

Projects Update

Week ending 29 January 2021

\$2 million investment for major Pilbara green hydrogen project

22 January

- McGowan Government to invest \$2 million in grant funding into Yara Pilbara Fertilisers' YURI <u>Green Ammonia Project</u>

- Part of McGowan Government's \$28 million commitment to driving a renewable hydrogen industry in WA

- \$5 million second round of Renewable Hydrogen Fund now open

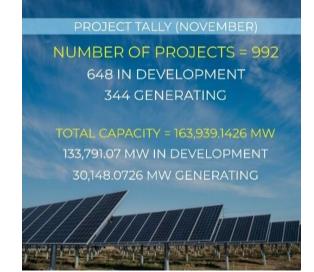
The McGowan Government will provide a \$2 million grant from its Renewable Hydrogen Fund for Yara Pilbara Fertiliser's job-creating YURI Green Ammonia Project on the Burrup Peninsula.

The YURI Green Ammonia Project will utilise solar energy to produce renewable hydrogen, which will in turn be used to produce green ammonia for export to global markets.

Yara, together with partner ENGIE, will initially install a 10MW renewable hydrogen plant to feed into its existing ammonia plant on the Burrup, with plans to significantly scale up to 500MW over the coming years.

The project is one of four in Western Australia currently being considered for the Australian Renewable Energy Agency's \$70 million Renewable Hydrogen Deployment Fund grants program.

YURI is the fourth capital works grant to be allocated funding from the first round of the McGowan Government's Renewable Hydrogen Fund, subject to conditions



including the project reaching a final investment decision.

The second round of the Renewable Hydrogen Fund has opened today, with up to \$5 million available to support projects aligned with the McGowan Government's vision for the State to become a significant producer, exporter and user of renewable hydrogen.

The first round of the State's Renewable Hydrogen Fund saw \$6 million in grants committed to four capital works projects, and \$1.67 million committed to seven feasibility studies.

More information on the Renewable Hydrogen Fund is available at https://www.wa.gov.au/government/publicat ions/western-australian-renewable-hydrogenfund

Comments attributed to Regional Development Minister Alannah MacTiernan: "Western Australia has an extraordinary opportunity to become a leader in the emerging renewable hydrogen industry.

"With Yara's Pilbara site alone accounting for 5 per cent of the world's ammonia production, this project offers a unique opportunity for WA to demonstrate the potential of green hydrogen at an industrial scale. "This project will put the Pilbara front-andcentre in the global renewable hydrogen race, creating a clean ammonia product for the world."

Comments attributed to Pilbara MLA Kevin Michel:

"The McGowan Government is committed to diversifying the Pilbara economy and creating local jobs.

"This project will be a big boost for our region, kick-starting a new renewable hydrogen industry on the Burrup and creating new job opportunities for locals."

Source: WA Government

FEED contract for hydrogen production plant in Australia

22 January

Sumitomo Corporation and JGC Holdings Corporation, which operates the overseas engineering, procurement, and construction (EPC) business of the JGC Group, have signed a Front End Engineering and Design (FEED) contract for the hydrogen related project planned by Sumitomo Corporation in Gladstone, Australia.

The Australian Government's National Hydrogen Strategy, formulated in 2019, sets out a vision of becoming a major global player by 2030, and the Australian Government is presently working to create a national hydrogen industry.

The City of Gladstone, which is located in the State of Queensland, is attracting attention as a suitable location for hydrogen production and consumption. This is due to its existing industrial infrastructure, with government's initiative on climate change, and having potential to decarbonise existing sectors such as industry, mobility, ports etc. It also has rich solar radiation with long daylight hours, which leads to the Green Hydrogen production site. This project is part of broader program that aims long term to build local hydrogen production and consumption in Gladstone by producing hydrogen from electrolysis of water using electricity from Solar PV as the main power source.

The initial hydrogen production plant, plans to produce 250-300 tonnes of hydrogen annually, with plans to scale up production.

In addition to producing hydrogen at the initial plant, we are in parallel creating hydrogen demand in this region.

Sumitomo Corporation expects hydrogen to be one of the important energies in the future, and promotes hydrogen related business such as Local Production and Consumption projects and Large Scale Value Chain projects, that utilises the regional requirements of energy and the characteristics of hydrogen.

In order to greatly contribute to the achievement of our long-term goals toward climate change mitigation, "Carbon neutralisation in 2050" and "Realisation of a sustainable energy cycle", we will accelerate our efforts for the materialisation of a hydrogen society by promoting hydrogen related businesses.

As one of the key issues (materiality) to be addressed as a corporate group, the JGC Group is making extensive efforts to expand the use of hydrogen energy, which is expected to be an energy source that does not emit CO2 when burned, and ammonia, which is expected to be one of the most promising hydrogen energy carriers in hydrogen transportation, where there are issues from an economic and safety perspective.

In October 2018, in collaboration with the National Institute of Advanced Industrial Science and Technology (AIST), we became the first in the world to successfully synthesise ammonia from hydrogen produced by electrolysis of water using renewable energy sources and to generate electricity from gas turbines fueled by the synthesised ammonia, and we are currently collaborating with other companies to explore fuel ammonia production projects overseas.

In addition, we are proposing a hydrogen production system that will produce hydrogen from synthetic gas made from waste plastics, in order to continue to contribute to the realisation of a hydrogen society in Japan and abroad.

Source: Sumitomo Corporation

NEW PROJECT

Fassifern Mine Pumped Hydro Project

Location: Lake Macquarie in the southern Hunter region, NSW Capacity: 600 MW Developer: Centennial Coal Status: Feasibility study underway Description: The closed Fassifern coal mine could be converted into a <u>pumped hydro</u>

energy storage facility located west of Lake Macquarie which if constructed would deliver nearly 1000 construction jobs and 50 ongoing positions. Works at the underground Fassifern coal mine ceased in 2014 after 125 years of operation, leaving a grid connection and excavated voids that could store water as part of a pumped hydro system. An open mine pit at ground level and void near the surface that could be repurposed as an upper reservoir, with a deep cavern at the coal seam acting as the lower reservoir. ARENA is providing \$995,000 towards the \$13.04 million technical review and pilot trial. This is also supported by \$4.16 million from the New South Wales Government's Emerging Energy Program. **Contact: Matthew Fellowes** Manager Energy Projects **Centennial Coal** Tel: (02) 4956 0203 Email: matthew.fellowes@centennialcoal.com.au

CitiPower and Yarra Energy Foundation pursue Victorian first "solar sponge" community battery network

27 January

Victorian electricity distributor, CitiPower, and the Yarra Energy Foundation (YEF) have signed a new agreement to unlock the potential of community-scale battery storage in the Melbourne CBD and inner-city suburbs.

The partnership will investigate a groundbreaking new model of community battery ownership including crowdsourcing local investment in what is considered a Victorianfirst. The aim is to create a network of batteries, or "solar sponges", located on the low-voltage electricity network across inner-Melbourne operated by CitiPower. This unique trial will focus on creating a sustainable commercial model that delivers benefits for consumers and networks.

The project's first phase is underway to identify the trial sites and gauge community sentiment as well as develop the potential funding model and relationships with market service providers including energy retailers. This will inform the second phase, which will aim to deploy the batteries on a broader scale in late 2021.

"The battery network would work as a solar sponge, absorbing power from solar during the day and releasing it during peak times and at night. This would provide customer, community and network benefits," said Dean Kline, Chief Executive Officer at the Yarra Energy Foundation.

As household batteries remain relatively expensive, "shared batteries are a smart solution to give households and businesses reliable and affordable energy when they need it," Mr Kline said.

Forecasts for the Australian solar market indicate that with more people working from home, higher than normal electricity consumption could make solar an even more attractive option for families and small businesses.

CitiPower's General Manager, Electricity Networks, Mark Clarke said the penetration of rooftop solar in the CitiPower network was currently low at around 5% of the 332,000 customers but was expected to reach 24% by 2026.

"With this renewable energy source growing it is a good time to be investigating the potential for connecting batteries to support the whole community," Mr Clarke said.

"By sharing the batteries, customers can make the most of their investment in solar. It benefits all CitiPower customers, even if they don't have rooftop solar, as batteries help reduce the cost of building network capacity to accommodate more power and manage localised peak demand, particularly in summer."

The first battery is expected to be trialed later in 2021. Financial modelling has commenced and the project has already received interest from investors.

Yarra Energy Foundation is a not-for-profit providing services and advice to homes and businesses that want better energy, with core funding provided by Yarra City Council.

CitiPower owns and operates the distribution network that delivers electricity to over 332,000 residential households and commercial customers across Melbourne's CBD and inner suburbs and is one of the most efficient networks in the National Electricity Market.

Source: CitiPower

INPEX commences performance validation of solar hydrogen facility

27 January

INPEX CORPORATION (INPEX) todav announced that it has constructed a solar hydrogen production test facility in Darwin in the Northern Territory of Australia, and begun its performance validation. This initiative is a segment of the Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPChem), a project sanctioned by Japan's New Energy and Industrial Technology Development Organization (NEDO) in which the company is participating since 2012.

Solar hydrogen production is a technology that enables the production of CO2-free hydrogen from water using sunlight and photocatalysis. Its practical application in the future is widely expected to be one of the solutions to realize a hydrogen society.

INPEX has led efforts to install and operate artificial photosynthesis panels (at the facility) in Darwin, Australia, where the volume of solar radiation is more abundant in comparison to Japan. The panels were developed by ARPChem and a photocatalytic development team from the University of Tokyo. INPEX completed the installation of the panels and commenced performance validation tests in December 2020. The tests are scheduled to run until December 2021 and their results are expected to contribute to the scaling up of the facility with a view to introduce practical applications.

Envisioning the advent of a hydrogen era, INPEX aims to expand its energy business to include the production and supply of hydrogen as one of the initiatives outlined in "Business Development Strategy - Towards a Net Zero Carbon Society by 2050," announced in January 2021. The company will continue to link up and cooperate with other companies and organizations to work towards the practical application of technologies contributing to climate change response initiatives.

Turning waste to biofuel could deliver new industry for Collie

27 January

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has today announced \$3.9 million in funding to Renergi Pty Ltd (Renergi) for the development of the next phase of Renergi's energy from waste technology in Collie, Western Australia.

The \$9.4 million demonstration plant is being developed by Renergi in partnership with the Shire of Collie and with \$2 million from the WA Government's Collie Futures Industry Development Fund.

As part of the Project, Renergi has attracted investment from a consortium of investors closely linked to Sunshot Energy, an emerging energy company co-owned by Professor Ross Garnaut. This consortium will support the future commercialisation of the Renergi technology at other regional locations around Australia.

ARENA has previously funded Renergi to advance and refine their pyrolysis technology from pilot projects that have led to this project that will convert landfill waste and other biomass to energy and biochar. This patented technology was initially developed at Curtin University's Fuels and Energy Technology Institute led by the then John Curtin Distinguished Professor Chun-Zhu Li with support from both ARENA and WA Government.

Renergi will design, build and operate a 1.5 tonnes per hour demonstration scale distributed energy from waste plant that will incorporate Renergi's patented grinding pyrolysis technology. The plant will convert 4,000 tonnes per year of municipal solid waste, which would otherwise go to landfill, and 8,000 tonnes per year of forestry and agricultural wastes to crude pyrolysis oil and biochar. While the crude pyrolysis oil will be sold as a liquid fuel for local industry, the biochar will be sold as a soil conditioner. ARENA CEO Darren Miller said this could see other opportunities open up for regional communities to convert their waste into fuel.

"Landfill avoidance has become a key issue in Australia due to restrictions on the export of materials to Asia, with approximately 75.8 million tonnes of waste being generated in 2018-19 alone.

Renergi's project aims to solve some of the current waste disposal problems that are affecting our local councils. Renergi's technology will demonstrate the viability of a scalable distributed energy from waste process, which will use low value waste to displace fossil fuels and thereby helping to reduce emissions.

While other energy from waste projects are focused on incineration at large centralised plants, Renergi's technology is a potential waste treatment solution for regional and smaller towns," Mr Miller said.

"This project is a great example of how ARENA's support can move a technology from early stage research and concept to demonstration, and put it on the pathway to commercialisation. This plant will showcase a 100 per cent Australian technology we are proud to have funded in all key stages of its development," he said.

ARENA has previously funded energy from waste projects in Kwinana and East Rockingham in WA, as well as Southern Oil's pilot plant for the production of renewable fuels in Gladstone and MSM Milling's biomass boiler in central west NSW.

The design phase will commence this year, and the plant is expected to be operating within two years.

Source: ARENA

OSMI secures Cubico as its long-term investment partner for Delburn Wind Farm

27 January

Cubico Sustainable Investments (Cubico) has been announced as the principal project investor for the <u>Delburn Wind Farm</u>.

Cubico, a leader and global investor in renewable energy with investments in 13 countries and an installed capacity of around 4 GW, has joined OSMI Australia as joint development partner in the Delburn Wind Farm and will purchase 100% of the project prior to the commencement of construction.

Cubico's Head of Australia, David Smith said:

'We are excited to be investing in this innovative project in the Latrobe Valley – Victoria's energy generation heartland – and are committed to delivering a high quality project that will support the economic transition of the region, as well as contributing to Victoria's renewable energy targets.'

'Cubico is committed to working closely with the community surrounding the project and will honour all commitments made by OSMI, such as maximising local procurement opportunities and the delivery of a best practice Community Benefits Scheme.'

Through the arrangements, OSMI will continue to be the public face of the project. The company will provide ongoing services such community engagement, as development approvals compliance and land management through the construction period and early operations, given its existing knowledge of the project, local area and established relationships with key stakeholders.

OSMI's Director, Peter Marriott said:

'We are really pleased to bring on a project partner that shares our vision and values in delivering leading edge renewable energy projects, with quality technology and communities at the centre of our decisionmaking framework. The team at Cubico have a strong history in the Australian power generation sector and we look forward to bringing this this project to fruition with them.'

Source: OSMI/Cubico

bp and Qantas form strategic partnership to advance net zero emissions

27 January

- bp to become Qantas' decarbonisation strategic partner

- Intend to collaborate on projects including advanced sustainable fuels, advocacy for further decarbonisation in the aviation sector, renewable power, carbon management and emerging technology

- bp's first decarbonisation partnership in the heavy transportation sector, progressing bp's aim to help cities and corporations to decarbonise

- Qantas and bp have both set ambitions to achieve net zero carbon emissions by 2050

Qantas and bp today announced a strategic partnership to further advance their shared net zero ambitions. Through the collaboration, the companies will work together on opportunities to reduce carbon emissions in the aviation sector and contribute to the development of a sustainable aviation fuel industry in Australia.

The two companies have agreed to explore ways in which bp's global capabilities, skills and knowledge can support Qantas' industryleading sustainability and environmental strategy.

Jointly, the teams will explore opportunities and projects in areas including advanced sustainable fuels, advocacy for further decarbonisation in the aviation sector, renewable power solutions and generation, carbon management and emerging technology. William Lin, bp's executive vice president, regions, cities & solutions, said: "At bp, we're focusing on working with corporates in key industrial sectors that currently have significant carbon emissions to manage and need to decarbonise - sectors such as aviation.

"By bringing our complementary capabilities together, we can help each other, and our customers, move at a faster pace on the energy transition journey. We are delighted to have the opportunity to collaborate with Qantas on plans to reach net zero while continuing to deepen our existing relationship.

"Frédéric Baudry, president, bp Australia and SVP fuels & low carbon solutions, Asia Pacific said: "This is another move towards our ambition to be a net zero company by 2050 or sooner and help the world to get to net zero. We believe the planet needs everyone working together on this vital cause, and that supporting companies to transition to a more sustainable future means we can all get there faster.

"Forming strong strategic partnerships with leading companies like Qantas is an important way to achieve our shared goals and we are proud that bp is working to provide decarbonisation solutions for customers in Australia."

"This is another move towards our ambition to be a net zero company by 2050 or sooner and help the world to get to net zero. We believe the planet needs everyone working together on this vital cause, and that supporting companies to transition to a more sustainable future means we can all get there faster."

Andrew Parker, Qantas group executive government, industry and sustainability said: "While the COVID crisis has compelled us to make many changes across the business, one thing that hasn't changed is our commitment to minimising the impact we have on the environment. "Even though we have been flying a lot less, we've actually seen the same proportion of customers choosing to offset their domestic travel during the pandemic – showing that this issue remains top of mind for people.

"Airlines globally have a responsibility to cut emissions and combat climate change, particularly once travel demand starts to return. The Qantas Group has set some ambitious targets to be net carbon neutral by 2050 and while offsetting emissions is a big part of that in the next few years, longer-term initiatives like building a sustainable aviation fuel sector in Australia, are key.

"This strategic partnership is designed to help build on this by leveraging the shared goals, expertise and reach of Qantas and bp to innovate together."

bp and Qantas are working towards a low carbon future and both companies aim to increase collaboration in this area over time.

Source: bp/Qantas

PROJECT NEWS Chichester Solar Farm

The <u>Chichester Solar</u> Gas Hybrid project, owned and operated by Alinta Energy, is well advanced with all the solar panels, transmission towers and transmission lines installed, and pre-commissioning activities commenced. The project will provide a low emission energy solution, incorporating largescale solar to displace around 100 million litres annually of diesel used in the existing Christmas Creek and Cloudbreak power stations.

Source: Fortescue Metals Group

VivoPower International PLC announces completion of electrical works for 39 MWdc Molong Solar Farm

27 January

VivoPower International PLC (NASDAQ: VVPR, the "Company") is pleased to announce that its wholly-owned subsidiary in Australia, J.A. Martin Electrical Pty Limited ("J.A. Martin") has recently completed all electrical works for the 39 MWdc <u>Molong Solar Farm</u>, located 40 kilometers northwest of the town of Orange in New South Wales. The project is the second Australian solar farm completed by J.A. Martin in partnership with lead contractor GRS.

Energized in late November, the Molong Solar Farm will generate approximately 78,000 MWh of clean energy per year, enough to power 11,000 homes. The project will displace over 53,000 tonnes of carbon dioxide emissions annually, the equivalent of taking 10,500 gasoline cars off the road. With the conclusion of construction at Molong, J.A. Martin has now completed works on over 150 MWdc of solar farms in Australia over the past 3 years.

Phil Lowbridge, General Manager of J.A. Martin, said, "J.A. Martin is proud to have successfully completed another large solar farm project in partnership with GRS, and to have reached yet another milestone for our solar business. We look forward to continued growth in this area as we build on our relationship with GRS and strengthen our position as a leading provider of solar solutions in Australia."

Carlos López, Managing Director of GRS, added, "GRS is especially proud to work with J.A. Martin on the Molong Solar Farm, our second EPC with them in the country and a great project that has allowed us to strengthen our business relationship based on professionalism, rigor and experience."

Source: VivoPower

Major milestone reached for renewable energy project

28 January

The Territory Labor Government and Sun Cable have signed a milestone agreement that will advance development of the \$22 billion <u>Australia-ASEAN Power Link</u> (AAPL).

The project will see up to \$8 billion invested into the Territory, which will host the largest solar farm and renewable energy system in the world.

Today's signing of the Project Development Agreement provides a roadmap for the NT Government and Sun Cable to work in partnership to finalise land tenure and commercial arrangements ahead of the project's financial close.

The sun-soaked Barkly region has been chosen as the ideal location for a solar farm and battery storage facility, which will be built across 12,000 hectares near Elliott.

Once operational, power from the site will be available 24/7, with the solar farm supporting the 30GW storage facility.

As well as the Barkly's sunny, cloud-free advantages, the facility will capitalise on the close access to road and rail.

The project will create 1,500 jobs during construction and 350 ongoing positions once operations begin.

Construction for the project will begin immediately after financial close in October 2023.

By 2027, the AAPL will have the capacity to provide a significant amount of renewable energy for the Territory, as well as up to 20 per cent of Singapore's electricity supply.

This could provide a reliable, affordable energy supply and unlock potential for a green manufacturing hub in Darwin. Once up and running, it's estimated the project will export \$1 billion dollars' worth of solar electricity each year.

Quotes attributable to Chief Minister, Michael Gunner:

"Today's announcement is a big step forward for the Territory – for our energy security and our job security.

"This project will put the NT on the international map when it comes to renewables.

"It will also see hundreds of Territorians find work in the Barkly and Darwin regions during the construction and operational phases.

"Territorians are already seeing the benefits of this investment, with Sun Cable hiring more than a dozen Darwin firms for initial works.

"This project will transform the Territory into a renewable energy powerhouse, and cement our position as Australia's comeback capital."

Quotes attributable to Minister for Renewables and Energy, Eva Lawler:

"This agreement shows strong confidence for investing in the Northern Territory and investing in renewable energy, which is not only good for the environment, but good for the economy.

"Locals can look forward to affordable energy that's reliable and renewable by the end of the decade.

"Our Government is doing whatever it takes to keep Territorians in jobs, and ensure the economy is continuing to tick over.

"We look forward to the next steps of this exciting project."

Quotes attributable to Sun Cable CEO, David Griffin:

"Through the Australia-ASEAN Power Link, Sun Cable seeks to generate and transmit dispatchable, competitively-priced, renewable energy at scale. "This will provide affordable, reliable energy to support industrial growth in Darwin, as well as supplying up to 20% of Singapore's electricity needs.

"The Australia-ASEAN Power Link project will help the Northern Territory make deep cuts to its emissions intensity by decoupling economic growth from carbon pollution."

Source: NT Government

750 North Queensland jobs a step closer

28 January

Around 750 construction jobs for North Queensland are a step closer after the \$1.7 billion CopperString 2.0 project secured a major \$17 million financing agreement with Korea Zinc Company Limited.

Premier Annastacia Palaszczuk said her Government had been a long-term supporter of the job-generating proposal to construct a 1,100 kilometre transmission line to connect the North West Minerals Province with the National Electricity Market.

"That's why I announced my Government had entered into an implementation agreement with CopperString late last year to provide certainty for the project and the jobs it provides," the Premier said.

"It's big projects like this that will help in Queensland's economic recovery and long term growth opportunities.

"This builds on our \$50 billion infrastructure guarantee and means jobs, jobs, jobs for North Queensland are a step closer.

"CopperString 2.0 will also open up land for the development of more solar and wind generation and support renewable generation capacity for a hydrogen export industry." Deputy Premier Steven Miles said the project would transform the North Queensland economy.

"It has the potential to be the most transformative project for the North Queensland economy since the construction of the Great Northern Railway reached Mount Isa in 1929," the Deputy premier said.

"It will transmit energy for new industries and that means supporting new mining, minerals processing and industrial jobs to support development in renewables."

Minister for Energy, Renewables and Hydrogen Mick de Brenni said CopperString has the potential to connect the North-west to the National Energy Market.

"This is another vote of confidence from industry that Queensland is the place to invest in the future of energy," Mr de Brenni said.

"CopperString will deliver cheaper, cleaner energy, unlocking investment in manufacturing and resources jobs for North Queenslanders."

Resources Minister and Member for Townsville Stewart said Scott the International Energy Agency's latest prediction is that 80 per cent of growth in electricity demand will be in renewables to 2030.

"That means more worldwide demand for critical minerals including cobalt, copper and vanadium," he said.

"Queensland has the metals needed for renewables and computers, tablets and mobile phones that will be in higher demand."

Yun Choi, Vice Chairman of Korea Zinc, said he sees great potential for CopperString to strengthen the industrial and clean energy ecosystem across the Townsville to Mount Isa corridor. "This regional economic development opportunity is important to Sun Metals and Korea Zinc, and is a strong element of our interest in supporting the CopperString project," Mr Choi said.

"We look forward to continuing our collaboration with the Palaszczuk Government and CopperString in relation to minerals processing, renewable energy and hydrogen development."

Mr Joseph O'Brien, Managing Director, CuString, congratulated the Queensland Government for the collaborative approach to the tripartite arrangement with CuString and Korea Zinc and for backing innovative infrastructure solutions such as CopperString to help steer Queensland back to prosperity after the COVID slowdown.

Source: Queensland Government

NEW PROJECT Wonmunna Solar

Location: Wonmunna minesite, 80km northwest of Newman in WA Capacity: 2.1 MW **Developer: Mineral Resources** Status: Confirmed as going ahead Description: A 2.1 MW redeployable solar installation at MinRes's proposed Wonmunna minesite is expected to achieve a site power renewable energy component of 24%. Wonmunna will be the first of roll-out of solar across MinRes's sites, supported by natural gas wherever possible due to its lower carbon footprint than diesel. MinRes is developing Wonmunna to deliver a 5mt per annum iron ore operation with exports of 1.0m to 2.0m wmt expected in H2 FY21. Contact: Simon Rushton General Manager – Commercial Mineral Resources Tel: (08) 9329 3600 Email: simon.rushton@mineralresources.com.au

Contracts awarded for Australia's largest SPS rollout

28 January

\$17 million awarded to WA businesses to deploy 98 stand-alone power systems (SPS)
Rollout across regional WA the largest deployment of SPS in Australia

Energy Minister Bill Johnston today announced \$17 million worth of contracts will be awarded to local businesses to revolutionise power supply in regional Western Australia.

From July 2021, 98 stand-alone power systems (SPS) will be rolled out across WA's network marking Australia's largest single rollout of SPS.

The units will provide a more reliable, greener power supply to residents across the South West Interconnected System including: Kalbarri, Three Springs, Merredin, Jerramungup and Rocky Gully.

The successful WA contractors are: Hybrid Systems, BayWa r.e. Solar Systems, Balance Utility Solutions and AGL Energy Services who are working with Bunbury subcontractor Positive Off-Grid Solutions.

SPS are a more efficient option than traditional poles and wires in supplying electricity to regional households and businesses. The units typically include solar panels, a battery and, where required, a backup generator.

The 98 units will replace around 330km of overhead powerlines, which would have needed to be replaced at a significant cost. They will also improve land amenity for farmers and reduce bushfire risk.

Comments attributed to Energy Minister Bill Johnston:

"Through the McGowan Government's Energy Transformation Strategy, we're revolutionising the way we deliver and provide energy to Western Australian homes. "Stand-alone power systems are an excellent alternative for regional customers and while they're part of Western Power's service area, they operate independently to the main grid.

"The increased rollout of SPS is creating new jobs and training opportunities for Western Australians.

"These new contracts will create jobs for Western Australians and support small businesses during the manufacture, installation and commissioning phases."

Comments attributed to Forrestfield MLA Stephen Price:

"Congratulations Balance Utility Solutions on being awarded one of the successful contracts.

"This is a great announcement for the local Forrestfield community, because it supports local jobs and promotes Balance as a leader in the energy technology space."

Source: WA Government

260MW Australian solar PV project sold

27 January

EEW, a leading international developer of utility scale solar energy projects, announced today the sale of its <u>260MW Solar PV Project</u> plant in Rockhampton, Queensland, Australia to a leading multinational renewable corporation.

The Group has an excellent track record of successfully completing utility scale solar photovoltaic (PV) energy developments, installing 1.2GW in Europe and Australia over the last ten years. The Queensland project is the fourth successful development and sale of a solar PV project for EEW in Australia.

Svante Kumlin, CEO of EEW, said: "We are delighted to complete the sale of this 260MW solar PV project. It marks yet another

significant milestone for us in Australia and we have been pleased to work closely with our partner to make this happen."

According to the International Renewable Energy Agency ('IRENA'), Australia is a leading solar market with close to 16GW of cumulative installed capacity through 2019, which is largely due to the availability of land and strong solar resource. The Rockhampton solar PV site is in eastern central Queensland, with development starting in 2017. The project will produce approximately 487GWh annually. This is the equivalent to providing approximately 91,000 Queensland homes with clean solar energy and avoiding approximately 400,000 tonnes of CO2 emissions per year in Australia.

Source: EEW

Preparing to energise Australia's largest renewables zone

28 January

THE State Government will shortly kick-start Australia's largest renewables zone by asking energy generation and storage project proponents to register their interest in being part of the New England Renewable Energy Zone, Member for Northern Tablelands Adam Marshall announced today.

Mr Marshall said expressions of interest would be called by the end of March this year – the first step of the long planning process for the 8,000 megawatt zone.

"The registration of interest process will help the government understand the scale, location and types of projects considering joining the New England Renewable Energy Zone," Mr Marshall said.

"The information provided will support technical design, planning and further market engagement on the Zone. "Establishing this renewables zone is a monumental undertaking and will take several years to plan, design and build and will be delivered in stages.

"The full development of our region through the zone is expected to be worth around \$12.7 billion in private sector investment, 2,000 construction jobs and 1,300 ongoing jobs."

To assist in getting the planning right and ensure the needs of the local communities and landholders are balanced with the desires of industry, Mr Marshall said the government would also establish a regional reference group to guide close engagement with the local community, landowners and other interested stakeholders on the development of the Renewable Energy Zone.

"This will ensure the design and delivery of the Renewable Energy Zone reflects the unique features of our region and maximises benefits for our communities without sacrificing or comprising the assets that make our area so special, such as highly productive agricultural land," he said.

Last year Mr Marshall and Energy Minister Matt Kean announced an \$80 million State Government investment to establish zone.

Already, large scale wind and solar projects in the Northern Tablelands are generating enough electricity to power 254,318 NSW homes.

"With approved projects like the New England Solar Farm at Uralla and Metz Solar Farm at Armidale expected to start construction in the next two years that output is set to explode to well over half a million regular homes," Mr Marshall said.

"It's eye watering to think the New England REZ could power a further 3.5 million homes.

"I've long spoken about renewable energy being the 'wind-of-change' for this region and today we can proudly say the hard work put in by the sector's pioneers has lit the way for a new bright future for our region and beyond."

Mr Marshall said the REZ represented a golden opportunity to diversify economies and provide better infrastructure.

"For the first time in our region's history, we are on the cusp of being a net exporter of energy building wealth in our communities," he said.

"Through progressive new policy frameworks and the National Energy Guarantee (NEG), we are balancing the needs of community while government action is driving new investment in new power generation to deliver least cost energy to customers.

"The benefits of the New England REZ blow way beyond the renewable energy sector, offering the opportunity for mass investment in things like public roads, telecommunications infrastructure and health services.

"Quality infrastructure is not only vital for the efficient delivery of electricity to the network but will also play a role in encouraging people to relocate to our area to work on these ground-breaking projects.

"Of course, the overriding principle of the zone is that our communities get to be in the driver's seat for the very first time, helping determine what projects are allowed to come to our region and where they ca and cannot be constructed."

Source: Adam Marshall MP

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Oakajee Strategic Industrial Area Renewable Hydrogen Project submission

29 January

Towards the end of December Quarter 2020, Pilot Energy also responded to the Government of Western Australia's Call for Expressions of Interest for the Oakajee Strategic Industrial Area ("Oakajee SIA") Renewable Hydrogen Project. The Company's comprehensive response provided multiple options based on an integrated renewable energy, blue and green hydrogen and carbon management solution.

Core to the submission was the Company's focus on leveraging its current development concepts for the <u>Mid West Integrated Wind</u> and <u>Solar Project</u> and position in the Cliff Head Oil Field. Utilizing this position, the Company believes that in delivering an integrated renewables, hydrogen and carbon management solution it can deliver an industrial scale hydrogen solution with a cost as low as LCOH of A\$2/kg with a zero CO2 emissions outcome for both domestic and export hydrogen demands as well as feedstock for both green chemical and green steel requirements.

This integrated solution can be delivered independent of or in conjunction with the Oakajee SIA. The Company notes that the West Australian Government announced on 21 January 2020 that it had received submissions for the Oakajee SIA from 65 parties and at least 10 of the parties were described by the Government as supermajors. The Company looks forward to participating in the West Australian Government's Oakajee SIA Renewable Hydrogen expression of interest process and will also continue a parallel and pursuing independent assessment and development of the Mid West Integrated Renewables, Hydrogen and Carbon Management Projects.

NOTE: Extracted from a quarterly report

Source: Pilot Energy

Record setting quarter reflects evolving energy trends

29 January

Continuing at a record pace, the uptake of residential and commercial solar reduced grid demand and drove record low emissions in Australia's electricity systems in the fourth quarter of 2020.

The Australian Energy Market Operator's (AEMO) <u>Quarterly Energy Dynamics (QED)</u> report for Q4 2020, highlighted that average operational demand in the National Electricity Market (NEM) reduced by 3% compared to Q4 2019, declining to its lowest quarterly average in 20 years.

AEMO's Chief Member Services Officer, Violette Mouchaileh, said: "Electricity demand continues to reflect changing energy trends with new minimum demand records observed in Victoria, South Australia (SA), and Western Australia (WA).

"The downward operational demand trend, coupled with increasing renewable energy, which accounted for 24% of the generation mix in Q4 2020, resulted in significant displacement of thermal generation and the lowest NEM emissions on record," Ms Mouchaileh said.

"Similarly in WA, renewable energy contributed 35% of total generation in Q4 2020, which also led to a decline in average coal-fired generation and gas-powered generation compared to Q4 2019."

The report notes that approximately three gigawatts (GW) of distributed solar was installed nationwide in 2020, up around 50% on the previous record in 2019.

While east coast electricity and gas market outcomes have been highly correlated in recent years, they diverged in the second half of 2020 with gas prices increasing and electricity prices remaining generally low.

"Wholesale electricity prices in Victoria and SA continued to fall. SA became the lowestpriced NEM region for the first time in almost 10 years as its quarterly average price reduced by 57% to \$29 per megawatt hour (MWh)," said Ms Mouchaileh.

"In contrast, New South Wales (NSW) and Queensland bounced back from Q3 2020 lows, with NSW's average price of \$64/MWh at a significant premium to other regions. This was driven by record low coal-fired generation, constraints on imports from other NEM regions, and price volatility."

Gas-powered generation demand also fell compared to Q4 2019, dropping 29% (-11 petajoules) with reductions in all states except Queensland, resulting in the lowest Q4 gaspowered generation demand since 2005.

Domestic wholesale gas prices increased in all east coast gas markets, averaging \$5.90/gigajoule (GJ) compared to \$4.50/GJ in Q3 2020.

"The increase in gas prices reversed the downward trend that commenced in 2019 and was largely influenced by LNG prices that are linked to international oil prices," Ms Mouchaileh said.

Source: AEMO