

Addressing the compounded food and energy crisis in Ukraine through innovative technologies and adaptive agricultural practices

Nadejda Khamrakulova,
Economic Affairs Officer



**SUSTAINABLE ENERGY
WEEK 2023**

BUILDING RESILIENT ENERGY SYSTEMS



UNECE

Addressing the compounded food and energy crisis in Ukraine through innovative technologies and adaptive agricultural practices



UNECE component of the Joint SDG Fund Development Emergency Modality–Response to the Global Crisis on Food, Energy, Finance project in Ukraine

Objective: the Government of Ukraine is equipped with an objective and comprehensive analysis of the biofuel production potential to solve the compound food and energy crisis in Ukraine

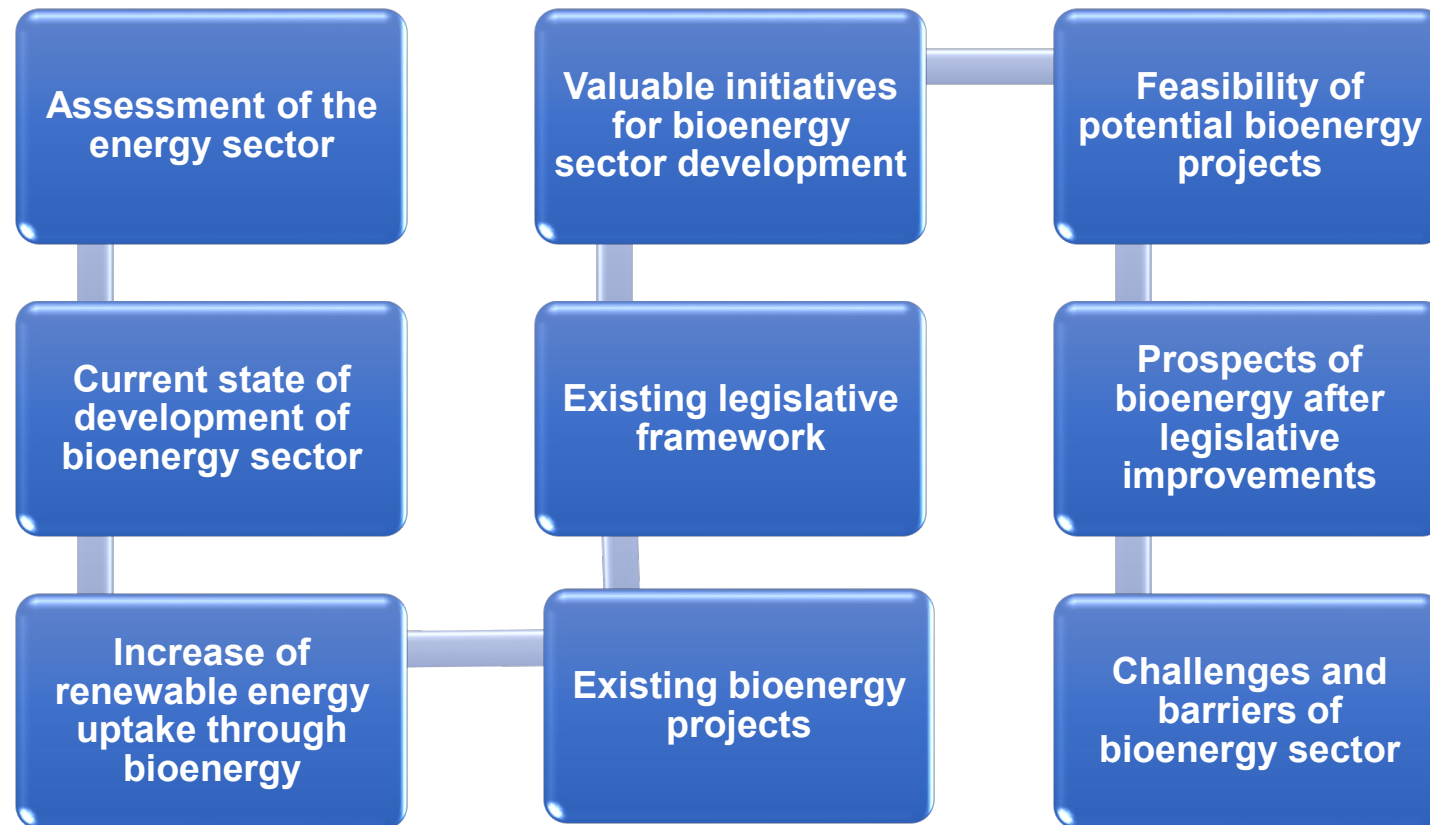
STUDY

Analysis of the normative and institutional framework in support of increasing the renewable energy uptake with special attention to bioenergy

EVENT

Multistakeholder dialogue on how to use the untapped renewable energy potential, choice of a technological focus for the demonstration project and recommendations on needed normative and institutional changes

Analysis of the normative and institutional framework in support of increasing the renewable energy uptake with special attention to bioenergy



Analysis of normative and institutional framework in support of increasing the renewable energy uptake with special attention to bioenergy



UNECE



Main drivers of bioenergy development:

- Agricultural and agro industrial production as the main source for the country currently and in the near perspective;
- Energy dependence on import and constantly growing prices on natural gas force to look for alternative fuels;
- Necessity of upgrading and increasing of energy efficiency of the obsolete heat and power utilities infrastructure;
- EU sustainability and energy saving targets – increasing demand for biofuels from Ukraine;
- Favourable taxation and recent legislative initiatives;
- Incentives for electricity and heat produced from agricultural residues.

Analysis of normative and institutional framework in support of increasing the renewable energy uptake with special attention to bioenergy

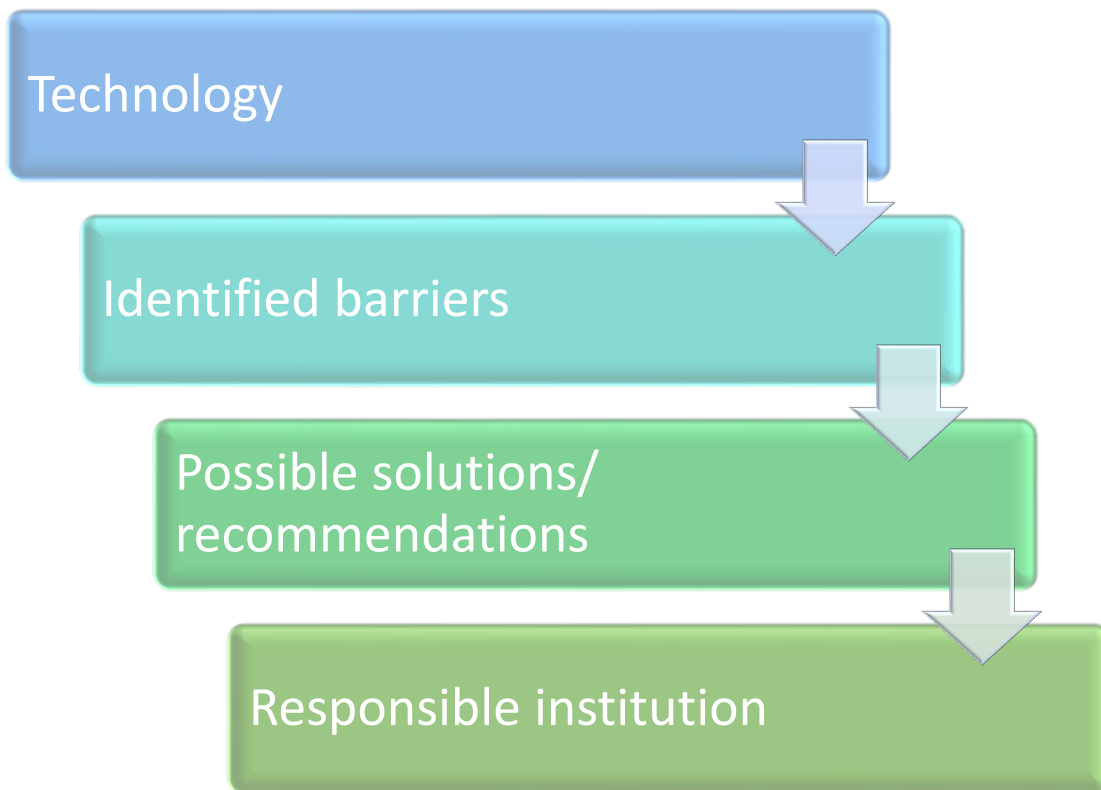


UNECE



Technology	Identified Barriers
Biomethane/biogas	<ul style="list-style-type: none"> • The Register for issuing Guarantee of Origin has not yet been operational; mechanism for issuing a guarantee of origin for biomethane in transport has not been implemented. • Absence of state goals and obligations regarding the share of biomethane use in transport. • Absence of legislation supporting for biomethane producers to connect the gas distribution system (GDS). • Lack of legislation providing incentives for the use of biomethane in the transport and agricultural sectors. • Lack of regulations on technical requirements for the use of biomethane as motor fuel in transport. • Due to Martial law in Ukraine, there are natural gas export limitations.
Bioethanol	<ul style="list-style-type: none"> • There is no regulation for mandatory share of bioethanol in gasoline. • Lack of technical regulations for alternative fuel with a bioethanol content of more than 10 per cent by volume to add about 85 per cent vehicles. • High excise tax rate on gasoline with a content of at least 5 per cent by weight of bioethanol – 100 EUR per 1000 litres. • Requirement for the full excise duty rate tax bill for the transportation of bioethanol.
Biodiesel	<ul style="list-style-type: none"> • High rate of excise tax on biodiesel and its blends – 106 EUR per 1000 litres. • Lack of support for alternative fuel with a biodiesel content of more than 7 per cent by volume. • There is no requirement for a mandatory share of biodiesel in diesel fuel. • There is no export duty on rapeseed. This reduces incentives to process rapeseed inside of the country. • There are no regulations and stimulus for the collection of used cooking oil that can be used for the production of biodiesel.
Solid biomass	<ul style="list-style-type: none"> • The need for biomass and biogas boiler plants, CHP plants/TPPs to pay obligatory CO2emissions tax. • Lack of regulations on the management of felling forest residues. • Lack of incentives for the production of heat from solid biomass for population due to subsidized natural gas tariffs. • Absence of a biomass exchange in Ukraine. • Monopoly of the district heating operators and lack of incentives for independent producers to access heat networks. • Absence of the “energy crops” definition in Ukrainian legislation. • Expensive and short-term land lease agreements for the cultivation of energy crops. • Imperfect land auctions procedure for land leases to cultivate energy crops. • Production of electricity from biomass is not supported by the mechanism of guarantees of origin. • Absence of auctions for the allocation of state support for bioenergy projects. • Lack of balancing capacities and electricity storage systems to balance the energy system with a high proportion of renewable energy sources.

Analysis of normative and institutional framework in support of increasing the renewable energy uptake with special attention to bioenergy



Technology	Possible solutions/recommendations	Responsible institution
Biomethane/ biogas	<ul style="list-style-type: none"> • Implementation of the biomethane Register¹. • Development of regulatory support schemes for biomethane usage in transport and agriculture. • Regulatory adjustment of GDS with the integration of consumers into larger consumption clusters, determination network operators to create conditions to receive the reverse flow of biomethane. • Inclusion of biomethane consumption goals (5-10 per cent of natural gas consumption in transport by 2030) in the National Energy Strategy and National Renewable Energy Action Plan, as well as goals for the number of gas filling stations. • Development of technical requirements for the use of biomethane as motor fuel (CNG i LNG). • Ensuring the possibility to obtain a guarantee of origin without connecting a biomethane producer to GTS or GDS. • Development of support mechanism enabling export of biomethane. 	<ul style="list-style-type: none"> • Ministry of Energy • Ministry of Infrastructure, State Agency on Energy Efficiency and Energy Saving of Ukraine • Ministry of Agrarian Policy and Food • Ministry of Economy

Addressing the compounded food and energy crisis in Ukraine through innovative technologies and adaptive agricultural practices



Project webpage: <https://unece.org/food-energy-crisis-ukraine>

Follow up activities and next steps:

- Technical assistance and analyses of policies for bioenergy strategy
- Capacity building and multistakeholder dialogues on how to use RE potential
- Assistance in developing bankable RE proposals

Thank you!

Nadejda Khamrakulova
nadejda.khamrakulova@un.org



SUSTAINABLE ENERGY
WEEK 2023

BUILDING RESILIENT ENERGY SYSTEMS



UNECE