



Parkway Minerals NL
ACN 147 346 334
Level 1, 677 Murray Street
West Perth WA 6005
PO Box 174
West Perth WA 6872
Australia
T +61 8 9479 5386
parkwayminerals.com.au

ASX Announcement

18 November 2020

ASX: PWN
FSE: 4IP

ACQUISITION OF INTELLECTUAL PROPERTY PORTFOLIO & EXPANSION OF STRATEGIC COLLABORATION WITH VICTORIA UNIVERSITY (Updated)

Highlights

ACQUISITION OF INTELLECTUAL PROPERTY (IP) PORTFOLIO

- Acquisition involves several water and wastewater processing related innovations.
- Acquisition includes underlying intellectual property including patents, knowhow and associated commercialisation rights.

STRATEGIC COLLABORATION WITH VICTORIA UNIVERSITY

- Expansion of strategic collaboration with Victoria University.
- Supports commercialisation efforts, including commitment to assist in commissioning, optimisation & operation of new state-of-the-art aMES™ pilot plant.

Parkway Minerals NL (ASX: **PWN**) (“**Parkway Minerals**” or the “**Company**”) is pleased to provide the following update, regarding the acquisition of several water and wastewater processing related innovations and the expansion of collaboration, with Victoria University.

Acquisition of IP Portfolio

In order to further strengthen and broaden the Company’s intellectual property portfolio, the Company has agreed to acquire several water and wastewater processing related innovations (the “**Acquired Innovations**”), from Victoria University. The Acquired Innovations have been developed over a number of years, and have potentially significant applications in the energy, mining and municipal water and wastewater treatment sectors. The Acquired Innovations have already undergone piloting, demonstrating substantial advantages, including the successful recovery of target products from complex feedstocks. Given the significant process engineering related capabilities developed by Parkway Minerals throughout 2020, the Company is well placed to incubate, scale-up and commercialise the Acquired Innovations.

The Acquired Innovations incorporate a combination of background intellectual property, jointly developed intellectual property, patented intellectual property (two international patent families) and associated commercialisation rights. In order to avoid any form of legal or commercial ambiguity, the Acquired Innovations also include any and all residual interests in the aMES™ technology that may have been held (in terms of IP) by Victoria University.

Consideration

As consideration for the Acquired Innovations, the Company has agreed to:

- a. Provide upfront consideration of 4,000,000 fully paid ordinary shares (the “**Consideration Shares**”) in the Company (a resolution seeking shareholder approval to issue the Consideration Shares will be sought at the upcoming AGM); and
- b. Undertake to execute a research plan (the “**Research Plan**”) with Victoria University before 15 May 2021, whereby the Company would agree to procure directly or indirectly research and development related services from Victoria University with a gross aggregate value of no less than \$500,000, within the subsequent 3-year period. Any investment by the Company will likely involve or leverage significant grant funding.

Strategic Collaboration with Victoria University

Background

Parkway Minerals and Victoria University have an established and collaborative relationship which formally commenced in 2015 and incorporates:

- Collaborative research & development related activities, including several projects supported by various government grants, including from the Australian Research Council.
- Parkway Minerals established an Engineering & Technical Office, co-located at Victoria University’s Werribee Campus, earlier this year.
- Several Parkway Minerals staff members have been granted visiting fellow status by Victoria University, with managing director, Bahay Ozcakmak also appointed an Adjunct Associate Professor by Victoria University. Bahay is an industry-based co-supervisor for a final year PhD student at Victoria University, which is performing breakthrough research funded by and closely aligned with Parkway Minerals.

Forward Plan

- In order to further strengthen the strategic collaboration between Parkway Minerals and Victoria University, the parties have developed a Framework for Cooperation, outlining a range of arrangements, including:
 - Mutual exclusivities in relation to certain R&D related activities, including with respect to the Acquired Innovations, and
 - Ownership of all aMES™ based proprietary process equipment, by the Company.
- The Research Plan (outlined above), also provides a basis for strong alignment.
- The parties have agreed to a plan to jointly commission, optimise and operate the new state-of-the-art aMES™ pilot plant, at Victoria University. This testwork will involve feedstock from a range of projects, to support the Company’s business development and aMES™ commercialisation related activities. As announced on [16 Nov 2020](#), pre-commissioning related activities for the aMES™ pilot plant, have now commenced.

Commentary

Parkway Minerals – Managing Director, Bahay Ozcakmak commented:

“Our collaborative relationship with Victoria University is highly synergistic, as it enables us to combine i) world-class R&D, with ii) established process engineering and commercialisation experience, iii) in order to develop innovative solutions for difficult wastewater processing challenges facing industry. We are excited to be further broadening the breadth and depth of our relationship with Victoria University, particularly at this critical time, as we transition to the pre-commissioning phase of our new state-of-the-art aMES™ pilot plant and other key commercialisation milestones. In recent months, our aMES™ and iBC™ based evaluations for several major energy and mining companies, has continued to advance positively. We continue to make progress in translating key findings, into techno-economic evaluations, which form the basis of commercially focused discussions. In this regard, further deepening our relationship with Victoria University is a key part of our commercialisation strategy, as it provides us with important capabilities and reinforces our business development activities. As part of this expansion of our strategic relationship with Victoria University, we have identified a number of potential opportunities that will enable us to leverage our investment, to unlock additional sources of grant funding. In addition to expanding our relationship with Victoria University, this transaction ensures we own all the intellectual property (IP) relating to our process technologies, on a 100% basis, without any restrictions on sub-licensing. (The only IP related fees payable by Parkway Minerals relate to a 2.5-5% net iBC™ licensing fee, as disclosed on 15 May 2020). This flexibility provides us with the freedom-to-operate, from a commercialisation perspective, whilst also expanding potential market opportunities for our technology portfolio. We look forward to providing further details, at the appropriate time.”

On behalf of Parkway Minerals NL.



Bahay Ozcakmak

Managing Director

This announcement has been authorised for release by Bahay Ozcakmak (MD) on behalf of the Board of Parkway Minerals NL.

Additional Information

For further information contact:

Bahay Ozcakmak

Managing Director

T: +61 414 596 007

E: bahay@parkwayminerals.com.au

aMES™ Pilot Plant



Recently installed state-of-the-art aMES™ pilot plant, currently undergoing pre-commissioning activities at Victoria University.

aMES™ Technology

The *activated Mineral Extraction System*, or **aMES™** is an innovative process technology that enables the treatment of concentrated brine solutions to recover a range of valuable compounds, reagents and fresh water. The technology utilises a proprietary multi-staged process incorporating novel membrane technology and is based on proprietary IP, incorporating patents, expertise and know-how acquired over more than a decade of intense process development.

Advantages of the aMES™ technology include:

- improvements in mineral recovery and product quality,
- opportunity for substantial project capex & opex savings,
- efficient use of energy and produces pure water as a by-product, and
- improved project footprint and environmental sustainability.

Ongoing collaboration with a number of brine project developers and operators has confirmed there are many applications where the aMES™ technology has the potential to deliver substantial value by enhancing existing flowsheets, in order to improve overall project performance.

Additional Information

www.parkwayminerals.com.au/ames-technology

iBC™ Technology

The *integrated Brine Causticization*, or **iBC™** is a patented process technology that simultaneously removes common impurities from waste brine streams and converts sodium carbonates and bicarbonates commonly found in coal seam gas (CSG) brines, into more soluble sodium hydroxide.

As a result of the causticization step, the iBC™ technology produces a purified brine suitable for downstream processing, including with the aMES™ technology, for the production of various salt products and industrial-grade sodium hydroxide.

Additional Information

<https://www.parkwayminerals.com.au/ibc-technology>

aMES™ Brine Processing Technology

Key Industries (Applications)

- Mining natural brine (salt lakes)
- Solution mining brine (potash)
- Refinery & industrial waste brine
- Wastewater treatment brine

Target Products (Produced)

- Potash (MOP/SOP/KMS)
- Lithium and magnesium salts
- Range of byproducts (B, Br, Ca, Co, Cu, I, Na, Ni, REE, Si, Sr)
- Reagents
- Water

iBC™ Brine Pre-Treatment Technology

Key Industries (Applications)

- Oil & gas waste brine (CSG)
- Wastewater treatment brine

Target Products (Produced)

- Sodium hydroxide concentrate
- Sodium chloride
- Byproducts (Ca, Mg, Si)

About Parkway Minerals

In October 2019, Parkway Minerals (ASX: PWN) completed a transformational transaction by acquiring an Australian unlisted public company, Consolidated Potash Corporation (CPC). Through CPC, Parkway Minerals acquired a minority interest in the Karinga Lakes Potash Project (KLPP) in NT Australia. The CPC transaction, also resulted in Parkway Minerals acquiring the innovative aMES™ technology, which has been developed to process a range of challenging brine streams from the mining industry, in order to recover valuable minerals, reagents as well as produce fresh water.

Given the significant market opportunities, Parkway Minerals is focused on commercialising a world-class technology portfolio to provide long-term sustainable solutions for processing complex brines, in the energy, mining and wastewater industries. In order to achieve this objective, Parkway Minerals is partnering with leading industry participants to provide, BPaaS – Brine Processing as a Solution™.

Strategic Investment

Parkway Minerals holds a strategic investment in Davenport Resources (ASX: DAV), which has successfully delineated a globally significant in-situ potash resource (in excess of 550 million tonnes of contained potash), at its South Harz project in Central Germany. Recently completed scoping studies have delivered excellent technical and economic results and provide Davenport Resources with an attractive opportunity to create and unlock substantial value.

Parkway Minerals is commercialising a world-class technology portfolio to provide long-term sustainable solutions for processing complex brines, in the energy, mining and wastewater industries.

Our mission is to collaborate with leading strategic partners to deliver:

BPaaS – Brine Processing as a Solution™

Forward-Looking Statements

This ASX Release may contain certain “forward-looking statements” which may be based on forward-looking information that are subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. Forward-looking information includes exchange rates; proposed or projected project or transaction timelines; uncertainties and risks associated with the advantages and/or performance of the Company’s projects and/or technologies; uncertainties and risks regarding the estimated capital and operating costs; uncertainties and risks regarding any envisaged timelines in relations to any results, milestones, partnerships, including but not limited to any milestones which may require obtaining approvals from third parties.

For a more detailed discussion of such risks and other factors, see the Company’s other ASX Releases. Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this ASX Release, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.