



NEWS RELEASE

Advent Technologies Participates in \$12.4 Million Project to Reduce GHG Emissions in the Maritime Sector

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BOSTON--(BUSINESS WIRE)-- Advent Technologies Holdings, Inc. (NASDAQ: ADN), an innovation-driven leader in the fuel cell and hydrogen technology space (the "Company" or "Advent"), is pleased to announce that its subsidiary, Advent Technologies A/S, has received approval for funding for its latest research and development project, RiverCell 3. This project aims to develop a maritime fuel cell system resulting in an auxiliary power unit with a total capacity exceeding 500kW. This will be accomplished by utilizing Advent's modular 50kW eMethanol-powered fuel cell systems ("Serene"), which are based on the Company's Ion-Pair™ membrane electrode assembly ("MEA") technology.

The RiverCell 3 project has a total budget of approximately \$12.4 million, from which Advent's budgeted portion is approximately \$6.1 million. The collaborative partners involved in the project include MEYER NEPTUN Engineering GmbH, Siemens Energy Global GmbH & Co. KG, Lloyd's Register EMEA Niederlassung Deutschland and Hochschule Wismar Bereich Seefahrt, Anlagentechnik und Logistik. The project commenced in January 2024 and is scheduled to conclude on December 31, 2026.

RiverCell 3 builds upon the foundation established by **previous** RiverCell initiatives, in which Advent played a pivotal role as a key partner, demonstrating the effectiveness of its Serene fuel cells to the maritime sector. In this latest stage of the project, Advent's innovative Ion Pair™ MEA technology will play a vital role in crafting fuel cell systems designed specifically for larger vessels.

By extending the expected lifespan of fuel cells by at least three times and doubling the power density compared to Advent's earlier systems, the Ion Pair™ MEA technology promises significant advancements in maritime

applications. The technology is made possible through the Company's participation in the U.S. Department of Energy's L'Innovator™ program, developed in collaboration with esteemed U.S. research institutions such as Los Alamos National Laboratory, Brookhaven National Laboratory, and the National Renewable Energy Laboratory.

The successful completion of RiverCell3 is anticipated to make a substantial contribution to the objectives outlined in the revised IMO GHG Strategy, which was adopted in July 2023. This strategy aims to mitigate greenhouse gas ("GHG") emissions for international shipping, with a reinforced commitment to achieving net-zero emissions by 2050. Furthermore, it pledges to encourage the adoption of alternative zero and near-zero GHG fuels by 2030, while also setting milestone targets for the years 2030 and 2040.

The RiverCell 3 project is partially funded by the German Federal Ministry for Digital and Transport as part of the National Innovation Programme Hydrogen and Fuel Cell Technology, with a total of approximately \$6.2 million, from which Advent's portion is approximately \$3 million. Funding for this measure is provided as part of the German Recovery and Resilience Plan (DARP) via the European Recovery and Resilience Facilities (ARF). The funding is coordinated by NOW GmbH and implemented by Project Management Jülich (Ptj).

Dr. Vasilis Gregoriou, Advent's Chairman and CEO, commented: "We express our sincere appreciation to the German Federal Ministry for Digital and Transport for their funding support, and we eagerly anticipate collaborating with our esteemed partners on this groundbreaking project for the maritime industry. Undoubtedly, the Ion Pair MEA technology will significantly enhance the capabilities of our Serene fuel cell systems, positioning them as a pivotal clean energy solution for the future of maritime operations."

Morten Sørensen, Senior Vice President of Advent Technologies A/S, commented: "The growing adoption of eMethanol as an environmentally friendly fuel in maritime settings stems from its notable energy density, convenient handling, and minimal emissions. As the maritime sector intensifies its endeavors to cut carbon footprints and comply with environmental regulations, Advent's eMethanol fuel cells stand out as the preferred choice, providing a compelling substitute for conventional diesel generators and engines that can be easily embraced today."

About Advent Technologies Holdings, Inc

Advent Technologies Holdings, Inc. is a U.S. corporation that develops, manufactures, and assembles complete fuel cell systems as well as supplying customers with critical components for fuel cells in the renewable energy sector. Advent is headquartered in Boston, Massachusetts, with offices in California, Greece, Denmark, Germany, and the Philippines. With more than 150 patents issued, pending, and/or licensed for fuel cell technology, Advent holds the IP for next-generation HT-PEM that enables various fuels to function at high temperatures and under extreme conditions, suitable for the automotive, aviation, defense, oil and gas, marine, and power generation sectors. For

more information, visit www.advent.energy.

Cautionary Note Regarding Forward-Looking Statements

This press release includes forward-looking statements. These forward-looking statements generally can be identified by the use of words such as “anticipate,” “expect,” “plan,” “could,” “may,” “will,” “believe,” “estimate,” “forecast,” “goal,” “project,” and other words of similar meaning. Each forward-looking statement contained in this press release is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statement. Applicable risks and uncertainties include, among others, the Company's ability to maintain the listing of the Company's common stock on Nasdaq; future financial performance; public securities' potential liquidity and trading; impact from the outcome of any known and unknown litigation; ability to forecast and maintain an adequate rate of revenue growth and appropriately plan its expenses; expectations regarding future expenditures; future mix of revenue and effect on gross margins; attraction and retention of qualified directors, officers, employees and key personnel; ability to compete effectively in a competitive industry; ability to protect and enhance Advent's corporate reputation and brand; expectations concerning its relationships and actions with technology partners and other third parties; impact from future regulatory, judicial and legislative changes to the industry; ability to locate and acquire complementary technologies or services and integrate those into the Company's business; future arrangements with, or investments in, other entities or associations; and intense competition and competitive pressure from other companies worldwide in the industries in which the Company will operate; and the risks identified under the heading “Risk Factors” in Advent's Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on March 31, 2023, as well as the other information filed with the SEC. Investors are cautioned not to place considerable reliance on the forward-looking statements contained in this press release. You are encouraged to read Advent's filings with the SEC, available at www.sec.gov, for a discussion of these and other risks and uncertainties. The forward-looking statements in this press release speak only as of the date of this document, and the Company undertakes no obligation to update or revise any of these statements. Advent's business is subject to substantial risks and uncertainties, including those referenced above. Investors, potential investors, and others should give careful consideration to these risks and uncertainties.

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