

# World Bank Ukraine Energy Sector Update

*June 24, 2025*



# Agenda

- Welcome and Introduction
- Context and World Bank Energy Engagement in Ukraine
- REPOWER Project Update: Progress and Results
- RENEW – New Operation
- Looking Ahead
- Q&A and Open Discussion

# Welcome and Introduction



# Context and World Bank Engagement



# Energy Sector Damages from Russian Invasion and Attacks

**Devastating damage of \$20.51 billion (RDNA4), double the damage recorded in RDNA3**

## Continued attacks on the energy sector:

- Thermal power plants mostly destroyed
- Hydropower plants with significant damages; Dnipro HPP out of operation
- Nuclear power plants' connections and autotransformers
- Main gas infrastructure (40% of domestic gas production out of operation)
- Regional heating and power infrastructure, especially in large cities in eastern and southern regions

## Power sector most affected (\$14.8 billion):

- Generation segment hit hardest (\$11.9 billion)
- 9 GW of generation capacity damaged or destroyed in 2024
- 15 GW of installed capacity available after repair campaigns
- Ukraine needs 18-19 GW to meet peak demand needs

## Recovery efforts by Ukraine:

- Energy companies aiming to repair needed capacity
- Cities installing backup solutions
- Ukrenergo's installed protection significantly reduced damages caused by attacks on the transmission network

## Heating:

- Power shortages to worsen, backup and alternative solutions needed to decentralize
- Lack of gas due to destroyed gas infrastructure and domestic gas production (need in financing to import about 4.5 bcm before the next heating season)

**Gas booster compression station before attack**



**The same gas facility after attack**



# Ukraine's Gas Outlook: Preparing for Winter 2025-2026

## Key Challenges & Current Status:

- Depleted Gas Reserves: UGS levels are lowest in 11 years, at approx. **7 bcm in early June 2025**.
- Significant Shortfall: Estimated deficit of **4.5-4.6 bcm ( According to NAK), or 4-8 bcm ( according to DIXI group)**
- Production Decline: Russian attacks in Feb-March 2025 halved state gas output, taking 6-36 months to restore.
- High Import Costs: Ukrainian industrial gas prices are at a 2-year high, exceeding European hubs by €2/MWh.
- Transit Halted: Russian gas transit via Ukraine ceased Jan 1, 2025.

## Progress & Mitigation Efforts:

- Contracted Imports: 1.5 bcm already contracted (including 300 mcm LNG from ORLEN).
- Financial Aid: Secured €430 million from EBRD & Norway for 1 bcm of gas. Still need ~\$1.5-2 billion+.
- Increased Injection: May 2025 saw 1 bcm injected into UGS, 40% more than last year.
- Diversified Routes: Activating 'Vertical Corridor' (Greece-Moldova-Ukraine) and strengthening Polish pipeline capacity for LNG imports.
- Domestic Resilience: Active drilling and infrastructure restoration efforts continue despite threats.

## Outlook:

- Meeting the 13-15 bcm UGS target by Nov 1, 2025, requires urgent, consistent imports of 22 mcm/day

Note, in 2024, they accumulated only 13 bcm and that was sufficient, but of course, accumulating 15bcm would provide more certainty

# REPOWER PROJECT



# REPOWER: Response to Needs and Results

- **REPOWER** targets restoration of essential energy services through procuring critical equipment and supporting protective facilities.
- Current funding from URTF: **US\$247 million** in committed grants to date
- Additional funding from URTF: **US\$116 million** to be signed before URC
- Remaining **financing gap: US\$137 million** – but sector needs far greater



	Committed	Disbursed	Equipment Delivered / Notes
<b>Component 1</b> - Emergency procurement of <b>power transmission</b> equipment & construction of level 2 protective infrastructure partnering with Ministry of Energy (MoE) and Ukrenergo (UE)	US\$199.7 m	US\$67.4 m	29 transformers delivered  Trucks, cranes and special machineries delivered
<b>Component 2</b> - Emergency procurement of <b>heating equipment</b> partnering with Ministry for Communities and Territories Development (MCDT) of Ukraine, Kharkiv City Council, UNOPS	US\$47 m	US\$46.7 m	Boiler equipment, pipes, pumping equipment delivered in December 2024
<b>Component 3</b> - Project management and monitoring	US\$0.3 m	US\$0 m	
<b>Total</b>	US\$247 m	US\$114.1 m (46%)	

Expected disbursement by end of 2025 Q4 is at least additional US\$75 million for Ukrenergo equipment supply and protective shelters.



# REPOWER: Component 1 - Power Transmission

Emergency procurement of power transmission equipment partnering with Ministry of Energy (MoE) and Ukrenergo (UE)  
Available URTF grant: **US\$199.7 million**

## Supply of emergency equipment

- 12 contracts for supply of various equipment (autotransformers, phase-shifting transformers, special vehicles, and machinery) signed for US\$85 million
- US\$67.4 million of US\$85 million disbursed with 29 transformers delivered and 5 more transformers to be delivered in 1-2 months
- Parts of specialized trucks, cranes, and other special machinery delivered enabling repairs of power infrastructure; remaining machinery and vehicles to be delivered by November 2025

## Construction of level 2 protective shelters

- 35 protective infrastructure to be financed (most as retroactive finance)
- 4 protective shelters completed; construction works ongoing for another 29
- To finance these contracts, amendments to the Law on Procurement being processed by the GOU
- Subject to Law amendments, approximately US\$30 million expected to be disbursed by mid-July 2025; remaining amount expected to be disbursed by mid-2026

The project has supported critical restoration of electricity supply for 3-4 million customers



# REPOWER: Component 2 - Heating Equipment

Emergency procurement of **heating equipment** partnering with Ministry for Development of Communities and Territories (MDCT), Kharkiv City, United Nations Office for Project Services (UNOPS)

Available URTF grant: **US\$47 million (additional US\$116 million under processing)**

- Equipment (piping, specialized machinery, electric motors, modular / containerized type, heat-only boilers, containerized cogeneration units, pumping equip, gas connection equipment) delivered to Kharkiv in Dec 2024
- The remaining equipment expected to be delivered by November 2025, including additional equipment to be procured from US\$2 million in savings
- As of May 15, 2025, US\$42.3 million committed in active contracts, of which US\$21.9 million worth of equipment delivered
- MDCT requested funding of US\$116 million for procuring emergency heating equipment for additional 7 cities. Additional financing currently being processed by the Bank, with the following eligibility criteria:
  - Only district heating infrastructure located in cities that suffered damages as a result of Russia's invasion of Ukraine
  - Availability of funds committed either by the selected city or central government to cover installation and maintenance costs
  - Selected city's district heating company has the capacity to manage the installation contracts and the equipment, once installed

The project has supported critical heating supply for 1-2 million customers



# Lessons Learned and next Steps

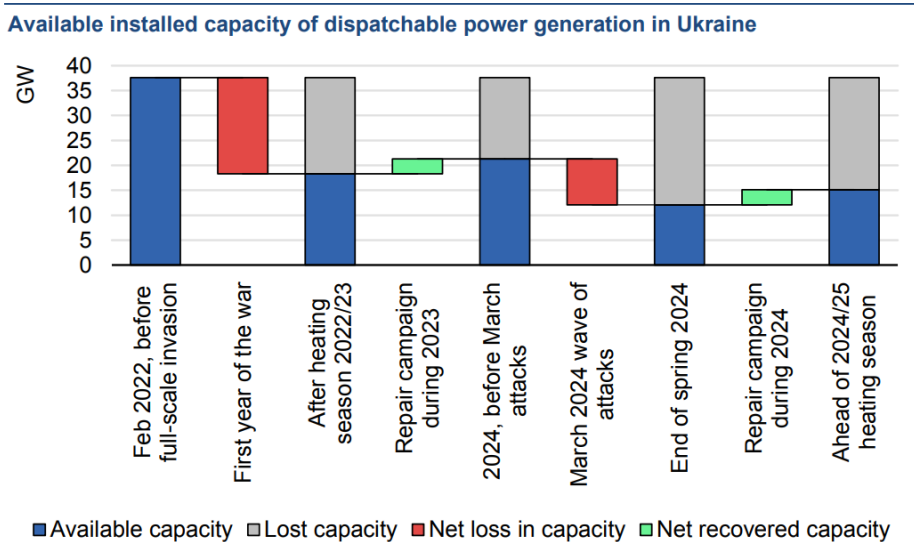
- **Ukrainian procurement law has created significant disbursement delays** to finance on-going protective shelter contracts since contracts could not be amended. Client is now issuing a modification of the procurement procedures to ensure applicability of IFIs procedures for IFI funded projects.
- **Collaboration with UNOPS in the heating component has been very successful.** support to additional 6 and Kharkiv will be expanding using the same implementation arrangements. Cities need to commit resources and technical ability to install equipment before launching procurement process.
- **Next steps:**
  - **Complete AF of US\$116 million for heating before end June, UNOPS agreement around URC.**
  - Follow up on the amendment of the **Procurement procedure.** This will enable significant disbursement.

# PROPOSED RENEW OPERATION



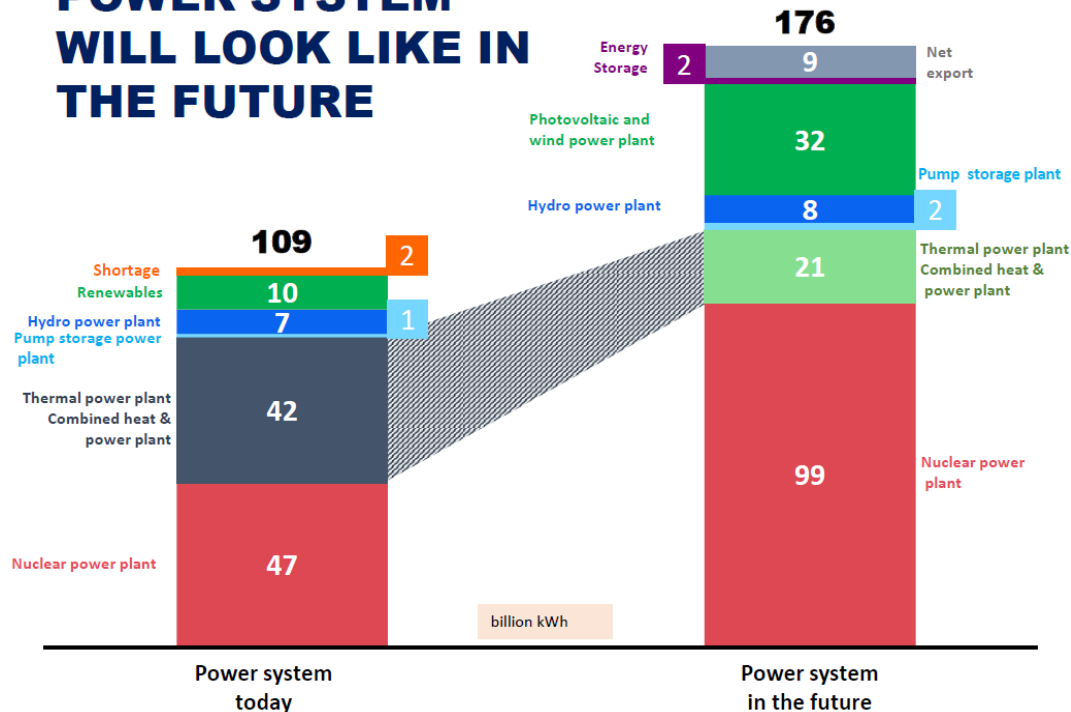
# Substantial additions in wind and solar capacity are required for Ukraine's Green Transition

- Levels of destruction and damage demand a large-scale effort to rebuild.



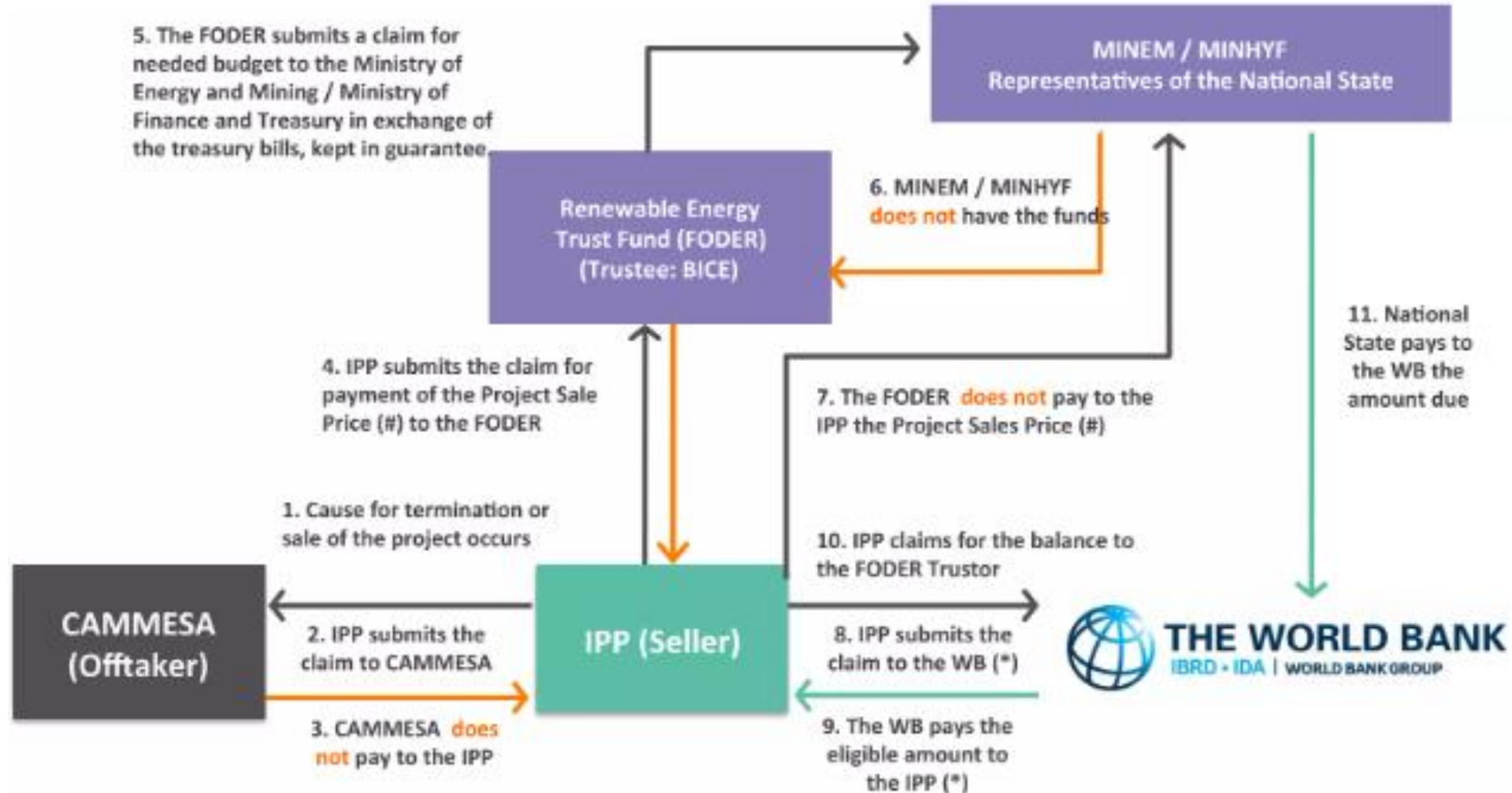
- GoU is committed to building back better / greener. The energy strategy shows the need to add over 22GW of renewables.
- Ukraine needs to develop around 1.5-2GW of battery storage by 2030 to enhance the power system flexibility for integration of variable renewable energy, even based on pre-invasion estimates.

## WHAT UKRAINE'S POWER SYSTEM WILL LOOK LIKE IN THE FUTURE



- In order to reach 80 percent of emission reductions by 2040, solar capacity install would need to reach around 17 GW (from 8 GW), and wind would need to get up to 25 GW of capacity installed (from current 1.8GW) by 2040.

# WBG experience: Argentina's RENOVAR program



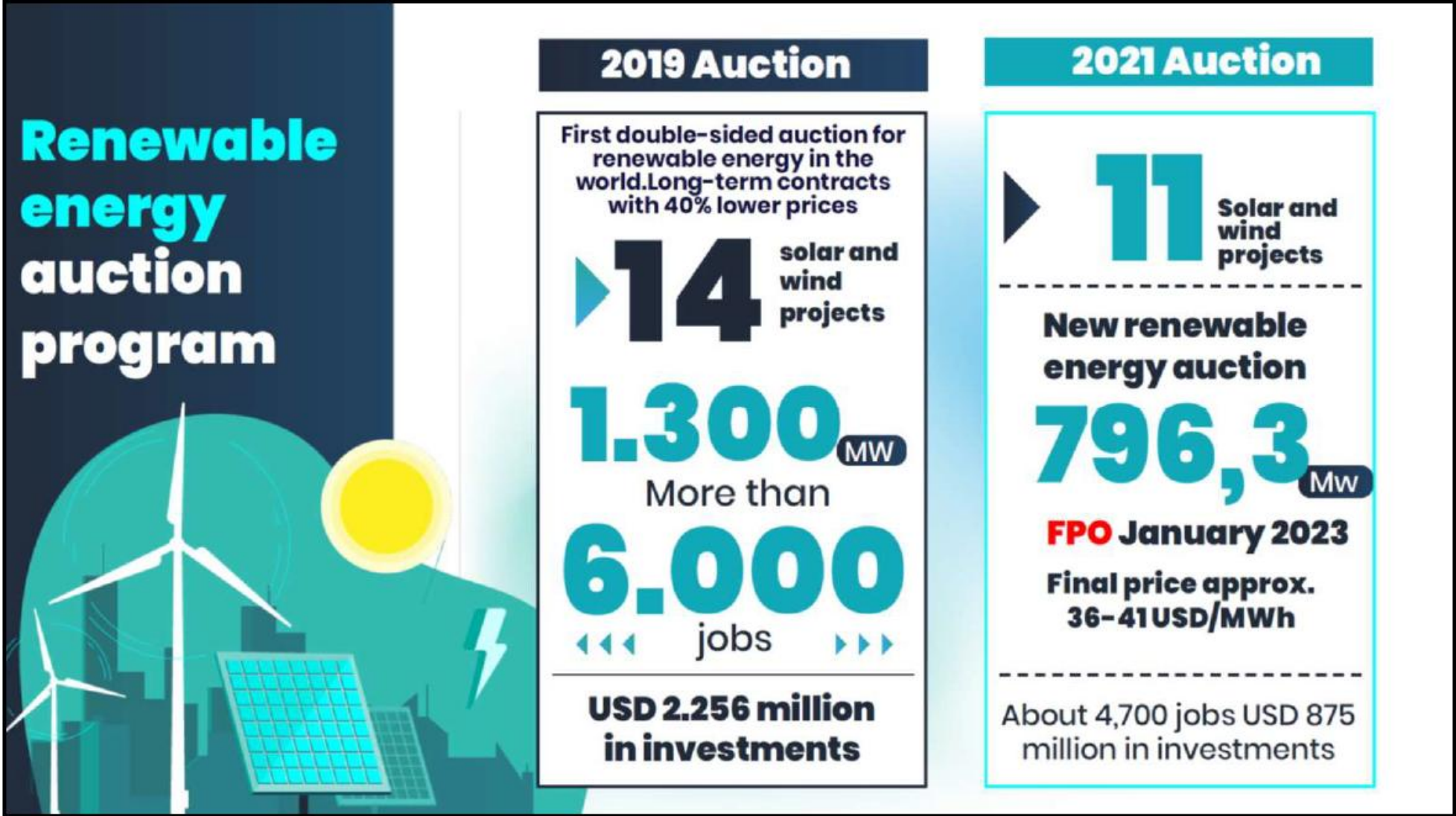
# Results of Argentina's WBG-supported **RENOVAR** program

**Figure 1: RenovAr Program Evolution**



⇒ *Argentina's RENOVAR program resulted in decreasing tariffs and increased interest from bidders over time.*

# WBG Risk mitigation and Auction support: Colombia Auction Program



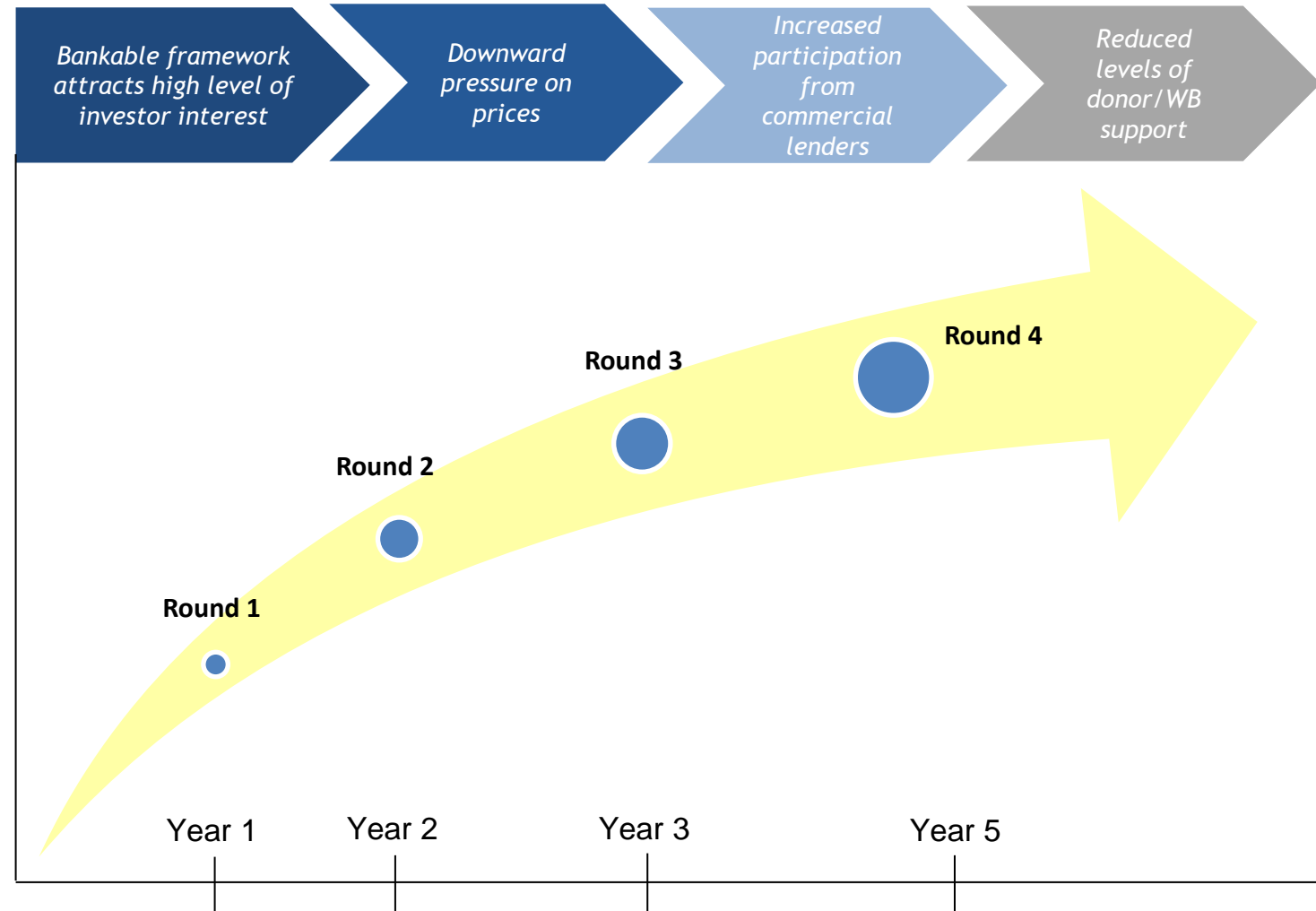
# What is RENEW: A proposal to help scale up GoU's renewable energy auctions

**RENEW Ukraine is A “one World Bank” engagement aimed at expanding the market for grid-connected renewable energy (with storage) projects, at scale and at competitive tariffs. The program will aim to add [20 GW] of wind and solar and 5GW of battery storage by 2040.**

**Its overall objective is to accelerate the development of renewables in line with targets to be defined in the NECP, by combining public, private and concessional resources to leverage the maximum private capital possible while keeping energy tariffs at affordable levels for the population.**

**Success will be measured based on:**

- 1. GW installed**
- 2. Private capital mobilized and long-term financing enabled**
- 3. Level of electricity prices and related impact on tariffs**



# What is RENEW: Key components of a WBG engagement

## 3 Components of RENEW



*A bankable set of contractual arrangements*

- Bankable source of payment to mitigate market risks and provide comfort to investors
- Tender documents which encourage competition amongst reputable players



*A credible solution from the technical / system planning standpoint*

- Capacity additions which make sense (technology and MW)
- Auctions at specific transmission nodes which can absorb additional intermittent capacity



*A credible plan for dealing with broader sector issues*

- Direction of travel towards financial sustainability
- Waterfall system / payment plan to clear existing arrears

## Activities & Roles of WBG



- Policy and sectoral support [DPO reforms contributed already]
- Tech expertise on system planning and financial viability of the sector
- De-risking products: backstopping key government payment obligations to facilitate commercial financing for the program
- Channeling of donor support

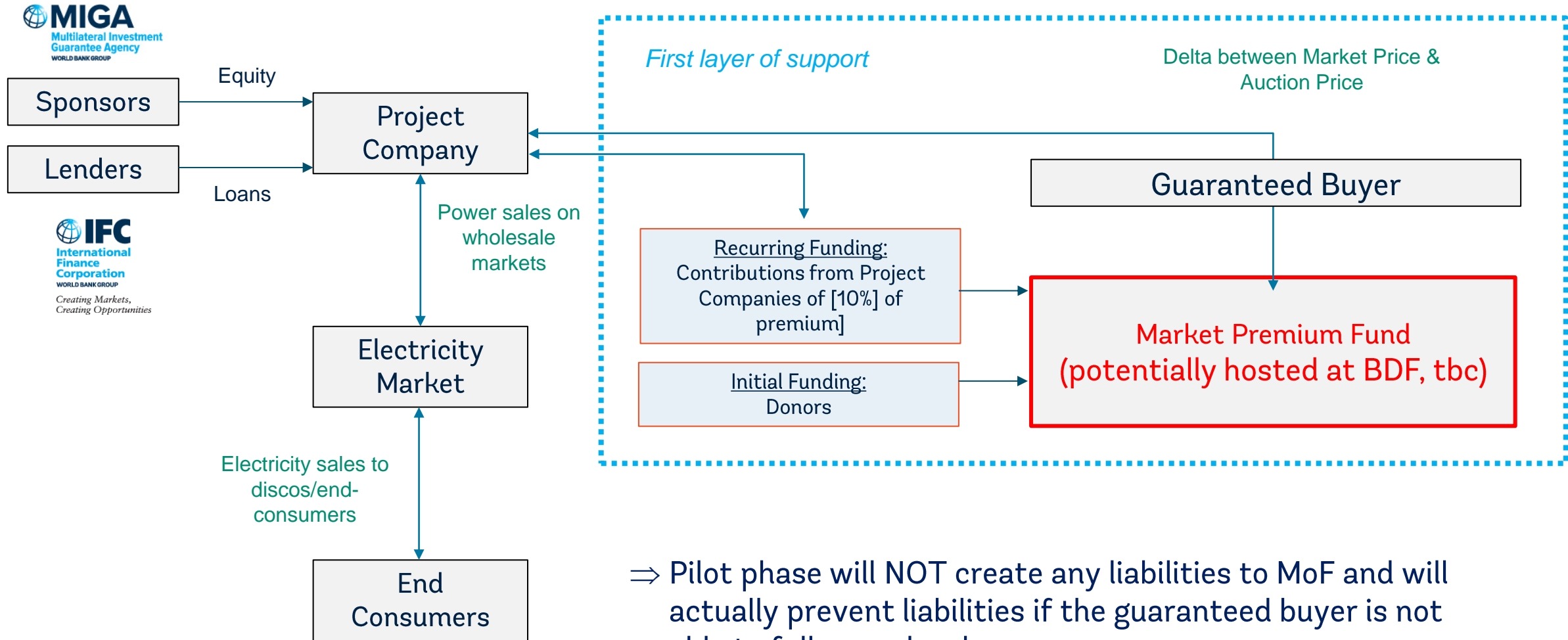


- Expertise in structuring large scale RE tenders
- Private sector lens
- Financial products for private sector participants
- Mobilization of other sources of funding for private sector participants



- Private sector lens
- Political Risk Insurance for private sector participants – equity and commercial lenders

# Concept Design for RENEW financial derisking: Pilot Phase of [1 GW]



⇒ Pilot phase will NOT create any liabilities to MoF and will actually prevent liabilities if the guaranteed buyer is not able to fully pay developers.

# Question and Answer



# Concept Design for RENEW: Pilot Phase

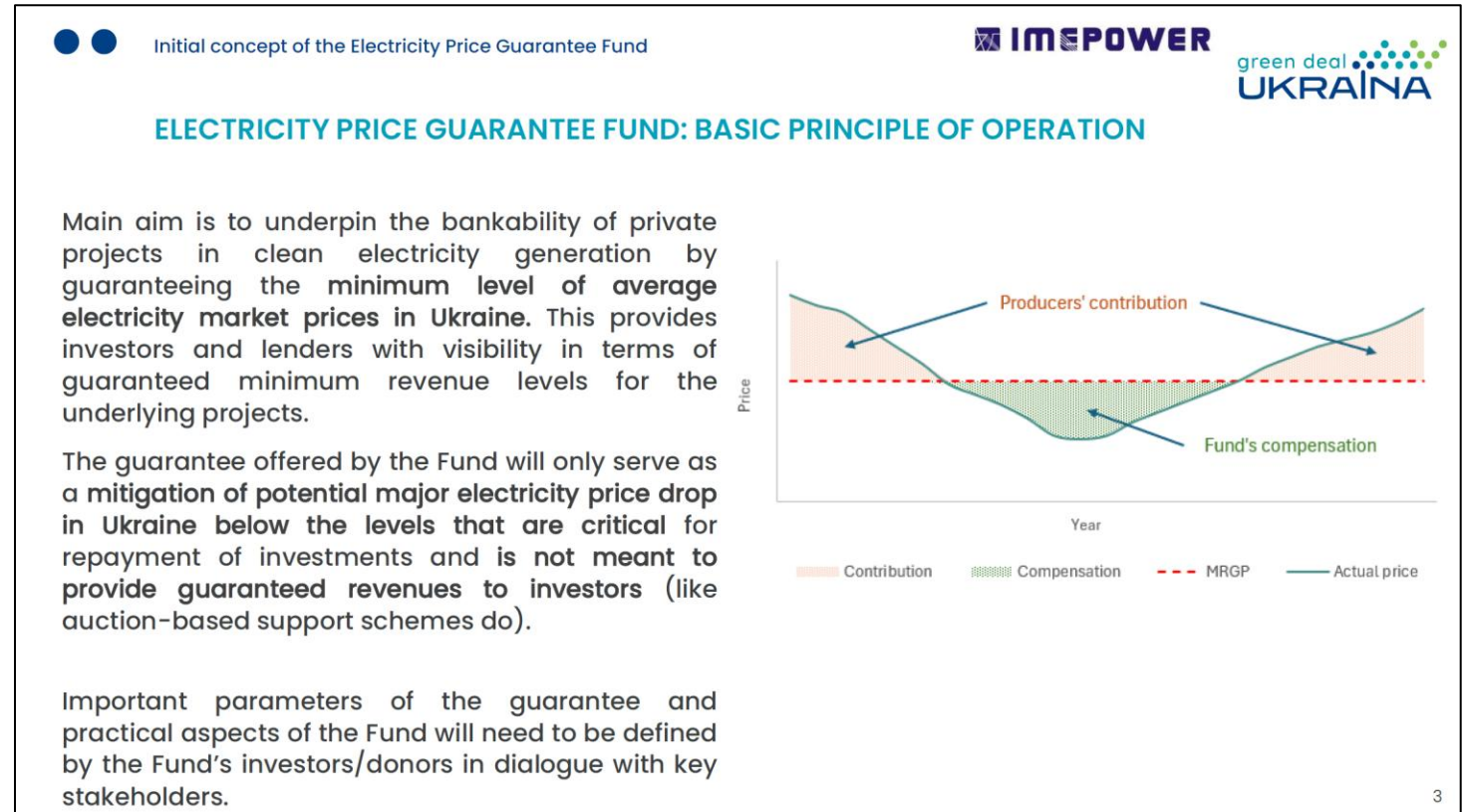
Support	Purpose of Support	Options	Initial sizing estimate
Market Premium Support	<ul style="list-style-type: none"> <li>• Payment of premia if sales price &lt; strike price</li> <li>• Liquidity support in the event of inability to sell</li> <li>• Deemed energy for curtailment</li> <li>• Initial capex buy-down for batteries</li> </ul>	<ol style="list-style-type: none"> <li>1. Donor injection as “seed capital”</li> <li>2. Supplemented with recurring revenue sources (private contributions)</li> </ol>	<ul style="list-style-type: none"> <li>✓ Initial balance requirement of the Premium Fund could be in the order of EUR [150-200] million</li> <li>✓ This could indicatively back an initial auction of 1GW of wind = catalyze around EUR 1.4 billion in investment (leverage effect of 7-9x)</li> <li>✓ Over time, would grow and be backed by IBRD contingent support or IBRD guarantees</li> </ul>

## Key aspects for WBG support at program level

- ✓ Sustainable RE mechanism and clear reform path to financially sustainable sector
- ✓ Adequate institutional and governance systems in place for agencies implementing the program (fiduciary, KYC and E&S oversight)

# Similar liquidity fund idea has been proposed by industry groups and may be backed by the EBRD and EC

- Industry groups put together a proposal of a risk-pooling mechanism where generators would contribute when prices are high in exchange for a minimum guaranteed price when prices drop.
- The concept has been discussed at a high level with key stakeholders, with many important aspects still to be worked through. EBRD seems willing to play a lead role.
- WBG has shared views this fund could be a pilot for a larger scale effort (as RENEW envisages) and should complement market mechanisms and existing auction efforts.



- **There are some fundamental points to iron out with EBRD (and others)!**
  - Allocation of funds available (competitive vs. first-come-first serve)
  - Management/governance of the fund (role of DFIs and of GoU)
  - Source of funds (initial and replenishment)
  - Determination of price being guaranteed