

DRAFT

RENEWABLE ENERGY POLICY
OF
BANGLADESH

MINISTRY OF ENERGY AND MINERAL RESOURCES
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH.

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DHAKA

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1. INTRODUCTION

- 1.1 Energy is one of the most important ingredients required to alleviate poverty, realize socio-economic and human development. The energy prospect is generally assessed on the basis of available commercial sources i.e., fossil fuel like gas, coal, oil etc. In Bangladesh efficient utilization of renewable energy resources is yet to assume commercial dimensions and hence a rational policy dissemination on renewable energy usage is essential. The renewable energy covers solar, wind, biomass, small hydro, geo-thermal, tidal, wave etc. in different form.
- 1.2 The frightening prospect of scarce non-renewable energy sources in a strife torn world presents one of the major concerns of mankind today. Though, energy derived from oil, gas and coal will play a vital role in meeting a growing demand for many years to come, the realization of the exhaustive nature of world's fossil fuels have focused interest and effort on harnessing alternative energy resources. Time has come to give recognition to the use of renewable energy resource which is free from environmental pollution, keep control over deforestation and abating atmospheric emissions.
- 1.3 At present the entities responsible for different functions of the electricity sector in Bangladesh are stated below:

Generation

- Bangladesh Power Development Board (BPDB).
- Rural Electrification Board (REB).
- Independent Power Producers (IPPs).

Transmission

- Bangladesh Power Development Board.
- Power Grid Company of Bangladesh Ltd. (PGCB)

Distribution

- Bangladesh Power Development Board.
- Dhaka Electric Supply Authority (DESA).
- Dhaka Electric Supply Company Ltd (DESCo).
- Rural Electrification Board through different Palli Bidyut Samities (PBSs)

- 1.4 Fossil energy resources in Bangladesh consist primarily of natural gas. Domestic oil reserve is considered negligible. Several small deposits of peat exist in the south western region of the country which have low calorific value. However, Bangladesh have substantial bituminous coal deposits in the north western region and mining of them are under active consideration of Government.
- 1.5 Access to electricity in Bangladesh is one of the lowest in the world, coverage today stands around 30% of the total population. However the rural areas of Bangladesh,

where 76% of the population live, is seriously deprived of the electricity facility. Larger energy supplies and greater efficiency of energy use are thus necessary to meet the basic needs of a growing population. It will therefore, be necessary to tap different sources of renewable energy and to use them in an efficient manner for the benefit of the people. For this, renewable energy development program will be taken in the areas where potential renewable energy resources are available considering economical & technical viability and keeping in view the Environmental Quality Standard (EQS). Plant location, size and design will be considered on the basis of available energy resources of the area and efficient conversion of energy will be given preference. Priority will be given to the rural areas where national grid expansion is expensive. This will reduce the pressure on the demand of commercial power supply and will help to avoid costly grid expansion and will also keep environment pollution free.

- 1.6 GOB has vision to electrify the whole country within the year 2020. But, major electrification through grid expansion is not a viable option for most part of Bangladesh in the foreseeable future mainly due to inaccessibility and low consumer density. It is established fact that renewable energy is environmentally sustainable, socially acceptable and economically viable option in the off-grid locations. So, to fulfill the GOB's noble vision of universal electrification, renewable energy sources will have to take vital role for off-grid electrification.
- 1.7 Prior attempts to develop renewable energy in Bangladesh have met with limited success due to policy, institutional, financing, market, information, technical and human resource barriers. This policy intends to reduce these barriers and provide a sound and sustainable implementation framework to tap the renewable energy potential of Bangladesh.
- 1.8 Private capital investment for implementing the renewable energy is a major issue to be considered. This policy envisages accomplishment of its objectives by mobilizing a concerted national effort with the continued co-operation and commitment of government, international organizations, bilateral and multilateral funding institutions, Civil Society Organizations (CSOs), Community Based Organizations (CBOs), Non-government Organizations (NGOs), research organizations, universities and private sector etc. It has become increasingly clear that for the development of renewable energy, the funding windows of non-government and private sources as well as financial and development institutions should be augmented. Furthermore, innovative new financing opportunities including micro-financing may be utilized to attract private capital to supplement the energy deficiencies in the rural areas and thus to fulfill the aspiration of the poor people.

2.0 GOVERNMENT POLICY

Government of Bangladesh has declared National Energy Policy (NEP) in the year 1996 covering Renewable Energy.

The major objectives of the NEP are:

- To provide energy for sustainable economic growth so that the economic development activities of different sectors are not constrained due to shortage of energy.
- To meet the energy needs of different zones of the country and of different socio-economic groups.
- To ensure optimum development of all the indigenous energy sources (e.g. commercial fuels, biomass fuels, and other renewable energy sources).
- To ensure sustainable operation of the energy utilities.
- To ensure rational use of total energy sources.
- To ensure environmentally sound sustainable energy development programs causing minimum damage to environment.
- To encourage public and private sector participation in the development and management of the energy sector.

To encourage private sector participation in the development of power sector Govt. declared some fiscal incentive through “Private Sector Power Generation Policy of Bangladesh in 1996.

In order to translate these policy objective into actual investment projects government has taken keen interest to finalize and declared a Renewable Policy.

To accelerate the growth of renewable energy sector of the country, NEP has recommended to establish Renewable Energy Development Agency (REDA). Until REDA is formed Power Cell will carry out all primary and initial works related to development of renewable energy.

3.0 MODALITY FOR IMPLEMENTATION OF RENEWABLE ENERGY PROJECTS

3.1 One window operation

Renewable Energy Development Agency (REDA) is to be established under the Power Division, Ministry of Power, Energy and Mineral Resources as a public limited company for the development and diffusion (dissemination / extension) of different type of renewable energy technologies (RETs). Representatives from different professional bodies, trade organizations, educational institutions, banks, NGOs will be included in the Board of Directors of REDA. REDA will start functioning with a seed fund from GOB and subsequently devise its business plan for long-term sustainability. REDA will represent government interest in renewable energy projects. Until REDA is formed the designated institution to facilitate the development of renewable energy will be the

Power Cell under the Power Division of the Ministry of Power, Energy and Mineral Resources.

3.2 Responsibilities of REDA

The REDA will:

- Act as a focal point in the renewable energy sector of Bangladesh and represent government in international institutions related to development of renewable energy.
- Take concrete steps to remove policy, institutional, financing, market, information, technical and human resource barriers existing in the renewable energy sector of the country.
- Identify and assess the potential of establishment of renewable energy projects which could make a significant contribution to energy needs both in short and long term.
- Establish a Renewable Energy Trust Fund to finance renewable energy projects and Research and Development (R&D) activities.
- To collect concessional funds (like GEF, CDM, PCF) from bilateral or multilateral lenders for renewable energy projects which will be implemented through CBOs, NGOs and rural energy entrepreneurs.
- Will articulate and co-ordinate in implementing the renewable energy projects and assist the Board of Investment (BOI) to promote and facilitate foreign and local investment in this sector.
- Formulate financing and delivery mechanism to increase the affordability of renewable energy systems for the rural poor.
- Improve access to basic health care for poor people in the un-electrified areas through the provision of renewable energy systems in health clinics and promote the use of renewable energy in vaccine and immunization programmes.
- Improve the quality of education in the un-electrified areas through the provision of renewable energy systems in schools.
- Promote the use of renewable energy to facilitate access to safe drinking water.
- Establish renewable energy powered Information and Communication Technologies (ICT) centres in the off-grid areas.
- Work closely with local government bodies to include provision of energy in different infrastructure projects including rural markets, cyclone shelters, schools, health clinics, government offices and training centres.
- Encourage CBOs, NGOs, rural energy entrepreneurs and private sector organizations in development of renewable energy and facilitate the institutional requirements for successful implementation of these projects.
- Arrange required training programs for capacity building and technology transfer needed to support commercialization of renewable energy technologies (RETs).
- Work closely with Bangladesh Standards and Testing Institute (BSTI) to prepare Standardization and Testing practices of different renewable energy technologies components for quality assurance.

- Launch a Geographic Information System (GIS) based renewable energy resource database.
- To monitor & evaluate RETs projects of the country and to maintain web-based Database for wide-spread dissemination.
- To publish renewable energy related leaflets, posters, periodicals, journals, best practice guides and books.
- Establish Renewable Energy Dissemination Parks in major cities of the country for awareness enhancement.

3.3 Financing Arrangements

- Government of Bangladesh (GOB) is a signatory to the climate change convention. REDA will establish a revolving Renewable Energy Trust Fund with grants from Global Environmental Facility (GEF) and other climate change abatement funds to support renewable energy projects in Bangladesh.
- GOB may allocate funds to a few designated banks for financing the capital investment required for renewable energy projects.
- To facilitate the creation and encouragement of a corporate debt securities market essential for raising local financing for renewable energy projects, the following provisions will be allowed:
 - i) Permission to renewable energy companies to issue Corporate Bonds both bearer and registered with the consent of the Securities and Exchange Commission (SEC).
 - ii) Permission to issue shares at discounted prices upto the limit of 10% of the face value to enable venture capitalists to be provided higher rates of return proportionate to the risks.
 - iii) Permission to foreign banks to underwrite the issue of shares and bonds by the private power companies with the recognition by SEC of such underwriting.
 - iv) Tax facilities for private sector instruments as available to Non-Banking Financial Institutions.

3.4 Environmental Impact Assessment (EIA)

It would be absolutely necessary to carryout Environmental Impact Assessment (EIA) to establish any renewable energy project and clearance from the Department of Environment would also be needed. The project proponent must follow “Bangladesh Environmental Conservation Act’ 95” and “Environmental Conservation Rules’ 97”.

4.0 TARIFF FOR SELL OF POWER

4.1 Power Offtake

It will be the responsibility of the renewable energy entrepreneurs or sponsors to find customers for electricity. Sponsor will have direct contract with the customers for the sale of electricity on terms mutually agreed upon. The distribution system required for

the supply of electricity to the contracted customers may be built by the Sponsors themselves or they can use the existing transmission and distribution systems, if there is adequate capacity. The sponsor will require to pay a wheeling charge to the owner of transmission/distribution facilities. The wheeling charges and other terms and conditions will be mutually agreed upon between the sponsor and the owner of the transmission/distribution facilities. Utilities (BPDB, DESA, DESCO, REB) will buy electricity generated from grid-connected renewable energy projects through mutually agreed "Power Purchase Agreement (PPA)"

4.2 Price Regulation

GOB will not regulate the price of electricity generated from renewable energy source which shall be negotiated between the sponsor and the consumers. ERC will protect the interest of the sponsors and the consumers.

5.0 FISCAL INCENTIVES

- 5.1. Renewable energy project sponsors whether semi-government, private companies (foreign or local), NGOs shall be exempt for corporate income tax for a period of 15 years.
- 5.2 100% depreciation in the first year for solar photovoltaic, solar thermal projects and 100% depreciation in five (5) years for wind, biomass, geothermal, tidal and small hydro projects.
- 5.3 The sponsors will be allowed to import plant and equipment (listed in Annex-1) without payment of customs duties, VAT (Value Added Tax) and any other surcharges as well as import permit fee provided that the equipment is not manufactured or produced locally.
- 5.4 Repatriation of equity along with dividends will be allowed freely.
- 5.5 Exemption from income tax in Bangladesh for foreign lenders to such companies.
- 5.6 The foreign investors will be free to enter into joint ventures.
- 5.7 The companies will be exempted from the requirements of obtaining insurance/reinsurance only from the National Insurance Company, namely Sadharan Bima Corporation (SBC). Private power companies will be allowed to buy insurance of their choice as per requirements of the lenders and the utilities.
- 5.8 The Instruments and Deeds required to be registered under local regulations will be exempted from stamp duty payment.
- 5.9 Power generation has been declared as an industry and the companies are eligible for all other concessions which are available to industrial projects.
- 5.10 The private parties may raise local and foreign finance in accordance with regulations applicable to industrial projects as defined by the Board of Investment (BOI).
- 5.11 Local engineering and manufacturing companies shall be encouraged to provide indigenously manufactured equipment of international standard to renewable energy project sponsors.

6.0 OTHER FACILITIES AND INCENTIVES FOR FOREIGN INVESTORS

The following facilities and incentives would be provided to private sponsors:

- 6.1 Tax exemption on royalties, technical know how and technical assistance fees and facilities for their repatriation.
- 6.2 Tax exemption on interest on foreign loans.
- 6.3 Tax exemption on capital gains from transfer of shares by the investing company.
- 6.4 Avoidance of double taxation in case of foreign investors on the basis of bilateral agreements.
- 6.5 Exemption of income tax for upto three years for the expatriate personnel employed under the approved industry.
- 6.6 Remittance of upto 50% of salary of the foreigners employed in Bangladesh and facilities for repatriation of their savings and retirement benefits at the time of their return.
- 6.7 No restrictions on issuance of work permits to project related foreign nationals and employees.
- 6.8 Facilities for repatriation of invested capital, profits and dividends.
- 6.9 TAKA, the national currency, would be convertible for international payments in current account.
- 6.10 Re-investment of remittable dividend to be treated as new foreign investment.
- 6.11 Foreign owned companies duly registered in Bangladesh will be on the same footing as locally owned companies with regard to borrowing facilities.

7.0 RIGHT OF INTERPRETATION

In case of any ambiguity with regard to interpretation of any provision of this policy document, the GOB interpretation shall be final.

LIST OF EQUIPMENT**General**

Data loggers

Metering equipment

Battery systems required for RETs (solar, wind, small hydro, biomass etc.)

Inverters for RETs (solar, wind, small hydro, biomass etc.)

DC Source for RETs (solar, wind, small hydro, biomass etc.)

Charge Controllers for RETs (solar, wind, small hydro, biomass etc.)

Luminous Flux Meter

Solar

Solar Photovoltaic Cells / Panel / Array

Solar Pyranometer

Solar Pyrheliometer

Solar Pathfinder

Solar PV IV-curve tester

Solar Inclinator

Solar A/C D/C converters

Solar Fans

Solar Lanterns

Solar bulb and Fluorescent tube light

Solar dryer

Solar water heater

Solar cooker

Wind

Wind Resource Monitoring Station (anemometers, wind vanes, data loggers, tower etc.)

Wind generator/Turbine (rotor blades, hub, bearing, gearbox, generator brakes, base plate, tower)

Wind Batter Charger or Wind Home Systems

Small Hydro

Current meter for measuring water flow

Altimeter for measuring head

Biomass

Biomass gasifier

Down-draft cooking stoves

Tandur oven

Combustion equipment

Gas treatment equipment

Biomass or waste heat boiler

Waste auto sorting equipment etc.

Glossary of Abbreviations/ Acronyms/ Terms

BOI	Board of Investment
BPDB	Bangladesh Power Development Board
CBOs	Community Based Organization
CDM	Clean Development Mechanism
CSOs	Civil Society Organizations
DESA	Dhaka Electricity Authority
DESCO	Dhaka Electricity Supply Co Ltd.
EIA	Environmental Impact Assessment
EQS	Environmental Quality Standard
ERC	Energy Regulatory Commission
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
GOB	Government of Bangladesh
IPPs	Independent Power Producers
ICT	Information and Communication Technology
MEMR	Ministry of Energy and Mineral Resources
NEP	National Energy Policy
NGOs	Non-governmental Organizations
PBS	Palli Biddiyut Samity (Rural Electric Co-operative)
PCF	Prototype Carbon Fund
PPA	Power Purchase Agreement
R&D	Research and Development
RE	Renewable Energies
REB	Rural Electrification Board
REDA	Renewable Energy Development Agency
RETs	Renewable Energy Technologies
SBC	Sadharan Bima Corporation
SEC	Securities and Exchange Commission
VAT	Value Added Tax