

## **NE-24-33427 – Investigation of Spark Plasma Sintering (SPS) Process Development for Graphite Neutron Moderator Production**

Element Factory, located in Cheyenne, WY, is an advanced clean energy technology company. They use industry 4.0 technologies to transform molecules into carbon products, industrial gases, and chemical precursors.

The nuclear energy industry needs graphite that is cheaper and easier to acquire. Element Factory needs expert guidance to better understand the regulatory standards and technical specifications that are required to qualify the product that will come out of their process for use in nuclear reactors.

For this project, Idaho National Laboratory (INL) will assist in developing specifications for carbon/graphite powder and compile quality assurance/quality control approaches and documentation requirements for producing nuclear-grade graphite components from the carbon powder precursor using Spark Plasma Sintering (SPS).