

MOBILIZING EU CAPITAL INTO ENERGY TRANSITION IN MONGOLIA

This Memorandum of Understanding (MoU) sets a non-binding strategic cooperation framework between the Government of Mongolia (GOVMON) and the European Investment Bank (EIB) aligned with EU's Global Gateway priorities and Mongolia's Vision 2025. While it does not guarantee funding, it opens the door for technical collaboration and potential financing of up to EUR 1 billion

RENEWABLE ENERGY PROJECTS



European Bank
for Reconstruction and Development

1 bil, USD



European
Investment Bank

1 bil, EUR

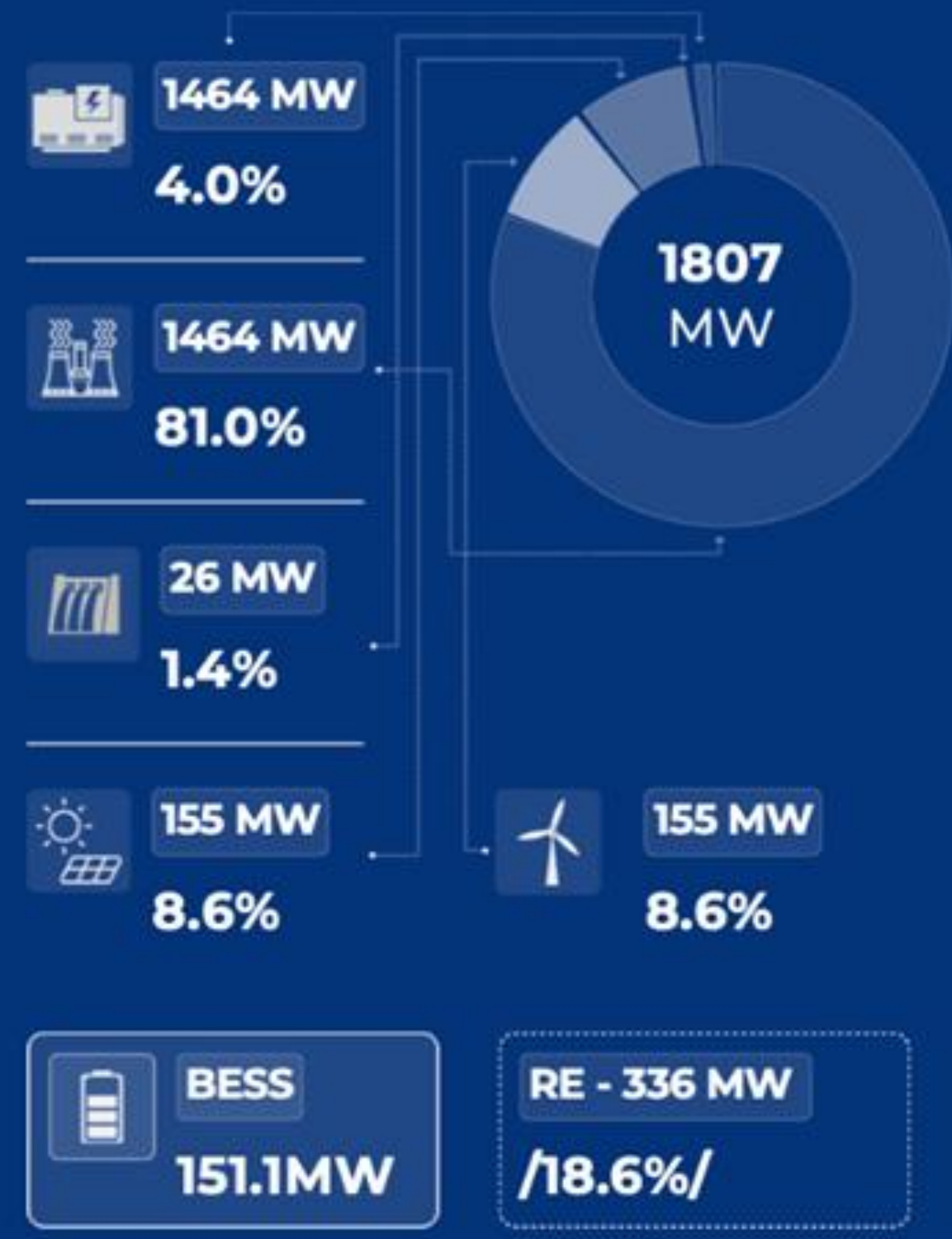
**Energy Transition
Private & Public
Sector**

ENERGY TRANSITION AND SUSTAINABILITY PROJECTS

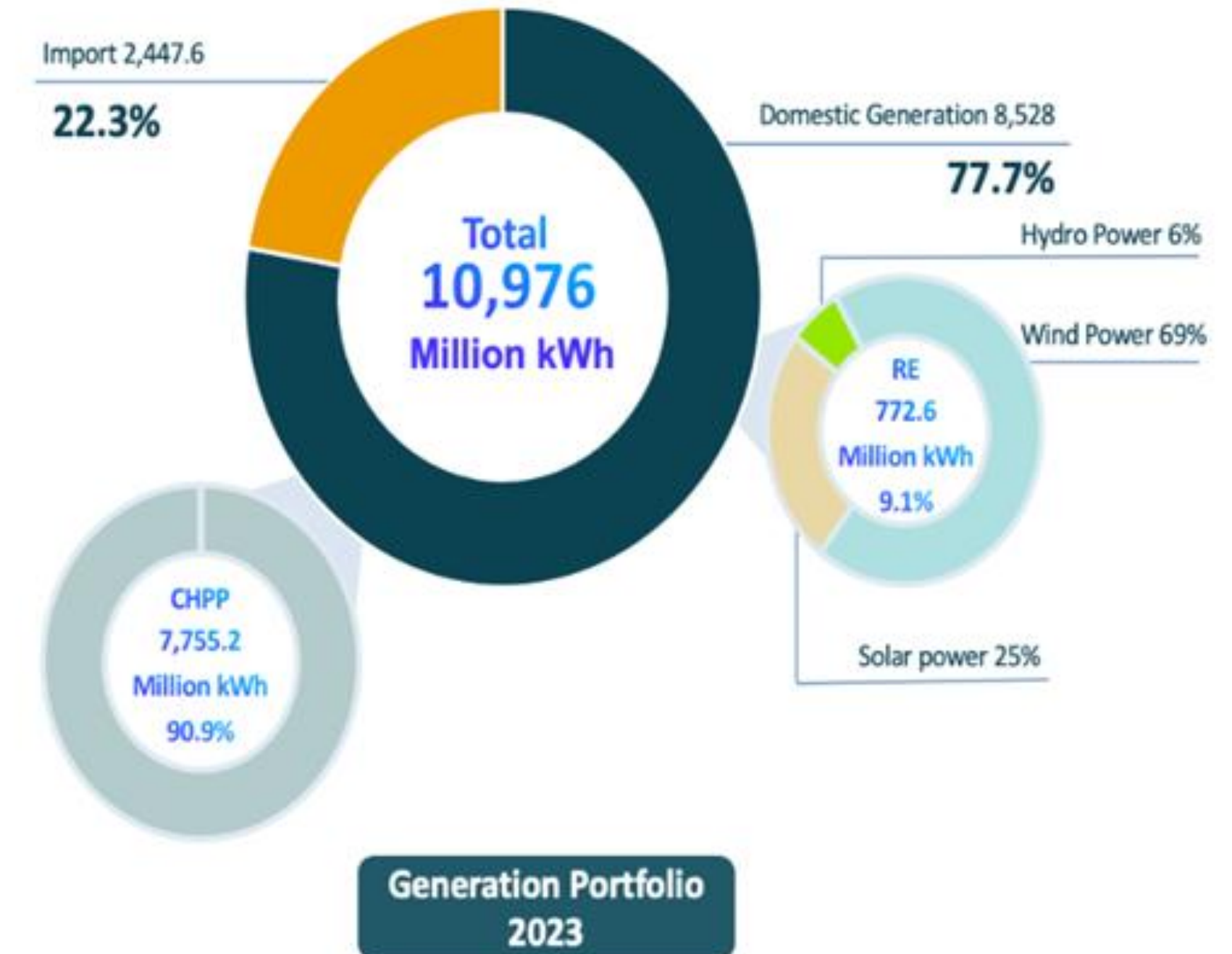
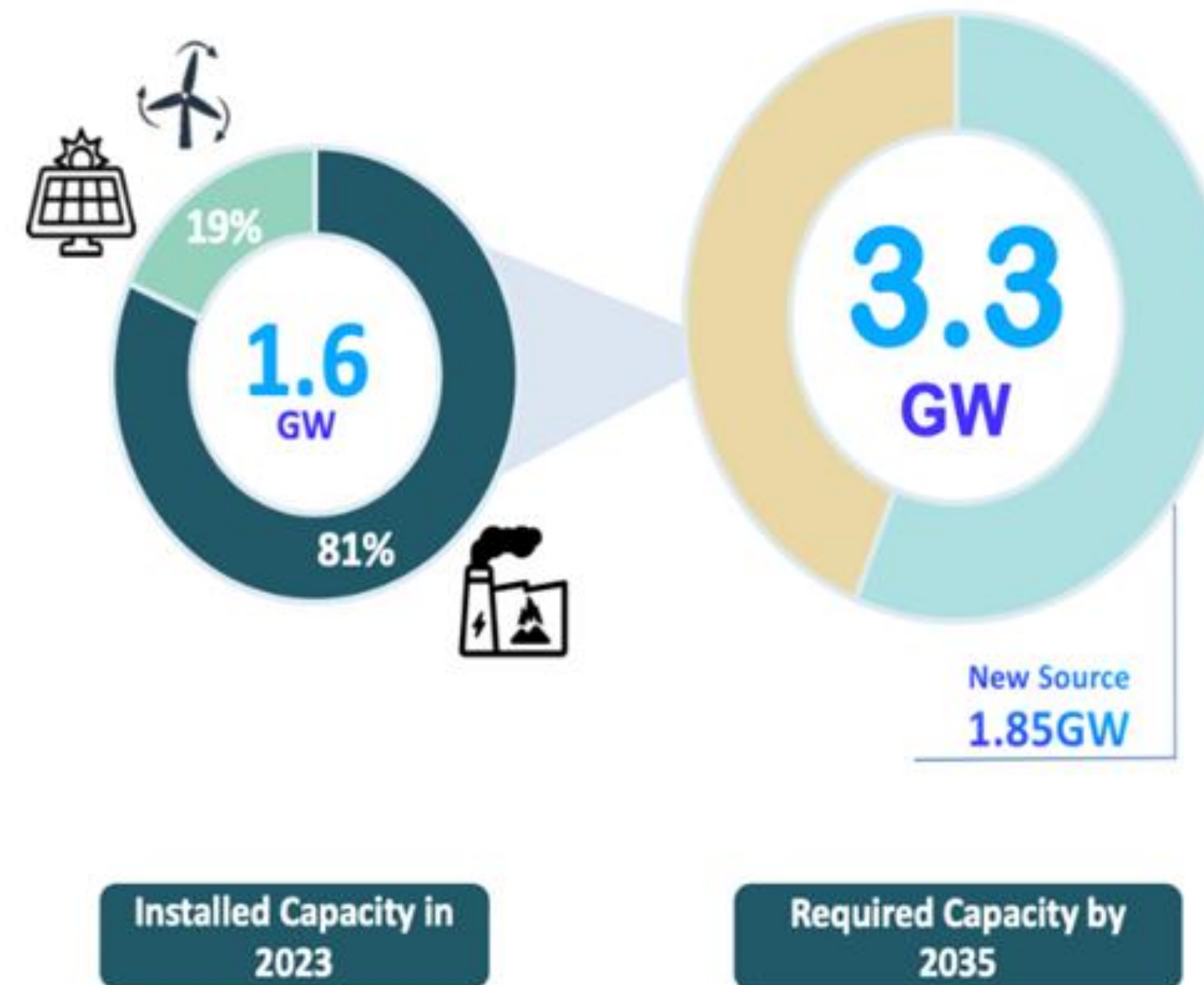
- **Transmission Lines**
- **Substations**
- **Private Sector Projects**
- **PPP Projects**
- **State and Private Banks**



INSTALLED CAPACITY MONGOLIAN POWER SYSTEM



DOMESTIC ENERGY CAPACITY AND DEMAND BY 2035






- Additional 1.85 GW of energy capacity will be required to meet local demand by 2035

| 2001 | 2007 | 2011 | 2015 | 2015 | 2019 |
|------------------------|--------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| LAW ON ENERGY | LAW ON RENEWABLE ENERGY | LAW ON ENERGY | LAW ON ENERGY CONSERVATION | LAW ON RENEWABLE ENERGY | LAW ON RENEWABLE ENERGY |
| 2001.02.01 APPROVED | 2007.01.11 APPROVED | 2011.12.09 (AMENDMENTS, CHANGES) | 2015.12.26 APPROVED | 2015.06.19 (AMENDMENTS, CHANGES) | 2019.06.06 (AMENDMENTS, CHANGES) |

LAW ON RENEWABLE ENERGY

2007

The purchasing tariff for the transmission network to purchase energy produced by renewable energy sources has been set in line with international practice.




-  Electricity price of 1kWh between \$0.08 and \$0.095.
-  Price of 1 kWh of electricity from Solar power plant up to 0.15-0.18 USD
-  The price of producing and supplying 1 kWh of electricity from a hydroelectric power plant with a capacity of up to 5,000 kW is 0.045-0.06 USD dollars.

2015

The purchasing tariff for the transmission network to purchase energy produced by renewable energy sources has been set in line with international practice.

2019

The purchasing tariff for the transmission network to purchase energy produced by renewable energy sources has been set in line with international practice.

-  Up to \$0.085 per kWh of electricity
-  The cost of producing and supplying 1 kWh of electricity from a hydroelectric power plant with a capacity of up to 5,000 kW is 0.045-0.06 US dollars.
-  Up to \$0.12 per kWh of electricity from Solar power plant



SOLAR AND WIND SOURCES PLANNED FOR IMPLEMENTATION

| N° | Station Name | Capacity |
|----|------------------|---------------|
| 1 | Ulgii SPP | 20 MW |
| 2 | Myangad SPP | 20 MW |
| 3 | Myangad BESS | 15 MW/ 93MWh |
| 4 | Umnugobi SPP | 20 MW |
| 5 | Umnugobi BESS | 10 MW/ 62 MWh |
| 6 | Bayankhongor SPP | 10 MW |

70 MWt (Solar icon) 25 MW / 155 MWh (Battery icon)

70 MWt (Solar icon) 27 MW / 78 MWth (Battery icon)

| N° | Station Name | Capacity |
|----|-----------------|---------------|
| 1 | Undurkhaan SPP | 15 MW |
| 2 | Undurkhaan BESS | 15 MW/ 30 MWh |
| 3 | Baruun-Urt SPP | 10 MW |
| 4 | Tamsag SPP | 20 MW |
| 5 | Tamsag BESS | 12 MW/ 48 MWh |
| 6 | Khutul SPP | 10 MW |



50 (Wind icon)
10 (Solar icon)
10 (Battery icon)

Solar and wind power plant projects to be implemented through competitive bidding

10 (Solar icon)
50 (Wind icon)

Business entities that obtained a special license before the amendments to the Law on Renewable Energy were made

50 (Wind icon)
15 (Solar icon)
10 (Solar icon)

PRIVATE SECTOR OWNERSHIP
PRIVATE SECTOR OWNERSHIP
STATE OWNERSHIP



IMPLEMENTED AND ONGOING RENEWABLE ENERGY PROJECTS AND MEASURES

2022

15.5 MW

Khovd, Myangadin 10 MW SPP

Gobi-Altai, Altai soum 0.3 MW SPP,
0.4 MW diesel, 3 MWh battery
storage

Zavkhan, Aldarkhan 5 MW SPP,
Uliastai

3.6 MWh BESS

Khovd, Jargalant soum 1st
kindergarden-1500 m2 135 kW
ground heat pump

2023

90 MW



Yesenbulag 10 MW SPP

80 MW capacity, 232 MWh storage
capacity

Zavkhan, Uliastaisoum No. 2 school -
2608 m2 110 kW ground ground heat
pump

2024

25 MW

·Murun, Khuvsgul aimag 10 MW SPP

·Erdene soum, Dornogovi aimag 15 MW
SPP

·Bayankhongor, Ulziit soum high school -
1886 m2

·Uvs, Ulaangom soum School No. 5 -
2745 m2

·Gobi-Altai, Altai soum Governor's
office bldg, hospital - 1317 m2

2026

200 MW

**Competitive selection of renewable
energy sources**

Wind-100 MW

Solar - up to 100 MW



Borkh (Zavkhan,
Aldarkhan)



Myangad (Khovd,
Myangad)



Kindergarten No. 1
(Khovd, Jargalant)



Moron
(Khuvsgul, Murun)



Altai (Gobi-Altai, Altai)



High school
(Bayankhongor,
Olziit)

Article 4.1.10 of the Renewable Energy Law stipulates that project selection entails a competitive evaluation of renewable energy generation projects eligible for grid integration, contingent upon compliance with technical conditions and the competitiveness of energy supply pricing bids submitted to the integrated grid.



The MoE with World Bank's International Finance Corporation is working to implement a 100 MW wind power plant project through a competitive selection process.



The European Bank for Reconstruction and Development is collaborating with the Ministry of Energy of Mongolia to implement solar power plant projects through a competitive selection process.



A feasibility study is being developed for a 200 MW/800 MWh energy storage project to be implemented through competitive bidding in collaboration with the World Bank.

Erdeneburen Hydropower Plant



2024

The preparatory work for the project has been fully completed, and a special loan agreement has been signed.

2025

Construction work 30%

2026

Construction work 60%

2027

Construction work 80%

2028

Construction work 95%

2029

Construction work 100%

Egiin Gol Hydropower Plant



2024

46th session of the UNESCO World Heritage Committee the decision has been made.

2025

The project's environmental and social impact assessment is ongoing, Feasibility study for auxiliary port will be ready.

2026

The project's environmental and social impact assessment will be completed.

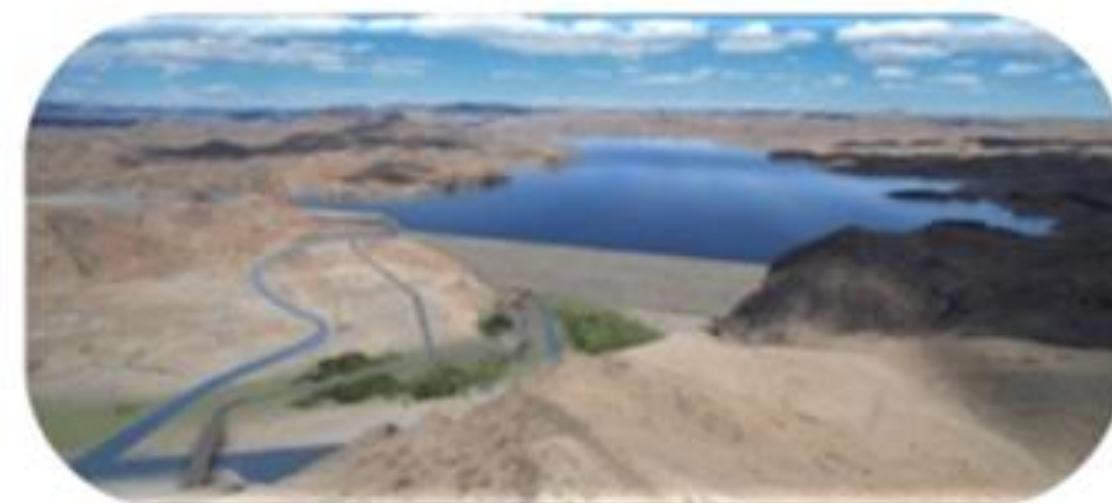
2027

The evaluation will be submitted to the UNESCO World Heritage Committee for a decision.

2028

Source of funding will decide

Baidrag Hydropower Plant



2024

EIA's ToR is developed and working to acquire for special state needs the project site.

2025

EIA will develop and the project site will take into specific state needs and will determine the source of funding.

2026

Will be decide on the source of funding and will be selected the contractor.

2027

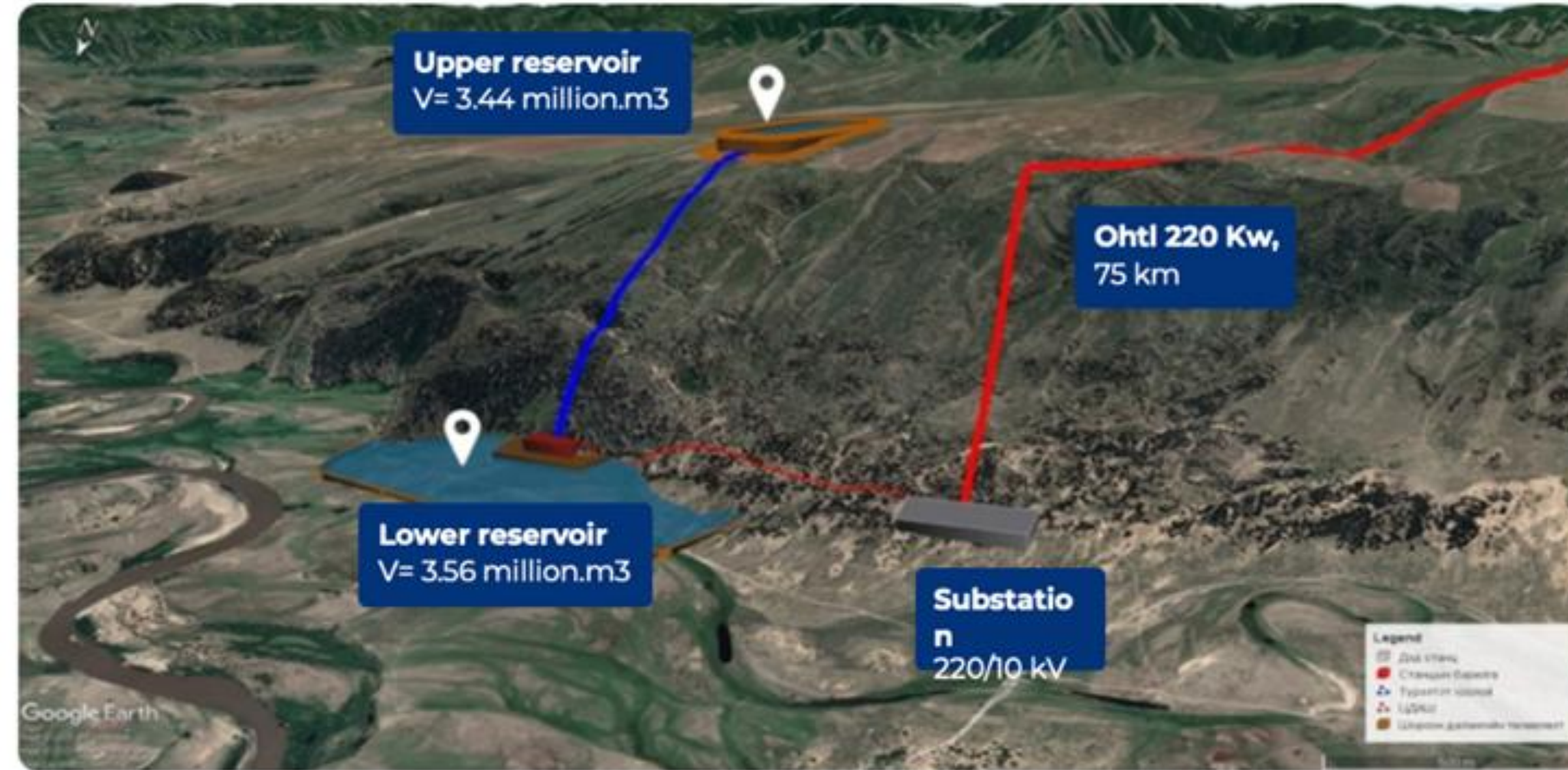
Construction work 30%

2028

Construction work 60%



100 MW PUMPED HYDROELECTRIC ENERGY STORAGE PROJECT TOWORKINTHE CENTRALREGION ALINTEGRATED GRID



Project overview information

| | |
|---|--|
| Responsible Ministry | Ministry of Energy |
| Implementation | 2024-2028 |
| Project capacity | The power plant will produce 100 MW of electricity, 292 millionkWh per year. |
| Location | Selenge aimag, Javkhlant soum, near the Yeroo river |
| Total source of funding | 190.8 million US dollars Asian Development Bank concessional loan |
| The alignment with long-term, medium-term, and short-term development policy directions. Whether it has been incorporated or not.? | It aligns with the 4.2.36 and 6.4 of the Long-Term Development Policy Document of Mongolia, "Vision-2050"; Action Plan of the Government of Mongolia for 2024-2028 |
| Construction work | 36 months |

Results of the project implemented:

- ◆ The goal is to reduce imported energy, regulate the fluctuations in electricity from renewable energy sources, and establish a flexible system to stabilize the production and consumption balance of the Central region's energy system.
- ◆ By constructing and commissioning a hydropower plant with a capacity of over 100 MW in the Central region's energy system, the impact of intermittent and variable renewable energy sources will be reduced. Additionally, due to the system's characteristics, it is estimated that this will create the possibility to establish new solar and wind power sources with an installed capacity of 150-200 MW.

Project preliminary work:

The feasibility study (FS) has been developed, and a General assessment of the environmental impact has been conducted. A Detailed assessment of the environmental impact's ToR has been prepared. Additionally, efforts are underway to designate the land for the construction of project infrastructure and the creation of a reservoir as land for the special state needs

| | |
|---|--|
| Feasibility study | ✓ |
| General assessment of the environmental impact | ✓ |
| Detailed assessment of the environmental impact | Developed the ToR |
| Land permit | Preparations are being made for special state needs. |

1. RESEARCH OF ENGINEERING GEOLOGY

2. RESEARCH ON THE IMPACT OF THE ENVIRONMENT AND SOCIETY

3. INSTALLED CAPACITY'S VERSION OF PUMPED HYDROELECTRIC ENERGY STORAGE

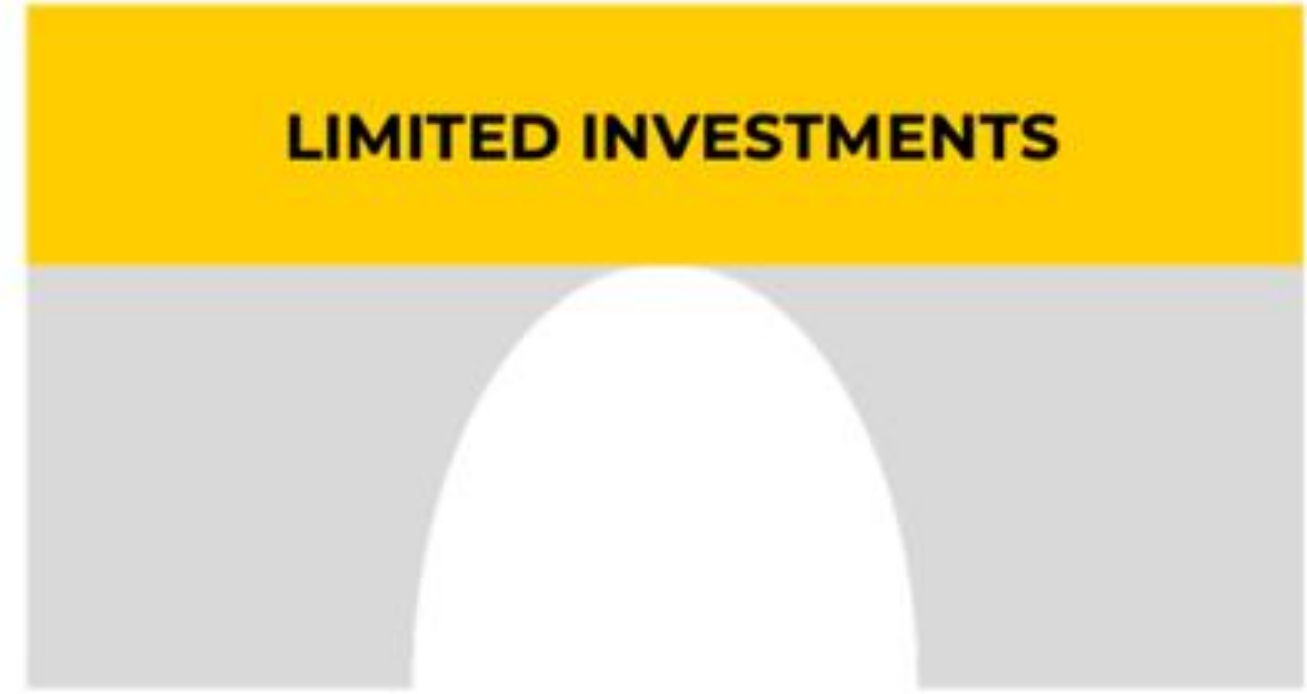
**PROJECT BANKABILITY FACILITY :
 SUPPORTING PROJECTS BRIDGE
 THE GAP BETWEEN THE
 BANKABILITY AND INVESTMENT**



Duration: 3-4 years



Plenty of project that are poorly structured
 Developers lacking financial and commercial skills
 Unrealistic expectations



Weak investment culture and risk assessments
 Weak understanding of technologies and business models
 Limited number or successful exist

KEY ACTIVITIES:

PROJECT PREPARATION & BANKABILITY
 INVESTOR MOBILISATION
 MARKET & CAPACITY BUILDING



KEY ACTIVITIES

to Mobilize EU Capital

PROJECT PREPARATION & BANKABILITY

- Investment readiness diagnostics
- Financial modelling and structuring
- Legal, regulatory, and PPA advisory
- Grid interface and technical optimisation
- Business Model and Structuring

MARKET & CAPACITY BUILDING

- Capacity building for Mongolian developers
- Standardised project documentation
- Risk assessment and ESG alignment
- Green Jobs
- Green finance criteria

INVESTOR MOBILISATION

- Investor and Debt finance facilitation
- Structured roadshows and pitch forums
- Support through financial close

**PROJECT BANKABILITY FACILITY :
SUPPORTING PROJECTS BRIDGE
THE GAP BETWEEN THE
BANKABILITY AND INVESTMENT**

P



**Renewable
Energy**



**Energy
Efficiency &
Demand
Reduction**



**Energy
Storage &
Conservation**



**Urban
Resilience**



**Rural
Electrification
& Energy
Access**



**Waste
Treatment**



**Water &
Sanitation**



**Agriculture &
Agribusiness**



**Clean
Technology**



**Climate
Resilience
Infrastructure**



Tourism



**Climate
Change
Adaptation**



Clean Cooking



**Biodiversity &
Eco-system
Services**