

5th S.E. Europe Energy Dialogue

Thessaloniki 2-3, June 2011



**INSTITUTE OF ENERGY
FOR SOUTH-EAST EUROPE**

**Conference Main Points
and
Conclusions**

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The 5th SEED

The Institute of Energy for SE Europe (IENE) organized the «5th SE Europe Energy Dialogue» in Thessaloniki, on June 2-3, 2011. This important international event, which was held in partnership with MEES (Middle East Economic Survey) and WEC (World Energy Council), attracted high-ranking government officials, senior business executives and energy experts from the countries of S.E. as well as from international organizations and companies.

The purpose of this international meeting which was organized by IENE and under the auspices of the Greek government and with the support of leading international organizations was to bring together high-ranking government officials, senior business executives and energy experts from the countries of S.E. Europe but also from major energy producing countries with the objective of exchanging information and ideas, networking and discussing the shaping of the political action required in order to face the increased global and regional energy and environmental challenges. The “Energy Dialogue” has been conceived as a forum for furthering the idea of a S.E. European energy bridge involving all the countries of the region.

This year, the SE Europe Energy Dialogue meeting was very topical in view of the present difficult situation regarding the security of energy supplies, especially by the oil and gas importing countries of SE Europe, and the global concern for the development of viable alternatives. The Summit will concentrate on the most important developments of the region’s evolving natural gas and electricity markets focusing on S.E. Europe’s ever deepening energy partnerships with the Caspian Sea, the Middle East and North Africa.

In addition to official representations from each of the SE European countries, senior executives from several major energy companies of the region but also, from banks and financial institutions (e.g. European Investment Bank, Black Sea Development Bank, etc.) as well as high ranking officials from the European Commission, the Energy Community, the World Energy Council and other international organizations participated in the «5th S.E. Europe Energy Dialogue».

Key Messages

- Rising energy demand for the region is foreseen over the next 10 years but at a much slower pace than previously forecasted
- Continuing strategic relevance of coal at least until 2020
- Urgent need to replace antiquated and low efficiency thermal electricity plants
- Inadequate progress is observed in electricity and gas market liberalization
- Very high net hydrocarbon import dependence and unsatisfactory import diversification is observed. Therefore there is a need to:
 - (a) increase indigenous oil and gas output and explore for new fields.
 - (b) replace and upgrade old and outdated refinery complexes
- Present underdevelopment of R.E.S combined with newly introduced incentives will lead to massive investments and significant penetration in the whole region by 2020/2030
- There remains low infrastructure inter- connectivity in oil and natural gas
- There is a need to complete main gas interconnectors in all SE European countries.
- Plans for the construction of South Gas Corridor projects must be accelerated so that new gas pipelines are in place by 2020, in order to meet rising European gas demand and help with diversification of supplies
- The role of Azerbaijan is to be further enhanced as a prospective key supplier for European gas needs while Turkey's role as regional gas hub is further reinforced
- There is a positive investment climate in electricity and gas with East Balkans and Turkey far ahead of Western Balkans in terms of actual investments and potential.

I. Conference Main Points

A. EU Policy Priorities

I. Energy policy

- Third Internal Energy Market Package
- Regulation on security of gas supply
- Energy Strategy 2020
- Energy Infrastructure Package
- Energy Efficiency Plan
- Energy 2050 Roadmap
- Endorse the full list of **priorities** as outlined in the Commission Communication of Feb. 4, 2011
 - (i). streamline and improve authorisation procedures
 - (ii). tariff setting and appropriate cost allocation for cross-border investment
 - (iii). limited public finance to leverage private funding

II. European infrastructures priorities – electricity by 2020

- Baltic energy market inter-connection plan
- Interconnections in South West Europe
- Interconnections in Central-South East Europe
- Offshore grid in the Northern Seas and connection to Northern and Central Europe
- Smart grids in the EU
- Electricity highways as longer-term priority

III. European infrastructures priorities – gas and oil by 2020

- Southern gas corridor
- Baltic energy market inter-connection plan
- South-North gas interconnections in Western Europe
- North south gas & oil interconnections in Central & South East Europe

IV. Way forward – proposals for 2011

- **New EU planning approach**
 - Planning and selection method including criteria
 - Regional cooperation
 - Policy and project support tool
- **Improved cost allocation**
 - Effective cost allocation for complex (cross-border) projects (« beneficiary pays » principle)
 - Regulation matching risks (innovation) and objective (security of supply) of infrastructure investments

- **Financing only where market failures take place**
- New financial instruments in cooperation with IFIs and direct EU support if needed
- **Faster and more transparent permit granting procedures**
- One-stop shop approach and time limit for decisions
- Transparency and early involvement of stakeholders
- Compensation harmonisation
- Rewards/incentives to regions and Member States

V. **EU renewable energy potential**

- Wind energy onshore
- Solar energy
- Wave energy
- Bioenergy

B. **Power Sector**

Electricity Market Liberalization

It is generally understood that wholesale market is the driving engine for investments

- Creation of best conditions to attract new investments in the generation sector in the whole SEE Region
- Direct electricity connection of SEE region with the EU internal energy market remains a major goal
- Provide opportunities for new electricity generation investments for the exploitation of the region's remarkable RES potential, in line with EU targets
- **Well balanced functions and competences.** Regulatory functions mostly stick to regulation (of rights, prices, licences) not so much to monitoring of market concentration.
- **Comprehensive monitoring obligations.** Need to extend over all impositions (including Public Service, Transparency, availability of Information, Conflicts of Interest, etc.) and also include practices.
- **Applicable instruments for penalty and appeal.** Powers of imposing penalties for non-performance / non-compliance are rather inefficient

(absent or administrative) application. Could be integrated with those of the Competition Authority

- **Independence from the policy authorities.** Policy authorities (ministries, state government, and local government) create conflict of interest with respect to entry and competition in the area of operation. State - owned companies normally enjoy unchallenged dominant position and advantages for the supply of electricity under public services obligation.

Priorities

- Unbundling of supply from incumbent generation. Unbundling of generation capacity
- Adequate treatment of eligibility
- Adoption and implementation of market rules which adequately address balance responsibility and balancing mechanisms
- Development and implementation of schemes and reliable mechanisms for protection of socially vulnerable customers
- Agreement on a regional market structure, an action plan of a regional market operator
- Agreement and implementation of common rules for authorization of trading activities
- Effective planning and implementation of investment priorities for development of the transmission and generation infrastructure

Harmonization of Wholesale Electricity Market

- Experience shows that license requirements for energy wholesale markets are questionable
- Some European countries deem a license for energy trading as indispensable, but there is not a common view
- A number of initiatives to limit the burden of national requirements have brought little progress
- On the contrary several countries in the region have increased bureaucratic barriers for energy trading
- There appears to be a need for urgent intervention by EU regulators and from other EU authorities in order to lift “illegal” and questionable barriers

C. Power Sector and RES

RES penetration into the grid

High RES penetration through distributed generation and utility-scale RES power plants, will have severe impact to the distribution system and transmission system

Challenges:

- High installed capacity, two to three times more than the conventional plants
- Extension of the grid, new power lines, new substations
- Need for additional storage capacity
- New techniques for system management
- Need for forecasting models, innovative technologies
- Impact in the operation time of existing thermal plants
- Impacts to the electricity market, new tools
- High investment in new RES-electricity, in the grid with higher electricity cost,
- New jobs prospects
- Strong implementation of energy efficiency measures
- Research, models, studies per country, on a regional and even European scale to optimize the technology capacity expansion, generator dispatch and transmission capacity expansion
- High penetration requires high flexibility in the system, in order to distribute the load to large geographic areas; pump storage and large hydro provide flexibility
- To create RES-e paths for enhanced energy flow, system operation and electricity market with new tools; improve system flexibility and avoid congestion in transmission interfaces
- Grid operation will be different from current practice, least-cost economic dispatch throughout the region or Europe
- Coordinated actions and realistic time framework regarding for the transformation of the power sector

Feed in Tariffs Policy:

- FIT is a strong support mechanism for renewable energy in a liberalised energy market.
- FITs must be designed as a controllable tools to promote renewable energy in financially sustainable conditions.
- Tariff pricing should be transparent as cost + reasonable profit to be attractive for investors
- License quotas are needed as a control tool.
- 20-30 year purchase guarantees are too long for a rapidly developing and cheapening technology.
- The FIT programmes of advanced European countries are not suitable for the still developing economies of the South East Europe (Balkans) region.
- Balkan countries can use and export renewable energy products in the medium run
- Generous FITs only benefit low cost imports from big PV equipment manufacturers
- To eliminate risk of overloading the FIT subsidy, control mechanisms such as quotas and resource assessment requirements should be used by the administrative authority.

D. Natural Gas

EU Gas Policy

- To establish, stabilize and diversify transit routes (e.g. Nabucco, ITGI and TAP)
- EU to become cleaner with the use of gas as the primary fuel for electricity generation.
- To increase energy efficiency with the help of gas.

EU envisages 4 Corridors:

- Western Corridor – North Africa
- Eastern Corridor - Russia
- Southeast Corridor – Caspian / Middle East
- North Corridor – the North Sea

Currently EU does not have a corridor in the Middle East, but would like to develop one. Currently it is developing others:

- South Caucasus: need legal and potential framework.
- Turkey: need legal framework and a pipeline rehabilitation and development of new trunk lines.
- The “distances” and the “number of transit states” lead to the need of extending common legal status across all.

Current Status on Natural Gas

1. There is concern that significant tightening of gas markets will occur by 2013-14.
2. Nabucco start date pushed back to 2013. Shell pulls out of Kazakh gas project.
3. Possible LNG exporters could include Iran, Iraq, Cameroon, Mauritania, Gabon.
4. New LNG terminals and South Stream can provide additional volumes to the market.

Cheap Gas is Possible if:

1. Current gas volumes in Europe are a sign of overcapacity and not oversupply.
2. Gas supply from Caspian and CIS region is developed.
3. Sufficient LNG volumes continue to reach Europe.
4. Improvements in depth and liquidity occur at hubs.

5. Shale gas resources are confirmed, resources committed & political consensus.

SE Europe as a Gas Corridor

A number of prerequisites are necessary for SE Europe to emerge as an effective transit gas corridor linking EU proper to Asian – Caspian supplies. These include the establishment of:

- Interconnectors (extensive network necessary)
- Underground gas storage
- Local gas prices must not be affected but should be determined using market criteria
- Effective market competition

Consumers Choice

This emerged as another important issue which will soon affect the SE European energy scene. The institution of the 3rd Energy Package prepares the ground for the enforcement of consumer's rights (Directives 2009/72/EC and 2009/73/EC). The following are some important observations:

- Right of choice to all consumers of the European Union including SE European countries
- Reinforcement of the competitive market
 - ✓ Variety of offers
 - ✓ Efficiency gains
 - ✓ Higher standards of services
 - ✓ Competitive prices
 - ✓ Increase of investments in new infrastructures—→improvement of security of supply and reduce of risks of blackouts or gas supply interruptions.
 - ✓ Tool against climate change
 - ✓ Improvement of Energy efficiency
- Scope: Realistic and effectible right of choice
- Means: Measures on Consumer Protection
 - ✓ Protection of the vulnerable Consumers
 - ✓ Security, quality and price of supply
 - ✓ Guidelines about the duties and the powers of National Regulatory Authorities
 - ✓ Cross border dispositions
 - ✓ Provision of a Consumer Ombudsman
 - ✓ Provision of minimum content of the supply contracts
 - ✓ Right of change supplier
 - ✓ Suppliers' obligation for notice of intention to modify contractual conditions

- ✓ Provision of wide choice of payment methods
- ✓ **Enhanced of National Regulatory Authorities – Monitoring of the operation of the market**
The draft of the new Supply Code delegates RAE to monitor the effectiveness of the market
- Provision of “Last Resort Supplier”
- Establishment of a European energy consumer checklist providing consumers with practical information about their rights
- Need to introduce intelligent metering systems that will assist the active participation of consumers in the electricity supply market
- Consumers’ choice for supplier is considered very tight with the demand side management not yet fully utilised
- Demand side management needs a wide social consensus and technologies which support efficiency
- The Consumer’s choice means:
 - ✓ New business
 - ✓ New suppliers
 - ✓ New opportunities for investments and jobs
- Need of a regional market
 - ✓ A common wholesale market with a common S&P and more players involved
 - ✓ Access of all citizens to affordable energy
 - ✓ Remodel of the economic development

E. WEC Scenarios

Critical factors to consider

- Energy demand expected to increase between 32% and 40% until 2030
- Fossil fuels will play an important role for decades to come – we need technologies to decarbonize them during the energy transition
- Urgent need to address infrastructure (grid systems) and storage options
- We need innovative financing mechanisms to cover large investment needs for new energy infrastructure
- Energy poverty will be a rising challenge – also within Europe
- Urgent need for politicians to address demand side policies (e.g. energy conservation) and end-user technologies
- Transforming the energy system will require large scale societal change and needs to be properly understood and managed

III. General Conclusions:

- The SEE region is projected to grow less than was expected three years ago, i.e. before the recent economic crisis. This implies less energy demand growth than was originally expected. Hence, new infrastructure projects and new investments need to downsize relative to older plans.
- Gasification trends anticipated in the past are still valid in the new conditions, as gas complies with new growing environmental concerns. Incremental gas requirements will be lower in the future than expected. The gasification in power generation in the long term remains a dominant trend in the region but the volumes are limited because of expectations about new investment in nuclear, renewables and CCS depending on the policy constraints that will prevail in the future. If decarbonisation and RES policies are pursued more intensively gas requirements will not necessarily increase from baseline levels, as other options will develop faster. Nevertheless, gas generation capacities will remain important and have to develop in order to support intermittency of renewables and dispatching flexibility.
- Oil will remain an important constituent in the fuel mix but its role will decline in substitutable uses, remaining however dominant in specific uses, such as in transportation. Possible change of energy carrier in this sector, for example through electro-mobility, will have strong effects on demand for oil. However, this is not expected to affect SE European region in the short to mid term and not before 2030.
- Solid fuels constitute an important indigenous energy source of the SEE countries but their future use for power generation is very sensitive and will

largely depend on carbon prices and other policies such as those that apply for the promotion of RES. Maintaining use of solid fuels in power generation at business as usual levels will depend on the development of CCS in the long term. CO₂ storage possibilities exist in some Balkan countries. More work is required in this area.

- Nuclear energy is shown to develop up to maximum possibilities in three of the SEE countries. The results show inflexibility for further expansion of nuclear energy. Turkey is to become a major nuclear power player in the region.
- Renewables have a great untapped potential in the SEE region. Wind power is likely to become the fastest expanding source of generation, but the wind potential is rather limited in the central and west Balkan countries. Solar PV has also a great potential especially in the southern countries of the region. The volume of unexploited biomass resources is remarkably high in most of the SEE countries.
- Developing the RES for power generation will require higher capital investment and will be possible only if specific RES supporting policies are in place, such as the feed-in tariffs with attractive price levels and long term applicability. The development of RES will also require investment in the grids and the presence of sufficient ancillary and back-up services. They will both imply higher generation and electricity supply costs, but the development of RES is expected to reduce other cost components especially the auction payments if carbon pricing in EU ETS is generally applied in the region.
- Electricity prices are projected to increase significantly in the future relative to present levels. A major reason is the pricing below total true costs that has been practiced in the past in most of the SEE countries. The increasing role of gas will also have implications on prices as in the wholesale markets gas will become the marginal fuel in price setting. The grid costs components will also increase substantially. The prices for energy intensive industries are expected to increase much less than the prices for households (generally cross-subsidised) and for services sectors.
- The generalisation of strong RES policies in the rest of the SEE countries is possible and initiatives are ongoing for this purpose. The RES can develop substantially and will have some moderate impact on electricity costs and prices.
- The participation of all the SEE countries in the EU ETS is not currently in the policy agenda but there are possibilities for their participation in the future, within the process of concerted actions towards decarbonisation and in the negotiation of agreements with the European Union.
- The generalisation of the EU ETS with full auctioning of allowances will result in considerable changes in power generation: it will put solid fuel projects at

risk but will favour CCS in the long term; it will provide a strong push for RES but less for nuclear; it will also sustain gasification trends. The most important effect will be on electricity prices, because the price of allowances will influence marginal costs at various load levels and will be passed through to consumer prices.

- Simulations show that prices in some of the SEE countries, such as Serbia (grouping also Montenegro and Kosovo), Bosnia, FYROM and Turkey, are likely to increase between 25% and 50% from baseline levels, depending on the level of the EU ETS carbon prices in the future. The electricity prices in Greece are also likely to increase considerably from past levels but this increase is projected to take place also under the baseline conditions. The rest of the SEE countries are less vulnerable to carbon pricing.
- In the context of carbon pricing the increasing penetration of renewables do not add on total costs and prices but imply a shift in cost components from auction payments to capital and grid costs.