

# EDISON BUSINESS PLAN 2008-2013

Milan, November 29th 2007

# AGENDA

1. KEY STRATEGIC GUIDELINES
2. MAIN ASSUMPTIONS AND SECTOR ENVIRONMENT
3. OPERATING TARGETS AND STRATEGY IN THE ELECTRIC POWER AND HYDROCARBONS SECTORS
4. FINANCIAL TARGETS
5. CAPITAL AND SHAREHOLDING STRUCTURE
6. APPENDIX

# KEY STRATEGIC GUIDELINES

- Edison has completed one of the most important investment plans in the European power sector reaching in 2007 a total installed capacity in Italy of **12.5 GW**.
- Strategic target in electric power is to preserve a **share in Italian generation capacity of around 15%** and to increase penetration in the free market.
- Strategic target in hydrocarbons is to achieve a **completely independent gas supply portfolio** and to reach a long term target of **15% of equity gas** on total gas portfolio.
- The growth will be pursued through geographical diversification, improvement in fuel and technology mix, optimization of the gas supply portfolio and availability of equity gas. Main drivers for growth are:
  - **renewables** (wind, hydro, photovoltaic and biomass);
  - **international power generation**;
  - further development of **E&P activities**.

# MAIN ASSUMPTIONS AND SECTOR ENVIRONMENT

# MACRO ECONOMIC ASSUMPTIONS

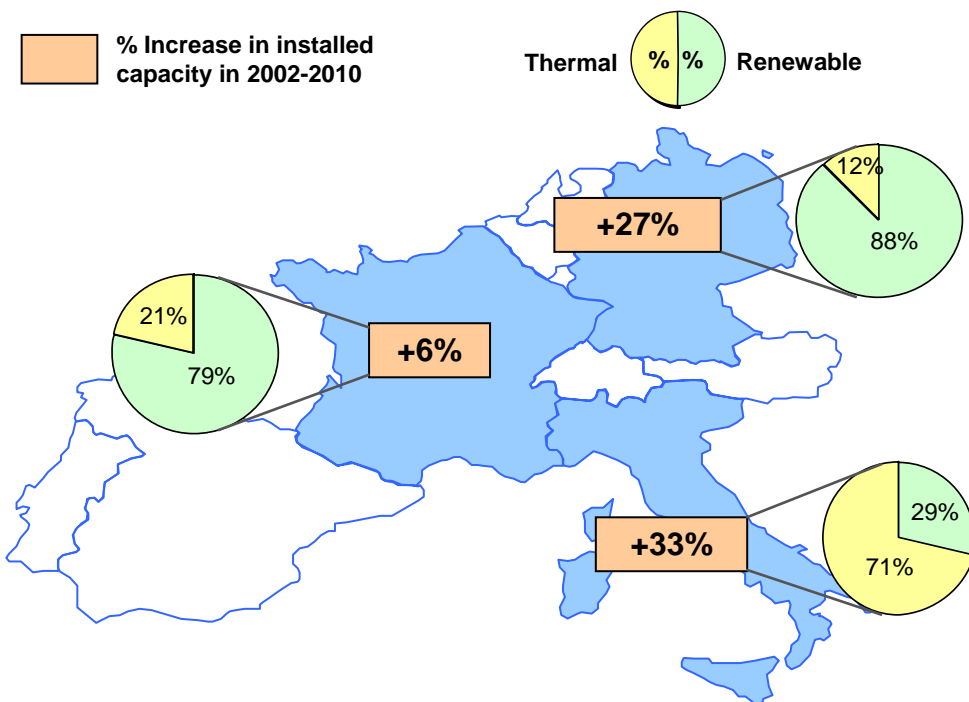
|                                     | 2008 | 2010 | Long Term |
|-------------------------------------|------|------|-----------|
| <b>BRENT</b> <sup>(1)</sup>         |      |      |           |
| USD/bbl                             | 70.0 | 57.2 | 50.4      |
| USD/€                               | 1.37 | 1.30 | 1.27      |
| €/bbl                               | 51.2 | 44.0 | 39.7      |
| <b>CO2</b> €/ton                    | 18.6 | 17.4 | 21.0      |
| <b>COAL</b> USD/tons <sup>(2)</sup> | 83.6 | 59.2 | 51.0      |

(1) ICE brent swap

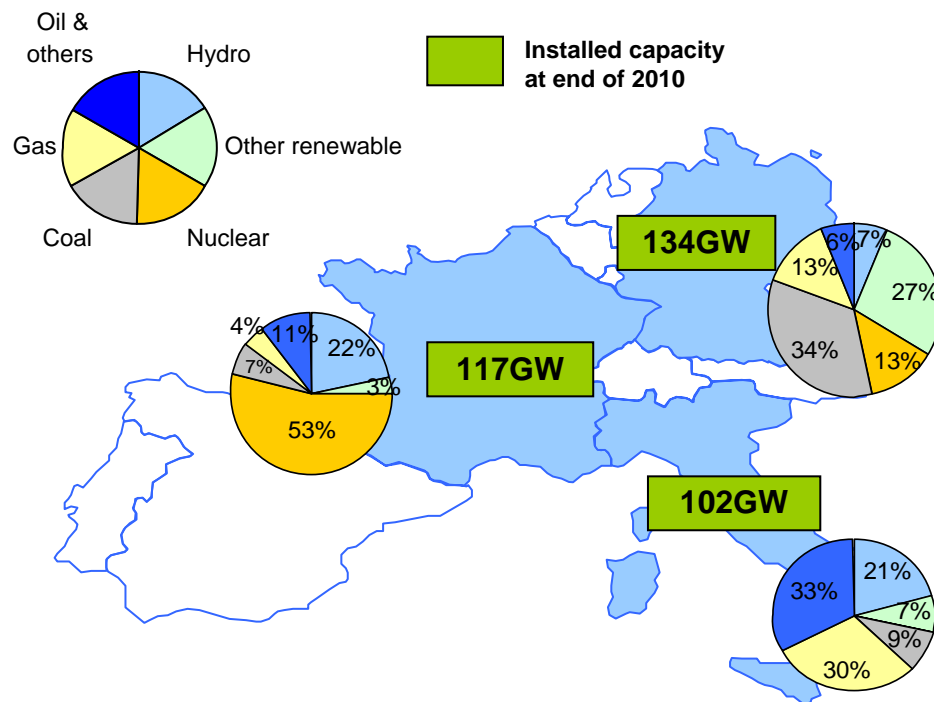
(2) CIF ARA (API#2)

# EVOLUTION OF ELECTRICITY MARKET IN EUROPE

## Power generation capacity increase



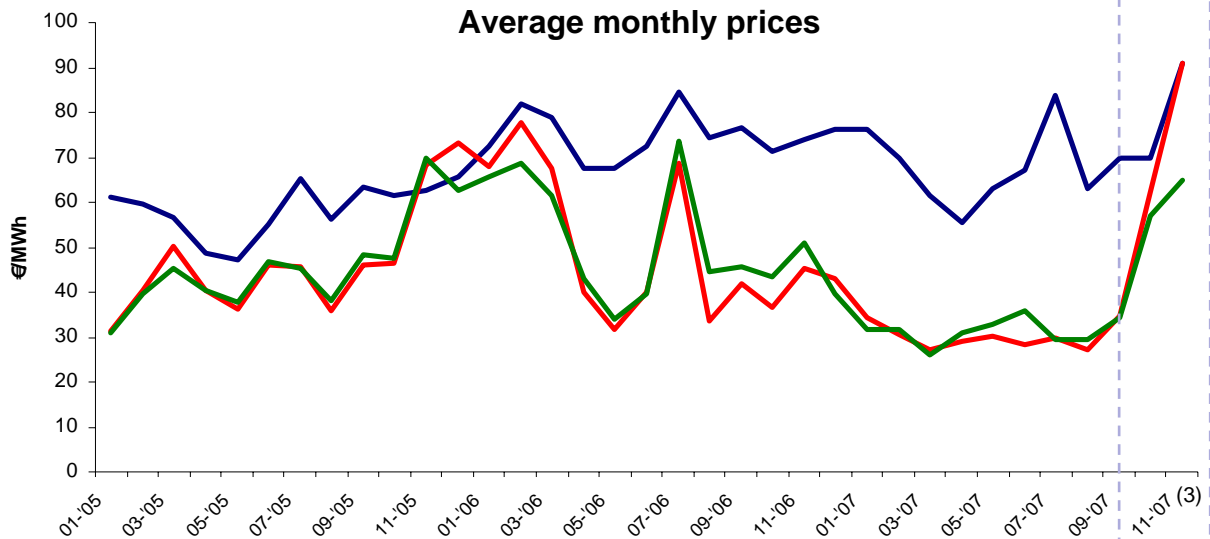
## Capacity and fuel mix at 2010



- Italy is completing a phase of significant investments in power capacity and the reserve margin has reached adequate levels.
- In France and Germany the contribution to the increase of capacity is mainly attributable to renewables, while the thermoelectric capacity represents by far the prevailing portion of the increase in Italy.
- The weight of estimated renewables sources other than hydroelectric in the total fuel mix at the end of period is particularly high in Germany (27%).

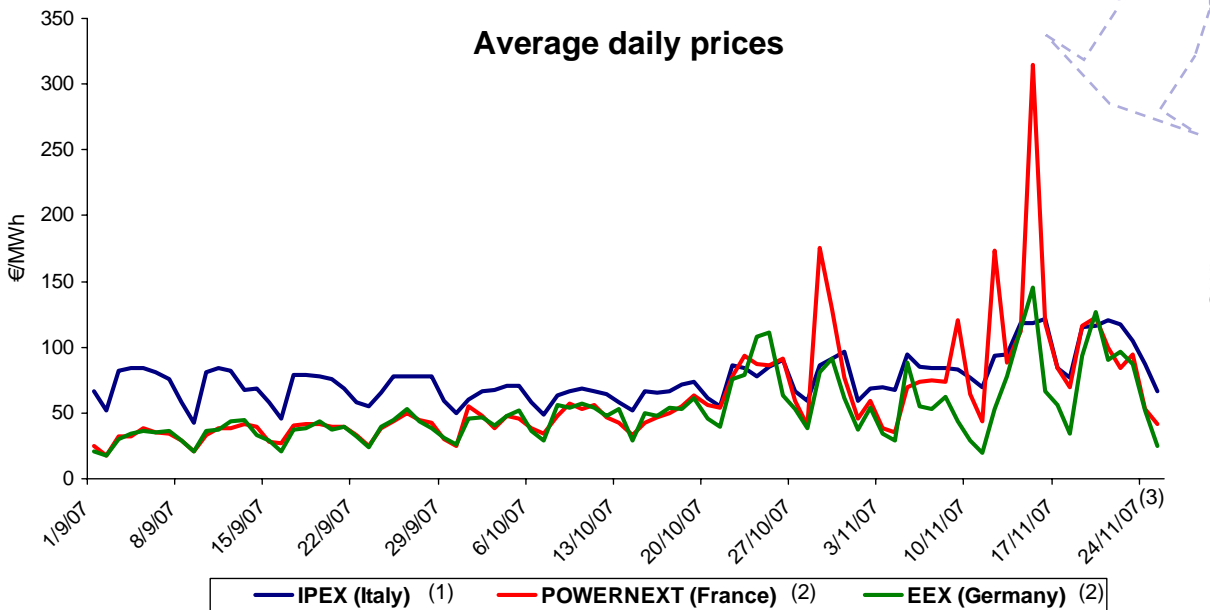
Source: UCTE

# EVOLUTION OF POWER PRICES IN EUROPE

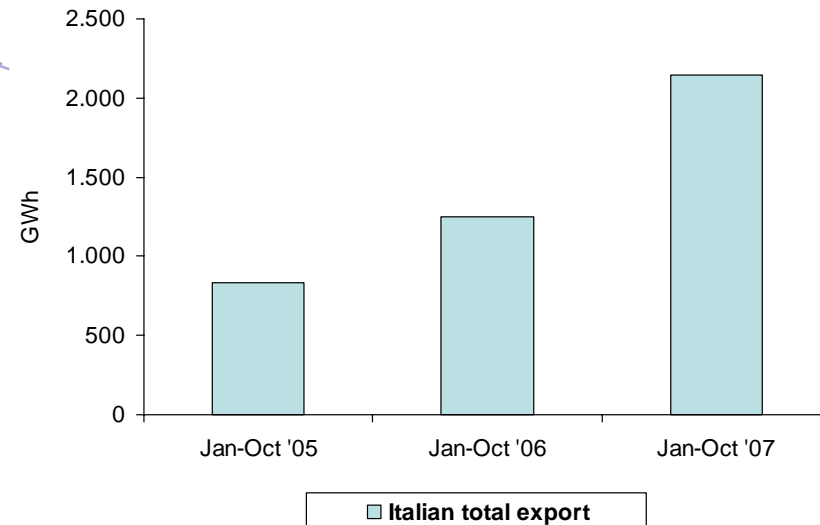


- (1) PUN (Prezzo Unico Nazionale) – Average National Price
- (2) Average base load prices
- (3) Last available data at 25/11/07

- Recurrent export opportunities can have an impact on the evolution of prices based on power availability deficit in some neighbouring countries.
- Total export volumes in first 10 months 2007 are respectively higher for 72% and 2.5 times than volumes exported in the same period in 2006 and 2005.



Source: Reuters

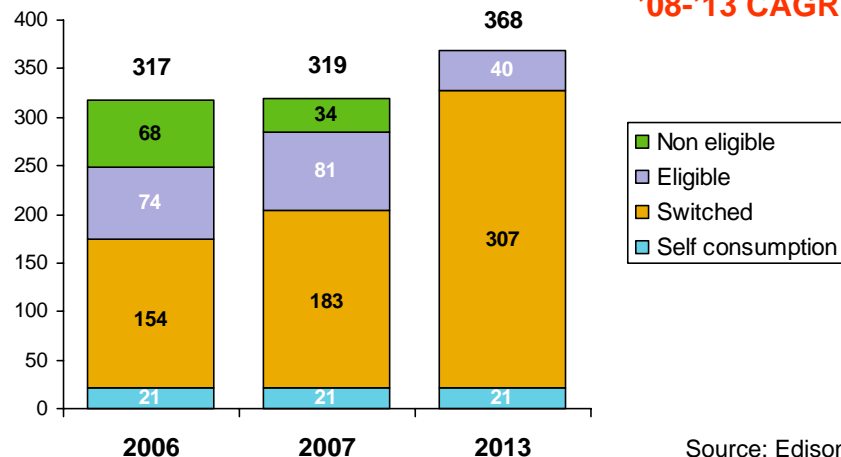


Source: Terna

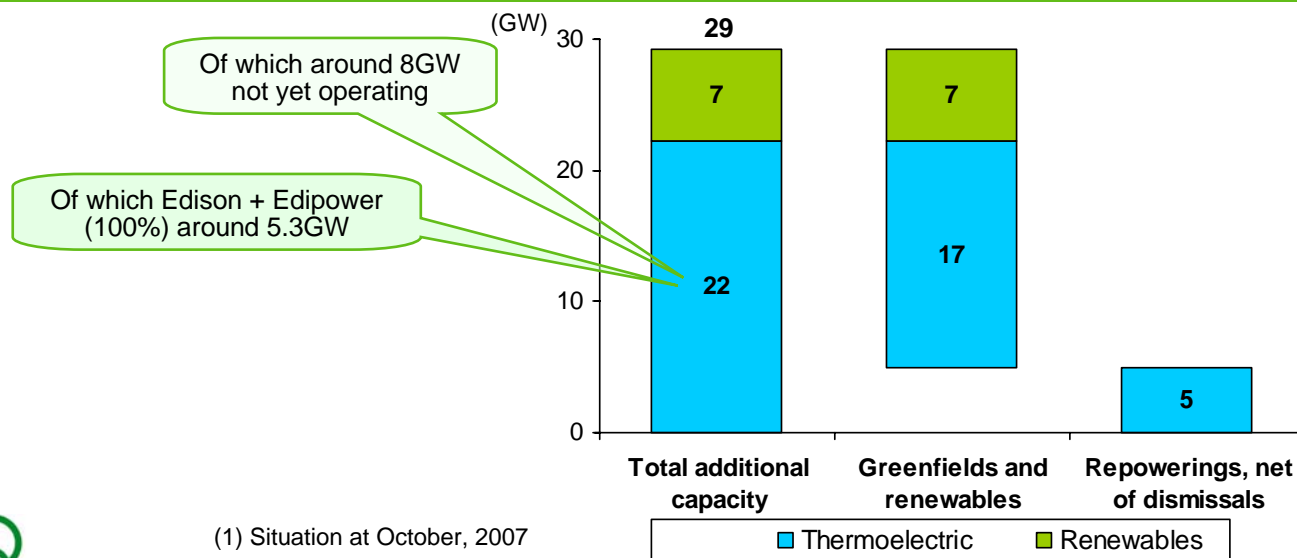
# POWER DEMAND AND INSTALLED CAPACITY IN ITALY

## Evolution of power demand

(TWh net of losses)

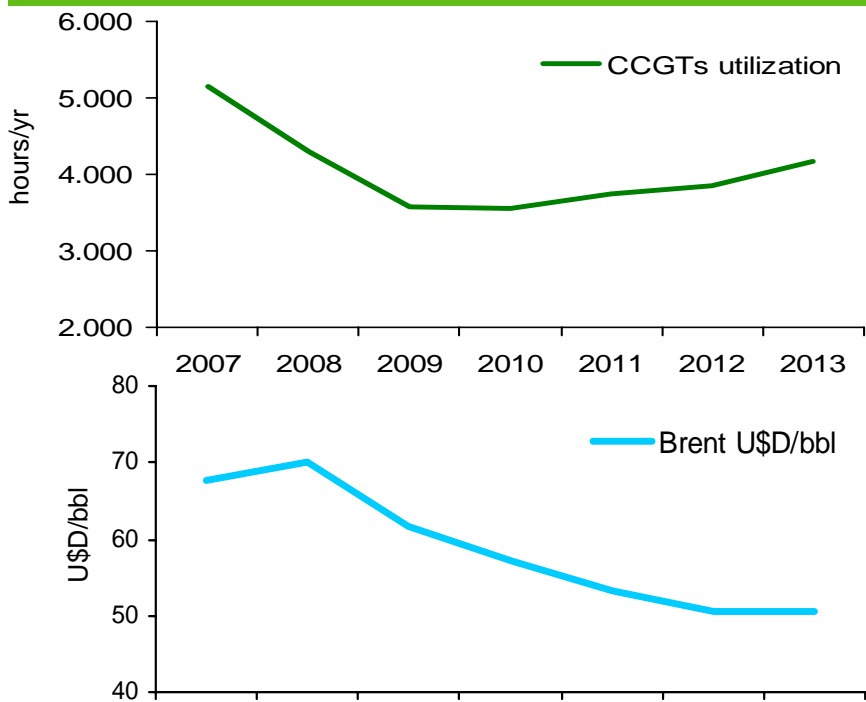


## Development of installed capacity in 2002-2012<sup>(1)</sup>



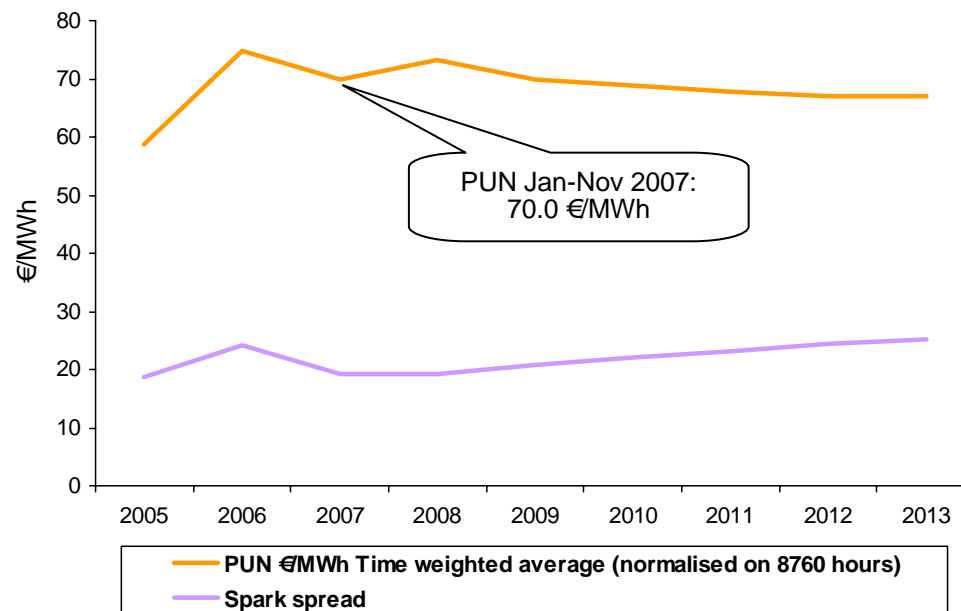
# EVOLUTION OF POWER PRICES IN ITALY

## Expected merchant CCGTs utilization and brent



|      | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|------|------|------|------|------|------|------|------|
| \$/€ | 1.35 | 1.37 | 1.33 | 1.30 | 1.28 | 1.27 | 1.27 |

## Power prices and spark spread

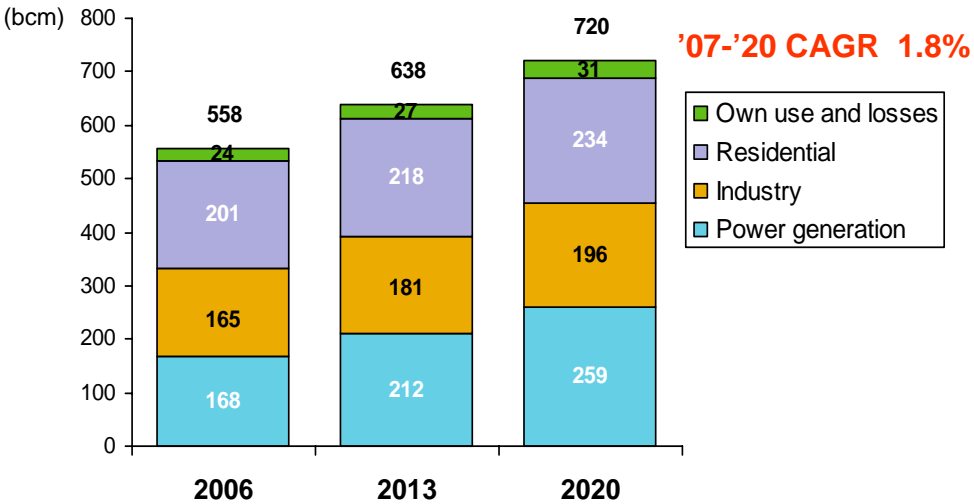


Source: Edison estimates

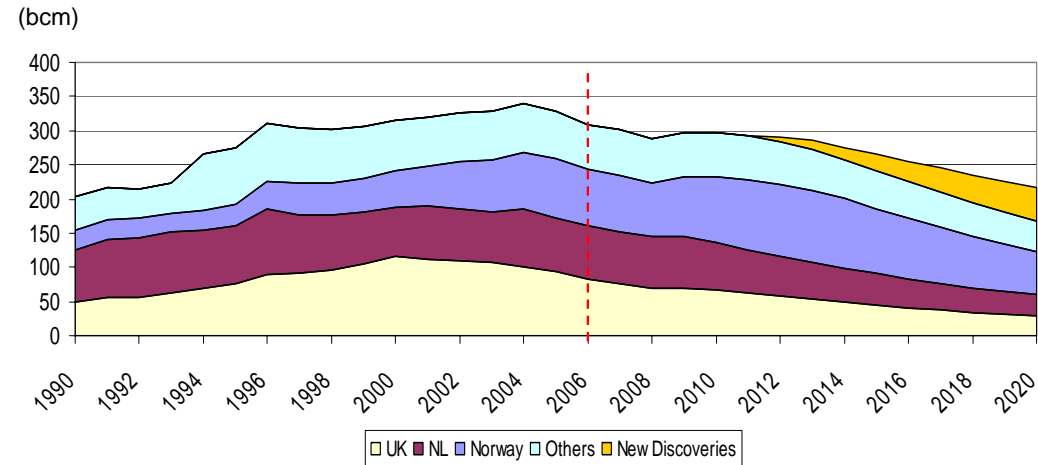
- The effects of the increase of installed capacity in Italy are expected to be factored in the reduction of CCGTs utilisation at an average level of around 4,000 hours per year.
- The reduction in PUN in 2007 is mainly related to a demand substantially flat in presence of an increasing capacity and reflects the decrease to under 1 euro /tonn.of the CO2 price.
- The spark spread in 2008 is foreseen in line with 2007 while the gradual growth in the period reflects the increase in Green Certificates requirements and an increasing pass-through of the CO2 costs (ranging from around 1.5 euro/MWh in 2009 to 4 euro/MWh in 2013)

# EVOLUTION OF GAS MARKET IN EUROPE <sup>(1)</sup>

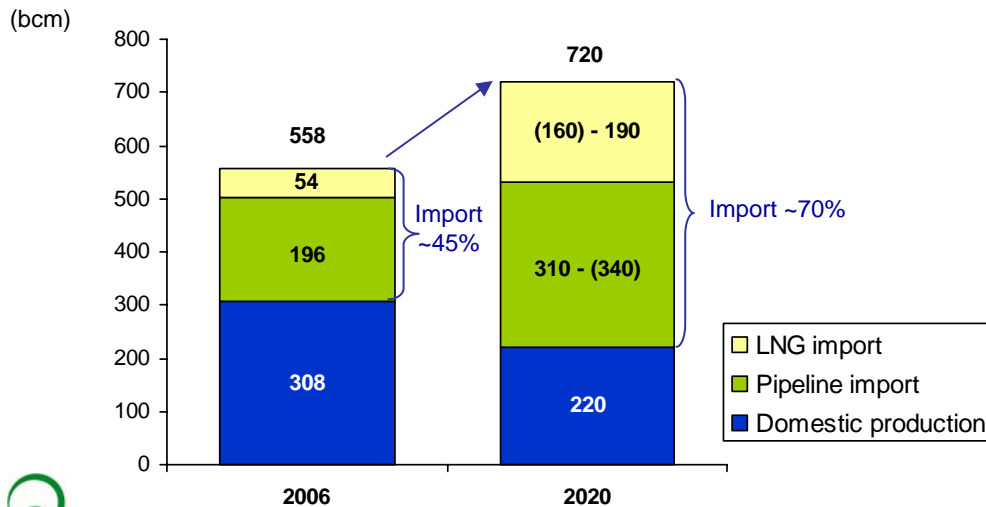
## Gas demand in Europe



## Gas production in Europe



## Increase of dependance on import



Gas import '06: ~ 250 bcm

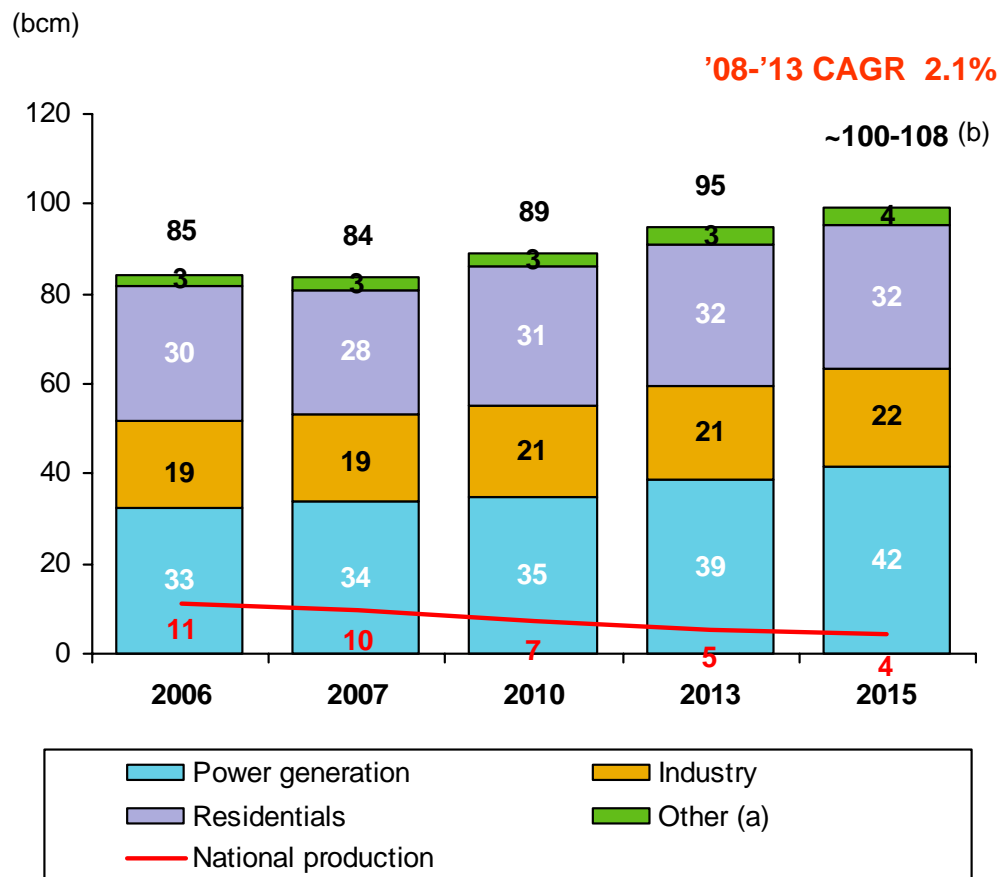
Gas import '20: ~ 500 bcm

Import gap: ~ 250 bcm

(1) Europe includes EU25 + Bulgaria, Norway, Romania, Switzerland and Turkey

Sources: IEA World Energy Outlook; BP Statistical Review, ENI, IHS, CERA, Edison estimates

# EVOLUTION OF GAS DEMAND IN ITALY



|                     |            |
|---------------------|------------|
| Gas import '06:     | 74 bcm     |
| Gas import '15:     | 96-104 bcm |
| Import gap vs 2006: | 22-30 bcm  |

| New import capacity in Italy |             |              |
|------------------------------|-------------|--------------|
|                              | bcm         | operating in |
| TTPC Improvement             | 6.5         | 2008-2009    |
| TAG Improvement              | 6.5         |              |
| LNG Rovigo                   | 8.0         |              |
|                              | 21.0        |              |
| Galsi                        | 8.0         | 2012-2013    |
| IGI                          | 8.0         |              |
|                              | 16.0        |              |
| <b>Total</b>                 | <b>37.0</b> |              |

(a) Agriculture, autotraction, chemical synthesis and losses

(b) Edison and Ministero dello Sviluppo Economico (MSE) assumptions respectively

Sources: Edison and MSE estimates

# TARGETS AND STRATEGY IN THE ELECTRIC POWER AND HYDROCARBONS SECTORS

# EDISON TARGETS IN THE POWER SECTOR

## EDISON AND EDIPOWER MERCHANT PLANTS

- Total merchant capacity at end 2007 around **8,000 MW**.
- Further new 800 MW CCGT plant in Central Italy expected at end 2011 and around 600 MW ex-CIP6 plants repowered in merchant GT (LMS 100, open cycle, peak hours usage).
- Further 400 MW available for free market at CIP6 contract expiration.
- Around 500 MW captive generation to be divested by end 2011.

## CIP6

Rationalisation of CIP6 portfolio:

- Around 600 MW, as above indicated, partially repowered in flexible merchant GT.
- Around 650 MW to be divested after CIP6 expiration.
- Remaining 700 MW maintained as cogenerative with limited capex.

## RENEWABLE ENERGY

- Hydro: increase of Edison domestic capacity from 1,300 MW to 1,400 MW, concessions renewals, revamping, new Edipower pumped storage for 115 MW (57 MW Edison share) and repowering of existing plants.
- Wind: increase capacity from 270 MW to 570 MW in Italy.
- Photovoltaic and biomass new capacity up to around 70 MW.

## FOREIGN INITIATIVES

- Projects under evaluation or development for 1,000 MW (Edison share).

# EDISON MERCHANT PLANTS EVOLUTION IN ITALY



**Candela  
400MW**



**Altomonte  
800MW**



**Torviscosa  
800MW**



**Simeri  
Crichi  
800MW**



**LMS 100  
Azotati 230MW**



**LMS 100  
Bussi  
110MW**



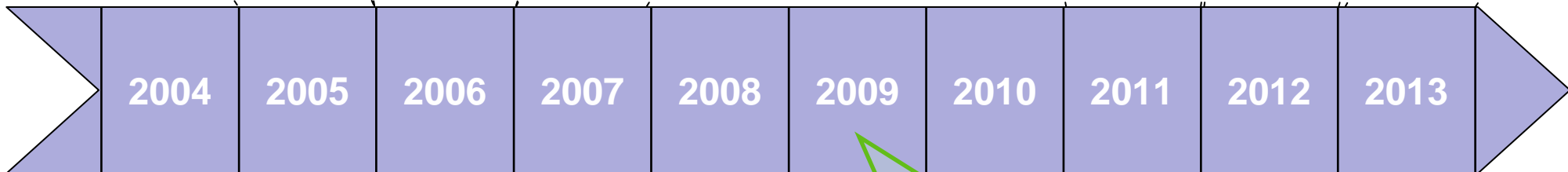
**Central Italy  
800MW**



**LMS 100  
San Quirico  
110MW**



**LMS 100  
Porto Viro  
110MW**



**Sermide 1200MW**



**Chivasso 1200MW**



**Piacenza 800MW**



**Turbigo 850MW**



**Tirano CC  
Merchant line  
150MW (\*)**

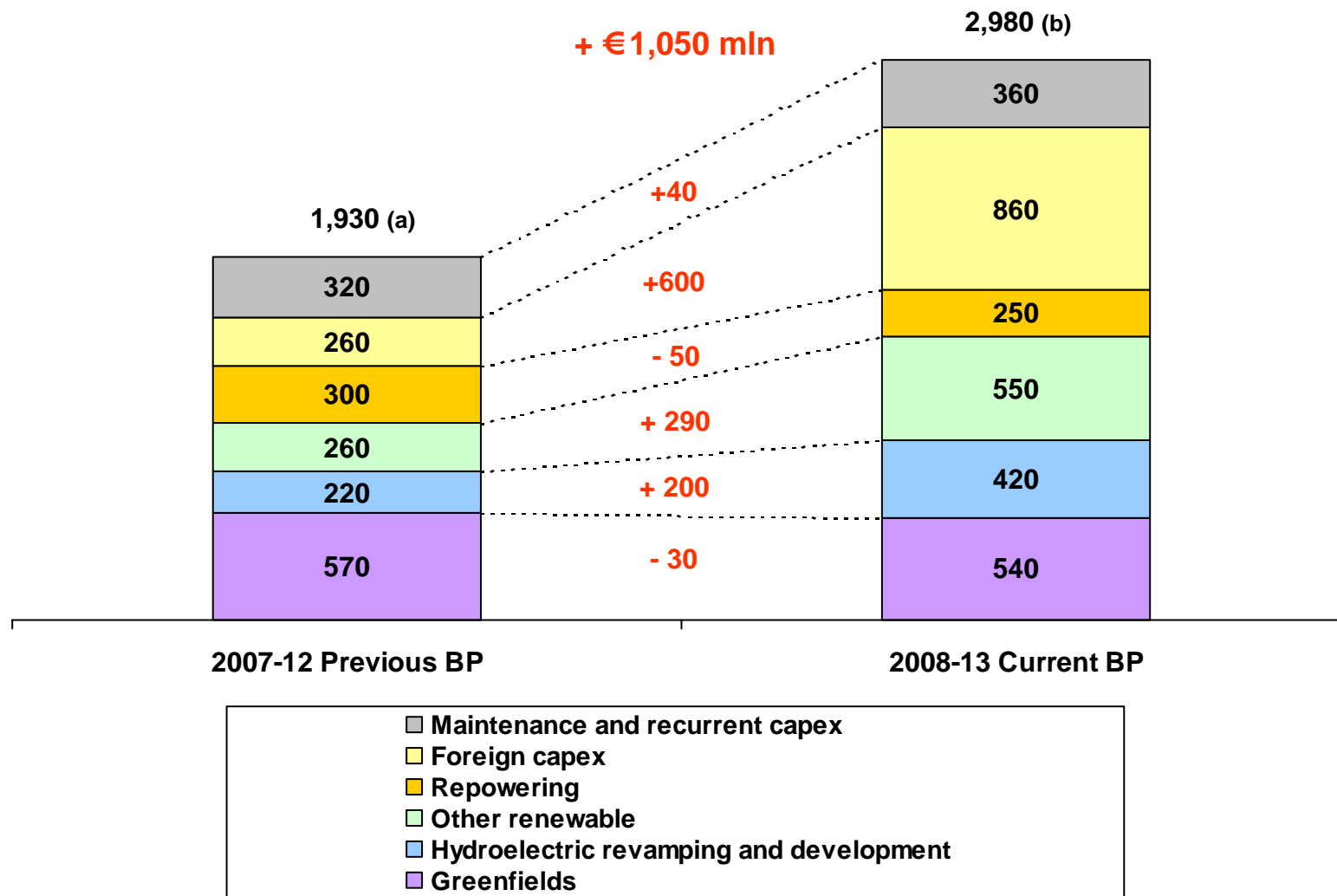
**International + 1000 MW**

**Renewables + 600 MW**



(\*) Capacity at 100%, Edison share 50%

# ELECTRICITY CAPEX (€mIn)



(a) Of which Edipower ~ €220 mIn

(b) Of which Edipower ~ €250 mIn

# EDISON GROUP PLANTS PORTFOLIO



| Installed capacity (GW) |                    |             |             |
|-------------------------|--------------------|-------------|-------------|
|                         | 2007               | 2013        |             |
| Italy                   | Thermal            | 7.8         | 9.2         |
|                         | Renewable          | 2.1         | 2.7         |
|                         | CIP6               | 2.5         | 0.7         |
| <hr/>                   |                    |             |             |
|                         | <b>Total Italy</b> | <b>12.4</b> | <b>12.6</b> |
|                         | International      | 0.1         | 1.1         |
|                         | <b>Total</b>       | <b>12.5</b> | <b>13.7</b> |

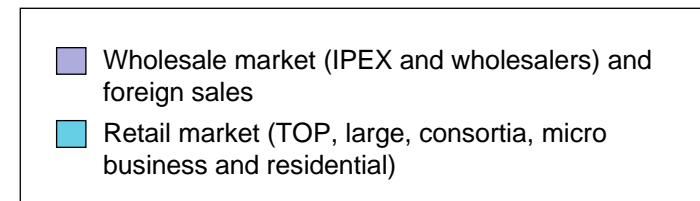
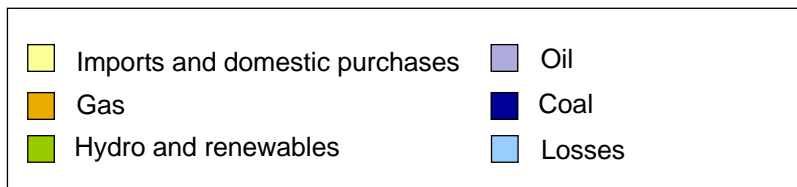
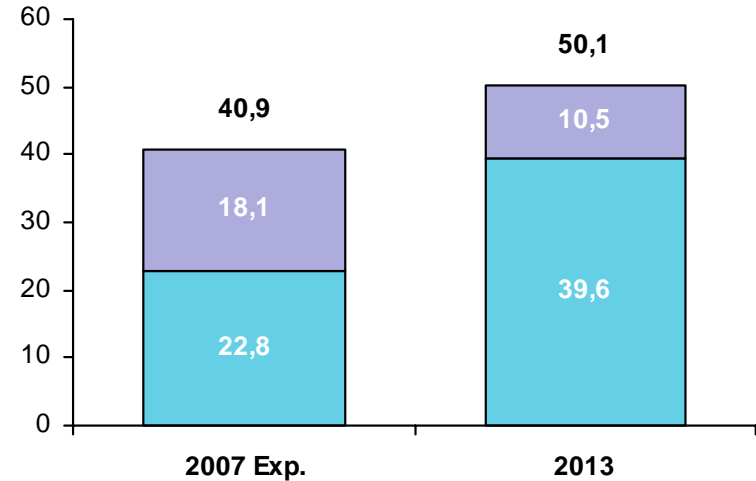
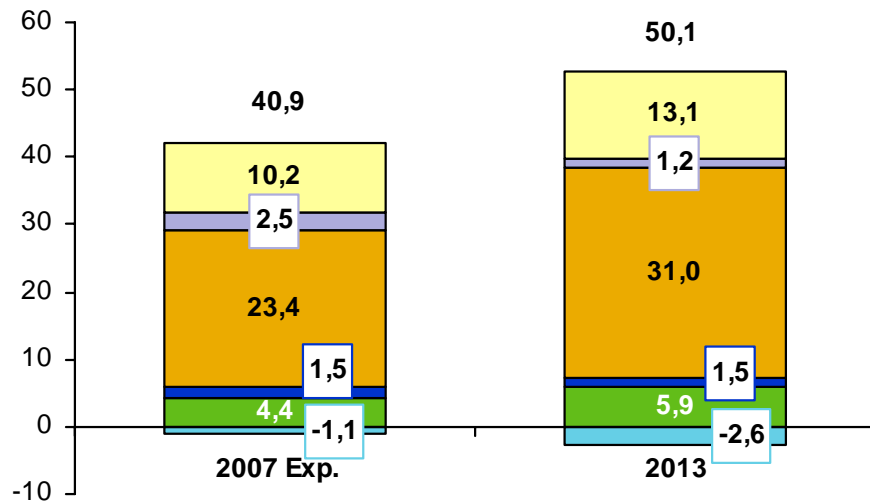
\* Capacity at 100%, Edison share 50%

# ELECTRICITY SOURCES AND USES ON THE FREE MARKET

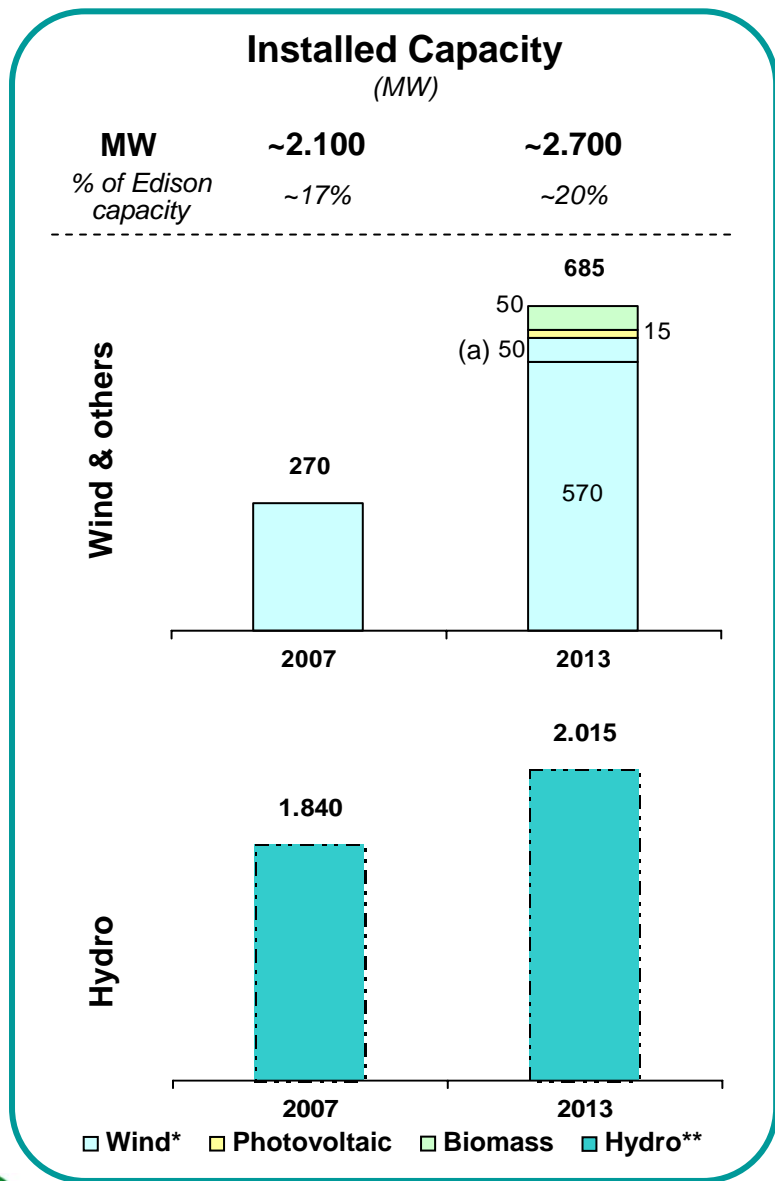
## Sources for the free market (TWh)

## Sales on the free market (TWh)

'08-'13 CAGR 3.4%



# RENEWABLES (ITALY AND INTERNATIONAL)



(a) 50MW increase in wind power in South-East Europe

## Rationale of renewables:

- ✓ fuel diversification
- ✓ “hedge” regulatory risk
- ✓ huge development potential

## New targets:

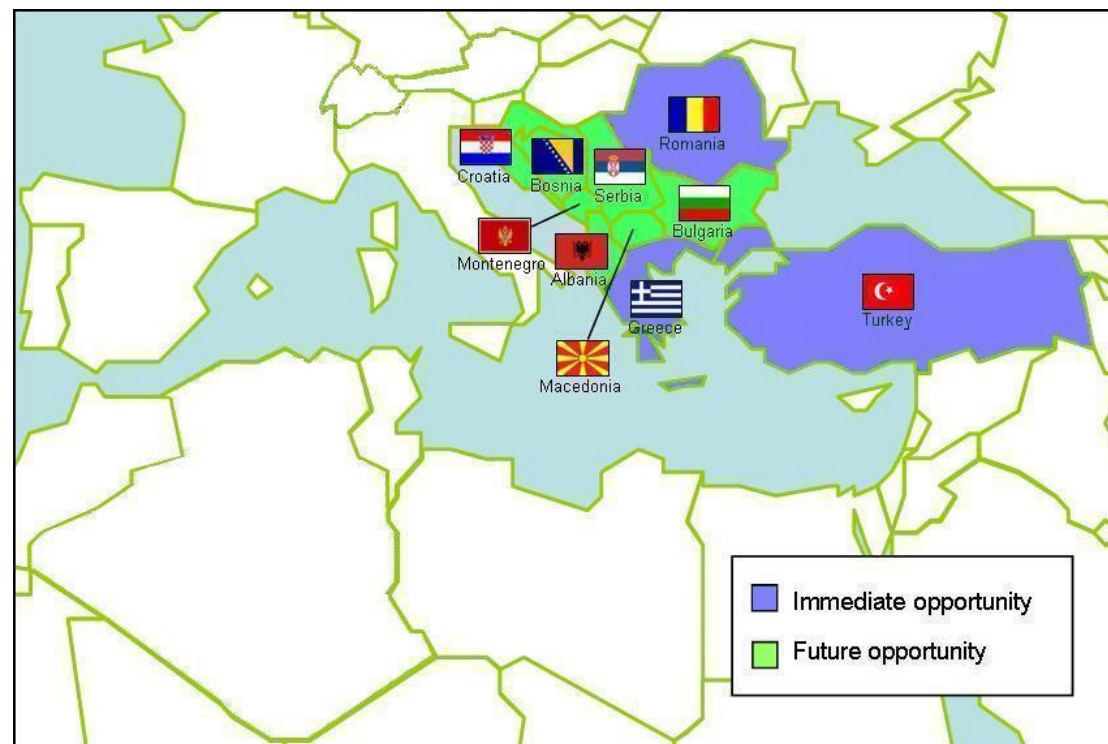
- further increase of wind capacity in Italy
- new technologies (biomass and photovoltaic)
- international expansion
- contribution to Edison EBITDA in 2013: hydro around 15%, other renewables around 5%

\* Included CIP6 capacity

\*\* Included hydro international

# POWER INTERNATIONAL: PROJECTS UNDER EVALUATION AND OPPORTUNITIES

|                |                          |        |                                 | MW (1)       |
|----------------|--------------------------|--------|---------------------------------|--------------|
| <b>Greece</b>  |                          |        |                                 |              |
| Thisvi         | Greenfield               | CCGT   | Starting construction           | 210          |
| T-Power        | Contributed by HP        | CCGT   | Operating                       | 200          |
| Astakos        | Greenfield               | Coal   | Waiting for authorization       | 300          |
| <b>Rumania</b> |                          |        |                                 |              |
| GenCo          | Acquisition              | Thermo | Privatisation expected to start | 220          |
| <b>Turkey</b>  |                          |        |                                 |              |
| Hydro plants   | Acquisition / greenfield | Hydro  | Preliminary evaluation          | 70           |
|                |                          |        |                                 | <b>1,000</b> |



- Total capex €860 mln.
- Contribution to Edison EBITDA up to around 5% in 2013.

## EMISSION TRADING

- Edison assumptions in the business plan: CO<sub>2</sub> deficit in 2008-2012 (second regulatory period) estimated equal to **12 million tons per year**.
- Opportunities to cover up to **85%** of the CO<sub>2</sub> needs through: reimbursements of 80% on CIP6 productions and transfer of 100% to captive clients.
- Net CO<sub>2</sub> burden offset by the **pass through of CO<sub>2</sub> cash cost** on PUN electricity price.
- Proactive acquisition policy of emission rights, including direct investments in international energy conservation projects and acquisition of CO<sub>2</sub> investment funds shares.



**No negative economic impact of CO<sub>2</sub> in the business plan period**

## GREEN CERTIFICATES

- The requirement of the ratio of GC production over total generation has not yet been defined by the authorities. In the present proposal for the 2008 Financial Decree under discussion in the Parliament, an increase of **0.75% per year until 2012** has been introduced.
- In Edison present BP an increase of **0.45% per year** (starting from the current 3.05%) **until 2012** has been assumed according to the common belief at the moment of the estimates.
- Taking into consideration the significant amount of capex planned for the increase of the capacity from renewable sources, Edison would reach the target to **fully cover** the needs for Green Certificates production, in the last period of the Business Plan timeframe, under the present assumptions.

## INFRASTRUCTURES

### **Confirmed development of new import infrastructures:**

- LNG Terminal
- GALSI
- IGI

### **Gas storage:**

- Improve logistics flexibility in order to sustain sales target.
- Confirmed development up to 1.6 bcm of working gas, 2.2 bcm total capacity.

## GAS SUPPLY

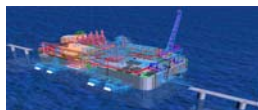
- Reach complete independence and safety of gas supply portfolio.
- Enhance geographical diversification of gas sources mix.

## E&P

- Growth towards 15% of equity gas on total portfolio.
- Focus on exploration and selected acquisitions.

# EDISON HYDROCARBONS EVOLUTION

## Infrastructures



LNG Rovigo



Cavarzere Minerbio

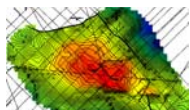


Galsi

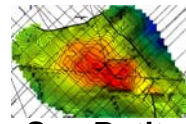


IGI

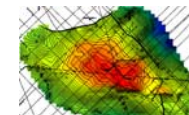
## Storage



Collalto and Cellino



San Potito-Cotignola (90% Edison)



Mafalda (40% Edison)

2008

2009

2010

2011

2012

## E&P



Croatia and Tesrauro  
200 mcm/y plus 50 mcm eq./y



Algeria  
280 mcm/y



Panda  
330 mcm/y

## Supply



2.0 bcm Algeria



6.4 bcm Qatar

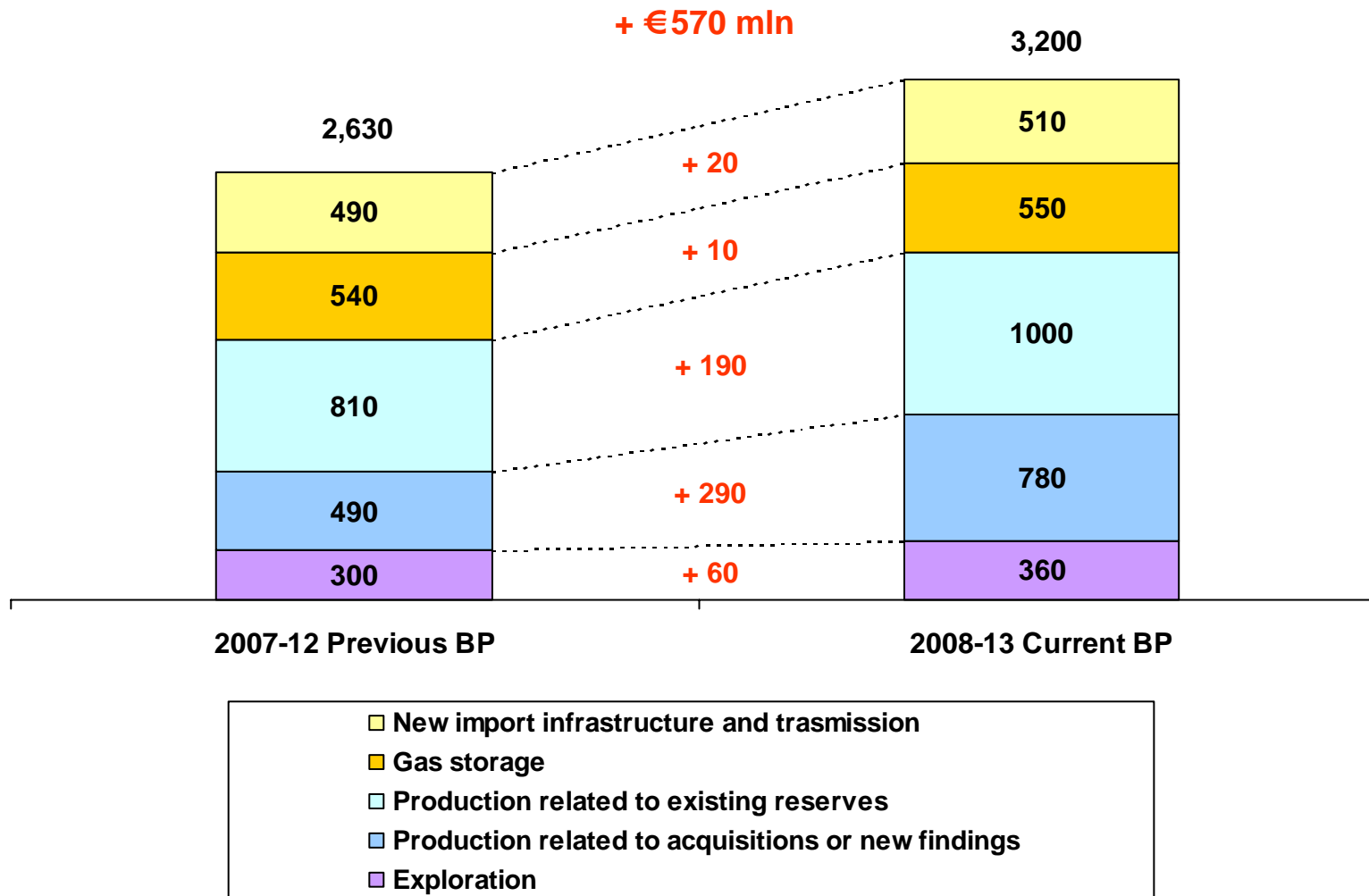


2.0 bcm Algeria



6.4 bcm Middle East

# HYDROCARBONS CAPEX (€mln)



# DEVELOPMENT OF GAS IMPORT INFRASTRUCTURES

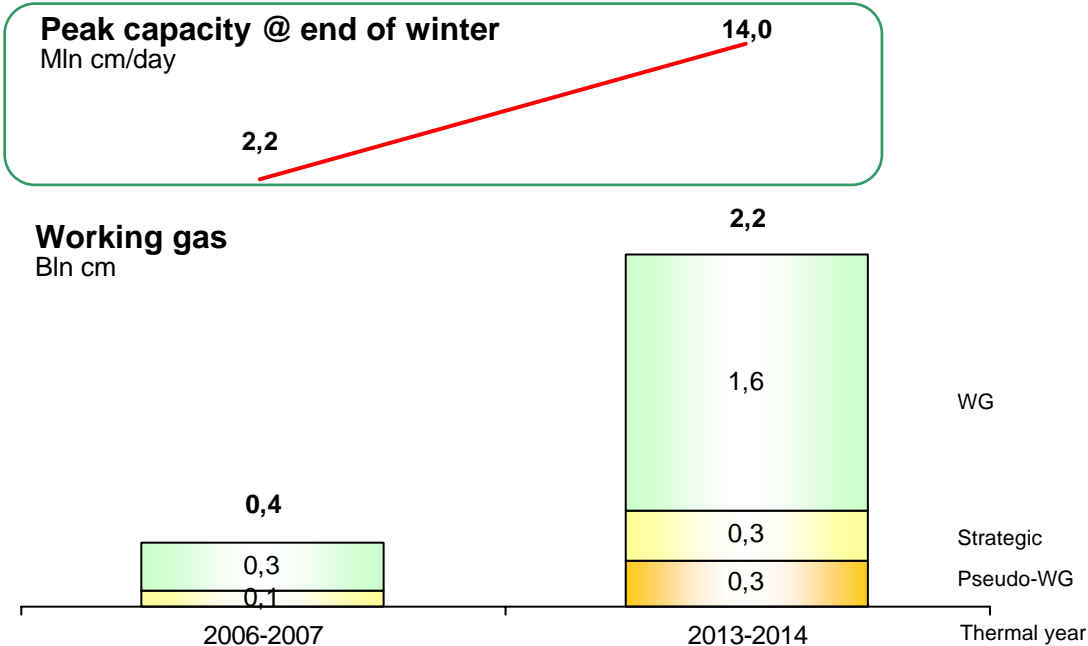
|                     | Total capacity | Edison share                  | Gas Edison                      | Start up |
|---------------------|----------------|-------------------------------|---------------------------------|----------|
| <b>Adriatic LNG</b> | 8 bcm/y        | Invest.: 10%<br>Capacity: 80% | Contracted ACQ<br>6.4 bcm/y (1) | 4Q 2008  |
| <b>Galsi</b>        | 8 bcm/y        | Invest.: 18%<br>Capacity: 25% | Contracted ACQ<br>2.0 bcm/y (2) | 2012     |
| <b>IGI</b>          | 8 bcm/y        | Invest.: 50%<br>Capacity: 80% | 6.4 bcm/y (1)<br>(uncontracted) | 4Q 2012  |

(1) TPA exemption for 25 years

(2) Gas purchase pre-contract signed with Sonatrach

# GAS INFRASTRUCTURES: DOMESTIC FACILITIES

## Gas storage



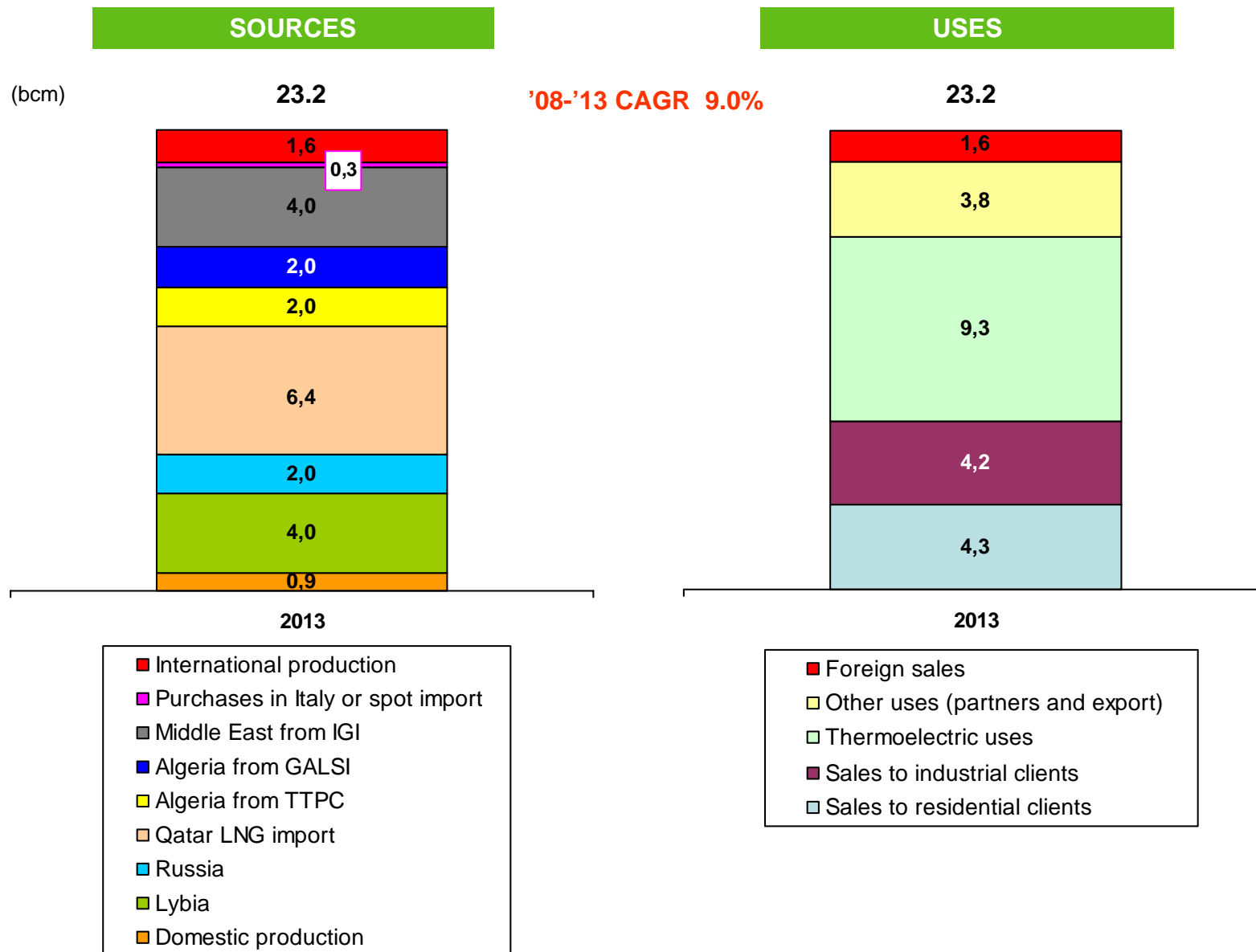
- **Completion of investment plan: capex around €550 mln of which €230 mln facilities and €320 mln cushion gas**
- **Regulated returns**
- **TPA exemption still under evaluation**
- **Contribution to Edison EBITDA: around 4% in 2013**

## Other

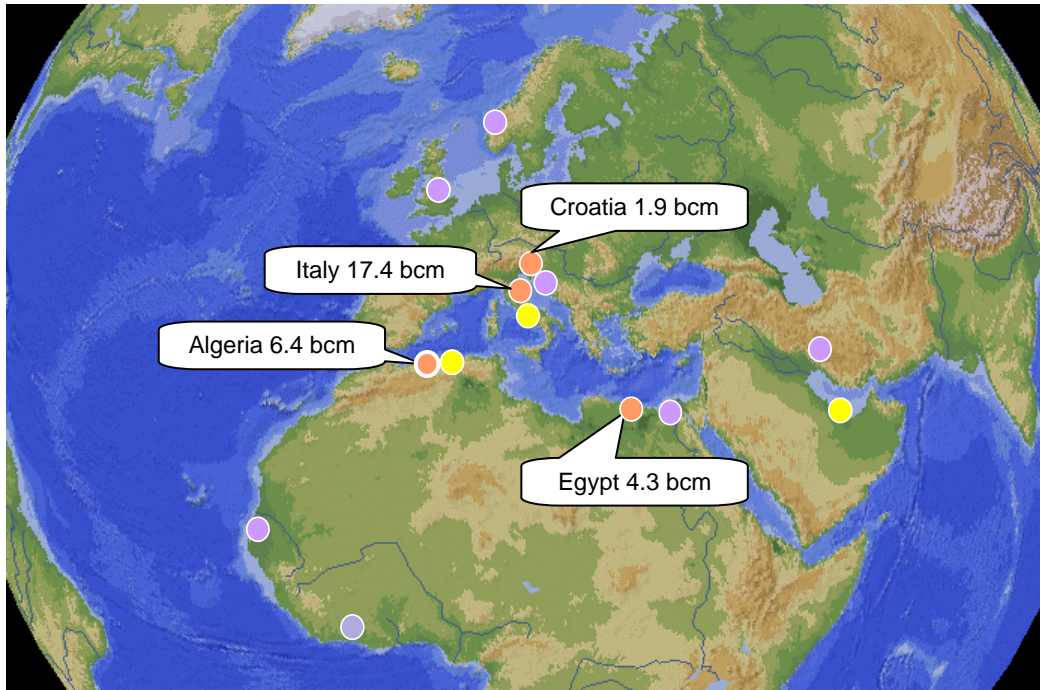
**Cavarzere-Minerbio** (pipeline from Adriatic LNG to grid): in operation from end 2008; maintained in portfolio thereafter (regulated returns).

**Gas Distribution:** participation in bids for new concessions and evaluation of acquisition opportunities, taking into account the evolution of the regulatory framework presently not yet defined.

# GAS SUPPLY AND SALES TARGETS



## Reserves

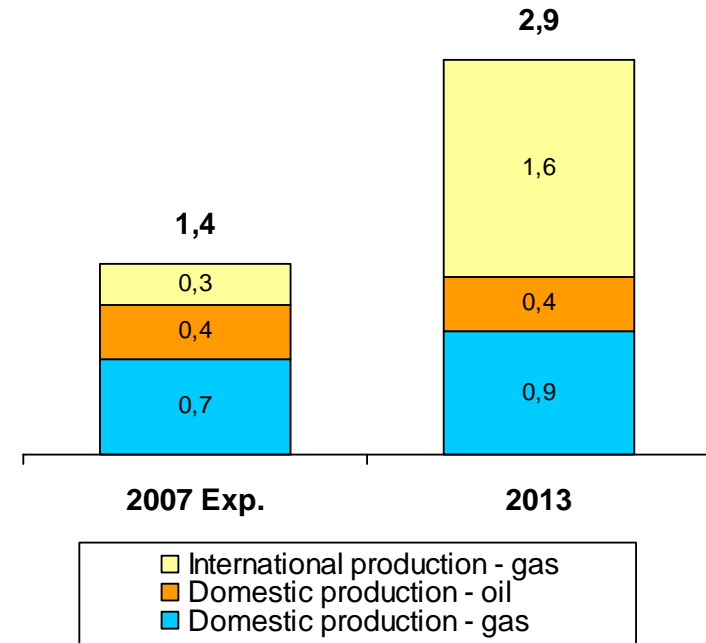


- Proven reserves at Dec. 31, 2006 = 30 bcm eq.
- Drillings
- Exploration permits and concessions

## Development of equity gas

(bcm eq.)

'08-'13 CAGR 12.9%



- Capex increased vis-à-vis previous Business Plan: exploration +20% (60 million) and development plus 480 million with focus on 5-6 countries.
- Production at end of period 12-13% of Edison gas portfolio, with a reserve/production ratio at around 16, equal to around 46 bcm eq. of total reserves portfolio in 2013.
- Contribution to Edison EBITDA: around 12% in 2013

# FINANCIAL TARGETS

# MAIN ECONOMIC AND FINANCIAL TARGETS

|               | Target<br>2008-2013 <sup>(1)</sup> |
|---------------|------------------------------------|
| <b>EBITDA</b> | <b>7-8% CAGR</b>                   |
| <b>EBIT</b>   | <b>12-13% CAGR</b>                 |
| <b>CAPEX</b>  | <b>~6,200 mln € <sup>(2)</sup></b> |
| <b>R.O.I.</b> | <b>average per year ~10%</b>       |

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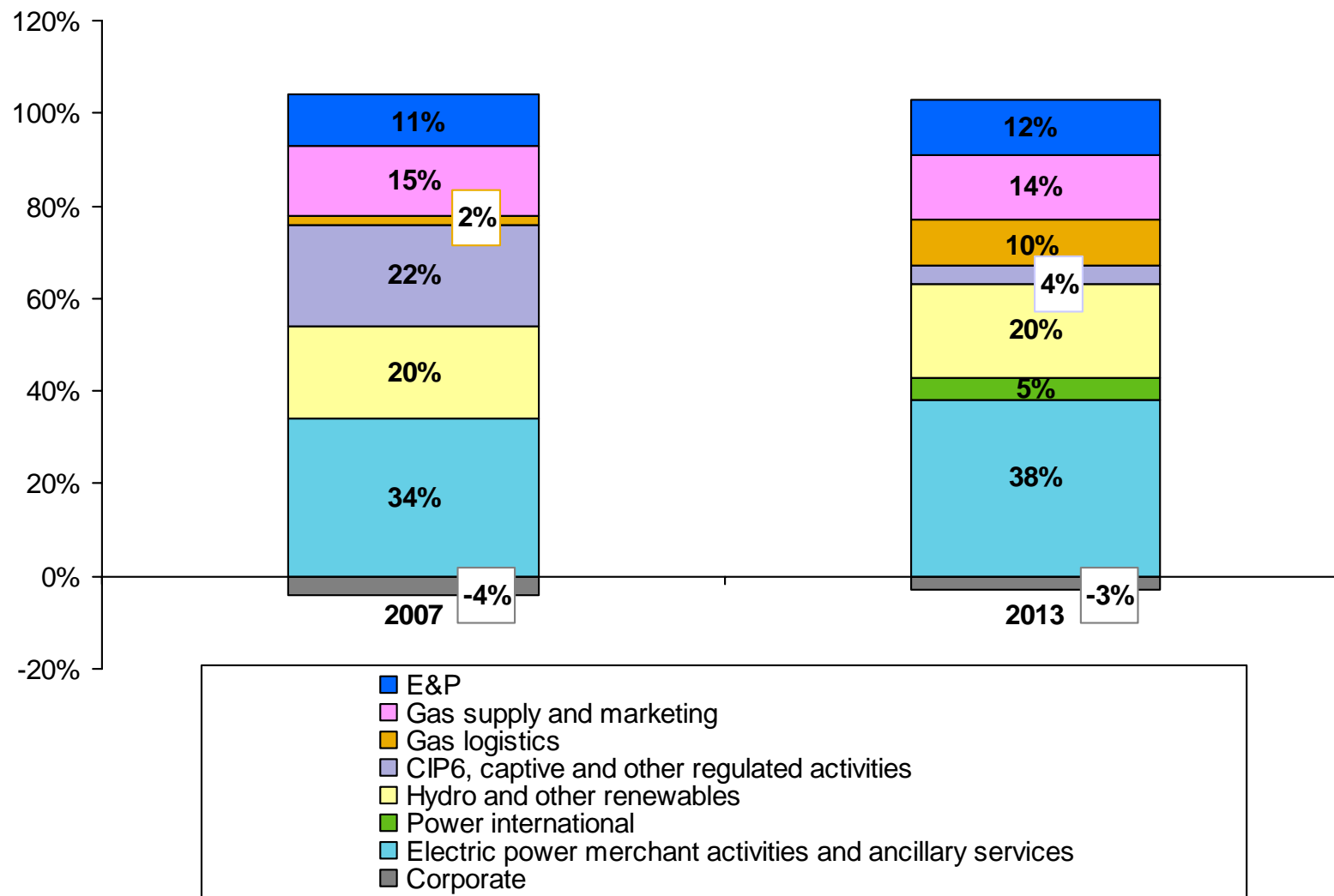
|   | Forecast 2013       |
|---|---------------------|
| <b>NFP</b>                              | <b>~3,200 mln €</b> |
| <b>NFP</b> <i>interest bearing debt</i> | <b>~2,500 mln €</b> |

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(1) Based on expected 2007 figures.

(2) Of which around €1 billion related to capex which are not generating Ebitda in the business plan timeframe.

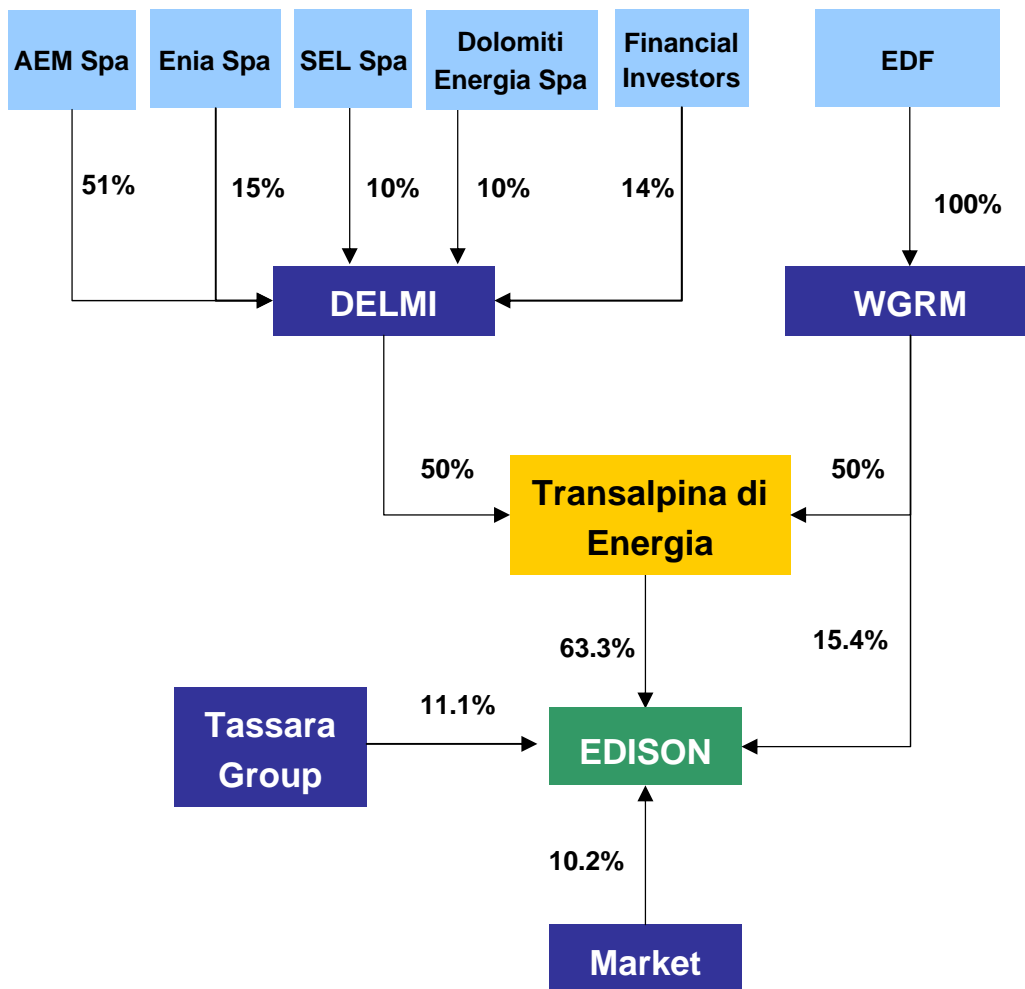
# EBITDA CHANGE BY ACTIVITY



# CAPITAL AND SHAREHOLDING STRUCTURE

# SHAREHOLDING STRUCTURE

As of 18 July 2007 (a)



EdF and Delmi have signed an agreement which regulates Edison corporate governance in Transalpina di Energia (TdE).

This agreement has a three-years duration since the date of the acquisition of TdE's control of Edison (Sept. 16, 2005) and is automatically renewed unless one of the signers announces his contrary intention at least 6 months before the expiration.

NOTE: All percentages of Edison stakes refer to ordinary shares

(a) Date of the last communication

# CAPITAL STRUCTURE

## Shares and warrants

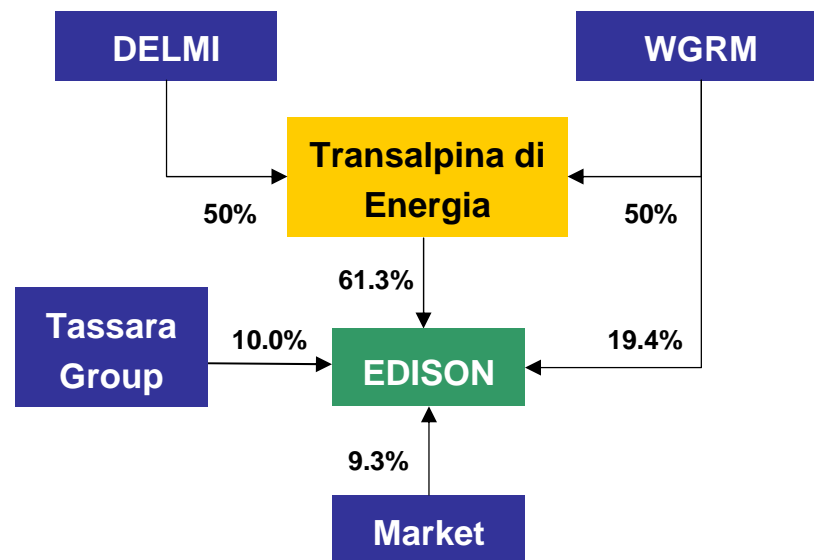
### CAPITAL STOCK AS OF 31.10.2007

|                   |                      |
|-------------------|----------------------|
| - Ordinary shares | 4,682,266,345        |
| - Saving shares   | 110,592,420          |
| - TOTAL SHARES    | <u>4,792,858,765</u> |

### WARRANTS OUTSTANDING AS OF 31.10.2007 TO BE EXERCISED BY END 2007

N° 498,897,612

## Shareholding structure fully diluted



NOTE: percentages refer to ordinary shares

## Dividend policy

| Dividend per share in € | 2005      | 2006  |
|-------------------------|-----------|-------|
| Ordinary shares         | 0.038     | 0.048 |
| Saving shares           | 0.218 (1) | 0.078 |

(1) Including cumulated dividends for previous years.

In the Business Plan period the dividend payout is assumed equal to the 50% of the net profit provided that the dividend per share is at least in line with the DPS of the previous year.

# APPENDIX

# ADRIATIC LNG TERMINAL

**Owner and Operator:** Terminale LNG Adriatico Srl (45% each Exxon Mobil and Qatar Petroleum and 10% Edison)

**Capacity:** 8 bcm

**Access:** Edison has the right to use on a priority basis 80% of the regassification capacity equal to 6.4 bcm for 25 years.

The gas will be imported from Qatar through a 25 year take or pay contract.

Regassification fee contractually fixed and capped to an agreed maximum amount.

**Building site:** Algeciras – Southern Spain

**Contractor:** Aker Kvaerner (offshore terminal), SnamProgetti (pipeline connecting the LNG offshore Terminal to the Minerbio hub)

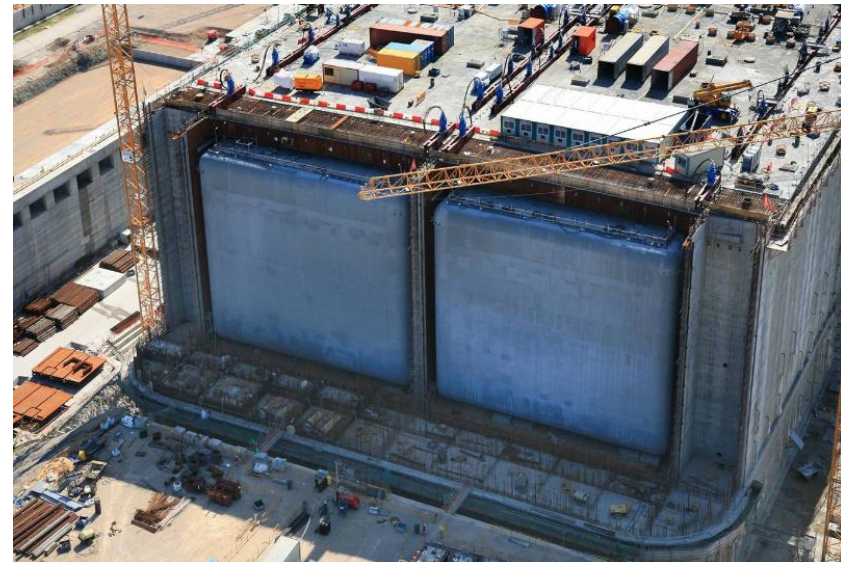
**Project status:** 77% completion at October 2007. Expected operations start: end of 2008.

**Technical details:** GBS (Gravity Based Structure) dimensions: 180x88m x 47m height; total storage capacity: 250,000 cm; mooring capacity: LNG tanks up to 152,000 cm.

GBS end wall completed (June 2007)



LNG tanks inside the GBS (June 2007)



# IGI PIPELINE

On January 31st 2007, the Italian and Greek Governments have signed a protocol of intent whereby Edison and Depa will have the right to use for 25 years the whole transmission capacity (8 bcm) provided by IGI natural gas pipeline. In particular, Edison will have 80% of total capacity and Depa the remaining 20%.

On July 26<sup>th</sup>, 2007 the Turkish, Greek and Italian Governments signed an agreement for the development of the natural gas transit corridor.

IGI pipeline is expected to start operating in 2012; on November 18th, 2007, the link between Greece and Turkey was inaugurated by the respective Prime Ministers. This pipeline is carrying the first supply of gas from the Caspian Sea to Greece.

**IGI CAPACITY: 8 bcm/y**

**ITG CAPACITY: 11.5 bcm/y**



Desfa will be totally in charge of the development of the on-shore tranche of the pipeline (~600 km).

Edison and Depa (each with a 50% stake in the joint venture Poseidon) will take on the development of the off-shore tranche of the pipeline connecting Stavrolimenas, on the Ionian Greek coast, to Otranto (~200 km).

IGI is listed as "Project of European interest" by the European Union and can benefit from facilitated loans and grants.

# GALSI PIPELINE

- **Capacity:** 8 bcm/yr
- **Length:** approx. 900 km of which 600 km offshore and 300 km onshore
- **Operating start:** 2012

## Project status:

Sonatrach called for tender for the purchase of gas through the Galsi pipeline. Gas contracts awarded in August 2006 to Galsi shareholders and third party.

On November 15th 2006 Edison signed an agreement for the supply of 2 bcm per year of gas for 15 years with Sonatrach.

On November 7th 2007 Galsi and Snam Rete Gas signed a memorandum of understanding for the construction of the pipeline.

On November 14th 2007 the Italian and Algerian Governments signed an Agreement for the development of Galsi pipeline.

## Next steps:

Pre-engineering studies under completion.

Authorisation process and start up FEED activities to start by 2007

Construction start expected in 2008



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