

DISTRIBUTED GENERATION:

FROM NATIONAL STRATEGY TO EXECUTION





Ukraine's DG Strategy: Goals & Vision

Resilience: distributed generation reduces attack risk

• Independence: renewables & local resources

Integration: ENTSO-E alignment for stability & market access

deployment

modular

scalable

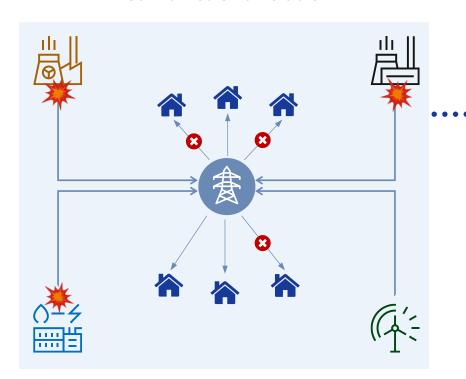
efficient

integrated

investment-enabled

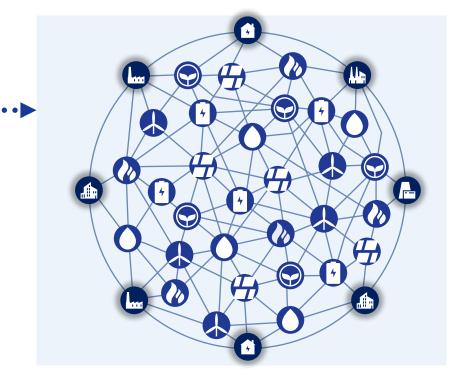
Legacy Energy System

centralized & vulnerable



Target Energy System

decentralized & sustainable

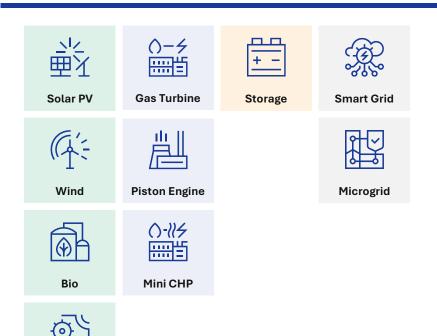




Ukraine's DG Strategy: Deployment Components

- Diversify technologies and integration models to accelerate distributed generation rollout
- Balance renewables, flexible gas assets, and storage to ensure reliability and sustainability
- Strengthen infrastructure and regional hubs for scalable, autonomous, and resilient operation.

Technology Diversification



Small Hydro

Infrastructure Development



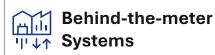
Further Needs (10 years)

TSO's development priorities:

- flexible generation 2.2 GW
- energy storage 1.5 GW



Various regions serve as testbeds for distributed generation and hydrogen projects



Solar PV + Energy storage for schools, hospitals, and businesses

The power system's additional generation needs amount to around 15-17 GW, with ~20% expected from flexible capacities.



<u>Ukraine's DG Strategy:</u> Challenges & Opportunities

- Operate under conflict-driven uncertainty while protecting critical infrastructure
- Secure capital and partner ecosystems to accelerate distributed generation deployment
- Turn reconstruction into modernization and regional energy leadership

Challenges



Ongoing military threats



Financing gaps and investor risk



Need for grid modernization and distributed generation integration

Opportunities



Rebuilding with modern, resilient technologies



Becoming a regional energy exporter



Leveraging Ukraine's renewable potential and skilled workforce



ECU DG paradigm: Business Model for DG



Asset Ownership & Financing

- Utility-owned
- Third-party-owned
- Customer-owned
- Capex-lite Models



Revenue Stack

- Energy Sales
- Grid Services
- Capacity Payments
- Energy-as-a-Service



Technology
Integration (by ECU)

- Real-time Dispatch
- Lifecycle O&M Management
- Market Access
- Al-driven Optimization



For Utilities:

Reduce congestion, defer grid upgrades, improve reliability

For Customers:

Lower energy costs, resilience, sustainability

For Investors:

Predictable returns via long-term commercial dispatch / aggregation contracts



ECU DG paradigm:

Strategic Framework & Implementation



- Load planning and demand forecasting for DG sources
- Dispatching operations to meet grid requirements
- Electricity trading in competitive market segments
- Imbalance optimization for grid stability



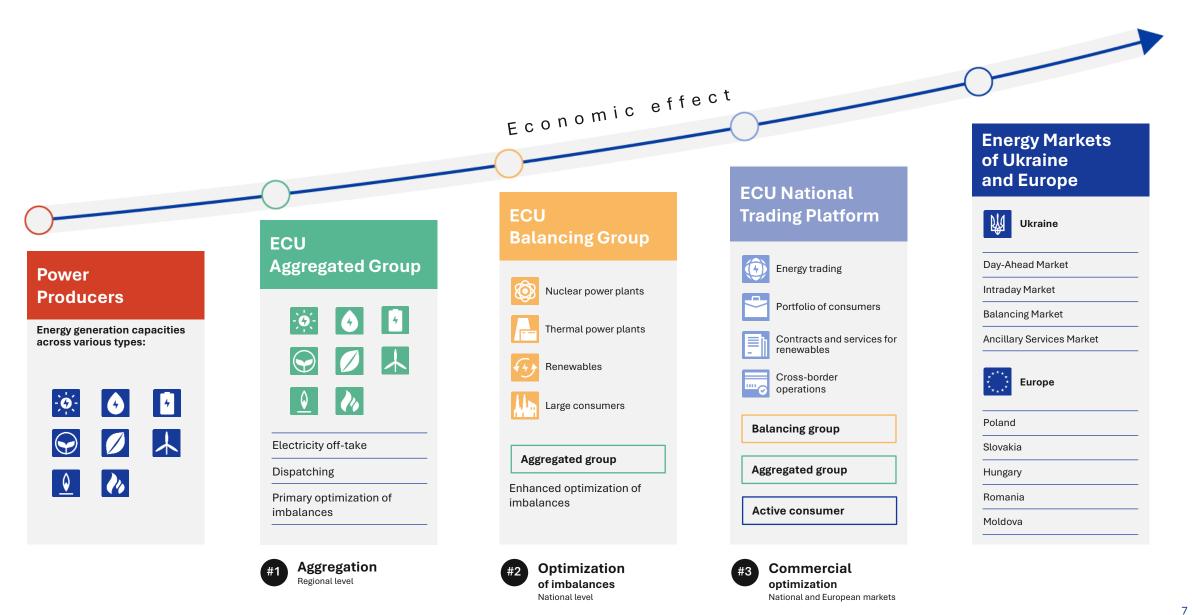
- End-to-end consulting for investors and communities
- Community-centric development with municipal partnerships
- Critical infrastructure projects with specialized division
- Technical solution selection and permit acquisition



- Financial sustainability model for distributed generation projects
- Aggregated groups to enhance market participation
- Access to state-supported loan programs
- ENTSO-E alignment for grid operational standards



ECU DG paradigm: Value Chain for Investors in Ukraine





ECU DG paradigm: Strategic Impact & Future Vision

Strategic Alignment

- ECU's multifaceted approach operationalizes Ukraine's Distributed Generation paradigm, creating a comprehensive framework for implementation
- The strategy de-risks investment through financial sustainability models and technical support, encouraging wider adoption of DG technologies
- Community-centric development empowers local actors to participate in energy production, strengthening local economies and energy security

Future Vision



ECU is accelerating Ukraine's transition to a secure, resilient, and decentralized energy future through coordinated market integration, community engagement, and strategic financial models that ensure long-term sustainability.