

UN Economic Commission for Europe

Summary of Policy Developments to Promote  
Energy Efficiency and Renewable Energy Investments  
in the **Republic of Moldova**

Seminar on Policy Reforms to Promote  
Energy Efficiency and Renewable Energy Investments

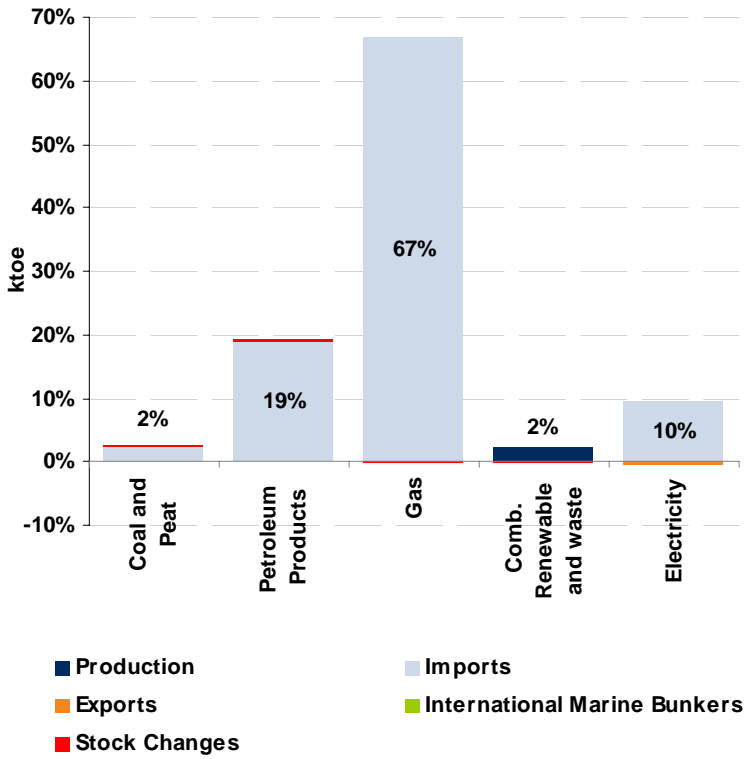
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Geneva, October 7.-8., 2009

# Energy Situation in the Republic of Moldova

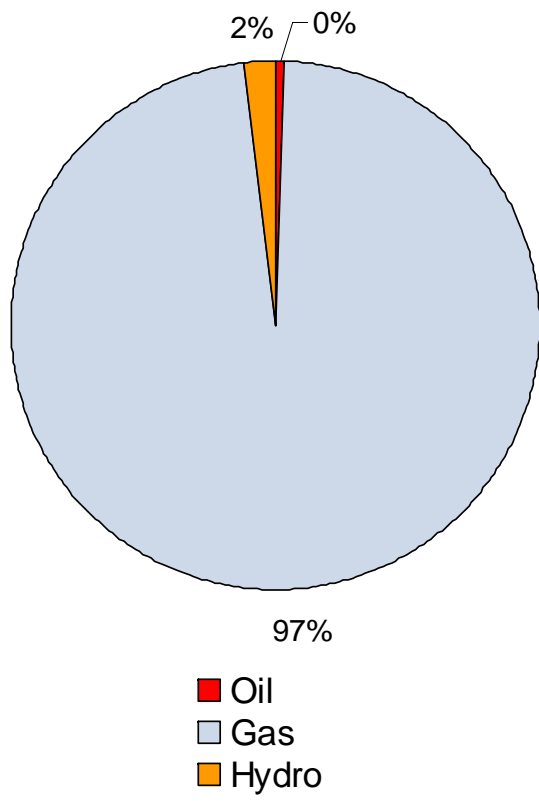
The Republic of Moldova has a very high dependence on energy imports (97%), while the power generation is mainly based on gas

**Energy Balance**



Source: IEA 2006

**Energy Sources for Power Generation**

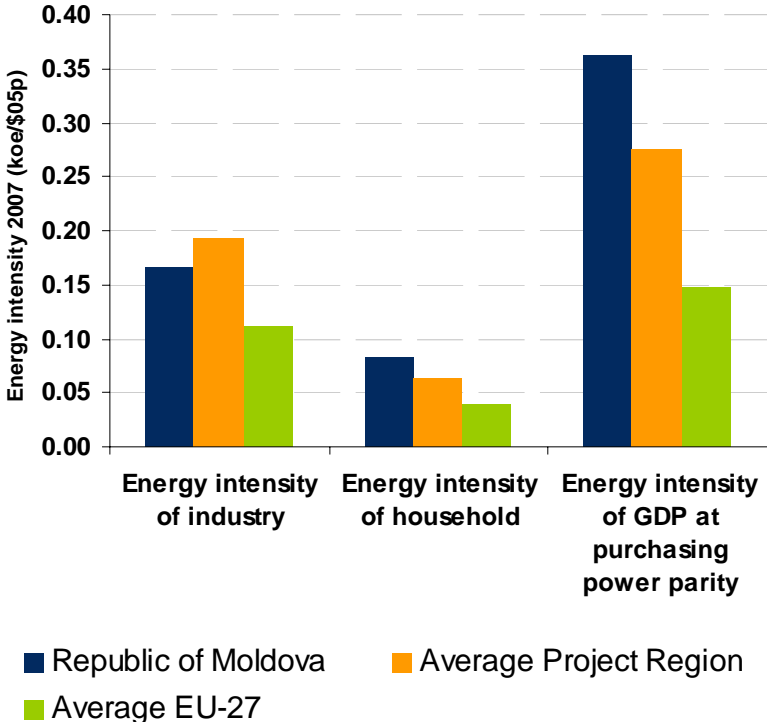


Source: IEA 2006

# Energy Efficiency and Renewable Energy Sources in the Republic of Moldova

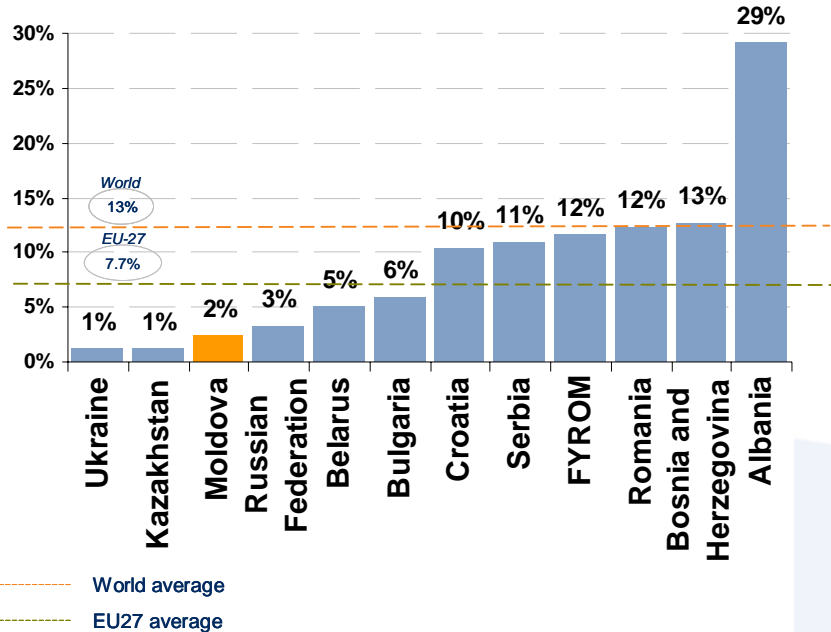
The Republic of Moldova has a comparatively high energy intensity and a low share of renewable energy sources in the primary energy supply

Energy Intensities



Source: Enerdata 2007

Renewable Energy Sources



Source: IEA 2006

# Barriers for Investments in EE and RES in the Republic of Moldova

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**The main barrier for investments in energy efficiency and renewable energy projects in the Republic of Moldova are capital constraints**

**Legal,  
institutional  
and  
administrative  
barriers**

- **No public tendering processes for private project developers have been established so far**
- **Excessive fragmentation of land ownership**
- **The National Agency for Energy Efficiency has still not been established**

**Economic and  
financial  
barriers**

- **Lack of national or municipal funds for the development of renewable energy and energy efficiency projects**
- **Commercial interest rates in the Republic of Moldova are prohibitively high for private enterprises**
- **Lack of transparency regarding the feed-in-tariff methodology for renewable electricity**

**Lack of  
awareness,  
human  
capacities and  
professional  
skills**

- **Lack of awareness on the part of commercial banks**
- **Lack of awareness regarding the economic value of biomass residues from agriculture, forestry and animal husbandry**

## Policy Developments in the Republic of Moldova

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**...however, in recent years several policy reforms have been undertaken by the Republic of Moldova to overcome these barriers**

**Privatization of the electricity market**

- In 2000, Union Fenosa bought three of the five electricity distribution companies, leading in the mid-term to a decrease of energy losses in the distribution system and the introduction of cost-covering tariffs

**Enlargement of interconnection capacity**

- The Energy Strategy of the Republic of Moldova until 2020, envisages the enlargement of the interconnection capacity between Moldova-Ukraine and Moldova-Romania

**Introduction of a feed-in-tariff for biofuels**

- As one of the few project countries, the Republic of Moldova introduced also a feed-in-tariff for biofuels

**Active participation in the Clean Development Mechanism**

- The Republic of Moldova is actively participating in the Clean Development Mechanism (CDM) and is currently implementing several CDM projects

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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**The establishment of a biomass energy program is recommended to fully exploit the Republic of Moldova's biomass potential**

**Legal, institutional and administrative barriers**

- **Monitoring of policy implementation**
- **Transparent public procurement and tendering guidelines**
- **Master plan transmission grid**
- **Biomass for energy program**

**Economic and financial barriers**

- **Financial incentives for energy efficiency and renewable heating**
- **Adaptation of support scheme for renewable electricity**
- **Small municipalities energy efficiency and renewable energy financing**

**Lack of awareness, human capacities and professional skills**

- **National education, training and public awareness program**
- **Capacity building for policy makers**
- **Capacity building for project developers**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Legal, institutional and administrative barriers (1/3)

### Monitoring of policy implementation

- **Lack of information of policy implementation e.g. the revision of the current Law on Energy Conservation or the new feed-in tariff promoting renewable energy generation, which is not operational yet, hampers effective and successful policy implementation.**
- **Thus, an institutionalization of regular energy policy monitoring is highly recommended. This should involve communicating policy requirements to all concerned parties using appropriate strategies, ensuring that targets of positive support for policy changes are identified, encouraging supporters of policy change to agree to clear statements of need for, and nature of, changes and improvements, ensuring that potential resistance to policy change is identified.**
- **The need for further incentives to support policy implementation and available resources for incentives and potential funding bodies have to be identified, most appropriate types of incentives evaluated and incentive requirements accurately prioritized.**
- **A monitoring report summarizing the results and drawing justifiable conclusions should be presented in a suitable format to the decision makers.**
- **The Ministry of Economy and Commerce (MEC) shall assign one new or existing authority or agency e.g. the National Energy Efficiency Agency under development for the overall control and responsibility for monitoring energy efficiency and renewable energy policy implementation.**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Legal, institutional and administrative barriers (2/3)

### Transparent public procurement and tendering guidelines

- **Lack of public tendering process discriminates private investments in energy efficiency and renewable energy projects in the Republic of Moldova. To overcome this barrier, transparency on procurement opportunities, contract evaluation and award procedures is required. Therefore, analogous to Bulgaria and Belarus, the development of Standard Bidding Documents is highly recommended.**

### Master plan transmission grid

- **Lack of security, transparency and reliability of operations of the transmission grid are a barrier to the realization of renewable electricity projects.**
- **The reorganization of asset management and of the operations of the national transmission system will therefore be necessary in the short and medium term. The Master Plan Transmission Grid shall identify and evaluate the needs for an upgrade and expansion of the transmission capacity, look at strategies for overcoming planning hurdles, sharing costs, accessing equipment and assessing priority actions and identify market mechanism and funding models for the integration of renewable electricity projects.**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Legal, institutional and administrative barriers (3/3)

### Biomass for energy program

- **The development, implementation and monitoring of a Biomass for Energy Program shall encourage the sustainable use of untapped biomass resources. The Biomass for Energy Program shall mobilize so far unused biomass resources from forestry, agriculture and related industry, increase and accelerate the availability of biomass as energy source in the Republic of Moldova.**
- **Measures and activities implemented within the Biomass for Energy Program could comprise:**
  - **promotion of enhanced co-operation and information exchange between market players such as farmers, forest owners, utilities, wood and food processing industry etc.**
  - **establishment of quality criteria and guidelines for the energetic use of biomass resources**
  - **start up support for the development and implementation of regional pilot and demonstration projects**
  - **capacity building on biomass logistics for farmers**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Economic and financial barriers (1/2)

### Financial incentives for energy efficiency and renewable heating

- **Lack of public funding is an economic barrier for energy efficiency and renewable energy projects in the Republic of Moldova. Therefore, the establishment of a public fund supporting sustainable energy projects is recommended.**
- **Funding could support renewable heating systems, cogeneration as well as energy efficiency measures and shall be open to private business and households. The support of accompanying measures such as energy audits and the installation of metering devices is highly recommended.**
- **The key areas of support and key sectors should be selected based on the available energy savings potential as well as the cost-benefit ratio to be evaluated.**
- **This fund should be managed by a new or existing authority or agency to be nominated on a national level. Co-funding by international institutions such as the United Nations Economic Commission for Europe (UNECE), the European Bank for Reconstruction and Development (EBRD) or World Bank is an option which should be considered.**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Economic and financial barriers (2/2)

### Small municipalities energy efficiency and renewable energy finance

- **Lack of availability of public funds hampers the development of municipal energy efficiency and renewable energy projects. The current situation of degradation and disrepair of municipal district heating system is one example for symptomatic lack of financial means for municipalities.**
- **The establishment of a fund financing municipal investments in energy efficiency and renewable energy according to the EU/EBRD Small Municipalities Finance Facility could help to overcome this barrier and is highly recommended for the Republic of Moldova.**

### Adaptation of support scheme for renewable electricity

- **The publication of the Methodology for the Determination, Approval and Application of Tariffs for Electricity generation from Renewable Electric Energy and Fuel provides the basis for investments in renewable electricity. However, the fact that tariffs must be calculated by the investors and the lack of benchmarks is a clear barrier for investors. Investors require announced and guaranteed financial incentives.**
- **Thus, the establishment of an advanced feed-in tariff scheme is highly recommended.**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Lack of awareness, human capacities and professional skills (1/2)

### National education, training and public awareness program

- **Lack of awareness is one major bottleneck to the development of a domestic market for energy efficiency and renewable energy projects in the Republic of Moldova.**
- **To overcome this barrier and to create a positive image for investments in sustainable energy, the national government shall develop suitable information, awareness-raising, guidance or training programs in order to inform citizens of the benefits and practicalities of developing and using energy from renewable sources and energy efficiency measures.**
- **Activities could comprise advertising campaigns, information dissemination on energy labels and standards, advice on behavioral practices, information dissemination through energy auditors, and capacity building for project developers, architects, installers etc.**
- **Due to the high potential for energetic use of biomass resources, the implementation of a dedicated information campaign for farmers in the framework of the Biomass for Energy Program is highly recommended.**

# Recommendations for overcoming barriers for investments in EE and RES in the Republic of Moldova

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## Lack of awareness, human capacities and professional skills (2/2)

### Capacity building for policy makers

- In order to ensure successful monitoring of policy implementation recommended as measure to overcome legal, institutional and administrative barriers, it is necessary to provide adequate funding and training for the staff of ministries, regulators and other governmental or municipal agencies with responsibilities in the energy sector.

### Capacity building for project developers

- Project developers lack knowledge about project financing mechanisms. Therefore, capacity building including dissemination of information about available schemes in combination with training on how to develop bankable projects is highly recommend to accelerate the implementation of private projects.
- This capacity building and awareness raising initiative should be a joint initiative of international donors in cooperation with participating banks and the national government.

## Conclusions

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**The Republic of Moldova has a very low share of renewable energy sources, but the biomass potential of the country could be successfully exploited**

- **The Republic of Moldova has a very high dependence on energy imports**
- **80% of the power generation capacity of the Republic of Moldova is located in the Administrative-Territorial Unit on the left bank of the Dniester (Transnistria)**
- **Although the energy intensity of the Republic of Moldova was cut in half from 1997 to 2007, the country still has a comparatively high energy intensity**
- **The Republic of Moldova has one of the lowest shares of renewable energy in the primary energy supply within the project region**
- **In order to further increase the share of renewable energy and to decrease its energy intensity, the country has a need of external project funding, which is currently lacking**
- **The establishment of a biomass energy program is recommended to fully exploit the Republic of Moldova's biomass potential**

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The background of the slide features a close-up, artistic photograph of a green plant stem with a small globe of the Earth resting on it. The lighting is dramatic, highlighting the textures of the plant and the globe. At the bottom of the slide, the word "PÖYRY" is written in a large, bold, light-colored sans-serif font, with a double slash symbol above the 'Y'.

PÖYRY