

# High Bridge Assists Owners and Contractors Deliver

*Planning, Project Management, Project Controls, Estimating, Scheduling, Cost Management, Change Control, & Lessons Learned Insights for Success*



Vogtle Nuclear Plant - Georgia



DOE Waste Management Complex - Idaho



Oconee Nuclear Plant – South Carolina



Sellafield Nuclear Facility - Northern England



ITER Fusion Energy Demonstration Project - Southern France



*“Connecting Vision and Plans with Performance and Execution”*

# High Bridge Associates, Inc. Core Services, Projects, & Customers

## *High Bridge Associates Vision and Mission*



- ▶ High Bridge Associates, Inc. (High Bridge) is a project management services & consulting company
- ▶ We assist owners, engineer/constructors, & manufacturers with new projects & operating plants
- ▶ **High**....Quality & Value-Added services
- ▶ **Bridge**....Connecting Vision & Plans with Performance & Execution
- ▶ **Associates**....Assembling customer/project specific teams comprised of employees & partner firms

*"Connecting Vision and Plans with Performance and Execution"*

## *High Bridge Core Services*

### Primary Areas

- ▶ Program Planning & Integration
- ▶ Planning & Scheduling
- ▶ Scope Development & Cost Estimating
- ▶ Independent Cost/Schedule Assessments & Process Improvement
- ▶ Project Controls/EVMS/Reporting
- ▶ Risk Management & Mitigation
- ▶ Project Management
- ▶ Construction Management
- ▶ SMR Project Development

### Secondary Areas

- ▶ Contract Administration & Change Management
- ▶ Procurement & Expediting
- ▶ Material Management
- ▶ Financial Analysis & Budgeting
- ▶ Baseline & Configuration Management
- ▶ Procedures & Training
- ▶ Systems Integration & IT Services
- ▶ Alternative Energy Planning

<b>High Bridge Commercial Nuclear Project Summary</b>										
Commercial Nuclear Plant Description	Units	BWR			Commercial Nuclear Plant Description	Units	PWR			
		Mark 1	Mark 2	Mark 3			West.	C.E.	B&W	Candu
Browns Ferry	3	3			Arkansas	2		1	1	
Brunswick	2	2			Beaver Valley	2	2			
Clinton	1			1	Big Rock	1	1			
Cooper	1	1			Bellefonte	2			2	
Dresden	2	2			Braidwood	2	2			
Fitzpatrick	1	1			Catawba	2	2			
Gina	1	1			Calvert Cliffs	2		2		
Grand Gulf	1			1	Crystal River	1			1	
LaSalle	2		2		DC Cook	2	2			
Nine Mile Point	2	1	1		Indian Point	1	1			
Oyster Creek	1	1			McGuire	2	2			
Peach Bottom	2	2			Millstone #3	1	1			
Perry	1			1	North Anna	2	2			
Pilgrim	1	1			Oconee	3			3	
Quad Cities	2	2			Palo Verde	3		3		
River Bend	1			1	Pickering	10				10
Shoreham	1		1		Rancho Seco	1	1			
<b>Total 17 Sites &amp; 25 Units</b>					Salem	2	2			
					Seabrook	1	1			
					Sequoyah	2	2			
<b>New Nuclear Power Facilities, Advanced Reactor Designs, and Uranium Enrichment</b>					South Texas	2	2			
					Vogtle	4	4			
					Three Mile Island	2			2	
					VC Summer	2	2	1		
					Waterford	1			1	
					Watts Bar	2	2			
ITER Fusion Project	1				WPPS	1	1			
LES Enrichment Plant	1				Zion	2	2			
Westinghouse AP1000	8									
AEP ESBWR	1									
Luminant US APWR	2									
UniStar EPR	1									
Dominion NA3/All NSSS	1									
Entergy ESBWR	1									
South Texas ABWR	2									
Duke AP1000	2									
British Energy/EDF/EPR	10									
NuScale SMR	1									
B&W mPower SMR	1									
<b>Total 20 Sites &amp; 32 Units</b>					<b>Total 28 Sites &amp; 60 Units</b>					
<b>Total Units</b>	<b>57</b>				<b>Total Units</b>	<b>60</b>	<b>34</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Grand Total 65 Sites and 117 Units</b>										

<b>High Bridge Government &amp; Science Projects Summary</b>		
<b>Facility/Program Location/Description</b>		<b>Facilities/ Projects</b>
<b>1</b>	<b>DOE National Nuclear Security Administration (NNSA) Albuquerque Weapons Programs</b>	
a.	B61-12 program planning, project controls, schedule development, integration, & EVMS infrastructure development	<b>1</b>
b.	W80-4 conceptual design planning, integration, project controls, & cost report development	<b>1</b>
<b>2</b>	<b>DOE National Nuclear Security Administration (NNSA) Kansas City Plant</b>	
a.	B61-12 & W88 Alt 370 readiness planning & assessment for Integrated Baseline Review (IBR)	<b>1</b>
b.	B61-12 & W88 Alt 370 assessment of EVMS project and corporate infrastructure readiness for DOE certification	<b>1</b>
<b>3</b>	<b>DOE Stanford Linear Accelerator Complex (SLAC)</b>	
	Program planning, readiness reviews, and integration support for various projects	
<b>4</b>	<b>DOE Headquarters Washington DC</b>	
a.	Office of Environmental Management (EM): Program Planning, Scheduling, & Integration	<b>6</b>
b.	Weapons Fissile Material Disposition Program: Independent Cost Estimate Review	<b>1</b>
<b>5</b>	<b>ITER International Fusion Research &amp; Demonstration Facility, Cadarache France</b>	
a.	Project Management, Planning, Integration, Scheduling, Estimating, Project Controls, & Risk Management	<b>1</b>
<b>6</b>	<b>SMART Park Alternative Energy Project (Sustainable Manufacturing and Recycling Technology)</b>	
a.	Develop, Integrate, Design, Construct, Own, & Operate a Municipal Solid Waste to Ethanol Renewable Fuel facility	<b>1</b>
<b>7</b>	<b>DOE Michigan State University (MSU):</b>	
a.	Facility for Rare Isotope Beams (FRIB): Strategic Planning, Project Management, Preparation, & Organizing	<b>1</b>
<b>8</b>	<b>DOE Los Alamos National Laboratory (LANL)</b>	
a.	Weapons Experimental Program: Project Controls, Planning, Scheduling, EVM Reporting, Procedures, & Risk Management	<b>1</b>
b.	Accelerator Production of Tritium (APT) Project: Cost Estimating, Planning, & Scheduling	<b>1</b>
<b>9</b>	<b>DOE Fermi National Accelerator Laboratory (FNAL)</b>	
a.	Long Baseline Neutrino Project: Executive Consulting for Integrated Planning, Project and Program Performance	<b>1</b>
<b>10</b>	<b>Korea National Science Research Center, Rare Isotope Science Project, Daejeon, KR</b>	
a.	Executive Consulting for Planning/Project Management & Member of the International Advisory Committee	<b>1</b>
<b>11</b>	<b>DOE Idaho Site/Idaho National Engineering Laboratory</b>	
a.	Program Planning/Scheduling Support: Primavera Upgrade & Training	<b>1</b>
b.	Pit 9 Waste Management Project: Project Controls, Planning, Scheduling, & Training	<b>1</b>
c.	Advanced Mixed Waste (AMWTP) Project: Project Controls, Scheduling, & Construction Management	<b>1</b>
d.	Idaho Cleanup Project: Project Controls Process Improvement	<b>1</b>
<b>12</b>	<b>Oak Ridge DOE Site/Oak Ridge National Laboratory</b>	
a.	Operating Contractor Support: Executive Consulting for Cost Reduction & Re-Organizing	<b>1</b>
b.	Spallation Neutron Source (SNS) Accelerator: Planning, Organizing, Risk Management, & Scheduling	<b>1</b>
c.	Y-12 Enriched Uranium Project: Independent Estimate/Schedule Review	<b>1</b>
d.	Gaseous Diffusion D&D Project: Planning, Scheduling, Cost Estimating, & Claims	<b>1</b>
e.	Clinch River Breeder Reactor: Project Controls, Planning, Scheduling, & Cost Estimating	<b>1</b>
<b>13</b>	<b>Savannah River DOE Site</b>	
a.	Mixed Oxide Fuel Facility (MOX): Project Controls, EVMS, Planning, Scheduling, Cost Estimating, Risk Mgt.	<b>1</b>
b.	Regulatory Monitoring/Bioassay Laboratory: Independent Cost Estimate	<b>1</b>
c.	F Canyon Ventilation Upgrade Project: Independent Estimate & Schedule Validation Review	<b>1</b>
d.	High Level Nuclear Waste Tank Farm: Operations Review	<b>1</b>
e.	Environmental Restoration Program: Technology Review & Cost Estimating	<b>1</b>
f.	Defense Waste Processing Facility (DWPF), High Level Nuclear Waste Vitrification: Project Management	<b>1</b>
g.	K-Reactor Upgrade Modifications & Restart: Project Management	<b>1</b>
<b>14</b>	<b>Nevada DOE Test Site</b>	
a.	Yucca Mountain Nuclear Waste Repository: Project Controls & Independent Estimate/Schedule Assessment	<b>1</b>
<b>15</b>	<b>DOE Richland Site</b>	
a.	High Level Waste Treatment Project: Planning & Schedule Integration	<b>1</b>
b.	Reactor D&D Program: Independent Cost Estimate Validation Review	<b>1</b>
c.	K-Basin Spent Fuel Cleanup: Independent Cost Estimate & Construction Management	<b>1</b>
d.	High Level Waste Tank Farm D&D: Cost Estimate/Schedule Independent Assessment	<b>1</b>
e.	High Level Waste Treatment Project: Construction Management	<b>1</b>
<b>16</b>	<b>DOE Argonne National Laboratory (ANL)</b>	
a.	Project Controls Process Improvement, Procedures, Training, & Scheduling	<b>1</b>
<b>17</b>	<b>DOE Lawrence Livermore National Laboratory</b>	
a.	Atomic Vapor Laser Isotope Separation (AVLIS) Project: Cost Estimating & Scheduling	<b>1</b>
<b>Total Projects Supported</b>		<b>42</b>



## ***High Bridge Overview***

### **Revenue, Employees, & Offices**

- Revenue & Employees 2012 through 2017:
  - Average \$60M per year & 300 employees in >30 states
- Offices in Greensboro, GA and Chattanooga, TN

### **Customers**

- 70% Utility, Industrial, & Federal Government *Owners*
- 20% Engineering, Procurement, & Construction *Contractors*
- 10% Original Equipment *Manufacturers*

### **Industries**

- 90% Commercial Power Generation
  - 60% Nuclear
  - 30% Fossil (Coal/CGTG) & Renewable (Wind/Solar/Biofuel)
  - 10% Government, Science/R&D, Industrial, & Petro Chemical

### **Business Model**

- Since 1994, >90% of our business is sole source negotiated
- Trust & proven track record with customer decision makers

## ***SELECTED HIGH BRIDGE CUSTOMERS***

### **UTILITIES**

*American Electric Power  
Arizona Public Service  
Constellation Energy  
Dominion Energy  
Duke Energy  
Entergy  
Exelon  
Florida Power & Light  
Luminant Energy  
Nebraska Public Power  
NIPSCO  
Nuclear Management  
PG&E  
Public Service & Gas  
SCANA/SCE&G  
Southern Company  
STPNOC  
TVA*

### **DEPARTMENT OF ENERGY**

*Field Offices &  
National Laboratories:*

*Albuquerque  
Argonne  
Brookhaven  
Idaho  
Los Alamos  
Oak Ridge  
Savannah River  
Richland  
MSU National  
Superconducting  
Cyclotron Lab  
Princeton Plasma  
Physics Lab  
Sandia  
Stanford SLAC*

### **INTERNATIONAL**

*Altran Mediterranee  
Areva/Cogema  
Framatome  
British Energy (UK)  
EDF (FR)  
ITER Fusion Project (FR)  
Ontario Power (CN)  
Empresa Nacional de  
Electricidad (ES)  
KOREA Project (KR)  
International Atomic  
Energy Agency (IAEA)  
Olkiluoto (FI)  
Worsley MFC (AU)*

### **EPC & OEM**

*AECOM  
Bechtel  
Burns & Roe  
CH2MHill  
Fluor  
GE Power  
Jacobs  
Kiewit  
Mitsubishi  
NuScale  
Parsons  
Sargent & Lundy  
Shaw/Stone & Webster  
Toshiba  
URS/Washington Group  
Voith Hydro  
Worley Parsons  
Westinghouse*

# Ken Aupperle Experience Summary

email [kjaupperle@hba-inc.com](mailto:kjaupperle@hba-inc.com) or mobile 1-423-488-8988



- **Mr. Aupperle has 47 Years of Experience in the Commercial Nuclear & Government Science Project Industries**
  - Last 24 years with High Bridge Associates - Consulting firm
  - Prior 23 years with Stone & Webster - EPC firm
  - Various assignments spanning strategic planning, project management, construction, risk management, cost estimating, scheduling, & process improvement
- **Senior Vice President with High Bridge Associates**
  - Leading nuclear supplier of planning & project management consulting & staffing services
  - Supporting utility owners, engineer/constructors, & equipment manufacturers
- **High Bridge Practice Lead**
  - Independent cost, schedule, & risk assessments for >100 projects valued at >\$300 billion
  - Nuclear industry Project Management Lessons Learned, cost/schedule data base, & analysis of risk issues
  - Supporting utility owners “New Nuclear” planning, organizing, & project deployment programs spanning various OEM/EPC New Nuclear consortiums
  - Consults with the International Atomic Energy Agency (IAEA) as a Subject Matter Expert (SME) for Project Management/Controls, Planning, & Integration
- **Stone & Webster Engineering Corporation (1971-1995)**
  - Commercial nuclear power, energy, infrastructure, and large DOE science projects
  - Vice President, Director of Construction, Project Manager, Estimating Manager, Scheduling Manager
  - Project Controls Manager, Project Controls Engineer, Chief Scheduler, Planning & Scheduling Engineer
- **Education**
  - Graduate Level Executive Program in Business Administration - Northeastern University, 1987
  - BS in Construction Management - Syracuse University, Summa cum Laude, 1971
  - AS in Construction Management - Hudson Valley Community College, Magna cum Laude, 1969

