

# **AREVA: Global leader in low-carbon power generation**

**Luc OURSEL, Chief Executive Officer**

**Pierre AUBOUIN, Chief Financial Executive Officer**

**Paris, September 19<sup>th</sup>, 2012**



# Agenda



## ▶ Our market

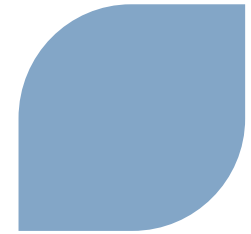
▶ AREVA overview

▶ H1 2012 Highlights

▶ Our strategy / progress update

▶ Financial Outlook

# Energy market: continued growth announced



Macroeconomics

Energy demand: **x2 by 2050**

Geopolitics

Energy **independence** and **security** of supply imperative

Resources

**Unavoidable decline** in fossil resources and **price increases**

Environment

GHG emissions reduction goal of **50% by 2050**

Economics

Need of mastered, stable and predictable **energy costs**

2011 WEO  
2009 – 2035 Scenario

Demand in  
nuclear energy\*

**+2.1%**  
**/ year**

Demand in  
renewable  
energies\*

**+2.5%**  
**/ year**

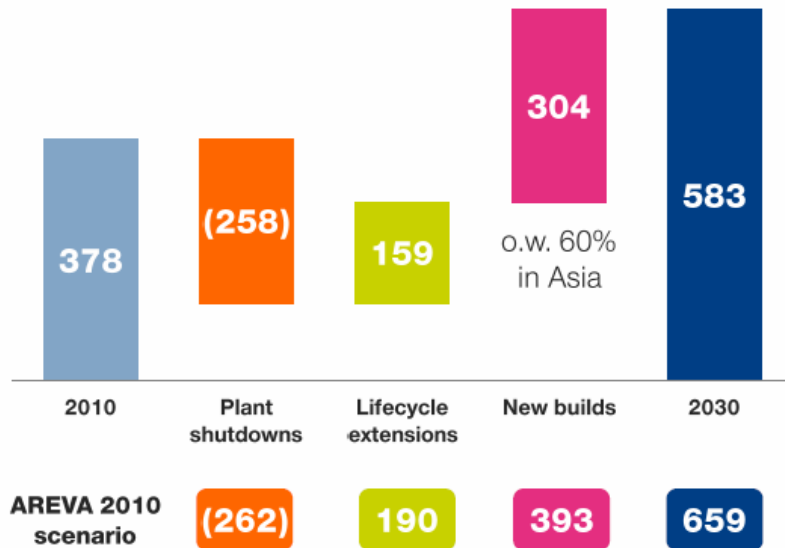
\* Billions of toe

Source: IEA ETP: reference scenario 2010 - UNFCCC, CERA 2009

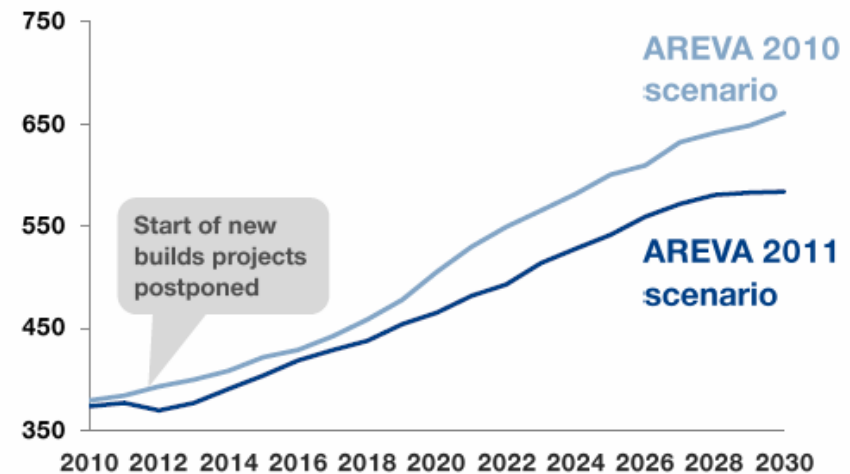
# Nuclear scenario: differed but confirmed growth

## AREVA 2011 scenario (GWe)

Reassessed at end-June 2011

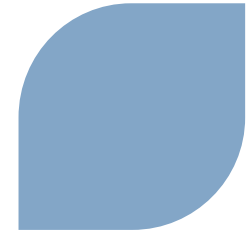


## Change in global installed base (GWe)

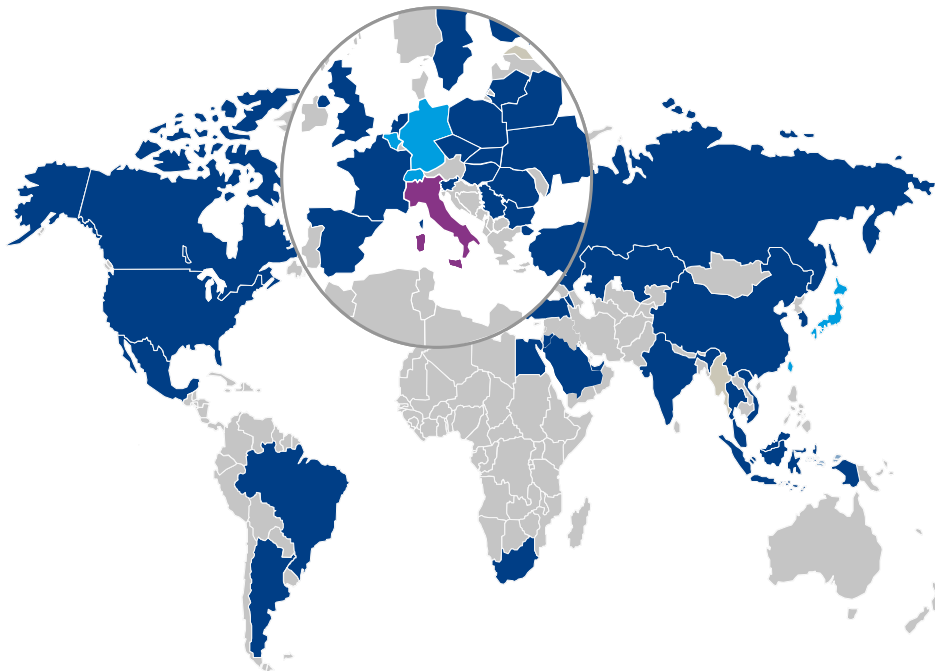


**AREVA's business model allows it to capture market opportunities in all segments**

# Market update



## Major nuclear programs confirmed



■ Nuclear programs / projects confirmed  
■ Gradual phase out of nuclear and / or plants shut down

■ Program for new nuclear reactors abandoned

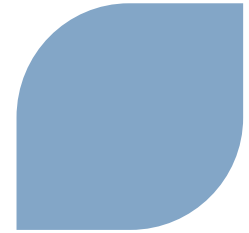
## Update on specific countries

- **Germany:** phase-out confirmed in 2011
- **France:** national energy debate until Spring 2013
- **UK:** final investment decision by EDF in 2012, Horizon takeover in 2012, market reform ongoing
- **USA:** 73 licenses to operate 60 years granted in August 2012, 80 years now being studied



**Nuclear market situation in line with our scenario**

# Update on Japan



- **Announcement by Japanese Democrat Party (new election expected shortly), no regulatory application so far, no clear schedule**
- **Policy to be re-assessed periodically:**
  - **Phase-out nuclear by the end of the 2030's**
  - **No new builds**
  - **No life extension**
  - **Continuation of recycling policy**
  - **Completion of reactors under construction**
- **Restart of reactors currently under maintenance after approval from nuclear safety authority**

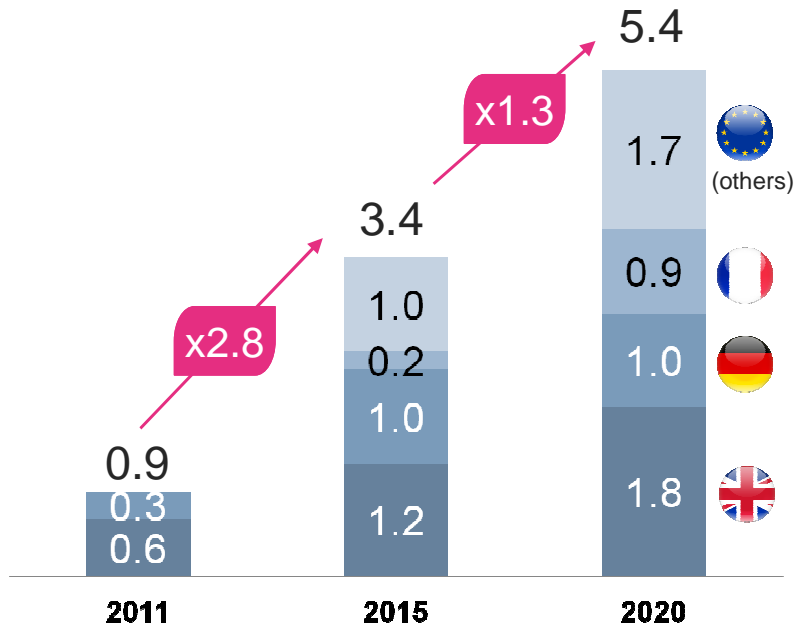


**Limited impact on AREVA's activity in Japan relative to Action 2016 plan expectations**

# Renewable Energies: accelerated growth

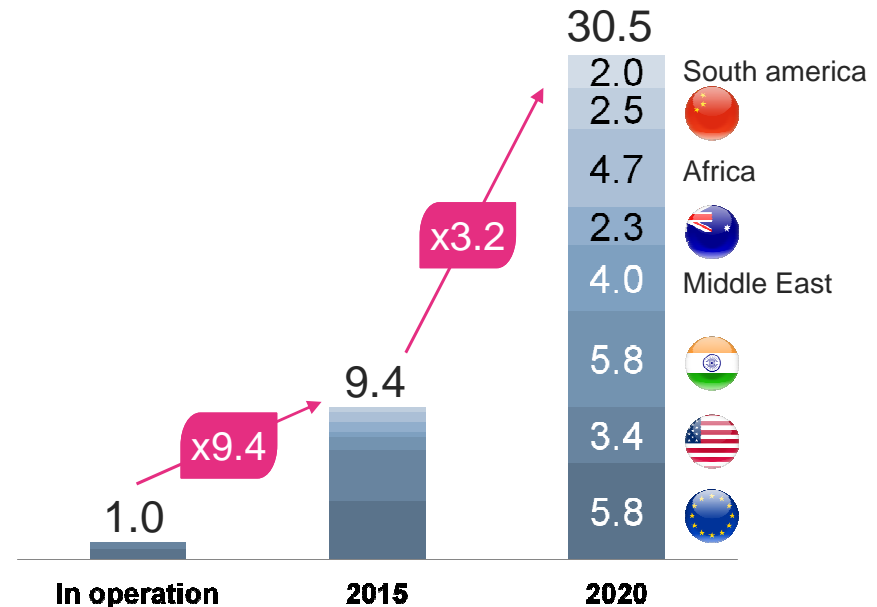
## Offshore wind market will focus on the UK, Germany and France

Annual addition to the installed base in Europe  
2011-2020 (GW) – Reference scenario



## Concentrated solar could reach up to 30GW by 2020

Installed Capacity (GW)



**AREVA's positioning on renewable market:  
selected growing activities**

Source : Boston Consulting Group



# Agenda



▶ Our market

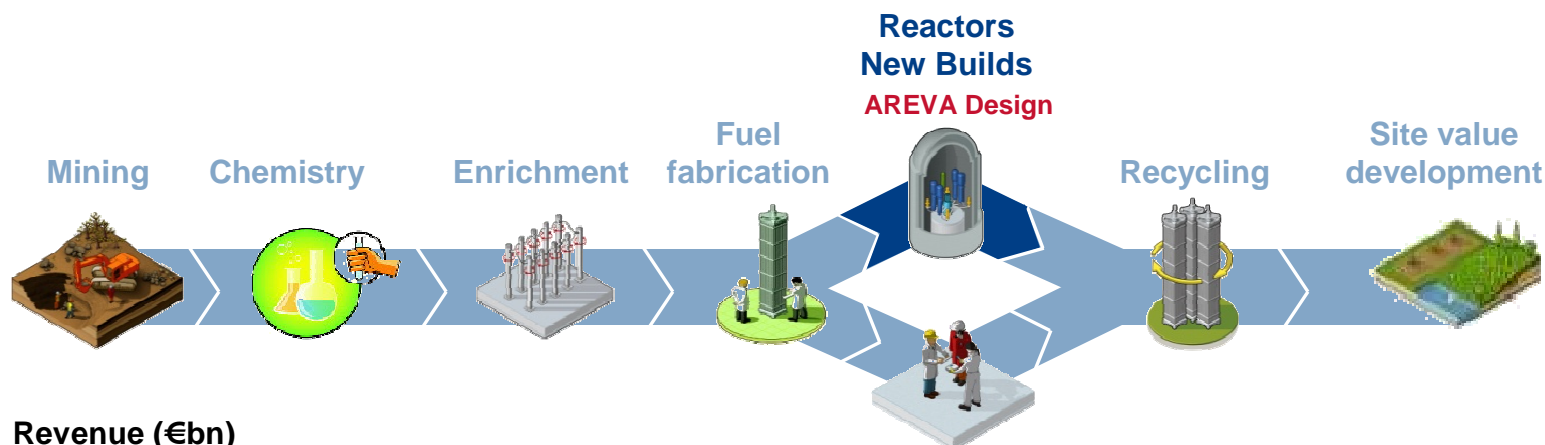
▶ **AREVA overview**

▶ H1 2012 Highlights

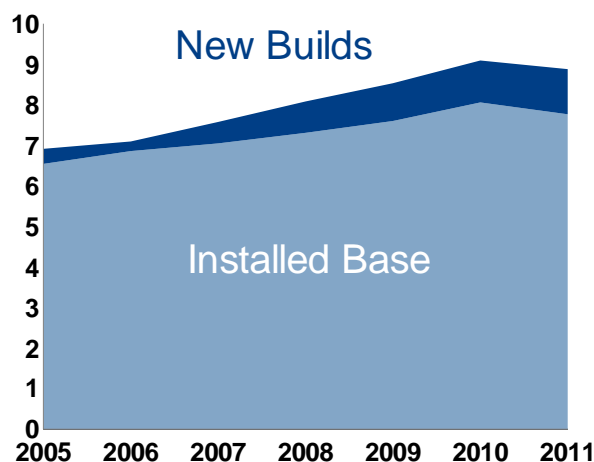
▶ Our strategy / progress update

▶ Financial Outlook

# A solid foundation with our recurring activities



Revenue (€bn)



**Recurring activities  
on worldwide existing fleet  
> 80% of group revenues**



**360 of 440 world reactors are served by AREVA**

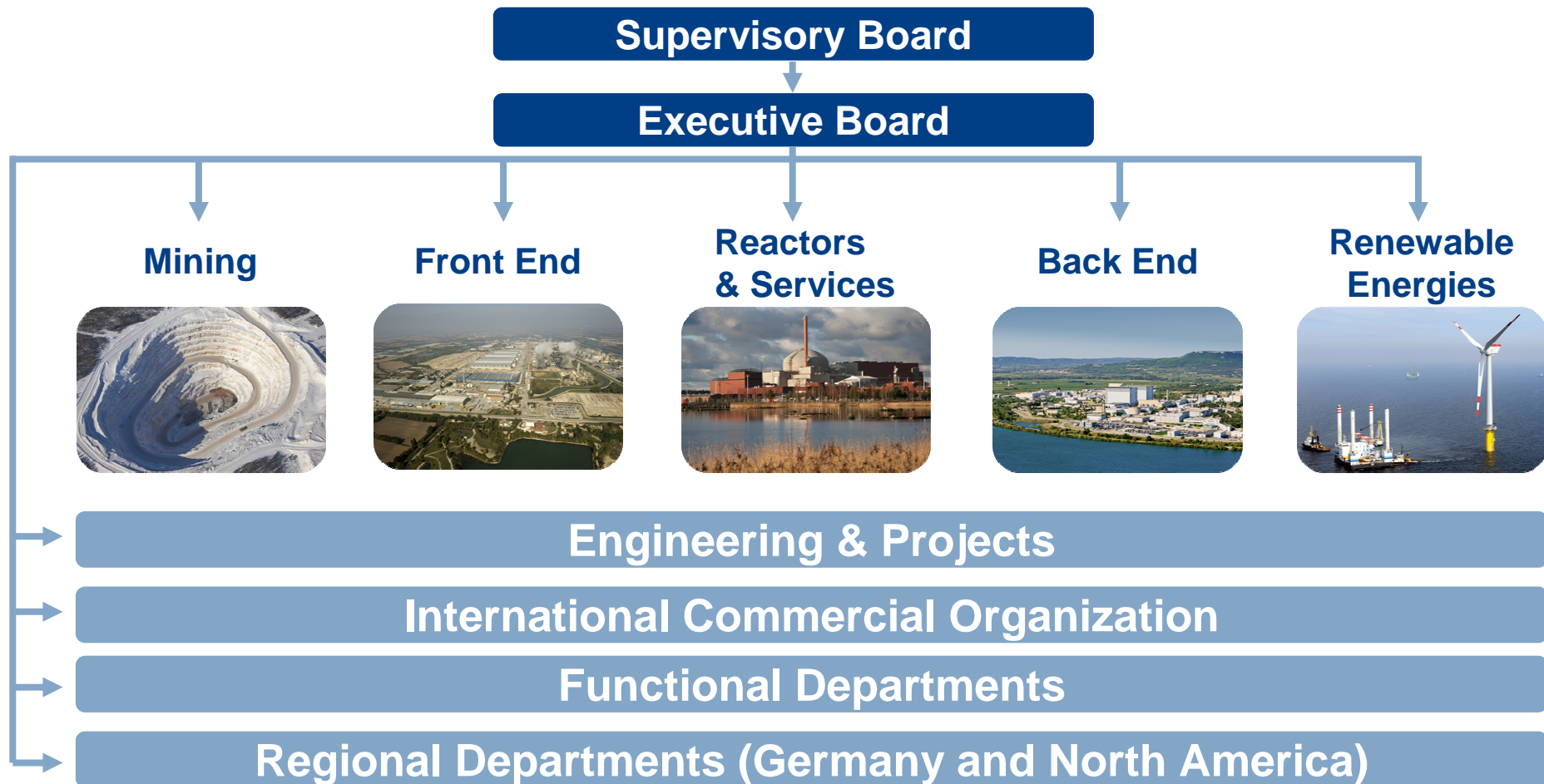
# €45.2bn of backlog: 5 years of revenue secured



## Backlog at June 30, 2012

		In value	Number of years of 2011 revenue in backlog	Approximate coverage of 2012 revenue by BG (rounded)
	<b>Mining</b>	€10.5bn	8 years	~100%
	<b>Front End</b>	€18.7bn	8 years	~95%
	<b>Reactors &amp; Services</b>	€8.3bn	3 years	~85%
	<b>Back End</b>	€6.2bn	4 years	~100%
	<b>Renewable Energies</b>	€1.4bn	5 years	~85%

# Our operating organization



# Mining

2011 revenue

€1.289<sub>bn</sub>

% of consolidated revenue

15%

2011 EBITDA margin

35%

2<sup>nd</sup>

in uranium production worldwide

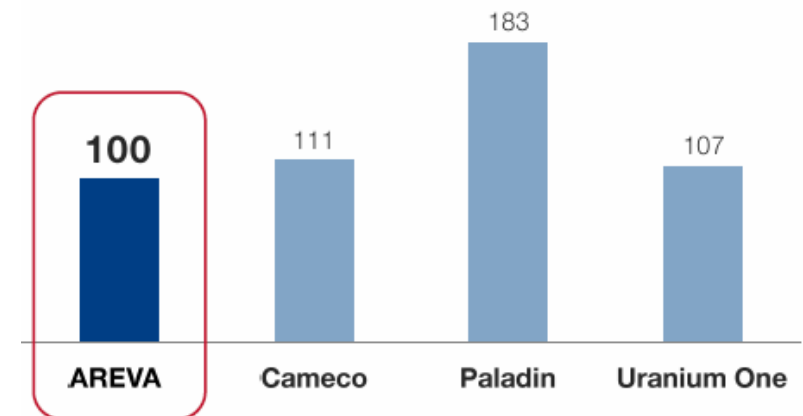
## ► A diversified mining portfolio



## ► The lowest cost base in the market in 2011\*

Cost of sales – Baseline 100

Production costs + royalties + transportation



\* Sources: AREVA and 2011 annual reports

## Front End

2011 revenue

€**2.282**bn

% of consolidated revenue

**26%**

2011 EBITDA margin

**8%**

## Major player

in the front end  
of the nuclear cycle

### ► Security of supply

#### ◆ Chemistry

More than **40 years of industrial experience**  
and more than 360,000 MTU delivered

#### ◆ Enrichment

**High-tech technology: centrifugation** (ETC)

#### ◆ Fuel

**More than 135 reactors** worldwide  
use AREVA's fuel assemblies

### ► New industrial facilities

Comurhex



Comurhex II



Eurodif



Georges Besse II



» **Currently in transition phase with renewal of industrial tool**

# Reactors & Services

2011 Revenue

€3.262bn

% of consolidated revenue

37%

2012 EBITDA margin

3%\*

60% of worldwide reactors served

## ► From construction to operations

### ◆ New Builds

Highest safety standards

EPR reactor: **unique experience feedback**

### ◆ Installed Base

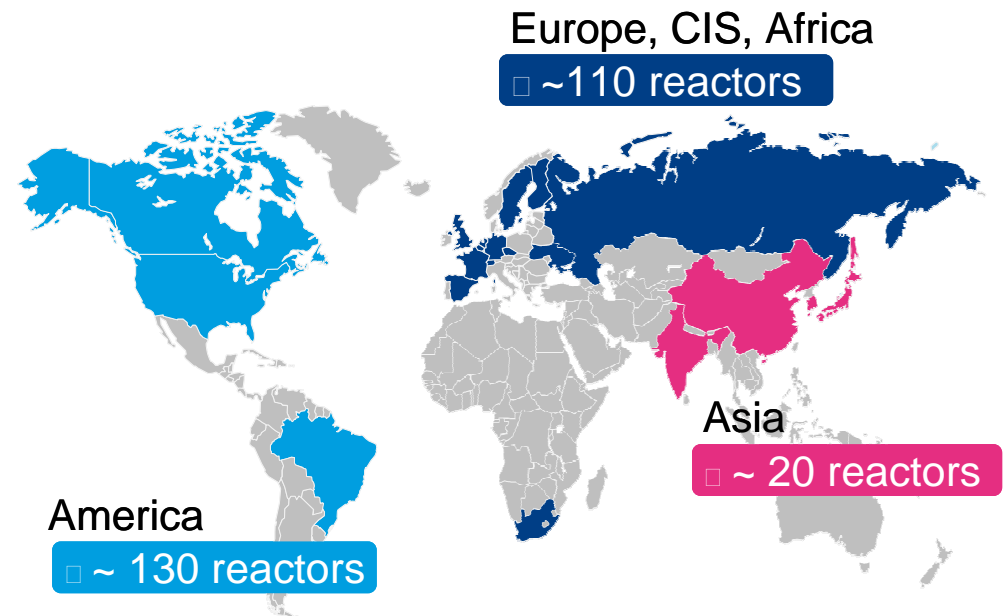
A **complete** range

An **international** experience

A **diversified project** portfolio

### ◆ Propulsion & Research Reactors

## ► Active in the global installed base



\*excluding loss making contracts



# Back End

2011 revenue

€1.594bn

% of consolidated revenue

18%

2011 EBITDA margin

26%

1<sup>st</sup>

worldwide in the back end of the nuclear cycle

## ► A comprehensive offering of solutions

- ◆ **Recycling**: more than **75%** of the global treatment market
- ◆ **Storage**: design and construction of **storage solutions**
- ◆ **Logistics**: **31%** of the global market
- ◆ **Nuclear Site Value Development - Dismantling**: **1,500** specialists
- ◆ **Cleanup**: present at more than **90%** of all French nuclear sites

## ► A strong and unique industrial base

La Hague (Manche)



Melox (Gard)





# Renewable Energies

H1 2012 revenue

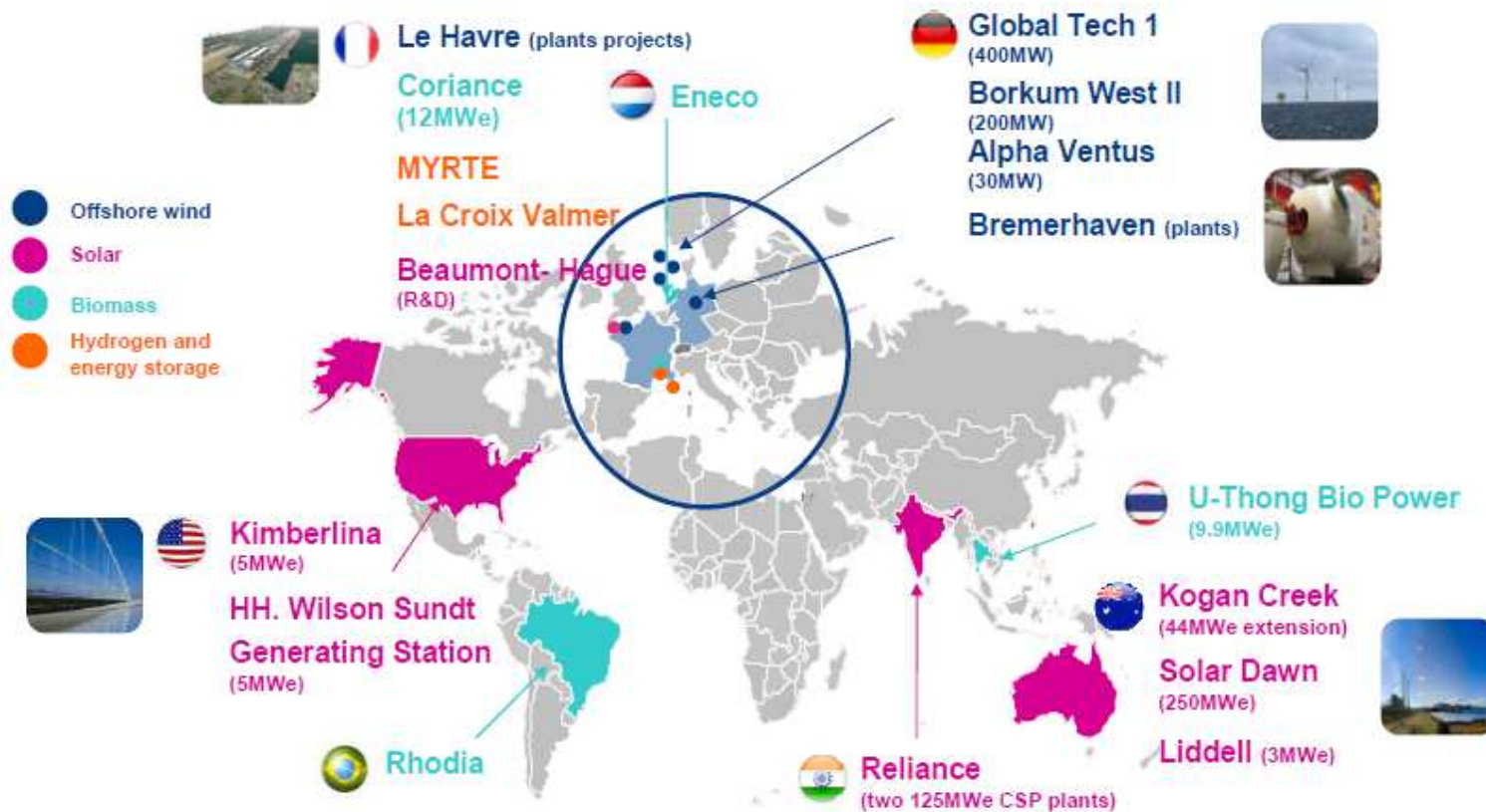
€0.253bn

% of consolidated revenue

6%

Positive contribution to group FCF in H1 2012

Numerous ongoing projects



# Agenda



▶ Our market

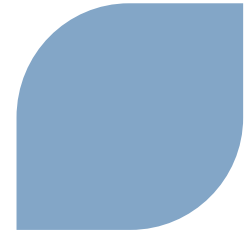
▶ AREVA overview

▶ **H1 2012 Highlights**

▶ Our strategy / progress update

▶ Financial Outlook

# A new commercial dynamism to capture opportunities on a growing nuclear market



- 14% increase in new orders vs. H1 2011 thanks to recurring installed base activities
- Participation in numerous tender offers for construction projects of nuclear power plants (representing more than 15 reactors)
- €80m “Safety Alliance” orders registered since the initiative’s launch following Fukushima – Numerous ongoing tender offers
- Near €50bn of offers submitted in the nuclear activities



**“Nuclear market” confirms its growth potential and AREVA knows how to respond to its needs**

# Amplified growth in renewables

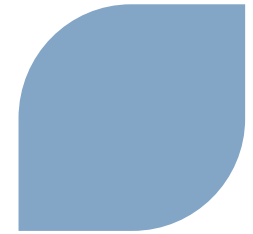


- **Acceleration of Offshore Wind turbines production's pace: 18 units in the 1<sup>st</sup> half of 2012 (vs. 2 in H1 2011)**
- **First contribution to revenue of ongoing solar projects (Kogan Creek and Reliance)**
- **Technological differentiation in Biomass: acquisition of the roasting technology – “green coal”**
- **Inauguration of first technological platforms in energy storage**



**Concrete projects, tomorrow's standards**

# Performance materializes thanks to Action 2016 implementation

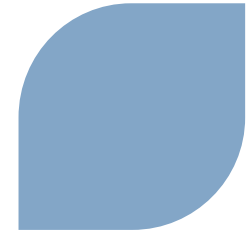


- Renewed revenue growth in the nuclear businesses (+3.7%) and ramp-up in the renewables business (fourfold increase in revenue between H1 2011 and H1 2012)
- Effectiveness of cost-cutting measures: 65% of the €1bn operating cost reduction goal by 2015 secured (20% achieved at end of June 2012)
- Asset disposals program is ahead of schedule: €1.2bn in asset disposals announced at the end of July 2012 for a minimum target of €1.2bn over the 2012-2013 period

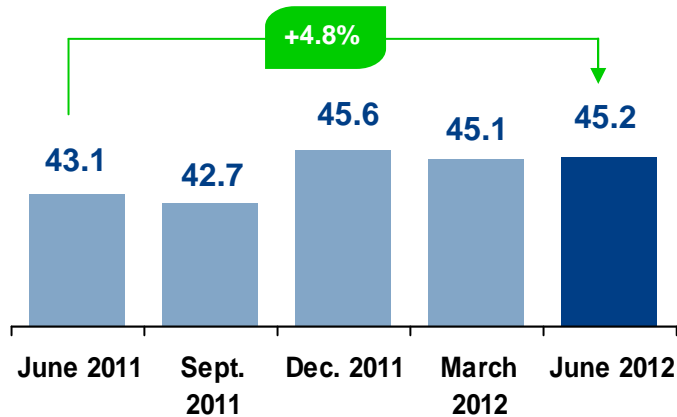


**Recovery of financial performance in the first half year**

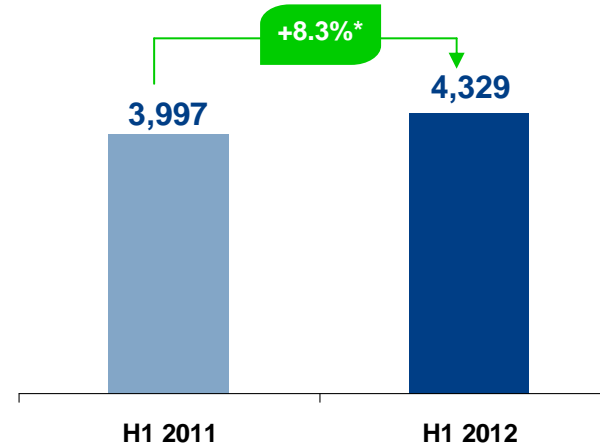
# Commercial dynamism and improved profitability



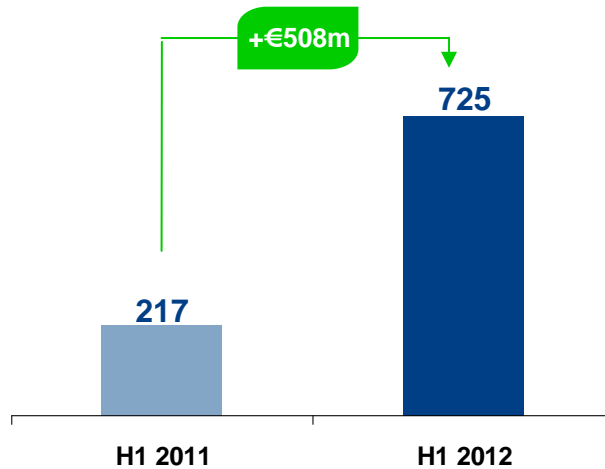
**Backlog (€bn)**



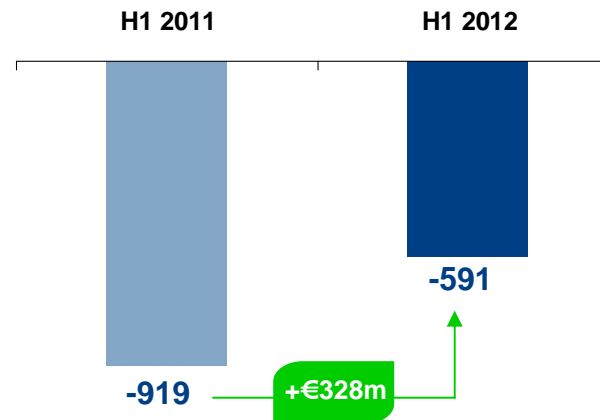
**Revenue (€m)**



**Restated EBITDA\*\* (€m)**



**Restated free op. cash flow before tax\*\* (€m)**



\* +6.7% at constant exchange rates and consolidation scope

\*\* Restated for Siemens impacts in 2011 and asset disposals in 2012

# Agenda



- ▶ Our market
- ▶ AREVA overview
- ▶ H1 2012 Highlights
- ▶ **Our strategy / progress update**
- ▶ Financial Outlook



## Safety Security Transparency

### Commercial priority given to value creation

- Installed Base: doubling profitability by 2016
- New Builds: becoming the reference technology

### Selectivity in capital spending

- €7.7bn over the 2012-2016 period, i.e. -34% vs. 2007-2011
- Several projects on hold

### Debt management

- Disposal plan > €1.2bn over the 2012-2013 period
- Fully self-financed Capex on a cumulative basis over the 2012-2016 period

### Improving our performance

-€1bn on annual operating costs base and -€500m inWCR by 2015



**Concrete progress in all strategic orientations**





# Commercial priority given to value creation



## Fuel cycle & Dismantling

## Reactors & Services

## Renewable Energies

### Orders intakes

FirstEnergy



EnBW

RWE

Xcel Energy



SNC • LAVALIN

RELIA**NCE** Power  
Anil Dhirubhai Ambani Group



### Commercial agreements



A UniSource Energy Company



Mitsubishi Corporation

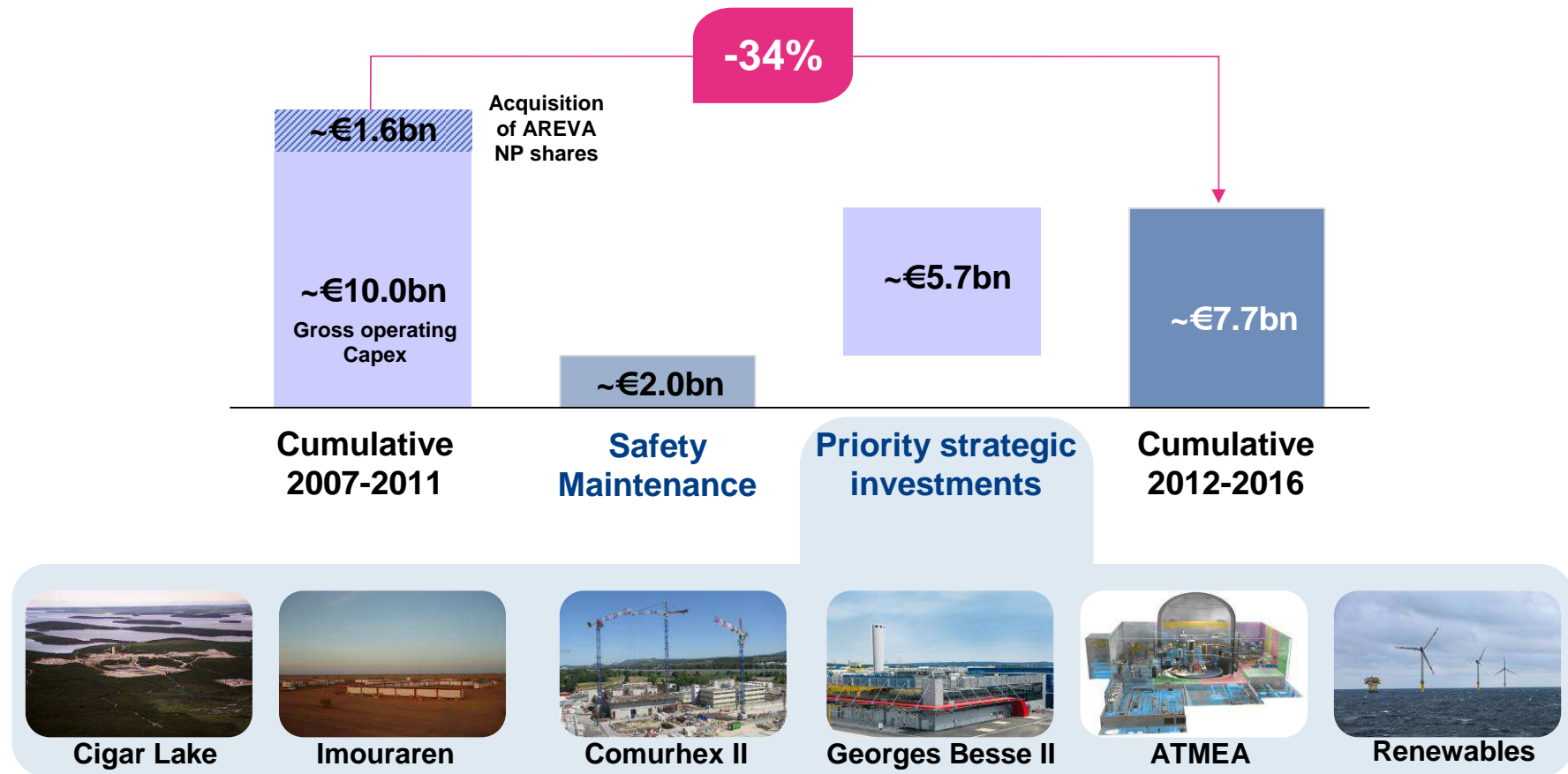


Rolls-Royce



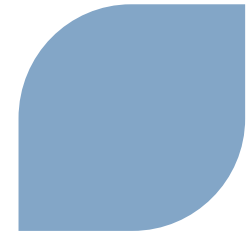
# Selectivity in capital spending

Adapting our investment program to new market conditions





# Enrichment: controlled technology transition



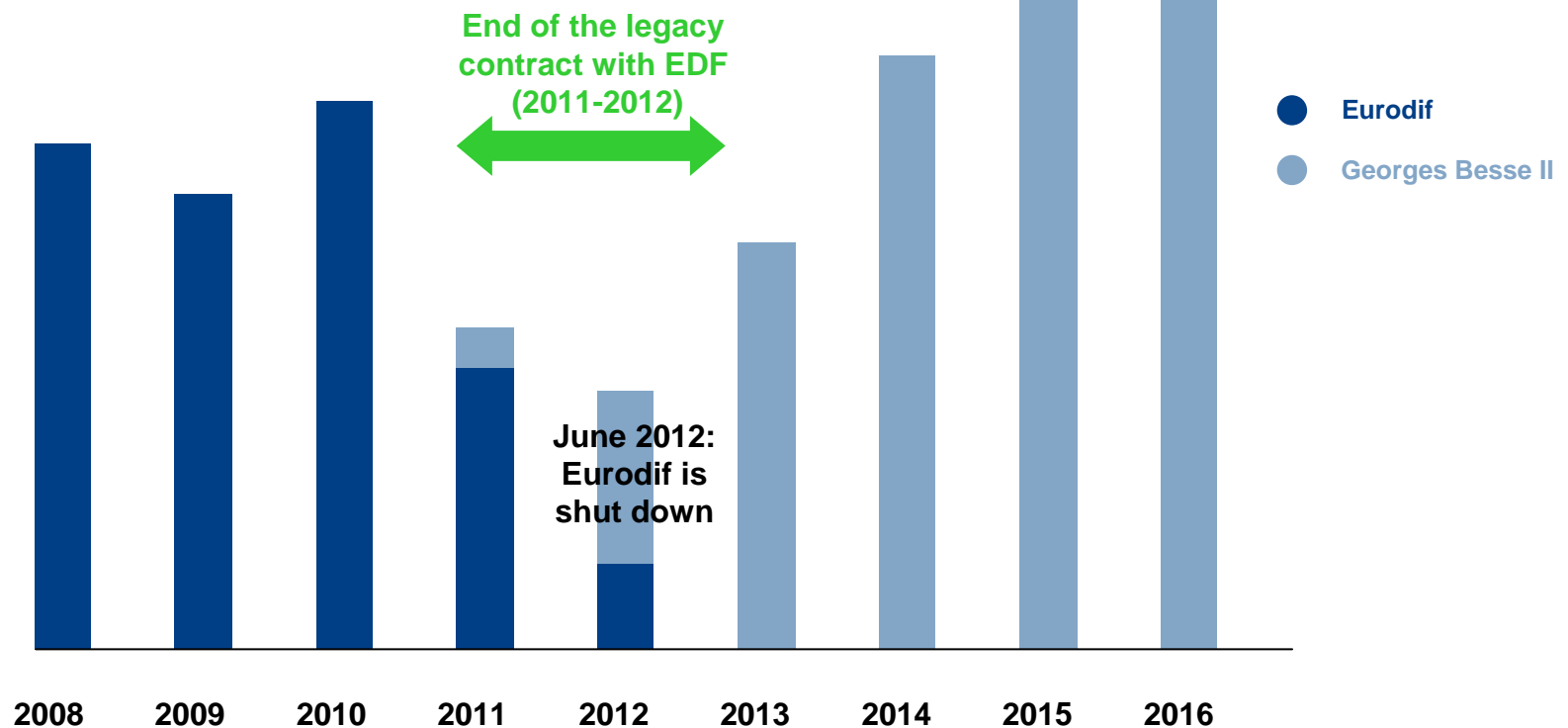
## EURODIF



## GBII

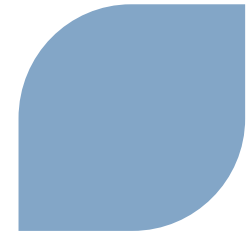


PRODUCTION  
(SWUs)





# Enrichment: deployment of a value creating technology



## EURODIF



## GBII



### Operating cost savings – cost of electricity



### Capex

~€1.5bn

~€500m

### EURODIF – PRISME cash spending

€244m in provisions  
at end of 2011

- The most efficient proven technology
- 50 times less electricity used and considerable reduction in water usage
- 80% of nominal production already sold through 2030
- Ease of future plant expansion: modular centrifuge cascades allow for capacity increases depending on market conditions

# Improvement of our financial structure



## Asset disposals program ahead of schedule



- December 14, 2011: **01dB-Metravib**
- January 30, 2012: **Sofradir**
- May 16, 2012: **ERAMET**
- June 1, 2012: **AREVA Lesedi**
- June 11, 2012: **Millennium**
- August 28, 2012: **La Mancha**

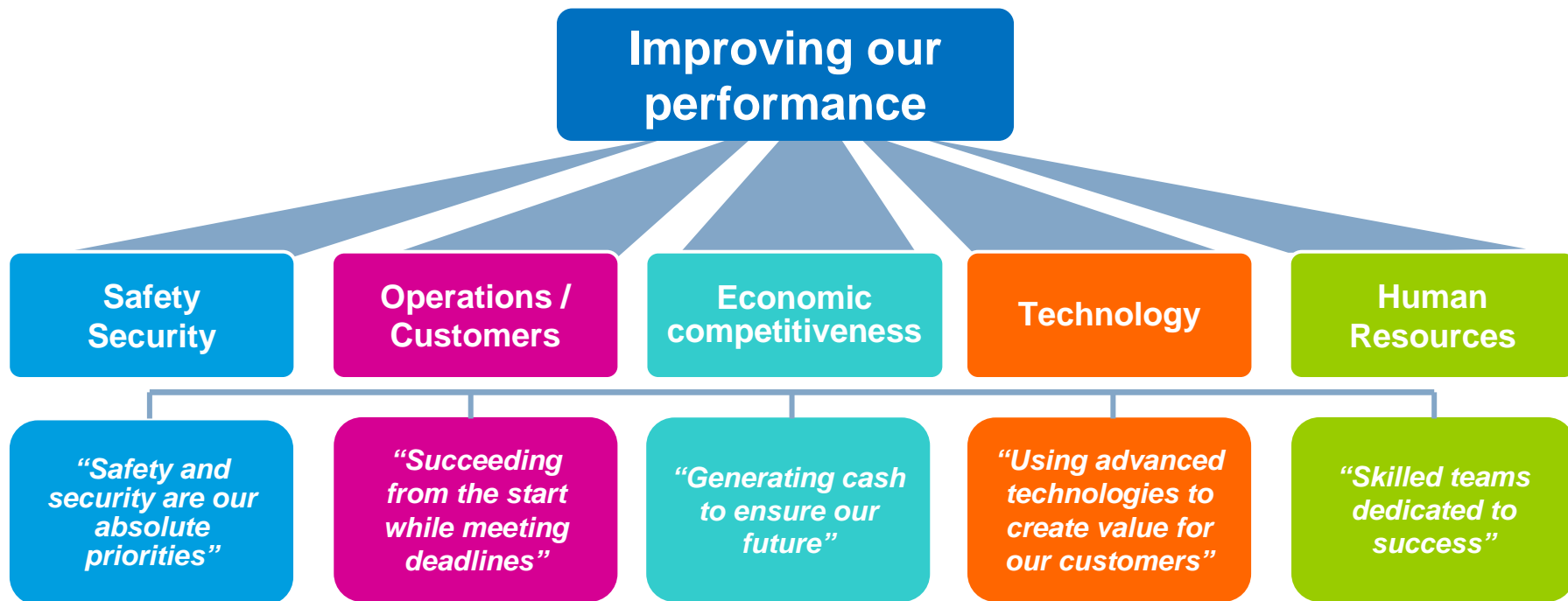
➤➤ **2012-2013 objective for disposals has been reached**

## Strengthening our balance sheet

- **2 bond issues:**
  - March 8, 2012: €400m bond issue (maturity: October 5, 2017)
  - March 21, 2012: €200m private placement maturing in 10 years
- **No major debt refinancing required before 2016**
- **Average debt maturity: 7 years**

➤➤ **Liquidity: €1.9bn in net cash available at 6/30/2012 (+€462m vs end of 2011)**

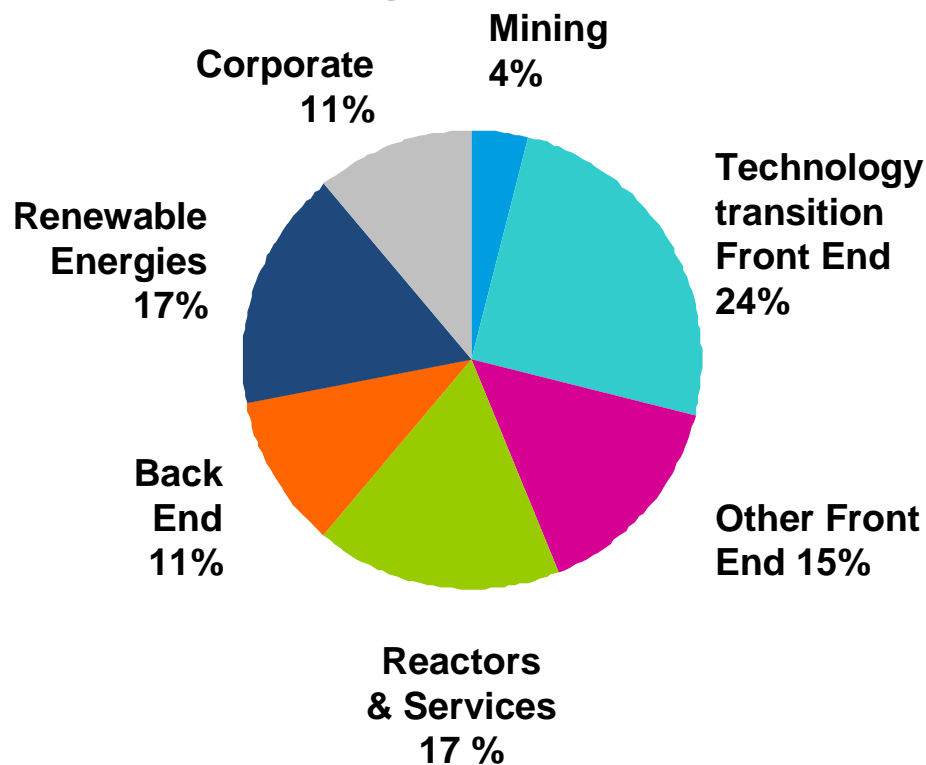
# Five pillars for performance improvement



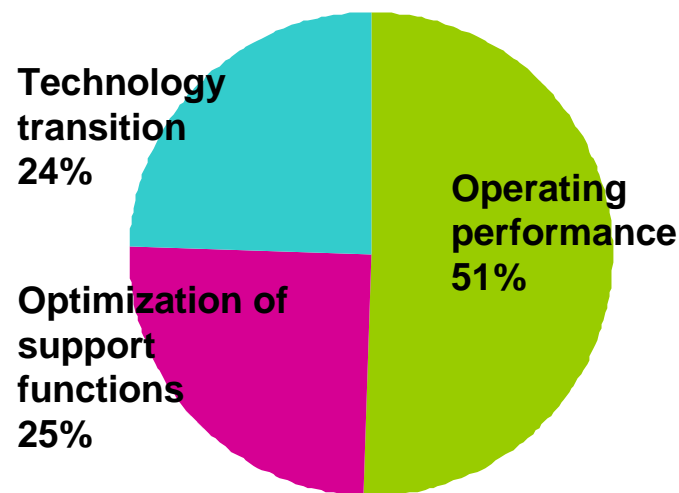
# Strengthening our economic competitiveness

**OBJECTIVE of improving performance**  
**€1bn reduction in annual operating costs by 2015**

**Allocation by BG**



**Allocation by optimization areas\***

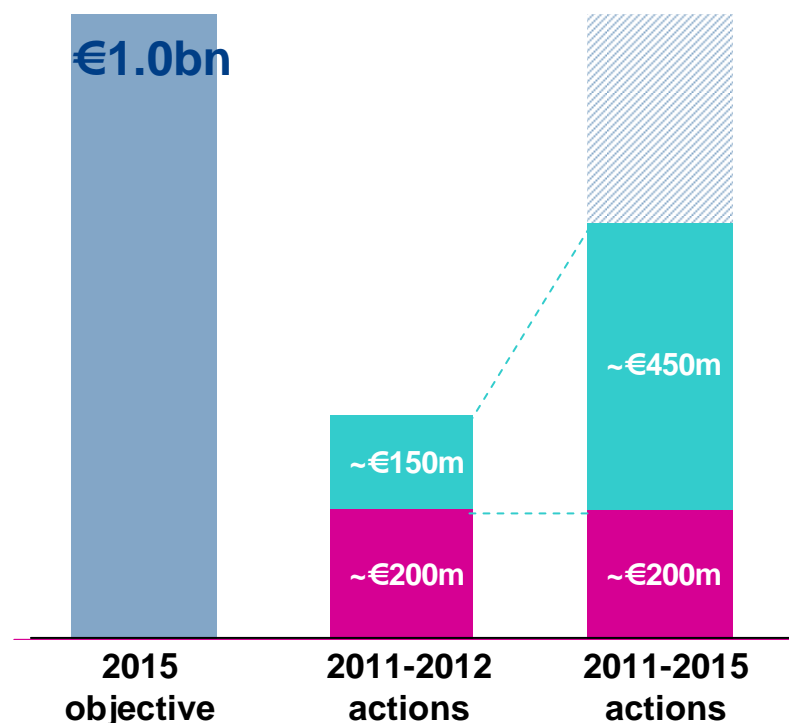


\* 2015 objectives

# 65% of the operating cost reduction goal secured

**OBJECTIVE** of improving performance  
**€1bn reduction in annual operating costs by 2015**

■ **Objective**  
 ■ **Achieved<sup>(1)</sup>**  
 ■ **Secured<sup>(2)</sup>**  
 ■ **Identified<sup>(3)</sup>**



» 45% of the 2015 goal is secured

» 20% of the 2015 objective has been achieved

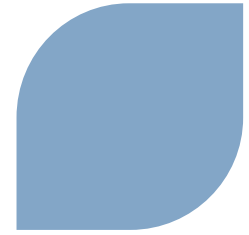
(1) Contribution to savings by actions completed at end-June 2012, based on annual costs excluding technology transition in Front End  
 (2) Contribution to savings by actions secured at end-June 2012, based on annual costs excluding technology transition in Front End  
 (3) Contribution to savings by actions identified at end-June 2012, based on annual costs



**€350m secured at the end of 2012**  
**65% of the €1bn secured by 2015**



# Agenda



- ▶ Our market
- ▶ AREVA overview
- ▶ H1 2012 Highlights
- ▶ Our strategy / progress update

## ▶ Financial Outlook

# Financial outlook

## Upward revision of 2012 outlook



	Action 2016: 2012-2013 outlook		Upward revision for 2012	2015-2016
Revenue	Nuclear: +3 to 6% per year		Nuclear: +4 to 6%	Nuclear: +5 to 8% p.a
		Renewables > €750m	Renewables: ~€600m	Renewables: >€1.25bn
EBITDA	> €750m	> €1.25bn	> €950m	
Free operating cash flow excl. disposals	> -€1.5bn	Break-even	> -€1.25bn	> +€1.0bn p.a from 2015

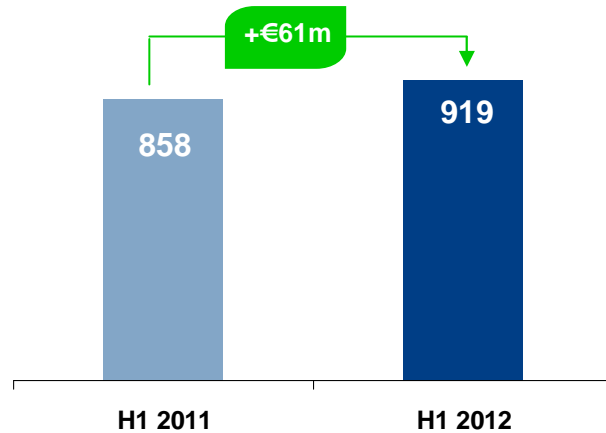
Data at constant consolidation scope



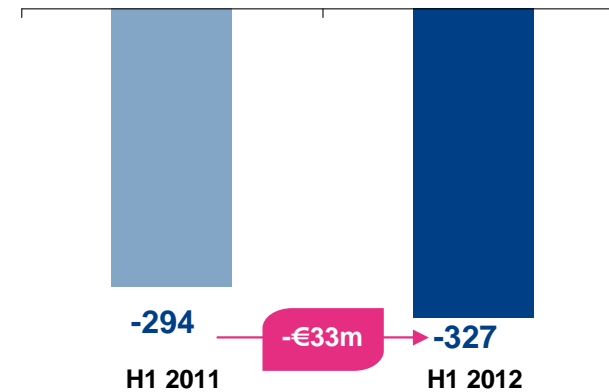
# Appendix

## Other financial indicators

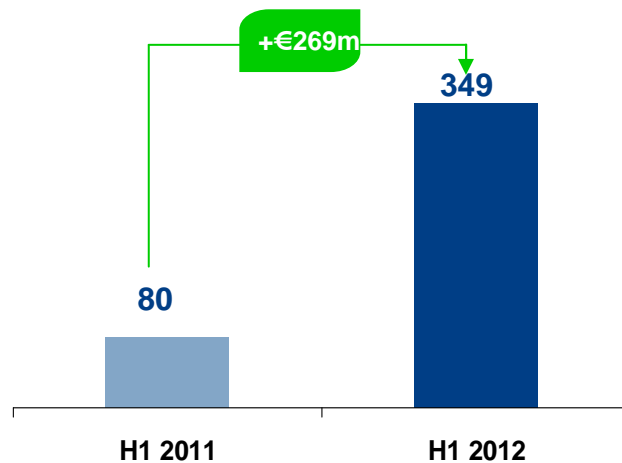
Restated gross capital spending\* (€m)



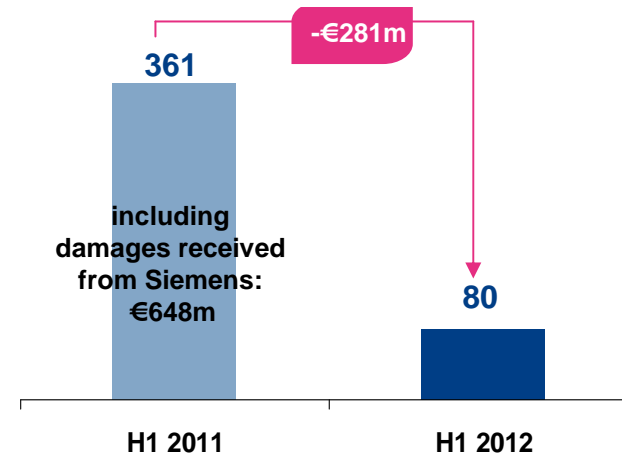
Change in operating WCR (€m)



Restated operating income\* (€m)



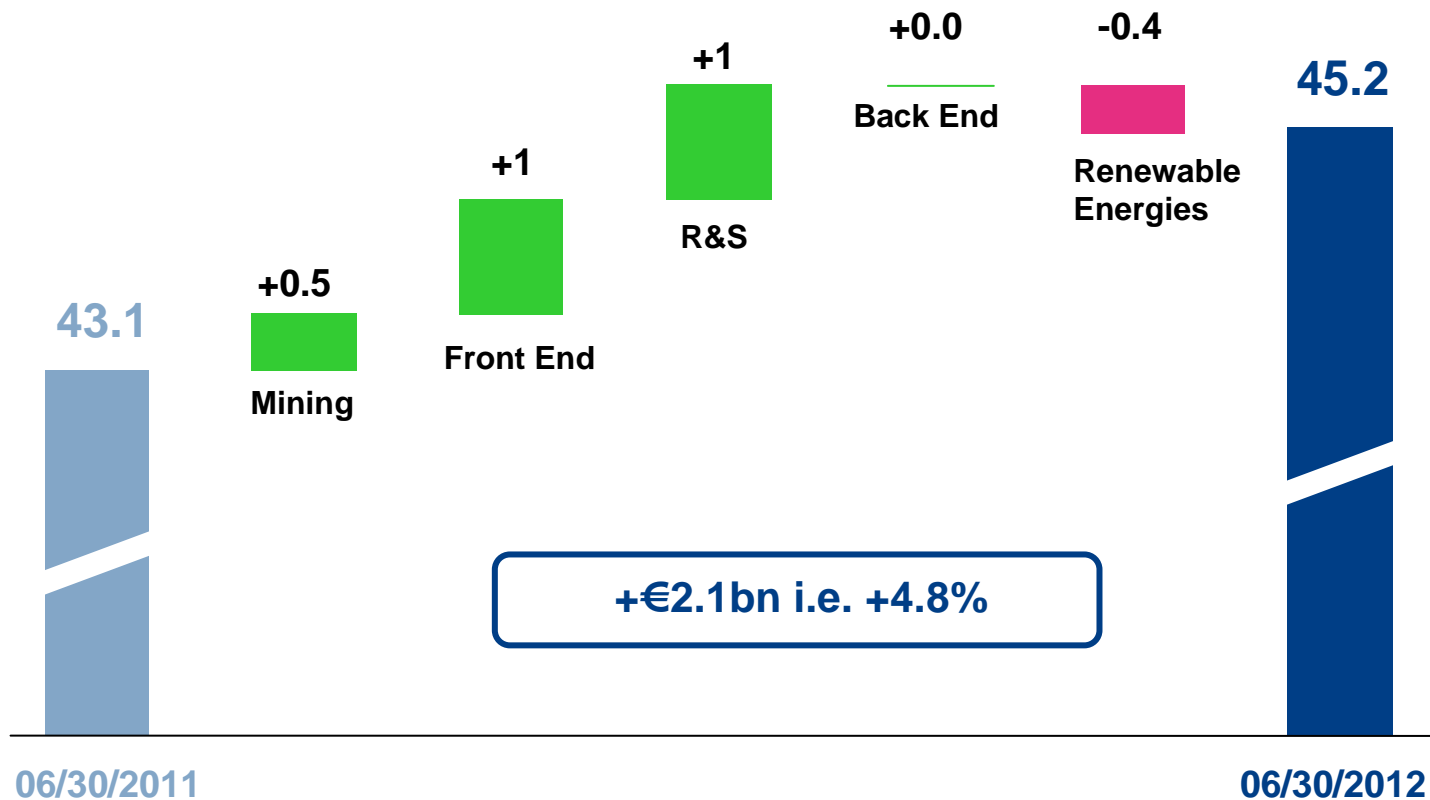
Net income attributable to owners of parent (€m)



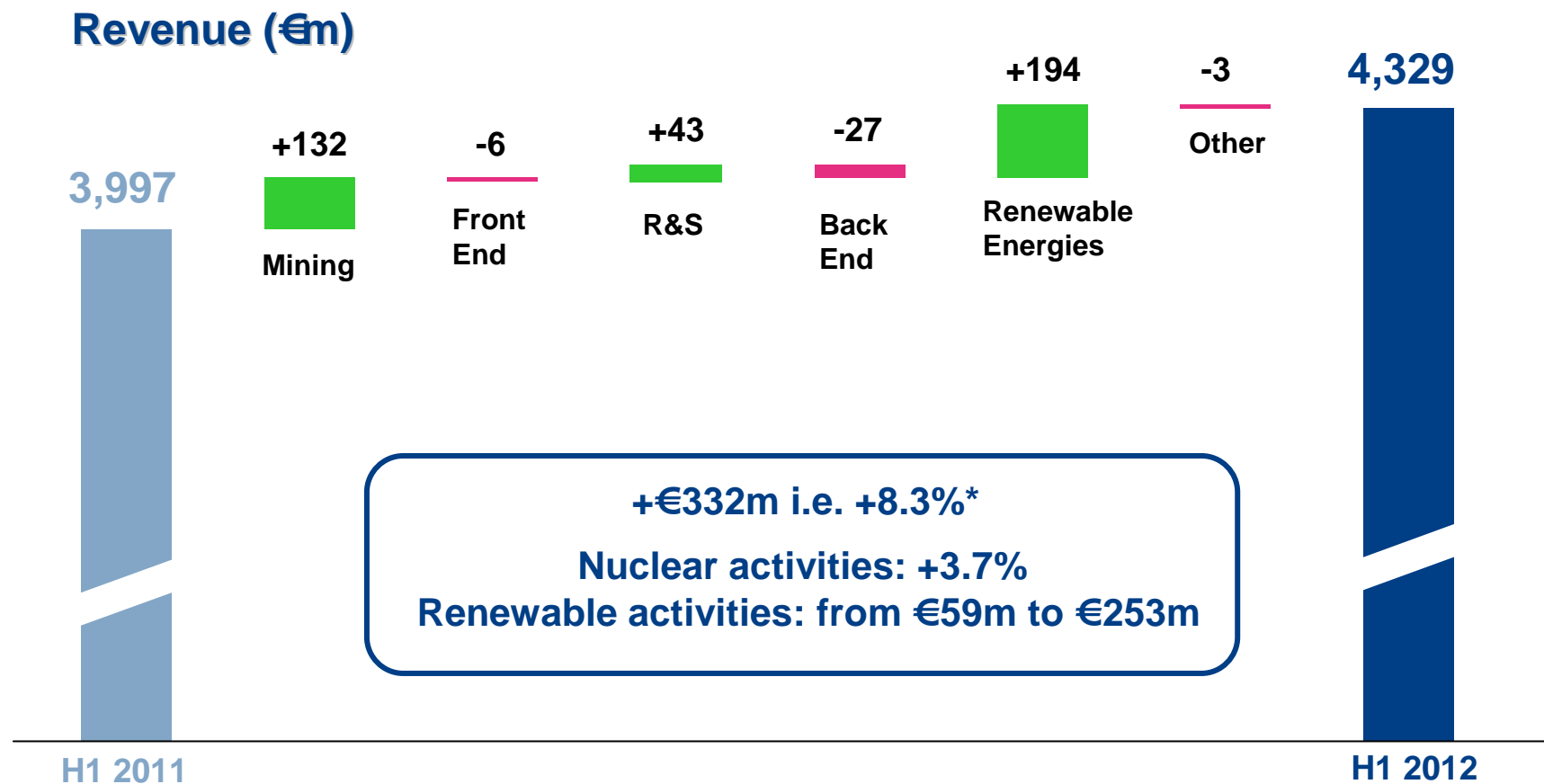
\*Restated for Siemens impacts in 2011 and asset disposals in 2012

## Growth in backlog

Backlog (€bn)



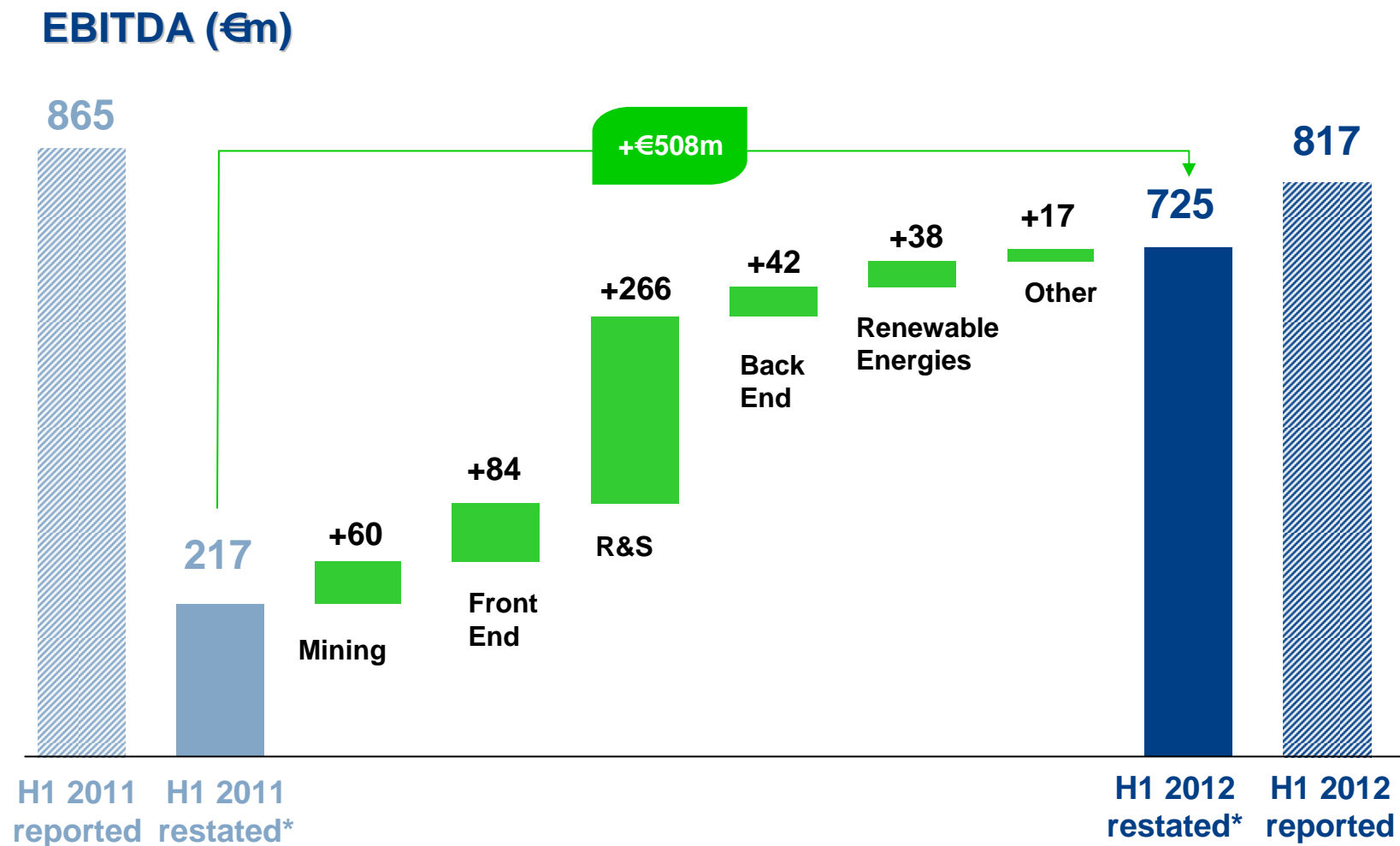
# Revenue growth in nuclear and renewables



**Renewables: new growth driver**

\* +6.7% at constant exchange rate and consolidation scope

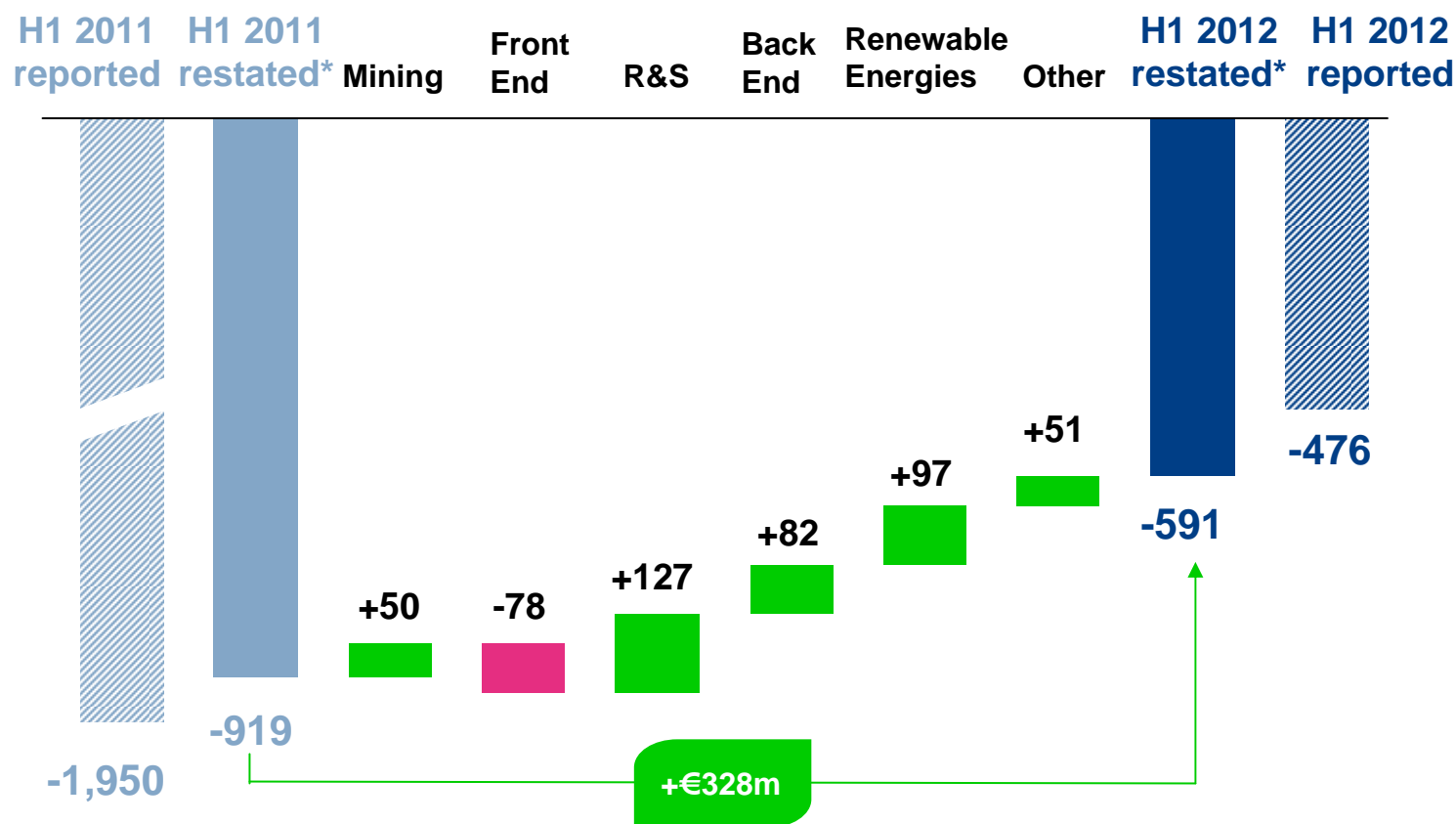
# Sharp increase in EBITDA in all operations



\* Restated for Siemens impacts and asset disposals in 2012

# Significant improvement in free operating cash flow

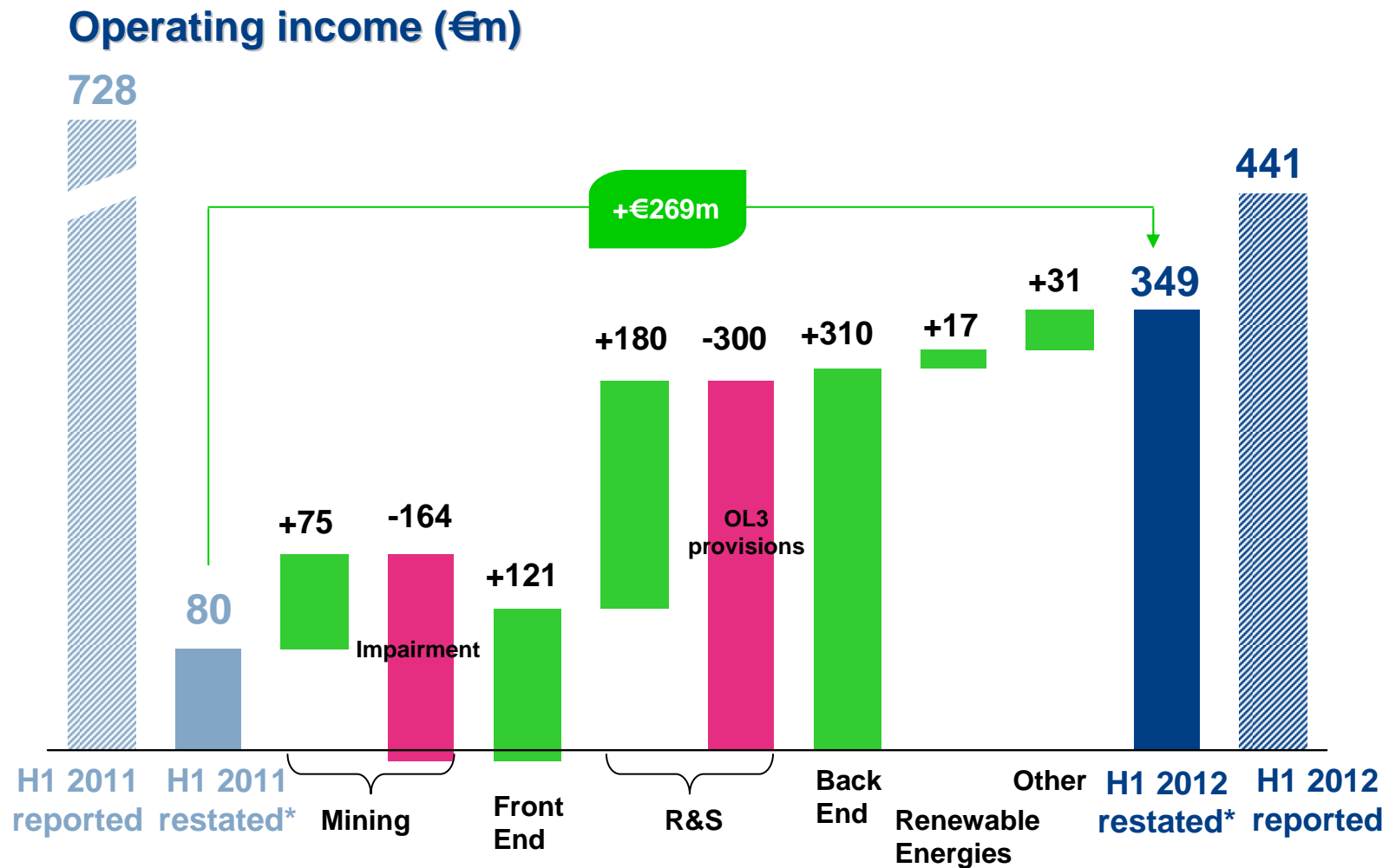
## Free operating cash flow (€m)



\* Restated for Siemens impacts and asset disposals in 2012



# Improvement in operating income



\* Restated for Siemens impacts and asset disposals in 2012

# Mining











<i>in €m</i>	H1 2011	H1 2012	Change		
<b>Backlog</b>	<b>9,983</b>	<b>10,472</b>	<b>+489</b>	↑	Asian (of which CNNC) and American customers
<b>Contribution to consolidated revenue</b>	<b>514</b>	<b>646</b>	<b>+132</b>	↑	Average sales price Volumes
<b>Restated operating income*</b>	<b>95</b>	<b>6</b>	<b>-89</b>	↑	Average sales price Volumes
<i>including impairment</i>	<i>0</i>	<i>(164)</i>	<i>-164</i>	↓	Impairment Bakouma and Ryst Kuil
<b>Restated EBITDA*</b>	<b>164</b>	<b>224</b>	<b>+60</b>	↑	Average sales price Volumes
<b>Restated net Capex*</b>	<b>(280)</b>	<b>(341)</b>	<b>-63</b>	↓	Restart of work at Imouraren site
<b>Restated free operating cash flow before tax*</b>	<b>(13)</b>	<b>36</b>	<b>+50</b>	↑	EBITDA improvement Decrease in inventories
				↓	Increased Capex

\* Restated from 2012 disposals










## Front End



<i>in €m</i>	H1 2011	H1 2012	Change	
<b>Backlog</b>	17,719	18,711	+992	 EDF US utilities EDF Energy (UK) RWE and EnBW
<b>Contribution to consolidated revenue</b>	914	908	-6	 Enrichment: export decrease + end of EDF contract Fuel: decrease in deliveries  Fuel: related services + mix/price impact
<b>Operating income</b>	66	187	+121	 GBII ramp-up and cost optimization Streamlining of industrial footprint (USA and Belgium) Chemistry growth New agreement early retirement plan
<b>EBITDA</b>	87	171	+84	 Same than operating income
<b>Net Capex</b>	(361)	(407)	-46	 GBII (71% of the whole BG Capex) + Comurhex II
<b>Free operating cash flow before tax</b>	(223)	(301)	-78	 Increased Capex  Decrease in accounts receivable EBITDA improvement



## Reactors & Services

<i>in €m</i>	H1 2011	H1 2012	Change	
<b>Backlog</b>	7,316	8,302	+986	 EDF SNC-Lavalin Nucléaire Russian utility
<b>Contribution to consolidated revenue</b>	1,604	1,647	+43	 Installed Base: buoyant business in France and North America  Nuclear measurements: strong demand in Japan Installed Base: decrease in demand in Germany New Builds: accounting adjustment related to OL3 provisions
<b>Operating income</b>	(79)	(198)	-120	 Installed Base: high activity level  €300 million in additional provisions for losses at completion related to OL3 project
<i>including OL3 provisions</i>	-	(300)	-300	
<b>EBITDA</b>	(113)	153	+266	 Performance improvement in Installed Base and Nuclear Measurements €300m insurance indemnification for OL3
<b>Net Capex</b>	(105)	(71)	+33	
<b>Free operating cash flow before tax</b>	(392)	(264)	+127	 Decrease in Capex EBITDA improvement  Unfavorable change in WCR (high level of customer prepayments in 2011)

## Back End



*in €m*

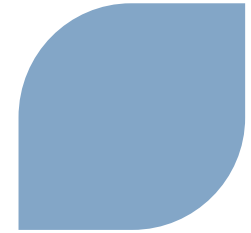
	H1 2011	H1 2012	Change	
<b>Backlog</b>	6,178	6,181	+4	⊖ European customers
<b>Contribution to consolidated revenue</b>	830	804	-27	↓ Downturn in Nuclear site value development (recycling contract Fukushima-Daiichi in H1 2011) ↑ Increased volumes at La Hague and MOX
<b>Operating income</b>	135	444	+310	↑ Increase in Recycling production Performance improvement plans New agreement on early retirement plan
<b>EBITDA</b>	228	270	+42	↑ Increase in Recycling production
<b>Net Capex</b>	(61)	(56)	+5	⊖
<b>Free operating cash flow before tax</b>	151	233	+82	↑ EBITDA improvement Receipt of customer prepayments

# Renewable Energies








<i>in €m</i>	H1 2011	H1 2012	Change	
<b>Backlog</b>	1,849	1,428	-421	<div>⬇️ New orders postponed</div> <div>⬆️ U-Thong Bio Power</div>
<b>Contribution to consolidated revenue</b>	59	253	+194	<div>⬆️ Strong growth in Offshore Wind (GTI and BWI)</div> <div>Buoyant business in Biomass</div> <div>Implementation of Kogan Creek and Reliance</div>
<b>Operating income</b>	(50)	(33)	+17	<div>⬆️ Business growth</div> <div>Performance improvement plans (of which Biomass restructuring plan)</div>
<b>EBITDA</b>	(63)	(25)	+38	<div>⬆️ Technical issues in H1 2011 in the Wind business solved</div>
<b>Net Capex</b>	(20)	(32)	-12	<div>⬆️</div>
<b>Free operating cash flow before tax</b>	(93)	4	+97	<div>⬆️ EBITDA improvement</div> <div>High level of customer payments received</div>

# Commercial priority given to value creation



## Ongoing negotiations (bilateral)

	Taishan 3-4
<b>CGNPC</b>	
	Jaitapur 1-2
<b>NPCIL</b>	
	Hinkley Point C-D
<b>EDF</b>	
	Penly 3
<b>EDF</b>	
	Calvert Cliff 3 Bell Bend Piketon
<b>EDF PPL Duke Energy</b>	

## Ongoing bids

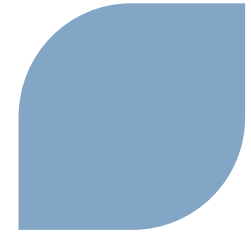
	
<b>JAEC</b>	
	Pyhäjoki
<b>Fennovoima</b>	
	Temelin 3-4
<b>CEZ</b>	
	OL 4
<b>TVO</b>	
	Wylfa 3-4
<b>Horizon Nuclear Power*</b>	

## Upcoming bids (in 3-5 years)

	ESKOM
	PGE
	Saudi Arabia
	GDF Suez – Iberdrola
	Delta
	New Brunswick Power
	Vattenfall

\* Suspended, waiting for new investors

# 2015-2016 Financial outlook



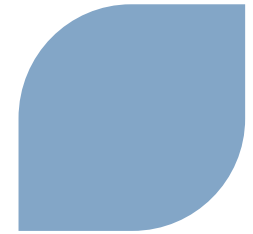
## 2015-2016

Revenue	Nuclear: +5 to 8% p.a
	Renewables: > €1.25bn
Capex	€1.3bn p.a on average on 2014-2016
Free operating cash flow excl. disposals	> +€1.0bn p.a from 2015

Data at constant consolidation scope



# Disclaimer



## Forward-looking statements

- ◆ **This document contains forward-looking statements and information. These statements include financial forecasts and estimates as well as the assumptions on which they are based, statements related to projects, objectives and expectations concerning future operations, products and services or future performance. Although AREVA's management believes that these forward-looking statements are reasonable, AREVA's investors and shareholders are hereby advised that these forward-looking statements are subject to numerous risks and uncertainties that are difficult to foresee and generally beyond AREVA's control, which may mean that the expected results and developments differ significantly from those expressed, induced or forecast in the forward-looking statements and information. These risks include those explained or identified in the public documents filed by AREVA with the AMF, including those listed in the "Risk Factors" section of the Reference Document registered with the AMF on 03/29/2012 (which may be read online on AREVA's website [www.areva.com](http://www.areva.com)). AREVA makes no commitment to update the forward-looking statements and information, except as required by applicable laws and regulations.**

