

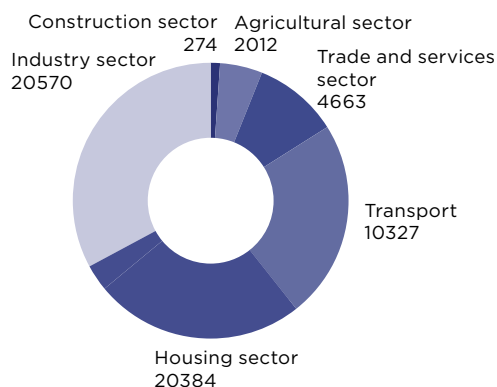
ENERGY EFFICIENCY IN UKRAINE

MAIN INDUSTRY QUANTITATIVE INDICES

According to official researches and Ukrainian policy papers on the energy efficiency in Ukraine, the GDP energy intensity of Ukraine is 3-4 times higher than in other European countries. **In particular, Ukraine consumes for heat of 1 sq. m. of housing 2-2.5 times more natural gas than EU countries.**

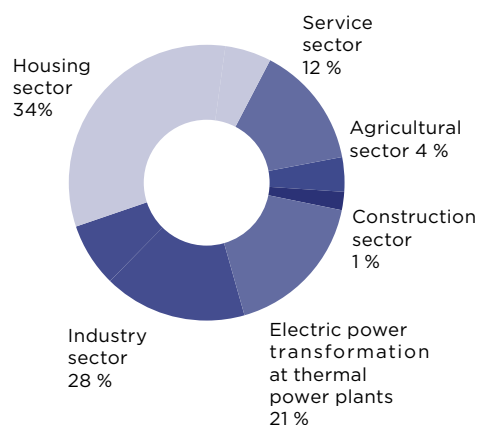
PERCENT IN ENERGY CONSUMPTION AND ENERGY SUPPLY

*According to the Energy balance of Ukraine for 2014, in tons of oil equivalent (thousands)

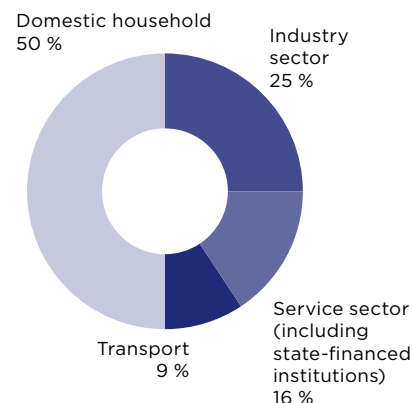


PERCENT IN POTENTIAL ENERGY SAVINGS

*According to the methodologies of UNDP, GEF, NewSEP



*According to State Agency on Energy Efficiency and Energy Saving of Ukraine, given due to methodology corresponding the Directive 2006/32/EU



As of 2015 the energy efficiency and alternative energy sources market demand in Ukraine is 55 bln Euro, among them - almost 40 bln Euro for energy efficiency projects, 15 bln Euro - for the alternative energy market development.

Demand for investments, in particular, for state-financed institutions is more than 4.4 bln Euro, for housing - more than 35 bln Euro. For clarity, considering the strategic objectives in energy independence and security of Ukraine, this number means direct saving in 700 mln m³ and 12 bln m³ respectively.

ENERGY EFFICIENCY OF REGIONS REGARDING ENERGY EFFICIENCY OF EU

Region	Energy Efficiency, % EU			
	Industry	Agriculture	Domestic household	Total
Vinnitsia	37	34	83	63
Volyn	31	27	74	57
Dnipropetrovsk	50	31	53	50
Donetsk	68	38	54	63
Zhytomyr	37	49	78	60
Zakarpattia	50	40	72	64
Zaporizhia	64	33	60	60
Ivano-Frankivsk	40	45	74	58
Kirovohrad	20	43	81	53
Kyiv	46	31	55	49
Lyhansk	42	34	53	45
Lviv	47	50	62	57
Mykolaiv	32	38	62	45
Odesa	38	38	72	61
Poltava	40	36	55	46
Rivne	15	37	75	39
Sumy	38	46	63	52
Ternopil	28	59	68	59
Kharkiv	46	40	51	47
Kherson	47	29	77	62
Khmelnyskyi	23	40	74	51
Cherkasy	19	34	68	59
Chernivtsi	30	48	72	63
Chernihiv	66	41	73	64

Source: According to the data from Dnipropetrovsk branch of National Institute for Strategic Studies, the analytical report "Energy Efficiency in Regional Dimension. Problems and Prospects" 2014.

MAIN INDUSTRY PROBLEMS/ DIFFICULTIES

According to foreign experience, the problems are conventionally divided into four categories: economic, financial, social, legal.

Economic:

- Inefficient use of fuel and energy
- High level of losses in the networks
- High level of depreciation of fixed assets and the slow pace of modernization
- Absence of markets with transparent regulating rules, as a result – suppression of reforms in the industry
- Mismanagement and irresponsibility (especially typical of state and municipal property)
- Abuse of monopoly
- Dependence on external supplies of fuel
- Lack of incentive mechanisms for the implementation of projects on energy saving/efficiency
- The lack of a unified data collection system of accounting and monitoring of energy consumption in the country which would give the possibility of forming energy balance on the basis of reliable data from specific customers

Financial:

- Lack of funds
- Lack of effective cooperation with private investors (ESCO, specialized funds, PPP projects etc.) and non-diversified portfolio of sources of investment to projects in the public and municipal sector and public utilities sector

Social:

- Low level of awareness of the population
- Lack of training, educational and other programs for the general public (the rural population)

Legal:

- Absence of relevant laws
- Low levels of the adopted laws
- Failure to comply with international obligations, strategic plans in terms of ensuring conditions for attracting investment
- Imperfect judicial system and enforcement mechanism, as a consequence –lack of guarantees of investment return and acquisition of income by investors

Prospects

Ukraine obtains enough intellectual and resource potential for fulfilment of main strategic objectives.

However, in case of further lack of proper incentives for energy efficiency projects, qualitative legal framework, as well as under the state of incompleteness of its reform process, these tasks execution cannot be guaranteed.

Ignoring the problem of creating specific instruments and mechanisms for energy auditing and monitoring may lead to even greater losses.

Opportunities

The bill “On the effective use of energy resources” can provide the real momentum into reforming energy efficiency.

It is important to use the development potential of alternative and renewable energy sources and alternative fuels as an important factor for improving energy security, reducing the use of fossil fuel resources (including imported).

Innovations in the industry

To ensure the use of available capacity it is necessary to introduce innovative incentive mechanisms. In the field of alternative energy sources in Ukraine there are mechanisms to stimulate the production of renewable electricity:

- 1) “green” tariff;
- 2) tax benefits;
- 3) preferential treatment of affiliating with the electric network.

Required measures

To fight corruption;

To complete the reforming stage having signed the Association Agreement with the EU in 2014, joined the Energy Charter and taken on international commitments;

To implement the Directives: 2010/31/EU with the Law “On Energy Efficiency of Buildings”; 2012/27/EU with the Law “On energy efficiency”; 2009/125/EU concerning environmental requirements to energy production; 2010/30/EU concerning labeling of products which affects the energy efficiency of buildings;

To continue the awareness-raising campaign for the citizens;

To create mechanisms of tariffs stabilization.

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Ukraine despite all its wealth remains a country dependent on imported fuel and is characterized by its extremely inefficient use. We have a huge, fully untapped potential of development of all known directions for improvement of the energy efficiency of the economy, including alternative energy, ESCO market etc. Paradoxically, during the years of independence we have not created proper conditions for such development. In 2014-2015 thanks to international commitment there were adopted a number of laws that give reason to hope for the irreversibility of creation of energy self-sufficient stage of development of the country.

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