

UKRAINIAN WIND MARKET OVERVIEW

2014



CONTENT

1. Executive Summary	4
2. National Renewable Energy Action Plan	8
3. “Green” Tariff	10
4. “Local Content” Requirement	11
5. Development Plan of the United Energy System of Ukraine	13
6. Grid Connection	13
7. Emergency Temporary Measures in the Energy Sector	14
8. Tax Changes	14
9. Peculiarities of Legal Status of Wind Power Projects in the Crimea	15
10. Wind Power Plants Operating in Ukraine	17
11. Small Wind Energy Sector	19
12. UWEA’s Activity in 2014	20

© 2015
©Ukrainian Wind Energy Association

Date of publication: February 2015

www.uwea.com.ua
uwea@i.ua
Phone. +380 (44) 223 29 96

Ukrainian Wind Market Review 2014 has been prepared by the Ukrainian Wind Energy Association (UWEA) in cooperation with KPMG.

Information provided by the **State Agency on Energy Efficiency and Energy saving of Ukraine (NAER)**, companies-members of the UWEA has been used in the report.
The authors of the report wish to thank **Yaroslav Petrov**, Counsel, Law Firm **ASTERS**, Kiev, Ukraine (www.asterslaw.com) for his kind help and legal advices on issues related to the development of wind power in Ukraine.
The authors of the report express their special thanks to **GRESA-GROUP** Company (www.ggc.com.ua) for their assistance in preparing statistics on small wind energy sector.

The **UKRAINIAN WIND ENERGY ASSOCIATION (UWEA)** is an All-Ukrainian, non-governmental, non-profit organisation whose purpose is to promote wind energy technologies and insure wind energy interests on the national and international levels. Ever since its foundation in spring 2008, the association has been committed to wide-scale developing wind energy in Ukraine, involving small and medium size businesses into the process. UWEA popularizes wind energy as environmentally sound, CO₂ neutral source of electricity for the Ukrainian consumers.

The UWEA links wind power project developers, wind power equipment suppliers and manufacturers, politicians, utilities, construction companies, scientists and researchers, lawyers, NGOs, consumers and others involved in the wind industry – one of the world's fastest growing energy industries. The Ukrainian Wind Energy Association cooperates with various national, regional and local authorities. The UWEA contributes greatly to information and experience exchange with all stakeholders. The UWEA is a proven, effective advocate for the Ukrainian wind industry and it continues to mature along with the industry.



KPMG has been working in Ukraine since 1992, and our goal has always been to use KPMG global intellectual capital combined with the experience of Ukrainian professionals to assist leading Ukrainian and multinational businesses in achieving their business aims.

Our experience of working with major Ukrainian and international companies in the renewable energy industry provides us with deep understanding of the specifics and trends in this sector and enables us to identify current key processes, needs, and challenges of companies operating in this industry.

KPMG in Ukraine offers legal support and assistance on almost all legal aspects of investing and doing business in Ukraine, including:

1. Legal advisory and support

- ▶ Most suitable and tax efficient form of doing business in Ukraine
- ▶ Corporate structuring and reorganization

- ▶ Establishment of off-shore holding companies/structures
- ▶ Corporate governance
- ▶ Financing the business in Ukraine and assistance with arranging financing
- ▶ Drafting and negotiation of various business contracts (e.g. EPC, O&M agreements, engineering service contracts, lease agreements etc.)
- ▶ Liaisons with state and local authorities in connection with obtaining licenses, permits, approvals, rulings

2. M&A support:

- ▶ Legal due diligence
- ▶ Transaction structuring
- ▶ Drafting and negotiation of the transaction documentation (e.g. SPA, shareholder's agreements, joint venture and investment agreements)
- ▶ Closing of the deal

3. Commercial litigation and disputes with state authorities



EXECUTIVE SUMMARY

The year 2014 was a year of political and economic challenges for Ukraine. Renewable energy sector was no exception. After the great 2013 the national renewable energy sector faced a lot of challenges last year. The annexation of the Crimea by the Russian Federation (Russia) and ongoing military operations in the east of the country have negatively affected the development of renewable energy in Ukraine. The slowdown appeared primarily due to reduced growth of the solar and wind sectors, which successfully developed in the period from 2011 to the first quarter of 2014 in the above mentioned regions.

At the same time, despite the difficult political and economic situation in the country wind energy capacity continued to grow in 2014 mainly in the first half of the year though at a slower pace.

During 2014 **126,475 MW** of new wind power capacities came on line in the mainland Ukraine according to the market survey conducted by the experts of the Ukrainian Wind Energy Association (UWEA). Thus, as of December 31, 2014, the cumulative capacity of the wind energy sector of the mainland Ukraine reached **409,525 MW**. All the wind power plants (WPP) have been grid connected and are selling electricity under the “green” tariff.

The installed wind capacity on the territory of the annexed Crimea has remained unchanged – **87,7 MW**. Russia’s occupation stopped wind development on the peninsula. Moreover, all existing Crimea’s wind power plants ceased their operations in the April – July period of 2014.

In August the State Committee on Prices and Tariffs of Ministers of Crimea set tariff for the electricity for generating companies producing electricity from wind in the amount of 3,25 Russian rubles per 1 kWh which is 2.24 times cheaper than “green” tariff acting in Ukraine.

The Crimean WPPs started to generate electricity for the peninsula after almost 6 months of downtime. At the same time, the issues related to payment for delivered “green” electricity, even at such low tariffs, was not resolved in the Crimea in 2014. Besides, the majority of the wind power plants installed in the Crimea were nationalized and merged into the State Unitary Enterprise of the Republic of Crimea Crimean Generating Systems, with the exception of Ostaninskaya WPP in Leninskiy region (25 MW, owned by the Management Company Wind Parks of Ukraine) and two research wind turbines Unison (unit capacity of 2 MW each), installed at Tarkhankutskaya WPP in the western part of the Crimea.

As of the date of preparation of this overview the four wind power plants constructed in the eastern part of Ukraine were in the zone of antiterrorist operation in Lugansk and Donetsk regions, in particular: Lutuginskiy and Krasnodonskiy wind parks with installed capacity of 25 MW each located in Lugansk region; and Novoazovski wind park with 57,5 MW installed capacity and 30,5 MW Vetroenergoprom WPP located in Donetsk region. Nevertheless these wind power plants continue to generate electricity and delivered it to the United Energy System of Ukraine. However, the further previously planned developments of these wind parks have been suspended.

In general, by the end of 2014 the total capacity of the wind turbines installed in the country (including Crimea) amounted to **497, 225 MW**, after 371 MW in 2013, that corresponds to the growth rate of **34%**.

In 2014 the wind sector of mainland Ukraine generated **1 123,7mln kWh of electricity** or about **0,62%** of the national electricity consumption. In comparison, in 2013 all the Ukrainian WPPs including Crimean ones delivered 630 mln kWh of electricity. The WPPs located in the territory of the annexed Crimea generated about **84, 813 mln kWh of electricity** in the July-December period of 2014.

“Green” electricity generated by wind power saved more than **500 000 tons of carbon dioxide emission**.

Total installed capacity of the power plants in Ukraine amounted to 54,7 GW by the end of 2014, out of which Thermal Power Plants (ThPPs) accounted for 62,8%, Nuclear Power Plants (NPPs) – 25,3%, Hydro Power Plants (HPPs) – 9, 9% and Renewable Energy Power Plants (REPPs) – 2,0%. The share of Wind Power Plant (WPPs) reached 0.9%. It’s planned to increase cumulative capacity of power plants using renewable energy sources over the next 10 years.

The share of “green” electricity in the structure of electricity costs in Ukraine in 2014 accounted for **6.6%**, out of which small HPPs – 0,49%, WPPs – 2,22%, Solar PP – 3,72%, biomass- 0,13% and others – 0,08%.

Since 2011 nearly all new wind capacities in Ukraine have been put online with private investments. About **700 mln euros** have been invested in the wind power sector of Ukraine.

In 2014 the following wind companies kept their leading position in the national wind sector:

- ▶ Management Company Wind Parks of Ukraine, LLC
- ▶ Wind Power, LLC
- ▶ Vindkraft Ukraine, LLC

Chart 1. Installed capacity by type of power plant

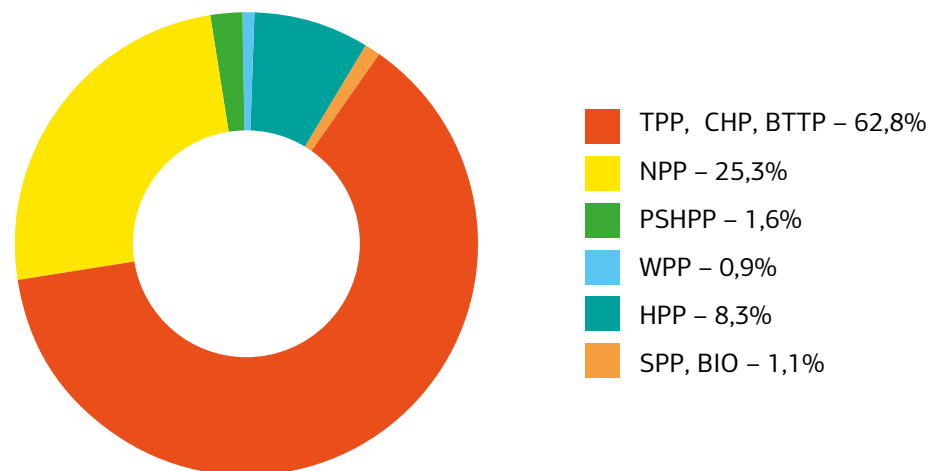
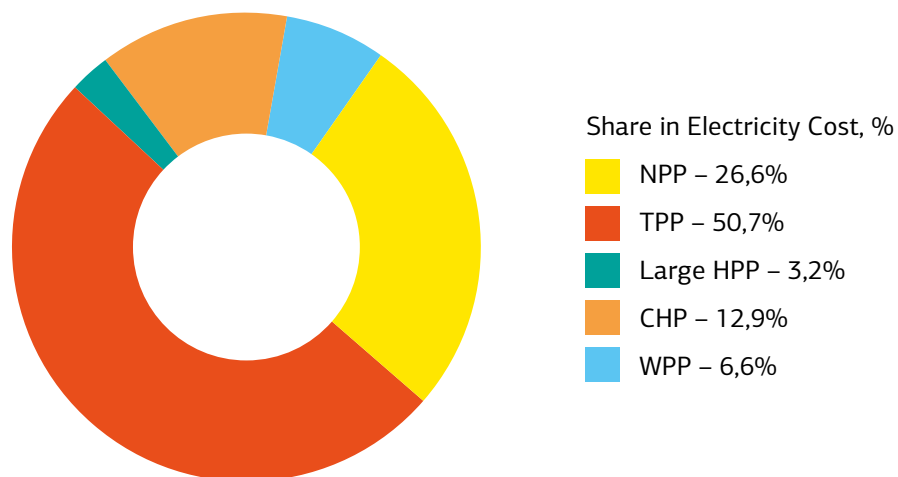


Chart 2. Share of primary energy sources in the electricity cost in Ukraine in 2014





In 2014 the construction of some wind parks in Lugansk, Zaporozhye and Kherson regions was either completed or continued; two wind turbines Vestas were erected in Lviv region at the end of 2014. An installed wind capacity by regions of Ukraine is shown in the Chart 3 below.

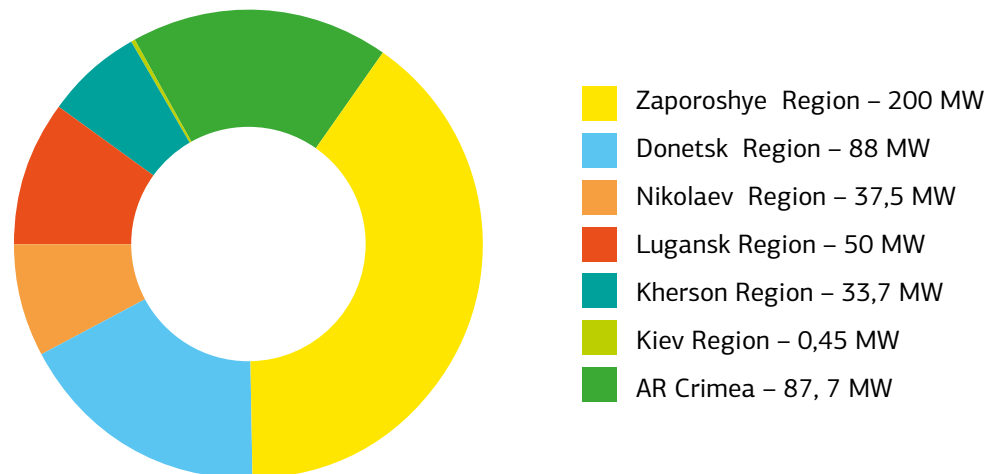
In 2014 **Management Company Wind Parks of Ukraine** commissioned Lutuginskiy Wind Park of 25 MW thus increasing cumulative installed capacity of their wind parks to 200,53 MW.

35 wind turbines Vestas V 112 constituting the second phase of the Botiyevskaya WPP (the owner is **Wind Power LLC**) were fully grid connected in the first half of 2014. After achieving full designed generating capacity of 200 MW the Botiyevskaya WPP became the largest operating wind power plant in Ukraine.

The company **Vindkraft Ukraine** commissioned two new wind power plants in Kherson region – Stavki and Beregovaya totaling 21,5 MW which construction was launched in 2013.



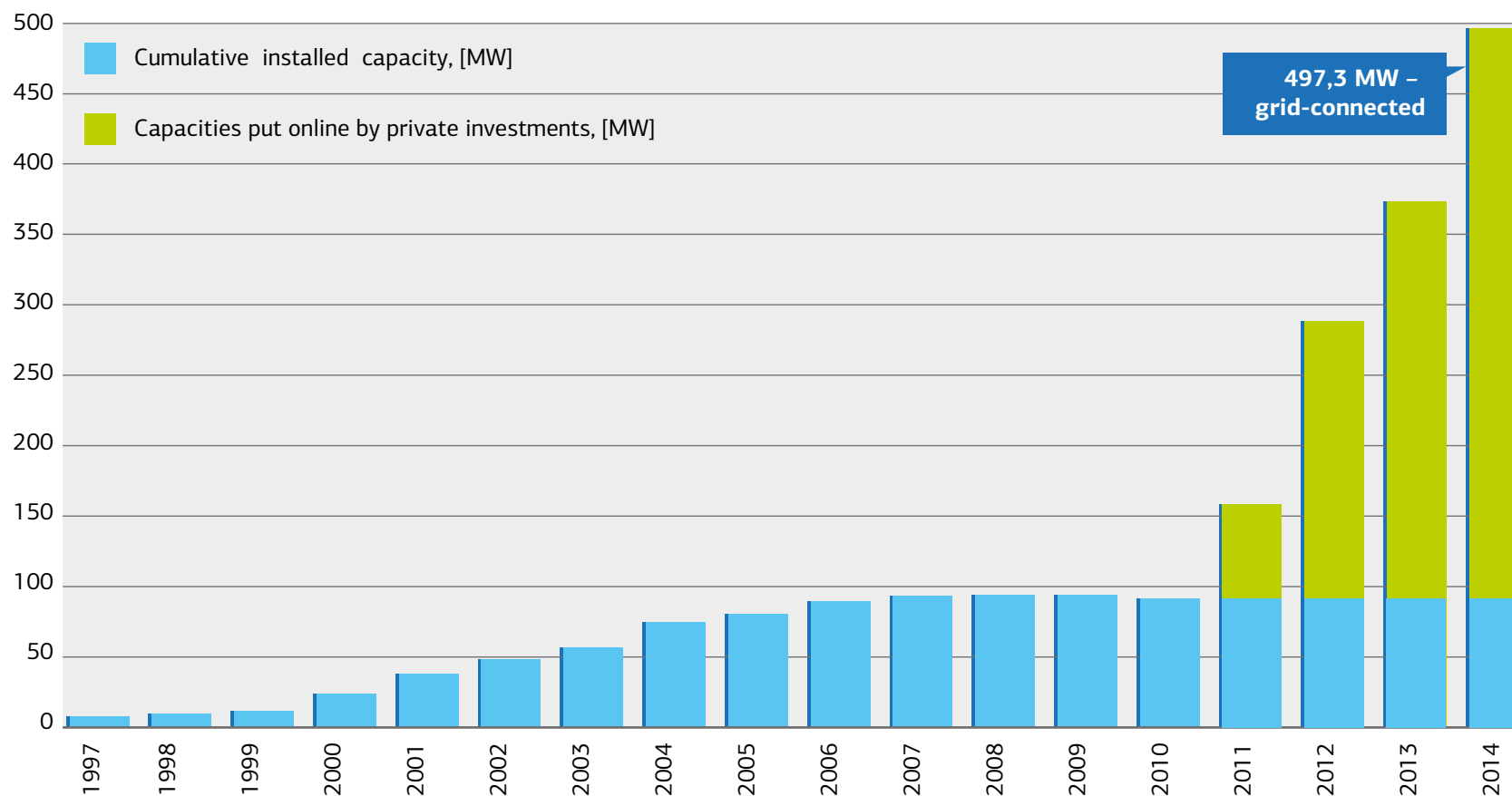
Chart 3. Installed wind capacity by regions of Ukraine



By the end of 2014 four more wind turbines FL 2500-100 with unit capacity of 2, 5 MW were erected at Ochakovskiy Wind Park in Nikolaev region by MC Wind Parks of Ukraine and two wind turbines VESTAS V-112 with unit capacity of 3, 3MW – at Saryi Sambor WPP in Lvov region by **Eco-Optima LLC**. These wind turbines are to be grid connected in the first half of 2015.

Due to the annexation of the Crimea by Russia, the ongoing conflict in the east of Ukraine, economic distress, the UWEA has to cut its forecast **for cumulative wind installations in 2015** almost in half from initially expected 900-1000 MW to **550 MW**. Growth of wind installed capacity in Ukraine since 2009 (the year of adoption of “green” tariff) is shown in Chart 4.

Chart 4. Cumulative installed capacity of the Ukrainian wind power plants, 1997-2014



NATIONAL RENEWABLE ENERGY ACTION PLAN

On 1 October 2014 the Cabinet of Ministers of Ukraine adopted the Decree “On National Renewable Energy Action Plan for the Period up to 2020”, No 902-p. This decree of the Government of Ukraine was adopted to execute the Decision of the Ministerial Council of the Energy Community D/2012/04 / MC-EnC “On the Implementation of Directive 2009/28/EC and Amending Article 20 of the Energy Community Treaty”.

The National Renewable Energy Action Plan (hereinafter – the “National Action Plan”) envisages that the share of energy produced from renewable energy sources (including large HPPs) should amount to at least 11% of the total ultimate energy consumption. The adoption of the National Action Plan opens broad perspectives for the development of wind energy sector in Ukraine. In particular, the share of wind energy in electricity production from renewable energy sources should reach **26.5% by 2020**.

According to the National Action Plan, the potential for the development of wind power generation in Ukraine, according to various estimates, comprises up to 15GW. “However, for the construction of such a number of wind power plants significant investments are required: according to various estimates, more than UAH 200 billion”, the document says. Based on the experience of the majority of European countries on implementation of WPP, due to the use of more powerful wind turbines and commissioning of new facilities, wind power generation in Ukraine can be increased to 2,400 GWh in 2015 (with the total capacity of 1,000MW) and up to 5,900 GWh in 2020 (with the total capacity of 2,280 MW).

Table 1. National Renewable Energy Action Plan for the Period up to 2020. Estimate of the total use of renewable energy sources (installed capacity, total power generation) in Ukraine at the stages of implementation of the commitments on renewable energy sources by 2020

	2009		2015		2018		2020	
	MW	GW•h	MW	GW•h	MW	GW•h	MW	GW•h
Hydropower plants	4549	11 430	4 898	12 215	5 167	12 885	5 350	13 340
< 1 MW	19	12	33	75	47	110	55	130
1 MW- 10 MW	30	18	65	140	80	175	95	210
> 10 MW	4 500	11 400	4 800	12 000	5 040	12 600	5 200	13 000
Geothermal energy	0	0	8	44	14	84	20	120
Solar power plants	0	0	1 000	1 050	1 700	1 780	2 300	2 420
Wind power plants (onshore)	76	41	1 000	2 400	1 900	4 845	2 280	5 900
Energy from biomass	0	0	250	1100	650	2 870	950	4 220
solid	0	0	175	770	455	2000	660	2 950
biogas	0	0	75	330	195	870	290	1270
Total	4 625	11 471	7 156	16 809	9 431	22464	10 900	26 000
Of which the central heating and power plant	0	0	250	1100	650	2 870	950	4 220

Таблиця 2. Table2. Installed wind capacity and electricity output in the period up to 2020, National Renewable Energy Action Plan, by years

Installed capacity/ electricity output	2009		2014		2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
WPPs onshore	76	41	700	1680	1000	2400	1350	3240	1650	4125	1900	4845	2100	5460	2280	5900

“GREEN” TARIFF

Forex indexation of “green” tariff

Since August 2014 due to the difficult condition of Ukraine’s energy sector and significant evaluation of the Ukrainian hryvnia against foreign world currencies, the National Commission for State Energy and Public Utilities Regulation – NEPURC (On August 27, according to the President Orders No.692 and No.693, the National Utilities Regulatory Commission and the Commission Exercising the State Regulation in the Energy Sector (NERC) were dissolved. Instead, according to the Order No.694, the National Commission for State Energy and Public Utilities Regulation (NEPURC) was established) actually stopped indexation of “green” tariffs with regards to change of the official exchange rate of UAH/EUR established by the National Bank of Ukraine (hereinafter- “NBU”). Last NEPURC Regulation on the establishment of “green” tariff for electricity generated from the renewable energy sources (RES) was passed on 31 July 2014, and none has been passed thereafter.

This suspension (omission of NEPURC) contradicts the Clause 17-1 of the Law of Ukraine “On Electric Power Industry”, whereby “green” tariff cannot be less than a fixed minimum amount of “green” tariff, which is fixed in the euro and on each date of setting tariffs for consumers shall be converted into the national currency at the official exchange rate of NBU on the date of such conversion.

In this regard, certain wind energy market players challenged such omission (failure) of NEPURC in the administrative courts. As a result of consideration of such claim, the first instance court passed a judgment dated 19 December 2014 in the case No.826/1773/14 Wind Power LLC v. NEPURC, whereby:

- (i) recognized failure of NEPURC to index tariff as illegal;
- (ii) instructed NEPURC to perform indexation of “green” tariff for September and October 2014 in accordance with the Law of Ukraine “On Electric Power Industry”;
- (iii) instructed NEPURC to amend the Rules of the Wholesale Electricity Market in order to reimburse the claimant for the lost difference in the cost of electricity for the period of September and October 2014.

As of the date of preparation of this overview, NEPURC appealed the above judgment in the Court of Appeals.

In addition, wind power company Vindcraft Ukraine LLC also filed the similar claim against NEPURC to the administrative court.

“Green” tariff for private households

Current Ukrainian legislation does not provide for the sale of surplus electricity produced by private households’ own wind turbines at “green” tariff (as opposed to power produced by photovoltaic solar installations of private households).

In this regard, the State Agency for Energy Efficiency and Energy Saving of Ukraine (SAEE) prepared and submitted to the public discussion the draft law “On Amendments to the Law of Ukraine “On Electric Power Industry” Regarding Ensuring Competitive Conditions of Electricity Production from Alternative Energy Sources.” The draft law provides for the possibility of private households to sell surplus electricity produced by their own wind turbines at “green” tariff.

In addition, the bill provides that the “green” tariff for private households that produce electricity from wind energy is set at the level of the retail tariff for consumers of the second class of voltage as of January 2009, adjusted by a specific tariff coefficient, which is used for the peak period (for the three-band tariff classification) multiplied by a coefficient of “green” tariff for electricity produced from wind energy for private households (specified in the draft law). However, as of the date of preparation of this overview the draft law was not registered in the Verkhovna Rada of Ukraine.

LOCAL CONTENT REQUIREMENT

For WPPs, commissioned after 1 July 2014 and construction of which commenced after 1 January 2012, the “local content” requirement was increased from 30% to at least 50%. Under Clause 17-3 of the Law “On Electric Power Industry”, the requirement of “local content” is a prerequisite for obtaining the “green” tariff.

Producers of electricity from renewable energy sources consider 50% “local content” requirement as commercially unreasonable, and for quite a long time initiate reduction of this requirement. In this context, on 19 November 2014 the Ministry of Economic Development and Trade has completed the development of the draft law “On Amendments to Art.17-3 of the

Law of Ukraine “On Electric Power Industry” Regarding the “Local Content” Requirement for Electric Power Facilities”. In particular, the draft law provides for the reduction of the “local content” requirement for renewable energy facilities to 25%. However, as of the date of preparation of this overview the draft law was not registered in the Verkhovna Rada of Ukraine.

At the same time, the “specific weight” of the individual elements in the “local content” in 2014 was not amended. Fixed share of individual elements in “local content”, applicable to WPP as of the date of preparation of this overview, is presented in Table 3 below.

Table 3. Fixed shares of individual elements of the “local content”

Elements of “local content”	Operations that shall be conducted in Ukraine	Share
Blades	Production	15
Tower	Production	15
Nacelle	Assembly	30
The main frame	Production	5
The main shaft	Production	5
Rotor	Production (casting)	5
	Assembly	5
Construction works	Execution	20
Total		100

In 2014, Ukrainian lawmakers have made some endeavors to change the amount of the fixed share of individual elements of “local content”. Thus, in May 2014 the draft law No. 4856 “On Amendments to Clause 17-3 of the Law of Ukraine “On Electric Power Industry” regarding improvement of conditions for the production of electricity from wind energy” was registered. The authors of the draft law proposed to abolish the “local content” in the production of blades and rotor for wind turbines in exchange for an increase in the fixed share of the main shaft, main frame and towers. However, on 27 November 2014 the draft law was withdrawn. In turn, on 12 December 2014 members of the Ukrainian parliament registered a draft law No. 1457 “On Amendments to Clause 17-3 of the Law of Ukraine “On Electric Power Industry” Regarding the Improvement of Conditions for the Production of Electricity from Wind Energy.” The draft law No. 1457 is similar to the draft law No. 4856.

In addition, on 13 March 2014 the NERC passed a Resolution No. 233 “On Approval of Changes to the Procedure of Determining the Amount of Local Content for Electric Power Facilities that Produce Electricity from Alternative Energy Sources (Except for Blast Furnace and Coking Gases)”. The above amendments expanded the list of documents required to determine whether the amount of the “local content” complies with the legislation. In particular, this list was supplemented by an explanatory note regarding the operations and processes of production of elements of “local content” with reference to the supporting documents provided by applicable legislation. In addition, the above mentioned changes established the procedure how the NERC and the

applicant should act in case the applicant submits an incomplete set of documents and / or submitted documents are insufficient to determine whether the amount of the “local content” complies with legal requirements (namely, in case of non-confirmation of ownership of the elements of the local content or lack of information on transactions in the chain of production of “local content” elements).

In December 2014 the four professional associations, including the Ukrainian Wind Energy Association, Bioenergy Association of Ukraine, Ukrainian Association of Renewable Energy and the Association Ukrhydroenergo, developed the draft law “On Introducing Changes to Certain Laws of Ukraine Regarding Competitive Conditions for Production of Electricity from Alternative Energy Sources”. This draft law provides for the abolition of the “local content” and the introduction of the premium in the amount from 5% to 15% (depending on the level of use of the equipment of Ukrainian origin) to the “green” tariff for electricity producers from RES, which use power equipment of Ukrainian manufacturers. As of the date of preparation of this overview the draft law was registered in the Verkhovna Rada of Ukraine under the number of 2010, from February 3, 2015.

DEVELOPMENT PLAN OF UNITED ENERGY SYSTEM OF UKRAINE

On 29 September 2014 the Ministry of Energy and Coal Industry of Ukraine by its Order No.680 adopted the Procedure of preparation of the development plan of the united energy system of Ukraine by the system operator for the next ten years (hereinafter – the “Plan”) and the Announcement procedures of the Plan. The Ministry of Energy and Coal Industry of Ukraine passed this legal act after a long delay – under the law such regulation had to be approved prior by 1 May 2014, and the Plan had to be approved by the Government of Ukraine prior to 1 January 2015. In turn, as of the date of the preparation of this overview, the Plan has not been approved by the Cabinet of Ministers of Ukraine. In this respect, we note that the legislation effective as of 1 January 2015 provides that the WPP with an installed ca-

capacity of more than 5 MW can get “green” tariff and preferential conditions for connection to the grid, provided that the construction of WPP complies with the Plan.

Given that the Plan has not yet been adopted, and according to the law the requirement on compliance with the Plan does not apply only to power facilities, the grid connection agreement of which was concluded by 1 July 2014, there are risks that the WPP commissioned after 1 July 2014, will not be able to get a “green” tariff and preferential terms for connection to the grid. As of the date of the preparation of this overview, the draft Plan has been developed and is currently under approval of the relevant ministries.

GRID CONNECTION

Legal framework governing connection of WPP to the grid in 2014 remained unchanged. Procedure of grid connection is regulated by the “Rules for connection of electric power facilities to the grid”, approved by NERC Res-

olution No.32 as of 17 January 2013 and “Methodology for calculation of fees for connection of the electric power facilities to the grid”, approved by NERC Resolution No.115 as of 02 December 2013.

EMERGENCY TEMPORARY MEASURES IN ENERGY SECTOR

According to the Order of the Cabinet of Ministers of Ukraine dated 1 October 2014 No. 915-p NEPURC can under request of Ministry of Energy and Coal Industry of Ukraine amend the value of “green” tariff, and the state-owned enterprise National Energy Company Ukrenergo in coordination with the Ministry of Energy and Coal Industry of Ukraine may introduce

temporary limits on production of electricity, in particular for the producers from renewable energy sources. This order ceased to have effect on 11 December 2014; however on 14 January 2015 the new order was adopted which introduced identical extraordinary measures in energy sector until 26 February 2015.

TAX CHANGES

On 31 July 2014, the Verkhovna Rada of Ukraine passed the Law of Ukraine “On Amendments to the Tax Code of Ukraine and to Some Other Legislative Acts of Ukraine (Regarding the Improvement of Certain Provisions)” No. 1621-VII. Such law abolished corporate income tax incentives for producers of electricity from renewable energy sources. It is worth reminding that earlier the provisions of subparagraph c) of Clause 17 of Article 4 of the Transitional Provisions of the Tax Code of Ukraine provided a tax exemption for the profits obtained from core business of power industry enterprises that produce electricity exclusively from renewable energy sources.

It should also be noted that the Cabinet of Ministers of Ukraine by its Resolution dated 29 December 2014 No.719 “On the Repeal of Certain Resolutions of the Cabinet of Ministers of Ukraine Regarding Importation of Energy-saving Materials, Equipment and Components into the Customs Territory of Ukraine” abolished the Resolution of the Cabinet of Ministers of Ukraine dated 14 May 2008 No. 444 “On Importation of Energy-saving Materials, Equipment and Components into the Customs Territory of Ukraine”. The abolished Resolution No. 444 contained the list of energy-saving materials, equipment and components which importation in Ukraine was exempted from import VAT and customs duties.

PECULIARITIES OF LEGAL STATUS OF WIND POWER PROJECTS IN THE CRIMEA

The business of the companies with assets in the wind power industry in the Crimea have been subject to significant changes in connection with the occupation of the Crimea by the Russian Federation in March 2014.

Electricity Tariffs

On 1 April 2014 the State-owned Enterprise Energorynok actually suspended execution of obligations under bilateral contracts for the purchase of electricity concluded with electricity producers located in the Crimea. In this regard, all WPPs in the Crimea with a total capacity of approximately 87.7 MW ceased their operations for a certain period. According to part 4 of Article 23 of the Law of Ukraine “On Electric Power Industry” the Cabinet of Ministers of Ukraine defines the peculiarities of the regulation of legal, economic and organizational relations connected to the production, transmission, distribution, supply, purchase, sale and use of electric energy on the temporarily occupied territory.

On 7 May 2014 the Cabinet of Ministers adopted the Resolution No.148 “On the Peculiarities of Regulation of Relations in the Electricity Sector on the Temporarily Occupied Territories of the Autonomous Republic of Crimea and Sevastopol”, whereby from 1 June 2014 the wholesale supplier (SOE Energorynok) does not purchase the electric energy from producers located in the Crimea, and does not make any settlements with them, including the repayment of the debt for the previous periods and does not sell electric energy to the suppliers of electricity for further supply to customers in the Crimea. In turn, only the State Foreign Trade Company Ukrinterenergo (hereinafter – “Ukrinterenergo”) can purchase electricity on the territory of Ukraine and supply it to the Crimea. PJSC DTEK Krymenergo purchases electricity from Ukrinterenergo for the Crimea, and thereafter sells it to “the Center of settlements”. On January 25, 2015 PJSC DTEK Krymenergo was nationalized by the self-proclaimed Crimean authorities.

On 9 July 2014, the Crimean State Council adopted the Resolution No.2357-6 / 14 “On the Issues of the Stable Functioning of the Enterprises of Fuel and Energy, Housing and Utility Services Sectors in the Republic of Crimea”. This Resolution, in accordance with the legislation of the Russian Federation, established tariffs for the electricity for generating companies producing electricity from renewable energy sources in the amount fixed in the export-import contracts between Ukrinterenergo and the branch DTEK Krymenergoof PJSC DTEK Krymenergo for 2014 in the amount of 3.42 Russian rubles per 1 kWh (net of VAT). This tariff does not apply to the regulated bilateral contracts between such generating enterprises and customers at rates established by the executive body authorized to exercise state regulation in this area in accordance with the legislation of the Russian Federation.

On August 13, 2014 the State Committee on Prices and Tariffs of the Republic of Crimea set tariff for the electricity for generating companies producing electricity from wind in the amount of 3,25 Russian rubles per 1 kWh.

Status of wind energy business in the Crimea

Under the Russian legislation, Ukrainian companies located in the Crimea had to take one of the following decisions by 1 January 2015:

- (1) to register under Russian legislation and continue to operate as a Russian legal entity; or
- (2) to continue their activities in the Crimea as a foreign legal entity with the relevant legal, regulatory and tax implications.

In addition, Ukrainian companies located in mainland Ukraine, which operated in the Crimea, were required to register with the tax authorities of the Russian Federation until 20 May 2014.

In turn, the NBU in November 2014 recognized legal entities located in the Crimea as non-residents for the purposes of currency and banking regulations of Ukraine. Moreover, NBU prohibited the Ukrainian residents to invest in the Crimean assets, and significantly limited ability of payments from Ukraine to the Crimea.

For Ukrainian and foreign companies owning wind power assets in the Crimea, there is also a risk of nationalization of their assets. It should be noted, that during 2014 the Crimean “authorities” have held several nationalizations of Crimean assets owned by Ukrainian businessmen, mainly guided by political arguments and considerations.

Financing

Opportunities of financing wind energy business in the Crimea were significantly narrowed due to the introduction of sanctions of the European Union and the United States of America (in particular, the European Union Council Resolution No. 825/2014 as of 30 July 2014, the Council of Europe Resolution No. 1351/2014 as of 18 December 2014, the Executive Order of the US President No. 13685 as of 19 December 2014) which prohibited European and US companies to finance Crimean businesses (including by means of the provision of loans, credits, share capital contribution, etc.).

Financing of the Crimean businesses by Ukrainian companies is also problematic since:

- (1) it is prohibited for Ukrainian companies to invest in the Crimea;
- (2) Ukrainian companies will need to obtain an individual license of NBU to provide loans to companies located in the Crimea;
- (3) payments to the Crimea are allowed only for servicing the property located there, which is owned by Ukrainian company and was acquired prior to the occupation of the Crimea.

Sale/restructuring

The possibility of sale or restructuring of the Crimean business is also significantly limited. As was mentioned above, European, US and Ukrainian companies are prohibited to invest into the Crimean businesses (in particular, by means of purchase of real estate in the Crimea, purchase or increase of share in the Crimean companies, establishment of joint ventures). In this regard, the Russian business can be the only real purchaser of Crimean wind power businesses.

From the Russian legal perspective, to carry out transactions with wind power assets in the Crimea, their owners must register such immovable property and the title to it in the Russian Unified State Register of rights to immovable property and transactions therewith. At the same time, such a register did not function properly in the Crimea for a long time, what in practice, complicated carrying out transactions with the Crimean immovable property (including WPP).

In turn, according to the Ukrainian legislation transactions with immovable property in the Crimea should be conducted on the territory of mainland Ukraine under the laws of Ukraine with registration in the Ukrainian State Register of property rights to immovable property. In addition, during the occupation the Ukrainian legislation prohibits any transactions with property and land plots, if the party to the transaction is a person owned or controlled by the occupant state (Russia). Transactions with the Crimean assets carried out in violation of the above requirements are void in Ukraine.

Therefore, in order to be lawful the transaction with the Crimean immovable property must be executed as 2 (two) transactions (one transaction for the purposes of the Ukrainian jurisdiction, and the other – for the purposes of the Russian Federation one), which significantly complicates the transaction and increases the transaction costs.

WIND POWER PLANTS OPERATING IN UKRAINE

126, 475 MW were added to the grid in 2014 in mainland Ukraine. By the end of 2014 the cumulative installed capacity of the mainland Ukraine reached to **409,525 MW**. All the wind power plants have been grid-connected and are selling electricity under the “green” tariff.

In 2014 the WPPs located in the mainland Ukraine generated **1 123 739 100 kWh** of electricity, while the WPPs located in the Crimea

generated about **84 812 921,5 kWh** of electricity in the late July-December period. The installed wind capacity on the territory of the annexed Crimea has remained unchanged – **87,7MW**. Russia’s occupation stopped wind development on the peninsula. Moreover, all Crimea’s wind power plants were out of operation in the April – July period of 2014.

Table 4. Wind Power Plants Operating in the Mainland Ukraine

Wind Power Plant	Region of Ukraine	Installed Capacity, 31.12. 2013, MW	Added in 2014, MW	Installed Capacity, 31.12. 2014, MW
Wind Park Novoazovskiy	Donetsk region	57,5	0	57,5
Wind Park Ochakovskiy (comprising of 25 MW Dmitrievskaya WPP, and 12,5 MW Tuzlovskaya WPP)	Nikolaev region	37,5	0	37,5
Wind Park Krasnodonskiy	Lugansk region	25,0	0	25,0
Wind Park Lutuginskiy	Lugansk region	0	25,0	25,0
Vetroenergoprom WPP	Donetsk region	30,53	0	30,53
Novorossiyskaya WPP	Kherson region	9,225	0	9,225
Stavki WPP	Kherson region	0	9,225	9,225
Beregovaya WPP	Kherson region	0	12,3	12,3
Sivashskaya WPP	Kherson region	2,92	0	2,92
Botiyevskaya WPP	Zaporoshye	119,925	79,95	199,875
Production Commercial Firm Ligena LLC	Kiev region	0,45	0	0,45
TOTAL:		283,05	126, 475	409,525

Table 5. Power Plants Operating in the Crimea

Wind Power Plant	Region	Beginning of Construction	Installed Capacity, 31.12.2014, MW
Donuzlavskaya WPP	town of Evpatoria	1993	6,665
Sudakskaya WPP	town of Sudak	2001	3,7625
Chernomorskaya WPP	Chernomorskiy region	2011	1,2
Presnovodnenskaya WPP	Leninskiy region	1996	7,39
Mirnovskaya WPP	Sakskiy region	1996	18,4625
Vorobievskaya WPP	Sakskiy region	1998	2,365
Eastern-Crimean WPP	Leninskiy region	2008	2,813
Tarkhankutskaya WPP	Chernomorskiy region	2001	20,05
Ostaninskaya WPP	Leninskiy region	2012	25,0
TOTAL:			87,699

SMALL WIND SECTOR

In 2014, the Ukrainian small wind market experienced a reduction in the new installations. Only 11 wind turbines were added last year, a 50% decrease to 22 new wind turbines installed in 2013. The installed capacity of small wind sector increased by 32 kW having reached around 14,6 MW.

The lack of state support for the small wind development, political and economic crises, inflation, annexation of Crimea and anti-terrorist operation in the east of Ukraine in 2014 hurt growth of small wind sector. The existing impossibility to sell electricity generated by small wind turbines at “green” tariff as opposed to private households using solar panels (Law of Ukraine “On Introducing Amendments to the Law of Ukraine “On Electric Power Industry” to Promote Electricity Production Using Alternative Energy Sources” No. 5485-VI, dd 20 November 2012) is the main barrier for successful development

of small wind energy in Ukraine. No mechanism for connecting small wind turbines to the grid has been developed in the country so far.

Historically, small wind turbine market in Ukraine has been focused on off-grid installations to produce electricity for private households. Reduction of the population’s purchasing power had a negative impact on small wind energy sector development, as a result a number of manufacturers of small wind turbines from Dnepropetrovsk, Zhytomir, Kiev, Lutsk stopped their activities.

A company Flamingo Aero continues to manufacture small wind generators in Ukraine due to its wide range of wind turbines rating from 0.8 to 20 kW.



Table 6. Ukrainian Small Wind Sector in 2014

No	Company	Manufactured wind turbines, units	Imported wind turbines, units	Installed wind turbines, units	Cumulative installed capacity, kW 1
1	Green Energy	0	0	0	0
2	Ukrainian Alternative Energy (EuroWind)	0	0	0	0
3	WINDER	0	0	0	0
4	Telefan Ltd	1	0	1	4
5	FLAMINGO AERO	9	0	10	28
TOTAL:		10	0	11	32

UWEA ACTIVITY IN 2014

In 2014 the UWEA focused its activity on the implementation of the current legislation in the renewable energy sector of Ukraine. Annexation of the Autonomous Republic of Crimea by the Russian Federation and ongoing military operation in the east had a significant negative impact on the renewable energy industry, inhibiting wind plant development and renewable generation in general.

The Law of Ukraine “On Introducing Amendments to the Tax Code of Ukraine and to Some Other Legislative Acts of Ukraine (regarding the improvement of certain provisions)” No. 1621-VII passed by the Verkhovna Rada of Ukraine on 31 July 2014 removed corporate profit tax exemption for companies generating electricity from renewable energy sources.

According to the experts of the professional associations, the law initiated by the Cabinet of Ministers of Ukraine, extremely negatively impacted the national market of alternative fuels and the renewable energy industry of Ukraine as a whole.

Industry associations including the Association of Alternative Fuel and Energy Market Participants of Ukraine (APEU), the Ukrainian Wind Energy Association (UWEA) and the Bioenergy Association of Ukraine (UABio) wrote a number of open letters addressed to the President of Ukraine Petro Poroshenko, Prime Minister of Ukraine Arseniy Yatsenyuk, Chairman of the Committee on Fuel and Energy Complex, Nuclear Policy and Nuclear Safety of the Verkhovna Rada of Ukraine Nikolay Martynenko, and Chairman of the Verkhovna Rada Committee on Taxation and Customs Policy outlining their position on the issue. Unfortunately, any appeals were never responded.

“Green” tariff rate reduction for the operating RE projects will stop investments in the national wind power industry and its further development”, stressed Aleksandr Dombrovsky, MP, advisor to the President of Ukraine,

speaking at the **press conference “Ukraine: European Integration and Renewable Energy. Challenges and Perspectives”** that took place on October 15, 2014 in UNIAN. According to Mr. Dombrovsky, it's possible to decrease “green” tariff rate only for new projects, since investors from the very beginning would know the real rate of return on their investment. At the same time it should be done by amending the relevant law.

Andriy Konechenkov, Chairman of the Ukrainian Wind Energy Association, noted that renewable energy would increase energy independence of Ukraine: “Since it runs on the energy of wind, sun and water, it does not require the import of expensive fossil fuels. “All the contemporary wars arise because of energy resources. When we are talking about “the sun” and “the wind,” we are talking about “the peace”, – said Konechenkov, noting that the development of the wind power industry means strengthening energy security and energy independence of the country.

Since August the National Commission for State Energy and Public Utilities Regulation (NEPURC) actually stopped indexation of “green” tariffs with regards to change of the official exchange rate of UAH/EUR established by the National Bank of Ukraine despite multiple requests from green energy producers. According to the Law of Ukraine “On Electric Power Industry”, the feed-in-tariff should be reviewed monthly to reflect the changes in the EUR/UAH exchange rate. Such actions of the regulator defy the law and lead to the failure to fully implement the National Renewable Energy Action Plan adopted by the Cabinet of Ministers in October 2014.

After many attempts to find a dialogue with NEPURC, the UWEA appealed to the President of Ukraine Peter Poroshenko to urgently address the problem of non-indexation of “green” tariff for business entities that produce electricity using renewable energy sources.

PARTICIPATION IN LEGISLATIVE PROCESS

A draft law **“On Introducing Amendments and Additions to the Law of Ukraine” On Electric Power Industry** developed jointly by the experts of the UWEA and the Association “Ukrainian National Committee of the International Chamber of Commerce” was submitted to the Cabinet of Ministers of Ukraine in December 2014. This bill sets “green” tariffs for electricity generated by small wind installations and combined wind-solar installations with unit capacity of up to 10 kW. Currently only households with solar installations up to 10 kW may qualify for feed-in tariff. Introduction of “green” tariff for private households using wind turbines with unit capacity of up to 10 kW will stimulate the development of small wind sector in Ukraine.

Besides, it is also proposed to establish “green” tariff for combined plants of private households using solar and wind energy, which, in turn, will contribute to the stability of the power grid and reduce the need for reserve capacity.

The UWEA jointly with specialists from the Ukrainian Association of Renewable Energy actively participated in the preparation of the draft law **“On Introducing Changes to Certain Laws of Ukraine Regarding Competitive Conditions for Production of Electricity from Alternative Energy Sources”**.

This draft law provides for the abolition of the “local content” and the introduction of the premium in the amount from 5% to 15% (depending on the level of use of the equipment of Ukrainian origin) to the “green” tariff for electricity producers from RES, which use power equipment of Ukrainian manufacturers. As of the date of preparation of this overview the draft law was registered in the Verkhovna Rada of Ukraine under the number of 2010, February 3, 2015.

STUDIES, STATISTICS REVIEWS

As in previous years the UWEA developed statistical annual and half-annual surveys of the Ukrainian wind energy sector in 2013 and 2014, the outcomes of which were presented to the State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE), NCRE, Ministry of Energy and Coal Industry of Ukraine. In addition, the Ukrainian wind energy statistics 2013 were also provided to the leading international organizations in the global wind industry such as the Global Wind Energy Council – GWEC, the European Wind Energy Association – EWEA and the World Wind Energy Association – WWEA.

In 2014 the UWEA expanded cooperation with international organizations and companies involved in the global renewable energy sector. Thus, in March 2014 a Collaboration Agreement was executed with the international consulting company MAKE Consulting and late December – with the leading international trade fair Wind Energy Hamburg.

For the first time, the UWEA’s experts contributed to the global renewable energy market review – REN21’s Global Status Report 2015 annually issued by the Renewable Energy Policy Network for the 21st Century – REN 21.

GLOBAL WIND DAY

Every year on June 15 the world community celebrates the Global Wind Day. As in previous years the UWEA marked the day by holding a press conference and information activities at the operating wind farms in Ukraine to provide the public with an opportunity to discover the benefits of wind energy and to learn more about the technology.

During the press conference **“Wind Energy is the Path to Energy Independence of Ukraine”** that took place on June 13, 2014 Andriy Konechenkov, Chairman of the UWEA, Andriy Sergienko, First Deputy Director of MC Wind Parks of Ukraine and Carl Sturen, General Director of Vindkraft Ukraine, spoke to reporters. “Ukraine has chosen the European way of development. Formation of the European, energy independent state is possible provided the Government of Ukraine implements the transparent, non-corrupt energy policy aimed at addressing both economic and social programs and job creation, the energy policy based primarily on the development of “green” and energy-saving technologies”, calls upon Andriy Konechenkov.



UKRAINIAN WIND ENERGY EXPERTS IN HAMBURG



The Ukrainian Wind Energy Association and the wind turbine manufacturer FWT Ukraine took part in the international wind energy fair Wind Energy Hamburg 2014. The event held from 23 to 26 September 2014, clearly demonstrated its international character – more than 33 000 visitors from all over the world, 1,250 exhibitors from 33 countries, 24 delegations from 22 countries. Wind Energy Hamburg 2014 was 100% powered by wind energy.

The Ukrainian booth was very popular among the trade visitors, representatives of the European and international organisations of the global wind industry, including President of the World Wind Energy Council (GWEC) Mr. Steve Sawyer; CEO of the European Wind Energy Association (EWEA) Mr. Thomas Becker; General Secretary of the World Wind Energy Association (WWEA) Mr. Stefan Gzänger; President of the Russian Association of Wind Power Industry (RAWI) Mr. Igor Bryzgunov, representatives of the global wind turbine manufacturers such as SIEMENS, NORDEX, VESTAS, VENSYS, representatives of the companies: GEO NET, Wind Guard, DEWI, Russian Wind and others.

The visit of a delegation of representatives of local governmental agencies and German entrepreneurs organized and headed by the Consulate General of Ukraine in Hamburg will certainly contribute to the beginning of the new



contacts. Chairman of the UWEA Andriy Konechenkov started his address by thanking the Consul General of Ukraine in Hamburg Mr. Yuriy Yarmilko and the Consul on Economic Affairs Mr. Andriy Cherniavskiy for their interest in the Ukrainian pavilion at Wind Energy Hamburg in 2014 and support of the international cooperation in the field of wind energy. "For the past years Ukraine has been the best example for the former Soviet Union countries in the field of wind energy development", said Andriy Konechenkov.

Andriy Sergienko, Deputy General Director of MC Wind Parks of Ukraine, noted that despite the difficult situation in the Eastern part of Ukraine, wind energy continued to be a reliable source of electricity supply in the region from the local energy resource – wind.

ENVIRONMENTAL MONITORING OF WIND & SOLAR POWER PLANTS



The modern wind power industry is not harmful to the environment. Outcomes of the on-site studies carried out by ornithologists at the Botievskaya Wind Power Plant site owned by a company Wind Power confirmed this statement.

The International Scientific Conference “Environmental Monitoring of Wind & Solar Power Plants – MEWSPS 2014” successfully took place in Melitopol on October 2-4, 2014. For the first time in Ukraine the international conference has been devoted to the issues related to the environmental impact of the wind and solar power plants. During three days ornithologists, ecologists, leading experts on the environmental impact assessment from Ukraine, Russia, Sweden and the Netherlands jointly with the leading national wind energy companies discussed the main issues related to the monitoring and evaluation of the impact of wind and solar power plants, electricity lines on environment at their design, construction and operation stages.

The delegates also visited the Botievskaya WPP site to watch the modern equipment and software to monitor the birds movement 24 hours a day throughout the wind farm territory under the real operating conditions.

The conference participants reported that for a number of species of birds there was a problem caused by the design of the overhead power lines; at the same time there were enough solutions to avoid the loss of birds. “Environmental safety is an important aspect in the operation of wind and solar power plants. Today our foreign colleagues have the opportunity to share their experiences in reducing the negative environmental impact of electricity lines, wind and solar plants”, said Valery Siohin, Head of the Public Ecological Organization Laguna, the conference organizer.

“Cooperation with leading flora and fauna experts is of paramount importance for the wind project implementation. Wind energy should not only



provide the local population with clean electricity and new jobs, but to create a comfortable environment for future generations, without harming the environment”, said Andriy Konechenkov, UWEA Chairman.

The conference was organized by the Ukrainian Wind Energy Association, the Azov-Black Sea Ornithological Station, Bureau Waardenburg (the Netherlands), Melitopol State Pedagogical University, Research Institute of Biodiversity of Terrestrial and Aquatic Ecosystems of Ukraine and Public Ecological organization Laguna.

ROUND TABLE UKRAINIAN WIND ENERGY SECTOR: CURRENT STATUS AND FUTURE PROSPECTS

Round table “Ukrainian Wind Energy Sector: Current Status and Future Prospects” organized by the UWEA in cooperation with the Ukrainian Union of Industrialists and Entrepreneurs (USPP) and the State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE) took place on October 18,

2014. The roundtable participants representing wind energy sector in Ukraine developed an Action Plan to resolve the problems the national wind energy sector had been facing with, which was subsequently submitted to the Cabinet of Ministers of Ukraine.

UWEA OPEN MEETING PERSPECTIVES FOR FURTHER WIND DEVELOPMENT IN UKRAINE INCLUDING THE OCCUPIED CRIMEAN PENNINSULA

Legislative violations and other barriers to the further development of wind sector and possible ways to overcome them were discussed at the Open Meeting of the UWEA members taking place on November 5, 2014 in the framework of the VI International Investment Business Forum for Energy Efficiency and Renewable Energy. In his address to the participants Deputy Head of the State Agency on Energy Efficiency and Energy Saving of Ukraine Sergey Dubovik stressed the need and importance of the development of wind power in Ukraine.

The UWEA Chairman reported on the Association’s activities in 2013-2014 and proposed a Work Plan for the Year 2014-2015.





“Thanks to the State initiatives, Ukraine has become the undisputed leader in the wind development among the countries of the former Soviet Union. At the same time, compared with the EU countries, we are only at the beginning of the national wind industry development. UWEA hopes that after the signing of the Association Agreement between Ukraine and the EU industry development is significantly faster. UWEA hopes that signing the Association Agreement between Ukraine and the EU will accelerate the development of renewable industry in the country. There is no other alternative: renewable energy is the path to energy independence of the country through the use of local energy resources. Wind energy creates jobs, stimulate the industrial development and improve the environment”, said Andriy Konechenkov.

SEMINAR ON TECHNICAL AND FINANCIAL ASSESSMENT OF THE CONDUCTED ONSITE WIND MEASUREMENTS

Speaking at the seminar “Technical and Financial Assessment of the Conducted Onsite Wind Measurements” jointly held by the WindGuard Eastern Europe and the UWEA on November 5, 2014, Dmitriy Goncharenko, Director of WindGuard Eastern Europe LLC not only focused on the current modern methods of wind power potential research, but also warned of possible mistakes and suggested existing solutions.

“Wind measurement campaign is the foundation of your house. If you have a low-quality, improperly calculated foundation, sooner or later your house will collapse. Properly conducted wind measurements are vital for the success or failure of your wind project”, stressed Dmitriy Goncharenko.

INTERNATIONAL WIND CONFERENCES AND EVENTS

As in previous years in 2014 the UWEA's experts participated in different international and national conferences, seminars fair trades, round tables as an information partner and/ or as a speaker. Among the main events with the UWEA's participation we'd like to mention the following ones:

- ▶ Wind Power Romania and Eastern Markets (January, Bucharest, Romania)
- ▶ EWEA Annual Event (March, Barcelona, Spain);
- ▶ 5th European Energy Day (May, Kiev, Ukraine)
- ▶ 5th annual international Ukrainian Energy Forum (June, Kiev, Ukraine);
- ▶ 13th International Wind Energy Conference and Exhibition WWEC 2014 (April, Shanghai, China);
- ▶ VI International Renewable Energy and Energy Efficiency Forum in Ukraine REF-2014 (October, Kiev, Ukraine);
- ▶ International Scientific Conference "Environmental Monitoring of Wind & Solar Power Plants – MEWSPS 2014" (October, Melitopol, Ukraine);
- ▶ Russian Wind Power Market Roadshow' 2014 (October, Prague, Czech Republic);
- ▶ IV International Investment Business Forum on Energy Efficiency and Renewable Energy and VII International Trade Fair Energy Efficiency. Renewable Energy – 2014 (November, Kiev, Ukraine).

Several articles and interviews by the UWEA's expert were published in different periodic media including such newspapers and magazines as: Business, 2000, Economic News, Day, Energy Business, Capital, Networks and Business, Oil Products and others.

Some articles were published by the following Internet Resources:
<http://elektrovesti.net>, <http://www.ua-energy.org>, <http://renewable.com.ua>,
<http://oil-gas-energy.com.ua>, <http://energefficiency.in.ua>,
<http://energynews.com.ua>.

The members of the board and experts of the UWEA took part in the press-conferences held by different news agencies such as Interfax, Ukrainian News, Obozrevatel (Observer), Ukrinform and gave TV interviews on the following channels: The First National, BTB, RBK, The First Business, Channel 5, Channel 112, etc.

Throughout the year UWEA representatives participated actively in all current Public Councils at SAEE, NCRE.

UWEA MEMBERS

