

NATRIUM[®] PROJECTED RFP OPPORTUNITIES

We are excited to release this list of potential supplier opportunities for the Natrium Reactor¹ Demonstration Project and look forward to hearing from interested parties who want to help bring the demonstration plant to fruition. Bear in mind that the details of this list are subject to change, revision, or cancellation.

There is no guarantee that these opportunities will result in a solicitation for products or services. Below is a list of anticipated vendor opportunities for the Natrium Reactor Demonstration Project, separated by Demonstration Plant Equipment and Test and Fill Facility equipment.

TERRAPOWER NATRIUM EQUIPMENT OPPORTUNITIES

EQUIPMENT	DESCRIPTION	RFP TIMEFRAME
Ex-Vessel Storage Tank	The design, fabrication, testing, and delivery of an Ex-Vessel Storage Tank which will be a sodium filled American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section III pressure vessel with internal rotating carousel for storage of new and spent core components.	2024 Q4
Sodium Cover Gas -Routing and Control Equipment	Design, fabrication, testing and delivery of gas routing and control equipment for the argon cover gas, including gas accumulator skids, overpressure protection skids, a safety isolation valve skid, and an oil bubbler.	2024 Q4
Plant Cyber System	Design, testing, delivery, and training of a plant cyber system (PCS). The cyber defense architecture for the System employs a multilayered approach to ensure robust protection against potential cybersecurity threats. This strategy is built on layers to provide a comprehensive defense mechanism. Equipment would include Security Information and Event Management (SIEM), firewalls, certificate authority, asset monitoring, data diodes, & Portable Media and Mobile Device (PMMD).	2024 Q4
Reactor Instrumentation System	Design, testing, and delivery of a a reactor instrumentation system (RIS).	2024 Q4
Anticipatory Seismic Trip	Design, fabrication, testing and delivery of a anticipatory seismic trip system that measures ground motion, applies required signal processing and logic, and automatically generates output actuation signals to the reactor trip breakers.	2024 Q4
New Assembly Preconditioning Station (NAPS)	Design, fabrication, and testing for the New Assembly Preconditioning Station. This vessel will be used to pre-heat and inert fresh fuel assemblies and includes a rotating carousel and pre-heating and inerting capabilities. The vessel is to be designed to ASME BPVC VIII.	2024 Q4

1. A TerraPower and GE Hitachi Technology

TERRAPOWER NATRIUM EQUIPMENT OPPORTUNITIES (cont.)

EQUIPMENT	DESCRIPTION	RFP TIMEFRAME
Plant Security System	Design, fabrication, testing, delivery, and maintenance personnel training of a physical security system (NSC). The NSC shall include supply of necessary cabinets, displays, operator/engineer stations, and hardware/software including I/O. Equipment would include security computer, video assessment, security communication, access control, intrusion detection, & physical search.	2025 Q1
Sodium Level Instruments	Design, fabrication, testing, and delivery of Sodium Level Instruments. These instruments will be located in drywells passing through the reactor head. The sensing devices will not contact Sodium, but will be exposed to high radiation and elevated temperatures.	2025 Q1
Expansion Tanks	Design, fabrication and delivery of a head tank partially filled with sodium. This tank are designed to ASME BPVC VIII – Division 1.	2025 Q1
Rotating Plug Assembly Seals	Design, fabrication, testing, inspection and delivery of Rotatable Plug Assembly (RPA) Seals. These are static and dynamic, provide the seal functions at the pressure retaining boundary in the Reactor Enclosure system to prevent egress of cover gas to out of the Reactor Vessel. These will be a part of the ASME Section III, Division 5 pressure boundary.	2025 Q1
Bulk Sodium	Sourcing and delivery to site of elemental sodium for use in the Natrium Reactor and the Test and Fill Facility.	2025 Q1
Fuel Transfer Lift	Design, fabrication, testing, and delivery of a fuel transfer lift and associated prototype. This elevator-like lift has three primary functions: charge and discharge core components into and out of the reactor, provide a portion of the primary containment boundary for the reactor vessel during refueling, and provide adequate shielding during normal operations and refueling outages.	2025 Q1
Physical Security System	Fabrication, fill, testing and delivery of Fixed In-Vessel Shielding (FIVS) containers filled with powdered neutron shielding material. The FIVS is permanently installed shielding within the Reactor Vessel that must last the lifetime of the plant. This will be a ASME III Div 5 fabrication.	2025 Q1
Failed Fuel Canister	Design, fabrication, and delivery of failed fuel canisters.	2025 Q1
Rotating Plug Jack (RPJ)	Design and fabrication of multiple electromechanical jack assemblies and a synchronous lift controller.	2025 Q1
Pin Removal Cell	Design, fabrication, testing, and delivery of the Pin Removal Cell (PRC). This machine has remote manipulators for the manual operation of handling socket removal/reinstallation, the Lead Test Pins (LTP) attachment to the Plug Extraction Machine (PEM), and pin canister opening/closing.	2025 Q2
Sodium Drain Tank	Design, fabrication and delivery of three sodium drain tanks. Two large tanks are identical, and one is a smaller supplemental tank. These tanks are designed to ASME BPVC VIII – Division 1.	2025 Q2

TERRAPOWER NATRIUM EQUIPMENT OPPORTUNITIES (cont.)

EQUIPMENT	DESCRIPTION	RFP TIMEFRAME
Pin Shipping Cask (PSC)	Design, fabrication, and delivery of a pin shipping cask, a specialty transportation cask designated to ship irradiated fuel pins from site to off site laboratory.	2025 Q2
Reactor Head Equipment Removal Cask	Design support, Fab and Test for equipment that will be a set of shielded casks and supporting equipment used to remove, store, and install major reactor head equipment. This includes shielded casks for long-term storage, as well as floor valves, beams, and adapters to support the casks and mate them to the reactor vessel. Design codes applicable to all or parts of this work would be ASME BPVC-III-I, ASME B31.3, ANSI N14.6, IEEE 1290 and AWS D1.6.	2025 Q3
Fixed In-Vessel Shielding	Fabrication, fill, testing and delivery of Fixed In-Vessel Shielding (FIVS) containers filled with powdered neutron shielding material. The FIVS is permanently installed shielding within the Reactor Vessel that must last the lifetime of the plant. This will be a ASME III Div 5 fabrication.	2025 Q3
Pool Immersion Cell	Fabrication and delivery of a Pool Immersion Cell (PIC). The PIC removes residual sodium coolant from core assemblies and transfers them to the Spent Fuel Pool. Includes a process skid, a pressure vessel, an elevator, and trolley.	2025 Q3
Plug Handling Fixture	Design, fabrication, testing and delivery of a Plug Handling Fixture (PHF). This portable machine has a hoist assembly and grapple enclosed in an airtight container to remove, transport and replace shield plugs.	2025 Q3
Intermediate Heat Transport System Sodium Drain Valves	Design, fabrication, testing (TBD), and delivery of sodium drain valves on small bore piping.	2025 Q3
Pin Transfer Cask (PTC)	Design, fabrication, and delivery of a pin transfer cask, a intermediate shield cask with internal hoist to move pin canisters from a hot cell to a transportation cask.	2025 Q3
Grapple Exchange Box (GEB)	Design, fabrication, and delivery of a grapple exchange box, a inert glovebox that allows the EVHM and BLTC grapples to be lowered into the box, disconnected from the machine for cleaning. There is an additional space for a second grapple to attached to the machine to continue operations.	2025 Q3
Drip Pan Exchange Out Box (DPR)	Design, fabrication, and delivery of a drip pan exchange box, a sealed and inert portable maintenance box that will interface with the EVHM and BLTC. The drip pan box, allows from drip pans, full of sodium drippage to be remove from the machine, move to a facility for cleanout, along with a space for a new drip pan to be installed in the machine.	2025 Q3

TERRAPOWER NATRIUM EQUIPMENT OPPORTUNITIES (cont.)

EQUIPMENT	DESCRIPTION	RFP TIMEFRAME
FHE Waste Gas Accumulator (FWBG)	Design, fabrication, and delivery of a external fuel handling waste gas accumulator, a large gas pressure vessel that provides a buffer volume between external fuel handling equipment exhaust gas and the plant stack. This vessel ensure controlled pressure and flow release to stacks.	2025 Q3
PHM Extension Tool (PET)	Design, fabrication and delivery of a long reach grapple that interfaces with the pool handling machine to move core assemblies.	2025 Q3
New Assembly Inspection Grapple (NAIG)	Design, fabrication and delivery of a long reach grapple that interfaces with core assemblies to move from the inspection stand to a preconditioning station.	2025 Q3
Fueling Floor Valve	Fabrication and delivery of a sealed port between various fuel handling equipment to maintain inert environmental boundaries.	2026 Q1

PROJECTED NATRIUM® REACTOR CORE COMPONENT ASSEMBLIES RFP OPPORTUNITIES

We are excited to release this list of potential nuclear safety and non-safety related component opportunities for the Natrium Advanced Reactor Demonstration Project (ARDP) DOE COOPERATIVE AGREEMENT NO. DE-NE0009054. 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.

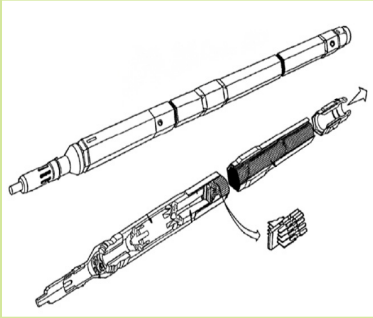
TerraPower is excited to release this list of potential Reactor Core Component (RCC) assembly opportunities for the Natrium Advanced Reactor Demonstration Project (ARDP). The intent of this program is to provide special purpose non-fuel core assemblies to the Natrium Demonstration Reactor. This program will consist of three distinct and separate opportunities:

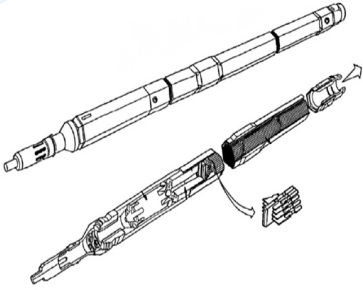
- Nuclear safety-related Reactor Core Component assemblies
- Non-nuclear safety-related RCC assemblies
- Neutron source capsules

The components listed in this document are critical to the success of the project. TerraPower is looking 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 for the ARDP.

Note: The TerraPower RCC assemblies program is distinct, separate, and in addition to other supplier opportunities posted for the Natrium Demonstration Reactor.

PROJECTED NATRIUM® RCC ASSEMBLY RFP OPPORTUNITIES

COMPONENT(S)	DESCRIPTION	RFP TIMEFRAME
Non-Nuclear Safety Related RCC Assemblies 	<p>Supplier to provide turnkey design, procurement, fabrication, assembly, test and site delivery services for non-nuclear safety-related RCC assemblies. These assemblies will be similar to Fast Flux Test Facility Simulated Core Assemblies. It is expected that there will be 400+ non-safety related assemblies of three to five different configurations.</p> <p><i>Note 1: TerraPower will provide procurement support for unique components and materials required by these assemblies.</i></p> <p><i>Note 2: The TerraPower RCC assemblies program is distinct, separate, and in addition to other supplier opportunities posted for the Natrium Demonstration Reactor.</i></p>	RFP – 2025 Q1

COMPONENT(S)	DESCRIPTION	RFP TIMEFRAME
Nuclear Safety Related RCC Assemblies 	<p>Supplier to provide turnkey design, procurement, fabrication, assembly, test and site delivery services for nuclear safety related RCC assemblies. These assemblies will be similar to Fast Flux Test Facility reactor core assemblies, while being new/ novel assembly types. It is expected that there will be 50+ safety related assemblies of three to six different configurations.</p> <p><i>Note 1: TerraPower will provide procurement support for unique components and materials required by these assemblies.</i></p> <p><i>Note 2: The TerraPower RCC assemblies program is distinct, separate, and in addition to other supplier opportunities posted for the Sodium Demonstration Reactor.</i></p>	RFP – 2025 Q1
Neutron Sources	<p>Supplier to provide Californium and Antimony/Beryllium capsules/pellets to Sodium Demo project to be incorporated into RCC assemblies to support reactor operation.</p> <p>Supplier to provide material production, shipping, and design integration support.</p>	RFP – 2025 Q1

BECHTEL POWER CORPORATION NATRIUM DEMONSTRATION PLANT OPPORTUNITIES

EQUIPMENT	RFP TIMEFRAME
RWG Charcoal Absorber Beds, ASME Section VIII	2024 Q4
Physical Model Testing, Cooling Tower CW Pump Intake	2024 Q4
Bulk, Fiberglass Pipe and Fittings	2024 Q4
Condenser and Polishers	2024 Q4
Bulks - Raceway (Conduit/Tray) and Fittings (NST)	2024 Q4
Cathodic Protection System – Design & Supply	2024 Q4
Compressors, Recipr., Special Purpose	2024 Q4
RWL Evaporator	2024 Q4
Filters, Non-Pressure Vessel – RWL	2024 Q4
Filters, Tubular Ultrafiltration – RWL	2024 Q4
Oil/Water Separator	2024 Q4
Pumps, Centrifugal, Horizontal, Slurry	2024 Q4
RWL Demineralizer	2024 Q4
Reverse Osmosis System – RWL	2024 Q4
Hydrants	2024 Q4
Pressure Vessel (NSS Drain Vessel)	2024 Q4
Bulks, Flange Bolts, Gaskets, and Insulation Kits (NST)	2024 Q4
Metal Reflective Insulation (MRI) – Supply and Install	2024 Q4
Material Testing Services for Concrete and Earthwork (SR/Non-ASME)	2024 Q4
Shop Fabricated Spools – CS, SS, & Alloy (NST)	2024 Q4
Filter, HEPA	2024 Q4
Windows, Radiation Shielding	2024 Q4
Heat Exchanger, NWS – CCW	2024 Q4
Heaters, CFW Feedwater	2024 Q4
Heater, Deaerating Feed Water Heater (FWH)	2024 Q4
Insulation, Concrete - Supply and Install	2024 Q4

BECHTEL POWER CORPORATION NATRIUM DEMONSTRATION PLANT OPPORTUNITIES (cont.)

EQUIPMENT	RFP TIMEFRAME
Large AWWA Steel Pipe Spools	2024 Q4
Pumps, Vertical Turbine	2024 Q4
Tank, Field Fabricated	2024 Q4
Basket/Concial Strainers (NST)	2024 Q4
Switchyard, Design, Fabricate and Deliver	2024 Q4
Pumps, Fire Water	2024 Q4
Temporary Fencing, Supply and Install	2024 Q4
Pumps, Centrifugal	2024 Q4
Crane – Overhead Cranes – Turbine Bldg EI	2024 Q4
Tank, Shop Fabricated, API 650	2024 Q4
Heat Exchanger, Air to Air	2024 Q4
Chiller, Centrifigual (EWS)	2024 Q4
Treatment, Oil/Water Separator	2024 Q4
Pumps, Sump, Vertical	2024 Q4
Pressure Relief Valves, Stainless Steel	2024 Q4
Air Handling/Filtration Units - Ventilation	2024 Q4
Fan-Coil Units	2024 Q4
Compressor, Air, Screw Type	2024 Q4
Electrical Heaters (Immersion, Inline) for NSS Drain Vessel/TSS Tanks	2024 Q4
Heaters, Air/Gas Inline, Electric	2024 Q4
Water Heaters, Electric	2024 Q4
Dehumidifier	2024 Q4
Humidifiers	2024 Q4
Sewage Lift Station	2024 Q4
N ₂ /Argon Storage & Supply	2024 Q4

BECHTEL POWER CORPORATION NATRIUM DEMONSTRATION PLANT OPPORTUNITIES (cont.)

EQUIPMENT	RFP TIMEFRAME
Tank, HDPE (Acid/Caustic)	2024 Q4
Safety Showers & Eyewash Stations	2024 Q4
Cable Bus and Isophase – Installation and Test	2024 Q4
SC Dampers (Potential CGD)	2024 Q4
Precast Concrete Items (Manholes, Duct Bank, Trenwa, Catch Basins, etc.)	2024 Q4
Precast Concrete Items (Manholes, Duct Bank, Trenwa, Catch basins, etc.) (SR)	2024 Q4

BECHTEL POWER CORPORATION TEST AND FILL FACILITY OPPORTUNITIES

EQUIPMENT	RFP TIMEFRAME
CRD Water Loop Module (Integrator)	2024 Q4
AC Switchboard	2024 Q4
Severe Service Control Valves (Small)	2024 Q4
Metal Expansion Joints	2024 Q4
Conductivity Level Switches and Leak Detectors	2024 Q4
Flowmeters, Magnetic	2024 Q4
Flowmeters, Sonic/Ultrasonic	2024 Q4
Inductive Level Transmitters	2024 Q4
Pressure Transmitters (Gauge/Differential) (Non-sodium)	2024 Q4
General Purpose On/Off Ball Valves – Soft Seated	2024 Q4
Radar Level Transmitters	2024 Q4
Temperature Transmitters/Thermocouples Assembly	2024 Q4
Pressure Relief Valves (Section VIII)	2024 Q4
Pressure Transmitters (Gauge/Differential) (Sodium Only)	2024 Q4
Fire Protection /Detection - Design, Supply and Install	2024 Q4
AC Power Distribution Board – 480V, 65kA Switchgear (Panel Board)	2024 Q4