



GAS INDUSTRY

FUTURE IN A MULTIPOLAR WORLD STRONGLY INFLUENCED BY GLOBALISATION AND THE RISE OF EMERGING COUNTRIES

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NEW ECONOMIC AND GEOPOLITIC CONFIGURATION



- **WESTERN COUNTRIES:** Average growth 2000-2010=1,3%
Energy consumption in stagnation
Issues : energy transition to succeed
Disorderly approach at the present time
- **EMERGING COUNTRIES:** Average growth 2000-2010=3,3%
Attractiveness for FDI* (BRIC=290 G\$)
Steady growth in energy consumption
Issues : ensure energy resources availability
(Coal, gas, oil, Renewable energies)
- **DEVELOPING COUNTRIES :** Economy based on exploitation of natural resources
Average economic growth
Issues : national consumption / exportation arbitrage
Transition energy model uncertain
- **NON DEVELOPPED :
COUNTRIES** Few natural resources
Internal social problems.
Threat on domestic and regional geopolitical
environment



FURTHER STEP FOR GLOBALIZATION

- A MULTIPOLAR WORLD**
- NEW ECONOMIC CONFIGURATION**
- IMPORTANT ENERGY CONTENT**



NATURAL GAS

- **Abundant for the moment, clean and cheap**
- **Geographical concentrations= competitions / arouse keen interest**
(Iran-Qatar-Russia-USA)
- **Unconventional resources in growth**
(America-China-Australia-Africa)
- **Other producing countries concerned by maintaining their market share/ economic and energy transition**
- **Growing needs for emerging countries with high growth**



OTHER NONE RENEWABLE RESOURCES (Oil & Coal)



- **Oil: abundant (unconventional) = nonrenewable + pollution**
- **According to the IEA: high reserve growth and consumption until 2035 (emerging countries)**
- **Oil rank remains undisputed until 2030/35**
- **90 billion dollars of investments per year in exploration/50% are for the unconventional**
- **Coal: abundant reserves specially in the biggest consuming countries (China-USA-Europe)**
- **Coal: is regaining what it has lost to other resources**



THE NUCLEAR

- **The most controversial today (victim of the Cold War before being an ideal for environmentalists)**
- **Currently: 3% of the world's energy,
17% in Europe, 75% in France**
- **Main drawback: security and storage / processing of nuclear waste (probable solution by 2050 and reuse in power generation X?)**
- **No viable alternative for the current time**
- **Nuclear power remains stable despite the Fukushima disaster**



RENEWABLE RESOURCES



- **Main advantage: Environmental**
- **Disadvantage / economic challenge**
- **Forecasts 2030: Renewables = 20 to 25%**
Nonrenewable = 75 to 80%
- **Heavy subsidies sometimes contested**
- **1 nuclear power plant = 40 000 wind**
= 30 millions M² (solar)
- **Foresights : related to technological progress**



**NATURAL GAS REMAINS
A DURABLE SOURCE OF ENERGY
BY 2030, AND POSSIBLY BEFORE
THE SECOND ENERGY SOURCE**



PRODUCERS AND CONSUMERS STRATEGIES WILL BE BASED ON



- 1. Ongoing geopolitical changes**
- 2. Geographical distribution of reserves and the importance of the investments to ensure supply**
- 3. Globalization or regionalization of markets (Competition between producers and market shares)**
- 4. Issue of indexation of prices and long-term contracts facing the pressures of spot markets**
- 5. Competition with other non renewable resources (coal and unconventional oil)**
- 6. Competition or complementarity with other energy sources (GAS-NUCLEAR-Renewables)**
- 7. Technological progress in energy saving**

A LONG TERM VISION IS NEEDED



THE ENERGY TRANSITION



**MULTI PARAMETERS FORMULA OR EVEN
WITH MANY UNKNOWNNS THAT YOUR
TWO COMMITITIES HAVE IN CHARGE
TO RESOLVE UNTIL THE NEXT**

**WORLD GAS CONGRESS
IN PARIS 2015**