Oak Ridge
National Laboratory

ORNL Summer Small Business Outreach: A Virtual Meeting
Business Opportunities

July 14, 2020
10:00 a.m. – 11:30 a.m. Eastern

ORNL Contracts Division
Brooks Baldwin, Division Director

ORNL is managed by UT-Battelle, LLC for the US Department of Energy
Welcome

- Brooks Baldwin
  Contracts Division Director
Agenda

Welcome

Doing Business with ORNL

Project Updates and Business Opportunities
  Construction
  IT/Computing
  U.S. ITER
  Second Target Station
  Additional Projects

Latest from the SBA

Q&A
Doing Business with ORNL

• Cassandra McGee Stuart, DBA
  Manager, Small Business Program
The national laboratories of the U.S. Department of Energy constitute a network for discovery and innovation.
ORNL Business Opportunities

- https://smallbusiness.ornl.gov
### ORNL Business Opportunities

#### Current Business Opportunity Listings

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Small Business Set-Aside</th>
<th>Estimated Value</th>
<th>Expected Issue Date</th>
<th>Expected Award Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial and Facility Services</td>
<td>Camera Investigations, Civil Survey, and Geotechnical Details</td>
<td>No</td>
<td>$1M - $2M</td>
<td>Jul-19</td>
<td>Sept-19</td>
</tr>
<tr>
<td>Construction</td>
<td>Construction Services to SNS Site Details</td>
<td>Yes</td>
<td>&lt;$10M</td>
<td>Jul-19</td>
<td>Oct-19</td>
</tr>
<tr>
<td>Construction</td>
<td>OLFCG Electrical Upgrade Details</td>
<td>Yes</td>
<td>$8.8M</td>
<td>Jul-19</td>
<td>Sept-19</td>
</tr>
<tr>
<td>Construction</td>
<td>Specialty Concrete Details</td>
<td>No</td>
<td>$750K</td>
<td>Sept-19</td>
<td>Sept-19</td>
</tr>
<tr>
<td>Computer/IT Services</td>
<td>GNU Compiler Collection (GCC) Support for Basic Ordering Agreement Details</td>
<td>No</td>
<td>&gt;$2M</td>
<td>Aug-19</td>
<td>Oct-19</td>
</tr>
<tr>
<td>Professional and Staffing Services</td>
<td>U.S. ITER Electromechanical Analysis Support Details</td>
<td>Yes</td>
<td>&gt;$1M</td>
<td>Sept-19</td>
<td>Dec-19</td>
</tr>
</tbody>
</table>
ORNL Business Opportunities

Small Business Set-Aside: Yes

Estimated Value: >$10M

NAICS Code: 541611

Expected Issue Date: July 2020

Expected Award Date: October 2020

Contact Name: Angela Shillings

Contact Email: shillingsag@ornl.gov
ORNL Business Opportunities

- https://smallbusiness.ornl.gov
Project Updates & Business Opportunities: Construction

• Landon Hill
  Procurement Manager
Construction

- [https://web.ornl.gov/adm/contracts/](https://web.ornl.gov/adm/contracts/)
  - Construction Labor Agreement
  - Construction Specification Forms
  - Qualified Construction/Demolition Subcontractors
Project Updates & Business Opportunities: IT/Computing

- Justin Keck
  Procurement Manager
IT/Computing

• Recent Competitions

• Upcoming Competitive Opportunities
  – Hardware refresh and maintenance for Display Interface
  – SAP License Opportunity for Certified Resellers
  – Cloud-Based Curriculum Content Repository

• These and any other major year-end opportunities will be posted at the Business Opportunities page.
Project Update and Opportunities:

US ITER

Cain Wooten, Senior Project Engineer
Lisa Cobb, Procurement Manager

July 14, 2020
ITER Mission
To demonstrate the feasibility of fusion energy for peaceful purposes

- First fusion device categorized as a nuclear installation (France/ASN)
- Largest vacuum vessel in the world (16,000 m³) with a vacuum pressure of $10^{-4}$ Pa.
- Largest cryostat in the world (3,850 tons)
- >10,000 tons of superconducting magnets with a combined stored energy of 51 GJ

International ITER Project is ~70% complete for First Plasma site construction and components
ITER Site

Saint-Paul-lès-Durance, France | May 2020
ITER Tokamak Complex

- 23,000 ton, 30 m Wide
- Plasma temperature is 10X the Core of the Sun – 150 Million °C
- Fusion energy 500 MW Output power.
- Largest Tokamak in the world, Plasma volume is 840 m³ with a 6 m radius.
Upcoming Procurement Areas in 2020

- Tokamak Cooling Water System
- Electron Cyclotron Transmission Lines
- Ion Cyclotron Transmission Lines
- Vacuum Systems
- Instrumentation & Controls
- Pellet Injectors
- Disruption Mitigation
Upcoming Procurements in 2020

US ITER Procurements and ITER IO Procurements

- Current US ITER Procurement Opportunities are posted at: https://usiter.org/opportunities/procurements.

- Interested bidders should watch the IO website https://www.iter.org/proc/overview for other opportunities.
All US sectors are engaged

INDUSTRY
- General Atomics, San Diego, CA
- ORANO USA, Charlotte, NC
- Luvata Waterbury, Inc., Waterbury, CT
- Precision Custom Components, York, PA
- PCC/Schulz, Robinsonville, MS
- Oxford Superconducting Technology, Carteret, NJ
- High Performance Magnetics, Tallahassee, FL
- Schneider Electric, Palatine, IL
- Robatel Technologies, Roanoke, VA
- Petersen, Inc., Ogden, UT
- Superbolt, Carnegie, PA
- Hayward Tyler, Colchester, VT
- Hyundai Corporation, Houston, TX
- New England Wire Technologies, Lisbon, NH
- St. Germain Heavy Industrial Projects, Houston, TX
- Hamill Manufacturing, Trafford, PA
- Major Tool & Machine, Inc., Indianapolis, IN
- Mega Industries, LLC, Gorham, ME
- Dielectric Communications, Raymond, ME
- Siemens's Industry, Inc., Wendall, NC
- Eaton Corporation, Cleveland, OH
- Kamatics, Bloomfield, CT
- ...and 100s more

UNIVERSITITES
- Massachusetts Institute of Technology
- University of Texas at Austin
- University of Tennessee
- Florida State University
- University of Wisconsin at Madison
- University of California Los Angeles
- University of Michigan
- University of California San Diego
- Columbia University
- Washington State University
- Indiana University

NATIONAL LABORATORIES
- Oak Ridge National Laboratory
- Princeton Plasma Physics Laboratory
- Sandia National Laboratory
- Savannah River National Laboratory
- Los Alamos National Laboratory
- Lawrence Livermore National Laboratory
- Idaho National Laboratory
- Fermi National Laboratory
- Argonne National Laboratory
- Lawrence Berkeley National Laboratory
~$1.4B to US industry, universities, labs

Over 80% of US ITER funding remains in the US

Awards and obligations as of May 2020
Project Updates & Business Opportunities: Second Target Station

• Nick Perry
  Procurement Manager
Introduction

• STS Organization
• STS Procurement
• Procurement Planning
• Sample Procurements
• Conventional Facility Status
• Summary/Questions
SNS upgrades will accelerate scientific progress and deliver wholly new capabilities

STS project: Build the second target station with initial suite of beam lines

- Optimized for cold neutrons
- World-leading peak brightness
- Provide new science capabilities for measurements across broader ranges of temporal and length scales, real-time, and smaller samples
**STS Project Organization Chart**

**Oak Ridge National Laboratory**
Thomas Zacharia, Laboratory Director

**Program Office**
Linda Horton, BES Director
Ed Stevens, Program Manager

**ORNL Site Office**
Johnny Moore, OSO Manager
Bill Cahill, Federal Project Director

**Second Target Station Project**
John Haines, Director
Graeme Murdoch, Project Manager
Executive Assistant, Lisa Eady

**Project Director**
John Haines

**Project Manager**
Graeme Murdoch

**Accelerator Systems**
Michael Allitt

**Target Systems**
Peter Rosenblad

**Instrument Systems**
Ken Herwig

**Conventional Facilities**
Gary Bloom

**Integrated Control Systems**
Steven Hartman

**Project Support**
Project Controls Manager, Monty Middlebrook
ESH&Q, Steve Trotter
Procurement Manager, Nick Perry
Business Manager, Justin Ferrell
Finance Officer, Chuck Marth
Human Resources Manager, David Lett
Comms Coordinator, Amy Keller

**STS Project Organization Chart is well aligned with WBS**
Procurement Organization

• Current Staff
  – Nick Perry, STS Procurement Manager
  – Barbara Shaw, Procurement Officer
  – Jeff Gerdes, Procurement Officer

• Additional Procurement staff will be added to support the Buy-Out and Administration of procurements for STS

• Additional support will be provided by ORNL Contracts Division personnel for lower $ value and rapid commercial purchases
Procurement Planning

• STS Procurement staff will follow ORNL Procurement Operating Practices in accordance with UT Battelle Prime Contract

• A “Material Assignment Schedule” (MAS) will be developed to plan, manage and track procurements

• The Team is in the process of identifying all future procurements and will be added to the MAS
Procurement Strategy and Delivery Methods

• Various procurement strategies and delivery methods will be utilized consisting of:
  – Subcontract/Purchase Order - Fixed Price
  – Basic Ordering Agreement - Time and Materials
  – Task Order - Cost-Reimbursement
  – Standardized Items/Bulk Purchase - Incremental Funding
  – Subcontract/PO with Options

• Fixed price agreements place the responsibility to perform within the stated price on the subcontractor and will be used at every opportunity
Sample of Major STS Procurements

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Estimated Cost (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturing - Bulk Shielding Components</td>
<td>$12.50</td>
</tr>
<tr>
<td>2</td>
<td>Monolith Inserts (15 Upper and 6 Lower Moderators)</td>
<td>$11.00</td>
</tr>
<tr>
<td>3</td>
<td>Cooling Water System</td>
<td>$7.90</td>
</tr>
<tr>
<td>4</td>
<td>Manufacture Core Vessel Body</td>
<td>$7.80</td>
</tr>
<tr>
<td>5</td>
<td>Manufacturing - CW System GFE</td>
<td>$7.60</td>
</tr>
<tr>
<td>6</td>
<td>MRA - including Be, moderators, vessel, structure, and piping</td>
<td>$7.00</td>
</tr>
<tr>
<td>7</td>
<td>Target disk including drive shaft</td>
<td>$6.70</td>
</tr>
<tr>
<td>8</td>
<td>Cold Box &amp; Oil Removal Skid - He Refrigeration System Components</td>
<td>$6.60</td>
</tr>
<tr>
<td>9</td>
<td>Polarizing Analyzer</td>
<td>$5.20</td>
</tr>
<tr>
<td>10</td>
<td>SiPM Pixelated Camera Detectors</td>
<td>$5.20</td>
</tr>
<tr>
<td>11</td>
<td>Manufacturing - Waste Disposal Cask</td>
<td>$4.00</td>
</tr>
<tr>
<td>12</td>
<td>$^{3}$He Detector Tubes</td>
<td>$3.70</td>
</tr>
<tr>
<td>13</td>
<td>Detector Vessel</td>
<td>$3.30</td>
</tr>
<tr>
<td>14</td>
<td>Bunker Roof Panels &amp; Alignment Structures</td>
<td>$2.80</td>
</tr>
<tr>
<td>15</td>
<td>Low Speed Choppers (F,H) &amp; Components</td>
<td>$2.70</td>
</tr>
<tr>
<td>16</td>
<td>High Speed Choppers (P,M) &amp; Components</td>
<td>$2.50</td>
</tr>
<tr>
<td>17</td>
<td>Detector 8-packs</td>
<td>$2.10</td>
</tr>
</tbody>
</table>
Two Major Procurements in Progress for Conventional Facilities

• AE Design Services Estimated value $30-49M
  – Basic Ordering Agreement (BOA) with one AE firm
  – Firm Fixed Price Task Orders
  – *Acquisition Plan Approved*
  – Solicitation in final approval stage

• CM/GC Contract Estimated value $600-$630M
  – Base Contract – Pre-construction Services – fixed price
  – Option 1 CM Services (Cost of CM Staff and Staff Resources, pre-negotiated change fees) – fixed price
  – Phased Firm Fixed Price Scope Packages
  – Acquisition Plan in progress
  – Solicitation in progress
Summary

• STS Procurement is appropriately staffed for this stage of the Project and is/will be adding staff to support the buy-out of the project

• Procurement Procedures and Approved Purchasing System in Place

• Procurement Planning is advancing and working with the STS Team to identify procurements

• Two Major Procurements for Conventional Facilities are in progress and advancing to meet project schedule
Additional Projects

- Brooks Baldwin
  Contracts Division Director
Additional Projects

• U.S. Stable Isotope Production and Research Center (SIPRC)
  – Increase the domestic production capabilities of stable isotopes for scientific, industrial, national security and medical uses
  – Over 500 individual purchases
  – Key components are dipole magnets and pressure vessels
  – Begins in FY21
Additional Projects

- Materials Plasma Exposure Experiment (MPEX)

- Design, fabricate, install, and commission a Linear Plasma Device to address the need for expanded materials science capabilities, particularly as it pertains to Plasma Material Interactions

- Estimated $40M in procurement in a 2-3 year period

- Some similarities to US ITER procurement scope
  - Magnets
  - Vacuum systems
  - Electrical systems
  - I&C
  - Diagnostics
Project Updates & Business Opportunities: Latest from the SBA

- Jutta Bangs
  Director, TN Small Business Development Center, Roane State
Latest from the SBA
Questions