National Energy Policy of Ethiopia

1994

ENERGY POLICY OF THE TRANSITIONAL GOVERNMENT OF ETHIOPIA

1. PREAMBLE

Ethiopia's Energy consumption is predominantly based on biomass energy sources. An overwhelming proportion (94%) of the country's energy demand is met by traditional energy sources such as fuel wood, charcoal, branches, dung cakes and agricultural residues. The balance is met by commercial energy sources such as electricity and petroleum. The most important issue in the energy sector is the supply of household fuels, which is associated with massive deforestation and the resultant land degradation. The increasing scarcity of fuel wood is compounded by Ethiopia's high population growth rate.

Ethiopia is committed to shaping its economic future. The government has adopted a strategy for sustainable economic development which places agriculture as its driving force. This strategy is known as ADLI (Agricultural Development Led Industrialization). It envisages the structural transformation of the Ethiopian economy through export-led growth which feeds into an interdependent agricultural and industrial development.

Though Ethiopia is endowed with vast energy resources 30,000 MW hydropower resources, 1387 million TOE biomass resources, 17.5 million TOE agricultural residue, over 100 billion cubic meter of natural gas, 4000MW geothermal energy, 40.3 million tons of coal and oil shale and vast resources of solar and wind energy, it has not been able to develop, transform and utilize these resources for optimal economic development. Therefore, the Transitional Government of Ethiopia believes it is imperative to provide the economy with the necessary energy inputs at the right time and affordable prices. This will speed economic development and help the country attain the objectives of the Economic Reform Program the government has adopted. It is necessary to formulate a comprehensive national energy policy which directs the development of the energy sector in a coordinated manner that, concomitantly, and ensures that energy development is benign to the environment.

Various attempts have been made in the past to formulate a national energy policy. However, this document represents the first energy policy to be formulated which takes into account the concerns of all sectors. This policy is grounded in the Transitional Government's Economic Policy. An energy policy is dynamic by nature. Therefore, this policy will be revised from time to time to take into consideration new developments.

This policy is intended to enhance and foster "Agricultural Development Led Industrialization (ADLI)" strategy and is consistent with other sector polices. In addition to this it provides the necessary support and incentives the participation of the private sector and community, particularly women in the development of energy.

2. RATIONALE FOR THE POLICY

Energy is critical for economic development. Its importance stems from the fact that energy is a basic input in all productive activities, including the household sector. Energy is a necessary input to meet basic survival needs. In order to properly address the energy problem in the country from all aspects, it is necessary to formulate a comprehensive national energy policy which ensure least-cost development consistent with the country's energy resource endowment and socio- economic policies. More specifically the need for energy policy is based on the following rationale:

2.1 To develop and utilize the country's energy resources on the basis of Ethiopia's overall development strategy priority along with the introduction of energy conservation and efficiency strategy.

2.2 To support other economic sectors to meet their development objectives by putting in place a clearly defined energy policy;

2.3 To save scare foreign exchange resources and to ensure that energy is efficiently utilized;

2.4 To ensure reliable and secure energy supplies to cushion the economy from external and internal disruptions of supply as well as price fluctuations;

2.5 To change the current energy production and utilization practices and ensure that energy development is based on sound management practice and is benign to the environment.

2.6 To formulate comprehensive energy prices in order to ensure financial and economic profitability;

2.7 To ascertain what energy technologies and equipment are appropriate for and compatible with the country's economic development needs; and

2.8 To raise the efficiency of the energy sector and develop the necessary institutional and manpower capabilities by introducing appropriate incentive measures, to undertake energy development programs.

3. POLICY OBJECTIVES

The general objectives of the energy policy are:

3.1 To ensure a reliable supply of energy at the right time and at affordable prices, particularly to support the country's agricultural and industrial development strategies adopted by the government.

3.2 To ensure and encourage a gradual shift from traditional energy sources use to modern energy sources.

3.3 To stream-line and remove bottlenecks encountered in the development and utilization of energy resources and to give priority to the development of indigenous energy resources with a goal toward attaining self sufficiency.

3.4 To set general guidelines and strategies for the development and supply of energy resources;

3.5 To increase energy utilization efficiency and reduce energy wastage; and, to ensure that the development and utilization of energy is benign to the environment.

4. GENERAL POLICY

The government of Ethiopia's general energy sector policy is:

4.1 4.1 To enhance and expand the development and utilization of hydrological resources for power generation with emphasis on mini hydropower development.

4.2 4.2 To promote and strengthen the development and exploration for natural gas and oil;

4.3 To greatly expand and strengthen agro-forestry programs;

4.4 To provide alternative energy sources for the household, industry, agriculture, transport and other sectors;

4.5 To introduce energy conservation and energy saving measures in all sectors;

4.6 To ensure the compatibility of energy resources development and utilization with ecologically and environmentally sound practices;

4.7 To promote self-reliance in the fields of technological and scientific development of energy resources;

4.8 To ensure community participation, especially the participation of women, in all aspects of energy resources development and encourage the participation of the private sector in the development of the energy sector.

4.9 To stage popularization campaign through mass media using various national languages to create awareness among the general public and decision makers regarding energy issues; and,

4.10 To create appropriate institutional and legal frameworks to handle all energy issues.

5. PRIORITY OF THE POLICY

The Government of Ethiopia's energy sector policy priorities are:

5.1 To place high priority on hydro-power resource development, as hydrological resources are Ethiopia's most abundant and sustainable energy forms;

5.2 5.2 To take appropriate policy measures to achieve a gradual transition from traditional energy fuels to modern fuels;

5.3 To set, issue and publicize standards and codes which will ensure that energy is used efficiently and properly;

5.4 To develop human resources and establish competent energy institutions;

5.5 To provide the private sector with necessary support and incentives to participate in the development of the country's energy resources; and

5.6 To pay due and close attention to ecological and environmental issues during the development of energy projects;

6. MAIN POLICY ISSUES

6.1 Energy Resources Development

6.1.1 Traditional fuels

1. A country wide afforestation program will be undertaken to enhance the supply of fuel wood to consumers.

2. To reduce the negative effects of agri-residue use for energy on soil fertility measures will be taken to modernize and increase the efficiency of the utilization of agri-residue as energy sources.

6.1.2 Modern Energy Resources Development

1. Hydro power will form the backbone of the country's energy sector development strategy, as it is the country's most abundant and sustainable energy resource;

2. Ethiopia's geothermal and coal resources will be developed on the basis of their economic profitability;

3. Natural gas resources will be developed and utilized to meet as much of the country's energy demand as possible; and

4. Promising areas for oil and natural gas will be explored by providing incentives to oil companies to encourage them to take in exploration activities.

6.1.3 Alternative Energy Resources Development

Policy

1. Solar and geothermal energy will be used, wherever possible, for process heat and power generation;

2. Ethiopia's wind energy resources will be developed to provide shaft power for water pumping and irrigation;

3. Coal will be developed and introduced as an alternative fuel.

6.2 Energy supply

6.2.1 Households Energy

Policy

Government's household energy policy is to achieve a balance between the supply and demand for household fuels. Government will seek to stabilize their prices by increasing the supply of alternative fuels and relieving the pressure on wood resources.

6.2.2 Transport Energy Supply

Policy

The transport energy supply policy is:

To formulate policy measures and give emphasis to the introduction of improved and appropriate transport technologies in the rural areas;

To adopt conservation measures to reduce the use of petroleum products in the transport sector;

To decrease the use of petroleum products in the transport sector by substituting, where ever possible, to new non-petroleum fuels.

6.2.3 Agriculture energy supply

Policy

Government's agriculture sector energy supply policy is to increase the supply of modern energy sources to the agriculture sector.

6.2.4 Industrial Energy

Policy

Government's industrial sector energy policy is:

1. To ensure that industrial energy supply will be compatible with the industrial development of the country; and
2. To ensure that industrial energy use and supply will be based on economic and efficiency criteria.

6.3 Energy Conservation and Efficiency

It is necessary to adopt energy conservation and efficiency measures in all sectors. It is also necessary to establish the necessary mechanisms to ensure adherence to such standards and codes.

6.3.1 Households energy

Policy

Government's policy regarding household energy is to increase energy efficiency in the household sector by instituting conservation and energy saving measures.

6.3.2 Industrial Energy

Policy

Government's industrial energy policy is to improve the efficiency of industrial equipment to conserve and reduce energy consumption.

6.3.3 Transport energy

Policy

Government will institute and enforce measures to improve energy efficienct use and conservation in the transport sector in order to decrease petroleum product consumption.

6.3.4. Agriculture Energy

Policy

Wherever possible, energy demand in the agriculture sector will be met through locally-produced modern energy resources.

6.3.5 Commercial and Service Sector Energy

Policy

Government will adopt energy efficiency measures to eliminate energy waste in the commercial and service sectors arising from inefficient end-use devices.

6.3.6 Mining and Construction Sector Energy

Policy

Government will adopt energy saving measures in the mining and construction sectors to decrease energy waste.

6.4 Comprehensive Policy Measures

6.4.1 Energy and environment

Government will ensure that the development of energy projects, energy generation, transmission and use is benign to the environment.

6.4.2. Energy Science and Technology

Emphasis will be given to the following issues, in order to create awareness about energy science and technology. This will also serve to build national capabilities in energy science and technology for the optimal development and supply of energy resources.

Traditional Energy Sources

Conduct research on all aspects of energy development and utilization to increase the reliability of energy supply, to arrest deforestation and to control environmental pollution resulting from energy use; and undertake research to increase the efficiency of traditional stoves and develop more effective energy use practices.

Electric Energy

Build national capacity in design, development, operation, maintenance and consultancy in the electricity sub sector; and gradually build local manufacturing capability of electrical equipment and appliances.

6.4.3 Energy Policy, Planning and Management

Create and maintain an energy data base to assist in energy planning, management and informed decision making.

6.4.4 Manpower Development and Energy Education

To effectively undertake energy development programs and least cost energy planning, develop the necessary manpower on all aspect of energy development and utilization; and

To enhance energy saving it is necessary to create awareness about the critical role of energy by educating the public on general energy issues.

6.5 Energy Institutional Issues

It is imperative to create an institution which is entrusted with policy formulation, priority setting and coordination of all energy sector development activities in order to coordinate and

ensure consistency in energy resource development, and to avoid resource waste and duplication of efforts.