UN Economic Commission for Europe

Recommendations for Policy Reforms

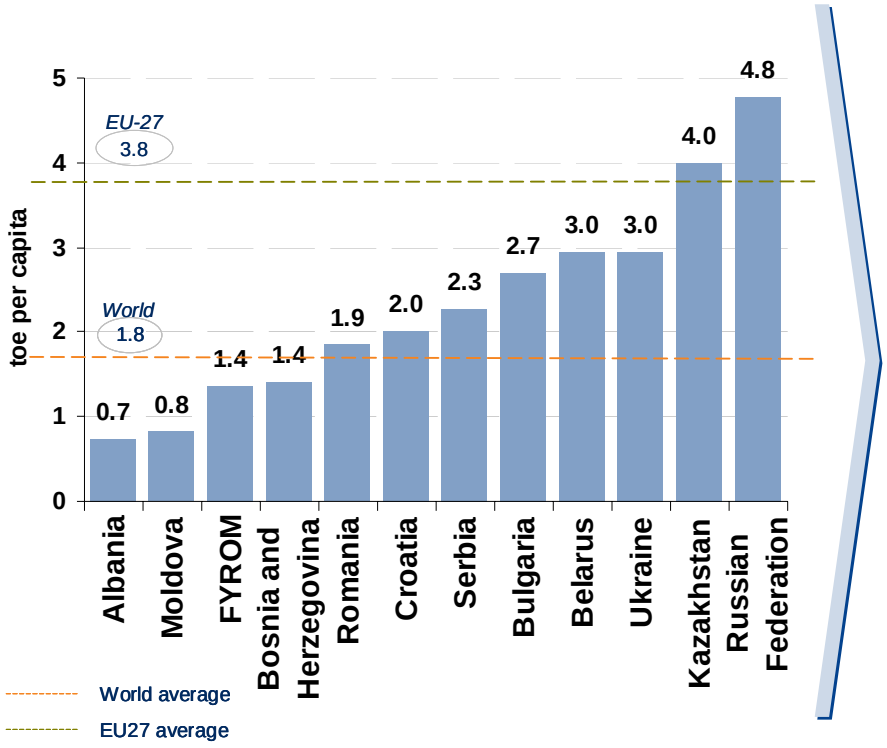
Seminar on Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments

Geneva, October 7.-8., 2009

Energy Supply in the Project Region

Only resource-rich Kazakhstan and the Russian Federation have a primary energy supply per capita than the EU-27 average…

Primary Energy Supply



Comments

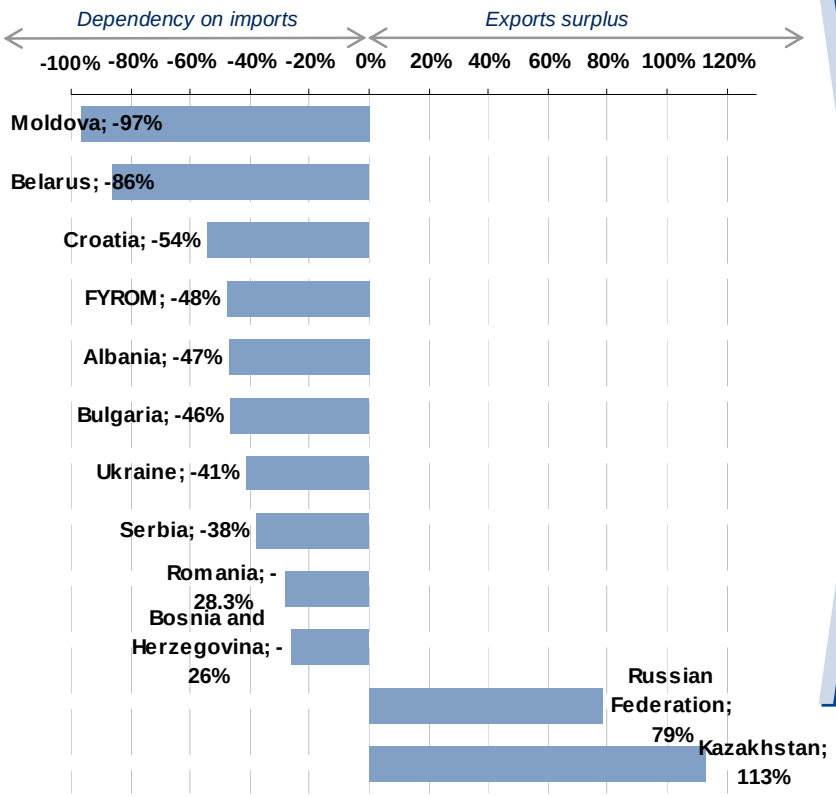
- The two resource-rich countries Kazakhstan and the Russian Federation have a higher primary energy supply per capita than the EU-27 average
- Albania, the Republic of Moldova, the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina have a primary energy supply per capita, which is below the world average

Source: IEA 2006

Energy Balances in the Project Region

… while all other project countries have a significant dependency on energy imports

Net balances of primary energy



Source: IEA 2006

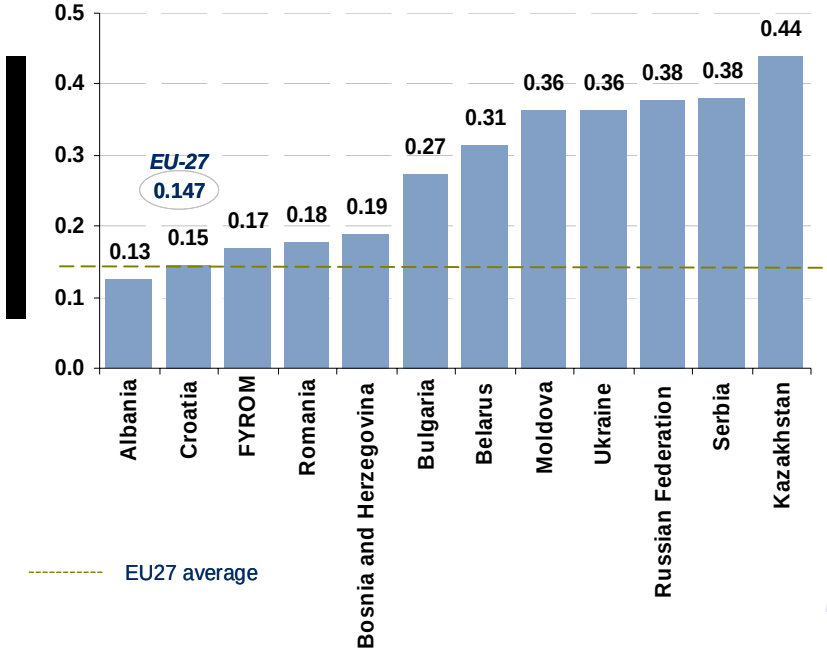
Comments

- The Russian Federation is an important gas and crude oil exporter (also) to the countries within the project region
- The Republic of Moldova has the highest energy import dependency (mainly from gas) of all project countries
- Belarus, which has the second highest energy import dependency, imports crude oil in the range of 70% of its energy balance, but exports domestically refined oil (50%)
- Crude oil or petroleum products and gas are the most significant energy imports of the countries with an energy import dependency

The need for investments in energy efficiency

Most countries of the project region have an energy intensity which is markedly higher than the EU-27 average

Energy Intensity in the project region



Comments

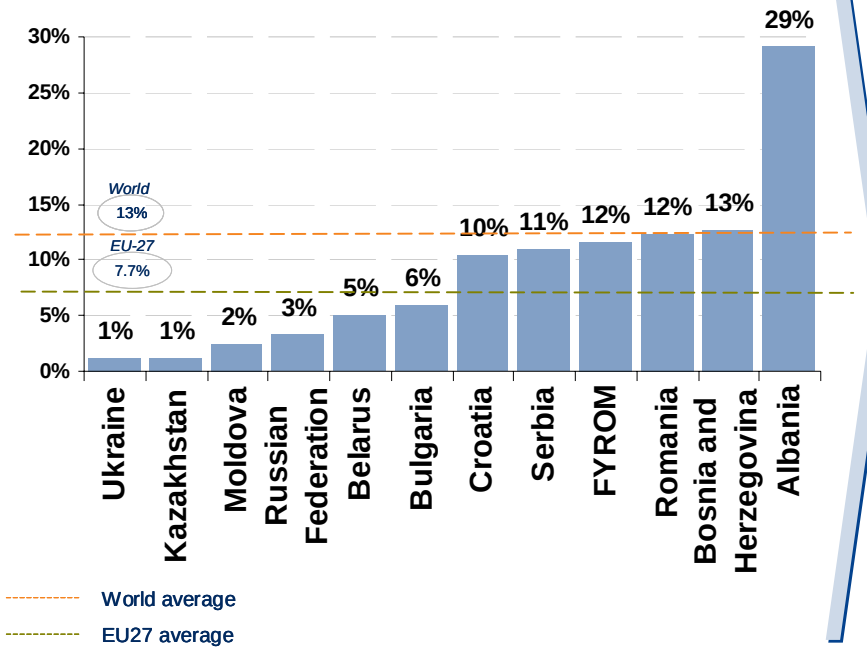
- Although Albania has the lowest energy intensity within the project region, this fact is more related to gross domestic product growth due to foreign aid and remittances from abroad
- Almost all countries experienced a significant decline in energy intensity levels since 1997 (up to 46%)
- The energy intensity values have to be regarded cautiously since some countries feature an active shadow economy

Source: Enerdata 2007

The need for investments in renewable energy sources

While the countries in the Balkan area have a significant share of renewable energy sources (based on large hydropower), the remaining countries in the project region have a modest share of RES

Deployment of renewable energy sources



Source: IEA 2006

Comments

- Only Albania has a higher share of renewable energy in the total primary energy supply than the world average
- All countries located in the Western Balkan have a higher renewable energy share than the EU-27 average
- The two resource-rich countries Kazakhstan and the Russian Federation feature a renewable energy share, which is below the EU-27 and world average
- In basically all countries the renewable energy is based on hydro power and combustible renewables and waste
- New renewable energy sources play currently a negligible role

Barriers for Investments in EE and RES in the Project Region

Several barriers for investments in energy efficiency and renewable energy sources are still present in the project region….

Legal, institutional and administrative barriers	• **Complexity of the regulatory framework** • **Lack of secondary legislation and operational instructions, tools and procedures** • **Complex and cumbersome authorization procedures** • **Absence or limited use of public tendering processes**
Market inefficiencies, economic and financial barriers	• **Excessive state intervention on price formation** • **Low energy tariffs that limit the profitability of energy efficiency projects** • **Unavailability of public funds for financing initiatives and programs**
Lack of awareness, human capacities and professional skills	• **Lack of human resources and professional expertise** • **Commercial banks lack experience in financing schemes** • **Lack of training and education possibilities for the formation of professionals**

Recommendations to overcome barriers for investments in EE and RES in the Project Region

There are several possibilities to overcome the barriers for investment in EE and RES

Recommendations to overcome legal, institutional and administrative barriers	**Renewable Energy Action Plan**	**The elaboration of an action plan is the basis for constant and sustainable growth of renewable energy sources**
	Energy Wood Program	**The implementation and monitoring of an Energy Wood Program shall encourage the sustainable use of wood resources**
Recommendations to overcome market inefficiencies, economic and financial barriers	**Tariff Reforms**	**Cost-reflective tariffs are crucial to maintain the energy infrastructure and attract new investments in EE and RES**
	Financial incentives for RES and EE	**The establishment of public funds for supporting RES and EE projects is necessary to promote and enhance the development of RES and EE**
Recommendations to overcome lack of awareness, human capacities and professional skills	**Public Awareness Programs**	**Advertising campaigns, energy labels and standards, energy performance certificates for buildings and capacity building programs**
	Capacity Building for Financing Institutions	**Assistance and training in refining, standardizing and evaluating loan applications**

Overview of policy recommendations to overcome barriers for investments in EE and RES in the Project Region

The priorization of recommendations into three categories enables the project region countries a gradual and smooth progress in policy reforms

Quick Wins

- **Quick Wins will demonstrate some rapid results and increase political and public support**
- **These measures can be introduced in less than a year and are likely to produce significant impact at moderate costs**

Essentials

- **Essentials are the backbone of a comprehensive energy efficiency and renewable energy policy, affecting the areas of greatest potential by raising standards and stimulating investments that are already financially viable**

High Cost, High Return

- **“High Cost, High Return” measures will remove fundamental barriers and will make more EE and RES investments financially viable.**
- **These interventions carry a much higher initial cost to the economy, but have a high return in terms of energy savings or RES generation.**

Overview of “Quick Wins”

“Quick Wins” can be implemented in a short timeframe and are likely to produce significant impact at moderate costs

National Education, Training and Public Awareness Programs

- **Information dissemination needs to be tailored to the end-user in order to be effective. Activities comprise advertising campaigns, energy labels and standards, energy performance certificates for buildings and capacity building programs.**

Flexible budgeting for State-Funded Organizations

- **State-funded organizations need more budget flexibility and autonomy. Budgeting principles should be based on full life-cycle costing in order to capture the benefits of long term investments. In doing so, the usage of energy service can be promoted.**

Transparent procedures for authorization, public procurement and tendering

- **Standard Bidding Documents provide a guide to transparency in procurement opportunities and that of contract evaluation and award procedures.**
- **Obligatory response periods for the authorities involved can be incorporated. Approval rates can be a tool for checking the streamlining of authorization procedures.**

Overview of “Essentials”

“Essentials” affect the areas of greatest potential and stimulate investments that are already financially viable

Financial incentives for EE and RES

- **The establishment of public funds supporting sustainable energy projects is recommended. The key areas of support should be selected based on the available energy savings potential as well as the cost-benefit ratio to be evaluated.**

Least-Cost Investment Plan for District Heating

- **Least-cost investment plans should evaluate costs and benefits of different energy efficiency measures such as optimization of heat supply systems, heat load redistribution, loss reduction, balancing centralized and de-centralized heating, cogeneration and metering.**

Master Plan Transmission Grid

- **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,, identify market mechanism and funding models, and define an actionable horizon plan for the successful integration of RES projects in the grid**

Overview of “High Cost, High Return”

“High Cost, High Return” measures carry a higher initial cost, but have a high return in terms of energy savings or RES generation

Tariff reform

- **The tariff level, customer classification, and tariff design must reflect as closely as possible the costs as the utility incurs them.**
- **The tariff must internalize environmental externalities on energy prices.**

Monitoring of policy implementation

- **The establishment of regular and institutionalized policy monitoring should involve communicating policy requirements to all concerned stakeholders using appropriate strategies and ensure that targets of positive support for policy changes are identified**

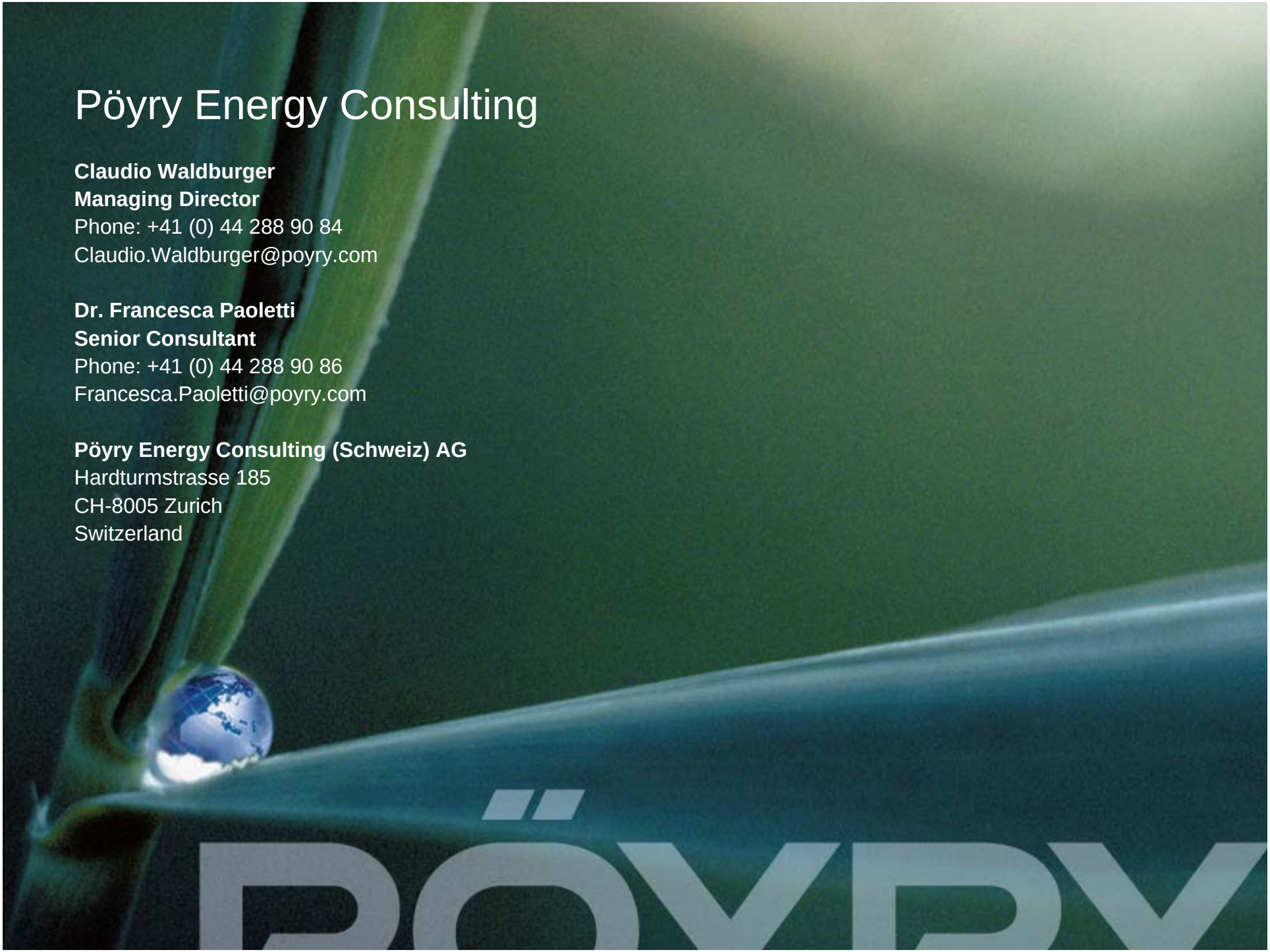
Establishment of institutional structures

- **Once the national policy framework is in place, it needs to be implemented in national, regional and/or municipal level. Implementation requires preparation and training of experts who are skilled and qualified to assess potential for EE and RES and to evaluate policy instruments.**

Conclusions

Even though many barriers for investments in EE and RES still exist in the project region, many success stories show how these barriers can be successfully overcome

- **With exception of resource-rich Kazakhstan and the Russian Federation, all project countries have significant dependency on energy imports; this dependency could be reduced by promoting renewable energy sources and energy efficiency**
- **Several project countries experience high energy intensity levels, which can be tackled by providing energy efficiency incentives and awareness raising and capacity building**
- **Artificially low energy tariffs contravene the principle of energy efficiency and incapacitate the profitability of energy efficiency projects and artificially; cost-reflective tariffs are thus crucial to maintain the energy infrastructure and attract new investments in EE and RES**
- **The establishment of dedicated loan facilities to local banks for on-lending to clients undertaking EE and RES projects in combination with assistance and trainings is necessary to remove the lack of experience and funds on the part of local banks**



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