

## COMBINED CYCLE PLANT

### OEM for Heat Recovery Steam Generators (HRSGs)

- Module Steam Generators (MSG) Design
- Enhanced Constructability-SMART (ECS) Design
- SMART-Box Design
- Bundle Design
- Loose HARP

### Inspections & Field Services for OEM & OEM

- HRSG Inspections
- Videoscope Inspections
- FAC Inspection & UT Mapping
- Operational and Engineering Review
- High Energy Piping, Metallographic Inspection
- Condition & Remaining Life

### Engineering Studies for OEM & OEM

- Effects of Gas Turbine Upgrades
- Cycling
- Turndown Studies
- Heat Rate Improvements
- Flow Maldistribution
- Structural
- Circulation

### Turnkey Retrofits for OEM & OEM

- Module/HARP Replacement
- Distribution Grid/Perforated Flow Plates

- Pressure Parts
- Casing, Insulation and Liners
- Baffles
- Attemperators
- Burner Upgrades
- SCR and CO Systems
- Sparging Systems

### Replacement Aftermarket Parts for OEM & OEM

#### OEM for Once-through HRSGs

#### OEM Steam Surface Condensers

#### OEM Feedwater Heater

#### OEM Heat Exchangers

- Flue Gas Heater
- Turbine Cooling Air
- Kettle Boiler
- Generator Air/Hydrogen Cooler
- Lube Oil Cooler
- Closed Cycle Cooling Water
- Replacement Modular Tube Bundles for Surface Condensers

#### Replacement Condensers, Heat Exchangers, FWH

- Finned
- Bent Tube
- HARPS

#### Imtec Access Doors

### Construction

- Projects – Turnkey Services Open-shop large scale and/or long duration for new or existing facilities
- Outage Services
  - Pressure parts replacements
  - HRSG harp replacements
- Balance of Plant (BOP)
  - Structural steel
  - Piping & valves
  - Duct work
  - Conveyors

### Heat Exchanger Services

- Construction, Installation, & Repair Labor (Merit Shop) as well as HRSGs, Feedwater Heaters & Condensers or any other Shell & Tube Heat Exchangers
- Installation, Retubing, Repair of New and/or Replacement Feedwater Heaters, Heat Exchangers & Surface Condensers
- Feedwater Heater & Heat Exchanger Tubes
- Other Heat Exchanger Services: Opening & Closing, Cleaning, Welding, Testing, Tube Plugging (Explosive & Mechanical), Explosive Tube Expansion
- Performance & Diagnostic Testing & NDE
- Life Assessment Services
- 24 Hour Emergency Services

## CONVENTIONAL COAL PLANT

### Engineering Services, including Repairs & Upgrades to any OEM's Boiler

#### Boiler Condition Assessment

#### Boiler Evaluation Services

#### Metallurgical Services

#### Commissioning Services

#### Fuel Conversion

#### Studies

- Performance
- Reliability
- Computational Fluid Dynamics

### Replacement and Redesign

- All Furnace Components
- Convection Pass Components
- Back Pass Components
- Critical Piping

### Milling Systems

- OEM Atrita
- MPS
- Ball Tube Mill
- Segments for all Major OEM's
- Pulverizer Grinding Rebuilds for all Major OEM's
- Mill Replacement Parts for all Major OEMs

### Combustion Systems

- Low NOx Burners & Burner Upgrades
- Spare Parts for all Riley Burner Products
- Burner Replacement, Rebuilds & Upgrades

### OEM for New Sub and Supercritical Pressure Boilers (Benson™)

#### Weld Overlay of Tubes

#### Emergency Stock Tubing

#### Tube Stocking Programs

#### Imtec Access Doors

- Boiler
- SCR (Laydown & Swing)
- Precipitators

### OEM Surface & Modular Condensers

#### OEM Feedwater Heaters (HP & LP)

#### OEM Heat Exchangers

- Flue Gas Heater
- Turbine Cooling Air
- Kettle Boiler
- Generator Air/Hydrogen Cooler
- Lube Oil Cooler
- Closed Cycle Cooling Water

#### Replacement Condensers, Heat Exchangers, FWH

#### Construction

- Projects – Turnkey Services Open-shop large scale and/or long duration for new or existing facilities
- Outage Services
  - Pressure parts replacements
  - Burners & gas conversions
  - Dry bottom ash conversions
  - HRSG harp replacements
- Balance of Plant (BOP)
  - Structural steel
  - Piping & valves
  - Duct work
  - Conveyors
- Rotating Equipment
  - Pulverizers
  - Fans
  - Air heaters
  - Equipment setting

#### Heat Exchanger Services

- Condenser Module Replacement
- Emergency Tube Plugging (24-hour)
- Field Retubes
- Shop Retubes

### Environmental Equipment OEM

- Air Quality Control Systems (AQCS)
- Wet Flue Gas Desulfurization (WFGD)
- Circulating Dry Scrubber (CDS)
- Spray Dryer Absorber (SDA)
- Spray Dryer Evaporator (SDE)
- Selective Catalyst Reduction (SCR)
- Regenerative Catalytic Reduction (RSCR)
- Multi-Pollutant Catalytic Reduction (MPCR)
- Direct Ammonia Injection

### Physical Modeling

#### Computation Fluid Dynamics Modeling (CFD)

#### Dry Sorbent Injection

#### Particulate Removal Systems

#### Integrated Systems and Analysis

#### Catalyst Management

#### Aftermarket

- SCR Upgrades for all SCR OEMs
- FGD Upgrades for all FGD OEMs
- DSI Upgrades for all DSI OEMs
- Ammonia Injection Upgrades

### Water Management and Optimization to Reduce

#### Biofouling and Wastewater Discharge

#### Waste Water Treatment Systems

#### Zero Liquid Discharge Solutions

#### Engineering Evaluations for O&M Reductions

#### Integrated Project Management from Material Supply to Full Turn Key

#### Geomembrane Liner Installation Services

#### Geostrux™ Geotextile Tubes

#### Geostrux™ Container Tubes

#### Floating Turbidity Screens/Barriers

#### Impermeable Liners

#### Road/Pad Construction Products

## NUCLEAR PLANT

### OEM for MSRs

#### Replacement MSR Tube Bundles

#### Replacement Moisture Separation Systems

#### MSR System Consulting Service

#### OEM for Surface Condensers

- Multi-pressure/Multi Shell Condenser

### OEM for Feedwater Heaters

- Low Pressure
- High Pressure
- Horizontal
- Vertical

### Replacement Modular Tube Bundles for Surface

#### Condensers including Turnkey Projects

#### Replacement Feedwater Heaters & Heat Exchangers

#### including Retubing

#### Heat Exchanger Consulting



- OEM HRSG Supplier
  - Commissioning & Start-Up
- OEM & OEM
  - Inspection & Field Services
  - Engineering Studies
  - Turnkey Retrofits
  - Replacement Parts



- Pressure Parts Fabrication
- Weld Overlay
- Spiral Fin Tubing
- Straight Tubes
- IMTEC Door
- HARPS



- Construction Services
- Project Services
- Heat Exchanger Services



# Babcock Power®

**ONE SOURCE. MANY SOLUTIONS.**



- OEM Fossil Fuel Fired Boilers
- Commissioning & Start-up
- Mill Systems
- Burner Retrofits
- Pressure Parts Retrofits
- Turnkey Fuel Conversions
- Component Rebuilds
- Grinding Roll Weld Overlay Services
- New Pulverizer Parts
- Field & Technical Services
- Engineering Studies
- Metallurgical Laboratory



- Selective Catalytic Reduction (SCR)
- Delta-Dry Sorbent Injection (DSI)
- Circulating Dry Fluid Bed Scrubber (CDS)
- Regenerative SCR (RSCR)
- Wet Flue Gas Desulfurization (Single FGD)
- Mixers to Improve Performance
- Upgrades to Wet & Dry Scrubber Systems



- OEM MSR
- OEM Condenser- Surface, Steam Surface & Modular
- OEM Feedwater Heaters (LP & HP)
- OEM Heat Exchangers
- Engineering Consulting Services
- Replacement Parts



- Geosynthetic Liner Supply & Installation
- Dewatering Tube Fabrication & Supply
- Coal Ash Solutions