Entropy Inc. Provides Operational and Corporate Update

(TSX: AAV)

CALGARY, AB, Feb. 8, 2023 /CNW/ - Entropy Inc. ("Entropy" or the "Corporation"), a subsidiary of Advantage Energy Ltd. ("Advantage"), is pleased to provide an operational update on its first post-combustion carbon capture and storage ("CCS") project at Glacier, Alberta, and a corporate update.

Glacier CCS Operations

Phase 1 of Entropy's Glacier CCS project (200,000 tonnes per annum ("tpa") in two phases) has been running steadily since commissioning in July 2022, and the system performance has established a new global benchmark for efficiency. Capture rates from the 5.3% CO2 flue gas are generally between 90% and 95%. Runtime of the CCS equipment has averaged 98%, not including outages related to host plant maintenance and a series of planned reconfigurations for research and development ("R&D"). The project has achieved a specific reboiler duty of 2.4 GJ/tonne during extended periods of stable operations, with even lower numbers achieved intermittently. The compression, transportation and sequestration system is performing as designed, permanently storing all captured CO2 volumes at predicted conditions, and Entropy is generating compliance-based environmental performance credits.

Analysis of final project capital for Glacier CCS Phase 1 indicates that future projects are on-track to achieve a capital cost of C$475/tonne/annum (capture only, including inflation) for high-quality mid-sized projects, and lower for large projects. Once the R&D phase is complete, Entropy expects full-cycle operating costs (including capture, compression, transportation and storage) for Glacier Phase 1 will trend downwards from approximately C$30/tonne currently towards C$27/tonne. Based on these results, Entropy expects Phase 2 full-cycle operating costs will drop below C$22/tonne, and larger projects are expected to be lower.

Entropy would like to thank the many team members who have made the project successful, including the research and development team from the University of Regina, the engineering team from Entropy led by Brent Allardyce, James Martin and Rick Bower, the Entropy project team, and our strategic partners at Advantage and Brookfield Renewable.

Athabasca Leismer Project Update

Entropy's Athabasca Leismer CCS project (440,000 tpa in two phases) has reached "shovel-ready" status. The next step for the project is to drill and test the local reservoir for injectivity; however, the disposal permit has been delayed while the province establishes regulations for the CO2 sequestration "hub" model. This permitting delay may result in the project being delayed by approximately three months as the end of the winter drilling season approaches. In an effort to support Alberta's emissions reduction objectives, we are continuing to engage with regulators to ensure effective local carbon storage policy, including geological suitability, permanence, access rights and monitoring while ensuring that emitters are not forced into constrictive, uneconomic storage solutions.

The Athabasca Leismer project has received significant financial support from the Alberta government through Emission Reduction Alberta's ("ERA") Carbon Kickstart Grant and is expected to be fully eligible for the federal CCS investment tax credit ("ITC") and carbon contract-for-differences ("CCFD") structure, although the federal programs have not yet been substantially enacted.

Corporate Update

Now that Entropy's advanced technology has been proven at Glacier, Entropy has begun expanding its team with a focus on commercial growth in the United States. Entropy believes the highly effective CCS policies contained in the Inflation Reduction Act of 2022 ("IRA"), with a government-guaranteed carbon price of US$85/tonne (~C$115/tonne), will lead to faster deployment of CCS technology.

Entropy is pleased to announce its first memorandum of understanding in California with California Resources Corporation ("CRC"). The project involves Entropy providing technology, engineering and development expertise to decarbonize gas-fired boilers that are used in field operations. Upon completion, the project is expected to capture and sequester approximately 400,000 tpa.

Entropy's near-term projects include approximately 1.5 mmtpa of post-combustion projects being developed in Canada and the United States, including Glacier (200,000 tpa), Athabasca Leismer (440,000 tpa), the CRC project (400,000 tpa) and an additional Alberta project on turbines and boilers (450,000 tpa). All of these projects have the potential to advance to procurement and construction during 2023 and represent first-in-kind deployment of CCS technology. Mid-term and long-term projects remain well in excess of 10 mmtpa.

Entropy is continuing to develop two large-scale sequestration hubs in Alberta. At the Bow Valley Carbon Hub, Entropy and its partner have begun investment in geologic and geophysical evaluations to meet the near-term requirements of a joint CCS project under development nearby. At the Grande Prairie Net Zero Gateway, Entropy and partners are kicking off geological evaluation work and scoping potential projects in the region.

Introducing EntropyIQ™: Proprietary Digital Carbon Management Software

Entropy is pleased to introduce EntropyIQ™, a proprietary emissions tracking, processing and reporting software platform that is a complete solution for all CCS measurement, monitoring and verification ("MMV") data. Developed by Entropy as a necessity for commercial CCS projects, this powerful proprietary platform creates a digital twin of emitting facilities to gather emissions and operating data directly from multiple control systems. The platform calculates a full suite of performance metrics and assembles a suite of auditable MMV reports for export and analysis. The subscription-based, fully operational platform is expected to satisfy the growing industry need for data management, emissions tracking, reporting and carbon credit generation, and is expected to complement Entropy's base business as a CCS developer.

Organizational Updates

Entropy is pleased to announce that Trevor MacFarlane has joined the board of directors. Mr. MacFarlane brings over 25 years of energy infrastructure experience including areas of expertise in strategic planning, operational risk management and technology. He holds a Masters in Metallurgical Engineering from Queen's University and completed advanced leadership programs, including a QuantumShift Fellow, from the Ivy School of Business. Mr. MacFarlane has previously held responsibility for overall corporate strategy, leadership and vision, and business performance for companies with an enterprise value of over $1 billion and 1,000+ employees. Mr. MacFarlane currently sits on the Board of the Canadian Energy Pipeline Association (CEPA) Foundation as well as an independent director for Skipper NDT, a technology firm focused on the performance of energy infrastructure, based in France.

Entropy is also pleased to announce that Jason Chadwick has been promoted to Chief Commercial Officer. Jason joined Entropy in 2021 as Vice President, Business Development and has played a critical role in developing partnerships with emitters and the commercial frameworks that will allow Entropy to develop projects in multiple jurisdictions around the world.

About Entropy:

Entropy is a privately-owned company, founded by Advantage, applying sophisticated science and engineering to develop commercial CCS projects. Entropy entered a strategic $300 million investment agreement with Brookfield Renewable in 2022 to scale up deployment of Entropy's CCS technology globally. Entropy's technology is expected to deliver commercial profitability with an industry-leading cost structure using proprietary modular carbon capture and storage technology. Entropy intends to deploy this technology in the global effort to reduce and eventually eliminate carbon emissions. Further information is available at www.entropyinc.com.

Forward-Looking Information and Advisory

All references in this press release are to Canadian dollars (C$) unless otherwise indicated.

The information in this press release contains certain forward-looking statements, including within the meaning of applicable securities laws. These statements relate to future events or our future intentions or performance. All statements other than statements of historical fact may be forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "anticipate", "continue", "demonstrate", "expect", "may", "can", "will", "believe", "would" and similar expressions and include statements relating to, among other things: the anticipated capital cost and full-cycle operating costs of Entropy's current and future projects; the anticipated capture rate of Entropy's Glacier CCS project; the anticipated benefits to be derived from construction at the Glacier CCS project and the anticipated timing thereof; the anticipated benefits of the EntropyIQ™ technology; the anticipated capture rate of the Athabasca Leismer CCS project and Entropy's expectations of when FID will occur; the anticipated capture rate of the CRC project; that Entropy will continue to engage with regulators and the anticipated benefits to be derived therefrom; Entropy's expectations that the Athabasca Leismer CCS project will be fully eligible for the ITC and CCFD structure; the anticipated benefits to be derived from the IRA; the anticipated timing of the procurement and construction of Entropy's near-term projects and their anticipated capture rates; Entropy's expectations that its Bow Valley Carbon Hub will be operational and will meet the requirements of a nearby capture project; Entropy's expectations that its technology will deliver commercial profitability with an industry-leading cost structure using proprietary modular carbon capture and storage technology; and that Entropy will deploy its technology in the global effort to reduce and eventually eliminate carbon emissions. Entropy's actual decisions, activities, results, performance or achievement could differ materially from those expressed in, or implied by, such forward-looking statements and accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur or, if any of them do,

what benefits that Entropy or Advantage will derive from them.

With respect to forward-looking statements contained in this press release, Entropy has made assumptions regarding, but not limited to: that Entropy's engagement with regulators will be successful; that the long-term operating costs of Entropy's CCS projects will not be greater than anticipated; that Entropy will receive the regulatory approvals required in connection with the Athabasca Leismer CCS project; that Entropy's existing engagements, including with respect to the CRC project, will lead to completed projects; that Entropy's CCS projects will reach FID; conditions in general economic and financial markets; effects of regulation by governmental agencies; current and future commodity prices and royalty regimes; future exchange rates; royalty rates; future operating costs; availability of skilled labor; the impact of increasing competition; that Entropy will have sufficient cash flow, working capital, debt or equity sources or other financial resources required to fund its capital and operating expenditures and requirements as needed; that Entropy's conduct and results of operations will be consistent with expectations; that Entropy will have the ability to develop its technology in the manner currently contemplated; current or, where applicable, proposed assumed industry conditions, laws and regulations will continue in effect or as anticipated; and the anticipated benefits and results from Entropy's technology are accurate in all material respects. Readers are cautioned that the foregoing lists of factors are not exhaustive.

These statements involve substantial known and unknown risks and uncertainties, certain of which are beyond Entropy's control, including, but not limited to: the risk that Entropy may not realize the benefits anticipated from its CCS projects when anticipated, or at all; the risk that MMV technology may not satisfy the growing industry need for a fully auditable data management system for emissions tracking, reporting and carbon credit generation; the risk that Entropy may not receive the regulatory approvals required in connection with the Athabasca Leismer CCS project when anticipated, or at all; the risk that Entropy's engagement with the regulators may not be successful; the risk that the Athabasca Leismer CCS project may not be fully eligible for the ITC and CCFD structure; the risk that Entropy's engagements may not lead to completed projects; the risk that the procurement and construction of Entropy's near-term projects may not be completed when anticipated, or at all; the risk that Entropy's Bow Valley Carbon Hub may not be operational or meet the requirements of a nearby capture project when anticipated, or at all; changes in general economic, market and business conditions; industry conditions; actions by governmental or regulatory authorities including increasing taxes and changes in investment or other regulations; changes in tax laws and incentive programs; changes in carbon tax and credit regimes; competition from other producers; the lack of availability of qualified personnel or management; intellectual property and patent risks; credit risk; changes in laws and regulations including the adoption of new environmental laws and regulations and changes in how they are interpreted and enforced; ability to comply with current and future environmental or other laws; stock market volatility and market valuations; failure to achieve the anticipated benefits and results of Entropy's technology; failure to achieve the anticipated benefits of Entropy's relationships with third parties; ability to obtain required approvals of regulatory authorities; and the ability to access sufficient capital from internal and external sources.

Management has included the above summary of assumptions and risks related to forward-looking information above in order to provide readers with a more complete perspective on Entropy's future operations and such information may not be appropriate for other purposes. Entropy's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what benefits that Entropy or Advantage will derive therefrom. Readers are cautioned that the foregoing lists of factors are not exhaustive. These forward-looking statements are made as of the date of this news release and Entropy and Advantage disclaim any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise, other than as required by applicable securities laws.

This press release contains information that may be considered a financial outlook under applicable securities laws about Entropy's potential financial position, including, but not limited to, the anticipated capital cost and full-cycle operating costs of Entropy's current and future projects, all of which are subject to numerous assumptions, risk factors, limitations and qualifications, including those set forth in the above paragraphs. The actual results of operations of Entropy and the resulting financial results will vary from the amounts set forth in this press release and such variations may be material. This information has been provided for illustration only and with respect to future periods are based on budgets and forecasts that are speculative and are subject to a variety of contingencies and may not be appropriate for other purposes. Accordingly, these estimates are not to be relied upon as indicative of future results. Except as required by applicable securities laws, neither Advantage nor Entropy undertakes any obligation to update such financial outlook. The financial outlook contained in this press release was made as of the date of this press release and was provided for the purpose of providing further information about Entropy's potential future business operations. Readers are cautioned that the financial outlook contained in this press release

is not conclusive and is subject to change.

The following abbreviations used in this press release have the meanings set forth below:

GJ	*gigajoule*
mmtpa	*million metric tonnes per annum*
tpa	*tonnes per annum*

SOURCE Advantage Energy Ltd.

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