



Giyani Metals Corp. - Completion of Solar Plant Study for the K.Hill Manganese Project & Grant of Options

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TORONTO, Jan. 18, 2021 (GLOBE NEWSWIRE) -- Giyani Metals Corp. (TSXV:EMM, GR:A2DUU8) ("**Giyani**" or the "**Company**") is pleased to announce that it has completed a photovoltaic solar plant ("Solar Plant") study for its K.Hill manganese project ("K.Hill"), in Southern Botswana. In addition, Giyani has granted 750,000 stock options to certain consultants of the Company.

Solar Plant Study

The Company is committed to building an environmentally sustainable operation and to have a positive impact for all of its stakeholders. This includes not only the people, environment and society surrounding K.Hill, but also the end buyers that have shown interest in obtaining a more sustainable source of high purity manganese. The K.Hill site is surrounded by flat topography, which, coupled with the high amounts of annual sunshine, makes it highly attractive for solar power generation.

Approximately 40% of an electric vehicle's ("EV") carbon footprint during production is associated with the battery. Feedback Giyani has received from potential end buyers, such as battery manufacturers and original equipment manufacturers ("OEMs") of EVs - particularly those in Europe, North America, Japan and South Korea - is that they are working to reduce their products' carbon footprint as much as possible. Therefore, the supply of the battery's raw materials is a particular focus. This has been supported by public statements by the EV OEMs on the importance of responsibly sourced battery metals. As the market for manganese-containing batteries continues to grow, the Company anticipates that the sustainability of high purity manganese will become of increasing importance.

Tetra Tech was appointed to conduct the Solar Plant study and determine which of the following three scenarios would be most commercially viable:

1. The '**No Export**' scenario considers the maximum size of Solar Plant that during peak solar generation (in the middle of the day) the K.Hill operations are only powered by the Solar Plant. Therefore, there is no facility for either storing or exporting excess power to the grid. Outside of peak generation, the grid supplies the remaining power requirements for the K.Hill operations.
2. The '**Net Zero Annual Generation**' scenario is where the size of the Solar Plant approximately matches the annual energy requirements of the K.Hill operations. During peak solar generation (middle of a summer's day), the excess power generated is exported to the grid. And vice-versa, during times of no solar generation (at night or on a cloudy day) power is purchased back from the grid. Thereby, on an annualized basis, the actual consumption of grid produced power, and therefore payments to the grid, are near-zero. This scenario would require additional capex for grid transmission and distribution infrastructure upgrades, as well as regulatory approval.
3. The '**Transition into IPP**' scenario envisions Giyani as an independent power producer (IPP), where the size of the Solar Plant is constrained by the capacity of the local grid interconnection infrastructure, rather than the demand from the K.Hill operations (as per Scenario 2). Similar to Scenario 2, excess power generated by the Solar Plant will be exported to the grid and bought back, albeit in smaller quantities. This scenario would also require regulatory approval.

The Solar Plant study concluded that despite each option delivering operating cost savings to K.Hill, compared to using 100% grid power, it is recommended to initially implement Scenario 1, with the view to upgrading to either Scenario 2 or 3 as a second phase once regulatory approval is granted. The Solar Plant study will now proceed to a feasibility study on that basis.

Table 1. Solar Plant Study Summary

	No Export	Net Zero	Transition to IPP
Scenario	1	2	3
Power rating (MW)	14	60	48
Solar array size (km²)	0.3	1.4	1.1
Net savings (US\$/yr)	\$2.8m	\$11.1m	\$9.7m
Capex (US\$m)	\$10.5m	\$44.9m	\$34.9m
CO₂ saving (Mt/yr)	63,000	247,273	214,375

Robin Birchall, CEO of the Company, commented:

"A Solar Plant generates many advantages for the K.Hill project. It creates operating cost savings, it improves our carbon footprint, and because of this we expect it to improve the marketability of our high purity manganese. Therefore, we expect this initiative to not only further improve our K.Hill project NPV, but also to provide a positive impact for the environment.

We believe that there are several attributes that are unique to K.Hill, one of which is access to an abundant source of renewable energy that we can harness to our advantage. As announced on October 2, 2020 the Company appointed Minviro to conduct an ISO compliant life cycle assessment. The Solar Plant will be included in this analysis. It is our focus to become one of the lowest carbon footprint producers of high purity manganese, which in turn we expect should attract a premium price for our product."

Grant of Options

Giyani has granted an aggregate of 750,000 stock options (each an "Option") to certain consultants of the Company in accordance with the Company's current stock option plan. Each Option is exercisable into one common share (a "Share") of the Company at a price of \$0.465 per Share for a period of five years from the date of grant, being today, with the Options vesting as to 250,000 today, and a further 250,000 on each of the first and second anniversaries of the grant date.

About Giyani

Giyani Metals Corp. is a mineral resource company focused on the development of its K.Hill, Lobatse & Otse manganese oxide projects in the Kanye Basin, Botswana, Africa. The Company's flagship K.Hill project is a near-surface deposit currently going through a feasibility study to produce high-purity electrolytic manganese metal and manganese sulphate, both key cathode ingredients for batteries in the expanding electric vehicle (EV) market.

Additional information and corporate documents may be found on www.sedar.com and on Giyani Metals Corp. Website: <https://giyanimetals.com/>.

About TetraTech

Tetra Tech is a leading provider of high-end consulting and engineering services for projects worldwide. With 20,000 associates working together, Tetra Tech provides clear solutions to complex problems in water, environment, infrastructure, resource management, energy, and international development. For more information about Tetra Tech, please visit www.tetrattech.com

Giyani appointed TetraTech, alongside SRK Consulting, in 2019 to produce the Preliminary Economic Assessment for K.Hill. Both consultants have since been retained by the Company to produce K.Hill's Feasibility Study, which is expected to be completed later in 2021.

On behalf of the Board of Directors of Giyani Metals Corp.

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Forward-Looking Information

This press release contains "forward-looking information" within the meaning of applicable Canadian securities legislation. All statements in this news release, other than statements of historical fact, that address events or developments that Giyani expects to occur, are "forward-looking statements". Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the words "expects", "does not expect", "plans", "anticipates", "does not anticipate", "believes", "intends", "estimates", "projects", "potential", "scheduled", "forecast", "budget" and similar expressions, or that events or conditions "will", "would", "may", "could", "should" or "might" occur. Specific forward-looking

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All such forward-looking statements are based on the opinions and estimates of the relevant management as of the date such statements are made and are subject to certain assumptions, important risk factors and uncertainties, many of which are beyond Giyani's ability to control or predict. Forward-looking statements are necessarily based on estimates and assumptions that are inherently subject to known and unknown risks, uncertainties and other factors that may cause actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements. In the case of Giyani, these facts include their anticipated operations in future periods, planned exploration and development of its properties, and plans related to its business and other matters that may occur in the future. This information relates to analyses and other information that is based on expectations of future performance and planned work programs.

Forward-looking information is subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ from those expressed or implied by the forward-looking information, including, without limitation: inherent exploration hazards and risks; risks related to exploration and development of natural resource properties; uncertainty in Giyani's ability to obtain funding; commodity price fluctuations; recent market events and conditions; risks related to the uncertainty of mineral resource calculations and the inclusion of inferred mineral resources in economic estimation; risks related to governmental regulations; risks related to obtaining necessary licenses and permits; risks related to their business being subject to environmental laws and regulations; risks related to their mineral properties being subject to prior unregistered agreements, transfers, or claims and other defects in title; risks relating to competition from larger companies with greater financial and technical resources; risks relating to the inability to meet financial obligations under agreements to which they are a party; ability to recruit and retain qualified personnel; and risks related to their directors and officers becoming associated with other natural resource companies which may give rise to conflicts of interests. This list is not exhaustive of the factors that may affect Giyani's forward-looking information. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in the forward-looking information or statements.

Giyani's forward-looking information is based on the reasonable beliefs, expectations and opinions of their respective management on the date the statements are made, and Giyani does not assume any obligation to update forward looking information if circumstances or management's beliefs, expectations or opinions change, except as required by law. For the reasons set forth above, investors should not place undue reliance on forward-looking information. For a complete discussion with respect to Giyani and risks associated with forward-looking information and forward-looking statements, please refer to Giyani's financial statements and related MD&A, all of which are filed on SEDAR at www.sedar.com.