

Biofuels in the Ukraine

Overview of Biofuels in the Ukraine

Ukraine is the second largest country in Europe with an area of more than 600.000 km² (of which approx. 70% is agricultural land) and a population of 45.5 million. Owing to the high levels of consumption, it is also one of the largest energy markets and plays a key role in the transit of natural gas from Russia to the EU. Notwithstanding domestic fossil resources (approx. 85 Mtoe in 2012) and the significant reduction in consumption as a direct effect of a series of economic crises that hit the country over the past decade, Ukraine is a net importer of energy (> 30% of TPES), mainly from Russia, Kazakhstan and Belarus.

The interdependency among former Soviet republics being a long lasting and occasionally difficult to overcome heritage, in recent years the growing instability of the region is being jeopardizing Ukrainian energy security. In order to limit its dependency on imports, Ukraine has put in place a comprehensive set of strategic and policy measures to diversify sourcing and complement the energy mix. Particular importance is given to the promotion of energy efficiency and RES, which – however - currently accounts for approx. 2.5% of TPES. Natural gas substitution is, understandably, particularly emphasized.

Ukraine – one of the largest cereals exporters globally – has extensive fertile farmlands and well developed agro-food industry. Apparently, this abundance in sustainable lignocellulosic feedstocks and the opportunity to develop dedicated crops fosters the ambition to meet the 10% RES-T target mainly relying on domestic production of biofuels (77% of total RES-T). The deployment of domestic capacities lagging behind, Ukraine is currently a major supplier of lignocellulosic feedstock to the EU, with 17 companies that are implementing voluntary certification schemes.

Biofuels policy, regulations, market development

Ukraine prioritized the development of RES as a key energy security strategy. The relevant regulatory framework has improved significantly over the past years, yet several bottlenecks are still to be removed. The main legislative framework for the use of RES dates back to 2003 with the law “On Alternative Energy Sources”. The production and consumption of biofuels, including the transport sector, is regulated by the law “On Alternative Types of Fuel” (2000), which has been amended in 2014 setting targets for the transport sector (mandatory 7% bioethanol blend from 2016). These provisions are currently not enforced.



Country information

Ukraine	
Population	45,490,000
GDP (per capita)	\$ 3,082.5
Final Energy Consumption (Mtoe)	61.46
Final Energy Consumption in Transport (Mtoe)	10.33
Final Energy Consumption in Transport Share	17%
Biofuels share in Transport Fuels	41 ktoe
Fuel-Mix	Gasoline, Diesel, Bioethanol

Since 2010, Ukraine is a Contracting Party of the Energy Community and is therefore committed to contribute to the establishment of a single European energy market and to aligning to the acquis communautaire. In this framework, the National Renewable Action Plan (NREAP) has been adopted in 2014, foreseeing that the share of RES shall represent 11% of the gross final energy consumption in 2020, with a mandatory 10% target for the transport sector. However, several measures related to biofuels that are set out in Directive 2009/28/EC have not yet been transposed, in particular the sustainability criteria for biofuels and bioliquids. RES are supported through feed-in tariffs, while administrative procedures are still cumbersome and the use of RES in transport is hindered by gaps in the regulatory framework.

The use of biofuels in transport is currently very low, notwithstanding the 7% mandatory blending. Despite the relevant capacities of the Ukrainian alcohol industry, production of bioethanol is limited (60-90 MI), with ephemeral use in transport. Presently, there is no commercial scale biodiesel production.

However, according to the NREAP, approx. 320Mtoe bioethanol and 70Mtoe biodiesel shall be made available on the Ukrainian market in 2020. The NREAP envisages that such demand shall be – ideally – entirely covered by domestic production, which represents a challenge as well as an opportunity for investors and entrepreneurs all along the relevant value chain.

Advanced biofuels demonstration and R&D projects

Energy related research in Ukraine is still catalysed by the nuclear sector, with nuclear safety being a priority. However – and notwithstanding the scarce state funding for research in energy technology – there is number of programmes and institutions conducting research, including main Universities and Institutes of the National Academy of Sciences. It shall be noted that research is currently focusing more on solid biomass (combustion, gasification); efforts are being made also to assess biomass potential and socio-economic implications. Noticeably, the energy sector restructuring in Ukraine sees active involvement on the civil society as well as that of the international Donor Community (EU, EBRD, OECD, IEA, IRENA, the World Bank, etc.).

Biofuels ministries, organisations and agencies in Ukraine

Ministry of Ecology and Natural Resources
Association of Alternative Fuel and Energy Market Participants
Bioenergy Association of Ukraine
Renewable Energy Agency
Ukrainian Association of Producers of Alternative Transport Fuels

Key biofuels industry and research stakeholders

National University of Life and Environmental sciences of Ukraine
Scientific Engineering Centre Biomass
Ukrainian Biofuel Suppliers
Institute of Market Problems and Economic & Ecological Research of the National Academy of Science
Odessa National Mechnikov University
Innovative center of the National Academy of Sciences of Ukraine
Institute of Renewable Energy of National Academy of Science
Institute of Engineering Thermophysics of National Academy of Science