

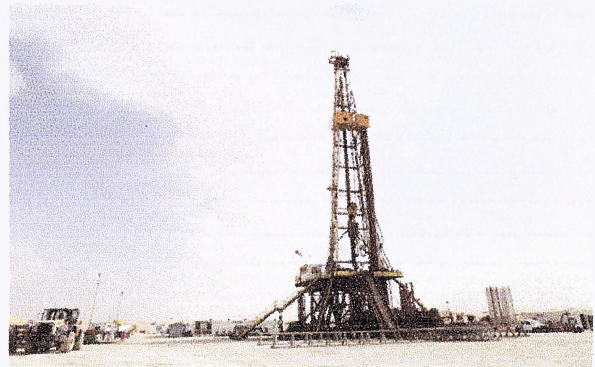
Bangladesh Public Administration Training Center

Savar, Dhaka



78th Senior Staff Course

Module: 02



Policy Evaluation Report

National Energy Policy 2004: Marginal Gas Field Development Policy

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Acronyms and Abbreviation

NEP	National Energy Policy
LNG	Liquefied Natural Gas
CNG	Compressed Natural Gas
LPG	Liquefied Petroleum Gas
SDG	Sustainable Development Goal
MOPEMR	Ministry of Power, Energy and Mineral Resource
ADP	Annual Development Program
3D	3 Dimension
SHS	Solar Home System
MW	Mega Watt
MTOE	Million Ton Oil Equivalent
Kgoe	Kilogram Oil Equivalent
KWh	Kilo Watt / Hour
MMCF	Million Cubic Feet
BCF	Billion Cubic Feet
TCF	Trillion Cubic Feet
CFD	Cubic Feet / Day
BAPEX	Bangladesh Petroleum Exploration Company
IOC	International Operating Company.

Executive summary

The first National Energy Policy (NEP) of Bangladesh was formulated in 1996 by the Ministry of Power, Energy and Mineral resources to ensure proper exploration, production, distribution and rational use of energy resources to meet the growing energy demands of different zones, consuming sectors and consumers groups on a sustainable basis. With rapid change of global as well as domestic situation, the policy was updated in 2004. The updated policy included additional objectives namely 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 energy sector and to bring the entire country under electrification by the year 2020.

Bangladesh suffers with heavy energy crisis with the gradual expansion of economic activities of the country. The estimations and reserves of energy resources show future potentials but a small fraction of them are being utilized which proved to be insufficient. Moreover, the impact of climate change and environment pollution has also been significantly felt. As a result, the successive governments have aimed at formulating an effective energy policy which would address these concerns. The energy policies have also received extensive criticisms especially on the questions of energy export and methods of extraction.

This policy sets the overall framework for the improved performance of the energy sector. The objectives are to provide energy for sustainable economic growth, ensure optimum development of all the indigenous energy sources (oil and gas, coal, hydropower), ensure sustainable operation of the energy utilities, ensure rational use of total energy sources, ensure environmentally sound energy development programs, encourage public and private sector participation in the development and management of the energy sector, bring entire country under electrification by the year 2020, ensure reliable supply of energy to the people at reasonable and affordable price, and develop a regional energy market for rational exchange of commercial energy to ensure energy security. The report provides a series of recommended energy policies on the following areas: non-renewable energy, petroleum, marginal gas field development, renewable and rural energy, power, rural electrification, and demand estimation and planning.

Chapter I

General Introduction

1.1 Background and context

The Energy policy of any country provides the overall direction towards achieving growth and development in the Energy sector. The policy direction plays a very important role in devising strategies, plans and programs for implementing sustainable development initiatives for a country.

Energy is the driving force behind all economic activities and most importantly the economy can be seen as a system of energy flows, as a sequence of energy conversion that culminate in the production of goods and services. Hence economic growth of a country is directly linked to energy growth of the country.

The Father of the Nation Bangabandhu Sheikh Mujibur Rahman took some prudent decisions to ensure economic development of war affected newly born country. Among those, one of the important decisions was to buy five gas fields from several foreign oil companies at a nominal price on 9 August, 1975 to ensure energy security of the country.

Government of Bangladesh is pledge bound to take Bangladesh into Middle-Income country by 2021 and to be developed country by 2041. To achieve this daunting task ensuring uninterrupted quality energy supply is a big challenge. In doing so, Bangladesh has adopted the National Energy Policy (NEP) in 2004. The ownership of this policy rests with the Ministry of Power, Energy and Mineral Resources. Before this the first Energy Policy was published in 1996.

1.2 Assessment of the strategy:

The National Energy Policy is a comprehensive and self contained statement of policy in the Energy sector. The National Energy Policy 2004 of Bangladesh seeks to achieve its goal through implementing its strategic objectives. Under the policy they will formulate a comprehensive

and integrated energy plan and optimize the recovery from the existing gas fields. Also will develop transmission and distribution network. This policy will help to make energy sector efficient through management techniques and human resources development. Also to implement measures in a phased manner to increase energy efficiency. The policy will also strengthen Research and Development activities and operational capabilities of the National Companies. It will strengthen the exploration activities for coal and other mineral resources keeping in view the socio-economic and environmental consideration.

The strategies of the National Energy Policy indicates to increase the use of LPG to reduce the dependency on natural gas and also to reduce deforestation. Also encourage to import of natural gas in the form of LNG to meet up increasing energy demand.

1.3 Planned time

The National Energy Policy 2004 sets its vision to ensure affordable primary energy for all by 2020. Also to achieving energy security for the country through exploration, development, production, import, distribution, and efficient management of different sources of primary energy and mineral resources.

1.4 Objectives

The objectives of the revised National Energy Policy (NEP) are outlined as follows.

1. To provide energy for sustainable economic growth so that the economic development activities of different sectors are not constrained due to shortage of energy.
2. To meet the energy needs of different zones of the country and socio-economic groups.
3. To ensure optimum development of all the indigenous energy sources.
4. To ensure sustainable operation of the energy utilities
5. To ensure rational use of total energy sources.
6. To ensure environmentally sound sustainable energy development programs causing minimum damage to environment.
7. To encourage public and private sector participation in the development and management of the energy sector.

8. To bring entire country under electrification by the year 2020.
9. To ensure reliable supply of energy to the people at reasonable and affordable price.
10. To develop a regional energy market for rational exchange of commercial energy To ensure energy security.

1.5 Coherence

This policy has been prepared keeping in mind the other guiding documents prepared or agreed by the government of Bangladesh. In this case, this policy takes guidance and support, among others, from the 7th Five Year Plan of the GOB, SDGs, Perspective plan etc so that the Industrial Policy remain within the boundary of the government vision and long term goal for achieving sustainable development.

1.6 Purpose of the paper

In this paper, an attempt is made to briefly highlight major area of the National Energy Policy 2004 and investigate how comprehensively this policy document addresses Marginal Gas field development issues. Hence the objective set for this paper is

- to understand and briefly highlight the salient features of the policy
- to identify the objective, relevant policy interventions and activities set for Marginal Gas Field Development in the National Energy Policy 2004, and
- to comment/assess the deficiency of the policy in terms of Marginal Gas Field Development.

1.7 Scope

The scope of this policy evaluation report will be limited to the National Energy Policy 2004 of Bangladesh. Due to time constrain this report will be confined specifically with the Marginal Gas Field Development objective and relevant policy interventions highlighted in the policy document.

Chapter II

Evaluation Methodology/Approach

The methodology used in conducting any research/evaluation is critically important and deserves careful consideration. The writer followed the underlying steps carefully in conducting this evaluation.

2.1 Data Collection Process

After the decision from the course management on policy selection, the writer spent time during different stages of evaluation started from the beginning with the Group Mentor to get guideline on how to proceed with this work.

At the beginning, the writer decided to conduct key informant's interviews from The Energy and Mineral Resource Division Of the ministry of Power, Energy and Mineral Resource MOPEMR, Hydrocarbon Unit and other relevant organizations involved in Gas field Management and operations'.

2.2 Literature review

The purpose of a literature review was to get ideas about key issues related to Energy policy in general and Marginal Gas Field development in particular and to give the researcher more insight about his proposed evaluation.

Literature for this evaluation was mainly collected from library and from Internet. The library of Bangladesh Public Administration Training Center (BPATC) and Energy and Mineral Resource division of the Ministry of Power, Energy and Mineral Resource Industries were used for literature collection and review. The internet facilities in BPATC were intensively used to collect literature and required information.

2.3 Approach of Analysis

Evaluation was carried out through in-depth study of the policy document, literature review, informal discussion and interview with key informants. Informal discussion was made during field attachment with some power and energy users in Mymensingh District. Interviews with key informants were taken with secretary, Joint secretary, Senior Assistant Secretary of the Ministry of Industry and Director of Hydrocarbon Unit.

2.4 Limitations

In any study/evaluation with finite resources and time, boundaries have to be set. This evaluation report therefore has some limitations which are as follows:

- As there are ten objectives in the policy, the evaluation is limited to few of the which is related to marginal gas field development objective only to make it manageable.
- Key informants Interview is carried out with two organizations only.
- No formal survey is carried out in the field level to know the impact of the current policy due to time constrain. Moreover the marginal gas field development issue only related with the policy level and parties are a few.

Chapter III

Evaluation Findings

3.1 Brief review of the National Energy Policy 2004 and Energy Scenario.

The National Energy Policy 2002 of Bangladesh announced in 2024. The policy has clear mandate with a broad-based vision for ensuring affordable primary energy for all. The Policy includes a target- oriented action plan. What distinguishes the GoB policy NEP is quite ambitious and farsighted regarding objectives and strategies for the reform process, particularly in the power sector. The need for a reform and strategies for implementing it are also underscored in the Fifth Five-Year Plan and through the ADP. Major bottlenecks are identified and strategies are developed.

- Separation of sector regulation and operation through a regulatory body
- Autonomy and commercial orientation of the sector entities
- Unbundling of generation, transmission and distribution
- Increased private sector participation

Energy is the prime mover for a socio-economic development of a country. Economic Development depends on reliable energy supply. To achieve Vision 2021, SDGs and Vision 2041, Bangladesh has to meet increasing energy demand. In order to ensure energy security as well as to meet the increasing energy demand, the primary energy source of the country especially gas, coal and other energy resources have been taken into consideration.

The role of energy sector is unlimited in reducing poverty i.e the overall socio economic development of the country. At present energy crisis has become an acute shape due to the lack of proper initiatives in the energy sector during the regime of past government. As a result, acquiring overall growth of the industry and other production sectors including power generation has been hampered. To overcome the stagnant situation of the country the present

government is working to ensure energy supply to expedite the motion of economic development and to achieve this goal mid-term and long-term plan has been undertaken for exploration, development and production of domestic primary fuel such as gas and coal.

The main purpose of oil, gas and natural resource sector is to meet growing energy demand of the country by undertaking enhanced exploration activities based on modern seismic survey like 3D survey and development and appraisal of oil and gas fields. Besides strengthening exploration and development of gas fields, the sector strategy also aims to reduce extreme dependence on Natural Gas through diversification of energy mix, balanced and synchronized development of gas production, transmission and distribution activities, encourage participation of private entrepreneurs in oil and gas exploration, production, and distribution.

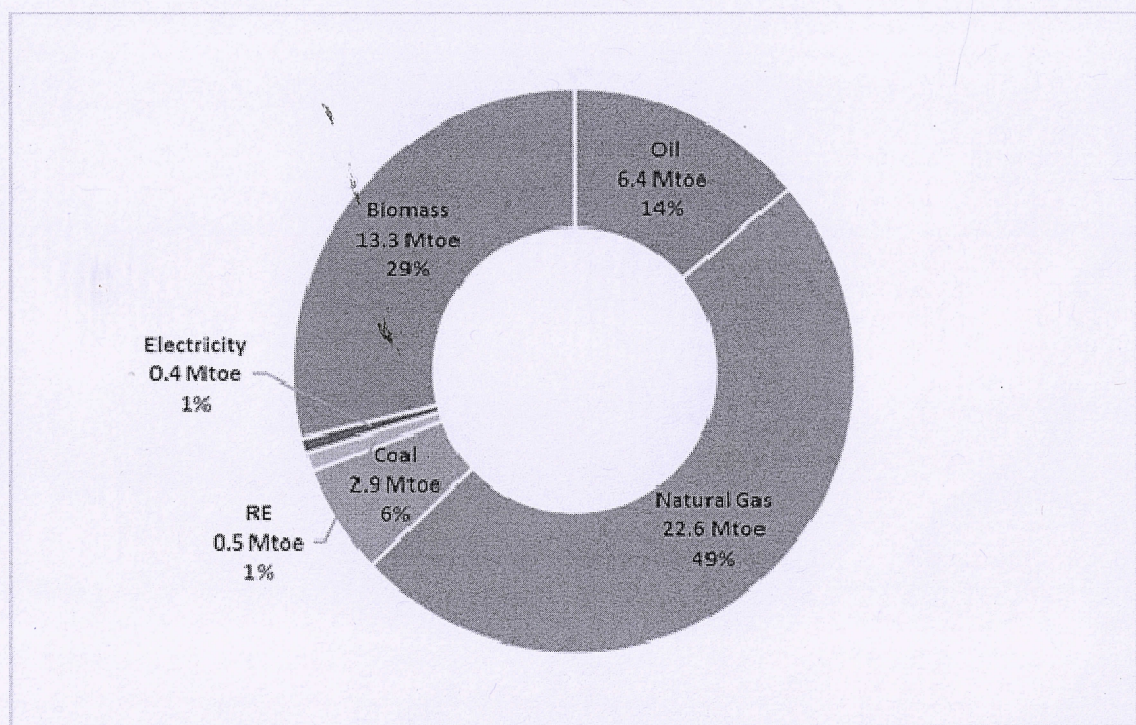
To meet energy demand at desired level, initiative has been taken to increase gas production and its optimum utilization. Steps have been taken to import LNG to meet up the increasing energy demand. Realistic policies for development of coal fields in northern part of the country are under process for national interest. Initiative has also been taken to build up regional energy security based on mutual co-operation with the neighboring countries under SAARC umbrella.

Known commercial energy resources in Bangladesh include indigenous natural gas, coal, imported oil and hydro-electricity. Biomass accounts for about 29% of the primary energy and the rest 71% is being met by commercial energy. Natural gas accounts for about 72% of the commercial energy. Imported oil accounts for the lion's share of the rest. Every year Bangladesh imports about 5.4 million metric ton of crude and refined Petroleum Products. Apart from natural gas and crude oil, coal is mainly used as fuel in the brick-fields and Thermal Power Plant.

Moreover, power is also being generated by using Solar Home System (SHS) in off grid areas. The amount of power generation using solar system is currently about 213 MW. In addition

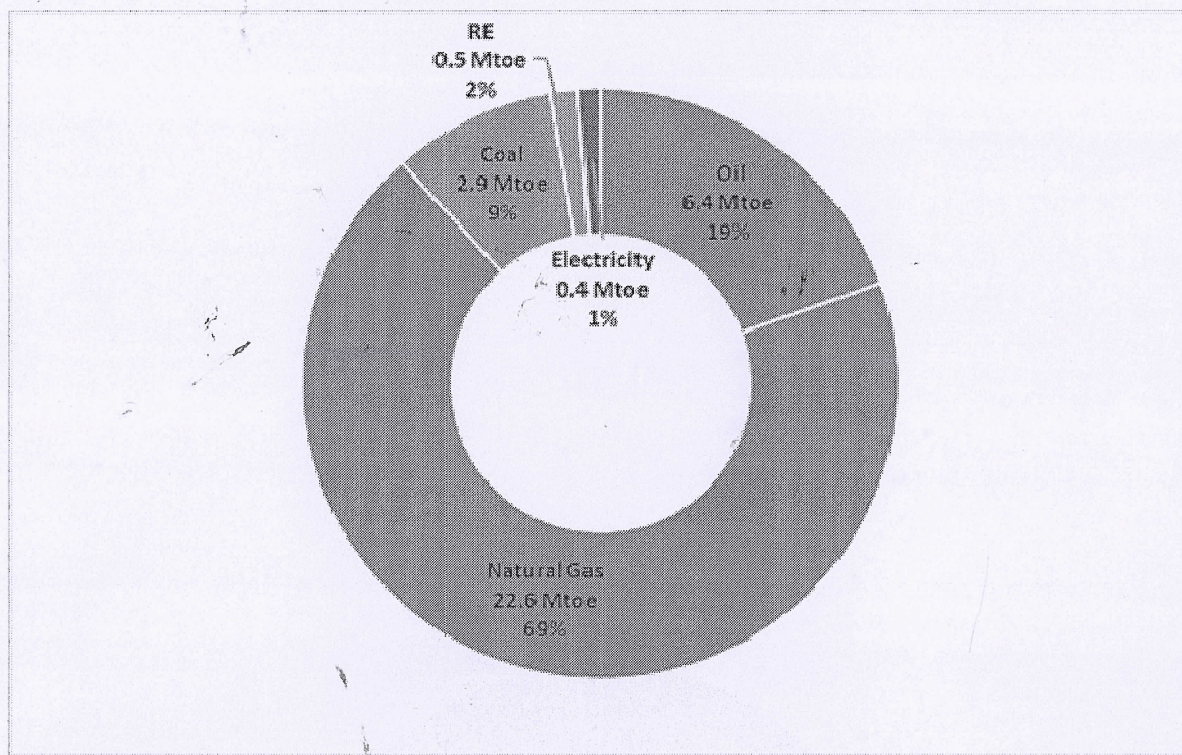
there are some poultry and dairy farms in which bio-gas plants are being set up and this bio-gas is used for cooking and power generation. The amount of power generation from such plants is currently about 1 MW. Steps have been taken to generate electricity by Bio-Mass Gasification Method in the country.

Estimated final consumption of total energy is around 46.1 MTOE. Average increase of energy consumption is about 6% per annum. Per capita consumption of energy in Bangladesh is on an average 285 kgoe (Kilogram Oil Equivalent) and per capita generation of electricity is 371 kWh with a access to electricity 76% , which is lower than those of South Asian neighboring countries.



Total Primary Energy 46.1 Mtoe

Figure 1 : Share of Primary Energy (2015 – 16)



Total Commercial Energy 32.8 Mtoe

Figure 2 : Share of Commercial Energy (2015 – 16)

Bangladesh also has a bright potential to produce electricity from wind and mini-hydro. Recently, solar power based irrigation pump has been used in a number of areas of the country. Its wide use will lessen the pressure on diesel and electricity.

Bangladesh Oil, Gas, and Mineral Corporation, short named Petrobangla, under the Energy and Mineral Resources Division of the Ministry of Power the Energy and Mineral Resources is entrusted with the responsibility of exploration of oil and gas, and production, transmission and marketing of natural gas in the country.

Natural Gas Reserve

Since first discovery in 1955 as of today 26 gas fields, 24 in the onshore and 2 in the offshore, have been discovered in the country. Of them 20 gas fields are in production, one offshore gas field have depilated after 14 years of production while other offshore field has not been viable for production due to small reserve. The estimated proven plus probable recoverable reserve was 27.12 TCF. As of June 2016, a total of 13.9 TCF gas has already been produced leaving only 13.22 TCF recoverable reserve in proven plus probable category. Some key information about the natural gas sector is presented in the Table – 1

Table – 1 : Gas Sector at a Glance

Total number of gas fields	26
Number of gas fields in production	20
Number of producing wells	101
Present gas production rate	2740 MMCFD
Highest Production (06 May, 2015)	2785.8 MMCFD
Total recoverable (Proven + Probabale) reserve	27.12 TCF
Cumulative Production (June,2016)	13.90 TCF
Remaining Resurve (Proven + Probabale)	13.22 TCF
Present Demand	3250 MMCFD
Present Deficit	500 MMCFD
Number of Customer	34 Lakh (Appx.)

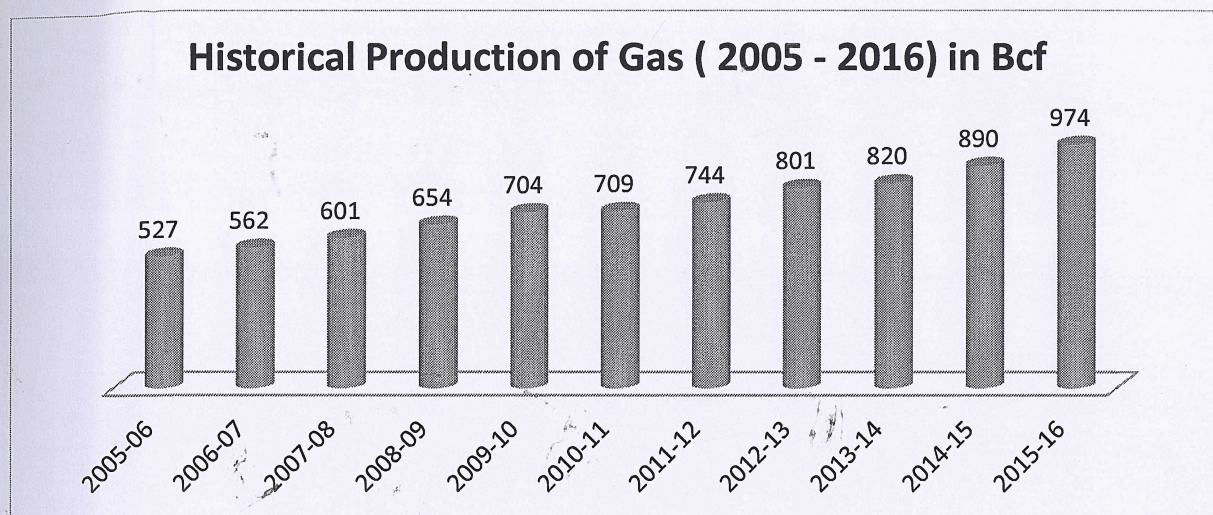
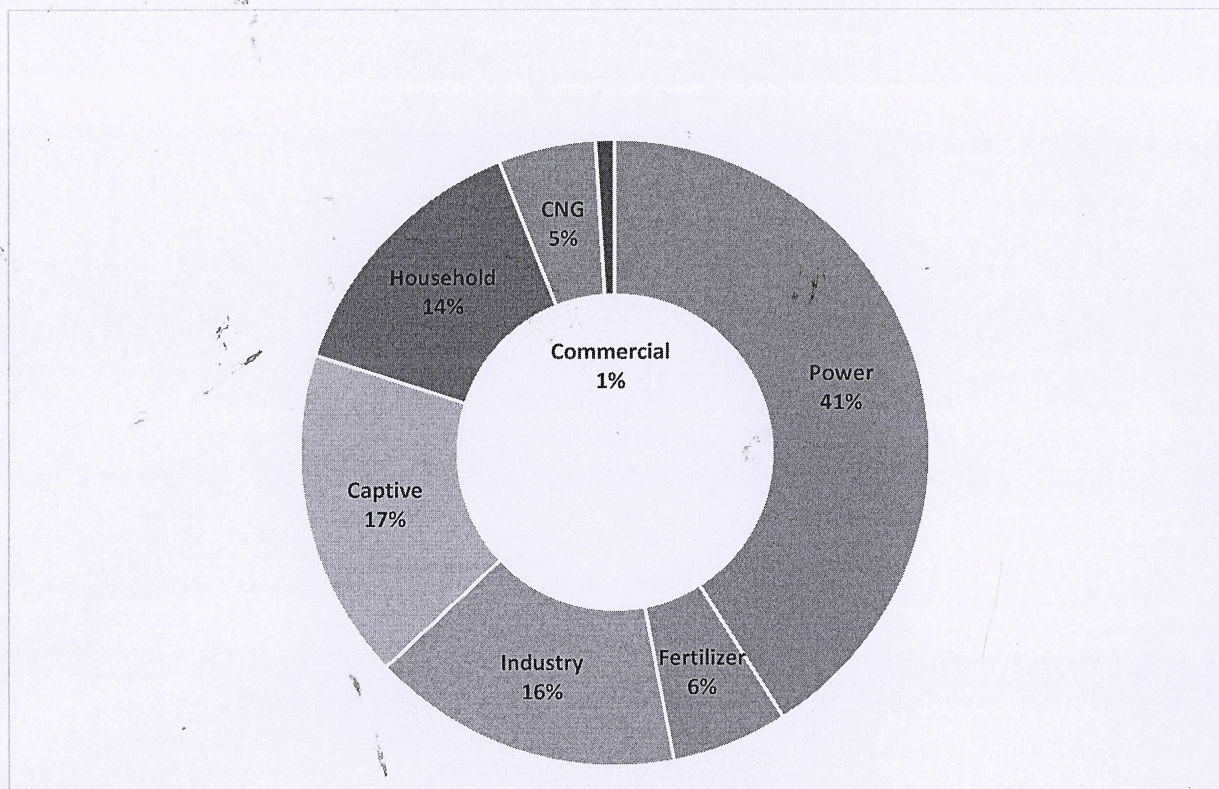


Figure 3 : Historical Gas Production in Bangladesh (2005 – 2016)

Although natural gas was introduced as commercial fuel in early 1960s, it's consumption got real momentum in eighties marking the beginning of the industrialization in the country.

Natural Gas Consumption

The current average production of natural gas is about 2,740 MMscfd. A total 974 billion cubic feet (BCF) of natural gas was produced in 2015 – 16 which was used by power- 41%, fertilizer- 6%, captive power-17%, industry-16%, domestic-14%, CNG - 5% and others very small amount. Natural gas accounts for the 72% grid electricity generation while all the 7 urea fertilizer factories are dependent on natural gas for feedstock. Natural gas has made tremendous contribution towards industrial growth in the country as fuel for heating and captive power generation at very favorable price. While the whole nation has been benefitted by this resource, about 7% of the population have directly been benefitted by using piped natural gas for household purposes. Compressed National Gas is being used as automobile fuel by about 250,000 motor vehicles in the country. Expansion of CNG facilities early last decade dramatically improved air quality in large cities especially in the capital Dhaka as well as lot amount of foreign exchange has been saved due to less amount of oil import.



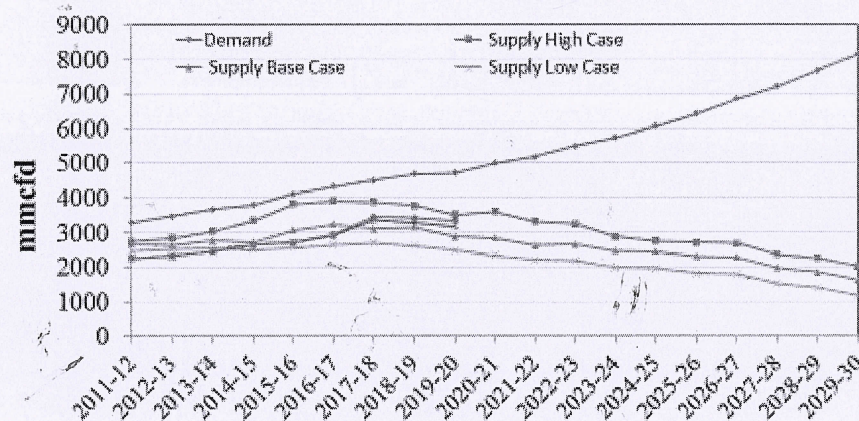
A Total of 974 Bcf gas was produced in 2015 – 16

Figure 4 : Sector wise Gas Consumption in Bangladesh (2015 – 2016)

Natural Gas Demand

Being almost single indigenous sources of commercial energy, demand for natural gas experienced very fast growth over the last three decades often outstripping the supply. Present demand for gas in the country is about 3,250 MMscfd whereas supply is 2700-2750 MMscfd indicating a shortage of about 500 MMscfd. It is estimated that demand for natural gas will rise to about 8000MMscfd by the 2030. Natural gas demand projection in the country is shown in the figure below:

Demand and Supply of Gas



Demand Supply gap is increasing, production is likely to decline from 2016-17

Figure 5 : Demand and Supply of Gas in Bangladesh (2014 – 2030)

LNG import to Supplement Indigenous Supply

As seen from the figure above, existing demand supply gap will widen with time, if large reserves cannot be discovered shortly. Foreseeing the uncertainty in new discovery, government has undertaken a project to import LNG equivalent to 500MMscfd in the first phase to offset demand supply gap. It is expected that re-gasified LNG will be fed to the network in early 2018 after installation of a floating storage re-gasification unit (FSRU) at Maheshkali in Cox's Bazar district by a private entrepreneur on build, own, operate and transfer (BOOT) basis, and construction of a 30 inches dia 91 km transmission pipeline from re-gasification facilities to Chittagong ring-main by the national gas transmission company, GTCL. Two land based LNG terminal of 1000 MMscfd each at Moheshkali and Payra are to be set up. Besides that different initiative has been taken for power generation more FSRU and land base LNG terminal are to be set up under Power Division.

Exploration Activities

Exploration for oil and gas in this country in the early last century while first success came in with discovery of gas field in Sylhet. So far 97 exploration wells have been drilled in the country with 26 discovery of gas fields. Government has attached utmost importance to the exploration for oil gas in the

country both in the onshore and in the offshore. It is the government priority sector. National exploration company BAPEx is engaged in the exploration in the onshore while international oil companies (IOC) are carrying out in onshore and offshore.

A total no. of 119 well will be drill by BAPEx & IOCs under a crash program of gas exploration/production up to 2021. Additional 1220 – 1278 MMscfd gas is expected to be added to the national grid.

Two PSCs, signed in February 2014, are currently active in the shallow offshore, one with ONGC Videsh Limited and Oil India Limited while another with the consortium of Santo and Kriss Energy (Asia) limited.

It has been decided in the back drop of maritime boundary settlement with Myanmar and India to conduct “ Non-Exclusive Multi-Client Seismic Survey” on the offshore to get seismic data of deep sea which is a internationally recognized practice followed by many countries.

The blocks of the country are rearranged, the Model PSC for Onshore 2015 and Model PSC for Offshore 2015 are in the final stage of approval.

3.2 Marginal Gas Field in the National Energy Policy 2004

In Bangladesh 22 gas fields of sizes ranging from 25 to 4000 Bcf have so far been discovered. Fifteen of these gas fields have been brought under production. Some of these fields, which have been in the process of depletion for continued production over time, have become commercially unviable and remained unattended. There are yet other gas fields, which have not been put under operation for want of commercial viability right from the beginning. All these gas fields, which have no apparent prospect for further development under the existing techno-economic considerations, may be termed marginal/abandoned. Development of marginal gas fields requires investment with significant risks. In order to provide a transparent mechanism to deal with such marginal/abandoned gas fields, a set of procedural guidelines is deemed necessary. The objectives if this procedure are to :

- Facilitate development of gas resources of marginal/abandoned gas fields;
- Introduce the state-of-the-art technology for development of marginal/ abandoned gas fields;

- Maximize ultimate recovery of gas from marginal/abandoned gas fields; and
- Attract private investment (domestic and foreign direct) in the development of marginal/abandoned gas fields.

Determination of Marginal Gas Fields

Petrobangla from time to time, with the approval of the Government, may declare certain gas fields as marginal/abandoned on the basis of the following procedure:

- Petrobangla shall constitute a technical committee, which will evaluate the status of all gas fields on the basis of geological, geophysical and engineering data, production history, cost effectiveness, size of the fields, remaining recoverable reserve, well deliverability, cost of production, access to pipeline and market etc. and determine which gas fields may be considered as marginal/abandoned.
- The recommendations of the technical committee will be reviewed by Petrobangla and after review Petrobangla shall prepare and forward for consideration and approval of the Government the list of gas fields to be declared as marginal/abandoned.

Processing

- Available data for the respective marginal/abandoned gas fields will be provided to the investors on payment of necessary fees. The confidentiality agreement will be signed in line with the international practice.
- GOB/Petrobangla may invite proposals for private investment for the development of marginal/abandoned gas fields. The offers received will be evaluated on declared criteria and the best offer will be selected for negotiation and finalization of the contract.
- The model production sharing contract 1997 as it relates only to gas and its associate products and as may be modified from time to time by the government shall be used as far as practicable as guidelines for negotiation. However, established norms and procedures will be taken into consideration while finalizing the contract between the parties.
- Offers received prior to the adoption of these procedures will be appraised by a technical committee appointed by Petrobangla. After appraisal a joint venture

agreement (jva) will be concluded between the selected investor and petrobangla/ company(ies) and forwarded to government for approval.

- In line with the general GoB policy of diversification and wider participation of investors in order to minimize risks and encourage competition, foreign companies already engaged in exploration and/or production shall not be eligible for participation in the development of marginal/abandoned gas fields except specifically allowed by the government.

Fiscal Incentives

- Repatriation of dividends, Repatriation capitals, repayment of loans etc. shall be in accordance with the policy of the Government/Bangladesh Bank.
- Payment and exemptions of import duty shall be in accordance with SRO 202, issued on 28.11.95 by the National Board of Revenue.
- The investors will be encouraged to use locally produced equipment and services.
- Except as provided for in above, existing GOB rules shall apply for payment of corporate tax and all other taxes as applicable for such investment.

Commercial Aspects

- The investors shall conduct all operations at their sole risks and expenses. If there is no commercially viable production in the marginal/abandoned gas field, or if the production achieved by the investors under the contract is insufficient to reimburse the costs, the investors shall bear the losses.
- The investors will be required to undertake optimal development of marginal/ abandoned gas fields for maximum recovery.
- If an indication of a market outlet is not given by Petrobangla within 6 (six) months after a request is made by the investors, they will be free to find the market outlet within the country.
- The investors will be entitled to recover investment within an agreed period of time under the terms of the contract. Investment recovery shall be limited only to the respective field
- The investors will have the right to produce annually an agreed volume of gas following good reservoir management practices.

- The investors will indemnify GOB/Petrobangla against any damage to resources and third parties.
- The investors will be required to pay annually to Petrobangla a contract
- administration fee and a training grant, which will not be included as recoverable cost.

Pricing

Price of natural gas and associate products to be produced and delivered will be determined through negotiation.

Safety and Environmental Protection

Laws, rules and policies formulated by the Government of Bangladesh from time to time in this regard shall be followed.

Right Of Interpretation

In case of any ambiguity with regard to interpretation of any provision of these procedures, the GOB's interpretation shall be final.

Explanatory Note

For the purposes of these procedures, Chhatak, Kamta and Feni gas fields shall be deemed to have been declared marginal/abandoned gas fields, and, the negotiations/ discussions conducted so far with the approval accorded by the government in 1999, shall be deemed to have been in compliance with the above procedures.

Welfare

The private companies in consultation with the Ministry of Energy and Mineral Resources/ Petrobangla will contribute towards the:

1. Development of roads, water supply, health and education facilities in the areas of their operation and towards any such other activities to be undertaken,
2. Undertake program to improve the state of environment in their areas of operation.

3.3 Relevance

In order for achieving sustainable economic development, the current Industrial Policy 2016 has been encouraging labor intensive SME industries as well as the private sector. From the previous discussion, it is clearly observed that the NIP 2016 is a policy that gives a critical sense of direction for the development of SME sector in the country. The government felt the need for developing this sector long time ago. The National Industrial Policy 2005 and subsequent

National Industrial Policy 2010 gave the policy direction towards development of this sector. The current policy gives the direction with high emphasis keeping the previous guidance in mind. One can see that the Industrial policy 2016 has been gradually seeing improvement over the previous two. Moreover, the specific activities/actions included in the action plan made this policy highly relevant in relation to achieve the SME sector development objective.

3.4 Efficiency

The Policy adopted well-conceived medium- and long-term measures for the development of the industrial sector and to devise workable and efficient institutional arrangements for expanding industrial activity and a mechanism to monitor the progress in the implementation of industrial sector projects.

The Ministry of Industries shall be the focal point for the promotion of industrial activity. The Board of Investment (BOI) shall be the main agency to assist and develop private sector industrial investment. BSCIC and EPZs will allot industrial plots in their respective areas.

The Policy seeks to make the programs of different training institutes under different ministries engaged in human resource development more dynamic and effective. The training institutes named in the Policy are Bangladesh Institute of Management (BIM); Bangladesh Institute of Technical Assistance Centre (BITAC); National Productivity Organization (NPO); Small and Cottage Industry Training Institute (SCITI), etc.

To manage the implementation of the NIP2016, a Research, Monitor and Data Cell will be established at the MOI. It is expected that this cell will monitor implementation of the Industrial Policy, collect and analyze data and put policy recommendations for the acceleration of industrialization process in the country.

Programs and action plans of various private sector organizations shall be utilized for effective implementation of the 2016 industrial policy.

3.5 Partnership and Cooperation

The Energy policy 2004 cross cuts many areas of other ministries. As the National Energy Policy is made in consultation with all relevant ministries/division and other related organizations, it is expected that implementation would be bit easier than before. Specifically the action plan of the policy would support the implementation. The overall coordination of the NEP 2004 rests with the Ministry of Power, Energy and Mineral Resources. According to the Action plan, implementations of the actions are the responsibility of the concerned ministry/ organizations.

It is expected that the private sector involvement especially international exploration companies, investors and other trade bodies in making of the policy, will ensure their support in policy implementation.

3.6 Impacts

The policy intervention highlighted in the National Energy Policy 2004 is expected to create a conducive environment for the Energy sector to grow. NIC will help our country achieving energy security for the country through exploration, development, production, import, Distribution and efficient management of different sources of primary energy and mineral resources.

Bangladesh is facing scarcity of energy. There is gap between demand and supply of energy. The gap is increasing day by day. Different initiatives has been taken to increase supply of energy. Contract has been signed to install a FSRU of 500 MMscfd capacity for LNG import, ERL expansion and SPM project have been thrown, Cross boarder energy trade will get momentum, Setting up of land based LNG terminals to import LNG has been initiated. New horizon has exposed in sea after settlement of maritime boundary with Myanmar and India. Discovered Coal Fields will be developed. Coal based power production will get momentum. Successful implementation of all these activities will meet up the energy demand of the country that will help to achieve the Vision 2021, SDG's and Vision 2041 of the government.

3.7 Sustainability

If the policy implementation is successful then the benefit accrued from such development would ensure better life of the people and will lead to ensure a socially just, economically viable and environmentally sound development for the country. As said previously, the successful implementation of the policy by 2021 would lead Bangladesh to a middle income country.

Chapter IV

Conclusion

4.1 Conclusion

The role of energy sector is unlimited in reducing poverty i.e the overall socio economic development of the country. At present energy crisis has become an acute shape due to the lack of proper initiatives in the energy sector during the regime of past government. As a result, acquiring overall growth of the industry and other production sectors including power generation has been hampered. To overcome the stagnant situation of the country the present government is working to ensure energy supply to expedite the motion of economic development and to achieve this goal mid-term and long-term plan has been undertaken for exploration, development and production of domestic primary fuel such as gas and coal.

Energy crisis and possible alternative energy sources are really big issues in Bangladesh. Renewable energy is one of the sustainable solutions to avoid the power crisis. To find out the factors of exiting power supply problem, current energy scenario, lack of infrastructure on conventional energy sources promote the renewable energy option. It needs to take visionary planning, must attract investment and create mass awareness. The potentiality of renewable energy resources is very good for its national growth, sustainability and socio-economic development. The use of renewable energy in the national energy context will develop the sustainability and socio-economic development in Bangladesh.

4.2 Recommendations

On the basis of the foregoing discussion and conclusion of the policy review, the following recommendations are made:

- In order to achieve the vision of NEP increase the gas production Marginal gas field may play important role. By implementing the NEP Marginal gas fields may add new gas

supply to our need. Taking account of our previous experience it must be very transparent so no allegation may come over these activities.

- Produce gas from a marginal gas field is a new and uncommon technology. Concern authorities must be aware of technology transfer from the contracted party.
- According to NEP contracted marginal gas field and price of the gas should determined by negotiation. So concern authorities must have professional and expert negotiators. A panel of negotiator may be formed.

4.3 Lessons Learned

In making of the National Energy Policy 2004, participation of stakeholders from different sectors was ensured. This was a welcome initiative by the Ministry of Power, Energy and Mineral Resource to involve the stakeholders. However despite involving relevant stakeholders, Marginal Gas Fields are very exclusive in nature. In its determination, only a few people are involved. Proper justification will depend only on them. If they are not loyal country may loss its resources.

While devising a policy instruments, it is necessary to consider pros and cons of the instrument and each & every wording of such instrument must be given extra care. Otherwise, the unintended outcome of such policy may override the benefits that the policy would accrue.

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