

DRI Research
& Innovation
Division

Research & Innovation at GDF SUEZ

EUROGIA2020 & RHC-Platform Joint Event

*Tapping the potential of Renewable Heating
and Cooling – 16 September 2013*

Marc FLORETTE

Senior Vice President
Research & Innovation Division,
GDF SUEZ

GDF SUEZ : key figures 2012

- **€82 billion** in 2012 revenues
- **€7-8 billion** of investment per year over 2013-2015.
- A presence in close to **50** countries.
- **138,200** employees throughout the world
 - inc. 60,050 in power and natural gas,
 - and 78,150 in energy services.
- **800** researchers and experts in **7** R&D entities.

Three buoyant businesses

Power

- **No.1** Independent Power Producer (IPP) in the world.
- **No.1** producer of non-nuclear power in the world.
- **117 GW** of installed power-production capacity.*
- **7.2 GW** of power capacity under construction.*

Natural gas

- **No.2** purchaser of natural gas in Europe.
- **No.3** importer of LNG in the world.
- **No.1** natural-gas transport and distribution networks in Europe.
- A supply portfolio of **1,208 TWh**.

Services

- **No.1** supplier of energy and environmental efficiency services in the world.
- **1,300 sites** throughout Europe.
- **186** district heating and cooling networks operated throughout the world.

* Including 100% of the capacity of GDF SUEZ assets at June 30, 2013 regardless of the actual holding rate.

A balanced power-production mix

- **117 GW**

of total installed capacity.

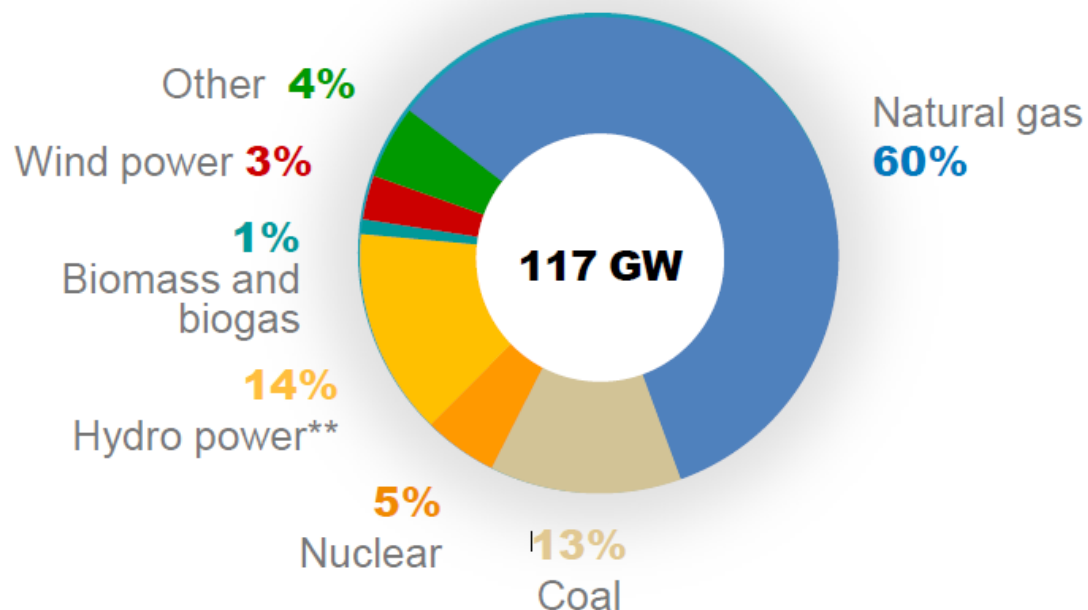
- **7.2 GW**

under construction, 80% of which in high-growth areas: Mexico and Latin America; Middle East, Turkey and Africa; South-East Asia.

- **Flexible,**

high-performance generation capacity with low carbon emissions.

GDF SUEZ installed capacity at June 30, 2013*



* Including 100% of the capacity of GDF SUEZ assets regardless of the actual holding rate. ** Including pumped storage.

A sustainable industrial strategy

The Group has defined three priorities based on long-term value creation:

- **Accelerate the Group's international development in high-growth markets** through its electricity production and LNG activities.
- **Optimize positions in mature markets** (France and Belgium, rest of Europe) leveraging the Group's competitive advantage in energy efficiency and its expertise in renewable energy.
- **Strengthen activities that generate recurring income** (infrastructure and services).

A strategy based on balance and flexibility

A unique economic model adapted to current challenges to better seize opportunities and mitigate risk :

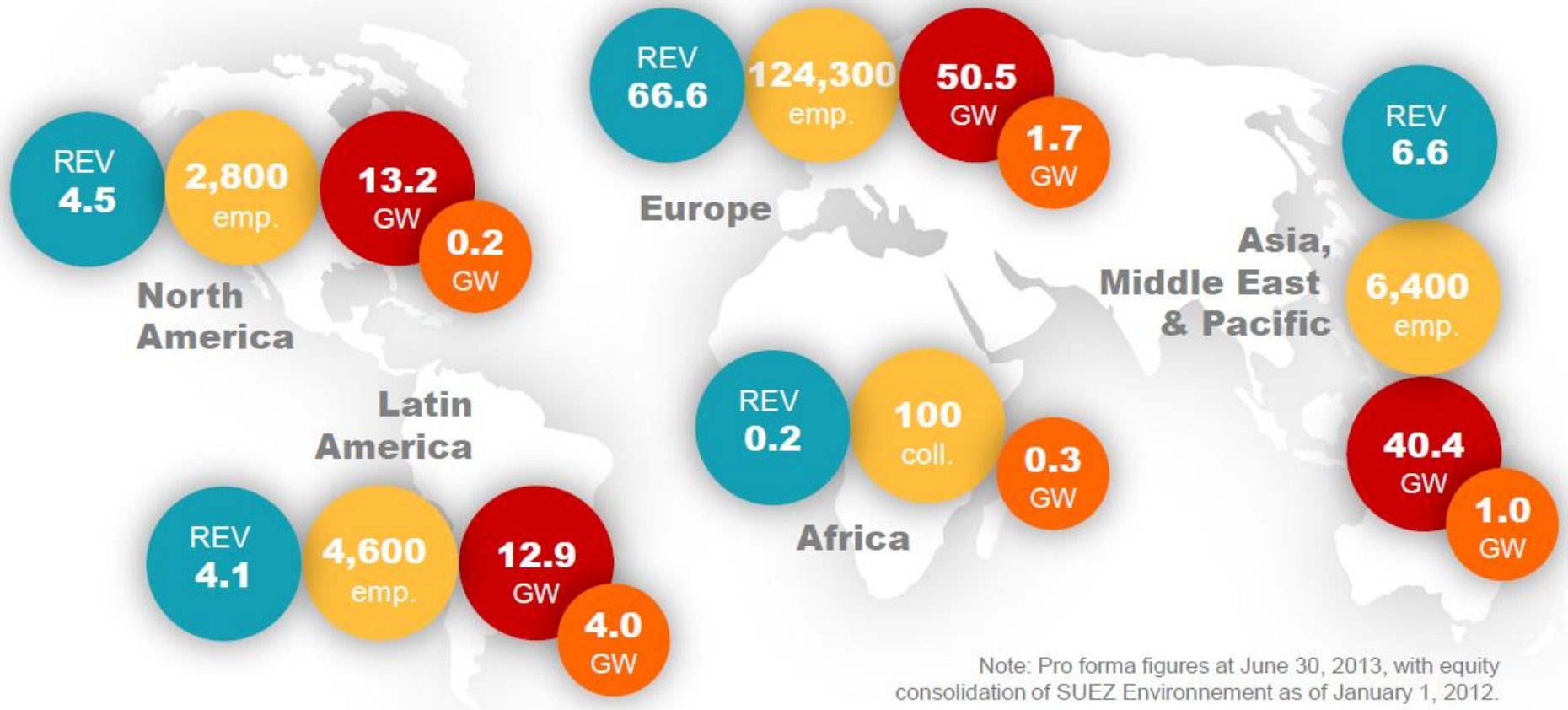
- **Balanced positioning**
between power, natural gas and services.
- **Balanced portfolio**
between secure and market-exposed activities.
- **A diversified production mix**
generating low carbon emissions.
- **A strong presence**
in emerging countries.

Revenues, workforce and capacity by region

€82 billion in 2012 revenues

138,200 employees

Capacity: **117 GW** installed // **7.2 GW** under construction*



Note: Pro forma figures at June 30, 2013, with equity consolidation of SUEZ Environnement as of January 1, 2012.

* Including 100% of the capacity of GDF SUEZ assets regardless of the actual holding rate.

R&I at GDF SUEZ

Research oriented two ways: operational and prospective

→ Operational excellence oriented research (Research to Business)

- Respond to an existing business line or client need (short and medium term)
- Continuously improve operational performance of our industrial assets and technology
- Support business development efforts



→ Prospective research: 3 priorities

Produce de-carbonized energy

Smart Energy & Environment

The gas chain of future

- These priorities are addressed through **5 strategic corporate R&D programmes**
- And are completed by an active **technology watch**, prioritizing technologies into our **technology panorama**



Key figures 2013

800 researchers /
7 research **entities**

Investments in R&I:
€162 million

5 strategic corporate programmes



+ 100 technologies
evaluated each year

Participation in
8 venture capital funds



Prospective research

Anticipate the technologies of tomorrow, to ensure a competitive advantage for our Group

→ 5 corporate programmes

- Smart Energy & Environment
- Cities and buildings of the future
- Offshore LNG and future gas chains
- Renewable energies
- Capture, transport and storage of CO₂

