ASTERS

Guide on Legal and Regulatory Framework

for Renewable Energy and Energy Storage Projects in Ukraine

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Executive Summary

Ukraine's renewable energy and energy storage sectors present significant opportunities, especially within the context of the country's European Union (EU) alignment and post-war reconstruction. Ukraine's energy system is undergoing major transformation, shifting from a legacy of carbon-intensive power towards a liberalised electricity market integrated with EU standards and targets. Investors, developers, and lenders will find a dynamic yet complex landscape influenced by **market reforms, new regulatory frameworks, and war-related transitional measures.**

Key highlights include:

- **Market Liberalisation & EU Integration:** Ukraine has liberalised its electricity market since 2019, introducing free wholesale trading and **aligning with EU energy directives**. Full synchronisation with the European electricity grid (ENTSO-E) has been achieved, laying the groundwork for future **expanded electricity trade** and integration into Europe's energy market.

- **Renewable Energy Market:** Renewable sources (primarily wind and solar) are expanding their share in Ukraine's energy mix. **Support schemes** such as feed-in tariffs (now closed to new projects) have historically driven **over 8 GW of renewables**. New support mechanisms — **auctions and a market premium system** — are being planned to align with EU state aid rules, offering long-term revenue stability.

  "Green" auctions will be held regularly until 31 December 2034 (as amended by Law No.4777-IX dated 10 February 2026), following the schedule set by the Cabinet of Ministers of Ukraine. In addition, the Cabinet of Ministers of Ukraine also determines the lot size, price caps for applications, and the location of the facilities eligible for "green" auction.

  By Order No. 298-r dated 01 April 2026 (with amendments introduced by Order No. 508-r dated 27 May 2026) the CMU approved annual support quota of 1 GW with breakdown by technologies (WPP – 700 MW, SPP – 50 MW, SPP+ESS – 100 MW, other types of alternative sources: biogas, biomass, small hydropower – 150 MW), and auction schedule for 2026 (auctions will take place in autumn), as well as determined indicative forecast annual support quotas for 2027–2030. Maximum bid prices were set at the same level as for 2025 (EUR 0.08 for solar and wind; EUR 0.12 for other RES). Quotas are given to projects at the whole territory of Ukraine, except the area of active combat operations or area temporarily occupied by Russian Federation.

- **Grid Connection & Infrastructure: Grid connection processes are improving** through updated codes and laws (e.g. **Law No. 4777-IX** (Feb 2026)) enabling **flexible and hybrid connections**, where multiple generation and storage units can share a single connection point with **clear technical standards**. This helps streamline project development and reduce costs, **especially for hybrid solar-plus-storage projects**. The concept of separately defined "allowed capacity" (contractual grid capacity) versus installed capacity now permits oversizing of generation or storage behind one connection, letting investors maximise project potential while respecting grid limits. Innovations like **smart grids and microgrids** are also being encouraged to boost resilience, especially given wartime damage to infrastructure.

- **Permitting & Land Use: Permitting processes for renewable and energy storage projects are detailed but increasingly streamlined.** Key steps include securing land (which often involves **long-term leases** with local authorities or private owners), conducting an **Environmental Impact Assessment (EIA)**, obtaining construction and operational permits, and acquiring **necessary licenses** (e.g. generation licenses and new energy storage licenses if a battery system over 5 MW is included). Recent reforms have simplified some permitting steps – for example, emergency legislation during the war has **sped up permits for small distributed generation and eliminated import taxes on certain types of renewable equipment** to stimulate rapid capacity additions.

- **Tax & Incentives: Tax policies** are supportive, including **VAT and customs duty exemptions** for certain types of imported renewable energy equipment (these were extended until 1 January 2029 as a wartime measure to reduce project costs and attract investment). The standard corporate income tax rate of 18% applies. The supply of electricity, including electricity generated from renewable energy sources, is subject to VAT at a rate of 20% for supplies within the domestic market of Ukraine and at a zero rate in the case of export. Investors can benefit from depreciation allowances and the stable tax environment. The Government is also developing **financial support programs and green financing** initiatives for energy projects, including interest-free loans for distributed generation (household solar/storage systems) and state-backed lending schemes for energy efficiency upgrades – indications of robust policy support for renewables and storage.

- **Cross-Border Trade: Cross-border electricity trading with the EU has begun at limited scale** due to war-related grid constraints. Ukraine's recent grid synchronisation with Europe in 2022 allows exports/imports of electricity via explicit auctions; however, **wartime priorities and physical limitations** are capping exports to a few hundred megawatts. Over time, as **Ukraine fully integrates** with Europe's electricity market and stability returns, cross-border trade could significantly expand, making Ukraine a potential **important power supplier to Europe. Hydrogen export** is a longer-term prospect: though **no dedicated hydrogen export regime exists yet**, Ukraine's vast renewable resources and strategic location position it as a future **green hydrogen exporter to the EU** once a regulatory framework is developed (draft hydrogen market laws are under consideration).

- **Environmental & Social Standards: Strict environmental and social regulations** apply to energy projects in Ukraine, largely aligning with EU norms. Environmental Impact Assessment (EIA) is mandated for significant renewable energy installations (e.g. a large solar or wind farm typically requires EIA approval **before construction**). Public consultation and oversight ensure environmental and community impacts are addressed. **Social safeguards** (such as land acquisition fair compensation and community engagement requirements) are increasingly important, especially when projects seek financing from international lenders. Developers should be prepared to implement **Environmental and Social Management Plans (ESMPs)** consistent with **international standards (e.g. IFC Performance Standards, EBRD policies)** in addition to meeting Ukrainian law – crucial for investor confidence and **compliance with international funding requirements.**

- **Investment Framework & Project Structures:** Ukraine has updated legislation to **facilitate investment and private-public partnerships (PPP)** in infrastructure and energy, recognising the need for massive capital injections for post-war reconstruction. **New PPP law (2025)** simplifies and expedites partnerships between investors and public entities, offering frameworks for long-term **concessions and risk-sharing arrangements**. Foreign investors are generally granted **national treatment** and are protected from expropriation under Ukrainian law. **However, war-related restrictions** (like capital controls limiting profit repatriation and currency exchange) currently present obstacles, which investors must account for. Recommended project structures typically involve establishing a **special-purpose Ukrainian company** to hold assets, contracts, and licenses, potentially complemented by political risk insurance or donor guarantees to mitigate war-related risks until stability is restored.

- **Wartime Measures & Special Considerations:** The ongoing war (and martial law in Ukraine) have impacted the energy sector and necessitated **special legal measures**. These include emergency laws to expedite critical infrastructure repairs, temporary price caps on electricity markets to control costs, leniency on regulatory requirements (e.g. deferral of non-urgent compliance obligations), and fast-tracked procurement processes for urgent power equipment without tenders in some cases. **Investors must carefully navigate these temporary rules** – which, while mitigating immediate challenges, can affect project economics and timelines. War-related risks (physical damage to assets, energy price volatility, currency restrictions, and force majeure events) remain high. Despite this, **international support and recovery funds are being mobilised** (e.g. donor-backed war-risk insurance schemes and **reconstruction guarantees), indicating that the groundwork for post-war investment recovery is being laid.**

- **Key Risks & Mitigation:** Legal risks in Ukraine's renewable energy sector span **regulatory changes, off-taker creditworthiness, grid limitations**, and **political/macro-economic uncertainty** due to the war. **Mitigation strategies** include securing **long-term offtake agreements or contracts-**

for-difference to protect against price caps or revenue volatility; obtaining **war and political risk insurance**; diversifying revenue streams (e.g. providing grid services to the TSO for additional income); ensuring **local community support** to avoid opposition; and structuring the venture to qualify for **international funding and guarantees** where possible (which can provide both financial backing and oversight for best practice compliance).

Overall, **Ukraine's renewable energy and storage regulatory framework is evolving into an investor-friendly model**. It combines short-term measures to adapt to wartime exigencies with long-term reforms aimed at EU harmonisation and sustainable growth. In the near term, **the market will be marked by transitional challenges (war impacts, interim support measures)**. However, committed investors can find **significant opportunities** by positioning themselves early, capitalising on support schemes and restoration efforts, and planning for **post-war expansion** when stability returns.

1 Overview of Ukraine's Renewable Energy Market & Electricity Regime

Ukraine's **electricity sector has undergone a profound market reform** in recent years, changing from a state-controlled model to a liberalised, investor-oriented system. Today's market is structured with multiple segments (bilateral contracts, day-ahead and intraday exchanges, balancing, and ancillary services), and features unbundled roles across generation, transmission (the Transmission System Operator, **TSO**), distribution (regional **Distribution System Operators, DSOs**), and supply companies. These reforms align Ukraine's market with EU energy laws, bringing greater competition and transparency.

Wartime context: Despite the progress, since 2022 the Russian invasion has forced emergency measures in the energy sector. The grid is now synchronised with the EU's ENTSO-E network, ensuring Ukraine can import or export power with Europe, but **wartime grid stability measures, price caps, and supply controls** have been implemented to keep the lights on domestically. These interventions, while necessary during the emergency, are temporary and expected to be lifted once conditions normalise. The war underscores both risks (physical damage to infrastructure, supply disruptions) and the **strategic importance of renewable energy** to bolster Ukraine's energy security and rebuild a resilient, modern grid.

Post-2019 Market Liberalisation: The Electricity Market Law (effective 2017, fully implemented in 2019) dismantled the old single-buyer system in favour of **competitive power trading platforms**. Now, generation companies sell electricity to suppliers and large consumers via **direct contracts or organised markets** (spot exchanges, balancing market, etc.). This has attracted independent power producers and traders, and allowed industries to source power through commercial agreements like power purchase agreements (**PPAs**). **Day-ahead and intraday markets** coordinate short-term supply and demand, while a **balancing market** (run by the TSO) manages real-time system stability. Additionally, the **Guaranteed Buyer** (a state-owned off-taker) still exists to purchase renewable electricity under legacy feed-in tariffs, though its role will diminish as Ukraine transitions to auctions.

Key Market Participants & Regulators: Several entities and authorities shape the operating environment:

- **Energy Producers:** These include state-owned giants (e.g. **Energoatom** for nuclear, **Ukrhydroenergo** for hydro) and private developers for thermal and renewable projects. They generate power and must be **licensed by NEURC** (the regulator) to operate in the market.
- **Transmission System Operator (TSO): NPC Ukrenergo** is Ukraine's state-run TSO, managing the high-voltage grid, balancing supply and demand, and organising cross-border flows with neighbouring countries. Ukrenergo also acts as **market settlement administrator** for key segments and must ensure fair grid access for new projects.
- **Distribution System Operators (DSOs):** Regional distribution companies deliver electricity to consumers and connect new distributed generation (e.g. small-scale solar). DSOs are responsible for providing **grid connection** conditions to new projects and ensuring local grid stability.
- **Suppliers and Traders:** These licensed companies buy electricity from producers or markets and sell to end-users or trade across borders. Many offtake contracts (especially for large industrial users) are priced in hard currency or indexed to mitigate the local currency's volatility, a key concern for foreign investors.

- **Ministry of Energy:** The central government authority sets energy policy and implements **EU energy acquis** (the body of EU energy law). It coordinates Ukraine's **Energy Strategy** and transitional measures during the war.

- **National Energy and Utilities Regulatory Commission (NEURC):** NEURC is the independent regulator overseeing tariffs, licensing (for generation, supply, and now energy storage), grid codes, and market rules. It enforces regulations, resolves disputes, and ensures **a level playing field**. **Investors must actively engage with NEURC processes**, as licensing and tariff decisions significantly impact project bankability.

- **Other Authorities: The State Inspectorate of Architecture and Urban Planning** ("DIAM" in Ukrainian) or **local architectural and building control authorities issue building permits** and ensures compliance with construction norms. For environmental matters, the **Ministry of Economy, Environment and Agriculture of Ukraine** oversees Environmental Impact Assessments.

Renewable Energy's Role: Renewable generation (notably **wind and solar**) has grown to around **11% of Ukraine's electricity generation**, and remains vital despite war-related setbacks. Ukraine's **2030 National Energy and Climate Plan** (2024) targets **~27% renewable electricity by 2030**, reflecting EU aspirations. **Wind and solar** are expected to drive this growth, given abundant resources (vast wind potential in coastal/steppe regions and high solar irradiance in southern Ukraine). **Biomass, biogas, and small hydropower** provide additional opportunities.

Renewable Support Schemes: Historically, Ukraine's generous **"green tariff"** (feed-in tariff, FIT) spurred rapid renewable investment in the 2010s, making Ukraine a regional renewable hotspot. This **FIT (denominated in EUR and guaranteed until 2030)** attracted billions in wind and solar projects, but also left the state **burdened by payments** when the grid was oversupplied. As a remedy and in line with EU rules, **competitive auctions** were mandated to replace FITs for new projects. **However, the introduction of auctions has been delayed** – first by policy debates and then by the war. The first auctions took place 2024-2025. These auctions were not successful and attracted limited interest among investors. In 2025, reforms were passed to improve auction conditions (larger quotas, indexation to EUR, etc.). In 2026 annual support quota of 330 MW with breakdown by technologies was approved with further increase to 1 GW and auctions are planned to be held in autumn of 2026.

In 2025 a market premium scheme was introduced: RES producers were opt to sell on the market and receive a premium from the state if market prices are below a reference level. This scheme was mainly designed for companies willing to switch for FIT to improve cash flow, but this scheme has not become widespread due to regulatory flaws.

Utility-scale projects may sell power on the market (merchant sales) or through corporate PPAs. Recent legislation changes (CMU Resolution No. 644 dated 20 May 2026) **allow the conclusion of cPPAs outside of electronic auctions** for two categories of producers: 1) Renewable energy producers that do not receive state support under the "green" tariff; 2) Electricity producers operating distributed generation facilities (located near the consumer, with a local impact on the grid). For both categories, participation in electronic auctions is now voluntary, enabling the conclusion of direct long-term bilateral contracts, including corporate PPAs. The adopted changes allow RES producers without a "green" tariff **to build business models on market terms, pave the way for on-site and near-site PPAs for distributed generation, enhance the energy resilience** of enterprises during periods of security risks, **provide businesses with price predictability and hedging opportunities, create favorable conditions for private investment** in new renewable energy projects.

EU Policy Alignment & REPowerEU: Ukraine's pivot towards the EU has profound implications for investors. The country is a member of the Energy Community and, since June 2022, an EU candidate country, which means **Ukrainian energy laws are being harmonised with EU standards** – from grid code reforms to environmental regulations:

- **Renewable Energy Directives (RED II & RED III):** Ukraine is incorporating these directives' targets and principles. RED II set an EU-wide 32% renewable energy target by 2030 (Ukraine's policies mirror this ambition in national plans). The newer RED III raises the EU target to 42.5%–45% by 2030; Ukraine's **energy strategy is expected to reflect similar higher ambition** to remain aligned with its future EU obligations. This alignment will lead **to modern support schemes (e.g. auctions and guarantees of origin), grid integration rules, and market access rights** for renewables in Ukraine that match EU norms.

- In April 2026, Ukraine **adopted the National Programme for EU Alignment to harmonize national laws with the EU acquis**, specifically targeting the energy sector under Chapter 15. This program

focuses on transposing the RED II and RED III Directives through two key legislative milestones:

- December 2026: Deadline for a framework law on Renewable Energy Sources (RES) to incorporate core RED III provisions into national legislation.
- December 2027: Deadline for comprehensive secondary legislation, covering sustainability criteria for biofuels, RES consumption methodologies, joint projects with EU states, and the regulation of renewable energy communities.

This structured roadmap also addresses permitting acceleration, professional certification, and statistical transfers, signaling a fast-tracked regulatory overhaul to meet EU accession standards.

- **The Electricity Integration Package (EIP)**: Enacted through Law No. 4834-IX in April 2026, marks a decisive step in **unifying Ukraine's electricity market with the EU**. By adopting European regulations on market coupling and network codes, the law integrates Ukraine's day-ahead and intraday markets into the common European liquidity pool. This shift ensures transparent price formation, automatic capacity allocation, and reduced volatility, offering businesses greater predictability and fewer barriers to cross-border trade.

  Beyond trading, the reform **facilitates Ukraine's accession to European balancing platforms**, enabling cross-border balancing and bolstering grid resilience. This integration fosters competition, attracting new participants to the balancing market while lowering overall costs. Full technical and market-level synchronization with ENTSO-E is supported by rigorous testing and oversight from the NEURC, ensuring the system meets strict European compatibility standards before the official launch. The law also **introduces innovative business models such as demand response, flexibility services, and citizen energy communities**, empowering consumers to participate actively in the market. These modern concepts create new opportunities for RES investors, storage operators, and tech companies to manage congestion and trade energy locally. **Full integration into the EU internal market is anticipated by early 2028 or 2029**, pending the completion of technical milestones and secondary legislation.

- **REPowerEU & Green Recovery:** In response to energy security challenges and the war, the EU's REPowerEU plan emphasises accelerated renewable deployment and interconnection. Ukraine's integration into the European energy system is seen as mutually beneficial – with Ukraine poised to become a major green energy supplier to the EU over time. For investors, this signals **strong political support and future cross-border export potential**, especially in Western part of Ukraine which are closest to EU markets.

Overall, **Ukraine's renewable energy market is at a turning point**. The fundamentals – rich resources, large post-war demand for new generation, and EU entry commitments – create a compelling long-term growth story for investors. **Short-term challenges (e.g. war-related disruptions, transitional regulation)** need careful navigation, but the **strategic upside is substantial,** especially as Ukraine evolves into a European renewable energy frontier.

Investor Takeaway

Ukraine's electricity market is increasingly aligned with EU standards, promising a stable, transparent framework over the long term. For investors and lenders, the post-war recovery and EU integration will likely unlock **new opportunities** – from participating in planned renewable auctions and **cross-border energy trade** to introducing innovative technologies (like **battery storage and hybrid systems**). In the short run, **wartime conditions** and transitional regulations require caution, active risk management, and possibly **international support (insurance, guarantees)**. Yet, those who enter early and help shape the market could gain significant **first-mover advantages** as Ukraine rebuilds and accelerates its green energy transition.

2 Grid Connection Requirements & Infrastructure

Connecting a renewable or energy storage project to Ukraine's grid is a **critical path for project success**. This section outlines grid connection processes, key technical requirements, and recent regulatory developments – all crucial for investors and developers to understand. Smooth grid integration can significantly impact a project's timeline and budget, making early planning and compliance essential.

2.1 Grid Connection Process & Technical Requirements

Standard Connection Procedure: Ukraine's grid connection procedure is centrally governed by the **Transmission System Code** (for high-voltage projects, typically large power plants connecting to the national grid via Ukrenergo) and the **Distribution System Code** (for projects connecting at regional or local distribution levels via DSOs). Project developers must follow a multi-step process:

- **Application for Technical Conditions (TC)**: The project company (often a local special-purpose vehicle, or SPV) submits a grid connection application to the relevant network operator. **If connecting at high voltage (e.g. 110 kV)**, this is Ukrenergo (the TSO); for lower voltages (e.g. 35 kV or below), it's usually a regional DSO. By law, the network operator must respond within a short timeframe (e.g. **10 business days** for standard DSO connections, depending on project complexity) with **Technical Conditions**. These conditions outline the required scope: the assigned point of connection, maximum capacity allowed to feed into the grid, and any **necessary grid reinforcements or technical upgrades** (like new lines or substation equipment).

- **Connection Agreement**: If the developer accepts the Technical Conditions (which might involve paying a **standard connection fee** usually based on capacity and distance), the next step is signing a **Connection Agreement** with the DSO or TSO. This contract formalises each party's responsibilities – the grid operator typically handles upstream network upgrades, while the project developer funds and builds any dedicated connection assets (like the line from the project site to the grid point). **The Connection Agreement is a critical milestone for investors**, as it confirms that the project has secured a route to market for its electricity.

  The maximum validity period of the Connection Agreement and Technical Conditions shall be 3 years from the date of execution of the agreement and may be extended for the same period, however the total validity period of the technical conditions and the connection agreement may not exceed 6 years.

- **Grid Code Compliance**: Renewable energy plants must be designed and built to **meet all applicable grid code requirements** at the connection point. This includes technical capabilities for **voltage and frequency control, automatic disconnection and fault-ride-through performance, ramp rate limitations, remote dispatch communication** with grid operators, and installation of certified metering equipment. The grid operator will typically specify these requirements in the Technical Conditions. Ensuring compliance can involve additional costs (e.g. grid compliance studies, specific inverters or control systems), so investors should factor these into project budgets early.

- **Testing & Commissioning**: Upon completing construction and grid line works, the developer must undergo testing of the plant in coordination with the TSO/DSO to verify it meets the Technical Conditions and safety standards before receiving permission for **commercial operation**. Finally, to actually inject power into the grid and sell electricity, the project must obtain a **generation license** from NEURC (national regulator), which can be applied for once the plant is ready and grid connection is in place.

Based on **NEURC Resolution No. 352** and the Distribution Systems Code, the **connection timelines are structured as follows:**

1. Accelerated Procedure (Martial Law)

Timeline: ~10 business days after application and payment.

Scope: Generating facilities and energy storage units.

Requirement: Temporary connection only.

Post-War Transition: Must be converted to a permanent connection per the Distribution Systems Code within 6 months after martial law termination.

2. Regular Procedure (Standard)

- **Standard Connection: 45 to 90 calendar days** (depending on capacity). Standard connection - connection of a customer's electrical installation with capacity of 5 kW to 50 kW to active DSO networks within 300 meters (straight-line distance), with technical parameters, power tiers and cost determined by the regulator.
- **Non-Standard Connection: 120 to 350 calendar days** (depending on capacity and required grid upgrades).

Completing a grid connection can be **time-consuming**, especially for larger projects requiring significant grid upgrades. It is prudent for developers and lenders to proactively engage with the grid operator and exhaustively clarify the connection requirements and timeline as early as possible, potentially negotiating **phased or interim connection solutions** if available (for example, connecting at flexible connection initially while full grid upgrades proceed).

2.2 Recent Legislative & Regulatory Developments

Modernising Grid Codes: To align with EU grid standards and accommodate new technologies, Ukraine has introduced important updates. **The Distribution System Code was amended in late 2025**, introducing:

- **Contractual (Allowed) Capacity**: New concepts of "allowed [contractual] export and import capacity" at connection points, which must be specified in the connection documentation. This clarifies the difference between a plant's installed capacity and the maximum capacity it is permitted to feed into or draw from the grid. For investors, this means **greater clarity in designing projects** – e.g. oversizing a solar farm or battery is permissible as long as exports do not exceed the agreed limit, enabling **flexible operation** (charging a battery or curtailing output to manage grid limits).

- **Internal Networks & Shared Connections**: A formal framework is now in place for "internal networks" and **shared-use connections**, such as multiple generating units or a hybrid project behind one point of connection. This includes clearly defining a "**main producer**" responsible for overall grid compliance at the connection, and allowing **sub-producers** (e.g. a co-located battery or multiple renewable units on one site) under a structured multi-party connection agreement. For example, a **single connection point** can now serve a solar plant and a battery (or multiple plants) legally, with one primary party coordinating grid obligations. This greatly benefits hybrid projects or co-located installations, simplifying grid access and reducing infrastructure duplication.

- **Non-Standard Connection Options**: The updated rules confirm that for higher-capacity distribution connections (above 1 MW, typically), a non-standard connection procedure can be pursued. This option allows the **customer (project developer) to undertake or fund the design and construction** of the "linear connection" (the power line connecting the project to the grid) beyond standard lengths or capacities. Under these non-standard arrangements, the developer can work with certified contractors to build the line faster, provided the DSO approves the design and eventually takes ownership for operations. This is useful for time-sensitive projects, as it gives investors some control to accelerate grid work – but it also requires **close coordination** and adherence to technical standards.

- **Capacity booking mechanism**: Applies to wind projects ≥20 MW, a capacity booking mechanism allows developers to reserve future grid capacity for up to 2 years using an agreement concluded with TSO. The law treats the capacity booking as a service, and the price of this service is €5,000 per 1 MW of the reserved capacity. With the capacity booking mechanism, wind projects could have up to eight years for the project development.

These reforms **increase the flexibility and predictability of grid connection** for new energy projects. They also reflect Ukraine's commitment to EU technical standards (following EU network codes).

2.3 Hybrid Projects: One Connection Point, Multiple Technologies

Hybrid Connections & "Cable Pooling": Ukraine's regulatory environment now **explicitly permits hybrid energy projects** (e.g. a solar farm co-located with a battery system, or multiple generation technologies on one site) to use a **single grid connection point**. This is known in international practice as "cable pooling," and it allows project sponsors to save on grid infrastructure costs and maximise the use of existing network capacity.

In practice, a hybrid project **will sign a tri-partite (or multi-partite) connection agreement** with the grid operator. The "main producer" (e.g. the solar plant operator) typically holds primary responsibility for ensuring the site's combined exports meet the technical conditions at the point of connection, while additional co-located units (like a battery operator or a wind generator) are partners to the agreement. **Investors in such hybrid configurations should note:**

- **Metering and Measurement**: The regulations require separate metering or clear accounting for each asset's output to ensure accurate settlement and compliance with any support scheme restrictions. For instance, if a battery is present alongside a solar PV plant that benefits from a feed-in tariff, **the energy fed into the grid must be transparently attributed** so that only the solar generation (and not any re-exported grid energy) receives the tariff. Proper metering and control systems will be needed to implement this separation.

- **Technical Coordination**: All on-site technologies must jointly satisfy grid connection standards (voltage control, relay protection settings, ramp rates, etc.). This might require **advanced control systems** to manage the site as a single entity. While this entails additional complexity, it ensures that hybrid projects are technically robust and can provide **valuable grid services** (like energy storage stabilising solar output).

- **State Support Eligibility**: Hybrid plants, if structured correctly, are **not disqualified from participating in state support schemes**. However, any subsidy or tariff will typically apply only to the renewable generation component. Investors should be aware of scheme-specific terms – for example, if auctions are introduced, they may specify how co-located storage is treated. Early engagement with policymakers can help shape investor-friendly terms for hybrids.

2.4 Smart Grids & Microgrids

The push for grid modernisation in Ukraine extends to **smart grid development and microgrid initiatives**. Smart grids involve the use of **automation, digital monitoring, and advanced control systems** to better manage electricity flows, integrate renewable sources, **reduce losses,** and improve reliability. The Ministry of Energy's roadmaps (announced in late 2024) include accelerating **smart network upgrades** and supporting microgrid pilots.

Microgrids – localised grids that can operate independently – are **gaining traction**, particularly for critical infrastructure and remote communities. The war has highlighted the benefit of microgrids for **energy resilience**: for example, an industrial park or hospital with its own solar panels and battery storage can maintain power even if the main grid is disrupted. While Ukraine's legislation on microgrids is still evolving, the government is **supportive of pilot projects** and demonstration zones. For investors and technology providers, this could open niche opportunities in microgrid control systems, battery solutions for off-grid operation, and partnerships with large energy consumers (e.g. factories) looking to enhance reliability. As microgrid regulations develop, it will be important to monitor how such projects can connect to or disconnect from the central grid and what licensing or

2.5 Balancing Responsibilities & Curtailment Regime

Balancing Market Obligations: In a modernised power system, **all generators (including renewable energy producers)** have a responsibility to help balance the grid. Under Ukraine's current rules, most large renewable energy projects must either join an **existing balancing group** or become a balance responsible party themselves. This means they must forecast their output and compensate for deviations (e.g. paying for any shortfall if they under-deliver compared to their day-ahead commitments). Historically, **renewables under the FIT did not bear imbalance costs**, but reforms have gradually introduced balancing obligations even for FIT-supported plants. **For new market-oriented projects** (like those selling electricity directly), full balancing responsibility is required. Investors **should ensure technical and contractual arrangements are in place** – such as hiring an experienced balancing service provider or **aggregator** – to manage this risk, as imbalance penalties can erode project revenues if not properly handled.

Curtailment Framework: Renewable energy projects in Ukraine may be subject to **curtailment** (ordered by the TSO or DSO to maintain grid stability or during emergencies). The regulatory framework generally provides that if a FIT-earning renewable plant is curtailed for system security reasons, it **should receive compensation** for the lost output, usually via the Guaranteed Buyer (the off-taker under FITs). However, in practice, **during the war, curtailment compensation has been uncertain**, as grid operators have at times had to limit output without immediate remuneration due to fiscal and technical constraints. For merchant or PPA-based projects (which do not rely on a state off-taker), curtailment risk translates into lost revenue unless they can be re-dispatched later. **Investors should assess curtailment risks** during grid connection planning and consider technologies like **energy storage** to minimise lost energy (e.g. storing excess energy when curtailment is ordered, then releasing it when the grid can accept power).

Practical Implication – Plan for Grid Connection Early

Getting a **grid connection is pivotal** to project bankability. Investors should begin the grid application and study process early, well before financial close, to identify any required **network upgrades or grid limitations**. Engaging reputable local grid consultants and maintaining a close dialogue with **Ukrenergo or the relevant DSO** can help avoid surprises (like unanticipated upgrade costs or delays). Where an area has limited grid capacity, an "**application rush**" is possible – rights are generally allocated on a first-come, first-served basis. Ensuring your project's **connection queue position** and exploring **hybrid or storage** options to enhance grid efficiency can be a competitive advantage.

3 Legal & Permitting Framework for Renewable Energy, Storage & Hydrogen

Developing a renewable energy or energy storage project in Ukraine requires navigating **multiple legal processes and permits**. This section provides a structured overview of those requirements – **from securing land rights and construction permits to obtaining generation licenses** – as well as highlighting key differences for **various technologies (solar, wind, bioenergy, hydro, storage, and hydrogen)**. Understanding and efficiently managing these processes is essential to keep projects on schedule, avoid legal pitfalls, and satisfy investor and lender due diligence.

3.1 National Legal & Permitting Process: An Overview

Project Development Phases: Renewable and storage projects in Ukraine typically require:

- **Site Acquisition (Land Rights):** The developer must secure rights to use the project site, either by purchasing private land or obtaining a lease on state/municipal land. There are special rules that **facilitate land allocation for energy projects** (see 3.1.1 below).

- **Spatial Planning & Zoning Approvals:** The land may need to be assigned an appropriate land-use category (e.g. “energy infrastructure” or “industrial” use). Projects on **agricultural land often require re-zoning or land use change permissions**, which add time to the process.

- **Grid Connection (Phase A: Technical Conditions)**: Apply to the TSO (Ukrenergo) or DSO (Oblenergo) to receive the Technical Conditions and the Connection Agreement. Feasibility Study: often runs in parallel to finalize the connection point, especially for co-located BESS.

- **Environmental & Technical Assessments**: For larger projects, a detailed **Environmental Impact Assessment (EIA)** must be carried out in accordance with Ukrainian law (and if seeking international funding, aligned with international standards). Technical studies (geological surveys, grid impact analyses, etc.) are also done at this stage.

- **Construction Permit**: Once project design and EIA are complete, the developer obtains a **construction permit** from the State Inspectorate of Architecture (DIAM) for project construction.

- **Grid Connection (Phase B: Physical Connection & Commissioning)**: Installation & Testing: Complete the physical construction and grid integration works. Working Commission: Finalize the Act of Providing Connection Services and the Act of Readiness for Operation.

- **Operational Licenses & Registration**: Before commencing commercial operations, the project company must obtain relevant **licenses** (e.g. an electricity generation license from NEURC; and, in the case of storage, potentially an energy storage license).

- **Market Participant Registration**:

  Market Operator Agreement: Register with the Market Operator to trade on the Day-Ahead (DAM) and Intraday Markets (IDM).

  TSO Registration: Sign agreements with the TSO for transmission and dispatching.

  Balancing Group: Choose to join a balancing group or act as a standalone participant.

This multi-step process involves various authorities and can span **12–24 months or more** for utility-scale projects, depending on factors like size, location, and any unique considerations (e.g. overlapping with municipal planning).

3.1.1 Land Allocation & Land Use Rights

Land Acquisition: Securing land is often the first major hurdle. In Ukraine, land can be **state-owned, municipal (community) property, or private**. Many high-resource areas (e.g. windy steppes or large solar-suitable tracts) are **state or communal lands**. Ukrainian law provides a **critical investor-friendly provision** - land auctions are not required when providing land for:

Public-Private Partnerships (PPP): To meet the needs of a private partner within a PPP framework.

Significant Investments: To investors implementing projects under the “Investment Nanny” law (projects with significant investments).

Infrastructure & Energy: For the construction, maintenance of engineering, transport, energy infrastructure facilities (linear and technical infrastructure), multimodal terminals, electronic communication networks, and road facilities (except for road service facilities).

This significantly streamlines site acquisition – a crucial benefit for investors, as land auctions can be lengthy and uncertain.

Practical Steps: Typically, a developer will identify a suitable site and approach the local municipality (or relevant state body) to initiate the leasing process. A lease period of up to 49 years is common for energy projects, giving long-term security. Foreign investors cannot directly own agricultural land in Ukraine under current law (restrictions which may remain until a national referendum is held). However, this does not prevent foreign developers from implementing projects: they can **lease land, partner with Ukrainian landowners, or reclassify the land use category (from agricultural to energy/industrial usage)** if needed. Lease agreements, once executed, must be **registered** in the State register of property rights to immovable property to become effective.

Zoning and Local Approvals: Developers should confirm that the chosen site is compatible with local zoning plans or ensure that **urban planning documentation** is updated to include the renewable project. Early engagement with local authorities can secure political support and preempt local objections, which is also important for community buy-in.

The estimated timeframe for land allocation for renewable energy projects in Ukraine typically ranges from **3 to 6 months** under optimal conditions, though legislative complexities can **extend this period up to 1 year** and more.

3.1.2 Grid Connection Process & Technical Requirements

Detailed description is given in Section 2.1. above.

3.1.3 Environmental Impact Assessment

Complete the EIA approval (for projects that trigger EIA, typically any large renewable plant or one in a sensitive area – more details in Section 6.1.)

3.1.4 Construction Permits & Project Approvals

Building Permits: Renewable energy and storage projects (aside from very small installations) require a formal construction permit before breaking ground. The developer must produce detailed design documentation which is produced by a licensed Ukrainian design companies, in compliance with building codes, safety standards, and **urban planning rules**. For larger or complex projects, a state expert examination may be mandated. **DIAM (State Urban Planning and Architecture Inspectorate) or local architectural and building control authorities** issue construction permits if requirements are met. This process can take a few months due to design revisions and official review timelines.

3.1.5 Operational Permits:

- **Obtain energy licenses: A generation license from NEURC for producing electricity** (usually required for any plant above a threshold capacity – currently 5 MW for generation, although smaller commercial generators often seek licensing if participating in markets or PPAs).

Entities that are allowed to generate electricity without electricity generation license:

1) **Consumers** – if the electricity is generated exclusively for own consumption without its sale.

2) **Electricity producers**:

   - if the electricity is generated by mobile (autonomous) power plants during the period of martial law and for six months after its termination or cancellation;
   - the total installed capacity of electricity generating equipment at a single measurement site is less than 5 MW;
   - the total installed capacity of electricity generating equipment at all measurement sites of a business entity is less than 20 MW.

3) **Active consumers:**

- if the total installed capacity of electricity generating equipment at a single measurement site is less than 5 MW and
- the electricity is used for own need, and the surplus is not sold on the wholesale market.

Under Law No. 4213-IX, the generation license threshold was temporarily raised to 20 MW at a single measurement point until January 1, 2028, treating electricity from active consumers or third parties as self-consumption to bolster energy security.

For projects with a **battery storage component**, a separate **energy storage license** is needed if the combined storage capacity is above 5 MW (as amended by Law No.4777-IX in 2026). Many developers apply for generation and storage licenses together for a hybrid project so both are in place by commissioning.

The following entities may store energy without a separate storage license:

1) **Consumers**: Provided they do not release stored energy into the external grid.

2) **Small Operators**: If the installed capacity at a single metering point is 5 MW or less.

3) **RES Producers (FIT/Auction/No Support)**: May store energy at their licensed production site without a separate license if:

The total power output injected into or withdrawn from the grid does not exceed their licensed/ permitted capacity.

They maintain separate commercial metering for the storage facility.

For FIT producers in the Guaranteed Buyer's group: They must only withdraw electricity from their own generating plants.

4) **Other Electricity Producers**: Under similar conditions—storage must be at the licensed site, total capacity must remain within the existing connection limits, and separate metering must be used.

- **Obtain additional consents depending on technology**: For instance, a biomass or waste-to-energy (WtE) plant must comply with waste management regulations; a hydro plant must secure **water use permits or concessions** from relevant authorities; a wind farm requires air traffic control clearance.

Timeframe for obtainment of generation license, energy storage license — ~10 business days after application and payment.

Timeframes & War-related Simplifications: Under martial law, Ukrainian authorities have introduced measures to **accelerate energy project deployment.** For example, in late 2024 **permitting for small-scale distributed generation** (often roof-top solar or community projects) was simplified – fewer approvals and shorter procedures, especially for micro-installations. Additionally, **state-owned energy companies are temporarily permitted to procure emergency generation equipment without regular tenders**, to quickly rebuild capacity lost to war damage. Investors planning new projects during the war should stay abreast of these special rules: they can present an opportunity to fast-track certain projects, albeit these measures might be revised once the situation stabilises.

3.2. Permitting Considerations by Technology

Solar & Wind Projects: These projects usually follow a relatively straightforward permitting path: land leasing/acquisition, grid connection, EIA (for utility-scale parks, typically >1 MW solar or >2 turbine wind farms), a construction permit, and a generation license. The specifics of construction permitting can

differ slightly by region – e.g. wind farms may require additional **cultural heritage clearances** if located near protected areas and often involve consultations with local communities due to their visual and environmental impacts. Solar projects generally raise fewer public objections, but must address land use changes if built on agricultural land.

Bioenergy & Waste-to-Energy (WtE): These projects have the added complexity of feedstock supply and **environmental permitting for emissions and waste handling**. In addition to standard permits discussed above, a biomass or biogas power plant needs to ensure compliance with **air emissions standards** (requiring an emissions permit for any boiler or combustion unit) and **waste disposal regulations**. WtE plants often need licensing under waste management laws. Investors should consider these factors in the project feasibility stage – including securing sustainable biomass supply chains or waste contracts – and potentially highlight their environmental benefits (e.g. waste mitigation) in community consultations.

Hydropower Projects: Small hydropower (typically run-of-river up to 10 MW) is regulated similarly to other renewables but requires **water use rights**. A hydropower developer must obtain a **water extraction permit** from the State Water Resources Agency, and potentially concessions if involving state hydro infrastructure. Given potential environmental sensitivities (impact on aquatic ecosystems), hydropower projects nearly always require robust EIAs and local stakeholder engagement. At present, Ukraine's hydro potential is largely tapped, but rehabilitation or modernisation of existing plants could be of interest for investors specialized in **green rehabilitation** projects.

Energy Storage Facilities: Energy storage (e.g. battery energy storage systems, BESS) is an emerging field in Ukraine. As standalone installations, batteries (below 5 MW) may not require a distinct license, but larger ones must secure an **energy storage** license from NEURC to operate and trade in energy markets. The licensing process for storage is relatively new (since mid-2022) but straightforward – requiring demonstration of technical capacity and corporate registration. So far, **few large storage projects are online**, but new regulations (like Law 2046-IX) have given energy storage legal recognition as a distinct type of activity. If a battery is **co-located with a generation plant,** permits and licenses must cover both activities, but the project can often be handled under the same corporate umbrella (i.e. one SPV both generates and stores energy). Co-located storage can also benefit from easier grid connection rules (see Section 2.3).

Hydrogen Infrastructure: The hydrogen economy in Ukraine is in its nascent stage. Currently, **no comprehensive hydrogen market law exists**, but hydrogen is recognised under broader alternative fuels legislation and national energy strategies. The government and private sector, in partnership with the EU, are exploring pilot **green hydrogen** production projects, especially in areas with surplus renewable energy. Permitting a hydrogen production facility would involve typical industrial construction permits and environmental approvals (for electrolysis plants, these are akin to industrial installations). If the project involves **hydrogen transport** (e.g. pipelines), additional **safety and technical regulation** would apply, and in many cases may require separate approvals from gas sector regulators or local authorities. Investors should note that robust hydrogen-specific regulations (covering transport, storage, and export) are expected in the coming years, as Ukraine positions itself to become an **exporter of green hydrogen** to the EU (e.g. via pipeline re-purposing or new export corridors under discussion by Ukrainian and EU officials). For now, hydrogen projects might proceed on a **demonstration basis**, with regulatory oversight by existing bodies (Ministry of Energy, State Inspection bodies) on a case-by-case basis.

4 Applicable Tax Rules & Incentives for Renewable Energy Projects

Ukraine's tax regime for renewable energy projects is generally stable and comparable to standard corporate taxation, with some additional incentives aimed at reducing capital costs for green investments. Investors should be aware of the tax obligations (which include corporate income tax and value-added tax) and take advantage of available **tax exemptions or benefits** for renewable and energy storage projects, especially those introduced as **wartime support measures**.

Corporate Income Tax & General Taxation: Renewable energy companies in Ukraine are subject to a **flat Corporate Income Tax (CIT) rate of 18%**, which is the standard business tax rate applied to all corporate profits. There is no special profits tax or surcharge specifically targeting renewable energy income, meaning **renewable**

projects compete on commercial terms and enjoy the same tax conditions as any industry. Dividends paid to foreign investors may be subject to **withholding tax**, but double taxation treaties (Ukraine has many DTTs) can reduce these rates. Renewable energy companies may benefit from accelerated depreciation of certain fixed assets, including machinery, equipment, and transmission devices, provided the assets meet statutory conditions, such as being new, commissioned between 2020 and 2030, used in the taxpayer's own business, and not leased or disposed of during the depreciation period.

VAT & Import Duties: The key tax incentives for green projects involve **import-related taxes.** Ukraine has been using **VAT and customs duty exemptions for renewable energy and energy storage equipment** to lower upfront costs for developers:

- **Value Added Tax (VAT):** Normally levied at 20% on imported goods, but **certain renewable energy equipment imports are VAT-exempt**. This policy, introduced as a post-2022 war measure to speed up the replacement of damaged infrastructure and encourage new capacity, reduces capital costs for solar panels, wind turbines, energy storage systems, and other critical equipment. In December 2025, Parliament extended these **VAT (and customs) exemptions through 2026–2028**, reflecting the state's commitment to support renewable investment during the recovery period.

- **Customs (Import) Duties:** Alongside VAT relief, i**mport duties on certain renewable energy components have been eliminated** for the same period. Equipment for **solar, wind, hydro and bioenergy plants, as well as battery storage**, can now be imported without paying the usual customs tariffs. This improves project economics for foreign-sourced technology (which is typical for wind turbines, solar panels, battery units, etc.).

Other Incentives & Relief: The government has also facilitated financing in the renewables sector by **expanding state-backed credit** facilities and **interest-free loan programs** for energy efficiency and distributed generation projects (targeted primarily at small-scale projects and households). While these measures are not directly tailored to large investors, they signal a policy environment **favouring clean energy deployment** and may indirectly benefit larger projects through supply chain growth and public acceptance. Ukraine's tax code also provides traditional investment-friendly features (e.g. **loss carry-forwards for tax purposes**, etc.).

Looking Ahead: The continuation of import tax exemptions through 2028 is a positive sign that Ukraine recognises the importance of minimising costs for renewable projects, especially during reconstruction. Once wartime needs subside, there could be discussions on **long-term "green incentives"**, such as reinstating certain tax credits or providing capital allowances for renewables in alignment with EU Green Deal objectives. Investors should monitor any new **tax legislation or renewable energy laws** – Ukraine's parliament has historically revisited energy taxation as policy priorities shift (e.g. considering carbon pricing mechanisms or adjusting excise duties for alternative fuels).

Investor Takeaway – Leverage Tax Benefits

The current tax framework in Ukraine does not impose unusual burdens on renewable energy projects – in fact, wartime measures have made it **more attractive through temporary VAT and import duty waivers. Investors and lenders should incorporate these incentives into their financial models** to reduce project cost estimates by factoring in tax savings on equipment imports. They should also stay alert for the **sunset dates** of these incentives (2029) and be prepared to advocate for their extension or replacement by stable, long-term support (like **tax credits or exemptions**) as the war ends and Ukraine's green economy strategy evolves.

5 Cross-Border Regulations for Electricity & Hydrogen Exports

As Ukraine integrates with Europe's energy systems, **cross-border energy trading regulations have become increasingly relevant** – particularly for electricity and, in the future, green hydrogen. For investors and project developers, understanding the current limitations and future potential of exporting energy from Ukraine is key, especially for projects located in Western part of Ukraine where European demand can be accessible after the war.

5.1 Electricity Exports: Current Status & Future Outlook

Ukraine's **electricity exports** were historically driven by its surplus baseload generation (e.g. nuclear, coal) and were mainly oriented to neighbouring EU countries (Poland, Slovakia, Hungary, Romania) and Moldova. However, the war has significantly curtailed export capacity: physical grid connectivity was disrupted due to damage in Eastern and Southern Ukraine, and grid security considerations limit exports to prioritise domestic supply. **As of early 2026, export capacity is constrained to a few hundred megawatts** – allocated via **monthly and daily auctions** run by Ukrenergo for cross-border capacity rights, in coordination with neighbouring TSOs.

Market Coupling & Future Expansion: In the medium to long term, Ukraine's full integration into the European power market is expected to enable **far greater electricity trade**. Plans are in motion to implement **market coupling** with EU power exchanges, which will allow implicit allocation of cross-border capacity – meaning that Ukrainian producers could eventually sell power directly into the European day-ahead market. For investors, especially those developing projects in Western part of Ukraine (where interconnections to the EU grid exist), this offers **a future upside: projects might access higher European electricity prices or cross-border PPAs** once conditions normalise. In the meantime, **export opportunities remain limited**. Projects intended for export must obtain **cross-border transmission capacity via auctions**. Exporting also requires holding a **wholesale electricity trading license** and abiding by Ukraine's **electricity export rules**, which include fulfilling domestic supply obligations first during deficits.

Regulatory Coordination: Given Ukraine's EU candidacy and Energy Community obligations, its cross-border trading rules are aligned with EU legislation. The ENTSO-E synchronization achieved in 2022 was a critical step that created a single synchronous area with Europe. Ongoing improvements, such as strengthening interconnector infrastructure and developing **joint allocation platforms** with EU TSOs, will gradually increase cross-border flows. The EU has a strategic interest in Ukraine's clean energy exports (including both electricity and hydrogen), so regulatory developments in this area will likely be accelerated as part of EU accession negotiations and reconstruction support.

5.2 Green Hydrogen Exports: Future Regulatory Path

The potential for **green hydrogen export** from Ukraine is a key aspect of the country's long-term energy strategy. With extensive renewable resources, Ukraine could produce hydrogen (via renewable-powered electrolysis) at scale and supply it to European markets aiming to decarbonise heavy industries and transport. **Currently, there are no specific export rules or market regulations for hydrogen** – the sector is too nascent. However, foundations are being laid: the government is formulating a **Hydrogen Roadmap and draft legislation** to define the hydrogen market, including production, transportation (possibly repurposing existing natural gas pipelines for hydrogen blends), and certification of green hydrogen in line with EU standards.

Pilot Projects & Interim Approach: In this regulatory vacuum, any hydrogen projects would be handled under general laws: for example, hydrogen production is subject to **industrial safety and environmental regulations** (the hydrogen facilities would likely need a similar approach as chemical or gas facilities). There's no designated "hydrogen off-taker" or regulated tariffs; any export would currently be a matter of **private commercial agreements** and subject to prevailing export-import laws (which, in normal times, do not restrict exporting hydrogen, but operationally it's not yet happening). Given EU interest (REPowerEU identifies Ukraine as a potential hydrogen supplier), **investors can anticipate rapid regulatory developments** in this space. For instance, one priority is establishing a **Guarantee of Origin** system for hydrogen to certify it as "green" – a step needed for trade with the EU. Institutional dialogues (e.g. a Ukraine-EU Hydrogen Corridor memorandum signed in January 2025) indicate that **Ukraine is aligning early with EU hydrogen market rules** (such as safety standards and certification schemes) to facilitate future exports and investment.

Opportunities & Challenges: Hydrogen is a longer-term play; returns depend on global hydrogen prices and infrastructure build-out. Early investors might partner with international donors or technology providers to pilot projects, benefiting from potential EU funding or participation in hydrogen "Important Projects of Common European Interest (IPCEI)" initiatives. Key challenges include the **lack of immediate domestic demand**, the need for **massive infrastructure** (electrolysers, storage, transport pipelines), and regulatory uncertainty. Nevertheless, the Ukrainian government's commitment to align with EU hydrogen strategy suggests that **pioneering investors could shape the regulatory environment**, securing first rights or favourable terms as the hydrogen export framework takes form.

Why This Matters for Investors

- **Short-term**: Electricity exports are currently limited, so projects must primarily target domestic off-takers or support schemes. Businesses building generation in Western part of Ukraine might secure some export revenues via cross-border capacity auctions, but these are modest.

- **Long-term**: As Ukraine's grid fully stabilises post-war and ENTSO-E links expand, export-oriented projects (especially in Western part of Ukraine) could become feasible. Preparing for that scenario – e.g. by designing projects to meet EU grid and market standards – might future-proof an investment.

- **Hydrogen's Horizon**: While hydrogen export is not yet a reality, investors can engage early with regulators to influence a conducive framework and position themselves for eventual large-scale exports. If hydrogen becomes a key EU import from Ukraine, early participants stand to gain from favourable policies (like export credits or fixed-price off-take agreements with European buyers).

6 Environmental & Social Regulatory Requirements

Renewable energy and storage projects must adhere to Ukraine's **environmental protection and social impact regulations**, which are increasingly aligned with international standards. Robust environmental and social compliance is not only a legal requirement; it's also crucial for **project sustainability, community acceptance, and access to international financing**. This section outlines the core environmental and social approvals (especially **Environmental Impact Assessment (EIA)**) and explores how local requirements compare to **international best practices (IFC Performance Standards, EBRD Environmental & Social Policy)** that global investors often apply.

6.1 Environmental Impact Assessment (EIA)

Mandatory EIA Process: Ukraine's Law "On Environmental Impact Assessment" (2017) established a comprehensive EIA procedure for projects likely to have significant environmental impacts. Most utility-scale renewable energy projects may be subject to EIA requirements depending on their characteristics, scale, location, land footprint, and potential environmental impacts. The applicability of the EIA procedure should be assessed on a case-by-case basis against the criteria and thresholds established by the EIA Law. The EIA process involves:

- **Scoping**: A formal submission to the authorities describing the project and requesting a scope definition for the EIA studies. The public and other government bodies can provide input on what impacts should be assessed.

- **Assessment & Report**: The project developer typically engages environmental consultants and technical experts to conduct studies assessing potential impacts on land use, biodiversity, air and water quality, noise, landscape and visual amenity, and, where relevant (including for utility-scale battery energy storage projects), hazardous materials management, fire safety, and waste management. Where a project is located on previously disturbed land (e.g., an industrial site or degraded land), certain environmental impacts may be less significant; however, all relevant environmental risks and potential impacts must still be properly assessed and addressed in the EIA documentation.

- **Public Disclosure & Consultation**: The EIA procedure includes mandatory public participation and consultation mechanisms, which may include public hearings and submission of written comments by stakeholders. While certain permitting and administrative procedures have been simplified during martial law, EIA requirements generally continue to apply, subject to specific legislative exceptions that may be introduced from time to time.

- **EIA Decision**: The competent authority reviews the final EIA report and public comments and subsequently issues an EIA Conclusion. Pursuant to the Law of Ukraine "On Environmental Impact Assessment", the competent authority is the central executive authority responsible for environmental policy and environmental impact assessment matters or another authority designated under the EIA Law, depending on the type and location of the planned activity. The EIA Conclusion may establish environmental conditions and mitigation measures that must be implemented during construction and operation to address identified environmental impacts.

Speed & Coordination: An EIA can add several months to project timelines (commonly 3–6 months, including the public consultation period). However, EIA steps can run **in parallel with other activities** (such as technical design or even initial grid connection processes). **During martial law**, some non-critical administrative procedures have been streamlined, but EIA remains largely required (except possibly for small emergency installations or in frontline areas).

6.2 Social Safeguards & International Standards

National Requirements: Ukraine does not have a discrete "social impact assessment" process separate from the EIA; however, social factors (like impacts on local communities, land users, cultural heritage sites) are considered as part of the **EIA and other permitting processes**. For example, any land acquisition and land use arrangements must comply with applicable land, property, and compensation legislation to ensure fair market value compensation for landowners, and labour practices are governed by Ukrainian labour law, which includes worker safety and rights. While Ukrainian legislation provides a baseline of social protections, specialized assessments and stakeholder engagement processes may be required under international standards in specific circumstances, which are relevant in some contexts abroad.

IFIs and Best Practices: If a renewable energy project seeks funding from international lenders (such as the EBRD, IFC, or other development banks), compliance with **international Environmental & Social (E&S) standards** will be necessary. This often means going **beyond Ukrainian law** in certain areas:

- **Environmental & Social Management Plans (ESMPs)**: Not explicitly mandated by Ukrainian law, but **required by lenders** as a framework to manage and monitor all E&S commitments.

- **Social Impact Management**: International standards (e.g. IFC Performance Standards, EBRD's Environmental and Social Policy) require thorough **stakeholder engagement plans** and sometimes specialized assessments (like community health and safety, socio-economic impact, cultural heritage management) that complement the EIA.

- **Labour and Community Guidelines**: IFIs require adherence to strict labour standards (e.g. non-discrimination, worker accommodations, grievance mechanisms) and community safety (e.g. traffic management during construction, emergency response planning). While Ukrainian law covers labour rights and general safety, the **documentation and active management of these issues** as per international guidelines might be something investors need to implement as part of project risk management.

Alignment Efforts: The gap between Ukrainian requirements and international E&S expectations is narrowing. **Ukraine's obligations under the EU Association Agreement** include adopting EU environmental directives (on EIA, industrial emissions, waste, habitat protection, etc.), gradually moving the national framework closer to EU norms. For investors, the key takeaway is: **complying with Ukrainian law will cover many bases but might not fully satisfy global ESG expectations**. Therefore, building an internal ESMP to meet higher standards ensures not only legal compliance but also **facilitates fundraising from climate-focused funds and lenders**.

6.3 Is Ukrainian EIA Compliance Enough for International Lenders?

Donor & Lender Perspective: International financial institutions (IFIs) and many private banks apply their own E&S policies which often exceed national requirements. Meeting Ukraine's EIA law is **necessary but might not be sufficient** to satisfy these financiers. **Gaps** can include areas like biodiversity offsets, climate risk assessment, cultural heritage preservation, and community development planning. For example, a Ukrainian EIA focuses on direct environmental impacts and standard mitigation – but a development bank might insist on robust biodiversity action plans or ensure projects address gender and inclusion issues. Therefore, prudent investors

should plan to meet both Ukrainian and international standards in parallel.

Bridging the Gap: In practice, many Ukrainian projects take a two-tier approach: firstly completing the **national EIA** to get the local approvals, and in parallel developing an **enhanced E&S action plan** for any additional measures required by international standards. In practice, internationally financed projects often supplement the national EIA process with additional environmental and social assessments and management instruments, which may be consolidated into an Environmental and Social Impact Assessment (ESIA) or similar documentation.

Comparison – Local vs International Standards: Key differences:

- **Scope of Impacts**: Ukrainian EIA legislation focuses primarily on environmental impacts and certain related effects on human health and living conditions, whereas international lenders typically apply a broader environmental and social risk management approach.

- **Public Consultation**: Ukrainian law requires public hearings for EIA, typically local and one-time. International standards prefer continuous stakeholder engagement from early planning through construction and operation, including grievance redress mechanisms.

- **Climate & Biodiversity**: With EU alignment, Ukraine will increasingly factor climate change and biodiversity concerns into planning, but IFIs may already require a climate risk assessment or climate resilience measures for the project.

- **Monitoring & Reporting**: Domestic permits will specify monitoring (e.g. periodic emission testing, water quality checks), but international lenders often require comprehensive E&S monitoring reports and independent audits as part of loan covenants.

For investors, **the safest approach is to adopt the higher standard** – treat the project as if it were subject to international E&S criteria. This ensures all bases are covered, minimizes any reputational or compliance risk, and will smooth the way when engaging banks, insurers or partners who have stringent ESG expectations.

Insight – Environmental & Social Governance (ESG) as a Value-Add

Rather than viewing environmental and social requirements as a hurdle, investors can consider them a **value-adding aspect** of project development. Achieving high ESG standards not only opens access to **international climate finance and potential grant support**, but also ensures **long-term sustainability** – a factor valued by institutional investors and stakeholders. By proactively implementing strong E&S measures, renewable projects in Ukraine can stand out in a crowded marketplace and appeal to global partners looking for bankable, responsible investments.

7 Impact of the Current War on Energy Projects

The war and ongoing martial law in Ukraine have had a **profound impact on infrastructure projects**, including renewable energy and energy storage development. This section examines the emergency legal measures and practical challenges introduced by the war, and how they affect project implementation.

7.1 Emergency Legislation & Temporary Measures

Martial Law & Energy Sector Legislation: Shortly after Russia's full-scale invasion in February 2022, Ukraine declared martial law, enabling the Government to issue emergency decrees affecting various sectors. In the energy sphere, **emergency legislation** has been enacted to:

- **Prioritize Energy Security**: The Government can **direct power generation and distribution** to ensure critical needs are met. For example, **electricity exports have been significantly curtailed** to prioritise domestic consumption during shortages. This is a critical point for any investor considering exports – until normal conditions return, domestic demand has first call on generation.

- **Implement Price Controls & Subsidies**: To protect consumers and industry during wartime, **temporary price caps** have been placed on wholesale and retail electricity prices. While this stabilises the market, it means projects selling energy at market prices may currently face artificially low price ceilings, impacting revenues. These measures are expected to be lifted post-war as Ukraine returns to a market-driven approach and (likely) introduces new support schemes (e.g. CfDs) to ensure bankable revenues for projects.

- **Streamline Rebuild & Permitting**: Recognising the urgency to restore power capacity, the Government has used emergency powers to **simplify certain permitting and procurement processes**. Notably, **state energy companies and utilities can procure replacement equipment without full public tenders**, speeding up repairs of damaged grids and power plants. For new distributed generation (like small solar and storage systems), some permit steps are temporarily waived or accelerated to encourage rapid deployment and energy self-sufficiency in communities. Investors may benefit indirectly from these measures (e.g. through faster equipment import times with less red tape, thanks to wartime simplifications). However, these exceptions are time-bound and subject to change, so they should not substitute proper compliance planning for long-term projects.

7.2 War's Legal Implications on Project Implementation

Force Majeure & Contractual Performance: The war constitutes a classic force majeure event in Ukraine. The Ukrainian Chamber of Commerce and Industry has been issuing **force majeure certificates** to confirm that contractual non-performance was due to war circumstances. Investors and project companies have been invoking force majeure to delay obligations under construction contracts, equipment deliveries, and even loan agreements. While this can provide short-term relief, it usually only suspends obligations (not excusing them entirely) and can lead to legal disputes if not carefully managed. New contracts should include clear **force majeure clauses covering war-related events**, detailing parties' rights and obligations (e.g. timeline extensions, cost sharing, termination rights). Lenders will closely scrutinise such provisions to assess **project robustness**.

Insurance & Risk Coverage: Obtaining **insurance for war risk and property damage** has become challenging and costly. Many international insurers exclude war damage. To fill this gap, **multilateral agencies and export credit agencies** are stepping in – for example, MIGA (World Bank's insurer) and others have either launched or are planning war-risk insurance programs for Ukraine's reconstruction. Investors should explore these options to cover political risk, expropriation, and war damage for their assets. This not only protects the project but may be required by lenders for financing.

Currency & Financial Controls: Under martial law, the National Bank of Ukraine has imposed **capital controls** to stabilise the economy. This includes restrictions on currency exchange and profit repatriation for foreign investors. Currently, **converting large amounts of Ukrainian Hryvnia (UAH) to hard currency and sending it abroad is limited**. This means renewable energy projects generating revenue in UAH could face delays converting and repatriating dividends. While exceptions exist (especially for critical investments and for IFI-financed projects), investors should account for this liquidity risk and structure around it (e.g. using offshore escrow accounts for PPA payments if possible, or delaying dividend distribution until restrictions ease). Over the long run, as Ukraine's situation stabilises, these controls are expected to relax – and EU membership talks will push for free movement of capital.

Operational Challenges: War conditions can also impact the **construction and operation** of projects. Supply chain disruptions, labour shortages, and security concerns (particularly in regions closer to active hostilities) are real practical hurdles. Project sponsors might need to incorporate **contingency budgets for delays and security measures**, choose project sites in more secure parts of the country (projects in Western and Central parts of Ukraine have been less affected by war), and maintain flexible schedules. Some developers have opted for phased commissioning or smaller-scale initial deployments that can be expanded when conditions improve.

Regulatory Stability vs Dynamism: In sum, war has introduced a paradox: on one hand, the Government has had

to continually adjust regulations (e.g. adjusting market rules, introducing emergency decrees) which can create uncertainty; on the other, it has galvanised the push for EU-aligned reforms and underscored the importance of modernisation and independence in energy. International support and internal policy focus on renewables remain strong, meaning the regulatory momentum is positive, even if near-term stability is elusive. The challenge for investors is to balance the **immediate uncertainty** with the **long-term commitment to reform**.

8 Key Legal Risks & Mitigation Strategies

Renewable energy investments inherently involve managing various **legal and regulatory risks**, which are amplified in Ukraine's context due to the war and transitioning framework. It is essential to identify these risks and plan mitigation strategies from the outset to ensure a bankable and resilient project.

Major Legal & Regulatory Risks:

- **Political & War-related Risk**: The overarching risk is the uncertainty from the ongoing war. **Policy shifts, physical security of assets, and macroeconomic instability** (inflation, currency fluctuations) all stem from the war. While Ukraine remains committed to honouring energy contracts and legal protections, the unpredictable nature of war means project timelines and conditions could change unexpectedly.

- **Regulatory Change Risk**: The **evolving legal framework** – e.g. new laws on support schemes, grid codes, or market rules – can affect project economics. For instance, the imposition of **price caps** (will be removed from 1 May 2027 as provided by the Market Coupling Law that entered into force on 23 April 2026) or changes in offtake arrangements (such as the guaranteed buyer's role or auction terms) could alter expected revenue. The trajectory of change is positive (towards EU standards and eventual liberalisation), but in the interim, investors should factor in flexibility for shifting regulations.

- **Offtaker Credit & Revenue Risk**: Prior to the war, many renewable projects relied on the **Guaranteed Buyer** (state-owned off-taker) for FIT revenues. Financial deficits and payment delays in that system created credit risk. New merchant or PPA-based projects avoid direct reliance on the state off-taker but then face **market price volatility** and potential price regulation. Without long-term contracts or support, revenue predictability is a challenge.

- **Grid & Curtailement Risk**: Projects might obtain connection approvals but find that grid **congestion or curtailment** reduces their output. This is particularly relevant in regions where infrastructure is weak or recovering from damage. Curtailment rules might not guarantee full compensation, thus impacting cash flow.

- **Permitting & Legal Process Risk**: While Ukraine's legal processes are defined, **bureaucratic delays or challenges from local stakeholders** (like environmental objections or land disputes) can occur. Inconsistent enforcement or changes in local government can sometimes complicate permits. Foreign investors might also face a **learning curve** due to language and procedural differences.

Mitigation Strategies:

To ensure these risks are manageable and attractive to lenders, consider the following:

- **Political Risk Insurance & Guarantees**: Engage with multilateral agencies (World Bank's MIGA, DFC, etc.) or export credit agencies early to secure **political risk insurance** covering war-related

and expropriation risks. Additionally, seek out **partial risk guarantees** or grant support from **donor-funded programs** aimed at de-risking investments in Ukraine's energy sector.

- **Robust Contracts & Legal Clauses**: Structure PPAs or other offtake contracts with protective provisions, such as **hard-currency indexation, termination compensation** in case of curtailment, and explicit **force majeure definitions** covering war events. Work with experienced legal counsel to ensure contracts are enforceable (potentially under neutral law or via international arbitration if needed to bolster confidence).

- **Diversified Revenue Streams**: Explore multiple revenue sources – for example, combining **selling power to industrial consumers (corporate PPA)** with **providing ancillary services** (frequency regulation, reserve power) to the TSO. This can reduce dependency on any single off-taker or regulatory mechanism, thereby spreading risk.

- **Local Partnerships & Stakeholder Engagement**: Partnering with a **reputable local developer or institution** can aid in navigating permits and local relationships. Strong stakeholder engagement from the start – including transparent communication with local communities, regulatory authorities, and key government officials – helps prevent disputes and can garner support that protects the project against political shifts.

- **Adaptive Project Planning**: Given regulatory flux, choose a **modular or phased project approach** that can adapt to policy changes. For example, design projects so they can scale or retrofit to meet new technical standards or benefit from new support schemes. Maintaining a close watch on legislative developments and being prepared to **advocate for investor-friendly regulations** (e.g. through industry associations) can also influence outcomes.

9 Conclusions & Outlook

Despite the shadow of war, **Ukraine's renewable energy and energy storage sectors remain promising** for forward-looking investors. The immediate horizon is characterised by challenges – war-induced uncertainty, transitional regulations, and practical hurdles – but the **long-term trajectory is undeniably positive**. Ukraine's commitment to **EU integration and modernisation** provides a clear roadmap for regulatory improvements, market-based support schemes, and enhanced investor protections. The **war has, paradoxically, accelerated certain reforms** (such as faster permitting and innovative grid rules) and cemented the consensus that energy independence via renewables is critical for national security.

For investors and lenders, the key to success in Ukraine's current environment will be **resilience and partnership**. Working closely with local stakeholders, tapping into international guarantee mechanisms, and structuring projects for both near-term adaptability and long-term growth will position projects to weather the present turbulence. As reconstruction gathers pace and **peace returns**, Ukraine is poised to become a **major clean energy investment destination**, with vast untapped resources ready to power both domestic development and European markets hungry for clean, secure energy.

In summary, **focusing on legal clarity, investor needs, and strategic framing – reveals that Ukraine's renewable energy and energy storage guide is more than just a regulatory manual**. **It's a blueprint for investors**: one that clarifies complex processes, highlights opportunities (and risks), and underscores why now is the time to be part of Ukraine's green transformation journey. With the right risk mitigations, investors can confidently engage in Ukraine's energy sector knowing that the foundation is being built for a stable, EU-integrated, and sustainable future.

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