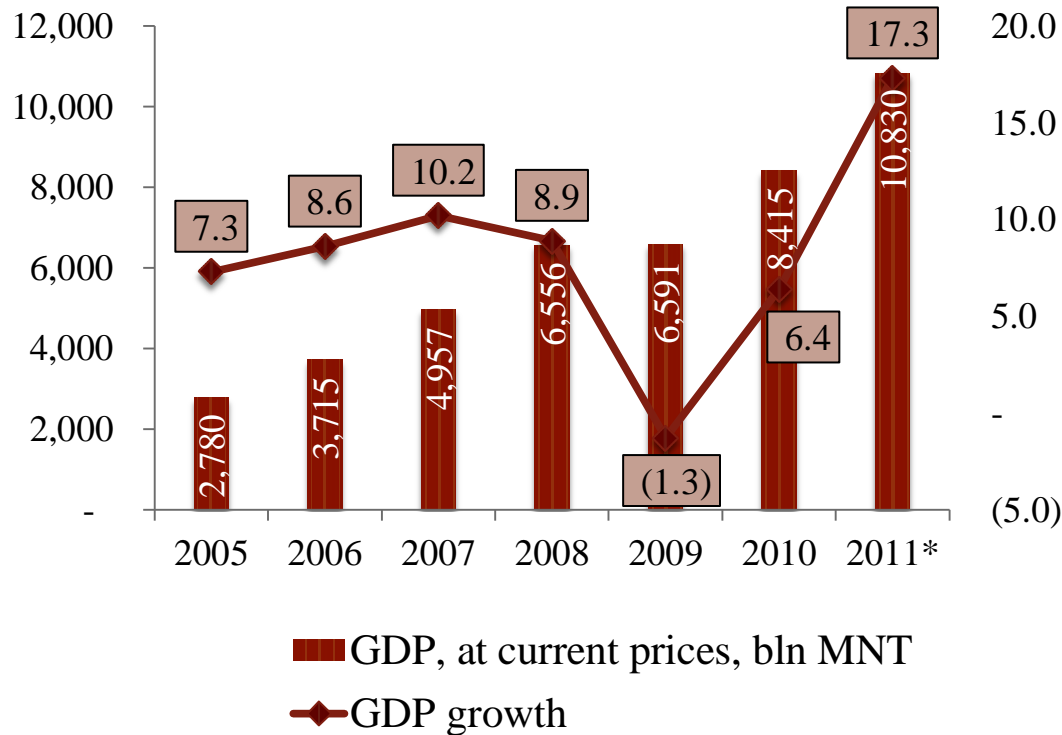


Energy sector of Mongolia

Mongolian economy as of 2011

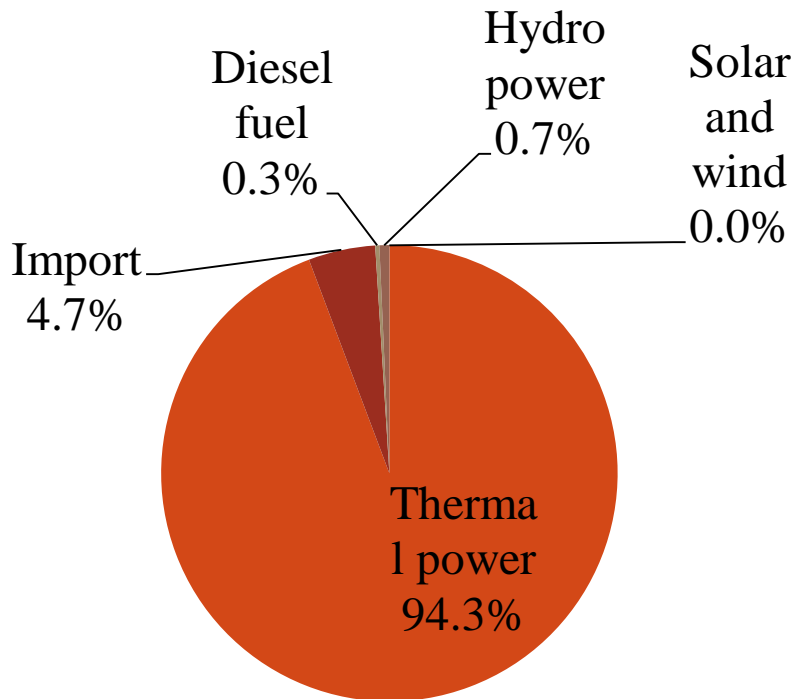
GDP



- GDP – USD 8.5 bln
- GDP growth – 17.3%
- Inflation – 10.2%
- USD rate – 1,396MNT
- Exports – USD 4.8 bln
- Imports – USD 6.5 bln
- Protecting investors – 29 (Doing Business 2012 rank out of 183 countries)

Source of energy production as of 2010

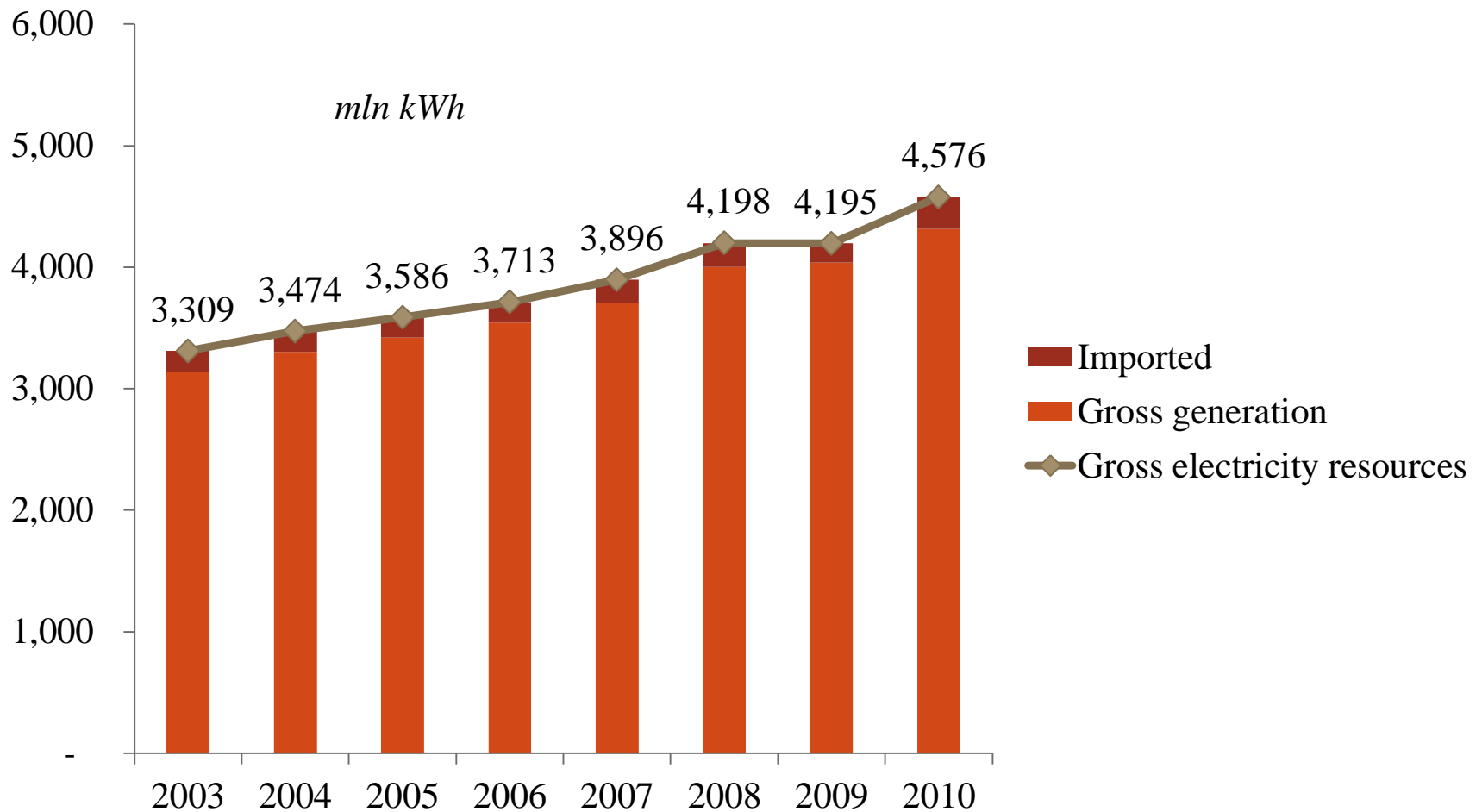
Composition of energy sources



In 2010 (mln kWh):

- Thermal power - 4,256.1
- Hydro-electric stations – 31
- Solar and wind power stations - 0.6
- Diesel fuel stations -13.2
- Energy imported - 214.1
- Energy exported - 20.7

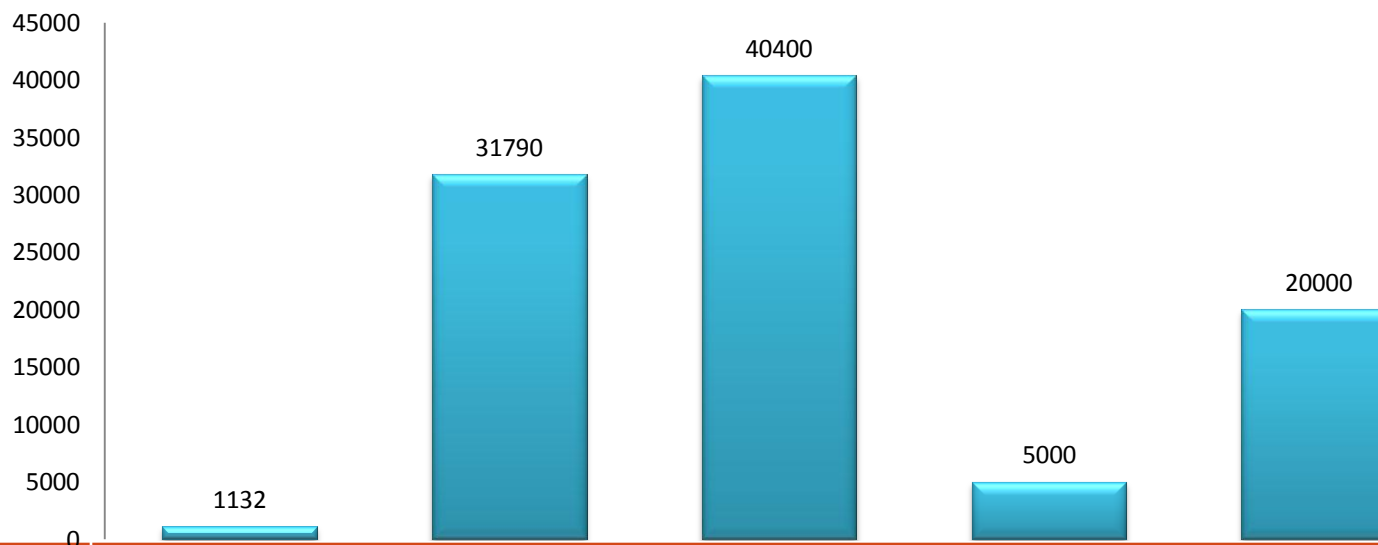
Gross electricity resources



Progress made

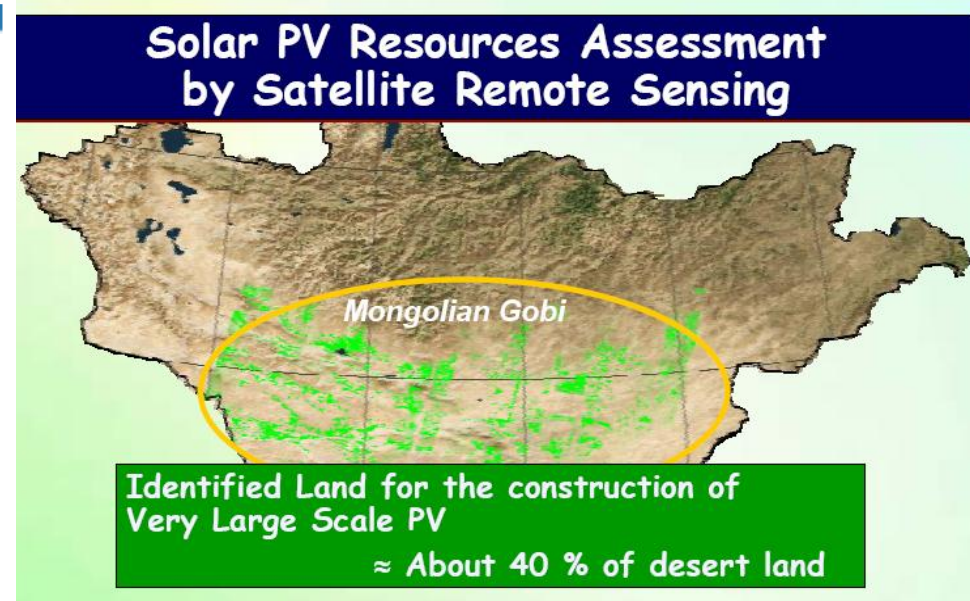
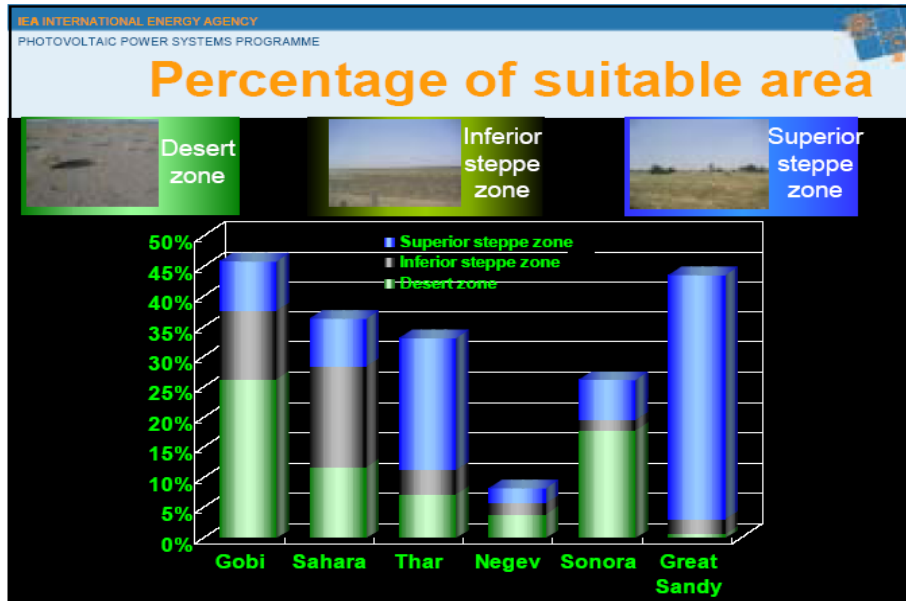
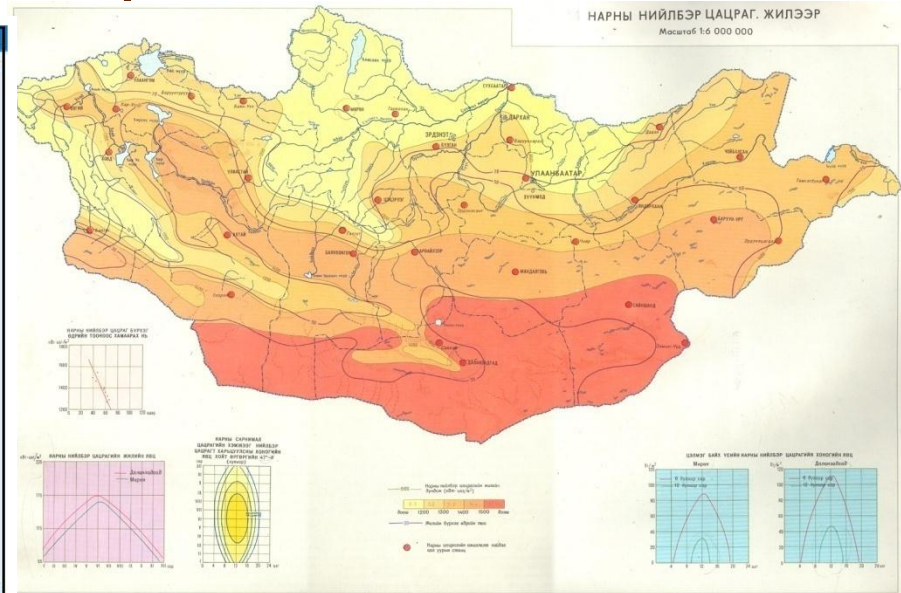
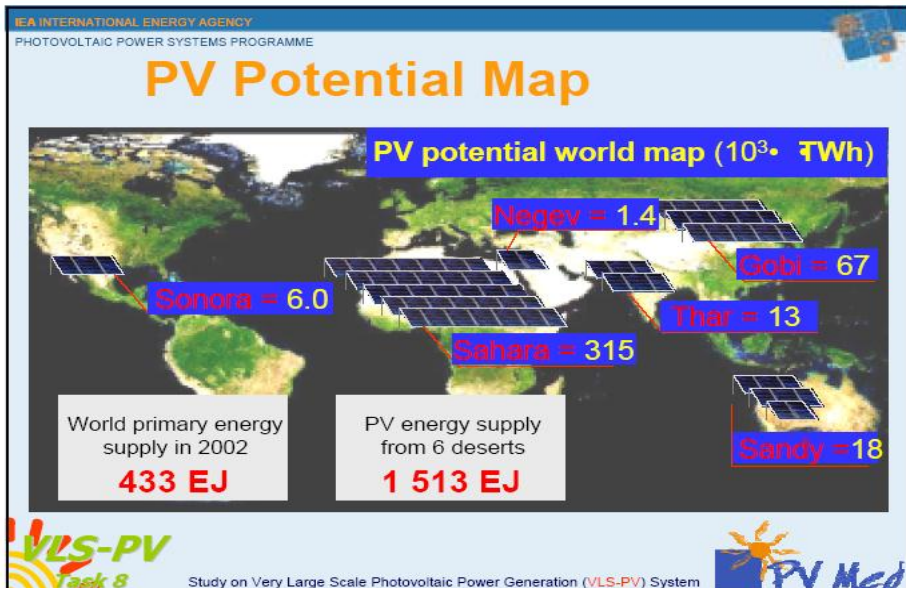
- Over half a million nomads live in Mongolia
- Using solar energy, we got rid of candle-lit way of life by implementing “100,000 Solar Houses” project which started in 1999
- Installed solar panels in over 100,000 nomadic households. As a result, many of them use cell phones, satellite dish so the children can watch TV... imagine the educational and cultural effect.

“100 000 Solar houses (gers)” National program /1999-2010/



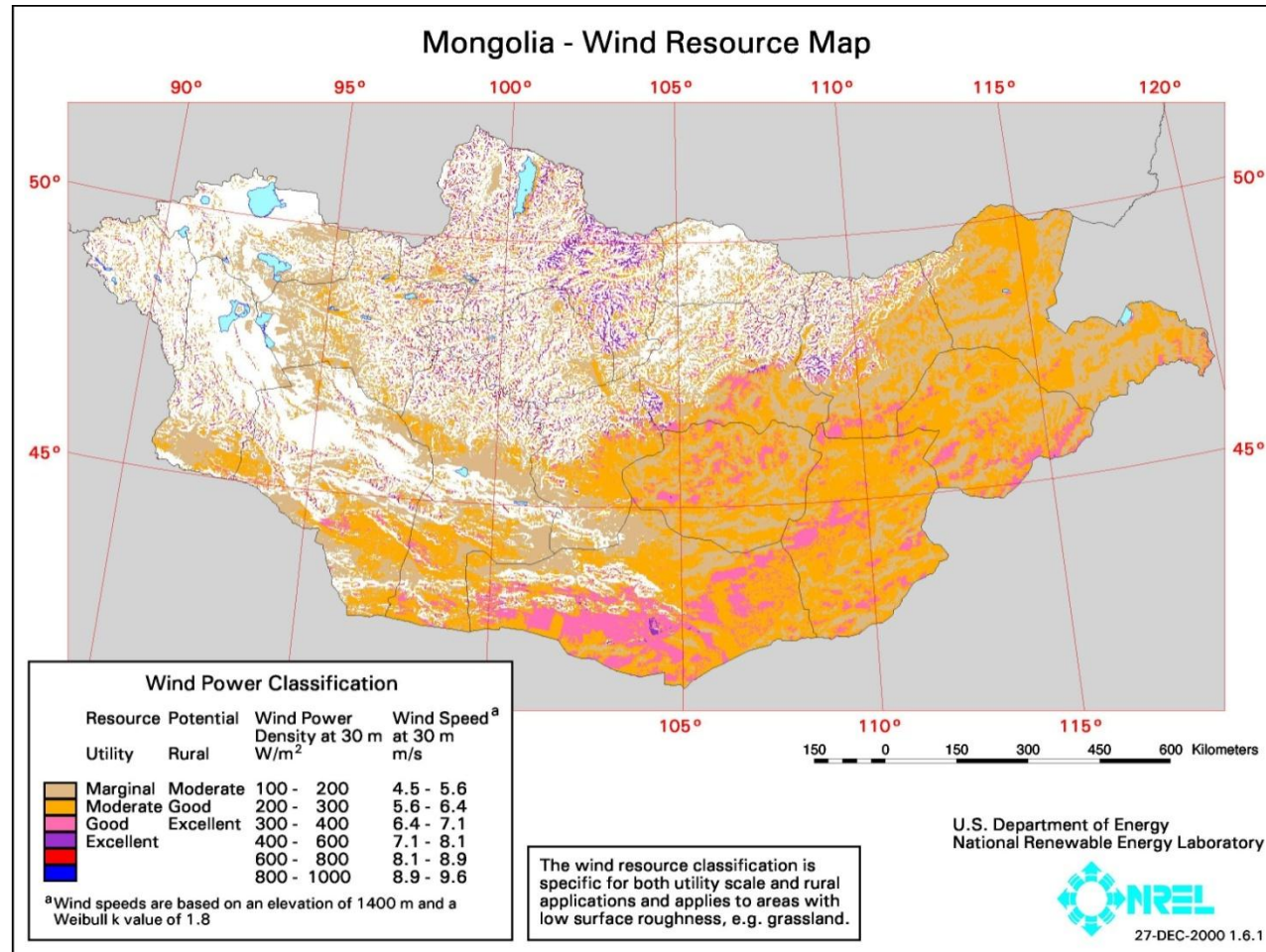
Type	Year					Total
	2001-2002	2003-2005	2007-2008	2010	2011	
Solar home System	56.6 kW (1132 units) (50W)	1589.5 kW (31790 units) (25, 50, 75W)	2020 kW (40400 units) (50W)	300 kW (5000 units) (25, 50, 75W)	1000 kW (20000 units) (50W)	4966.1 kW (98322 units)

Solar power potential

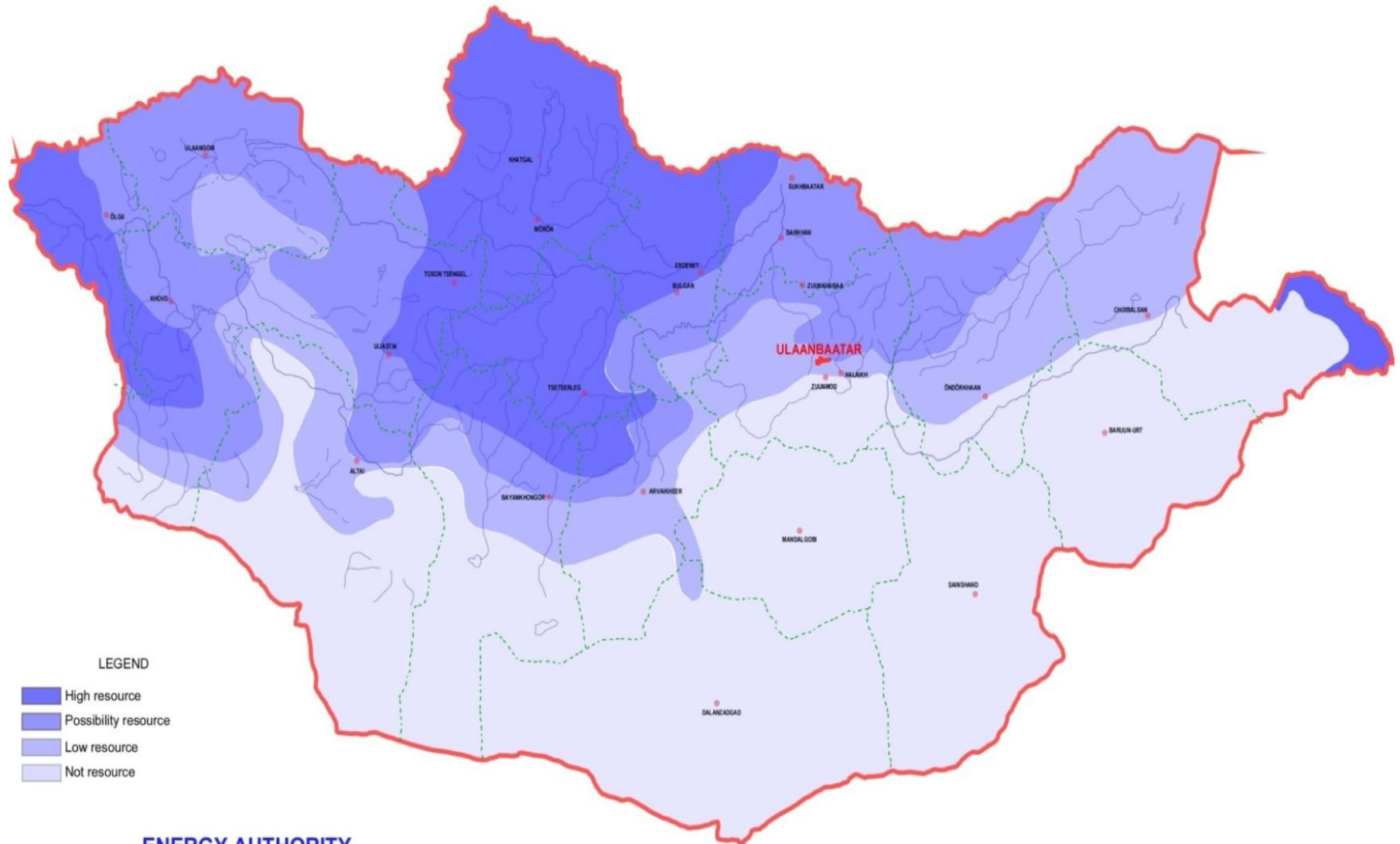


Wind power potential

- Mongolia has potential to be a major wind power producer.
- Mongolia has enormous wind power resources;
 - Good-to-excellent wind resources equivalent to **1,113,300 MW** of wind electric potential,
 - More capacity than China.



HYDRO ENERGY RESOURCE OF MONGOLIA

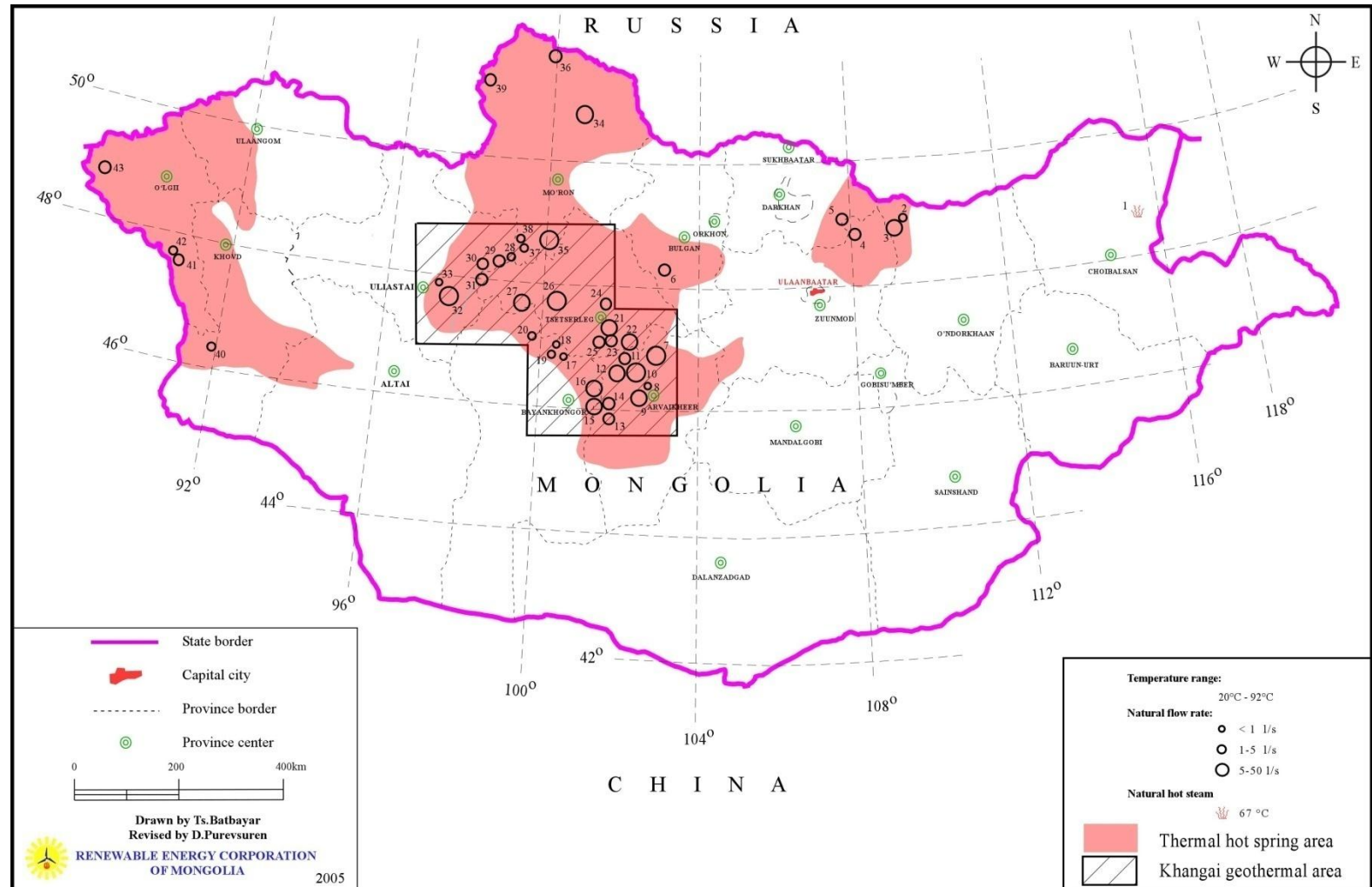


LEGEND

- High resource
- Possibility resource
- Low resource
- Not resource

ENERGY AUTHORITY
RENEWABLE ENERGY DEPARMENT

Geothermal power potential



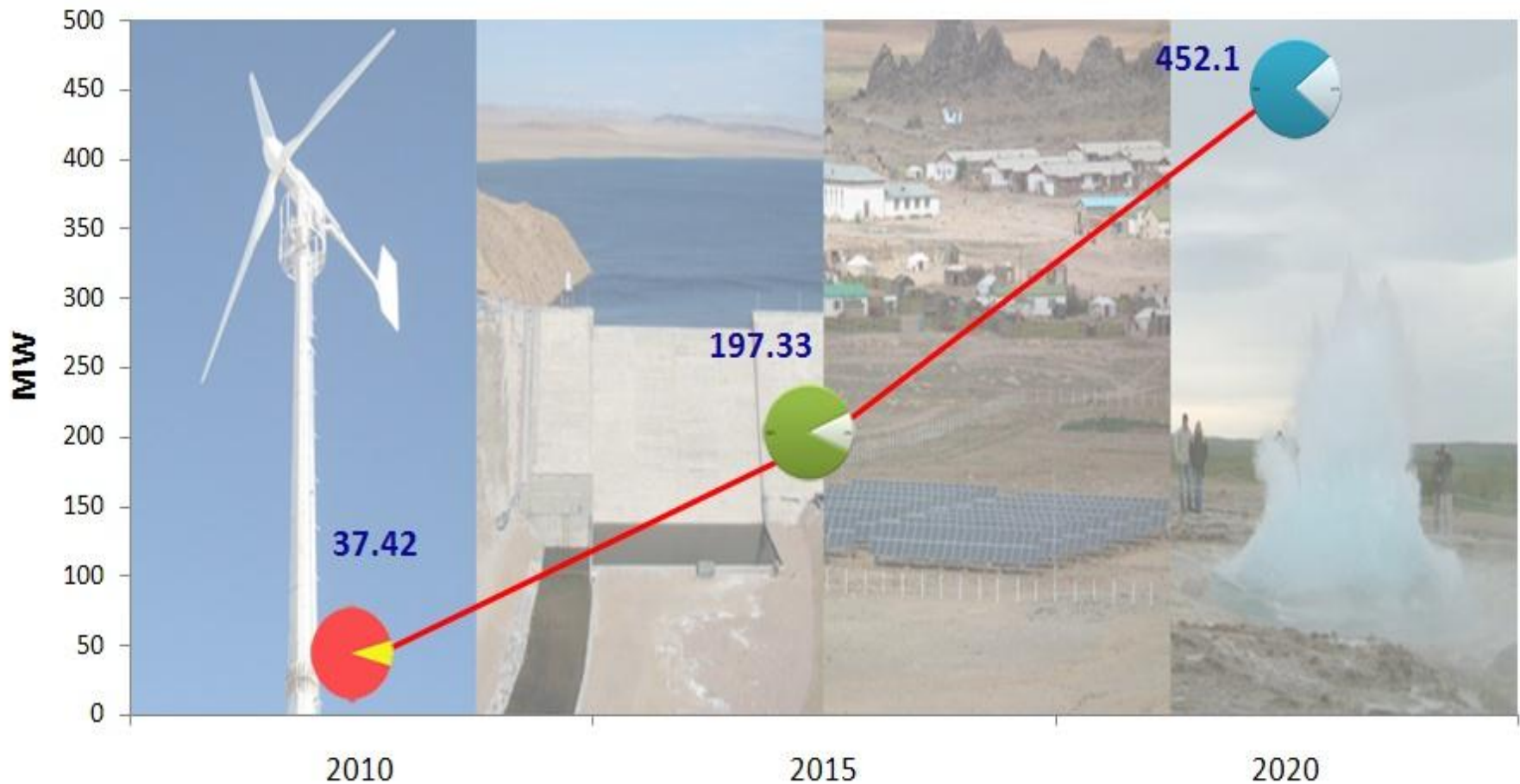
Totally founded by 43 hot springs, but their application is limited not so great.

The energy sector development programs and policy documents & their implementation

- The State Great Khural and the Government of Mongolia approved following documents:
 - “Program on Integrated Energy System of Mongolia”,
 - “The National Renewable Energy Program”
 - “The 100 000 Solar Ger’s” National Program
 - “The Comprehensive Policy on National Development” and Government programs include concrete short-term and long-term strategies for the development of the energy sector.
- Short and mid term development plan of the sector was termed following documents:
 - Government Action Plan 2008-2012
 - Sustainable Development Plan of Energy Sector

“National Renewable Energy program” /2005-2020/

Renewable energy capacity target by 2020



COOPERATION AND INVESTMENT OPPORTUNITIES IN RENEWABLE ENERGY

In order to meet Mongolia's energy consumption growth for 2015- 2030 which is estimated as 1500-3000 MWs and to export electricity, it is necessary to build power stations near mining deposits such as Tavan Tolgoi, Shivee Ovoo, Baganuur, Aduunchuluun, Hotgor, Booroljuut, Chandagan.

The initiatives, active participation and support from international banks, financial institutions, foreign and domestic investors, and business entrepreneurs of the energy sector, are of vital importance for the best implementation of these projects.

PROPOSED PROJECTS

ELECTRIFICATION

1. Oyu-tolgoi wind park, 250 MW, /Feasibility study was completed/
2. Sainshand solar power plant, 30 MW, /Pre-feasibility study was completed/
3. Taishir solar power plant, 7.8 MW, /Pre-feasibility study was completed/
4. Industrial complex in Sainshand city, 300MW electrical demand
5. Tavantolgoi mining complex, 300-500MW electrical demand
6. East coal fired thermo-electrical power plant /increase capacity up to 100MW/
7. Electric railways in southern region, 200 MW
8. Delger Hydro Power Plant, 250 MW; /Feasibility study was completed/
9. Egiin Hydro Power Plant, 220 MW; /Feasibility study was completed/
10. Erdeneburen Hydro Power Plant, 60 MW; /Feasibility study was completed/
11. Chargait Hydro Power Plant, 24.6MW; /Feasibility study was completed/
12. Orkhon Hydro Power Plant, 100MW; /Feasibility study was completed/

PROPOSED PROJECTS

HEATING

1. Thermal power plant, 5MW x 3 aimag`s /renewable energy source/
2. Heating households using renewables, /capital city and remote areas/
3. Thermal power plant in capital city, /coal-fired power plant/

In the future ...

- Mongolia has rich energy resources including not only coal but also renewable (solar, wind, hydro and geothermal) energy
- Need for further capacity building in power generation, transmission and distribution
- Committed to green development
- Remarkable potential to contribute to regional energy supply
- Gridline development is necessary and international cooperation is highly appreciated
- Ready to join in high quality researches in energy sector and Asia's energy solution and the Asia Super Grid project