the state. Together, the partnership brings a wealth of knowledge to the project with collective expertise spanning financing, developing and operating solar projects across the globe.

Commenting on the developments, Guy Beesley, Managing Director, Stellata said: "Securing the generation licence, grid connection and reserve capacity credits for Merredin Solar Farm represents a huge step forward for our partnership and the Merredin project, having only received planning permission in June last year. Now that the contracts are in place, we look forward to commencing construction and furthering our efforts to bring clean, renewable electricity to Western Australians."

Source: Stellata Energy

PROJECT BRIEF: Low Head Wind Farm

George Town Council this week approved Low Head Wind Farm Pty Ltd's application for the construction and operation of a 10-turbine wind farm with a capacity of up to 35 MW of electricity approximately 5.5km east of Low Head in northern Tasmania. The proposal also involves the construction of twin 22kV transmission lines from the wind farm site to the George Town substation 8km to the south.

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GFG Alliance's trailblazing green energy study awarded key federal funding

21 February

An ambitious plan by Sanjeev Gupta's GFG Alliance to enhance South Australia's energy security through an innovative pumped storage project near Whyalla, moved a step closer to reality today with the award of Australian Government funding for a significant pre-feasibility study.

The Australian Renewable Energy Agency (ARENA), on behalf of the Australian Government, is providing A$500,000 for the GFG Alliance to investigate how the Iron Duchess North mine pit, in the South Middleback Ranges of South Australia, could be utilised as a lower reservoir for a pumped hydro energy storage (PHES) plant with an estimated capacity of 90 MW and 390 MWh.

This activity will receive funding from ARENA as part of ARENA's Advancing Renewables Program, and follows on from an earlier, positive concept study in relation to the project. ARENA's funding adds to a similar financial commitment from the Government of South Australia via their Renewable Technology Fund announced earlier this month.

PHES works by pumping water uphill between two connected reservoirs at times of low electricity demand when power is cheap and abundant, and then running the water back downhill to drive turbines during periods when demand is high or when supply is low due to lack of wind or sun.

The first stage of this study is expected to be completed in six months, and will include high-level designs, engineering studies, network studies, geotechnical investigation, market modelling and commercial evaluation.

If the results from this study are positive, this proposed investment in Australia's future green energy supply – currently having an estimated cost of A$170 million – could be built by 2022.

SIMEC ZEN Energy – part of the GFG Alliance – will play a key role in the study and will also be project managing it. Responding to the funding announcement, Geoff Titus, Chief Executive Officer of SIMEC ZEN Energy said:
"We're grateful to ARENA for their support on this important scheme. This ground-breaking study into pumped hydro storage potential at the South Middleback Ranges is a great opportunity for SIMEC ZEN Energy to obtain real-world insights and use these to provide solutions for customers seeking secure, affordable and low-emission energy to overcome their current energy challenges.

"We look forward to working initially with Liberty OneSteel to meet its energy needs and ultimately to establishing partnerships with other large energy users across Australia seeking a new way of contracting energy for their long-term success."

Matt Reed, Executive General Manager of GFG Alliance business SIMEC Mining, said:
"As well as the environmental advantages this innovative renewable energy project will bring, it will also re-use depleted pits, thereby unlocking a legacy from past economic activity for the benefit of Australia's future generations. GFG Alliance, with its unique focus on energy, mining and industry is ideally placed to capture this added value for the economy.

"GFG Alliance is grateful for this funding support that will help accelerate Australia's transition to a more economic, secure, reliable, and sustainable electricity network."

Source: ARENA

Strengthening South Australia's system through storage

21 February

The Turnbull Government, through the Australian Renewable Energy Agency (ARENA), is providing $1 million to conduct two feasibility studies into two pumped hydro energy storage (PHES) projects, designed to strengthen the South Australian system and deliver more affordable and reliable power for South Australian families and businesses.

The first $500,000 will be provided to EnergyAustralia for the next stage feasibility study into the Cultana seawater PHES project – a project that would be the first of its kind in Australia and have a capacity equivalent to more than 126,000 home batteries at a third of the cost.

In February 2017, the Turnbull Government, through ARENA, provided $453,000 to conduct an initial feasibility study into the project which found it could generate 225MW/1770MWh of electricity. Including engineering assessments, planning approvals and financial modelling, the first feasibility study determined the project could be constructed and fully operational by 2023.

This next stage feasibility study will complete the project design, including studies on environmental impacts and connection to the grid.

The second $500,000 will be provided to Zen Energy and SIMEC Mining for phase one of a feasibility study into a PHES project at the former Iron Duchess North mine in the South Middleback Ranges near Whyalla.

Utilising an existing mine pit as a lower reservoir, the project has an estimated capacity of 90MW/390MWh. The technical and commercial feasibility study will include high level designs, engineering studies, network studies, geotechnical investigation, market modelling and commercial evaluation.

"The Turnbull Government put energy storage on the agenda to deliver a more affordable and reliable energy system for Australians," Minister Frydenberg said.

"A 2017 report by the Australian Council of Learned Academies noted that no large-scale pumped hydro facilities have been built in Australia in the last 30 years – this is what the Turnbull Government is fixing.

"South Australia is facing a significant transition issue which is implicating both system security and electricity pricing.

"That's why we're investing in projects such as these, because the South Australian Government failed to take energy storage needs into account all the while pursuing a reckless 50 per cent renewable energy target."

In his review of the National Electricity Market, Chief Scientist Dr Alan Finkel noted that pumped hydro storage systems are the most mature electrical energy storage systems available.

Whether it's Snowy 2.0 in New South Wales and Victoria, the Battery of the Nation projects in Tasmania, the Kidston hybrid solar and PHES project in Queensland or these various projects in South Australia, the Turnbull Government is exploring, upgrading and expanding pumped hydro energy storage projects across Australia.

Source: Federal Government

New clean energy targets put South Australia on the world map

21 February

The new renewable energy and energy storage targets announced by the South Australian Government are genuinely world-class ambitions that help to put the state's clean energy achievements on the world map, the Clean Energy Council said today.

Clean Energy Council Chief Executive Kane Thornton said the South Australian Government had shown that it is a national and international leader in the uptake of renewable energy and the transition of its energy sector.

"The energy storage target in particular is exactly what is needed to help deliver higher levels of wind and solar while ensuring the ongoing reliability of the power system. Both the 75 per cent renewable energy target and the new energy storage target underline the state's many clean energy achievements, from working with Tesla and Neoen to build the world's largest lithium-ion battery to producing half of SA's power from renewables," Mr Thornton said.

"South Australia has shown that it is possible to deliver electricity that is both reliable and clean, and as more low-cost renewable energy enters the power system it will push power prices down for homes and businesses. The government is driving a shift toward clean energy which will reduce its exposure to volatile fossil fuel prices and make the state much more competitive in the future – while creating business opportunities in the here and now.

"One thing our industry has shown is that if you give us a target or a goal, we will beat it. South Australia has essentially met its existing renewable energy target seven years early, and there are now enough projects which will go ahead to meet the national 2020 renewable energy project. The expertise and efficiency our industry has built up is remarkable," he said.

The Clean Energy Council has released an eight-point plan ahead of the election to unlock a battery revolution in South Australia. In some respects the state government has gone above and beyond these recommendations.

Mr Thornton said the industry welcomed the support of both the South Australian Liberal Party and SA Best for the solar thermal plant in Port Augusta, as well as the Liberals' previously-announced plan for more batteries in the state's households. The industry is looking forward to further strong announcements on energy from both parties, he said.

Source: Clean Energy Council

$3m South Australian Grant for Elizabeth Microgrid

21 February

Highlights:

• Award of $3 million government grant for a utility battery system in South Australia

• Design, construct, operate and maintain a 2MW/500 kWh Battery Energy Storage System

• Site is former GM Holden manufacturing facility in Elizabeth in Adelaide

Carnegie Clean Energy Limited (ASX: CCE) is pleased to announce that it has been awarded a $3 million Government grant to design, construct, operate and maintain a 2MW/500kWh Battery Energy Storage system (BESS) at the General Motors Holden Site in Elizabeth, South Australia. The grant has been awarded from the Renewable Technology Fund, part of the South Australian Government's Energy Plan.

The BESS will provide a unique demonstration of grid-support services in times of peak demand and will operate alongside the existing diesel fuelled back up generators at

Elizabeth. The facility offers key advantages of traditional diesel run gas turbines for grid support, offering significant savings in standby fuel consumption, greenhouse gas emissions, low maintenance, low noise pollution and faster response to grid support events.

The facility is based on Carnegie's standardised 2MW grid support BESS, capable of expansion up to the 10's and 100's of MW. Carnegie is also working closely with the new owner of the General Motors Holden Site to develop a rooftop solar system of initially 3MW in capacity, which could be expanded to 10-15MW if deployed across the site's available roof space. Works will commence immediately on design and grid connection for the BESS and are forecast to complete by December 2018.

South Australian Premier, the Hon Jay Weatherill said, "This solar and battery project by Carnegie is part of a wave of new investment in South Australia we have leveraged through the $150 million Renewable Technology Fund announced as part of our energy plan."

"Renewable energy projects like this also reduce demand on the grid during peak times, which puts downward pressure on power prices for all South Australians. This project is symbolic of the broader transition we are seeing in our economy away from traditional manufacturing towards high-tech industries creating jobs of the future for South Australians."

Carnegie's Managing Director Dr Michael Ottaviano said, "We are fielding an increasing number of opportunities that historically were performed by diesel or gas turbines, for which battery systems are now increasingly competitive. The CCE battery solution offers faster response time, lower operating cost, no greenhouse gas pollution, and silent operation. This is Carnegie's first project in South Australia and means we are now delivering projects right across Australia."

Source: Carnegie Clean Energy

SA charges ahead with clean energy combo

21 February

South Australia remains ahead of the pack when it comes to the nation's clean energy race, with plans to increase the state's renewables target, while also rolling out a new storage target, in what would be an Australian first.

Climate Councillor and energy expert Professor Andrew Stock said the South Australian Government's proposals mean the state would increase its Renewable Energy Target to 75 percent by 2025, making it one of the highest in the country, while also introducing a new storage target.

"South Australia is really raising the stakes when it comes to Australia's renewables and energy storage race," he said.

"The state is already on track to reach its original target of 50 per cent renewable sources 7 years ahead of schedule and is now increasing this target even further. This is another step in the right direction towards tackling climate change."

"This means that South Australia will receive around three quarters of its electricity from clean, affordable and reliable renewable energy, such as wind and solar by 2025."

The announcements include plans for South Australia to create a Renewable Storage Target of 25 per cent by 2025.

"The proposal to rollout Australia's first energy storage target forms a significant clean energy combination.

"This is a natural step for South Australia, following the switch-on of the world's most powerful battery and the construction of the nation's first solar thermal plant and virtual power station."

Stock called on the rest of the nation to continue to follow South Australia's leadership when it comes to embracing

Australia's transition to a 21st century electricity grid.

"South Australia is among states and territories leading the charge in the nation's clean energy race, but unfortunately the Federal Government remains stuck in the stalls with an inadequate National Energy Guarantee."

"The Federal Government must move to implement strong and credible climate and energy policy to encourage Australia's transition to renewable energy and storage technology, in a bid to cut our rising pollution levels and tackle climate change."

Source: Climate Council

Australia's first hydrogen demonstration park with Siemens technology to be built in Adelaide

21 February

South Australia's Tonsley Innovation District is set to become a hub of hydrogen activity in Australia after Australian Gas Infrastructure Group (AGIG), the country's largest gas distribution business, announced the construction of the country's first hydrogen production and distribution facility. This will be enabled by a 1.25 mega watt Siemens PEM electrolyser that will produce hydrogen using electricity from the grid and potentially on-site solar.

The power-to-gas demonstration plant – to be called Hydrogen Park SA (HyP SA) will produce hydrogen from renewable electricity, which will then be injected into the local gas distribution network at the Tonsley Innovation District in Adelaide to provide low-carbon gas to homes and businesses. Hydrogen Park will play a crucial role in demonstrating how electrolysers can be integrated into electricity networks to support network stability – particularly in renewable-rich regions such as South Australia.

Announcing the project at the CEDA: Economic and Political Overview in Adelaide event in Adelaide, Jeff Connolly, CEO and Chairman of Siemens Australia said, "Hydrogen holds exciting potential for Australia, and it's great to be partnering with the South Australian Government and the Australian Gas Infrastructure Group to deliver proven and world leading hydrogen technology.

"It's pleasing to see hydrogen become reality since we began driving this conversation in Australia only a few short years ago. Reticulating hydrogen into the gas network supports de-carbonisation of the state. It also supports the development of a domestic market for hydrogen which I believe can lead to Australia becoming a renewable energy export superpower if we harness the untapped renewable assets of the country."

The hydrogen produced will be injected into AGIG's local gas network to power the Tonsley Innovation District – but with the ability to be expanded to supply a proposed residential development in the area and other remote customers through tube and trailer facilities.

Andrew Staniford, AGIG Chief Customer Officer welcomed the decision saying, "We are delighted that South Australia will lead the way with this pioneering technology. It propels South Australia's status as a leader in renewable technology and a first mover in hydrogen. The demonstration plant will illustrate the complementary nature of gas and electricity in meeting the decarbonisation challenge – a key in balancing the energy trilemma."

Hydrogen has been a significant focus area for Siemens in Australia. This announcement follows last year's release of Hydrogen Roadmap by South Australia, which in turn followed a Memorandum of Understanding signed between WorleyParsons and Siemens to focus on leveraging innovative technologies for energy solutions.

Source: Siemens Australia

NEW PROJECTS: Cohuna Solar Farm & Girgarre Solar Farm

Leeson Projects is planning to develop two new solar farms in Victoria for a total cost of $200mil. The Cohuna Solar Farm is a 34 MWp project consisting of approximately 100,000 solar panels installed on 82.5 hectares of land 8km south of Cohuna in Victoria. The Girgarre Solar Farm is a 100 MWp project consisting of approximately 250,000 solar panels installed on 250 hectares of land 5km west of Girgarre in Victoria

Project Timings: Cohuna Solar Farm
Project construction start date: Q4 2018
Project construction end date: Q4 2019

Project Timings: Girgarre Solar Farm
Project construction start date: Q1 2019
Project construction end date: Q3 2020

An EPC contractor will be appointed as the main contractor for the solar farms, which will undertake the key engineering design and procurement for the facilities. A subcontractor will be appointed for the Balance of Plant (BOP). This will include the work packages such as:

•Civil and electrical balance of plant (onsite roads, piles, buildings, electrical reticulation, etc.)
•Logistics
•Tracker and PV panel installation
•Interconnection works.

Smaller work packages will be specified to assist with the main work packages listed above.

An industry briefing session is expected to occur in Autumn 2018.

More details are available here.

Source: ICN Gateway

PROJECT BRIEF: George Town Solar Farm

On 21 February 2018 George Town Council advertised the start of the public exhibition period of the development application for the George Town Solar Farm. The advertisement period runs for 2 weeks (ending 6 March 2018) and allows members of the public to comment on the proposal. The project will then enter the final stages of review with George Town Council. Epuron is proposing to build a solar farm with capacity of up to 5 MW (A.C.) occupying an area of up to 12 hectares. The site is ideal as it is flat and clear, with good access to the existing road network and nearby powerlines. The land is unoccupied and zoned as Light Industrial, and as a result the project is expected to have minimal adverse environmental impacts. The project will connect to the existing 22 kilovolt powerline running adjacent to the site, and provide power back towards the George Town substation. Construction is anticipated to start mid-to-late 2018.

EOIs sought for Leeton Solar Farm

Photon Energy is seeking Expressions of Interest to construct the 30 MWp, $30mil Leeton Solar Farm located approximately 1.6 km from Leeton city centre in NSW and covering an area of 37ha.

The solar farm will be connected to the Essential Energy network and will include the following infrastructure

- 86 500 solar panels
- Solar PV mounting structure
- DC and AC cabling
- Inverter container modules
- Landscape screening
- HV infrastructure

For the construction of the project, Photon Energy is looking for capable and experienced suppliers and subcontractors. Photon Energy is committed to support local industry and community groups.

The ICN Work Package is divided into six (6) chapters:

- Civil works – earth moving, access tracks, excavations, concreting, etc.
- Mechanical works – fencing, piling, PV array assemblies, etc.
- Electrical works – Cable reticulation, trenching, termination, etc.
- Transportation and logistics
- Landscaping – vegetation screening
- Site support services – accommodation, catering, waste recycling, etc.

More details are available here.

Source: ICN Gateway