



# Project Updates

Week ending 22 September 2017

## PROJECT TALLY (September)

Number of projects = 390

- 158 Generating

- 232 In Development

Total Capacity = 53,285.56 MW

- 17,828.63 MW Generating

- 35,456.93 MW In Development

## Ross River Solar Farm - site preparation underway

18 September

Initial site preparation works are starting at the \$225 million Ross River Solar Farm site, Townsville's newest large scale solar plant.

Construction of the 148 megawatt (MW) solar farm, located 20 kilometres south of Townsville, is expected to begin in September.

Project Director, Lyndon Frearson, said priority tasks before construction commences were the creation of a new site road entry, installation of perimeter fencing and set up of a site office and facilities for the construction team.

Construction of the solar farm is expected to be completed within 12 months. At peak construction, a workforce of around 250 contractors and laborers will be required on-site and every effort will be made to employ local labour where it makes sense to do so.

"Recruitment is happening now to ensure we have a pool of appropriately skilled local workers to work alongside our specialist project team and operations staff. Individuals or companies that would like to understand the opportunities for Australian Industry can contact us via the website," Mr Frearson said.

Neighbours adjacent to the project have also been notified with the project team posting its first 'Community Update' to over 3000 homes and businesses last month. The project

also has a website, [www.rossriversolarfarm.com.au](http://www.rossriversolarfarm.com.au)

"We're putting in place a number of strategies to prevent or reduce some of the less desirable consequences of major construction works like traffic delays, noise and dust," Mr Frearson said.

"We're not taking shortcuts when it comes to resident engagement, this will be a priority to ensure those living closest to the site experience minimal impact."

The project has also set up a telephone hotline to respond to community enquiries during construction – 0475 802 063.

A total of 417,600 polycrystalline solar panels are being procured for the project and will be delivered via containers in stages to the Port of Townsville.

The solar panels will be attached to a ground-mounted single axis tracking system that will slowly track the daily movement of the sun, maximising the amount of energy the solar farm generates. The solar farm will produce enough clean electricity to power approximately 54,000 homes.

Australian-based solar developer, ESCO Pacific, and specialist independent infrastructure manager, Palisade Investment Partners, are working in partnership to deliver the Ross River Solar project.

Downer Utilities has been appointed as the Engineering, Procurement & Construction (EPC) contractor.

Source: Ross River Solar Farm

Link to AltEnergy database: [Ross River Solar Farm](#)

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## Sun shines on ninth solar farm for the Western Downs

18 September

Well and truly on its way to becoming the Energy Capital of Australia, the Western Downs is set to welcome its ninth solar farm to the region with Council approving a 240MW renewable energy development 42km west of Dalby.

- The APA Group Beelbee Solar Farm project, located on Beelbee Road, will complement the Darling Downs Solar Farm, currently under construction along Grahams Road, Kogan;
- It's expected to produce between 150MW and 240MW of power into the national electricity grid and has the potential for battery storage of up to 100MW;
- The project is expected to employ up to 450 workers during peak construction, and support up to six full time operational staff.

Western Downs Regional Council Deputy Mayor Andrew Smith said the Beelbee Solar Farm project marks the third renewable energy development approved by Council in less than two months.

"What a month it's been, and I'm told there's even more development applications in the pipeline!" he said.

"We're pleased to once again be working with APA Group to bring their second solar farm to the Western Downs.

"Complementing their Darling Downs Solar Farm, their commitment to bring another renewable energy project to our region

highlights the Western Downs' economic strength and impressive portfolio on the solar energy scene.

"This return investment is a win for our communities with the project set to bring a further 450 jobs to the Western Downs during construction, and APA have already expressed desire to work with local contractors and businesses where ever possible.

"Our Planning and Development Assessment Team have established a reputation for fast application turnaround times, approving this latest development in less than six weeks. This responsive approach shows everyone that the Western Downs is well and truly open for business."

Source: Western Downs Regional Council

Link to AltEnergy database: [Beelbee Solar Farm](#)

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## Australia's largest rooftop solar system set to slash BNE's energy needs

19 September

Brisbane Airport Corporation (BAC) is investing in a major renewable energy Solar PV project capable of generating more than 9,315,000 kilowatt hours a year.

The 6MW system, consisting of 22,000 panels spanning an area of 36,000 meters squared or more than twice the size of the Melbourne Cricket Ground (MCG), will be installed across six sites at Brisbane Airport (BNE).

Brisbane Airport's International Terminal alone will support 1.98MW with 7,133 panels covering more than 11,675 square metres, making it the largest single roof top solar panel installation at an Australian airport and BNE and the largest commercial roof top solar system in the Southern Hemisphere.

More than 200kms of cabling will be used for the install, equivalent to driving from Brisbane to the Gold Coast and back.

Krishan Tangri, BAC General Manager Assets, said electricity is one of the biggest expenses to running Brisbane Airport with dozens of large buildings requiring cool, lighting and heating 24 hours a days, 365 days a year.

“We are acutely aware of the increasing energy needs of running a major airport and since 2012 we’ve had an extensive energy reduction program in place resulting in the completion of 40 projects which collectively save more than 8 GWh per year.

“We are in the enviable position of having thousands of square metre of un-impeded roof space ideal for solar harvesting and, with systems becoming more efficient and more affordable to install, it makes financial sense to invest in this readily available supply of renewable energy to save costs and decrease our carbon footprint.

“Once fully operational, the new system will account for 18 per cent of BAC’s direct electricity consumption, or 6 per cent of our total consumption, further complementing the savings we’re making through air conditioning control optimisation, lighting control upgrades and LED technology within BAC buildings, car parks and street lighting,” Mr Tangri said.

The solar energy generated per year is equivalent to powering over 1,700 Australian homes for a year, with carbon offset equal to planting over 50,000 trees or taking 1,500 cars off the road each year.

Epho, an Australian commercial solar company specialising in serving Australian businesses with solar energy solutions, collaborated with Sam Khalil Managing Director of Shakra Energy.

Shakra Energy is the developer of commercial and large scale solar plants and the party that assembled the team for the bid. Sam Khalil

will be on the steering committee to ensure an efficient and effective development of the solar development.

Oliver Hartley, Epho Managing Director, said the BAC project is not only the biggest commercial solar installation in the Southern Hemisphere, it is also one of the more complex given the live environment of the airport.

“To win this project, Epho had to demonstrate superiority in project management, stakeholder management, engineering, operations and work health and safety.

“The introduction of such a significant solar system is a prime example of how BAC is adopting world-leading technologies in harmony with its sustainability focus,” Mr Hartley said.

Design of the system is currently underway with installation commencing from December 2017 and completion expected in August 2018.

Source: Brisbane Airport Corporation

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## **Advisian hires global director for new energy**

20 September

Advisian, the consulting arm of WorleyParsons, has appointed Tony Frencham as global director for new energy as it announces plans to scale significantly within the next five years.

Frencham joins from Dow Chemical, where he served 28 years in a number of senior leadership roles in Asia Pacific, North America and the Middle East, most recently heading up commercial operations in South-East Asia.

Based in Melbourne but with a global remit, Frencham leads the strategy for new energy, which will include structuring a global team to capitalise on market opportunities relating to

renewable energy sources and their distribution.

Dennis Finn, CEO of Advisian and group director of global sales and marketing, says: “Tony’s impressive track record of building businesses on a regional and global scale made him a natural fit for the role. His appointment underlines our continued commitment to a sector that we recognise as a strategic priority both now and for the future. There has arguably never been a more exciting time for new energy and we look forward to continuing this journey under Tony’s leadership.”

Together, Advisian and WorleyParsons have completed over 600 new energy projects to date including hydropower, solar and wind, as well as energy storage, smart grid and transmission.

Frencham adds: “Advisian and WorleyParsons have been part of the new energy conversation for many years and I’m excited to build on the great successes the company has achieved to date. The way the world produces and consumes energy is changing dramatically and, as renewable resources become a larger part of the energy mix, we are working with our customers to ensure they can achieve their affordability, reliability and sustainability objectives. With its 130-year track record in energy and power, the company is perfectly placed to help clients make that new energy transition.”

Advisian works with customers to identify new energy solutions through its comprehensive suite of technical, project and business services. Underpinned by WorleyParsons’ technical expertise, it helps companies globally make the best decisions about new energy – where to invest, what technologies to implement, and how to integrate, deploy and operate them.

Source: WorleyParsons

## NEW PROJECT

### Horsham Solar Farm

Developer: ESCO Pacific

Capacity: Up to 100 MW

Technology: Horizontal tracking

Modules: ~340,000 solar panels

Cost: \$200mil

Location: 14km east of Horsham in western Victoria

Connection: Existing Horsham terminal substation

Status: DA submitted with council decision expected in Q4 this year

Contact:

Allison Hawke

Head of Development

ESCO Pacific

Tel: (03) 8595 2406

Email: [allison@escopacific.com.au](mailto:allison@escopacific.com.au)

## Moorabool Wind Farm update

Main contractor soon to be appointed to engineer, procure and construct (EPC) the Moorabool Wind Farm in Ballan, Victoria.

Expressions of Interest are currently being sought from suppliers and contractors for work packages including:

- Logistics
- Wind Turbine Erection
- Design and Construction of the civil and electrical balance of plant (onsite roads, foundations, buildings and electrical reticulation).

Further smaller work packages will become available following appointment of the Main Contractor.

More information is available at icngateway: <https://gateway.icn.org.au/project/3914/moorabool-wind-farm-project?st=projects&psid=1494376540>

### Moorabool North

Moorabool North consists of 50 permitted turbines running south from Mt Egerton Road to Hamills Lane. Pre-construction plans have

now been submitted to the Minister for Planning for his approval.

All geotechnical investigations for the turbine, access track and cable locations have been completed and some detailed design work is underway.

Construction is expected to begin later this year.

#### Moorabool South

Moorabool South consists of 57 permitted turbines running south from Hamills Lane to Elaine. Goldwind is continuing to work through the requirements of the planning permit conditions to ensure a suitable turbine layout design. Pre-construction plans for submission to the minister are now being prepared.

There has been a delay in submitting the development plans to the Minister which is now due in September/October 2017. It is anticipated that construction of Moorabool South will begin late 2017.

#### Contact:

Helen Kennedy  
Goldwind Australia  
Tel: 0472 832 552  
Email: [info@mooraboolwindfarm.com](mailto:info@mooraboolwindfarm.com)

Link to AltEnergy database: [Moorabool Wind Farm](#)

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## Wind farm freight sails into Cairns Port

20 September

The first shipment of project freight for Ratch Australia Corporation's Mount Emerald Wind Farm has arrived in Cairns (on Wednesday 20 September).

Treasurer Curtis Pitt said the vessel Oldendorff Erna arrived at the Port carrying tower sections for the exciting Tablelands project.

"There will be back-to-back shipments of tower sections and blades being shipped directly into the Port of Cairns," Mr Pitt said.

"They are the first wind farm components and will be followed by many more elements with an estimated 185,000 revenue tonnes of cargo to be delivered over the life of the project.

"The second shipment of blades is scheduled to arrive on September 27.

"With the potential for further wind farm projects on the Atherton Tablelands and near Lakelands, these first shipments will establish the Port of Cairns as the new project hub for the North.

"The project will see the creation of around 150 jobs during the construction phase and represents a significant boost to our local economy, especially for the contractors, suppliers, transport and logistics companies involved.

"The Palaszczuk Government is committed to ensuring the Port of Cairns continues to develop to facilitate projects such as Mount Emerald Wind Farm, which bring jobs and economic growth to the Far North Queensland Region."

Unloading and transporting the blades will be an impressive sight as each blade has a length of 57 metres and weighs 16 tonnes each.

The unloading of the cargo is expected to take three days with the blades being transported directly from the wharf to the newly constructed project cargo laydown area in Tingira Street Portsmouth.

Ports North chair Russell Beer said the four-hectare Tingira Street site had been purpose-built by Ports North to accommodate the wind farm components in Cairns before being transported by road to the windfarm site on the Atherton Tablelands.

“Ports North has been actively working to increase project freight opportunities through the port and the shipping of the Mount Emerald Wind Farm project cargo confirms the capabilities of Cairns as a project shipping port,” Mr Beer said.

Powerlink has already commenced construction works to connect the 180 megawatt (MW) Mt Emerald Wind Farm near Mareeba in Far North Queensland to its transmission network.

As part of the construction works, Powerlink will build a dedicated 275kV substation to connect the wind farm to the network.

Powerlink Chief Executive Merryn York said the Mt Emerald Wind Farm would connect to the existing transmission network via the Woree to Chalumbin transmission line.

“This project is another example of the important role the transmission network will play in facilitating large-scale renewable generation and achieving a lower carbon future for Queensland,” Ms York said.

“We look forward to delivering the Mt Emerald Wind Farm connection for Ratch and continuing to partner with other renewable energy customers across Queensland.”

Ratch spokesperson Neil Weston said it was great to have Powerlink mobilised on site now that all the detailed design and grid connection analysis had been completed.

“The grid connection is a critical part of the overall project, and we look forward to working with them to get the project finished and energised in 2018,” he said.

Mr Pitt said the Palaszczuk Government had kick-started a renewable energy boom in Queensland.

“Mt Emerald Wind Farm is one of 20 renewable projects totaling 1,800 megawatts committed to or under construction in Queensland, delivering \$3.4 billion of

investment and over 2,800 direct construction jobs, mostly in regional Queensland,” Mr Pitt said.

“This is compared to the renewable energy blackout we saw under the LNP, not one large-scale renewable project was commissioned during their term and 1,300 renewable industry jobs were lost

“Now Tim Nicholl’s only energy policy is to build an expensive, unnecessary coal fired power station.

“Renewable energy now the cheapest and quickest way to deliver new generation, which is why we’re focusing on securing the next wave of large-scale renewable energy projects in Queensland through Renewables 400, our 400 megawatt (MW) reverse auction.”

Source: Powerlink

Link to AltEnergy database: [Mount Emerald Wind Farm](#)

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## **GFG Alliance invests in ZEN Energy to create a new Australian National Energy Champion**

20 September

Sanjeev Gupta’s GFG Alliance, through its energy division, SIMEC Energy, today (20th Sept 2017) reached an agreement with ZEN Energy to establish a strategic partnership and acquire a majority stake in ZEN, a prominent emerging Australian energy company providing businesses and households with affordable, reliable and tailor-made solutions.

Having last month acquired Arrium, Australia’s largest integrated steel and mining business, GFG Alliance has now taken a major step towards realising its Australian energy ambitions. The opportunity to invest in large-scale power projects to meet its own industrial requirements and support the

domestic economy was a key driver for GFG's strategic entry into Australia.

ZEN has an experienced management team looking to develop and improve the national energy market through partnerships with governments, industries and households. Building on their experience in designing and installing solar and battery storage solutions for residential and commercial customers, ZEN now offers power supply solutions to large industrial customers. ZEN works closely with some of Australia's largest energy users to reduce costs, increase reliability, and increase the amount of low-emissions energy used in industry.

ZEN uses a combination of energy sourced from new and existing power plants, demand management technologies and energy storage to deliver energy supply solutions at a competitive price. ZEN also manages the development of new renewable energy projects.

The strategic partnership and acquisition of a majority stake in ZEN Energy is an early win in GFG's 100-day plan following its acquisition of the former Arrium business on August 31. These businesses, including SIMEC Mining Australia, SIMEC Infrastructure Australia and Liberty OneSteel (formerly Arrium), are substantial consumers of energy.

SIMEC ZEN Energy, the new name for the joint venture, will work to improve energy security and reduce the cost of power for GFG Alliance and other businesses in Australia.

SIMEC ZEN Energy will become a member of the GFG Alliance and will work closely with SIMEC Energy's existing global energy team which already has 600 MW of power generating assets in the UK with another 400 MW under development, ranging from solid biomass and liquid bio fuels, to hydro and tidal, to wind and solar, and also cutting-edge waste-to-energy projects.

ZEN Energy will partner with SIMEC to deliver cheaper, more reliable and environmentally

sustainable energy for SIMEC's mining operations in South Australia and Liberty OneSteel's operations in South Australia, Victoria, New South Wales, Queensland, and Western Australia.

SIMEC ZEN Energy will also project-manage the development of SIMEC Energy Australia's new large scale energy projects, including solar PV, battery storage and pumped hydro facilities.

Sanjeev Gupta, GFG Alliance's Executive Chairman, said:

"The high cost of energy for Australian consumers is debilitating for the economy and a crying shame for a country so rich in resources. We clearly see a need for industrial groups and energy generators to work together. Long-term sustainable energy solutions need to be founded on both economic and environmental principles in order to work properly. With our partners, we can deliver a step change in the power industry, bringing innovative solutions and new projects to dramatically reduce the cost of dispatchable power.

GFG Alliance is already one of the biggest users of industrial energy in Australia. Given the issues here, it has been a priority for us to take decisive remedial steps. Combining our power expertise developed in the UK, and ZEN's local knowledge in Australia, is a natural partnership.

ZEN Energy is proudly Australian and brings unparalleled market and technological knowledge to address the challenges faced by the Australian power sector. We're delighted to partner with them on projects and look to invest for further growth.

Our main focus, as in the UK, will be renewable energy.

This is an important milestone for GFG Alliance in Australia; I am excited about this joint venture and the role it will play in transforming the Australian power industry."

Ross Garnaut, Chairman of ZEN Energy, said: "ZEN has spent many years building the strategy, business models and management and technological capacities to introduce new solutions to Australia's energy problems of weak competition, high costs, low reliability and unnecessary pollution. We have been looking for the right capital investor and strategic partner to help realise our plans, and have found the perfect match in Sanjeev and the SIMEC Energy team. Their understanding of the energy dilemma this country faces, which is making much of our industry uncommercial and environmentally unsustainable, means we see the market need and opportunity in the same way. We are excited about the future, as this will yield benefits for Australian jobs, investors, communities and the environment."

Source: Zen Energy

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## **ANU finds 22,000 potential pumped hydro sites in Australia**

21 September

The Australian National University (ANU) has completed an audit of 22,000 potential sites across Australia for pumped hydro energy storage, which can be used to support a secure and cheap national electricity grid with 100 per cent renewable energy.

The zero-emissions grid would mainly rely on wind and solar photovoltaic (PV) technology, with support from pumped hydro storage, and would eliminate Australia's need for coal and gas-fired power.

Lead researcher Professor Andrew Blakers said the short-term off-river pumped hydro energy storage (STORES) sites combined had a potential storage capacity of 67,000 Gigawatt-hours (GWh) - much more than the capacity required for a zero-emissions grid.

"Australia needs only a tiny fraction of these sites for pumped hydro storage - about 450

GWh of storage - to support a 100 per cent renewable electricity system," said Professor Blakers from the ANU Research School of Engineering.

"Fast tracking the development of a few of the best sites by 2022 could balance the grid when Liddell and other coal power stations close.

"Pumped hydro storage, including Snowy 2.0, can be developed fast enough to balance the grid with any quantity of variable wind and solar PV power generation, including 100 per cent renewable energy.

"We found so many good potential sites that only the best 0.1 per cent will be needed. We can afford to be choosy."

The Australian Renewable Energy Agency (ARENA) provided \$449,000 to support the ANU-led study.

Maps showing the locations of potential STORE sites and a report on the findings are available [at <http://re100.eng.anu.edu.au/research/phes/>](http://re100.eng.anu.edu.au/research/phes/).

STORES sites require pairs of reservoirs at different altitudes, typically ranging from 10 hectares to 100 hectares, in hilly terrain and joined by a pipe with a pump and turbine. Water is pumped uphill when wind and solar energy is plentiful, and electricity is available on demand by releasing the stored water through a turbine.

Co-researcher Dr Matthew Stocks said that off-river pumped hydro storage typically delivered maximum power for five to 25 hours, depending on the size of the reservoirs.

"Like all hydro power, it can go from zero to full power in about one minute," said Dr Stocks from the ANU Research School of Engineering.

"Annual water requirements would be much less than half that of the current fossil fuel

system because wind and PV do not require cooling water."

Co-researcher Mr Bin Lu said all of the potential STORES sites were outside national parks and urban areas, and each site had a storage potential range of 1-300 GWh.

"Pumped hydro - which accounts for 97 percent of energy storage worldwide - has a lifetime of 50 years, and is the lowest cost large-scale energy storage technology."

Source: ANU

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### **Finley Solar Farm update**

The environmental impact statement for ESCO Pacific's Finley Solar Farm proposal is now on public exhibition until 22 October as part of the process to gain development approval from the NSW Department of Planning & Environment. The Finley Solar Farm is a solar photovoltaic plant capable of generating up to 170 MW of renewable energy located west of the township of Finley in the Berrigan Shire Council. The \$170 million dollar project will comprise of approximately 500,000 solar panels generating enough electricity to power the equivalent of 59,000 homes.

Link to AltEnergy database: [Finley Solar Farm](#)

### **Coppabella Wind Farm - latest news**

Project modification

Coppabella Wind Farm has recently submitted to the NSW Department of Planning and Environment, an application to modify the Development Consent SSD-6698. This modification is required to enable optimum development, efficient operation and, competitively priced power to be provided into the National Electricity Market.

The key modifications being sought include:

- Internal access roads

A variation to the internal access road and earthworks design is required as the original design that was used for the Development Consent does not sufficiently account for the complexity of terrain on and around the Coppabella Hills. A detailed road and earthworks design has since been completed and this forms the basis for a realistic earthworks footprint. As a result, the vegetation impact allowance is required to be increased and an increased biodiversity offset provision specified. The impact footprint is predominantly made up of grasslands and includes areas that will be temporarily impacted and then rehabilitated after construction.

- Increased tip height

Due to the lengthy development review process since the original Yass Valley Wind Farm was submitted for approval in 2009, wind turbine technology has advanced substantially and the modification is required to ensure the project can provide competitively priced power to the National Electricity Market. The proposed variation in turbine dimensions leads to an increase in the maximum blade tip height from 150 metres to 171 metres.

Additionally, a number of minor modifications are being sought to allow for the optimal construction of the project. The modified design has been developed in parallel with further environmental assessments to minimise any increase in environmental impacts.

The associated application documents can be found online at the NSW DPE major project register, see [here](#). Hard copies of the documentation will be available at the following locations:

- Hilltops Council: 3 East Street, Harden;
- Harden Library: East Street, Harden;
- Yass Valley Council: 209 Comur Street, Yass;
- Yass Valley Library: 88 Comur Street, Yass;
- Binalong Post Office: 28 Fitzroy Street, Binalong; and
- Nature Conservation Council: Level 14, 338 Pitt Street, Sydney.

Feedback on the modification application can be submitted to the NSW DPE during the public exhibition period: Friday, 22 September 2017, to Monday, 23 October 2017.

#### Upcoming Community Consultative Committee Meeting

The first Community Consultative Committee (CCC) for the Coppabella Wind Farm project will be held on Thursday 5th October 5pm-7pm in Binalong, NSW. If you wish to attend the meeting as an observer, please contact Nic Carmody, Independent Chairperson for the CCC: [nic.carmody@bigpond.com](mailto:nic.carmody@bigpond.com)

Link to AltEnergy database: [Coppabella Wind Farm](#)

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## Sun Metals applies for electricity generation authority

Sun Metals Corporation Pty Ltd (Sun Metals) has applied to the Regulator for a generation authority under the Electricity Act 1994 (the Act). Under the Act, the Regulator is the Director-General of the Department of Energy and Water Supply, being the Chief Executive of the Department that administers the Act.

The application for a generation authority is in respect of a proposed solar farm (the Sun Metals Solar Farm), to be located adjacent to the existing Zinc Refinery, around 10 kilometres (km) south of Townsville.

The generating plant will comprise approximately 1,264,200 solar modules (First Solar / Series 4 / Cd Te Thin Film) with a 124 megawatt (MW) indicative nominal alternating current (AC) capacity and a nameplate rating of 151MW direct current (DC), located over approximately 200 hectares.

Sun Metals propose to connect the Sun Metals Solar Farm to Powerlink's transmission grid via an existing 132kV substation owned and maintained by Sun Metals. Electricity generated is proposed to be used to supply

Solar Metal's Zinc Refinery and/or be sent into the National Electricity Market (NEM).

The generation authority, if issued, will authorise:

- connection of the solar farm to Powerlink's transmission grid and
- operation of the solar farm.

Subject to receipt of all necessary approvals (including this generation authority) and finalisation of commercial arrangements, Sun Metals anticipates the Sun Metals Solar Farm will reach connection stage in January 2018, with project completion anticipated in April 2018.

Source: Queensland Government

Link to AltEnergy database: [Sun Metals Solar Farm](#)

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## Bluff Solar Farm – further detail

Infigen Energy's proposed Bluff Solar Farm in northern Queensland will involve the construction of a large-scale solar farm over part of Lot 79 on SP238443 with access across Lot 723 (rail corridor). The solar farm is likely to be constructed in two (2) stages, with shared access and on-site infrastructure, including battery storage and switching yards connecting to the grid network.

The detailed design, specific layout and electricity generating capacity have not been confirmed at this stage. However, it is envisaged the Project will involve a typical solar farm of up to 250MW with arrays, switch yards, substation, battery storage, control building, and car park area to facilitate the operation of the solar farm, as shown on the proposal plans provided as Annex A and as set out below.

Ultimately, the final design work will be undertaken by an engineering, procurement and construction (EPC) contractor who will be engaged by Bluff Solar Farm Pty Limited

following the receipt of the Development Permit for Material Change of Use and Reconfiguring a Lot which is the subject of this Development Application. However, for the purposes of this assessment, the PV modules area proposed to be setback approximately 150-200m from the road corridor to the north, and will not encroach on electricity transmission easements. An approximate 10m setback is proposed to the eastern and western side boundaries to allow access, with a 20-30m buffer to the waterway also proposed to preserve the ecological values of the waterway.

### **Project Staging**

Should the Project be completed in stages, it is envisaged the stages will consist of the following:

Stage 1 is likely to involve the construction of approximately 80 – 130 MW in the northern/central portion of the Project area, and is subject to detailed design. This would include part of the lease area to the south of the high voltage line traversing the site. The PV modules will be split into two (2) stages, with the existing waterway/ buffer area and transmission line providing separation between the sections. The site office including control building, switchyard and other associated operational infrastructure will be positioned in proximity to the existing electricity substation, obscuring the view from the road/rail corridor, with inverter buildings and battery storage containers spread throughout the lease area.

Stage 2 of the Project will likely involve an expansion of the Project to the southern portion of the lease area and may accommodate approximately 100 – 130MW. A separate switchyard and grid connection is proposed for this stage.

Source: Infigen

Link to AltEnergy database: [Bluff Solar Farm](#)

## **Queensland renewable energy boom continues**

21 September

Treasurer and Acting Energy Minister Curtis Pitt has called on Prime Minister Malcolm Turnbull to visit some of Queensland's state of the art wind, solar and hydro renewable energy projects during his blow in visit this week.

Mr Pitt said the PM's visit seemed to have been planned only to muddy the waters of the national energy debate and continue to blame Queensland for his failure to come up with real reform to the national energy market.

"It would be good if the Prime Minister acknowledged that Queensland is leading the nation in renewables investment and energy pricing outcomes," Mr Pitt said.

"The Prime Minister, on his visit to Queensland, is continuing to offer no real solutions to end the policy uncertainty and high electricity prices plaguing the nation.

"Mr Turnbull should at least get a sound understanding of the renewable energy boom happening in Queensland, and that we're moving towards having the right mix of electricity generation to provide an affordable, secure and sustainable supply of electricity."

Mr Pitt said a new Green Energy Markets' Renewable Energy Index report released today showed renewable energy jobs in Queensland surpassed those in New South Wales for the first time.

"The Palaszczuk Government welcomes the report and it also welcomes any jobs that come as a result of Queensland's renewable energy boom," he said.

"This level of investment is unprecedented and I'm proud to be part of a government that kick-started the industry in Queensland after not one large scale renewable energy project was built during the previous LNP government.

“As at 30 August, 2017 – there are 20 financially committed large scale renewable projects in the pipeline worth \$3.4 billion, with a generating capacity of 1781 MW and supporting 2,773 construction jobs, however the broader pipeline of proposed projects is 40 projects ,worth \$5 billion, with a generating capacity of 5297 MW and 9,245 jobs.”

Mr Pitt said the report showed Queenslanders continued to embrace solar on their rooftops.

“In May this year we announced that Queensland had officially become the solar state with figures confirming that combined solar rooftops are now Queensland’s largest power station – surpassing the 1,680 megawatt Gladstone Power Station,” he said.

“As at August 2017, there are over 450,000 residential customers with solar PV in Queensland. There is 1799 megawatts of total solar PV installed on the network.

“We’re well on our way to meeting our target for one million Queensland rooftops with solar or 3,000 megawatts of total solar by 2020.

“Solar PV costs are continuing to decline which is a likely contributor in the continual uptake of solar.

“I’d say Opposition Leader Tim Nicholls is regretting the day he ever called those who adopted solar champagne sippers and the latte set.”

Mr Pitt said the Electricity Statement of Opportunities recently released by AEMO confirmed that Queensland’s electricity supply remains secure and is predicted to meet peak demand in all forecast scenarios.

“Queensland has the youngest, least emission-intensive fleet of coal-fired generation in the country which is well placed to continue to supply reliable electricity for North Queensland as we make the transition to a clean energy future,” he said.

“If the market saw a new coal-fired power plant as viable, they would have built one already and they haven’t.

“Even the Prime Minister last month rejected funding a NQ coal-fired plant saying: ‘We have no plans to build a coal-fired power station...’

His Treasurer, Scott Morrison, also said: “New cheap coal is a bit of a myth... And [High Efficiency Low Emission coal-fired power station] takes seven years to turn up, so if we that is all of a sudden going to make your power bills cheap next month, it won’t.’

“Renewable energy is undeniably the cheapest form of new energy infrastructure to build in Australia over a new coal-fired power station. In fact assessment of the modelling prepared for the Finkel Review showed that the capital cost of a new ultra-supercritical coal-fired power station is at least 34% more than an equivalent solar farm.

“The Finkel Review modelling also clearly showed a CET would deliver lower electricity prices, more investment and lower emissions compared to a business as usual approach and that households would be around \$90 better off per year over the next decade under a CET.

“The Palaszczuk Government is 100% committed to adopting the cheapest and most efficient forms of energy generation to lower power bills and to continuing to use public ownership to back consumers.”

“The LNP and Tim Nicholls don’t care about electricity prices paid by Queenslanders. That’s why power bills increased by 43% under the LNP’s time in office, compared to an average of 1.9% per year under Labor.”

Source: Queensland Government

## **ARENA pumps funding into Battery of the Nation vision**

22 September

A plan to double Tasmania's energy capacity and make it the renewable Battery of the Nation has moved a step closer.

A shortlist of about 30 potential pumped hydro energy storage sites has been identified in four regional areas. Funding from the Australian Renewable Energy Agency (ARENA) will help narrow that list to between 10 and 15 possible development sites.

When it's fully realised, pumped hydro could generate up to 2,500 megawatts (MW) of electricity, which would double Tasmania's current hydro capacity and provide flexible, dispatchable energy when it's needed by customers.

It could also create up to \$5 billion of infrastructure investment and up to 3,000 jobs across a 10 to 15 year construction period.

The shortlist includes four existing power stations with potential for pumped hydro conversion. The CEO of Hydro Tasmania, Steve Davy, and CEO of ARENA, Ivor Frischknecht, today inspected one of those stations – Cethana Power Station in north-west Tasmania.

In an exciting development for the north-west, Lake Cethana has already been assessed as having some of the best pumped hydro potential in Tasmania – with up to 1,000MW at one site.

Mr Davy said Tasmania is uniquely placed to help lead Australia through its challenging energy transition.

"The Battery of the Nation is about energy security and affordable prices," Mr Davy said.

"Doubling Tasmania's renewable energy capacity addresses three big challenges at once.

"It will lock in full energy security for Tasmania, help give Tasmanians some of the nation's cheapest power prices, and give us plenty of spare energy to support mainland Australia.

"At a time when Australia badly needs flexible and storable energy to replace the coal power it's phasing out, the Battery of the Nation offers a future that's clean, reliable and affordable," he said.

ARENA has committed up to \$2.5 million for Battery of the Nation project studies, with funding to be matched by Hydro Tasmania.

The ARENA funding includes \$300,000 for the initial study to assess and prioritise potential pumped hydro sites, and \$500,000 to support feasibility studies into the Tarraleah and Gordon Power Station projects - which will boost efficiency and reliability.

ARENA CEO, Ivor Frischknecht, said the Battery of the Nation studies, along with feasibility studies into Snowy Hydro 2.0, would examine how pumped hydro energy storage could play an expanded role in Australia's energy mix, and help accelerate the transition to renewable energy.

"These feasibility studies are the first step towards significantly upgrading or replacing some of Tasmania's existing power stations and introducing pumped hydro energy storage," Mr Frischknecht said.

"With these projects, we could double Tasmania's pumped hydro capacity and help power an additional 500,000 households. Tasmania could play a crucial role in helping to provide secure, reliable - and renewable - electricity for the National Energy Market," he said.

Hydro Tasmania has ruled-out developing any pumped hydro sites in the Tasmanian Wilderness World Heritage Area, and is not investigating new on-river dams. As Australia's leading renewable energy business, Hydro Tasmania is strongly

committed to values of sustainability, and has started close stakeholder consultation on the Battery of the Nation project.

Pumped hydro storage works by pumping water uphill (when surplus energy is available) so it can be re-used to generate electricity later.

There's more information about pumped hydro energy storage and the Battery of the Nation project more broadly on Hydro Tasmania's website.

Source: Hydro Tasmania