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ESTABLISHING AN EMISSIONS TRADING SYSTEM IN UKRAINE: CHALLENGES AND PROSPECTS

The establishment of an Emissions Trading System (ETS) in Ukraine is an essential element of aligning national climate policy with European standards and meeting international obligations. The strategic goal for Ukraine is to gradually integrate into the EU, as stipulated by the Association Agreement and as a result, to join EU Emissions Trading System (EU ETS). However, the path toward this objective is constrained by the realities of war, limited financial and governmental institutional capacity, and the structural specifics of the Ukrainian economy.

Unlike the EU, where carbon pricing was introduced as part of a stable economic environment and a functioning low-carbon policy architecture, Ukraine is attempting to build its ETS in conditions of war-related destruction and energy insecurity. As of November 2024, direct economic losses to Ukrainian industry caused by Russian military aggression exceed $14.4 billion, and over 500 large and medium enterprises have been damaged or destroyed [1, p. 13]. The actual figure is likely higher, as information about all enterprises – particularly those located in temporarily occupied territories – is incomplete or unavailable.

Ukraine has traditionally exhibited higher carbon intensity in its production processes compared to the European Union. At the same time, the Ukrainian economy remains strongly export-oriented. In 2024, exports accounted for 29.4% of the country's GDP [2]. The EU continues to be Ukraine's primary trading partner, but the introduction of the Carbon Border Adjustment Mechanism (CBAM) by the EU poses risks for the future of this trade relationship.

Ukraine's ability to supply affordable low-carbon electricity is limited, and the operation of the national power system remains unstable due to ongoing Russian attacks. Most information related to the energy sector is currently classified. Forecasting the future composition of

Ukraine's energy system is highly uncertain, as continued military hostilities effectively preclude investment in new generation capacity.

Moreover, Ukraine's greenhouse gas monitoring, reporting, and verification (MRV) system was suspended in 2022. There is no publicly available national emissions registry, and the regulatory infrastructure for emissions certification remains incomplete. Without a fully functioning MRV, the reliable operation of an ETS is impossible.

Ukraine lacks a sufficient number of qualified specialists capable of supporting the operation of an Emissions Trading System (ETS). As a result, the country will require extended timeframes for testing the new system, along with mandatory training programs and knowledge exchange initiatives with European counterparts.

Ukraine's system of public governance remains institutionally underdeveloped and is characterized by corruption risks. The Ministry of Environmental Protection and Natural Resources currently lacks the capacity and expertise required to establish and administer a carbon allowance market – essentially the core function of an Emissions Trading System (ETS). Despite support from international partners, the Ministry has not been able to fully launch the system for monitoring, reporting, and verification (MRV) of greenhouse gas emissions. This raises concerns about its ability to lead the future implementation of an ETS.

Ukrainian enterprises lack sufficient internal financial resources to support industrial decarbonization, and they do not have access to climate finance instruments comparable to those that have been operating in the European Union for decades. As a result, Ukrainian companies face the risk of having to address decarbonization challenges on their own. In contrast, ArcelorMittal's climate strategy, for instance, envisions covering 50% of its decarbonization costs through public funding [3, p. 3].

An additional factor that must be taken into account when designing an Emissions Trading System (ETS) in Ukraine is the volume of CO_2 emissions directly related to military activities. According to research by the Initiative on GHG Accounting of War, the greenhouse gas emissions associated with the war increased by 30% in 2023 – equivalent to an additional 55 million metric tons of CO_2 – compared to the previous year [4, p. 3]. Over the three years of war, total conflict-related emissions are estimated at 230 million metric tons of CO_2 equivalent [4, p. 3].

These massive climate impacts are primarily driven by active combat operations, the use of heavy military equipment and artillery, and large-

scale attacks on energy infrastructure. As a result, Ukraine faces a paradoxical situation: while emissions from industrial and energy sectors are declining, the war itself has become a major source of greenhouse gas emissions.

The EU Emissions Trading System (EU ETS) is designed to reduce carbon emissions in a cost-effective manner. However, Ukraine faces a different reality: the country has already significantly reduced CO_2 emissions from industrial activities due to prolonged deindustrialization and the ongoing war since 2014 [5, p. 44].

For Ukraine, the key challenge is not immediate emissions reduction but the adaptation of its economy to eventual integration into the EU ETS. Ukrainian enterprises must gain practical experience operating within an ETS, while the state must establish appropriate governance institutions and financial instruments to support decarbonization. The carbon intensity of production should be gradually reduced to levels that ensure the competitiveness of Ukrainian companies in both the EU market and the EU ETS framework. In this context, emissions reduction will be a secondary outcome – driven by the broader transition of Ukraine's economy toward low-carbon production technologies.

The scheme below outlines potential pathways for addressing the challenges discussed above, aimed at developing an Emissions Trading System (ETS) in Ukraine that would not hinder the country's post-war economic recovery.

Both the Ukrainian government and the business community support the need to implement an Emissions Trading System (ETS) and other components of EU climate policy. This is essential not only for Ukraine's future European integration but also for maintaining access to the EU market for Ukrainian producers. Ukraine should aim to achieve outcomes comparable to those of the EU, while taking into account national circumstances and leveraging best European practices to accelerate the integration of its ETS with the EU ETS.

The future of the Ukrainian economy lies in transitioning to low-carbon production technologies that will enable domestic enterprises to reach competitive levels of greenhouse gas emissions relative to their European counterparts. The introduction of a national ETS is just one of the instruments that will contribute to achieving this objective.

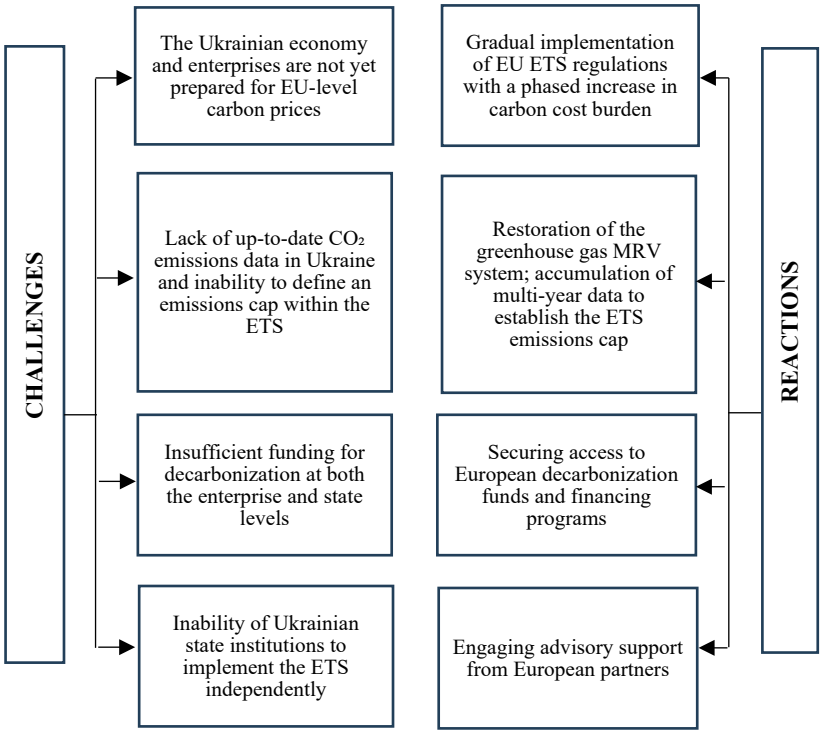

Figure. Key challenges in establishing Ukraine's Emissions Trading System and potential pathways for their resolution

Source: author's own elaboration

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