

# Renewable Energy Incentives in Ukraine

## Investor Guide

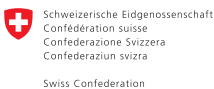


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## About this guide

This guide outlines and analyzes key provisions of Ukrainian legislation related to the generation of electric power from renewable resources and the sale of such power at a special green tariff. The guide also provides advice on how to invest in renewable energy projects within the framework of the legislation.

Additionally, this guide offers a brief overview of the Ukrainian energy market and how local renewable energy producers participate in this market. The government established green tariff program is analyzed in detail and is accompanied by a step-by-step action plan for investors who are considering the generation and sale of renewable energy within this program.

In cases where the energy law contains gaps or is unclear, commentary has been provided.

Finally, the guide contains a chapter for state regulators with recommendations on how to improve the existing regulatory framework.

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The IFC Cleaner Production Program in Ukraine is supported with funds from the Free State of Saxony, the Ministry of Foreign Affairs of Finland and the Dutch Ministry of Economic Affairs.

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For more information please visit <http://www.swiss-cooperation.admin.ch/ukraine/>

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### Information about the Ministry of International Affairs of Finland

<http://formin.finland.fi>

### Information about the Dutch Ministry of Economic Affairs

<http://www.agentschapnl.nl/en>

## Abbreviations

1. **GT** – green tariff
2. **Civil Code** – Civil Code of Ukraine of 16.01.2003 #436-IV
3. **WEM Agreement** – agreement among the members of the Wholesale Electricity Market of Ukraine as of November 11, 1996
4. **Enorgorynok** – State Enterprise “Enorgorynok”
5. **NPC Ukrenergo** – State Enterprise National Power Company “UkrEnergo”
6. **Alternative Fuels Law** – Ukrainian Law on Alternative Types of Fuel established on January 14, 2011, No. 1391-XIV
7. **State Registration Law** – Ukrainian Law On State Registration of Rights in Real Estate and Their Encumbrances established on January 7, 2004, No. 1952-IV
8. **Power Industry Law** – Ukrainian Law on the Power Industry established on October 16, 1997, No. 575/97-BP
9. **Law on Power Industry Lands** – Ukrainian Law On Power Industry Land established on July 9, 2010, No. 2480-VI GT – green tariff
10. **Customs Tariff Law** – Ukrainian Law on the Unified Customs Tariff established on February 5, 1992, No. 2097-XII.
11. **Law on Stimulation of Production** – Ukrainian Law “On Amending the Ukrainian Law ‘On the Power Industry’ with regard to stimulating the generation of power from alternative sources” of 20.11.2012 #5485-VI
12. **Land Code** – Land Code of Ukraine established on October 25, 2001, No. 2768-III
13. **NERC** – National Energy Regulatory Commission of Ukraine
14. **Power Generation License** – license to undertake business activity on electricity generation
15. **Co-generation License** – license to undertake business activity on combined generation of heat and electricity
16. **WEM** – Wholesale Electricity Market of Ukraine
17. **Tax Code** – Tax Code of Ukraine established on December 12, 2010 No. 2755-VI
18. **Resolution No. 444** – Resolution of the Ukrainian Cabinet of Ministers No. 444 established on May 4, 2008.
19. **VAT** - value added tax
20. **UAH** – Ukrainian hryvnia (Ukrainian currency)
21. **EUR** – Euro

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# Executive Summary

## Incentives for electricity generation in Ukraine

In Ukraine, the following incentives to stimulate renewable energy generation are available for producers: (1) the green tariff, (2) tax benefits and (3) a preferential connection to the grid. The the Power Industry Law also establishes the notion of 'green certificates' – essentially, a document which proves that electricity was generated from renewable resources. However, second tier regulations have not supported the use and circulation of these certificates and, as a result, they are not supported by regulators at the national level. The result is that there are no practical incentives to obtain green certificates.

The green tariff (GT) system of incentives currently applies to electricity produced from almost all renewable energy sources except for large hydropower plants. In this regulatory framework, renewable energy falls into two categories:

- (1) electricity, which is guaranteed by law to be sold at a minimum GT including power generated from the following sources: wind, solar, some types of biomass and small hydropower plants
- (2) electricity for which the guaranteed minimum GT does not apply. In this case, producers are instead eligible to sell electricity at GT rates established by the National Energy Regulatory Commission at its discretion, based on the construction and maintenance costs of a power plant, plus a reasonable rate of return.

Until recently, electricity produced from biomass could be sold at the guaranteed minimum green tariff rate, provided the biomass was of plant origin. The guaranteed minimum green tariff rate did not apply to electricity generated from biomass of non-plant origin or biogas. Since April 1, 2013 any type of biomass, provided that it is waste, is eligible for the GT. This includes biomass waste of animal origin and biogas. Produce that is specifically grown for energy purposes, such as technical crops, is not be eligible for the green tariff.



Electricity generated simultaneously from both renewable and conventional sources is not eligible for the green tariff.

The green tariff framework will be in effect until January 1, 2030 and can be taken advantage of by business entities producing electricity from alternative energy sources at power plants commissioned during the effective period of this legislation. The state guarantees that the government will purchase all renewable electricity generated under the GT program at predetermined rates, which cannot be changed during the effective period of the law.

The green tariff rates for electricity generated by power plants that are either commissioned or significantly upgraded after 2014, 2020, or 2024 will decrease by 10 %, 20 % and 30 % respectively. Power plants are deemed to be significantly upgraded if the cost of upgrading the energy-generating equipment exceeds 50% of the original cost of the equipment that is being upgraded.

Current law requires that renewable energy projects purchase a portion of goods and services that originated in Ukraine in order to be eligible for the green tariff program. The percentage of Ukrainian goods and services that must be purchased depends on the date the plant is commissioned and the type of renewable energy produced. The Ukrainian sourcing of goods and services is confirmed by certificates issued by the Ukrainian Chamber of Commerce and Industry, or by local chambers. Only qualified organizations, via a special procedure, can confirm the percentage of goods and services that were sourced in Ukraine.

Electricity may be sold at green tariff rates to the State Enterprise Energorynok, which is obligated to purchase electricity produced from renewable energy sources, or directly to consumers. However, consumers have neither economic nor administrative incentives to purchase electricity at high green tariff rates.

There are also a number of tax incentives for the generation of electricity from renewable resources, such as:

– Tax exemptions:

- a waiver from the import VAT and customs duties for equipment related to the production of electricity from renewable resources. A list of approved equipment is published by the Ukrainian government;
- a waiver of the 3% special mark-up tax on generated electricity;
- an exemption from corporate profit taxes on the profit derived from the main activities of a company producing electricity solely from renewable resources until January 1, 2021

- A 75% reduction in property taxes for land used by power plants producing renewable energy;
- A cap on rental payments for land leased from state and municipal authorities.

Most power plants that generate energy from renewable resources may be located only on land designated as “power industry land”. However, electricity transmission facilities (overhead and cable transmission lines, transformer substations, and load dispatch centers) may be located on land designated for any purpose. Generating electricity on land not designated as “power industry land” will not be possible unless the designated purpose of such real estate is officially changed. It should be noted that in Ukraine, there is a moratorium on changing the designated purpose of most agricultural land.

Electricity suppliers which transfer electricity via their own distribution networks must permit producers of renewable electricity to connect to their grids.

As of January 1, 2013, the connection of power plants that produce electricity from renewable energy sources to the grid shall be financed in the following way:

- 50% of the costs of connecting to the grid will come from grid operators;
- The producer is responsible for providing the other half of the costs to the relevant electrical transmission organization in the form of refundable financial aid. The time period required for returning the financial aid will be determined by the National Energy Regulatory Commission of Ukraine (NERC) and may not exceed ten years.

For the purpose of selling electricity to Energoynok at green tariff rates, the producer should:

- Join the wholesale electricity market (WEM).
- Obtain a license for electricity generation or for co-generation.
- Establish a contract with Energoynok.
- Apply to the National Energy Regulatory Commission of Ukraine in order to be granted a green tariff.



# Introduction

## Background

In Ukraine there are three main mechanisms for stimulating the generation of energy from renewable resources: 1) a green tariff; 2) tax benefits and 3) preferential conditions for connecting to the grid. Although mentioned in the *Power Industry Law*, the topic of green certificates has not been expanded and detailed in second tier regulations and is therefore not enforced by state regulators.

Even though government support is in effect, renewable energy plants account for a meager 0.6% of the country's total installed power generation capacity (not including large hydropower installations).

## Objective of this Guide

Potential investors are largely unaware of the intricacies of the green tariff (GT) state support program and comprehensive information about the GT is not readily available. Given this state of affairs, this guide aims to provide exhaustive information about the main provisions of legislation related to renewable energy generation and how this legislation is actually implemented.

The information presented in the guide offers potential investors an approximation of how much financing they would need, how long it might take to execute a project and what administrative risks they may face should they decide to embark on a GT project.



This guide may also be useful for people who can influence the development of Ukrainian regulatory policy, since the guide outlines major procedures and legislative provisions, details policy gaps and inefficiencies and recommends how renewable energy producers can increase the effectiveness of their businesses.

## Guide Outline

This guide includes the following chapters:

- 1. Structure of the Ukrainian Electricity Market:** This chapter outlines the main players in the energy market and describes their roles in the system.
- 2. Green Tariff:** This chapter offers detailed information on the green tariff government program.
- 3. Achieving Eligibility for the GT Program:** This chapter offers step-by-step instructions on how to generate electricity that can be sold at GT rates.
- 4. Inspection Regarding Compliance with GT Requirements:** This chapter explains how the government ensures that power generators comply with GT legislation.
- 5. Tax and Customs Duties Exemptions:** This chapter discusses tax benefits that incentivize the development of renewable energy.

## Disclaimer

This report is based on an analysis of Ukrainian law that is in effect as of the writing of this guide. There are no opinions expressed in this report regarding any laws, regulations, court practices or supervisory authorities which will or may be enacted after the publication of this report. There can be no guarantee that the legal position expressed in this report will completely comply with the positions of tax, law enforcement and other state authorities as these agencies deal with specific GT cases.

# 1

## Structure of the Ukrainian electricity market

The Ukrainian energy market consists of the following elements:

### **Government regulators:**

Parliament, Verkhovna Rada of Ukraine ([rada.gov.ua](http://rada.gov.ua))

- Provides a legislative framework for the power industry that establishes governing bodies, the main rights and obligations for market participants and the minimum guaranteed green tariff rates

Ukrainian Cabinet Ministers ([www.kmu.gov.ua](http://www.kmu.gov.ua))

- Provides a regulatory framework for the power industry (creates rules for the usage of electricity)
- Determines a list of goods that may be imported to Ukraine on preferential terms. The goods may be used for the construction or upgrade of power generation facilities.

National Energy Regulatory Commission ([www.nerc.gov.ua](http://www.nerc.gov.ua))

- Involved in the second-tier regulatory framework of the power industry. Creates rules for connecting to the grid, terms and conditions for performing licensed activities and sample contract forms for use in the power industry
- Issues licenses for the cogeneration and production of electricity, and supervises compliance with licensing terms
- Sets the green tariff rates for certain business entities
- Establishes prices and tariffs in the power sector
- Approves the WEM agreement and amendments



**Generating companies:**

Electricity producers that manage thermal, nuclear, hydropower stations and installations generating electricity from alternative resources are considered generating companies. The largest hydropower stations are members of the Public Joint Stock Company “Ukrhydroenergo”, while nuclear power plants belong to National Nuclear Power Company “EnergoAtom”.

**Operators of the grid:**

The State Enterprise “National Energy Company Ukrenergo” ([www.ukrenergo.energy.gov.ua](http://www.ukrenergo.energy.gov.ua))

- Provides operational and technological management of the centrally administered energy system;
- Ensures power transmission via backbone and interstate lines;

Power distributors (‘oblenergo’)

- Own local distribution networks and deliver electricity to consumers at regulated tariffs.

**Power suppliers fall into two groups:**

- Those that supply power at unregulated tariffs
- Those that supply power at regulated tariffs (power is delivered within a designated area, and the tariff is set by NERC).

**Wholesale electricity market:**

The wholesale electricity market is based on an agreement created by members of the power industry (known as the WEM Agreement). Under Ukrainian legislation, the purchase and sale of all power must take place on the WEM (barring a few exceptions). No other wholesale electricity market is permitted in Ukraine. The purchase of electric power at WEM is done by the wholesale (load) supplier, the State Enterprise “Energorynok”. Energorynok ensures that the WEM functions properly.

The power market’s operational pattern may undergo significant changes. In particular, this could occur because the Ukrainian parliament may enact a law entitled “On the Foundations of a Functioning Electricity Market in Ukraine”. See Annex II of this guide for an analysis of the key provisions and exported reforms introduced in a draft of this law.

**Inspection/supervisory bodies:**

State Inspection of Power Plants and Grids

- Ensures that power plants and grids meet technical operating requirements.

State Inspection on Energy Supervision over Electric and Heat Energy Consumption

- Supervises power generation entities that are involved in the business of heat supply
- Ensures that consumers of electricity comply with legal and regulatory requirements regarding energy generation, supply and consumption.



# 2

## Green Tariff (GT)

### 2.1. GT Scope

According to the *Power Industry Law*, GT is a special tariff for electricity generated by power stations using alternative energy sources excluding energy sources such as coke gas and gas from blast furnaces. Large hydropower plants are also not eligible for GT. In contrast, small hydropower plants that produce electric hydropower with an installed power capacity of no more than 10 MW are eligible for GT.

Alternative energy sources are defined by the Ukrainian Law on Alternative Energy Sources. The law declares the following eligible alternative energy sources:

- 1) renewable energy sources that primarily include solar, wind, geothermal, wave and tidal energy, hydropower, biomass energy, gas energy from organic waste, gas from sewage treatment stations and biogases
- 2) secondary energy sources, which include coke gas and gas from blast furnaces, methane from coal mines and the transformation of waste heat from technological processes.

➔ The list of alternative energy sources provided above is not exhaustive. In practice, it will be extremely difficult to make an argument that energy sources not explicitly declared in the law should be considered alternative. It is challenging to make such an argument since the applicable legislation does not establish criteria for classifying other energy sources as either renewable or secondary energy sources. Furthermore, there is no authorized authority which may issue an official conclusion that an energy source is indeed an alternative source of energy.



## 2.2. GT Rates and Their Application

### 2.2.1. General Provisions

According to the *Power Industry Law*, GT is approved by the National Energy Regulatory Commission of Ukraine (NERC) for electricity produced by business entities at power stations using eligible alternative energy sources. GT rates shall be established for each business entity, for each type of alternative energy source utilized and for each power plant operated.

➔ If two or more alternative energy sources are used simultaneously, the producer needs to seek GT approval for each source. If the installations generating electricity constitute a single power plant, for example a group of windmills, GT will be established for such an installation as if it were a single site. If the installations have separate connections to the grid, separate counters and other separate facilities, it is most likely that GT will be established for each of these connections independently.

### 2.2.2. Fixed Minimal GT Rates

In general, rates of GT are calculated using the following formula as specified in the *Power Industry Law*:

$$\mathbf{GTR = RP * C * PTC}, \text{ where}$$

**GTR:** GT rate depending on the types of alternative energy sources,

**RP:** retail price for electricity charged to 2nd class consumers as of January 2009, established in accordance with NERC Resolution No.1440 of December 23, 2008,

**C:** coefficient established by the *Power Industry Law*,

**PTC:** peak time coefficient for three tariff classification zones. This coefficient is used to calculate certain GTRs established in accordance with NERC Resolution No. 1241 of December 20, 2001.

See Tables 1 and 2 below for fixed minimal GT rates for different alternative energy sources calculated using the above formula (all figures were converted into Euros).

Table 1. Calculation of the fixed minimal GT in effect till April 1, 2013.

Type of alternative energy source	Power station capacity and other factors influencing the GT rate	RP, EUR/KWh	C	PTC	Rate of the tariff
Wind	Up to 600 kW inclusive	0.05385	1.2		0.06462
	Over 600 and up to 2000 kW	0.05385	1.4		0.075390
	Greater than 2000 kW	0.05385	2.1		0.11308
Solar energy	Power plants located on the ground	0.05385	4.8	1.8	0.465264
	Power plants on rooftops with a power capacity exceeding 100 kW	0.05385	4.6	1.8	0.445878
	Power plants on rooftops with power capacity of up to 100 kW or installed on facades of structures regardless of power capacity	0.05385	4.4	1.8	0.426492
Biomass	Completely or partially of plant origin	0.05385	2.3		0.123855
Small hydropower plants	No more than 10000 kW	0.05385	0.8	1.8	0.077544

On April 01, 2013, GT rates were changed significantly due to the passage of the Law on Stimulation of Production by the Ukrainian Parliament. See Table 2 to understand how rates are calculated in accordance with the new law.

Table 2. Calculation of the fixed minimal GT in effect from April 1, 2013.

Type of renewable energy	Power plant capacity and other factors influencing the GT rate	RP, EUR/kWh	C	PTC	Tariff rate (EUR / kWh)
Wind	Up to 600 kW inclusive	0.05385	1.2	–	0.06462
	600 - 2000 kW	0.05385	1.4	–	0.07539
	more than 2000 kW	0.05385	2.1	–	0.113085
Solar energy	Power plants located on the ground	0.05385	3.5	1.8	0.339255
	Power plants on rooftops with power capacity exceeding 100 kW	0.05385	3.6	1.8	0.348948
	Power plants on rooftops and/or facades with power capacity of up to 100 kW inclusive	0.05385	3.7	1.8	0.358641
	Power plants on rooftops and/or facades of privately-owned homes with power capacity up to 10kW inclusive	0.05385	3.7	1.8	0.358641
Biomass and biogas	Waste	0.05385	2.3	–	0.123855
Hydropower plants	Micro hydropower plants (up to 200 kW)	0.05385	2	1.8	0.19386
	Mini hydropower plants (over 200 kW but no more than 1000 kW)	0.05385	1.6	1.8	0.155088
	Small hydropower plants (up to 10,000 kW inclusive)	0.05385	1.2	1.8	0.116316

GT rate computations are adjusted to include a coefficient for different types of renewable energy sources. Specifically, GT rates are calculated by multiplying the retail price of electricity for second class consumers by a specific coefficient for each type of energy.

The retail price of electricity for second class consumers used in the equation to calculate GT rates is set at a fixed rate: the price of electricity for second class consumers as of January 2009. In this manner, future changes in the price of retail electricity will not affect GT rates.

As for solar energy and hydropower, these renewable resources contain an additional multiplier when computing GT rates: a peak time coefficient. Like the price of retail electricity, the peak time coefficient is frozen for all GT rate calculations as of January 2009. As a result, should the actual peak time coefficient change, it will not affect GT rates.

The fixed minimal GT rates are converted to Euros and the exchange rate is fixed as of January 1, 2009. The producers of electricity from alternative energy sources are also protected from a fluctuation of

the EUR/UAH (Euro / Ukrainian hryvnia) exchange rate. If, on the date the retail tariffs are established, the exchange rate is less than 10.85546 UAH to EUR (the National Bank of Ukraine exchange rate as of January 1, 2009), NERC is obligated to establish GT rates based on a rate of 10.85546 UAH to EUR. Alternatively, if the exchange rate is more than 10.85546, NERC shall use the current exchange rate to calculate GT rates. In practice, NERC has always adhered to this requirement and adjusted GT rates every month.

In sum, by adjusting the GT rates in relation to currency exchange rates in the manner described above, and as specified in the Power Industry Law, investors and project developers are safeguarded from inflation.

### 2.2.3. Green Tariffs for Other Energy Sources

The *Power Industry Law* does not establish minimum fixed GT rates for alternative energy sources other than those listed in Tables 1 and 2 above. Nonetheless, such energy sources are eligible to be sold at GT rates as specified in Article 1 of the Power Industry Law. The law also stipulates that NERC shall approve GT rates for producers of electricity from such sources. In this case however, NERC is not bound by fixed minimal GT rates.

In Letters No. 3699/23/17-09 of June 4, 2009 and No. 7282/23/17-10 of October 15, 2010, NERC confirmed that it will establish GT rates for producers of electricity from alternative energy sources not eligible for the fixed minimal GT rates. The rates will be determined by considering production costs, return on investment and the rate of return. According to NERC's letter published on June 4, 2009, NERC will also consider the amount of taxes and duties stipulated by current legislation, as well as costs for upgrading or reconstructing facilities. In any case, producers of electricity from alternative energy sources not eligible for the fixed minimal GT rates will have to justify the sought-after GT rates when filing an application with NERC.

### 2.2.4. GT Rates for Biomass and Biogas

The procedure for establishing GT rates for electricity generated using biomass will undergo a major change following the adoption of the Law on Stimulation of Production. Once the legislation takes effect on April 1 2013, there will be two stages for determining GT rates for energy sourced from biomass. Stage one applies to biomass and biogas prior to April 1, 2013 and stage 2 commences on April 1, 2013, when new regulations will go into effect for the aforementioned materials.

#### **The GT as it pertains to biomass and biogas prior to April 1, 2013**

According to the version of the Power Industry Law in effect till April 1, 2013, biomass is material that completely or partially comes from a plant and may be used as fuel to generate energy.

This definition leads to the following conclusions:

- 1) Fixed minimal GT rates apply only to biomass that is fully or partially of plant origin. Thus, producers of electricity sourced from biomass of animal origin (livestock waste, fisheries, etc.) must justify their eligibility for GT rates as discussed in Section 2.2.3 of this report. Neither the Power Industry Law nor NERC's resolutions define minimal requirements for the amount of plant-origin biomass that may exist in a biomass mix of plant and animal origin. Therefore, a literal interpretation of the law stipulates that a producer using biomass that consists partially of plants should be entitled to GT biomass rates, regardless of the portion of plant origin in the biomass.
- 2) Fixed minimal GT rates do not apply to biogas. According to Article 1 of the Alternative Fuels Law, biogas is a gas derived from biomass and is used as fuel. NERC notes that biogas differs from biomass, even if biogas is created as part of an intermediary stage of processing biomass, such as during biomass gasification.
- 3) Power plants must burn biomass in order to be eligible for the fixed minimal GT rate, because, as specified in Article 1 of the Alternative Fuels Law, biomass must be used as fuel.

There is another definition of biomass in Article 1 of the Alternative Fuels Law. Biomass is defined as "biologically renewable substances of organic origin which are subject to biodegradable processes such as agricultural waste (livestock and crop sectors), by-products from forestry and related industries and organic and industrial matter found in industrial and municipal waste". This definition does not apply to those who seek to acquire the minimal fixed GT rate. However, this definition may be used to justify eligibility for less favorable GT rates (see section 2.2.3 of this guide for details).

### **The GT as it pertains to biomass and biogas beginning on April 1, 2013**

The Law on Stimulation of Production has changed the definition of biomass. Biomass is considered a non-fossil, biologically renewable substance of organic origin that comes in the following forms: biodegradable waste from forestry and agricultural operations (both crops and livestock), fishery and related industries, and the biodegradable components of industrial and municipal waste. In the new law, biogas is referring to gas generated from biomass.

These new definitions of "biomass" and "biogas" have lifted restrictions as specified by current legislation. Under the updated law, the green tariff shall apply to biomass of both plant and animal origin and the usage of biomass shall not be restricted to incineration. Moreover, there is a clear opportunity to use biogas for the production of energy. Furthermore, on April 1, 2013 biomass (and consequently, biogas) must be generated exclusively from waste. As a result, agriculture products (i.e. technical crops) cannot be used for the production of energy that is eligible for GT rates.

➔ Legislation fails to clearly define what is considered waste that be used for power generation in a GT framework. References to definitions of waste contained in regulations unrelated to GT laws and regulations (even if we overlook the legal validity of such a reference), do not help to resolve this problem. This uncertainty may be a stumbling block for the use of some energy sources, which cannot be unambiguously declared waste, such as wood pellets (the product often produced from wood waste).

### 2.2.5. GT Rates for the Simultaneous Production of Electricity from Conventional and Alternative Energy Sources

The *Power Industry Law* sets no restriction for producers who simultaneously use alternative and conventional energy sources to produce and sell energy at GT rates. However, in practice, it is impossible to get GT approval in such cases. This is so since the Procedure on the Establishment, Review and Termination of GT for Business Entities approved by NERC Resolution of January 22, 2009, No. 32 (GT Establishment Procedure) stipulates that the GT program does not apply to business entities that produce electricity simultaneously using alternative energy sources and conventional energy sources. The restriction was established because it is technically difficult to control the proportions of energy sources used (conventional vs. renewable) and the regulator was concerned that producers of electricity may overuse traditional energy sources.

### 2.2.6. Effective Term of GT / Revoking GT

According to the *Power Industry Law*, the GT renewable energy support program will be in effect until January 1, 2030. Notwithstanding, no official nationwide targets have been announced which would mark the quantitative success of the program. For example, no goals have been set for the amount of energy generated from renewable sources or the installed energy capacity. Furthermore, there are no legal barriers to prevent parliament from cancelling or substantially changing the existing GT program.

➔ As a result, for investors who may be in the processes of applying to sell electricity at GT rates, there is an element of risk that the GT program could be repealed or altered by the government. Furthermore, there would be no recourse to seek compensation from the government for any lost investments. However, for businesses that have already been approved to sell power at GT rates, the guarantee that the GT program will be in effect until January 1, 2030, as stipulated by the *Power Industry Law*, looks to be a useful tool for investors.

In addition to the risk of a possible cancellation of the green tariff support program, Ukrainian legislation also allows the government to cancel GT for specific power producers. The procedure for establishing, revising and cancelling green tariffs for commercial entities, as approved by NERC Regulation #32 on January 22, 2009, establishes the following causes for terminating GT rates for a specific business:

- 1) Cancellation of a business' power generation license or co-generation license;
- 2) Expiration of GT support program;
- 3) Request of the producer of renewable energy.

### **2.2.7. Reduction of GT Rates**

According to the Power Industry Law, GT rates will decrease over time. The decreases will occur in 2014, 2020, and 2024 for electricity generated by power plants that are either commissioned or significantly upgraded after these points in time. Specifically, the GT rate will decrease by 10% in 2014, 20% in 2020 and 30% in 2024 (see table 3 below for details). Power plants are considered to have been significantly upgraded if the value of upgrading the energy generation equipment exceeds 50% of the initial value of the existing equipment.

When a power plant is commissioned to sell electricity under the GT program, the producer is eligible to sell electricity at a fixed GT rate that will be in effect as of the date of commissioning until 2030. For example, if a power plant is commissioned or significantly upgraded before March 31, 2013, this plant may sell power at the GT rate set before March 31, 2013 until 2030. Future reductions of GT rates apply only to power plants that are commissioned or significantly upgraded during a period in which a new, lower GT rate has already taken effect. See the table below for a view of GT rates over time.



Table 3. Incremental Reduction of Green Tariffs (Eur/kWh).

Type of renewable energy	Power plant capacity and other factors influencing the GT rate	GT				
		in effect as of March 31, 2013 (Eur/kWh)	in effect from April 1, 2013 - December 31, 2014	in effect from January 1, 2015 - December 31, 2019	from January 1, 2020 - January 31, 2024	from January 1, 2025 - December 31, 2029
Wind	Up to 600 kW inclusive	0.06462	0.06462	0.058158	0.051696	0.045234
	600-2000 kW	0.07539	0.07539	0.067851	0.060312	0.052773
	Greater than 2000 kW	0.113085	0.113085	0.1017765	0.090468	0.0791595
Solar energy	Power plants located on the ground	0.465264	0.339255	0.3053295	0.271404	0.2374785
	Power plants located on rooftops with a power capacity exceeding 100 kW	0.445878	0.348948	0.3140532	0.2791584	0.2442636
	Power plants on rooftops and/or facades of buildings with a power capacity of up to 100 kW inclusive	0.426492	0.358641	0.3227769	0.2869128	0.2510487
	Power plants on rooftops and/or facades of privately-owned homes with a power capacity up to 10kW inclusive	X	0.358641	0.3227769	0.2869128	0.2510487
Biomass and biogas	Waste	0.123855	0.123855	0.1114695	0.099084	0.0866985
Hydro-power plants	Micro hydropower plants (up to 200 kW)	0.077544	0.19386	0.174474	0.155088	0.135702
	Mini hydropower plants (over 200 kW but no more than 1000 kW)	0.077544	0.155088	0.1395792	0.1240704	0.1085616
	Small hydropower plants (up to 10.000 kW inclusive)	0.077544	0.116316	0.1046844	0.0930528	0.0814212

### 2.2.8. Local Purchasing Requirements

Energy projects are required by law to purchase a portion of goods and services of Ukrainian origin in order to be eligible for the green tariff. Table 4 below describes the types and percentage of Ukrainian goods and services that must be purchased.

The local purchasing requirement does not apply to:

- Plants that commenced construction prior to January 1, 2012
- Hydropower plants

Table 4. Local purchasing requirement

Type of alternative energy	Year power plant commissioned	The share (%) of products locally purchased establishing eligibility for GT
Solar, wind and biomass	by January 1, 2013	30%
	from January 1, 2013 (requirement is in effect until July 1, 2013)	15%
	from July 2, 2013 until July 1, 2014	30%
	from July 2, 2014	50%
Biogas	up to January 1, 2014 inclusive	None
	January 2, 2014 - January 1, 2015	30%
	after January 1, 2015	50%
Solar energy (power plants that produce solar energy are required to obtain Ukrainian raw materials for producing solar modules)	2013 (requirement is in effect until April 1, 2013)	30%

➔ The Power Industry Law does not explicitly state that the local purchasing requirement is applicable to sites commissioned on July 1, 2013. A literal interpretation of the law asserts that on this date no local purchasing requirement will be in effect. Moreover, more clarity is required when plants using wind, sun, or biomass energy are commissioned between January 1, 2013 and July 1, 2013, but apply for the green tariff after July 1, 2013.

Beginning on July 1, 2013, any goods or services purchased within Ukraine will no longer qualify for the percentage of locally produced goods and services required by the government. Instead, as specified by the Power Industry Law, a specific set of products and services will qualify as being locally produced. For each type of renewable energy source, there is a specification for what must be manufactured, assembled or performed within Ukraine. See the tables 5-7 below for details.

*Table 5. Mandatory local purchasing allotments for plants using wind energy.*

Items purchased locally	Activity to be performed in Ukraine	Minimum purchase allotment, %
Blades	Manufacture	15
Tower	Manufacture	15
Nacelle	Assembly	30
Main frame	Manufacture	5
Main drive	Manufacture	5
Rotor	Manufacture (casting)	5
	Assembly	5
Construction	Performance	20
Total		100

*Table 6. Mandatory local purchasing allotments for solar power plants.*

Items purchased locally	Activity to be performed in Ukraine	Minimum purchase allotment, %
Polysilicone	Manufacture	32
Single-crystal ingots, multi-crystal ingots, pseudo single-crystal ingots	Manufacture	13
Single-crystal or multi-crystal wafers	Manufacture	7
Photovoltaic elements	Manufacture	20
Solar modules	Assembly	23
Construction works	Performance	5
Total		100

*Table 7. Mandatory local purchasing allotments for power plants using biomass.*

Items purchased locally	Activity to be performed in Ukraine	Minimum purchase allotment, %
Turbine	Manufacture	25
Boiler	Manufacture	35
Construction works	Performance	40
Total		100

*Table 8. Mandatory local purchasing allotments for power plants using biogas*

Items purchased locally	Activity to be performed in Ukraine	Minimum purchase allotment, %
Bioreactor for hydrolysis	Manufacture	35
Cogenerator	Manufacture	35
Construction works	Performance	30
Total		100

According to the Ukrainian Cabinet Ministers' Resolution "Issues of the Application of Certificates on the Origin of Goods to Confirm their Ukrainian Origin and Determine the Share of Raw Material, Inputs, Fixed Assets, Works and Services of Ukrainian Origin in the Cost of Construction of Facilities Generating Power from Alternative Sources of Energy", locally produced goods and services shall be certified by the Chamber of Commerce and Industry of Ukraine or regional chambers of commerce and industry. Expert organizations are responsible for validating the percentage of locally produced goods and services as defined by law via a special procedure. The list of expert organizations is available on the Ministry of Regional Development, Construction and Utilities' website: [http://minregion.gov.ua/index.php?option=com\\_k2&view=itemlist&task=category&id=113:perel%D1%96k-ek-spertnix-organ%D1%96zacz%D1%96j&Itemid=147&lang=uk](http://minregion.gov.ua/index.php?option=com_k2&view=itemlist&task=category&id=113:perel%D1%96k-ek-spertnix-organ%D1%96zacz%D1%96j&Itemid=147&lang=uk) .

The procedure for calculating the percentage of local goods and services purchased by a project is described by the Procedure for Determining the Share of Raw Materials, Materials, Fixed Assets, Works and Services of Ukrainian Origin in the Cost of Construction of Facilities Generating Power from Alternative Sources of Energy, as approved by NERC's order from June 15, 2012. The procedure puts forth the following formula for calculating the percentage of purchased goods and services of Ukrainian origin:

$$N\% = \frac{C \text{ r. mat} + C \text{ fixed assets} + C \text{ main tech. equip.} + C \text{ works, services}}{C \text{ total cost}} \times 100\%, \text{ Where}$$

**N%** is the percentage of raw material, inputs, fixed assets, works and services of Ukrainian origin in the total construction cost of a power plant;

**C r.mat.** is the total cost of raw material and inputs of Ukrainian origin used in the construction of a power plant. This total does not include the cost of raw materials and inputs for the main technological equipment. (UAH (Ukrainian hryvnia) in thousands, not including VAT);

**C fixed assets** is the cost of all fixed assets of Ukrainian origin used in the construction of a power plant. This excludes the cost of raw materials and inputs for the main technological equipment., (UAH in thousands, not including VAT);

**C main tech.equip.** is the cost of the main technical equipment of Ukrainian origin, specifically, the value of the raw materials and supplies of Ukrainian origin in the main technological equipment (UAH in thousands, not including VAT);

**C works, services** is the cost of Ukrainian sourced goods and services in the total cost of construction of a power plant (excluding the cost of raw material and inputs in the cost of the main technological equipment (UAH in thousands, not including VAT);

**C total cost** is the total initial value of a power plant producing electricity with the use of alternative sources of energy according to data from accounting records (UAH in thousands, not including VAT);

When a power plant is commissioned, the electricity producer must request that an authorized expert organization issue an opinion regarding the calculation of locally purchased goods and services. The power plant must submit documents confirming the cost of construction and the portion of goods and services that were purchased in Ukraine before an opinion can be issued. The opinion issued by the expert organization and the submitted documents will stand as evidence in the process of being granted the right to sell electricity at GT rates. However, beginning on July 1, 2013, NERC will perform calculation of locally purchased goods and services directly (without involvement of authorized expert organization).

### 2.2.9. Purchasing Renewable Power

According to the Power Industry Law, the state guarantees that electricity produced from alternative energy sources must be purchased by the appropriate entity. This mandate only applies if such electricity is not sold directly to consumers or energy distributors. Additionally, the electricity must be paid for in full, as required by the procedures and terms in the Power Industry Law.

The Power Industry Law stipulates that electricity produced under the green tariff program must be sold on the Wholesale Electricity Market of Ukraine (WEM). According to the WEM Agreement, Energorynok, acting as a wholesale supplier, shall purchase electricity from producers within the framework of two different contracts. The first contract is the WEM Agreement and the second is a separate agreement with each electricity producer.

Energorynok is obligated to purchase electricity produced from alternative energy sources. But, Ukrainian law does not specify sources of financing which Energorynok may use to purchase electricity under the GT program. Thus, Energorynok should plan its operation in order to secure financing for purchasing GT electricity. This should be done chiefly through balancing purchase prices from electricity producers with sale prices to electricity suppliers. Specifically Energorynok sells electricity to power distributors (Oblenergo), which distribute electricity to consumers. Energorynok aims to secure enough revenue from Oblenergo to be able to purchase electricity at GT rates.

As mentioned earlier, the Power Industry Law also stipulates that electricity produced from alternative energy sources may be sold at GT rates via direct contracts with consumers. The consumer of such electricity shall receive a document from the state authority designated by the Ukrainian Cabinet Ministers. The document will confirm the purchase of electricity produced from alternative energy sources. However, at this point, no such state authority has been designated and no such document has been established. Furthermore, the law establishes no economic or administrative incentives for such consumers to purchase electricity at the high GT rates.

# 3

## Achieving Eligibility for the GT Program

### 3.1. Incorporating a Company

According to the Terms and Rules of Carrying out Business Activity on Electricity Generation, only business entities (either private entrepreneurs or legal entities) may produce and sell power at green tariff rates.

Ukrainian law defines a number of legal entities that may conduct commercial activities in Ukraine such as limited liability companies, joint stock companies, companies with additional liability, general partnerships and general partnerships with limited partners.

In order to establish a legal entity it is necessary to do the following:

- prepare and sign a charter written in Ukrainian and, if necessary, in another foreign language;
- register the legal entity with the state registrar;
- obtain a company seal;
- open a bank account for the legal entity.

➔ The legal entity should declare in its charter that it will produce electricity (among other possible activities) so that it will be eligible to receive a license to produce electricity.



## 3.2. Acquiring Property Rights

### 3.2.1. Property Law

As a general rule, facilities that produce electricity may be located only on land that is designated as “power industry land”. An exception is made for power transmission facilities (overhead and cable transmission lines, transformer substations, distribution points and equipment) which may be located anywhere regardless of the designated purpose of the real estate.

Electricity producers may use land that is not designated as “power industry land” only after rezoning.

According to the Land Code law, state and municipal authorities are responsible for designating land for a particular use or changing its usage classification. For privately owned land, there is a special procedure for changing its zoning designation.

It is important to remember that in Ukraine there is a moratorium on the following farm land transactions:

- 1) The sale of agricultural land that is owned by a municipality or the state except when the land is alienated specifically for the benefit of the public;
- 2) The sale, purchase, any other type of alienation, or zoning change of privately owned land (by individuals or legal entities) designated for agricultural production, except for the exchange of land for another plot of land, inheritance or acquisition of land for public use.

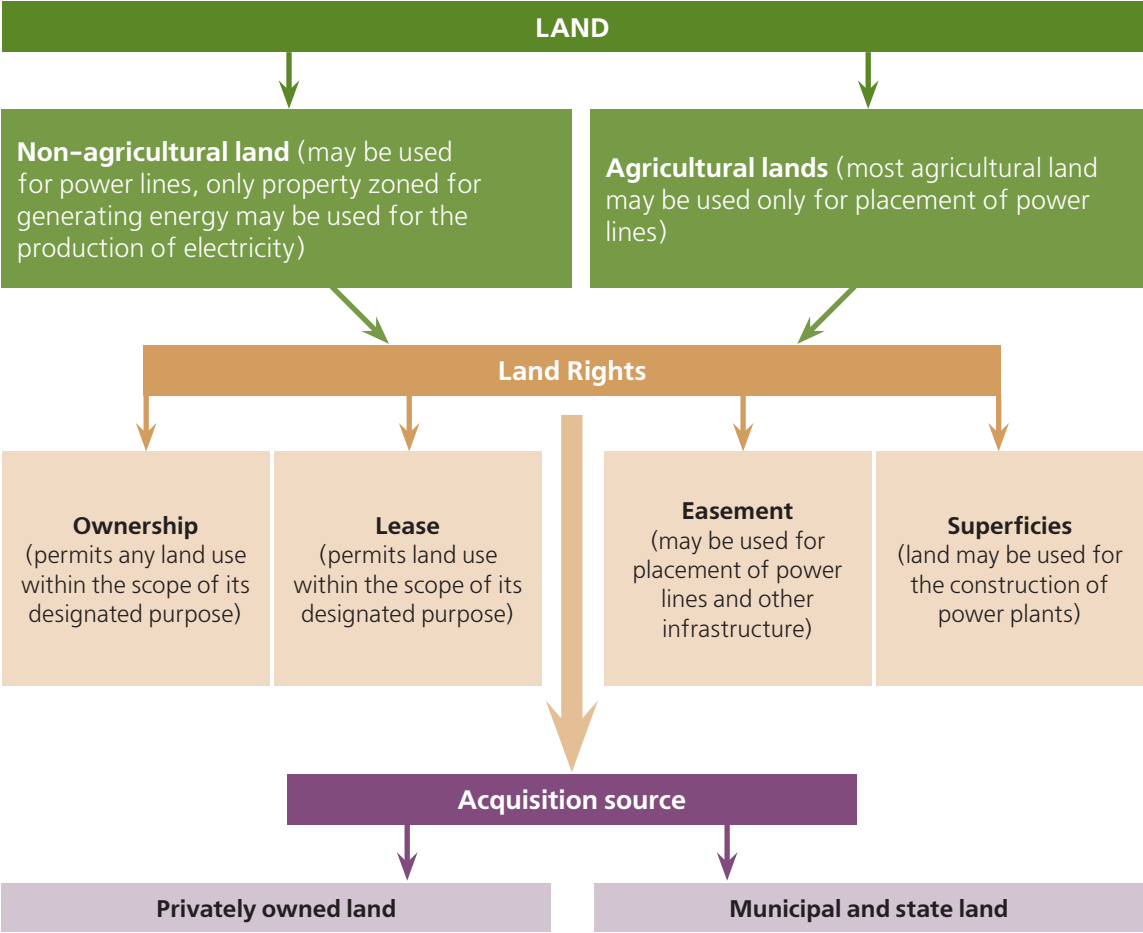
➔ Please note that using land for a purpose for which it is not designated is grounds for terminating the right to use the land. Judicial proceedings are required to terminate land usage rights in such cases. The Land Code is ambiguous about whether or not the ownership rights can be terminated. Therefore, the risk of losing ownership rights should be considered for the business project.

Furthermore, both the Land Code and the Law on Power Industry Land require that owners secure their energy facilities and protect residents by establishing sanitary and protection zones around these installations. The size of protective zones and how they should be established vary significantly depending on a number of factors and thus are determined on a case-by-case basis.

Finally, the Land Code prohibits foreign legal entities, Ukrainian legal entities founded by foreign legal entities, foreign citizens, and individuals without citizenship from acquiring agricultural land. These entities may only execute leases, easements, and superficies on agricultural land. Meanwhile, foreign legal entities, including Ukrainian legal entities founded by foreign legal entities and individuals, are entitled to acquire non-farm land plots in two cases: by purchasing an existing building on the property or by constructing a facility specifically designated for conducting business in Ukraine, provided that the facility is located within a municipality.



Table 8. Land rights for power producers



### 3.2.2. Acquiring Rights to Privately Owned Land

The transfer of usage rights or ownership of land is executed via a contract. In accordance with the Land Code, an agreement for either the alienation of ownership rights or granting the right to use a particular property is subject to state registration. In addition, all agreements for the alienation of ownership rights shall be notarized before they are registered with the state.

The procedures for registering land rights with the state are currently being modified. As required by the State Registration Law, the registration is carried out by the State Registration Service of Ukraine and its local agencies or, in case property rights are obtained according to the notarized contract, by a notary officer.

In order to register ownership rights, the new owner must submit the following documents:

- an application;
- an agreement demonstrating the transfer of rights (ownership, superficies, easement) for a piece of land;
- documents confirming payment for the registration of property rights with the state and the acquisition of an excerpt from the State Registrar of Real Estate Rights. The excerpt demonstrates that the registration was successful and that the ownership rights are recognized by the state;

The property rights must be registered by a notary officer simultaneously with a contract notarization. In case of registration carried out by the State Registration Service of Ukraine, the registration procedure must not exceed 14 calendar days from the submission date.

### 3.2.3. Zoning Changes for Privately Owned Land

The process of changing the usage rights for privately owned land is regulated by the Procedure for Changing the Designated Purpose of Land Owned by a Citizen or Legal Entity as declared in the Ukrainian Cabinet Minister's Resolution established on April 11, 2002, No. 502.

The first step for changing the zoning designation for a piece of land involves the land use planning permission. If an entire plot of land will receive a zoning change, the owner must obtain re-approval of the land use planning permission. If the land owner would like to change the use designation for part of a plot of land, a land use planning permission must be prepared.

A state or private survey organization must prepare the land use planning permission for a plot of land which will have its designated purpose modified, upon request of the land owner. The terms and conditions for preparing the project shall be declared in a contract between the customer and contractor. The land use planning permission shall be approved or reapproved with the Land Resources Agency, the environmental service, the sanitary and epidemiologic service, the settlement construction and architectural authorities and with the department for protecting cultural heritage.

Furthermore, the plot of land must be surveyed by the state. And, following the survey, the client must submit the project documentation to the village, settlement, city council, or district state administration, so that a decision can be issued regarding the land use planning permission.

The steps required to change a zoning designation will depend on the current type and location of the land. Villages, towns and city councils decide whether or not to change the designated purpose of land located within a municipality.

The district administration decides whether or not to change the designated purpose of land outside a municipality in several cases: if the plot of land will be used for agriculture, forestry and water management services, or, if the construction of facilities will be done to provide services for district residences such as schools, hospitals and shopping centers. Additionally, in cases where land will be used for other purposes, the district administration reviews the application and submits a decision, along with the application, to the regional administration, which will decide whether or not to change the zoning designation of the property.

To change the zoning designation for the following types of land, a decision is required by the Ukrainian Cabinet Ministers. Such land includes arable land, land used to grow perennial crops for non-agricultural purposes and forests occupying less than ten hectares. Other types of property whose zoning designation can only be changed by the Cabinet Ministers of Ukraine includes land designated for conserving the environment, land used for recreation, land that is important for public health and land that is declared to be particularly valuable. Zoning changes for real estate that is of a particularly high value and is located within a municipality can be done only after the approval of the Ukrainian Parliament, village, municipality or city council. If the land is located outside a municipality/inhabited area, the decision shall be made by the Ukrainian Cabinet Ministers after approval by Parliament.

The procedure for changing the designated use of land does not specify timeframes for the state and local authorities to take action. This may lead to delays.

### 3.2.4. Acquiring Usage Rights on Municipal or State Land

According to the Land Code, only municipal and state authorities may approve the transfer of usage or ownership rights for municipal and state land. Similar to privately owned land, any agreement to acquire rights to municipal or state land is subject to state registration. However, state registration of the right to lease municipal or state land is carried out in the process of registering the land plot.

In addition, as required by the Land Code, the granting of rights to use municipal/state land or the transfer of ownership rights to municipal or state land is subject to a special auction. Only in certain cases is it permitted to grant rights to municipal and state land without auctions. This is possible in the following cases:

- if privately owned structures are located on such land plots;
- for construction projects which are fully funded in the Ukrainian state budget;
- for the construction, service and repair of engineering, transport, energy infrastructure and communication facilities

In sum, there are two ways that property rights can be acquired for municipal or state land:

- via an auction for a plot of land or other land rights;
- by executing a procedure to sell ownership and other rights for land without the use of an auction.

In order to obtain usage or ownership property rights the applicant must file an application with municipal or state authorities that includes various mandatory documents.

In order to obtain land ownership rights it is necessary to submit:

- an application;
- documents confirming the right to lease the property or documents confirming that the applicant owns a building located on the property;
- a copy of the statutory documents for a legal entity;
- in certain cases additional documents may be requested in accordance with the rules of the applicable regulatory bodies.

Once an application and all required documents have been submitted, the state or municipal authorities will consider the application and make a ruling. If a land survey was not submitted, the authorities may require that a qualified land survey company conduct a survey and an appraisal of the property. Once the survey and appraisal have been submitted, the municipal or state authority will render a decision.

The cost for preparing the land survey will be agreed upon by the business seeking a zoning change and the land survey organization. Lease payments and the purchase price of a property are determined based on the land appraisal.

### 3.3. Construction of Power Plants Using Alternative Energy Sources

As specified in the Ukrainian Law on the Regulation of Construction Activity, the following major steps are required to build a power plant that generates power via alternative energy sources:

- 1) regulatory bodies submit construction requirements and specifications to the project developer (e.g. the electricity producer)
- 2) develop project documentation and if required, examine the documentation;
- 3) the project developer approves the project documentation;
- 4) to prepare and commence construction may require:
  - a registration declaring that preparatory tasks have commenced
  - a registration of the commencement of construction or
  - issuance of permission to commence construction;
- 5) commission the construction site - this may be executed by either a:
  - registration declaring readiness of the construction site, or
  - issuance of a certificate verifying that the site is ready for the commencement of construction;
- 6) register ownership rights for the property under construction.

The Law on the Regulation of Construction Activity does not expressly establish whether only Ukrainian legal entities may carry out construction projects and other actions related to construction activities. Nonetheless, Article 19 of the Ukrainian Law on Architectural Activity expressly permits foreign citizens to carry out the same architectural activity as Ukrainian citizens. Carrying out certain projects related to categories IV and V of complexity will require the receipt of a special construction license. However, in practice, it is almost impossible for foreign companies, their representative offices or their permanent establishments to receive such a license.

### 3.3.1. Initial Construction Requirements

Electricity producers must file an application expressing the intent to initiate a construction project with the executive agency of a village, settlement, or city council. After the filing, the executive agency will provide the electricity producer with initial specifications and requirements that can be used to create the required project documentation.

The main components of the initial specifications are:

- construction guidelines and restrictions;
- documents describing planning and architectural requirements along with engineering and technical specifications for a new construction project. The plan, parameters and cost of the construction will be executed within the framework of the construction and technical specifications for the proposed project and site.

The initial requirements will contain the project specifications and guidelines and will be publicly accessible at the local level. These requirements and specifications may not change while construction is underway. Changes to the initial specifications may only be introduced with the consent of the project developer (electricity producer). Construction conditions and restrictions are issued by the applicable authorized construction and architectural authorities free of charge.

The procedure for issuing guidelines for construction on a particular plot of land was established by the Order of the Ministry of Regional Development, Construction and Housing and Utilities Sector of Ukraine of July 7, 2011, No. 109.

A feasibility study is typically conducted to determine the technical requirements for connecting the power plant to the electricity grid. Specifications are assessed based on the power producer's generation capacity. The law does not list the instances in which a feasibility study is mandatory. Therefore, it is up to the energy developer to determine, whether a feasibility study is necessary. According to current practices, the first step for connecting a power plant to the grid is to obtain technical assignments for a feasibility study. In cases where the power generation capacity exceeds 10 MW, the technical assignments are prepared by NEC "UkrEnergo". Please note, UkrEnergo has approved standard technical assignments for solar and wind power stations ([http://www.ukrenergo.energy.gov.ua/ukrenergo/control/uk/publish/article?art\\_id=109082&cat\\_id=33495](http://www.ukrenergo.energy.gov.ua/ukrenergo/control/uk/publish/article?art_id=109082&cat_id=33495)).

Following the feasibility study, NEC "UkrEnergo" issues technical specifications for connecting to the grid. When the design capacity is less than 10 MW, the approval of the project specification is granted by the owners of the local electricity distribution networks. The feasibility study is the basis for developing the technical requirements for the grid connection.

### 3.3.2. Technical Requirements for Construction

There are a variety of construction requirements for meeting the calculated infrastructure demand of the power plant. In particular, such specifications include the supply of water, heat, power and natural gas. Other key specifications involve sewage systems, radio communications, runoff water drainage, telecommunication systems, dispatch mechanisms, and fire safety systems.

Businesses in the process of constructing a power plant are entitled to receive a set of technical specifications from the applicable regulatory body. Technical specifications are valid until the completion of construction and may be changed only with the developer's (electricity producer's) consent.

Usually, technical specifications are provided by municipal, state or privately owned companies that own or manage the infrastructure systems that the power plant will rely on. Such infrastructure includes sewage systems, the water supply, the heat supply system and telecommunication systems.

The Ukrainian Law on the Regulation of Construction Activity requires the submission of an application in order to receive technical specifications. However, there may be special requirements for the application package as specified by secondary legislation. For example, the following items may be required: a questionnaire, a layout of the construction site, a notarized copy of the document that certifies the right to develop the site as specified in the Rules on Granting and Agreeing on Technical Conditions of Heat Networks approved by Resolution of NERC and Ministry on Issues of Housing and Utility Sector of October 29, 2009.

Two types of technical specifications are needed for the construction of a power plant: 1) technical requirements for building and operating the facility and 2) technical specifications for connecting the power plant to the grid

### 3.3.3. Project Documentation for Construction

Project documentation is developed according to the procedure established by the Ministry of Regional Development, Construction, Housing and Utilities Sector of Ukraine, May 16, 2011, #45. The documentation is developed from the initial specifications within the requirements of the law and within the confines of the State Construction Norms (specifically, the State Construction Norms A.2.2-3-2012 approved by the Resolution of the Ministry of Regional Development, Construction and Housing and Utilities Sector of Ukraine on March 3, 2012). Project documentation shall be approved by the project developer (the electricity producer).

It should be noted that the project shall be subject to a mandatory environmental assessment if the planned facility is considered to pose threats to the environment. A list of facilities that fall into this category is generated by the Resolution of the Ukrainian Cabinet Ministers established on July 27, 1995. The list includes producers of electricity and heat using organic fuel hydropower plants. Thus, biomass and hydropower projects eligible for GT will most likely be subject to an environmental impact assessment.

In practice, an environmental impact assessment is conducted in the course of documenting the project. An assessment is conducted regardless of the project complexity and the results will be included in the project documentation. The scope and procedure for conducting environmental impact assessments are determined by the State Construction Norms A.2.2-1-2003. Public hearings during the course of the assessment are required only for projects which are considered a heightened environmental risk. This includes construction with a IV-V level of complexity, as established by the Resolution of the Cabinet of Ministers of Ukraine on July 27, 1995.

Furthermore, project documentation of construction with a category IV-V level of complexity is subject to mandatory examinations in order to ensure compliance with established rules of sanitation, epidemiologic safety, protection of the local ecology, labor rights and energy conservation. Other examinations will inspect fire safety, technical safety and, nuclear and radiation safety. Finally, inspections will be required to demonstrate durability, reliability and that the construction meets guidelines for the required life term of the facility.

According to the Procedure on Qualifying Construction Objects of Category IV and V Complexity, for various facilities that are considered to be strategically significant to the state or region, if an accident during construction would result in the interruption of the energy supply (including electricity networks) these construction sites will have a category IV -V level of complexity. This is necessary since power plants that are connected to either local or state electricity networks could have accidents that may disrupt the entire network.

Finally, any construction residing on a site that is complicated with respect to its engineering or ecologically sensitive will be subject to an examination of its durability, reliability and usable life term.

The development of project documentation is conducted on the basis of a contract between the company managing the construction and the electricity producer. The construction company should abide by the General Conditions on the Conclusion and Performance of a Contractor's Agreements in Construction as approved by the Resolution of the Ukrainian Cabinet Ministers.

Project documentation shall be developed by a licensed project organization. The cost of services shall be established in accordance with the Rules on the Determination of the Value of Project and Research Services Performed on the Territory of Ukraine approved by the Resolution of the State Committee on Construction, Architecture and Housing Policy of Ukraine. These rules stipulate how to calculate the cost of preparing project documentation and performing services for construction which is financed by state funds, or state enterprises. However, the rules are only advisory if the construction is financed from other sources. In the case of private financing, the producer and their consultant agree on the documentation costs.



#### 3.3.4. Registering the Declaration to Commence Preparatory Work

After acquiring rights to a plot of land, the project developer may perform preparatory work as required by state construction rules and standards. However, preparatory work which includes the removal of utility infrastructure and green spaces cannot be carried out without notifying the State Inspector of Architecture and Construction Control. The formal notification is a registered declaration for the commencement of work. The following work is considered to be preparatory: the preparation of a land plot, erecting fences around construction and demolition sites, building temporary facilities required for the construction and the placement of construction materials on site.

Registering the declaration shall be carried out by the State Inspectorate of Architecture and Construction Control. The registration is free and must be executed within five business days. If the inspectorate fails to register the declaration or refuses to register it within 5 business days, the applicant may begin preparatory work. Work may begin on the eleventh business day following the expected date of registration or the day the registration was refused. In either case, the declaration is considered registered.

A registered declaration does not entitle the electricity producer to begin construction.

#### 3.3.5. Registering the Declaration to Commence Construction

The right to construct facilities which belong to categories I-III of complexity and connect such a facility to utility services and other facilities is granted to the producer or its contractors after the declaration to commence construction has been registered.

The construction of a facility or the connection of a facility to utility services and existing facilities is prohibited without this registration.

Within seven calendar days from the date of the declaration's registration, the producer shall inform, in writing, the local municipal or governmental authorities regarding its registered declaration. The producer must also inform these authorities about matters related to fire and equipment safety related to construction.

A construction permit (see 3.3.6) is not required to build facilities that fall into categories I-III of complexity. Despite this fact, architects, engineers and other contractors involved in the construction should be certified specialists as specified by law.

In order to register a declaration, the project developer must submit two copies of the declaration to commence construction to the Inspectorate of State Architecture and Construction Control. The form must be in the proper format as required by the Ukrainian Cabinet Ministers.

Registration of the declaration shall be carried out free of charge within five business days from the date of its receipt. If the inspector fails to register the declaration or refuses to register it within five business days, the producer may commence preparatory work beginning on the eleventh business day from the expected date of registration or the refusal of registration. In such cases, the declaration is deemed to be registered.

### 3.3.6. Permission to Construct Facilities

The right to construct facilities which belong to categories IV-V of complexity is granted to the producer or its contractors after the receipt of permission to commence construction. Additionally, permission is required to connect the new facilities to utility networks and other existing facilities.

Constructing facilities of categories with levels IV-V of complexity without a permit is forbidden and may be grounds for demolition via judicial proceedings.

→ The producer shall notify, in writing, the local municipal or governmental authorities regarding the registration of its declaration to construct facilities. The notification must occur within seven calendar days from the date of the declaration of registration. Additionally, the relevant offices responsible for fire and facility safety must be notified about the commencement of construction. The notification must take place within seven calendar days from the date of the declaration.

Constructing facilities that fall into categories IV-V require a construction license as specified by the Procedure on Licensing Commercial Activity Related to the Creation of Architectural Objects approved by the Resolution of the Ukrainian Cabinet Ministers and the Licensing Conditions for Carrying Out Commercial Activity in Construction Related to the Creation of Architectural Objects approved by the Ukrainian Ministry of Regional Development and Construction. Thus, the electricity producer itself or its contractor must hold the license. As a matter of practice, producers hire licensed contractors to build facilities.

In order to receive a permission to construct a facility, a project developer must submit the following documents to the State Architecture and Construction Inspectorate of Ukraine:

- an application (using the required form);
- a copy of the document which confirms ownership or usage rights for the land;
- developed and approved project documentation for construction;
- a copy of a document confirming ownership of a building or facility or written consent of its owner to construct, renovate, or maintain a facility;
- a copy of a license which grants the right to construct a facility (if necessary);
- copies of certificates that verify the qualifications of personnel responsible for the construction of the facility

A decision to issue the permission shall be carried out free of charge within ten business days from the date the application is registered. If the Inspectorate fails to either issue the permit or provide a written refusal within this time frame, the producer may appeal to the Ministry of Regional Development, Construction and Housing and Utilities Sector of Ukraine to ensure that a decision is reached. If a license is not issued or refused within ten business days, by default permission will have been granted.

### 3.3.7. Registering a Declaration to Begin Using a New Facility

The commissioning of newly constructed facilities that fall into categories I-III of complexity is done by registering a declaration to begin using a new facility with the State Architecture and Construction Inspectorate of Ukraine. It should be noted that the facility may be commissioned in stages (as new complexes come online), provided that the facilities comply with requirements for safe usage.

➔ A registered declaration to begin using a new facility will enable the provider to order and begin using utility services such as water and heat.

A copy of the producer's registered declaration shall be submitted to the local municipal or governmental authorities. Additionally, fire and facility safety officials should be informed about the newly commissioned facility within seven calendar days from the date of the registered declaration.

The use of newly constructed facilities of categories I-III is prohibited without commissioning. The date that the declaration is registered is considered the commissioning date.

In order to register a declaration, a project developer must submit two copies of the declaration to an Inspectorate of State Architecture and Construction Control using the required form. The Inspectorate considers the declaration within ten business days and then registers it. The procedure is free of charge.

### 3.3.8. Certifying a Newly Constructed Facility

Facilities that fall into categories IV-V are commissioned by receiving the relevant certificate declaring the facility as safe and ready for use.

The certificate permits the producer to order and use utility services such as water and heat.

Newly constructed facilities of categories IV-V may not be used without commissioning. The commissioning date is the date a certificate is issued.

The producer shall submit the following documents to the Inspectorate of State Architecture and Construction Control:

- an application for the commissioning of the new facility using the required form;
- an act declaring readiness to commence operation of the new facility (submitted via a standardized form).

The Inspectorate shall commence an examination no later than the third day after the date the application was registered. The inspection will last no more than four business days. Additionally, the Inspectorate shall issue a decision regarding the certificate using the required form and within ten business days from the date the application was registered. The procedure is free of charge.

### 3.3.9. Registration of Ownership Rights

According to transitional provisions of the State Registration Law, the new procedure of registration of real estate rights will take effect on January 1, 2013. From this date forward, registration shall be carried out by the State Registration Service of Ukraine and its local agencies.

In order to register a title for a structure, the project developer must submit the following to the relevant registrar:

- an application to register ownership rights using the appropriate form;
- a certificate of real estate ownership rights issued by municipal authorities. The certificate is issued on the basis of a document which demonstrates rights to a plot of land and a document confirming that the facility located on the property has been commissioned;
- documents confirming payment for the registration of ownership rights with the state and the acquisition of an excerpt from the State Registrar of Real Estate Rights. The excerpt demonstrates that the registration was successful and that the ownership rights are recognized by the state;
- power of attorney, if necessary;
- the passport of the applicant.

Registering with the state shall last no longer than 14 business days from when the application was received by the registrar, not including the amount of time required for conducting a technical inventory of the facility.

### 3.3.10. Permits for Performing Hazardous Work and Operating Hazardous Equipment

A permit is required in order to operate hazardous facilities and dangerous equipment. In particular, operating electrical facilities that use more than 1000 volts requires a permit. Considering this requirement, the permit may be required in order to build and/or operate power stations that use alternative energy sources. Additionally, the permit must be obtained in case of operation of combined (heat and power) generation station.

In order to obtain a permit to operate hazardous facilities and dangerous equipment, the following documents must be submitted to the State Service of Mining Supervision and Industrial Safety of Ukraine or its local agencies:

- an application (using the form established by the Resolution of the Ukrainian Cabinet Ministers On Approval of the Form of Application for Entities on Obtaining Authorization Documents);
- an expert report verifying compliance with labor protection and industrial safety laws regarding the operation of hazardous equipment and facilities

The duration of the procedure to issue a permit must not exceed ten business days from the submission of the application. The issuance of a permit is free; however, conducting the expert examination is subject to a fee. The cost of an expert inspection of the industrial construction's safety is determined according to the Resolution of the Ukrainian Cabinet Ministers On the Approval of the Procedure for Determining the Maximum Size of the Tariff for Expert Examination of the Safety Status of Industrial Construction of an Entity, established on November 4, 2009, No. 1251. The total cost depends on:

- the number of employees who perform dangerous work;
- a list of hazardous work being performed;
- the number of dangerous machines, tools and equipment.

## 3.4. Connection to the Grid

### 3.4.1. General Provisions

Under the Power Industry Law, electricity suppliers which transmit electricity through their own local (distributional) networks must allow producers of electricity using alternative energy sources to access their grids.

Currently, in Ukraine there are three procedures for connecting renewable energy power plants to the electricity grid:

- The connection of cogeneration installations (regulated by the Rules on the Connection of Combined Heat and Power Installations to Electricity Networks approved by the NERC Resolution of January 21, 2006, No. 47);
- The connection of wind power plants (regulated by the Rules on the Connection of Wind Power Plants to Electricity Networks approved by the Ministry of Fuel and Energy of Ukraine on October 28, 2009, #570). These rules regulate the grid connection of wind farms that possess a power capacity no less than 100 MW and are expected to be built in the Autonomous Republic of Crimea and Mykolayivska oblast.
- The connection of other renewable energy power plants (regulated by the Rules on Connection of Power Installations to the Grid, approved by the NERC Regulation of January 17, 2013.

To connect power installations that have a power capacity of 70 MW or more, an application must be submitted to the licensee of the trunk/interstate transmission network (NPC "Ukrenergo").

When connecting a plant with a power capacity under 10 MW, an application should be submitted to the power transmission organization that operates where the applicant's installation is located (typically, an oblenergo).

When connecting a plant with a capacity between 10 - 70 MW, the applicant can apply to either the power transmission organization that operates where the applicant's installation is located, or to the licensee of the backbone and interstate transmission lines (NPC Ukrenergo").

A final decision on the connection of such power installations shall be based on a feasibility study that considers the effects of the new grid connection on the reliability and quality of the power supply in the surrounding area of the new facility.

Upon receiving an application for a connection, the power transmission organization shall prepare, free of charge, a draft agreement for the renewable energy power plant's new connection to the grid. Technical specifications shall be issued to the applicant free of charge within 15 business days from the date of the application and within 30 business days if there is a need to have the specifications approved by the owner of any trunk/interstate power grids. The specifications must not contain any requirements demanding improvements of the electricity grid as any upgrades are the sole responsibility of the grid operator.

The power transmission organization is also responsible for taking further steps to ensure that a connection to the grid can be made. Specifically, the power transmission entity must do the following:

- 1) develop project documentation for external electrical power supply installations;

- 2) perform construction and assembly tasks, and
- 3) commission newly constructed external electrical power supply installations.

Assuming that a producer has followed the proper procedures and that all required contracts have been executed, a power station must be connected to the grid within 5 days. For example, a contract must have already been executed between NPC Ukrenergo and the power plant for the parallel operation within the United Electricity System (UES) of Ukraine in order for the grid connection to be activated.

Furthermore, it should be noted that, by law, there are two types of agreements used for connections to electricity networks. These agreements may be used by renewable energy power plants seeking connections to the grid. Both types of agreements do not meet the requirements as stipulated by the regulatory framework for connecting to the grid. And, both types of agreement require amendments. The first type of agreement is the Model Agreement on Connection to Electricity Networks, presented in Annex #1 of the Rules of Connecting Electricity Installations to the Grid, approved by NERC Regulation of January 17, 2013.

The second type of agreement is the Template Agreement on Connecting to Electricity Networks of Electrical Installations Producing Electricity from Alternative Energy Sources, approved by NERC's Resolution No. 838 of July 16, 2009. This agreement applies only to suppliers that distribute electricity via local distribution networks. According to Article 179 of the Commercial Code of Ukraine, the parties entering into an agreement based on template agreements recommended by state authorities may change and add provisions to such agreements so long as there is mutual consent.

#### **3.4.2. Connecting Combined Energy Plants (Heat and Power) to the Grid**

An electricity producer utilizing a combined heat and power plant may access the grid once the following steps have been executed:

- the producer identifies an organization to develop the project documentation;
- an application is filed to connect the combined heat and power plant to the grid;
- payment for the preparation and issuance of technical specifications;
- the grid owner prepares a draft agreement regarding the connection to the grid;
- the grid owner determines options for connecting the producer's installations and possible connection points;
- the producer and the grid owner agree on how to secure the supply of electricity and establish a connection point;
- the grid owner prepares technical specifications and provides them to the producer;
- the project organization develops project documentation based on both the technical specifications and the contract with the producer;
- the producer and the grid operator approve the project documentation which includes the cost of the connection to the grid;

- the producer and the grid owner determine a mechanism for financing new construction and any reconstruction of the grid owner's electricity networks which are or will be an integral part of the owner's grid;
- conclusion of an agreement on connecting to the grid;
- execution of construction, pre-commissioning and installation of the facilities;
- performance of pre-commissioning checks and the commissioning of the facilities;
- certification of access for connecting the combined heat and power installation to the owner's grid;
- execution of the applicable agreements as specified by law;
- if the producer will be connected to the grid via a third party transit network, the third party must demonstrate that specialized personnel will maintain the transit facility;
- connect the combined heat and power installation to the grid.

Owners (licensees) of distribution networks are responsible for connecting power producers to their networks. It seems that the rules for connecting to the grid also apply to Ukrenergo as an owner (licensee) of transmission networks.

In order to obtain access to a grid, the producer shall submit the following documents to the grid operator in two stages. The stages are:

**Stage One** – steps required to obtain technical specifications and a contract for connecting to the grid from the grid operator:

- an application that should describe the area of activity, location and details of the producer, the name of the cogeneration installations and their location, the purpose for receiving technical specifications (construction, reconstruction, increase of power capacity, etc.);
- a questionnaire signed by the producer and the project organization;
- a layout indicating the location of cogeneration installations;
- a copy of requirements for the construction of facilities on a plot of land (for installations commissioned for the first time);
- copies of a document proving ownership rights for the combined heat and power plant and a document demonstrating ownership rights or rights to use the land for construction, reconstruction or upgrading;
- a copy of the entitlement to close contracts.

In practice, before the receipt of the technical specifications, the producer often orders and receives a technical and economic study regarding the connection to the grid which evaluates the feasibility of the connection. The study discusses the equipment needed for the connection along with other requirements.

Once the application in step one has been submitted, the grid owner shall provide a draft agreement to the producer within 15 business days.



Furthermore, the term for considering the project documentation and forging an agreement with the grid owner shall not exceed 15 business days from the date the documentation was received. If the project documentation is rejected due to noncompliance with technical specifications or Ukrainian law, the grid owner should send a letter with comments and recommendations within 15 business days. The producer shall have 30 calendar days to resolve any problems identified by the grid owner. The grid owner may extend this 30-day period by providing notice two days before the deadline. Once the producer resolves any issues, a final agreement on the corrected project documentation shall not exceed 15 business days.

Once a final agreement is reached, the electricity producer may move onto stage two in order to obtain approval for access to the grid.

**Stage two** – steps required for obtaining approval to access the grid:

- an application to conduct a technical inspection and receive approval to access the grid;
- technical conditions;
- project documentation;
- execution of an agreement that identifies which parts of the connection facilities are owned and maintained by the grid operator and the electricity producer;
- information regarding the existing electricity gauges and the installation of new gauges;
- the entity responsible for installing and constructing the facility transfers it to the owner;
- a copy of an order appointing personnel responsible for the operation of the installations or a copy of an agreement for managing the installations with an eligible organization;
- the list of personnel who are entitled to complete an application for connecting or disconnecting cogeneration installations, conduct negotiations and maintain records;
- copies of schematics and certificates for infrastructure that cannot be visibly inspected.

The connection of cogeneration installations to electricity networks shall be conducted within five business days after the grid operator and power producer complete the following tasks:

- 1) produce engineering schematics for the electricity supply, cogeneration installation and electricity measurement systems
- 2) comply with the law, technical conditions and project documentation;
- 3) the producer provides executive, technical, transfer and acceptance documentation to the grid operator and the documentation complies with legal requirements;
- 4) a certificate of access to the grid is executed;
- 5) the producer pays for connection services as specified in the contract with the grid operator;
- 6) execute all agreements related to the production, transmission and, if necessary, the sale of electricity;
- 7) the producer confirms that certified personnel have been hired to manage the cogeneration installation, or the producer has executed an agreement with a business entity who employs individuals who have been trained, attested and certified for the cogeneration installation;
- 8) connect electricity gauges to the grid operator's measurement system;

- 9) grid operator and producer agree upon the format of reporting electricity measurements;
- 10) if necessary, the producer and the owner of transit installations and a support organization agree on the operational maintenance of the transit installations. These installations would have assumed the status of transit systems after the producer's installation was connected to the grid.

Timeframes for completing the items listed above have not been specified for all steps in the overall process for connecting a heat and energy plant to the grid. Unfortunately the Rules for the Connection of Cogeneration Installations to Electricity Networks do not set timeframes for all steps in the process. In order to ensure that a grid connection is approved and activated without excessive delay, it is recommended to set timeframes in the contract between the producer and the grid operator.

### **3.4.3. Connecting Wind Farms to Electricity Networks**

Wind farms with a power capacity of 100 MW or more that are constructed in the Autonomous Republic of Crimea and Mykolayivska oblast are subject to the Rules for the Connection of Wind Power Plants. For all other types of wind farms, these rules may be used as a set of recommendations.

Under the procedure specified by the rules for wind farms, an electricity producer that runs a wind farm may access the grid by fulfilling the following steps and requirements:

- the producer identifies an organization to develop the required project documentation;
- an application is filed for connecting a wind farm to the grid;
- the producer and the grid owner strike an agreement to secure the supply of electricity and a connection point to the grid;
- the grid owner prepares technical specifications and provides them to the producer;
- a project organization develops project documentation for the technical specifications previously agreed upon with the producer;
- the grid owner and the producer agree on the design and estimate documentation and determine the cost of the wind farm's connection to the grid;
- execute the final agreement for connecting to the grid;
- construct facilities for the grid connection and the pre-commissioning of the facilities;
- conduct commissioning checks;
- certify access for connecting to the owner's grid;
- physically connect the producer's installation to the grid;
- execute the agreements as required by law;
- owners ensure the sound operation of the transit installations.

The owners (licensees) of local distribution networks are responsible for connecting the producer to its networks. It appears that the rules for such connections are also applicable to Ukrenergo as an owner (licensee) of transmission networks.

In order to have technical specifications issued and agreed upon, and to also approve the connection to the grid, the producer must submit the following documents:

- a letter declaring an intention to connect to the grid. The letter should describe the area of activity, the location and details of the producer, the location of the wind farm, the purpose for obtaining technical specifications (such as construction, reconstruction, power capacity increases, etc.);
- a questionnaire signed by the producer and the company working with the producer to develop the project documentation;
- a layout indicating the location of the wind farm;
- a copy of the requirements for constructing a facility on a piece of land (for installations commissioned for the first time);
- a copy of an entitlement to close contracts.

In practice, before the producer receives the technical specifications, the producer orders and obtains a study which evaluates the feasibility of connecting to the grid, the equipment needed and other requirements for the connection.

The owner shall provide a draft agreement to the producer within 15 business days from the application submission date.

The grid owner has 15 business days from the date the documentation is received to approve or reject the project documentation. If the project documentation is rejected for noncompliance with technical specifications or regulations, the producer will have 30 calendar days to comply properly with all technical specifications and regulations. The producer may extend this period by notifying the grid owner two days before the deadline so that errors in the project documentation can be resolved. After these issues are resolved, the grid operator has 15 business days agree to the terms of the project documentation.

The connection of wind farms to electricity networks shall be conducted in accordance with the connection agreement established between the producer and grid operator, within five business days after the fulfilment of the following items:

- 1) executing a certificate of access to the grid ;
- 2) the producer obtains a certificate confirming that the constructed power plant meets the requirements set forth by the project documentation and current laws;
- 3) the producer assigns specialized personnel for the wind farm installation or the producer executes an agreement with a business entity for the wind power installation. The business entity must demonstrate that the employees who are performing the maintenance have been trained, attested and certified to perform such work;
- 4) if the producer must connect to the grid via a third party that controls a transit facility, the third party, the producer and any supporting organizations should generate an agreement permitting the producer to use this link for accessing the grid.

Timeframes for completing the items listed above have not been specified for all steps in the overall process for connecting a wind farm to the grid. Unfortunately the Rules for the Connection of Wind Power Plants do not set timeframes for all steps in the process. In order ensure that a grid connection is approved and activated without excessive delay, it is recommended to set timeframes in the contract between the producer and the grid operator.

#### 3.4.4. Costs for Connecting to the Grid

Ukrainian legislation establishes two different procedures for financing a connection to the grid depending on when technical specifications were obtained and when construction was initiated. The two situations follow:

- 1) renewable power plants which obtained technical specifications for the grid connection before January 1, 2013 and commenced construction before July 1, 2013
- 2) financing for the connection of plants that do not meet the criteria of item 1 above

Power plants in group one enjoy a privileged status because they are covered by the Law of Ukraine No. 5021-VI "On the Introduction of Changes to Certain Laws of Ukraine Concerning Payment for Connections to Electricity Networks of Natural Monopolies"<sup>1</sup>. A connection to the grid for producers in group one is financed in the following way:

- 50% of the connection costs come from tariffs charged for the transmission of electricity;
- 50% of connection costs originate from refundable financial aid which is provided by the producer to the electricity transmission organization.

The period of time required for returning the financial aid will be stipulated by NERC in the procedure on financing connections to the electricity network. In any case, the return of financial aid may not exceed 10 years

The legal status of power producers that are not covered by the law No. 5021-VI "On the Introduction of Changes to Certain Laws of Ukraine Concerning Payment for Connections to Electricity Networks of Natural Monopolies" remains, to a certain extent, unclear. Ukrainian law does not explicitly state that the connection of power plants using alternative sources of energy to the grid should be free of charge. Under the Power Industry Law electricity suppliers (oblenergohospodars), which transfer electricity via their own distribution networks, must not deny access to their grids to producers of electricity from alternative energy sources. Similar provisions are stipulated by the Rules on the Connection of Cogeneration Installations to Electricity Networks approved by NERC Resolution No. 47 of January 21, 2006.

Furthermore, electricity suppliers must create investment programs to ensure that funds are available to subsidize the costs for connecting alternative energy power plants to their grids.

It should be noted that the Power Industry Law does not require that grid connections be provided free of charge. Instead, investment programs are required to ensure that such funding is available. NERC approved a procedure for considering and approving investment programs (NERC Resolution No. 1052 of July 26, 2007). According to the resolution, the investment program is usually approved for one calendar year. The procedure specifies stages for, preparing, approving and implementing an investment program.

The programs should be submitted for approval to NERC, in advance, and according to a schedule provided by NERC. According to the investment program procedure, financing projects related to the reconstruction of network facilities (projects related to grid connections probably falls within this category) shall be included in the investment program only if all necessary project documentation, and sometimes technical and economic justifications, are approved according to law.

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<sup>1</sup> It should be noted that the Rules for Connecting a Power Installation to the Grid approved by NERC's Regulation of January 17, 2013 includes no exceptions, and in fact extends this "privileged" financing program for connecting power plants to the grid regardless of when they received technical specifications and began construction.

## 3.5. Electricity Production License

### 3.5.1. The Licensed Activity

As required by the Power Industry Law, the production of electricity is subject to licensing. Electricity may be produced without a license provided that the established power capacity or power supply does not exceed a certain threshold as declared in the Conditions and Rules for Carrying Out Entrepreneurial Activity when Producing Electricity.

According to the Conditions and Rules for Carrying Out Entrepreneurial Activity when Producing Electricity, an electricity production license is required for business entities that:

- 1) own or use equipment with a power capacity greater than 5 MW;
- 2) own or use equipment producing electricity from alternative energy sources (except for coke gas and gas from blast furnaces) with an established power capacity greater than 10 MW, or if the producer intends to sell electricity on the WEM regardless of its power capacity.

Since the WEM (particularly Energorynok), is the sole purchaser of electricity at GT rates, and since producers of electricity using alternative energy sources intend to sell electricity to Energorynok, the producers must obtain a license to produce electricity.

If the producer is willing to produce heat along with electricity, it may obtain a license for the combined production of heat and electricity. Furthermore, the GT Establishment Procedure expressly states that the GT program applies only to business entities which have obtained either a license to produce electricity or a license for the combined production of electricity and heat.

The receipt of the license triggers a number of obligations required by the Conditions and Rules for Carrying Out Entrepreneurial Activity When Producing Electricity. In addition, the law implies that once a license is obtained, the producer must purchase goods and services for equipping its facilities via an open bidding process as required by Article 18 of the Power Industry Law. Moreover, the Law of Ukraine On the Introduction of Changes to Certain Laws of Ukraine Concerning the Payment for Connecting to Electricity Networks of Natural Monopolies which took effect on January 1, 2013, specifies requirements for obtaining goods and services. Specifically, licensees, whose prices for services or goods are established by NERC, must equip their power plants using a competitive bidding process. Since GT is established monthly by NERC, the requirement to conduct an open bidding process is mandatory. However, since there are no approved requirements for conducting an open bidding process (procurement on a competitive basis), producers may seek bids at their own discretion.

The licensing requirements do not establish specific requirements for the personnel hired by electricity producers. However, certain requirements exist as required by labor safety law. For instance, Ukrainian law distinguishes five classes of electricians, each of which have their own special tasks and responsibilities, educational and qualification requirements and a list of work they are permitted to perform. For example, solar and wind power facilities that generate different levels of kW may only be maintained and repaired by certain types of electricians. For example:

- solar and wind power facilities with a generation capacity less than 50 kW may only be serviced by class 2 electricians;
- solar and wind power facilities with a generation capacity greater than 50 kW may only be serviced by class 3 electricians or higher;

The labor protection requirements for electricians that operate and maintain electrical equipment are established by the Model Instruction On Labor Protection for Electricians that Operate and Maintain Electrical Equipment approved by the Order of the Ministry of Industrial Policy of Ukraine, No. 476 of December 19, 2006. This law outlines the work which can be performed by electricians that operate and maintain electrical equipment. This law also defines the various safety requirements throughout the course of a project and during emergencies.

### **3.5.2. Obtaining a License to Produce Electricity**

In order to obtain a license to produce electricity, the producer must submit the following to NERC:

- 1) An application using the standardized form that contains these primary items:
  - the applicant's information (exact name and other details);
  - the location where electricity will be produced;
  - the types of activity that will be conducted (electricity production)
- 2) power of attorney to represent the producer, if necessary;
- 3) a receipt for payment of the license;
- 4) a notarized copy of the corporate charter (must demonstrate electricity production as a core business activity);
- 5) a description of the electricity production facility including technical characteristics of the power plant and a schematic of the electrical connections and electricity gauges;
- 6) a document proving sufficiency of funds, specifically, a copy of an  $\phi$ -N 1 accounting report for a particular reporting period. This requirement has been established only for electricity suppliers, not electricity producers. However, the document must be submitted nonetheless;
- 7) a copy of the document confirming ownership rights or rights to use equipment that generates electricity (in the latter case the documents must confirm the ownership rights of the owner);

Five copies of the documents specified above must be submitted. One set of copies shall be notarized. If the list of documents is incomplete or the documents themselves do not meet stated requirements, NERC will notify the applicant in writing within five days.

NERC shall submit a decision to issue or refuse a license within 30 days after the receipt of an application package. Notification of refusal shall be sent to the applicant within 30 days after the receipt of an application package. If necessary, NERC may verify information in the submitted documents as well as the applicant's ability to meet the conditions and rules needed to obtain a license.

The minimum amount of time allowed for issuing a license following an approval by NERC has not been established. The expiration of the license is established by NERC and it may not expire in less than three years.

The payment for a license consists of the following:

- a onetime fee - UAH 18,72 per MW of the power capacity of the power plant;
- a recurring monthly fee - calculated by NERC based on the installed capacity and volume of supplied power and heat (as of today, for power generators this fee can cost up to UAH 1000 per month).

### 3.5.3. Obtaining a License for the Combined Production of Heat and Electricity

In order to obtain a license to produce electricity and heat, the producer must submit the following to NERC:

- 1) An application using the standardized form which, among other things, shall contain:
  - The applicant's information (name and other details);
  - the location where electricity will be produced;
  - the types of activity that will be conducted (electricity and heat production)
- 2) power of attorney to represent the producer, if necessary;
- 3) a receipt for payment of the license;
- 4) a notarized copy of the corporate charter (must demonstrate electricity and heat production as core business activities);
- 5) a description of the electricity and heat production facility (technical characteristics of the power plant; schematic of the electrical connections and electricity gauges);
- 6) a copy of the document that confirms ownership of the cogeneration equipment.

Five copies of the documents must be submitted. One set of copies shall be notarized. If the list of documents is incomplete or the documents themselves do not meet stated requirements, NERC will notify the applicant in writing within five days.

NERC shall submit a decision to issue or refuse a license within 30 days after the receipt of an application package. Notification of refusal shall be sent to the applicant within 30 days after the receipt of an application package. If necessary, NERC may verify information in the submitted documents as well as the applicant's ability to meet the conditions and rules needed to obtain a license.

The minimum term for issuing a license following an approval by NERC has not been established. The operational term of the license is established by NERC and it may not be less than three years.



The payment for a license consists of the following:

- Onetime fee - UAH 18,72 per MW of the power capacity of the power plant plus UAH 21,77 per Gcal/h of established power capacity;
- Recurring monthly fee - calculated by NERC based on the installed capacity and volume of supplied power and heat (as of today, for power generators, this fee can cost up to UAH 1000 per month)



### 3.6. Joining the WEM (Wholesale Electricity Market of Ukraine)

According to the WEM Agreement, Energorynok, acting as a wholesale supplier, shall secure the purchase of electricity from electricity producers as specified by the terms in the agreement and the terms of any bilateral agreements between Energorynok and electricity producers. Such bilateral agreements may only be concluded with electricity producers that are WEM members.

Each producer of electricity from alternative energy sources should seek approval from the WEM Council to join the WEM. The WEM Council is comprised of:

- ten voting directors (five directors are elected by electricity producers and five directors are elected by electricity suppliers);
- six non-voting directors (one from Energorynok, five from other state institutions);

Should the WEM Council approve the producer's application, the producer may join the WEM and sign the WEM Agreement.

Please note that only licensed electricity producers may join the WEM. Any producer of electricity using alternative energy sources may join the WEM regardless of their size or other characteristics.

The producer of electricity from alternative energy sources may be denied membership in the WEM only in the following cases:

- the submitted documents contain false data;
- an analysis performed by the Secretary of the WEM Council and Energorynok demonstrates that the applicant will not be able to abide by the requirements of the WEM agreement.

A rejection to join the WEM may be appealed by filing an appeal with NERC or taking legal action in a court of law.

In order to become a member of the WEM, the producer must submit the following to the Secretary of the WEM Council:

- an application using the standardized form;
- power of attorney to represent the producer, if necessary
- a brief description of the applicant's activities indicating the intended territory of operation during the first month of activity, and future territories of operation must be identified according to supply agreements;
- data about transactions which the applicant intends to execute on the WEM;
- a notarized copy of the producer's license to generate electricity or to produce both heat and electricity;
- the legal address and bank account details of the applicant, certified by the bank manager's signature and seal (two copies are required using the standardized form);
- minutes of negotiations with Energorynok regarding data amounts, forms, terms, means for transmitting data and procedures necessary for settling payments for electricity according to WEM Rules;

- certificate verifying the nature of expected transactions on the WEM;
- a NERC certificate verifying that all license payments are not in arrears.



It should be noted that the Secretary of the WEM Council may request that the applicant provide additional information which may be reasonably required for proper consideration of the application.

Additionally, the following documents are usually required:

- 1) a recommendation to join the WEM from a current WEM member;
- 2) a notarized copy of the producer's charter;
- 3) a notarized copy of the certificate on registration as a value added tax payer;
- 4) copies of documents demonstrating the appointment of a manager for the business entity (appointment order, general meeting minutes, etc.);
- 5) samples of signatures using the required standardized forms.

If the submitted application package complies with the requirements described within this chapter, the Secretary of the WEM Council will provide the application to his council members for consideration. A decision from the council shall be sent to the applicant within one week from the application registration. A final decision regarding the electricity producer's WEM application shall be executed within 30 days after the receipt of all the necessary information. After an approval for admission by the WEM Council, the secretary of the WEM Council will send a notification indicating:

- the necessity of directing an authorized person to sign the WEM Agreement on behalf of the electricity producer;
- the commencement date of operations on the WEM.

Applying for and obtaining membership in the WEM is free of charge.

Take note that there is no procedure for obtaining the following documents:

- 1) minutes of negotiations with Energorynok regarding data amounts, forms, terms, means for transmitting data and procedures necessary for settling payments for electricity according to WEM Rules;
- 2) a certificate verifying the nature of expected transactions on the WEM;
- 3) a NERC certificate verifying that all license payments are not in arrears;
- 4) a certification of the character of expected transactions on the WEM as agreed upon with Energorynok as the administrator of the settlements system;

The electricity producer should obtain the documents described above using the general procedure. In Ukraine, the general procedure provides that a response to the submission of these documents should occur within 30 days.

Overall, the consideration of an application to join the WEM can take up to 30 days. However, the approval of documents one and two in the list above may take even longer because of the potential necessity to negotiate with Energorynok's specialist regarding the content of the documents.

### 3.7. Concluding an Agreement with Energorynok

According to the WEM Agreement, Energorynok shall secure the purchase of electricity from electricity producers based on the terms of the WEM Agreement and via separate agreements with electricity producers. Thus, in addition to joining the WEM, an electricity producer must also enter into a bilateral agreement with Energorynok. In practice as of late, these agreements take effect after NERC approves GT rates for a producer.

NERC has developed a Template Agreement for the Sale and Purchase of Electricity between Energorynok and Business Entities that Produce Electricity from Alternative Energy Sources (the Electricity Purchase Agreement Template). According to the Commercial Code, parties that enter into an agreement based on a template agreement recommended by state authorities, may amend and/or add provisions to the agreement so long as there is mutual consent. However, in practice, Energorynok does not change provisions in the Electricity Purchase Template Agreement.

The procedure for signing a bilateral agreement between Energorynok and an energy producer is not covered by the WEM Agreement. In fact, article one of the WEM Agreement only states that such an agreement shall be agreed upon with the WEM Council.

According to the current practice for signing bilateral agreements, the electricity producer shall file an application with Energorynok describing the power capacity of its installations, the installation locations, the availability of automatic meters, information about the producer's license and a copy of the license attached to the application. All other information about the producer is provided by the Secretary of the WEM Council. After the application is submitted, Energorynok will provide a bilateral contract to be signed by the producer. Additionally, a copy of the bilateral contract is provided to the local energy system so that they may agree to the terms. After concluding the agreement, it must be approved by NERC. There are no specific provisions governing the approval procedure.

### 3.8. Setting the GT Rate

As noted above, the right to sell electricity at GT rates is approved by NERC. The GT rates are not established automatically once a power plant is commissioned, or even after a contract is closed for the sale of electricity to Energorynok. Furthermore, only commissioned power plants are eligible for GT approval and only licensed electricity producers may seek GT approval. Thus, a licensed producer of electricity using alternative energy sources must file an application with NERC to seek GT approval after the commissioning of its power plant. If a GT application is rejected, the electricity producer may contest NERC's decision in court.

In order to obtain GT approval the electricity producer must file an application with NERC using a standardized form along with the following attachments:

- 1) power of attorney to represent the producer, if necessary;
- 2) an explanatory note with detailed information about the business entity such as the form of the entity's ownership, the established power capacity of the generation equipment and characteristics of the generation equipment;
- 3) a calculation of the costs to produce electricity using the required standardized form;
- 4) a description of production costs including copies of contracts, expense calculations, a description of the expense calculations, information about the average number of employees, and information regarding the value of fixed assets on the balance sheet as of the date the application was submitted;
- 5) an explanatory note describing the construction of the power plant;
- 6) a copy of the technical specifications for connecting the new installations to the grid;
- 7) a registered declaration demonstrating readiness to construct and operate a facility or a certificate demonstrating a readiness to operate the facility;
- 8) a copy of the budgets for: reconstruction, equipment upgrades and replacing equipment (with either the producer's own funds or borrowed funds);
- 9) a document certifying that a required part of the goods and services purchased for the construction of the power plant are of Ukrainian origin (see 2.2.8. Local Purchasing Requirement).

The GT approval and application process is executed free of charge. NERC will consider the application within 30 calendar days from the date of its filing. After a decision is issued, NERC submits the GT application for approval at NERC's open meeting along with informing the applicant about the filing.

A decision regarding the approval of GT and the establishment of a GT rate is executed in the form of a NERC resolution for each electricity producer that applies for the GT program.

# 4

## Inspections Regarding Compliance With GT Requirements

According to Article 4 of the Ukrainian Law On the Main Foundations of State Supervision in the Business Sector, only Ukrainian law (primary legislation) may establish governmental supervision of business activities. Under article 12 of the Power Industry Law, NERC is responsible for supervising licensees and licensed electricity producers. To perform such regulation, NERC may freely check the compliance of licensees with licensing requirements (similar powers are provided by the NERC regulation approved by the Presidential Resolution of Ukraine, No. 1059/2011, of November 23, 2011).

However, the Power Industry Law does not expressly authorize NERC to check for the compliance of licensees with GT requirements. One may argue that compliance with the GT program is mandatory since only licensed producers are eligible for GT. Nonetheless, such verification powers are not expressly declared by Ukrainian law. Thus, any NERC actions and decisions related to compliance checks may be contested. Current regulations and law (laws of Ukraine, acts of the Ukrainian Cabinet Ministers, or NERC acts) describe inspection procedures for verifying that producers are not violating GT requirements. Probably, such checks will be conducted during compliance inspections of power generation licensing requirements. There are two types of inspections for verifying compliance with licensing requirements:

- planned inspections (may be conducted no more than twice a year unless electricity is not being produced);
- unplanned inspections.

➔ NERC conducts both quarterly and annual planned inspections. Notice of an annual inspection must be provided no later than December 1st of the year preceding the inspections. Notice of a quarterly inspection must be provided no later than the 25th day of the preceding quarter of an inspection. Inspection plans should be sent to licensees within ten business days after the inspection is approved. Licensees should receive written notification about an inspection at least ten days prior to the inspection. A planned inspection may not exceed 15 business days (for small business entities – the inspection may not exceed five business days).



Unplanned inspections may only be carried out if there are grounds demonstrating that a licensee is not complying with requirements. Grounds to justify an unplanned inspection include the discovery and confirmation of inaccurate information in mandatory reports filed by a licensee, testimony by third parties demonstrating a violation of licensing requirements, or the failure to promptly file mandatory reports without a justifiable cause. An unplanned inspection may not exceed ten business days (for small business entities the inspection may not exceed five business days).

After conducting an inspection, a NERC officer must report the inspection results. If licensing violations are discovered, NERC may either forgive the violations or impose sanctions. If an electricity producer fails to resolve violations in a timely manner, NERC may impose sanctions or even cancel the producer's license. Appropriate grounds for cancellation could include an inability on the part of a licensee to comply with licensing requirements or repeated violations of licensing requirements.

# 5

## Tax and Customs Duties Exemptions

Ukrainian law, in particular the Tax Code, provides a number of tax breaks which may be exploited while implementing a GT project.

### 5.1. Exemption From the Import VAT and Customs Duties

Under the Tax Code, the importation of equipment to Ukraine related to the generation of renewable energy is exempt from the 20 % value added tax (VAT). Likewise, the Ukrainian Law On Unified Customs Tariffs (Customs Tariff Law) exempts such equipment from customs duties.

The exemption from both VAT and customs duties is valid if the equipment in question will be used for producing electricity and if identical or similar equipment is not manufactured in Ukraine.

The list of equipment that falls into these categories is established by the Ukrainian Cabinet Ministers. The list entitled 'the List of Energy Saving Materials, Equipment and Their Parts which Are Exempt from Import Customs Duties and Import Transactions to Ukraine which Are VAT Exempt' was established by the Resolution of the Ukrainian Cabinet Ministers, No. 444, of May 5, 2008 (Resolution Number 444).

➔ Importers of equipment used in the production of energy from renewable resources are obligated to submit monthly reports describing the usage of the equipment. The monthly reports must be provided within three years and by the 5th day of each month following the month in which the equipment cleared customs. Three copies of the report must be provided to the applicable customs office.



Two copies of the report shall be forwarded to the tax office where the importer is registered and to the State Agency on Energy Efficiency and Energy Saving of Ukraine. These authorities supervise the designated use of equipment as specified by law.

If a producer improperly claims a tax exemption on imported equipment, the producer must pay the standard VAT plus a penalty based on interest owed to the government for the period the VAT was not paid. Specifically, the interest penalty is 120% of the National Bank of Ukraine's interest rate that was in effect on the date the tax would have been originally charged until the date the VAT was paid. Furthermore, the producer must pay the standard import customs duty for the imported equipment plus a penalty of 0.2% of the customs duty for each day the customs fee was not paid, up to and including the payment date.

Imported equipment that is used to generate power from renewable energy sources does not automatically qualify for VAT and customs duty exemptions. Producers must first have their equipment included on the List of Energy Saving Materials, Equipment and Their Parts which Are Exempt from Import Customs Duties and the Import of which to Ukraine is VAT Exempted (the List) by the Cabinet Ministers. Specifically, producers must collect and file a number of documents with the Ukrainian Ministry of Economic Development and Trade. This ministry is responsible for preparing a draft resolution for the Ukrainian Cabinet Ministers in order to introduce changes to the List.

A producer must submit the following items to the Ukrainian Ministry of Economic Development and Trade in order to have equipment included on the List:

- 1) An application listing the equipment along with their corresponding codes. The codes can be found on the Ukrainian Foreign Economic Activity Classifier of Goods. Also required is the quantity of equipment and its value;
- 2) power of attorney to represent the producer, if necessary;
- 3) a certified copy of a contract demonstrating the purchase of the imported equipment;
- 4) profit estimates for the power generation business including the estimated taxes owed for profits;
- 5) a certification that any imported equipment used for the production of energy is energy-efficient;
- 6) a document confirming the producer's commitment to use imported equipment exclusively for the production of energy accompanied by justifications and calculations;
- 7) a certification from the applicable ministry or central executive agency that similar equipment is not manufactured in Ukraine.

Resolution No. 444 does not set forth specific timeframes for completing the procedure to incorporate equipment on the List. Thus, it is impossible to foresee the duration of this procedure. Furthermore, the procedure for obtaining approval from the applicable ministry or central executive agency confirming that similar equipment is not manufactured in Ukraine lacks transparency and is rife with vague criteria.



## 5.2. Property Tax Benefit

Producers of electricity generated from renewable resources, as well as other legal entities and private citizens that own land, must pay a property tax. For property that is occupied by a power plant that is producing electricity from renewable resources, the property tax rate (both inside and outside local jurisdictions) is 25% of the standard property tax as defined by tax law.

➔ There are no official procedures for claiming this tax credit. However, in practice, it is necessary to prove that the land in question is zoned for the purpose of generating electricity from renewable resources. Thus, it is recommended that the zoning classification be documented in the sale and purchase contract and also in any land survey documentation.

## 5.3. Limits on Rental Payments for the Lease of State or Municipal Land

Section 288.4 of the Tax Code requires that the contract between the lessor and the lessee list both the cost of the lease and the requirements for making a lease payment. As a general rule, the annual lease payment for state and municipally owned land may not exceed 12% of the properties' appraised value.

But there is an exception for land occupied by power plants generating electricity from renewable resources. In such cases, the annual lease payment may not exceed 3% of the appraised value of state and municipally owned land plot. This also applies to land that is being used for manufacturing, distribution centers, electric substations and electricity networks related to the generation of power from renewable resources.

## 5.4. Exemption From the Tax Duty in the Form of a Special Mark-Up on Produced Electricity

According to the Tax Code, if a producer sells electricity outside the WEM, it shall pay a specially designated mark-up of the existing electricity tariff. The mark-up is 3% of all electricity sold excluding the VAT. However, this tax does not apply to electricity produced by qualified cogeneration installations, small hydropower plants or plants generating power from renewable resources.

➔ As noted above, the WEM is the sole purchaser of electricity at GT rates. This is the case since there is a lack of administrative or economic incentives to sell electricity directly to consumers. Since the Ukrainian electricity market is transitioning from a single buyer market to a balanced and bilateral contracts market, this tax benefit may be especially beneficial in the future.

## 5.5. Corporate Profit Tax Exemption

Under the Tax Code, profit generated from the main activity of companies that produce electricity exclusively from renewable resources is exempt from the corporate profit tax (the CPT) for ten years beginning January 1, 2011. The current tax rate on profits is 21%. Companies that generate electricity from both traditional and renewable resources are not eligible for the exemption.

Additionally, the CPT exemption is not applicable to profit generated from the sale of green electricity. The tax exemption only applies to the main activity of the company. The tax code does not define the 'main activity' of a company. Considering existing legislative acts, it is fair to assume that the tax authorities will take into consideration two factors for determining the main activity of a company:

- the company should have been founded for specific activities as reflected in the founding corporate documents and other related documents;
- most of the company's income should originate from the activities declared in the founding documents.

Profits that are eligible for the CPT may only be used for financing the following:

- an increase in production;
- reequipping fixed assets;
- implementation of new technologies related to the main activity of the taxpayer; and/or
- paying off a loan that was used to fund an increase in production, reequipping fixed assets or implementing new technologies related to the main activities of the taxpayer.

In the event of an improper claim for the corporate tax credit, the electricity producer must pay all back taxes in full. A sanction may be imposed retroactively as provided by law.

# Annexes

**Annex I.** Summary of Procedural Obstacles  
and Policy Recommendations

**Annex II.** Draft Legislation

**Annex III.** Sources of References



## Annex I. Summary of Procedural Obstacles and Policy Recommendations

The table below illustrates the main obstacles and risks associated with GT projects as well as policy recommendations for avoiding these problems.

№	Main bottlenecks and risks associated with GT projects	Recommendations
1.	Combined use of traditional and alternative energy sources will render power plants ineligible for approval of fixed minimal GT rates.	Establish fixed minimal GT rates for the simultaneous usage of conventional and renewable sources of energy. The tariff should apply to the share of renewable energy sources used in the production of electricity.
2.	State guarantee ensuring GT rates applies only to commissioned power plants. Thus, investors and developers assume the risk that the program could be cancelled before their generation facilities are constructed.	State guarantee regarding the establishment of GT (provided all legal requirements are met) should be granted at the initial stages of construction for power plants using renewable resources. For example, the guarantee may apply to projects which have obtained technical specifications for connecting to the grid.
3.	Significant upgrading of power plants that use alternative energy sources or construct additional facilities (in excess of 50% of their initial value) after 2014, 2020, and 2024 may result in the decrease of GT rates for the entire power plant by 10 %, 20 % and 30 % respectively. Since funds exempted from the corporate profit tax should be directed to the modernization of the company's facilities, implementing new technologies, and increasing production, the negative consequence of the scheduled GT rate decreases seems to be unreasonable.	Cancel the graduated reduction of GT rates for renewable energy plants that are significantly upgraded or that construct additional facilities. Alternatively, a reduced GT rate may be established for added capacity only.
4.	Because of an underdeveloped industry for manufacturing renewable energy power plants, a local purchasing requirement appears to be one of the main obstacles for implementing the majority of projects under GT.	Repeal the local purchasing requirement, decrease the mandatory amount of locally purchased equipment or postpone the activation of this regulation.
5.	The list of documents which are required for joining the Wholesale Electricity Market is not exhaustive, allowing the WEM to require additional documents at its discretion.	Amend the section of the Wholesale Electricity Market Agreement which governs joining the market so that an exhaustive list of documents are specified.

№	Main bottlenecks and risks associated with GT projects	Recommendations
6.	There is no formal procedure for finalizing contracts with the State Enterprise "Energorynok".	Adopt a procedure for finalizing contracts on the sale of electricity to the State Enterprise "Energorynok". This procedure may establish special provisions for producers of electricity from renewable energy sources.
7.	The procedure for exempting imported equipment and materials used for the construction of power plants producing electricity from renewable resources lacks timeframes and requires applying with a number of state authorities. This process significantly complicates or even makes the receipt of an exemption impossible.	Introduce timeframes for the consideration of submitted documents. Shorten the list of involved state authorities and required documents. The procedure for issuing decisions regarding the tax exemption should be simplified and free of charge.
8.	Legislation establishes an oppressively large number of permits related to the green tariff program and these permits cannot be obtained at the same time (the license, decision on establishing the green tariff, joining the WEM, etc.)	Enable the obtainment of several permits simultaneously (e.g. to the ability to obtain a license and have tariff green tariff established at the same time via a "one-stop shop" procedure) or reduce the number of permit documents required (e.g. exempt individuals that have already been granted GT, from the requirement of becoming licensed ).

## Annex II. Draft Legislation

### **The Draft Law on the Foundations of a Functioning Electricity Market in Ukraine, No.0916**

Draft Law No. 0916 is aimed at transitioning the Ukrainian electricity market from a single buyer market model to a bilateral contracts and balanced electricity market. Even though Draft Law No. 0916 does not directly affect the feed-in tariff framework, it may significantly affect the payment model for companies awarded GT.

According to the Draft Law, there will be a unified electricity market in Ukraine with the following subsections:

- the bilateral contracts market;
- the “day ahead” electricity market (the purchase of electricity for the day following the trade date);
- the balanced market - a market organized by the system operator to balance the amount of electricity that is produced and consumed

Electricity produced from alternative energy sources may be sold exclusively at green tariff rates on the “day ahead” market. All electricity offered by a producer for sale at green tariff rates on the “day ahead” market shall be purchased by the operator at the green tariff rate. The sale and purchase of electricity generated from renewable resources shall be executed on the basis of a contract between the “day ahead” market participants and the market operator. This transaction must occur during the period that the green tariff established for the applicable producer is valid. The standardized form needed to execute this contract shall be approved by the state regulator of the industry sector.

In order to compensate the operator for the difference between the selling price and the GT rates, Draft Law establishes a special fund (the Fund for the Distribution of Imbalanced Costs). The fund will be financed by electricity producers that use nuclear power, hydropower (excluding small hydro-power plants), pump storage power plants, power transmission enterprises and suppliers of imported electricity.

### Annex III. Sources of References

1. Commercial Code of Ukraine January 16, 2003, No. 436-IV.
2. Land Code of Ukraine of October 25, 2001, No. 2768-III.
3. Tax Code of Ukraine of December 2, 2010, No. 2755-VI.
4. Law of Ukraine on Alternative Energy Sources of February 20, 2003, No. 555-IV.
5. Law of Ukraine on Alternative Types of Fuel of January 14, 2000, No. 1391-XIV.
6. Law of Ukraine on Combined Production of Heat and Power (Cogeneration) and Use of Waste Heat of April 5, 2005, No. 2509-IV.
7. Law of Ukraine on Labor Protection of October 14, 1992, No. 2694-XII.
8. Law of Ukraine on Land Lease of October 6, 1998, No. 161-XIV.
9. Law of Ukraine on Lands of Power Industry of July 9, 2010, No. 2480-VI.
10. Law of Ukraine on Power Industry of October 16, 1997, No. 575/97-BP.
11. Law of Ukraine on Regime of Foreign Investment of March 19, 1996, No. 93/96-BP.
12. Law of Ukraine on Regulation of Construction Activity of February 17, 2011, No. 3038-VI.
13. Law of Ukraine on State Registration of Rights in Real Estate and Their Encumbrances of July 1, 2004, No. 1952-IV.
14. Law of Ukraine on Unified Customs Tariff of February 5, 1992, No. 2097-XII.
15. Order of Committee of Ukraine for Technical Regulation and Consumer Policy on Approving, Amending and Canceling of Regulatory Documents (Classifier of Professions 003:2010) of November 28, 2010, No. 327.
16. Order of the Ministry of Fuel and Energy of Ukraine on Approval of the Rules on Connection of Wind Power Plants to Electrical Networks of October 28, 2009, No. 570.
17. Order of the Ministry of Justice on Approval of the Temporary Regulation on Procedure of State Registration of Ownership Rights and Other Rights in Real Estate of February 7, 2002, No. 7/5.
18. Order of the Ministry of Labor and Social Policy of Ukraine on Approval of the Issue 1 "The professions, which are general for all types of economic activities" of Directory of Qualification Characteristics of December 29, 2004, No. 336.
19. Order of the Ministry of Regional Development, Construction and Housing and Utilities Sector of Ukraine On Approval of the Procedure on Provision of Construction Conditions and Restrictions for Construction on Land Plot, Their Components and Content approved by of July 7, 2011, No. 109.
20. Order of the State Committee of Ukraine on Land Sources on Approval of the Classifier of Types of Designated Purpose of Lands approved of July 23, 2011, No. 548.
21. Resolution of Cabinet of Ministers of Ukraine On Approval of the Implementation of Investment Projects of Construction of Wind Power Plants in the Autonomic Republic of Crimea and Mykolayivska oblast of February 19, 2009, No. 254-p.

22. Resolution of State Committee on Construction, Architecture and Housing Policy of Ukraine On Approval of the Rules on Determination of Value of Project and Research Works Performed in the Territory of Ukraine of December 14, 2000, No. 285.
23. Resolution of the Cabinet Ministers of Ukraine On Approval of the General Conditions on Conclusion and Performance of Contractor's Agreements in Construction approved by of August 1, 2005, No. 668.
24. Resolution of the Cabinet Ministers of Ukraine on Approval of the Procedure on Qualifying Construction Objects as IV and V Category of Complexity of April 27, 2011, No. 557.
25. Resolution of the Cabinet of Ministers of Ukraine on Approval of the List of objects of heightened environmental hazard of July 27, 1995, No. 554.
26. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedure on Commissioning of Completed Construction Objects of April 13, 2011, No. 461.
27. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedures Keeping Land Book and Book of Records and Right on Permanent Use of Land Plot, Land Lease Agreements of September 9, 2009, No. 1021.
28. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedure on Issuing of Permit for Works of High Danger and Operation (Use) of High Dangerous Machines, Tools, Equipment of October 26, 2011 No. 1107.
29. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Form of Application for Entities on Obtaining of Permission Documents of December 7, 2005, No. 1176.
30. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Certain Issues of Certification of Ownership Rights in a Land Plot of May 6, 2009, No. 439.
31. Resolution of the Cabinet of Ministers of Ukraine on Establishment of Powers of Executive Power Authorities and Executive Agencies of City Councils Regarding Regulation of Prices (Tariffs) of December 25, 1996, No. 1548.
32. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Issues of Import to Ukraine of Energy Saving Materials, Equipment and Their Parts of May 4, 2008, No. 444.
33. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Payment for Issue or Reissue by NERC of Licenses for Certain Types of Entrepreneurial Activities of July 13, 1995, No. 516.
34. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedure of Issuing by NERC of Licenses on Carrying Out Activity Related to Production, Transmission and Supply of Electricity, Combined Production of Heat and Electricity, Production of Heat at Heat and Power Plant and Installations Using Non-Traditional or Renewable Energy Sources of April 29, 1999, No. 753.
35. Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedure on Change of Designated Purpose of Lands Owned by Citizens or Legal Entities approved by the of April 11, 2002, No. 502.
36. Resolution of the Cabinet of Ministers of Ukraine Procedure on Approval of the Performance of Preparatory Works of April 13, 2011, No. 466.
37. Resolution of Cabinet of Ministers of Ukraine of December 5, 2007, No. 1396 on Approval of Procedure on Licensing Commercial Activity Related to Creation of Architectural Objects.



38. Resolution of the Ministry of Fuel and Energy of Ukraine on Approval of the Rules for Connecting Wind Power Plants to the Electrical Networks of October 28, 2009, No. 570.
39. Resolution of the Ministry of Regional Development, Construction and Housing and Utilities Sector of Ukraine on Approval of the Procedure on Development of Project Documentation for Construction of Objects of May 16, 2011, No. 45.
40. Resolution of Ministry of Regional Development and Construction of Ukraine of January 27, 2009, No. 47 on Approval of Licensing Conditions for Carrying Out Commercial Activity in Construction Related to Creation of Architectural Objects.
41. Resolution of the Ministry on Issues of Housing and Utility Sector Rules on Approval of the Granting and Agreeing Technical Conditions to Heating Networks of October 29, 2009, No. 334.
42. Resolution of the NERC Approval of the Methodology of calculation of value of works related to connection of electric installations of consumers to electric networks or licensee and other additional works and services related to licensing activity of December 25, 2008, No. 1522.
43. Resolution of the NERC on Approval of the Conditions and Rules on Carrying Out Entrepreneurial Activity Related to Transmission of Electricity through Local Electric Networks of June 13, 1996, No. 15.
44. Resolution of the NERC on Approval of the Granting and Agreeing Technical Conditions to Heating Networks of October 29, 2009, No. 1232.
45. Resolution of the NERC on Approval of the Instruction on Issue of Licenses by NERC on Carrying Out Certain Types of Entrepreneurial Activities of October 6, 1999, No. 1305.
46. Resolution of the NERC on Approval of the Procedure on Consideration of and Approval of Investment Programs of July 26, 2007, No. 1052.
47. Resolution of the NERC on Approval of the Procedure on Control over Compliance by Licensees of Conditions and Rules for Carrying Out Activity Related to Production, Transfer and Supply of Electricity, Combined Production of Heat and Electricity, Production of Heat at Heating Plant and Installations Using Non-Traditional or Renewable Energy Sources of May 19, 2011, No. 882.
48. Resolution of the NERC on Approval of the Rules on Connection of Cogeneration Installations to Electric Networks of January 21, 2006, No. 47.
49. Resolution of the NERC on Approval of the Template Agreement on Connection to Electrical Networks of Electrical Installations Producing Electricity from Alternative Energy Sources of July 16, 2009, No. 838.
50. Resolution of the NERC on Approval of the Procedure of Determining the Share of Raw material, Fixed Assets, Works and Services of Ukrainian Origin in the Value of Construction of Power Plants, Generating Electricity Using Alternative Sources of Energy of June 15, 2012, No. 749
51. Resolution of State Committee on Construction, Architecture and Housing Policy of Ukraine on Approval of the Rules on Determination of Value of Project and Research Works Performed in the Territory of Ukraine of December 14, 2000, No. 285
52. Draft law on Foundations of Functioning Electricity Market of Ukraine of June 6, 2012, No. 0916.

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