



DEFLAZIONE E COMMODITIES

08/04/2016 Claudio Machetti



Global scenario evolution



DEMAND

OECD: decoupling of GDP and electricity demand
Non-OECD: increasing pro-capita consumption as main driver

WHAT HAS CHANGED

Lower global demand growth

COMMODITIES

Significant overcapacity in oil and coal supply
Gas price less correlated to oil in Europe

Commodities prices in line with consensus

Lower power prices

FX

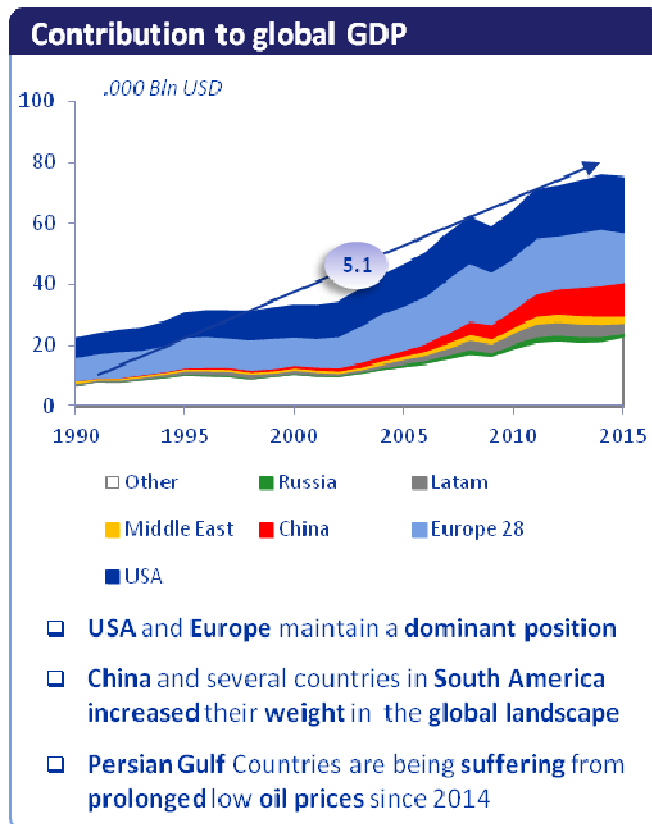
Increasing pressure on emerging markets

Weaker currency exchange rates

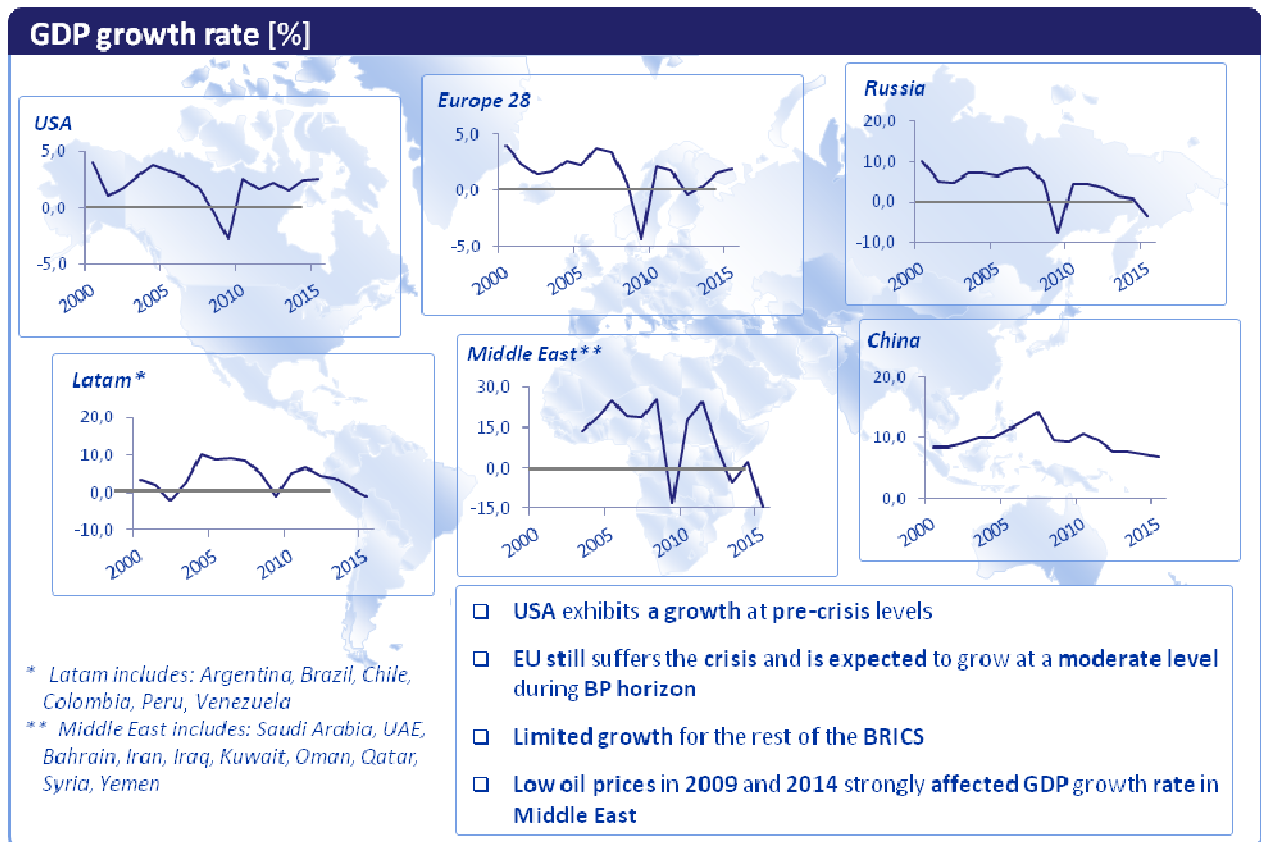
2015 THE YEAR OF VOLATILITY

Crisis still persists in some regions

Recovery is not homogenous around the world



Source: IMF

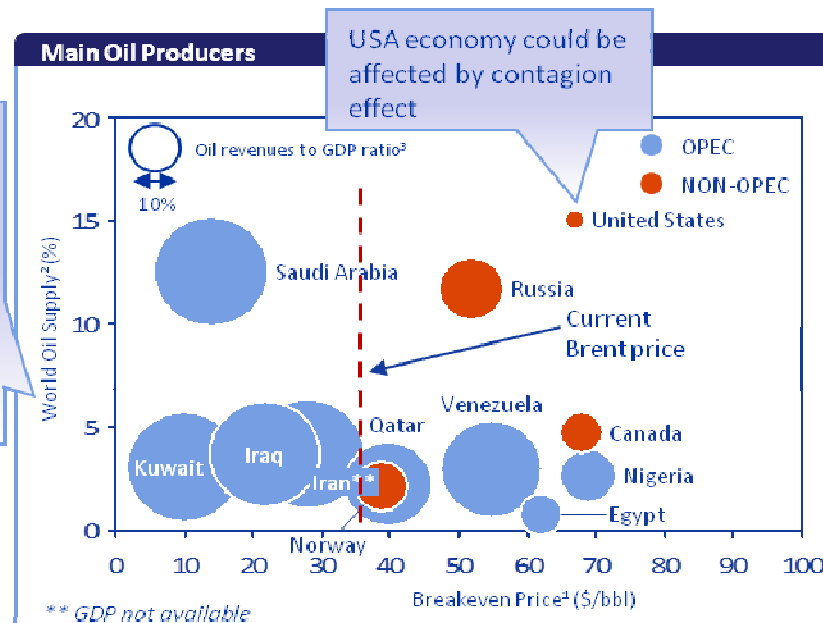


Current oil prices make unprofitable investments in most of the main producer Countries



Top 5 Crude Oil Reserve*	
[Bln. Barrel]	
Venezuela	298
Saudi Arabia	268
Canada	172
Iran	158
Iraq	144

* Source: EIA



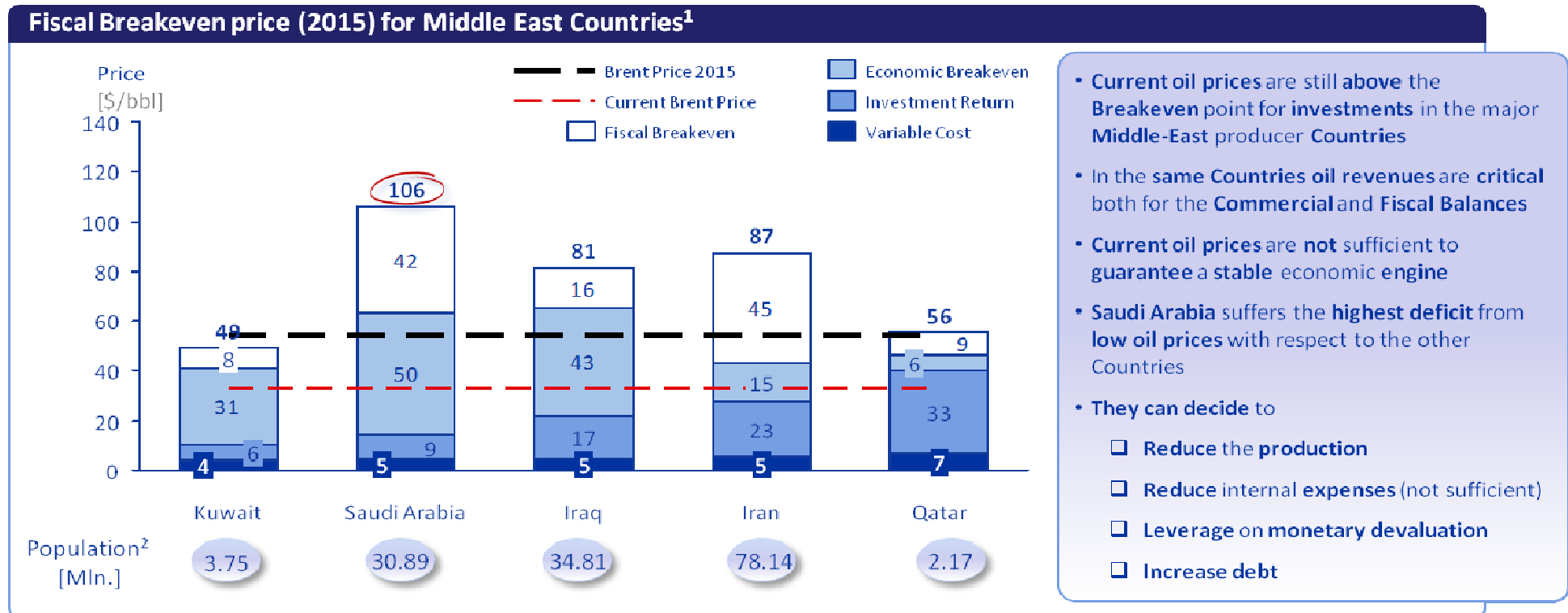
- Current **profitable** countries represent only 25% of world oil supply
- GDP in non-OPEC countries is mainly based on revenues from not related oil products
- Low oil prices, in non-OPEC countries, affect directly the economic results of oil-companies (a part from Russia)
- The **plunge** in oil prices and the **stagnant** situation affects strongly OPEC countries' fiscal balance
- OPEC countries have the possibility to drive the prices centralizing the production decisions
- OPEC countries take advantage from strong dollar values

OPEC countries may decide to adjust the production if current prices put in crisis their fiscal balance

The same is not completely true for those countries where the production is decentralized, despite a strong coordination at Government level is in place

1. The economist.com
2. Internal elaboration from EIA
3. Internal elaboration from EIA, IMF

OPEC countries' fiscal balance is put to test by prolonged low oil prices

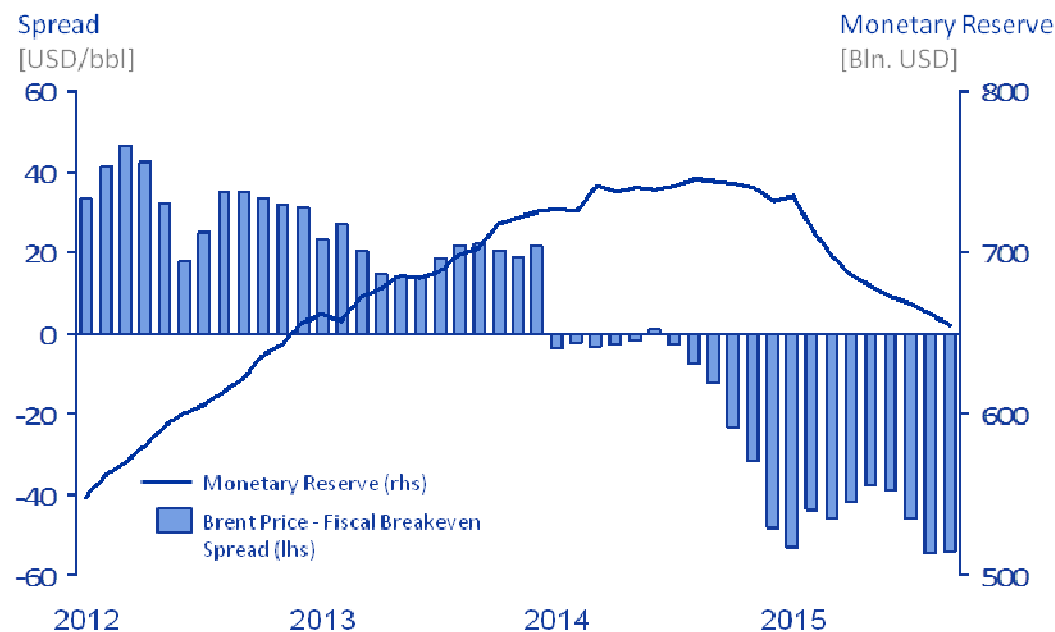


1. Internal analysis on data from IMF and The Economist.com
 2. World Bank, 2014

Saudi Arabia is financing its strategy withdrawing from its own monetary reserves



Saudi Arabia Monetary Reserves¹



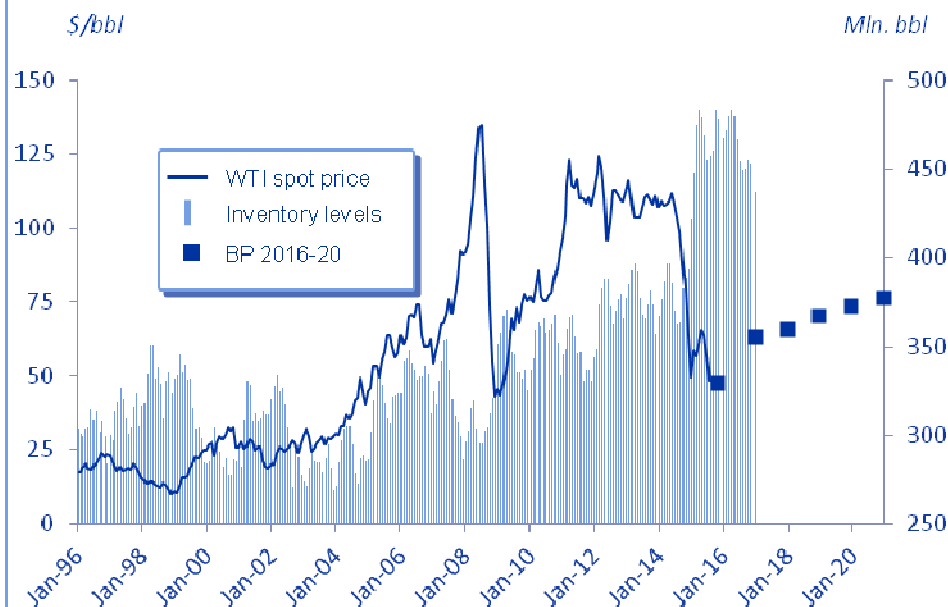
- Saudi Arabia took advantage from high oil prices until 2014, stocking the corresponding surplus in its own monetary reserves
- The economic strategy Saudi Arabia is following is financed through the monetary stocks
- The prolonged low-oil price is, however, putting to test its economic and fiscal endurance
- In the recent months Saudi Arabia has reduced the internal fiscal discount on fuels, unchanging the level of production
- The devaluation of the internal currency could, in the short-run, give additional fuel to its strategy
- If internal endurance is not considered, Saudi Arabia seems to have room to maintain unchanged the strategy for the next two years before reaching pre-Arab Spring levels
- Different pressures can come from the other OPEC countries

1. Internal analysis on IMF data

Oil production did not change despite the low oil prices

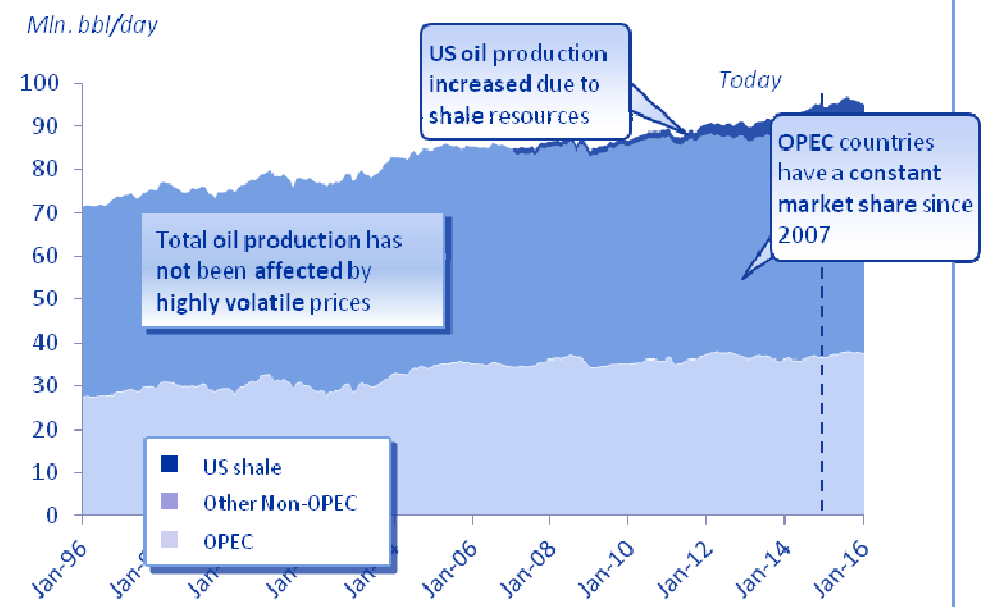


Crude oil: Strategic usage of inventories¹



Source: EIA

Crude oil and other liquids production



Sources: EIA

Inventory levels have increased in the last 12 months and they are currently at their maximum since '90s. Strategic Petroleum Reserves not included.

Cyclical behaviour of commodity prices

Commodities appear to have the same duration of the expansion period with different lags among them

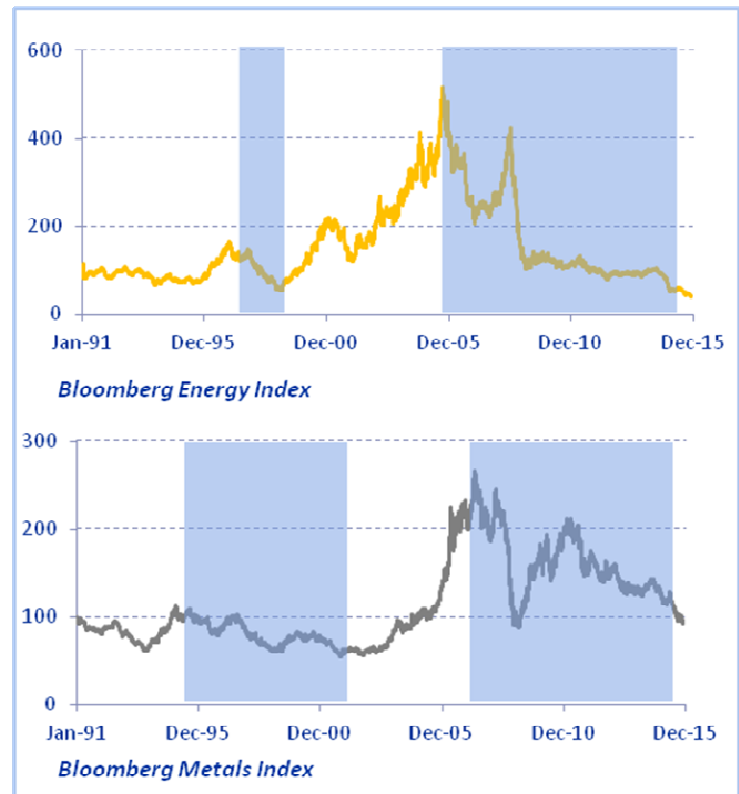


Commodity price evolution is **driven** by two main factors

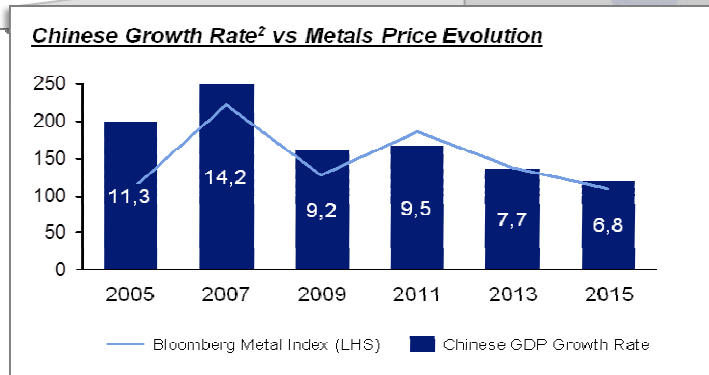
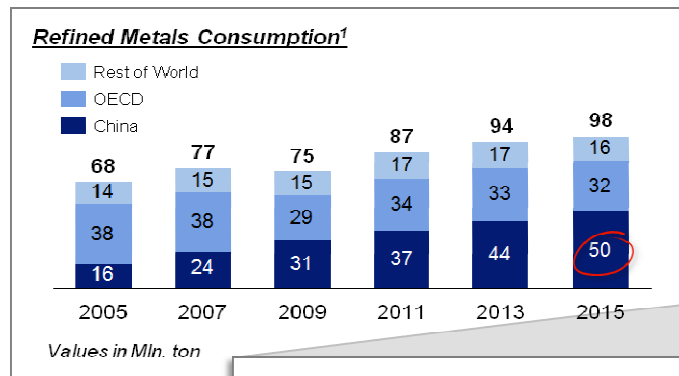
- ❑ **Growth cycles**, which exhibit **sudden movements of prices** and are usually **determined** by exogenous factors: **weather** conditions, **wars**, etc.
- ❑ **Natural cycles**, which act in the **long run** (beyond 2 years) and are determined by **endogenous figures** (long term supply-demand balance, technological disruption)



- ❑ **Filtering algorithm** reveals **two natural cycles** in the last 25 years for the Bloomberg Commodity Index
- ❑ The most **undeniable cycle** starts with **global crisis**
- ❑ **Despite the first recovery at 2010, it seems we are still in a plunging period**
- ❑ The **average duration of the expansion period** is **~5-6 years**



Chinese economic engine is driving metal prices evolution



- ❑ Conversely from developed Countries, where GDP growth depends mainly on services, **Chinese economic development needs a huge amount both of raw and refined metals** to feed, respectively, industry (e.g. steel) and infrastructure development (e.g. power grid)
- ❑ In the last years the **Chinese consumption of refined metals exceed 50% of the World consumption**
- ❑ Despite short-term spikes, **metal prices are more and more linked to Chinese GDP growth rate**

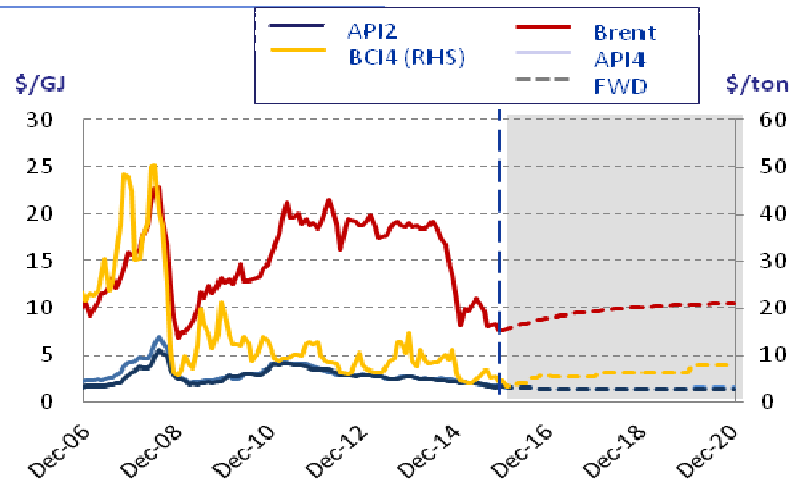
1. World Bank, "Commodity Market Outlook", 2016
2. IMF

Coal: market trends and forecasts

The coal market is undervalued and we expect prices to recover

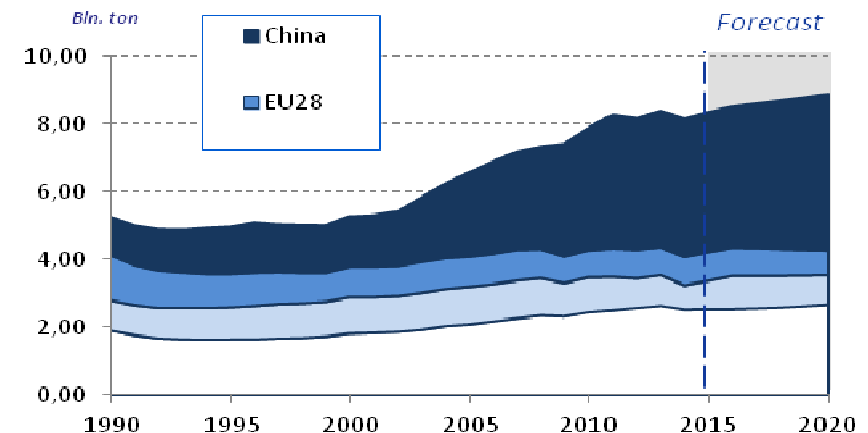


Market trends 2006-2020



- ✓ Coal price has currently reached its minimum since 2006
- ✓ The forward market does not put in evidence any kind of recovery in the forthcoming years
- ✓ The comparison between API2 and API4 prices highlights the squeeze of implicit shipping cost
- ✓ More in general, the collapse of freight prices worldwide is putting in crisis most of the shipping companies which have seen their revenues strongly reduced since 2009

Coal consumption in the main World economies



Source: EIA, internal elaboration from Enerdata

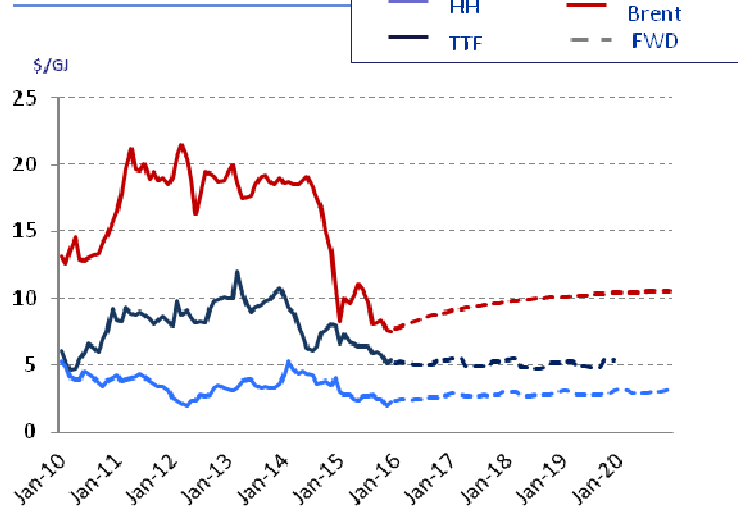
- ✓ China coal consumption grew exponentially, actually represents over 50% of the total
- ✓ Since 2010 China has a slowdown consumption
- ✓ In the rest of the world coal consumption has remained almost steady
- ✓ Going forward, policies of decarbonization may affect coal demand, even if coal will remain one of the main source to guarantee security of the supply

Gas: market trends and forecasts

Natural gas is becoming a global market

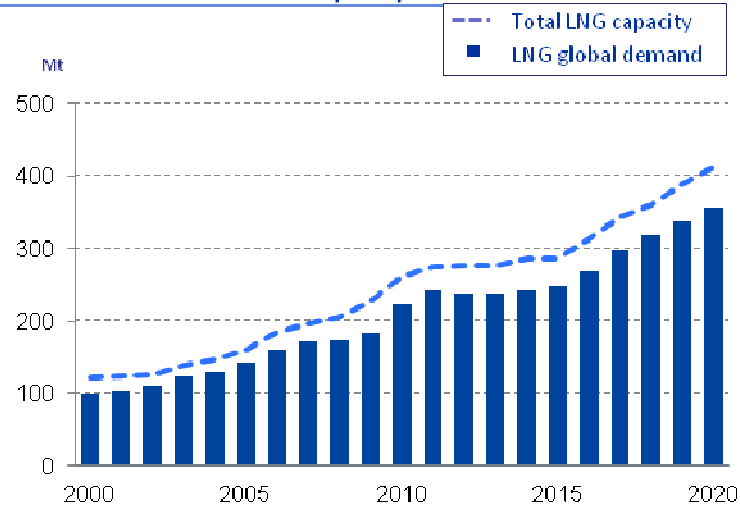


Market trends 2010-2020



- ✓ Gas prices experienced a drop mainly due to low Brent prices and oversupply
- ✓ European hubs are converging even if with different liquidity
- ✓ European markets are expected to maintain a premium in comparison to Henry Hub price

Global LNG demand and capacity



- ✓ The role of **unconventional gas**, especially from **USA**, will be **significant** in the future
- ✓ It's **expected** an **expansion** of global **trade** in **LNG** to lead to price **convergence** between regional **differences**

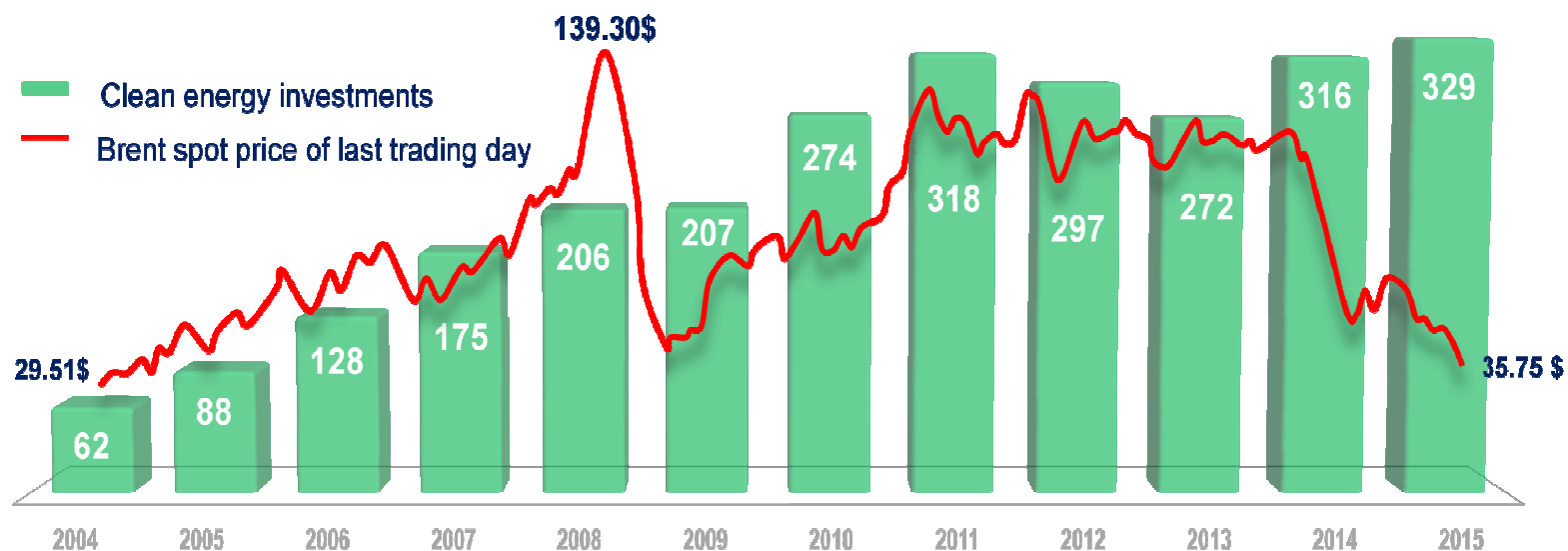
Source: Argus, Bloomberg, Nymex, Albasoluzioni, IHS

Global trends in clean energy investments

2004-2015



Clean Energy Investments vs. Oil Price (bn\$)



NO relationship between oil price and clean energy investments

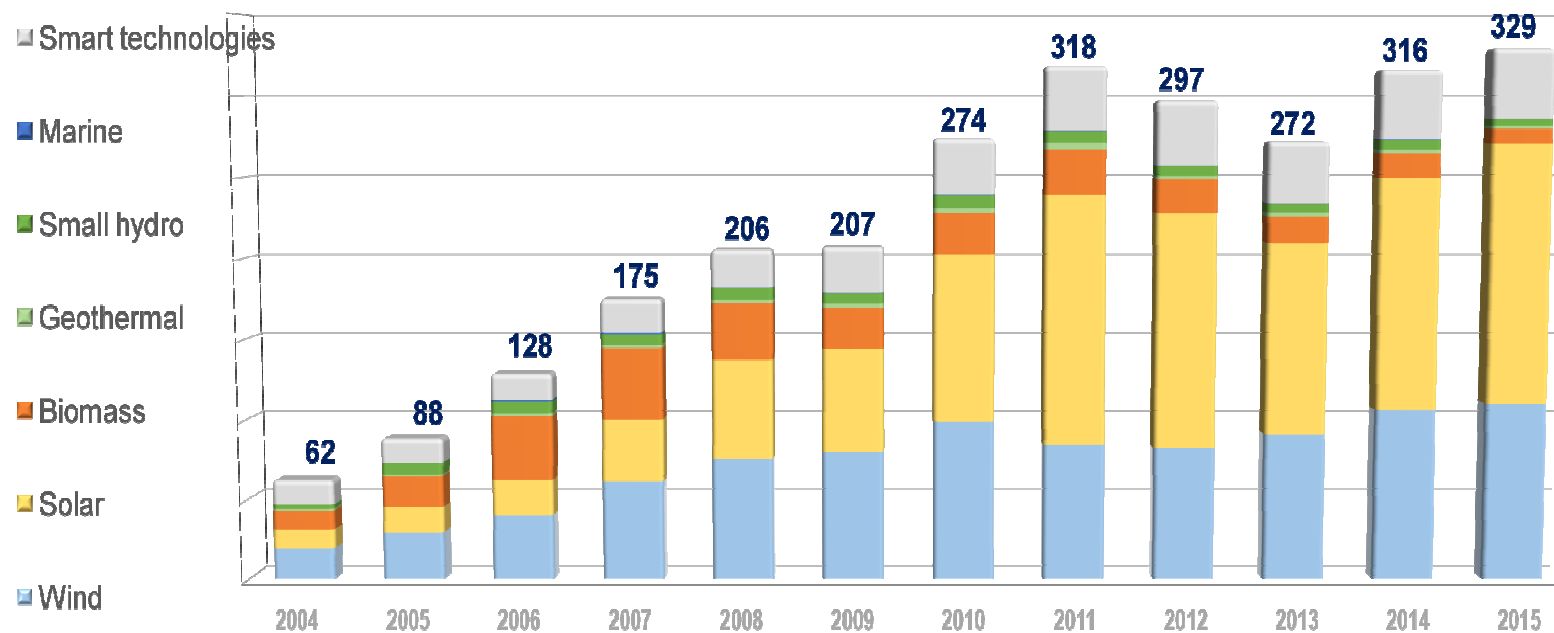
Source: Bloomberg New Energy Finance, Jan 2016
Note: figures include corporate and government R&D, investments in Smart Technologies as well as investments in all renewable technologies excluding large hydro.

Global trends in clean energy investments

2004-2015



Global Annual investments in clean energy (bn\$) – Breakdown by Technology

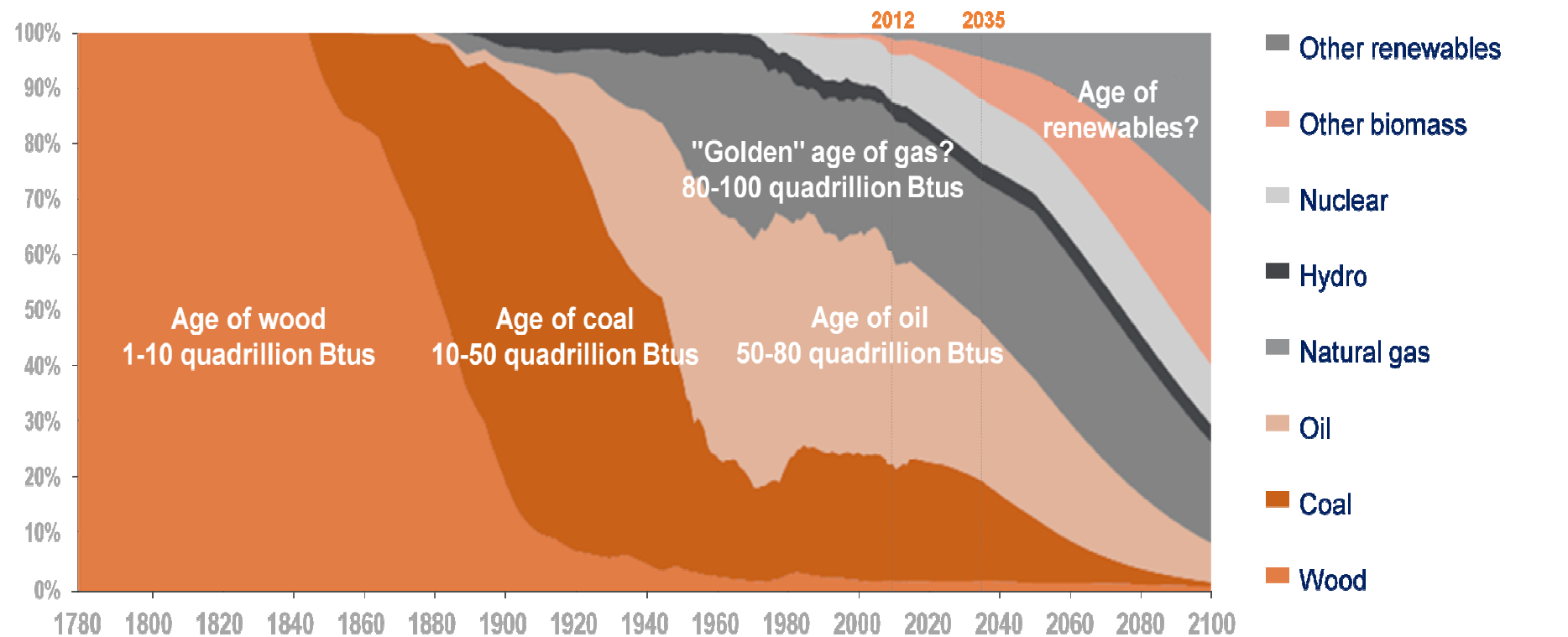


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Note: figures include corporate and government R&D, investments in Smart Technologies as well as investments in all renewable technologies excluding large hydro.

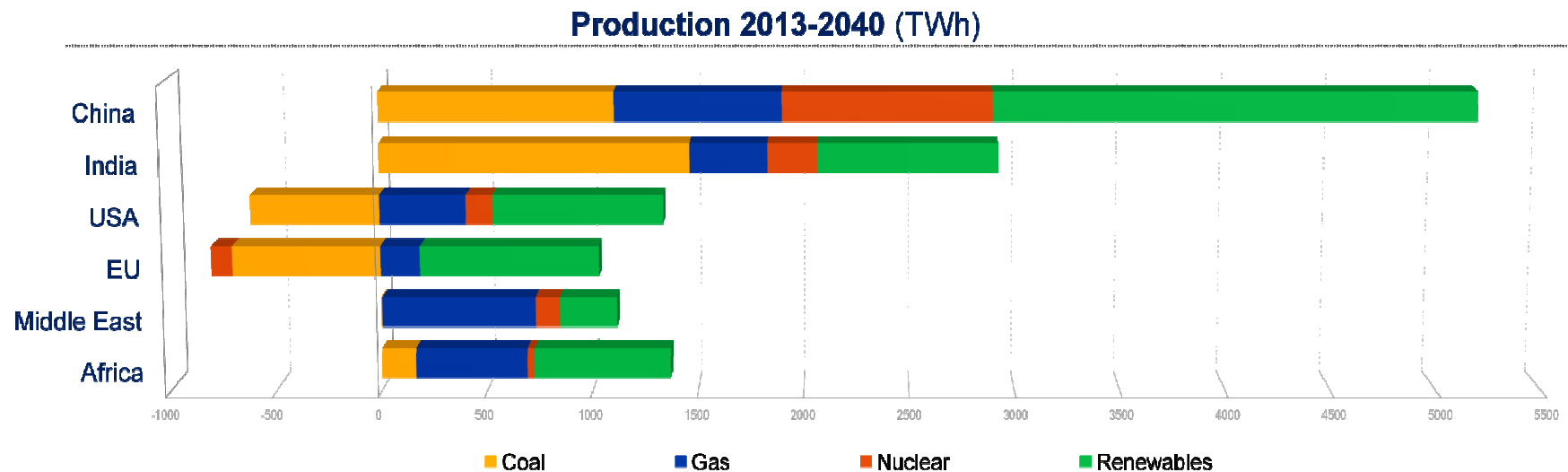
Technology evolution in energy



Evolution of the U.S. primary energy mix (1780-2012) and projection to 2035-2100



Changes in power production by 2040¹

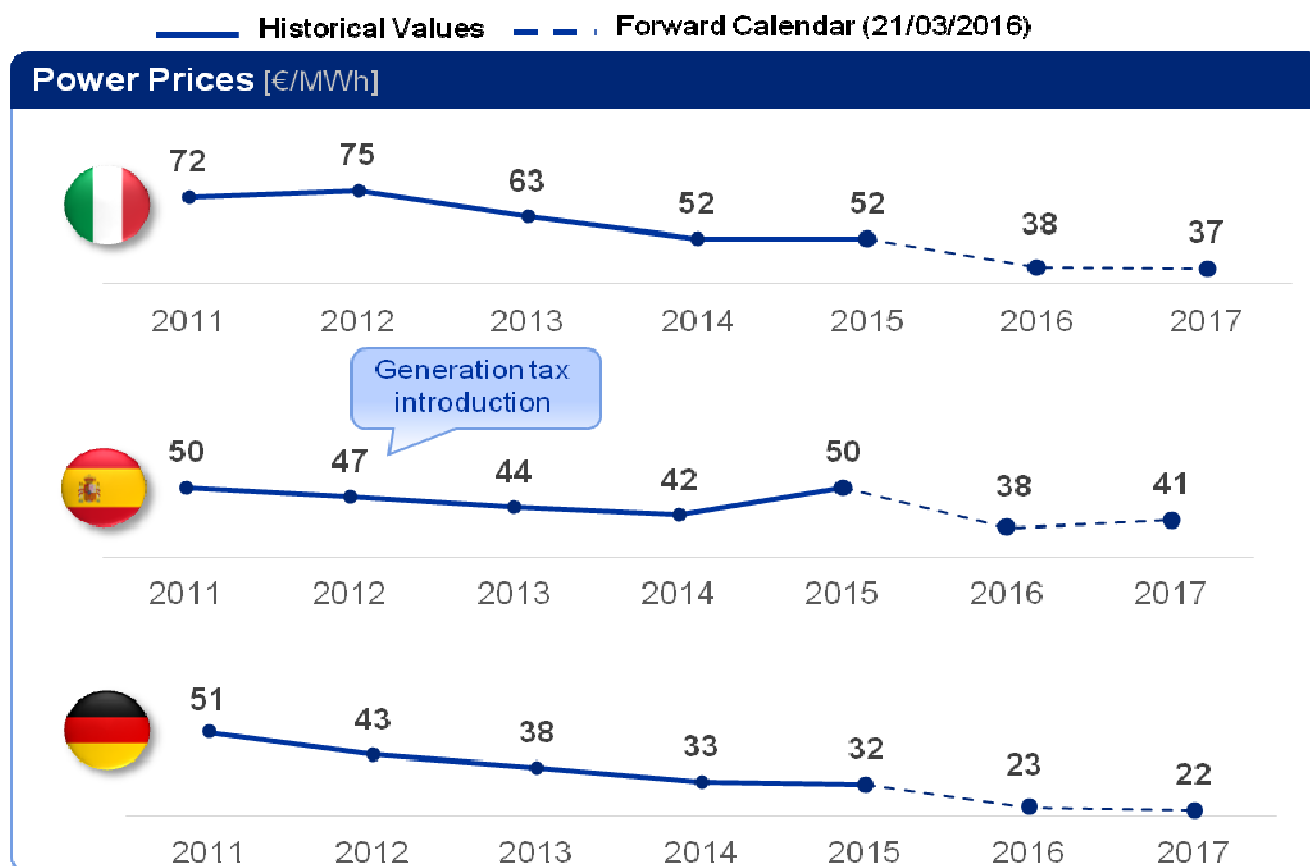


Emerging Markets will account for 65% of production growth
Renewables will represent 52% of new electricity generation

1: Source: IEA, WEO 2015 (2013 base year)

Power prices: market trends and forward

EU powersector fundamentals remain weak

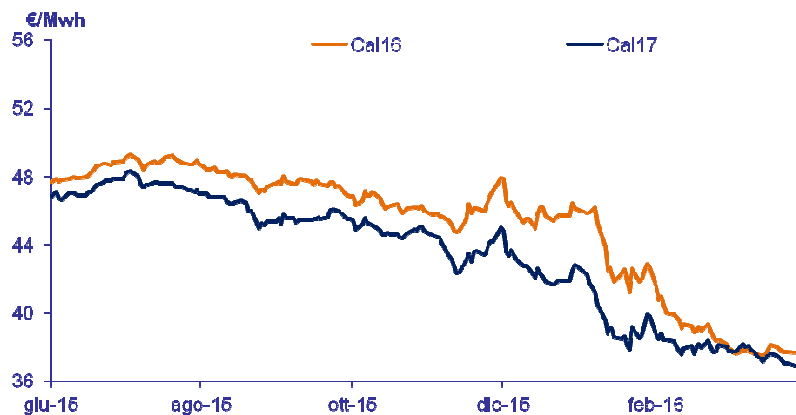


- Over the last five years, the EU power sector has been hit by macroeconomic and industry-specific factors that have led to overcapacity and low power market prices.
- Fundamentals remain weak and suggest that this market conditions could continue even for the medium term future.
- The impact of these negative trends could be offset by:
 - Leveraging on operational excellence
 - Rationalizing the investment decisions
 - Working with regulators and governments to solve the problem of unprofitable capacity

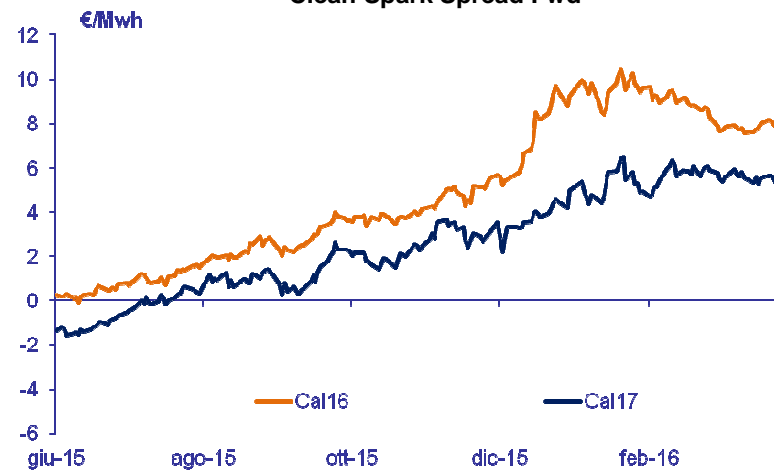
Italian Energy Prices



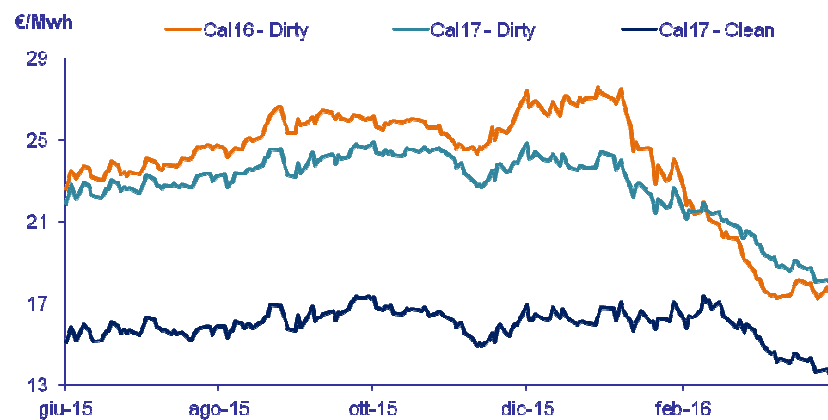
Power Fwd



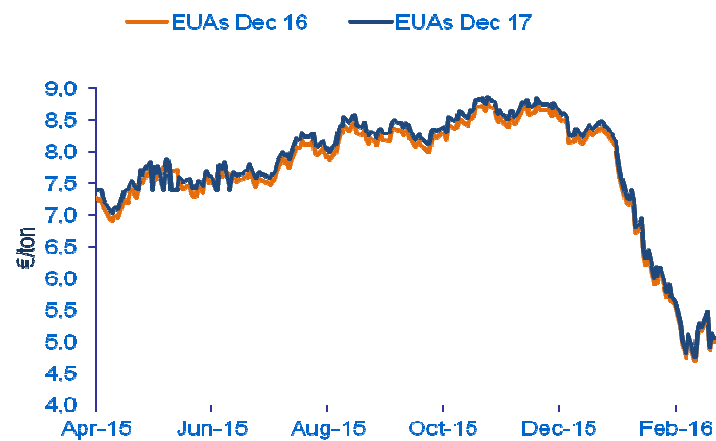
Clean Spark Spread Fwd



Dark Spread Fwd



CO2





Thank you

