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ASP Isotopes Inc. Enters Into Memorandum of Understanding With a Small Modular Reactor Company To Supply High Assay Low Enriched Uranium (HALEU)

ASP Isotopes Inc. Enters Into Discussions With Four Further Additional Customers To Supply HALEU and Creates New Subsidiary Focused on Enriching Uranium for the Production of Advanced Nuclear Fuels

-Both the Memorandum of Understanding (MOU) and the other additional customer discussions are focused on formalizing collaboration to develop a HALEU production facility. These discussions include providing financial support for the development of a production facility and the future supply of metric tons of HALEU.

-ASPI has created a new subsidiary, Quantum Leap Energy LLC (QLE), to focus on the development of Quantum Enrichment Process technology, with a goal to supply commercial quantities of HALEU for Small Modular Reactors by 2027 and Lithium-6 for Nuclear Fusion.

-Based on these discussions with potential customers, ~$30 billion of HALEU demand is already anticipated.

-Quantum Leap Energy LLC operations are expected to be primarily funded by customers through investments and prepayments—ASPI is to consider plans for a future spin-off of the Quantum Leap Energy business to ASPI shareholders.

WASHINGTON, Sept. 28, 2023 (GLOBE NEWSWIRE) -- ASP Isotopes Inc. NASDAQ: ASPI ("ASPI," or the "Company"), an advanced materials company dedicated to the development of technology and processes designed to produce isotopes used in multiple industries, today announced that it has entered into a memorandum of understanding (MOU) with a major SMR (small modular reactor) company and is also engaged in discussions with at least four other potential customers regarding the development of a High Assay Low Enriched Uranium (HALEU) production facility with financial support from these future potential customers.

The Company is in discussions with potential customers who anticipate requiring over $30 billion[(1)] of HALEU at recent market prices.

HALEU will be required to enable many nuclear reactors, such as SMRs (small modular reactors), to operate in the future. Currently, there are no Western producers of HALEU in commercial quantities, and many SMR companies worldwide face substantial delays until this fuel supply issue is resolved. The Nuclear Energy Institute estimates that there may be a HALEU supply demand of approximately 3,000 metric tons by 2035[(2)]. However, based on discussions with and the interest received from potential customers, the Company believes this figure may be significantly larger.

The advanced nuclear fuels required during the next fifty years are expected to differ significantly from those used in the last fifty years. Without these advanced nuclear fuels, the world stands little chance of meeting 2050 climate goals, which could have devastating consequences for the world. Historically, low-carbon-emitting, environmentally friendly fuels for electricity production were available only at a substantial “green premium” vs. carbon-based fuels used for electricity generation.

ASPI believes their Quantum Enrichment process will be able to produce HALEU at an attractive price, allowing new nuclear energy to become available at a “green discount” to carbon-intensive electricity production processes. This “green energy cost advantage” is expected to help accelerate the global adoption of new nuclear energy, with a corresponding benefit to climate goals.

The Company has incorporated a new subsidiary, Quantum Leap Energy LLC (QLE), in the United States and an operating subsidiary in the United Kingdom (Quantum Leap Energy Ltd), which will focus on producing advanced nuclear fuels.

Specifically, QLE will concentrate on producing HALEU for use in Small Modular Reactors by 2027 and Lithium-6, which will be necessary for Nuclear Fusion. This production will come from the development of the Quantum Enrichment Process. Quantum Enrichment Process, an isotope enrichment method under development by our scientists, is a laser-based enrichment method, which we believe will have both the lowest levelized cost of HALEU production, the lowest cash operating cost of HALEU production, low capital expenditure, and efficient construction cycles. This will make the Quantum Enrichment Process ideal for enriching smaller-to-mid size quantities or flexible and growing amounts of specialized materials (HALEU and Lithium-6), as opposed to existing isotope enrichers who rely on a more extensive and slower process to produce commodity products.

In addition, based on initial experimental data, we believe that the Quantum Enrichment Process can enrich previously depleted uranium tails, which is essentially waste from other enrichers. Globally, over 1.7 million metric tons of depleted uranium tails are becoming an environmental hazard.

During the next 30 years, global energy consumption will likely double[(3)]. To meet 2050 climate goals, this must occur with a zero increase in carbon emissions. *“Over the last several decades, the scientists at ASPI have developed some of the world's most advanced isotope enrichment technologies. We have already had success with the enrichment of Carbon, Oxygen, and Silicon which will come into production in 2024 and we look forward to further using these technologies to solve some of our planet's greatest challenges*,” said Paul Mann, Chairman and CEO of ASPI, and Chairman and CEO of QLE. “*Nuclear fuel has one of the most severely compromised supply chains of any material in the World[(4)]. The*

World is in urgent need of an alternative supplier."

Quantum Leap Energy LLC is expected to be financed primarily independently of ASPI. It is expected that most of QLE's financial needs will be supplied by its future customers and other commercial partners. It is currently anticipated that the Company will consider plans for a future spin-off of the QLE business to ASPI shareholders.

About ASP Isotopes Inc.

ASP Isotopes Inc. is an advanced materials company dedicated to developing technology and processes to produce isotopes in multiple industries. The Company employs proprietary technology, the Aerodynamic Separation Process ("ASP technology"), for the production of all isotopes. The Company's initial focus is on producing and commercializing highly enriched isotopes for the healthcare and technology industries. The Company also plans to enrich isotopes for the nuclear energy sector. The Company has isotope enrichment facilities in Pretoria, South Africa, dedicated to the enrichment of isotopes of elements with a low atomic mass (light isotopes).

There is a growing demand for isotopes such as Silicon-28, which will enable quantum computing, and Molybdenum-100, Molybdenum-98, Zinc-68, Ytterbium-176, and Nickel-64 for new, emerging healthcare applications, as well as Chlorine-37, Lithium-6, and Uranium-235 for green energy applications. The ASP Technology (Aerodynamic Separation Process) is ideal for enriching low and heavy atomic mass molecules. For more information, please visit www.aspisotopes.com.

Forward Looking Statements

This press release contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995, including, without limitation, statements relating to the development of new technology for the enrichment of nuclear isotopes, the funding of operations, and the commencement of supply of isotopes to customers. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy, and other future conditions. Forward-looking statements can be identified by words such as "believes," "plans," "anticipates," "expects," "estimates," "projects," "will," "may," "might," and words of a similar nature. Examples of forward-looking statements include, among others but are not limited to, statements we make regarding expected operating results, such as future revenues and prospects from the potential commercialization of isotopes, future performance under contracts, and our strategies for product development, engaging with potential customers, market position, and financial results. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict, many of which are outside our control. Our actual results, financial condition, and events may differ materially from those indicated in the forward-looking statements based upon a number of factors. Forward-looking statements are not a guarantee of future performance or developments. You are strongly cautioned that reliance on any forward-looking statements involves known and unknown risks and uncertainties. Therefore, you should not rely on any of these forward-looking statements. There are many important factors that could cause our actual results and financial condition to differ

materially from those indicated in the forward-looking statements, including: our reliance on the efforts of third parties; our ability to complete the construction and commissioning of our enrichment plants or to commercialize isotopes using the ASP technology or the Quantum Enrichment Process; our ability to obtain regulatory approvals for the production and distribution of isotopes; the financial terms of any current and future commercial arrangements; our ability to complete certain transactions and realize anticipated benefits from acquisitions; contracts, dependence on our Intellectual Property (IP) rights, certain IP rights of third parties; and the competitive nature of our industry. Any forward-looking statement made by us in this press release is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise. This press release includes market and industry data and forecasts that we obtained from internal research, publicly available information and industry publications and surveys. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Unless otherwise noted, statements as to our potential market position relative to other companies are approximated and based on third-party data and internal analysis and estimates as of the date of this press release. We have not independently verified this information, and it could prove inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data-gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the information and forecasts from sources cited herein. No information in this press release should be interpreted as an indication of future success, revenues, results of operation, or stock price. All forward-looking statements herein are qualified by reference to the cautionary statements set forth herein and should not be relied upon.

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1. https://www.uxc.com/p/tools/FuelCalculator.aspx2021

2. Korsnick, M. (2021, December 20). Updated Need for High-Assay Low Enriched Uranium. Nuclear Energy Institute

3. IEA. “Net Zero by 2050 – Analysis.” IEA, www.iea.org/reports/net-zero-by-2050.

4. RFERL “Russia’s Stranglehold on the World’s Nuclear Power Cycle” , https://www.rferl.org/a/russia-nuclear-power-industry

Source: ASP Isotopes Inc.