

SECURITY OF SUPPLY

THE SOUTH EAST EUROPE ACHILLES'S HEEL

THREATS AND OPPORTUNITIES

Dr. I.N. Desypris
Chairman of IENE
Energy Division, Mytilineos Holdings S.A

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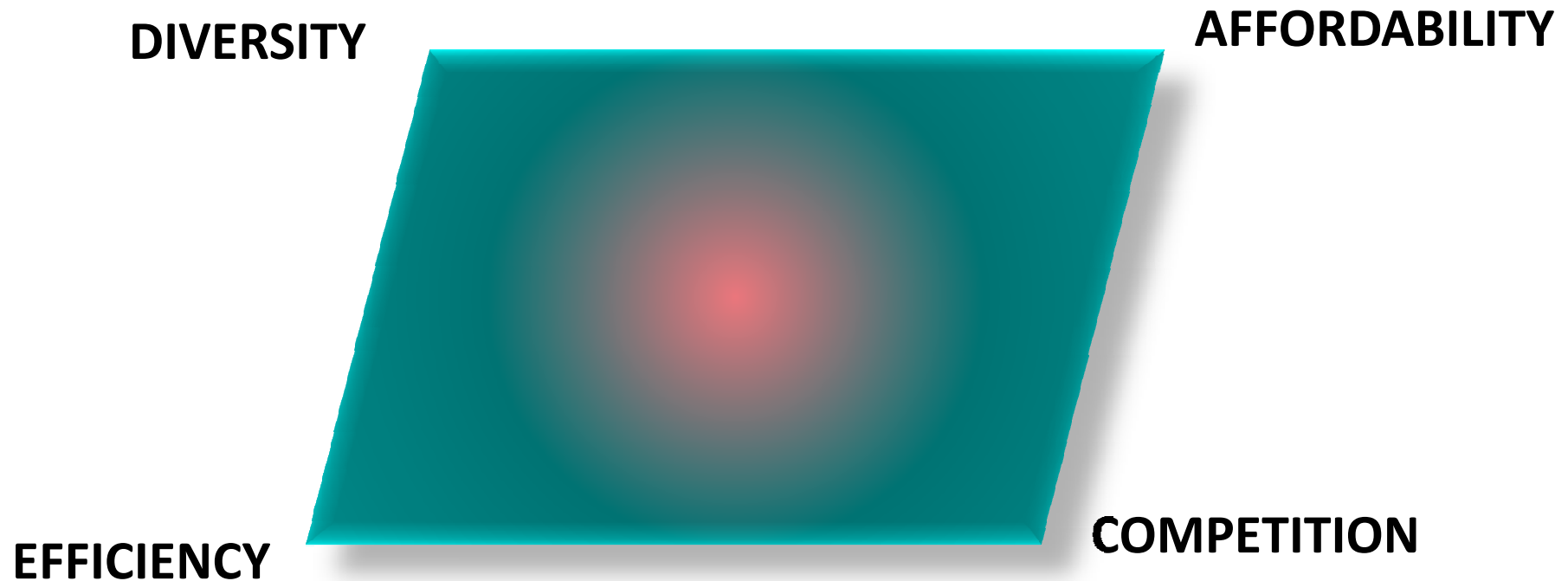
SECURITY OF SUPPLY IS

- ▶ Reduction of external dependence, enforcement of transport infrastructure and gas storage facilities and diversification of supply of gas and electricity.
- ▶ Diversified supply structure puts the operational regime in a better position to counter threats of sudden energy disruption.
- ▶ It is essential that these efforts do not undermine, but supplement the overall liberalization of the national energy markets

Legislative Framework:

- ▶ **Directive 2005/89/EC**
- ▶ **Directive 2004/67/EC**
- ▶ **Third Legislative Package** (Directive 2009/72/EC and Directive 2009/73/EC)

SECURITY OF SUPPLY MEANS

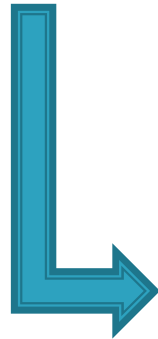


SECURITY OF SUPPLY MEANS

DIVERSITY



Accepting the widest
range of energy sources



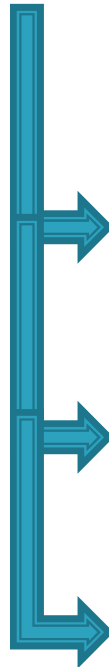
- Forms of energy → technologies
- Places it comes from

SECURITY OF SUPPLY MEANS

COMPETITION



**Best ways of finding
producing and distributing
energy**



**Opening access encourages efficient solutions,
may involve partnerships and combinations of
skills**

**Pressure on supplies requests development of
resources and technologies**

**Climate change request sustainability of
energy security and technologies**



Efficient Partnerships



Efficient Combination of Skills



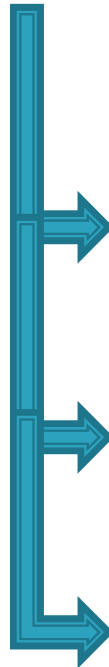
Efficient Management

SECURITY OF SUPPLY MEANS

EFFICIENCY



**Making the most of
Each unit of energy**



Use less, a priority

**More efficient vehicles, buildings
and appliances**

**Investments in technology,
Infrastructures (smart grids)**



Social Consensus



Technologies

SECURITY OF SUPPLY MEANS

AFFORDABILITY



**Finding out the cheapest
alternative fuel**



Where from

At what cost

SECURITY OF SUPPLY MEANS

Q : What is the future “diverse” mix of Energy for South-East Europe ?

Coal ? → CCS?

Gas ? ↗ Pipelines ?
↘ LNG ?

Renewables ? → How much ?

Nuclear ? → Money ? Time ?

Q : What are the technologies involved in this diverse mix ?

Conventional

Unconventional

..... **AND MATTERS TO SOUTH EAST EUROPE BECAUSE**

- **NO OR LITTLE INDIGENOUS OIL**
- **NO OR LITTLE INDIGENOUS GAS**
- **NO OR LITTLE INDIGENOUS TECHNOLOGIES**
- **INSUFFICIENT INFRASTRUCTURE**
- **ROAD MAP TO CLIMATE CHANGE MITIGATION**

NEED TO LOOK AT FIGURES ?

ENERGY IMPORT DEPENDENCY IN SOUTH EAST EUROPE (%)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Bulgaria | 46,6 | 46,3 | 46,8 | 47,3 | 48,4 | 47,4 | 46,2 | 51,9 |
| Greece | 69,4 | 68,9 | 70,7 | 67,5 | 72,7 | 68,6 | 71,9 | 67,3 |
| Romania | 21,9 | 25,8 | 23,8 | 25,4 | 30,3 | 27,6 | 29,2 | 32,0 |
| Turkey | 65,44 | 64,29 | 67,25 | 70,95 | 70,44 | 71,93 | 72,46 | 74,36 |

Source: Eurostat (2009)

PLUS THE ECONOMIC REALITIES INTERVENE TO

- **REDUCE THE DEMAND**
- **REDUCE THE INVESTMENT**
- **INCREASE THE COST OF CAPITAL**
- **GIVE ECONOMIC ADVANTAGE TO EXPORT-ORIENTED MARKETS**
- **KEEP WEAK EU ETS BECAUSE OF LOWER CO2 EMISSIONS**
- **KEEP LOW NEW NUCLEAR DUE TO HIGH COSTS**



THE GAME TENDS TO CHANGE !

SECURITY OF SUPPLIES AND THE ROAD MAP TO CLIMATE CHANGE IS AN ADDITIONAL BURDEN

- **TRANSPORT**
 - Efficient engines
 - Biofuels
 - Hybrids
 - Electric vehicles

- **POWER**
 - GAS best alternative to medium term
 - MEANS investments in Infrastructure (pipelines, gas storage, LNG terminals)
 - CCS expensive
 - Offshore Wind Farms still expensive
 - Nuclear expensive and long lead time

- **DEMAND SIDE MANAGEMENT**
 - Efficiency
 - Reduction of consumption
 - Cost effectiveness of DSM
 - Technologies and smart grids

CAN SOUTH EAST MEDITERRANEAN INTEGRATE REGIONALLY ?

**(SOUTH WEST MEDITERRANEAN IS
ALREADY INTEGRATED WITH EUROPE)**

- ➔ WHICH IS ECONOMICALLY THE BEST WAY ?**
- ➔ DOES IT REALLY OFFER DIVERSIFICATION ?**
- ➔ DOES IT OFFER REAL COMPETITION ENVIRONMENT ?**
- ➔ DOES IT OFFER SYNERGIES AMONG COMPANIES AND COUNTRIES ?**

..... LACK OF SECURITY OF SUPPLY AND ECONOMIC REALITIES – THREAT OR OPPORTUNITY ?

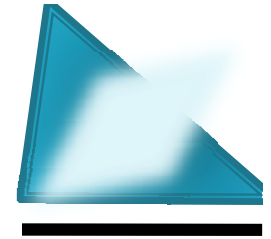
OPPORTUNITY OF SOUTH EAST EUROPE IN BECOMING A CORRIDOR

BUT

- **NEED NEW LOCAL CONSUMING MARKETS IN THE CORRIDOR “ROAD”**
- **SEARCH FOR NEW ECONOMIC DEVELOPMENT MODELS**
- **OPPORTUNITY FOR CONSENSUS**
- **INTERNATIONALIZE INVESTMENTS**
- **COOPERATE TO NEW TECHNOLOGIES**
- **COOPERATE TO NEW REGIONAL INFRASTRUCTURE**
- **JVs IN MANAGING NETWORKS**
- **JOINT APPROACHES TO FUNDS**

PROPOSAL TO THE BOD OF IENE

- **A “HORIZONTAL” ADVISORY REGIONAL EXPERTS COMMITTEE TO COMPILE A REPORT TO REGIONAL GOVERNMENTAL BODIES AND 5th SEED (2011)**



THANK YOU

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