

# **MONGOLIA SUSTAINABLE ENERGY SECTOR DEVELOPMENT STRATEGY PLAN /2002-2010/**

## **One. Background, scope and timeframe of the strategy plan**

The main objective of the “Mongolia Sustainable Energy Sector Development Strategy Plan (2002-2010)” is to create a financially sustainable energy sector that will provide cost-effective energy access, thereby enabling poverty reduction and greater private sector and civil society participation. Moreover, Mongolia’s energy sector should be developed within a regional energy context, while at the same time taking advantage of new technologies and sources of energy that might further promote economic efficiency and environmental sustainability.

### **1.1. Justification**

#### **Justification, the scope and timing of implementation of the strategy plan**

“Mongolia Sustainable Energy Sector Development Strategy Plan (2002-2010)” determines actions to be implemented in the energy sector in the short- and medium-terms and the strategic plan will be used by the Government of Mongolia as the guidelines for activities to be implemented in the energy sector.

#### **Scope of the strategy plan**

An implementation of the Strategy plan shall be managed by the state central administrative authority in charge of energy issues, and shall be based on collaboration between the Government of Mongolia, international financial institutions, donors, local and international non-government organizations, private sector and energy sector enterprises.

#### **Basic principles of the strategy plan**

“Mongolia Sustainable Energy Sector Development Strategy (2002-2010)” shall be based on 5 main principles:

- *Financial sustainability* to transform the energy sector into self sustainable sector;
- *Restructuring* to complete commercialization and non-state participation;
- *Energy conservation* to promote efficiency, consumer choice, and environmental sustainability;
- *Capacity building* to ensure success of market transformation; and
- *Energy access and affordability* to improve energy access and mitigate social impact of reforms.

## **Timing of implementation of the strategy plan**

“Mongolia Sustainable Energy Sector Development Strategy Plan (2002-2010)” shall be implemented during the short and medium term, from 2002 to 2010.

## **Two. The objective of the strategy plan and implementation criteria**

The objective of the “Mongolia Sustainable Energy Sector Development Strategy Plan (2002-2010)” is to ensure sustainable development of the energy sector and promote creation of an independent energy sector.

### **Performance criteria for the strategic plan**

- Financially sustainable and self-sustainable energy sector created; financially sustainable state-owned enterprises in energy sector created; inter-company arrears resolved; the burden from external loans and its interests decreased.
- The energy sector restructuring process completed; energy sector regulatory framework suitable to a market economy established thereby enabling private sector participation in energy sector both foreign and domestic which will result in delivery of cost efficient and competitive services in the energy market; phased privatisation of selected state-owned enterprises in energy sector.
- Creation of necessary legal and institutional framework for improvement of energy conservation and efficiency; implementation of energy conservation projects in order to enable the public to benefit from improvements in energy conservation and efficiency; an involvement of the private sector through energy saving projects by encouraging ESCOs.
- Improved capacity building in policy making, formulation, regulation by building institutional capacity in the sector; improved operational capacity in energy production that meets market economy requirements.
- Improving energy access in rural areas, promoting broader utilization of renewable energy sources, introducing lifeline tariffs to low-income people enabling affordable and equal access for all citizens.

## **Three. Actions to be undertaken to implement the strategic plan**

### **1. Build an financially sustainable and independent energy sector**

**Objective 1.** To create financially sustainable energy sector, to promote ability of state-owned energy enterprises to financially self sustain in a market conditions; Create a system of financial responsibility between energy entities and consumers to reduce the financial burden on the state budget; Create a financially self-sustainable energy sector.

## **Actions to be taken**

- 1.1. To assess the borrowing capacity of the Government and take loans for new investments in energy sector based on a rigorous financial rate-of-return analysis for each project proposal.
  - 1.2. Rehabilitation and new investment projects in the energy sector made on the basis of the return on the investment;
  - 1.3. Attracting private investment to finance new investment projects in the energy sector;
  - 1.4. To resolve arrears between power plants, coal mines, distribution companies and consumers by introducing new mechanisms for resolving arrears;
  - 1.5. Introduce cost recovery tariff mechanisms for power production operations;
- Implementation of adequate policy on prices and tariffs
    - Improvement of tariff methodology
    - Introduction of cost-based bidding pool mechanism
    - Introduction of price and tariff mechanisms to fully cover the costs
  - Commercialization
- 1.5.1. Improvement of revenue collection
    - Metering
    - Improving the collection system
  - 1.5.2. Reduction of losses
    - Improvement of technical efficiency (to reduce technical and non-technical losses from 33% to 15%)
  - 1.5.3. Resolving debts between the entities

## **2. Implementation of restructuring of the energy sector**

**Objective 2.** Deepen the restructuring process in the energy sector; establish an independent regulatory environment in the energy market; improve the regulatory environment as required for commercialization; thereby, to take actions to undertake phased privatisation.

### **Actions to be taken**

- 2.1. Unbundling according to system operations
- Incorporate the energy sector state-owned entities

## 2.2. Commercialization of the state-owned companies in the energy sector

- To introduce international accounting standards and to carry out regular audits;
- To introduce Management Information Systems;
- To improve budget planning and use;
- To improve the metering equipment of distribution companies;
- To introduce advanced systems of billing and collections in distribution companies’
- To introduce financial information systems;
- To introduce advanced systems for forecasting and planning (based on best international practices);
- To improve the commercial legal framework between companies /Law on Investment, Labor Law, on contract issues, on dispute resolution and environment issues, etc./

## 2.3. Phased privatization of energy sector companies

- To study privatization experiences of other countries with similar transition economies;
- To develop the Privatization Strategy of the energy sector ( to clarify the privatization process [to consider the legal, regulatory and operational issues as a whole] and timing of implementation of the strategy)
- To carry out the privatization in a phased manner and using different methods (including management contracts, open auctions, trading shares on stock exchange, etc.)

## 3. Improvement of energy conservation and efficiency

**Objective 3.** Increase energy use and reduce air pollution by improving energy conservation; reduce emissions of green house gases; improve energy efficiency by promoting ESCOs and approving and implementing the National Energy Management Program (NEMP).

### 3.1. To improve energy efficiency and establish a legal framework for energy conservation

- To approve the Law on Energy Conservation;
- To approve and implement the National Energy Management Program (NEMP);
- To expand and improve electricity transmission and distribution grids;
- To improve efficiency of heat-only boilers and or replace;
- To reduce air pollution by improving stoves in cities and urban areas;
- To make efficiency as a priority consideration in licensing and approval of tariffs.

### 3.2. To increase the use of energy by improving energy efficiency

- To support ESCOs and introduce energy saving performance contracts
- To introduce efficient heat-only boilers, electronic equipment and engines

### 3.3. To reduce air pollution

- To replace not efficient diesel generators in soums

- To introduce new types of fuels, such as LPG, coalbed methane, charcoal, coal briquettes, and coke.

#### **4. Institutional capacity building in the energy sector**

**Objective 4.** Build institutional capacity to support the transition of the energy sector to a market-oriented, to improve regulatory and policy-making capacity of the sector, and to create highly competent state-owned and private energy companies.

##### **Actions to be taken**

4.1. To improve financial and operational capacity of energy entities

- Business administration training for managers of energy companies;
- Training in improved co-generation production expenditure estimation for combined heat and power (CHP) plants;
- Training on advanced payment, customer discount and bonus mechanisms;
- Introduction and promotion of time diversified metering devices.

4.2. To improve regulatory capacity of the energy sector

- To improve the tariff and price-setting mechanism and thereby to introduce prices and tariffs that cover the costs;
- Electricity and heat pricing
  - Customer categories
  - Survey on ability to pay
- Analysis of long-term demand growth

4.3. Improvement of energy policy planning capacity

- Foreign loans, interest and exchange rate adjustment mechanisms
- Training in the following areas at the ministerial level and selected companies:
  - To improve structure of energy supply in aimags and rural areas;
  - Long-term planning for energy sector;
  - Overall study and evaluation of the energy sector
- To study possibilities of regional cooperation in the energy sector, participate actively in North-East Asian and regional collaboration in energy and learn from other experiences in regional cooperation;
- To study possibilities for attracting foreign investment (FDI), and to attract foreign direct investment into the energy sector by creating the necessary environment.

#### **5. Improving energy access in rural areas and introducing lifeline tariffs**

**Objective 5.** Improve energy supply (electricity and heat); create lifeline tariff mechanisms for low-income population and to introduce a new system of energy subsidies

5.1. To improve energy supply in the central region

- To conduct a study on ability to pay and to introduce lifeline tariffs
- To study ways of improving access and to implement it.

5.2. To improve supply of electricity for 4 aimag centers and soum centers not connected to the grid

- To connect aimag and soum centers, as well as other users to the central energy grid in order to make energy supply affordable and reliable;
- To reduce technical and non-technical losses;
- To develop energy supply based on renewable energy sources (solar, wind and hydro power);
- To increase power consumption in aimag and soum centers;
- To improve the subsidy system and to create financial capacity to operate without subsidies;
- To introduce lifeline tariffs.

5.3. To improve supply of electricity in rural areas

- To implement the Government program "100 000 solar gers"
  - To attract the private sector and non-government organizations by resolving the necessary regulatory issues;
  - To resolve financial issues jointly with rural financial institutions;
  - To establish a fund to implement the program;
  - To facilitate implementation.
- To improve electricity supply in rural areas using wind power
  - To cooperate with international environmental protection organizations to introduce wind energy use on a broad scale.

5.4. To improve heat supply and increase its efficiency

- Heat costs of the poor:
  - To study possibilities to increase the number of customers and potential customers;
  - To conduct a study on heat prices and tariffs and ability to pay;
  - To introduce lifeline tariffs for heat
- To improve or replace small scale heating plants used in aimag and soum centers and heat-only-boilers boilers used in rural areas
  - To assess efficiency and impact on the environment of small heating plants and heat-only boilers used in aimag and soum centres
  - To study budget subsidies and to replace inefficient boilers
- To improve residential heating
  - To improve stoves of households in ger districts;
  - To install new equipment to analyze air pollution in Ulaanbaatar;
  - To introduce less-smoke, new design stoves in aimags and soums in order to reduce air pollution;
  - To study possibilities to supply improved stoves to the low-income population of rural areas and to take actions.

5.5. Monitoring and assessment

- Improve methodology to monitor achievements in improving access to modern energy services in rural areas

- Improve data collection on access to energy by different categories of customers based on their social status

#### **Four. Management, organisation and funding required to implement the strategy plan and expected results of implementation**

##### **4.1. Management and organisation of the strategy plan**

The central government administrative authority in charge of energy issues shall manage implementation of the strategy jointly with relevant organizations, and shall report on implementation once a year to the Cabinet

##### **4.2. Funding necessary for implementation of the strategy**

The following sources of funds shall be used to finance the implementation of the strategic plan:

- funds from central and local government budgets,
- foreign and domestic investment,
- foreign concessional loans and grants,
- funds of energy companies,
- funds of Mongolian and foreign non-government organisations,
- other sources.

##### **4.3. Expected results of implementation of the strategy plan**

Implementation of the “Mongolia Sustainable Energy Sector Development Strategy Plan (2002-2010)” will ensure sustainable development of the sector and enable a financially independent energy sector. This will deliver the following results:

- The energy sector will become financially sustainable and self sustainable, and state-owned energy companies will become able to operate financially self-sustainable;
- Restructuring of the energy sector will be completed and a regulatory framework will be established conforming with market principles;
- Cost efficient and competitive domestic and foreign private companies will be able to provide services on the energy market;
- State-owned companies of the energy sector will have been privatised in a phased way and using sequenced approach;
- Policy formulation and regulation of the energy sector will be improved as a result of institutional capacity building in the sector;
- Capacity utilisation in energy generation, transmission and distribution will have been increased according to market requirements;

- Access to energy in rural areas will have been increased, and renewable sources of energy (solar, wind and hydro) widely used;
- Pricing and tariff mechanism adapted to ability to pay will be developed and lifeline tariffs introduced for low-income population
- A legal framework will be adopted that is necessary for improving energy efficiency;
- Energy efficiency programs will have been implemented to increase the benefits from more efficient use of energy;
- The private sector will be attracted by encouraging activities of ESCO companies that provide energy efficiency services.

## **THE MINISTRY OF INFRASTRUCTURE**