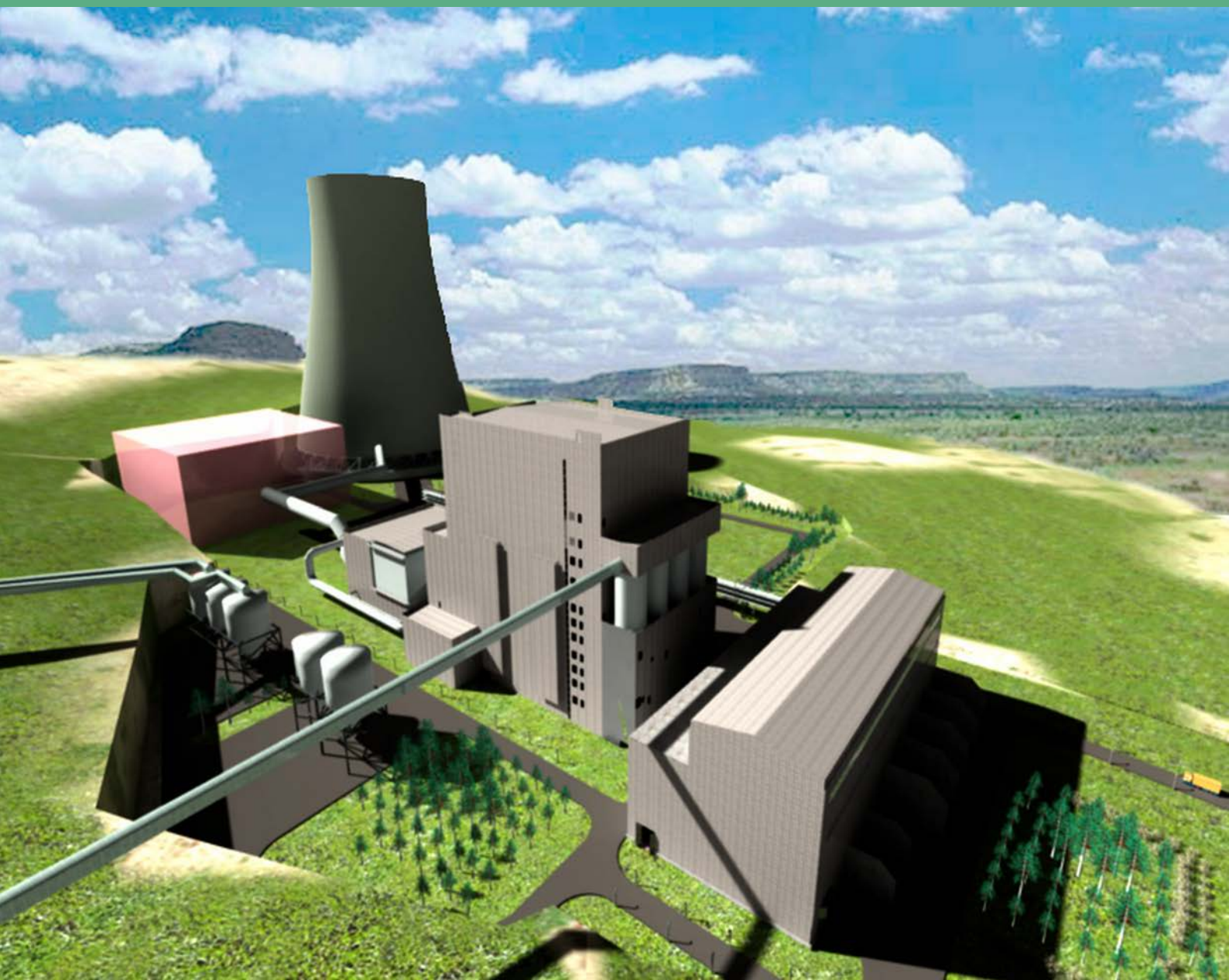




Foster Wheeler's Flexible CFB Carbon Capture Technology Development

Supported by European Energy Program for Recovery



The Compostilla Project OXYCFB300



European Energy Program for Recovery

The European Energy Program for Recovery (EEPR) is part of Europe's €200 billion EC - Economic Recovery Plan, which emphasizes investment into new energy projects as part of the economic recovery.

In December 2009, the European Commission selected six large-scale CO₂ carbon capture and storage (CCS) projects to receive €1 Billion in funding.

Foster Wheeler is teamed with the EU, Endesa and CIUDEN to develop Phase 1 of the future full scale CCS plant featuring FW's Flexi-Burn® CFB Oxyfuel CCS technology at Endesa's Compostilla plant site.

The initial phase of the Compostilla project covers the FEED and feasibility studies and risk analysis including a 30 MWth CFB test facility to validate the design of the full scale plant, with construction of Phase 2 likely to be decided by mid 2012.



Roles of Compostilla Project Participants:



- Spanish Utility Promoter
- General Coordination and Project Management
- Engineering (FEED, Studies)
- Permitting
- Knowledge Sharing



CIUDEN

- CCS Technology Development Plants (TDP) Promoter
 - Capture
 - Transport
 - Storage



- Flexi-Burn® Oxy-CFB Technology Developer and Provider

Estimated Oxy-CFB-300 Demo Plant Performance

	Oxy Mode	Air Mode
Net Power (MWe)	236	264
Boiler Efficiency (% LHV)	94.1	90.2
CO ₂ Emission (g/kWh-net)	77	855
CO ₂ Capture Ratio (%)	91	0

Better Technology For a Cleaner World



CIUDEN's Oxy-fuel Technology Development Plant (TDP)

Fundacion Ciudad de la Energia (CIUDEN) is a non-profit collaborative research organization for technological development established by three ministries of the Spanish Government. The TDP is located in El Bierzo in Northwestern Spain and performs collaborative research for international cooperations with industry, universities, and research institutions.

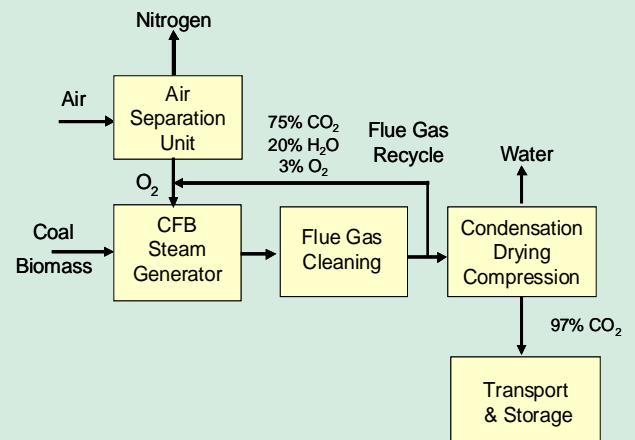


CIUDEN Technology Development Plant Layout

How Does Flexi-burn® Carbon Capture Technology Work?

Foster Wheeler is developing Flexi-Burn® CFB Technology with collaboration from Endesa, CIUDEN and other European partners in the EU-FP7 Program, which will allow the CFB to produce a CO₂ rich flue gas and be part of a practical CCS solution. Flexi-Burn® Combustion Technology uses a simple continuous process:

- Combustion air to the boiler is replaced with a mixture of oxygen from an ASU plant and recycled furnace flue gas
- Recycled flue gas/oxygen mixture burns fuel while allowing for uniform transfer of heat throughout boiler
- Flue gas becomes inherently CO₂ rich (over 91% on dry basis) without needing expensive CO₂ separation process
- Plant stack gas can be simply dried to produce a highly concentrated stream of CO₂



Foster Wheeler's CFB Technology at the Technology Development Plant Test Site

At the heart of the TDP is Foster Wheeler's 30 MWth Flexi-Burn® CFB test unit.

- Designed to test burn a wide range of Spanish coals: anthracite and imported coals, as well as biomass
- Testing of the unit is expected to begin in 2011
- FW has previously completed testing at the 1 MWth scale



A Flexible Solution for Carbon Reduction

Bringing Fuel Flexibility to CCS Technology

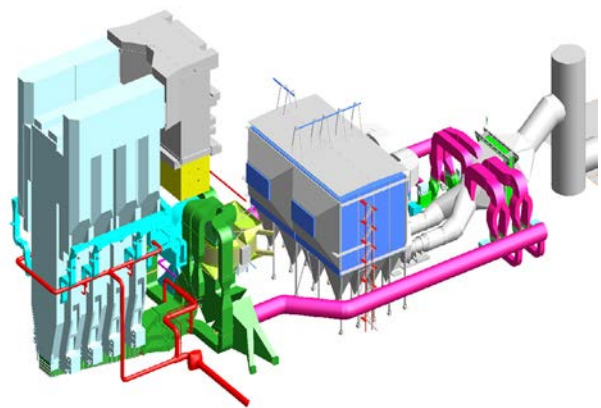
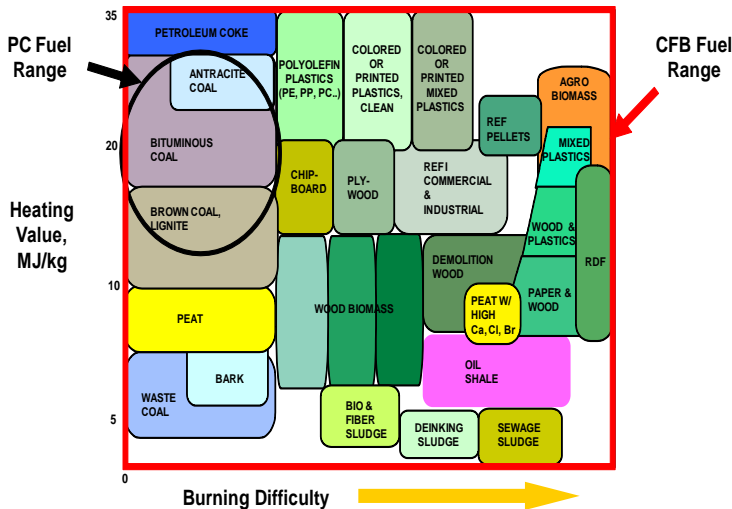
Foster Wheeler is the world leader in fuel flexible CFB Technology burning the widest range of fuels such as: coal, lignite, petroleum coke, biomass, RDF, etc.

- Over 370 CFB boilers sold worldwide
- Units in service for over 40 years
- The world's largest and first supercritical CFB boiler with the capacity of 460 MWe at PKE's Lagisza power plant in Poland
- Building the world's largest units firing strictly biomass at Polaniec Station in Poland (190 MWe)

The Benefits of Flexi-Burn® Technology

CFB's are being developed to be Economical, Reliable, and Carbon Flexible:

- Proven CFB Fuel Flexibility coupled with highly efficient Supercritical Steam Technology
- 600 and 800 MWe unit sizes for economical power production
- Operates in either Economical Air or Carbon Capture mode
- Offers a Carbon Reduction of over 91%
- Flexible plant design allows deferment of Carbon Capture Capital until needed

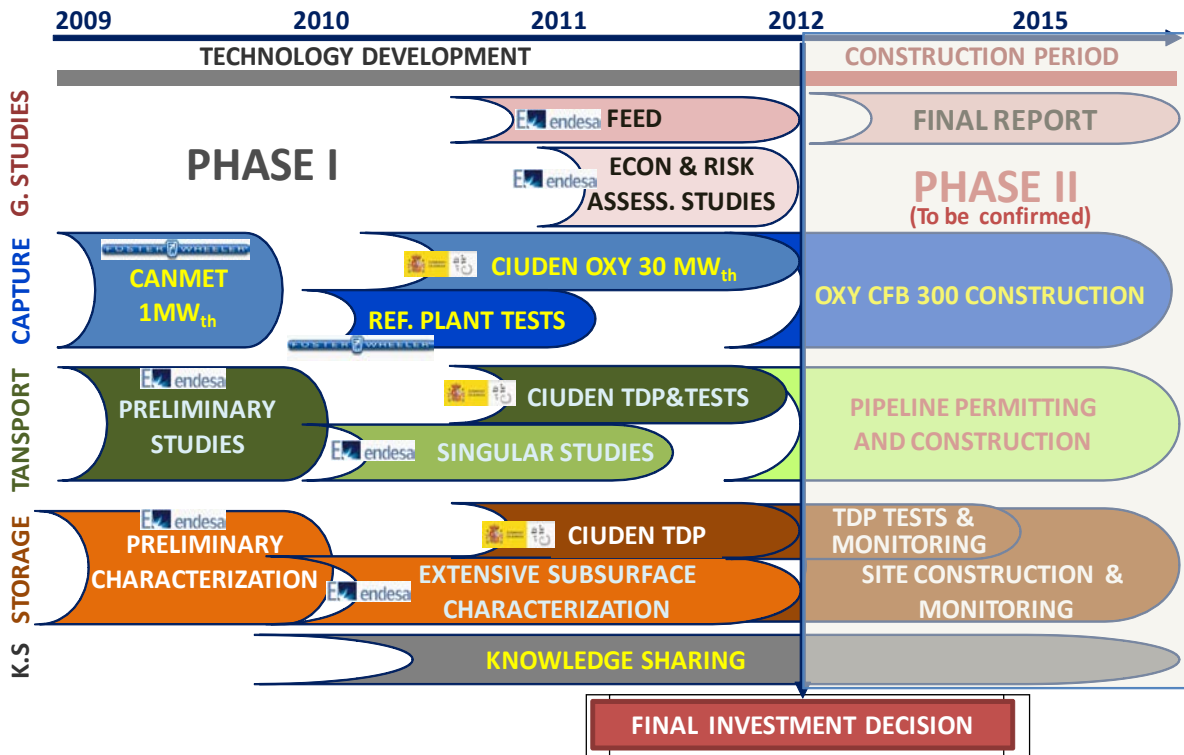


Supercritical CFB Plant with Flexi-burn® Combustion



General view of CIUDEN's Technology Development Plant

The Oxy-CFB-300 Project and Schedule Toward 2012 Final Investment





We offer a full range of steam generator and auxiliary equipment, and aftermarket products and services to the power, industrial, and waste-to-energy sectors. Our global manufacturing and engineering network can deliver cutting-edge products and expertise, quickly and cost competitively with best-in-class quality. Established in 1891, our experience comes from over a century of designing, servicing, and continually improving steam generating equipment.

Steam Generators

- Circulating Fluid Bed
- Pulverized Coal
- Oil & Gas
- Supercritical Steam
- Solar Power
- Package
- Grate & MSW
- Metallurgical Waste Heat
- Heat Recovery Steam Generators

Auxiliary Equipment

- Feedwater Heaters
- Condensers
- Biomass Gasifiers

Services & Environmental Products

- SCR and SNCR Systems
- Low NOx Combustion Systems
- Replacement/Upgraded Parts
- Construction Services
- Modernizations, Condition Assessments
- Biomass Conversions

CONTACT US

GLOBALLY

www.fwc.com

CHINA

Unit 1 on 6/F
Raffles City Beijing Office Tower
No. 1 Dongzhimen South Street
Dongcheng District
Beijing, 100007 China
T +86 (0) 10 8409 8855

8th & 5th Floor, UC Tower
500 Fushan Road
Pudong New Area
Shanghai, China 200122
T +86 (0) 21 5058 2266

FINLAND

Metsänneidonkuja 8
FI-02130 Espoo, Finland
T +358 (0) 10 393 11

Relanderinkatu 2
FI-78201 Varkaus, Finland
T +358 (0) 10 393 11

GERMANY

Burggrafenstrasse 5A
40545 Düsseldorf, Germany
T +49 (0) 211 5502 4700

POLAND

Aleja Jana Pawla II 15
00-828 Warsaw, Poland
T +48 (0) 22 697 6870

ul. Staszica 31
41-200 Sosnowiec, Poland
T +48 (0) 32 368 1300

SPAIN

Calle Gabriel Garcia Márquez, 2
28230 Las Rozas
Madrid, Spain
T +34 (0) 91 336 2400

SWEDEN

Lindövägen 75
602 28 Norrköping, Sweden
T +46 (0) 11 285 330

THAILAND

9th Floor, Maneeya Building
518/5 Ploenchit Road
Lumpini, Pathumwan
Bangkok 10330, Thailand
T +66 (0) 2 652 0760

USA

Perryville Corporate Park
Clinton, New Jersey 08809 USA
T +1 (1) 908 730 4000

9780 Mt. Pyramid Court, Suite 260
Englewood, Colorado 80112-7060 USA
T +1 (1) 303 784 4880