



## UKRAINE RESILIENCE NETWORK

RENEWING UKRAINE'S  
ENERGY  
INFRASTRUCTURE

AN INITIATIVE FROM

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Ukraine's energy infrastructure stands in sore need of renewal and updating. On 24 February 2022, as Russian troops invaded Ukraine, Ukrainian engineers from the country's national electric grid operator disconnected the country's power system from the Russian power network to which it had always been inextricably linked. By 16 March near-total disconnection had been achieved and the principal elements of the Ukrainian national electricity grid had been synchronised with western and European standards, so that Ukraine could now engage in energy transfer transactions with national grids across Europe. Ukraine achieved energy liberation from the Russian aggressors in a matter of a few weeks. Normally such work would take years. This was a heroic effort on the part of Ukraine's patriots working on her national grid, that prevented Russian militants from overrunning Ukraine and destroying her democratic institutions through energy extortion. Henceforth, Ukraine could achieve energy supplies not available domestically from free Europe, thereby contributing to the campaign to keep Ukraine independent and free.

Nevertheless Ukraine's energy infrastructure was virtually all of it constructed in the Soviet era, and incorporates colossal inefficiencies that must be addressed as Ukraine progresses with her continued inexorable march towards European Union standards and membership and the goals of Euro-Atlantic integration with the European community of nations and the North Atlantic Treaty Organization. The Soviet energy supply system was premised upon a series of outdated substations and network connections that are very familiar to the Russian aggressors and were the subject of a comprehensive regime of destruction in the winter bombing campaign of 2022 to 2023. Although again heroically the Ukrainian patriots battled to reconstruct the substations and energy infrastructure as a result of the Russian bombardment with long-range hypersonic cruise missiles, much was not repaired and Ukraine's energy infrastructure remains in an *ad hoc* state of disrepair. Moreover there are a series of inefficiencies built into the Ukrainian energy network, which leads to people in residential apartment buildings opening their windows in summer because the communal heating cannot be turned down in the face of Ukraine's searing hot

summers; while in winter the requisite communal heating necessary to keep families suffering through Ukraine's cruel winters is not always available. Children and families are freezing cold indoors, as energy supplies cannot reach them efficiently.

These issues are of particular concern to the United States, with whom we have a series of Congressional and other federal government contacts working on a bipartisan basis to maintain the independence and freedom of Ukraine and working tirelessly to ensure that the US public funds supporting Ukraine's domestic budget in the context of Ukraine's existential struggle for independence from Russian neo-totalitarian imperialism are wisely and well spent. Inevitably a substantial proportion of those funds are being deployed to purchase electricity and maintain power to Ukraine's metropolitan communities as people continue to live and work through atrocious wartime conditions. Nevertheless it is a legitimate imperative to ensure that the generous US and other international taxpayer donations to the Ukrainian budget are spent as efficiently as is possible in a wartime environment. US and other international taxpayers supporting the war in Ukraine are entitled to expect value for money.

Moreover energy efficiency is an imperative if Ukrainian public institutions are to reform themselves in a way consistent with meeting the benchmark criteria for EU membership. Hence comprehensive reform of the Ukrainian energy sector is a priority, including a countrywide investigation of the inefficiencies known to exist within the domestic energy sector and providing advice on both institutional and infrastructure reforms. Mercifully the Russian aggressors have ceased their relentless attacks upon the Ukrainian energy infrastructure that prevailed as a military policy in the 2022 / 2023 winter fighting season as a means of terrorising Ukraine's civilian population, principally because they have run out of long-range accurate ballistic missiles and they are not replenishing them. Therefore there is now an opportunity to investigate on a more comprehensive basis, with international oversight, the damage done in the course of last winter's campaign against Ukraine's energy infrastructure without concern that such attacks might recommence with anywhere near the same degree of intensity. At the same time the repair works to Ukraine's Soviet-era electricity substations can be studied and recommendations can be devised for how to supersede this antiquated energy architecture with a series of micro-grids or other contemporary energy technology appropriate to an aspiring EU member state in the twenty-first century.

In the course of these infrastructure reforms, the current centralised system of energy supply within Ukraine might be transitioned into a more needs-based localised or federalised system of energy distribution, without corresponding modern infrastructure congruent with this model. The Institute for Strategy, Resilience and Security has comprehensive expertise to undertake the sorts of desktop and site-based reviews, planning, interviews, recommendations and policy formulations to undertake this sort of work, in conjunction with the Ukraine Development Trust that offers intimate familiarity with the domestic Ukrainian economic, political and energy environment in partnership with relevant UK, European Union and United States expert partners determined to work with Ukraine in her process of Euro-Atlantic integration with the overriding aim of keeping Ukraine independent and free.