AltEnergy

WATTS NEWS

Week ending 18 June 2021

Planning commences for new solar farm in Fulham

10 June

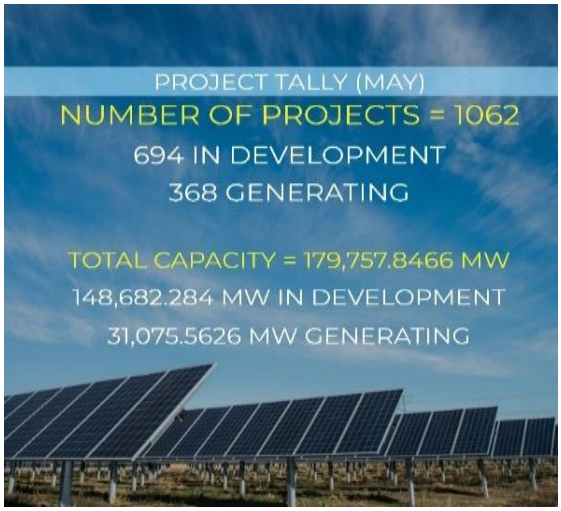
Gippsland's transition to renewable energy continues to gather momentum, with planning underway for a new solar farm in Fulham.

The Fulham Solar Farm is a joint venture (JV) between Solis Renewable Energy, Marathon Electrical and WK & MA Ferguson, and is their second project to commence the planning process, with the Perry Bridge Solar Farm recently receiving planning approval from the Victorian Government.

The Fulham project is a proposed solar farm of 80 megawatts (enough to power around 25,000 homes) with battery storage of up to 80 megawatt hours to be located on 400 acres of farmland adjacent to the northwest corner of the Hopkins Road and McLarens Road intersection, Fulham. The solar farm is planned to co-exist with existing grazing activities on the site.

Detailed site assessments and designs are currently underway, with a formal period of community consultation to be completed in the coming months, prior to submission of a planning application to the Department of Environment, Land, Water and Planning (DELWP).

"We are very excited by the ongoing progress and support for these projects" said Brett Singh, Director of Marathon Electrical, "we have had significant interest from the local community and industry regarding the projects and are well advanced in discussions



with AusNet regarding connecting the projects to the grid".

To support the renewable energy projects across the region, the JV partners have joined with a number of other local organisations to launch the Australian Renewables Academy.

The Australian Renewables Academy (ARA) aims to create and embed a renewable energy skilled workforce in Gippsland, allowing local people to participate fully in and benefit from the renewable energy boom that is beginning in the region.

"We intend to create opportunities for all members of the Gippsland community through supported training and work readiness programs," said Singh. "The ARA will ensure that the economic and social benefits of the rapidly developing renewables sector are realised by the local community through the development of a well trained workforce, with transferable skills to make the most of the employment opportunities in the sector."

The Australian Renewables Academy will be based in Sale and over time will develop courses and connections with education providers that are relevant to industry and can be delivered Australia wide.

Source: Solis Renewable Energy, Marathon Electrical and WK & MA Ferguson

NEW PROJECT

Bass Offshore Wind Energy Project

Location: Bass Strait, offshore Northern Tasmania
Capacity: 500 MW (Stage 1)
Developer: Brookvale Energy
Status: In development
Description: The Bass Offshore Wind Energy Project will be able to scale up to 2GW to be delivered across multiple stages (stage 1 of approximately 500MW). It will increase large scale network power supply supporting the government's planned/supported investments in Battery of the Nation, Marinus Link and the development of a hydrogen industry and support the Tasmanian Government's global leading target of 200% renewable energy. The project will create significant short term and long-term employment opportunities with the delivery, management and operation of the project including research, marine engineering, fabrication and construction, vessels and delivery headquarters.
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Australia and Germany partner on hydrogen initiatives

13 June

Australia and Germany will invest in a series of new initiatives to accelerate the development of a hydrogen industry, creating new economic opportunities and jobs while reducing emissions.

Today, our countries announce the *Declaration of Intent between the Government of Australia and the Government of Germany on the Australia-Germany Hydrogen Accord*.

The Accord builds on our respective strengths, with Australia looking to be a major hydrogen exporter and Germany holding expertise in hydrogen technology and planning to import significant quantities of hydrogen in the future.

Prime Minister Scott Morrison said international collaboration focused on technological innovation was key to getting new energy technologies like hydrogen to commercial parity.

"Our partnership with Germany will accelerate the development of an Australian hydrogen industry and create new jobs," Prime Minister Morrison said.

"Our ambition is to produce the cheapest clean hydrogen in the world, which will transform transport, mining, resources and manufacturing at home and overseas.

"Developing new low emissions industries means more jobs for Australian workers, and cheaper energy means lower costs for businesses so they can reinvest in hiring more people."

Minister for Energy and Emissions Reduction Angus Taylor said getting new energy technologies to parity with existing technologies was the only way to reduce emissions without imposing taxes or new costs on households, businesses and industry.

"Australia is playing its role in the global effort to reduce emissions by driving down the cost of low emissions technologies," Minister Taylor said.

"Clean hydrogen is a priority under the *Technology Investment Roadmap* and we're excited to be working with Germany to bring this new industry to life.

"We have a mix of all the key ingredients needed to be a major global player in a thriving global clean hydrogen industry – abundant land and energy resources coupled with an excellent track record and reputation as reliable energy partner.

"We have set the goal of producing hydrogen at less than $2 a kilogram – 'H2 under 2', the price at which hydrogen becomes competitive with higher emitting alternatives.

"Getting new technologies like hydrogen to cost parity will enable substantial reductions in global emissions, while strengthening existing industries and creating new ones."

The Accord includes three major initiatives:
1. Establishing the German-Australian Hydrogen Innovation and Technology Incubator (HyGATE) to support real-world pilot, trial, demonstration and research projects along the hydrogen supply chain. Australia and Germany have respectively committed up to $50 million and €50 million to establish HyGATE.
2. Facilitating industry-to-industry cooperation on demonstration projects in Australian hydrogen hubs.
3. Exploring options to facilitate the trade of hydrogen and its derivatives produced from renewables (such as ammonia) from Australia to Germany, including through Germany's H2Global Initiative, which supports long-term supply agreements with German industry.

The Accord builds on Australia's existing collaboration with Germany on low emissions technologies including hydrogen, with a two-year supply chain study between the two countries already underway.

Together with partnerships with Singapore and Japan, these new initiatives are part of the Government's $565.8 million commitment to build new international technology partnerships that will drive investment in Australian-based projects and create up to 2,500 jobs.

Building demand for future low emissions energy exports will help Australia's emerging hydrogen industry scale up and attract investment. An Australian hydrogen industry could generate more than 8,000 jobs and deliver over $11 billion a year in GDP by 2050.

Source: Federal Government

Nordex SE informs about potential order for 1 GW wind farm in Australia

14 June

Nordex SE ("Nordex" or the "Company"; ISIN: DE000A0D6554) and Acciona Energía are in advanced negotiations of contracts and are about to reach agreement in principle for the supply and installation of up to 180 Nordex N163/5.X wind turbines of Nordex's Delta4000 series to Acciona Energía's MacIntyre wind precinct in the State of Queensland (Australia).

The development there comprises the MacIntyre wind farm with an estimated capacity of 923 MW and the Karara wind farm of approx. 102.6 MW, taking the total capacity planned to be installed and operational by 2024 to about 1,026 MW.

The Company expects to conclude negotiations and sign definitive agreements in the coming weeks for the projects to become firm order intake before yearend 2021.

Further updates on this potential order intake will be provided within the Company's regular reporting.

Source: Nordex

Clean Energy Council celebrates Global Wind Day

15 June

On Global Wind Day, the Clean Energy Council recognises the vital role that wind plays in Australia's energy mix and the valuable contribution wind makes to our regional economies.

The wind sector accounted for the bulk of new generation in 2020, with the commissioning of 10 new wind farms around Australia adding 1097 MW throughout the year. This was a new record for the sector,

comfortably surpassing the 837 MW record set in 2019.

"Wind continued to be Australia's leading source of clean energy in 2020, accounting for 35.9 per cent of renewable generation and almost 10 per cent of total generation," says Clean Energy Chief Executive, Kane Thornton.

Wind's contribution to Australia's energy mix has grown 136 per cent since 2014. There are now over 100 wind farms in Australia, and that number is set to grow with 25 large-scale projects with a total capacity of 4.5 GW either under construction or financially committed.

There are 8000 jobs in delivering the wind projects already committed across Australia, and an additional 22,000 jobs in the pipeline if projects with planning approvals are delivered.

On Global Wind Day, the Clean Energy Council also welcomes the appointment of Amelia Hanscombe, Legal Manager for Pacific Hydro, as Australia's Ambassador to the Global Wind Energy Council's Women in Wind Global Leadership Program.

Ms Hanscombe says that there is enormous potential for women working in the sector.

"There are so many brilliant untapped opportunities for women to participate at every stage of the wind farm delivery chain," she said.

As an energy lawyer working across the entire lifecycle of a wind farm, Hanscombe has seen the phenomenal diversity of skills and expertise underpinning the sector, including engineering, finance, construction, environment and planning, business, communications, advocacy, and law.

Wind energy has illustrated substantial direct and indirect financial benefits to regional and rural Australia, contributing to the social fabric of local communities and diversifying traditional agricultural economies. By the end of 2021, it's estimated that $5 million will flow annually into regional and rural communities through Community Enhancement Funds alone.

Australian wind farms are also estimated to provide landholder payments to the value of around $50 million per year.

"The economic benefits of the wind sector make a significant contribution to the success of the industry," said Thornton.

"Harnessing wind for clean, low-cost power also benefits local employment and job creation, income development, strengthens the social fabric of our communities and enhances consumer choice.

"With the prospect of an offshore wind industry just over the horizon, we expect that the Australian wind energy sector will only continue to go from strength to strength."

Source: Clean Energy Council

Wind resource to deliver low carbon SOP

15 June

Highlights

- Exceptional wind resource provides potential to increase renewables penetration rate beyond the DFS design of 58%
- Excellent results produced from 12 months of on-site wind monitoring with an average wind speed of 27km per hour and low seasonal variability
- Long-term data indicates higher wind velocities at night, complementing the solar energy that is available during daylight
- Current FEED phase will assess the integration of hydrogen-based storage to maximise renewables penetration and further reduce CO2-e emissions

Agrimin Limited (ASX: AMN) ("Agrimin" or "the Company") is pleased to announce the potential to increase the Mackay Potash Project's high renewables penetration rate

following the results of ongoing green studies. Based on 12 months of data collection at the proposed process plant location, the wind resource has been verified to support the Company's low carbon Sulphate of Potash ("SOP") production.

Mark Savich, CEO of Agrimin commented: "Confirming the high quality and consistent wind resource at Lake Mackay was a critical part of our green strategy. Completion of long-term wind monitoring will now allow the finalisation of our power solution and supports the extremely low carbon footprint of Agrimin's SOP fertiliser. This is important for our ESG objectives and for our future customers.

"We are committed to assessing opportunities to further reduce CO2-e emissions and enhance the green credentials of the Mackay Potash Project. Our integrated owner's team has commenced studies to maximise renewables penetration by matching process plant power demand with the availability of renewable energy supply (load profiling), as well as assessing the potential integration of hydrogen-based storage solutions.

"The Mackay Potash Project has the unique ability to create a reliable seaborne supply of certified organic SOP fertiliser to farmers around the world, many of which are currently using SOP fertiliser produced from the highly polluting Mannheim process."

The Definitive Feasibility Study ("DFS") was designed for the Mackay Potash Project having an average power load of 16 megawatts with this power generated via a hybrid gas, solar, wind and battery solution with a modelled renewables penetration of 58%. This power load is designed to support the process plant, non-process infrastructure, offices and accommodation camp, as well as harvesting and pumping operations within the solar evaporation ponds.

For the past year, the Company has collected Sonic Detection and Ranging ("SODAR") data to provide information about daily and seasonal wind patterns at the proposed process plant site. The SODAR device uses sound waves to measure wind speed and direction in the atmosphere at 10m intervals up to 200m above ground level. Measurements were taken every ten minutes, providing a comprehensive data set over the 12-month observation period.

The SODAR data has been correlated to ERA5 and MERRA2 processed satellite data sets, providing accurate wind strength and variability estimates which are suitable for final power system selection. The data show that Lake Mackay has an average wind speed of approximately 27km per hour at the planned wind turbine hub height of 130m, with low seasonal variability.

This average wind speed exceeds the assumption used in the DFS which was based on regional wind data. Importantly, the SODAR data demonstrates that wind energy is typically stronger at night and in the morning, which will complement solar energy and greatly improve renewable energy utilisation.

Based on the confirmed wind and solar resources at Lake Mackay, the Company plans to optimise the mix of renewable energy generation with a review of energy storage options and process plant power demand during the current Front End Engineering Design ("FEED") phase. These aspects are being considered as part of ongoing green studies and have highlighted the potential to also decrease operating costs over the 40 year life of the Mackay Potash Project.

Source: Agrimin

Solar Choice purchases additional 75% stake in multi-stage 2,000MW Bulli Creek Solar Farm & Energy Storage Project

15 June

Solar Choice has reached completion on the purchase of an additional 75% stake in the multi-staged 2,000MW Bulli Creek Solar Farm & Energy Storage project in southern Queensland.

Having previously retained a 25% interest in the project it originated in 2013, Solar Choice now fully owns the development. The site is located on the Queensland NSW Interconnector 4kms south of a major 330kV substation west of Toowoomba.

Source: Solar Choice

Renewable hydrogen could reduce emissions in alumina refining

16 June

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has today announced up to $579,786 in funding to Rio Tinto to support a feasibility study investigating the potential to partially decarbonise its alumina refining operations using renewable hydrogen.

Conventional alumina refining combusts natural gas to achieve the high temperatures necessary in the calcination process. Rio Tinto will investigate the technical implications of displacing natural gas with renewable hydrogen at its Yarwun alumina refinery in Gladstone, Queensland. The study would inform the viability of a potential demonstration project to validate the findings.

The $1.2 million study, funded equally by ARENA and Rio Tinto, will comprise two distinct work packages:

- Simulating the calcination process using a lab scale reactor at Rio Tinto's Bundoora Technical Development Centre in Melbourne, Victoria.
- Preliminary engineering and design study conducted at Rio Tinto Yarwun to understand the construction and operational requirements of a potential demonstration project at the refinery.

The study will see an improved understanding of the potential for renewable hydrogen to be used in the alumina refining process and the scope of development works required to implement hydrogen fuelled calcination technology at an existing alumina refinery.

Australia is the world's largest producer of bauxite and the largest exporter of alumina, accounting for 15 per cent of global alumina refining capacity. Alumina refining is an energy intensive process that uses high pressure steam to produce the heat required to process bauxite into alumina. Alumina can then be converted to aluminium in a smelting process.

ARENA has identified the alumina sector as a key target in its strategy to support industry to reduce emissions due to the potential size of emissions abatement. In 2019, alumina refining accounted for over 14 million tonnes of carbon dioxide in Australia, which represents approximately 24 per cent of Australia's scope 1 manufacturing emissions.

The Australian Government's first Low Emissions Technology Statement highlights the importance of developing a low emissions steel and aluminium industry to help reduce emissions and stimulate economic activity. Innovation in metals refining can improve the competitiveness and emissions intensity of Australia's steel and aluminium production.

Last month, ARENA announced $11.3 million in funding for Alcoa to investigate and deploy an alternative technology that uses recycled steam for process heat powered by renewable energy.

ARENA CEO Darren Miller said Rio Tinto's study would explore the potential for hydrogen to reduce emissions across the aluminium supply chain and would complement ARENA's support for Alcoa's project.

"If we can replace fossil fuels with clean hydrogen in the refining process for alumina, this will reduce emissions in the energy and emissions intensive refining stage of the aluminium supply chain. Exploring these new clean energy technologies and methods is a crucial step towards producing green aluminium.

This study will investigate a potential technology that can contribute to the decarbonisation of the Australian alumina industry. If successful, the technical and commercial lessons from Rio Tinto's study could lead to the implementation of hydrogen calcination technology, not only in Australia, but also internationally," he said.

Rio Tinto accounts for approximately a third of Australia's total alumina production capacity. Rio Tinto is aiming to reach net zero emissions across its operations by 2050. Across the company, it is targeting a 15 per cent reduction in absolute emissions and a 30 per cent reduction in its emissions intensity by 2030, from a 2018 baseline.

Rio Tinto Aluminium Pacific Operations acting managing director Daniel van der Westhuizen said "We see the ARENA and Rio Tinto-funded study as a step towards reducing refinery emissions and one that has the potential to play an important part in Rio Tinto's commitment to decarbonisation.

"We're investing in work that needs to be done, not only to decarbonise one of our sites, but also to help provide a lower-emissions pathway for Rio Tinto and the global aluminium industry.

"We recognise we are on a long road towards reducing emissions across our operations and there is clearly more work to be done. But projects such as this are an important part of helping us get there."

Source: ARENA

NEW PROJECT

Coleambally Solar Farm 2

Location: Approximately 25km north east of the Coleambally township in NSW
Capacity: 7.2 MW
Developer: ACEnergy
Status: Development application under assessment
LGA: Murrumbidgee Council
Estimated cost: $6.459mil
Description: The subject site abuts existing Essential Energy 33KV transmission lines connected to a nearby Essential Energy transformer, and is currently utilised for agricultural purposes. The proposal would include the installation of approximately 16,128 450-watt solar panels mounted on single-axis tracking systems. The solar panels would be supported by ancillary aspects including a power station consisting of an inverter, transformers and switch gear; a HV switchboard consisting of HV switch gear; battery storage; electrical poles; hardstand vehicle areas and site fencing and landscaping. Although the solar modules have a combined nameplate capacity of 7.2MW, the maximum export capacity is 5MW. Five DC-coupled Battery Energy Storage Systems (BESS) would also be included in the development.
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ALDI harnesses clean power completing its renewable electricity transition

16 June

ALDI Australia has today announced it has achieved its commitment to power its operations with 100% renewable electricity six months ahead of schedule. This milestone establishes ALDI as the first supermarket in Australia to have all offices, stores and warehouses powered using only renewable electricity sources, and results in a reduction of the company's carbon dioxide (CO_2) emissions by 85%[i].

The transition was achieved using a three-pronged approach comprising of on-site generation via its extensive network of solar panels across stores and Distribution Centres, offsite generation through Power Purchase Agreements with two wind farms, and the acquisition of market renewable energy certificates. By achieving its 100% renewable electricity commitment, the supermarket will annually prevent over 274,000 tonnes of carbon dioxide emissions from entering the atmosphere[ii] which is the equivalent of powering 59,677 Australian homes[iii] or taking 80,588 cars[iv] off the road for one year.

"As the 67th biggest user of electricity in Australia[v] we recognise the significant role we have to reduce our impact on the environment and contribute to a more sustainable future. We have always been a business that prioritises doing the right thing over talking about it. We hope that other businesses across the country are encouraged by what we have been able to achieve and accelerate their own plans around renewable energy," said Tom Daunt, CEO, ALDI Australia.

"Our customers care about ensuring they purchase with purpose and every time someone walks through our doors they can feel confident their weekly shop isn't costing the earth. We're already known for our high quality products at incredibly low prices and as a responsible Australian business, we're thrilled to be maintaining this great value without compromising the environment."

ALDI is already generating energy from its wind-farm investments with ten-year Power Purchase Agreements with Tilt Renewables' Dundonnell Wind Farm, based in western Victoria, and RATCH-Australia's newest wind farm – Collector Wind Farm located in the Southern Tablelands of New South Wales.

"Tilt Renewables' partnership with ALDI will be a long-term journey supplying clean renewable energy to their stores from our Dundonnell Wind Farm. Projects like Dundonnell support local jobs as well as Australia's transition to a lower-emissions future, and we are pleased that ALDI are leading the way in procuring renewable energy and supporting this future," said Deion Campbell, CEO, Tilt Renewables.

"It has been so encouraging for the RATCH-Australia development team to see a well-known household name like ALDI embrace clean energy. Servicing ALDI's energy needs currently makes for almost 20% of our Collector Wind Farm's generation. I hope that many more Australian companies follow ALDI's lead and tap into this abundant resource," said Mr Polagorn Kheosiplard, Managing Director, RATCH-Australia.

To generate clean energy onsite, the supermarket continues to install solar panels across its network of freestanding stores. Since commencing its solar installation program in 2015, ALDI will have installed more than 104,000 panels across 274 stores and six Distribution Centres by the end of the year. ALDI's industry partner Epho, who was recently acquired by AGL, has made up the lion's share of its extensive solar rollout, having contributed 24.5 Megawatts of power to the supermarket's total electricity requirements. The benefits of the partnership with Epho extends beyond generating clean electricity, having enabled 150 Epho employees and contractors across the country to remain in their jobs during the height of the COVID-19 pandemic last year.

"Supporting ALDI with their renewables ambition makes the Epho team immensely proud. Last year, at the peak of the program, we delivered 100 solar systems on ALDI stores in 100 business days. This kind of speed is only possible because ALDI and Epho have built a strong partnership over the years," said Dr Oliver Hartley, Managing Director, Epho.

ALDI has also taken steps to reduce its total electricity usage implementing energy efficiency measures like LED lights reducing total lighting energy consumption by over 50%, as well as trialling natural refrigerant technology.

The supermarket's 100% renewable electricity achievement is just one of several sustainability initiatives across the business and its supply chain. By 2025, ALDI aims to send zero waste to landfill which includes a goal to achieve zero food waste sent to landfill by 2023. The program will see ALDI expand segregated waste collection at stores and identify closed loop recycling opportunities. It also aims to reduce at least a quarter of all plastics and packaging from its own brand products, as well as remove certain single-use and problematic plastics from its range.

References available here: https://www.aldiunpacked.com.au/aldi-harnesses-clean-power-completing-its-renewable-electricity-transition/

Source: ALDI Australia

2020 Renewable Energy Target Annual Statement was tabled in the Australian Parliament on 16 June 2021

16 June

The *2020 Renewable Energy Target Annual Statement – Large-scale Renewable Energy Target met* has been tabled in the Australian Parliament today. As the 2020 target has been met, this is the last annual statement to Parliament on progress towards the Renewable Energy Target. Ongoing and timely reporting on data and information on the performance of renewables in Australia continues to be made available in the Quarterly Carbon Market Reports.

Source: Clean Energy Regulator

Significant interest in Big Canberra Battery

16 June

There has been significant industry interest in the Big Canberra Battery project, with 42 submissions from interested parties to a market sounding process which closed recently.

This is a clear signal of the industry's capacity to deliver on this ambitious project, which will support the ACT's efforts to reduce emissions and maintain a reliable and efficient energy grid for ACT households.

The Big Canberra battery will deliver at least 250MW of battery storage – supporting Canberra households with stored renewable energy. When complete, it will be one of the biggest battery storage systems in Australia.

The Big Canberra Battery will involve a distributed network of batteries built around the city. As a combined network, this battery system can address network constraints, enable more Canberrans to reap the benefits of solar and present the opportunity for Government to reduce costs and potentially generate revenue.

Through the Government's Sustainable Household Scheme, which will support more Canberra households to fit solar panels and efficient electric appliances, we will further increase the significant amount of renewable energy already generated in this city.

The global battery storage market is predicted to be worth $400 billion by 2030, and the high

interest in the ACT's proposed battery system will ensure that the nation's capital remains at the forefront of a booming industry – supporting new jobs in emerging industries.

An Expression of Interest process will open in the coming months for interested industry partners to work with the ACT Government on the specific design parameters of the project.

Source: ACT Government

Positive outlook for Western Australia's evolving power system

17 June

Accelerating investment in new renewable generation and Distributed Energy Resources (DER) in Western Australia (WA) is driving a paradigm shift in the power system, presenting both exciting opportunities and new operational challenges.

One in three homes in the South West Interconnected System (SWIS) now have rooftop solar installed, and AEMO's 2021 Wholesale Electricity Market (WEM) Electricity Statement of Opportunities (ESOO) report projects rooftop and large-scale commercial solar systems will reach around 40% of total generation capacity by 2030-31.

AEMO's CEO and Managing Director, Daniel Westerman said: "This is a profound transformation that calls for the highest levels of collaboration across the WA energy system – amongst market bodies, policy makers, industry participants and consumer groups."

"As the energy transition unfolds, AEMO is committed to working collaboratively with stakeholders to implement the WA Government's Energy Transformation Strategy, to ensure WA households and businesses are the beneficiaries of secure, reliable, affordable and sustainable energy," Mr Westerman said.

"It is pleasing that AEMO's analysis in the 2021 WEM ESOO confirms sufficient generation capacity to meet forecast demand in the SWIS over the next decade" Mr Westerman added.

The report expects increased business activity and growth in new housing will drive a 0.2% annual increase in peak demand forecast over the 10-year outlook period, compared to a 0.2% decline in last year's WEM ESOO. The Reserve Capacity Requirement has been determined as 4,396 megawatts (MW) for 2023-2024, meeting the one in 10 year forecast peak demand, which is a slight decrease from the 4,421 MW requirement in 2022-23.

AEMO Executive General Manager, WA, Cameron Parrotte said: "Our analysis shows that even with the expected staged retirement of coal generators, including Muja C unit 5 in 2022 and Muja C unit 6 in 2024, connected and committed capacity is forecast to meet anticipated demand over the next decade."

The report affirms the rapid pace and scale of transition underway in WA's power system, with rooftop solar and large-scale commercial system installations expected to grow at an average annual rate of 8% (219 MW per year) to reach an estimated 4,069 MW of installed capacity by 2030-31.

As a result, overall operational consumption will decline at an annual rate of 0.8% over the outlook period. Further, forecast minimum operational demand, the demand for electricity from the grid, is expected to decline from the current record low of 954 MW to 232 MW by 2025-26.

Mr Parrotte said that as the shift towards variable generators and uptake of distributed solar continues, we are encountering new challenges associated with minimum demand and managing system security issues. This includes maintaining voltage, system strength, and inertia standards. New standards, system services, and regulatory arrangements are

required to keep the power system secure and reliable.

“AEMO is supportive of innovative solutions to help address these challenges, pointing to the importance of projects already underway, like the WA Government’s Energy Transformation Strategy, to help alleviate system security risks under certain conditions such as when minimum operational demand is low,” Mr Parrotte added.

“AEMO will continue to collaborate with consumers, industry and government to develop new standards and to support cost-effective regulatory and market reforms required to ensure consumer expectations for reliable, secure, sustainable and affordable energy are being addressed,” he said.

Source: AEMO

Record renewables funding for Roadmap rollout

17 June

A huge $380 million will be invested in implementing the state’s landmark Electricity Infrastructure Roadmap, as part of the 2021-22 NSW Budget.

Treasurer Dominic Perrottet said the funding will be injected over the next four years to enable the NSW Government to get on with the job of delivering cheap, reliable electricity for homes and businesses across the state.

“The Roadmap is expected to attract $32 billion of investment over the next decade and create thousands of jobs,” Mr Perrottet said.

"This investment is consistent with key recommendations of the Productivity Commissioner Peter Achetstraat's recently released White Paper which highlights the importance of a reliable, sustainable and productive supply of energy for NSW."

Energy Minister Matt Kean said the unprecedented funding package is the biggest NSW Government investment in large-scale renewable energy in the state’s history.

“We have the most ambitious renewable energy policy in the country,” Mr Kean said.

“With four of our five coal fired power stations due to reach the end of their technical lives in the next fifteen years, we are on the clock to replace them before they close to keep the lights on and prices down.

“The Roadmap is expected to deliver NSW families and businesses some of the cheapest electricity in the OECD and will set the State up for success in a low carbon world.”

This funding will ensure transmission upgrades in the Central West-Orana Renewable Energy Zone (REZ) are shovel-ready by the end of 2022 and fund the set-up of the Roadmap including the Consumer Trustee, Financial Trustee, and Regulator to protect consumers and drive competition.

The budget funding boost builds on more than $110 million of existing funding commitments, including $40 million for the Central West-Orana REZ and $79 million for the New England REZ. The NSW Electricity Infrastructure Roadmap is the NSW Government’s legislated plan to bring online 12 gigawatts of renewable energy and 2 gigawatts of storage by 2030.

Source: NSW Government

NEW PROJECT

FRV to carry out its first hybrid solar-storage project in Australia

17 June

• FRV begins construction of Dalby Hybrid Power Plan, a 5 MWac power plant with 2.4 MWac of photovoltaic solar power generation and 2.5 MWac /5MWh of co-located battery storage in Queensland.

• FRV has well established experience in Australia, but the Dalby Hybrid Power Plant is its first hybrid project in the country and one of the first Battery Energy Storage System (BESS) projects in Queensland.

Fotowatio Renewable Ventures (FRV), part of Abdul Latif Jameel Energy and a global leading provider of sustainable energy solutions will develop its first 5 MWac Solar-Storage Hybrid Power Plant in Australia.

Located in the Dalby region of Queensland, the Battery Energy Storage System (BESS) facility will feature 2.4 MWac of solar photovoltaic (PV) generation panels and a 2.5 MWac/5 MWh energy storage system which, once completed, will be one of the first co-located PV and BESS system greenfield developments in Australia.

The plant's output will be connected to Ergon's distribution network, allowing the hybrid power plant to supply and take electricity from the grid and trade in the National Electricity Market.

The plant's technical solution is designed to be operated as a predictable and dispatchable generation plant, to provide a reliable energy output. The system will have the ability to access the maximum number of markets and revenue streams, including arbitrage and FCAS services.

Carlo Frigerio, Managing Director of FRV Australia, stated:
"BESS are needed to support further investment in QLD renewables and help maintain system security and reliability. This project will be critical to Queensland's future energy supply and security as renewable energy capacity increases, with storage supporting solar and wind-generated power to be supplied to the market when it is most needed. The inclusion of PV as part of the project shows the importance of integrating solar and batteries in order to deliver dispatchable power.

Felipe Hernandez, Global Managing Director of FRV-X, added:
"FRV is already collaborating with governments, regulators, and partners around the world to lay the foundations for a new energy model. Energy storage plays a central and critical role to fully realise the power of renewable energy, and FRV acknowledges the value of this technology as a key element to achieve a decarbonised society".

The Dalby project continues FRV's global expansion in the utility-scale storage systems sector, and its aim to further grow its pipeline of energy storage capacity. An approach that is underpinned by two battery projects in the UK; Holes Bay in Dorset, a 7.5 MW/15 MWh battery plant that has been operating since June 2020, and Contego, a 34MW/68 MWh battery project in West Sussex, that once completed in 2021, will be one of the most advanced and innovative energy storage systems in the UK. In addition to this, FRV has developed an advanced pipeline of battery projects in different countries.

This project is FRV's ninth project in Australia becoming part of a total of approximately 640MWdc owned projects' portfolio. Only last year, FRV reached 3 financial closes in Australia alone clearly demonstrating its continuing strong commitment to grow and consolidate its unique portfolio of solar and storage assets in the country.

The Dalby Hybrid Facility is expected to create job opportunities during construction and operations and, in this sense, FRV requires all construction partners working on its solar farm developments to hire local contractors and utilize local suppliers wherever possible.

Expected to be operating at full capacity by early 2022, Dalby Hybrid Power Plant represents FRV's first hybrid project announcement after the Company's international rebranding, and moves the organization closer to its goal of leading the global energy transformation through continuous improvement and consolidation of sustainable, secure and affordable energy models in the communities in which it operates.

Source: FRV

PROJECT NEWS

Asian Renewable Energy Hub

Federal Minister for the Environment Sussan Ley has rejected the proposed Asian Renewable Energy Hub due to it having "clearly unacceptable impacts" on the environment. Plans for the $22bil project, covering around 6500km2 in the East Pilbara region of Western Australia, included construction of an initial 15 GW of wind and solar power to be delivered in phases. Up to 3000 MW of generation capacity was dedicated to large energy users in the Pilbara.

The original project proposal was approved by the federal government under the EPBC Act in December last year. However a revised proposal, deleting export of electricity via HVDC subsea cables to South East Asia and focussing on large scale production of green hydrogen products for domestic and export markets, was submitted in May this year and is the one rejected by Ley.

In October last year the Federal Government granted AREH Major Project Status and the WA Government gave the project Environmental Approval.

The project consortium, consisting of InterContinental Energy, CWP Energy and Macquarie, were aiming for a final investment decision in 2025.

Onslow microgrid powered hydrocarbon free

18 June

Horizon Power, and Partner PXiSE Energy Solutions, successfully power Onslow with 100 per cent renewable energy in a demonstration of advanced microgrid technology. The first step in delivering on the ambition of making this part of normal operation.

In a complex and technically challenging endeavour, the hydrocarbon free operation was achieved for 80 minutes utilising an DER System (DERMS), orchestrating both traditional energy sources with customer and utility solar and battery solutions.

DERMS uses predictive analytics to maximise the amount of renewable energy in Onslow microgrid while maintaining network stability and integrity for all customers. This is the first time DERMS has been deployed for this purpose in Australia. Further testing will continue to maximise understanding of this operation before the functionality is commissioned later this year.

Horizon Power CEO, Ms Stephanie Unwin said "renewable energy solutions are front of mind and we have very clear goals for our energy future. This technical functionality developed in Onslow continues to lead the industry to overcome the barriers to increased rooftop solar installation which has been shown to reduce energy costs for our regional customers."

"This is a significant milestone for energy control technology and renewable energy, with broad applications for the world at large," said PXiSE Energy Solutions CEO Patrick Lee. "The DERMS and microgrid-facilitated hydrocarbon-free period in Onslow demonstrates the possibility for certain communities to run solely on solar plus battery storage."

Aided by DERMS, Onslow Power Project is projected to deliver cleaner, greener energy to Onslow with fossil fuel savings of about 820 tonnes of CO2 emissions per year.

Source: Horizon Power