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FOR IMMEDIATE RELEASE

# EmitlQ's Preliminary Feasibility Study Confirms 99% Emission Cut and \$140-340 per ton Carbon Credit Potential with Volt Carbon's Air Classification Technology for Graphite

December 5, 2024, Calgary, AB, Canada – Volt Carbon Technologies Inc. ("Volt Carbon" or the "Company") (TSX-V: VCT) (OTCQB: TORVF), is pleased to announce key findings from an independent preliminary feasibility study conducted by Natureblocks Technology Inc. also known as EmitlQ (the "**Study**"), highlighting the environmental and economic benefits of the Company's air classification technology for graphite production. The Study underscores the Company's commitment to environmentally responsible operations and highlights substantial environmental and economic benefits.

### Air Classification Technology

Volt Carbon's proprietary air classification process has achieved graphite purity levels of 95% to 98.5% (Independently verified by ProGraphite GmBH) without the use of water or chemical reagents on several graphite ore samples in Ontario and Quebec. This innovative dry process separates natural flake graphite from impurities using controlled airflow, eliminating many of the environmental risks associated with conventional flotation methods.

## Operational Benefits and Key Environmental Findings from the Study:

- 99% Reduction in GHG Emissions: Emissions are reduced to as low as 0.123–0.15 kg CO₂e per kilogram of graphite when powered by renewable energy, compared to 9.5–13.7 kg CO₂e per kilogram using traditional methods.
- **Negligible Water Use:** The process virtually eliminates up to 75 litres of water required per kilogram of graphite in traditional flotation.
- Reduced Land and Chemical Impact: Air classification minimizes land disturbance, acidification potential, and chemical waste, aligning with Volt Carbon's sustainability goals.
- Land Use Transformation: The dry air classification process has a lower environmental impact on land use compared to traditional methods, which can lead to erosion and groundwater depletion. This reduced land disturbance aligns with Volt Carbon's commitment to environmentally responsible operations.
- Reduced Acidification Potential: The air classification process minimizes chemical waste production, reducing the environmental risks associated with soil and water contamination from chemical reagents. Traditional flotation methods contribute significantly to acidification, whereas air classification virtually eliminates this risk.

# **Carbon Credit Revenue Opportunities**

As Volt Carbon aims to scale up to produce 10,000 tons of graphite annually, the study indicates it could offset \$140 to \$340 per ton in production costs through carbon credits. This adds up to \$1.4 million to \$3.4 million in total offsets for every 10,000 tons produced, certified under standards like the Verified Carbon Standard (VCS) and the Gold Standard.

"The preliminary feasibility results from EmitIQ have exceeded our expectations, particularly in terms of water savings and emissions reductions, which appear to be industry leading. EmitIQ's high-fidelity validation highlights the

immense potential of our technology. Our next step is to construct a demonstrator unit to support a full feasibility assessment and advance commercialization for graphite applications," said V-Bond Lee, CEO of Volt Carbon Technologies.

The full report from EmitIQ can be found here.

# **Next Steps for Volt Carbon's Air Classification Technology**

Developed using advanced computational fluid dynamics, Volt Carbon's air classification system simplifies permitting and improves scalability while reducing capital expenditures. Unlike traditional wet processes, this innovative technology unlocks the potential of smaller, previously uneconomical ore bodies. Volt Carbon will continue to build and test its machinery, with plans to further scale a demonstrator unit as a key step toward commercialization.

## **About Volt Carbon Technologies**

Volt Carbon Technologies, headquartered in Calgary, is a publicly traded carbon science company focused on energy storage and green energy solutions. The company operates a lithium-ion battery plant in Guelph and a mineral processing facility in Toronto. Volt Carbon also holds mining claims across Ontario, Quebec, and British Columbia, supporting its commitment to sustainable resource development. For the latest updates on Volt Carbon's projects and news, visit <a href="https://www.voltcarbontech.com">www.voltcarbontech.com</a>.

On behalf of the Board of Directors,

#### **Volt Carbon Technologies Inc.**

V-Bond Lee, P. Eng. CEO, President, Chairman of the Board and Director

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FORWARD LOOKING STATEMENTS AND FUTURE ORIENTED FINANCIAL INFORMATION: This press release contains forward-looking statements and future oriented financial information, within the meaning of applicable securities legislation, concerning Volt Carbon's business and affairs. In certain cases, forward-looking statements or future oriented financial information can be identified by the use of words such as "plans", "expects" or "does not expect", "intends" "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Such forward-looking statements and future oriented financial information include those with respect to: (1) the expected 99% Emission Cut and \$140-340 per ton Carbon Credit Potential with Volt Carbon's Air Classification Technology for Graphite; (2) emissions are expected to be reduced to as low as 0.123-0.15 kg CO<sub>2</sub>e per kilogram of graphite when powered by renewable energy, compared to 9.5-13.7 kg CO<sub>2</sub>e per kilogram using traditional methods; (3) expected negligible water use resulting from the elimination of up to 75 litres of water required per kilogram of graphene in traditional flotation; (4) expected reduced land and chemical impact resulting from the expect minimized land disturbance, acidification potential, and chemical waste; (5) the dry air classification process has an expected lower environmental impact on land use compared to traditional methods, which can lead to erosion and groundwater depletion; (6) anticipated reduced acidification potential and the expected minimization of chemical waste production reducing the environmental risks associated with soil and water contamination from chemical reagents; (7) the plan to explore the viability and benefits of implementing a carbon offset project using Volt Carbon's innovative dry separation process in graphite production; (8) the expectation that Volt Carbon is positioned

to earn potentially \$1.4 million to \$3.4 million in carbon credits for every 10,000 tons of graphite concentrate produced; (9) the expectation that these carbon credits can be certified under standards such as the Verified Carbon Standard (VCS) and Gold Standard; (10) the anticipated immense potential of our technology and the expected next step of constructing a demonstrator unit to support a full feasibility assessment and advance commercialization for graphite applications; and (11) the expectation that Volt Carbon will continue to build and test its machinery, with plans to further scale a demonstrator unit as a key step toward commercialization. The future oriented financial information contained in this news release was approved by management as of the date hereof. The purpose of the future oriented financing information is to provide investors, analyst and other financial stakeholders insight into the potential economic benefits resulting from Carbon Credits and readers are cautioned that the information may not be appropriate for other purposes.

Statements of past performance should not be construed as an indication of future performance. Forward-looking statements and future oriented financial information involve significant risks, uncertainties and assumptions, and should not be read as guarantees of future performance or results and will not necessarily be accurate indications of whether or not such results will be achieved. These assumptions and risks include, but are not limited to: the continued existence of the carbon credit program in Canada and future viability of same, regulatory and governmental changes, capital and operating costs varying significantly from estimates, the ability to replicate the results of the Study in a demonstrator unit and at a commercial production level, the ability to construct a demonstrator unit with reasonable construction and operating costs, the ability to construct units that can operate on a commercial scale, the data available at the time of the Study, the reliability of third-party sources, including the Study, the assumptions and limitations outlined in the Study, the preliminary in nature of the Study and the fact that estimates provided therein are subject to revisions in subsequent design phases or through more comprehensive assessments such as a Feasibility Study or Life Cycle Assessment. A number of factors, including those discussed above, could cause actual results to differ materially from the results discussed in the forward-looking statements. Any and all such forward-looking statements or future oriented financial information in this press release are expressly qualified in their entirety by these cautionary statements. Readers are cautioned not to place undue reliance on such forward-looking statements and future oriented financial information. Forward-looking information and future oriented financial information are provided as of the date of this press release, and Volt Carbon assumes no obligation to update or revise them to reflect new events or circumstances, except as may be required under applicable securities legislation.