NANO Nuclear Energy Reports Fiscal Year 2024 Results and Provides Corporate Outlook

December 30, 2024

New York, N.Y., Dec. 30, 2024 (GLOBE NEWSWIRE) -- NANO Nuclear Energy Inc. (NASDAQ: NNE) ("NANO Nuclear" or "the Company"), a leading advanced nuclear energy and technology company focused on developing portable, clean energy solutions, today reported its fiscal year end 2024 results and provided a corporate outlook.

"Thanks to the support of our shareholders, collaborators, our world-class technical teams, executive advisory board filled with former national leaders and finally the U.S. government, NANO Nuclear became among the great Wall Street stories of 2024. This year was a transformative year for our company and a testament to the evolution of the United States' nuclear energy industry. We have evolved quickly from a start-up to a growing enterprise seeking to develop, gain approvals for and ultimately commercialize vertically integrated cutting-edge nuclear technologies, all while expanding our presence as a leading advocate for the future of clean, sustainable energy," **said Jay Yu, Founder and Chairman of NANO Nuclear Energy**.

"In just over seven months as a public company, we grew our current cash position to over $120 million and have positioned ourselves as one of the leaders in the advanced nuclear technology industry," **continued Mr. Yu**. "We have recruited former top government officials and notable scientists and engineers to join our team and to help drive our progress. We have pursued and signed numerous agreements and memoranda of understandings with companies in the datacenter, artificial intelligence, vertical farming and spent fuel recycling industries as well as governmental entities in Africa. We have expanded our key relationships with the United States Department of Energy (DOE) and obtained key government technological and funding support for our initiatives. On top of all these achievements, we are steadfastly committed to prudent capital stewardship and disciplined spending, laying the foundation for sustainable growth as we strategically scale our company. By maintaining a strong focus on financial responsibility and operational efficiency, we aim to maximize shareholder value while advancing our mission to drive innovation and expand our market presence in 2025 and beyond."

"We have pursued an ambitious agenda of growth initiatives, working diligently to establish ourselves as a leader in this dynamic industry," **said James Walker, Chief Executive Officer and Head of Reactor Development of NANO Nuclear Energy.** "Throughout 2024, our efforts have centered on expanding regulatory and technical expertise, building strategic relationships with governments and industry leaders, advancing the development of our technologies, and acquiring complementary technologies. These accomplishments have positioned us to harness the momentum in the market, and we enter 2025 with confidence and a strong foundation for continued value-creating operations."

2025 Corporate Outlook

Having built a strong foundation in 2024, NANO Nuclear is now looking ahead to executing on its plans and expanding even further in 2025. The Company's ambitious goals and strategic future milestones planned for 2025 evidence NANO Nuclear's commitment to advancing its mission of delivering cutting-edge nuclear technologies and establishing itself as a leader in the advanced nuclear energy sector.

LIS Technologies, Inc. (LIST), supported by NANO Nuclear, to Participate in DOE's Low-Enriched Uranium (LEU) Enrichment Acquisition Program

LIST, supported by NANO Nuclear, will begin work with the DOE to participate **as one of six contract awardees** in DOE's Low-Enriched Uranium (LEU) Enrichment Acquisition Program. The total overall amount appropriated under the LEU Acquisition Program is anticipated to be **$3.4 billion over the next 10 years.** As part of the LEU Acquisition Program, the DOE will issue task orders to the six contract awardees to bid on, with all task orders having a minimum order value of $2 million. LIST and NANO Nuclear will collaborate and seek to develop a **vertically integrated fuel pipeline, producing LEU and HALEU** anchored by LIST's only U.S. origin and patented laser enrichment technology to ensure a seamless supply chain from enrichment to reactor deployment.

Showcasing High TRL Technologies

NANO Nuclear plans to highlight the high Technology Readiness Level (TRL) of its newly acquired patented **MMR®** and **Pylon** reactor technologies, further positioning the Company as an innovator in the advanced nuclear technology sector. The formal closing of NANO Nuclear's acquisition of these assets from Ultra Safe Nuclear Corporation (USNC) is expected to occur in the very near future.

MMR® ***Demonstrations and Licensing***

NANO Nuclear will continue a collaboration with the University of Illinois for the demonstration and U.S. Nuclear Regulatory Commission (NRC) licensing of the patented MMR® advanced nuclear reactor. Further demonstrations are expected at the Canadian Nuclear Laboratories with Ontario Power Generation. The MMR® is the first small modular reactor to enter the Canadian Nuclear Safety Commission's formal licensing review.

MMR Reactor Grant Submissions

NANO Nuclear plans to submit the MMR® reactor for several grants and development opportunities.

Pylon Reactor Development

NANO Nuclear will continue preparations for the Pylon reactor demonstration at the Idaho National Laboratory's DOME facility by 2027, following USNC's selection for the National Reactor Innovation Center's Front-End Engineering program.

ODIN Microreactor Regulatory Engagement

Regarding NANO Nuclear's novel **"ODIN" low-pressure coolant portable microreactor**, the Company plans to:

- Formally engage with the NRC and develop and submit its Regulatory Engagement Plan (REP) to the NRC.
- Complete salt irradiation testing to select the coolant for the ODIN reactor.

ODIN Microreactor Rig Construction

NANO Nuclear will continue to advance rig construction for the ODIN reactor system to verify computer models, collect data for regulatory licensing efforts, and finalize prototype design.

ZEUS Microreactor Advancement

Regarding NANO Nuclear's novel **'ZEUS' solid-core battery advanced portable microreactor design** , the Company plans to:

- File for new patents relating to this technology after filing provisional patents in 2024.
- Work to advance novel technology in collaboration with the Idaho National Laboratory (INL) utilizing the **Gateway for Accelerated Innovation in Nuclear (GAIN) Nuclear Energy U.S. Department of Energy (DOE) voucher award** received by NANO Nuclear for 'ZEUS'.

Nuclear Fuel Transportation System Optimization

NANO Nuclear plans to advance its licensed patented design for an optimized basket transportation system capable of moving various nuclear fuel types, including oxide, hydride, TRISO, and nitride fuels. The Company licenses a patent on an exclusive basis from Battelle Energy Alliance, which provides research, engineering, testing, and consulting services to the DOE and other federal agencies.

Tennessee Nuclear Technology Headquarters Completion

NANO Nuclear plans to finalize the lab and office construction of its Nuclear Technology Headquarters based in Oak Ridge, Tennessee, with the goal of housing and bolstering the Company's operational capabilities.

Team Expansion

During 2024, NANO Nuclear was successful in recruiting world-class nuclear engineers to expedite technology development. NANO Nuclear expects it will retain additional engineering, scientific and regulatory talent going forward.

Fuel Processing Facility Design

NANO Nuclear plans to initiate design work for multiple facilities in the fuel processing supply chain to ensure readiness for mass manufacturing of reactor fuel.

Additional University Collaborations

To expand on its existing relationship with leading nuclear technology university professionals from U.C. Berkeley, Cambridge University and University of Illinois, NANO Nuclear will seek similar collaborations to provide additional resources for reactor system development.

U.K. Collaboration

NANO Nuclear will continue USNC's collaboration with the U.K. government on the MMR® reactor under a cost-share program, leveraging significant U.K. government support.

ALIP Technology Development and Commercialization

NANO Nuclear will work toward completing development work on its acquired ALIP technology with a view towards making this technology commercially available.



Figure 1- NANO Nuclear Energy (NASDAQ: NNE). The First Vertically Integrated Portable Nuclear Microreactor Publicly Listed in the U.S. raised a total of approximately $134 Million since its Initial Public Offering (IPO) on May 8, 2024.

2024 Operational Highlights

Financial Achievements

Approximately $134 million in capital raised in 2024

- Initial Public Offering, and full over-allotment exercise, raised approximately **$11.8 million in May.**
- Follow-on public offering, and full over-allotment exercise, raised approximately **$20.7 million in July.**
- Subsequent follow-on public offering, and full over-allotment exercise, raised approximately **$41.4 million in October.**
- Private placement with three accredited institutional investors, raised approximately **$60 million** in November.
- Current cash on hand at the **end of December 30, 2024 is over $120 million.**

Selected for Inclusion into Russell 3000® Index

- Selected as **one of only 12 IPOs for inclusion into the broad-market Russell 3000® Index based on the Index's quarterly review** . The Russell 3000 Index is an influential benchmark that captures the performance of the 3,000 largest U.S. public companies.

Technological Advancements

Key Enabling Technology Acquisition

- Acquired novel **Annular Linear Induction Pump (ALIP)** intellectual property which addresses challenges in high-efficiency thermal fluid management for clean energy and high-temperature industrial processes, offering numerous advantages over traditional pumps.
    - Committed to overseeing a **related Small Business Innovation Research (SBIR) Phase III project.** Throughout prior SBR phases, the Department of Energy has cumulatively awarded over $1.37 million in grants to date to support this technology.

Expansion of Core Nuclear Fuel Transportation Technology

- Signed an agreement with GNS Gesellschaft für Nuklear-Service mbH (GNS) to undertake a wide-ranging project to produce **an optimized HALEU transportation system** based on NANO Nuclear's exclusively licensed fuel transportation basket design.
    - Investigating potential of transporting **multiple HALEU nuclear fuel types**, including uranium oxide, TRISO particles, uranium-zirconium hydride, uranium mononitride, and salt fuel for molten salt reactors.

Expansion of Intellectual Property Protections Surrounding Key Technologies

- Filed a series of provisional patent applications with the United States Patent and Trademark Office (USPTO) to secure formal **intellectual property protection** for the ALIP technology.
- **Filed provisional patents** relating to efforts to design, manufacture and commercialize advanced nuclear reactors that are configured to deliver consistent power output while being compact enough to optimize transport logistics, namely the 'ZEUS' microreactor.

Acquisition of Select Ultra Safe Nuclear Corp. Patented Technologies

- Executed definitive agreement to acquire patented **Micro Modular Reactor (MMR®) and Pylon technologies**, including all associated intellectual property, through a Chapter 11 bankruptcy auction.

    - The **MMR® Energy System** is stationary and designed to produce power up to 45 megawatts thermal (MWth), complementing NANO Nuclear's portable microreactors 'ZEUS' and 'ODIN' which are designed to produce 1 to 1.5 MWe of power.

    - The MMR® Energy System is being demonstrated at the Canadian Nuclear Laboratories with Ontario Power Generation and at the **University of Illinois at Urbana-Champaign, which is currently in pre-licensing with the Nuclear Regulatory Commission (NRC).** It was also the **first small modular reactor to enter the formal licensing review phase with the Canadian Nuclear Safety Commission (CNL)**.

    - The Pylon reactor is a compact nuclear reactor designed to provide between 1 MWth and 5 MWth of power.

    - The Pylon reactor is scheduled to be demonstrated at the **Idaho National Laboratory's DOME facility by 2027, following USNC's selection for the National Reactor Innovation Center (NRIC)** Front-End Engineering program.



Figure 2 - NANO Nuclear's 1.64-acre land package in the historic Heritage Center Industrial Park in Oak Ridge, Tennessee. Includes a 14,000 sq. ft., 2-story facility to house NANO Nuclear's Technology Headquarters.

Operational Growth

Addition of Key Personnel and Leaders

- **David Tiktinsky** joined NANO Nuclear as its Head of Nuclear Regulatory Licensing after nearly 40 years at the U.S. Nuclear Regulatory Commission (NRC), where he primarily focused on licensing and regulatory activities for nuclear fuel cycle facilities and medical isotope production.

- **Eric R. Oesterle** joined NANO Nuclear as its Head of Microreactor Regulatory Licensing following his 15 years at the NRC during which he held supervisory roles as Branch Chief for Operating Reactor Licensing, Reactor Safety Systems, License Renewal and Subsequent License Renewal

- **Michael Norato Ph.D,** a distinguished engineer with over 25 years of experience who just retired from Idaho National Laboratory and he will lead the establishment of deconversion and fuel processing facilities, helping to further NANO Nuclear's goal of being a vertically integrated leader in the U.S. nuclear fuel cycle. Dr. Norato has extensive knowledge of the

entire nuclear fuel cycle as well as experience in the commercial regulatory regime and all aspects of licensing, constructing, and regulating nuclear fuel cycle facilities.

- **The Hon. John G. Vonglis** joined NANO Nuclear in an active role as its Executive Director of Global Government Affairs following a distinguished career which included stints as Chief Financial Officer of the U.S. Department of Energy (DOE) and Acting Director of DOE's Advanced Research Projects Agency-Energy.
- **Darlene T. DeRemer** joined NANO Nuclear as Chairwoman of Executive Advisory Board for Institutional Finance. Ms. Darlene DeRemer is the Chair of the ARK Invest ETF Trust Board, co-founder of Grail Partners LLC. and has over 25 years of experience as a leading adviser in the financial services industry.
- **Lt. General (Ret.) Terry G. Robling** joined NANO Nuclear as Chair of its Executive Advisory Board for Federal and Defense Appropriations and Requirements. General Robling was also the former Commanding General of U.S. Marine Corps Forces in the Pacific and "Top Gun" Graduate. He will focus his efforts to expand NANO Nuclear's professional network and build relationships with key government officials.
- **Former Congressman and District Attorney Daniel M. Donovan Jr**. joined NANO Nuclear as Chairman of the Executive Advisory Board for Market Intelligence. Mr. Donovan is a seasoned attorney and prominent public figure with a distinguished career in law and politics.

Nuclear Technology Headquarters

- Purchased a 1.64-acre land package in the historic **Heritage Center Industrial Park in Oak Ridge, Tennessee.**
    - Includes a **14,000 sq. ft., 2-story facility** to house NANO Nuclear's Nuclear Technology Headquarters.
- Appointed Idaho National Lab and DOE veteran **Michael A. Norato, Ph.D.,** as its Director of Nuclear Facilities and Infrastructure.

Nuclear Fuel Enrichment and Procurement Partnership

- Announced **$2 Million investment and strategic collaboration with related party** LIST to advance the only U.S. origin, patented laser uranium enrichment technology.
    - LIST will provide NANO Nuclear with enriched UF6 to be fabricated and sold to customers and will act as NANO Nuclear's preferred supplier of enriched UF6 in future fuel purchasing agreements. The parties intend that LIST will provide NANO Nuclear with enriched UF6 at no cost to be fabricated and sold to customers, with LIST to receive compensation as part of a profit-sharing arrangement to be agreed to between the companies in the future.

Subsidiary to Explore Nuclear Energy Applications in Space

- **NANO Nuclear Space Inc.** (NNS) launched to explore the potential commercial applications of the Company's developing micronuclear reactor technology, particularly in cis-lunar space.
    - Appointed Noted **Physicist Carlos O. Maidana, Ph.D. as its Head of Thermal Hydraulics and Space Program**. Dr. Maidana will spearhead design of space nuclear systems that encompass nuclear propulsion and power generation technologies

optimized for space applications.

- Seeks to leverage proprietary technologies as well as recently acquired **ALIP technology** to address challenges in high-efficiency thermal fluid management in high temperature applications, including energy generation and even propulsion.
- NANO Nuclear's newly acquired patented Pylon reactor is a compact nuclear reactor designed for versatility in application and deployment. **Pylon can be integrated with modular balance of plants tailored to specific applications including remote terrestrial, marine, and space deployments**. The Pylon reactor is scheduled to be demonstrated at the Idaho National Laboratory's DOME facility by 2027.

Partnerships, Collaborations and Government Awards

Department of Energy Award for Proprietary 'ZEUS' Microreactor

- Granted the **GAIN voucher award** for the independent assessment of its novel heat exchanger concept for open-air Brayton cycle in collaboration with the INL for 'ZEUS'.

Department of Energy Low-Enriched Uranium Acquisition Program up to $3.4 Billion

- LIST, supported by NANO Nuclear, was selected by the U.S. Department of Energy to participate **as one of six contract awardees** in DOE's Low-Enriched Uranium (LEU) Enrichment Acquisition Program.
  - The total overall amount appropriated under the LEU Acquisition Program is anticipated to be **$3.4 billion**.
  - LIST and NANO Nuclear will collaborate to establish a **vertically integrated fuel pipeline, producing LEU and HALEU** to ensure a seamless supply chain from enrichment to reactor deployment.

Collaboration with Governments and Agencies

- Signed a Memorandum of Understanding (MOU) with the **United States Department of Energy (DOE) Idaho Operations Office** to evaluate the feasibility of siting, construction, commissioning, operation and decommissioning of NANO Nuclear's **'ZEUS' and 'ODIN'** microreactors in development at **the Idaho National Laboratory (INL)**.
- Signed a Memorandum of Understanding (MOU) with the **Rwanda Atomic Energy Board** to cooperate on educational, regulatory and physical development of the country's nuclear energy infrastructure.
- Signed a MOU with the **Government of the Togolese Republic** to advance the development and deployment of nuclear reactors, fuel facilities and nuclear material transportation within the territory of Togo.
- Joined the U.S. Civil Nuclear/SMR Industry Working Group (CNIWG) for Southeast Asia to support the deployment and **export of U.S. small modular reactors (SMRs) and advanced nuclear technologies to Southeast Asia** alongside just 15 other civil nuclear entities.

Key Collaborations

- Signed a MOU with Curio Solutions to **optimize Curio's nuclear fuel recycling capabilities** for NANO Nuclear's next-generation portable nuclear microreactors in development.

- Signed a MOU with Blockfusion Ventures, an affiliate of data center operator Blockfusion USA, Inc., to explore the **integration of its advanced microreactor technologies,** evaluating compatibility between its microreactors' electric output and the artificial intelligence (AI) datacenter's energy requirements.
- Signed a MOU with Everstar to explore the potential of leveraging Everstar's developing suite of artificial intelligence driven advisory and technology solutions to **modernize the regulatory licensing process** for NANO Nuclear's fabrication, deconversion, transportation and microreactor development projects.
    - Initial agreement has since **produced an advanced AI-driven compliance solution**, designed to simplify and streamline NANO's regulatory processes.
- Signed a MOU with Vert2Grow Energy Solutions Inc. (Vert2Grow) to explore the **integration of NANO Nuclear's portable microreactor technology in development with the innovative vertical farming solutions** of Vert2Grow and its technology partner FSSC to deliver sustainable power and food production capabilities to remote communities worldwide.
- Signed a MOU with Digihost Technology to **advance the transition to carbon-free energy at Digihost's 60 megawatt upstate New York power plant** and provide clean, reliable, and scalable energy for Digihost's high-tech operations, including AI-driven data centers and digital asset colocation programs.

Further details regarding NANO Nuclear's results of operations for its fiscal year ending September 30, 2024, its operational plans and goals and important risk factors for investor consideration can be found in NANO Nuclear's Annual Report on Form 10-K, which was filed with U.S. Securities and Exchange Commission today and is available at https://ir.nanonuclearenergy.com/financial-information/sec-filings.

About NANO Nuclear Energy, Inc.

NANO Nuclear Energy Inc. (NASDAQ: NNE) is an advanced technology-driven nuclear energy company seeking to become a commercially focused, diversified, and vertically integrated company across five business lines: (i) cutting edge portable microreactor technology, (ii) nuclear fuel fabrication, (iii) nuclear fuel transportation, (iv) nuclear applications for space and (v) nuclear industry consulting services. NANO Nuclear believes it is the first portable nuclear microreactor company to be listed publicly in the U.S.

Led by a world-class nuclear engineering team, NANO Nuclear's products in technical development are **"ZEUS", a solid core battery reactor, and "ODIN", a low-pressure coolant reactor**, each representing advanced developments in clean energy solutions that are portable, on-demand capable, advanced nuclear microreactors.

Advanced Fuel Transportation Inc. (AFT), a NANO Nuclear subsidiary, is led by former executives from the largest transportation company in the world aiming to build a North American transportation company that will provide commercial quantities of HALEU fuel to small modular reactors, microreactor companies, national laboratories, military, and DOE programs. Through NANO Nuclear, AFT is the exclusive licensee of a patented high-capacity HALEU fuel transportation basket developed by three major U.S. national nuclear laboratories and funded by the Department of Energy. Assuming development and commercialization, AFT is expected to form part of the only vertically integrated nuclear fuel business of its kind in North America.

HALEU Energy Fuel Inc. (HEF), a NANO Nuclear subsidiary, is focusing on the future development of a domestic source for a High-Assay, Low-Enriched Uranium (HALEU) fuel fabrication pipeline for NANO Nuclear's own microreactors as well as the broader advanced nuclear reactor industry.

NANO Nuclear Space Inc. (NNS), a NANO Nuclear subsidiary, is exploring the potential commercial applications of NANO Nuclear's developing micronuclear reactor technology in space. NNS is focusing on applications such as power systems for extraterrestrial projects and human sustaining environments, and potentially propulsion technology for long haul space missions. NNS' initial focus will be on cis-lunar applications, referring to uses in the space region extending from Earth to the area surrounding the Moon's surface.

For more corporate information please visit: https://NanoNuclearEnergy.com/

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Cautionary Note Regarding Forward Looking Statements

This news release and statements of NANO Nuclear's management in connection with this news release or related events contain or may contain "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities

Litigation Reform Act of 1995. In this context, forward-looking statements mean statements related to future events, which may impact our expected future business and financial performance, and often contain words such as “seek,” "expects", "anticipates", "intends", "plans", "believes", “potential”, "will", "should", "could", "would" or "may" and other words of similar meaning. In this press release, forward-looking statements include, among others, statements regarding our operational goals and plans for 2025. These forward-looking statements are based on information available to us as of the date of this news release and represent management's current views and assumptions. Forward-looking statements are not guarantees of future performance, events or results and involve significant known and unknown risks, uncertainties and other factors, which may be beyond our control. For NANO Nuclear, particular risks and uncertainties that could cause our actual future results to differ materially from those expressed in our forward-looking statements include but are not limited to the following: (i) risks related to our U.S. Department of Energy (“DOE”) or related state nuclear fuel licensing submissions, (ii) risks related to the development of new or advanced technology and the acquisition of complimentary technology or businesses, including difficulties with design and testing, cost overruns, regulatory delays, integration issues and the development of competitive technology, (iii) our ability to obtain contracts and funding to be able to continue operations, (iv) risks related to uncertainty regarding our ability to technologically develop or acquire and commercially deploy a competitive advanced nuclear reactor or other technology in the timelines we anticipate, if ever, (v) risks related to the impact of government regulation and policies including by the DOE and the U.S. Nuclear Regulatory Commission, including those associated with the recently enacted ADVANCE Act, and (vi) similar risks and uncertainties associated with the operating of an early stage business in a highly regulated and rapidly evolving industry. Readers are cautioned not to place undue reliance on these forward-looking statements, which apply only as of the date of this news release. These factors may not constitute all factors that could cause actual results to differ from those discussed in any forward-looking statement, and NANO Nuclear therefore encourages investors to review other factors that may affect future results in its filings with the SEC, which are available for review at www.sec.gov and at https://ir.nanonuclearenergy.com/financial-information/sec-filings. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. We do not undertake to update our forward-looking statements to reflect events or circumstances that may arise after the date of this news release, except as required by law.

Attachment

- Figure 2



Figure 2



Figure 2 - NANO Nuclear's 1.64-acre land package in the historic Heritage Center Industrial Park in Oak Ridge, Tennessee. Includes a 14,000 sq. ft., 2-story facility to house NANO Nuclear’s Technology Headquarters.

Source: NANO Nuclear Energy Inc.