

# First Phosphate and Integrals Power sign Joint Development Agreement to Produce Environmentally Compliant Battery Grade Iron III Phosphate Precursor for the LFP Battery Industry

written by Raj Shah | February 15, 2024

February 15, 2024 ([Source](#)) – First Phosphate Corp. (CSE: PHOS) (OTC: FRSPF) (FSE: KD0) (“First Phosphate”) is pleased to announce that it has signed a Joint Development Agreement (“JDA”) with Integrals Power Limited (“IPL”) of Milton Keynes, United Kingdom to produce battery grade iron III phosphate precursor to supply the lithium iron phosphate (“LFP”) battery industry outside of China.

## Business Case

- Iron phosphate is a manufactured substance used as a base precursor in the traditional production of LFP cathode active material (“CAM”) in China.
- To initiate production of LFP batteries outside of China in the most cost-effective format using the traditional LFP synthesis method, a locally produced source of iron phosphate precursor is required, one which meets US Inflation Reduction Act local production requirements.
- Iron phosphate is generally produced in China using iron

sulfate and mono ammonium phosphate.

- Iron sulfate is not always readily available in quantity as a source of iron outside of China.
- Moreover, the waste streams produced from the production of iron phosphate using iron sulfate and mono ammonium phosphate are not easily manageable within European/North American environmental compliance frameworks.
- A new process for making iron phosphate precursor is required for the European and North American LFP battery industry, one which is compliant with applicable environmental standards.
- A process for making iron phosphate in North America must to be cost sensitive in order to compete with iron phosphate producers in China as the latter are able to arbitrage labour and environmental standards between Europe/North America and China.

## **Business Agreement**

- The parties agree to undertake an initial phase of joint development of the technology needed to produce the iron phosphate precursor for LFP CAM.
- If successful, the joint development is expected to result in a scalable, low cost, environmentally compliant technology for the production of battery grade iron III phosphate ( $\text{FePO}_4$ ); one which could be combined with lithium carbonate or lithium hydroxide to produce LFP CAM.
- If successful, the parties agree to work collaboratively to bring this process into immediate large scale production.
- Where possible, First Phosphate will provide the raw materials to make the iron III phosphate based on its phosphate concentrate (source of PPA) and its magnetite (source of iron).

- The intellectual property developed to produce the iron III phosphate will be co-owned by First Phosphate and IPL.
- The effort required to develop the initial phase technology is estimated to take up to 9 months to creation of a full pilot line. Contemporaneously, large-scale expansion plans for the technology will be developed by the parties.
- Research and development of this initiative will be carried out by IPL. To support the development, First Phosphate will pay USD \$250,000 to IPL. The balance of the initial stage development costs will be funded by IPL.
- First Phosphate has been granted a share purchase option to acquire 2.7% of the shares in the capital of IPL at a cost of £500,000 exercisable until March 1, 2026. First Phosphate agrees to pay a penalty of £25,000 if more than 75% of the option expires unexercised. First Phosphate currently owns 7,386 shares of IPL representing 0.6% of the company.

## **About First Phosphate Corp.**

First Phosphate is a mineral development company fully dedicated to extracting and purifying phosphate for the production of cathode active material for the LFP battery industry. First Phosphate is committed to producing at high purity level, in responsible manner and with low anticipated carbon footprint. First Phosphate plans to vertically integrate from mine source directly into the supply chains of major North American LFP battery producers that require battery grade LFP cathode active material emanating from a consistent and secure supply source. First Phosphate holds over 1,500 sq. km of royalty-free district-scale land claims in the Saguenay-Lac-St-Jean Region of Quebec, Canada that it is actively developing. First Phosphate properties consist of rare anorthosite igneous phosphate rock

that generally yields high purity phosphate material devoid of high concentrations of harmful elements.

### **About Integrals Power Limited**

IPL is a next-generation battery nano-material company committed to accelerated research, development and commercialisation of lithium-ion battery. The team of entrepreneurs, scientists and engineers have conducted comprehensive market verification and validation to form their strategy for the development of commercially feasible battery materials. This broad market research empowered the accelerated development and production of IPL proprietary high-performance, cost effective and scalable battery cathode materials for LFP/LFMP batteries. IPL's latest battery material development results empower economical cells with higher performance compared to the conventional alternatives.

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### **Forward-Looking Information and Cautionary Statements**

*This news release contains certain statements and information that may be considered “forward-looking statements” and “forward-looking information” within the meaning of applicable securities laws. In some cases, but not necessarily in all cases, forward-looking statements and forward-looking information can be identified by the use of forward-looking terminology such as “plans”, “targets”, “expects” or “does not expect”, “is expected”, “an opportunity exists”, “is positioned”, “estimates”, “intends”, “assumes”, “anticipates” or “does not anticipate” or “believes”, or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might”, “will” or “will be taken”, “occur” or “be achieved” and other similar expressions. In addition, statements in this news release that are not historical facts are forward looking statements, including, among other things, the Company’s planned exploration and production activities, the properties and composition of any extracted phosphate, the Company’s plans for vertical integration into North American supply chains, successful commercial relations between First Phosphate and IPL, IPL’s successful development of the technology, as described including its relative cost, and the developed product’s compliance with European and North American environmental standards and compliance frameworks, and the US Inflation Reduction Act, the ability of the parties to successfully scale the technology, and the availability of funding for future phases of development and production.*

*These statements and other forward-looking information are based on assumptions and estimates that the Company believes are appropriate and reasonable in the circumstances, including, without limitation, expectations of the Company’s long term business outcomes given its short operating history; expectations regarding revenue, expenses and operations; the*

Company having sufficient working capital and ability to secure additional funding necessary for the exploration of the Company's property interests; expectations regarding the potential mineralization, geological merit and economic feasibility of the Company's projects; expectations regarding drill programs and the potential impacts successful drill programs could have on the life of the mine and the Company; mineral exploration and exploration program cost estimates; expectations regarding any environmental issues that may affect planned or future exploration programs and the potential impact of complying with existing and proposed environmental laws and regulations; receipt and timing of exploration and exploitation permits and other third-party approvals; government regulation of mineral exploration and development operations; expectations regarding any social or local community issues that may affect planned or future exploration and development programs; expectations surrounding global economic trends and technological advancements; and key personnel continuing their employment with the Company.

There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include: limited operating history; high risk of business failure; no profits or significant revenues; limited resources; negative cash flow from operations and dependence on third-party financing; the uncertainty of additional funding; no dividends; risks related to possible fluctuations in revenues and results; insurance and uninsured risks; litigation; reliance on management and key personnel; conflicts of interest; access to supplies and materials; dangers of mineral exploration and related liability and damages; risks relating to health and safety; government

regulation and legal uncertainties; the company's exploration and development properties may not be successful and are highly speculative in nature; dependence on outside parties; title to some of the Company's mineral properties may be challenged or defective; Aboriginal title and land claims; obtaining and renewing licenses and permits; environmental and other regulatory risks may adversely affect the company; risks relating to climate change; risks related to infrastructure; land reclamation requirements may be burdensome; current global financial conditions; fluctuation in commodity prices; dilution; future sales by existing shareholders could cause the Company's share price to fall; fluctuation and volatility in stock exchange prices; and risks related to market demands. There can be no assurance that any opportunity will be successful, commercially viable, completed on time or on budget, or will generate any meaningful revenues, savings or earnings, as the case may be, for the Company. In addition, the Company will incur costs in pursuing any particular opportunity, which may be significant.

These factors and assumptions are not intended to represent a complete list of the factors and assumptions that could affect the Company and, though they should be considered carefully, should be considered in conjunction with the risk factors described in the Company's other documents filed with the Canadian securities authorities, including without limitation the "Risk Factors" section of the Company's Annual Information Form dated November 29, 2023 which is available on SEDAR at [www.sedarplus.ca](http://www.sedarplus.ca). Although the Company has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking information or information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. The Company does not

*undertake to update any forward-looking information, except in accordance with applicable securities laws.*