

# NATRIUM® PROJECTED GNF OPPORTUNITIES

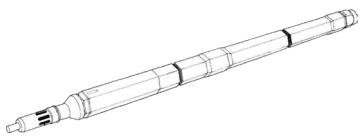

We are excited to release this list of potential nuclear safety-related component opportunities for the Natrium<sup>1</sup> Advanced Reactor Demonstration Project (ARDP) DOE COOPERATIVE AGREEMENT NO. DE-NE0009054. This program is intended to provide the initial core fuel load consisting of components for nearly 500 fuel, shield, control, and reflector assemblies critical to the success of the project. **Bear in mind that there is no guarantee that these opportunities will result in a solicitation for products or services and the details of this list are subject to change, revision, or cancellation.**

Global Nuclear Fuel (GNF) and TerraPower wish to build a strong supply chain for this reactor and future Natrium reactors and look forward to hearing from interested parties. Below is a list of anticipated vendor opportunities separated by Raw Materials, Fabricated Components, Machined Components, and Additional Component opportunities.

## GNF NATRIUM RAW MATERIAL OPPORTUNITIES

COMPONENT	DESCRIPTION	PROCUREMENT TIMELINE
HT9 Raw Material	Manufacturing, quality control testing, and shipping of 250 – 350 tons of HT9 steel that will be utilized to produce components from various bar sizes.  See <a href="#">ASTM A831</a> for a representative material specification.	PO Issuance – 2025 Q2 Order Fulfillment Finish – 2027 Q4



## GNF NATRIUM FABRICATED COMPONENTS OPPORTUNITIES

COMPONENT	DESCRIPTION	PROCUREMENT TIMELINE
Hexagonal Ducts w/ Coated Load Pads 	Manufacturing, quality control testing, and shipping of 500 – 600, 12–15-foot hexagonal HT9 ducts with hard-face coated stepped wall thickness load pads. Typical equipment required to manufacture ducts are large draw benches and atmosphere-controlled heat treatment furnaces.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q2 Order Fulfillment Finish- 2029 Q3
Wire & Shield Slug 	Manufacturing, quality control testing, and shipping of 1,000,000 feet of HT9 wire and 50,000 shield slugs to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q3 Order Fulfillment Finish- 2029 Q1

<sup>1</sup>: A TerraPower and GE Hitachi Technology

COMPONENT	DESCRIPTION	PROCUREMENT TIMELINE
<b>Cladding (Tubing)</b> 	Manufacturing, quality control testing, and shipping of 50,000 12–15-foot HT9 cladding tubes. Three different sizes of tubing will be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q1 Order Fulfillment Finish- 2028 Q2
<b>Guide Tube &amp; Inner Duct Tube</b>	Manufacturing, quality control testing, and shipping of 15-20 large-diameter HT9 guide & inner-duct tubes to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q2 Order Fulfillment Finish- 2028 Q3
<b>Seal Ring</b>	Procurement, manufacturing, quality control testing, and shipping of 500-600, nickel-based alloy seal rings to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q3 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>Handling Sockets</b> 	Procurement, manufacturing, quality control testing, and shipping of 500-600 stainless steel hexagonal handling sockets comprised of multiple similar part numbers to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2026 Q2 Order Fulfillment Finish- 2027 Q4
<b>Flow Restrictor</b>	Procurement, manufacturing, quality control testing, and shipping of 500-600 nickel-based alloy flow restrictors to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q4 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>Inlet Nozzle Assembly w/ Coating</b> 	Procurement, manufacturing, quality control testing, and shipping of 500-600 stainless steel inlet nozzles comprised of multiple similar part numbers to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>Plenum Spring</b>	Procurement, manufacturing, quality control testing, and shipping of 4000 - 5000 nickel-based alloy plenum springs to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q3 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>Machined Components &amp; Other Direct Materials</b>	Procurement, manufacturing, assembly, quality control testing, and shipping of completed machined components and other direct materials in production quantities. This category contains over 100,000 individual parts from approximately 50 different component types made of multiple alloys to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q3 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>Upper End Plate</b>	Manufacturing, quality control testing, and shipping of 15-20 HT9 upper end plates to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q1 Order Fulfillment Start- 2027 Q3 Order Fulfillment Finish- 2028 Q4
<b>Shield Block</b>	Manufacturing, quality control testing, and shipping of 15-20 HT9 shield blocks to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q1 Order Fulfillment Start- 2027 Q3 Order Fulfillment Finish- 2029 Q1

# GNF NATRIUM ADDITIONAL COMPONENT OPPORTUNITIES

COMPONENT	DESCRIPTION	PROCUREMENT TIMELINE
<b>Tag Gas and Tag Gas Assembly</b> 	Procurement, manufacturing, assembly, quality control testing, and shipping of 40,000-50,000 completed tag gas assemblies to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q3 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>B4C Pellets</b> 	Procurement, manufacturing, quality control testing, and shipping of 20,000 pounds high-density sintered B4C pellets to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2026 Q2 Order Fulfillment Finish- 2027 Q3
<b>Damper Assembly</b>	Procurement, manufacturing, assembly, quality control testing, and shipping of 15-20 complete damper assemblies to be shipped to the Natrium Fuel Facility in Wilmington, NC.	RFP – 2025 Q2 Order Fulfillment Start- 2026 Q3 Order Fulfillment Finish- 2027 Q4
<b>HT9 Coiled Rod</b>	Processing, quality control testing, and shipping of HT9 coiled rod to manufacturing end-users. The coiled rod will be used for manufacturing wire, slugs, and other possible components.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q1 Order Fulfillment Finish- 2028 Q2
<b>HT9 Billet Conversion</b>	Processing, quality control testing, and shipping of HT9 billets converted into hollows for further processing at manufacturing end-users. The hollows will be used to manufacture multiple components.	RFP – 2025 Q2 Order Fulfillment Start- 2027 Q1 Order Fulfillment Finish- 2028 Q1