Entropy Inc. Announces Glacier Phase 2 Final Investment Details, First Clean Power Investment, and Corporate Update

(TSX: AAV)

CALGARY, AB, July 9, 2024 /CNW/ - Entropy Inc. ("Entropy" or the "Corporation"), a subsidiary of Advantage Energy Ltd. ("Advantage"), is pleased to provide a corporate update including the recent final investment decision ("FID") at Glacier Phase 2 and Entropy's first investment into the clean power generation market.

Glacier Phase 2 Investment Details

Entropy is pleased to announce FID of our second post-combustion carbon capture and storage ("CCS") project, with an onstream date expected in the second quarter of 2026. Highlights of the project include:

- All material unabated emissions sources at the Glacier Gas Plant will be captured using Entropy's industry-leading modular CCS ("MCCS™") technology, targeting over 90% efficiency.
- Total CO_2 capture capacity will be 160,000 tonnes per annum ("tpa"), from nine gas-fired engines plus one gas-fired power generation turbine. This is in addition to the existing Phase 1 capacity of 32,000 tpa.
- Total cost of Glacier Phase 2 capture equipment, compression, transportation and storage wells is $127 million, resulting in a capital efficiency of $800/tpa, or $600/tpa for capture only excluding compression, transportation and storage.
- All capital expenditures are expected to be eligible for the recently legislated federal investment tax credit of up to 50%, plus the upcoming Alberta carbon capture incentive program of 12%.
- All CCS process heat will be supplied from waste heat recovery (0 GJ/tonne external heat).
- Parasitic power load is expected to be 10% for capture and 10% for disposal compression.
- All CO_2 will be permanently disposed of into a saline aquifer approximately two kilometers below the surface, strictly regulated by the Alberta government.
- Revenue from the project is contractually underpinned 75% by a 15-year Carbon Credit Offtake ("CCO") agreement with Canada Growth Fund ("CGF") and 25% by a 15-year Power Purchase Agreement ("PPA") with Advantage.

Glacier Phase 2 technology integrates multiple industry-first innovations developed since 2022 while operating Glacier Phase 1, including process design refinements, standardized procedures, enhanced operational strategies identified using EntropyIQ™ data analysis, solvent enhancements, and customized original equipment facilitated by manufacturers.

To achieve commerciality, Entropy has advanced several carbon policy and revenue models including contractually guaranteed offtake via the world's first 15-year CCO. Entropy's investment in Glacier Phase 2 will have no material exposure to potential changes in federal and provincial carbon pricing.

Entropy Entering Independent Power Producer Market with Clean Baseload Power at Glacier

Entropy is pleased to announce its first investment in clean power generation. In conjunction with the Glacier Phase 2 CCS project, Entropy will repower Advantage's Glacier Gas Plant by installing a 15 MW gas-fired turbine and selling power to Advantage via a 15-year PPA while capturing approximately 90% of the CO_2 emissions from the turbine. Details of the project include the following:

- Entropy will install the modular power plant at a cost of $47 million, providing power and heat for the Glacier plant and Entropy's CCS equipment.
- Advantage will receive higher-reliability base-load power at a cost below or equal to the existing on-site generators.
- Entropy will install one iCCS Turbine™ module on the gas turbine, capturing CO_2 from its exhaust (3.5% CO_2 concentration) at no cost to Advantage.
- With the more efficient turbine power source, the existing generators will be shut-in, eliminating prior CO_2 and methane emissions.
- Entropy will compress, transport and dispose of the captured CO_2 in an Entropy-owned disposal well.

Injectivity Results from Recently Drilled CO_2 Disposal Well for Glacier Project

Injectivity testing at the recently-drilled Glacier 16-15-076-12W6 CO_2 disposal well has been completed, indicating an initial capacity of up to 3 million tpa. The well was drilled to 2,115 meters vertical depth with a horizontal length of 2,700 meters for a total cost of $6.7 million. All Glacier Phase 1 CO_2 volumes are currently being sequestered in the well, operating at 18% of allowable injection pressures, and Entropy expects the well will accommodate Phase 2 CO_2 volumes once commissioned.

Clean Power Data Center Project

Entropy has signed an agreement to jointly develop a data center powered by gas-fired turbines and decarbonized by iCCS Turbine™ technology. The project involves construction of base-load power generation for the data center, while capturing and storing CO_2 at an Entropy-developed CO_2 storage hub.

Current Outlook for Remaining Unallocated CCO Volumes

With the advancement of Glacier Phase 2, Entropy will allocate approximately a quarter of CGF's initial 600,000 tpa commitment (please refer to Entropy press release dated December 20, 2023). For the remaining offtake volumes, Entropy will seek to optimize the allocations by selecting the highest quality projects with the lowest cost structures and the most committed emitting partners. Engineering design work continues to advance on several projects in Alberta as well as two projects in the United States, although projects which are outside of Canada are unable to benefit from the CCO structure.

Glacier Phase 1 Operational Update

Glacier Phase 1A (16,000 tpa capacity) was commissioned in July 2022 with industry-leading performance. Glacier Phase 1B (16,000 tpa capacity) was commissioned in December 2023, on-schedule and on-budget, integrating several engineering and operational enhancements and doubling the facility's capacity. The expertise that Entropy has gathered while operating this commercial CCS plant has been critical in establishing a competitive advantage and foundational knowledge that was essential for the Glacier Phase 2 FID.

Organizational Update

Entropy is pleased to announce the promotion of Mr. Chris Hooper to the position of Chief Financial Officer ("CFO"). Previously serving as Vice President of Capital Markets, Mr. Hooper has been an integral part of the team, demonstrating leadership and strategic insight in multiple aspects including the CGF investment. In his new role, Mr. Hooper will oversee the financial operations of the Corporation, ensuring effective fiscal management and contributing to ongoing growth initiatives.

Entropy would like to express our great appreciation to Mr. Craig Blackwood, our founding CFO, for his substantial efforts in creating, leading and incubating Entropy within Advantage over the last 4 years. While continuing in his role as CFO of Advantage, Mr. Blackwood will act as an advisor to Entropy, providing valuable guidance, support, and direction to the Corporation.

We are also pleased to announce Mr. Adam Bedard is joining Entropy as Vice President, United States. Mr. Bedard's background in CCS development throughout the United States will be a welcome addition as Entropy advances several projects in California, the Rockies and the Midwest.

About Entropy

Entropy is a privately-owned company applying sophisticated science and engineering to develop commercial CCS projects. Entropy entered a strategic $300 million investment agreement with Brookfield in 2022. In 2023, Entropy entered a strategic investment with the Canada Growth Fund which includes a $200 million strategic investment and a Carbon Credit Offtake agreement for up to one million tpa of carbon credits for 15 years. These transactions have been undertaken to scale up the 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: Entropy's position, strategy and development plans and the anticipated benefits to be derived therefrom; the anticipated onstream date of Glacier Phase 2 and the anticipated benefits to be derived therefrom; the anticipated results of the Glacier Phase 2 project, including targeted efficiency, capture capacity, total costs, expectations that all CCS process heat will be supplied from waste heat recovery and targeted parasitic power load; expectations that Glacier Phase 2 will have no material exposure to potential changes in federal and provincial carbon pricing; Entropy's investment in clean power generation and the anticipated costs thereof and benefits to be derived therefrom; expectations that the recently drilled CO_2 disposal well for Glacier will accommodate Phase 2 CO_2 volumes once commissioned; the anticipated benefits to be derived from Entropy's agreement to jointly develop a clean power data center and

its expectations that carbon storage will be provided by one of Entropy's two global-scale CO_2 storage hubs in Alberta; Entropy's anticipated uses of CGF's initial 600,000 tpa commitment and the anticipated benefits to be derived therefrom; the anticipated benefits to be derived from Entropy's strategic investment agreements with Brookfield Renewable and CGF; 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 future operating results will be consistent with the results of its injectivity tests at the recently drilled CO_2 disposal well; that the long-term operating costs of Entropy's CCS projects will not be greater than anticipated; that Entropy's existing engagements, including with respect to its projects in the United States and Canada, will lead to completed projects; that Entropy's agreement to jointly develop a clean power data center will lead to a completed project; that the government will provide additional clarity on the federal investment tax credit and carbon price certainty; 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 the emissions captured from Entropy's projects under development in the United States and in Canada may be less than anticipated; the risk that Entropy's three iCCS™ standardized designs may not lead to the benefits anticipated; the risk that Glacier Phase 2 may not come onstream when anticipated or achieve the results anticipated; the risk that Glacier Phase 2 may have material exposure to potential changes in federal and provincial carbon pricing; the risk that Entropy's investment in clean power generation may cost more than anticipated and may not achieve the results anticipated; the risk that the recently drilled CO_2 disposal well for Glacier may not accommodate Phase 2 CO_2 volumes once commissioned; the risk that Entropy's agreement to jointly develop a clean power data center may not lead to a completed project when anticipated, or at all; the risk that Entropy may not optimize the allocations of its remaining offtake volumes; the risk that Entropy's strategic investment agreements with Brookfield Renewable and CGF may not achieve the results anticipated; the risk that Entropy's existing engagements, including with respect to its projects in the United States and in Canada, may not lead to completed projects; 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 the

Corporation's potential financial position, including, but not limited to: the anticipated costs of Glacier Phase 2 and Entropy's investment in clean power generation; 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 the Corporation 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 Entropy nor Advantage 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 the Corporation'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 and terms used in this press release have the meanings set forth below:

Clean Baseload Power or Clean Power	*references power generation that the Corporation believes is expected to achieve lower greenhouse gas emissions intensity as compared to power generation using coal, oil, or unabated natural gas*
CO_2	*carbon dioxide*
GJ	*gigajoule*
tpa	*tonnes per annum*

SOURCE Advantage Energy Ltd.

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