

General Discussion of Mongolia

Geographic Characteristics

Located in Central Asia, Mongolia is positioned between Russia to the north and the People's Republic of China to the east, west and south. With more than 1.5 million square kilometers of territory, Mongolia is the fifth largest country in Asia and ranks seventeenth among all nations. Mongolia is divided into primary natural zones that include mountains primarily in the country's north and west; basins, such as that in which the capital Ulaanbaatar is located; and a mixture of desert and steppe which together cover three-fourth of the country.

Mongolia's average altitude is almost 1,600 meters above sea level. Its higher latitude combines with the altitude to intensify the semi-arid climate. Winters are long and cold. Average temperatures fall below freezing for six months of the year. Temperatures in January average about from -25 to -40 degrees Celsius.

The Constitutional Transformation to Democracy and a Market Economy

A new Constitution embracing democracy and the market system was passed by the Baga Hural in May 1991 and adopted by the State Great Hural in January 1992. The Constitution took effect on February 12, 1992, changing the nation from the People's Republic of Mongolia to Mongolia. The Constitution makes Mongolia a democratic parliamentary state with independent legislative, executive and judicial branches; it guarantees citizens freedom of speech, religion, and other basic human rights, as well as the right to own property and engage in private business activity. The President and the Parliament are elected directly by the people.

Mongolia's Existing Structure of Government

Mongolia is divided into 21 administrative units (provinces) called aimags. The population of cities range in size from 50,000 to over 600,000 inhabitants in the capital of Ulaanbaatar. The cities are divided into districts. There are 9 districts in Ulaanbaatar. Urban population accounts for about 51 percent of the country's total population and there is a strong tendency for migration from the rural to urban areas. The aimag populations range from 40,000 to approximately 100,000 persons. They are divided into aimag centers and rural sums or districts around the centers. Sums are comprised of sum centers and bags. The latter (bags) are the lowest level rural administrative. There are a total of 333 sums and 1,564 bags in the country.

Conclusions made by reporters on all indicators

To summarize the results for Mongolia on the indicators, it is helpful to review how the vectors were created. In each case, the value of 1 on the vector represents the 'status quo' - either by reflecting world averages in the last decade or the actual country's performance in the last decade. The value of 0 on the vector represents the sustainability goal. Move all the way to zero on a given vector means that the country's energy system is highly sustainable along that particular dimension, whether it be economic, social, environmental or technological. Vector values greater than 1 either mean that the country is even more unsustainable than the global average, or is getting worse than the performance in the last decade.

Eight indicators of energy sustainability for Mongolia

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	1990		2000		% of change	
	Metric	Vector	Metric	Vector	Metric	Vector
1. Carbon emissions	1735 kgC/cap	1.765	1096.8 kgC/cap	0.958	-36.8	-45.7

2. Local pollutants	22.2 kg/cap	1.0	12.8 kg/cap	0.53	-42.3	-47.0
3. Household electrification	85.0%	0.15	70.0%	0.30	-17.6	+200.0
4. Clean energy investment	US\$0.2mln	1.000	US\$0.43mln	1.004	+125.0	+0.04
5. Resilience: energy import	133.0 PJ	0.246	92.81 PJ	0.216	-31.2	-0.12
6. Government investment	US\$20.0mln	0.14	US\$74.6mln	0.75	+273	+435.7
7. Energy productivity	95.0MJ/US\$	9.8	88.9MJ/US\$	9.17	-6.4	-6.4
8. Renewable energy	0.0015	1.098	0.0025	1.097	66.7	-0.09

The main reason for the value of CO₂/capita being 1.6 times lower than world average is:

- Low efficiency (0.2-0.5) of small capacity boilers for heating and of household stoves;
- Energy production and consumption 's obsolete technology;
- Low consumption of renewable energy.

The drop in CO₂ emissions per capita in the last decade is explained by the almost "stopped" condition of the country's industrial sector. Although, country's SO₂ emissions per capita are low, the concentration of SO₂ in the atmosphere of Ulaanbaatar, capital city of Mongolia, reached a level high enough to damage human health. This is due to old cars and to households' emissions in the city. Currently, in Ulaanbaatar, there are 80 000 stoves and 50 000 cars (most of these cars are old).

The Government of Mongolia signed the United Nations Framework Convention on Climate Change on June 12, 1992 at the Rio Earth Summit and the Great Hural of Mongolia (Parliament) ratified it on September 30, 1993.

Potential options and opportunities for GHG emissions mitigation in Mongolia were identified during the preparation of the initial National Communication. The results of the analysis show that the country's main source of GHG emissions mitigation is the ENERGY SECTOR.

The Government of Mongolia already developed a national program for the reduction of GHG emissions reduction starting in 1999 and is implementing it. Reduction of GHG emissions depends on the development of conversion technologies and improved energy efficiency. In the near future the Law on Economical Consumption of Energy will be passed by the Great Hural. This law will determine the method and its legal basis to increase the efficiency of the energy supply system and improve the technology used in the energy sector.

Almost all citizens of larger cities and rural centers have access to electricity. Mongolia is the closest to the sustainability target on the indicators for access to electricity (0.30).

There is carried out National Programme to use solar and wind mobile equipments by herdsmen. In 2001, programme to build central electric system, covering all area of Mongolia was improved by Government.

Currently, it is impossible to build large size plants harnessing renewable energy, such as hydro plants, wind generation stations due to lack of financial resources and

technological expertise in the country. This is one of the problems faced by Mongolia. In the next 4 years, Mongolia is going to give maintenance to several hydro plants, such as hydro plant of river Eg, one of the Mongolian biggest river for instance.

Today, there is no gasoline processing in country. Because of this problem, the situation of importing liquid fuels from other countries will not change in the near future. However, in the eastern part of Mongolia American, Canadian and Mongolian joint venture companies are exploring for oil. Positive results of these explorations are already evident and oil resources were found.

Poor economy is one of Mongolian urgent problems. Due to that situation no local investment is made to improve energy production efficiency, increase capacity and improve energy sector's structures. However, it is not the best solution to resolve all these problems by foreign investment, loan and aids.

Almost all energy-using systems are old (made during the communist period). The vector value of energy intensity is much higher than world average results (9.17) and cannot decrease because of this prevalent problem.

In Mongolia, plants and industries have an opportunity to save energy without cutting their production, by introducing new and safe technologies and equipment.