

## 5th Energy Policy Talk – 21 April 2016

# **DRAFT - Key recommendations on “How to achieve future investments in Renewable Energy in Ukraine - overcoming political, legal, regulatory & technical barriers”**

### Addressing the problem

This policy talk aims to tackle the subject of what it would take to get significant renewable energy investments flowing into Ukraine. To address the problem, let us put it into context:

- Ukraine’s primary energy supply is dominated by natural gas (approximately 40%), which makes the country highly dependent on Russian gas imports. A key priority of the Government of Ukraine is the substitution of natural gas with renewable energy and energy efficiency.
- The Ukrainian Government has adopted the National Renewable Energy Action Plan (NREAP) until 2020 which has a goal to increase the **share of renewables in the total energy consumption to at least 11% (includes large hydro)**. **In 2015, this share was at around 4.56% for renewables (including large hydro)**.
- It is estimated that **this target will require EUR 16 billion in renewable energy investments**: EUR 8.9 billion for power generation, EUR 6.7 billion for heating and cooling and EUR 0.56 billion for transport.
- Ukraine has been facing a **drastic decrease in renewable energy investment since 2014**. The country went from being the largest recipient of renewable investment in the region, to **almost non-existent investment flows** in 2015, based on the 2015 regional REN21 / UNECE report.

INO GATE experts have been actively interviewing both international and domestic private renewable energy project developers and investors to get insights on what is holding back investment in the renewable energy sector and more importantly, what has to be done to stimulate the large-scale investments needed to meet this target.

### Problems & solutions

The problems and recommendations are divided to two major target groups:

#### 1) Recommendations for the Ukrainian Government

The recommendations for the Ukrainian Government fall into three major categories:

- a) **Bankability** - issues related to project bankability i.e. what equity investors and debt financiers require to deploy financing in renewable energy projects (e.g. counterparty risk, power offtake, etc.)
- b) **Project development** – issues related to the ease of developing renewable energy projects in a given country (e.g. permitting, grid connection, etc.)

- c) **Overarching issues** – issues related to the wider context of governance that would in fact support investments overall (e.g. long-term stable and reliable policies and support systems, credit rating of the country, transparency and decentralization to local authorities)

**Issues concerning bankability are the most important to deblocking RES investments in Ukraine**

as this provides the necessary comfort and confidence to investors so that they can raise the necessary capital for their projects. Ease of developing projects signals a healthy environment to develop or acquire developed projects, however without mitigating bankability concerns, fully permitted projects will not be realized. The third category is part of a longer and wider process of reforms needed.

**2) Recommendations for international donors to support the Ukrainian Government**

Some key recommendations for the international donor / financial community have been developed that would give support to the Ukrainian Government in both areas mentioned above – bankability and project development.

The table below summarizes the problems and the solutions in terms of what barriers have been identified by (inter-) national investors in Ukraine and specific recommendations for introducing solutions to overcome these barriers that would allow a “de-blocking” of renewable energy investments in Ukraine.

This table forms the basis for the discussions and debate at the policy talk on 21 April 2016.

**Table: Summary of barriers to renewable energy investments in Ukraine as seen from the private investors’ point-of-view and recommendations**

Recommendations for the Ukrainian Government		
Category	Identified barriers in Ukraine	Possible solutions/recommendations
<b>Bankability</b>		
<b>Counterparty risk</b>	<p>A <b>credible counterparty</b> for the offtake is necessary to ensure project bankability. In the absence of such a counterparty (e.g. financially strong public, state-owned entity or industrial off-taker) a form of insurance is sought to mitigate such risk.</p> <p>Currently private investors in RES in Ukraine are exposed to a relatively high level of counterparty risk given the fragile state of the Ukrainian economy (credit rating CCC). Additionally, it is currently difficult for investors to find to insurance against counterparty risk. For example, it has been understood that MIGA* is no longer providing political insurance for project in Ukraine, while private insurance is very expensive and sometimes not available.</p>	<p>While the top level of Government and a number of ministries would need to be involved in overcoming the issue of counterparty risk, the Ministry of Finance could take the leading role.</p> <p>The following forms of credit enhancement can be assessed to mitigate counterparty risks:</p> <ul style="list-style-type: none"> <li>• <b>Bilateral and Multilateral agencies</b> – explore other possibilities with bilateral and multilateral agencies for insurance programs in Ukraine.</li> <li>• <b>Export Credit Agencies</b> – stimulate use of ECAs for commercial and political insurance provision.</li> <li>• <b>Sovereign Guarantee</b> – to the extent possible, a sovereign guarantee mechanism can be provided as a credit enhancement to projects.</li> </ul>

	<p><i>*MIGA is a Multilateral Investment Guarantee Agency – a member of the World Bank Group which offers political risk insurance and credit enhancement guarantees to help investors protect foreign direct investment in developing countries)</i></p>	<ul style="list-style-type: none"> <li>• <b>Government Funded Account</b> – sovereign government deposits funds pledged to project lenders which would be available for withdrawals to the extent a state owned off-take purchaser is unable to make necessary payments to the project company.</li> <li>• <b>Replacement of offtake counterparty</b> - replacement of state-owned offtake purchasers with other more creditworthy customers (e.g. international corporation, etc.)</li> </ul>
<b>Timing of Power Purchase Agreement (PPA) signing and green tariff</b>	<p>International practices guarantee the green tariff to power generating developers during financing phase of their projects and <b>before major investments in infrastructure are made</b>. This is of significant importance as without a signed PPA (and therefore guarantee power offtake), financiers do not have the confidence to deploy the needed capital.</p> <p>It has been identified that as per the current legislative procedures, a producer is obliged to first construct and commission the project after which it can sign a PPA and receive the green tariff which increases risks for project developers substantially.</p>	<p>Allow to <b>enter into conditional, time-limited</b> (2 to 3 years) PPA before commissioning of the RE installation. This would allow developers to raise the financing needed.</p> <p>In the absence of any firm progress from the developer on the financial structuring and construction of the project, the conditional PPA may be revoked.</p>
<b>PPA improve template</b>	<p>Developers are asked to sign a template PPA document, which (as per investor discussions and their feedback from financiers) is considered <b>not to be acceptable by most lenders</b>.</p>	<p>Revise PPA template and align it with international standards including proper protection clauses embedded in the document such as:</p> <ul style="list-style-type: none"> <li>• State <b>FIT duration</b> until 2030</li> <li>• <b>Guaranteed offtake</b> for the lifetime of the project, with regards to volume</li> <li>• Address <b>change-in law risks</b> with regards to FIT, exchange rate mechanisms etc.</li> <li>• Provisions for <b>curtailment</b> compensation</li> <li>• International <b>arbitration</b> in third country</li> </ul> <p>A possible way to do this is by adding it as secondary legislation.</p>
<b>Power offtake (PPA) duration extension</b>	<p>Power purchase Agreements (PPAs) should guarantee a certain <b>duration of guaranteed offtake</b> to make projects bankable i.e. remove both volume and price risk for the produced power.</p> <p>As per the current regulation, PPAs in Ukraine for renewable energy projects are</p>	<p>Amend the model PPA for the sale of electricity <b>establishing the validity of the PPA till the 1st January 2030</b> as the end of "green" tariff action in line with the Law "On electricity".</p>

	signed for one year with state owned enterprise “Energorynok”. The producer is obliged to re-sign the PPA annually. This process is not considered to be line with international power offtake contracting as it exposes investors/financiers with an additional source of project risk.	
<b>Balancing costs (for wind and solar developers)</b>	<p>Project financiers require visibility in terms of operating expenses (OPEX) during the operating period of the power plant. Any potential variation of costs is sought to be mitigated depending on the cost item at hand.</p> <p>It has been observed that as per new draft law on electricity market reform (Draft Law No. 4196) on the introduction of the Third Energy Package in Ukraine, balancing costs shall be borne by renewable energy producers.</p> <p>Private investors have voiced their concern that this is premature given the (a) lack of high quality wind data, (b) nascent level of RES penetration in the market, (c) lack of sufficient forecasting technologies and (d) lack of established Ancillary Service Provider and Guaranteed Buyer.</p>	<p>In consultation with the Energy Community, assess possible compromises, such as:</p> <ul style="list-style-type: none"> <li>• Identify parameters of the phasing approach learning from the EU best practice</li> <li>• A compromise by RES developers in Ukraine has been proposed to introduce balancing cost responsibility post 2020 i.e. once Ukraine reaches 11% RES penetration, as per the National Energy Strategy. Thereafter, a phasing in of balancing costs post 2020 in incremental basis is proposed.</li> <li>• Establish a maximum cap on balancing costs as 5% of revenue.</li> </ul>
<b>Project Development</b>		
<b>Grid access</b>	<p>Investor faces a <b>bureaucracy in the energy company responsible for the grid connection</b>. Negotiations, approvals, official mailing, etc. are lengthy and cumbersome processes. This factor may significantly lengthen the time needed to complete a project.</p> <p>Transparency in terms of connection points and available capacities is missing.</p>	<p>Provide guarantees <b>that grid connection will be awarded on time</b> by providing transparency in terms of technical specifications, connection points and available capacities (e.g. involving the <i>National Commission for State Energy and Utilities Regulation</i>; the Commission is responsible that developers get access in time).</p> <p>The Commission could implement a system which regularly reports the technical capabilities of the power grids in the various regions and inform of potential grid extensions etc.</p>
<b>Permitting</b>	<p>RES projects in the Ukraine usually go through a <b>lengthy and complex system of approvals</b>, permitting, and local government engagement that requires extensive time.</p> <p>The obtaining permits to start building as well as access to land plot for construction is non-transparent and unpredictable</p>	<p>Introduce <b>one-stop-shop for RES developers</b>, preferably with online capabilities to shorten duration of permitting procedures and reduce their number (e.g. single procedure/permit for capacity to be installed, allocation of connection costs, land zoning permits etc.)</p> <p>This could preferably be an independent central agency, with bird’s-eye view of the market</p>

	<p>process; procedures can be distinct in different regions.</p> <p>The legal deadlines are often not actually enforced. These negative factors can lead to corruption.</p>	<p>which should oversee the permitting procedure, ensure transparency and impartiality and should have the administrative obligation to reply within a few months.</p> <p>A small fee per application could help to finance the process.</p>
<b>Land zoning</b>	<p>According to the current Ukrainian legislation (LAND CODE OF UKRAINE) agricultural cannot be used for RES installations but must be converted to "lands of industrial, transportation, communications, energy, defense and other purpose".</p> <p>The procedures re-zoning land for RES are very complicated and time consuming</p>	<p>Adopt Draft Law 2529a from 08.26.2015 "On Amendments to Certain Legislative Acts of Ukraine about simplification procedures on land allocation and/or power generation facilities from renewable energy and/or biofuels"</p> <p>The Draft Law proposes to allow the construction of power and heat generation facilities from renewable energy/ biofuels:</p> <ul style="list-style-type: none"> <li>• Without changing the utilization purpose of land;</li> <li>• Without detailed plans of territories up to 01.01.2018</li> </ul>
<b>Develop capacity in regions for RE</b>	<p>Due to the limited foreign investment in the market during the past 3 years, there has been a decrease in good quality projects that are being developed. In addition, given the infancy of the sector in the country, there is a general shortage in the capacity to develop renewable energy projects.</p> <p>During our discussion with international investors, the necessity for good local project developers was singled out as, according to them, having a local partner is a requirement to tackle some of the local specific topics.</p> <p>In their previous experiences, investors have reported that some projects they have reviewed were sub-par (e.g. missing bird studies, sub-optimal detailed planning in terms of size of turbines etc.).</p> <p>Lastly, in some cases, local authorities are not aware yet of the benefits of RES.</p>	<p><b>Support development of credible projects by:</b></p> <p><u>Short term:</u></p> <ul style="list-style-type: none"> <li>• Mapping existing and perspective projects as well as potential of all kind of RES and available feedstock in regions.</li> <li>• Development of the road map for investors with clear description of all steps for RES projects implementation and relevant contacts of authorities involved in each stage of project.</li> </ul> <p><u>Medium term</u></p> <ul style="list-style-type: none"> <li>• Providing a series of consultations and seminars with local business, experts and government representatives to discuss the process of implementation of renewable energy projects in Ukraine.</li> <li>• Carrying out (locally focused) public awareness campaigns about tasks and targets of clean development and RES usage, aimed at improvement of social acceptance of RES in regions.</li> <li>• The availability of human capital to meet the needs of investors should be promoted at the state level.</li> </ul>

		<ul style="list-style-type: none"> <li>• The educational program should be updated for the relevant colleges and Universities in Ukraine in order to guarantee the availability of high-skilled specialists to be involved in renewable energy sector.</li> <li>• The state agency on energy efficiency and energy saving of Ukraine (SAEE) as organization in charge of implementation of the NREAP 2020 could take a leading role for these mentioned activities</li> </ul>
<b>Overarching issues</b>		
<b>National commitment on RES</b>	<p>While the country has made a national commitment to increase the share of renewables in the total energy consumption to at least 11%, the policy action seems to lack tangible midterm goals on how it shall achieve such targets. Considering the fact that large-scale renewable energy investments require over 10 years of payback, investors are also missing signals for a <b>long term goal</b> beyond 2030.</p>	<p>Develop sector-specific roadmaps covering:</p> <ol style="list-style-type: none"> <li>a) power generation</li> <li>b) heating (including CHPs)</li> <li>c) biofuels for transport</li> </ol> <p>The roadmap could include the following aspects:</p> <ul style="list-style-type: none"> <li>• Assess development pathways (scenarios per each sector)</li> <li>• Identify and categorize areas/projects in terms of priority</li> <li>• Assess economic and strategic implications for each pathway (security of supply and cost implications)</li> <li>• Identify regulatory changes imminent to implement pathways</li> <li>• Assess funding / investment opportunities for implementing projects</li> <li>• Identify and assign national &amp; local roles and responsibilities per sector</li> <li>• Develop action plans per sector (sub-sector) and monitoring procedures.</li> </ul>
<b>Heat market diversification with biomass</b>	<p>Ukraine has very good grounds to develop the biomass heating as well as CHP (combined heat and power) sector due to a) availability of district heating networks for heat and b) availability of domestic biomass resources for fuel</p> <p>However, one of the barriers to introducing biomass in the heat sector is the absence of a competitive heat market in Ukraine. Local district heating (DH) companies are local monopolies which are not incentivized to enter into long term heat offtake with developers. Only a few small scale heating or CHP projects exist.</p>	<p><b>Stimulate a diversification of fuel sources for the Ukrainian heat market</b> in line with international practices by:</p> <ul style="list-style-type: none"> <li>• Defining an acceptable model of heat market in Ukraine (including modification of existing and implementation of new legislation)</li> <li>• Promote use of biomass for CHP (not only heat) to promote higher efficiency use of energy.</li> <li>• Coordinate actions with a more radical reform of the heat system efficiency (e.g. with a focus on reducing network losses).</li> </ul>

<b>Biofuels for transport</b>	Transport fuel policy is not recognising the specificities of biofuels. There are no clear targets or measures to allow for the significant potential to be realised. For example, bioethanol-based fuels are more linked to the regulations for drinking alcohol. Lack of the recognition of proper biofuels results in excessive taxation.	Re-evaluate the status of biofuels from a classification and taxation perspective.
<b>Dividend repatriation</b>	Ability to <b>repatriate dividends</b> is very important investment criteria. Currently, dividend repatriation in Ukraine is not allowed as per the Currency Conversion and Exchange Transfer restrictions imposed by the National Bank of Ukraine.	Engage in <b>consultations with relevant parties</b> to address the currency restrictions and their effect on the business climate in Ukraine.
<b>Recommendations for international donors to support the Ukrainian Government</b>		
<b>National Energy Strategy and RES Commitment</b>		
<b>Resource Maps</b>	Technical information about Ukraine's RE potential and project pipeline is only available to a limited extend or considered unreliable unless done by a reputable international firm. Such information is also costly to obtain.	Undertake comprehensive assessment of Ukraine's RE potential by region/city (Ukraine's RE atlas) to provide data-driven basis for project development  Introduce project development facility to build on the results of RE atlas and include inter alia additional local resource assessments where needed, feasibility studies, permitting process, training programs.
<b>Financing possibilities on Ukrainian market</b>	Project developers – especially Ukrainian developers - need access to finance at reasonable rates.  The Ukrainian banks offer the corporate financing only and use credit lines of the international banks, such as the EBRD and the EIB. The main requirement for the recipient of a loan is 100% guarantee. The loans from Ukrainian banks foresee the high level of interest rates (up to 24%), that is not interesting for investor also.	Improve conditions for project financing in Ukraine and access to financing from the local banks.  Introduce a financing programme of renewable energy projects in Ukraine; on reasonable terms and conditions through the development of a special-purpose fund to this effect (including a grant scheme to reduce project development costs for developers)