



**MINISTRY OF FUEL
AND ENERGY**

THE INTERNATIONAL SEMINAR ON “THE HYDROGEN ECONOMY FOR SUSTAINABLE DEVELOPMENT”

H.E. ERDENEBAT BADARCH

Minister for Fuel and Energy of Mongolia

September 28-29

Reykjavik, Iceland



COUNTRY PROFILE

Mongolia is a country with vast territory and small population, landlocked and remote location.

The development of infrastructure, such as roads, energy access and telecommunications, is vital for Mongolia.



POLICY BACKGROUND

Major priorities of the Government:

- to create necessary institutional framework for private sector participation (PSP),
- to meet increasing energy demand by clean, environment friendly and efficient way,
- to facilitative the development of renewable energy,
- to improve efficiency of energy sector.



SECTOR OVERVIEW



- Total installed electricity capacity - 878.4 MW,
- Heat capacity-2030 GCal/hour,
- The electricity transmission covers most of territory of Mongolia.
- 7 combined heat and power plants (CHP) in operation.

Stable power demand will increase in the future.



- 130 soums of 334 supplied from diesel stations,
- 6 from small hydro power plants, 2 from solar, and 3 from solar-wind hybrid systems.
- About 0.6 per cent of total electricity is supplied from renewable energy sources, such as small hydro power plants, solar, wind systems.





RENEWABLE ENERGY

The Mongolian Parliament (State Great Hural) adopted the “National Renewable Energy Program” in 2005

objective of the program

- to promote the use and production of renewable energy,
- to reach the production of renewable energy to 3-5% from total electricity generation by 2010, and up to 20-25% by the year 2020.





Mongolian resources of renewable energy:

- **favorable climatic and weather conditions**
- **3800 small and big streams and rivers in our country,**
- **sunny and daylight time 1200-1600 kilowatts per square meter,**
- **160 thousand square kilometer area is suitable for wind energy application,**
- **over 40 indications of geothermal manifestations on the territory of Mongolia.**



OTHER ENERGY RESOURCES

- The Liquefied Petroleum Gas,
- Coal liquefaction,
- Coal gasification,
- Coal producing coke-chemical elements,
- Coalbed methane (CBM)





THE MAIN POLICY PRIORITIES AND GUIDELINES:

1. It is crucial to start the development and construction of Egiin hydro power plant (HPP).
2. To improve legal and institutional environment





3. To supply herders and rural families with modern energy sources.
4. To resolve the issue of air pollution in Ulaanbaatar and other cities.
5. To resolve the issue of fuel supply for rural regions.





6. Mongolia offers good potentials and is keen to promote the regional energy cooperation.





HYDROGEN ENERGY TECHNOLOGY

As a world trend for clean energy, **HYDROGEN** is considered to be an ideal energy carrier in the foreseeable future. It can be produced from a variety of energy sources, such as solar, nuclear and fossils.





A hydrogen based system offers totally clean energy supplies with no pollution. The system is based on coal and renewable sources of electricity and uses hydrogen as an energy carrier / fuel that is able to replace all existing uses of fossil fuels.





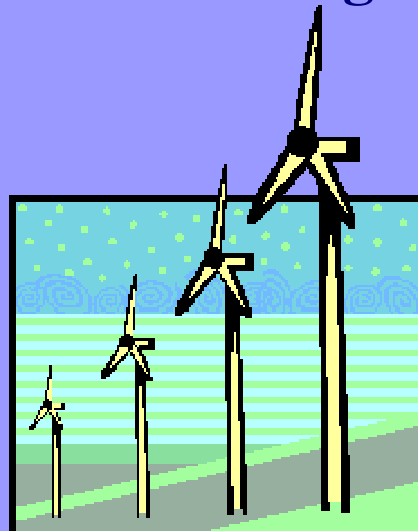
Hydrogen has three basic benefits that address these concerns.

- **The use of hydrogen greatly reduces pollution.** The advantage of using hydrogen as an energy carrier is that when it combines with oxygen the only byproducts are water and heat.
- **Hydrogen can be produced locally from numerous sources.** Hydrogen gas can be produced from methane, gasoline, biomass, coal or water.
- **If hydrogen is produced from water we have a sustainable production system .** Renewable energy can be used to power electrolyzers to produce the hydrogen from water.





- It is estimated that with a current production level, Mongolian known coal reserves are forecast to last over 200 years.
- Coal is the cheapest and best source for Mongolia's future energy supply.
- In order to be safe and clean energy system, and energy security, development of a HYDROGEN from coal is most important and potential for Mongolia.





I hope that we will learn more about clean energy of hydrogen and its economy, and we hope to cooperate with you in the future in this field.

Thank you for your attention!