



HARD TALK CONCLUSIONS: TOP 15 RECOMMENDATIONS FOR UNBLOCKING PRIVATE SECTOR INVESTMENTS IN SUSTAINABLE ENERGY

Summary of Barriers to RES Investments in Ukraine as seen from the Private Investors' Point-of-view and Recommendations for the Ukrainian Government & International Donors

The Hard Talk was held in Kyiv on 15-16 December 2016 with the participation of most key stakeholders related to the sustainable energy sector. The discussions focused on the draft discussion paper which set out a series of recommendations. The discussion paper was based on the April 2016 [REPORT "Outreach & Consultations with Major Renewable Energy Sources \(RES\) Project Developers and Private Investors: Insights and Recommendations on Facilitating Private Sector Investments in RES Projects in Ukraine"](#) funded by the EU's INOGATE Programme which was prepared by Revelle Group and has now been updated to reflect the latest situation as of December 2016.

As a result of discussions held, the present recommendations are considered the final agreed conclusions of the Hard Talk. They are grouped into three categories:

- A: Bankability issues (5)
- B: Project development Issues (4)
- C: Overarching issues (6)

For each recommendation, the specific barrier is shortly described followed by a possible solution and specific recommendation. The key responsible institutional players for taking actions to overcome the barriers are also set out.

| No. | Category | Identified barriers in Ukraine | Possible solutions/recommendations | Responsible institution & any donor involvement |
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| A | Bankability | | | |
| A.1 | Counterparty risk | <p>A credible counterparty for the offtake is necessary to ensure project bankability. In the absence of such 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 providing political insurance for project in Ukraine only to a limited extent, while private insurance is very expensive and sometimes not available.</p> <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> | <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 National Bank of Ukraine 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"> • Bilateral and Multilateral agencies – explore other possibilities with bilateral and multilateral agencies for programs in Ukraine that facilitate Risk Mitigation e.g. Partial Risk Guarantee (WB) or Political Risk Insurance mechanisms (MIGA) • Export Credit Agencies (ECAs) – stimulate use of ECAs for commercial and political insurance provision. • Sovereign Guarantee – to the extent possible, a sovereign guarantee mechanism can be provided as a credit enhancement to projects. • Government-funded Account –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. • Replacement of offtake counterparty - replacement of state-owned offtake purchasers with other more creditworthy customers (e.g. international corporation, etc.) or inclusion of Put/Call Options in case of offtaker’s default. <p>A more clear planning of how the support scheme will be financed (e.g. by nuclear and/or hydro) should be formulated and made public in order to give confidence that the guaranteed buyer will be have adequate funding to honour the support schemes.</p> | <p>National Bank of Ukraine</p> <p>Ministry of Finance</p> <p>World Bank / MIGA</p> |
| A.2 | Timing of Power Purchase Agreement | International practices guarantee the green tariff to power generating | The Draft Electricity Market Law addresses this concern by establishing the Green Tariff regime, according to which | Verkhovna Rada Committee on Fuel and Energy Complex, Nuclear |

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| | <p>(PPA) signing and green tariff</p> | <p>developers during financing phase of their projects and before major investments in infrastructure are made. This is of significant importance as without a signed PPA (and therefore guaranteed 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>most PPA terms are locked in after securing the necessary permits but before construction of the facility. A point that is still to be considered is to secure the Green Tariff as early as possible in the project development stage.</p> <p>The proposed regime partially addresses the barrier and is compatible with the recommendation to enter into agreement before commissioning of the RES installation. It should be adopted during the Second Reading as it is considered a fundamental support for investors to have this in place. Where possible, consideration for securing the green tariff earlier should be introduced.</p> <p>It should be noted that these locked-in terms should be withdrawn after a period of time that would be adequate for construction and commissioning.</p> <p>Regarding the specific amount of the feed-in tariff (FiT) itself, it should be able to change dynamically in order to better reflect market conditions (reduction of installation costs, number of pending applications, etc). However, any changes should be made to a pre-established and transparent methodology. A mechanism to monitor market and system conditions and periodically adapt the FiT should be set in place. This mechanism should not involve having to go through amendment of the law (since it is a cumbersome process) every time but should be through executive decrees or through an independent agency.</p> <p>It is also recommended that any FiT changes should have grandfathering provisions for existing agreements explicitly provided in the Law and should only apply for future Licenses. This will also increase early interest in investing (to lock-in favourable terms before possible amendments to the FiT).</p> | <p>Policy and Nuclear Safety</p> <p>Chairman of the Verkhovna Rada of Ukraine (to prioritize the voting for this draft electricity law in Verkhovna Rada)</p> |
| <p>A.3</p> | <p>PPA improve template</p> | <p>Developers are asked to sign a template PPA document, which (as per investor discussions and their feedback from financiers) is considered not to be acceptable by most lenders.</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"> Extension of the FiT duration, with the duration for the scheme to last for at least 5-10 years and duration of eligibility of a facility for support for at least 10-15 years. (This amendment is already foreseen in the Draft Electricity Market Law with the proposed extension | <p>NEURC Parliament</p> |

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| | | | <p>until 31 December 2029 and should be adopted during the Second Reading – see also point A.2).</p> <ul style="list-style-type: none"> • Guaranteed offtake for the lifetime of the project, with regards to volume • Address change-in-law risks with regards to FiT, exchange rate mechanisms etc. • Provisions for curtailment compensation • International arbitration in third country (possibly by Parliament adopting explicit legal provisions that allow this clause to be introduced into the PPA). <p>Following the adoption of the Draft Electricity Market Law, NEURC will have to develop the PPA template. In doing so, NEURC should take into consideration international best practices to establish legal certainty, transparency and legal equality.</p> | |
| A.4 | Power offtake (PPA) duration extension | <p>Power purchase Agreements (PPAs) should guarantee a certain duration of guaranteed offtake 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 signed for one year with state owned enterprise “Energoynok”. The producer is obliged to re-sign the PPA annually. This process is not considered to be in line with international power offtake contracting as it exposes investors/financiers with an additional source of project risk.</p> | <p>The Draft Electricity Market Law provides for an extension of agreements falling under the “Green Tariff” regime until 31 December 2029. This approach, insofar as it takes under consideration the depreciation of the asset, addresses the respective barrier and should be adopted during the Second Reading.</p> | <p>Verkhovna Rada Committee on Fuel and Energy Complex, Nuclear Policy and Nuclear Safety</p> <p>Chairman of the Verkhovna Rada of Ukraine (to prioritize the voting for this draft electricity law in Verkhovna Rada)</p> |
| A.5 | Balancing costs (for wind and solar developers) | <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 the Draft Law on Electricity Market on the</p> | <p>In discussing Balancing Costs, the following aspects should be taken into consideration:</p> <ol style="list-style-type: none"> 1. Increasing capacity in forecasting and modeling methodologies and tools is required. 2. Certain market maturity and market-specific conditions must be present (intraday and balancing market, balancing market with short bidding periods, market mechanisms that properly value the provision of | <p>Ministry of Energy and Coal Industry of Ukraine</p> <p>NEURC</p> <p>SAEE</p> |

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| | | <p>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>ancillary or grid support services for all market participants, etc.). The existence of these market conditions must be explicitly stated as a legal prerequisite to the introduction of balancing costs.</p> <ol style="list-style-type: none"> 3. Evaluation of RES penetration and impact on the market should be examined. 4. The introduction of ‘balancing groups’ should be examined as a way to manage risks. 5. Balancing costs should not apply retroactively to already commissioned facilities. 6. The balancing cost rates should be applied according to the year of commissioning of the installation. <p>The issue of Balancing Costs should be revisited after a more comprehensive analysis.</p> | |
| B | Project Development | | | |
| B.1 | Grid access | <p>Investor faces a bureaucracy in the energy company responsible for the grid connection. 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 that grid connection will be awarded on time 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 NEURC is responsible that developers get access in time).</p> <p>The NEURC 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> <p>A way to streamline the administrative process would be by pre-approval for specific sites that meet specific technical configurations within existing connection points / grid capacity.</p> <p>Rethink grid connection costs allocation to reduce the burden on the project developer and allow private contractors to perform connection works at market prices.</p> <p>Moreover, close institutional collaboration between grid operator and NEURC is necessary to coordinate administrative and technical requirements and achieve efficiency and transparency.</p> | <p>Ministry of Energy and Coal Industry of Ukraine</p> <p>NEURC</p> <p>Parliament</p> <p>Ukrenergo</p> |
| B.2 | Permitting | <p>RES projects in Ukraine usually go through a lengthy and complex system of</p> | <p>Introduce one-stop-shop for RES developers, preferably with online capabilities to shorten duration of permitting</p> | |

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| | | <p>approvals, permitting, and local government engagement that requires extensive time.</p> <p>Obtaining permits to start building as well as accessing land plot for construction are non-transparent and unpredictable processes; procedures can be distinct in different regions.</p> <p>The legal deadlines are often not actually enforced.</p> | <p>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>The one-stop-shop is envisaged as a unified point of contact and a methodology for the interface between the project developer and all administrative authorities involved in the pre-development process. Representatives of this unified point of contact could be located in all regions / municipalities.</p> <p>This could preferably be an independent central agency, with bird's-eye view of the market 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> <p>The example of countries that have established one-stop shop permitting (UK, Netherlands, Denmark, Ireland, etc) dictates that best practice consists of submitting Permit applications to one agency, which has control of the permitting process and is in position to align diverse interests. The target is to reduce the number of individual consents needed to offtake a project.</p> | |
| B.3 | Land zoning | <p>According to the current Ukrainian legislation (LAND CODE OF UKRAINE) agricultural land cannot be used for RES installations but must be converted to "lands of industrial, transportation, communications, energy, defence and other purpose".</p> <p>The procedures for 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"> • Without changing the utilization purpose of land; • Without detailed plans of territories up to 01.01.2018 <p>The Draft Law should be adopted since it addresses the barrier.</p> <p>The issue of zoning of biomass boilers should also be examined.</p> | Verkhovna Rada |

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| B.4 | Develop capacity in regions for RE | <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> | Support development of credible projects by: <u>Short term:</u> <ul style="list-style-type: none"> • Mapping existing and perspective projects as well as potential of all kind of RES and available feedstock in regions, supporting inter alia ongoing mapping of RES potentials in the Ministry of Regional Development. • 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 in the regions. <u>Medium term</u> <ul style="list-style-type: none"> • 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. • 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. • The availability of human capital to meet the needs of investors should be promoted at the state level. • 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. • The State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE) as organisation in charge of implementation of the NREAP 2020 could take a leading role for these above-mentioned activities. | SAEE |
| C Overarching issues | | | | |
| C.1 | National commitment on RES | <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-</p> | <p>It is clear that sustained political commitment is needed to achieve the 11% target by 2020, which should be reaffirmed in practice by concrete policy measures, legislative actions and detailed planning.</p> <p>Develop sector-specific road maps covering:</p> <p>a) power generation</p> | Ministry of Energy and Coal Industry of Ukraine Ministry of Regional Development NEURC SAEE |

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| | | <p>scale renewable energy investments require over 10 years of payback, investors are also missing signals for a long term goal beyond 2030.</p> | <p>b) heating (including CHPs) c) biofuels for transport</p> <p>The roadmap could include the following aspects:</p> <ul style="list-style-type: none"> • Assess development pathways (scenarios per each sector) • Identify and categorize areas/projects in terms of priority • Assess economic and strategic implications for each pathway (security of supply and cost implications) • Identify regulatory changes imminent to implement pathways • Assess funding / investment opportunities for implementing projects • Identify and assign national & local roles and responsibilities per sector • Develop action plans per sector (sub-sector) and monitoring procedures. | |
| C.2 | Heat market diversification with biomass | <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>Stimulate a diversification of fuel sources for the Ukrainian heat market in line with international practices by:</p> <ul style="list-style-type: none"> • Defining an acceptable model of heat market in Ukraine (including modification of existing and implementation of new legislation) • Rethink ownership regime, management and third party access to the transmission system • Work with municipalities and regions to build reliable biomass supply chains at local level which could encourage further conversion of local heat systems to biomass • Coordinate actions with a more radical reform of the heat system efficiency (e.g. with a focus on reducing network losses) including the soft measures of training of local technical personnel • Increasing options for private capital influx (through RES generation PPP, tendered concessions, ESCO participation or auctions) • Analyse conditions at the regional/municipal level and make a comprehensive roadmap for technical | <p>Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine</p> <p>Ministry of Agriculture</p> <p>Ministry of Finance</p> <p>SAEE</p> |

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| | | | <p>and regulatory modernization of the whole sector.</p> <ul style="list-style-type: none"> • Introduce a level playing field and transparency by monetizing subsidies. The proposed Energy Efficiency Fund, which is foreseen to address this issue, should be more actively pursued. | |
| C.3 | Biofuels for transport | <p>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.</p> | <p>Re-evaluate the status of biofuels from a classification and taxation perspective.</p> | |
| C.4 | Dividend repatriation | <p>Ability to repatriate dividends is very important investment criteria. Until June 2016, dividend repatriation in Ukraine was not allowed as per the Currency Conversion and Exchange Transfer restrictions imposed by the National Bank of Ukraine (NBU).</p> <p>However, in June 2016, the NBU Board decided to allow repatriation of dividends accrued to foreign investors for 2014-2015 in an effort to improve the investment climate in Ukraine.</p> | <p>Engage in consultations with relevant parties to address the currency restrictions and their effect on the business climate in Ukraine.</p> | National Bank of Ukraine |

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| C.5 | Resource Maps | <p>Technical information about Ukraine's RE potential and project pipeline is only available to a limited extent or considered unreliable unless done by a reputable international firm. Such information is also costly to obtain.</p> | <p>Undertake comprehensive assessment of Ukraine's RE potential by region/city (Ukraine's RE atlas) to provide data-driven basis for project development</p> <p>Introduce project development facility to build on the results of RE atlas, include inter alia additional local resource assessments where needed, feasibility studies, permitting process, training programs learning from the results of EBRD's USELF facility¹</p> <p>International Donors and IFIs could be instrumental in assisting in this highly technical field by providing technical assistance, building capacity and financing comprehensive mapping. The collaboration of the international community with SAEE and Ministry of Regional Development would be instrumental in moving this issue forward.</p> | <p>International Donors SAEE</p> <p>Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine</p> |
| C.6 | Financing possibilities on Ukrainian market | <p>Project developers – especially Ukrainian developers - need access to finance at reasonable rates.</p> <p>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 high interest rates (up to 24%), that are not very interesting for investors.</p> | <p>Improve conditions for project financing in Ukraine and access to financing from the local banks.</p> <p>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).</p> <p>The option of facilitating financing by inclusion of certain projects (e.g. retrofitting DH with biomass / CHP) under the eligible projects of the Energy Efficiency fund should be examined.</p> <p>Address financial management and budgeting rules in district heating companies and municipalities in order to encourage their role in attracting private investors at local level.</p> | |

¹ EBRD, Ukraine Sustainable Energy Lending Facility, Case Study, <http://www.ebrd.com/downloads/sector/sei/uself.pdf>