NEWS RELEASE

Advent Technologies Secures $2.2 Million Contract with the U.S. Department of Defense, Paving the Way for Higher Production Volumes of Portable Fuel Cell Systems

9/7/2023

Approved for Public Release

BOSTON--(BUSINESS WIRE)-- Advent Technologies Holdings, Inc. (NASDAQ: ADN) ("Advent" or the "Company"), an innovation-driven leader in the fuel cell and hydrogen technology space, is delighted to announce that its subsidiary, Advent Technologies, LLC, has secured a new $2.2 million contract with the U.S. Department of Defense (“DoD”). This milestone achievement comes under the General Technical Services prime contract titled 'Soldier Tactical Expeditionary Power - Energy Generation Services’, and it will play a crucial role in supporting the demanding defense mission requirements of the U.S. Army.

This contract is the continuation of a series of past contracts with the U.S. DoD and its primary objective is to further optimize Advent's proprietary Honey Badger 50™ (“HB50”) portable fuel cell system by integrating the Company’s innovative Ion Pair Membrane Electrode Assembly (“MEA”) technology. Upon the completion of this new 12-month contract, Advent and the U.S. DoD aim to reinforce their long-term collaboration by focusing on the manufacturing process of the enhanced HB50 fuel cell system, that will enable high-volume production manufacturing capacity.

MEAs form the heart of the fuel cell, and their performance determines the lifetime, efficiency, weight, and to a large extent, the cost of the end electrochemistry products. Advent’s Ion Pair MEA technology is anticipated to significantly enhance HB50’s performance, resulting in higher power density and improved compact packaging, making it an ideal solution for off-grid field applications, including military and rescue operations.

Since 2020, Advent Technologies, LLC has been actively refining its HB50 fuel cell system to create a highly portable and efficient power supply suitable for on-the-move battery charging and direct power supply for various U.S. Army applications. Through rigorous development efforts, the size and weight of the original 50W fuel cell system have been significantly reduced, culminating in successful field tests in 2022 and 2023, with the final technical report reinforcing its operational suitability.

The HB50 power system can be fueled by biodegradable methanol, providing near-silent power generation with clean emissions. Its compact design allows it to seamlessly power radio and satellite communications apparatus, remote surveillance systems, laptops, and other battery charging needs, making it an ideal choice for covert operations. The system’s unique thermal features enable it to operate within a wide ambient temperature range from considerably below freezing to surpassing 40°C, therefore ensuring reliability in challenging conditions and climates.

HB50's adaptability to run on methanol as hydrogen carrier fuel allows it to operate at a fraction of the weight of traditional military-grade batteries. This factor is aligned with the U.S. DoD's pursuit of lightweight and highly portable power solutions for their electronic needs, especially in conjunction with Integrated Visual Augmentation System and dismounted leader situational awareness systems for use during combat operations, like Nett Warrior.

Dr. Vasilis Gregoriou, Advent’s Chairman and CEO, commented, “This contract is a significant milestone in our journey to broaden market presence and establish Advent's portable fuel cell products as the leading choice for essential defense applications. Our collaboration with the U.S. Department of Defense on the Honey Badger 50™ fuel cell system opens the door to great opportunities and higher production volumes. Our vision encompasses a future where a substantial proportion of the U.S. Army’s remote operations will be powered by Advent’s highly innovative portable fuel cells. Beyond meeting the Army's needs, this optimized system represents a clean power solution for various other applications. Looking ahead, we have a strong vision for these unique fuel cells, foreseeing their widespread use in various sectors like robotics, agriculture, drones, emergency operations, as well as catering to the needs of leisure and camping enthusiasts in the hospitality industry.“

“We are very excited about this new contract and deeply honored to further expand our collaboration with the U.S. Department of Defense in advancing the development of our Honey Badger 50™ fuel cell system," said Vasilis Kopelas, General Manager of Advent LLC. "At Advent, we firmly believe in a world where fuel cells become the primary power option for challenging defense mission requirements, and we very much look forward to contributing to this new reality with our portable fuel cells. This enhanced version with Advent’s Ion Pair technology will set new benchmarks for fuel cell efficiency, longevity, and power density, providing reliable power both practically and sustainably for critical field operations."

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.

Advent Technologies Holdings, Inc.
Michael Trontzos **press@advent.energy**

Source: Advent Technologies Inc.