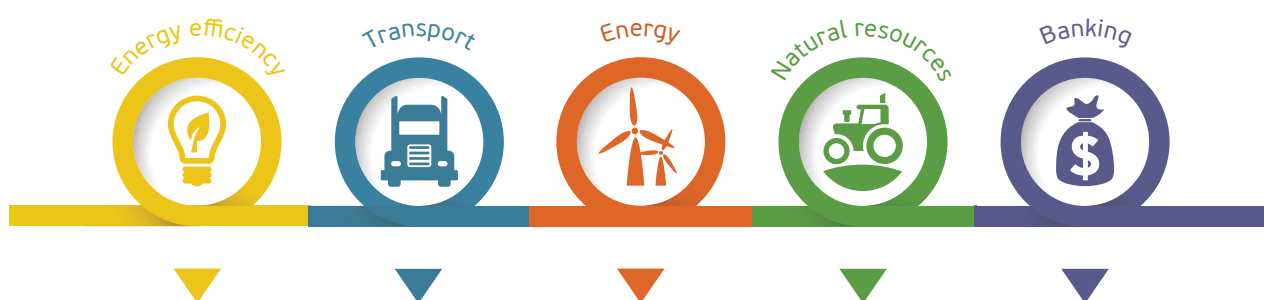


Roadmap for Ukraine:

Green bond guidelines for the creation of new market

Introduction

This roadmap aims to outline some of the challenges for accessing green finance in Ukraine. It provides an overview of fixed income solutions to finance low carbon development, clean transportation, adaptation to climate change, development of renewable energy, biodiversity protection and preservation, eco-innovation etc. Green bonds may be a critical tool for Ukraine's green finance and for the country to emerge as a green economy. The Ukrainian market has great potential. While the country is well known for its abundant natural resources, it has more to offer. Ukraine is currently undergoing dramatic restructuring of the energy sector as, geopolitical considerations have forced it to reduce dependency on energy imports, to boost fuel efficiency and to access energy sources that are more reliable.



Natural resources



Description of the issue: Agriculture in Ukraine secures approximately 10-11% of national GDP and employs a quarter of working people. The Ministry of Agrarian Policy and Food of Ukraine (2020 Strategy) is working to improve the competitiveness of Ukraine's agrarian business. Pursuing climate-resilient development that can simultaneously contribute to reducing greenhouse gas (GHG) emissions will require integrated approaches and substantial, long-term investment in agriculture, fisheries, and forestry.

Potential issuer: Ukrainian agri holdings that are listed on foreign exchanges. Projects such as energy from biomass or waste offer efficiency as well as carbon gains. Furthermore, the sector has potential for energy efficiency projects and building of new industrial buildings according to international green certification norms (LEED, BREEAM, Green Star, etc.).

Transport sector



Description of the issue: Ukraine has a great transit potential because of its geographical position. However, the discrepancy of Ukrainian transit conditions versus international environmental requirements with users of Ukrainian transit services having to cover Scope 3 emissions at their own expenses does not allow using this advantage. As the result, in 2014 compared to 2007, Ukrzaliznytsia (Ukrainian railway monopoly) has lost 70.5 million tons of annual international transit. By contrast, in-country transit cargo flows by rail account for 81% of the total.

Potential issuer: The most potential issuer in this sector is Ukrzaliznytsia. Total depreciation of the company's electric locomotives park 84%. The planned investments for the next 5 years for the purchase of passenger electric trains accounts for USD 430 million and USD 1.15 billion to purchase new locomotives (including more than 120 freight electric locomotives).

Energy industry



Description of the issue

The relative share of renewable energy in the overall national energy balance is just over 2%. According to the National Renewable Energy Action Plan, this needs to reach 11% by 2020, implying a total renewable energy use of 8,530 ktoe/year (357 PJ/year). In 2030 estimated renewable energy use would be 15,500 ktoe/yr (649 PJ/yr) in business as usual scenario. That would represent 17.7% of the estimated GFEC (gross final energy consumption) of 87,636 ktoe/yr. According to REmap 2030 Renewable Energy Prospects for Ukraine prepared by IRENA (2015, Abu Dhabi), in order to achieve the goals established by the NREAP, the total investment needs in renewables until 2030 will be up to USD 5.0 billion per year on average. Spending at USD 2.5 billion per year is required to fulfill the Reference Case, and an extra USD 2.5 billion per year would be needed to develop REmap options.

Potential issuer: The biggest company in the industry, DTEK, that owns brown business, but has serious & credible green growth ambitions - these need green (bonds) finance! Is a strategic holding company that manages three operational sub-holding companies with assets in coal production, thermal energy generation and distribution, as well as alternative energy and gas production.

Energy efficiency



Description of the issue

The biggest problem of the energy sector in Ukraine is inefficient use of energy resources for heating up the household sector, that loses 60 percent of energy or 3 billion in USD each year. In 2015-2016 this was financed by the State budget through accumulation of external debt. Ukraine is heavily dependent on energy imports, leading to high risks due to the current geopolitical situation. The total investment's need in the household sector for energy efficiency improvement measures amounts to ~ USD 57 billion leading to a gas consumption reduction potential of 11.4 billion m3 (according to the reports of the Ministry of Regional Policy).

Potential issuer: State Agency on Energy Efficiency and Energy Saving of Ukraine creates the State Specialized Financial Institution «Energy Efficiency Fund» or State Energy Efficiency Fund (SEEF). The Fund is a separate legal organization, so it can also be the issuer of green bonds with a state guarantee.

Banking sector



Description of the issue: The banking system of Ukraine is represented by three state banks and some international banks. All of them have eco efficiency credit programs. These banks are: Oschadbank, Ukreximbank and Ukgasbank.

Potential issuer: Understanding the importance of improving energy efficiency and the role of renewable energy sources Ukgazbank bank launched an initiative to become a green bank financing a range of low carbon projects. The expected goal is to support the generation of more than 500,000 GW of clean energy annually, and to prevent the release of 1.6 million tons of carbon dioxide per year.

Conclusion:

The growth of the renewable energy and energy efficiency sectors in Ukraine has become one of the first priorities both for the public and commercial sector. However, this type of development requires significant capital inflows, mostly through external private financing. Green bonds are recognized globally as an effective tool of the international financial market to raise funds for low carbon projects and assets. Finally, many projects eligible for green bonds have important Sustainable Development Goals (SDG) impacts.