



**Investor Day**

December 9, 2011

# INDUSTRIAL DEVELOPMENT & LARGE PROJECTS

**GDF SUEZ**

BY PEOPLE FOR PEOPLE

## **Forward-Looking statements**

*This communication contains forward-looking information and statements. These statements include financial projections, synergies, cost-savings and estimates, statements regarding plans, objectives, savings, expectations and benefits from the transactions and expectations with respect to future operations, products and services, and statements regarding future performance.*

*Although the management of GDF SUEZ believes that the expectations reflected in such forward-looking statements are reasonable, investors and holders of GDF SUEZ securities are cautioned that forward-looking information and statements are not guarantees of future performances and are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of GDF SUEZ, that could cause actual results, developments, synergies, savings and benefits to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.*

*These risks and uncertainties include those discussed or identified in the public filings made by GDF SUEZ with the Autorité des marchés financiers (AMF), including those listed under “Facteurs de Risque” (Risk factors) section in the Document de Référence filed by GDF SUEZ with the AMF on 28 March 2011 (under no: D.11-0186). Investors and holders of GDF SUEZ securities should consider that the occurrence of some or all of these risks may have a material adverse effect on GDF SUEZ.*



# AGENDA

























INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

**Anne RAVIGNON-CHASSAGNETTE**

*Corporate Director in charge of Financial Communications*

# Today's agenda

8:30–9:00 a.m.		<b>INTRODUCTION</b> G. Mestrallet	
9:00–10:30 a.m.		<b>POWER *</b> D. Beeuwsaert and H. Ducre	 
10:30–10:45 a.m.		<i>Break</i>	
10:45 a.m.–12:15 p.m.		<b>GAS *</b> JM. Dauger and D.Holleaux, JC. Depail and JM. Leroy	   
12:15–1:30 p.m.		<i>Lunch</i>	
1:30–2:30 p.m.		<b>A NEW MARKET: THE CITY OF TOMORROW *</b> J. Tolot and JL. Chaussade	 
2:30–2:50 p.m.		<b>SUSTAINABLE DEVELOPMENT</b> B. Bensasson	
2:50–3:10 p.m.		<i>Break</i>	
3:10–4:00 p.m.		<b>OPTIMIZING VALUE CREATION</b> I. Kocher	
4:00–4:15 p.m.		<b>CONCLUSION</b> JF. Cirelli	
4:15–4:45 p.m.		<b>GENERAL Q&amp;A</b> G. Mestrallet, JF. Cirelli, I. Kocher, B. Bensasson	   

\* Presentation and Q&A



Estreito, Brazil

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

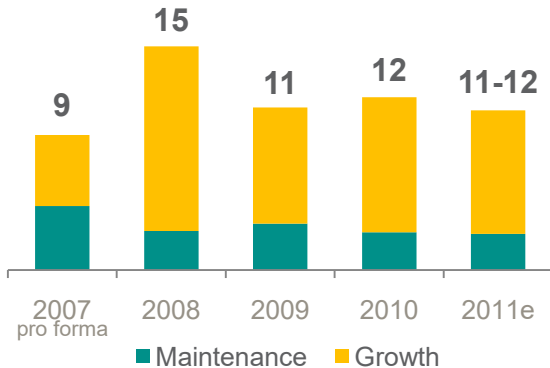
Investor Day

# INTRODUCTION

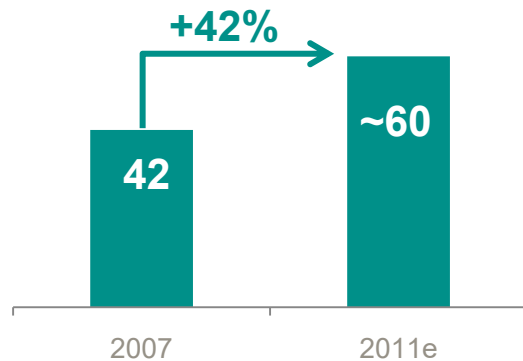
**G rard MESTRALLET**  
*Chairman and Chief Executive Officer*

# Successful growth story since the merger

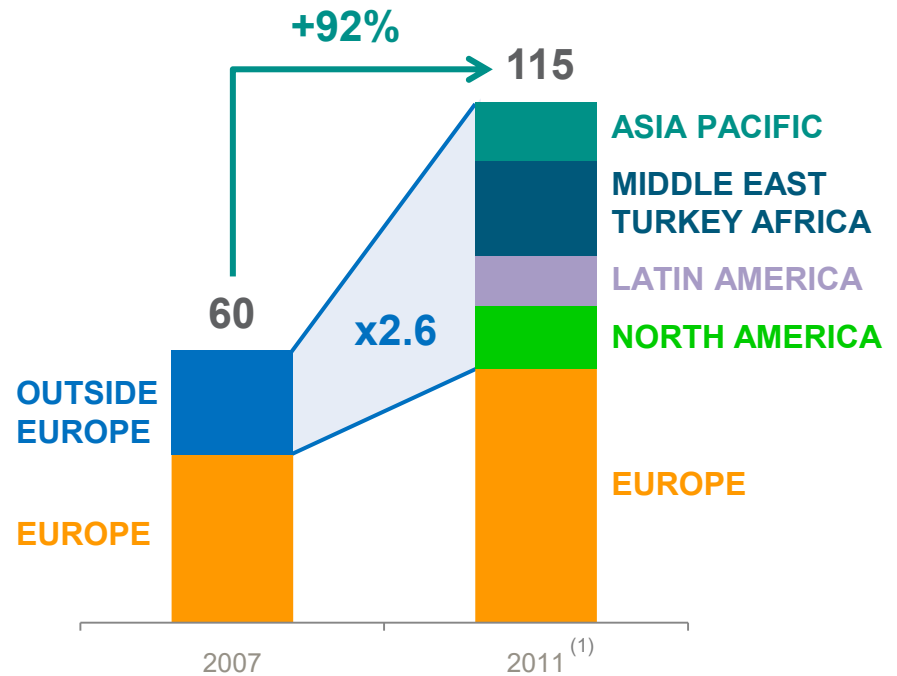
Sustained Capex program  
(in €bn)



E&P production  
(Mboe)

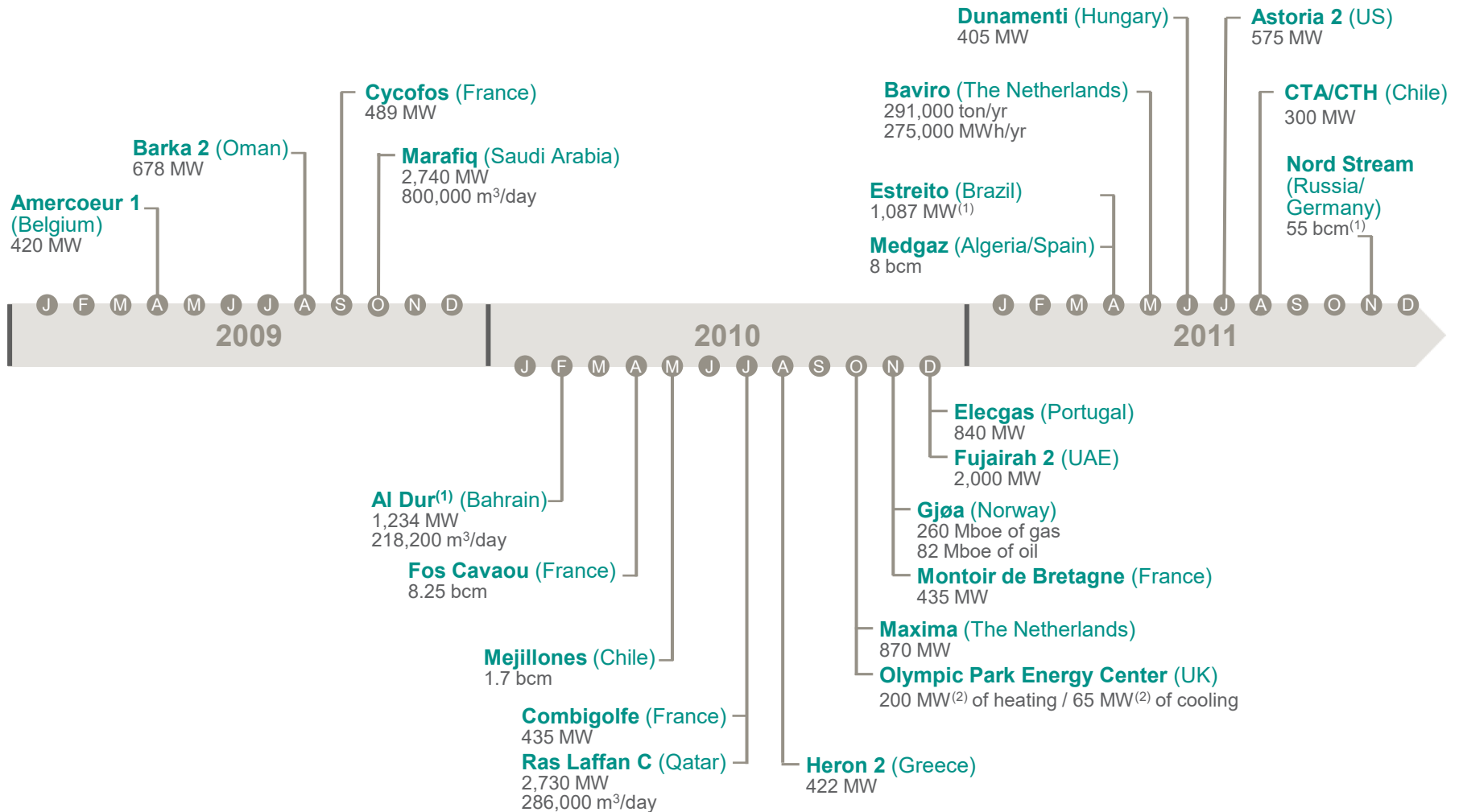


Generation capacity  
(GW at 100%)



(1) As of June 30, 2011

# Acceleration of industrial development



(1) Partial commissioning (2) Final capacity

# Strong leadership positions with a balanced business model

## POWER



Marafiq, Saudi Arabia

- #1 Independent Power Producer (IPP) in the world
- #1 producer of non-nuclear energy in the world
- #1 wind producer in France
- 114.5 GW of installed power-production capacity<sup>(1)</sup>
- 17.5 GW of capacity under construction<sup>(1)</sup>

## GAS



Provalys LNG carrier

- #1 purchaser in Europe
- #1 importer of LNG in Europe
- #1 storage operator in Europe
- #1 transmission and distribution networks in Europe

## SERVICES

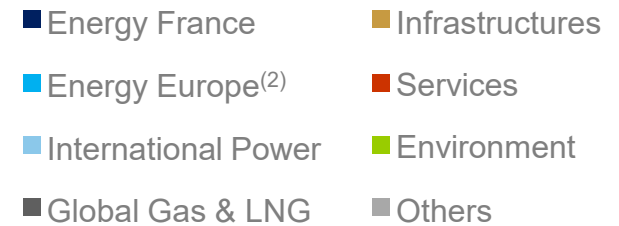
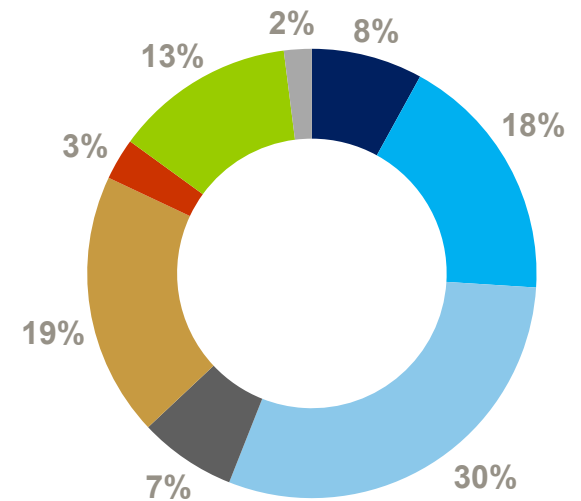


Olympic Games, London

- #1 supplier of energy and environmental efficiency services in Europe
- #2 supplier of water and waste services in the world
- 180 district heating and cooling networks operated worldwide

(1) At 100%, as of 06/30/2011

Breakdown of Capital Employed  
As of 06/30/2011



(2) Including Benelux & Germany

# Growth strategy: priority to value creative growth

**Organic growth** is our philosophy to ensure the best remuneration of our assets

## Geographical profile:

- Accelerate Group's development in fast growing countries
- Improve integration in Europe

## Preserve a balanced business profile:

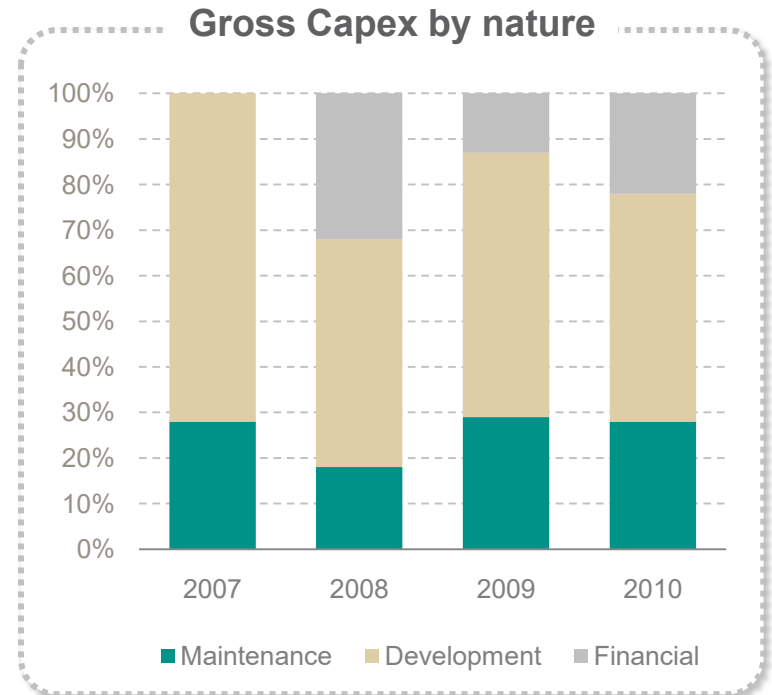
- Maintain a diversified energy mix
- Develop renewables

## Build up future options:

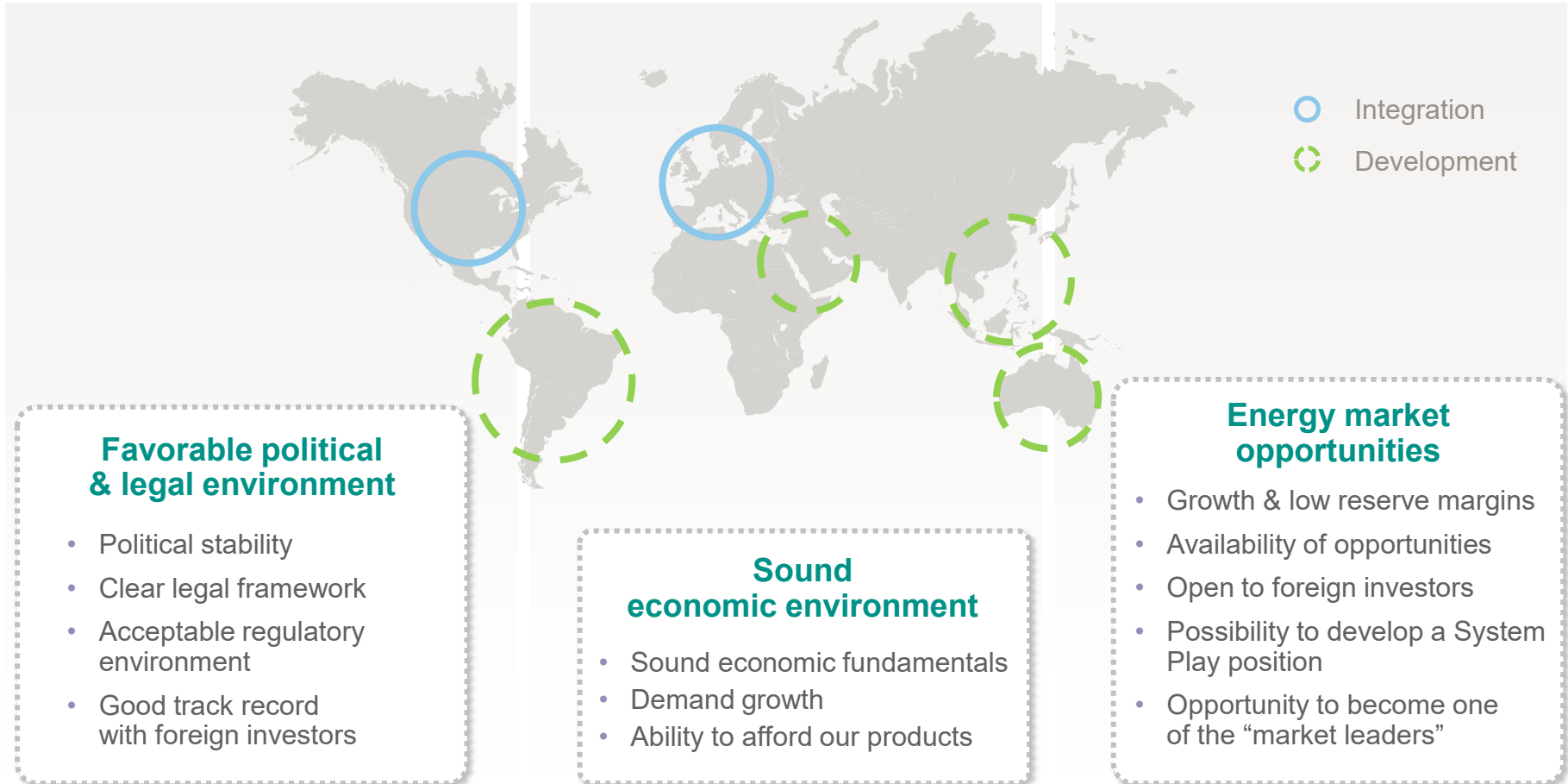
- Examine presence in new countries/markets responding to our criteria
- Examine investments in new energy businesses and technologies

Optimize **efficiency of capital employed**

**Reinforce flexibility** in an uncertain environment



# Seizing growth opportunities at acceptable risk level



**In depth analysis of attractiveness of markets**

# GDF SUEZ's positions tomorrow

## POWER

- 150 GW by 2016 of which 90 GW outside Europe
- Increase in renewable installed capacity of 50% by 2015 vs 2009

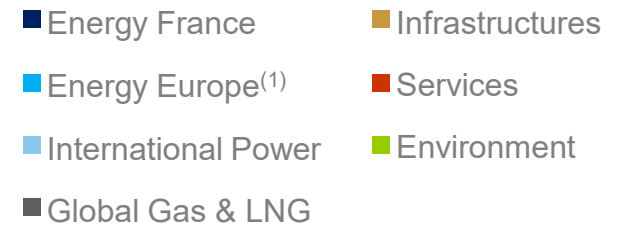
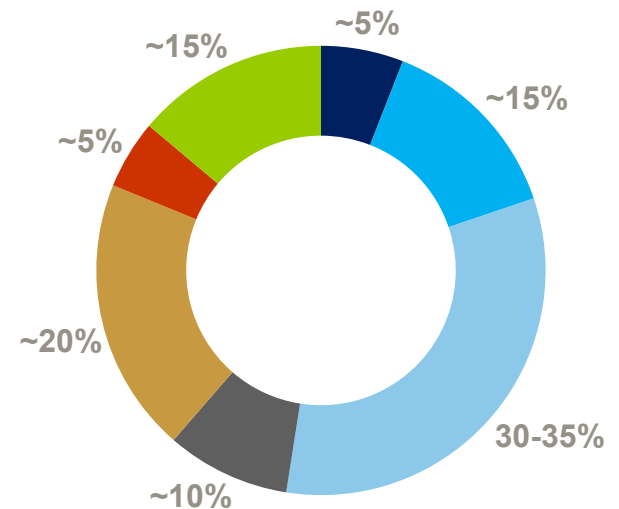
## GAS

- E&P production: ~65 Mboe in 2014–2015
- External LNG sales: ~x2 LNG sales to emerging markets by 2020 vs 2010

## SERVICES

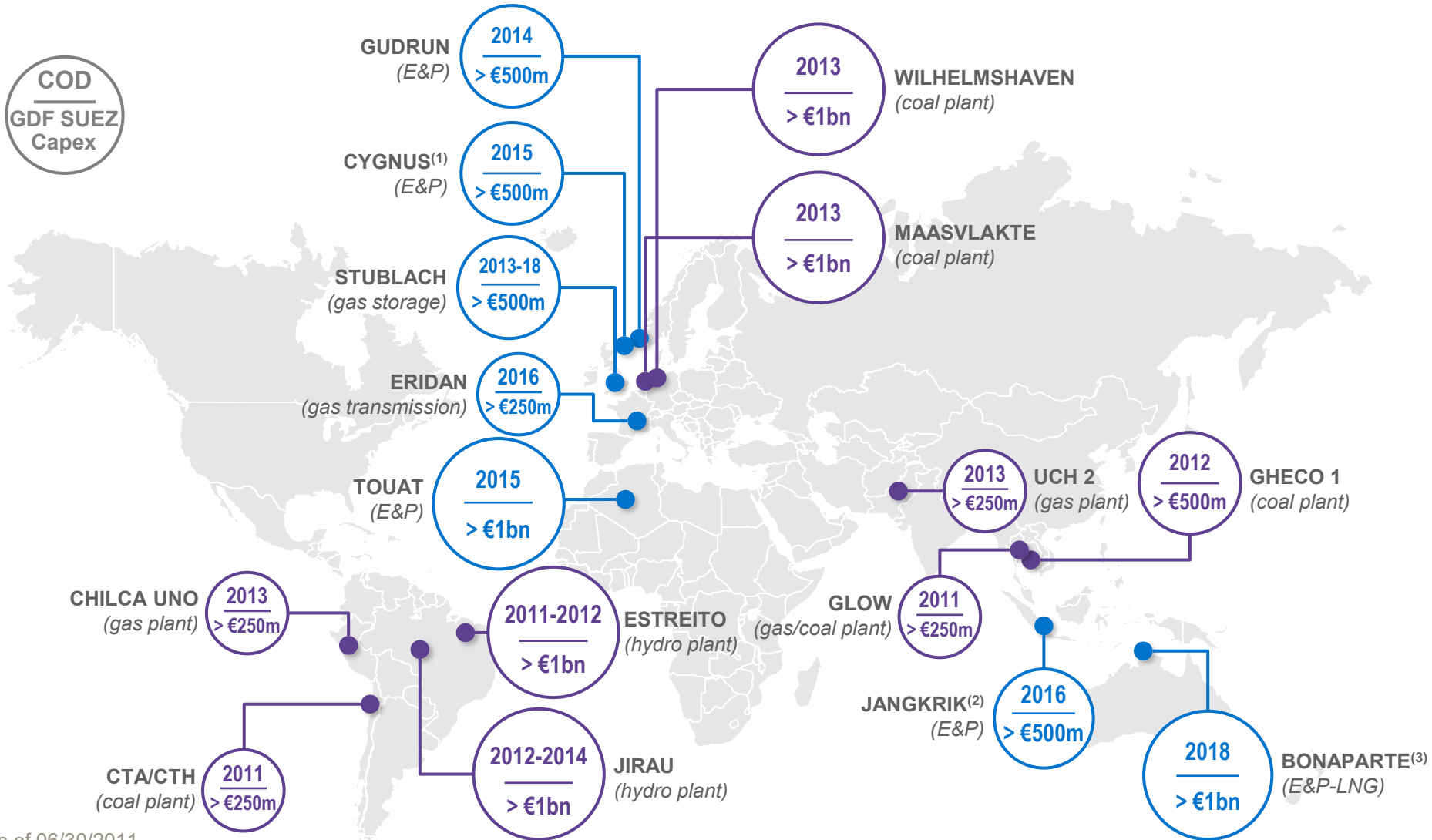
- Increase energy efficiency revenues by 40% by 2016–2017
- 2 million of water smart meters by 2014 (+150%)
- 2017 waste treatment objective: ratio of 2 mt recovered for 1mt eliminated

Breakdown of Capital Employed  
Estimated as of end 2017



(1) Including Benelux & Germany

# 16 major projects ongoing



As of 06/30/2011

(1) Pre-development decided; FID expected in 2012

(2) Before FID

(3) Pre-development decided; FID expected in 2014

# Group's key strengths for large projects



# Best-in-class energy engineering capacity

**Tractebel Engineering:** a global player integrated to the Group and also working for external companies

**3,750** people  
operating in **20** countries

**60** projects  
under way in **60** countries

More than **100 years**  
of expertise in energy  
and infrastructure projects

## ENGINEERING SERVICES THROUGHOUT THE PROJECT LIFE CYCLE

### ► Feasibility studies

- Policy studies
- Investment studies
- Basic design
- Audits
- Environmental assessment

### ► Investment projects

- Design
- Procurement
- Implementation
- Management & follow-up of construction
- Sustainable development plan

### ► Operations & maintenance support

- Long-term operation
- Performance optimization
- Reliability studies
- Operational assistance
- Simulation & training

### ► Decommissioning projects

- Asbestos removal
- Soil remediation
- Site redevelopment studies
- Dismantling

# Cutting-edge technologies



- **The Gjøa floating platform** is fully powered by mainland electricity, reducing CO<sub>2</sub> emissions by 210,000 ton/yr – first time in the offshore gas & oil industry



- **Best technologies** from inception and leverage inhouse research on LNG value chain



- **World's largest combined power and desalination plant**, design's optimization resulted in winning bid

**More than 1,100 researchers** contributing to the technological excellence of the Group

**5 strategic corporate programs:** offshore LNG and future gas chains; renewable energies; smart grids for energy & environment; tomorrow's cities & buildings; CO<sub>2</sub> capture, transport and storage

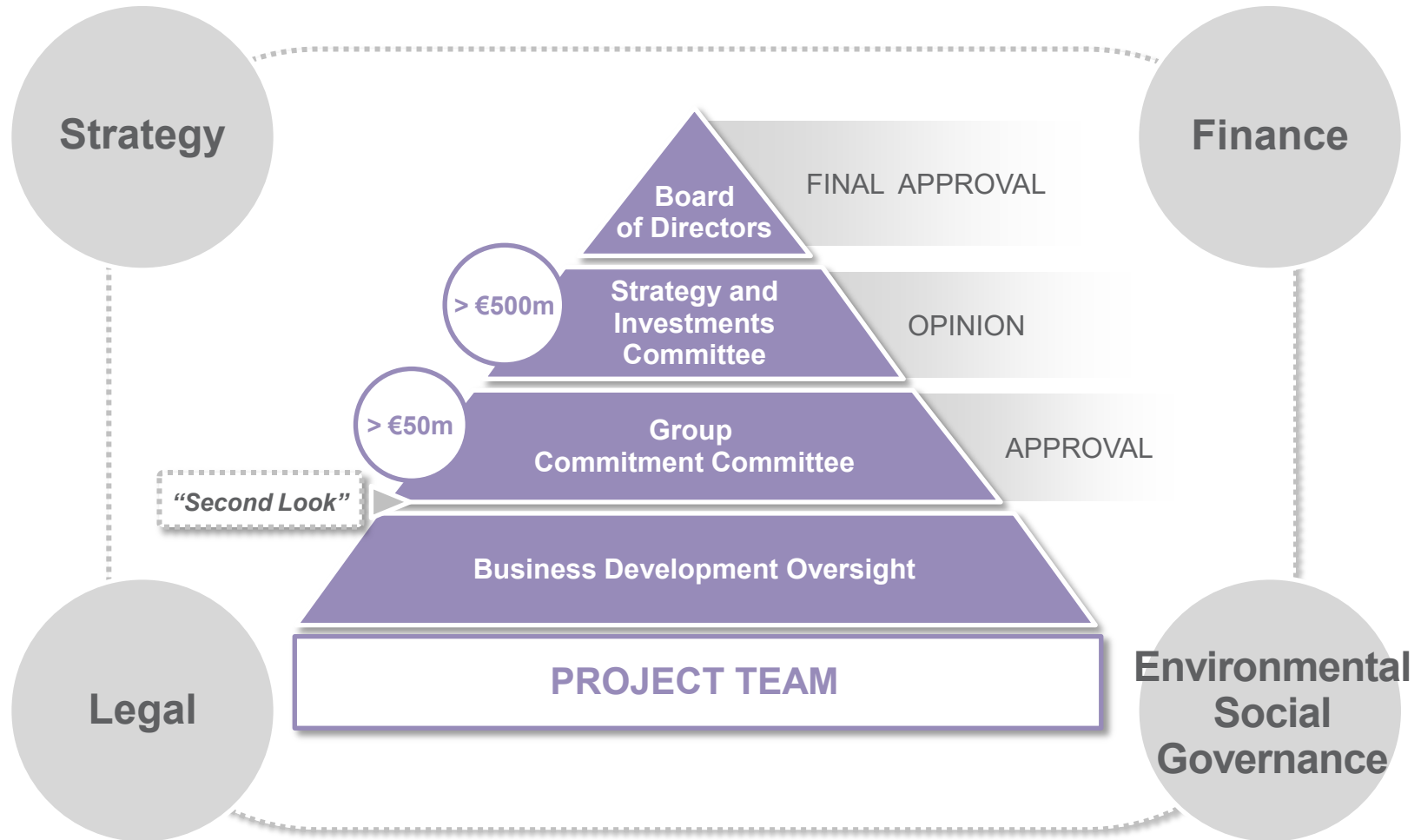
**A portfolio of ~3,200 patents**

**€220m on Research & Development<sup>(1)</sup>**

**440 innovation initiatives** selected for the GDF SUEZ Innovation Trophies<sup>(1)</sup>

(1) In 2010

# Centralized approval process



**> €20bn of projects examined each year meeting our investment criteria**

# Effective industrial risk management



# Value-creative partnerships

## Industrial partnerships to reduce industrial risk



## Local partnerships to mitigate political / regulatory risk



## Financial partnerships to boost development and limit capital intensity



## Global partnership



# STRICT GOVERNANCE RULES

# Group financial strength

Corporate LT ratings	S&P	Moody's
EDF	AA-/Stable	Aa3/Stable
<b>GDF SUEZ</b>	<b>A/Stable</b>	<b>A1/Stable</b>
E.ON	A-/Negative	A3/Stable
Iberdrola	A-/Stable	A3/Stable
Enel	A-/Negative	A3/Negative
RWE	A-/Negative	A3/Negative

Ratios FY10	S&P FFO/Net Debt (%)	Moody's RCF/Net Debt (%)
RWE	26.4	21.0
<b>GDF SUEZ</b>	<b>25.3</b>	<b>17.6</b>
E.ON	25.3	17.3
EDF	18.0	19.3
Iberdrola	17.2	15.8
Enel	16.7	13.7

06/30/2011	Gearing (%)
E.ON	37.7
<b>GDF SUEZ</b>	<b>51.6</b>
RWE	76.8
EDF	82.5
Enel	85.1
Iberdrola	90.6

Gearing: net financial debt/equity

**Strong financial structure**

**Strong credit rating**

**Permanent access to capital markets**

**Low financing costs**

# Size effect to create value





Rodenhuize, Belgium

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

# POWER

## Dirk BEEUWSAERT

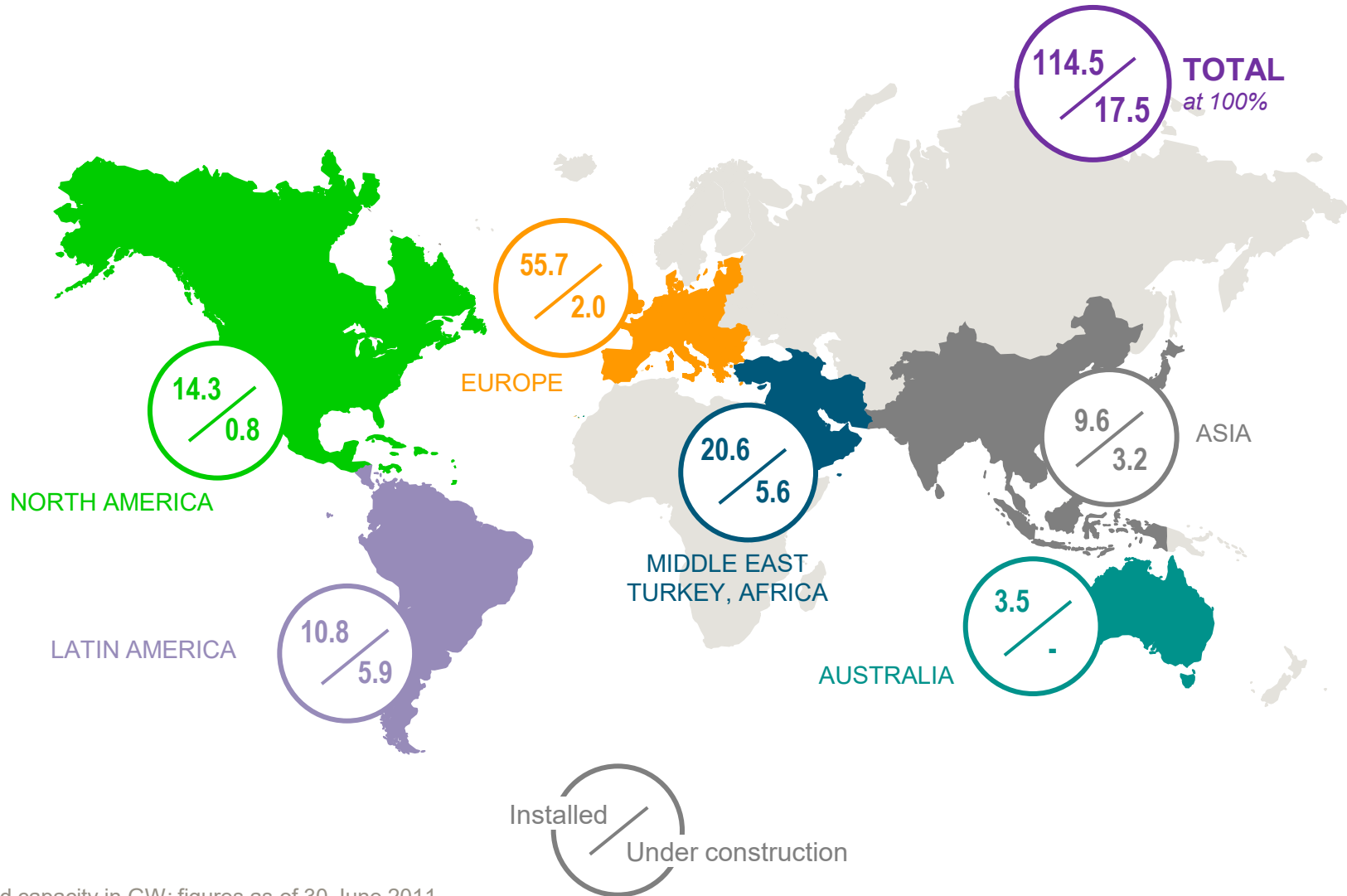
*Executive Vice President, in charge of the  
Energy Europe & International Business line*

## Henri DUCRÉ

*Executive Vice President, in charge of Energy France Business line*

# A leading generator with high quality assets

Strong international reach across 34 countries

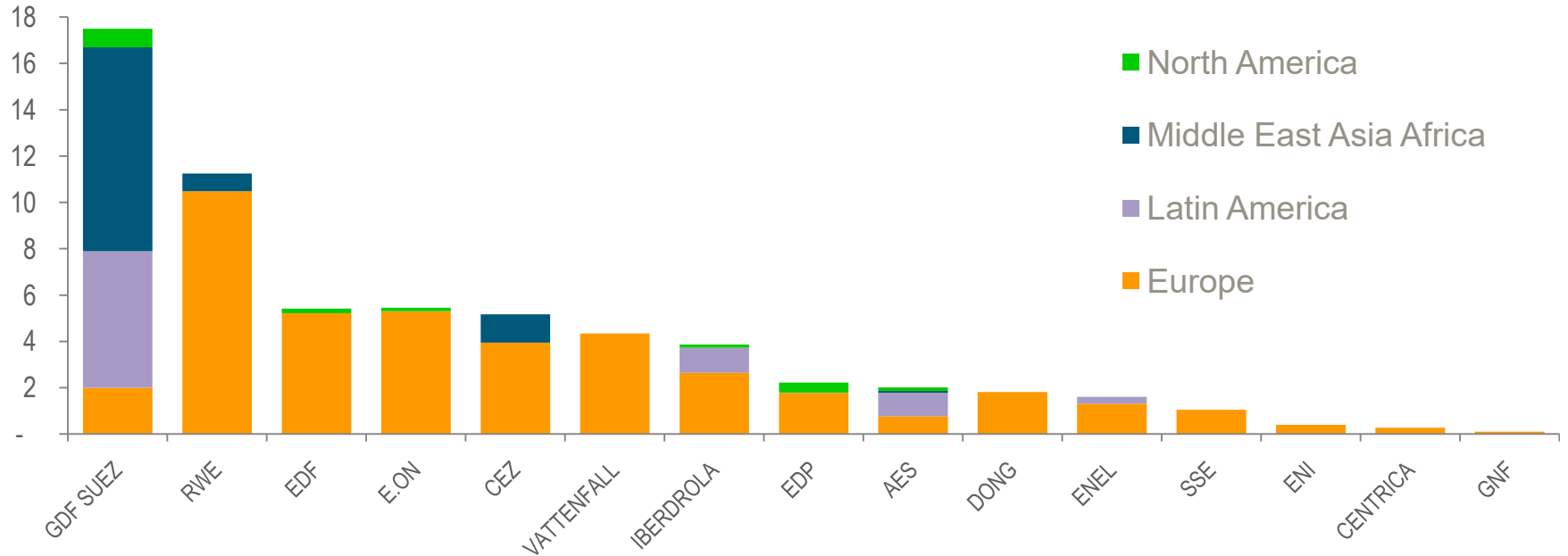


Installed capacity in GW; figures as of 30 June 2011

# A world leader in power generation projects

GDF SUEZ builds more new power generation capacities than any other European utility

GW under construction



Figures at 100%  
Source: last public information available (at the end of June 2011)

# A strong competitive position

## Market's attractiveness

- Substantial capacity needed in emerging markets:
  - To meet growing demand, replacement capacity and electrification
  - Significant opportunities in our target markets in emerging regions by 2020<sup>(1)</sup>:
    - Asia: 100 GW<sup>(2)</sup>
    - Latin America: 75 GW
    - Middle-East: 70 GW
    - Further opportunities in Turkey and Africa
- Recovery in some merchant markets
- Opportunities in renewables: hydro and wind

## GDF SUEZ' competitive skills

- Gas and power integration
- Proven expertise across all key generation technologies
- Deep regional knowledge
- Building upon partnerships and our existing positions
- Wide network of in-house experts and specialists: Laborelec, Tractebel Engineering, Central Portfolio Management, HQ specialist support
- Strong operational synergies in procurement:
  - Lower maintenance spend through optimization of spare parts needs
  - Fuel costs
  - Engineering Procurement and Conception (EPC) costs
- Optimum O&M organizations

(1) Source: GDF SUEZ data

(2) Excluding China and India

## 1 MIDDLE EAST BUSINESS MODEL

Large hydro projects in Brazil

Biomass

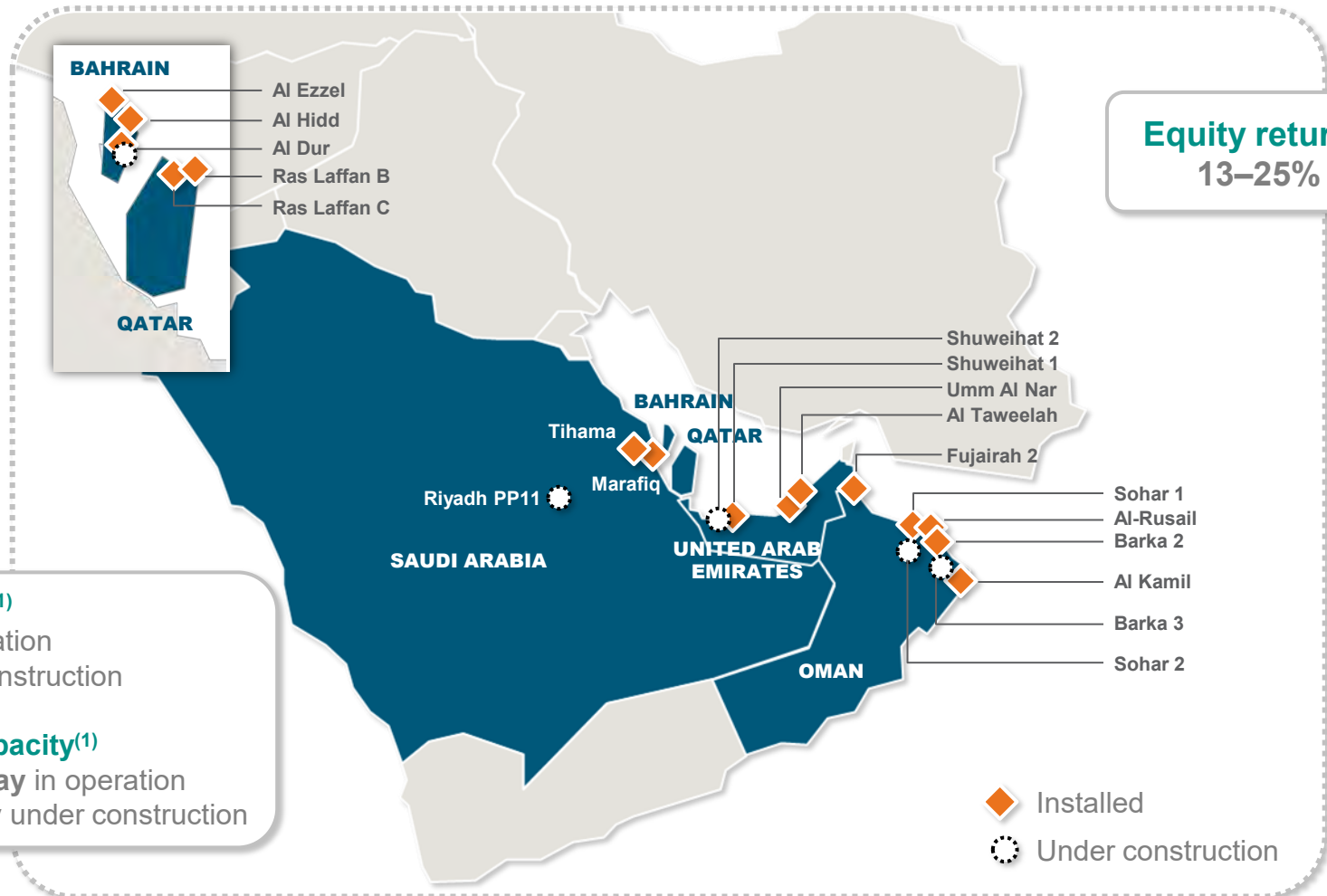
Repowering

Wind energy in France

Hydro in France

# Middle East

## A success story for GDF SUEZ



(1) At 100% as of 30 June 2011

## Favorable regulatory regime and need for capacity

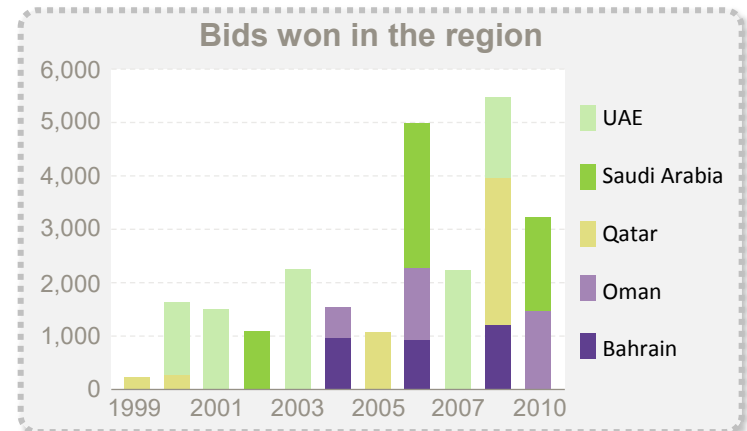
- **Significant need for additional generation and desalination capacity:**  
20 GW of visible requests for proposals
- **Stable regulatory framework** encouraging **long-term private sector involvement to ensure security of supply**
- A creditworthy **Single Buyer** model
- **Long-term** electricity and water sales **contracts** (15–25 years), denominated in USD, without market risk or fuel risk
- Site and main permits are provided
- Organic growth opportunities, building on existing positions
- **Clear, attractive and proven tendering process**
- **Strong EPC contract provisions:**  
fixed price and fully wrapped EPC



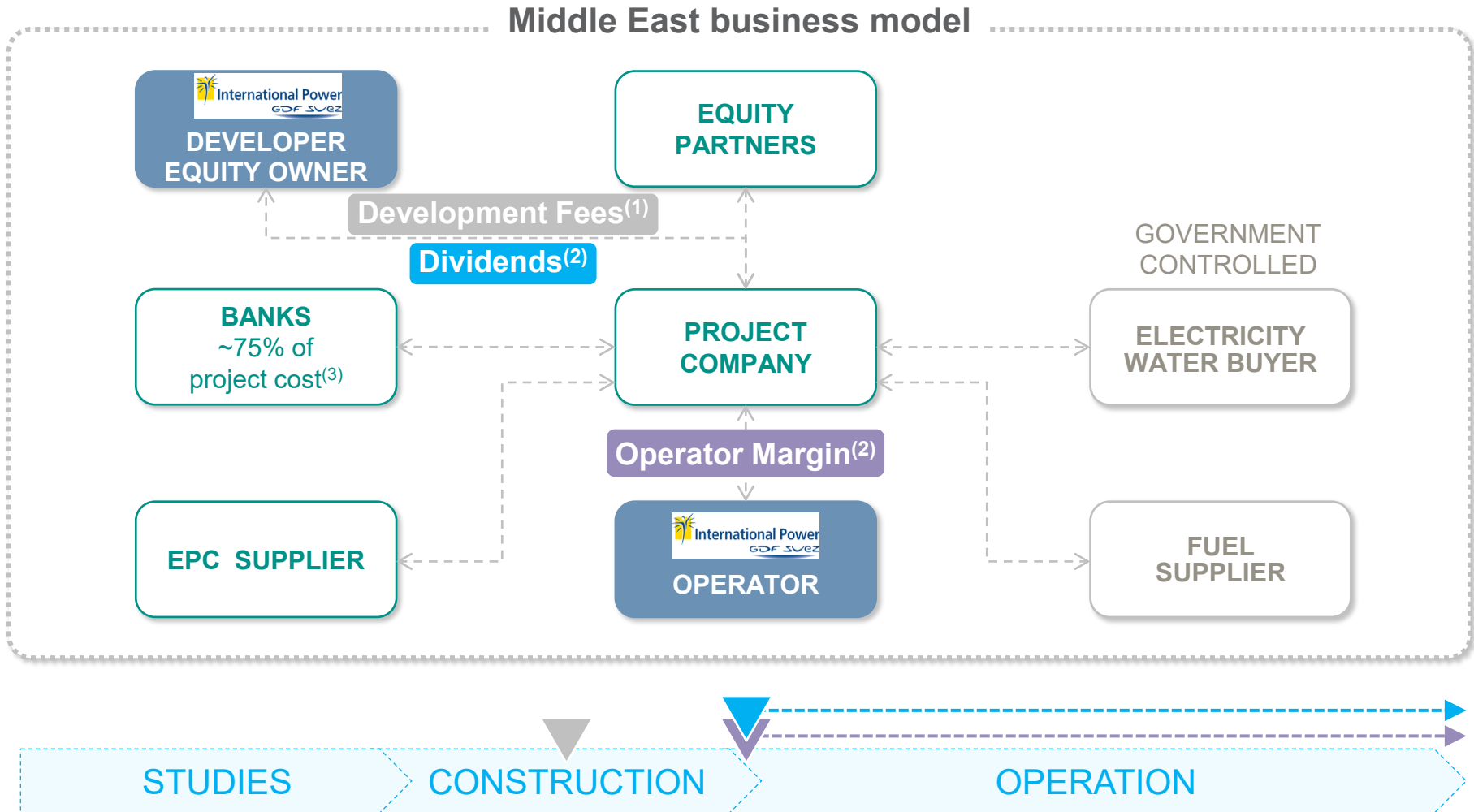
# Competitive advantages through experience and reputation

## GDF SUEZ has been the most successful developer in the Gulf

- Combination with IPR strengthened our position, in a market now dominated by 3 to 4 strong players
- High GDF SUEZ & IPR win rate over the recent years: 60%
- Ability to attract best partners
  - Long-term and multiple relationships with our main partners
  - Credibility makes it possible to attract the best sources of financing (Export Credit Agency, JBIC)
  - Use of experienced EPC contractors
  - Early movers in using Asian EPC contractors



# Various sources of value creation through investing, developing and operating



(1) Development fees: EBITDA impact    (2) Dividends & Operator Margin: below EBIT    (3) Indicative leverage of the project

# Marafiq, Saudi Arabia

World's largest combined power and desalination plant

## TIME LINE

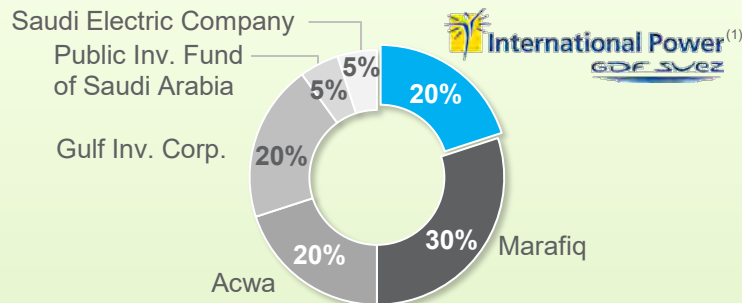
Studies

Construction

Operation



## Equity ownership



(1) GDF SUEZ holds 70%

## Leading developer, operator and shareholder

### Design optimization resulted in winning bid

- Competitors offered 4 identical power/water units
- Our offer was 3 power/water units and 1 power only unit; higher EPC cost but overall more fuel efficient and flexible

### One of the most efficient and cheapest power/water assets in Saudi Arabia

- 2,740 MW (10% of the installed capacity in Saudi Arabia)
- 800,000 m<sup>3</sup>/day seawater desalination, an exceptionally high water output (representing daily needs of 5.5 million people)

### At financial close (2007), Marafiq was the largest project finance debt & largest Islamic financing in the power sector

### Design review and follow up of the construction by Tractebel Engineering

## Time schedule

- Development: 1 year
- Construction: 3 years
- Operation: 25 years (COD: October 2009)

## Financial indicators

- Build, Own, Operate, Transfer
- Total project capex: **\$3.4bn**
- **20 year** Power and Water Purchase Agreement
- Debt/Equity: **80% / 20%**

# Al Dur, Bahrain

One of the largest private industrial projects in Bahrain

## TIME LINE

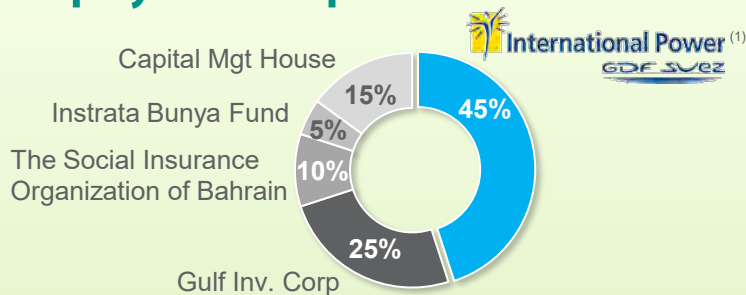
Studies

Construction

Operation



## Equity ownership



International Power<sup>(1)</sup>  
GDF SUEZ

**Reverse Osmosis:** use of highly flexible and efficient water desalination technology

**Financial close** was achieved in challenging conditions

Non-recourse debt from a syndicate of international, regional and Islamic banks

**1,234 MW** power capacity

**218,200 m<sup>3</sup>/day** seawater desalination facility

## Time schedule

- Development: 2 years
- Construction: 2 years
- Operation: 25 years (406 MW commissioned as of today)

## Financial indicators

- Build, Own, Operate
- Total project capex: **\$2.1bn**
- **25 year** Power and Water Purchase Agreement
- Debt/Equity: **75% / 25%**

(1) GDF SUEZ holds 70% of IPR

Middle East business model

## 2 LARGE HYDRO PROJECTS IN BRAZIL

Biomass

Repowering

Wind energy in France

Hydro in France

# Large hydro projects in Brazil



(1) At 100% as of June 30, 2011

# Long-term presence providing competitive advantage

## Market's attractiveness

- Supportive regulatory framework
  - Brazilian Government's "Growth Acceleration Program"
  - New concessions for hydro plants awarded through lowest tariff auctions with up to 30 years PPA
  - Other technologies: thermo, wind, biomass – lowest tariff auctions for up to 20 years PPA
- Strong demand growth
  - From 2011 to 2020, Brazil's installed capacity and electricity demand will grow 50%<sup>(1)</sup>
  - This corresponds to 62 GW hydro, 78 GW wind or 40 GW thermal power plants

## GDF SUEZ' competitive skills

- Long-term presence in the country
  - 1998: acquisition of Gerasul (installed capacity of 3.7 GW), renamed to Tractebel Energia
  - Continuous and successful growth: 7.6 GW installed capacity (84% hydro) and 4.5 GW under construction<sup>(2)</sup>
- Existing presence provides competitive advantages:
  - In-house technical know-how in engineering (Tractebel Engineering)
  - Experienced in major project management
  - Leadership in free energy commercialization
- Reputable player in Brazil
  - Good local relationships
  - Environmental and social programs

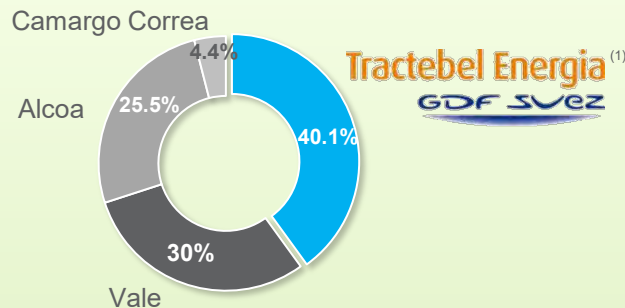
(1) Source: GDF SUEZ estimates (2) At 100% as of June 30, 2011

### TIME LINE

Studies → Construction → Operation



### Equity ownership



(1) IPR holds 68.7% of Tractebel Energia

Construction started in June 2007

Generation capacity: **1,087 MW**

Strong commitment to sustainable development

**Long-term contract** for 100% of Group stake, at R\$156/MWh indexed to inflation

COD of first units before PPA allowed **sale of early generation**

Long-term financing in local currency (18 years)

### Time schedule

- 3rd unit (out of 8) started commercial operation as of September 2011: 37% of total installed capacity and 60% of assured energy
- Full COD expected in 2012

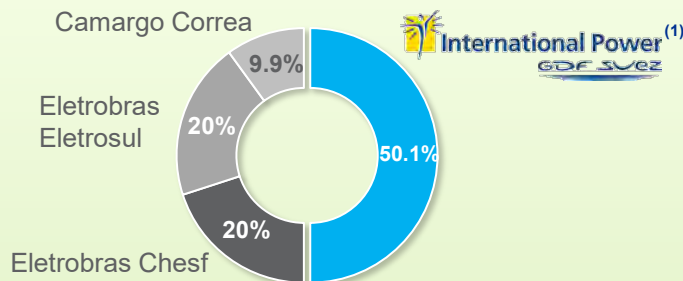
### Financial indicators

- PPA duration: **30 years**
- Debt/Equity: **65% / 35%**
- Transfer price to Tractebel Energia: **BRL 604m**

### TIME LINE



### Equity ownership



(1) GDF SUEZ holds 70% of IPR

### 2nd biggest hydro plant in Brazil with 3,750 MW

#### Project optimization through engineering innovation

- New project location, 9.5 km downstream, in wider section of river resulted in significant reduction of excavations
- River deviation – key milestone – completed in September 2011

#### Major project management in a remote area

- Biggest bulb turbine in the world with 75 MW
- Stators from China: 250 tons; 10.4 m diameter
- Transformers: 230 tons
- Excavation: 9.2 million m<sup>3</sup>
- 2 million m<sup>3</sup> of concrete (eq. to construction of 24 Maracanã stadiums)

#### Strong water flow, x3 the flow of the Danube

Long-term contract for more than 70% of the energy indexed by inflation

Long-term financing in local currency (20 years)

Maximum assured energy level expected to be reached in H2 2013

#### Financial indicators

- PPA duration: **30 years**
- Debt/Equity: **68% / 32%**

Middle East business model

Large hydro projects in Brazil

## 3 BIOMASS

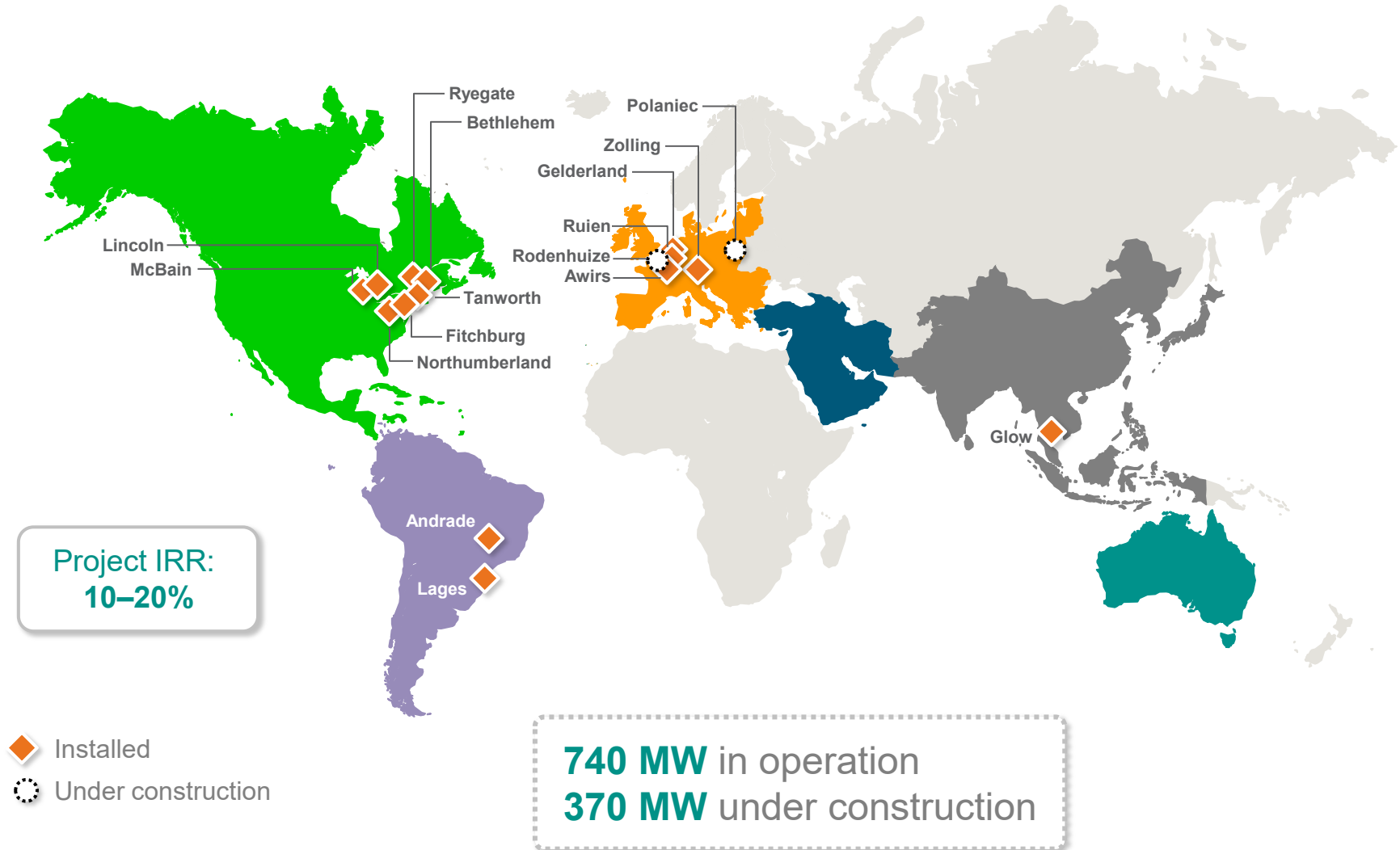
---

Repowering

Wind energy in France

Hydro in France

# #1 worldwide in biomass based generation



Figures at 100%, as of 30 June 2011

## Market's attractiveness

- Steep increase in world biomass power generation expected in the coming years: +5.9%<sup>(1)</sup> CAGR on 2008–2035
- European biomass-fired power and heat should more than double by 2020 to achieve EU Renewable Energy Systems targets
- Subsidy based business: rules vary from country to country

## GDF SUEZ' competitive skills

- Experience across
  - Conversion of existing installations to biomass
  - Construction of new biomass-fired power plants
  - Co-combustion
- Success driven by in-house expertise
  - Electrabel: O&M and biomass procurement
  - Tractebel Engineering: EPC management
  - Laborelec: equipment selection and optimization
- Develop supply chains, provide advise on demand to all GDF SUEZ entities
- Manage the complete logistics chain
- Competitive sourcing and flexible portfolio through a global diversified sourcing approach
- GDF SUEZ supplies represent about 10% of the global wood pellets market
- Long-term experience in wood plants in the US

(1) Source: IAE World Energy Outlook 2010

# "Max Green" Rodenhuize, Belgium

Lifetime extension and benefit from green certificates

## TIME LINE

Studies

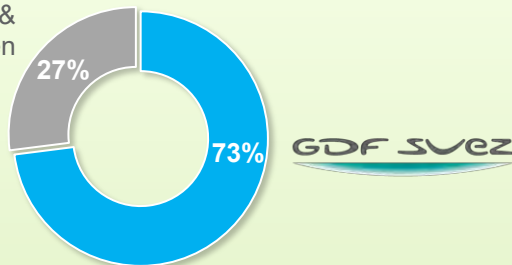
Construction

Operation



## Equity ownership

Ackermans &  
Van Haaren



Conversion of Rodenhuize 4 from coal-fired to a 180 MW full biomass-fired power plant

- Fuel supply: wood pellets (700,000 to 800,000 tons/year)
- Non-emitted CO<sub>2</sub>: **1,200,000 ton/year**
- High electrical efficiency: **35%**

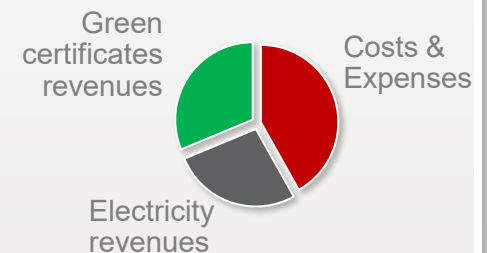
## Time schedule

- Development: **15 months**
- Construction: **17 months**
- Operation: **7 to 10 year lifetime extension** thanks to conversion (COD: July 2011)

## Financial indicators

- Total Capex: **€125m**
- Corporate financing

## Indicative EBITDA breakdown



# Polaniec, Poland

## World's largest biomass-fired power plant

### TIME LINE

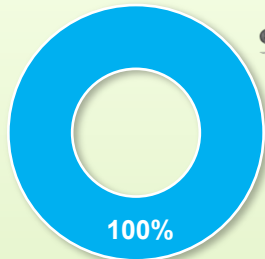
Studies

Construction

Operation



### Equity ownership



GDF SUEZ

Conversion from coal-fired to a **190 MW** full biomass-fired power plant

- Fuel: wood and agri-fuels from local sources (Poland and Ukraine)
- Non-emitted CO<sub>2</sub>: **1,200,000 ton/year**
- Green certificates

Design and construction of the Circulating Fluidized Bed boiler: first of its size in the world capable of burning 100% biomass fuels

### Time schedule

- Development: **12 months**
- Construction: **30 months**
- Operation: **20 years minimum**
- Expected COD: **end of 2012**

### Financial indicators

- Total Capex: **€240m**
- Corporate financing

Middle East business model

Large hydro projects in Brazil

Biomass

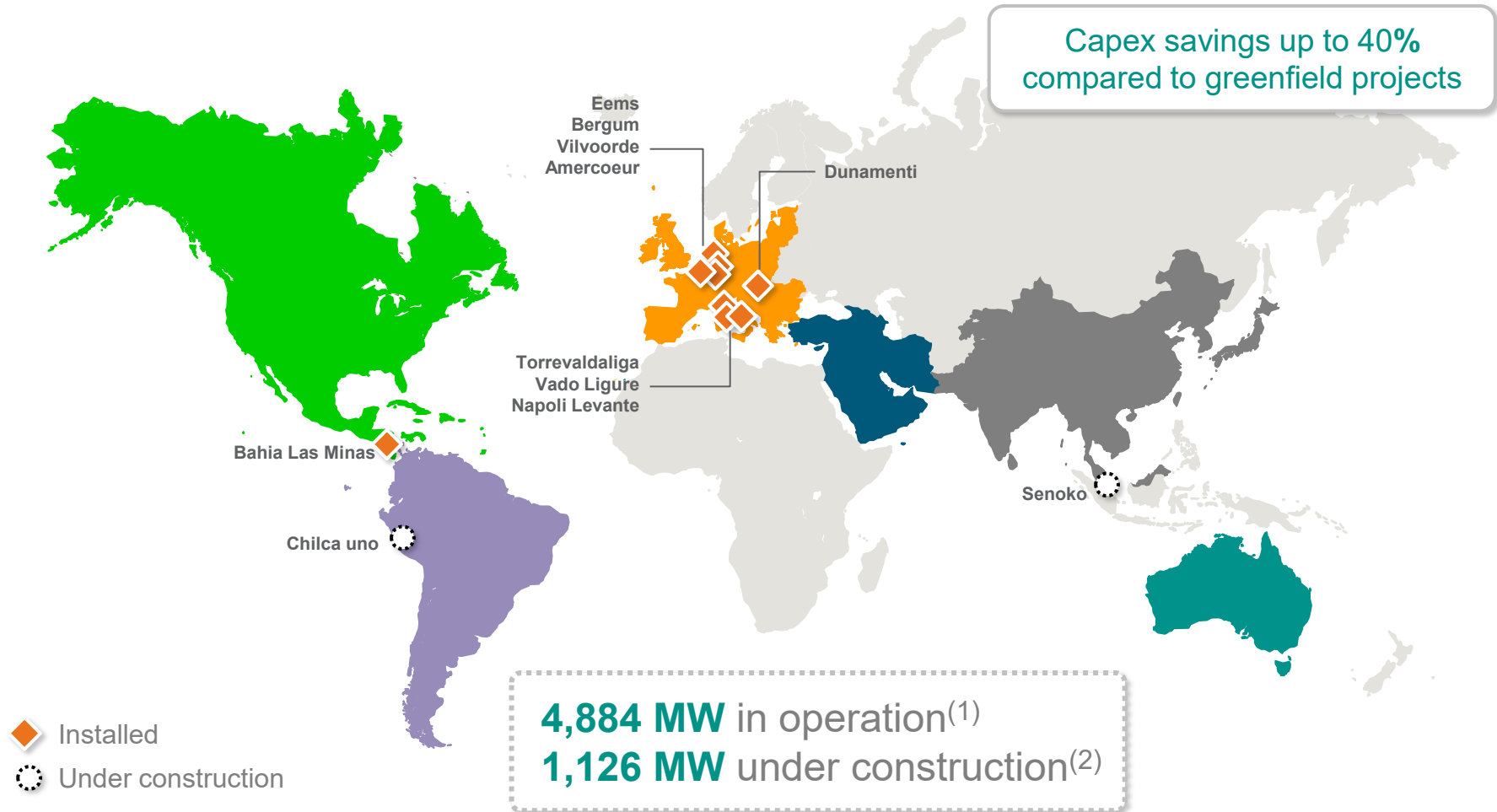
## 4 REPOWERING

---

Wind energy in France

Hydro in France

# Large repowering experience



Figures at 100%, as of 30 June 2011

(1) Total capacity after repowering (2) Additional capacity after repowering

# Creating value by using existing facilities to implement projects with a low investment cost

- **Capex savings up to 40% compared to greenfield projects**
- **Higher output and efficiency, reducing carbon footprint**
  - More than 50% increase of output and efficiency achievable, while reducing CO<sub>2</sub> emissions by more than 60%
- **Laborelec**
  - Strong experience in upgrading, repowering, and lifetime extension of power plants, as well as new plants design
  - Involved in the repowering of Amercoeur: verification of the chemical processes including the preparation of demineralized water and the cooling circuit water treatment
- **Tractebel Engineering**
  - Equipment renovation and detailed replacement studies leading to technical and economic optimization
  - EPC management from pre-feasibility to start up



# Amercoeur, Belgium

## Tripling capacity and higher efficiency

### TIME LINE

Studies

Construction

Operation



Capacity increased from **135 MW** to **420 MW**

**Fuel switch:** from coal to natural gas

Efficiency increased from **38%** to **58%**

**Addition of a gas turbine**, a heat recovery steam generator and replacement of the steam turbine and transformer

Project completed ahead of schedule and higher performance than anticipated

Output sold on the Central Western Europe market (integrated in Electrabel portfolio)

Rationale for doing the project: replacement of decommissioned capacities in Belgium, **additional flexibility** of the power generation fleet, **economies of scale** in the operation of several other units in the area

### Time schedule

- Development: **24 months**
- Construction: **28 months**
- Operation: **30 years** (COD: April 2009)

### Financial indicators

- GDF SUEZ shareholding: 100%
- Corporate financing

# Chilca Uno, Peru

Efficiency increased from 38% to 54%

## TIME LINE

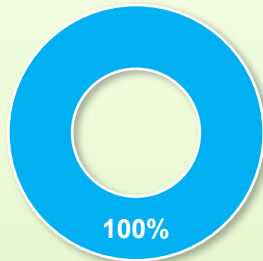
Studies

Construction

Operation



## Equity ownership



**EnerSur**<sup>(1)</sup>  
GDF SUEZ

Capacity increased from **541 to 807 MW**

Fuel: natural gas (unchanged by the project)

Closing the 3 existing open cycles by addition of heat recovery boilers and a steam turbine

## Fully contracted

Rationale for the project:

- Additional energy without greenhouse gas emissions
- **Commercial and operational synergies** with EnerSur's portfolio
- Took advantage of **lower international prices of generation equipment** due to 2008 financial crisis

## Time schedule

- Notice To Proceed: **June 2010**
- Expected COD: **July 2013**

## Financial indicators

- Total Capex: **\$350m**
- Financing: largest leasing contract structured in Peru, **\$310m**
- PPA duration: **8 to 12 years**

(1) IPR holds 61.7% of EnerSur

Middle East business model

Large hydro projects in Brazil

Biomass

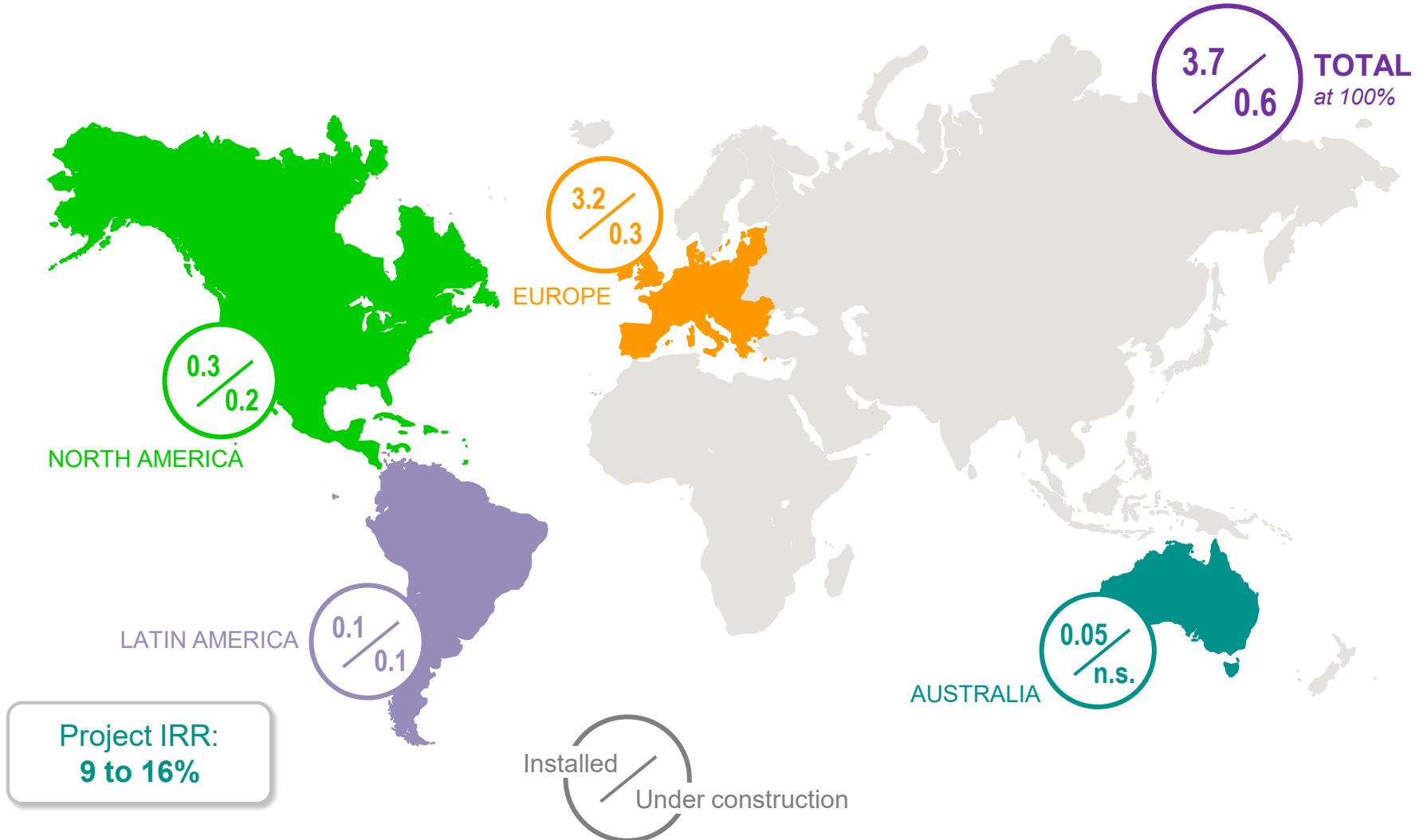
Repowering

## **5** WIND ENERGY IN FRANCE

---

Hydro in France

# Developing global wind power positions



Installed capacity in GW; figures as of 30 June 2011

# Onshore wind

Ambition to double capacity to 2 GW by 2016 in France

## Market's attractiveness

- **Strong regulatory support** to develop renewables ("3x20" target)
- **Ambitious objective** of 19,000 MW of installed capacity by 2020
- Stable regulatory system based on feed-in tariff for 15 years, **not far from market prices**

## GDF SUEZ' competitive skills

- **Market leader** in France
- **Optimization of the wind portfolio:** first operating center with 24/7 supervision and remote control of wind farms in France
- **Participative model** based on fair land protocol and capital opening proposal for local stakeholders

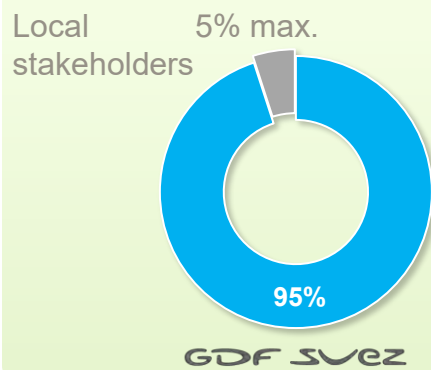
# Onshore wind

Les Hauts-Pays, one of the largest wind farms in France

## TIME LINE



### Targeted equity ownership Participative model



- A fair collective allocation of land allowances between all parties involved in the project
- Important consultation process
- Nearly 100 local stakeholders being proposed share ownership (5% maximum)

### Asset details

- Wind generators: **39**
- Generation capacity: **80 MW**
- Number of functioning hours: **2,500 hours<sup>(1)</sup>**
- Production: **200 GWh per year<sup>(1)</sup>**
- Availability rate guaranteed by constructor
- Guaranteed price over **15 years**

### Time schedule

- COD: **July 2010**
- Operation: **25 years**

### Financial indicators

- Total Capex: **€135m**

(1) Theoretical average

### Market's attractiveness

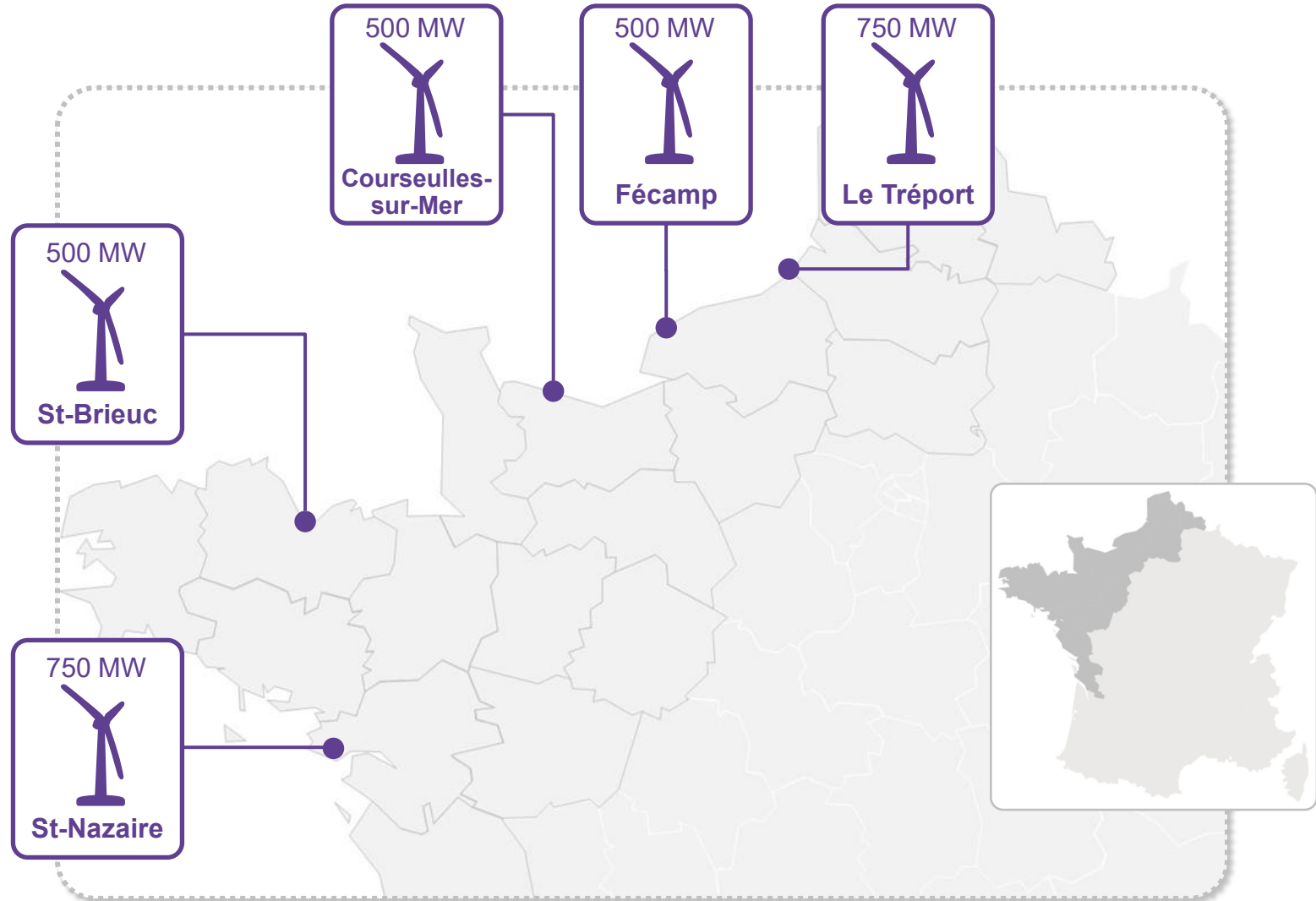
- Ambitious objective of **6,000 MW by 2020 in France**
- **3,000 MW** between 2015–20 (first call for tenders launched on July 2011)
- **Limited risk** for GDF SUEZ:
  - Each applicant will set the electricity price in line with its targeted IRR
  - EPC-type contract and maintenance contract with long-term guarantee
  - Non-recourse financing

### GDF SUEZ' competitive skills

- Extensive studies on Les Deux Côtes offshore wind farm project in Dieppe-Le Tréport (public debate in 2010)
- Several offshore wind development sites considered over the past years, in particular in Normandy
- Participation in offshore wind projects in England, Belgium, Netherlands and Luxembourg through Tractebel Engineering, Fabricom and INEO

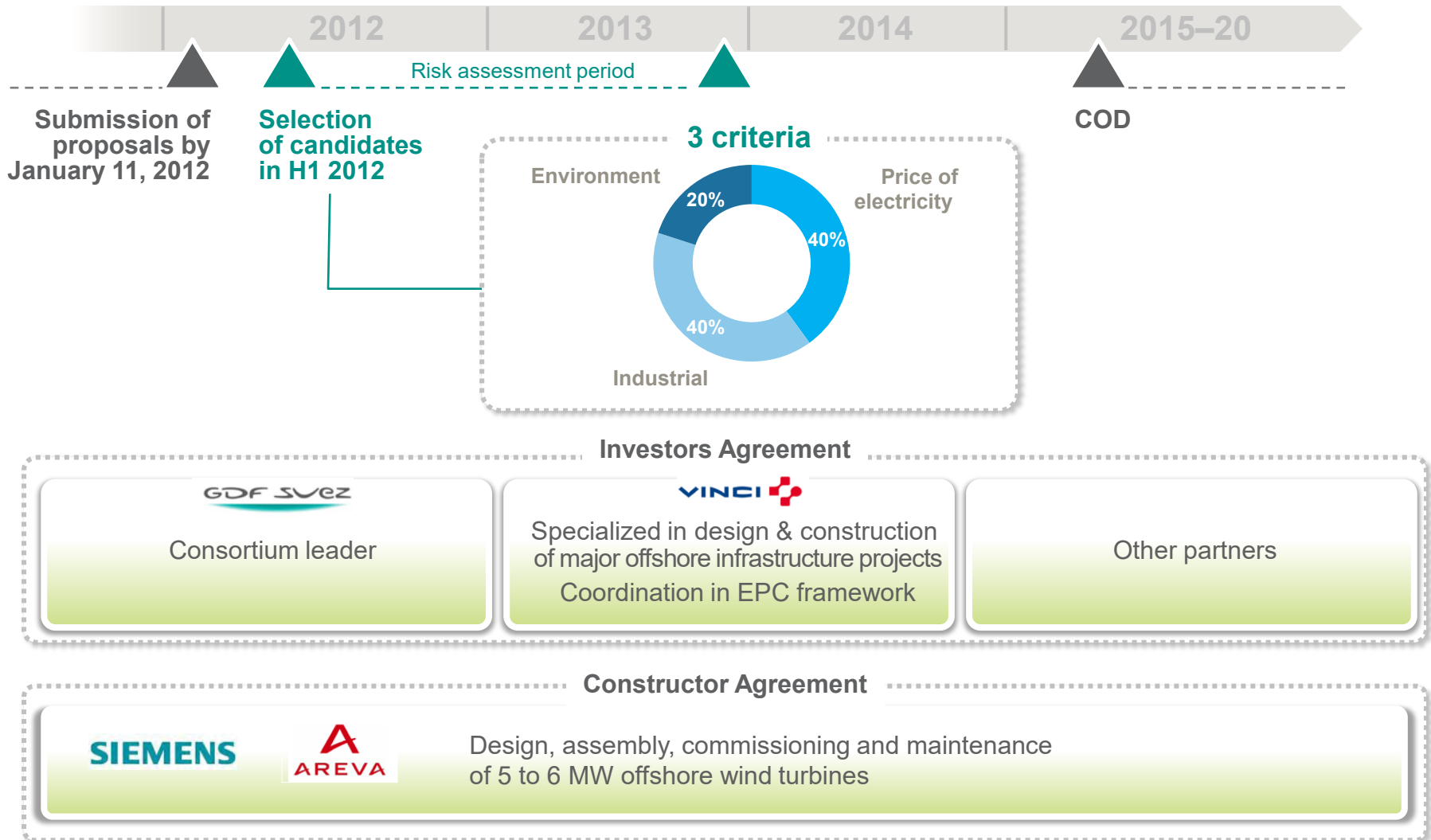
# Offshore wind

## First call for tenders spread over 5 zones



# Offshore wind

## A structured approach to bid



Middle East business model

Large hydro projects in Brazil

Biomass

Repowering

Wind energy in France

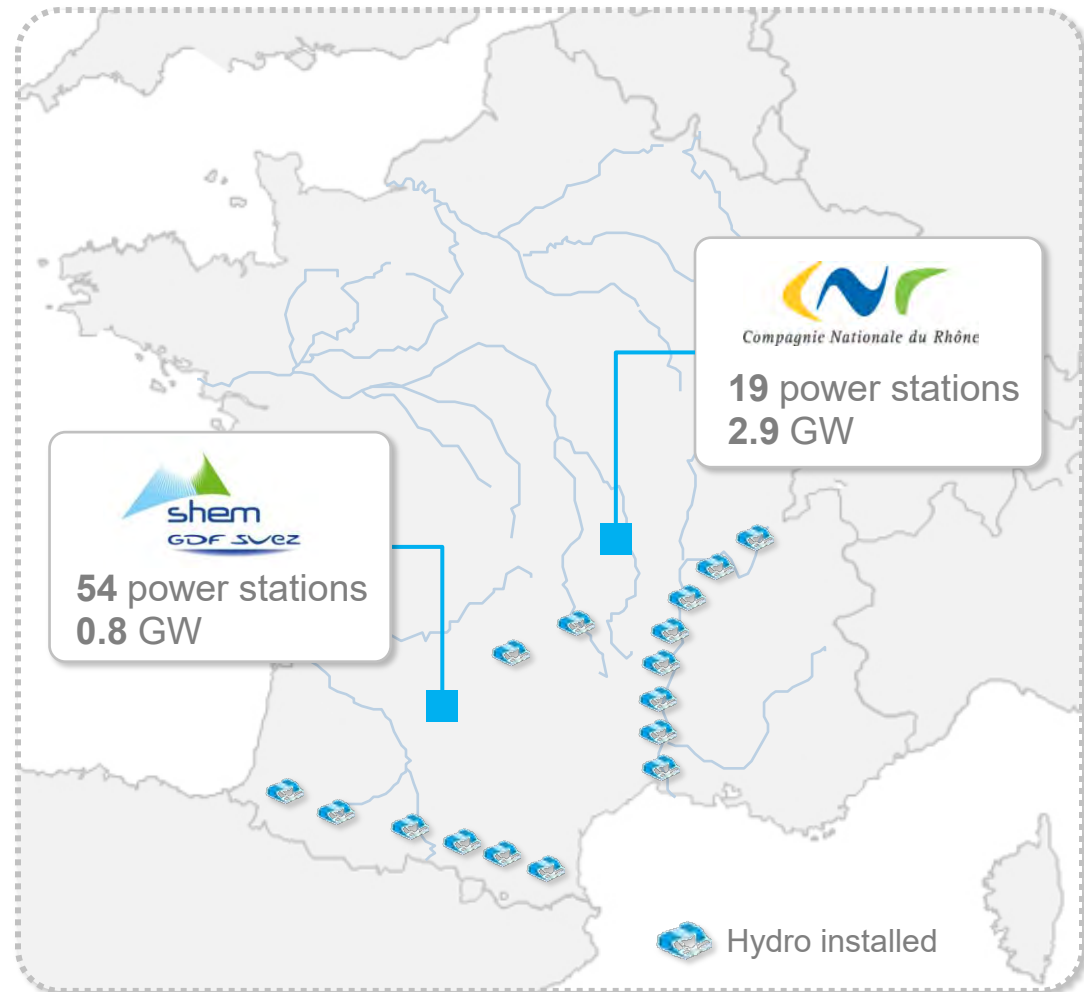
## 6 HYDRO IN FRANCE

---

# Hydro: 2nd player in France

## GDF SUEZ has:

- **15%** of the 25 GW hydro-electric French portfolio
- and **25%** of the French production



# Objective to increase hydro capacity by at least 1,500 MW

## TIME LINE



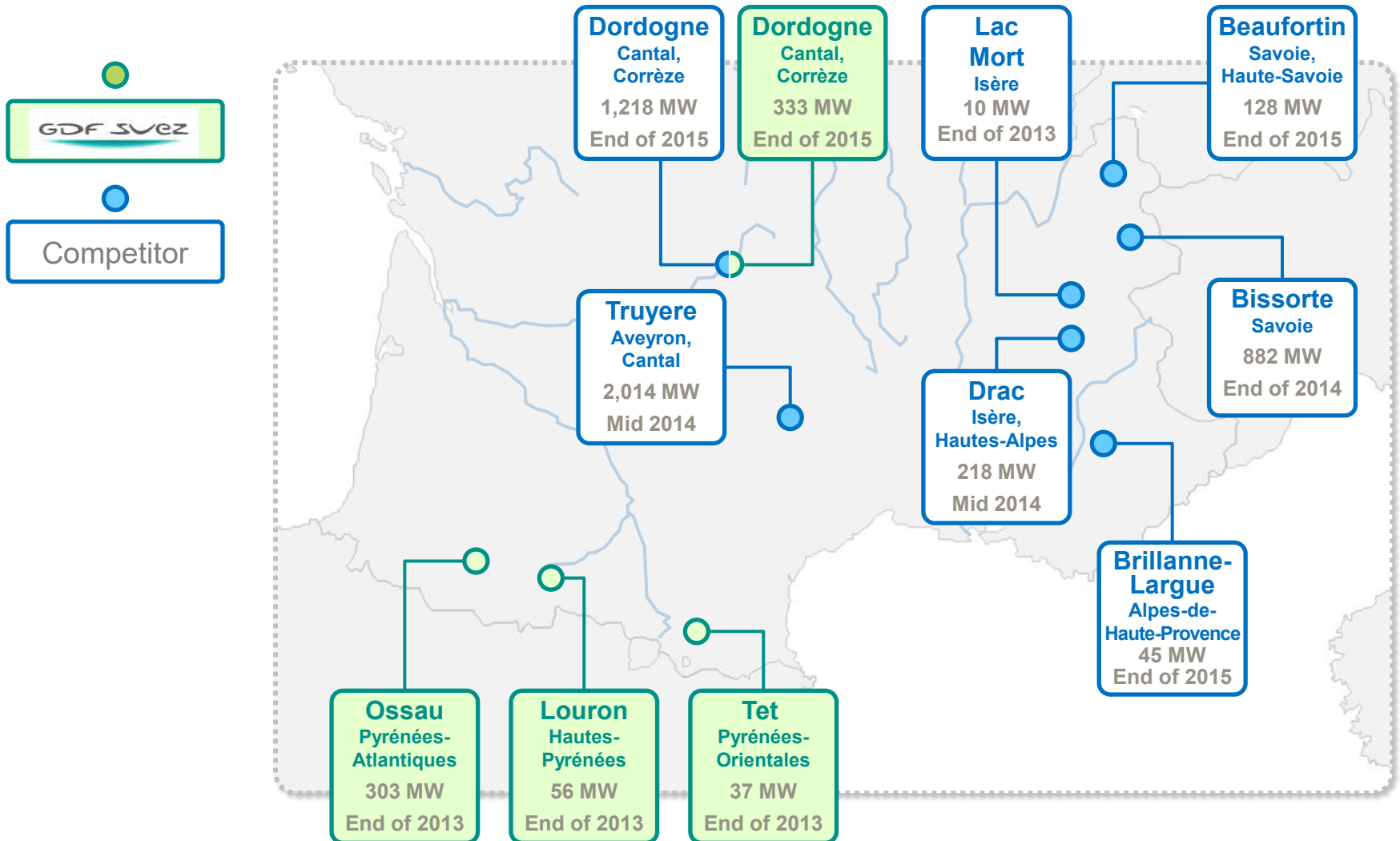
### 5.3 GW in competition by 2015

- Call for tender announced by French Government, not launched yet
  - 10 concessions
  - 5.3 GW of which 0.7 GW for GDF SUEZ
  - Selection of candidates: ~18 months after the call for tender
- Highly competitive context
- 3 criteria:
  - Energy efficiency: additional equipment
  - Economics: fee by valley, based on revenues of electricity sales
  - Environment

### GDF SUEZ' competitive skills

- Remote control of facilities
- Establishment of a model, modulation of the river's flow and optimization
- Originality and success of the "Rhône model"
- Long experience and established expertise in water management
- Recognized expertise in engineering
- Strong sustainable development approach for GDF SUEZ current assets

# Competitive perimeter and calendar



Officialized on 22 April 2010

- **Our distinctive skills:**
  - presence across all key generation technologies
  - wide international reach
  - proven track record in construction and operation
  - ability to attract best partners
  
- **Sizable, attractive projects:**
  - 17.5 GW under construction
  - 84% in fast growing markets and 82% contracted



**Investor Day**

December 9, 2011

# INDUSTRIAL DEVELOPMENT & LARGE PROJECTS

**GDF SUEZ**

BY PEOPLE FOR PEOPLE



Absheron, Azerbaijan

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

# GAS

## E&P - LNG

### Jean-Marie DAUGER

*Executive Vice President,  
in charge of the Global Gas & LNG Business line*

### Didier HOLLEAUX

*Senior Vice President Exploration & Production*

## Infrastructures

### Jean-Claude DEPAIL

*Executive Vice President,  
in charge of Infrastructures Business line*

### Jean-Marc LEROY

*Chief Executive Officer, Storengy*

## Increasing challenges for the natural gas markets

- **Strong growth in LNG demand**  
+3.9% CAGR from 2010–2030<sup>(1)</sup>
- **Booming natural gas demand in Asia**  
Sharp increase in gas demand in China and India: ~x2 by 2015<sup>(2)</sup>
- **Increasing share of natural gas**  
in the power generation mix
- **Increasing import needs in Europe** due to the decrease of indigenous production: need to reinforce existing gas infrastructure and provide flexibility
- **Development of unconventional gas**  
Game changer in the US, potential being assessed in Europe and Asia

## In which GDF SUEZ is well positioned

- **Group's presence along the LNG value chain:**  
from liquefaction to commercialization
- **Commercial development: over 8mt LNG contracts**
  - September 2010 – Kogas: 2.5mt
  - October 2010 – CNOOC: 2.6mt
  - May 2011 – Petronas: 2.5mt
  - November 2011 – Petronet: 0.6mt
- A portfolio of **68 GW of gas-fired generation**<sup>(3)</sup>.  
**Increasing position in Asian power generation:**  
+25% additional capacities in 2013
- **Leading positions** in natural gas infrastructures in Europe and stakes in new pipeline capacities (Nord Stream, Medgaz)
- **Expertize in tight gas developments** in Germany, Algeria, Egypt and the North Sea

(1) CERA – Global Redesign – April 2011

(2) IEA, World Energy Outlook 2010 New Policies Scenario, evolution of natural gas demand 2015 vs 2008

(3) At 100% as of 06/30/2011

## 1 EXPLORATION & PRODUCTION - LNG

---

## 2 INFRASTRUCTURES

---

# Strategic positions in the world



**E&P activity across 16 countries (operator in 8 countries)  
with a strong organic growth potential.**

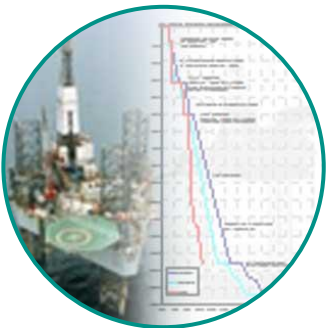
**A global leader in LNG with presence along the whole value chain from  
liquefaction to regasification terminals, including a fleet of 17 vessels.**

# Wide range of skills and expertise



## Use of innovative technology in geoscience applications, drilling, production and operations

- 3D seismic interpretation with expertise center in Lingen
- State of the art modeling
- World class High Pressure/High Temperature, horizontal drilling with expertise center in Aberdeen
- Tight gas
- Use of expandable liner



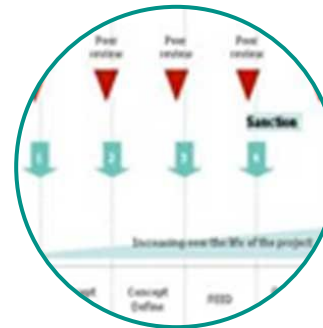
## World class HSE standards, procedures and performance

- Excellent HSE performance:
- Lost Time Incident Frequency in line with 2010 target and E&P industry Europe: < 1,5 per million man hours



## Over 40 years of field development and operations management experience in the Netherlands and Germany

- Largest owner of infrastructure in the Netherlands
- Transfer of experience in field management in both oil and gas, offshore and onshore



## Developing a „GDF SUEZ“ way of managing large industrial projects based on best-in-class industrial expertise

- Multi-company expertise
- Lean but effective process with flexible governance
- A successful experience in the smooth, safe & efficient take over of operatorship on Gjøa

## Geography

- **Mature countries close to infrastructures with established suppliers**  
e.g. UK, Netherlands, Germany, Algeria
- **Frontier areas with specific challenges:**  
isolation, climate, lack of infrastructures  
e.g. Barents Sea, Australia, High Pressure/High Temperature, deep water

## Maturity

- **Assets with different time-to-market to smooth the rate of growth**
- **Producing** assets  
e.g. Gjøa, Schneeren
- Assets **in development**  
e.g. Touat, Cygnus
- **Assets in pre-development**  
e.g. Bonaparte, Jangkrik
- Portfolio of **exploration options**  
e.g. Absheron, Jacqui

## Risk/return profile

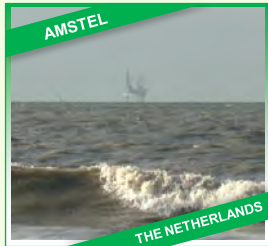
- **Short time-to-market with high return** assets to complete the portfolio, and balance risks  
e.g. G16a-B, rather mature & small assets
- **Long-term assets** with a long time-to-market but more financial and industrial visibility  
e.g. Gjøa, Touat

PRODUCTION FORECAST:  
**expected to reach ~55 Mboe in 2012–2013, ~65 Mboe in 2014–2015**

# Northern Europe: Dutch mature basin

Amstel: Leverage of existing infrastructures and exploration prospects

OIL



## History

- Discovered in 1962 by NAM but never developed
- Main and cost efficient offshore

operator → opportunity purchasing of Delta Hydrocarbons in 2010

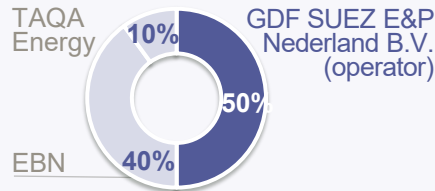
- Successful appraisal of well in Q1 2011
- Quick development (appraisal and platform construction)

TIME LINE :

Studies

Construction

Operation

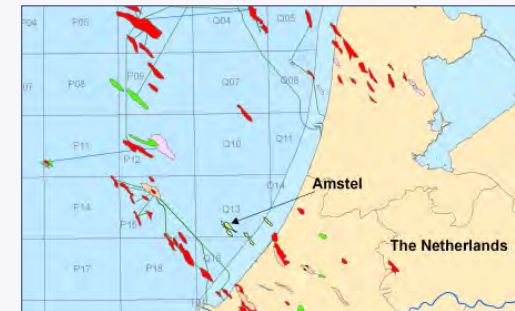


## Development plan

- FID: 2011
- Targeting first oil 2013
- Average production: 1.9 Mboe/yr<sup>(1)</sup> (at 100%)
- Detailed engineering ongoing

## Licence location

Offshore block Q13



## Financial indicators

Total Capex	~€200m
Project IRR	above 20%

## Value creation drivers

- Low incremental capex for new developments (making effective use of existing infrastructures)
- Further oil potential in surrounding area

- Capacity to manage environmental constraints
- First oil development for GDF SUEZ E&P Nederland

(1) Average production over the field lifetime

# Northern Europe: Dutch mature basin

## G16a: Leverage of existing infrastructures and exploration prospects

GAS

TIME LINE :

Studies

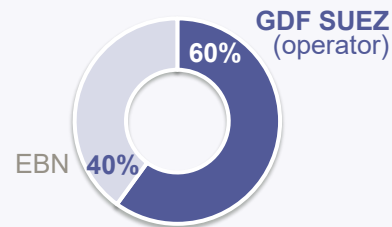
Construction

Operation



### History

- **2003** G16a license acquired from NAM
- **2005** G16a-A field developed with G16a-A platform
- **2007** G16a-B field discovered with G16a-A3 well drilled from G16a-A platform
- **2009** G16a-C field discovered by G16-9 well
- **July 2011** G16a-B platform installed. G16-9 well is used as G16a-B1 producer. Additional G16a-B2 production well was drilled
- **October 2011** 1st gas from G16a-B
- **G16a-B3 appraisal** and **G16a-B4 exploration** wells will test upside potential



### Financial indicators

Total Capex	~€125m
Project IRR	above 20%

### Development plan

- Field development plan and FID approved in 2009
- **1st gas G16a-B in Q4-2011**
- **1.5 months ahead of schedule**
- **Average production: 1.1 Mboe/yr<sup>(1)</sup> (at 100%)**
- Gas and condensate will be transported to Uithuizen gas treatment facility via existing outlet infrastructure (NGT)

### Value creation drivers

- **Exploration capacity:** several exploration prospects nearby
- There is still potential in the North Sea
- **Upside:** 2 additional wells (included in 3P reserves)
- **Rapid development:** project ahead of schedule, benefiting from favorable framework ("small field policy") and existing outlet infrastructure (NGT – 38.6% owned)

(1) Average production over the remaining field lifetime

# Northern Europe: German mature basin

Römerberg: Early production financing development phase

GDF SUEZ

BY PEOPLE FOR PEOPLE

OIL

TIME LINE :

Studies

Construction

Operation

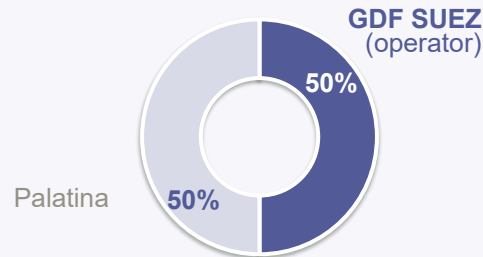


## History

### • Drilled wells:

ROEB0	2003
ROEB1	2007
ROEB2	2009
ROEB3	2010/11
ROEBH1	2011
ROEBH2	2011

### • Preparation of field development



## Development plan

- Targeting **full development in 2014**
- **Early production** (at 100%):  
2009: 0.4 Mboe, 2010: 0.5 Mboe
- **Average production:**  
1.8 Mboe/yr<sup>(1)</sup> (at 100%)

## Licence location



## Financial indicators

<b>Total Capex</b>	~€280m
<b>Project IRR</b>	above 20%

## Value creation drivers

- Capacity to build **special partnerships** (reactivity, openness, quick geological evaluation)
- Capacity to manage **environmental constraints** (suburban environment, deviated wells)
- **Secured licenses** all around the initial discovery
- **Highly developed infrastructure and oil market**
- Short Time-to-Market and Distance-to-Market for **fast economic developments**
- Strong experience and capabilities in **monetizing mature fields**

(1) Average production over the remaining field lifetime

# Northern Europe: United Kingdom

Cygnus: largest Southern North Sea undeveloped gas field

**GAS**



**History**

- **1988/1989:** discovery by Marathon. Considered sub-economic at that stage

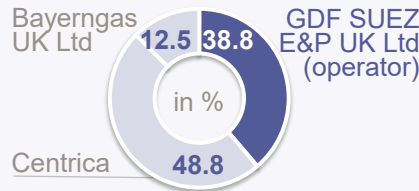
- **2002:** GDF SUEZ E&P UK Ltd and partners acquired the license
- **5 appraisal wells** have been drilled on Cygnus by GDF SUEZ as operator since 2006

**TIME LINE :**

Studies

**Construction**

Operation



**Development plan**

- Targeting **first gas in 2015**
- Up to 4 platforms and 13 wells in 2 phases
- **Average production:** 14.2 Mboe/yr<sup>(1)</sup> (at 100%)
- **FID:** 2012

**Asset details**

- Offshore, 2 reservoirs
- Large license, 25 km x 12 km
- 15–25 m water depth over Dogger Bank
- 6th largest gas field in the UK by reserves
- Largest future gas development in UK

**Financial indicators**

<b>Total Capex</b>	~€1.6bn
<b>Project IRR</b>	10–20%

**Value creation drivers**

- Cygnus is the **largest discovery in Southern North Sea** in the last 10 years
- **Better assessment of potential** through geosciences, exploration expertise, and successful appraisal
- **Strong potential for development and exploration**
- Long-term plan for Cygnus to become **hub for the whole region**
- **Southern North Sea is one of the 3 core growth areas** for GDF SUEZ E&P in the UK
- **Expertize center** in Aberdeen

(1) Average production over estimated plateau

# Northern Europe: Gjøa, Norway

One of the largest E&P players behind the Majors

## OIL & GAS



### History

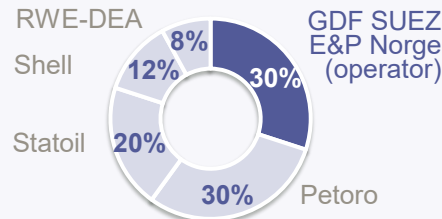
- **1989** Discovered by Norsk Hydro
- **2003** GDF SUEZ acquires interest in the field
- **2004** Joint operatorship agreement signed with Statoil
- **June 2007** Plan for Development and Operations (PDO) approved
- **June 2010** Platform on location
- **Nov. 2010** Production start-up and transfer of operatorship

## TIME LINE :

Studies

Construction

Operation



### Development plan

- **Started in:** November 2010
- **Oil export capacity:** 0,087 Mboe/day
- **Gas export capacity:** 0.11 Mboe/day
- **Very efficient start up:** Feb.–May '11
- **Production regularity**  
on average: >95%
- **Average production:** 24 Mboe/yr<sup>(1)</sup>  
(at 100%)

### Asset details

- **Oil & gas fields offshore**
- **Gross reserves:**
  - Liquid recovery: 82 Mboe
  - Gas recovery: 260 Mboe
- **60 km off the Norwegian coast**

### Financial indicators

<b>Total Capex</b>	~€4bn
<b>Project IRR</b>	10–20%

## Value creation drivers

- **Designation as operator for production:** recognition of dynamism and professionalism of E&P Norge by the majors
- **Two companies – one team** (Statoil and GDF SUEZ in project and pre-operation phases)
- **Major development** on Norwegian Continental Shelf in the past five years
- **Early involvement** and smooth transition of operatorship
- Gjøa can serve as **hub for future developments** in the Northern North Sea

(1) Average production over estimated plateau

# North Africa: a major project for GDF SUEZ and Algeria

Touat: GDF SUEZ<sup>™</sup> largest E&P project under construction

GDF SUEZ

BY PEOPLE FOR PEOPLE

GAS

T I M E L I N E :

Studies

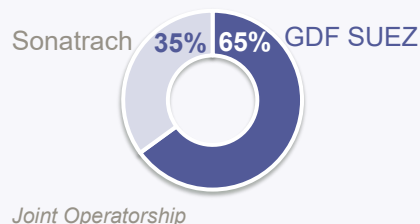
Construction

Operation



## History

- **2001** agreement between Gaz de France and Sonatrach to enter into upstream
- **July 10, 2002:** Production Sharing Contract awarded
- **June 23, 2009:** Development plan approval by ALNAFT (National Agency for Valorization of Hydrocarbon Resources)
- **Duration:** 30 years



## Development plan

- **Average production:** 29.9 Mboe/yr<sup>(1)</sup> (at 100%)
- **41** production wells in **10** fields
- First gas in **2015**
- FID: 2009

## Asset details

- 10 gas fields
- Near Adrar, South West of Algeria
- 50 km from new pipeline to be built by Sonatrach from Reggane to Hassi R'Mel via Krechba
- End of license 2039

## Financial indicators

<b>Total Capex</b>	~€2.3bn
<b>Project IRR</b>	10–20%

## Value creation drivers

- **Successful appraisal campaign** (7 wells) in difficult conditions
- Project built on the **long-term partnership with Sonatrach**
- A **major project** for GDF SUEZ and Algeria
- **The biggest project** in the new South-East Algeria gas province
- Contributes to European market supply, especially French market

(1) Average production over estimated plateau

# Bonaparte: the first GDF SUEZ operated E&P-LNG project

GAS



## History

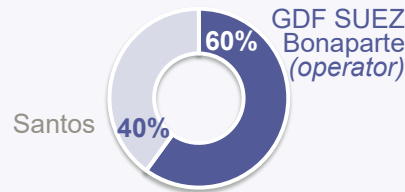
- **2009:** acquisition of 60% of the Petrel, Tern and Frigate gas fields from Santos, a major Australian player in oil & gas, looking for partners
- **February 2010:** opening of Perth office
- **Pre-FEED<sup>(1)</sup> phase 2010–2012:** concept selection and definition studies, appraisal well(s) for gas reservoirs characteristics details and confirmation, partnerships. A proposed 2 mtpa floating liquefaction plant

T I M E L I N E :

Studies

Construction

Operation



## Development plan

- **2013–2014:** FEED<sup>(1)</sup> phase, basic engineering, LNG contracts, partnerships
- **FID: 2014**
- Targeting **first gas in 2018**

## Asset details

- 3 stranded gas offshore fields
- 250 km from Darwin
- **Average production:** 20 Mboe/yr<sup>(2)</sup> (at 100%)
- LNG nameplate production capacity: **2 million tons/yr**

## Financial indicators

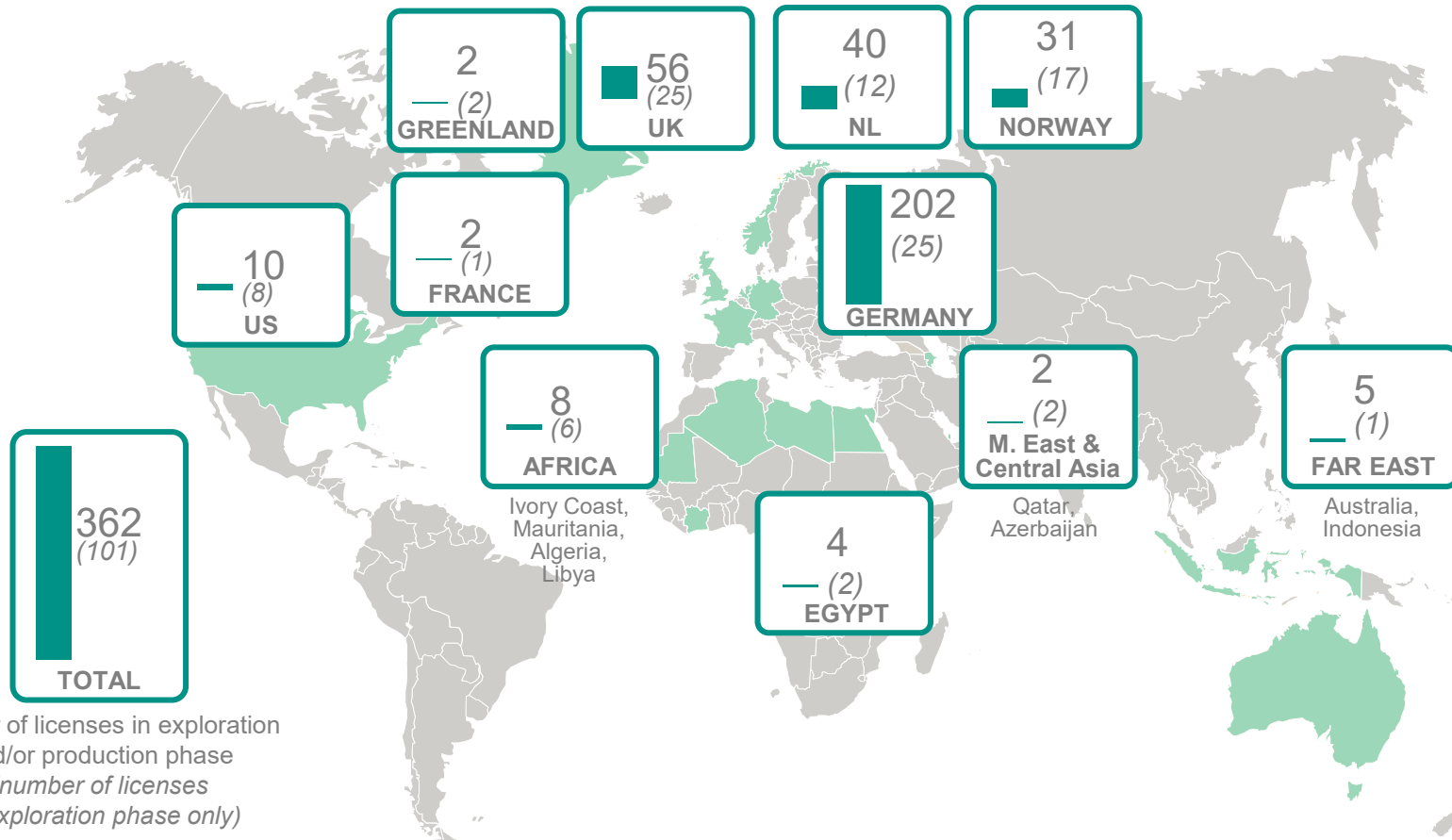
<b>Total Capex</b>	~€3–3.7bn
<b>Project IRR</b>	10–20%

## Value creation drivers

- **Expand the Group's reach in Asia and strengthen its LNG portfolio in an attractive E&P basin**
- **GDF SUEZ long maturation of Floating LNG (FLNG):** to capitalize on design and engineering work already undertaken in FLNG terminals, both in liquefaction and regasification (Neptune DeepWater Port in the US, commissioned in 2010)
- **An E&P-LNG fully integrated project:** from the reservoir to the LNG buyer
- **Floating Production Storage and Offloading technology with many advantages:**
  - FPSO can be built in large shipyards at competitive prices
  - FPSO has a potential for being further duplicated

(1) Front End Engineering Design (2) Average production over the field lifetime

# Diversified exploration portfolio in over 16 countries

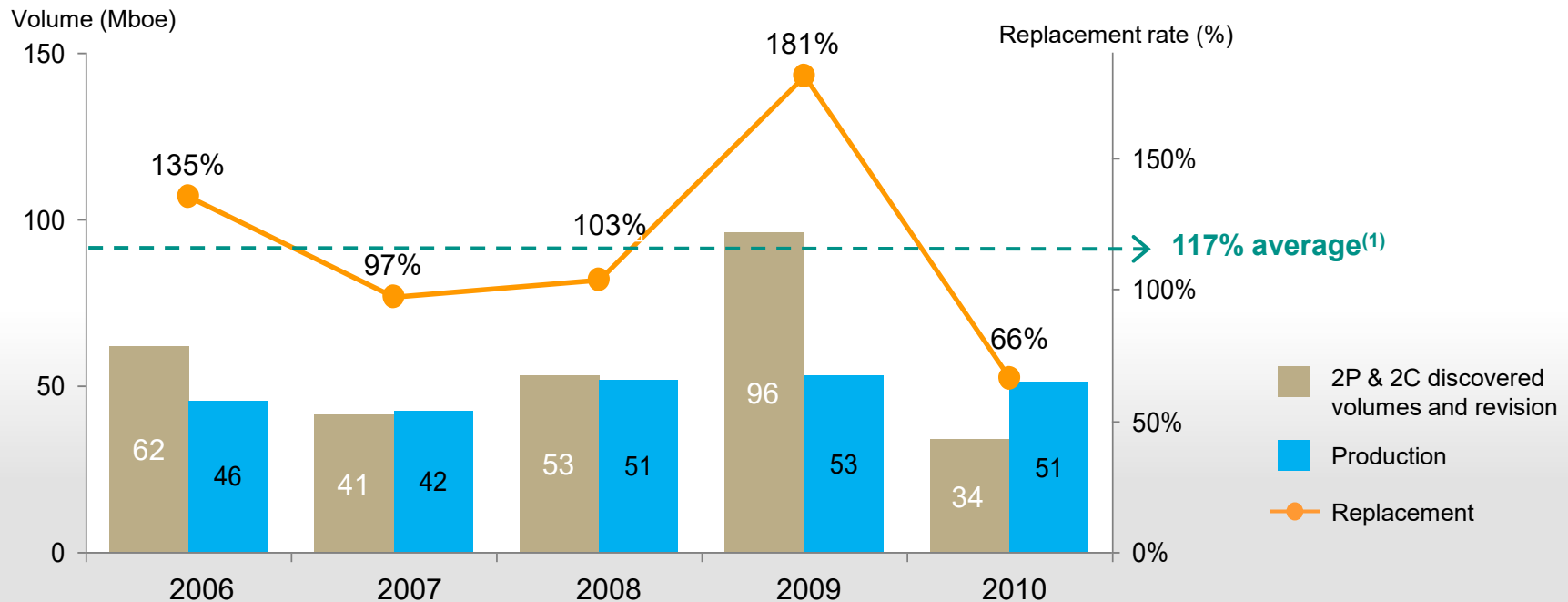


Number of licenses in exploration and/or production phase  
(number of licenses in exploration phase only)

**Portfolio moving toward a reinforcement of GDF SUEZ E&P in growing zones, including Asia Pacific**

# Exploration: a strong track record with a high resource replacement rate

## 2006-2010 exploration track record: resource replacement average of ~117%<sup>(1)</sup>



### A strong exploration track record in both mature and new areas:

- To continue delivering a resource replacement rate of 120% in the coming years
- A balance between projects which generate quick returns (near field) and projects that can deliver mid to long-term growth (growth and frontier exploration)
- To deliver at least a 13% full cycle rate of return (IRR) for the whole portfolio

(1) Since 2006, excluding the impact of acquisitions and divestments

# Caspian Sea, Absheron in Azerbaijan

Successful example of high risk, high reward exploration

TIME LINE :

Studies

Construction

Operation



## History

- Initially operated by Chevron leading a consortium with SOCAR (50%) and TOTAL (20%): drilling in difficult conditions

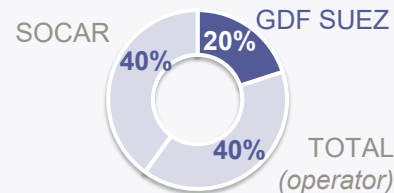
(high pressure); partners decided to relinquish the license

### Since 2001:

- Hydrodynamism phenomena measured on Shah Deniz (TOTAL partner with BP) which could allow a remaining accumulation updip and on the Northern structure
- New deeper play increasing Gas Initially In Place (GIIP)

- In 2007, TOTAL farmed-in the license a second time (60% share)

- February 2009: Farm-in agreement by GDF SUEZ E&P



## Development plan

- 150 meter of cumulated net gas pay
- Several hundreds of potential Mboe of gas and associated condensates
- 250 days drilling operations planned, 330 days forecasted. Test: 30 days
- First gas in 2023

## Licence location



## Asset details

- Offshore 475 meter water depth
- 100 km from Baku
- Three year exploration period with one well commitment

## Financial indicators

Total Capex	~€5–15bn
-------------	----------

## Value creation drivers

- Successful example of high risk, high reward exploration
- How geological excellence can lead to value creation by proposing new concepts in already explored areas

# Indonesia: Muara Bakau (Jangkrik & Jangkrik North East)

World class reservoir with extremely good productivity

GAS



## History

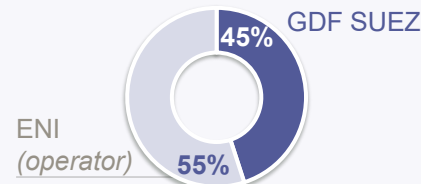
- **December 2002:** PSC operated by Lasmo, then by ENI from June 2003
- **September 2009:** acquisition of a 45% share from ENI
- **July 2011:** Preliminary development plan submitted to authorities
- **Dec 2002 – 2012:** Exploration phase
- **2 gas discoveries:** Jangkrik and Jangkrik North East

TIME LINE :

Studies

Construction

Operation



## Development plan

- **Fast track:** targeting 1st gas in Q1 2016
- **Facilities:** full offshore treatment, 1 floating platform 20,000 tons, 11 production wells
- **Average production:** 4.2 Mboe/yr<sup>(1)</sup> (at 100%)
- **FID:** Q1 2013
- **Liquefaction:** Bontang LNG plant

## Asset details

- Offshore gas fields
- Acreage: 1,082 km<sup>2</sup>
- East Kalimantan (Eastern part of Kutei basin)
- Water depth: 400 meters in average
- Multiple stacked reservoirs, high productivity

## Financial indicators

<b>Total Capex</b>	~€1.6bn
<b>Project IRR</b>	10–20%

## Value creation drivers

- **Successful exploration and appraisal** leading to Gas Reserves of 200–300 Mboe (100%)
- World Class Reservoir with **extremely good productivity**
- **Relatively lean gas with no contaminants** (96% CH<sub>4</sub> ; no H<sub>2</sub>S, no Hg & minor CO<sub>2</sub> content)
- **Ideal location:** existing infrastructure (Bontang LNG plant) allowed for rapid and efficient development
- **Quick access to market:** 1st gas expected in Q1 2016
- **Remaining exploration potential:** 2 prospects ready to drill

(1) Average production over the field lifetime

## 1 EXPLORATION & PRODUCTION - LNG

---

## 2 INFRASTRUCTURES

---

## #1 transmission network in Europe

- 32,200 km in France
- 1,373 km in Germany and Austria

## #1 distribution network in Europe

- 192,000 km in France connecting 9,423 municipalities
- Providing gas to 11.1 million clients

## Largest storage capacity in Europe

- 22 facilities and 12.5 bcm working capacity
- Of which 14 facilities and 10.1 bcm located in France

## #2 largest LNG terminal receiving capacity in Europe and 2 niche markets in Chile & Boston

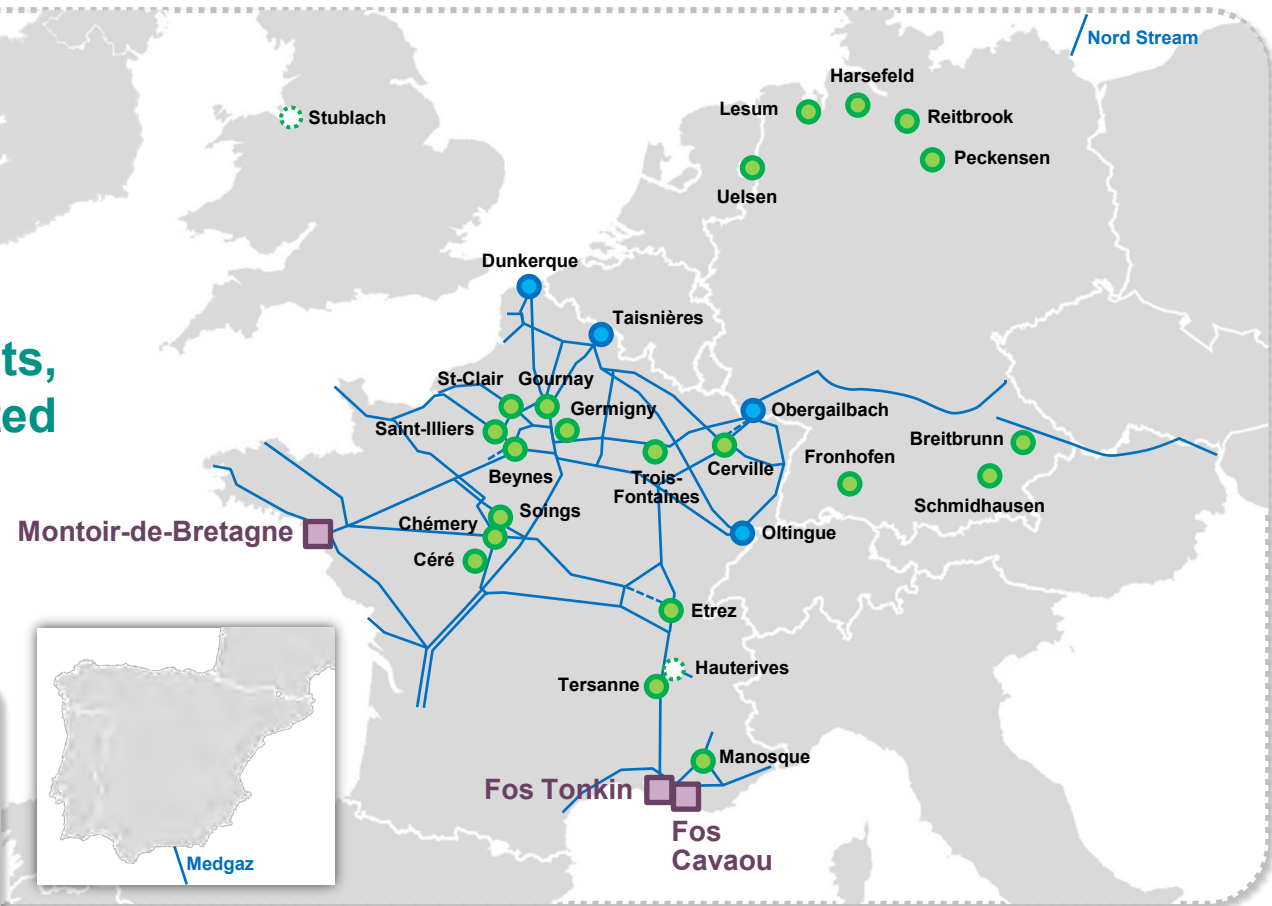
- 24 bcm regasification capacity in 3 LNG terminals in France (Montoir, Fos Tonkin, Fos Cavaou<sup>(1)</sup>)






Figures as of December 31, 2010 except for Storengy: figures as of September 31, 2011

(1) Operated by Elengy and owned by STMFC, a 72% stake Elengy subsidiary

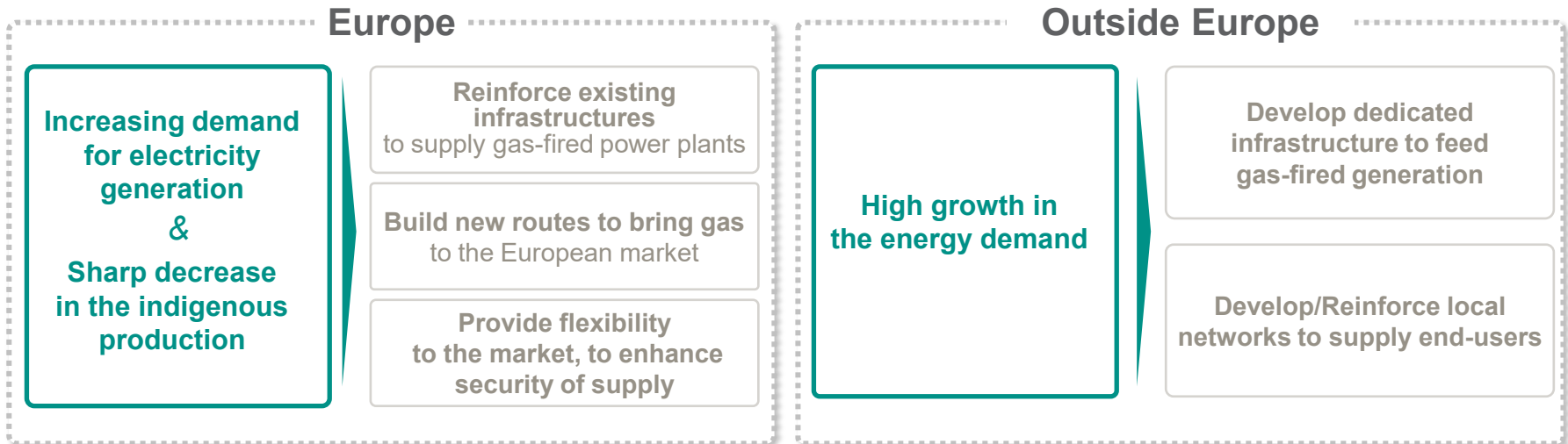
# Key positions at the heart of Europe

Four types of assets,  
mainly regulated



-  LNG reception terminal
-  Storage
-  Storage under construction
-  Main transport network
-  Network interconnection point

# Well positioned to meet growing gas infrastructure needs



## GDF SUEZ' competitive skills

- A diversified asset portfolio, complementary and strategic
- Expertize of teams, acknowledged by the whole international community
- Competitive services thanks to operational and commercial synergies
- Long-term commitment of the Group in gas infrastructure activities

**Strong need for CAPEX in infrastructure worldwide**

## Regulated activities<sup>(1)</sup>

### Value creation model based on:

- **RAB rate of return**
- **RAB development** (transmission and LNG terminals)
  - Rate incentive for projects providing new capacities
  - Sales based on Open Seasons, ensuring at least the first 10 years of turnover
  - Risk is mainly regulatory

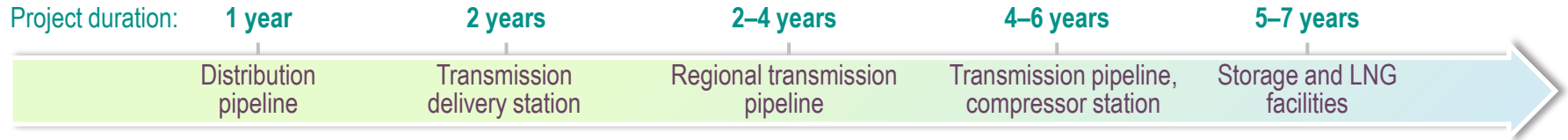
## Storage

- **Balanced market risk exposure, with:**
  - Higher rate of return than regulation
  - 60% of commercial capacities sold in the medium-term
- Unique positioning in Europe: **both marketer and operator**, enabling us to **maximize the performance and value** of assets:
  - Enhance lifetime and capacity
  - Ability to quickly adjust supply to demand
  - Pool sites to create additional value

**Capital intensive activities, generating sound and predictable cash flow with low risks**

(1) Transmission, distribution, LNG terminals

# Key metrics for gas infrastructure projects



## Asset lifecycle

- **Project duration:** from several months (distribution) to several years, complex permitting process, long engineering studies
- **Operation:** 40 years up to 60 years (facilities), and more (pipelines)
- **Decommissioning / dismantling:** 1 to 2 years
- **Long payback period:** 20 to 30 years

## Profitability

### REGULATED ASSETS

- IRR higher than regulated rate of return (post tax) + incentives, thanks to yearly RPI<sup>(1)</sup> indexation of RAB
- EBIT close to RAB remuneration

### STORAGE

- **Better profitability** (IRR between 8% and 12%), **higher market exposure**

(1) Retail Price Index

# ERIDAN project in France

Important milestone toward a unique market zone

GDF SUEZ

BY PEOPLE FOR PEOPLE

## TIME LINE

Studies

Construction

Operation

**A new transmission pipeline, reinforcing the existing Rhône pipeline in southern France**

Length: 220 km, diameter: 1.2 meter

**The French regulator gave its consent to the project on April 19th 2011**

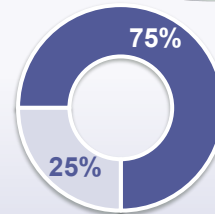
**Thorough studies to limit environmental impact, often beyond legal requirements**

**The project has been awarded a 300bps premium in addition to the base rate<sup>(1)</sup> for 10 years, owing to its contribution to market opening**

Total Capex €490m<sup>(2)</sup>

Expected commissioning **end of 2016**

GDF SUEZ



CNP, CDC,  
CDC Infrastructure



## Several upsides brought by this project

- **Development of entry capacities** in GRTgaz's southern market zone
- **Development of transit capacities** connecting southern gas sources to the core European market
- **Additional line pack** providing flexibility to CCGTs
- **OPEX optimization:** less compressor fuel gas
- The project will **avoid compressor station revamping** (La Bégude)
- The project is eligible for **European funding**

(1) Base rate as of today: 10.25% pre-tax (2) Capex before European funding

# Gas storage development in Germany

An operation making GDF SUEZ #1 in Europe

## TIME LINE

Studies

Construction

Operation

### Financial indicators

- Enterprise value: €930m
- EBITDA on a full year basis: ~€110m
- Project IRR: 10%
- GDF SUEZ shareholding: 100%

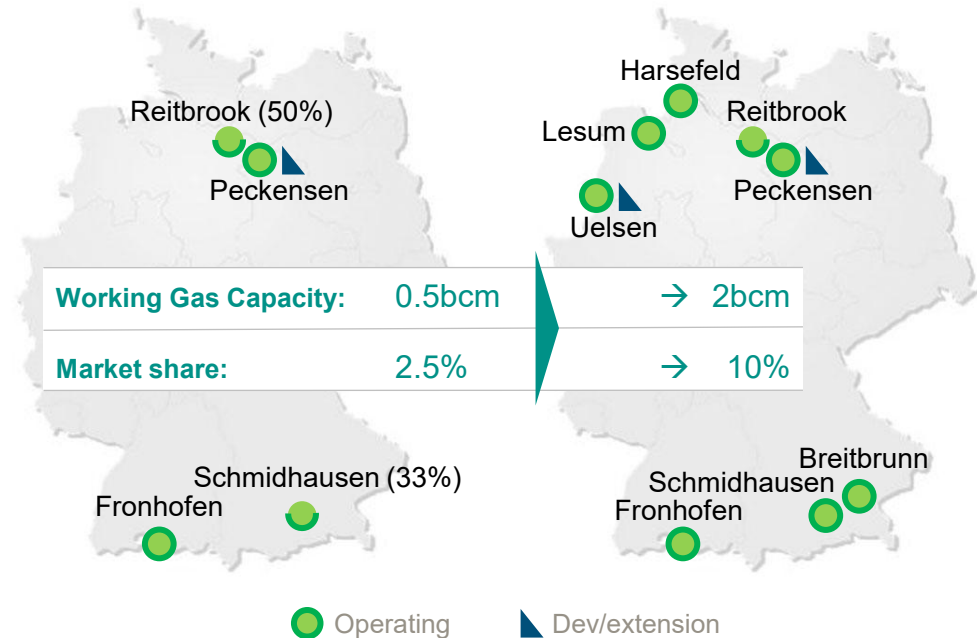
### Insourcing of O&M

- Storengy's business model implementation

## GDF SUEZ POSITIONS IN STORAGE

BEFORE ACQUISITION

AFTER ACQUISITION



## Rationale for acquisition





**Stronger positions** to meet increasing flexibility needs: seasonal swing<sup>(1)</sup> demand, intermittent renewable power generation

**80% of capacities contracted until 2020**

**Synergies** with existing assets in the Group

(1) Seasonal swing is the difference in gas supply or demand between winter and summer

# Value creation is around 20% of Enterprise Value paid

<b>Short-term</b>	Increase in Working Gas Capacity and increase of withdrawal rate of existing assets	
	Sales of unbundled capacities <sup>(1)</sup>	
<b>Mid-term</b>	Implementation of further O&M synergies in Storengy Deutschland post-merger	
<b>Long-term</b>	Development of new cavities on sites, according to market demand	

(1) Volume capacities and injection/withdrawal flow capacities sold separately.

# Gas storage development in the UK

## Stublach: a key asset for higher flexibility

### TIME LINE

Studies

Construction

Operation

#### Financial indicators

Total Capex	€543m
Project IRR	8%
GDF SUEZ shareholding	100%

#### Asset details

- **Performance:** 12 days in – 12 days out
- **Competitive costs:** 0.3 p/th injection and 0.3 p/th withdrawal



#### History

- **Stublach project:** fast cycling salt caverns to supply flexibility matching UK needs
- **400 mcm capacity in 28 cavities** (initial design) at a 500 meters depth
- **Withdrawal rate:** up to 33 mcm/day, used in multi-cycling
- **Commissioning of the first cavities** in 2013, the last in 2018
- **Third Party Access exemption**



#### Value creation

- **Optimization** of cavities' depth and operating pressures
- **1st Capex reduction (€23m):** cushion gas volume reduced by 40%, and number of cavities brought from 28 down to 24
- **Surface facilities made modular,** enabling gradual development
- **2nd Capex reduction (€30m):** number of caverns reduced to 20, increasing their size (+10%), phasing modification to meet market demand
- **Reshaping of commercial strategy:** from long-term contracts to short-term contracts, targeting the provision of flexibility

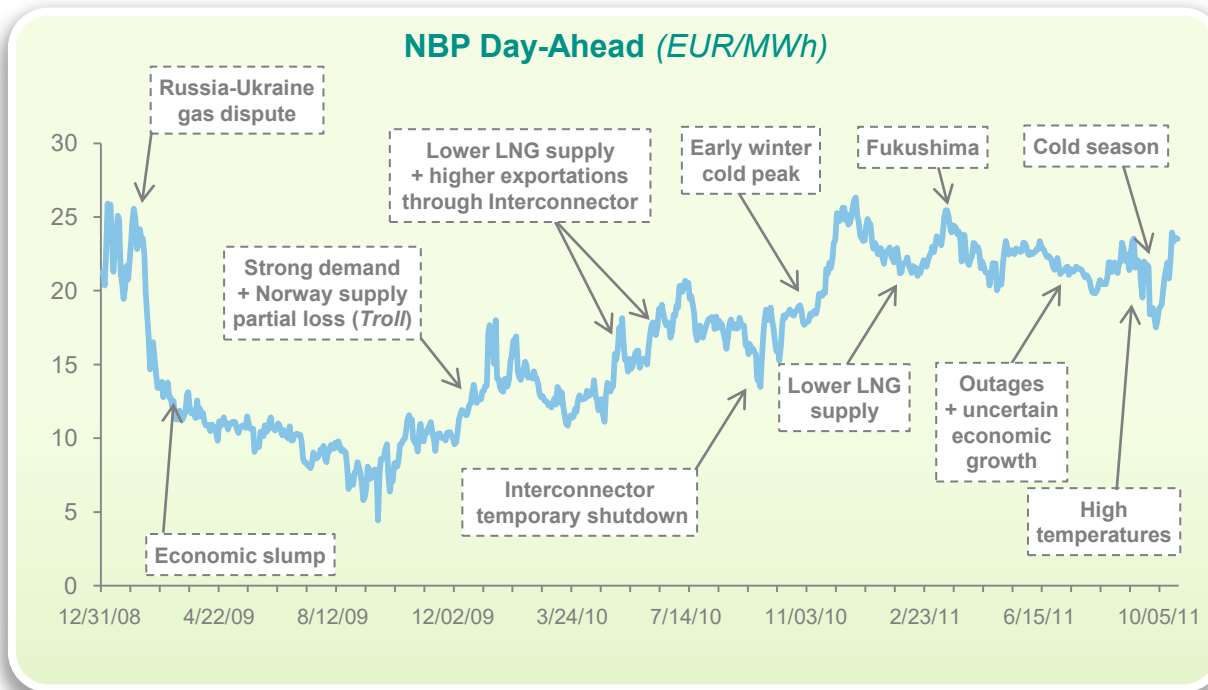
# Gas storage development in the UK

Stublach

In the UK, the need for swing<sup>(1)</sup> and flexibility will increase sharply:

- Domestic production is declining, hence seasonal swing
- Domestic production being replaced by LNG and interconnector supplies, with less modulation
- Gas demand: volatility is expected to increase due to the development of intermittent renewable power generation

→ New storage capacities needed to provide for swing and flexibility



The project value depends on market's volatility. The commercial approach has thus been redirected:

- In addition to “one year all flexibility included” products,
- Storengy will offer short-term products, to match specific flexibility needs (each calendar spread), while maximizing storage value

(1) Seasonal swing is the difference in gas supply or demand between winter and summer

# A strong presence across the gas value chain to capture full value

- **Strong value creation** revealed by recent strategic partnerships in E&P and GRTgaz
- **Distinctive skills:** expertise, HSE management, reactivity and adaptation, good track record in project delivery
- **A growth story with a large number of projects and a balance** between regions, maturities, time-to-market, regulated and market exposure
- **In the future:** development in Asia Pacific area in E&P, major infrastructure gas projects ongoing in Europe, self financing of new organic projects



**Investor Day**

December 9, 2011

# INDUSTRIAL DEVELOPMENT & LARGE PROJECTS

**GDF SUEZ**

BY PEOPLE FOR PEOPLE



Fribourg-en-Brigau, Eco District

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

# A NEW MARKET: THE CITY OF TOMORROW

**Jérôme TOLOT**

*Executive Vice President of GDF SUEZ, CEO of GDF SUEZ ENERGY SERVICES*

**Jean-Louis CHAUSSADE**

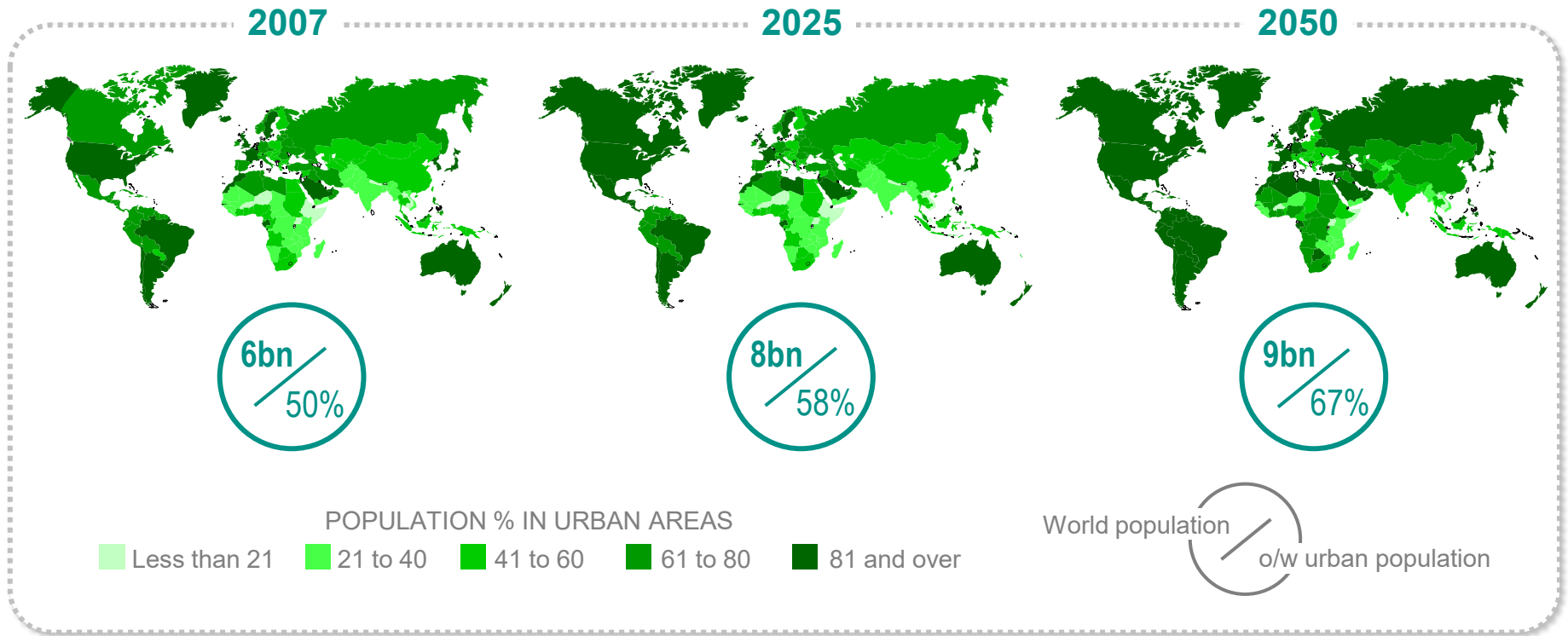
*Executive Vice President of GDF SUEZ, CEO of SUEZ ENVIRONNEMENT*

# The city of tomorrow

A promising market for GDF SUEZ

GDF SUEZ

BY PEOPLE FOR PEOPLE



## Doubling of urban population by 2050

with scarcity of resources and more stringent regulation

Source: United Nations Department of Economic and Social Affairs/Population Division, World Urbanization Prospects: The 2009 Revision

# Sustainable development is becoming a key challenge for local authorities

## Economic attractiveness<sup>(1)</sup>

**80%** of global GDP is generated in urban areas

## Environment preservation<sup>(2)</sup>

Urban areas produce **50 to 60%** of global greenhouse gas emissions

**2bn tons/year** of waste produced in Europe

## Social concern<sup>(3)</sup>

**33%** of the urban population in developing regions lives in slums

**24%** of the world's urban population doesn't have access to sanitation services

- (1) Source: United Nations Department of Economic and Social Affairs/Population Division, World Urbanization Prospects: The 2009 Revision  
(2) Source: United Nations HABITAT 2009  
(3) Source: United Nations, Millenium Development Goals – 2010 report

# GDF SUEZ has a long history of partnering with local authorities and promoting sustainable development

## ECONOMIC SERVICES



Gas distributed to **11 million people** in France



Transport infrastructures (CNG, EV, tramway)



Waste collected from **50 million people** worldwide



Drinking water supplied to **91 million people** worldwide



More than **600,000** street lights worldwide

## ENVIRONMENTAL SERVICES



**180** District Heating & Cooling networks operated



**350** sorting & recycling sites



**Aquaviva:** Carbon-neutral Water Treatment Plant

## SOCIAL RESPONSIBILITY



*"Rassembleurs d'énergies"*

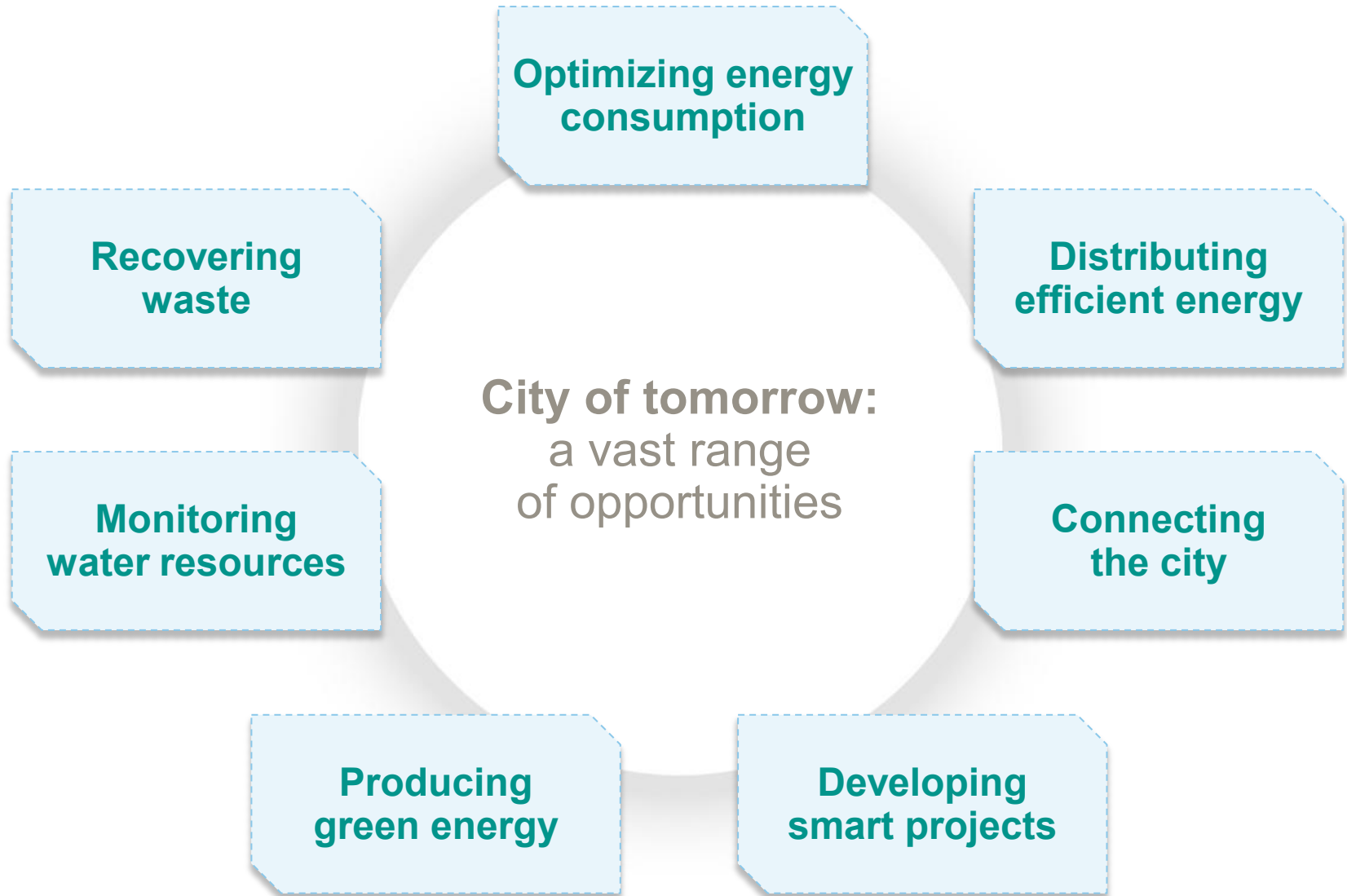


Thermal renovation of housing



Social tariffs

# Urban growth will provide new markets for GDF SUEZ



# Optimizing energy consumption

## Building Energy Efficiency

### Market's attractiveness

- **Regulatory Framework:** 3x20 European target
- **European target for 2020:** ~4,000 TWh of energy savings
- **Potential additional market for energy efficiency:** €40–80bn o/w 50% in buildings<sup>(1)</sup>

### GDF SUEZ' competitive skills

- **Unique presence** along the whole value chain (engineering, installation and operation)
- **Leading position in Europe:** **10%** market share in energy services

(1) Source: GDF SUEZ estimates

# Optimizing energy consumption

## Some achievements



### Key project figures

1st PPP "Energy performance contract"  
in France

Surface: 300,000 m<sup>2</sup>

Energy Savings: 35%

Contract duration: 20 years



### Key project figures

Heating & Cooling system

Surface: 80,000 m<sup>2</sup>

Energy Savings: 40%

Contract duration: 15 years

Building energy efficiency total revenues<sup>(1)</sup>: ~€5.5bn

(1) 2011 estimated revenues for GDF SUEZ Energy Services

# Distributing efficient energy

## District Heating & Cooling

### Market's attractiveness

- Expected growth in all European countries
- Target to double the number of customers connected to district heating in France by 2020 vs 2010 (*"Grenelle de l'environnement"*)
- More than 70% of heating resources are direct renewable or recycled energy (energy from waste, CHP, biomass)

### GDF SUEZ' competitive skills

- GDF SUEZ is present in **180 European District Heating & Cooling networks** representing 12 TWh (Paris, Barcelona, London)
- Leadership positions in France, UK and Slovakia
- Extensive skills and know-how over the entire value chain: engineering, installation and operation

# Distributing efficient energy

## Some achievements



### Key project figures

Cooling	65 MW <sup>(1)</sup>
Heating	200 MW <sup>(1)</sup>
Energy Savings:	10%
Contract duration:	40 years



### Key project figures

Cooling	325 MWth
Heating	3,700 MWth
Energy Savings:	
– Heating	10%
– Cooling	50%
Contract duration:	20 years

**District Heating & Cooling total revenues<sup>(2)</sup>: ~€1.3bn**

(1) Final capacity (2) 2011 estimated revenues for GDF SUEZ Energy Services

### Market's attractiveness

- 2010 investment of **€8bn** in Western Europe
- Forthcoming renewal of more than **60%** of the existing Data Centers worldwide
- A **4-fold increase** of the energy consumption in Data Centers (emergence of Cloud Computing) by 2020 vs 2010

### GDF SUEZ' competitive skills

- GDF SUEZ operates **300,000 m<sup>2</sup>** of Data Centers in Europe
- Ability to offer a global integrated solution: design, installation, maintenance, electricity operation
- Promotion of "Green Data Centers"

# Connecting the city

## Some achievements



### Key project figures

Electricity savings:	20%
Surface:	6,000 m <sup>2</sup>
Contract duration:	6 years



### Key project figures

Electricity savings:	25%
Surface:	1,000 m <sup>2</sup>
Contract duration:	7 years

Data Centers total revenues<sup>(1)</sup>: ~€600m

(1) 2011 estimated revenues for GDF SUEZ Energy Services

## 40 "smart" projects have recently been launched by GDF SUEZ

### Smart metering

#### Implementing its own technology to:

- Monitor and manage energy and facilities
- Diminish operational costs
- Enable innovative tariffs and new services

### Smart grid

#### Strongly implied in 2 "smart" R&D fields:

- Aggregation concept for a diversified set of distributed assets
- Demand Side Management, including Electric Vehicle charging

### Performance visibility

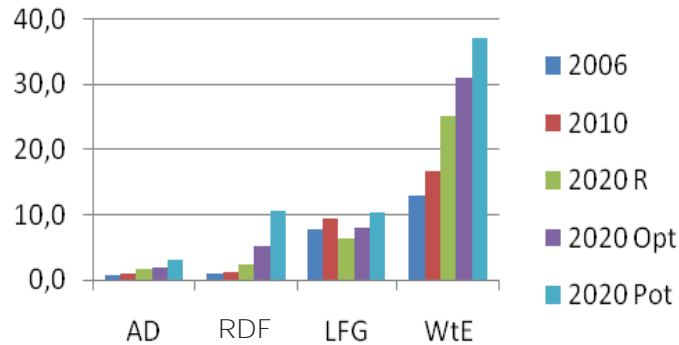
#### Building the decision-making control systems to enable services for local authorities, B2B and B2C customers in:

- Energy efficiency
- Interactive new services

# Producing green energy from water & waste

## Market's attractiveness

Growth in green energy production from waste in TWh



Source: Confederation of European waste to energy plants  
From all sources for Europe in total

AD : Anaerobic Digestion

RDF : Refuse Derived Fuel

LFG : Landfill gas

WtE : Waste to Energy

R : Realistic

Opt : Optimistic

Pot : Potential

## GDF SUEZ' competitive skills

- 48 urban **energy from waste plants**: 1,800 MW capacity, 3.4 TWh energy produced
- **Landfill biogas, anaerobic digestion**
- Innovative **wastewater biological treatment**  
Greenbass process managing oxygen needs, energy self-sufficient WWTP
- **Positive energy WWTP**
- **Heat recovery from waste water**: Degrés Bleus®
- **Pressure use** in reverse osmosis desalination
- **Alternative energy** production from Refuse Derived Fuel (RDF) for co-incineration, plastic-to-fuel (Cynar, Blue Orange cleantech fund)



**2012 renewable energy production objective: +10% vs. 2008**

# Producing green energy from water & waste

## Some achievements



- **Amman's main wastewater treatment plant**
  - Plant capacity: 267,000 m<sup>3</sup>/day
- **Turbines & biogas driven generators** provide up to 95% of the energy required for waste water & sludge treatment
  - Annual production of 21.9 GWh
  - On-site electricity generation via 6 GW cogeneration units fed by biogas
- **Revenues of \$169m over 22 years**



- **Sustainable reduction of energy cost and CO<sub>2</sub> emissions -30% to -70%**
- **Ste Genevieve at Nanterre**
  - 25 year concession
  - 13,500 tons of CO<sub>2</sub> avoided
  - 56% of heat provided by combined renewable energy sources (Degrés Bleus<sup>®</sup> & geothermal)



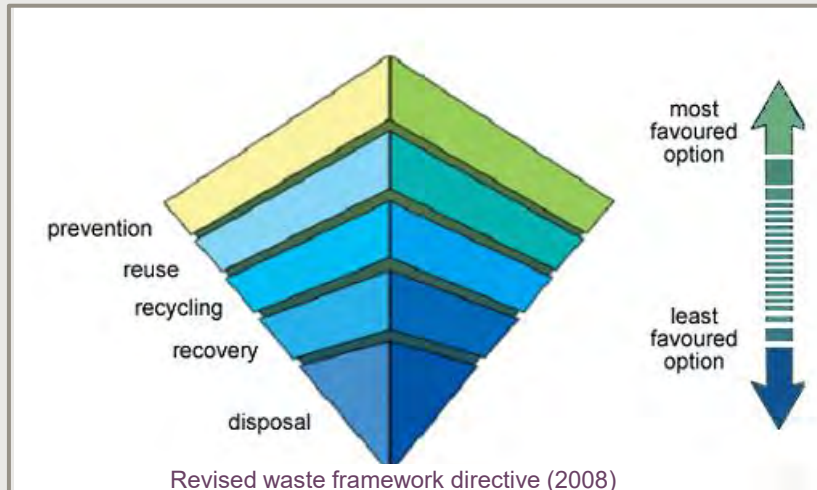
- A large **energy from waste** plant
  - Waste collection of 1.2 million people, 14 towns
  - 730,000 tons household waste treated per year
- **Energy production**
  - Supply of ~10% of CPCU,s steam: heating of ~50,000 houses equivalent
- **Revenues: €210m over 6 years**



# Preserving and recycling natural resources

New waste services for the city of tomorrow

## Market's attractiveness



- **2020 targets from Waste Framework Directive:**
  - 50% of municipal waste
  - 70% of non hazardous construction & demolition waste
- **Grenelle de l'Environnement (France):**  
75% of household packaging recycled by 2012  
(vs. 60% in 2005)

## GDF SUEZ' competitive skills

- **SUEZ ENVIRONNEMENT manages 350 sorting & recycling sites (6.7mt)**
- **Multi-material offers**
  - Metal, paper, cardboard, wood, plastic...
  - End of life product, work clothes, bottle to bottle, WEEE, vehicles, aircraft dismantling
- **Innovative sorting:** optical devices, ballistic separators
- Long-term **partnerships** with global industrial firms
- **Automated waste collection**
- **Site remediation**



**2017 waste treatment objective:  
ratio of 2 mt recovered for 1 mt eliminated**

# Preserving and recycling natural resources

## Some achievements

GDF SUEZ

BY PEOPLE FOR PEOPLE



### France Plastiques Recyclage: a worldwide benchmark

- 2010 target: process 40,000 tons of used bottles to generate 30,000 tons of recycled material
- Savings of 25–50% in virgin PET in bottle manufacturing



### Renault contracts

- Long-term partnership to develop end of life vehicles recycling
- 2015 target: 95% of recovery of all vehicles
- €100m investment over 5 years

# Preserving and recycling natural resources

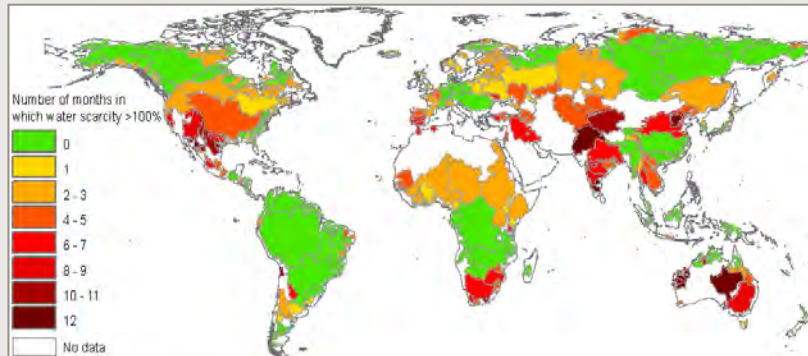
New water services for the city of tomorrow

GDF SUEZ

BY PEOPLE FOR PEOPLE

## Market's attractiveness

- Water scarcity has become a global challenge



Source: UNESCO – IHE, Septembre 2011

- Regulation in favor of water quality, resource and environment protection
- Fast growing smart metering market<sup>(1)</sup> for water, gas and electricity:
  - EU: €15bn in 2015, €42bn in 2020
  - US: €10bn in 2015
- Water meters<sup>(2)</sup> : 33m in 2015 vs.10m in 2010

## GDF SUEZ' competitive skills

- **1,200** drinking water production & **1,800** wastewater treatment facilities
- **Leak detection** and **reuse** to preserve water resource
- **Desalination** as an alternative resource: total capacity of 2.5 Mm<sup>3</sup>/day, >250 plants
- Managing **emerging micro pollutants** and **storm water**
- Rapid development in **smart water metering**
  - Turnkey services
  - For municipalities, individuals, real estate agents, industry and agriculture, resource and environment keepers



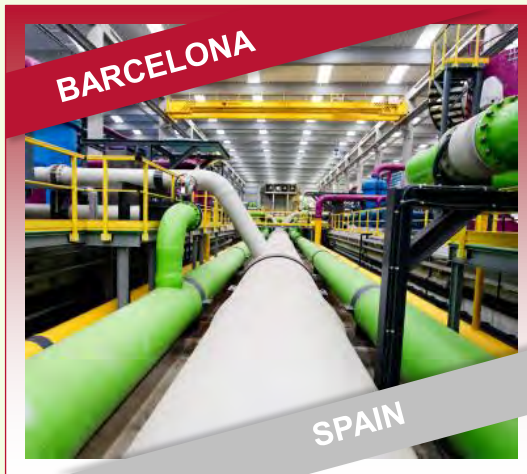
**3 year objective: 2m smart water meters > +150%**

(1) Source: company data

(2) Forecast for US and Europe

# Preserving and recycling natural resources

## Some achievements



### Key project figures

**Largest desalination plant** in Europe:

- capacity of 200,000 m<sup>3</sup>/day
- supply up to 2 million inhabitants

First reverse osmosis seawater desalination plant in Spain

Design, construction and operation contract



### Key project figures

**Largest European automated meter reading contract**

- 400,000 inhabitants on the island of Malta
- 250,000 automated water meters

# Being a strategic partner for cities

Offering innovative solutions through partnerships

GDF SUEZ

BY PEOPLE FOR PEOPLE

## Private Finance Initiative in the UK



Response to large waste infrastructure needs

**SUEZ ENVIRONNEMENT well positioned** with 7 PFI over 23

## Strong track-record of PPP for energy services



**45 PPP** worldwide  
**1st energy efficiency PPP** in France

## Chinese offers



**Water joint ventures** with New World and municipalities

**Industrial park multi-flow offers** (Shanghai, Chongqing, Wuhan)

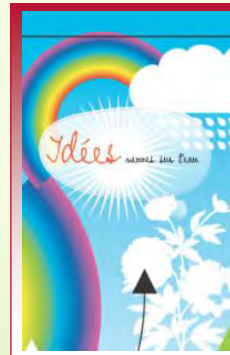
## Alliance contract in Australia



Utility management along with the client, **sharing the benefits**

**ADELAIDE water contract** (€420m, 10yr): JV between SUEZ ENVIRONNEMENT and Transfield Services

## New governance in water in France



**“Idées nouvelles sur l’eau”**: aligning governance to stakeholders expectations

**ORLÉANS & ROUEN**: dedicated companies with local authority & civil society representatives, committed to environmental performance

# A unique positioning for value creation in services

## Market trends

- Urban population to double by 2050
- Growing demand for recovery and energy efficiency solutions
- Increasing demand for information from consumers

## GDF SUEZ' positioning

- Presence along the entire value chain in energy and environment services
- Cutting-edge technologies
- Sustainable development performance
- Addressing municipal and industrial clients with strong European platform and worldwide positions
- Strong track record and experienced teams
- Major achievements ahead of market trends



The Germinon-Vélye  
wind farm, France

# SUSTAINABLE DEVELOPMENT

**Bruno BENSASSON**

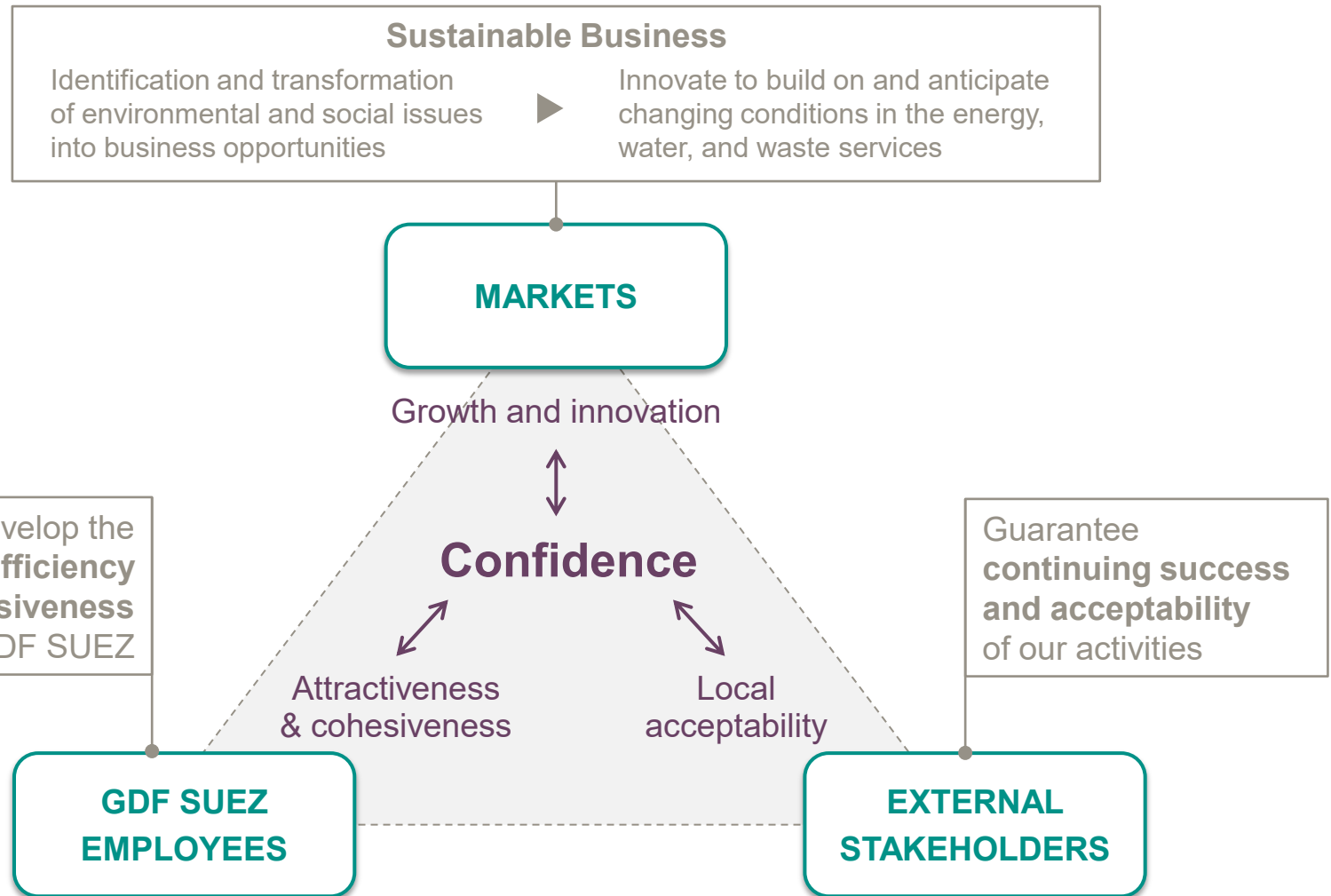
*Member of the Executive Committee in charge  
of Strategy and Sustainable Development Division*

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

# Sustainable Development Policy Orientations

Specific added value in GDF SUEZ' business model



# Full integration of Sustainable Development into Group's policy

## Assessment of non-financial risks for project decision

### SD Investment Criteria:

Embedded in the Commitment Committee's (CC) decision

### 10 Criteria:

Ethics, CO<sub>2</sub> eq emissions, CO<sub>2</sub> price impact on IRR, Energy Efficiency, Environmental ecosystem management, Cooperation with stakeholders, Social impact, Human resources, Local purchases, Health & Safety

## Governance

1 committee of the Board fully dedicated to "Ethics, Environment and Sustainable Development"

SD Steering Committee

SD Groupwide Network

# Sustainable Development Objectives

## RENEWABLE ENERGY



50% increase in renewable installed capacity

## BIODIVERSITY



Action plan for each sensitive site in the EU

## RECRUITMENT



100,000 new hires

## SAFETY



Frequency rate < 6<sup>(1)</sup>

## DIVERSITY



Women: 35% of high-potential employees<sup>(2)</sup>

## PROFESSIONAL TRAINING



2/3 Group employees trained each year

## EMPLOYEE SHAREHOLDERS



Employee shareholders: 3% of the capital

## Environmental & Social indicators verified by external auditors

18 indicators certified with reasonable assurance  
GDF SUEZ: highest level among the CAC 40<sup>(3)</sup>

21 indicators certified with moderate assurance

(1) Frequency rate: (number of accidents with leave/hours worked) x 1,000,000

(2) Other objectives: 1/3rd of new top executives; 25% of executives; 30% of the recruitments

(3) Source: Capitalcom, 2011

# Sustainable Business

## Renewable energy and energy efficiency

### Hydro projects

**Brazil:** Jirau (3,750 MW), Estreito (1,087 MW)

**France:** objective to increase the installed capacity by at least 1,500 MW by 2016

**Panama:** Dos Mares (118 MW)

**Peru:** Quitaracsa (112 MW)

### Wind projects

**France:**

**Onshore:** targeting 2,000 MW by 2016, (vs 998 MW installed capacity in June 2011)

**Offshore:** participation to the 3,000 MW tender offers in 2012

**Canada:** 286 MW installed capacity, 184 MW in construction

**Brazil:** 5 wind farms (145 MW)

### Smart cities and energy efficiency



1st "Energy performance contract"



Tramway



Public lighting

**Issue:** Climate change

**Business opportunities:** Energy efficiency and renewables

### Olympic Park Energy Center, London 2012

- **Cofely:** 40 year contract (build, finance and operate)
- **East London: Olympic Games, Stratford**
  - 2 power plants (natural gas and biomass)
  - Tri-generation (heating, cooling and electricity)
- **Production for 20,000 families:**

Heating	200 MW <sup>(1)</sup>
Cooling	65 MW <sup>(1)</sup>
Electricity capacity	30 MW <sup>(1)</sup>
- **Requirements for the final decision of Olympic Games Committee and Stratford City:**
  - Energy efficiency (tri-generation)
  - Low CO<sub>2</sub> emissions (biomass)
- **Investment:** €100m
- **Total revenues:** €1.5bn



(1) Final capacity

# Local Involvement: securing the acceptability

Hydropower plant project, Jirau, Brazil



## Comprehensive action plans to ensure the acceptability of the project

- Integrated into the Growth Acceleration Program in Brazil
- **Run of the river** hydro power plant. Small flooded area: 208 km<sup>2</sup>
- 33 environmental and social programs defined by **IBAMA** and approved by **FUNAI** (National Indian Foundation) – €520m
- Programs built according to **IHA Protocol** (International Hydropower Association), certified by **Bureau Veritas** (external verification) and audited regularly.
- Resettlement program of **525 families**, approved by IBAMA
- 22,000 direct and 40,000 indirect jobs created (at the peak)
- **Voluntary socio-environmental programs:** beyond the demands of the law (construction of Nova Mutum Parana, a complete city with 1,600 houses and all facilities, health and agricultural programs, social programs with reputable international NGOs – INMED, Instituto ProNatura, etc)

# Health & Safety management: very high level of requirement

**Group objective:** achieve a Frequency Rate of less than 6 in 2015<sup>(1)</sup>

**Example of E&P:** major industrial incident types that could occur:

- Fire and explosion on a large manned platform
- Leak in a pipeline including potential fire or explosion
- Blow-out on a drilling rig
- Major spill associated with transportation of hydrocarbons (offshore tanker or land transportation)
- Other potential incidents include the loss of a supply vessel, ship collision or a vehicular accident (including a helicopter crash)

➔ **Frequency Rate** (Global Gas & LNG): strong track record thanks to risk management (2009: 2.3, 2010: 1)  
All managers incentivized on HSE performances

## Gjøa project, Norway



**Health & Safety management:**

- High level of risks (inflammable, under pressure)
- Comply with local H&S regulations and Group's requirements
- H&S into the management of all activities
- H&S responsibilities of the manager and the employees (actions: skills development, improved maintenance organization by increasing supporting staff)

**Gjøa more specifically:**

- Location in high density ship traffic area
- Actions: implementation of updated ship collision study, drills for ship collision

(1) 2015 target, number of accidents with leave/hours worked x 1 million

# Climate change

Commitment to reduce greenhouse gas emissions

**Objective:** increase the installed capacity in renewable energy by 50% between 2009 and 2015

**Well on track** as of end of June: 15.6 GW installed, 5.6 GW under construction

## Polaniec project

- **The “Green Unit”:**  
190 MW
- 100 % fired from **biomass** (wood and agricultural biomass).  
The world’s biggest biomass-fired unit.



- Reduction in CO<sub>2</sub> emissions of 1.2 million tons per year

## Rodenhuize project

- Repowering of a coal power plant by a full **biomass** unit (wood pellets):  
180 MW
- Reduction in CO<sub>2</sub> emissions of  
1.2 million tons per year
- Reduction of 90% of NOx emissions and dust



# Preservation of biodiversity

Commitment to ensure the appropriate integration of installations into their environment

**Objective:** Implement a biodiversity action plan at each sensitive site in the European Union by 2015

## Eridan project: Natural gas transport in France

- **Public debate (2011)** about the "route" plan
- GRTgaz "**Charter for a sustainable project**": compliance with the laws, current practices within GRTgaz and voluntary actions



- **Specific biodiversity management** resulting from the public debate and the Charter:
  - comprehensive studies on the local fauna and flora by experts and environmental NGOs – collected data shared with the local authorities
  - Re-forestation: according to specific requirements excluding any non-local species and avoiding the introduction of invasive species
  - Cooperation with several reputable external organizations in order to ensure compliance with good biodiversity practice

# Preservation of resources

Re-energy project, Sita-Roosendaal, The Netherlands

Industrial responses to the scarcity of natural resources and environmental issues

## Re-energy project, Sita-Roosendaal, Baviro EfW plant



**Non-hazardous waste treatment and recovery plant**  
(circular economy)

Among the most effective ones in Europe

### Environmental performance

Waste: 291,000 tons/year (=1.9 million inhabitants)

### Electricity generation

275,000 MWh/year

(=electricity consumption of 70,000 households/year)

### Heat production for greenhouses

saving 3.5 million m<sup>3</sup> natural gas/year

Residual heat used in the eco-neighbourhood in construction

- **Synergies** within GDF SUEZ (Sita, Fabricom, Electrabel)
- **SUEZ ENVIRONNEMENT** evolves from "supplier of environmental services" to "**manager of water and waste cycles**"

# Full integration of sustainable development into GDF SUEZ strategy

## GDF SUEZ model

- **Sustainable business development**
- **Benchmark utility** providing industrial solutions for environmental and energy challenges, with a high level of H&S management and commitment to local acceptability

## Value creation

- Contribution to growth with **sustainable business solutions**
- Contribution to securing project return by appropriate **non financial risk management**

## Undergoing works: additional ambitious SD objectives

- Widening dated and quantified objectives in economic, environment and social areas



**Investor Day**

December 9, 2011

# INDUSTRIAL DEVELOPMENT & LARGE PROJECTS

**GDF SUEZ**

BY PEOPLE FOR PEOPLE



Marafiq, Saudi Arabia

# OPTIMIZING VALUE CREATION

**Isabelle KOCHER**

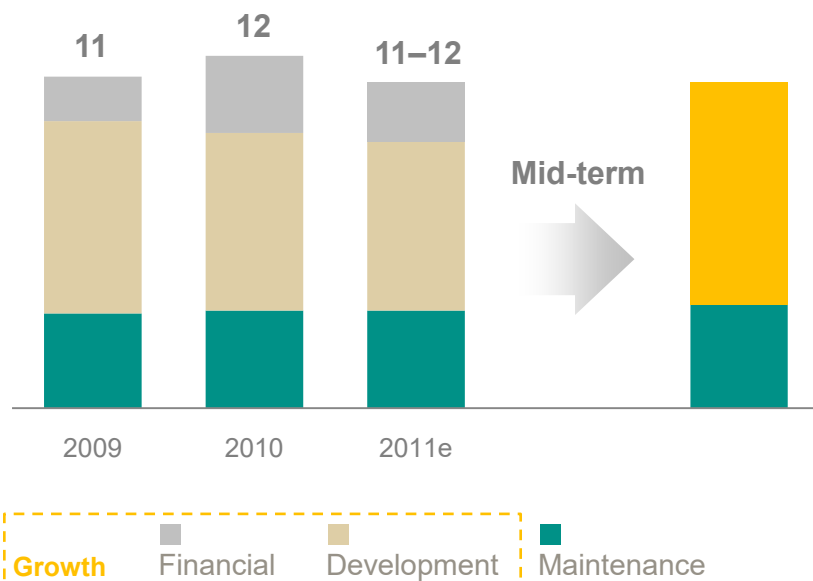
*Executive Vice President, in charge of Finance*

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

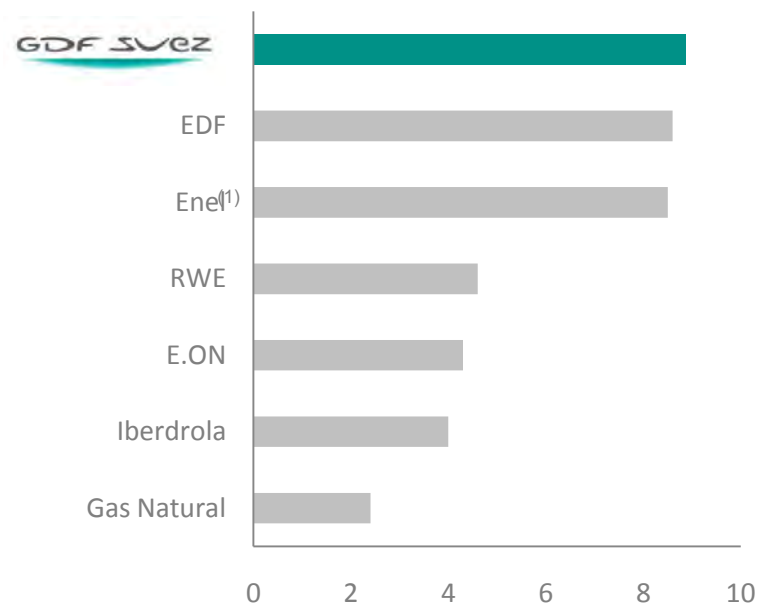
Investor Day

# Strong cash generation and ability to invest

Indicative gross Capex profile  
(in €bn)



EBITDA H1 2011  
(in €bn)



(1) Reported EBITDA excluding non-recurring adjustment

# Capex designed to generate a profitable growth, an attractive shareholder remuneration with a solid financial structure

**Attractive shareholder  
remuneration**

**Solid financial structure**

Net debt/EBITDA  $\leq$  2.5x  
over 2011–2013

“A-category” rating

**PROFITABLE  
GROWTH**

**Sizeable Capex envelope**

# Ability to be highly selective



## Experienced teams to select the best projects

Local business development teams

Engineering teams

Price & market modeling analysts

Finance & legal specialists

# Strict investment criteria

A high number of investment options

1

## Strategic criteria

Balanced investment mix by activity and geography  
Increasing exposure to fast growing markets

3

## Financial criteria

Clear risk/return profile  
Rapid positive contribution to free cash flow and net income  
Flexible financing policy  
Steady results ramp-up on majority of committed Capex

## Focus on value creation

2

## Risk criteria

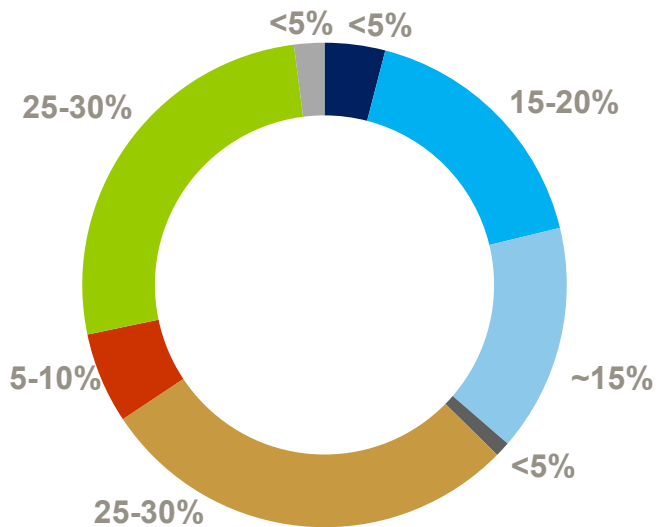
Diversified project portfolio to limit global risk  
Balanced profile between contracted and merchant projects  
Partnerships crystallizing value and limiting risk  
Strict project monitoring

# Strategic criteria

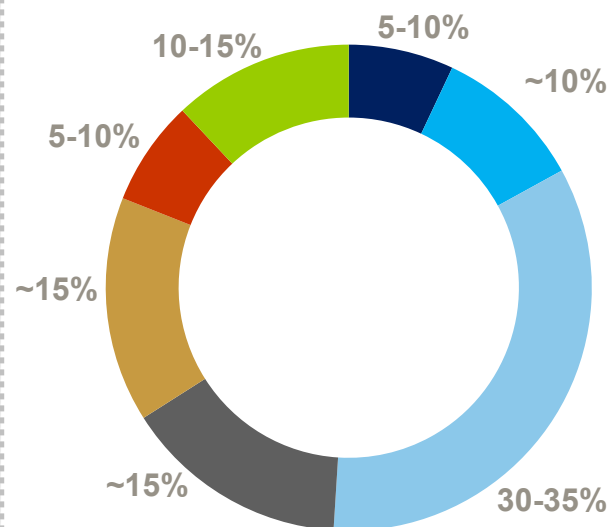
Focus on fast growing markets

## Indicative Capex breakdown over 2012–2017

### MAINTENANCE CAPEX

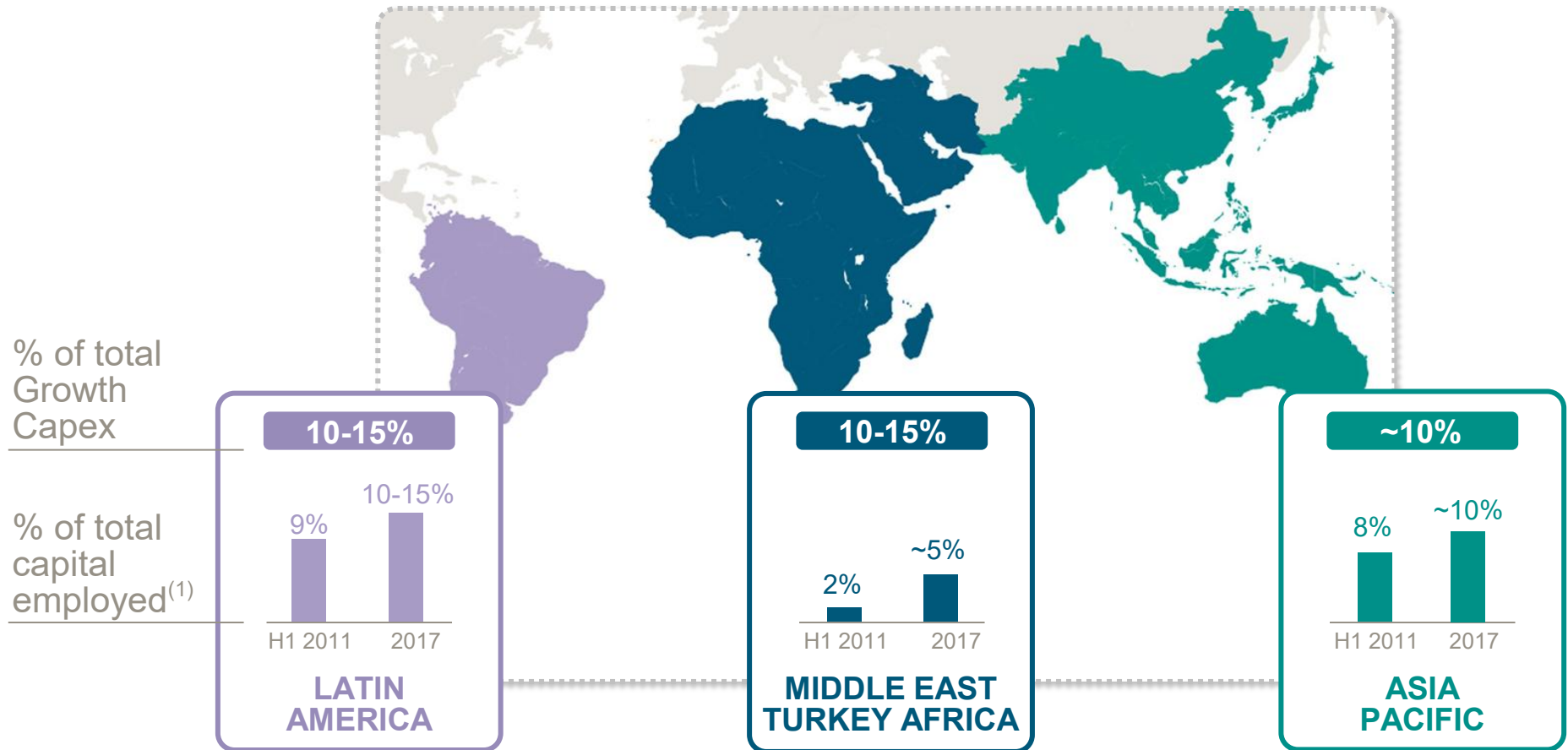


### GROWTH CAPEX



- France Power
- Europe Power
- International Power
- E&P
- Infrastructures
- Services
- Environment
- Others

# More than 30% of Growth Capex to be spent in fast growing countries over 2012-2017



(1) H1 2011: as of June 30 ; 2017: estimated as of year end

# Risk criteria

## Managing project risks

Global risks:		MASTERING	HEDGING	POTENTIAL SHARING
COUNTRY			Premium integrated into WACC	<input checked="" type="checkbox"/>
CURRENCY			Complementary policy at entity and corporate levels	<input checked="" type="checkbox"/>
Project risks:				
DESIGN & CONSTRUCTION	<b>Transferring risk, to a large extent, to global or regional suppliers</b> through EPC <sup>(1)</sup> contracts to benefit from: <ul style="list-style-type: none"> <li>- Local expertise</li> <li>- Global network</li> <li>- Dedicated know-how</li> </ul>		Contingencies	<input checked="" type="checkbox"/>
EXTRA FINANCIAL	<b>Part of investment decision</b> <b>Analysis through 10 key environment, social and governance indicators</b> <b>Dedicated socio-environmental programs</b>			<input checked="" type="checkbox"/>
COST & PERFORMANCE	Operational know-how			<input checked="" type="checkbox"/>
REVENUE	Favoring long term commitment through PPA and regulated activities		<b>Progressive hedging on activities with market exposure</b>  <b>Business-specific risks are captured separately through <math>\beta</math> within the WACC</b>	<input checked="" type="checkbox"/>

(1) Engineering, Procurement and Construction

## Following investment decisions

- Project monitoring at **Business line and unit level**
- Frequent updates for the **Management Committee** for large projects
- Look-back process

## Project management risk as a key Group risk

### Indicators

- Quality
- Cost & schedule
- Return on capital

### Levers

- Project portfolio balance
- Reinforced control at inception
- Strengthened steering during development

Minimal spread over project's WACC

$$\text{IRR} > \text{WACC} + 200\text{bps}$$



Focus on  
value creation

Positive contribution to:

**Free cash flow  
year 1 after COD**

Positive contribution to:

**Net income Group  
share year 2 after COD**

**“Bankability”**

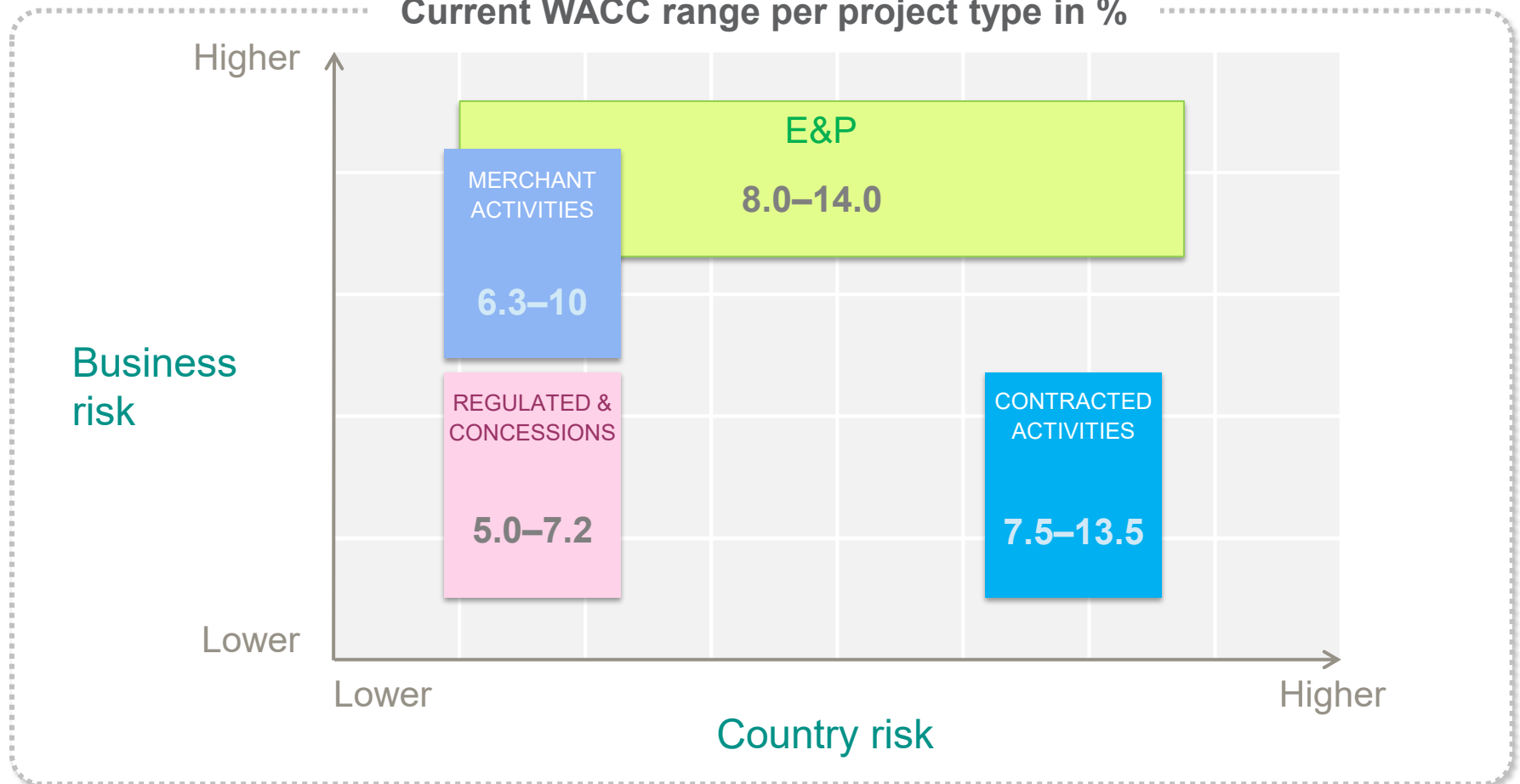
Demonstration of the possibility  
and cost to access external resources

**420bps of average IRR spread over WACC for projects approved in 2010,  
increasing by 30bps vs. 2009**

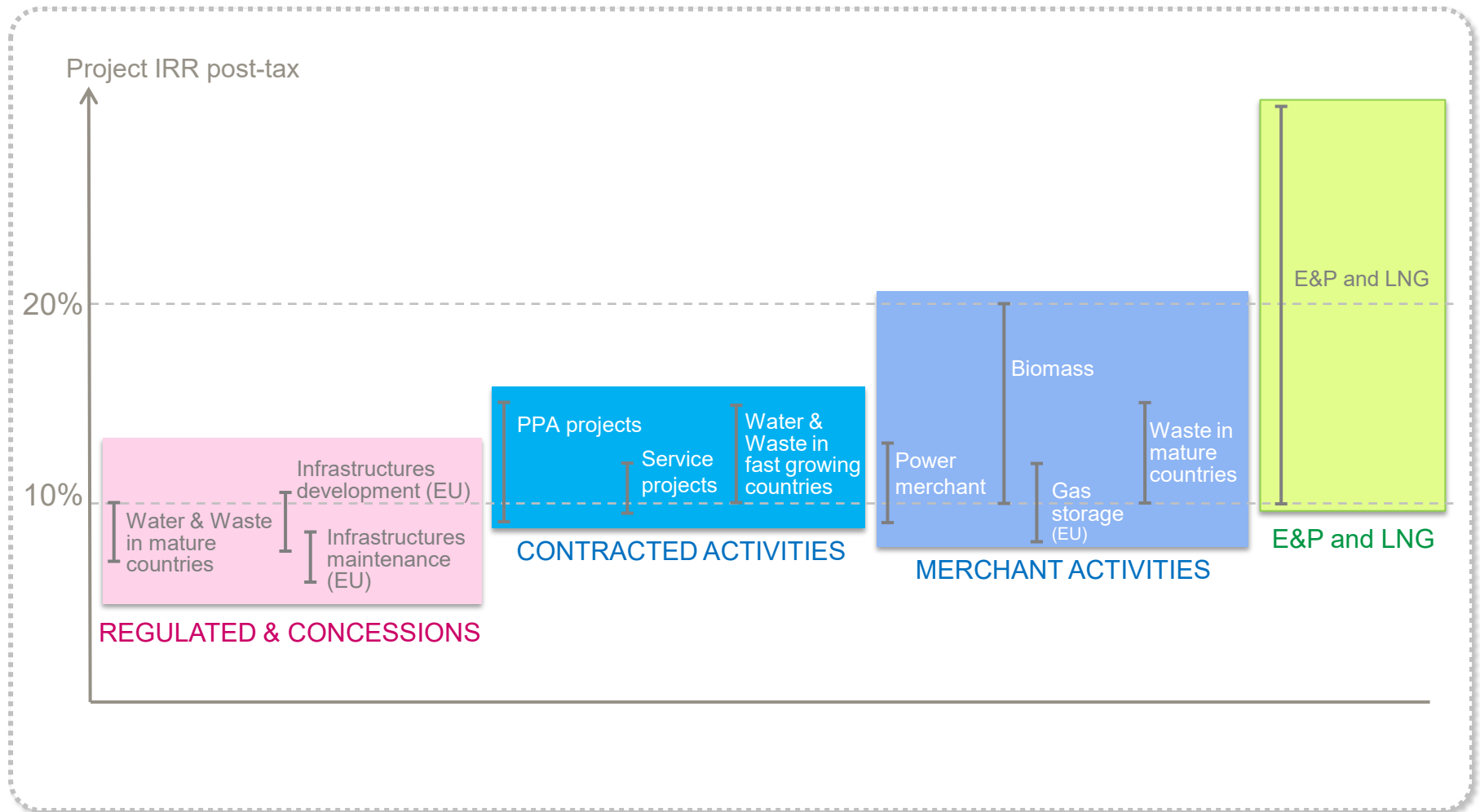
# GDF SUEZ WACC assessment

Clear risk/return profile

Current WACC range per project type in %



# IRR overview on current portfolio of projects



## Selection of the best partners

### Partners who bear specific industrial risks

- **Sharing industrial skills**
- **EPC contractors**
- **Long-term relationship**

### Partners who share with us risks and return

- Empowering relationship with local stakeholders to **mitigate political / regulatory risk**
- Providing **sponsorship** to enter new markets

### Partners who contribute to financing

- Limitation of capital intensity and exposure to financial risk
- Financing & **speeding-up growth** on core activities for the Group
- Mitigation of country risk (Export Credit Agencies)

### Global partnership with CIC

Joint investment opportunities, financing cooperation and commercial sponsorship

## STRICT GOVERNANCE RULES

# Flexible financing policy to deliver value creative projects

## Corporate finance & financing upsides

- Attractive financing costs thanks to Group's strong financial structure
- Expected financing synergies of €72m<sup>(1)</sup> at IPR level and €40m<sup>(1)</sup> at Group level following integration

## Partnerships to speed up growth

- GRTgaz with CNP/CDC (25%)
- E&P with CIC (30%)

## Project financing: limiting exposure to equity share

32 project financings closed since October 2008

### Project finance vs corporate finance:

- Emerging markets
  - Third party presence mitigating political risks
  - Predictable cash flows
  - Stable contractual & regulatory framework
- Typically Middle East & Asia

### Levers:

- High leverage ratios to optimize returns (75–80% / 25–20%)
- Longer tenors
- Internal skills

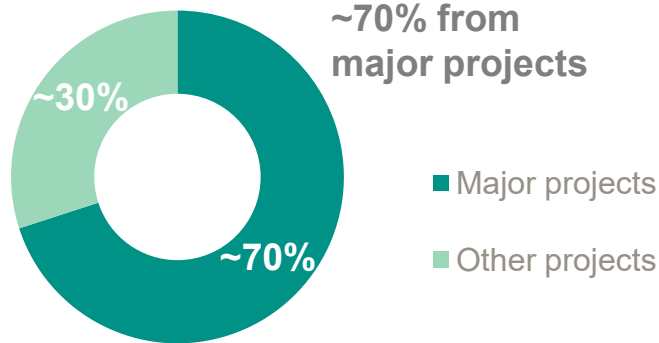
(1) On a full year basis

# Predictable growth from projects portfolio

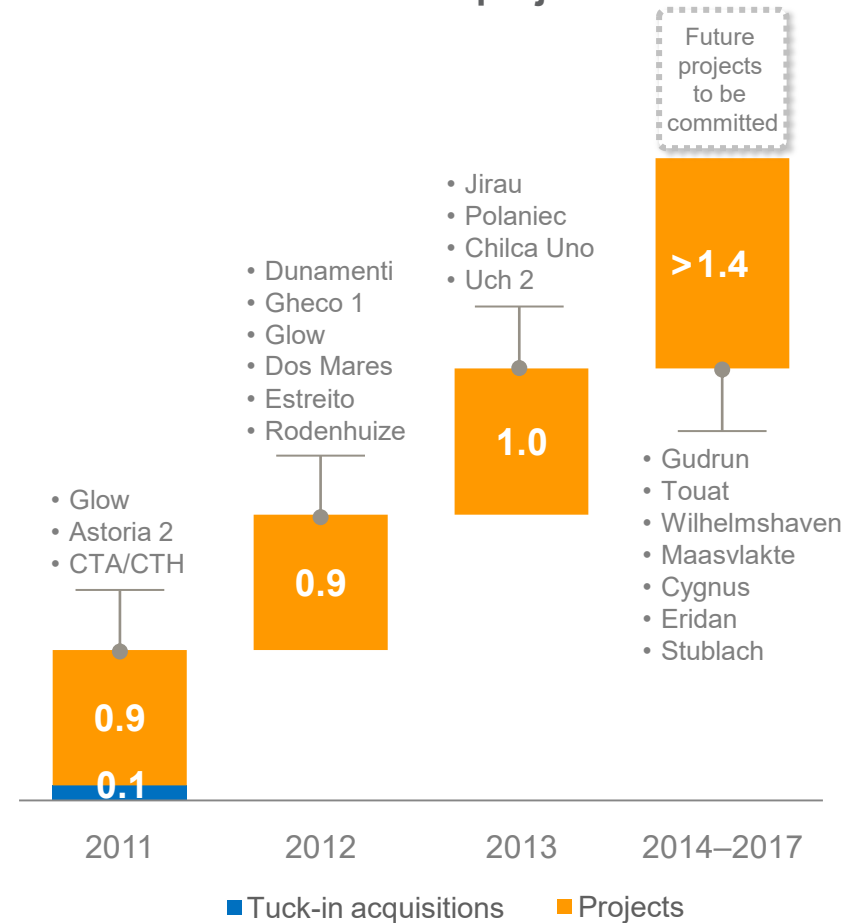
~70% of committed growth generated by major projects (Capex > €250m<sup>(1)</sup>)

Balanced growth between activities

Estimated EBITDA contribution from committed projects 2014–2017



Estimated EBITDA build-up from committed projects



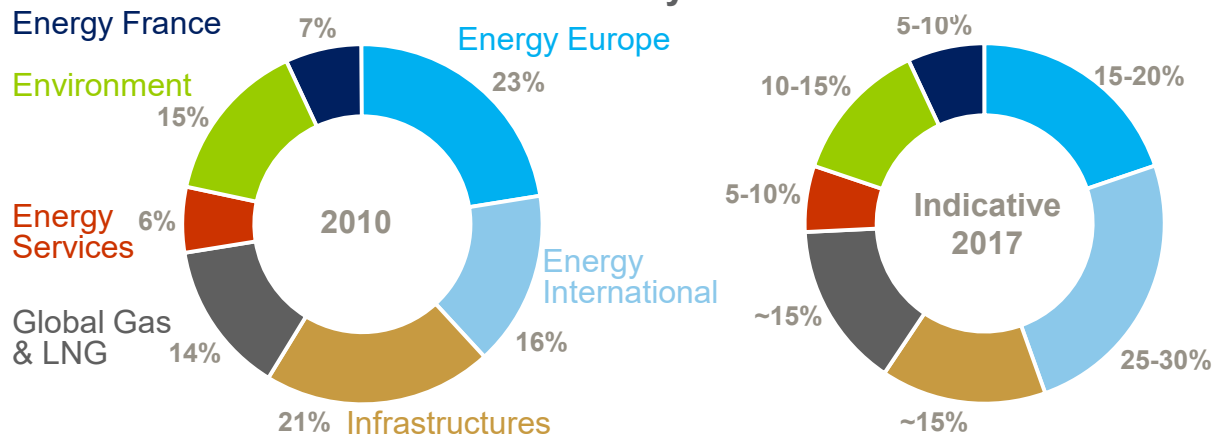
Committed as of 06/30/11  
(1) GDF SUEZ share

# Preservation of a balanced business mix

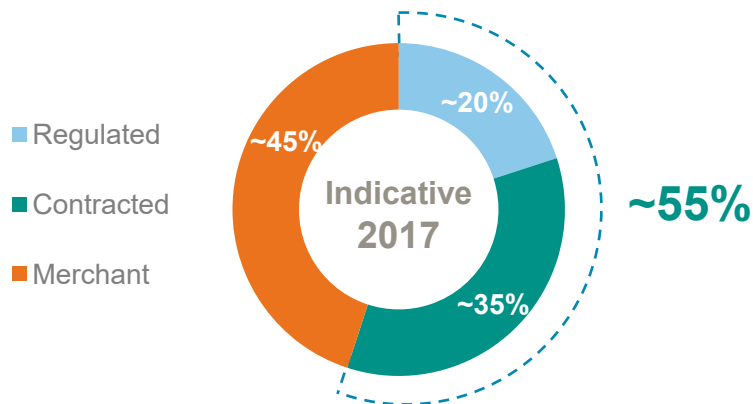
Growth levers in each business line

Maintaining more than 50% of EBITDA from contracted and regulated activities

EBITDA breakdown by business line



EBITDA breakdown by contract status



- **Experienced financial organization on project management and commitment to continuous improvement**
- **Strict investment criteria**
- **Highly diversified project portfolio to capture market value and limit risks**
- **Ambitious development plan focused on:**
  - Speeding up development in fast growing markets
  - Strengthening integration and optimizing position in mature markets
  - Developing activities generating secured returns and recurring cash flows



Gjøa, Norway

# CONCLUSION

**Jean-François CIRELLI**  
*Vice-Chairman and President*

INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS

Investor Day

# Business model designed for sustainable value creation

## 16 major projects ongoing...

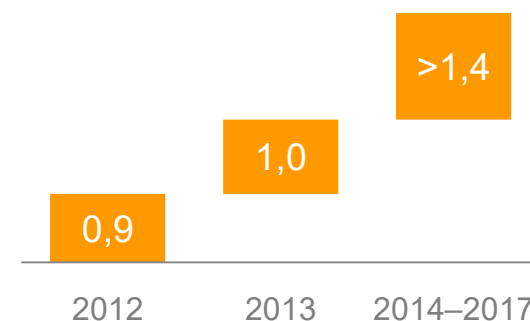
As of 06/30/2011

COD

CTA/CTH (coal plant)	0.3 GW	Chile	2011	
GLOW (gas/coal plant)	0.3 GW	Thailand	2011	
ESTREITO (hydro plant)	1.1 GW	Brazil	2011-12	
GHECO 1 (coal plant)	0.7 GW	Thailand	2012	
JIRAU (hydro plant)	3.8 GW	Brazil	2012-2014	
CHILCA UNO (gas plant)	0.3 GW	Peru	2013	
UCH 2 (gas plant)	0.4 GW	Pakistan	2013	
WILHELMSHAVEN (coal plant)	0.7 GW	Germany	2013	
MAASVLAKTE (coal plant)	0.8 GW	Netherlands	2013	
STUBLACH (gas storage)	400 mcm cap.	UK	2013-18	
GUDRUN (E&P)	10 Mboe/yr <sup>(1)</sup>	Norway	2014	
CYGNUS (E&P) <sup>(2)</sup>	14.2 Mboe/yr <sup>(1)</sup>	UK	2015	
TOUAT (E&P)	14.8 Mboe/yr <sup>(1)</sup>	Algeria	2015	
ERIDAN (gas transport)	220 km pipe	France	2016	
JANGKRIK (E&P) <sup>(2)</sup>	4.2 Mboe/yr <sup>(1)</sup>	Indonesia	2016	
BONAPARTE (E&P-LNG) <sup>(2)</sup>	20 Mboe/yr <sup>(1)</sup> 2 mt/yr LNG prod.	Australia	2018	

## ... to deliver high return rates

- More than **€3.3bn** additional EBITDA from **2012 to 2017**, coming from committed Capex<sup>(3)</sup>



- Target spread between project IRR post-tax and WACC of **at least 200bps**

(1) Average production over the field lifetime / estimated plateau (2) Before FID (3) Assets under construction as of 06/30/11: €11.4bn

## Unique and experienced human capital

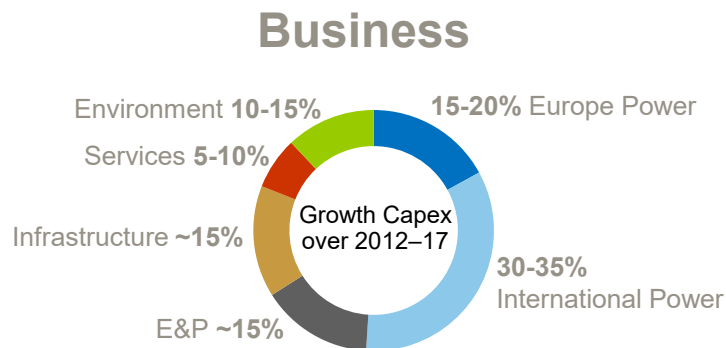
- Strong engineering (~10,000 people) and project development teams (~300 people)
- Unparalleled skills to develop, build and operate large projects

## Size as a competitive advantage

- Generate cost savings through global sourcing with key suppliers
  - Price per set of gas turbines on Jirau lowered by 16%
  - Pooling the needs for capital spare parts for gas turbines in the Netherlands and in France: 30% price discount obtained
- Successful access to tenders
  - High GDF SUEZ & IPR win rate over the recent years: 60%

# Security and visibility at the heart of GDF SUEZ' business approach

## Highly diversified portfolio of projects around the world



## Geography

>**30%** of growth Capex in fast growing countries<sup>(1)</sup>

## Fuel mix

Gas and renewables represent more than **80%** of capacity under construction<sup>(2)</sup>

## A balanced business mix

~**55%** of 2017 EBITDA from contracted and regulated activities,  
~**45%** from merchant

## Safety and health as a priority

Targeting a frequency rate <**6**<sup>(3)</sup>

(1) Over 2012-2017 (2) As of 06/30/11

(3) 2015 target, number of accidents with leave/hours worked x 1 million



**Investor Day**

December 9, 2011

# INDUSTRIAL DEVELOPMENT & LARGE PROJECTS

**GDF SUEZ**

BY PEOPLE FOR PEOPLE

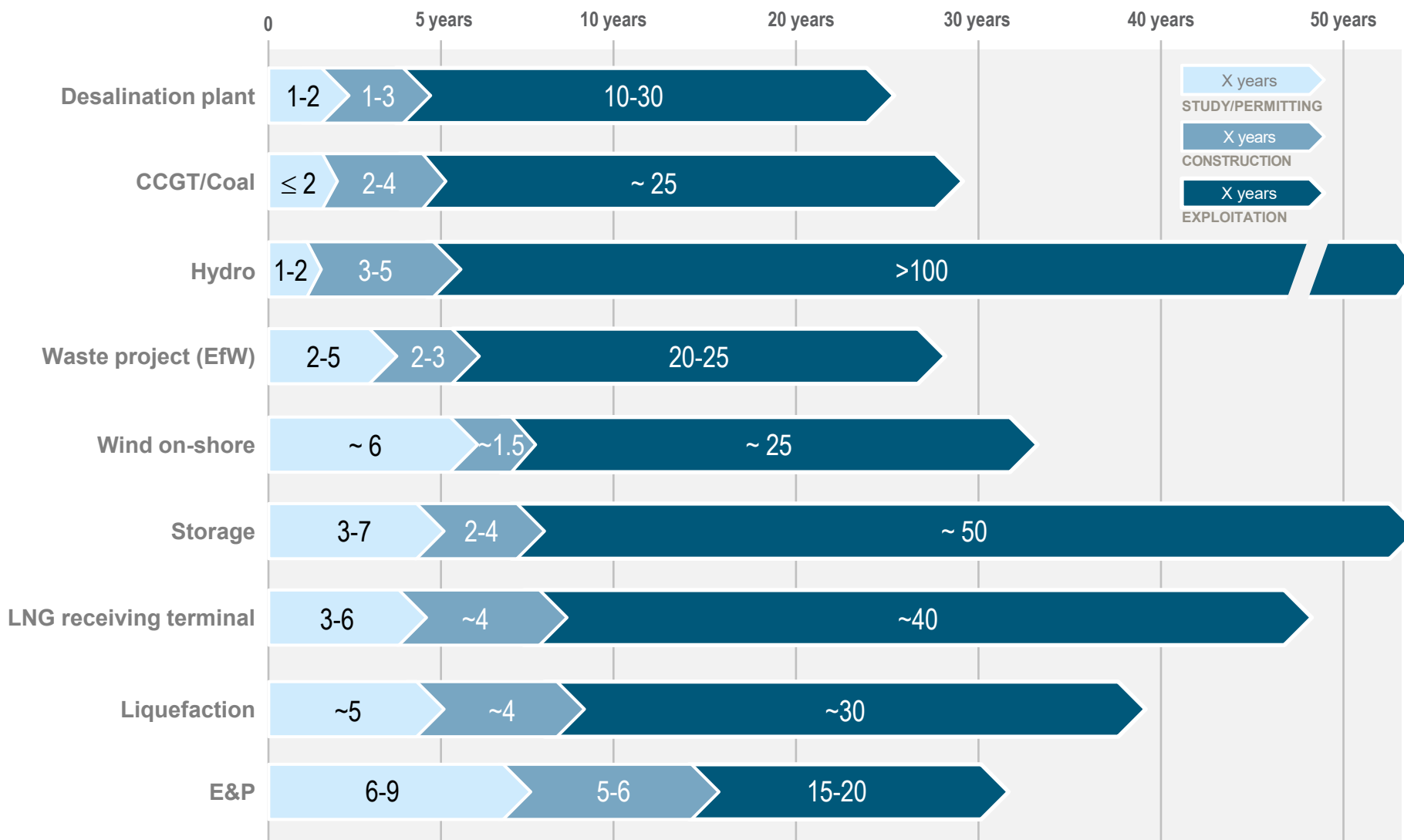


# APPENDICES

**INDUSTRIAL  
DEVELOPMENT  
& LARGE PROJECTS**

**Investor Day**

# Diversified horizon on long-term projects



## **Committed Capex**

Development Capex on projects on which expenses have begun or on which irrevocable commitments have been taken towards suppliers or clients

## **Development Capex**

Tangible or intangible Capex aimed at increasing total capacity of the Group

## **Maintenance Capex**

Tangible or intangible Capex aimed at keeping production assets in good working order without increasing total capacity of the Group

## **Financial capex**

Acquisition of shares in a company

## **Growth Capex**

Development Capex + Financial Capex

## **Gross Capex**

Total Capex (Development + Maintenance + Financial) before disposals

## **BCM**

Billion Cubic Meters

## **CC**

Commitment Committee

## **CCGT**

Combined Cycle Gas Turbine

## **CDS**

Credit Default Swap

## **CHP**

Combined Heat and Power

## **COD**

Commercial Operation Date

## **EfW**

Energy from Waste

## **EPC**

Engineering, Procurement & Construction

## **ESG**

Environmental, Social and Governance

## **FEED**

Front End Engineering and Design

## **FFO**

Funds From Operations

## **FID**

Final Investment Decision

## **IPP**

Independent Power Producer

## **Mboe**

Million Barrels of Oil Equivalent

## **Mtpa**

Million Tons Per Annum

## **Nox**

Nitrogen oxide

## **O&M**

Operation & Maintenance

## **PFI**

Private Finance Initiative

## **PPA**

Power Purchase Agreement

## **PPP**

Public Private Partnership

## **RAB**

Regulated Asset Base

## **WEEE**

Waste Electrical and Electronics Equipment

## **WWTP**

Waste Water Treatment Plant