

20 February 2019

KETEP \$9.5M Battery Trial Update

- KORID Energy has exceeded stack development expectations as part of the Korean Energy Technology Evaluation and Planning (KETEP) 1MW/4MWh vanadium redox flow battery (VRFB) trial
- Through the trial the KORID has received a funding commitment of AU\$3.0M to further develop its battery stack technology
- KORID has achieved a 12% higher stack power and energy density through its year 1 development

Protean Energy Ltd (**Protean, POW** or the **Company**) is pleased to advise that its 50% owned subsidiary, KORID Energy Ltd (**KORID**), which is currently engaged in developing a 1MW/4MWh VRFB for a Korean Government funded trial, has exceeded its first year development expectations by 12% (**Table 1**).

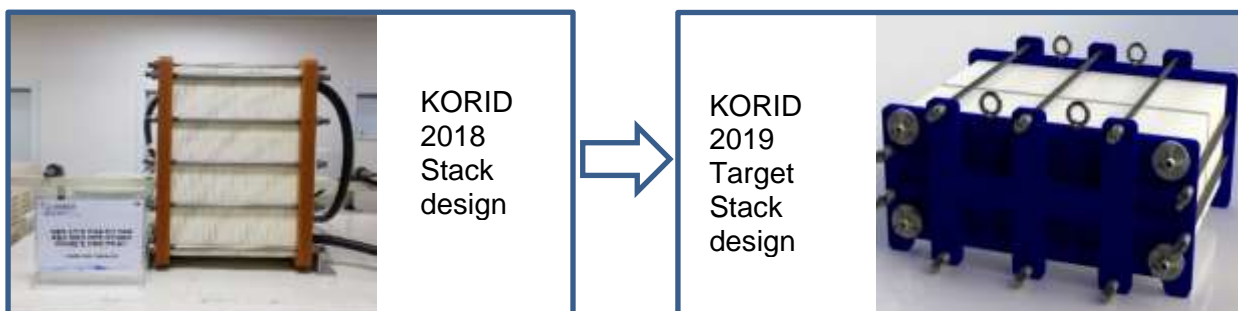
KORID was selected to participate in the KETEP trial as a result of its leading stack technology with an aim to develop a final product with significantly higher stack power and power density. The trial development key performance indicators are shown in Table 1 below:

KPI	1 st Year Target	1 st Year Achieved	2 nd Year Target	3 rd Year Target	4 th Year Target
Stack Power (kW)	12.5	14.0	25	25	>25
Stack Power Density (kW/L)	60	67.3	70	80	>80

Table 1 KORID trial participation KPIs

The first year results of KORID's development was evaluated by third-party experts, KTC, in Seoul Olympic Parktel with the performance of the stack being 12% higher than targeted. Key components optimised within the first year of development include: Reduced internal resistance, improved stack flow-frame design and the incorporation of a 430% thinner bipolar plate.

As part of the continuing stack development KORID has identified engineering targets including further optimisation of the flow-frame, a new gasket-free design and injection molded flow-frame which will significantly reduce production cost.



ABOUT PROTEAN ENERGY LIMITED (ASX: POW)

Protean Energy Limited is focused on the commercialisation of the V-KOR vanadium battery energy storage systems via its Korean joint venture subsidiary, KORID Energy Ltd (**KORID**).

Protean is also developing a multi-energy mineral project in South Korea through its 50% holding in Korea Vanadium Limited (**KV**). KV is a JV company between Protean and KOSDAQ-listed DST Co Ltd (**DST**). KV owns 100% of the rights to 3 projects in South Korea, including the Company's flagship Daejon Vanadium Project.

For further information, see www.proteanenergy.com or phone: T: + 61 8 9481 2277