

7 September 2021

Hybrid Renewable Energy Microgrid; Greenhouse Gas Emissions Assessment

Highlights

- **PWR Hybrid has been awarded Preferred Proponent status to build, own and operate the circa 35MW hybrid renewable microgrid at the Lake Wells Sulphate of Potash Project (LSOP)**
- **The microgrid will integrate an innovative gas-fuelled power station with solar PV, wind and battery energy storage technology which is expected to achieve a Renewable Energy Fraction (REF) above 65%**
- **In terms of REF, the hybrid facility will become one of the leading remote mine site power installations in the country, supplying energy to Australia's greenest SOP project**
- **Engine selection will be based upon the capability to utilise gas and hydrogen, including zero emissions green hydrogen from renewable sources**
- **LSOP Greenhouse Gas Emissions (GHG) assessment report finalised with comprehensive ESG audit commissioned in preparation for compliance with global sustainable reporting regimes**
- **Lake Wells SOP Project forecast to produce 68% less CO₂-e GHG than equivalent Mannheim process and 49% less than equivalent brine SOP projects**

Australian Potash Limited (**ASX: APC** or the **Company**) is pleased to advise that PWR Hybrid has been awarded Preferred Proponent status to build, own and operate the Lake Wells high renewable energy fraction microgrid. The Power Purchase Agreement will be finalised through the Early Contractor Involvement (**ECI**) process the companies will now progress, with an improved indicative levelised cost of energy (**LCOE**) to the recently published Front End Engineering Design (**FEED**) study.

PWR Hybrid brings over 28 years of experience in developing power solutions to remote sites across the globe, including more than 350MW of solar installations. Partnering with some of the leading global suppliers of renewable and thermal power generation and plant design, PWR Hybrid continues to leverage its several decades working in the Australian mining industry to develop innovative and practical hybrid energy solutions.

The Company also commissioned an assessment of the LSOP's GHG footprint as part of its preparation for compliance with the Sustainable Finance Disclosure Regulation (**SFDR**) regime, effective in Europe from 10 March 2021. This assessment¹, taking into consideration the power balance across the Project and energy usage through to ports of loading in Western Australia, concludes that the LSOP will produce a CO₂-e GHG that is materially lower than either a comparable Mannheim operation (LSOP<Mannheim by 69%) or solar-salt/brine operation (LSOP<other by 49%).

Australian Potash Managing Director and CEO, Matt Shackleton said, “Strategically, we shifted the focus of the LSOP development and operations to a sustainable energy footing to capture and leverage the already low GHG footprint of a solar-salt project. With the benefit of time, and rigorous and methodical planning, several alternative configurations for the LSOP microgrid were presented and assessed. We are pleased to appoint a Preferred Proponent to work with us in developing what will be Australia’s greenest SOP project.

“Our SOP distribution partners operate across global geographies and markets where sustainable industries are valued for their contribution to the reduction of greenhouse gases. Many of these jurisdictions have, or are preparing to adopt, sustainable finance disclosure standards. With our vision on the operational future of the LSOP, and therefore our end users, we consider it vital to address sustainable production of SOP as a critical path item. To that end, we have commissioned a formal, rigorous ESG audit of the LSOP which will further provide our distribution partners, end users and investors with third party validation of the Project’s ESG qualities.

“The LSOP suite of K-Brite™ products are being progressively certified for use in organic agriculture in the world’s most lucrative markets, which when coupled with the very low CO₂-e footprint of the Project, will provide our end users with confidence that they are using sustainable products of the highest quality.”

Technical scope of the LSOP microgrid ECI process

Indicative Installed Capacity (MW)					
Solar	Wind	BESS	Gas	Diesel	TOTAL
4.5	9	9	10.7	2	35.2

The LSOP microgrid will be developed in a staged approach, with the thermal component to be completed within circa 15 months of the Company making a final investment decision. This timeline ensures power supply preparedness for steady state operations.

PWR Hybrid’s Director, Ryan Green noted “We’re extremely pleased to be awarded preferred bidder status by Australian Potash. This is further recognition of PWR Hybrid’s capabilities in the hybrid power station market.

“Having recently delivered a 12MW gas-fired power station in WA, and commenced work on the hybridisation of that project, the company is well-positioned to partner with APC to provide an industry leading hybrid power station at the Lake Wells SOP Potash Project.



Figure 1: A recently delivered solar farm by renewable energy EPC, juwi. APC engaged juwi to deliver a report on the renewable energy resource at the LSOP (Source: juwi)



Figure 2: APC’s Lake Wells SOP Project’s gas-hybrid renewable micro-grid will comprise solar, wind and a battery energy storage system (BESS) (Source: juwi)

Greenhouse Gas Emissions Assessment Report

A Carbon Footprint Study was commissioned by APC to determine GHG emissions from APC’s LSOP compared to other sources of SOP. The study was performed by Novopro, a Canadian project development, engineering, and management company, operating in a number of mineral and metallurgical fields, specialising in potash mining and processing plants. Novopro has conducted carbon footprint estimations for multiple potash projects (muriate of potash and SOP) in different areas of the world.

LSOP’s direct and indirect GHG emissions were compared against other brine SOP producers and Mannheim reaction produced SOP.

GHG Emissions (kg CO ₂ -e/tonne SOP)			
Scope	LSOP	Other brine SOP production	Mannheim SOP production
1: Direct emissions Including diesel for mobile fleet and natural gas combusted at site	20	123	135

GHG Emissions (kg CO ₂ -e/tonne SOP)			
2: Indirect emissions Including emissions from energy produced by third-party providers	64	134	35
3: Reagent emissions Including GHG emissions accounted for by third-party manufacture of major reagents	103	113	421
Total	187	370	591

This release was authorised by the Managing Director of the Company.

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About PWR Hybrid

PWR Hybrid is a specialist power provider that builds, owns, and operates high performing remote power generation facilities. Through a combination of thermal, renewable, and energy storage systems the company provides cost-effective and reliable power solutions with low emissions for its clients.

Forward Looking Statements

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These forward-looking statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

About Australian Potash Limited



APC holds a 100% interest in the **Lake Wells Sulphate of Potash (LSOP)**, located approximately 500kms northeast of Kalgoorlie, in Western Australia's Eastern Goldfields. The Company is finalising pre-development plans for commencement of construction. First production from the LSOP is scheduled mid-2023.ⁱⁱ

APC holds a 100% interest in the **Laverton Downs Project**, located 5kms north of Laverton, in Western Australia's Eastern Goldfields.ⁱⁱⁱ

APC holds a 30% free-carried interest in the **Lake Wells Gold Project**, located 500kms northeast of Kalgoorlie, in Western Australia's Eastern Goldfields.^{iv}

Please visit www.australianpotash.com.au for more information.

ⁱ Carbon Footprint Estimation, Lake Wells SOP Project, August 2021, Novopro Projects Incorporated

ⁱⁱ Refer to ASX Announcement 20 April 2021 'FEED positions K-Brite at the Premium End of SOP Market'. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 20 April 2021 announcement; and 2. State that the material assumptions and technical parameters underpinning the estimates in the 20 April 2021 announcement continue to apply and have not materially changed.

ⁱⁱⁱ Refer to ASX Announcement 9 April 2021 'Massive Nickel Sulphide Targets Identified at Laverton Downs'. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 9 April 2021 announcement; and 2. State that the material assumptions and technical parameters underpinning the estimates in the 9 April 2021 announcement continue to apply and have not materially changed.

^{iv} Refer to ASX Announcement 8 April 2021 'SBM Acquires 70% Interest in Lake Wells Gold Project'. That announcement contains the relevant statements, data and consents referred to in this announcement. Apart from that which is disclosed in this document, Australian Potash Limited, its directors, officers and agents: 1. Are not aware of any new information that materially affects the information contained in the 8 April 2021 announcement; and 2. State that the material assumptions and technical parameters underpinning the estimates in the 8 April 2021 announcement continue to apply and have not materially changed.