

Chilca Uno power station, Peru



MAIN PROJECTS UNDER CONSTRUCTION

INVESTOR DAY

December 6, 2012

GDF SUEZ

BY PEOPLE FOR PEOPLE

Update of main projects under construction

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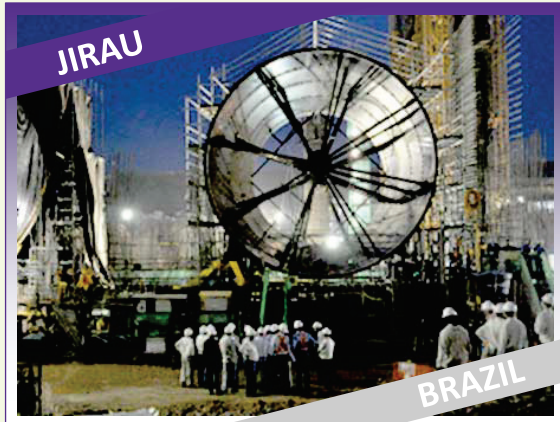
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Jirau, Brazil

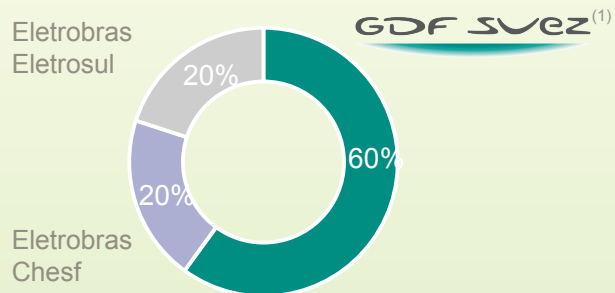
Among the largest hydro plants in the world

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Equity ownership



3rd largest hydro plant in Brazil with 3,750MW (at 100%)

Project optimization through engineering innovation

- New project location, 9.5 km downstream, in wider section of river resulted in significant reduction of excavation

Major project in a remote area

- 50 of the biggest bulb turbines in the world
- Stators from China: 230 tons; 10.2 m diameter
- Transformers: 180 tons
- 2 million m³ of concrete (eq. to construction of 24 Maracanã stadiums)

Strong water flow, x3 the flow of the Danube

Environmental operation license issued in October 2012

Clean Development Mechanism registration underway⁽³⁾

Contract: 73% contracted under 30-year PPAs – indexed to inflation – balance of energy to be sold by shareholders

Time schedule

COD first units: Early 2013, 100% of assured energy expected in H1 2014

Financial indicators

Total investment: BRL 15.4bn⁽²⁾; including over BRL 1bn in 33 socio-environmental programs

Debt: BRL 9.5bn loan from BNDES⁽⁴⁾ and commercial banks

PPA duration: 30 years

Options to create additional value:

Additional assured energy (90 aMW)

Additional long-term tax incentives in the region

(1) Subject to completion of the acquisition of Camargo Correa's 9.9% share expected in Q4 2012

(2) CAPEX to completion, including inflation up to June 2012, not thereafter, it includes the receipt of certain tax credits (PIS/Cofins), excludes interest during construction

(3) Registration with the United Nations Framework Convention on Climate Change (UNFCCC) (4) Brazilian Development bank

Trairi, Brazil

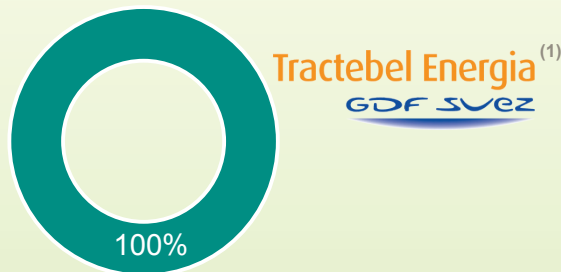
Large wind projects delivering CDMs

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Equity ownership



Capacity:	115MW (at 100%)
Fuel:	Wind
Description:	Large wind project (total of 50 turbines) consisting of 4 wind farms (Trairi, Fleixeiras I, Guajirú, Mundaú) located in the Ceará State. Tractebel Energia's first project that sells 100% of output to the free market.
Supplier:	Siemens
Contract:	Expected output from wind farms to be sold on the free market, with 100% sold forward for 3-4yrs

Time schedule

Start of construction:	2011
Expected COD:	2013

Financial indicators

Expected Capex:	BRL 490m
Financing:	70% debt financed by BNDES ⁽²⁾

(1) GDF SUEZ holds 68.7% of Tractebel Energia (2) Brazilian Development bank

Laja, Chile

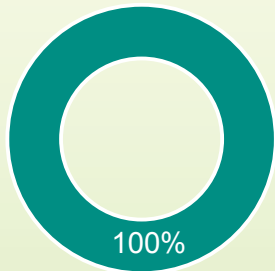
First Kaplan bulb hydro power plant in Chile

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Equity ownership



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Capacity: 34MW, 2 turbines

Fuel: Hydro

Description: Addition of run of the river hydro plant diversifies our generation portfolio in Chile with renewable energy. Currently in the process of registering for CDM (Clean Development Mechanism). Expected emission reduction of at least 105,000 ton/year of CO₂.

Suppliers: Turbines supplied by Dong Fang

Contract: 12-year PPA

Time schedule

Start of construction: 2009

Expected COD: 2013

Financial indicators

Financing: USD 82m loan from European Investment Bank

GNL Mejillones second phase, Chile

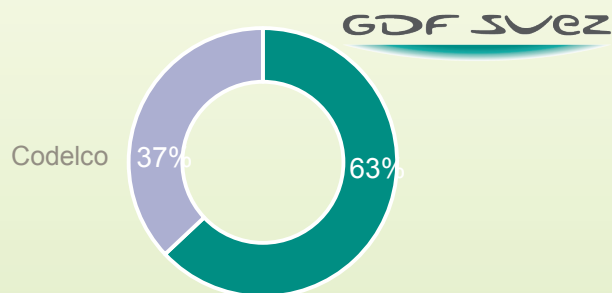
Enhanced gas storage capability

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Equity ownership



Capacity: 175,000m³ (at 100%)⁽¹⁾

Description: Second phase of the GNLM project (on-shore tank), replacing a 155,000m³⁽¹⁾ floating storage unit used in phase 1.

The new facility significantly reduces the cost of renting floating storage and operating costs.

Commercial: Currently negotiating long-term Terminal Use Agreements (TUA) with clients such as large mining companies and E-CL, for services such as cargo unloading, storage and re-gasification

Time schedule

Expected COD: 2013

Financial indicators

Expected capex: USD 200m

(1) Net operational capacity

Ilo 2, Peru

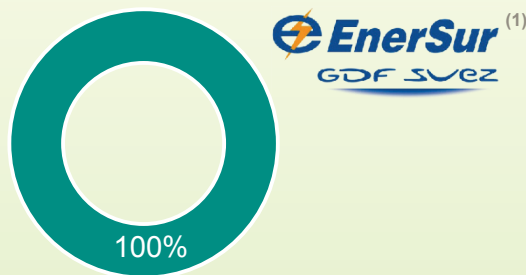
Building peaking capacity in Peru

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Equity ownership



Capacity: 564MW (at 100%)

Fuel: Fuel oil

Description: Greenfield project in the city of Ilo, Southern Peru. Government decided to promote investment in cold reserve generation in the context of potential energy shortages in the Northern and Southern areas of the country and a decrease in decentralized (outside of Lima) generation capacity. Option to convert the plant to combined cycle upon arrival of a Government planned natural gas pipeline, increasing its capacity to 775 MW. EnerSur is a key player in Southern Peru.

Suppliers and equipment: GE – Santos, 3x dual fuel OCGTs

Contract: PPA contract for 460 MW for 20 years

Time schedule

Start of construction: May 2011

Expected COD: 2013

Financial indicators

Expected Capex: USD 220m

(1) GDF SUEZ holds 61.7% of EnerSur

Quitaracsa, Peru

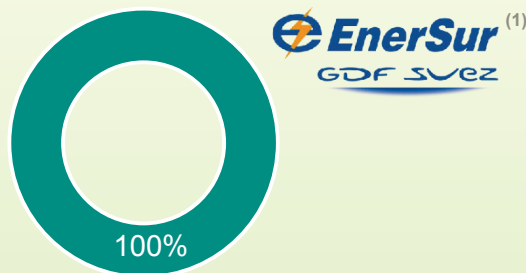
Balancing our portfolio in Peru

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Equity ownership



Capacity: 112MW (at 100%)

Fuel: Hydro

Description: Hydroelectric power project located in the Ancash Region (500 km to the north east of Lima) that will be part of the National Electricity Grid. The plant balances our existing portfolio with hydro capacity to capture commercial and operational synergies, and take advantage of long term attractive contract conditions for hydro plants.

Suppliers: Rainpower, STE Energy and JME

Contract: Fully contracted 10-12-year PPA

Time schedule

Start of construction: Dec 2010

Expected COD: 2014

(1) GDF SUEZ holds 61.7% of EnerSur

Dos Mares, Panama

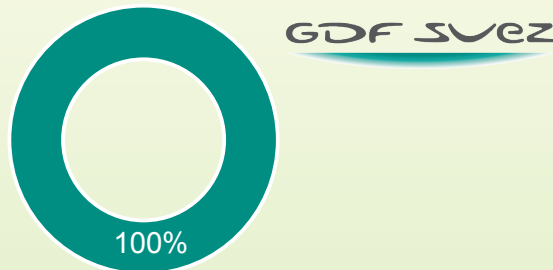
Group's first hydro project in Central America

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Equity ownership



Capacity: 118MW (59MW in operation), 3x2 turbines

Fuel: Hydro

Description: Three run of the river hydroelectric plants in the Chiriquí region. Two of the facilities have already been commissioned. This investment diversifies our 332 MW-thermal portfolio in Panama⁽¹⁾ with renewable energy in response to rising demand.

Suppliers: Turbines supplied by Alstom/Areva, civil works by Odebrecht

Contract: Fully contracted

Time schedule

Start of construction: 2008

COD: Phased commissioning from 2010 to early 2013

Financial indicators

Expected Capex: USD 460m

Financing: European Investment Bank USD 211m

PPA duration: 10 years

(1) At 100%, as of 6/30/2012

Tihama extension, Saudi Arabia

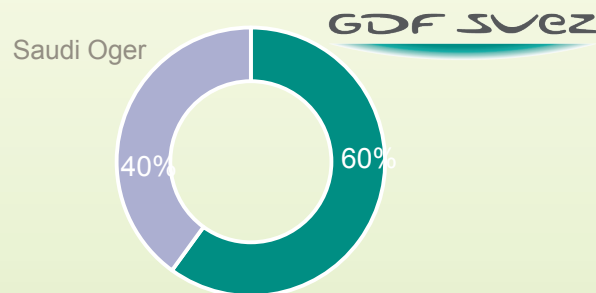
Building on strong relationship with existing clients

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Equity ownership



Capacity: 532MW extension to the existing 1,063MW Tihama power project (at 100%)

Fuel: Natural gas

Description: Expansion of 532 MW and 868 tons/hr of steam at three of Tihama's four sites - Ju'aymah, Shedgum and Uthmaniyah. Technology used for the expansion will ensure additional power output with lower carbon footprint. Competitive bid due to economies of scale realised from organic expansion.

Suppliers: EPC contractor Hyundai Heavy Industries, gas turbines supplied by General Electric

Contract: Long-term sales agreement through to 2026

Time schedule

Start of construction: 2012

Expected COD: phased commissioning in 2014/2015

Financial indicators

Expected Capex: USD 430m

Financing: 80% debt financed from a club of local banks

Barka 3 & Sohar 2, Oman

Delivering new capacity in Oman



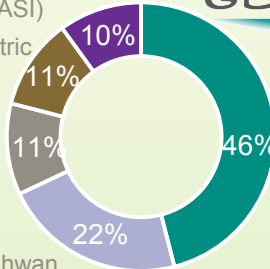
Equity ownership

Public Authority for Social Insurance (PASI)

Shikoku Electric Power Co.

Sojitz

Multitech (Bahwan Engineering Company)



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- Capacity:** 2 x 744MW, 494MW at Sohar 2 currently operational (at 100%)
- Fuel:** Natural gas
- Description:** Greenfield CCGT plants, Barka 3 is located 50 km northwest of Muscat; Sohar 2 is located 250 km northwest of Muscat. Long term Tolling Agreement supported by Government Guarantee, consistent with regional growth strategy, building on a strong existing position in this market.
- Suppliers:** EPC consortium of Siemens and GS Engineering & Construction of South Korea, Equipment: each plant has 2x dual fuel Siemens gas turbines and 1 Siemens steam turbine
- Contract:** 15-year PPA with the Oman Power and Water Procurement Company

Time schedule

Start of construction: 2010

Expected COD: 2013

Financial indicators

Expected Capex: USD 1.7 billion

Financing: 72% debt financed

Riyadh IPP, Saudi Arabia

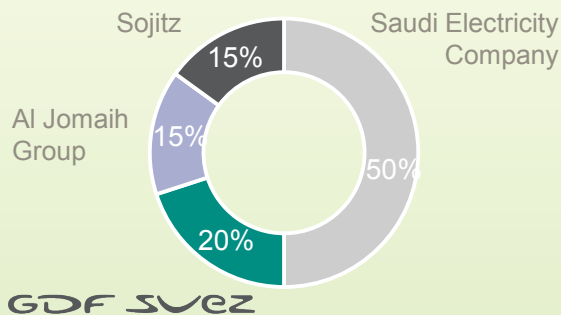
Strengthening our position in a key GCC market

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Equity ownership



Capacity:	1,730MW, currently 604 MW operational (at 100%)
Fuel:	Natural gas
Description:	Greenfield combined cycle power plant in two blocks, located approx. 60km from Durma. Long term Tolling Agreement supported by Government Guarantee
Suppliers:	EPC contractor Hyundai Heavy Industries (HHI). Gas turbines supplied by General Electric
Contract:	Fully contracted for 20 years by the Saudi Electricity Company

Time schedule

Start of construction:	2010
Expected COD:	2013

Financial indicators

Expected Capex:	USD 2.1 billion
Financing:	73% debt financed

Uch 2, Pakistan

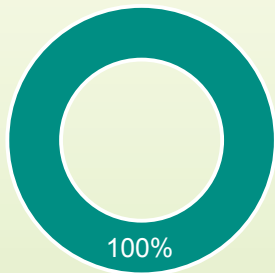
Competitively prices power from a domestic fuel source

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Equity ownership



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Capacity: 375MW

Fuel: Natural gas

Description: CCGT extension to the existing Uch 1 plant located in Balochistan, Pakistan. Long term Tolling Agreement supported by Government Guarantee, taking fuel from a dedicated gas field. Option taken to increase power generation capacity in a country with significant shortage of power generation capacity

Suppliers: EPC Consortium of Hyundai Engineering Company and Descon Engineering Ltd

Contract: 25-year PPA with fuel cost pass through

Time schedule

Start of construction: 2012

Expected COD: End 2013 / early 2014

Financial indicators

Expected Capex: USD 480m

Financing: 25% equity / 75 % debt
from multilateral and bilateral agencies

Glow SPP12 (TNP2), Thailand

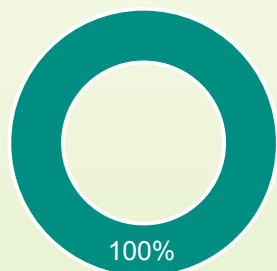
Delivering economies of scale from an existing asset

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Equity ownership



Capacity: 110MW (at 100%)

Fuel: Natural gas

Description: 2nd gas-fired Cogen unit in same industrial park as existing plant

Suppliers: Ishikawajima Heavy Industries (IHI), as off-shore supplier and Thai Jurong Engineering as on-shore contractor. Turbines supplied by General Electric. Part of Thai SPP⁽²⁾ program (to stimulate Small Cogeneration plants) as well as meeting additional local demand

Contract: 90 MW sold under a long term PPA (25 years) to EGAT (Electricity Generating Authority of Thailand), with remaining volumes sold to local industrial customers

Time schedule

Start of construction: 2010

Expected COD: 2012

Financial indicators

Expected Capex: USD 130m

(1) Glow Energy (Listed company; 69% owned by GDF SUEZ) (2) Small Power Producer

Rotterdam, The Netherlands

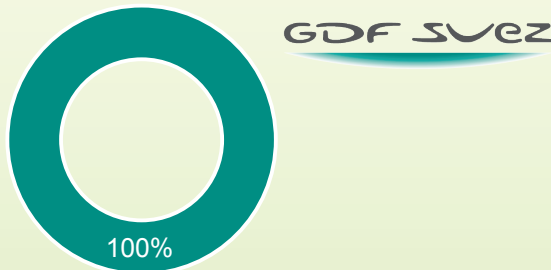
Highly efficient coal fired unit

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Equity ownership



Ultra-supercritical coal fired unit of 736 MW

New high efficient (45%) plant that allows decommissioning of highly polluting old existing coal plants

High CO₂-reduction through possibility for co-firing with biomass (30 % of production, up to 50 %)

Carbon capture ready

Significant contribution to security of supply issues (complementary with gas generation portfolio)

Very competitive site: access to cape-size bulkers for coal supply

Time schedule

Construction:	50 months
Operation:	40 years minimum
Expected COD:	summer 2013

Financial indicators

Total Capex:	€1.5bn
Corporate financing	

Wilhelmshaven, Germany

Highly efficient coal fired unit

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Ultra-supercritical coal fired unit of 731 MW

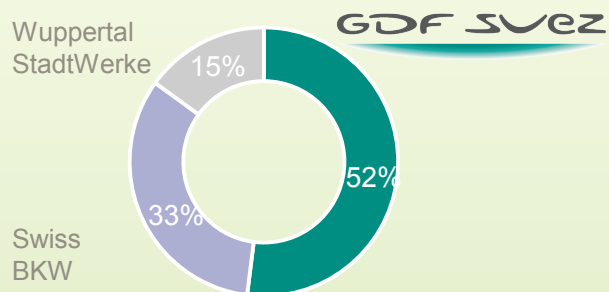
New high efficient (46%) plant that allows decommissioning of highly polluting old existing coal plants

Carbon capture ready

Significant contribution to security of supply issues (complementary with gas generation portfolio)

Very competitive site: access to cape-size bulkers for coal supply

Equity ownership



Time schedule

Construction:	65 months
Operation:	40 years minimum
Expected COD:	end 2013

Financial indicators

Total Capex:	€1.7bn
Corporate financing	

Polaniec: refurbishment & repowering, Poland

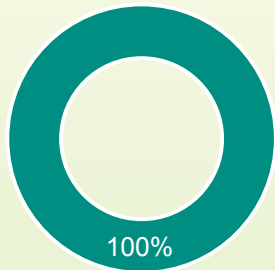
World's largest biomass-fired power plant

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Equity ownership



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Refurbishment & repowering of 7 units of the Polaniec power plant (out of 8 units)

- **Capacity increase** by 76MW to reach 1520 MW on the 7 units
- **Co-firing:** hard coal from local producers (Poland) and biomass (comprising wood chips and agricultural wastes)
- **Non-emitted CO₂:** 1,250,000ton/yr thanks to better efficiency and co-firing

8th unit already converted from coal-fired to a 190 MW full biomass-fired power plant "Green Unit"

- **COD:** December 2012
- **Fuel:** wood and agri-fuels from local sources (Poland, Ukraine)
- **Non-emitted CO₂:** 1,200,000ton/yr
- Green certificates
- **Operation:** 20 years minimum

Time schedule

- Construction:** August 2012 to December 2014, 4-month overhauls by unit
- Operation:** 20 years
- Expected COD:** December 2012 for the 1st unit
December 2014 for the 7th unit

Financial indicators

- Total Capex:** PLN1.0bn
- Corporate financing**

Dutch mature basin: Amstel

Leverage of existing infrastructures and exploration prospects

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OIL



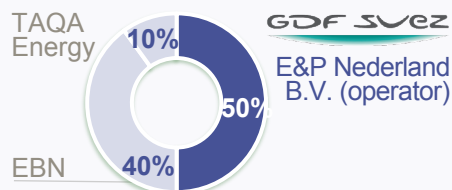
History

- 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)

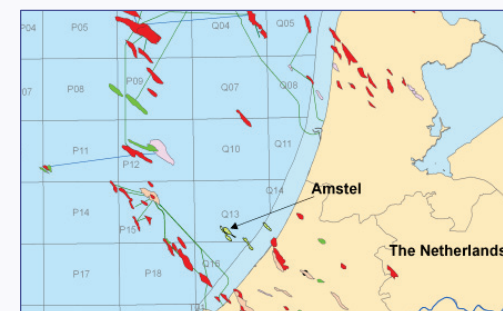


Development plan

- FID: 2011
- Targeting first oil: 2013
- Average production: 1.9 Mboe/yr⁽¹⁾ (at 100%)
- Project status: Engineering successfully completed. Start of Fabrication.

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

German mature basin: Römerberg

Early production financing development phase

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OIL



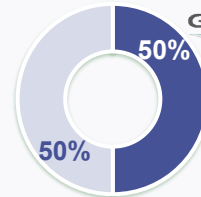
History

• Drilled wells:

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

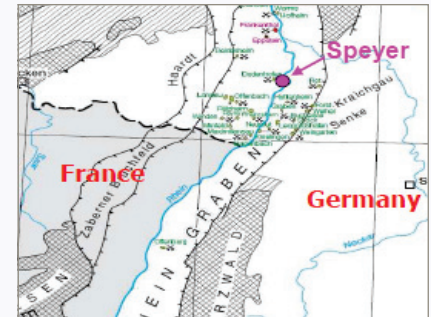
• Preparation of field development

Palatina



GDF SUEZ
(operator)

Licence location



Development plan

• Targeting full development in 2016

• Early production (at 100%):

2009:	0.4mboe
2010:	0.5mboe
2011:	1mboe

• Average production:

1.8mboe/yr⁽¹⁾ (at 100%)

Financial indicators

Total Capex	~€280m
Project IRR	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

UK North Sea: Cygnus

Successful discovery from a relinquished area

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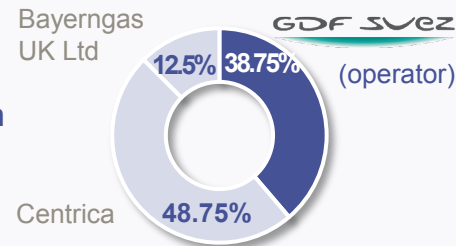
GAS



History

- Project officially sanctioned in **August 2012**
- **6th largest gas field** in the UK by remaining reserves

Turning a relinquished area into largest field in the Southern Gas Basin of the UK North Sea in the last 25 years.



Licence location



Development plan

- **~109 Mboe of natural gas 2P reserves**
- Expected to account for 5% of UK domestic gas production at plateau in 2016
- Will produce enough gas at plateau to satisfy the supply requirements of 1.4 million households annually in the UK
- **First gas: 2015**
- **~14 Mboe yearly production by 2016** (at 100%)
- Up to 4,000 direct and indirect jobs will be created at the peak of construction and 120 offshore operational jobs thereafter

Financial indicators

Total Capex ⁽¹⁾	~€1.7bn
Project IRR	10–20%

Value creation drivers

- **Strong potential** for development and exploration
- **Potential hub for the whole area**

(1) At 100%, excluding pre development costs

Norwegian basin: Gudrun

Maintain profitable business in European strongholds

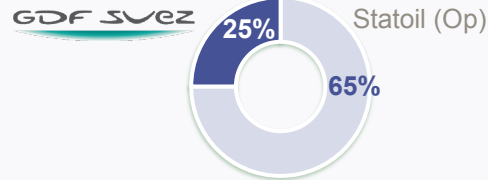
OIL

GAS



History

- **1975** Gudrun Discovered by Elf
- **1979, 2001, 2006:** 3 appraisal wells were drilled to assess the field
- **2008:** Final concept was frozen.
- **Fev 2010:** Development plan submitted to the authorities and approved 3 months later.
- **Other field discovered in vicinity:**
1982: Sigrun Field,
2010: Gudrun Øst (p.n. Brynhild)



Development plan

- **FID:** 2010
- Targeting **first oil/gas: 2014**
- **Average production:**
10 Mboe/yr⁽¹⁾ (at 100%)
- **Project status:** Middle of Fabrication period, start of Hook-up modules

Asset details

- Central North sea, 200km from shore, Water Depth: 109m
- 2/3 Oil, 1/3 Gas
- 7 HP/HT wells
- Jacket based platform linked to Sleipner and Kårstø for gas and oil export.

Financial indicators

Total Capex	~€2.5bn
Project IRR	10–20%

Value creation drivers

- Project built on a **constructive partnership with Statoil**
- A **major project** for GDF SUEZ EPI including Upside potential within licenses
- Contributes to GDF SUEZ reserves – and production growth objectives

(1) Average production over the field lifetime

A major project for GDF SUEZ and Algeria: Touat

GDF SUEZ' largest E&P project under construction

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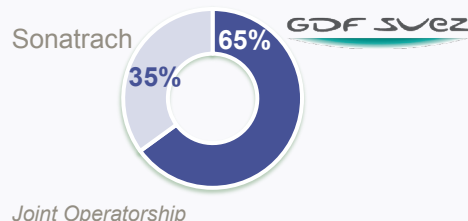
GAS



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



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

Development plan

- **Average production:** ~30 Mboe/yr⁽¹⁾ (at 100%)
- **41** production wells in **10** fields
- First gas: late 2016 / early 2017

Financial indicators

Total Capex	~€2.3bn
Project IRR	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) Production over estimated plateau (7 years)

ERIDAN project in France

Important milestone toward a unique market zone

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

Length: 220 km, Diameter: 1.2 meter

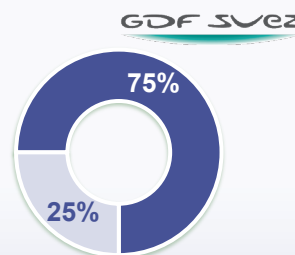
The French regulator gave its consent to the project on April 19th 2011

Thorough studies to limit environmental impact, often beyond legal requirements

The project has been awarded a 300bps premium in addition to the base rate for 10 years, owing to its contribution to market opening

Total Capex **€490m⁽¹⁾**

Expected commissioning **end 2016**



CNP, CDC,
CDC Infrastructure



Value creation drivers

- **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) Capex before European funding

Hauts De France II and Arc de Dierrey

Reinforcing entry & transit capacity in France northern area

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2 new pipelines, 5 interconnecting stations to reinforce the existing pipelines in northern France. Large program activated by the Dunkerque LNG terminal.

Length: 415 km, Diameter: 1.2 meter

17 km, Diameter: 0.9 meter

The French regulator gave its consent to the project on December 23th 2011

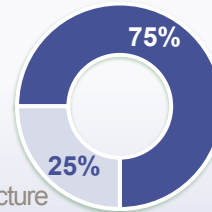
The project has been awarded a 300bps premium in addition to the base rate for 10 years, owing to its contribution to market growth

Total Capex **€1,100m⁽¹⁾**

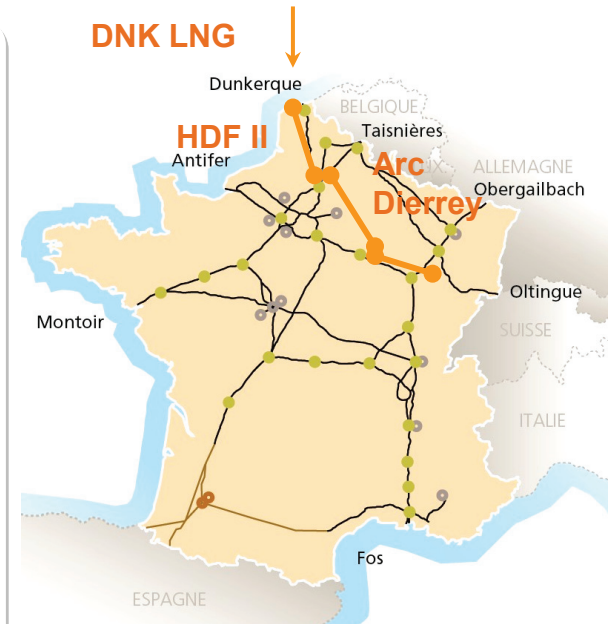
Pipes under construction, works will start in 2013

Expected commissioning **end 2015**

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CNP, CDC,
CDC Infrastructure



Value creation brought by this project

- **Development of new entry capacities** in GRTgaz's northern market zone (+ 250 GWh/j)
- **Development of transit capacities** connecting northern market zone to the Belgium market
- **Additional line pack** providing flexibility to CCGTs
- **Important contribution toward a unique market zone**
- The project is eligible for **European funding**

(1) Capex before European funding

Gas storage development in the UK

Stublach: a key asset for higher flexibility

GDF SUEZ

BY PEOPLE FOR PEOPLE



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**

Asset details

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

Financial indicators

Total Capex	€594m
GDF SUEZ shareholding	100%

Licence location



Value creation drivers

- **Strategic location of the asset:** in the largest European gas market, in a strong gas demand area of Cheshire
- Only one UK gas storage expected to be commissioned within the next four years
- **Reduction of caverns number from 28 to 20 without reduction of capacity**
- **Fast-cycling storage** (ultra high withdrawal rate) to match market needs: security of supply and flexibility
- **Reshaping of commercial strategy:** 1/3rd long-term contracts, 1/3rd yearly contracts, 1/3rd profit sharing agreements