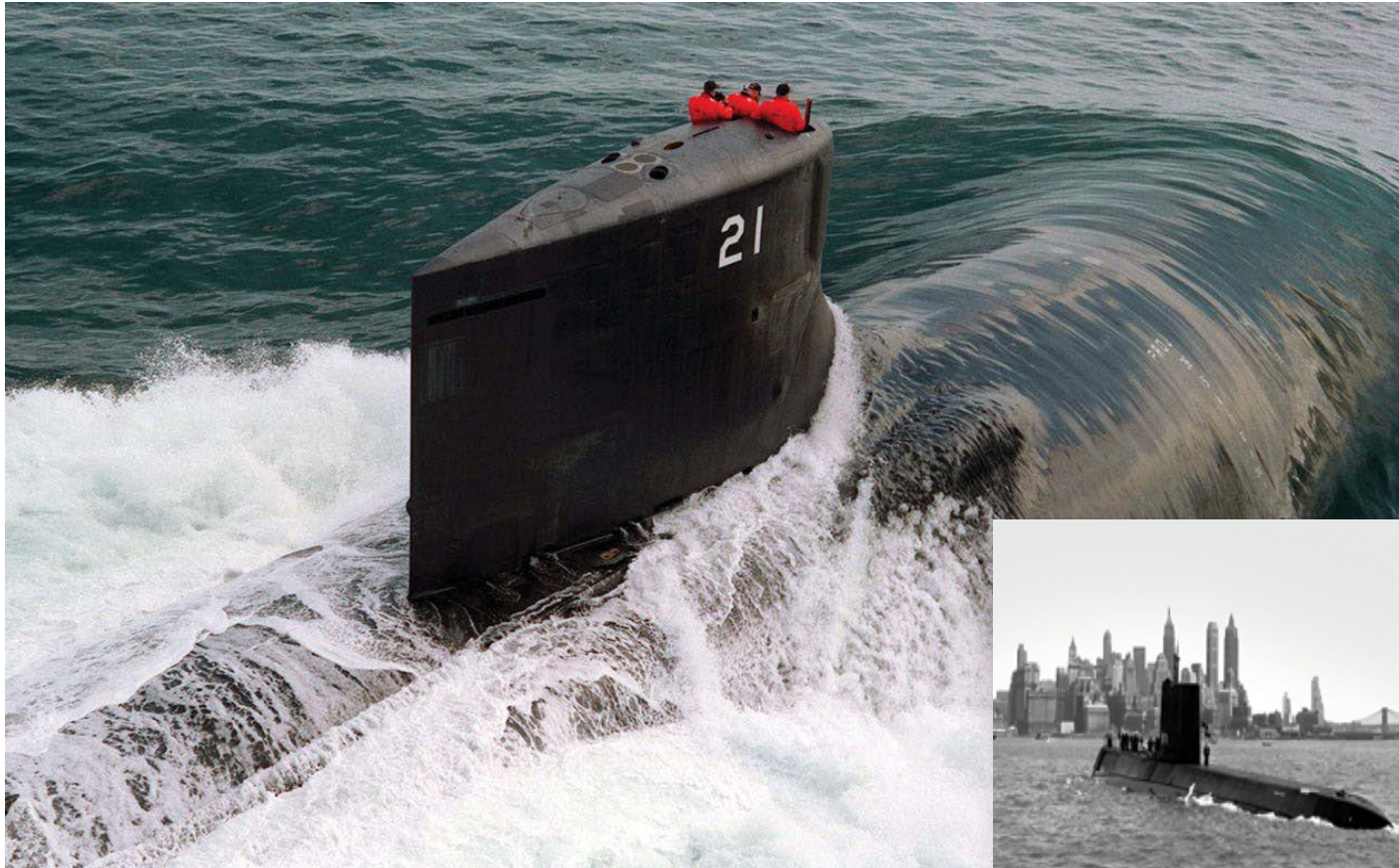




# **Partnering with Small Business WM 2014 Symposia Conference**



# *B&W Overview*

# Key Company Metrics



- 140 year-old American company
- 60+ years as a defense contractor
- Operate a network of 13 major manufacturing facilities globally
- 12,000 employees worldwide, plus 10,000 joint venture employees
- Supplied >300K MW of installed capacity in >800 utilities in over 90 countries
- Provided >300 nuclear steam generators to customers worldwide
- Named to MIT Technology Review's 2012 TR50 List of the *World's Most Innovative Companies*



# A Legacy of Innovation



## 1867... Building a power boiler reputation

- Original Babcock & Wilcox
- First water-tube power boiler
- Marine boilers for Teddy Roosevelt's *Great White Fleet*



## 1946... Leading the development of nuclear power

- Nuclear components for the *Manhattan Project*
- Reactors for first nuclear-powered submarine, *USS Nautilus*
- First generation U.S. commercial nuclear power plants



## 1968 ... Addressing the environment

- Fossil fuel emission controls for particulate, SO<sub>x</sub>, NO<sub>x</sub>, Hg
- Development of supercritical coal plants
- Research in fuels, materials, combustion, and post-combustion systems



## 1994 ... Managing national security

- Prime contract for Y-12 and Pantex M&O
- Enriched uranium downblending
- Management of Los Alamos and Idaho National Laboratories



## 2005 ... Minimizing Climate Change

- Carbon capture and storage (CCS) demonstration
- Biomass and solar thermal technologies
- Next-generation commercial nuclear power (m-Power)



# Business Units

## Power Generation

- Coal-fired power generation
- Service, operation and maintenance
- Construction and EPC
- Environmental systems (FGD, SCR, mercury, carbon)
- Renewables (Biomass, solar, waste-to-energy)



## Nuclear Energy

- Field services
- Plant modifications
- Component manufacturing and installation
- Fuel design, enrichment and fabrication
- B&W mPower™



## Nuclear Operations

- Virginia-Class submarine program
- Ford-Class carrier program
- Refueling
- Fuel processing and fabrication



## Technical Services

- Nuclear material handling, storage and security
- Manage & operate nuclear laboratories and nuclear weapons production sites
- Environmental management including decontamination and decommissioning



**Leading technology innovator in power generation and a specialty manufacturer of nuclear components with legacy spanning 140 years**

# An Evolving Technology Portfolio

## Environmental

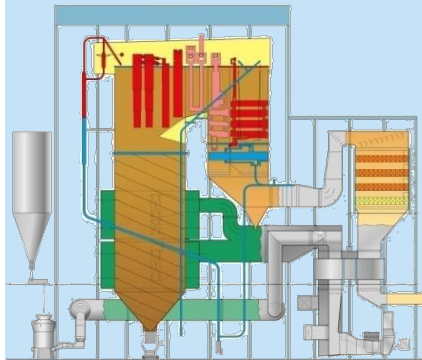
- NO<sub>x</sub> reduction
- SO<sub>2</sub> control
- Particulate control
- Acid gas reduction
- Mercury removal
- Ash management



**Total Environmental Solutions**

## Ultra Supercritical

- Highest efficiency coal-fired design
- 133 Supercritical Boilers
- Largest supercritical boilers in world (9 x 1,300 MW)
- Base-loaded and Full-cycling designs
- Preferred technology for India and China



**Ultra-Supercritical Boiler**

## Renewables

- Biomass
- Waste-to-Energy
- Concentrated Solar Power (CSP)
- Operate and Maintain



**Solid Waste Authority West Palm Beach, FL**

## CO<sub>2</sub> Capture

- Oxy-Coal Combustion
- Regenerable Solvent Absorption Technology (RSAT™)
- Extensive commitment to R&D
  - Wide variety of programs
  - Oxy-coal combustion project, FutureGen 2.0



**Recently Expanded R&D Facility**

# U.S. Government Agency Experience

## DOE/NNSA

### B&W Y-12, LLC

*B&W TSG is principle owner of LLC, partnering with Bechtel National*



#### Scope:

- Deliver cost-effective uranium processing facility & services
- Production, refurbishment, and dismantlement of weapons components
- Prevent proliferation of weapons of mass destruction
- Provide facility and security for storage of special nuclear materials

**Annual Site Funding:** \$900M

**Contract Duration:** 12-year Contract

**Acreage:** 811 acres

**Plants and Facilities:** ~500; 6 million sq. ft. of floor space

**Employees:** 4,600 (site)

### B&W Pantex, LLC

*B&W TSG is principle owner of LLC partnering with Honeywell and Bechtel National*



#### Scope:

- Evaluate, retrofit, and repair nuclear weapons
- Certification of weapons' safety and reliability
- Dismantle weapons surplus to the stockpile
- Sanitize components
- Develop, test, and fabricate high-explosive components
- Provide interim storage and surveillance of plutonium pits
- Provide NMC&A and security

**Annual Site Funding:** \$500 Million

**Contract Duration:** 12-year Contract

**Acreage:** 16,000 acres (~25 sq. mi)

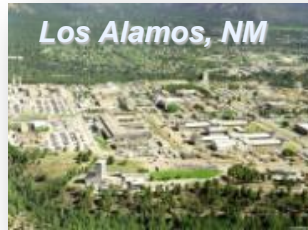
**Plants and Facilities:** ~600

**Employees:** 3,300 (site)

# National Laboratories

## Los Alamos National Laboratory

*Los Alamos National Security, LLC (LANS) Consortium comprised of the University of California (lead), Bechtel National, B&W and URS*



### Scope:

- Operate TA-55, the site's largest and most complex nuclear facilities – production of plutonium pits
- Manage Laboratory Operations, Business Operations and Lab
- Direct all Safeguards and Security

## Lawrence Livermore National Laboratory

*Lawrence Livermore National Security, LLC (LLNS), Consortium comprised of the University of California (lead), Bechtel National, B&W and URS, including subcontractors Battelle and Texas A&M*

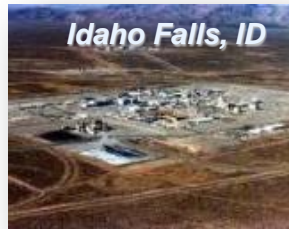


### Scope:

- Manage the tritium operations, Special Nuclear Material de-inventory and nuclear operations (Tritium and National Ignition Facility)

## Idaho National Laboratory

*Battelle (lead), with B&W, URS, MIT and Electric Power Research Institute (EPRI) integrated subcontractors*



### Scope:

- Develop nuclear fuel cycle and nuclear energy technology
- Direct national security, and supporting missions
- Operate Advanced Test Reactor and manufacture classified components for the DoD

## Oak Ridge National Laboratory

*UT-Battelle, LLC; B&W is an integrated subcontractor*



### Scope:

- Maintain scientific excellence in Neutron Science, Energy, Advanced Materials, and National Security
- Deliver High Flux Reactor fuel



# Environmental Management Projects

## Portsmouth Gaseous Diffusion Plant D&D

- Prime contractor is Fluor B&W Portsmouth, LLC, comprised of Fluor Federal Services and B&W
- Scope is for decontamination and decommissioning services at the Portsmouth plant in Ohio

## Uranium Conversion Operations

- Prime contractor is B&W Conversion Services, LLC, comprised of B&W and URS
- Scope is to perform uranium conversion operations at the Paducah Gaseous Diffusion Plant in Kentucky, and Portsmouth Gaseous Diffusion Plant in Ohio

## Advanced Mixed Waste Treatment Project

- Prime contractor is Idaho Treatment Group, LLC, comprised of B&W, URS and EnergySolutions
- Scope is to safely process and dispose of transuranic waste and mixed low-level waste

## Savannah River Liquid Waste Disposition Program

- Prime Contractor is Savannah River Remediation, LLC, comprised of URS, Bechtel, CH2MHill, and B&W
- Scope is to achieve closure of SRS liquid waste tanks

## West Valley Demonstration Project Phase I Decommissioning & Facility Disposition

- Prime contractor is CH2M Hill-B&W West Valley, comprised of CH2MHill Constructors, B&W and Environmental Chemical Corporation
- Services provided include:
  - Project management and support services
  - Site operations, maintenance, and utilities
  - High-level waste canister relocation, facility disposition, waste tank farm management, NRC-licensed disposal area management, waste management and nuclear materials disposition
  - Safeguards and security

## Waste Isolation Pilot Plant

- Prime contractor is Nuclear Waste Partnership, LLC, comprised of URS and B&W
- Scope is to operate and maintain WIPP through safe management, retrieval, characterization, transportation, and disposal of approved wastes

## Paducah Gaseous Diffusion Plant Remediation Services

- Prime contractor is LATA Environmental Services of Kentucky, KY – B&W is an integrated subcontractor
- Provide environmental services

# SB Opportunities

## DUF6

### Needs

- Staff augmentation - engineering, procedure writing/technical editing, training/curriculum development
- Plant modification/alteration/repair services
- T equipment
- Equipment calibration
- Warehousing

**Contact:** Kathy Vaselopulos

**Phone:** 859-361-5515

## MPower

### Needs

- Fabrication (N Stamp)
- R&D
- Engineering
- Technical Staffing

**Contact:** Mike DeAngelis or  
Ken Bogacik

**Phone:** 330-998-3781/434-316-7606

## Y-12

### Needs

- Computer hardware, software and supplies
- Electrical and electronic instruments and systems
- Mechanical equipment and supplies
- Laboratory, safety and operating products
- Environmental and waste management services
- Professional and administrative services
- Engineering support services
- Research & Development
- Information Technology
- Construction materials and services

**Contact:** Lisa A. Copeland, SPO  
Manager

**Phone:** 865.576.2090

Socioeconomic Programs Office  
B&W Y-12, LLC

PO Box 2009

Oak Ridge TN 37831-6501

<http://www.y12.doe.gov/>

## Pantex

### Needs

- Engineering and Professional Services
- Engineering Equipment
- General Plant Construction
- Commodities

**Contact:** Amber Bullard,  
Acting/Interim Small  
Business  
Program Manager

**Phone:** 806.477.6929