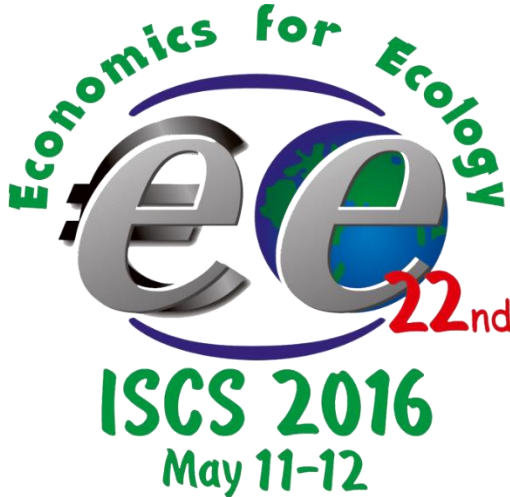


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## **THE ECONOMY DEVELOPMENT OUTLOOK OF RENEWABLE ENERGY SECTOR**

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Today the renewable energy sector continues to be one of the most an attractive market for public and private investors.

According to the Renewables global future report [1] world gets about 17–18% of its energy from renewables, including about 9% from “traditional biomass” and about 8% from “modern renewables.” In 2011, about 30 countries were getting 20% or more of their total energy from renewables, and some as high as 50%. Countries in this category include Austria, Brazil, Chile, Denmark, Finland, Iceland, New Zealand, Norway, Peru, the Philippines, Portugal, Romania, Sweden, Uganda, and Uruguay. The share of energy from renewable sources in gross final consumption of energy reached 15.0% in the European Union (EU), compared with 8.3% in 2004, the first year for which the data is available (Table 1).

Table 1 – Share of energy from renewable sources (in % of gross final energy consumption) [2]

	2004	2010	2011	2012	2013	2020 target
Denmark	14.5	22.0	23.4	25.6	27.2	30
Germany	5.8	10.4	11.4	12.1	12.4	18
Spain	8.3	13.8	13.2	14.3	15.4	20
France	9.4	12.8	11.2	13.6	14.2	23
Croatia	13.2	14.3	15.4	16.8	18.0	20
Austria	22.7	30.8	30.9	32.1	32.6	34
Poland	6.9	9.2	10.3	10.9	11.3	15
Finland	29.2	32.5	32.9	34.5	36.8	38
Sweden	38.7	47.2	48.9	51.1	52.1	49
Norway	58.1	61.2	64.7	65.9	65.5	67.5

It is also noticed that during the 1990s, projections of renewable energy that were considered most credible. For example by the International Energy Agency (IEA), foresaw shares of modern renewables reaching no more than 5–10% into the far future, given the policies and

technologies existing at the time. As a result of the market, policy, and technology developments of the past 15 years, those early projections have already been reached.

Also many finance experts say that private investment in renewables could exceed \$500 billion annually by 2020. A few experts cited figures as high as \$1 trillion by 2020.

However, while most experts were generally optimistic about the opportunities for scaling up and extending many existing investment sources and mechanisms, it is necessary to understand that there will be a clear need in the future to go beyond current financing sources. Consequently utility balance-sheet finance, bank lending, private equity, and venture capital are only scalable to a certain point, and would not support \$500 billion-plus annual investment levels. To reach these levels would require the involvement of other institutional investors, implementation of the new economic (financial) mechanisms and new equity sources at both small and large scales.

According to the European practice should be implemented and used some general principles for the implementation of various policy options:

- flexibility in implementation of an economic instrument;
- ensuring an appropriate balance between regulatory and economic instruments;
- responsibility for distribution (spending) the revenues (investment);
- providing a clear policy framework;
- fully taking into account the economics of the waste management sector;
- requiring reporting and controlling.

Consequently, the benefits of implementing and maintaining of the new economic (financial) mechanisms in renewable energy sector should:

- increase productivity through the use of innovative and environmental technologies and equipment;
- reducing costs and product cost based on the reduction of energy intensity and resources;
- increase the competitiveness business entity and the possibility of entering new markets etc.
- increasing duration of life and reduce the level of morbidity;
- improve the living standards and the working conditions;
- reduce the destructive impact on the environment;

- gradual restoration of ecological balance and reduction of anthropogenic load
- improve the quality resource consumption.
- reducing the level of political dependence on foreign suppliers resources;
- widening the opportunities to the use of international agreements for activation quota trading, environmentally oriented products.

**References:**

1. Renewables global future report. 2013. Available from: [http://www.ren21.net/Portals/0/documents/activities/gfr/REN21\\_GFR\\_2013.pdf](http://www.ren21.net/Portals/0/documents/activities/gfr/REN21_GFR_2013.pdf)
2. Eurostat news release. 2015. Available from: [http://ec.europa.eu/eurostat/documents/2995521/6734513/8-10032015-AP-EN.pdf/3a8c018d-3d9f-4f1d-95ad-832ed3a20a6b\)](http://ec.europa.eu/eurostat/documents/2995521/6734513/8-10032015-AP-EN.pdf/3a8c018d-3d9f-4f1d-95ad-832ed3a20a6b)

## **ENERGY EFFICIENCY AND THE ECONOMIC CRISIS**

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At this stage of the Ukrainian economy development the problem of energy shortages has escalated, as a result of resources of energy-intensive production, inefficient use of fuel and energy resources (FER), reducing own sources and increasing prices for imported ones. Economic growth in Ukraine depend on the amount of own available resources, potential of energy efficiency and energy intensity of leading industries.

The problems of ensuring economic security, energy saving and enhancing competitiveness have been investigated in the works O.S.Vlasyuka, T.V.Serdyuka, V.O.Barannika. Basic theoretical and practical achievements of V.M.Heights, S.F.Yermilov, N.V.Mytsu, V.P.Rosen, J.P.Yaschenko were devoted to the problems of reducing energy intensity of Ukraine's economy, providing industry with energy resources, substantiation of the energy efficiency.

The level of energy sector development of every country has a decisive impact on its economy and social sphere, the standard of living. Extraction of energy resources, energy production and consumption of humanity is continuously increasing with the growth in the world population, economic development and technological progress. For the last