



MINISTRY OF ENERGY OF  
THE REPUBLIC OF AZERBAIJAN



# RENEWABLE ENERGY SECTOR IN AZERBAIJAN

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**Deputy Director of AREA**

## "Azerbaijan 2030: National Priorities for socio-economic development"

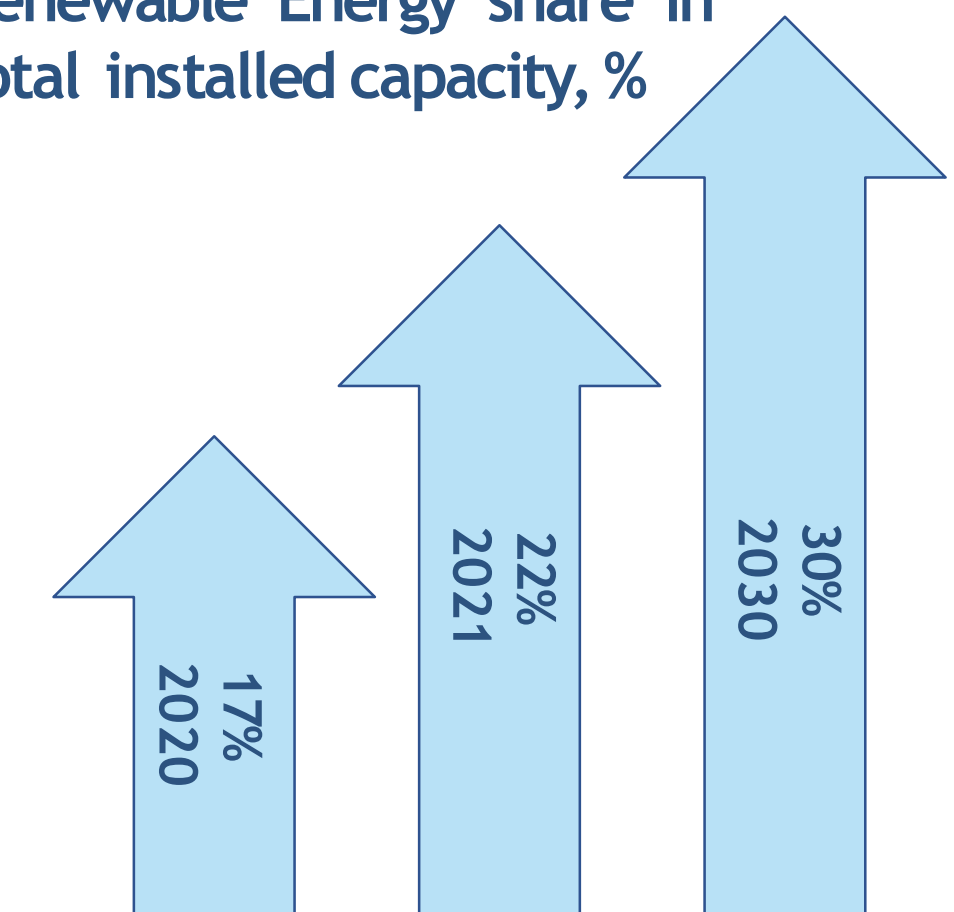
1. A steadily growing, competitive economy
2. A dynamic, inclusive society based on social justice
3. Areas of modern innovations and competitive human capital
4. The Great Return to the territories liberated from occupation
5. A clean environment and country of "green growth"
  - high quality ecological environment
  - green energy zone



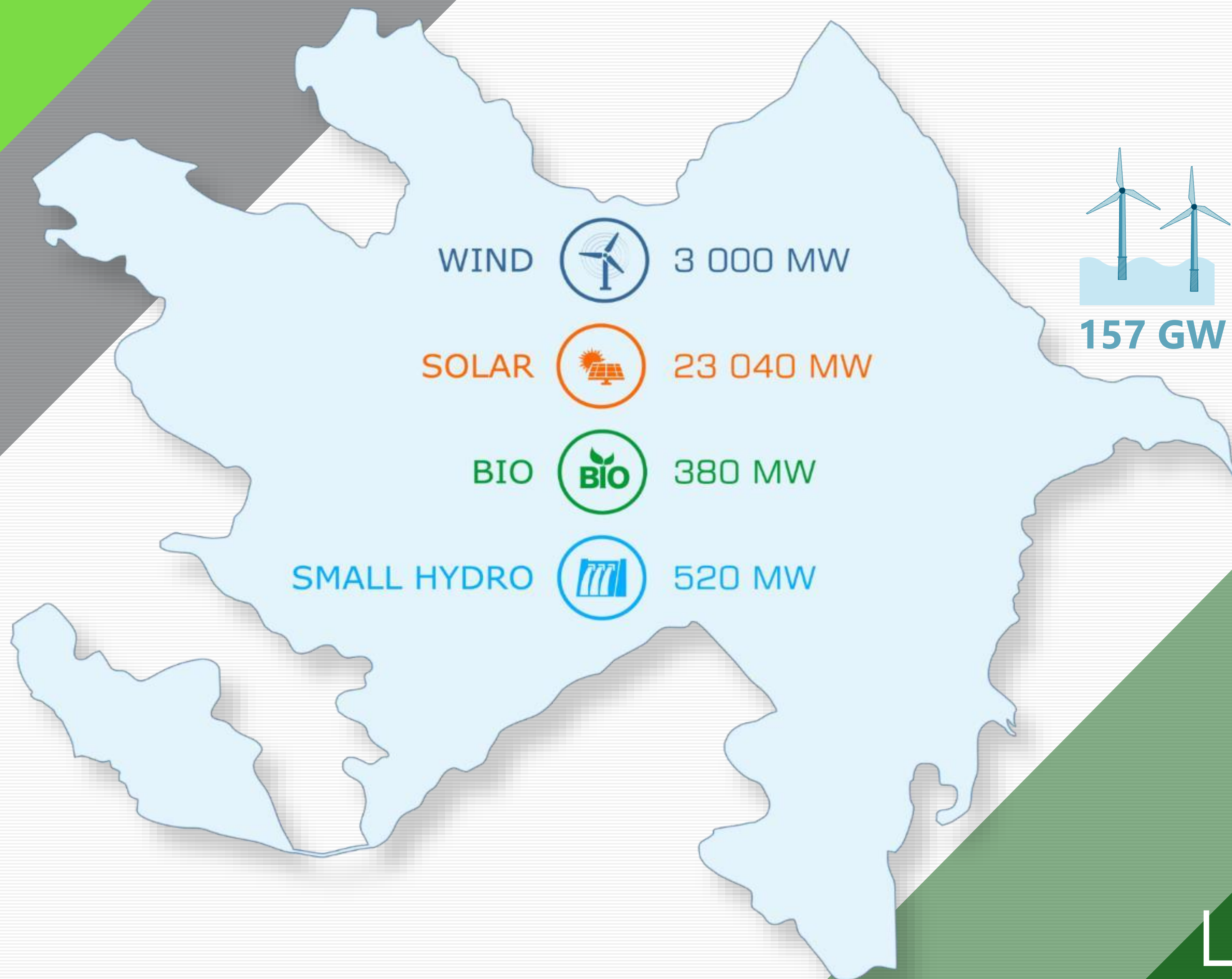
Reduction of greenhouse gas emissions – 40% by 2050

**NET ZERO EMISSION ZONE  
IN THE LIBERATED LANDS**

Renewable Energy share in total installed capacity, %







# RENEWABLE ENERGY POTENTIAL

# ELECTRICITY MARKET (installed capacity)

Total installed capacity

**7937 MW**

Thermal power plants (6632 MW)

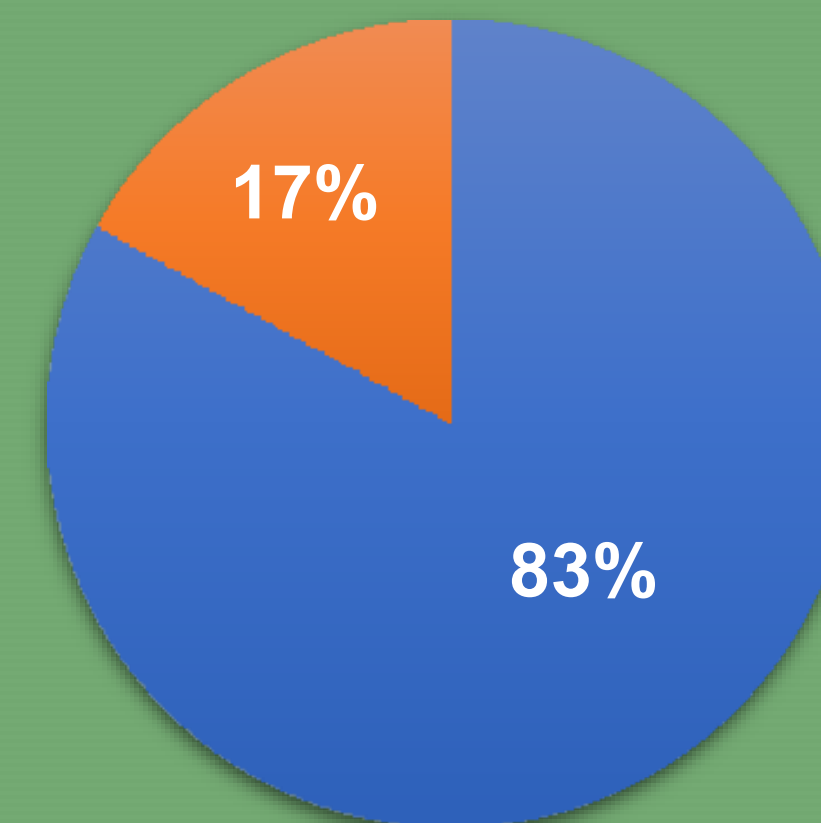
Hydropower plants (1159 MW)

Solar power plants (42 MW)

Wind power plants (66 MW)

Waste to energy plant (37 MW)

Bioenergy/ Biogas plant (≈1 MW)



■ Conventional power plants  
■ Renewable power plants

Planned capacity addition with RE projects

-2023	2023-2025	2026-2030
440 MW	460 MW	600 MW

# Implementation Strategy

- Development of the regulatory and legal framework
- Determination of the supporting mechanisms
- Preparation on the realization of auctions on the renewable energy zones
- Cooperation with the partners (potential investors)





# Regulatory and Legal Framework

- Law of the Republic of Azerbaijan on the usage of renewable energy sources in the production of electricity
- Template power purchase agreement
- Template connection agreement
- The auctions rules
- The rules on application of the net metering and calculation scheme



# Guarantees Proposed To The Investors

- Protection of the investment (existing in the legislation)
- Tax rebates within seven years (investment promotion mechanisms)
- 50% reduction of income tax for individual entrepreneurs;
- 50% reduction of profit tax for legal persons;
- no VAT and no customs duties on imports of machinery, technological equipment and installations;
- no property tax;
- no land tax.
- Guaranteed off-take (Take or pay)
- Guaranteed connection
- Priority in dispatching
- Possibility of indexation of payments to foreign currency
- Long-term land lease



# Implementation of Renewable Energy Projects by the Investors

## AUCTIONS

- The auctions rules
- RFQ
- RFP

## BILATERAL AGREEMENT

### **Bilateral agreement shall be carried out in the following cases:**

- during the implementation of pilot projects;
- if deemed necessary in terms of the interests and strategic importance of the state;
- if it is not possible to determine the investor at the auctions or if the auction did not take place.





## FINAL AGREEMENTS WITHIN THE PILOT PROJECTS

**Below-mentioned Agreements were signed on:**

- 240 MW wind power plant between the Ministry of Energy, Azerenergy OJSC and ACWA Power of the Kingdom of Saudi Arabia – 29.12.2020
- 230 MW solar power plant between the Ministry of Energy, Azerenergy OJSC and Masdar of the United Arab Emirates – 06.04.2021

- **INVESTMENT AGREEMENT**
- **POWER PURCHASE AGREEMENT**
- **TRANSMISSION CONNECTION AGREEMENT**





## IMPLEMENTATION AGREEMENTS SIGNED DURING BEW 2022

### With Masdar company

- on evaluation, development, and implementation of 1,000 MW utility-scale onshore solar and 1,000 MW wind energy projects in the Republic of Azerbaijan
- evaluation, development and implementation of integrated offshore wind and green hydrogen projects with a capacity of 2,000 MW.



### With bp company

- Addendum to the Implementation Agreement that had previously signed in June 2021 committing to work together to take the next steps towards joint implementation of a 240MW solar power plant in the Jabrayil district.



# SUPPORT FOR THE IMPLEMENTATION OF RENEWABLE ENERGY AUCTIONS IN AZERBAIJAN

- Site selection
- Develop all the tender documentation required for a renewable project
  - Auction rules
  - RFQ, RFP
  - Template Support Agreement
  - Template Power Purchase Agreement
  - Template agreement for connection to the grid
  - Template agreement for land lease
  - Final drafts of bid forms
- Prepare a complete and comprehensive set of technical specifications to be included in the RFP
- Provide the authorities with detailed technical, environmental, financial and legal assistance for the implementation of the tender
- Develop framework for a future competitive procurement scheme



**European Bank**  
for Reconstruction and Development



# REGIONAL KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE FLOATING SOLAR ENERGY DEVELOPMENT

-Design, procure and supervise implementation of a pilot project and develop corresponding scaled-up project

Pilot project: 100 KW FPV plant in Lake Boyukshor

Initial FS for the scale up project

-Analyze policies and tariff structures and recommend suitable for business models

-Institutional Capacity Building for Stakeholders

***50 MW FPV project is under consideration***





# OFFSHORE WIND ROADMAP FOR AZERBAIJAN

**The development of a Roadmap Study** which outlines:

- the potential role that offshore wind could play in Azerbaijan's future energy mix
- the areas of Caspian sea suitable for offshore wind development
- the potential costs and economic benefits, the key issues that would need to be addressed through further technical studies
- the responsible agencies and permitting procedures, any policy or regulatory changes that would be required to facilitate offshore wind deployment
- recommendations on next steps.

**Azerbaijan's first offshore wind demonstration project.** This work will outline:

- how a sample demonstration project could be developed and delivered
- advice on options for procurement strategy (i.e. models for project concessions)
- different approaches to de-risking activities that could be commissioned by the government.

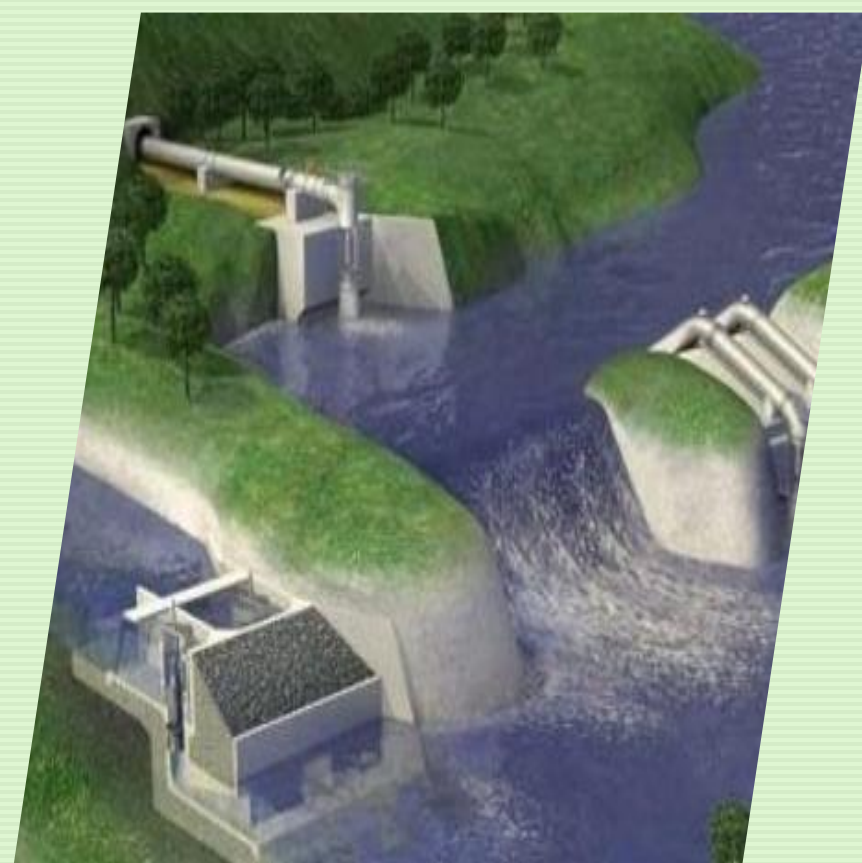




## THE ESTABLISHMENT OF GREEN ENERGY ZONE IN THE LIBERATED AREAS

*"The liberated lands also have enormous energy potential. From the beginning, I want to say that I would like to see the liberated areas as a green energy zone. There are ample opportunities for that."*

**H.E. Mr. Ilham Aliyev**  
**PRESIDENT OF AZERBAIJAN**



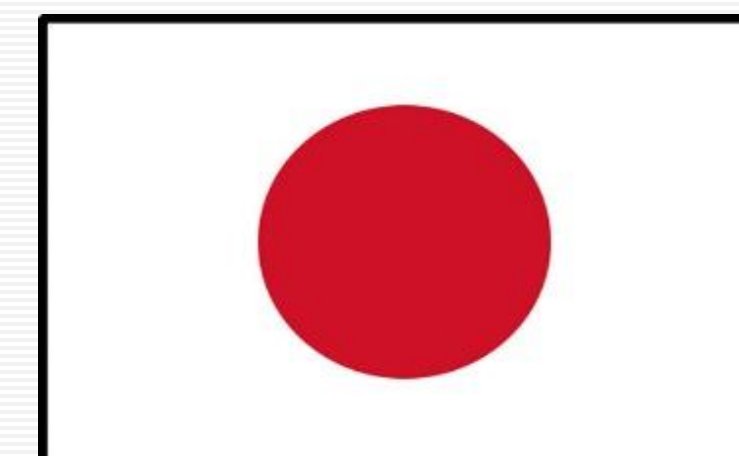


# THE ESTABLISHMENT OF THE GREEN ENERGY ZONE IN THE LIBERATED AREAS - GREEN ENERGY ZONE CONCEPT & MASTER PLAN

The agreement was signed between the **Ministry of Energy**  
and the Japanese company **TEPSCO** on 6 May 2021.

## ➤ Ensuring energy security of the region:

- utilisation of clean energy potential
- application of energy efficiency technologies and methods
- application of modern energy management approaches and tools



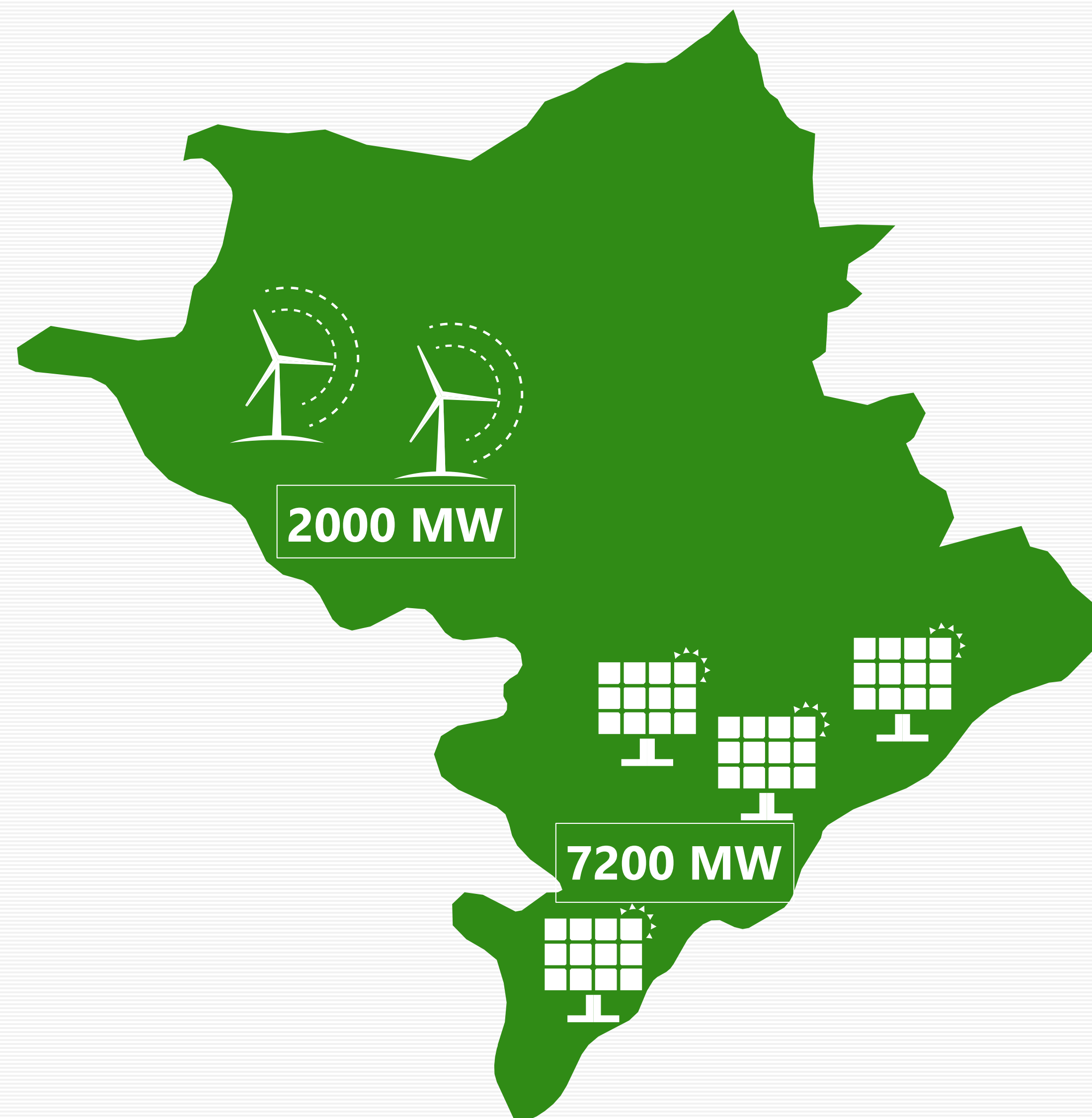
# RENEWABLE ENERGY POTENTIAL

## Solar

- Gubadli
- Zangilan
- Jabrayil
- Fuzuli

## Wind

- Kalbajar
- Lachin





## HYDROENERGY POTENTIAL

Karabakh is one of the main regions of Azerbaijan's internal water resources. About 25% of the country's internal water resources, approximately 2.56 billion cubic meters of water per year, are formed in this area.

The main rivers in the area, the Tartar and Hakari rivers and their tributaries, have a high hydropower potential.

The capacity of hydropower plants to be built in the Jabrayil region, on the Araz River at the Khudafarin and Maiden Tower hydroelectric junctions will be 140 MW for the Azerbaijani side.

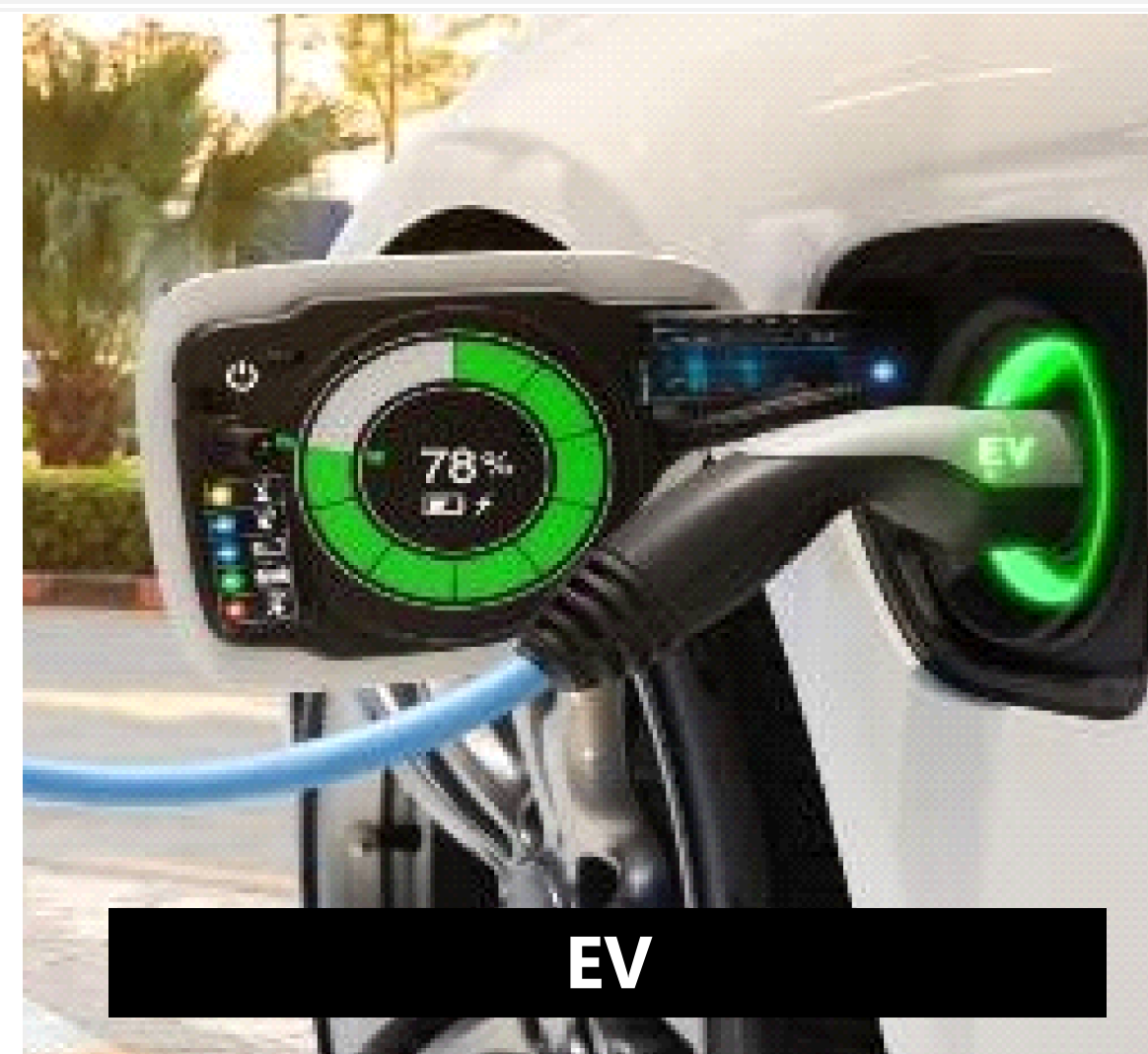




# Application of the Green Energy Zone Concept in other areas



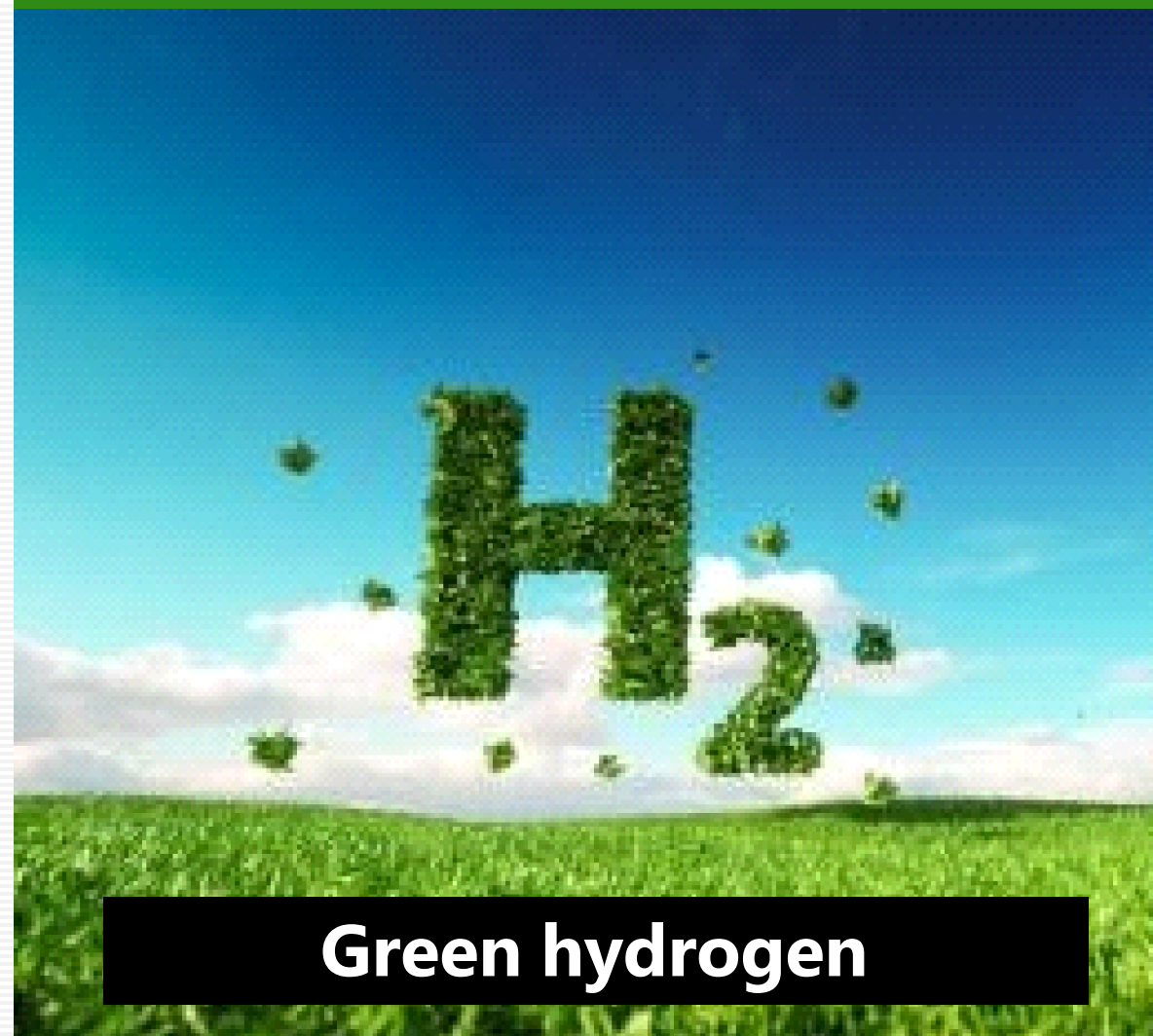
Energy efficiency



EV



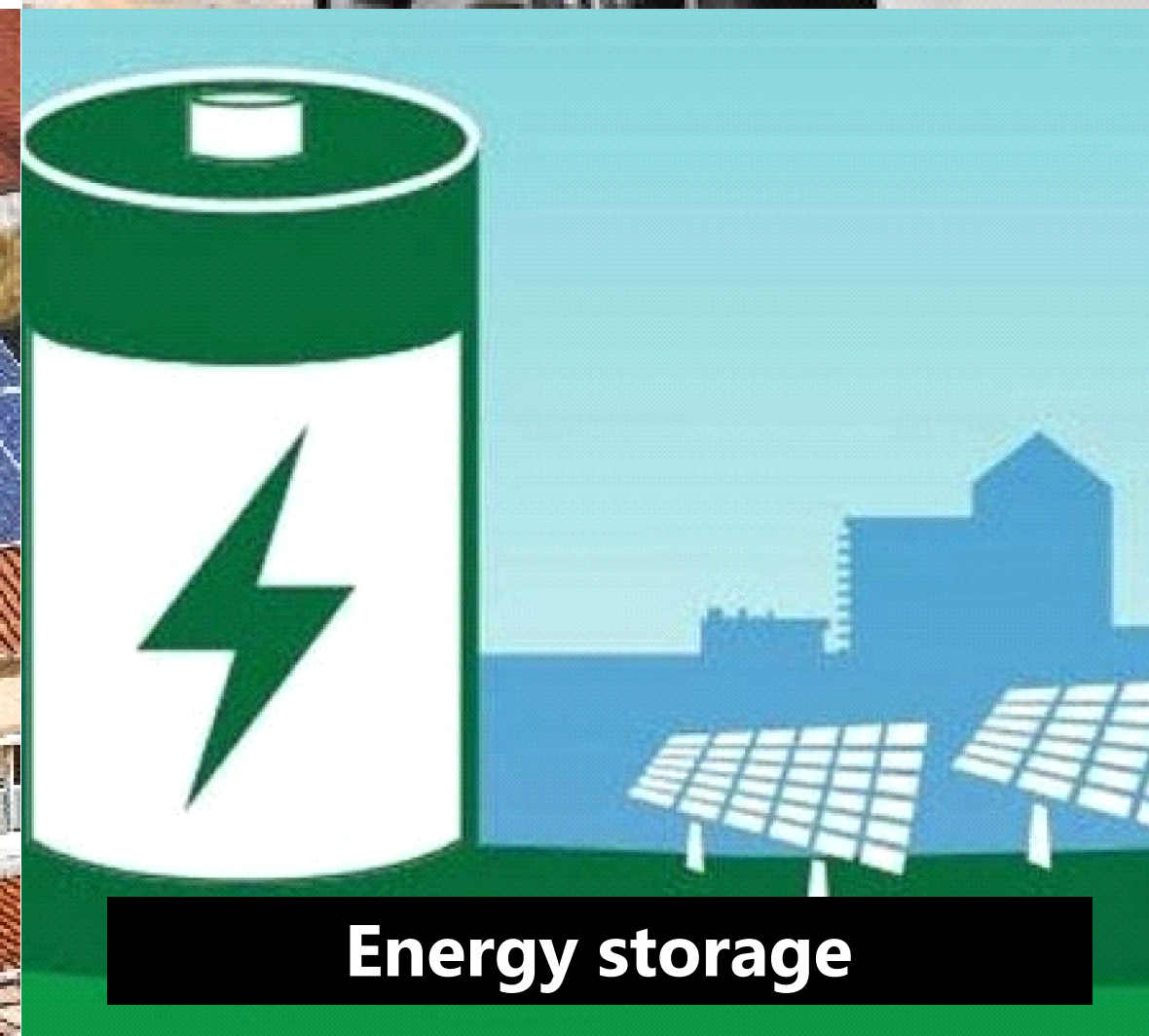
Street lightning (RES)



Green hydrogen



PV installation on the roofs



Energy storage



Waste management





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**THANK YOU FOR THE ATTENTION!**

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