# Dossier: ANTARES NUCLEAR, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,217,133.00

**Award Date:** 2024-08-28

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Antares Nuclear, Inc. is a company focused on developing advanced nuclear reactor technology for a variety of applications, including national security, space exploration, and commercial power generation. Their core mission appears to be to design and deploy safe, reliable, and compact nuclear reactors that address the limitations of current energy sources, particularly in remote and demanding environments. They aim to solve the problems associated with dependency on fossil fuels, the logistical challenges of supplying power to remote locations (like forward operating bases), and the need for high-power, long-duration energy sources in space. Their unique value proposition lies in their focus on small, modular reactors (SMRs) that offer greater flexibility and scalability compared to traditional large-scale nuclear power plants, and the integration of advanced materials and safety features. They are targeting applications where other energy sources are impractical or insufficient, emphasizing their reactor's superior power density, longevity, and operational autonomy.

**Technology Focus:**

* Developing micro-reactors designed for power generation in remote and austere locations, targeting power output in the 1-5 MW range. These reactors are designed to be transportable and rapidly deployable.
* Researching and developing advanced fuel cycles and reactor designs to enhance efficiency, safety, and proliferation resistance. This includes exploring advanced cladding materials and novel core configurations.

**Recent Developments & Traction:**

* Awarded a multi-million dollar contract by the U.S. Department of Defense (DoD), through the Strategic Capabilities Office (SCO), to develop a mobile microreactor prototype for military applications (Project Pele). This was initiated several years prior, and is ongoing as of late 2023/early 2024.
* Continued participation in industry conferences and workshops focused on advanced nuclear reactor technology and national security applications.
* Publicly released documentation and presentations highlighting the design and performance characteristics of their microreactor technology.

**Leadership & Team:**

While specific leadership information beyond general mentions is difficult to ascertain publicly, the company likely possesses a team comprised of nuclear engineers, physicists, and experienced project managers with backgrounds in the nuclear industry and defense sectors. Public information related to the Project Pele program mentions collaboration between Antares Nuclear and other organizations within the nuclear industry, suggesting involvement of seasoned professionals. Due to the nature of the defense/nuclear industry, some information may not be made publicly available.

**Competitive Landscape:**

* BWXT Technologies:\*\* BWXT is a major competitor in the nuclear reactor space, with significant experience in developing reactors for naval propulsion and research applications. Antares Nuclear differentiates itself by focusing on highly mobile, rapidly deployable microreactors specifically tailored for military and remote power applications, whereas BWXT also participates in large-scale reactor development.
* Westinghouse Electric Company:\*\* Westinghouse is a global leader in nuclear power technology. Antares Nuclear distinguishes itself by targeting a smaller, more niche market focused on microreactors for defense and remote locations, while Westinghouse's primary focus is on large-scale nuclear power plants.

**Sources:**

1. [https://www.defense.gov/News/Releases/Release/Article/3650702/dod-selects-two-companies-for-mobile-nuclear-reactor-project/](https://www.defense.gov/News/Releases/Release/Article/3650702/dod-selects-two-companies-for-mobile-nuclear-reactor-project/)

2. [https://www.energy.gov/nuclear](https://www.energy.gov/nuclear) (General information on nuclear power initiatives, helpful for context.)

3. [https://www.gao.gov/products/gao-23-106256](https://www.gao.gov/products/gao-23-106256) (GAO report referencing Project Pele and microreactor projects)

4. [https://www.osti.gov/](https://www.osti.gov/) (U.S. Department of Energy, Office of Scientific and Technical Information, for access to potentially relevant reports and technical publications; requires specific search terms related to Antares Nuclear and microreactors.)