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Industrial Production – Market Outlook

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Analyst & Investor Day

May 2012

1

Bioenergy Market Outlook & Growth Strategy

2

Recycling Market Outlook & Growth Strategy



Long – term prospects remain solid

Structural problems persist, Brazil short of ethanol, India & Thai sugar crops to partially balance shortage

Short-term

Demand

- 2%+ world sugar demand
- 3%+ growth new car sales
- Switch to E25 expected

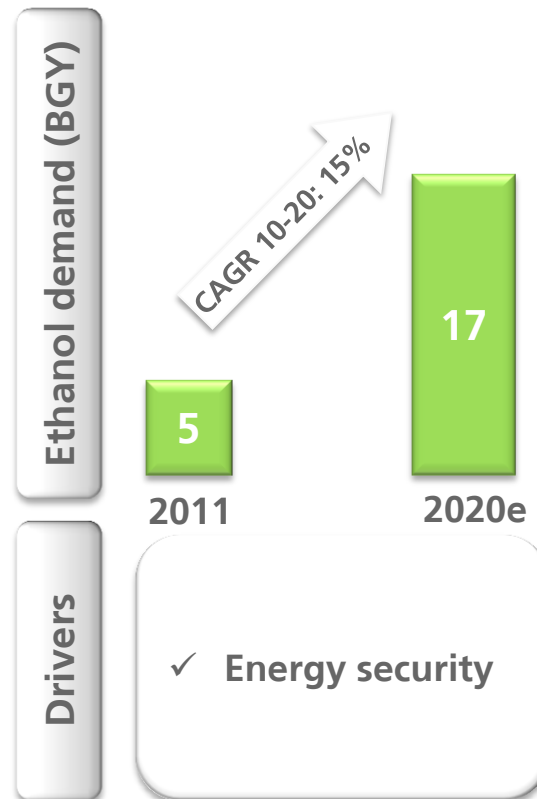
Supply

- 470-510 Mt 12/13
- Structural problems still not solved
- No new greenfields expected
- Tight balance 12/13 expected

Abengoa insight

- Cogen facilities online
- San Luiz expansion start up
- Aggressive cane contracting plan towards 8MT

Longer-term



Stable outlook long term

Ethanol market will remain short, market to be balanced through imports mainly from US

Short-term

Demand

- Low gasoline consumption, -8% y/y
- Slow penetration of E10
- Ne, Sw, Fi, Dn accelerating targets, UK: aggressive ramp-up in 2013

Supply

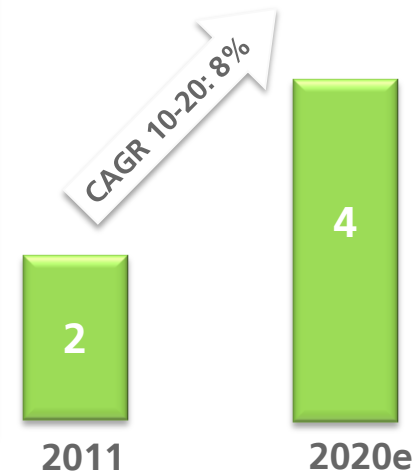
- E90 imports flooding market in H1, already banned: positive for H2
- Supply from EU source freeze

Abengoa insight

- Rotterdam facility: operations integrated in AB culture, full speed
- CO2 negotiations
- Buy/sells activity

Longer-term

Ethanol demand (BGY)



Drivers

- ✓ **Legislation:**
RED (10% renewable energy in transportation by 2020)
- ✓ **Sustainability**

Short – term oversupply

Better H2 economics expected, similar to 2011; Long term outlook is positive

Short-term

Demand

- Low gasoline consumption -5% y/y
- High exports expected at 2011 levels
- Import duty & VEETC discontinued

Supply

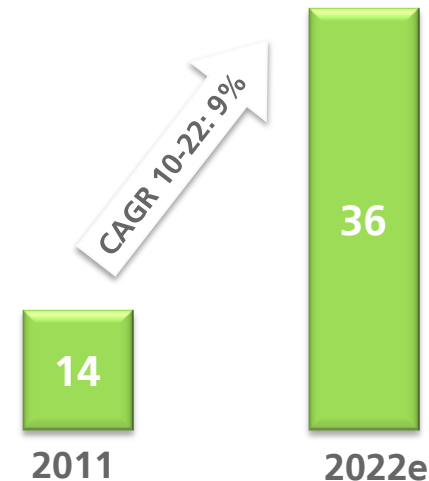
- Seasonal overcapacity
- E15 roll-out to comply with RFS:
 - Introduction to catch up 2013-2014
 - E11 & E12 penetration to substitute E10
 - 2015 Market short 2.5 bgal if E10 only
 - Penetration to ramp up starting 2012, Midwest states likely to start

Abengoa insight

- Buy/sells activity
- Export opportunities

Longer-term

Ethanol demand (BGY)



Drivers

- ✓ Legislation:
RFS (36 BGY in 2022)
- ✓ Energy security

	Q1	Q2e	Q3e	Q4e
Ethanol Supply				
Annualized installed capacity	14,583	14,583	14,583	14,583
% installed capacity operating	97%	93%	94%	95%
Ethanol production	3,526	3,360	3,433	3,482
Annualized Ethanol production	14,185	13,513	13,659	13,854
Ethanol Demand				
Annualized Motor Fuel Demand	130,747	133,100	136,182	132,190
Ethanol motor fuel inclusion rate	9.7%	9.9%	9.9%	9.9%
-Gasoline blending	3,164	3,240	3,389	3,299
-Industrial use	39	39	39	39
-Exports	219	168	171	267
Total Ethanol Demand	3,422	3,447	3,599	3,604
Annualized Ethanol Demand	13,772	13,868	14,319	14,339
Days Inventory	25	24	22	20
Crush Spread (c/gal)	45-50	50-55	70-75	75-80

Higher gasoline demand and ethanol gasoline blending will result in a demand-pulled market in H2 driving up crush margins

Bloomberg

DuPont Acquires Enzyme Maker Danisco for \$5.8 Billion

Petrobras signs \$1.2 bln ethanol deal with Tereos 

CNET > News > Green Tech

Shell ramps up cellulosic ethanol efforts 

Mascoma and Valero Establish Joint Venture for Commercial-Scale Hardwood Cellulosic Ethanol Facility 



Oil Refiner Valero Plows More Money into Renewables with Terrabon Investment



French Oil Major Total Invests in Cellulosic Company Coskata

Chevron Backs Solazyme to Develop Algal Biodiesel Technology 



Petrobras enters into agreement with KL Energy to develop technology to produce cellulosic ethanol

Shell and Cosan — oil and ethanol merger will deliver cellulosic ...

Chevron, LS9 re-up partnership for clean, green fuels & chemicals 



BP and Verenium Form Leading Cellulosic Ethanol Venture to Deliver Advanced Biofuels



Shell bets on ethanol in \$21 billion deal with Brazil's Cosan

POET, DSM form landmark cellulosic ethanol joint venture

Two titans form a monster JV, starting out with a \$250M investment. How big, how fast could it grow?



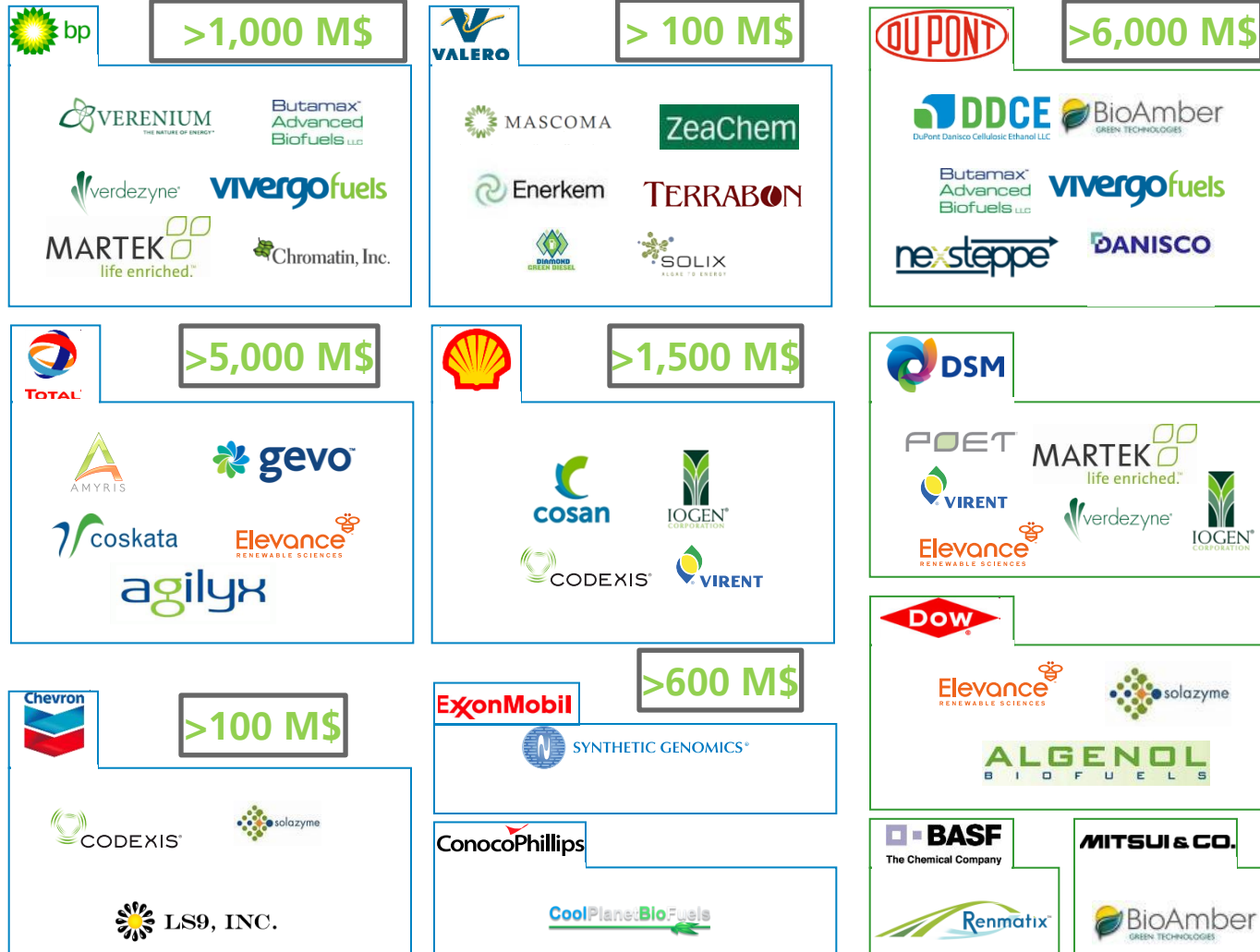
FINANCIAL TIMES

Petrobras to boost ethanol production

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...reshaping market structure

Big players aim to control both technology and biomass access



Hugoton biomass to ethanol commercial plant

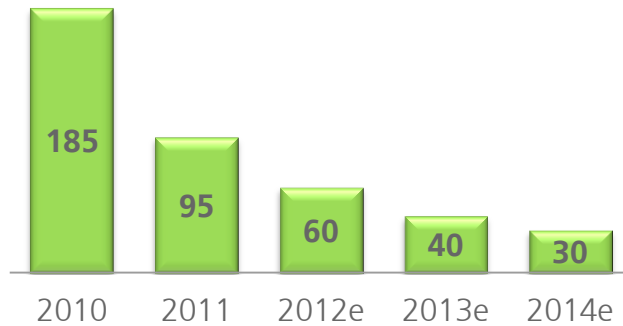
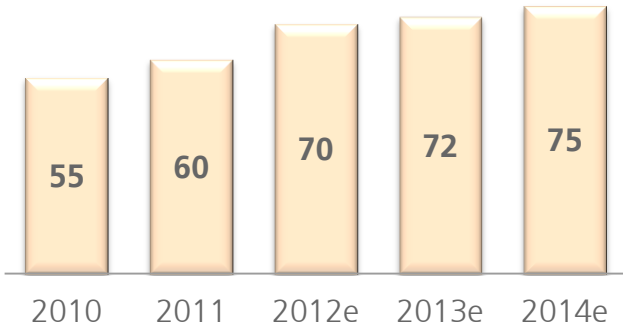
Milestones



- ✓ DOE Grant awarded (97 Musd)
- ✓ DOE federal loan guarantee awarded (134 Musd)
- ✓ Air Permit obtained
- ✓ Construction started July 2011
- ✓ Start-up forecasted end-2013



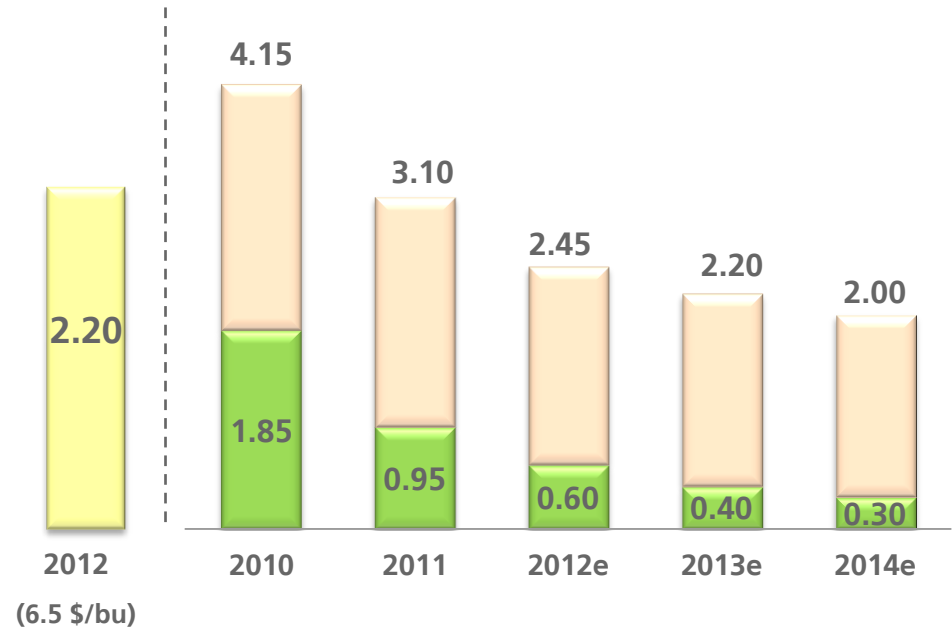
Our 2G biomass to ethanol technology will be competitive with ~70 \$/bbl crude oil



2G Ethanol production cost (\$/gal)

Corn Ethanol

Cellulosic Ethanol



Corn Ethanol production Cost
 Cellulosic Ethanol production Cost
 Share of Enzymes in total production cost

1

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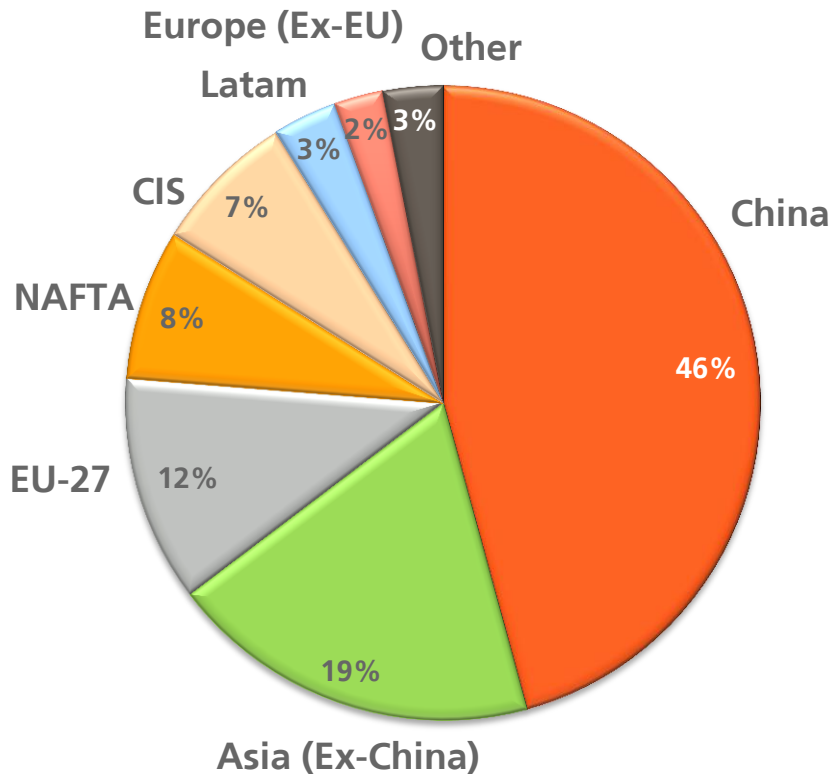
Recycling Market Outlook & Growth Strategy



Abengoa enjoys a leading position (~45% market share) in Europe, the main steel dust market worldwide

Crude Steel Production by region 2011

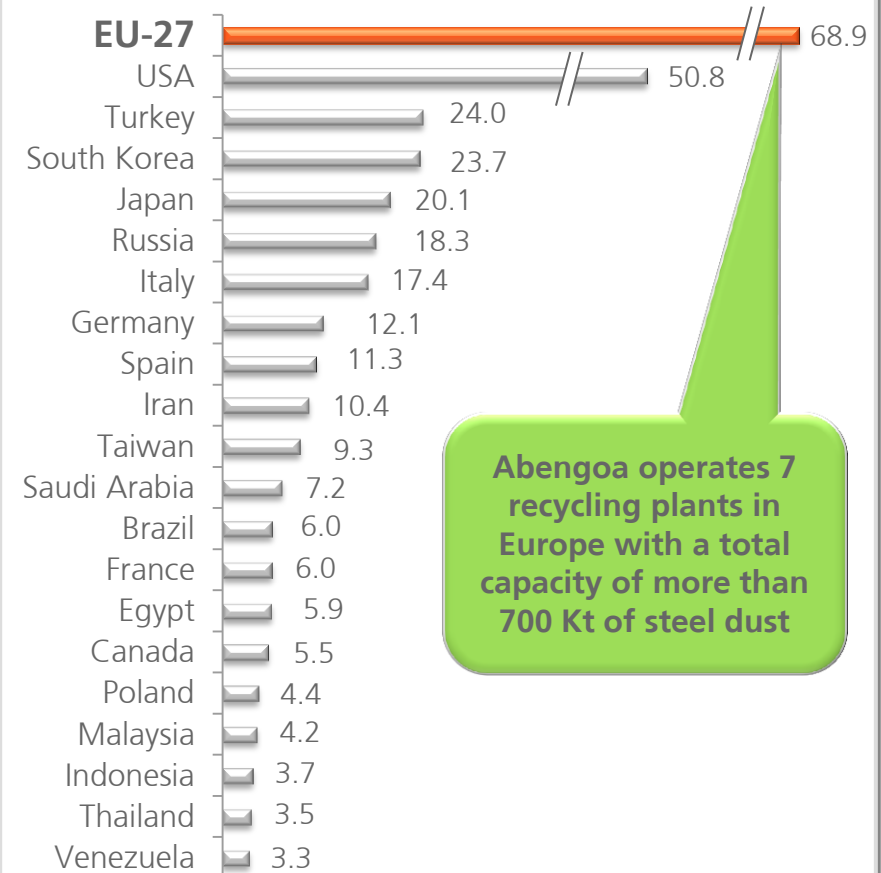
% Total = 1,414 Million tons



Source: World Steel Association

Mini-Mill Steel Production (EAF) by country – Top 20

Total 2011 = 410.9 Million tons

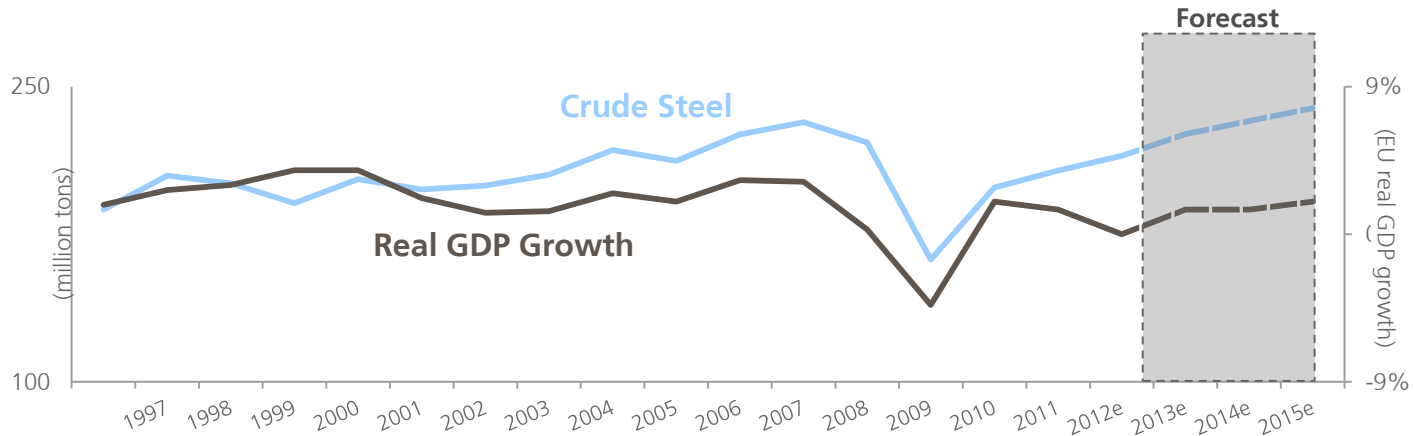


Abengoa operates 7 recycling plants in Europe with a total capacity of more than 700 Kt of steel dust

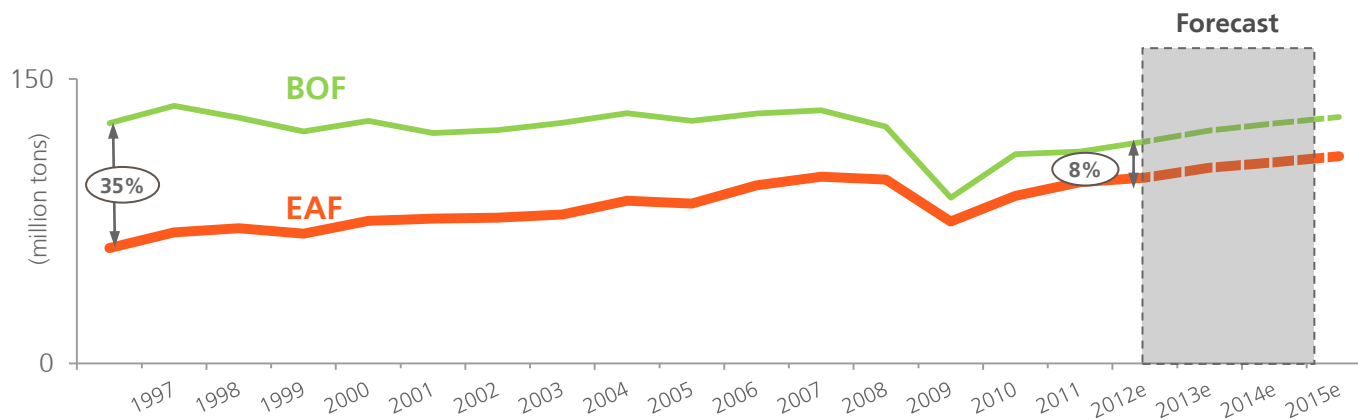
Source: CRU

Steel production in Europe expected to grow slowly to pre-crisis levels

European Steel production follows real GDP growth



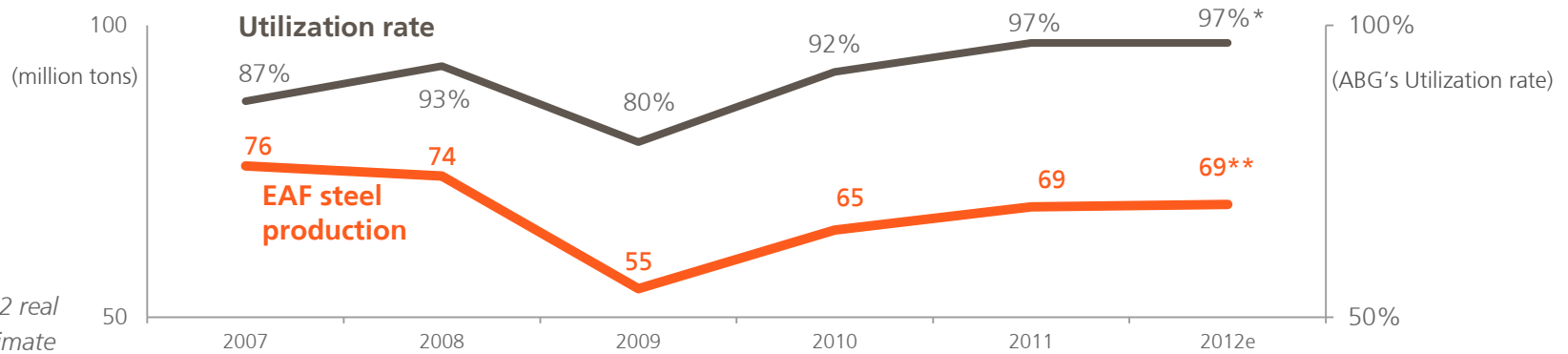
Mini-mill technology (EAF) gains share vs. integrated furnace (BOF)



xx% Gap between EAF and BOF

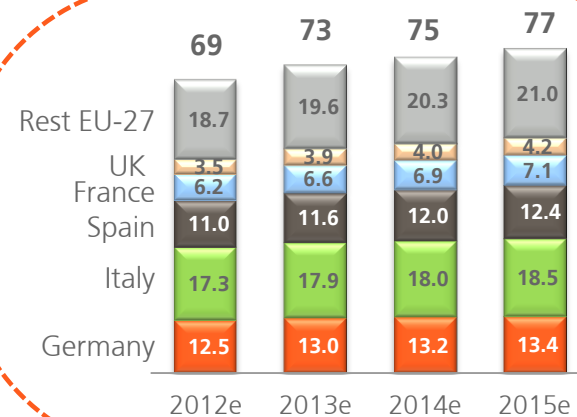
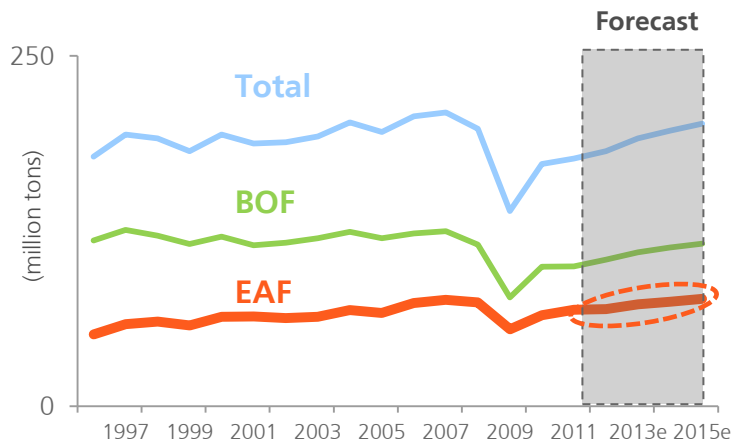
At current levels of mini-mills production in EU-27, Abengoa steel recycling generates strong stable cash flows, given high utilization rates

Utilization of Abengoa's plants follows mini-mills (EAF) production



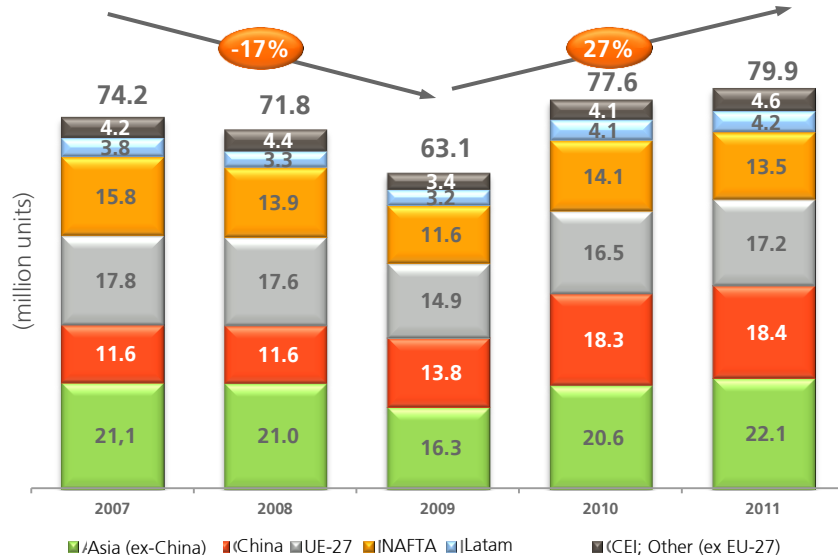
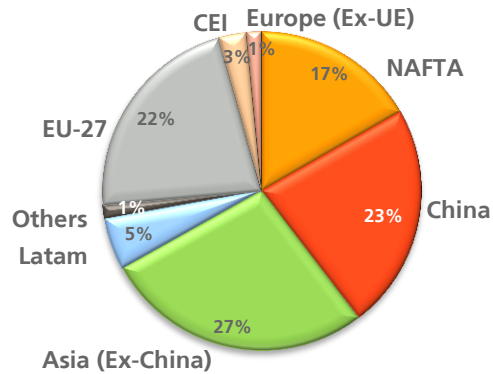
* Q1 2012 real
** FY Estimate

Stable growth expected in steel production



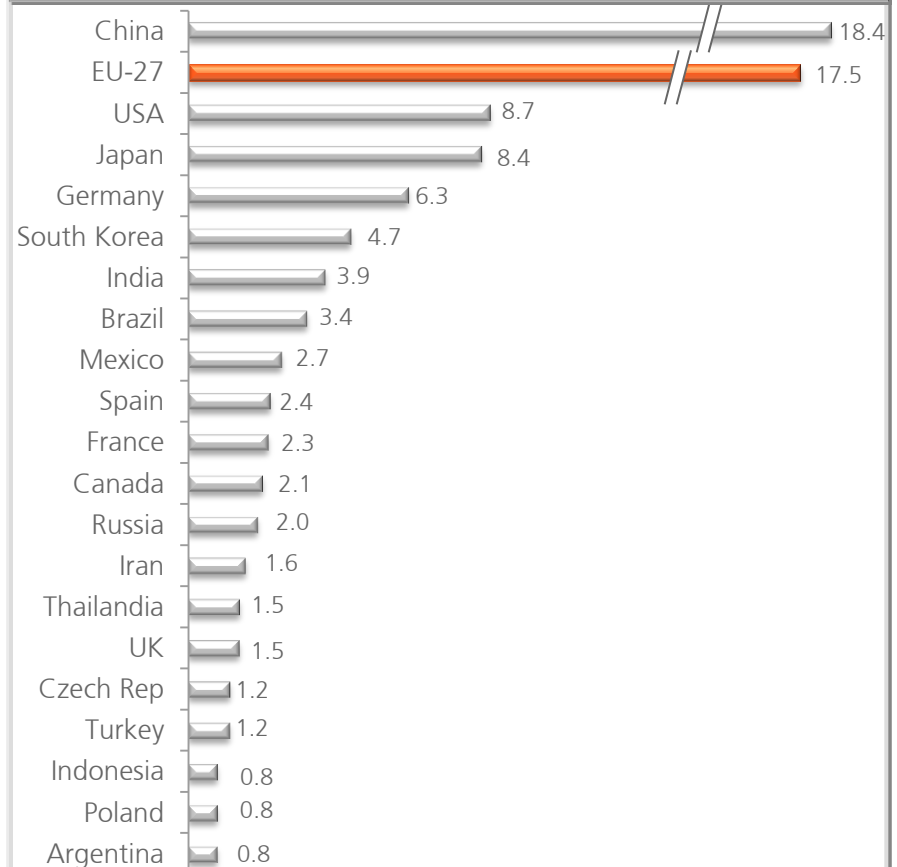
Abengoa Aluminum recycling business depends on EU automobile industry, the 2nd largest market worldwide

Vehicle production by region in 2011 (% Total = 80.3 million units)

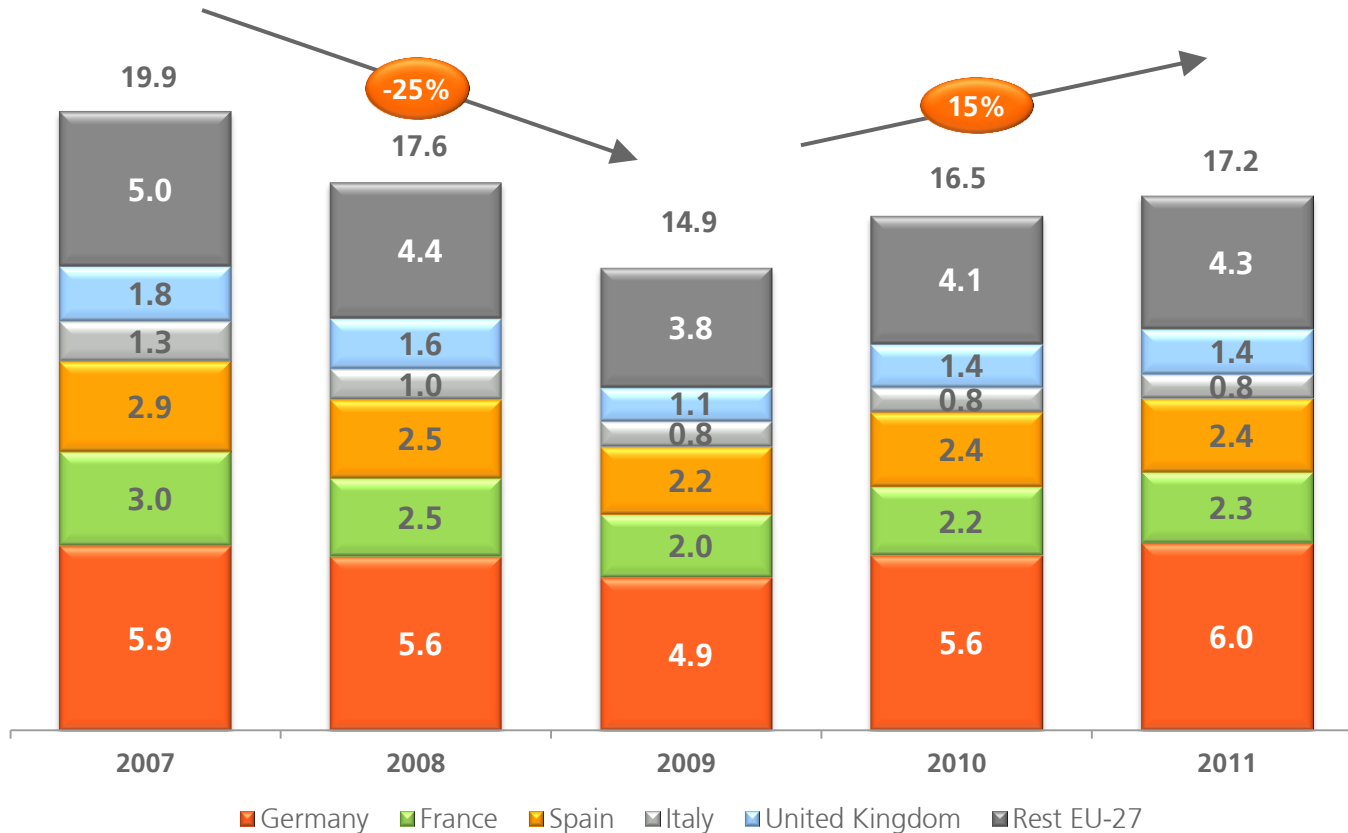


Vehicle production by region – Top 20

(Total 2011= 80.3 million units)



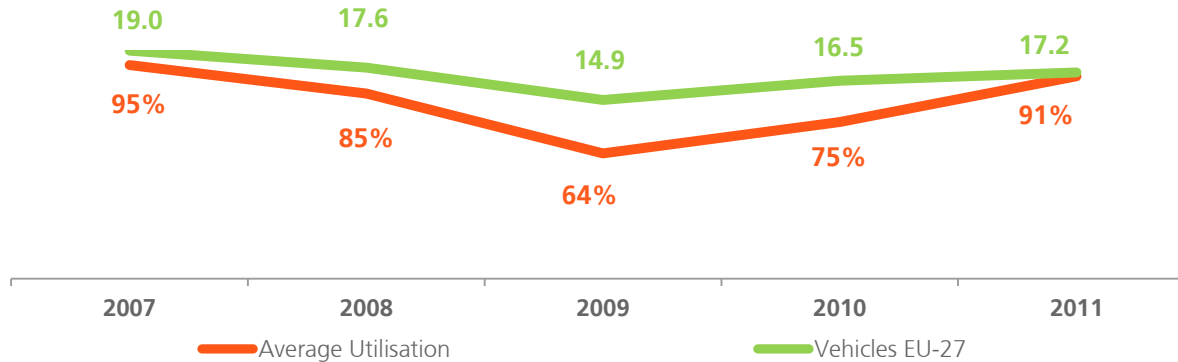
European vehicle production industry shows slow recovering from 2009 lowest figures



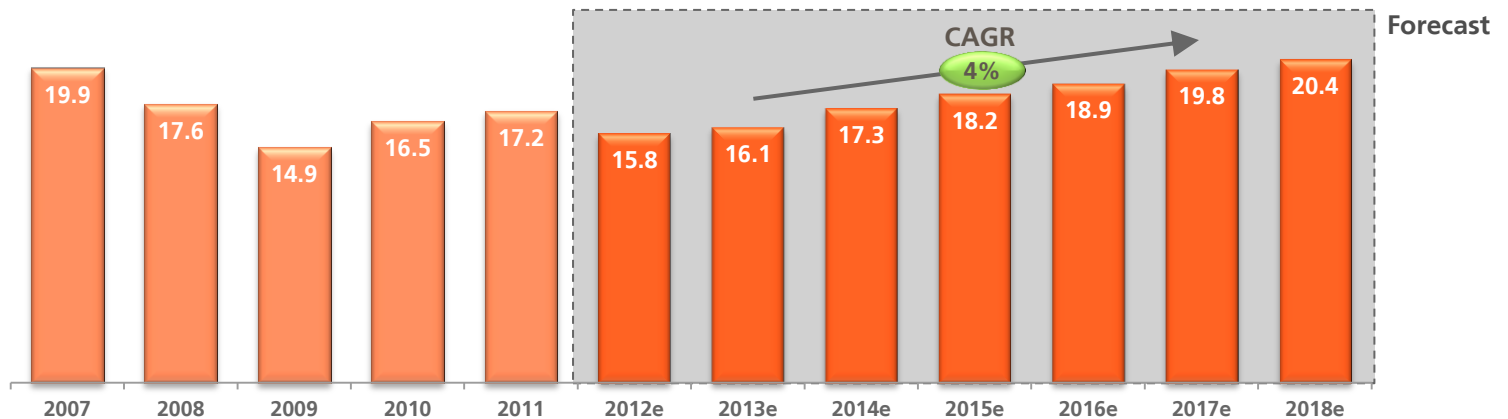
Signs of recovery although still far from pre-crisis

At current levels of vehicle production in Europe, Abengoa generates stable cash flows due to high utilization rates

Plants' utilization follows vehicle production trend

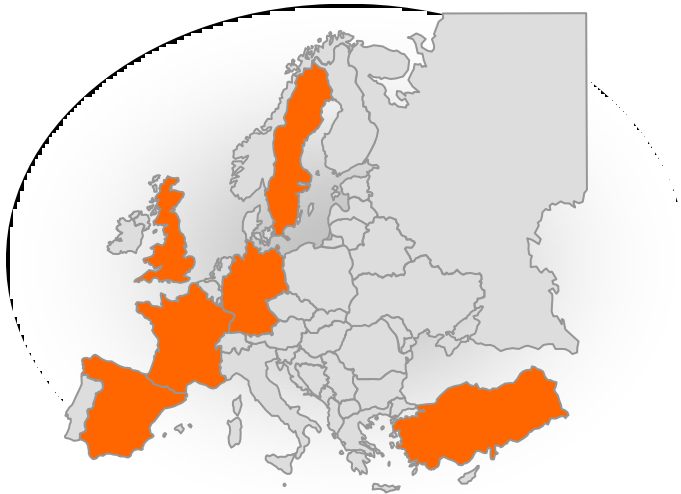


Slow recovery expected to reach pre-crisis levels



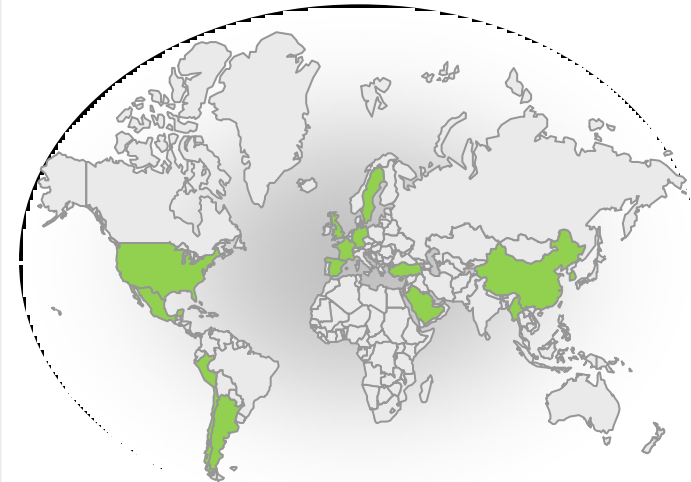
Abengoa aims at becoming a global leader in industrial waste recycling niches

Today - top european player in steel dust and salt slags



- ✓ Presence in 6 European countries
- ✓ 13 recycling plants
- ✓ ~900 kt treated annually

Tomorrow – global leader in industrial waste recycling niches



- ✓ Presence in 10-11 countries of the world
- ✓ 19-20 recycling plants
- ✓ ~1,600 kt treated annually

Additional growth through recycling of other niche metal residues



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Thank you!

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