



8 June 2016

COMPLETION OF LARGEST HYBRID SOLAR/BATTERY/DIESEL POWER STATION IN AUSTRALIA

Pacific Energy Ltd (ASX: PEA) and its subsidiary Pacific Energy (KPS) Pty Ltd ("KPS") are pleased to advise that Sandfire Resources Ltd (ASX: SFR; "Sandfire"), a major long term customer of KPS, has announced the successful completion of the \$40m DeGrussa Solar Power Project, which includes integration with the existing KPS diesel power station. A full copy of Sandfire's announcement to the ASX is attached.

The 10MW solar facility is located adjacent to the KPS owned and operated 19MW diesel power station, covering an area of 20 hectares and includes 6MW of lithium-ion battery storage.

The solar facility has been integrated with KPS's power station utilising sophisticated control systems in order to manage load swings and maintain uninterrupted power supply. These integrating systems have now been successfully commissioned.

The resultant hybrid facility is reportedly the largest in Australia and one of the largest in the world. The integration of solar PV with the KPS diesel power station is expected to reduce annual diesel consumption and cut carbon emissions by more than 12,000 tonnes of CO₂ annually – a reduction of more than 15 per cent based on Sandfire's reported emissions for the 2016 financial year.

"Pacific Energy congratulates Sandfire on this important and ground-breaking project for the mining industry. We acknowledge the involvement and cooperation of all parties who worked on the project and brought together a number of technologies to successfully develop the integrated power station facility" said Pacific Energy's Managing Director, James Cullen.

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KPS's role in the project included:

- Integrating the control systems which govern the solar/battery/diesel integration
- Upgrading and modifying HV switchgear
- Developing the operating protocols which govern the interface between the solar/battery and diesel facilities
- Commissioning assistance and advice

Mr Cullen also said that the high level of interest in the project should see other mining companies consider building similar facilities and that KPS was well placed to add significant value following the success at DeGrussa.

End

NOTE: To access copies of media releases which were also issued today by consortium members as well as new high resolution images of the DeGrussa Solar Power Project including drone footage and images and an animation sequence showing the DeGrussa Solar Power Project, please click on the following Dropbox link:

<https://www.dropbox.com/sh/yb46q33v2myg45c/AAApTT9IMgCjFZTYut0125zia?dl=0>

About Pacific Energy

Pacific Energy is an ASX listed (ASX: PEA) power generation project developer and owner.

Headquartered in Perth, Western Australia, Pacific Energy is focused on the development, ownership and maintenance of mine site and renewable energy power stations.

Kalgoorlie Power Systems, a wholly owned subsidiary of Pacific Energy Limited, is a leading provider of power generation infrastructure to the mining and resources sector in Australia. The business operates a build, own, maintain execution model with 233MW of contracted capacity at 18 mine site locations across Australia.

Pacific Energy Hydro, a wholly owned subsidiary of Pacific Energy Limited, owns and operates 6MW of hydro power generation capacity located approximately 70 kilometres east of Melbourne, Victoria. The company's hydro assets commenced operation in 1992 and comprise two separate power stations located at the Cardinia Reservoir and Blue Rock Dam.



DEGRUSSA SOLAR PROJECT SUCCESSFULLY COMMISSIONED

New \$40M solar power station in steady-state operations

Highlights

- **Construction of the \$40M DeGrussa Solar Power Project** has been completed with the **plant recently commissioned** and now in steady-state operating mode.
- **The project involved the installation of 34,080 solar PV panels** and associated site electrical work, allowing incorporation of the **10MW facility** and the 6MW on-site battery storage with the existing diesel-fired power station at the DeGrussa copper-gold mine.

Sandfire Resources NL (ASX: SFR; "Sandfire") is pleased to advise that the new solar power facility at its 100%-owned DeGrussa Copper-Gold Mine in Western Australia has achieved full generation capacity after successfully attaining key milestones during commissioning. The facility is currently generating approximately 7MW of power, which is in line with seasonal expectations. Solar generating output will ramp up during the summer months to achieve the full 10MW functional capacity.

The solar array covers a total area of over 20 hectares at the site, which is located immediately adjacent to the DeGrussa underground mine and processing plant.

Commissioning of the \$40 million project commenced in March 2016 following installation of the last of the 34,080 solar photovoltaic (PV) panels. The project required electrical infrastructure to be installed including inverters to change the electric current from DC to AC, transformers and other electrical accessories and control systems.

Testing confirms that the plant can perform in accordance with contractual specifications and validates the power purchase agreements covering the facility. Continual testing will be completed in June to ensure it can maintain stable operations at 100 per cent generation capacity.

The innovative \$40 million DeGrussa Solar Project is the largest integrated off-grid solar and battery storage facility in Australia and reportedly, in the world. The project comprises 34,080 solar PV panels with a single-axis tracking system mounted on 4,700 steel posts. This enables the panels to track the sun during the day, improving the plant's overall performance.

The panels are connected via an extensive network of low-voltage, high-voltage and communication cables to a 6MW lithium-ion battery storage facility and the existing 19MW diesel-fired power station at DeGrussa.

The DeGrussa Solar Power Project is owned by the leading French renewable energy firm Neoen, with juwi Renewable Energy responsible for the project development, EPC and O&M. The plant was constructed by national surveying and infrastructure construction company OTOC Limited (ASX: OTC), with project financing provided by the Clean Energy Finance Corporation (CEFC) and recoupable grant funding support of \$20.9M from the Australian Renewable Energy Agency (ARENA).



The solar facility has been integrated with the diesel-fired power station – owned and operated by Pacific Energy Ltd (ASX: PEA) subsidiary KPS – continuing to provide base-load power to the DeGrussa mine with sufficient minimum load to ensure it can respond quickly to meet the power requirements of the process plant and underground mine.

Sandfire's Managing Director, Mr Karl Simich, said the completion and successful commissioning of the DeGrussa Solar Power Project was a significant achievement, providing a strong demonstration of the exciting opportunities emerging within the mining industry for the adoption of renewable energy technologies at remote mine sites.

“This is the largest integrated off-grid solar and battery storage facility in Australia and draws together a number of technologies which are widely expected to have a transformational impact on the global economy over the next decade. These include solar power combined with a state-of-the-art lithium-ion battery storage facility, which has been used for the first time in a remote location at the DeGrussa Copper-Gold Mine.

“This project has already attracted a significant amount of interest from within the mining industry in Australia with Sandfire receiving inquiries from several of our peers interested in adopting this technology at their mine sites. I would not be surprised to see more facilities like this built over the next few years, as the benefits and potential of solar power become increasingly recognised across the resource sector.

“The DeGrussa Solar Project is expected to reduce our annual diesel consumption and cut our carbon emissions by more than 12,000 tonnes of CO₂ annually – a reduction of more than 15 per cent based on our reported emissions for the 2016 financial year.

“The successful completion and delivery of this project is a great achievement by the consortium that was formed to finance, develop and implement this state-of-the-art project, and I would like to congratulate them on achieving this significant milestone.

“The project has undergone final testing and commissioning in May and is now fully operational.”

Editor's note: *To access copies of media releases which were also issued today by the other consortium members listed below as well as new high-resolution images of the DeGrussa Solar Power Project including recent drone footage and images (from last week) and a recent animation sequence showing the DeGrussa Solar Power Project, please click on the following Dropbox link:*
<https://www.dropbox.com/sh/yb46q33v2myg45c/AApTT9IMgCjFZTYut0125zia?dl=0>

About Neoen

Neoen is an independent power producer, generating electricity from renewable sources (solar, wind or biomass). Neoen develops, finances, builds and operates plants and is active in France, Portugal, Australia, Mexico, Egypt, Mozambique, Jamaica, Zambia, Jordan and El Salvador. With a current operating base of 759 MW, Neoen seeks to achieve installed power of over 1000MW by 2017. Founded in 2008, the company is a subsidiary of Impala SAS (www.impala-sas.com), a diversified investment group with over 6000 employees and a global presence, of Bpifrance (www.bpifrance.fr), the French public investment bank, and of private equity firm Omnes Capital (www.omnescapital.com). www.neoen.com

About juwi

The juwi Group is one of the world's leading renewable energy companies specialising in the Engineering, Procurement and Construction (“EPC”) of utility-scale projects. With approximately 1,000 employees worldwide, juwi has been involved in the development, design, construction and operation of more than 1,500 solar PV projects and the installation of more than 700 wind turbines with a cumulated capacity of over 3,300MW.

About OTOC

OTOC is a leading provider of infrastructure construction and renewable energy services to government, resources, energy, utilities and remote area clients. Our Australasian footprint allows us to leverage our wealth

of experience to deliver the highest quality service across critical support infrastructure projects. OTOC prides itself on delivering complete infrastructure solutions through the ability to partner with clients on all project stages, from design through to construction and ongoing maintenance. OTOC also provides premium surveying, aerial mapping, laser scanning, town planning and urban design services nationally across all sectors. OTOC Limited is listed on the ASX with ticker OTC.

About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the supply of renewable energy in Australia. Through the provision of funding coupled with deep commercial and technical expertise, ARENA provides the support needed to accelerate the development of promising new solutions towards commercialisation. ARENA invests in renewable energy projects across the innovation chain and is committed to sharing knowledge and lessons learned from its portfolio of projects and information about renewable energy. ARENA always looks for at least matched funding from the projects it supports and to date has committed \$1.1 billion in funding to more than 250 projects. For more information, visit www.arena.gov.au.

About the CEFC

The Clean Energy Finance Corporation (CEFC) invests commercially to increase the flow of funds into renewable energy, energy efficiency and low emissions technologies. The CEFC has supported projects across the Australian economy, benefitting a diverse range of businesses, large and small. The CEFC's mission is to accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction. The CEFC does this through direct investments which attract private sector finance, as well as through its strategic co-financing partners. The CEFC was created by the Australian Government and operates under the *Clean Energy Finance Corporation Act 2012*. More information is available on the CEFC website: www.cleanenergyfinancecorp.com.au.

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Forward-Looking Statements

Certain statements made during or in connection with this statement contain or comprise certain forward-looking statements regarding Sandfire's Mineral Resources and Reserves, exploration operations, project development operations, production rates, life of mine, projected cash flow, capital expenditure, operating costs and other economic performance and financial condition as well as general market outlook. Although Sandfire believes that the expectations reflected in such forward-looking statements are reasonable, such expectations are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward looking statements and no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, delays or changes in project development, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metals prices and exchange rates and business and operational risk management. Except for statutory liability which cannot be excluded, each of Sandfire, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in this statement and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this statement or any error or omission. Sandfire undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly you should not place undue reliance on any forward looking statement.