



# DEVELOPMENT OF THE POWER SYSTEM OF UKRAINE

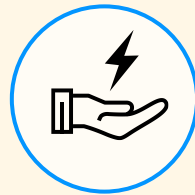
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Speaker **Sergii Nazarenko**

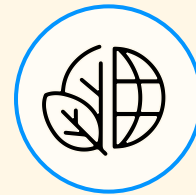


# OUR GOALS

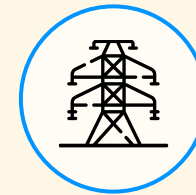
IN ADDITION TO COUNTERING MILITARY THREATS, THE MAIN TASKS OF THE ENERGY SECTOR OF UKRAINE CORRESPOND TO THE MOST EUROPEAN POWER SYSTEMS:



Ensuring resilience and security of power supply



Decarbonisation of the energy sector



Increasing the power system flexibility



Reduction of electricity costs for consumers

Quick response to threats and cooperation at the regional level are the key to the stability of the energy sector in a time of crisis



## THE POWER SYSTEM OF UKRAINE NEEDS INVESTMENTS OF:

- international financial organisations
- private investors

# ENHANCEMENT OF ENERGY SUSTAINABILITY

## PRIORTIES FOR INVESTMENTS:

- **Construction of distributed generation** up to 3 GW to ensure needs of the critical infrastructure at the level of territorial communities
- **Implementation of highly maneuverable capacities** up to 2.4 GW for balancing the power system
- **Developing of energy storage systems** up to 2 GW
- **Reconstruction of DSO networks** to ensure the connection of distributed generation facilities, developing of “smart grid” and “demand response” technologies
- **Increasing the installed capacity of wind power production** up to 6 GW



# FINANCIAL BALANCING OF THE ELECTRICITY MARKET

Increasing the efficiency of the Guaranteed Buyer's trading strategy



Attracting financial support from international financial organizations



Ending the growth of debt in the balancing market by establishing a list of protected consumers and special accounts



Using a part of the TSO's dispatching tariff to repay debts on the balancing market and to the Guaranteed Buyer



Repayment of special obligations debts to the universal service providers, NPC Ukrenergo and Guaranteed Buyer



Financial balancing of TSO's tariffs



# ORGANISATIONAL AND TECHNICAL MEASURES FOR EFFECTIVE OPERATION OF THE NEW GENERATION



## What has been done?

- Simplified grid connection procedures
- Reduced time for issuing technical specifications
- Conducted long-term auctions for the purchase of additional services



## What needs to be done?

- Integration of electricity markets of Ukraine and the EU
- Development of legal mechanisms to implement the REMIT law to prevent market manipulations and misuses
- Introduction of loans and insurance against military risks
- Development of interconnectors and elimination of bottlenecks in the IPS of Ukraine and neighboring power systems
- Liberalisation of grid connection, land allocation and permitting procedures for the construction of generating facilities

# DEVELOPMENT OF A NEW ARCHITECTURE OF ENERGY SECURITY



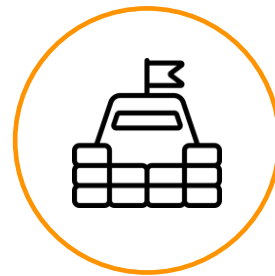
Engineering protection of critical infrastructure facilities



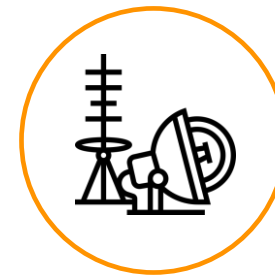
Physical security systems at facilities



Fire protection solutions



Protection of personnel, communication and control systems



Counteraction to drones, electronic warfare



Air defense of facilities

**Technical solutions for critical infrastructure protection should become a basis for development of technical standards in the European Union**



**THANK YOU  
FOR ATTENTION!**

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