

Grant No. 36
42 - Energy and Mineral Resources Division
Medium Term Expenditure

(Taka in Thousand)

	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-Development	34,55,50	38,54,19	38,40,81
Development	1080,09,00	1231,46,61	1403,59,99
Total	1114,64,50	1270,00,80	1442,00,80

1. Mission Statement and Major Functions

1.1 Mission Statement

Ensure the energy security of the country through the exploration of different sources of energy and mineral resources, development, production, distribution and proper management.

1.2 Major Functions

- (a) Acts and Rules related to Petroleum, Natural Gas and Mineral Resources;
- (b) Policy related to mineral resources other than Petroleum and Petroleum Products;
- (c) Subject mentioned in the Bangladesh Oil, Gas and Mineral Resources Ordinance 1986 and Bangladesh Petroleum Ordinance 1974;
- (d) Subject mentioned in the Bangladesh Mineral Exploration & Development Corporation Order 1972 and government's responsibilities mentioned therein;
- (e) Government's responsibilities mentioned in the Bangladesh Minerals Exploration and Development Order 1972 (merged with Petrobangla);
- (f) Administration planning, programming and policy relating to geological survey;
- (g) Administration and control of the following departments and agencies- the Geological Survey of Bangladesh, the Bureau of Mineral Development, the Department of Explosives, the Bangladesh Petroleum Institute, Bangladesh Oil, Gas & Mineral Corporation and Bangladesh Petroleum Corporation
- (h) Liaison and signing of agreement with international organisation

2. Medium Term Strategic Objectives and Key Activities

Medium Term Strategic Objectives	Key Activities	Implementing Departments/Agencies
1. Increase the reserve of useable energy resources	<ul style="list-style-type: none"> • Conduct geological surveys 	<ul style="list-style-type: none"> • Geological Survey of Bangladesh (GSB)

Medium Term Strategic Objectives	Key Activities	Implementing Departments/Agencies
to ensure energy security	<ul style="list-style-type: none"> • Exploration, development and extraction of energy sources on shore and coastal areas of the country 	<ul style="list-style-type: none"> • Petrobangla • GSB
	<ul style="list-style-type: none"> • Exploration, development and production of gas, oil, coal • Attract local and foreign, public and private investment in refining and transporting fuel oil 	<ul style="list-style-type: none"> • Petrobangla • Bangladesh Petroleum Corporation (BPC)
	<ul style="list-style-type: none"> • Search for alternative energy sources 	<ul style="list-style-type: none"> • Petrobangla • BPC • Hydrocarbon Unit
2. Capacity Building in the exploration, development and production of oil and gas	<ul style="list-style-type: none"> • Capacity enhancement of the Bangladesh Petroleum Exploration & Production Company Limited (BAPEX) in drilling, assessment and development of gas wells • Involve private and foreign companies in the exploration, development and production. 	<ul style="list-style-type: none"> • Petrobangla
3. Gradual expansion of the gas network in the Western and South-Western region of the country to allow for balanced economic development	<ul style="list-style-type: none"> • Construction and expansion of a gas transmission line in the Western and South-Western region of the country 	<ul style="list-style-type: none"> • Petrobangla
	<ul style="list-style-type: none"> • Installation of compressor stations for maintaining gas transmission and pressure 	
4. Formulate laws and regulations relating to energy and mineral resources to enhance accountability in the energy sector and reduce system loss	<ul style="list-style-type: none"> • Formulate and update the Energy Policy, the Coal Policy, and the Gas Law 	<ul style="list-style-type: none"> • Energy and Mineral Resources Division
	<ul style="list-style-type: none"> • Smooth distribution and planned marketing of gas 	
	<ul style="list-style-type: none"> • Update mining and mineral resources regulations 	
	<ul style="list-style-type: none"> • Disconnect illegal and defaulter customers' connections and bring about accountability through the realisation of arrear bills 	
5. Increase the use of gas fuel in vehicles to conserve the environment	<ul style="list-style-type: none"> • Rational expansion of the CNG sector and increase the supply of CNG and LPG 	<ul style="list-style-type: none"> • Petrobangla • BPC • Department of Explosives
6. Ensure the safe supply and use of petroleum and other explosive materials	<ul style="list-style-type: none"> • Provide security under the Explosive and Petroleum Act 	<ul style="list-style-type: none"> • Department of Explosives

Medium Term Strategic Objectives	Key Activities	Implementing Departments/Agencies
among the consumers	and issue and or renew no objection certificates and licenses	
7. Ensure the supply of quality fuel oil in line with national demand	<ul style="list-style-type: none"> • Increase the capacity for the refining of crude petroleum • Enhance storage capacity • Ensure financial solvency in importing and marketing of fuel oil through enhancement of financial and operational efficiency 	<ul style="list-style-type: none"> • BPC
8. Production of mineral resources other than oil and gas	<ul style="list-style-type: none"> • Exploration, development, production and marketing of mineral resources other than gas and oil 	<ul style="list-style-type: none"> • GSB • Bureau of Mineral Resources Development (BMD)
9. Development of the skills of the human resources involved in the energy sector	<ul style="list-style-type: none"> • Provide training and higher studies opportunities at home and abroad • Organise workshops and seminars • Conduct research activities 	<ul style="list-style-type: none"> • Energy and Mineral Resources Division • Petrobangla • GSB • Bangladesh Petroleum Institute (BPI) • BPC • BMD • Department of Explosive • Hydrocarbon Unit

3. Poverty and Gender Reporting

3.1 Impact of Strategic Objectives on Poverty Reduction and Women's Advancement

3.1.1 Increase the reserve of useable energy resources to ensure energy security

Impact on Poverty Reduction: No direct impact. But, if the reserve of energy increases through oil and gas exploration; it then will lead to an increase in power generation, industrialisation and the expansion of small and cottage industries nation wide. As a result the income of the poor will increase.

Impact on Women's Advancement: No direct impact. But, if improved energy facilities can be provided to the people of the country through increases in oil and gas reserve, then women, as half of the total population, will also benefit.

3.1.2 Capacity Building in the exploration, development and production of oil and gas

Impact on Poverty Reduction: No direct impact.

Impact on Women's Advancement: No direct impact.

3.1.3 Gradual expansion of the gas network in the Western and South-Western region of the country to allow for balanced economic development

Impact on Poverty Reduction: It can help in reducing poverty indirectly through the employment of the poor during installation of gas pipe lines and distribution of gas.

Impact on Women's Advancement: Women will feel a benefit in easier household activities through expanding the availability of the gas network.

3.1.4 Formulate laws and regulations relating to energy and mineral resources to enhance accountability in the energy sector and reduce system loss

Impact on Poverty Reduction: No direct impact.

Impact on Women's Advancement: No direct impact.

3.1.5 Increase the use of gas fuel in vehicles to conserve the environment

Impact on Poverty Reduction: No direct impact. But, poor people employed in areas related to the use of gas in vehicles, CNG conversion factories, refueling stations and commercial production of LPG will benefit. Indirectly this will help in the reduction of poverty through employment generation in these fields.

Impact on Women's Advancement: The daily working hours of women will be reduced through use of improved technology, e.g. gas, LPG for cooking. As a result they will be able to involve themselves in other activities.

3.1.6 Ensure safe supply and use of petroleum and other explosive materials among the consumers

Impact on Poverty Reduction: No direct impact. But, fuel oil is used in irrigation and there is participation of poor people in oil marketing. Oil marketing companies namely: Padma, Meghna and Jamuna collectively sell 38.00 lakh MT of petroleum products per annum. Poor people are involved with these activities.

Impact on Women's Advancement: There is direct and indirect involvement of women in transport, agriculture and irrigation systems of the country.

3.1.7 Ensure the supply of quality fuel oil in line with national demand

Impact on Poverty Reduction: No direct impact.

Impact on Women's Advancement: No direct impact.

3.1.8 Production of mineral resources other than oil and gas

Impact on Poverty Reduction: No direct impact. There is vast reserve of mineral resources in different areas of the country. Huge numbers of employment opportunities will be created, if necessary projects are taken to tap into these resources, especially through the production of coal. This will contribute to poverty reduction.

Impact on Women's Advancement: No direct impact.

3.1.9 Development of skills of the human resources involved in the energy sector

Impact on Poverty Reduction: No direct impact.

Impact on Women's Advancement: No direct impact. But, the female officers and staffs working in the energy sector will get opportunities to participate in different training, seminars, and workshops. This will help to enhance their skills and will have indirect impact on women development.

3.2 Allocation for Poverty Reduction and Women's Advancement

(Taka in Thousand)

Particulars	Budget 2010-11	Projection 2011-12	Projection 2012-13
Poverty Reduction	199,48,87	123,90,25	140,14,38
Gender	76,26,19	40,69,85	45,90,59

4. Priority Spending Areas/Programmes

Priority Spending Areas/Programmes	Related Strategic Objectives
1. Gas exploration and extraction: Strengthening of gas exploration is inevitable to meet the increasing national demand for gas. The energy security of the country will be ensured if new gas fields can be discovered through exploration activities. So, this sector has been given highest priority.	<ul style="list-style-type: none"> Increase the reserve of useable energy resources to ensure energy security
2. Development of the Coal sector: The national gas reserve is diminishing gradually. The coal sector has therefore been given second highest priority as an alternative energy source. The development of the coal sector can help to ensure national energy security.	<ul style="list-style-type: none"> Production of mineral resources other than oil and gas
3. Ensuring uninterrupted supply of fuel oil: Uninterrupted supply of fuel oil is a must for development of agriculture, communication, and the industry and power sector. For this reason ensuring continuous supply of oil has been given 3 rd highest priority.	<ul style="list-style-type: none"> Ensure the safe supply and use of petroleum and other explosive materials among the consumers
4. Expansion of gas network: If maximum gas supply is ensured through expansion of the gas network, then small and large industries will be established in remote areas of the country. This will contribute to the economic development of the country. So, this sector has been given 4 th highest priority.	<ul style="list-style-type: none"> Gradual expansion of the gas network in the Western and South-Western region of the country to encourage economic activities
5. Reduce systems loss, enhance operational skill and strengthen of realisation of arrears bill: Government Subsidy to this sector can be reduced significantly if revenue collection can be increased through reducing systems loss, enhancing the operational skills in marketing of oil and strengthen the realisation of arrears revenue. This is why this sector	<ul style="list-style-type: none"> Reduce systems loss and increase accountability to ensure safe supply of gas for the consumers

Priority Spending Areas/Programmes	Related Strategic Objectives
has been given 5 th priority.	
6. Human resource development: The energy sector is technical in nature. To build this sector as a technology based modern sector and to ensure that officers and staffs related to this sector are skilled and more motivated to work hard, research and training should be provided on a priority basis. For this reason this sector has been considered as the 6 th priority sector.	<ul style="list-style-type: none"> Development of the skills of the human resources involved in the energy sector

Key Performance Indicators (KPIs)

Indicators	Related Strategic Objectives	Unit	Target 2008-09	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
							2010-11	2011-12	2012-13
1. Exploration/ discovery of new gas/ coal field	1,8	Number	0	0	2(gas)	0	1 (gas)	2 (gas)	1 (gas)
2. Survey, development and drilling of production gas well	1	Number	1	0	3 (3-D)	1 (3-D)	2 (3-D) drilling of one well	2 (3-D) drilling of two wells	1 (3-D) drilling of two wells
3. Gas production	1	BCF	646	654	803	800	914	1,000	1,100
4. Coal extraction	8	M. M.T.	1.00	0.86	1.00	1.00	1.00	1.00	1.00
5. Installation of high pressure gas transmission pipe line	3	KM	12	0	88	12	618	100	61
6. Geological survey/ exploration/ mapping	1	Number	24	23	15	22	26	23	21
7. Demand for fuel oil	7	Lakh MT	39.00	33.88	41.46	40.98	44.22	46.23	48.75
8. Conversion of diesel/ octane driven vehicles to gas driven vehicles	5	Number	22000	24493	21500	22000	21000	20500	15000

5. Recent Achievements, Key Activities and Outputs of the Departments and Agencies under the Ministry

5.1 Petrobangla

5.1.1 Recent Achievements: Cairn Energy and Tullow Oil of the United Kingdom, Chevron of the USA and Total Oil Company of France are currently working on exploration and development of gas and oil in 10 blocks under a production sharing contract. Alongside these international companies, Bangladesh Petroleum Exploration & Production Company Limited (BAPEX), a company under Petrobangla, has been conducting exploration activities at block 8 and 11. At present 1,985 million cubic feet of gas and 6,850 barrels of condensate are produced daily in the country from 17 gas fields through 79 wells. At present the number of CNG run vehicles in the country is 1,63,278. In addition, the present production of coal through development of underground mines continues and 23 lakh MT of coal was extracted, which is mainly used for the production of electricity. Extraction of hard rock or granite from mines continues and to date around 11 lakh MT were extracted.

5.1.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Exploration, development and extraction of energy sources on shore and coastal areas of the country	<ul style="list-style-type: none"> • Drilling of 8 exploration wells 	1
2. Attract local and foreign, public and private investment in refining and transporting fuel oil	<ul style="list-style-type: none"> • Expedite discovery and development of oil and gas fields 	1
3. Search for alternative energy sources	<ul style="list-style-type: none"> • Reduce dependency on gas as a primary fuel for power generation 	1
4. Capacity enhancement of BAPEX in drilling, assessment and development of gas wells	<ul style="list-style-type: none"> • Increase domestic capacity in the area of gas and oil exploration through procurement of 2 rigs and seismic equipments 	2
5. Involve private and foreign companies	<ul style="list-style-type: none"> • Speedy and efficient exploration, development of oil and gas 	2
6. Construction and expansion of a gas transmission line in the Western and South-Western region of the country	<ul style="list-style-type: none"> • Construction and expansion of 416 KM of pipe line at the Western and South-Western part of the country 	3
7. Installation of compressor stations for maintaining gas transmission and pressure	<ul style="list-style-type: none"> • Installation of three compressor stations 	3
8. Rational expansion of the CNG sector and increase supply of CNG and LPG	<ul style="list-style-type: none"> • Converting 63,000 vehicles to CNG run vehicles and making CNG easily available across the majority of the country 	5
9. Provide training and higher studies opportunities at home and abroad	<ul style="list-style-type: none"> • Provide training at home and abroad to 316 officers and staffs 	9
10. Organise workshops and seminars	<ul style="list-style-type: none"> • Inform latest steps taken in the energy sector all around the world through 47 workshops and/or seminars 	9
11. Conduct research activities	<ul style="list-style-type: none"> • 17 research work 	9

5.1.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Annual production of gas	BSF	654	803	803	914	1,000	1,100
2. Installation of high	KM	0	88	88	100	100	60

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
pressure gas transmission pipe line							
3. Gas exploration activities	No. of well	0	2	0	2	2	1

5.1.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	0	0	0	0	0
Development	654,38,00	1070,23,00	817,14,00	1205,08,17	1403,59,99
Total	654,38,00	1070,23,00	817,14,00	1205,08,17	1403,59,99

5.1.5 List of Projects, Programmes and Operational units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit	
Petrobangla	1-11
Approved Projects	
1. Evaluation and Development of Shabazpur Gas Field	2
2. Dhaka Clean Fuel Project (RPGCL part)	9
3. Operation Capability Strengthening Project	5
4. Mobarokpur Oil/Gas Well Drilling Project	1
5. Establishment of Muchai and Ashuganj Compressor Station	8
6. Establishment of Gas Circulation Pipe Line in Monohordi-Dhunua, Alenga and the East End of Jamuna Bridge and Compressor Station in Ashuganj and Elenga	8
7. Appraisal of Gas Field (3-D Seismic) (Titas Bakhrabad, Sylhet Koylastila and Rashidpur)	1
8. Western End of Jamuna Bridge-Nalka, Hatikumrul-Ishardi-Bheramara Gas Transmission Pipe Line.	7
9. Bonpara – Rajshahi Gas Transmission Line Project	7
10. Gas Distribution Net-work in Rajshahi City and its vicinity	7
11. Systems Loss Reduce of Titas Gas Transmission and Distribution Company (TGTDCCL)	2
12. Up Gradation of Data Center of BAPEX	5
13. Supply of Gas at Chandpur 150 MW Thermal Power Station	7
14. Bheramara Khulna Gas Transmission Pipe Line Project	7
15. Drilling of Kapasia Oil and Gas Exploration Well	1
16. Bakhrabad Shidhirganj Gas Transmission Pipe Line	7
17. Gas Field Development Project at Semutang	2

Operational Unit/Project/Programme	Related Key Activity
18. Drilling of Shundulpur Oil and Gas Exploration Well	1
19. Exploration and Production Capacity Building	4
20. Drilling of Shrikail Oil and Gas Exploration Well	1
21. Nabiganj Town Gas Supply Project	7
22. Controlling Gas Emission and Evaluation & Development of Titas Gas Fields	1
23. South-Western Region Gas Distribution Project	6
24. Gas Supply Efficiency Improvement of TGTDCCL	6
25. Gas Transmission Capacity Expansion (Ashuganj to Bakhrabad)	6
Unapproved Projects:	
1. Increase Gas Production under Fast Track Programme	1
2. 2 D Seismic Survey	4
3. Sylhet Gas Transmission Network up Gradation Project	6
4. Sylhet Gas Distribution Project	6
5. Procurement of gas process plant for Shahbazpur filed	4
6. Begumganj Gas Filed Development Project	4
7. Development of BAPEX Gas Fields (Salda# 3,4 and Fenchuganj# 4,5	4
8. Resettlement of the Villagers, Affected by Barapukuria Coal Mine to a Proposed Mining City	9
Self Financing Approved Projects	
1. Reservoir Management Project (Part -2)	9
2. Installation of 2 nd MSTE Plant at Koilastila (Revised)	1
3. Installation of a Daily 3X1250 Barrels Capacity Condensate Fractionation at Rashidpur Gas Field	8
4. Drilling of New Well at Habiganj- Narshandi Gas Field (completed)	2,7
5. Re-drilling of Meghna -1 Well (Revised)	1
6. Well Work Over at Titas Gas Field	1
7. Re-development of Bakhrabad Gas Field (1 st Phase)	1
8. Drilling of New Well including Process Plant (well nos. 17 and 18)	1
9. Construction of BAPEX Bhaban Project	9
10. Second Work Over of the Well no. 7 of Sylhet Gas Field (01/01/09-30/06/10)	1
11. Re-drilling of Habiganj-11 well (01/10/09-31/12/10)	1
Proposed Projects (Self Finance)	
1. Construction of 8 KM long 24 Inches Diameter Pipeline up to Titas (location – 7) AB Gas Transmission Pipeline (01/01/04-31/12/09)	6
2. Pipeline networking balance (01/01/2010-30/06/2011)	6
3. Construction of 20"X1000PSIGX25 KM Parallel/Loop Line from Monohordi Valve Station to Nashindi-12 Valve Station (July 09 -June 11)	6

5.2 Bangladesh Petroleum Corporation (BPC)

5.2.1 Recent Achievements: BPC has imported a total of 31,11,999 MT of crude and 72,81,223 MT of refined fuel oil in the last three years. In addition, BPC has exported 3,59,469 MT of naphtha over the same time period.

5.2.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Attract local and foreign, public and private investment in refining and transporting of fuel oil	<ul style="list-style-type: none"> Exploration, development and supply of gas, oil, coal and other mineral resources will be expedited through investment by different foreign and domestic institutions 	1
2. Exploring alternate fuel sources	<ul style="list-style-type: none"> Reduction of foreign exchange spending 	1
3. Rational expansion of the CNG sector and increase the supply of CNG and LPG	<ul style="list-style-type: none"> Supply of environmentally friendly fuel in 65% areas of the country 	
4. Increase the capacity for the refining of crude petroleum	<ul style="list-style-type: none"> Supply of 70% of fuel oil at a fair price 	7
5. Enhance storage capacity	<ul style="list-style-type: none"> Increase storage capacity by an additional 1 lakh MT 	7
6. Ensure financial solvency in importing and marketing of fuel oil through enhancement of financial and operational efficiency	<ul style="list-style-type: none"> Transportation loss will be reduced to 0.095% from the existing level of 0.11% 	7
7. Provide training and higher study opportunities at home and abroad	<ul style="list-style-type: none"> Provide training to 20 officers and staff, arrange 3 workshops and seminars and conduct 2 research works 	9
8. Organization of workshop/seminar	<ul style="list-style-type: none"> Organization of 3 workshops/seminars 	9
9. Conducting research activities	<ul style="list-style-type: none"> Conducting 2 research activities 	9

5.2.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Import of crude oil	Lac MT	8.61	13.00	12.50	13.00	11.00	13.00
2. Import /Export of refined oil	Lac MT	25.13	28.35	28.00	28.00	29.00	29.00
3. Storage capacity	Lac MT	8.94	8.94	9.94	10.13	10.50	11.00

5.2.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	0	0	0	0	0
Development	0	0	14,74,00	0	0
Total	0	0	14,74,00	0	0

5.2.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Approved Projects	
1. Construction of Jamuna Office Bhaban, Karwan Bazar, Dhaka	1,2,4
2. Installation of Radar Type Auto Tank Gauging System at ERL	2,3,4
3. Reconstruction of White Oil Import Tanker Receiving Pipe Line From DOJ no. 7 to LJ no. 4 at Chittagong	2,3
4. Construction of " Mongla Oil Installation" Bhagerhat, Khulna	2,3,4
5. BMRE of ERL (ADB/IDB financed)	1,2,4
Unapproved Projects	
1. Construction of Deep Sea Unloading Facilities of Crude Oil and Refined Petroleum Products, Chittagong	1,2,3,4
2. Construction of BPC Office Building at Chittagong	4
3. Construction of OMS Storage Tank (17500 cft floating roof) at ERL	2,3,4
4. Construction of White Oil Import Tanker Receiving Pipe Line From DOJ no. 7 to LJ no. 4 at Chittagong	2,3,4
5. Installation of Radar Type Auto Tank Gauging System at ERL and Oil Marketing Company	2,3,4
Probable Projects	
1. Construction of White Oil Pipe Line from Chittagong to Munshiganj	7

5.3 Geological Survey of Bangladesh (GSB)

5.3.1 Recent Achievements: Recently GSB has successfully implemented four development and two technical projects and one programme. Under the revenue programme three wells were drilled at Dighipara Coal Field and the amount, spread and quality of coal were determined. A three dimensional geological modeling and mapping of Dhaka city was partially completed. Procurement of geological instruments including one rig, exploration of mineral resources at the coastal areas, identification of disaster prone areas and High Resolution Modeling of Dhaka city are going on. Also, drilling of one well and 28 programmes on geological mapping, economic geology, geo-chemistry, geo-engineering, environment and disaster were implemented. Mapping of 70017 square KM of the country and drilling of 197 wells were completed. Through these activities, 2725 million MT reserve of high quality

coal in 4 coal mines were discovered. Three dimensional database containing information on the geology, geo-engineering, geo-technology and environment was prepared for the town planners, architects and the policymakers. Besides, under the project titled “Exploration of mineral resources in coastal areas and identifying the disaster prone areas of Bangladesh” mapping of greater Faridpur, Barisal and Noakhali and 144 geological vertical intersection by 90 meters deep drilling and 82 geological vertical intersection by 5 meter deep augur drilling were completed, and 1757 samples were collected.

5.3.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Conduct geological surveys	<ul style="list-style-type: none"> Mapping of the geological environment and rocks through the collection of information and data from the earth's surface and from inside of the earth 	1
2. Exploration, development and production of energy sources on shore and coastal areas of the country	<ul style="list-style-type: none"> It is possible to achieve economic growth and socio-economic development 	1
3. Exploration, development, production and marketing of mineral resources other than gas and oil	<ul style="list-style-type: none"> 3 important mineral resources exploration activities will be implemented in different areas of the country 	8
4. Provide training and higher study opportunities at home and abroad	<ul style="list-style-type: none"> Impart training to 75 officers 	9
5. Organise workshops and seminars	<ul style="list-style-type: none"> Arrange 20 workshops and seminars 	9
6. Conduct research activities	<ul style="list-style-type: none"> 45 research 	9

5.3.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Geological mapping	Number	21	20	17	22	20	18
2. Exploration of mineral resources	Number	1		-	1	1	1
3. Geo-engineering mapping	Number	-	1	1	1	1	1
4. Fighting natural disasters	Number	1	1	1	2	1	1
5. Preparation of reports	Number	40	22	19	26	23	21

5.3.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	10,33,51	11,17,25	13,01,57	14,98,55	15,66,97
Development	10,11,00	10,15,00	22,71,00	15,06,81	0
Total	20,44,51	21,32,25	35,72,57	30,05,36	15,66,97

5.3.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programmes	Related Key Activity
Operational Unit	
Geological Survey of Bangladesh	1-6
Approved Projects	
1. Exploration of Mineral Resources at Coastal and Offshore Areas of Bangladesh and Identification of Disaster Prone Areas	1,2,3,5,6,7
2. High resolution modeling of North-Eastern part of Greater Dhaka city, Bangladesh	1,5,6,7
3. Enhance institutional support and capacity building for mitigation of geo-hazards in Bangladesh	1,6,7
1. Strengthening the research and exploring capabilities of the Geological Survey of Bangladesh	2,3,5,6,7
Unapproved Projects	
1. Geo-scientific activities for development of mineral resources- 2 nd phase (Development programme of the revenue budget)	1,2,3,4,5,7
2. Geological mapping of the Chalanbil area to reveal the evidences of quaternary era and climate change	1,2,3,5,6,7
3. Establishment of Advanced Geoscience Research Centre at Mirpur	5,6,7
4. Aquifer mapping for remedial of arsenic contamination in the ground water of Bangladesh	1,2,3,5,6,7
Probable Projects	
1. Establishment of regional office of the Geological Survey of Bangladesh in Chittagong	3,5,6,7

5.4 Department of Explosives

5.4.1 Recent Achievements: The Department of Explosives has issued 4,027 licenses, examined and issued gas free certificates for 41,518 tanks, issued 3,024 no objection certificates for the import of inflammable liquid, and issued permission for transportation of gas in 447 cases, and has provided expert opinion in 486 court cases in the last three years.

5.4.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Rational expansion of the CNG sector and the increase supply of CNG and LPG	<ul style="list-style-type: none"> Issuing licenses for 389 CNG stations Allow import of 2.89,866 CNG and LPG cylinders 	5
2. Provide security under the Explosive and Petroleum Act and issue and or renew no objection certificates and licenses	<ul style="list-style-type: none"> Issuing 389 licenses Raise 3,024 objections 	6
3. Organize workshops and seminars	<ul style="list-style-type: none"> Organization of 5 workshops/seminars 	9
4. Conducting research activities	<ul style="list-style-type: none"> Provide expert opinion after examination of 486 explosive objects 	9

5.4.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. License issued	Number	1,375	1,450	1,450	1,500	1,550	1,600
2. Gas free certificates issued	Number	14,500	14,500	14,500	15,000	15,500	16,000
3. Clearance for imports issued	Number	1,250	1,300	1,300	1,350	1,375	1,400

5.4.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	1,09,06	1,25,55	1,17,50	1,50,04	1,55,21
Development	0	0	0	0	0
Total	1,09,06	1,25,55	1,17,50	1,50,04	1,55,21

5.4.5 List of Projects, Programmes and Operational units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit:	
Department of Explosive	1-3

5.5 Bureau of Mineral Resources Development (BMD)

5.5.1 Recent Achievements: Two licenses related to coal extraction, renewal of a lease for one mine, and two licenses to allow exploration of mineral sand were issued in the last three years. In addition, lease price/royalty were collected from earlier leases related to quarries of general rock, construction sand and silica sand.

5.5.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Exploration, development, extraction and marketing of mineral resources other than gas and oil	<ul style="list-style-type: none"> Grant and/or renew 24 white clay lease and issue 5 licenses relating to the exploration of mineral sands Grant leases to 15 normal rock quarries Grant lease to 35 silica sand quarries 	8
2. Provide training and higher study opportunities at home and abroad	<ul style="list-style-type: none"> Training and higher study abroad for 2 officers 	9

5.5.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Leasing of mines and quarries	Number	2	10	2	13	16	22
2. Exploration license issued	Number	0	3	1	2	2	3
3. Development of coal mine	Number	0	0	1	1	1	1

5.5.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	15,75	20,37	1,56,79	1,58,52	1,63,76
Development	0	0	0	0	0
Total	15,75	20,37	1,56,79	1,58,52	1,63,76

5.6 Hydrocarbon Unit

5.6.1 Recent Achievements: Already international consultancy firm was appointed and this firm has started updating the reports titled "Bangladesh Petroleum Potential and Resource Assessment 2001" and "Bangladesh Gas Reserve Estimation 2003" published in 2002 and 2004 respectively. Khalaspir Coal Mine Development proposal of Hosaf International Limited was reviewed by international consultancy firm and the firm has already submitted draft final

report. Besides, to assess the potential of Straddle Plant, international consultancy firm was appointed. The Hydrocarbon Unit is also preserving data on gas reserve and production in its "Mini Data Bank" along with publishing a monthly report titled "Gas Reserve and Production".

5.6.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Search for alternative energy sources	<ul style="list-style-type: none"> To be sure about the reserves of alternative energy including coal and prepare strategy accordingly 	1
2. Provide training and higher study opportunities at home and abroad	<ul style="list-style-type: none"> Skilled workforce will help develop the energy sector of the country 	9

5.6.3 Output Indicators and Targets

Output Indicators	Unit of Measurement	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Study reports	Number	12	12	14	16	14	10
2. Training	Person	0	0	10	10	20	10

5.6.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	0	0	0	0	0
Development	13,90,00	8,00,00	16,20,00	15,51,00	0
Total	13,90,00	8,00,00	16,20,00	15,51,00	0

5.6.5 List of Projects, Programmes and Operational units

Operational Unit/Project/Programme	Related Key Activity
Approved Project:	
1. Strengthening of the Hydrocarbon Unit (Phase-2)	1-2

5.7 Bangladesh Petroleum Institute (BPI)

5.7.1 Recent Achievements: Training including foundation training has been imparted to 670 trainees under 34 training courses in the last three years. In addition, as directed by the Energy and Mineral Resources Division, BPI has prepared a database of the materials stored in the storage facilities of Petrobangla, and other subsidiary companies under Petrobangla, using a Unified Material Code (UMC) and a number of different companies have been connected to the database through networking.

5.7.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Provide training and higher study opportunities at home and abroad	<ul style="list-style-type: none"> Provide opportunities to 435 officers/staffs for training and higher studies at home and abroad 	9
2. Arrange workshops and seminars	<ul style="list-style-type: none"> Arrange 2 workshops/ seminars 	9
3. Conduct research activities	<ul style="list-style-type: none"> Conduct 9 researches 	9

5.7.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Training	Person	05	14	14	12	15	19
2. Research Articles	Number	01	02	02	02	02	02

5.7.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
Non-development	55,00	67,42	78,00	82,50	83,75
Development	0	0	3,00,00	0	0
Total	55,00	67,42	3,78,00	82,50	83,75

5.7.5 List of Projects, Programmes and Operational units

Operational Unit/Project/Programmes	Related Key Activity
Operational Unit	
Bangladesh Petroleum Institute (BPI)	1-3