The Blaine Group, Inc.
A Total Communications Agency
8665 Wilshire Boulevard, Suite 301 Beverly Hills, CA 90211
310.360.1499 • FAX 310.360.1498 • Email: devon@blainegroupinc.com

FOR IMMEDIATE RELEASE: June 15, 2023

FOR FURTHER INFORMATION: Adam Ruseling
Devon Blaine
adam@blainegroupinc.com
devon@blainegroupinc.com

MICRONUCLEAR©, LLC

CORPORATE BACKGROUNDER

Brentwood, TN … MicroNuclear©, LLC's primary objective is to revitalize and secure energy needs using proven and safe technology that not only solves *existing* energy needs but also opens an essentially unlimited potential to advance the security, reliability, and availability of *future* energy needs.

When we consider and compare the current realities of all forms of energy production, it becomes clear that only one technology has all the capabilities to meet the increasing demands of our planet … microreactor nuclear technology. This new type of reactor, from America's MicroNuclear, LLC, employs a Molten Salt Nuclear Battery (MsNB) that, in a few short years will be supplying a logical, safe, reliable, and economical solution that also minimizes the issue of nuclear waste disposal.

Molten salt nuclear reactor technology is not a new concept. Its feasibility has been proven for decades, and the recent re-examination of that concept by MicroNuclear provides innovative design solutions that will change the entire energy infrastructure.

To understand how transformative the MsNB is, it is important to look closely at the specific requirements of competing technologies, in their attempt to reach a goal of resilient, emission-free, environmentally-friendly energy that is sustainable, reliable, and affordable. The environmental and societal impact of generating facilities is massive, with extremely detrimental damage potential. Capacity factors (percent of availability) of these different technologies vary greatly, but none comes close to the capacity of nuclear power (92%) which is, by far, the most reliable and efficient.

For example, to produce the same 10-megawatt output as a quarter-acre facility that houses a MsNB (92% Capacity Factor), a wind farm (30% Capacity Factor) requires over 2,700 acres, while a solar farm (25% Capacity Factor) can require over 500 acres. In comparison, the MsNB reactor vault, and the commercial load equipment, can be contained in a 30-foot by 30-foot building installed above or below ground.

Traditional and current nuclear power plants are light water reactor systems with extensive, complex components including a solid core reactor, pressurizer, coolant pumps and loops, steam generators, turbine generators, cooling towers and more. These systems can reliably generate large amounts of electricity. A thousand megawatts are not unusual, but those power plants require a large amount of land to do so along with a complex operating system and support resources, many operational staff, and are expensive to build and maintain. Light water nuclear reactors are safe and reliable. However, they do raise persistent questions regarding radioactive water, expended core disposal, and nuclear waste.

Molten salt reactor technology addresses, solves, and reverses these conceptions. The basic operating principle is simple. The reactor core of the Molten Salt Nuclear Battery, is, as the name implies, a molten mix of nuclear fuel and a chemical salt. The salt in the MsNB is not your sodium chloride table salt. Instead, the MsNB uses fluoride salt because of its desirable characteristics when mixed with a nuclear fuel. As for the nuclear fuel in the MsNB, it can use either Uranium or Plutonium. It can also run on fuel derived from Thorium. Most importantly, the MsNB uses natural circulation to move the molten salt fuel through the reactor core, simplifying a design without the need for pumps, valves, or coolant loops. The elimination of each of these components enhances safety and reliability while it reduces cost.

The MsNB is referred to as a battery because it is manufactured in a factory, transported to the site, installed, and at the end of its 10-year life, is simply replaced with a new MsNB. It can be installed in critical infrastructure such as municipal buildings, hospitals, and military bases. It is ideal for industrial heat applications, desalination facilities, hydrogen production, and co-generation applications in remote villages. The MsNB is designed to provide reliable and sustained energy, securing the absolute requirement of an uninterrupted supply of power. Additionally, the MsNB development is mature: it is ready for prototype production, then fueled with molten salt, operational demonstration, and validation.

Any discussion of nuclear energy is incomplete without understanding safety and radioactive waste disposal. The simplicity of the MsNB drives safety. It capitalizes on passive and inherent design features and operates at ambient pressure, eliminating serious accidents. If the operation of the of the MsNB is interrupted or is shutdown, the MsNB simply and safely goes into a hot standby condition. The process is so inherently safe in its design, that NO action is required by an operator. This means the MsNB is … “Walk Away Safe.”

Regarding waste, unique to the MsNB technology, is that 90% of the expended fuel can be re-used in subsequent MsNBs. Additionally, the leftover 10% are products that can be separated from the salt and have valuable commercial medical uses. The remaining waste, amounting to only a few kilograms, is safely disposed of in a repository until it decays to essentially natural

background radiation levels. Comparing this to the tons of waste from an expended solid reactor core, the benefits of the Molten Salt Nuclear Battery are undeniable.

The team at MicroNuclear, LLC is committed to paving the way to a future with reliable, safe, sustainable, economic power.

MICRONUCLEAR, LLC LEADERSHIP

Paul J. Marotta, PhD, PE, BCEE – Co-founder of MicroNuclear, LLC

Over 40 years of experience in a variety of nuclear, industrial, consulting, R&D and academic settings. Demonstrated achievement leading the development, planning and implementation of projects aimed at providing solutions to complex challenges.

Richard Christensen, PhD, PE – Co-founder and CTO of MicroNuclear, LLC

Served as director of Nuclear Engineering over the last 30 years at both The Ohio State University and University of Idaho. Over 100 publications related to heat exchangers and 11 patents with four more related to MsNB progress. Degrees include a doctorate in nuclear engineering from Stanford University (1974), a Master of Science in mechanical engineering, also from Stanford (1970), and a bachelor's degree in physics from Brigham Young University (1968).

Richard McPherson – CEO of Idaho Energy, Inc, a subsidiary of MicroNuclear, LLC

Richard McPherson has been involved in nuclear energy since attending Admiral Rickover's famous Nuclear Power School in 1964. After his 20-year Navy career, Richard was asked, because of the Chernobyl accident, to be the United States Representative to the International Atomic Energy Agency, on a special six nation group to study "Nuclear Fuel Cycle Facilities, the Environment and Public Opinion." Today, his focus is on manufacturing consent and deploying the Molten Salt Nuclear Battery worldwide, thus fulfilling President Eisenhower's offer to provide American nuclear energy to the world for peace, prosperity and security.

David C. Klugh – Executive VP Operations and Training at MicroNuclear, LLC

David has over 40 years of experience that includes: Nuclear Plant Operations, Talent Development, Executive Management, Instructional Systems Design, and Training Implementation. He has applied his experience to the design, development, implementation, and management of a broad range of interactive digital media. David is a U.S. Navy veteran and served on active duty for 22 years. He is a graduate of the U.S. Navy Nuclear Power School and the University of Washington (B.S. Geological Oceanography). David has an M.S. in Education from National University, with an emphasis in Cognitive Science, Educational Technology, and Computer Science.

http://www.new.micronucleartech.com/blog/wp-content/uploads/2023/06/MicroNuclear-Corporate-Backgrounder.docx