ABENGOA BIOENERGY

www.abengoabioenergy.com

Abengoa Bioenergy : The Global Ethanol Company

Brusels
January 2008

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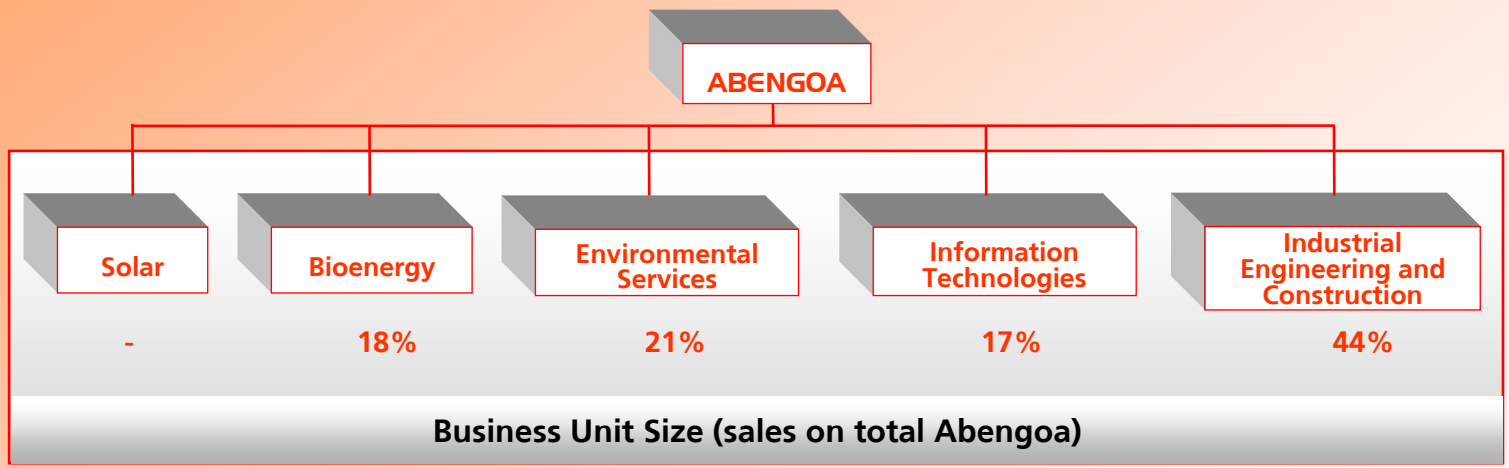
Abengoa is a technological company that applies innovative solutions for sustainable development in the infrastructures, environment and energy sectors. It is present in over 70 countries where it operates through its five Business Units: Solar, Bioenergy, Environmental Services, Information Technology, and Industrial Engineering and Construction.

Abengoa is a listed company in the Madrid Stock Exhange.



Abengoa Bioenergy produce energía a partir de fuentes renovables, contribuyendo al objetivo de Abengoa que se centra en el desarrollo sostenible

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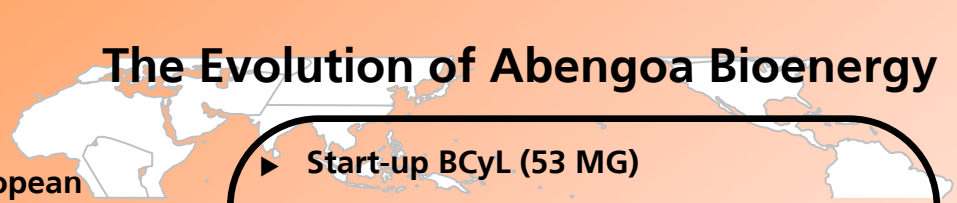
The Evolution of Abengoa Bioenergy



1995

- Abengoa identifies the need for a renewable alternative to transport sector energy needs

1996 - 2001

- Construction of the two largest facilities in Europe
- Acquisition of High Plains Corporation in the U.S.

2002 - 03

- R&D award by the European Commission (4.5 MM Eur)
- R&D award by the U.S. DOE ($35.5 MM)
- Construction of a third facility in Spain
- First sales of ethanol from Spain to other EU countries

2004 - 05

- Joint venture with Cepsa (Total) for ETBE facility
- Expansion of U.S. plants (York, NE and Colwich, KS)
- 22 MG of ethanol exports contracted in Europe
- R&D award by the U.S. DOE ($2.2 MM)
- Strategic Investment in O2Diesel

2006 - 07

- Start-up BCyL (53 MG)
- Expansion of Portales and BG
- Joint venture with Cepsa (Total)
  59 MG Biodiesel Plant
- 152 MG award in France
- 43 MG of ethanol exports in EU
- Strategic Investment in Dyadic

2008 - 09

- Start-up ABNE (88 MG)
- $76 MM award from DOE for the construction of the first of a kind commercial facility to produce ethanol from lignocellulosic biomass
- $39 MM award from Spanish Ministry of Industry to design and develop new ethanol production technologies
- Construction of a fifth facility in Europe: ABN (127 MG)

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The Evolution of Abengoa Bioenergy

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Technology Development is Critical for the Future of the Sector

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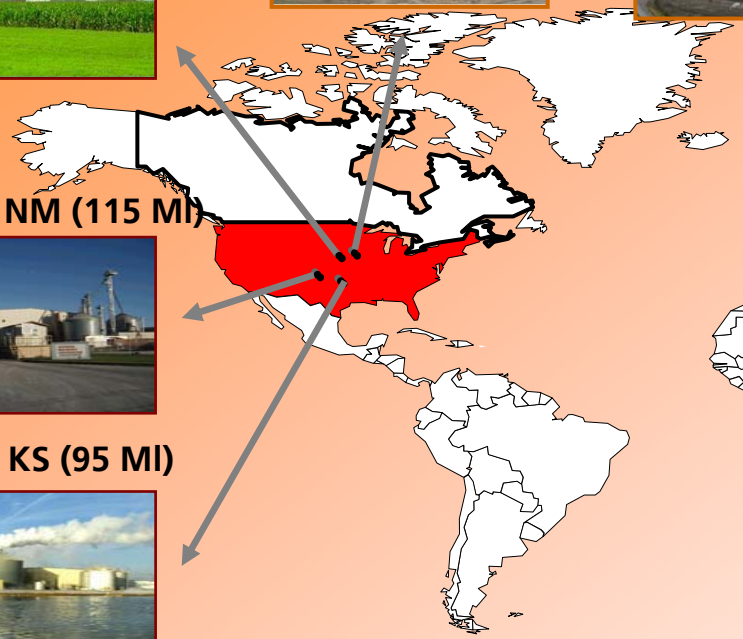
The Global Ethanol Player

Ravenna, NE * (330 Ml)

Lacq * (250 Ml)

York, NE (210 Ml)

EU (Ml)	2006	2007	2008
Production	540	540	790
Construction *	250	730	480



Portales, NM (115 Ml)

Colwich, KS (95 Ml)

Netherlands* (480 Ml)

Cartagena (150 Ml)

La Coruña (190 Ml)

Salamanca (200 Ml)

US (Ml)	2006	2007	2008
Production	420	750	750
Construction*	330		

Abengoa Bioenergy is the main ethanol producer

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European Company using own Technology through the World In Line with SRA and SDD

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Abengoa Bioenergy is the main ethanol producer

Our vision as part of a sustainable energy system

Market evolution

Step by step Process

ETBE & E5 Co-existence in the EU	Ethanol Mandate in EU (E5)	Massive introduction of higher ethanol blends: E10, E20, E85 E-Diesel	Commercial ethanol production from hybrid lignocellulosic biomass and cereal hybrid	Commercial ethanol production from lignocellulosic biomass stand alone New products from biomass
Ethanol mandate (RFS) and MTBE Phase-out in US				

	Short Term	Medium-Long Term
Areas	ABNT Plan	ABNT Plan
Projects	• Increase actual yield • Open new markets • Residual starch conversion • New uses (E-diesel, E85)	• Production from Biomass • Increase DDGS added value and develop new coproducts from biomass • Energy crops • Gasification/Catalysis and enzymatic hydrolysis • Fiber conversion, protein isolate • Biorefinery concept • Energy crops
Objectives	• Yield 440 m3/ton (2.91 gal/bu) • Captive fleets	• Ethanol competitiveness

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In Line with SRA and SDD

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ABNT Strategy

- Abengoa Bioenergy carries out its activities related to new technologies through its subsidiaries companies ABNT in US and EU
- More than 55 investigators in Europe and US working in R&D
- Use partnerships, JVs and shareholder stake in equity to identify and develop production technologies and new price competitive applications

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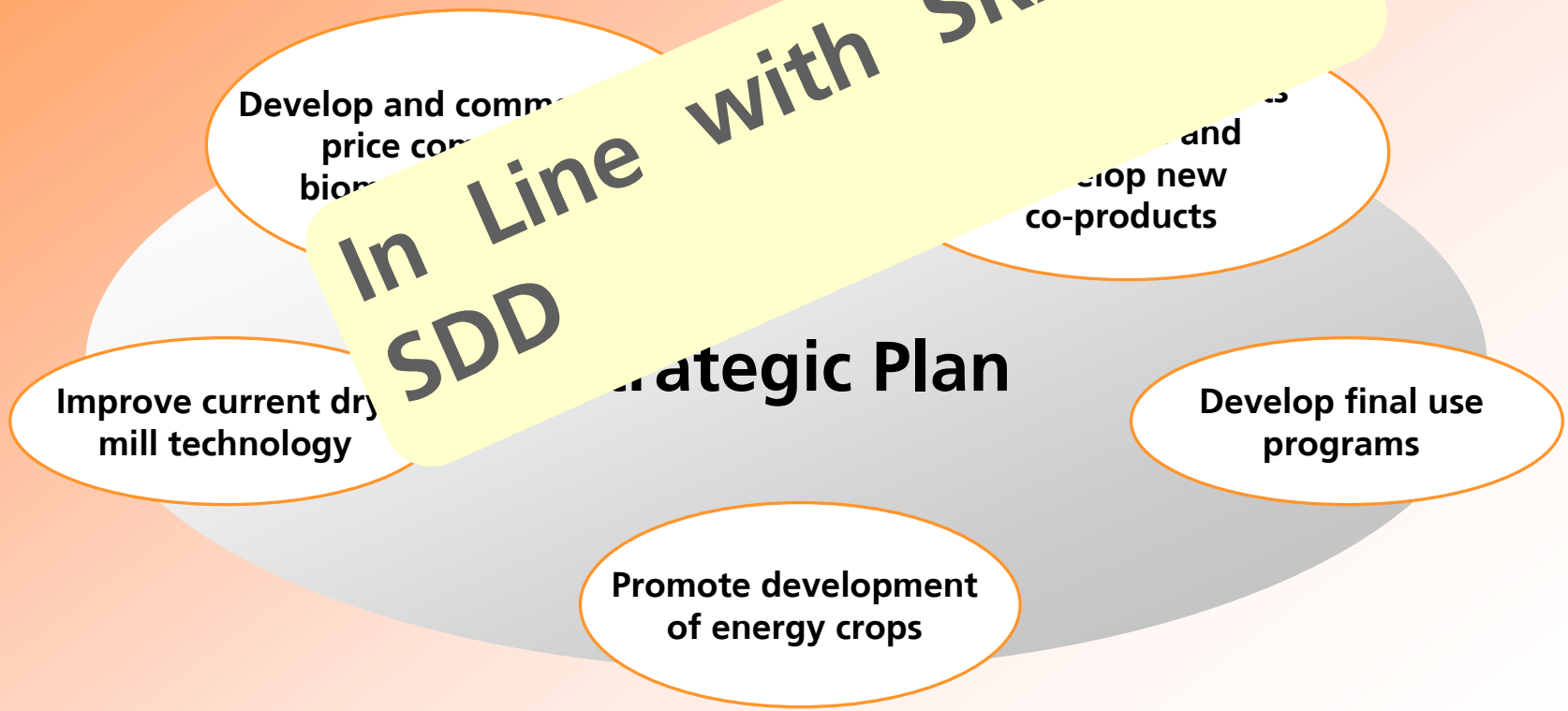

Biomass Demonstration Plant in BCL (Salamanca, Spain)

- Capacity : **5 Ml/y**
- Raw material : **Wheat and Barley Straw**
- Technology : **Enzymatic Hydrolysis (glucose)**
- Objective : **Demonstrate biomass-to-ethanol process technology at commercial scale**
- Start-up **Operations : End 2007**

Residual Starch Pilot Plant in York (NE, US)

- Capacity : **Not significant**
- Raw material : **cereal (flexible)**
- Technology : **Dry-mill cereal technology**
- Objective : **Achieve higher starch conversion**
- Start-up **Oper. : Operating**

Biomass Pilot Plant in York (NE, US)

- Capacity : **Not significant**
- Raw material : **corn stover**
- Technology : **Enzymatic Hydrolysis (glucose & xylose)**
- Objective : **Competitive process with grain ethanol**
- Start-up **Oper. : Mid 2007**

Technology Development

- York Pilot Plant (DOE)
  - Phase I
  - Phase II
- BCyL biomass Demonstration Plant
- Hybrid DOE Project

Pilot scale

Demo scale

Commercial scale

BCyL Biomass Plant

- Capacity :
- Raw material : Wheat and Barley Straw
- Technology : Enzymatic Hydrolysis (glucose)
- Objective : Demonstrate biomass-to-ethanol process technology at commercial scale
- Start-up Operations : 2008

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In Line with SRA and SDD

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- Capacity :
- Raw material : Wheat and Barley
- Technology : Enzymatic Hydrolysis
- Objective : Demonstrate biomass-technology at commercial scale
- Start-up Operations : 2008

Why being Sustainable?

Environmental		Economical		Social		Sustainability
Climate Change Regulations	+	Growth Dependence Purchasing Sales Regulations	+	Growth Comfort Opinion Regulations	=	Worldwide Sustainability Awareness

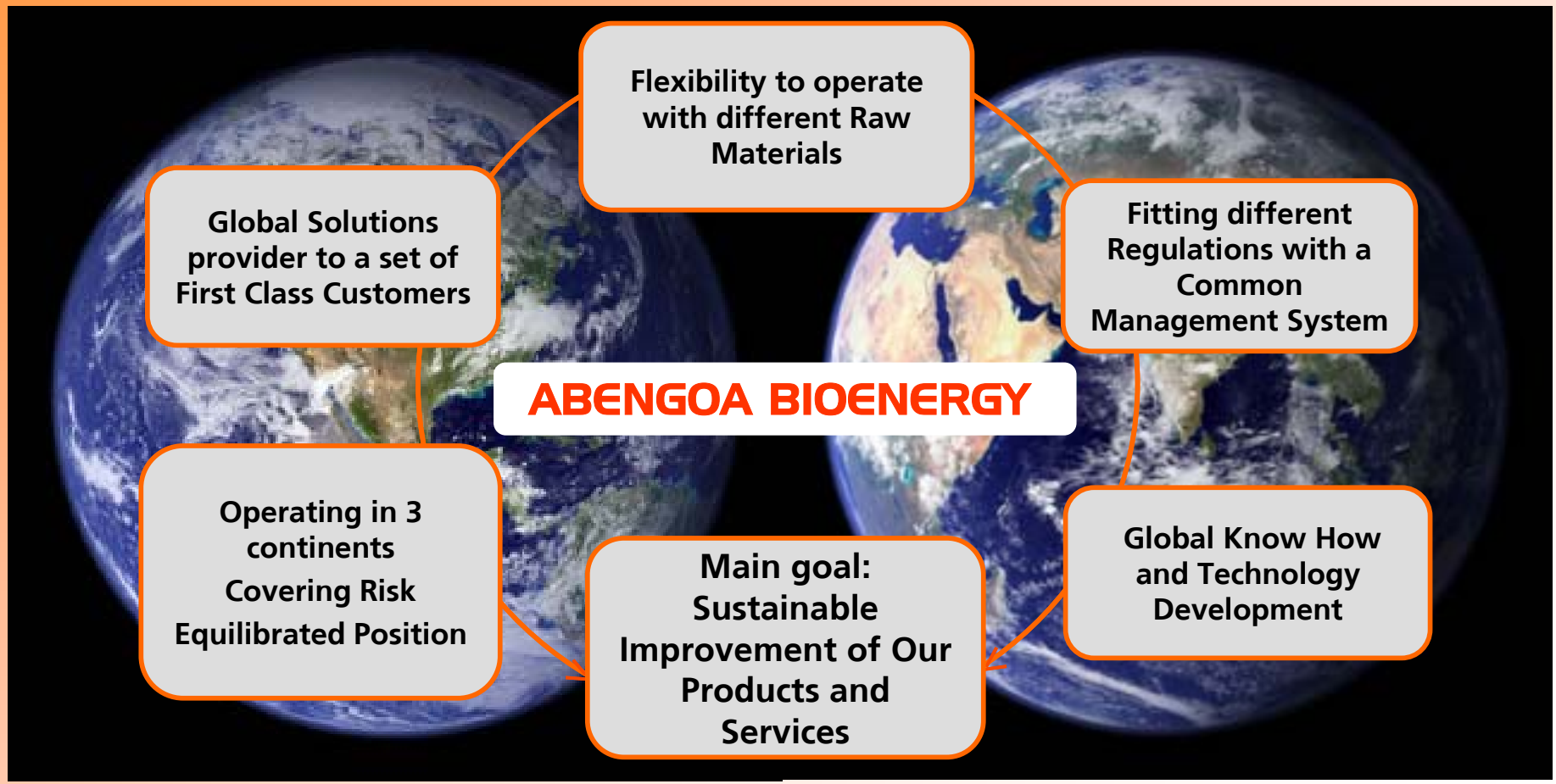
It is needed to develop and implement a Sustainability System

- Tool to take decisions → Decisions
- Achieve an equilibrium between external requirements (inputs) and (outputs) → Actions
- Be ready for actual tendencies and regulations→ Improvements

Our vision

We have to act, improve and manage Business Unit activities, based on external and internal fluxes coming from the three main areas of Sustainability

A Global Company needs to be Sustainable



A Global Company needs to be Sustainable

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Conclusions

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Assumptions

- Biofuel market presents enormous growing expectative
- Biomass production is necessary to make viable a sustainable growing global biofuel market
- The development of lignocellulosic raw material market (energy crops) is a main issue to make possible biomass technology development
- Biofuel market must grow under stable conditions to let technological advances deployment

Abengoa Bioenergy activities

- AB targets the main market assumptions
- AB is developing technology in the main research areas in line with SRA and SDD
- AB works to push main sector necessities: raw material and bioethanol markets deployment in line with SRA and SDD

Our research activities tries to bring Abengoa Bioenergy as technological leader in a growing market