UKRAINIAN ENERGY SAVING & RENEWABLE ENERGY EQUIPMENT MARKET
During 2015 and the following years Ukraine will be one of the key world markets for products, equipment and services designed to increase energy efficiency and production of renewable energy.

**DESPITE THE FALLING OIL PRICES.**
Reasons for growing market potential

• Main reason is that Ukraine will eliminate the price subsidization and multi-level tariff system on natural gas soon. It will be done under the pressure of IMF and other international financing organizations. Ukraine depends very much on their aid and investments.

• It will rise tariffs on natural gas for cooking and water boiling by 500-550 %, and by 300% on heat and hot water for Ukrainian population.

• Electricity tariffs are growing also. Since June 2014 they already rose by 10-50%. Some experts are predicting the rise of the electricity tariffs by 300% during the next couple of years. The situation got worse after Ukraine lost control of some of its coal mining regions in the East of Ukraine.

• The Ukrainian heat producing plants using coal were designed to use local grades of coal. Now Ukraine does not control territories (part of Donetsk and Lugansk regions) where 50% of its coal mines are situated.
Ukraine signed the free-trade and association agreement with EU and took obligations to implement EU standards in Ukraine, including standards on energy efficiency and renewable energy production.

Every year Ukraine consumes about **210 million tons of equivalent fuel**. Own Ukrainian resources cover only about **53%** of the needful energy sources.

Ukraine imports more than **75%** of the necessary natural gas and **85%** of the necessary crude oil and oil products.

Regarding the natural gas consumption, Ukraine consumes **40 billion m3** per year, from each Ukraine imports **30 billion m3** per year.

Ukraine has a conflict with Russian Gazprom, the largest supplier of natural gas into Ukraine. Ukraine applied to the Stockholm Arbitrage Court against Gazprom. It is worth mentioning that Ukraine technically depends highly on import of natural gas from Russia. It means that Ukraine will not get low prices on natural gas despite the fact of declining world prices on oil and natural gas.
The existing situation highly stimulates the interest of both private Ukrainian households and companies to buy energy saving materials and equipment as well as equipment for production of renewable energy.
What are prospects of energy efficiency measures in Ukraine?

• Ukrainian and European experts confirm that the Ukraine’s level of energy efficiency is only about 30% from the level of European countries. Huge potential for Ukrainian energy efficiency improving exists.

• The Ukrainian Academy of Science evaluates the potential of energy efficiency in Ukraine as 42-48%. 38% energy efficiency improvement can be obtained in industry, 30% in municipal economy sector and 17% in energy sector.

• Large potential is in the field of development of renewable energy.
Who has the money to buy?

Sources of financing
Which part of the population is potential?

- Taking into account growing energy tariffs and threat of heating cutback, Ukrainians actively invest into energy efficiency of their homes. The government welcomes the process and tries to stimulate it. For example, recently the government launched financial support programme for people wishing to change their natural gas-powered heating equipment for electricity-powered or similar.

- There are 38+ million population in Ukraine (45+ million people on the territory which includes annexed Crimea and uncontrolled territories of Donbass region). Even if we take for calculation a figure of 5% for solvent people, the total amount of solvent consumers is about 2 million of customers who can afford investing into energy saving.

- Ukrainian citizens have about 20 – 40 billions USD cash outside banks.

- Ukrainian emigrants send about 8 billion of USD per year to Ukraine.
Government support programs for energy saving investments

• Ukrainian government supports energy saving even now. For example, Ukr government supported financially the program of purchase of solid fuel heating boilers which should help to reduce natural gas consumption.

• There are other governmental financial support programs which include support of purchases of energy saving windows, insulation materials, LED lamps etc. The recipients of such programs will be private persons, associations of home owners (OSBB), municipalities.

• Ukraine implements a package of reforms. Among them is the decentralization of financial flows. It means, that municipalities in Ukraine can receive additional funds which can count up to 2.5-3 billion of USD per year. Large part of these funds will be spent for energy saving and renewable energy production projects.
Company sector as target market

- Ukrainian companies try to decrease their energy costs now. There are many programs for corporations wishing to launch energy-efficient equipment.
- Despite the crisis, there are hundreds of solvent companies in Ukraine. Especially export-oriented companies.

International financial organizations (IFO) as a source of financing:

- IFO support heavily energy efficiency in Ukraine. Among them are IMF, World Bank, EBRD, IFC, European Commission. F.e., World Bank is considering a 383 mill. USD loan for energy efficiency improvement in 9 cities of Ukraine. European Investment Bank considering 385 mill USD loan for energy transmitting project in Ukraine. Also, Finland based NEFCO has been launching many energy efficiency projects with Nordic partners and suppliers in Ukraine. etc.
Ukraine’s stimulation policy of energy efficiency and renewable energy development
Towards EU legislation and regulations

• Ukraine became the member of the Energy Community in 2010 and implemented in its national legislation some EU directives which regulate energy efficiency issues and issues related to renewable energy.

• Ukraine signed in 2014 the Association and Free-trade agreement with EU. It means that Ukraine took obligations to adopt national law and technical regulations to the demands of EU. It means also that Ukraine will provide EU standards oriented energy efficiency policy.
After joining the Energy Community, Ukraine is in the process of realization of the following EU directives which are related to energy efficiency

- **2006/32/EC**: The European Union (EU) has adopted a framework for energy end-use efficiency and energy services. Among other things, this includes an indicative energy savings target for the Energy Community’s Member States, obligations on national public authorities as regards energy savings and energy efficient procurement and measures to promote energy efficiency and energy services.

- **2010/31/EC**: Directive on the energy performance of buildings (recast). This Directive aims to promote the energy performance of buildings and building units.

- **2010/30/EC**: Energy labels help consumers choosing products which save energy and thus money. They also provide incentives for the industry to develop and invest in energy efficient product design.
• As a member of the Energy Community, Ukraine joined to the decision of the board of ministers of the Energy Community D/2012/04/MC-EnC. According to D/2012/04/MC-EnC Ukraine took obligations to reach until 2020 the level of 11% of renewable energy in the total structure of energy consumption.

• On 01 October 2014, Ukrainian government adopted the National plan of actions in the field of renewable energy for the period until 2020 year.
Which energy efficiency actions are planned to implement in Ukraine?
Improvement actions in energy efficiency

- The following energy efficiency improving actions are considered by Ukraine as promising for implementation in the housing and commercial buildings:
  - Additional insulation of walls
  - Installation of energy efficient windows
  - Additional heat insolation of roofs
  - Installation of energy efficient plumbing and heating installations
  - Replacement of existing lightings for energy efficient

- Ukrainian industry also needs large energy efficiency improvements and introduction of new technologies. Eg. Ukrainian metallurgy sector needs replacement of old equipment (in a whole, the existing metallurgy equipment has 50%-85% wear rate). The same situation is with the Ukrainian chemical industry. Energy consumption of production of many goods in Ukraine is 130-300% higher compared to modern production facilities.

- In 2015 Ukraine is going to launch the National action plan in energy efficiency and saving.
Which renewable energy sources are planned to develop in Ukraine?
According to the National of actions in the field of renewable energy for the period until 2020 year, the following renewable energy sources are planned to develop in Ukraine

**Hydropower energy**
- After the modernization and launching of new capacities Ukraine can obtain the following figure:
  - Micro and mini hydro plants capacity increase from **33 MW** in 2015 to **55 MW** in 2020
  - Small hydro plants capacity increase from **65 MW** to **95 MW**
  - Large hydro plants capacity increase from **4800 MW** to **5200 MW**

**Solar energy**
- Good level of solar insolation and existing feed-in-tariff make this industry very attractive for investments and development. PV solar equipment can be used all year long in Ukraine and most efficiently from April to October. The possible increase of capacities can be from **1000 MW** in 2015 to **2030 MW** in 2020.
Wind energy
• Good potential, especially on the south and south–east part of Ukraine, where wind speed is up to 7 m/s. FIT for wind energy is valid. The possible increase of capacities can be from 1000 MW in 2015 to 2280 MW in 2020.

Bioenergy
• Ukraine possesses practically world’s best agriculture lands. The main energy sources which can be developed in Ukraine are energy sources from biomass agriculture residue, wood residue, biogas etc. According to experts’ estimations, the potential of bioenergy in Ukraine is huge, about 15 gigawatt. The nearest years plan is to increase capacities from 250 MW in 2015 to 950 MW in 2020.

Geothermal energy
• The possible increase of capacities can be from 8 MW in 2015 to 20 MW in 2020
Feed-in-tariff?
Feed-in-tariff launched

• In order to attract investments and stimulate the development of some renewable energy sources, Ukraine launched Feed-in-tariff for electricity from solar, wind, bio energy etc.

• As for the end of the first half of 2014, the total capacity of FIT supported objects in Ukraine was **1419 MW**.

• For solar the figure was **819 MW**, wind energy **497 MW**, small hydro power stations **77 MW**, biomass and biogas power plants **26 MW**. The capacity of heat producing units which use renewable energy sources exceeded **1070 MW**.
Got interested?

Sarus can help to enter the Ukrainian market
• **Sarus Oy, Finland**, provides marketing services for Finnish companies who want to achieve growth in CIS countries including Ukraine, Russia, Belarus, Kazakhstan.

• Our team consists of experienced experts from Finland, Ukraine, Russia, Belarus and Kazakhstan.

• We understand clearly needs and business culture of CIS based companies and organizations.

In Ukraine:

• We have very good business contacts with many Ukrainian companies as well as authorities, associations and other local and international organizations involved in the development of energy efficiency and renewable energy in Ukraine.

• Sarus Oy can organize market research, find Ukrainian customers and partners, support Finnish companies in negotiations and further sales.

**WELCOME FOR COOPERATION**
Your target groups in Ukraine can consist of the following

- Ukrainian importers, distributors, design companies and integrators of products, equipment and services for the field of energy saving and production of renewable energy.
- Large industrial and agriculture production companies
- Municipalities
- Energy auditors
- Energy service companies
- Condominium associations

WELCOME FOR COOPERATION
THANK YOU FOR YOUR ATTENTION!

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