



***Foster Wheeler's Commitment to
China Sourcing & Technology Update***



April 15, 2008

Agenda

- **FW General Introduction & Company Overview**
- **Commitment to China Sourcing**
 - History
 - Evolution
 - Current Status & China Manufacturing Capability
 - Key's to Success in China Manufacturing and Sourcing
- **Technology Update**
 - General Capabilities, Products & Services
 - Focus on Supercritical PC - Longview Project
 - Focus on Supercritical CFB - Lagisza Project
- **Q&A**



FW Company Overview

Foster Wheeler Business Groups

Engineering & Construction



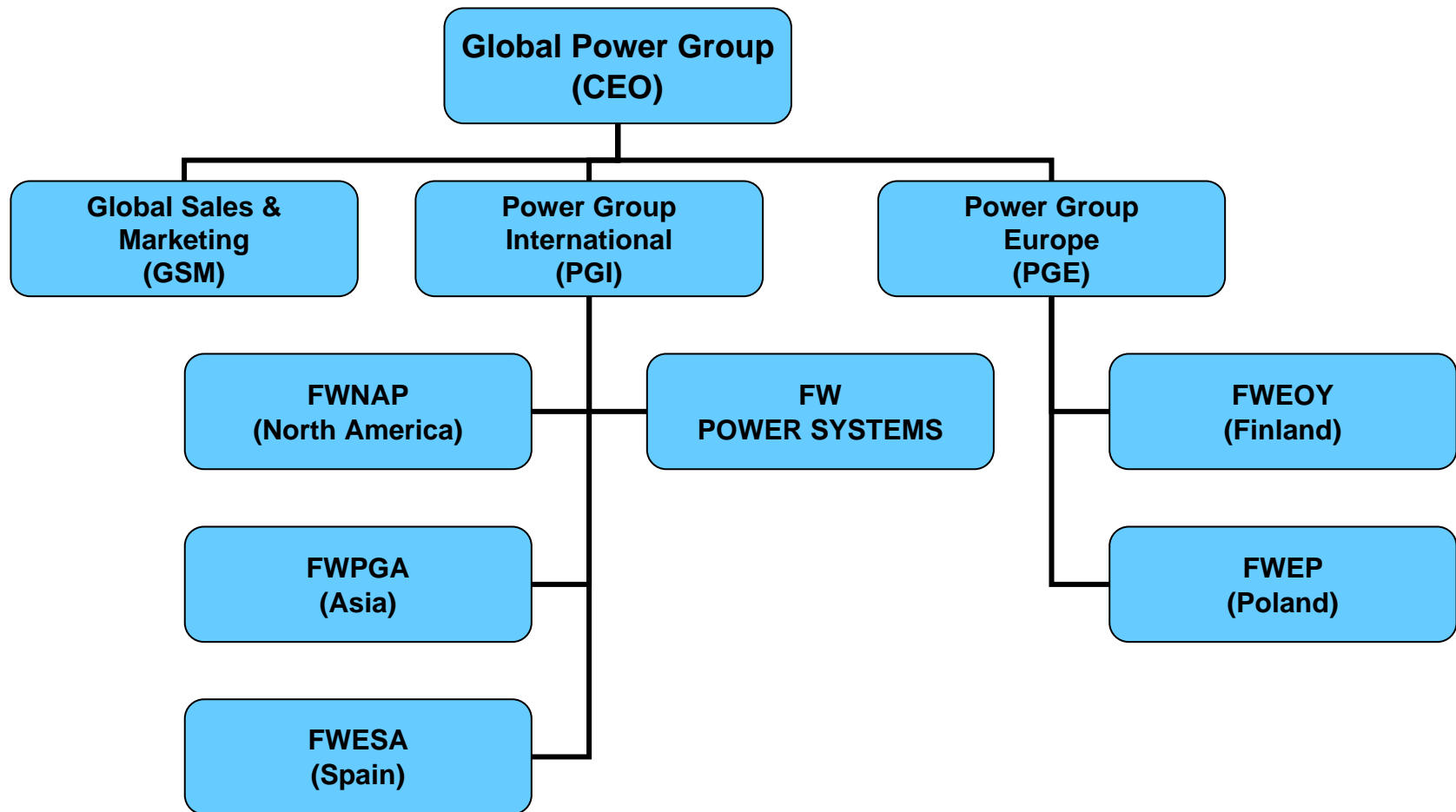
Designing, constructing, and managing projects for some of the world's largest process plants in a wide range of industries, including oil and gas, chemicals, and pharmaceuticals.

Global Power Group



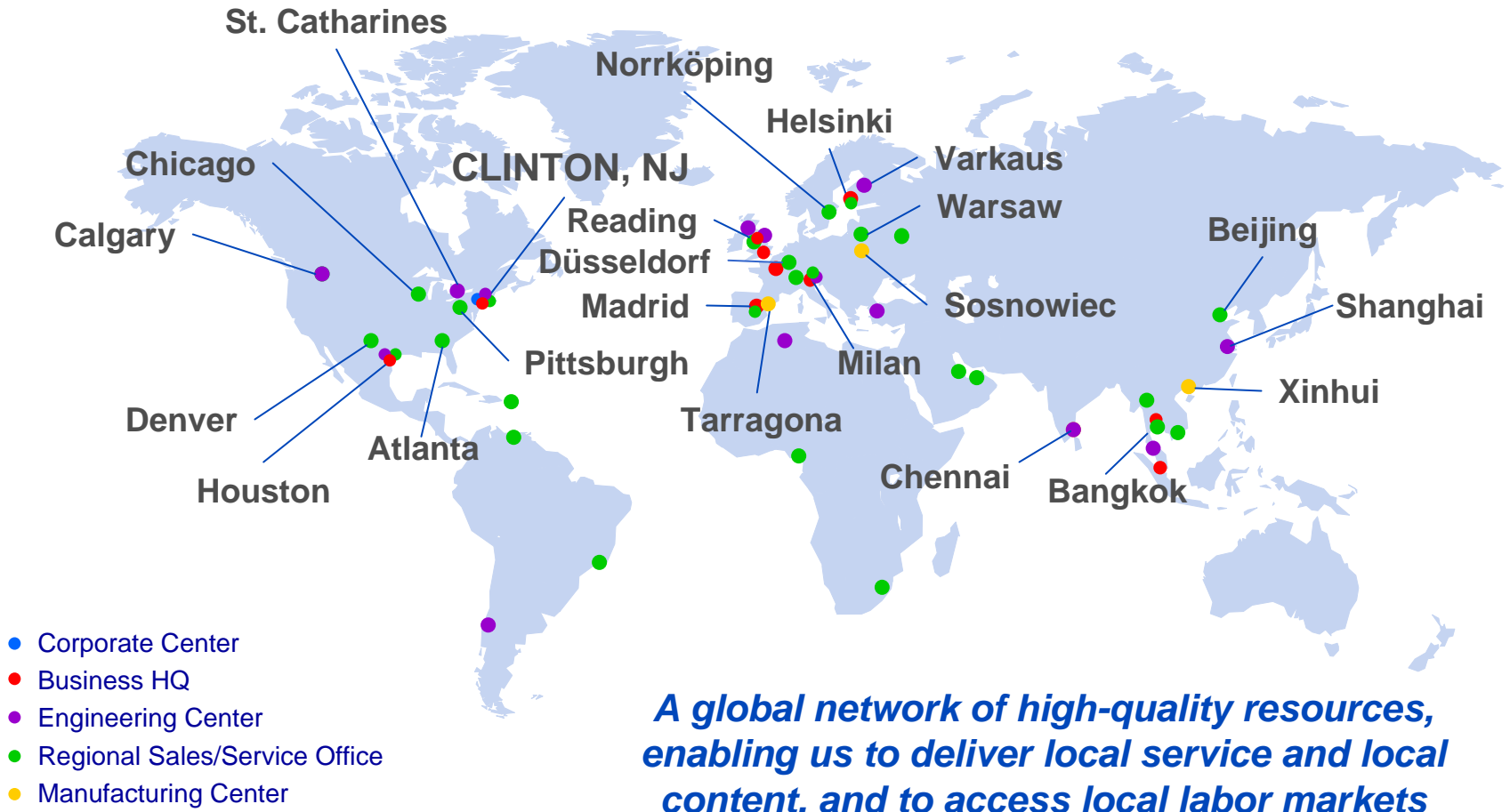
Designing, manufacturing, and erecting a full line of boilers, and environmental products for utility, industrial, and cogeneration clients. A world-leading expert in combustion technology.

Our Global Presence Provides Global Resources to Our Local Clients



FW Worldwide Offices

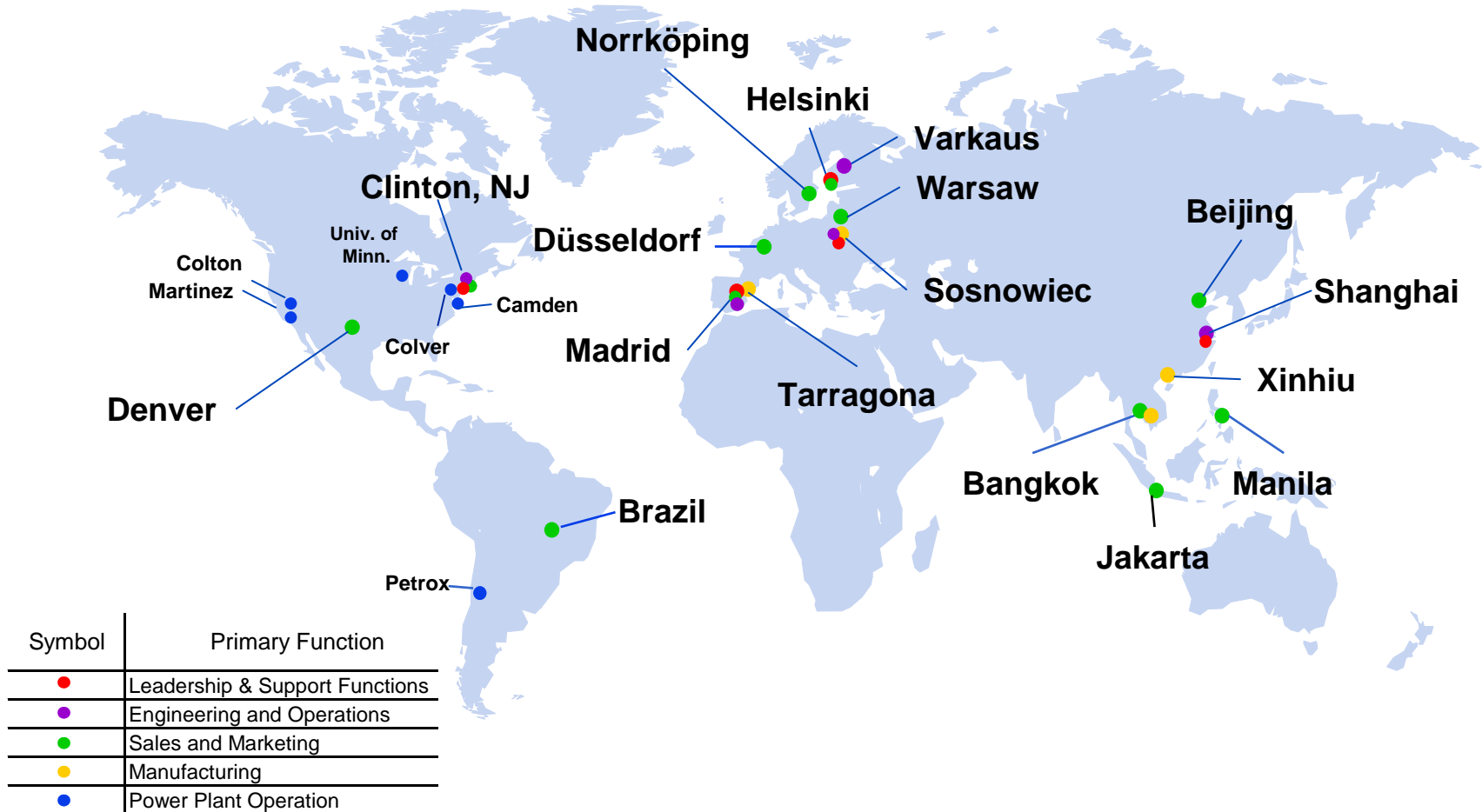
A global business with over 13,300 highly-skilled people



A global network of high-quality resources, enabling us to deliver local service and local content, and to access local labor markets

FW Power Group Offices

A Global Business with over 3,000 highly-skilled people



Our European Manufacturing Facilities

- **FAKOP, Poland**
 - Primarily panel & header shop
 - New coil line installed for smaller coils and sections

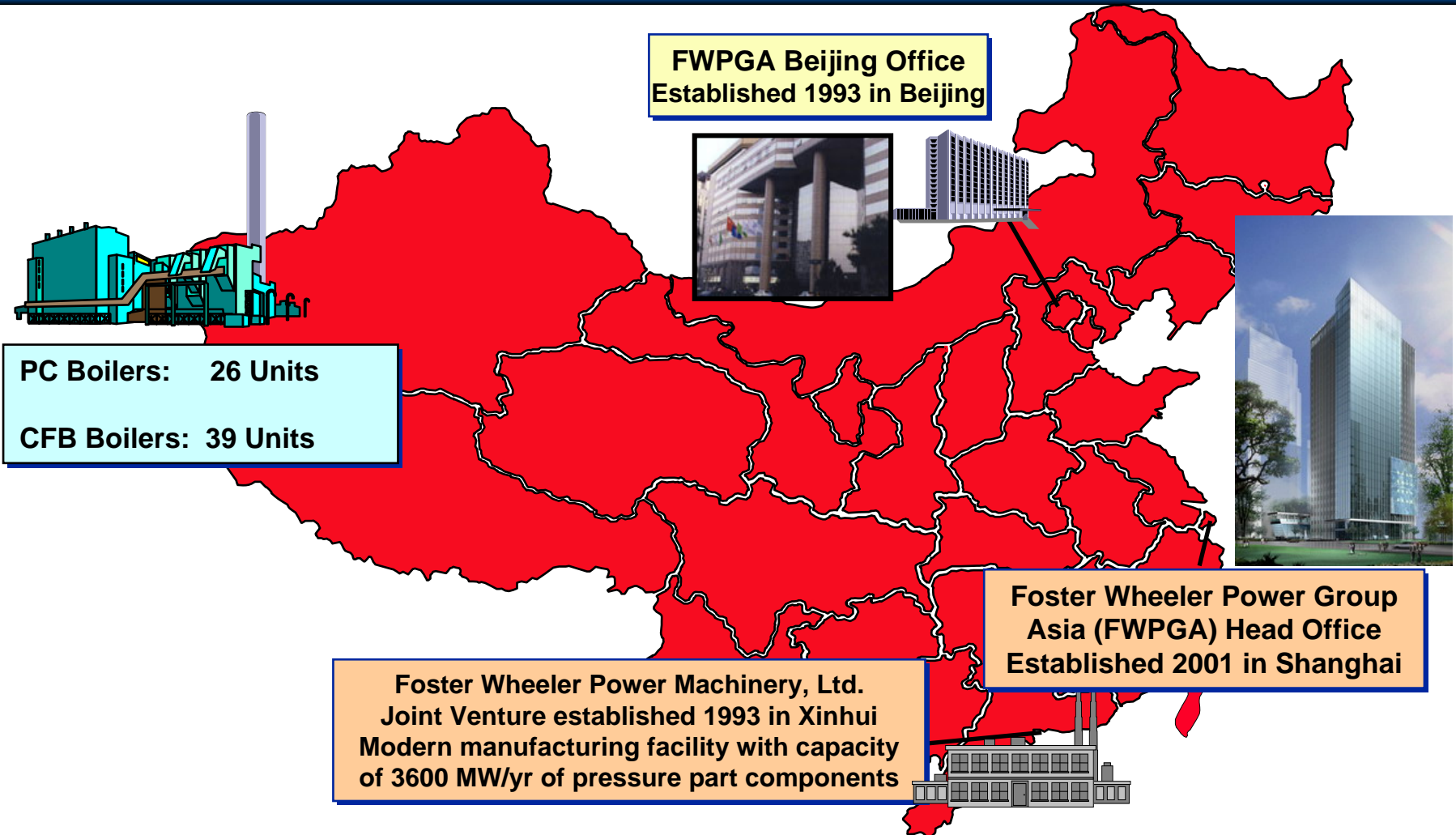
- **Tarragona, Spain**
 - Primarily platen and horizontal coil shop
 - Continuous bending machine capability





FW Commitment to China Sourcing

FOSTER WHEELER POWER GROUP ASIA (China Operation)

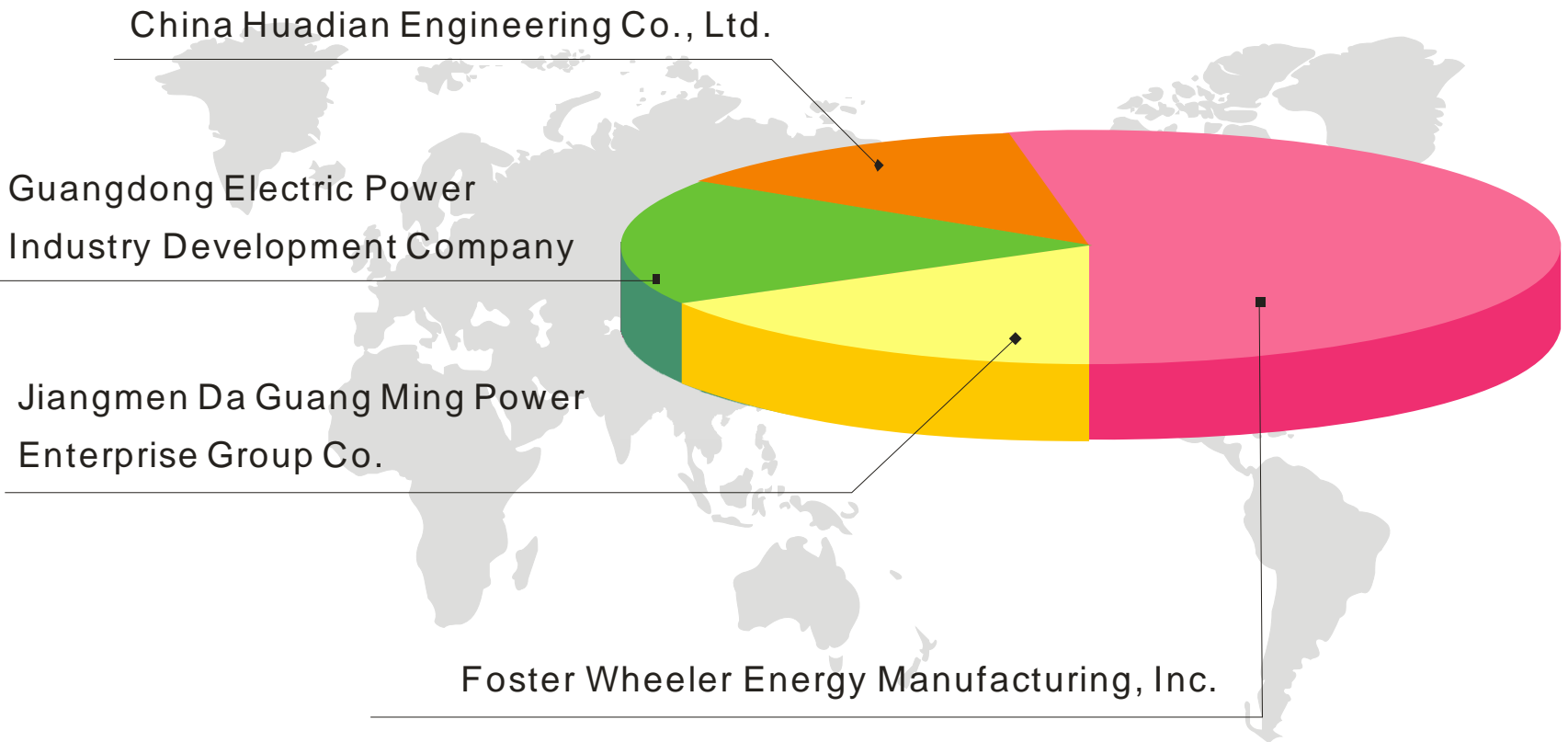


Our Xinhui Manufacturing Facility

- Full Service Boiler Manufacturing Facility
- Majority-owned by FW in a joint venture with China Huadian Engineering Company, Guangdong Electric Power Industry Development Company, and Jiangmen Da Guang Ming Power Enterprise Group Company
- Equipped with State of the Art Machines and Highly Skilled Labor
- Located Outside Hong Kong with Convenient Access to Major Highways and Dock Facilities
- Four Bays with a 1.2 million Man-Hour Annual Capacity
- ASME, ISO 9000-2000 Certified



FW Power Machinery is a Subsidiary of FW Global Power Group – It's a joint venture among:



Keys to Success: Safety & Environment

The Safety, Health and Environment (SHE) department at our Xinhui Manufacturing Facility is an independent department which performs the safety responsibility. Our security practice includes many areas:

- Safety inspections of production
- Safety meetings
- Ensuring awareness of all safety regulations to all members of the staff
- Encourage staff by implementing Safety Awards



Keys to Success: Purchase & Analysis

- **Purchasing capable of global sourcing**
- **QA/QC audits and shop inspections prior to any vendor qualification**
- **Unannounced shop inspections**
- **Raw material inspection and control (including size, specification, chemical/mechanical properties). Full material traceability.**



Keys to Success: Quality

- Xinhui has a state-of-the-art management system
- Xinhui manufactures to the quality standard of all FW shops
- Holds an ASME certificate of Authorization – Symbol S (Power Boiler), China Boiler Manufacturing (Level A) for pressure part vessels and IOS 9001 Certificate
- METI, PED standards



Xinhui's Quality Metrics for 2004

On Time Delivery	100%
Field Rework and Back Charges to Shop (% of Shop Revenue)	<0.5%



Quality is Built into Every Step Of Our Fabrication – Starting With Raw Material

	FW	Typical for Industry
Material Critical Dimensions	Physically Measured and Documented	Visual Inspection for Obvious Defects
Material Composition	Physical Chemistry Analysis	No Verification at All



Welding Quality Control – Built Into Our Process

	FW	Typical for Industry
Weld Material Control	Electrode and Wire Inventoried by Separate Material Control Agent, Every Shift for Every Welder	Welder Responsible without Independent Check
Dissimilar Metal Welds	Weld with Inconel, Grind Termination craters	Extra Charge for Inconel, Terminations Left Unground
Weld Inspection	100% Dye Penetration for T91 Material, 10% for all Others	Visual Inspection Only



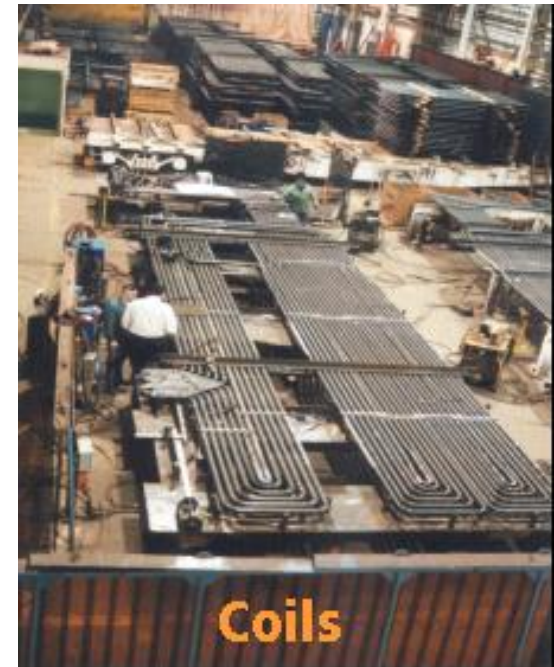
Ensuring A Quality End Product – Final Dimensional Inspection

	FW	Typical for Industry
All Products	All Critical Dimensions and Tolerances Physically Measured and Supplied in QC Package to Client	Only Some Critical Dimensions are Checked
Panels	In Addition to Above, Panels are Trial Assembled to Ensure Fit	Only Some Critical Dimensions are Checked



Keys to Success: Planning & Project Management

- Planning management mode: one-on-one communication with client project manager. Centralized communication within organization.
- The plan begins in sales, formed from the administrative planning of the contract, with progress continually being checked.



Keys to Success: Engineering & Technology

- Xinhui has in-house engineering designers, metallurgists, manufacturing experts and administrative personnel.
- Xinhui has in-house Engineering Design capabilities to facilitate effective communication and production efficiency.
- **Welding Methods** – automatic/manual TIG, automatic/manual MIG, automatic/manual FCAW manual SMAW, automatic/manual GMAW, SAW, automatic and semi-automatic stud welding



Keys to Success in China Manufacturing & Sourcing

- Keen understanding of local in-country culture and practices
- Establish commitment to country presence
- Commitment to Safety and Environment across all levels of the organization
- Network of Procurement specialist and unique Qualified Vendor List (QVL)
- Quality Assurance/Quality Control, material traceability to international standards
- In-country Project Management, Project Controls and Engineering Capabilities
- On time delivery
- Key partnerships with value-added suppliers and qualified domestic manufacturing facilities



***FW Products and Services/
Technology Update***

Foster Wheeler Global Power Group Products & Services

- **Steam Generators**
 - Circulating Fluid Bed
 - Pulverized Coal
 - Oil & Gas
 - Bubbling Fluid Bed
 - Grate and MSW
 - Package
 - Waste Heat
 - Metallurgical Waste Heat
 - HRSG
- **Auxiliary Equipment**
 - Condensers
 - Feedwater Heaters
 - Biomass Gasifiers
- **Plant Operation**
- **Aftermarket Services**
 - Low NOx Burner and Air Systems
 - Biomass Combustion Retrofits
 - Coal Mills
 - Coal/Air Control Systems
 - Boiler Conversions
 - Major Pressure Parts
 - Outage Construction
 - Replacement Parts
 - Boiler Maintenance
- **SCR Retrofit**
- **Major Construction**
 - Scrubber Construction
 - Boiler Erection



FW Once Through Technology

Foster Wheeler OTU Evolution

Current Offering

MULTIPASS FURNACE

Dual Pressure Operation
(Constant Furnace,
Variable SH)

Good Heat Rate at Top
Load

Multiple Passes to
Equalize
Heat Flux

Simple Support System

SPIRAL FURNACE

Variable Pressure
Operation (Variable
Furnace & SH)

Better Heat Rate at All
Loads

Tubes Wrap Furnace to
Equalize Heat Flux

Detail Support System

VERTICAL RIFLED FURNACE

Variable Pressure
Operation (Variable
Furnace & SH)

Best Heat Rate at All
Loads

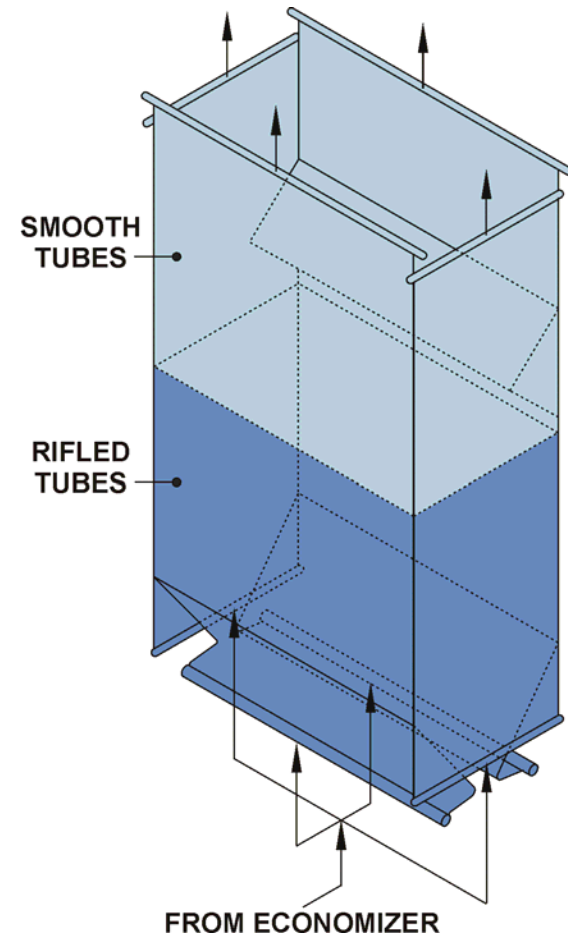
Self-compensating Circuits
to Equalize Heat Flux

Simple Support System

BENSON VERTICAL

“State-of-the-Art” Furnace Evaporator for PC Application

- Effective tube cooling with optimized rifled tubing
- “Natural Circulation” characteristic limits differential tube temperatures
- Single upflow pass minimizes interconnecting piping
- Standard, simple vertical tube support
- Can operate with full variable pressure in evaporator and superheater
- Low evaporator pressure loss reduces auxiliary power consumption





Longview Supercritical PC Project

LONGVIEW POWER, LLC

750 MWe Supercritical OTU PC Boiler Project

LOCATION:

Maidsville, West Virginia, USA

CUSTOMER:

Longview Power LLC

Jointly owned by GenPower, LLC and
First Reserve Corporation

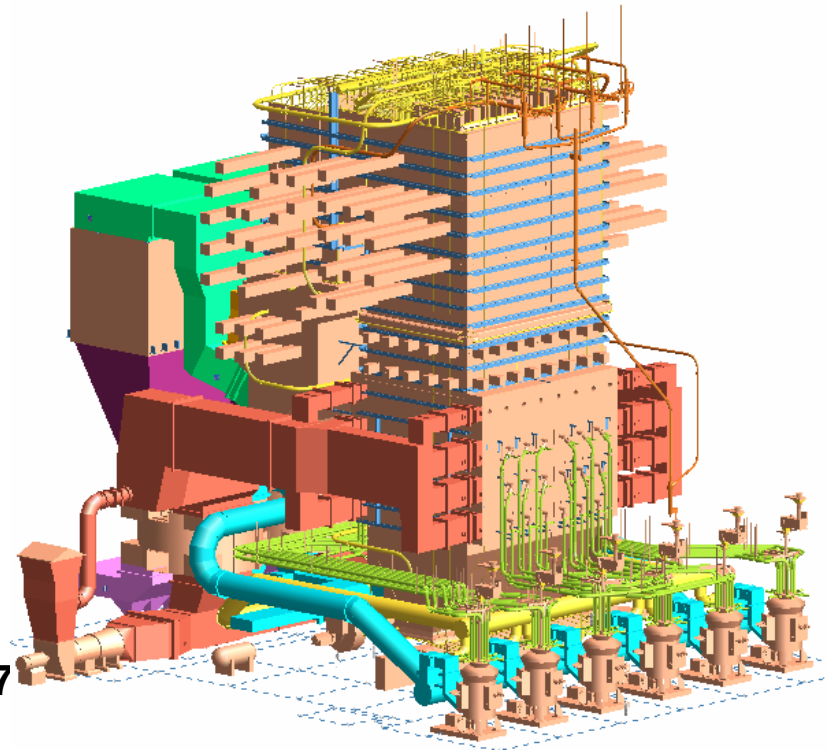
TECHNOLOGY FEATURES:

750 MWe Pulverized Coal Supercritical
Vertical OTU boiler with Low NO_x Burners
and SCR

Fuel: Eastern bituminous coal

PROJECT SCHEDULE:

Contract Signing	February 2, 2007
Construction Start	Spring 2007
Commercial Operation	Spring 2011



LONGVIEW POWER, LLC

Design Basis (English Units)

STEAM CONDITIONS:

Capacity, MWe	1 x 750 MWe
Steam Flow, klb/hr (SH/RH)	5207/4125
Steam Pressure, psi (SH/RH)	3844/827
Steam Temperature, °F (SH/RH)	1056/1053

FUEL:

	Bituminous Coal
Moisture, % wt	4.5
Ash, % wt	18.5
Sulfur, % wt	2.5
Volatiles, % wt	32.0
HHV, BTU/lb	11000

EMISSION LIMITS:

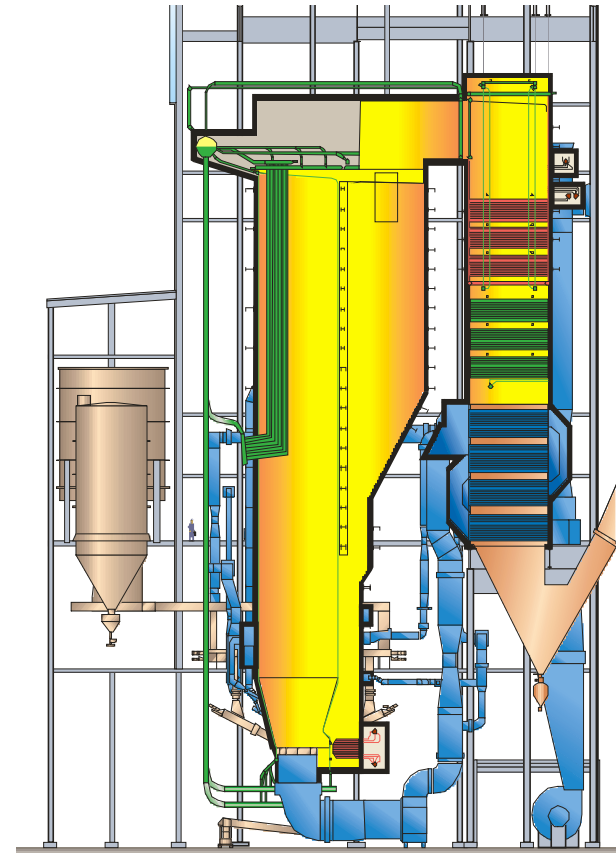
NO _x , lb/10 ⁶ btu	0.065
CO , lb/10 ⁶ btu	0.11
VOC, lb/10 ⁶ btu	0.004



Lagisza Supercritical CFB Project

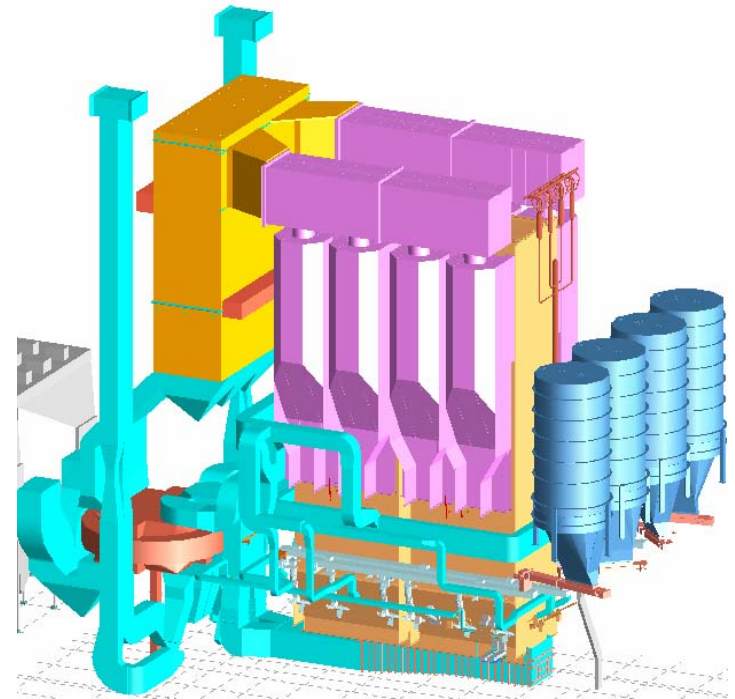
CFB Status

- **CFB has established leading position in small and mid-size industrial and utility plants**
- **Fuel flexibility is a special advantage**
 - Wide range for design coals
 - Opportunity fuels (biomass etc)
 - Hard-to-Burn fuels (petcoke etc)
- **Excellent emission performance**
 - No DeSOx / DeNOx –plants required
- **CFB has reached utility scale**
 - Sizes up to 300 MW_e in operation
 - 460 MW_e under design
 - 600 MWe offered
 - 800 MWe in development



Once-Through CFB Key Design Features

- Proven and Efficient CFB Process
- High Plant Efficiency
 - Supercritical Steam Pressure
 - Sliding Pressure Operation
- BENSON Vertical Tube Technology
 - Vertical Tube Furnace Walls
 - Low Pressure Drop
- Integrated Steam Cooled Solids Separators
 - Minimum amount of refractories
- INTREX™ Fluidized Bed Heat Exchanger
 - High Heat Transfer Rates Minimize Surface Area
- Regenerative Air Heater
 - Maximum Boiler Efficiency



PKE / Lagisza Project

- Customer: Poludniowy Koncern Energetyczny (PKE), Polish Electrical Utility Company
- 460 MWe power plant located in the Lagisza power plant in southern Poland
- Contract awarded December 30, 2002
- Foster Wheeler delivery
 - Boiler island – CFB technology
 - Auxiliary equipment
 - Flue gas heat recovery system
 - Boiler house with foundations



Plant Design Parameters

		Gross	/	Net
• Electrical Output	MW	460	/	439
• Plant efficiency (LHV)	%	45.3	/	43.3
• Plant efficiency (HHV)	%	43.5	/	41.6
• Plant Heat Rate (HHV)	Btu/kwh	7849	/	8208

Outlet Steam Condition (SH/RH)

• Flow	kg/s	361 / 306	kpph	2860/2423
• Pressure	bar	275 / 55	psia	3990/800
• Temperature	°C	560 / 580	°F	1040/1076

Lagisza Project Schedule

Contract Signing	Dec 2002
Notice to Proceed:	
I Stage – Basic Eng	Mar 2003
II Stage* – Full NTP	Dec 2005
Construction Start	Jan 2006
Plant Mechanical Completion	July 2008
Plant Commercial Operation	Mar 2009

* After Project Financial Closing



Lagisza Summary

- 460 MWe Utility CFB Boiler
- Supercritical Once-Through Technology
- High Plant Efficiency
- Modern CFB Design
- Excellent Fuel Flexibility
- Competitive Cost
- New CFB Designs up to 800 MW_e Under Development



PKE LAGISZA
460 MWe Supercritical
Once-Through CFB BOILER