REPORT ON THE IMPLEMENTATION OF THE ACQUIS ON RENEWABLES IN THE ENERGY COMMUNITY CONTRACTING PARTIES

Final Report Presentation

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USAID-HELLENIC AID Energy Cooperation (SYNENERGY)
Planning Workshop on Energy Efficiency in Buildings and Renewable Energy
May 20, 2008, Athens, Greece

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Main Objective and Timeframe

- To address in a single framework of the acquis on renewables specific tasks which should be realised by the Contracting Parties, assess the existing and future barriers and propose means for overcoming
- Start date: May 2007
- Report presentation: ECS, Vienna, October 2007

Methodology

- First step - collection of the information on energy sector data, focus on action regarding the implementation of EU Directives 2001/77/EC (RES-E) and 2003/30/EC (Biofuels)
  - Source of data:
    - Publicly available data
    - National representatives of Contracting Parties
    - FP6 research projects and other relevant sources

Methodology, con't

- Second step
  - Review of current situation
  - Evaluation of the implementation plans for the RES-E and Biofuels Directives
  - Report of all findings
  - Recommendations for future actions and plans in order to assist the Contracting Parties to reform and strengthen their RES energy sector

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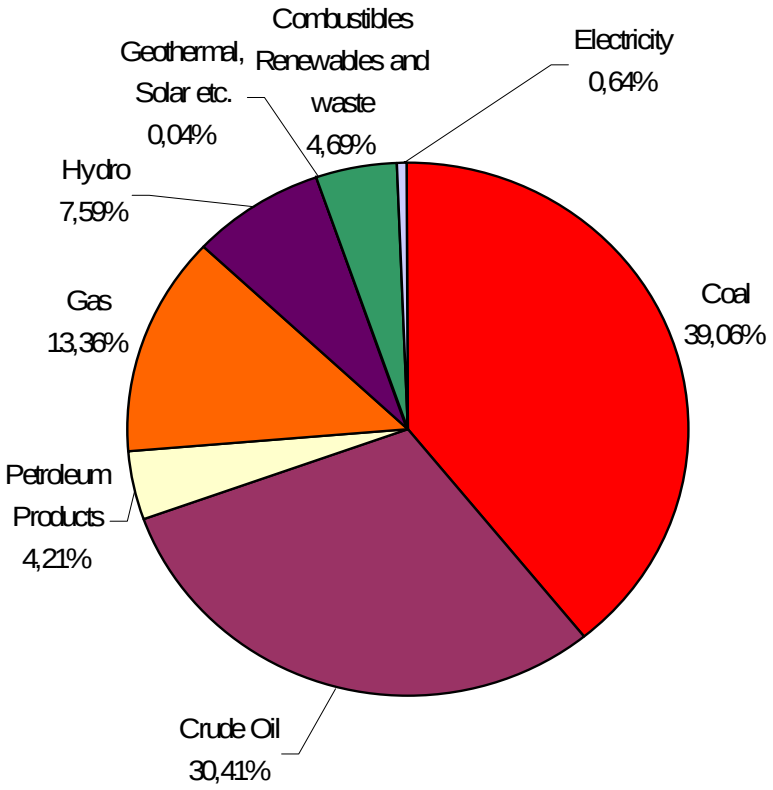
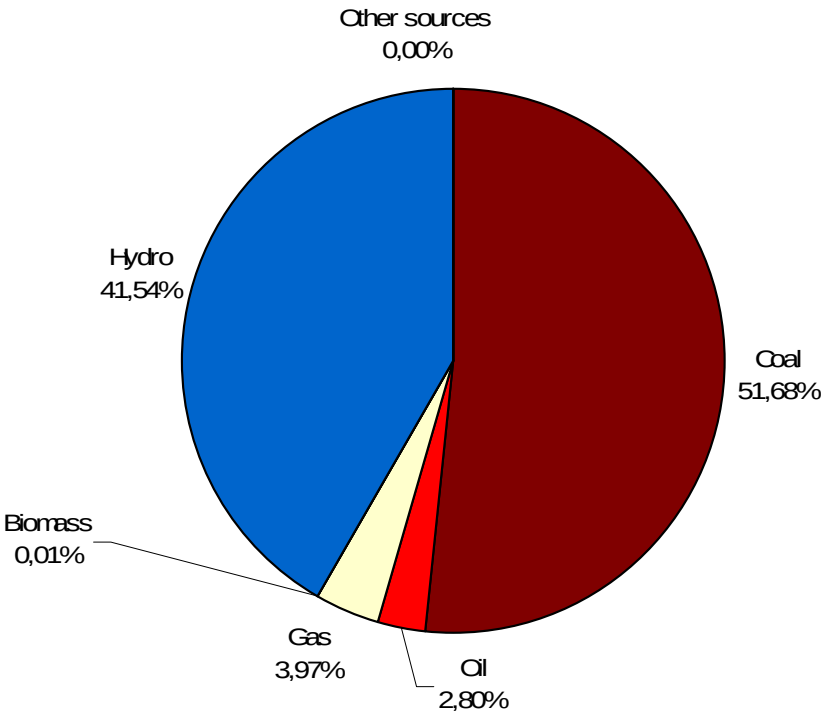
Energy Demand and Supply, results

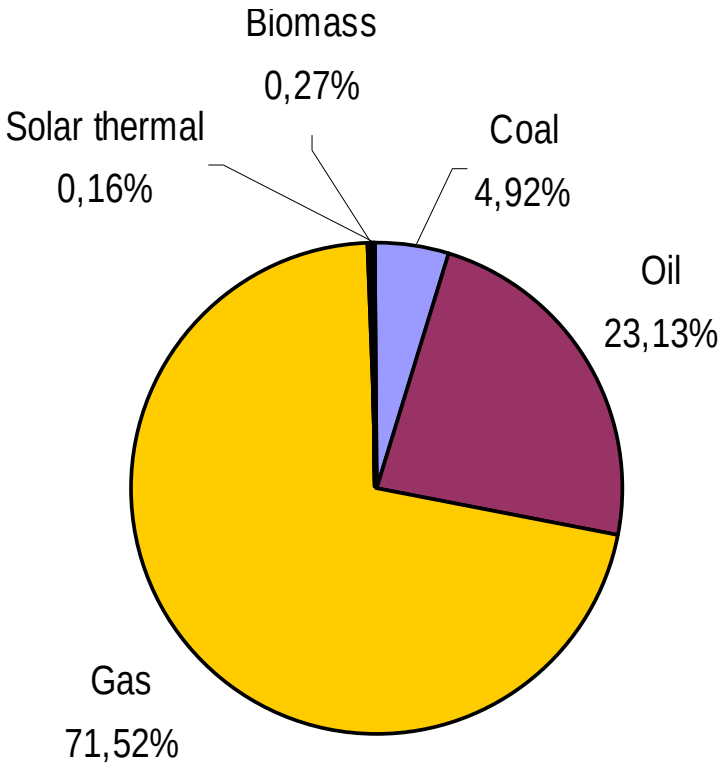


Shares of energy forms in the total primary energy supply in the Contracting Parties in 2004

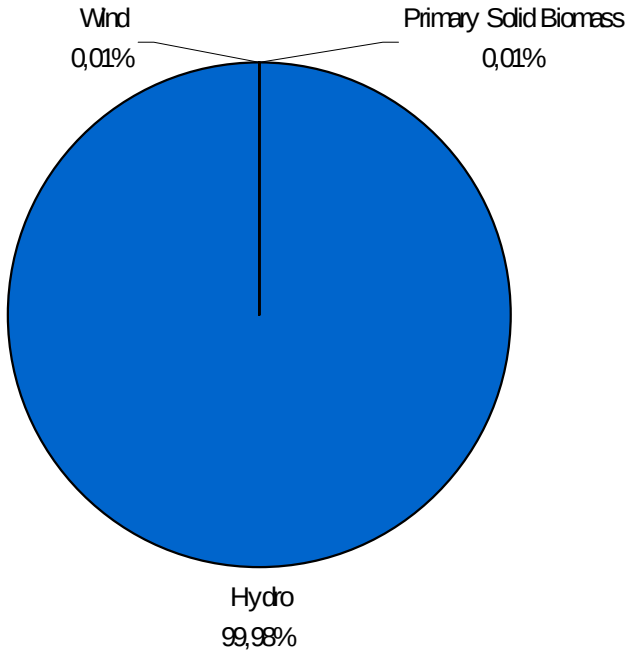


Shares of energy forms in the total electricity generation in the Contracting Parties in 2004

Energy Demand and Supply, results



Shares of energy forms in the total heat production in the Contracting Parties in 2004



Shares of RES types in the total RES electricity generation in the Contracting Parties in 2004

National Energy Sector Development Strategies and Potential Energy Development Options

- Albania
  - National Strategy of Energy approved by the Government in 2003, contains several sections on RES, mostly small HPPs, wind, and solar energy
- Bosnia and Herzegovina
  - National Energy Strategy does not exist
- Croatia
  - Energy Sector Development Strategy published in 2002
  - Contains energy, economic, legislative, organisational, institutional and educational aspects, which aim to prepare the Croatian energy sector for a successful integration into the EU
  - Among other goals: efficient use of energy, the use of renewable energy sources

National Energy Sector Development Strategies and Potential Energy Development Options, con't

- The former Yugoslav Republic of Macedonia
  - Partial engagements for definition of concrete strategies for development, but no concrete strategy for RES development that is officially accepted and supported
- Montenegro
  - Energy Policy adopted in 2005, preparation of the Energy Sector Development Strategy in the final phase
  - Energy Policy aims at the creation of conditions which should enable the higher utilisation of renewable energy resources
- Serbia
  - Parliament adopted the *Serbian Energy Sector Development Strategy by 2015* in 2005
  - Special priority of use of new renewable energy sources (NRES)
- UNMIK
  - *Energy Strategy of Kosovo 2005-2015* (draft), published in 2005
  - Expected drafting of the National Plan for Energy Efficiency and Renewable Energy Sources

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Current RES Utilisation and Potential: Albania

- Hydropower dominant for electricity production, average output of 4162 GWh or 98% of the total
- Hydropower potential estimated at around 3000 MW, 35% utilised
- In 2001, 23 GWh_{th} produced from 15 solar panel systems, potential hot water production in solar panels estimated at 1000 GWh_{th}
- Wind energy utilisation in early stages, estimations given in the Energy Strategy that 400 GWh/year could come from wind energy by 2020
- Biomass utilised in form of fuelwood only, potential app. 6 Mtoe, could be improved with utilisation of agriculture residues and urban waste
- Annual usage of geothermal energy 8.5 TJ with total installed capacity of 9.6 MW_{th} in 5 installations

Current RES Utilisation and Potential: Bosnia and Herzegovina

- Hydropower the most utilised RES: 45.5% of the total annual electricity generation in 27 HPPs
- Potential for establishment of new HPPs, only 35 % of the total being utilised
- Investigations of the wind potential have been performed in the southern part of the country
- Geothermal and solar energy not being utilised, no reliable data on potential
- Biomass traditionally used for residential heating around the country and there is a single case of electricity generation
- 50% of the area forested, biomass potential significant, but should be validated through systematic potential assessment

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Current RES Utilisation and Potential: Croatia

- About 50 % of electricity production from 25 HPPs, total installed capacity of 2046.26 MW
- 13 small HPPs, with total installed capacity of 32.763 MW
- 2 wind power plants operational with installed capacity of 16.95 MW, over 1 500 MW of wind projects at an advanced stage of preparation
- Production of solid biomass - both modern (pellets, briquettes) and traditional (fuelwood)
- Electricity generation from landfill gas amounted to 10.9 GWh
- Annual potential of solid biomass from forestry and wood processing industry estimated at 12.1 PJ, from agricultural residues at 11.4 PJ and from animal manure at 2 PJ
- 18 geothermal locations with the total installed heat capacity of 113.9 MW_{th}
- Solar energy used to lesser extent both as solar panels and photovoltaic systems

Current RES Utilisation and Potential: The former Yugoslav Republic of Macedonia

- Hydropower installed capacity represents 32% of estimated potential, which contributes with 4% in the total primary energy production
- Small HPPs 42 MW of installed power and 147 GWh of generated power, estimated electricity generation potential from 400 identified locations is 1088 GWh
- Installed geothermal capacity 62.3 MWth, produces 598.6 TJ/year
- Solar energy not utilised
- Fuelwood is the second most important energy source for (residential) heating, after electricity - 800 000 m3/year wood provides about 2 660 GWh/year of energy or 8.9% of the total primary energy source
- Wind potential still to be assessed

Current RES Utilisation and Potential: Montenegro

- Hydropower the most important resource for electricity production, 61% of the total
- 2 large and 7 small HPPs, total installed capacity of 658 MW, utilise only 27% of total hydro potential
- Available data on wind potential rather scarce, currently one wind turbine 500 kW
- According to the available data there are no identified geothermal sources
- Considerable potential for solar energy, utilisation limited to hot water preparation in coastal towns
- Biomass (fuelwood) used for residential heating
- Biomass potential significant, 42% of forested area

Current RES Utilisation and Potential: Serbia

- Hydropower accounts for 30% of the total electricity production
- The hydro total potential estimated at 17 000 GWh, of which 60% is being utilised
- Utilisation of wind and solar energy almost negligible
- Studies on wind and solar potentials should be undertaken in order to define the most prominent locations and feasibility of electricity production
- Geothermal energy well investigated and there are 160 geothermal springs identified, some of them utilised but none for electricity generation
- Initial studies on biomass from forests, wood processing industry and agriculture indicate significant potential, currently only fuelwood utilised

Current RES Utilisation and Potential: UNMIK

- RES utilisation limited to hydropower, 2 HPPs with the total installed capacity of 43.3 MW
- Data on the potential of other RES very scarce and their utilisation, apart from biomass for residential heating, is negligible

Implementation of the Directive 2001/77/EC

- Overview of the Contacting Parties plans provided in accordance with the Directive's key issues:
  - National indicative targets: Croatia (1.8% by 2007; 5.8% by 2010), UNMIK (for 2007-2016)
  - Support schemes: Croatia (feed-in)
  - Guarantee of origin: Albania (partly), Croatia (partly)
  - Administrative procedures: All - under review
  - Grid system issues: Albania, Croatia, FYROM – purchase obligation by TSO/DSO or MO
- Source of information: Energy Community material *Plans for Implementation of the Acquis on Renewables in the Contracting Parties,* official documents of Contracting Parties

Implementation of the Directive 2003/30/EC

- Overview of the Contacting Parties plans provided in accordance with the Directive's key issues:
  - National indicative targets: Croatia (5.75% by 2010), FYROM (5.7% by 2010), UNMIK (5.75% by 2015)
  - Monitor the effect of the use of biofuels in diesel blends above 5 percent by non-adapted vehicles: Croatia, FYROM, Serbia, Montenegro - partly
  - Ensure that information on the availability of biofuels and other renewable fuels is publicly available : none
  - Support measures for biofuels: none
- Source of information: Energy Community material *Plans for Implementation of the Acquis on Renewables in the Contracting Parties,* official documents of Contracting Parties

Institutional Capacity and Barriers for Renewable Sources Projects Implementation

- Most relevant institutional capacities for all Contracting Parties regarding RES development
- Identification of the most important barriers and elaboration of means to overcome them
- Barriers classified into five categories:
  - Policy
  - Regulatory
  - Financial
  - Administrative
  - Information barriers

Institutional Capacity: Conclusions

- Relatively well developed (on paper):
  - Albania
  - Croatia
  - The former Yugoslav Republic of Macedonia
  - Serbia
- Poorly developed
  - Bosnia and Herzegovina
  - Montenegro
  - UNMIK
- Missing in all Contracting Parties: Regional Energy Agencies

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Conclusions and Recommendations

- General situation: RES at early stage of development
- Most important barrier for a wider introduction of RES is the lack of stable legislative framework
  - Only Croatia introduced legislation for RES electricity (March and July 2007 – too early to evaluate effects!)
  - None of the Contracting Parties have legislation for biofuels (support mechanisms)
- Most important recommendation: follow the target based approach which has proved its effectiveness in the case of EU Member States
  - Define legally binding targets for RES utilisation in the fields of electricity production and transport
  - Introduce supportive measures needed to achieve the set targets

Conclusions and Recommendations, con’t

- Level of the set targets should be based on the realistic assessments of national renewable potentials, both technical and economic
- Most of the Contracting Parties have not yet performed such an assessment
- Perform a cost benefit analysis and impact assessment for RES prior to the definition of the targets

Conclusions and Recommendations, con't

- Adoption of the legislative framework for RES can be quite a long-lasting and extensive process
  - Strong commitment of all relevant national stakeholders
  - Many stakeholders in the Contracting Parties are newly created institutions, having many tasks and duties, which are not always clearly defined
  - Consultations should be carried out very carefully and precisely from the very beginning of the adoption process

THANK YOU FOR YOUR ATTENTION !!!

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