

# Ultra Power Systems Pty Ltd Signs Exclusive Patent Option Agreement to Purchase a License for the VanadiumCorp-Electrochem Processing Technology for Australia



December 10, 2018 (Source) – VanadiumCorp Resource Inc. (TSX-V: “VRB”) (the “Company”) and Electrochem Technologies & Materials Inc. (“Electrochem”) have signed a Patent Option Agreement (“POA”) for Ultra Power Systems Pty

Ltd (“Ultra”) to purchase an exclusive license. Ultra plans to utilize the Australian license of VanadiumCorp-Electrochem Processing Technology (“VEPT”) to expedite construction of the world’s first dedicated vanadium processing facility. Ultra’s core objective is to directly integrate low cost battery grade vanadium electrolyte into vanadium redox batteries from virtually any source in a fraction of the time and capital requirements of current vanadium extraction processes. The VEPT dramatically reduces emissions associated with vanadium extraction as well as substantially offsetting the operating cost through the production of valuable by-products.

The resultant vanadium electrolyte therefore has a minimal carbon footprint as well as being significantly cheaper. Additionally, the electrolyte offers an exceedingly lengthy usage life (effectively perpetual reuse), which provides an excellent basis for long-term leasing. This will provide end users the option of avoiding a large portion of the initial

capital outlay by distributing it over time through a lease arrangement (with the electrolyte remaining an asset of Ultra).

**Key aspects of the signed POA include the following terms with all financial considerations split evenly between VRB and Electrochem:**

- Fully executed agreement signed by all parties November 23, 2018.
- USD \$500,000 payment includes exercise of the option.
- Non-reimbursable down payment received upon signing the Patent Option Agreement.
- 6 month option to acquire the exclusive license of VEPT for the jurisdiction of Australia Territory.
- Definitive license terms exercisable in the POA includes a minimum annual payment, financing fees and a gross royalty due upon production, applicable to all vanadium products, ferrous sulfate heptahydrate (copperas), titanium products and other by-products for a project duration of 25 years.

Adriaan Bakker, CEO of VanadiumCorp states, “This agreement represents a new chapter for VanadiumCorp with the benefit of cash flow and a realistic commercialization pathway for VanadiumCorp and Electrochem’ s jointly developed green processing technology. Our vision to establish the most efficient and sustainable solution for energy storage is within reach years sooner than anticipated.”

Francois Cardarelli, President of Electrochem Technologies & Materials Inc. “This Patent Option Agreement is in line with our corporate strategy to monetize our patents that will require large scale operations. This important milestone regarding the VEPT will allow this disruptive and robust technology to be implemented in Australia, a jurisdiction particularly favorable considering the large deposits of vanadiferous titanomagnetite already in production or close to

commercial production. This milestone is turning point for licensing our joint IP with VanadiumCorp and Electrochem preceding the national entry phases of VEPT for key global jurisdictions”.

Brad Appleyard, Managing Director of Ultra Power Systems Pty. Ltd. states, “We are excited to commercialize VEPT exclusively in the mining friendly and vanadium rich jurisdiction of Australia. With strong channel partners, investors and government support we intend to establish the leading integrated solution for vanadium batteries worldwide. Stationary battery storage is the key to a successful transformation of the energy industry into one based on renewable energy. Vanadium Redox Flow Batteries are the cleanest and most effective such technology available today. The central role played by the electrolyte in these batteries provides Ultra with an opportunity to play a key role in the power industry well into the future”.

**Ultra Power Systems Pty Ltd.** is an Australian privately owned and financed company planning to build a vanadium electrolyte production facility with VEPT in Australia to process abundant vanadium-bearing resources and feedstocks for vertical integration into leasing vanadium batteries to mines and remote communities, primarily in Canada and Australia. Ultra also intends to utilise its electrolyte rights to participate in large scale renewable projects and to engage sub-licensees in strategic areas of the globe.

**VanadiumCorp Resource Inc.** plans to develop VEPT in Canada and co-license the VEPT for targeted global jurisdictions to directly recover battery grade vanadium products, Vanadium Electrolyte™ and coproducts such as iron and titanium from many sources irrespective of oxidation and deleterious elements such as silica. Jointly developed and owned with Electrochem, this innovative chemical process allows for integrated and low carbon footprint recovery of critical metals needed on a

global scale from vanadiferous titanomagnetite “VTM”, magnetite, hematite and ilmenite as well as steel slags, calcine and oil residues. VanadiumCorp also holds a significant vanadium-titanium-iron bearing resource base in mining friendly Quebec, Canada.

**Electrochem Technologies & Materials Inc.** is a private Canadian corporation that invents, develops, patents, scales-up and commercializes proprietary chemical, metallurgical and electrochemical technologies that are innovative, and sustainable. The company also manufactures industrial electrodes, recycles rare earths from fluorescent lamps phosphors and produces tantalum and tungsten fine chemicals at its production facilities in Boucherville. Electrochem currently owns fourteen patents worldwide.

**VEPT:** The jointly owned “VanadiumCorp-Electrochem” Process Technology (“VEPT”) describes a novel chemical process invented by Dr. Francois Cardarelli that addresses the recovery of vanadium, iron, titanium, and silica feedstocks such as vanadiferous titano-magnetite, iron ores and concentrates such as magnetite and hematite, vanadium containing wastes such as BOF-slugs, calcine and other industrial by-products also containing vanadium. Building a conventional primary vanadium mine can take typically take 5-10 years with a large capital requirement and involve significant technical risks, a large carbon footprint. For the small number of surviving producers, vanadium is generally recovered at 1% from VTM concentrate as a single commodity that requires costly purification and is cost and trade prohibitive to import from China, South Africa and Brazil. For convenient access to the International PCT Patent Publication the PCT is available for direct download using the following link. <https://goo.gl/N8pPfU>

**On behalf of the board of VanadiumCorp:**

Adriaan Bakker

President and Chief Executive Officer

*Disclosure notice: Adriaan Bakker and John Hewlett both own 250,000 shares of UPS representing less than 1% of UPS.*

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