



HYDROCARBON UNIT

Energy and Mineral Resources Division

Annual Report
On
Gas Production, Distribution
and Consumption
FY 2015-2016

HYDROCARBON UNIT

Energy and Mineral Resources Division
Ministry of Power, Energy and Mineral Resources

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P r e f a c e

Annual Report entitled Gas Production and Consumption was prepared and published by Hydrocarbon Unit for the first time in October 2005. The present one is the issue of Annual Report on Gas Production and Consumption for the period of July 2015 to June 2016. In this report, gas production by State-owned Enterprise (SoE), International Oil Companies (IOC) and Joint Venture Undertakings in Bangladesh have been reflected. Daily average gas production rate and Condensate-Gas ratio have been included in the report as well. Moreover, sector-wise gas supply and consumption along with Unaccounted for Gas (UFG) have been illustrated with a monthly graphical presentation.

This report has been prepared based on the data available from the Monthly Reserve and Gas Production Report of HCU and Monthly Information System (MIS) of Petrobangla.

It is expected that the report will be helpful as reference book and elements of interest for the concerned.

The report will also be available at HCU's website: www.hcu.org.bd

Date: 16 November 2016

Md. Harun-or-Rashid Khan

Director General

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1.0 Background:

First exploration in Bangladesh is recorded at the beginning of 1908. It was BOC (Burmah Oil Col Co). BOC conducted surface geological mapping in Chittagong area. During 1910 to 1914 exploratory wells were drilled in Staked and presence gas was recorded. These wells were drilled by BOC and IPPC (Indian Petroleum Prospecting Company). Due to First World War exploration activities ceased. After the 1st World exploration activities resumed and during 1923-33 two wells were drilled by BOC in Path aria structure in Baralekha Bazar. Both the wells had oil and gas shows. After the Second World War due to political reason exploration activity remained suspended. However after end of World War II, due to political reason exploration activity remained suspended.

After Independence of India and Pakistan in 1947, exploration activities resumed in 1951. Pakistan Petroleum Limited (PPL), a subsidiary of Burmah Oil Company (BOC), started exploration in greater Sylhet area. This resulted in first discovery of gas in Sylhet (1951-55). Four years later in 1959 gas was discovered in Chattack. Pakistan Petroleum Limited (PPL) was the operator for of these two gas fields. Pakistan Shell Oil Company (PSOC), a subsidiary of Shell Oil started exploration and discovered gas in Rashidpur (1960), Titas (1962), Kailas Tila (1962) and Habiganj (1963).

Gas Production in this part of the world started in 1960-61 fiscal year when Sylhet and Chattack, both the gas fields were open for production. Production from Titas and Habiganj gas fields started in 1968. State participation in petroleum exploration started in 1960 when Oil & Gas Development Corporation was created with technical assistance from former Soviet Union. Semutang Gas Field was discovered in 1970-71.

After independence of Bangladesh, technical assistance from former USSR (former) reestablished and exploration activity picked up momentum. Begumganj, Feni, Kamta gas fields were discovered during this period. Offshore area of the country was awarded to international companies. During last decades new gas discoveries were made by both national and international companies. Updated estimate placed GIIP at 35.80 Tcf and reserve at 28.47 Tcf (Updated Report on Gas Reserve Estimation 2010, Gustavson Associates LLC, USA).

2.0 Summary:

Annual gas production report is based on gas and condensate production data received from gas production companies. Information on gas sales and purchase by the producers and distributors is collected from MIS report of Petrobangla. In 2015-16 fiscal year total production of gas logged 971.54 Bcf and daily average production was 2661.76 MMcfd. During the year well wise maximum daily gas production was 1215 MMcfd and well wise minimum gas production was 1.00 MMcfd. During the two Eid holidays gas consumption is significantly reduced. During the year some of the wells were shut down. At the same time a number of new wells were open for production rate of increase in production over the year was quite low. In 2014-15 fiscal years total gas production was 893.50 Bcf and daily average production 2447.95 MMcfd.

In 2015-16 increase of annual gas production was 78.04 Bcf and daily gas production was 213.81 MMcfd. Total producing gas field was 20. Gas production is largely depended on Bibiyana, Titas,

Jalalabad and Habiganj gas fields. This four gas fields provided 81.76 percent (2176.44 MMcfd out of total daily gas production is 2661.76 MMcfd)

During the year 93 wells in 20 gas fields were flowing. However during the year a number of wells were shut down. On the other hand new wells were added to the production stream. At the end of the year 93 wells were flowing. During this year National Companies produced 394.64 Bcf gas from 61 wells which equals to 1081.21 MMcfd. Minimum gas production was recorded from Begumganj gas field (1.0 MMcfd). Begumganj gas field was open for production in the middle of March, 2015. During the year average daily production from Srikail gas field was 36.99 MMcfd.

Chevron and Tullow Oil these two international companies remained active during the period. IOCs production logged 576.90 Bcf which equals to 1580.55 MMcfd. At the beginning of the year IOCs production was below 1312.90 MMcfd and this gradually increased with in time.

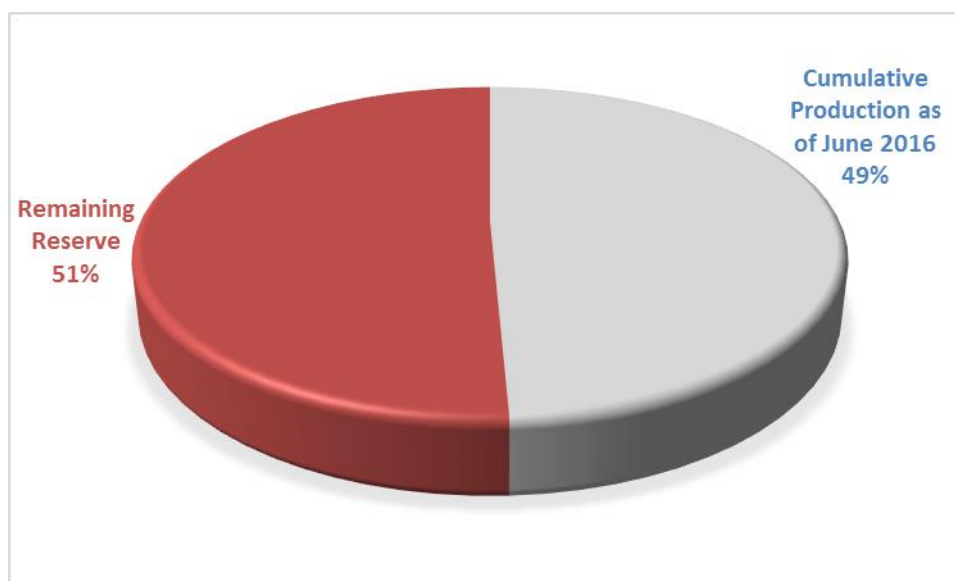
Report on annual gas production of this year 2015-16 is prepared using daily gas and condensate production data. Information on gas and condensate production was received from the gas production companies. Information on gas purchase and sales is collected from MIS report (June 2016) of Petrobangla.

In the current year four gas fields, Bibiyana, Titas, Jalalabad and Habiganj gas fields produced 794.40 Bcf gas and average gas production was 2176.44 MMcfd. Remaining 177.14 Bcf gas is produced by 16 gas fields which equals to 485.32 MMcfd.

Reserve and Production up to 2016 at a glance

Gas Initially in Place (Proven + Probable)	35,796.19 Bcf	35.80 Tcf
Recoverable (Proven + Probable)	28,467.40 Bcf	28.47 Tcf
Cumulative Production as of June 2016	14,030.32 Bcf	14.03 Tcf
Remaining Reserve	14,437.08 Bcf	14.44 Tcf

Figure 1 : Gas already Consumed & the Remainder



3.0 Gas Productions: (National Gas Producing Companies)

Three national and two international companies produced 971.54 Bcf gas and well wise average daily gas production was 2661.76 MMcfd. During this year increase in gas production was 78.04 Bcf and daily average gas production was 213.81 MMcfd.

Out of total production national companies share was 1081.21 MMcfd. Total production of national companies during the year was 394.64 Bcf. In the past year total production by national companies was 1070.96 MMcfd. 61 wells were open for production during the year.

Out of total production IOCs share was 1580.55 MMcfd. Total production of IOCs during the year was 576.90 Bcf. IOCs produced this volume of gas using 31 wells. During this year maximum gas production was recorded from Bibiyana Gas field. Table (Below) compares company wise gas production for 2015-16.

MMcfd	SGFL	BGFCL	BAPEX	Chevron	Tullow	Total
2015-16	148.76	817.26	115.19	1478.08	102.47	2661.76

During the year maximum condensate recovery was 8077 bbl/day from Bibiyana gas field. Jalalabad gas field occupied second position and daily condensate recovery was 1538 bbl/day. Condensate recovery from Kailas Tila gas field was 637 bbl/day. In addition to condensate, NGL, Kerosene, HSD, and MS are recovered. Condensate recovery arranged according to volume.

Table below shows volume of liquid products in 1000 liter from well stream.

FY	MS	HSD	NGL	Condensate	SKO
2015-16	88,740.50	55,693.55	25,764.00	6,65,278.76	16,266.67

In 2015-16 fiscal year Bangladesh Petroleum Exploration and Production Company (BAPEX) and two gas producing companies (BGFCL and SGFL) operating 16 gas fields in the country. During the year total production of national companies logged 394.64 Bcf, which equals to 1081.21 MMcfd. National companies produced through 61 wells i.e., average well wise production was 17.72 MMcfd. Well wise maximum production was 225 MMcfd (Habiganj) and minimum production was 1.00 MMcfd (Begumganj).

3.1. Bangladesh Petroleum Exploration and Production Company Ltd. (BAPEX):

BAPEX is the Exploration and Production Company of Petrobangla. During the year this company operated seven gas fields i.e. Begumganj, Shahbazpur, Salda, Fenchuganj, Semutang, Sundalpur and Srikail gas fields. Rupganj, Sundalpur and Srikail are three discoveries by BAPEX. Geologically Bangura and Srikail could be a single anticline. During the year the company produced 42.04 Bcf gas and daily average gas production rate of 115.19 MMcfd. During the year 20.96 thousand bbl condensate was recovered.

3.1.1 Begunganj Gas Field:

During the year this field gas produced 0.34 Bcf and daily average gas production rate of 0.93 MMcfd. In addition to gas, from this field during the year 45 bbl condensate was also recovered.

3.1.2 Fenchuganj Gas Field:

Fenchuganj Gas Field is the main gas producer of the company. During the year this field produced 12.40 Bcf gas and daily average gas production rate of 33.97 MMcfd. In addition to gas, from this field during the year 8405 bbl condensate was recovered.

3.1.3 Salda Nadi Gas Field:

During the year two wells were producing. During the year this field gas produced 3.10 Bcf and daily average gas production rate of 8.49 MMcfd. In addition to gas, from this field during the year 471 bbl condensate was recovered. Salda Nadi gas field is a small gas field. This gas field is producing for quite some time.

3.1.4 Shahbazpur Gas Field:

Shahbazpur gas field is located in Shahbazpur i.e. Bhola island because of this gas supply is limited within the island. During the year this field gas produced 10.50 Bcf and daily average gas production rate of 28.77 MMcfd. In addition to gas, from this field during the year 1027 bbl condensate was recovered.

3.1.5 Semutang Gas Field:

This gas field was discovered in 1970-71 Oil & Gas Development Corporation. After independence the area, including the discovered gas pool was awarded Shell Oil. Shell drilled another well. Shell left the country as the reward was not attractive for them. This field was awarded to BAPEX. This well was completed as a gas producer in December 2011. During the year this field gas produced 1.10 Bcf and daily average gas production rate of 3.02 MMcfd. In addition to gas, from this field during the year 380 bbl condensate was also recovered.

3.1.6 Sundalpur Gas Field:

This gas field was discovered by BAPEX in 2011-12. In the same year this gas field was brought into production in March 2011-12. During the year this field gas produced 1.10 Bcf and daily average gas production rate of 3.02 MMcfd. In addition to gas, from this field during the year 23 bbl condensate was also recovered.

3.1.7 Srikail Gas Field:

Srikail gas field was discovery of BAPEX. This field was brought into production in on 14 May, 2002. During the year this field gas produced 13.50 Bcf and daily average gas production rate of 36.99 MMcfd. In addition to gas, from this field during the year 10.62 thousand bbl condensate was also recovered. It may be mentioned here that geologically Srikail is part of Bangura structure. Tullow is producing from this structure. A joint study on Srikail and Bangura can be initiated for better understanding of the structure.

3.2 Bangladesh Gas Fields Company Ltd:

This is the second largest gas producer of the country. The company operates Titas, Habiganj, Bakhrabad, Narshingdi and Meghna gas fields. During the year this company gas produced 298.30 Bcf and daily average gas production rate of 817.26 MMcfd. In term of gas reserve, Titas is the largest gas field of the country. During the year 169.76 thousand bbl condensate was recovered.

3.2.1 Titas Gas Field:

Titas gas field is the largest gas field of the country and second largest gas producer. During the year this field gas produced 187.60 Bcf and daily average gas production rate 513.97 MMcfd. In addition to gas, from this field during the year 133.88 thousand bbl condensate was recovered.

3.2.2 Habiganj Gas Field:

Habiganj Gas Field is the third largest gas field of the country. During the year Habiganj field gas produced 82.50 Bcf and daily average gas production rate of 226.03 MMcfd. In addition to gas, from this field during the year 4.23 thousand bbl condensate was recovered.

3.2.3 Bakhrabad Gas Field:

During the year this field gas produced 13.90 Bcf and daily average gas production rate of 38.08 MMcfd. In addition to gas, from this field during the year 6.22 thousand bbl condensate was recovered.

3.2.4 Narshingdi:

During the year this field gas produced 10.30 Bcf and daily average gas production rate of 28.22 MMcfd. In addition to gas, from this field during the year 17.79 thousand bbl condensate was recovered.

3.2.5 Meghna Gas Field:

During the year this field gas produced 4.00 Bcf and daily average gas production rate 10.96 MMcfd. Gas production rate was quite stable. In addition to gas, from this field during the year 7.63 thousand bbl condensate was recovered.

3.3 Sylhet Gas Fields Ltd:

This company operates four gas fields i.e. Kailas tila, Rashidpur, Beani bazar and Sylhet. During the year this company gas produced 54.30 Bcf and average daily gas production rate of 148.76 MMcfd. During the year 326.18 thousand bbl condensate was recovered. Brief description of the gas fields are provided below. It may be mention here that gas production stated in this part of the world from Sylhet gas field.

3.3.1 Kailas Tila gas field:

This is the main producer of SGFL. During the year this field gas produced 26.20 Bcf and average gas production rate of 71.78 MMcfd. During the year six wells were producing. In addition to gas, liquid product is also recovered. This gas field is quite wet and maximum recovery of liquid was achieved from this gas field. In addition to gas, from this field during the year 232.52 thousand bbl condensate was recovered.

3.3.2 Rashidpur Gas Field:

During the year this field gas produced 21.40 Bcf and average gas production rate of 58.63 MMcfd. In addition to gas, from this field during the year 17.00 thousand bbl condensate was recovered.

3.3.3 Beani Bazar Gas Field:

During the year this field gas produced 3.60 Bcf and average gas production rate of 9.86 MMcfd. In addition to gas, from this field during the year 54.89 thousand liter condensate was recovered.

3.3.4 Sylhet Gas Field:

This is the oldest producing gas field of the country. Sylhet structure is known for first oil discovery of the country. During the year this field gas produced 3.10 Bcf and average gas production rate of 8.49 MMcfd. In addition to gas, from this field during the year 21.78 thousand bbl condensate was also recovered.

4.0 Gas Productions (International Companies):

Chevron and Tullow are two international oil and gas companies (IOCs) operating in the country. During the year these two companies gas produced 576.90 Bcf and average daily gas production rate of 1580.55 MMcfd. In average per well gas production of IOCs wells is much higher than that of the national companies. IOCs produce 1580.55 MMcfd using 32 wells and average per well production of IOCs well is 49.39 MMcfd. During the year 3615.08 thousand bbl condensate was recovered by the IOCs and average daily recovery of condensate was 9.90 thousand bbl per day.

4.1 Chevron Bangladesh:

This company is the largest producer of gas of the country. Chevron operates three gas fields i.e. Bibiyana, Jalalabad and Moulavi Bazar. It may be mentioned that Bibiyana is the second largest gas field of the country and it is also the largest gas producer of the country. During the year Chevron gas produced 539.50 Bcf and average daily gas production was 1478.08 MMcfd. In addition to gas, this company producer 3511.04 thousand bbl condensate was recovered.

4.1.1 Bibiyana Gas field:

During the year Bibiyana Gas field gas Produced 428.60 Bcf and average daily gas production rate of 1174.25 MMcfd. In addition to gas, from this field during the year 2948.05 thousand bbl condensate was also recovered.

4.1.2 Jalalabad Gas field:

Jalalabad is the second gas field operated by Chevron. During the year Jalalabad gas field gas produced 95.70 Bcf and average daily gas production rate of 262.19 MMcfd. In addition to gas, from this field during the year 561.38 thousand bbl condensate was also recovered.

4.1.3 Moulavi Bazar gas field:

During the year Moulavi Bazar gas field gas produced 15.20 Bcf and average daily gas production rate of 41.64 MMcfd. In addition to gas, from this field during the year 1.60 thousand bbl condensate was also recovered.

4.2 Tullow Bangladesh Limited:

4.2.1 Bangura gas field:

Tullow Oil operates Bangura gas field. During the year Bangura gas field gas produced 37.40 Bcf and average daily gas production rate of 102.47 MMcfd. In addition to gas, from this field during the year 104.04 thousand bbl condensate was also recovered.

4.3 Santos Bangladesh Limited

4.3.1 Sangu gas field:

Sangu is the lone offshore gas field operated by Santos from Australia. During the year Sangu gas field is struggling and may shut down to October 2013.

5.0 Gas Production:

During the year gas production has been recorded 971.54 Bcf and average daily gas production was 2661.76 MMcfd. Sector wise gas consumption during the year 966.81 Bcf and average daily gas supply rate of 2648.80 MMcfd is shown in Table 20 and Figure 20.

Table 1 : Company wise Gas Production in FY 2015-2016

SI No.	Name of Company	Bcf	MMcfd
1.	BAPEX	42.04	115.19
2.	BGFCL	298.30	817.26
3.	Chevron	539.50	1478.08
4.	SGFL	54.30	148.76
5.	Tullow	37.40	102.47
Total		971.54	2661.76

Source: HCU Data bank

Figure 2 : Company wise Gas Production

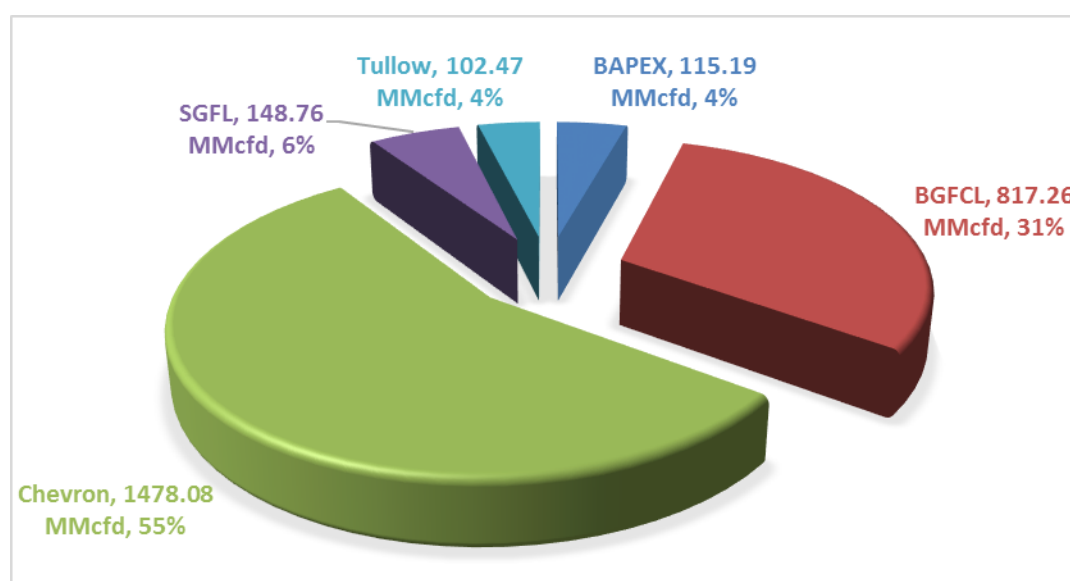


Table 2 : Field wise Gas Production in FY 2015-2016

SI No.	Name of Gas field	Bcf	MMcfd
1.	Begumganj	0.34	0.93
2.	Shahbazpur	10.50	28.77
3.	Semutang	1.10	3.02
4.	Fenchuganj	12.40	33.97
5.	Salda Nadi	3.10	8.49
6.	Srikail	13.50	36.99
7.	Sundalpur	1.10	3.02
8.	Meghna	4.00	10.96
9.	Narshingdi	10.30	28.22
10.	Habiganj Gas field	82.50	226.03
11.	Bakhrabad	13.90	38.08
12.	Titas Gas field	187.60	513.97
13.	Bibiyana Gas field	428.60	1174.25
14.	Moulavi Bazar	15.20	41.64
15.	Jalalabad Gas field	95.70	262.19
16.	Kailas Tila	26.20	71.78
17.	Sylhet	3.10	8.49
18.	Rashidpur	21.40	58.63
19.	Beani Bazar	3.60	9.86
20.	Bangura	37.40	102.47
Total		971.54	2661.76

Source: HCU Data bank

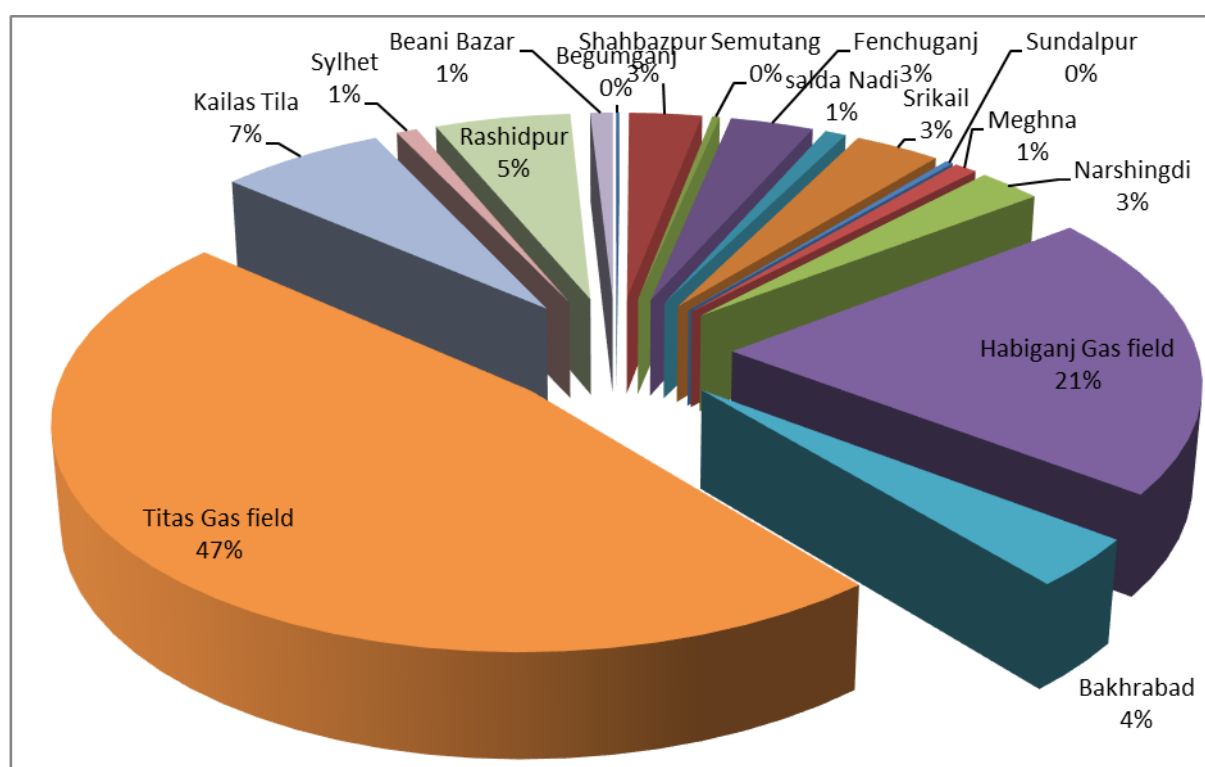
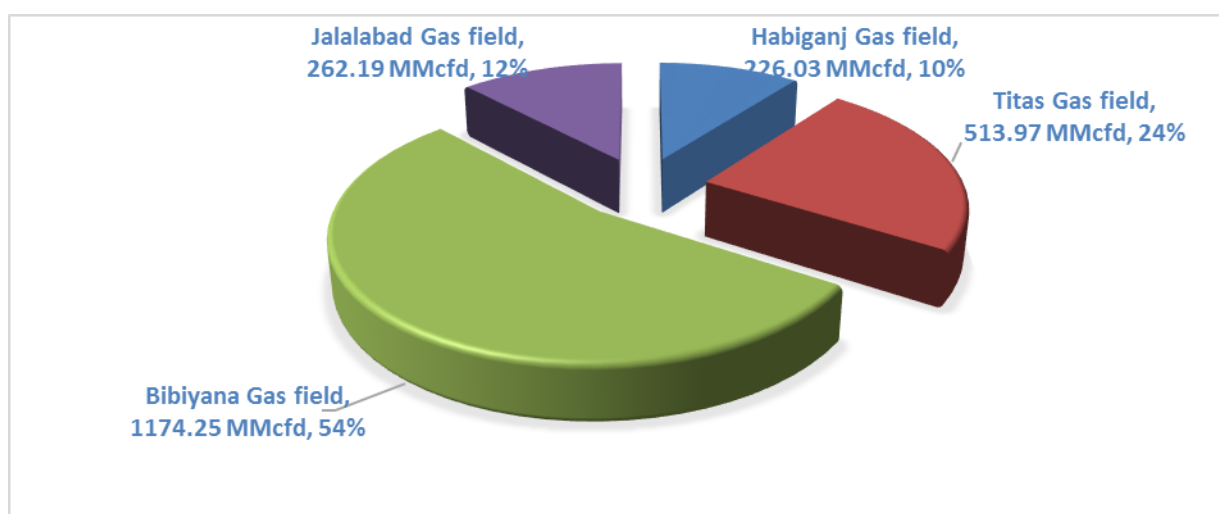
Figure 3 : Field wise Gas Productions


Table 3: Major four (4) Gas producing fields in FY 2015-2016

SI No.	Name of Gas field	Bcf	MMcfd
1.	Habiganj Gas field	82.50	226.03
2.	Titas Gas field	187.60	513.97
3.	Bibiyana Gas field	428.60	1174.25
4.	Jalalabad Gas field	95.70	262.19
Total		794.40	2176.44

Source: HCU Data bank

Figure 4 : Major four (4) Gas producing fields

Table 4 : Comparison of Annual Gas Production by National Companies in FY 2015-2016

SI No.	Name of National Company	Bcf	MMcfd
1.	BAPEX	42.04	115.19
2.	BGFCL	298.30	817.26
3.	SGFL	54.30	148.76
Total		394.64	1081.21

Source: HCU Data bank

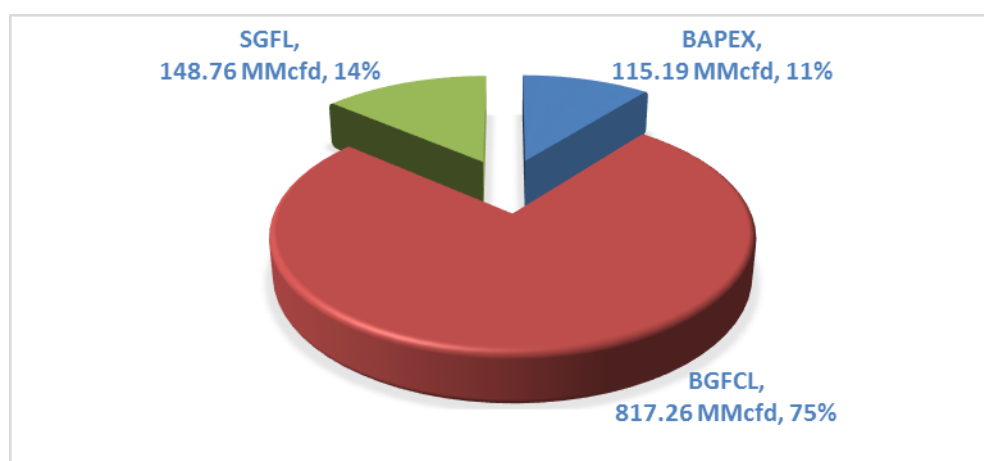
Figure 5 : Comparison of Annual Gas production by National Companies


Table 5 : Field wise Annual Gas Production of Gas Fields Under National Companies, FY 2015-16

SI No.	Name of Gas field	Bcf	MMcfd
1.	Begumganj	0.34	0.93
2.	Shahbazpur	10.50	28.77
3.	Semutang	1.10	3.02
4.	Fenchuganj	12.40	33.97
5.	Salda Nadi	3.10	8.49
6.	Srikail	13.50	36.99
7.	Sundalpur	1.10	3.02
8.	Meghna	4.00	10.96
9.	Narshingdi	10.30	28.22
10.	Habiganj Gas field	82.50	226.03
11.	Bakhrabad	13.90	38.08
12.	Titas Gas field	187.60	513.97
13.	Kailas Tila	26.20	71.78
14.	Sylhet	3.10	8.49
15.	Rashidpur	21.40	58.63
16.	Beani Bazar	3.60	9.86
Total		394.61	1081.21

Source: HCU Data bank

Figure 6 : Field wise Annual Gas production of National Companies

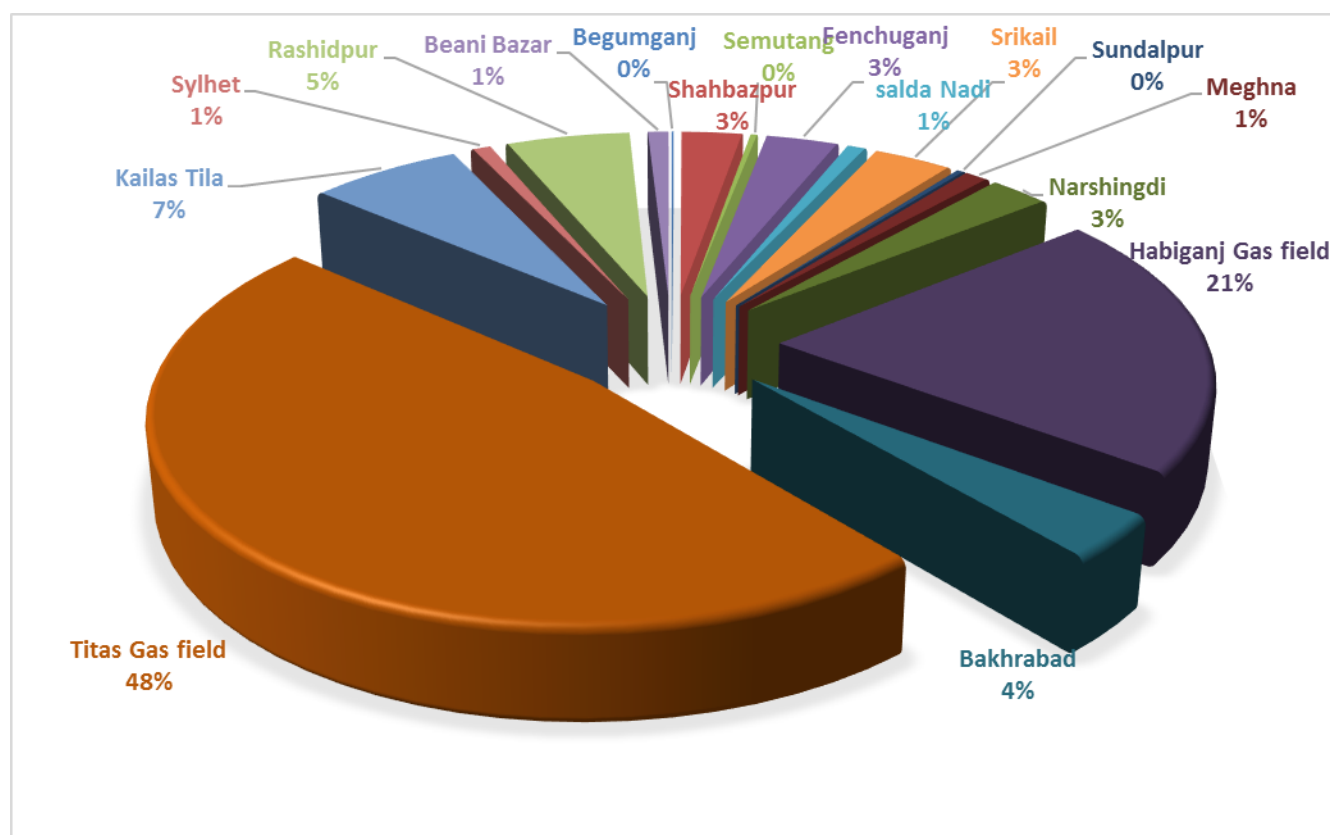


Table 6 : Field wise Gas Production in BAPEX in FY 2015-16

SI No.	Name of Gas field	Bcf	MMcfd
1.	Begumganj	0.34	0.93
2.	Shahbazpur	10.50	28.77
3.	Semutang	1.10	3.02
4.	Fenchuganj	12.40	33.97
5.	Salda Nadi	3.10	8.49
6.	Srikail	13.50	36.99
7.	Sundalpur	1.10	3.02
Total		42.04	115.19

Source: HCU Data bank

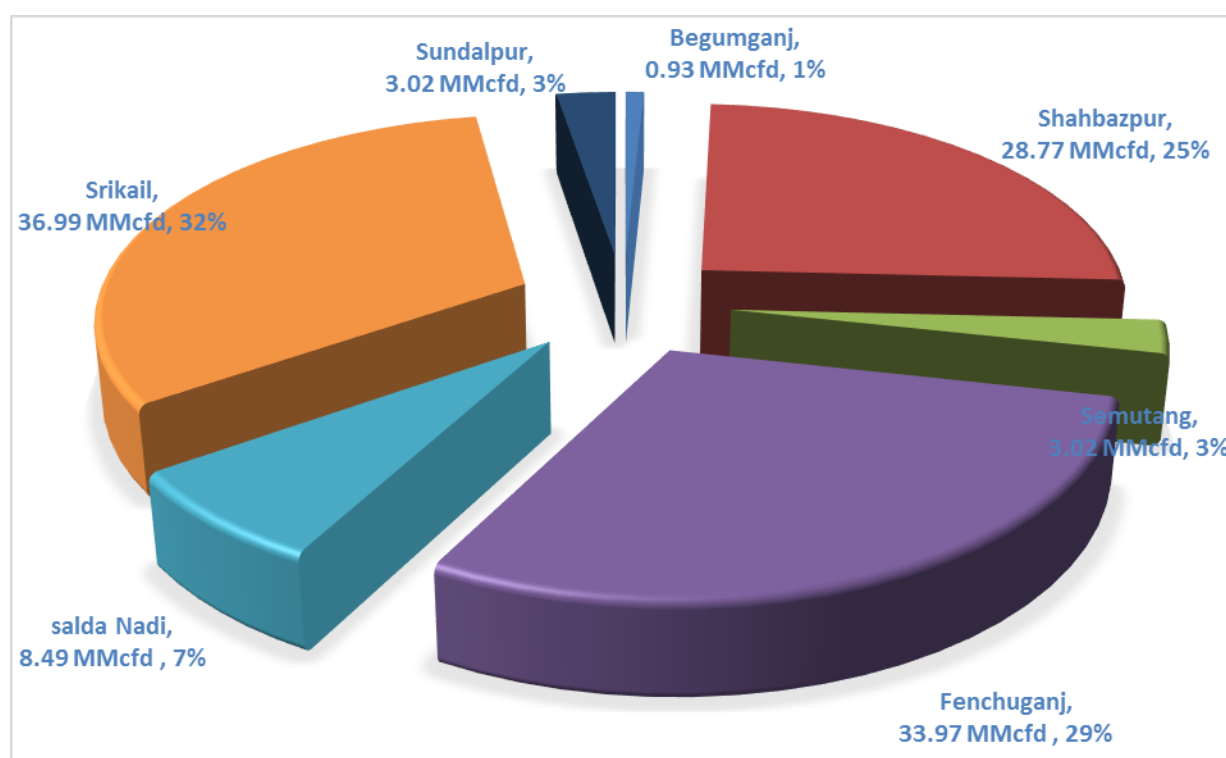
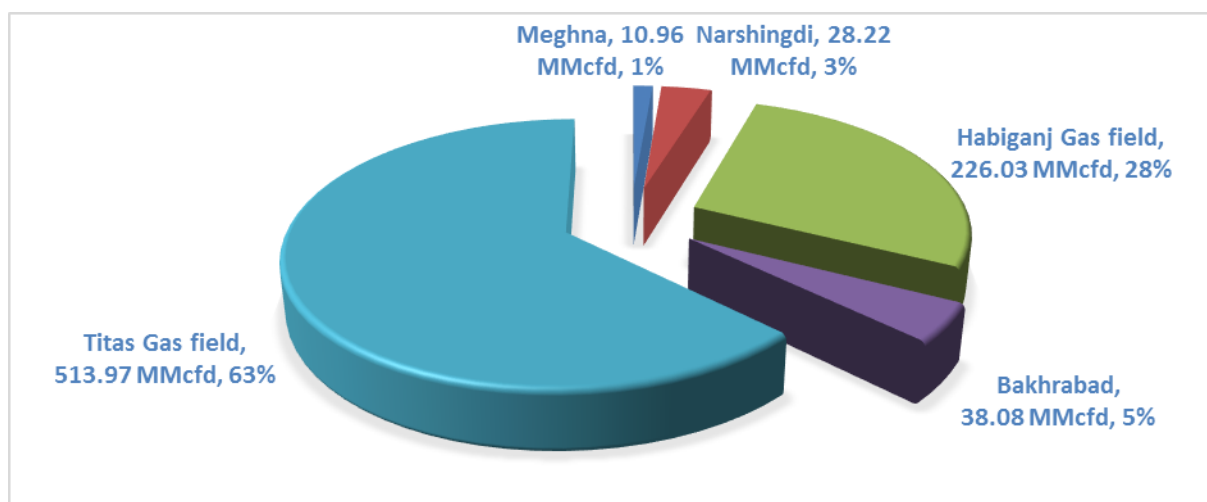
Figure 7 : Field wise Gas Production in BAPEX


Table 7 : Field wise Gas Production in BGFCL in FY 2015-16

SI No.	Name of Gas field	Bcf	MMcfd
1.	Meghna	4.00	10.96
2.	Narshingdi	10.30	28.22
3.	Habiganj Gas field	82.50	226.03
4.	Bakhrabad	13.90	38.08
5.	Titas Gas field	187.60	513.97
Total		298.30	817.26

Source: HCU Data bank

Figure 8 : Field wise Gas Production in BGFCL

Table 8 : Field wise Gas Production in SGFL in FY 2015-16

SI No.	Name of Gas field	Bcf	MMcfd
1.	Kailas Tila	26.20	71.78
2.	Sylhet	3.10	8.49
3.	Rashidpur	21.40	58.63
4.	Beani Bazar	3.60	9.86
Total		54.30	148.76

Source: HCU Data bank

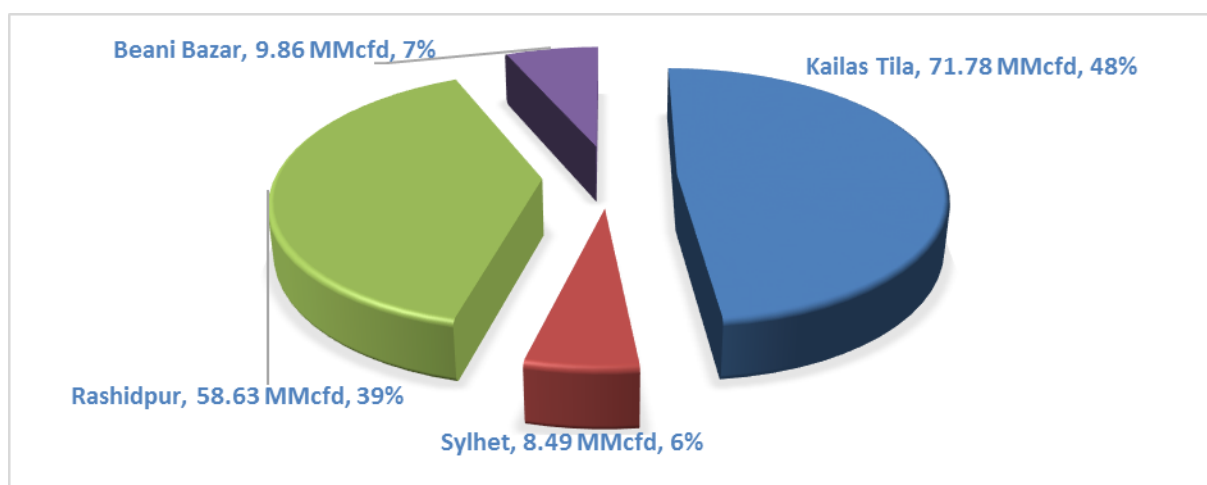
Figure 9 : Field wise Gas Production in SGFL


Table 9 : Comparison of Annual Gas Production by International Companies in FY 2015-2016

SI No.	Name of Company	Bcf	MMcfd
1.	Chevron	539.50	1478.08
2.	Tullow	37.40	102.47
Total		576.90	1580.55

Source: HCU Data bank

Figure 10 : Comparison of Annual Gas Production by International Companies

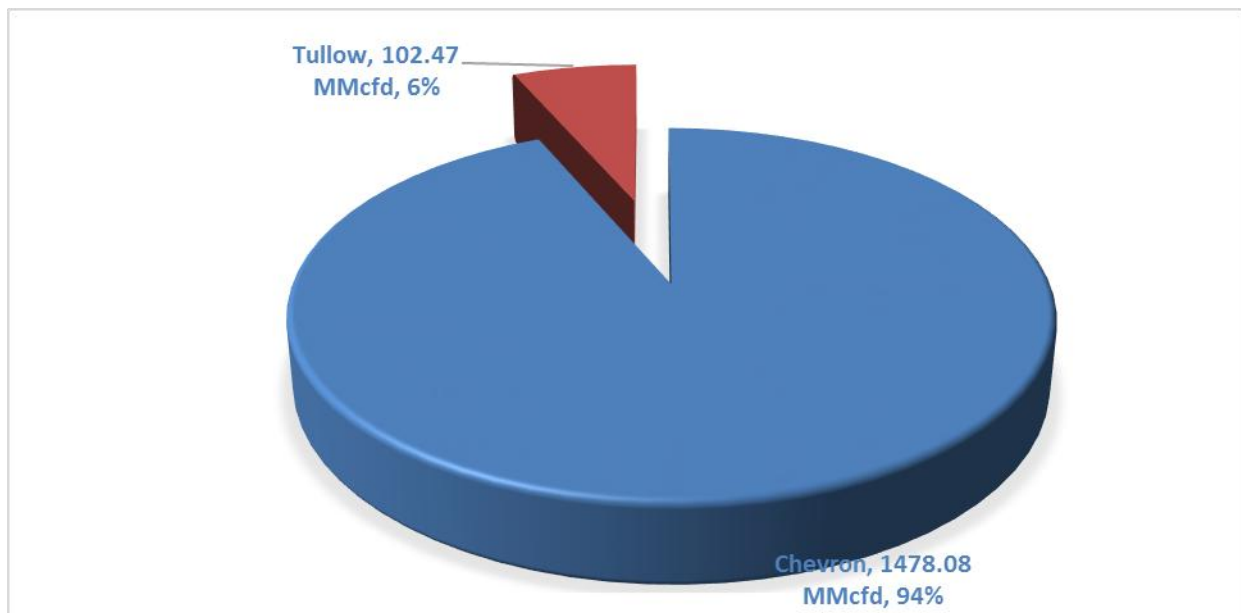


Table 10 : Field wise Gas Production by IOCs in FY 2015-16

SI No.	Name of Gas field	Bcf	MMcfd
1.	Bibiyana Gas field	428.60	1174.25
2.	Moulavi Bazar	15.20	41.64
3.	Jalalabad Gas field	95.70	262.19
4.	Bangura	37.40	102.47
Total		576.90	1580.55

Source: HCU Data bank

Figure 11 : Field wise Gas Production of IOCs

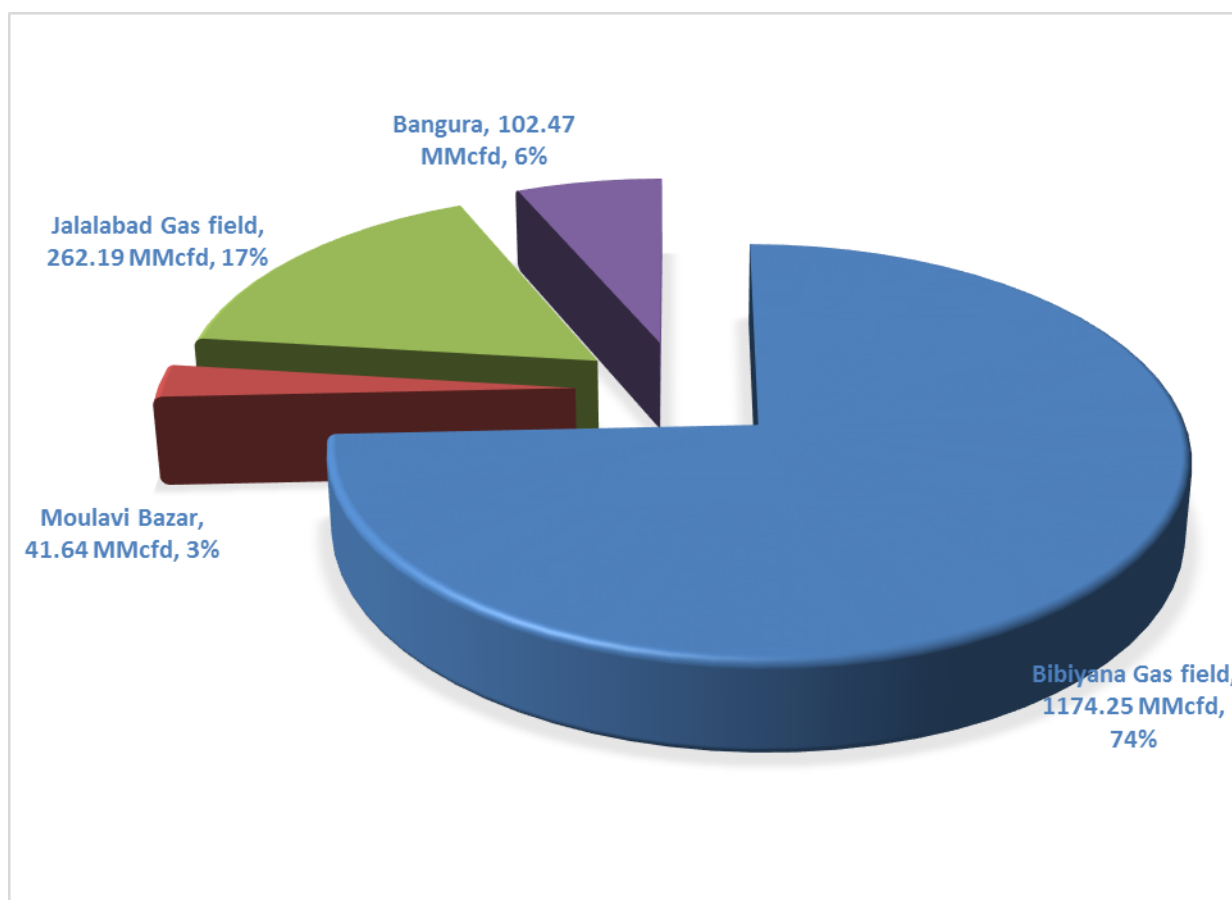


Table 11 : Field wise Gas Production by Chevron Operated Gas Fields in FY 2015-2016

SI No.	Name of Gas field	Bcf	MMcfd
1.	Bibiyana Gas field	428.60	1174.25
2.	Moulavi Bazar	15.20	41.64
3.	Jalalabad Gas field	95.70	262.19
Total		539.50	1478.08

Source: HCU Data bank

Figure 12 : Field wise Gas Production by Chevron operated Gas Fields

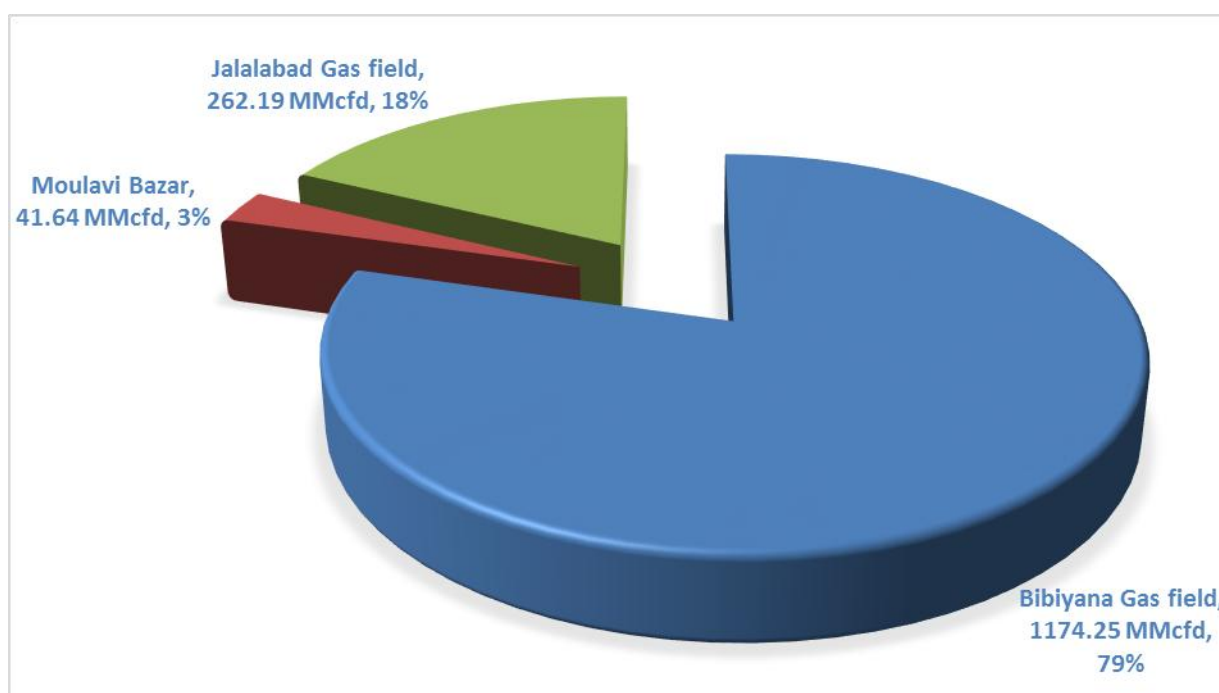


Table 12 : Field wise Condensate Recovery in FY 2015-2016

SI No.	Name of Gas field	bbl/year	bbl/month	bbl/day
1.	Begumganj	45	3.75	0.12
2.	Shahbazpur	1027	85.58	2.81
3.	Semutang	380	31.67	1.04
4.	Fenchuganj	8405	700.42	23.03
5.	Salda Nadi	471	39.25	1.29
6.	Srikail	10613	884.42	29.08
7.	Sundalpur	23	1.92	0.06
8.	Meghna	7633	636.08	20.91
9.	Narshingdi	17789	1482.42	48.74
10.	Habiganj Gas field	4236	353.00	11.61
11.	Bakhrabad	6227	518.92	17.06
12.	Titas Gas field	133879	11156.58	366.79
13.	Bibiyana Gas field	2948055	245671.25	8076.86
14.	Moulavi Bazar	1607	133.92	4.40
15.	Jalalabad Gas field	561381	46781.75	1538.03
16.	Kailas Tila	232517	19376.42	637.03
17.	Sylhet	21780	1815.00	59.67
18.	Rashidpur	16996	1416.33	46.56
19.	Beani Bazar	54885	4573.75	150.37
20.	Bangura	104041	8670.08	285.04
Total		41,31,990	3,44,332.50	11,320.52

Source: HCU Data bank

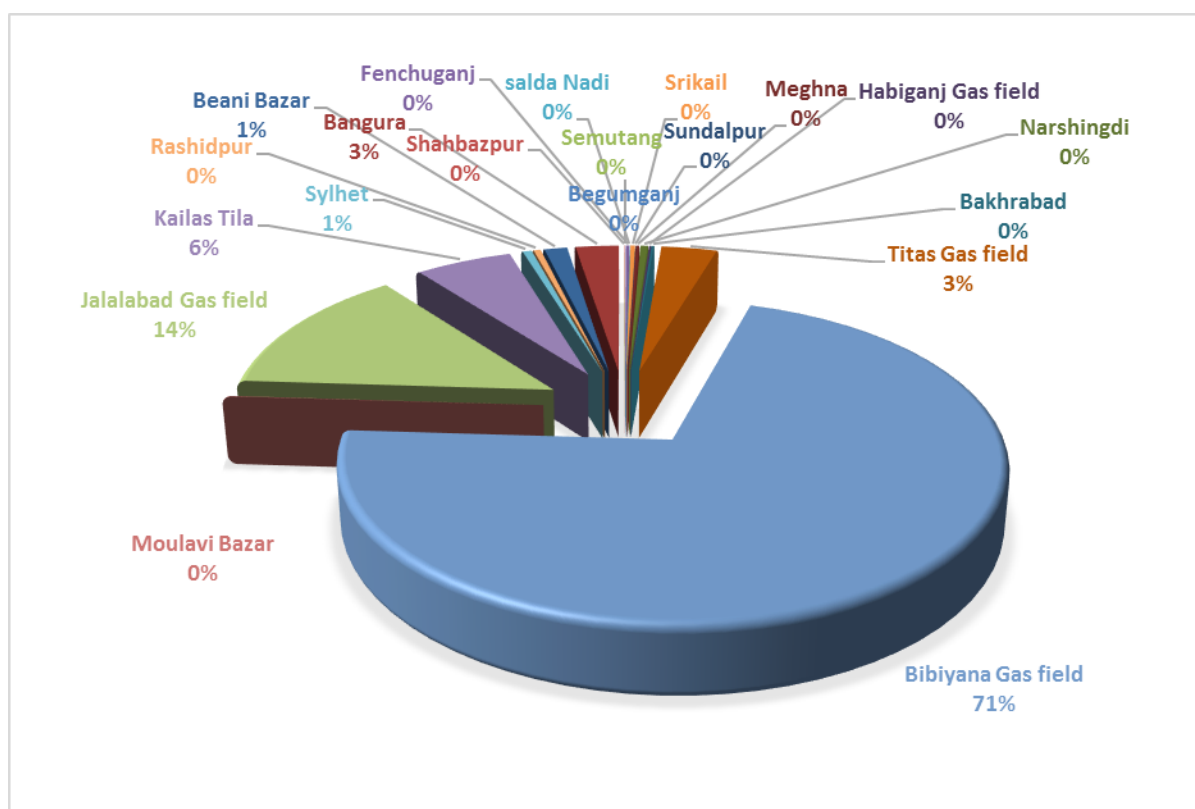
Figure 13 : Field wise Condensate Recovery in BBL/Day


Table 13 : Comparison of Condensate Production by National Companies in FY 2015-2016

SI No.	Name of National Company	BBL/Year	BBL/Month	BBL/Day
1.	BAPEX	20964	1747.01	57.43
2.	BGFCL	169764	14147	465.11
3.	SGFL	326178	27181.5	893.63
Total		516906	43075.51	1416.17

Source: HCU Data bank

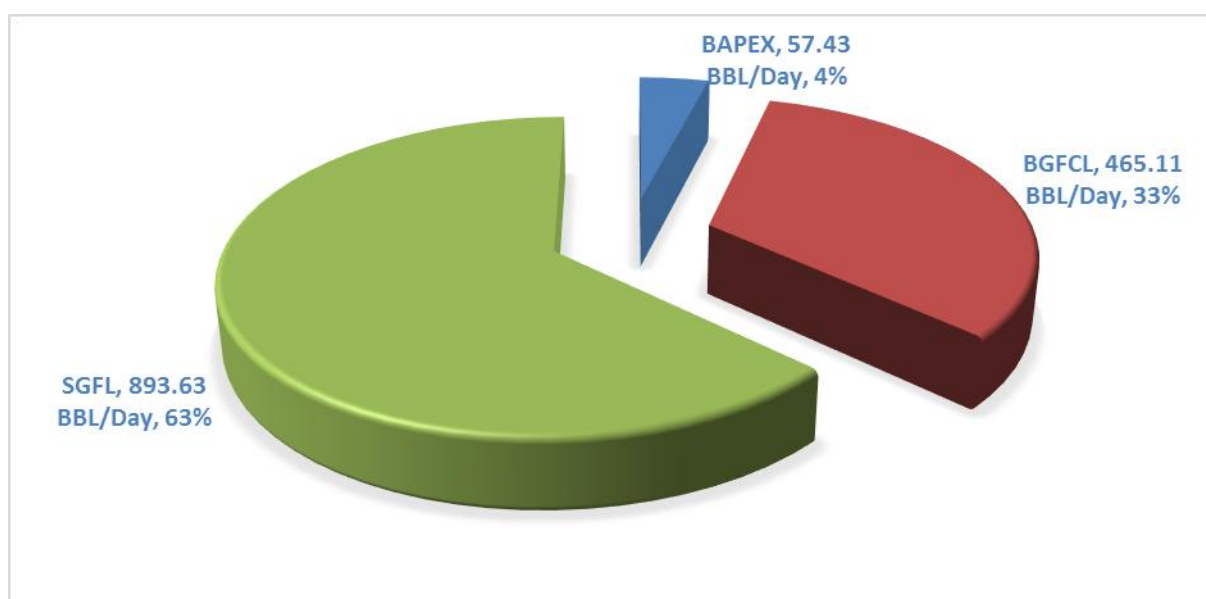
Figure 14 : Comparison of Condensate production by National Companies


Table 14 : Comparison of Condensate Production by IOCs in FY 2015-2016

SI No.	Name of Company	BBL/Year	BBL/Month	BBL/Day
1.	Chevron	3511043	292586.9	9619.29
2.	Tullow	104041	8670.08	285.04
Total		3615084	301257	9904.33

Source: HCU Data bank

Figure 15 : Comparison of Condensate production by International Companies

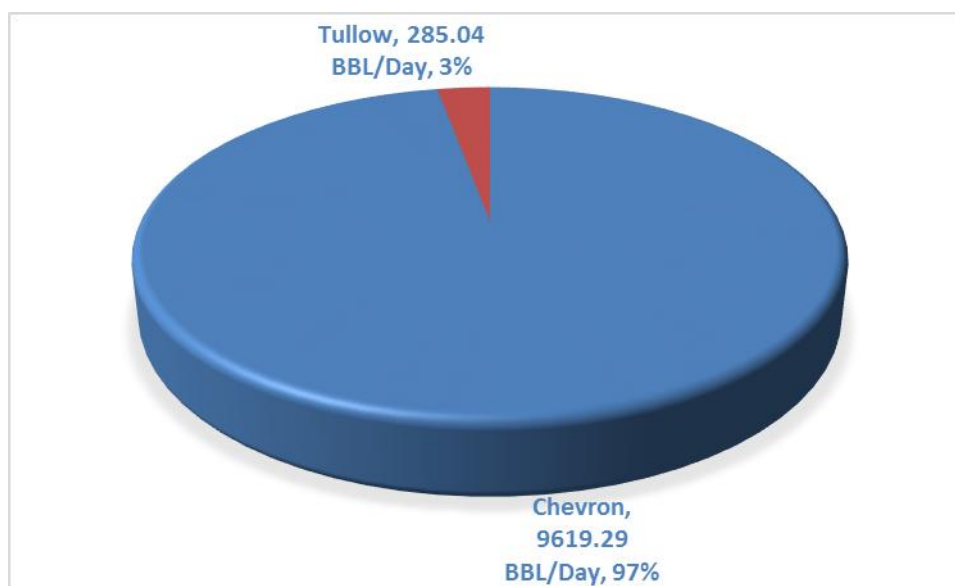


Table 15 : Field wise Condensate Production in BAPEX in FY 2015-2016

SI No.	Name of Gas field	BBL/Year	BBL/Month	BBL/Day
1.	Begumganj	45	3.75	0.12
2.	Shahbazpur	1027	85.58	2.81
3.	Semutang	380	31.67	1.04
4.	Fenchuganj	8405	700.42	23.03
5.	Salda Nadi	471	39.25	1.29
6.	Srikail	10613	884.42	29.08
7.	Sundalpur	23	1.92	0.06
Total		20964	1747.01	57.43

Source: HCU Data bank

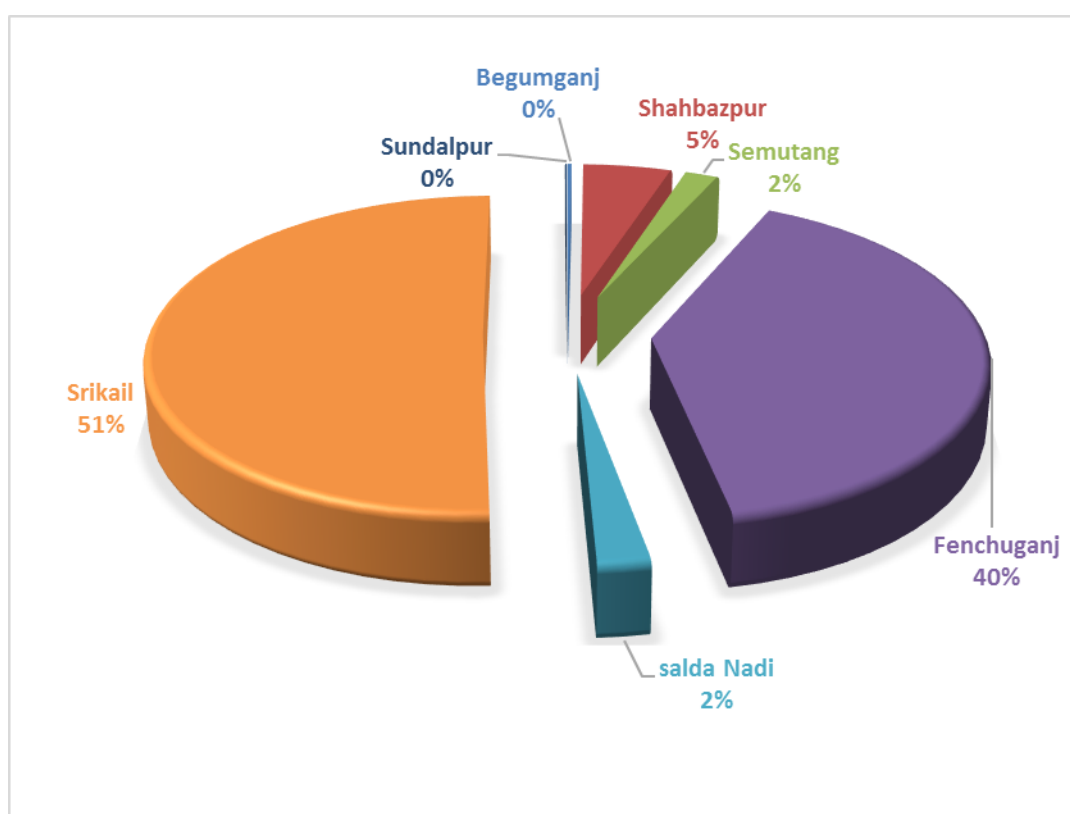
Figure 16 : Field wise Condensate Production in BAPEX


Table 16 : Field wise Condensate Production in BGFCL in FY 2015-2016

SI No.	Name of Gas field	BBL/Year	BBL/Month	BBL/Day
1.	Meghna	7633	636.08	20.91
2.	Narshingdi	17789	1482.42	48.74
3.	Habiganj Gas field	4236	353.00	11.61
4.	Bakhrabad	6227	518.92	17.06
5.	Titas Gas field	133879	11156.58	366.79
Total		169764	14147	465.11

Source: HCU Data bank

Figure 17 : Field wise Condensate Production in BGFCL

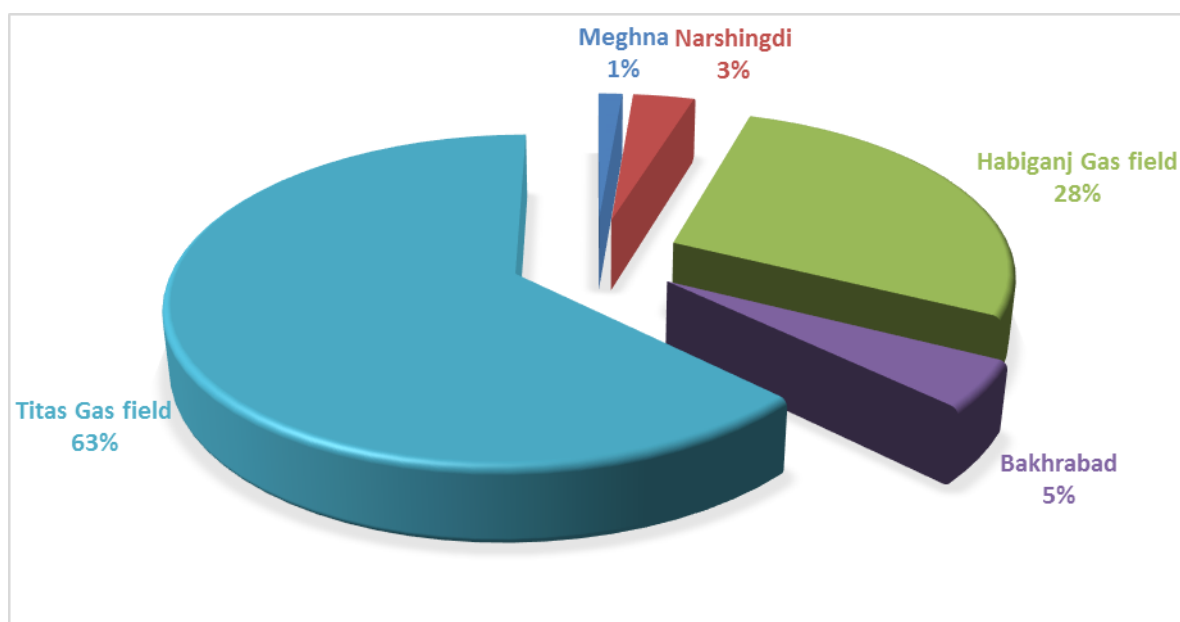


Table 17 : Field wise Condensate Productions in SGFL in FY 2015-16

SI No.	Name of Gas field	BBL/Year	BBL/Month	BBL/Day
1.	Kailas Tila	232517	19376.42	637.03
2.	Sylhet	21780	1815.00	59.67
3.	Rashidpur	16996	1416.33	46.56
4.	Beani Bazar	54885	4573.75	150.37
Total		326178	27181.5	893.63

Source: HCU Data bank

Figure 18 : Field wise Condensate Productions in SGFL

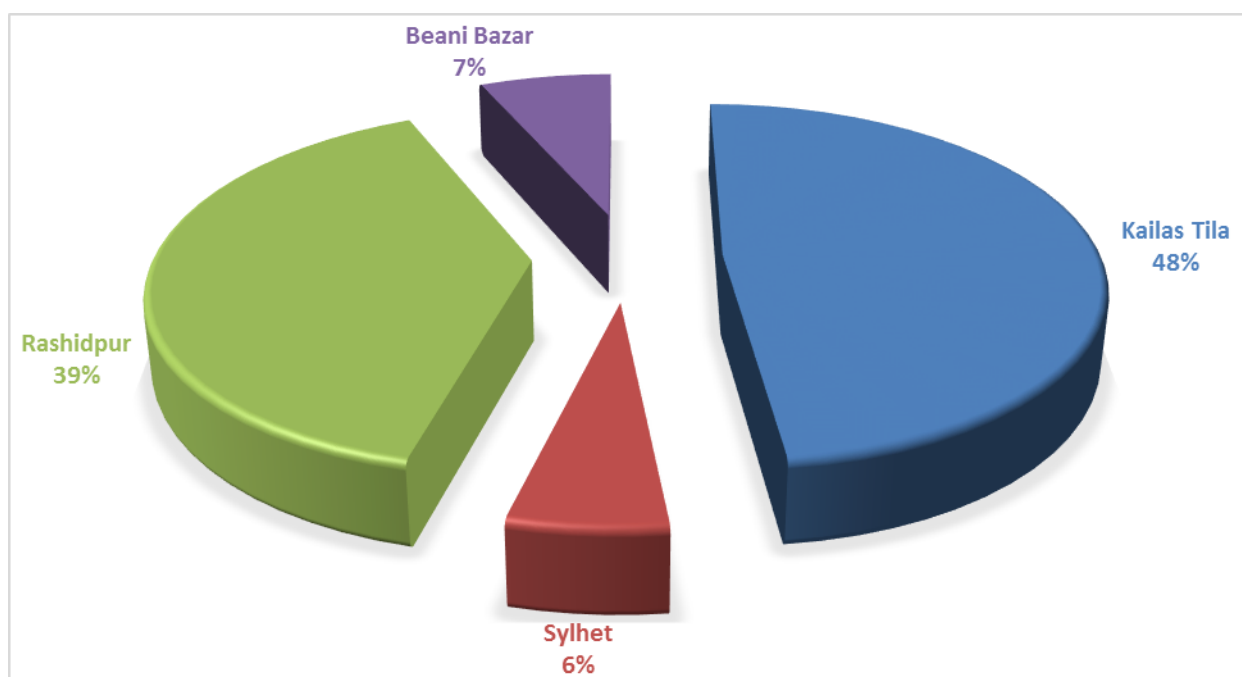
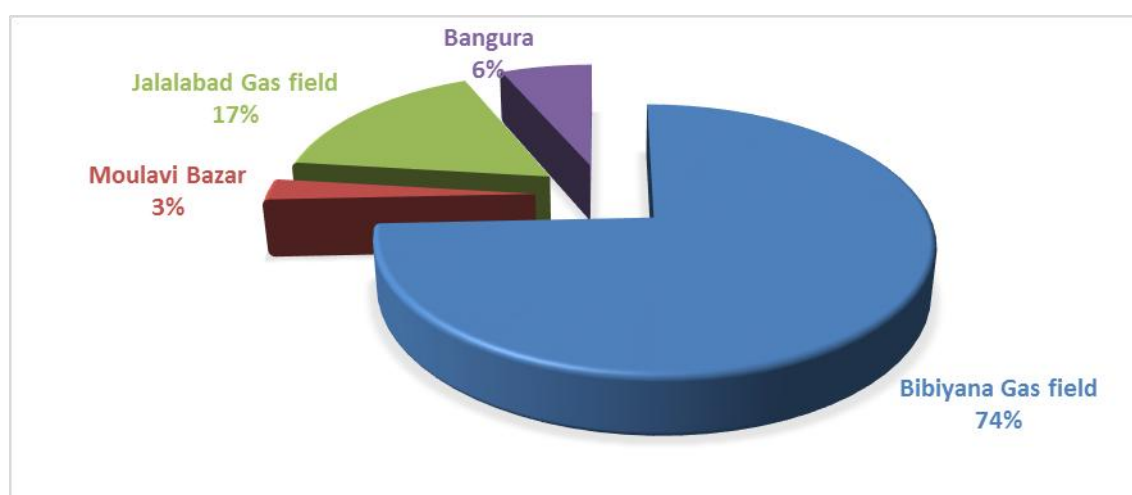


Table 18 : Field wise Condensate Production by IOCs in FY 2015-16

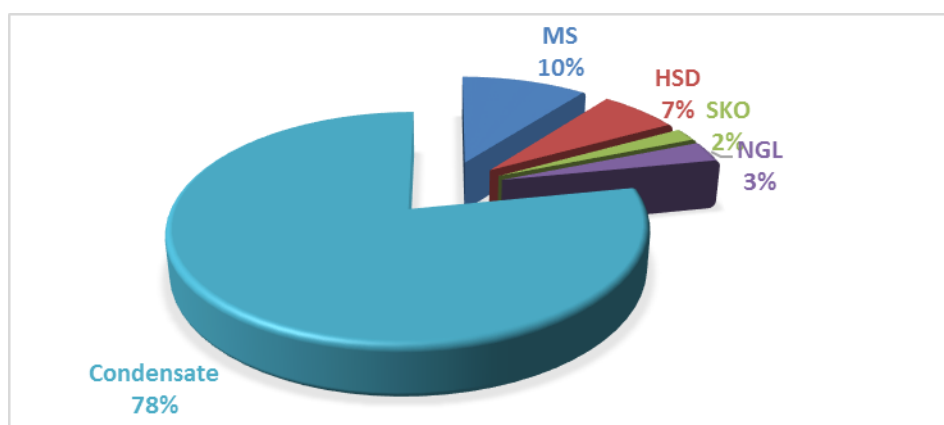
SI No.	Name of Gas field	BBL/Year	BBL/Month	BBL/Day
1.	Bibiyana Gas field	2948055	245671.25	8076.86
2.	Moulavi Bazar	1607	133.92	4.40
3.	Jalalabad Gas field	561381	46781.75	1538.03
4.	Bangura	104041	8670.08	285.04
Total		3615084	301257	9904.33

Source: HCU Data bank

Figure 19 : Field wise Condensate Production by IOCs

Table 19 : Annual Recovery of Liquid in 1000 Liter FY 2015-2016

SI No.	Name of Product	Liter
1.	MS	88,740.50
2.	HSD	55,693.55
3.	SKO	16,266.67
4.	NGL	25,764.00
5.	Condensate	6,65,278.76
Total		1,86,464.72

Source: MIS Report, Petrobangla

Figure 20 : Annual Recovery of Liquid in 1000 liter


6.0 Gas distribution scenario in the FY 2015-16

The following distribution companies purchase gas from the different production companies of Petrobangla & IOCs and sell to the end-users in different sectors.

- Titas Gas Transmission & Distribution Company Limited (TGTDC)
- Bakhrabad Gas Distribution Company Limited (BGDCL)
- Jalalabad Gas Transmission and Distribution System Limited (JGTDSL)
- Pashchimanchal Gas Company Limited
- Karnaphuli Gas Distribution Company Ltd. (KGDCL)
- Sundarban Gas Company Limited (SGCL)

6.1 Gas purchase from production companies by distribution companies:

Amount of Gas purchase by different distribution companies from the production companies of Petrobangla & IOCs is shown below:

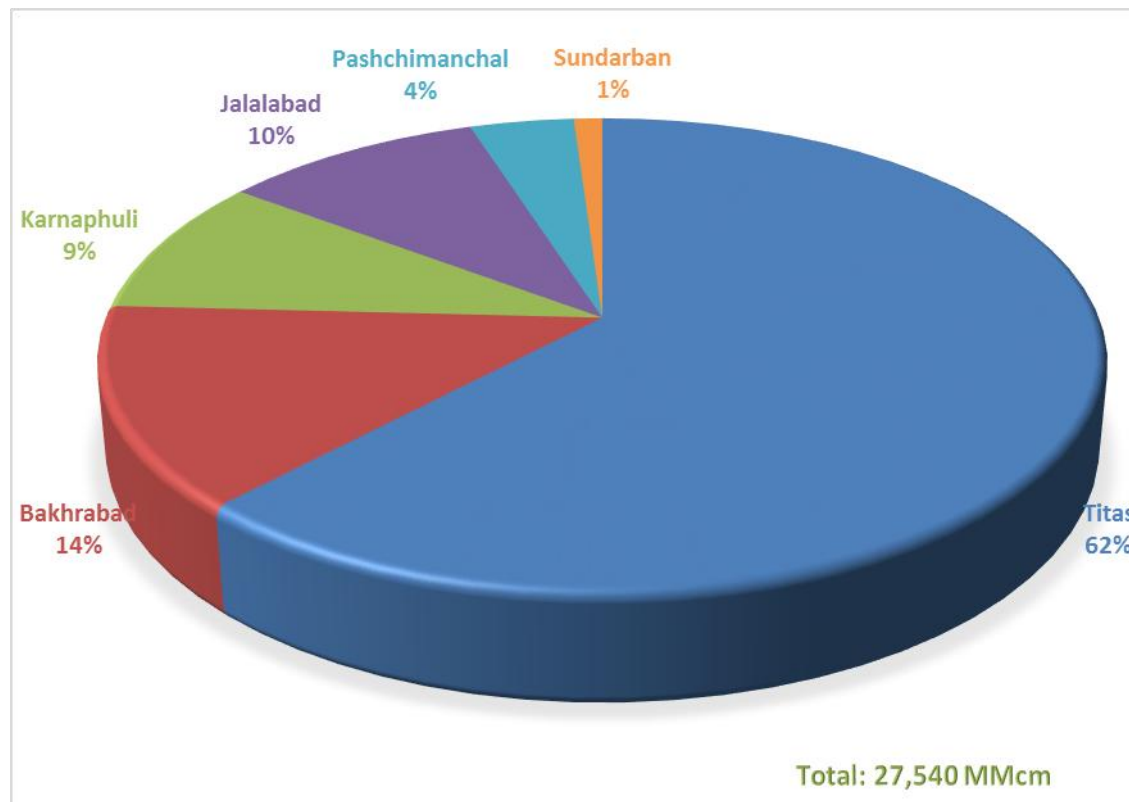
Table 20 : Amount of Gas Purchase by Distribution companies

Titas	Bakhrabad	Karnaphuli	Jalalabad	Pashchimanchal	Sundarban	Total
17095.62	3783.75	2584.49	2706.316	1074.955	294.571	27539.7

Source: Petrobangla MIS Report June-2016

Amount of gas in mmcm

Figure 21 : Gas Purchase by Distribution Companies



6.2 Gas distribution in different sectors by distribution companies:

The purchased gas is sold to end-users in variety of sectors (e.g., electricity producing companies, fertilizer companies etc.).

Table 21 : Gas sale by Titas Gas Transmission & Distribution Company Limited (TGTDC)

Consumer	Brick fields		CNG		Households		Total	
	Amount (mmcm)	Price (million taka)	Amount (mmcm)	Price (million taka)	Amount (mmcm)	Price (million taka)	Amount (mmcm)	Price (million taka)
Govt. organization	0	0	7.168	46.09	43.411	525.87	2620.926	7737.74
Non-Govt. organization	0	0	793.788	20970.63	2462.423	17044.21	13936.65	102420.4
Total	0	0	800.956	21016.72	2505.834	17570.08	16557.57	110158.1

Source: Petrobangla MIS Report June-2016

Table 22 : Gas sale by Bakhrabad Gas Distribution Company Limited (BGDCL)

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)
Govt. organization	1662.8	4699.63	257.09	663.37	0.21	3.44	0	0.12	0	0.09
Non-Govt. organization	1074.32	3029.59	37.74	97.37	99.16	791.32	54.53	394.26	42.59	193.33
Total	2737.12	7729.22	294.83	760.74	99.37	794.76	54.53	394.38	42.59	193.42

Source: Petrobangla MIS Report June-2016

Table 23 : Gas sell by Karnaphuli Gas Distribution Company Ltd. (KGDCL)

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)
Govt. organization	579.47	1641.29	34.55	90.77	33.06	251.07	42.3	284.95	0.12	0.33
Non-Govt. organization	174.78	494.31	329.11	3098.52	364.27	3024.25	435.37	3262.74	36.93	435.52
Total	754.25	2135.6	363.66	3189.29	397.33	3275.32	477.67	3547.69	37.05	435.85

Source: Petrobangla MIS Report June-2016

Table 24 : Gas sell by Jalalabad Gas Transmission and Distribution System Limited (JGTDSL)

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)
Govt. organization	1263.7	2874.3	245.0	655.4	24.3	117.9	10.7	121.3	0.0	0.0
Non-Govt. organization	413.8	2104.3	0.0	0.0	134.0	1178.9	207.8	1320.1	22.4	268.9
Total	1677.5	4978.6	245.0	655.4	158.4	1296.8	218.5	1441.4	22.4	268.9

Source: Petrobangla MIS Report June-2016

Table 25 : Gas sell by Pashchimanchal Gas Company Limited

Consumer	Electricity		Captive Power		Industries		Commercial		CNG		Households		Total	
	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)
Govt. organization	762.2	2160.4	0.0	0.0	3.1	24.9	0.0	0.2	0.0	0.0	5.6	39.9	770.9	2225.4
Non-Govt. organization	66.3	193.0	43.9	355.2	29.2	206.8	7.5	88.1	84.8	2235.6	136.4	919.0	368.2	3997.6
Total	828.6	2353.4	43.9	355.2	32.3	231.7	7.5	88.3	84.8	2235.6	142.0	958.9	1139.1	6223.0

Source: Petrobangla MIS Report June-2016

Table 26 : Gas sell by Sundarban Gas Company Limited (SGCL)

Consumer	Electricity		Captive Power		Industries		Commercial		CNG		Households		Total	
	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)	Amount (mmcm)	Price (million Tk)
Govt. organization	289.8	817.4	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.2	8.2	291.0	825.9
Non-Govt. organization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	2.3	14.9	2.3	15.2
Total	289.8	817.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	3.4	23.2	293.3	841.1

Source: Petrobangla MIS Report June-2016

7.0 Gas consumption scenario in the FY 2015-16

Natural gas consumed in different sectors for the purpose of end-user usage are summarized below:

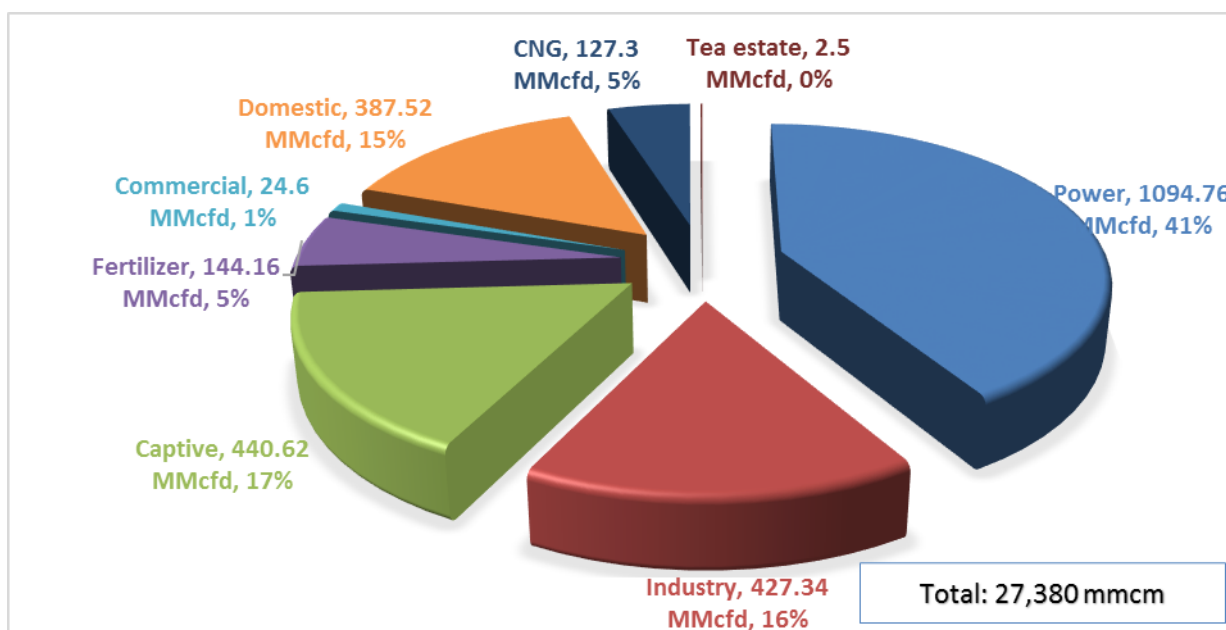
Table 27 : Sector wise Gas Consumption in FY 2015-16

(1CM=35.31CF)

SI No.	Name of Specification	MMCM	MMcfd
1.	Power	11316.55	1094.76
2.	Industry	4417.40	427.34
3.	Captive	4554.68	440.62
4.	Fertilizer	1490.18	144.16
5.	Commercial	254.28	24.60
6.	Domestic	4005.83	387.52
7.	CNG	1315.88	127.30
8.	Tea estate	25.79	2.50
Total		27380.59	2648.80

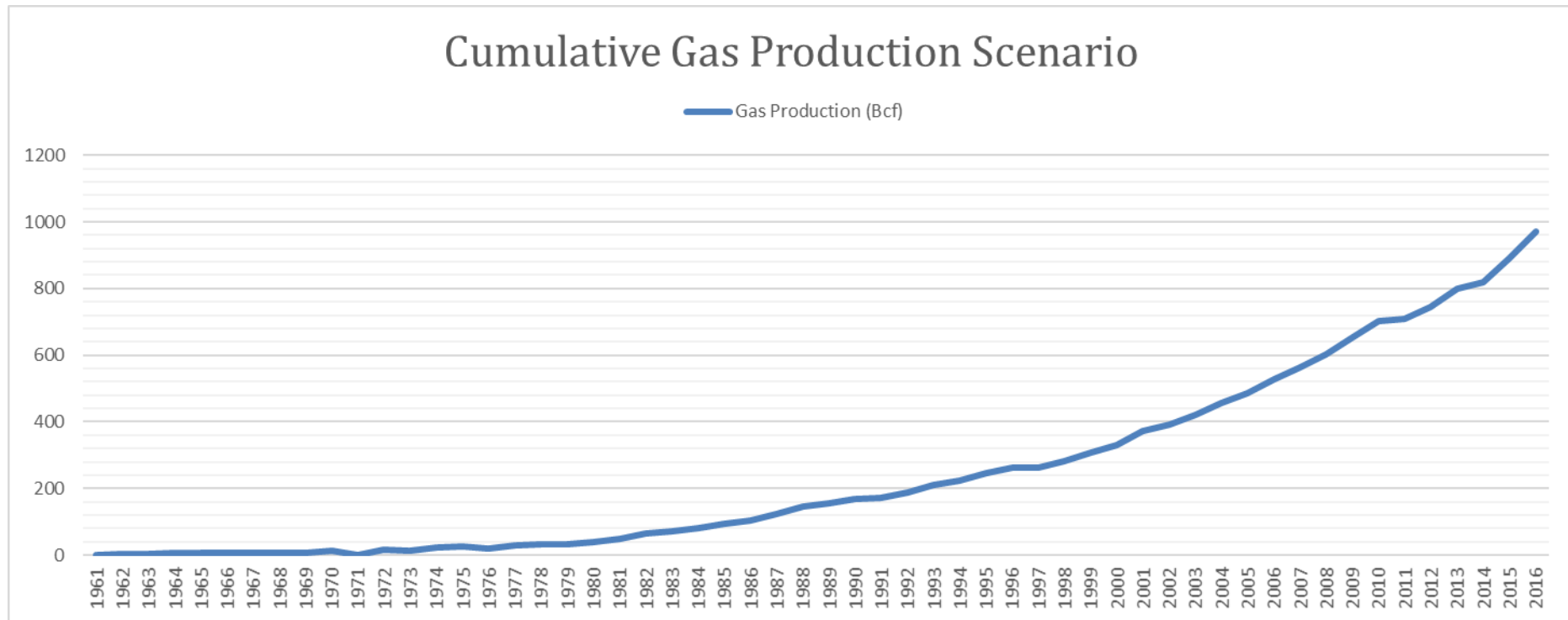
Source: MIS Report, Petrobangla

Figure 22 : Sector wise Gas Consumption



8.0 Gas Production and Demand

Figure 23 : Gas production from the beginning till now



Gas production against the demand of Bangladesh From 2009 to 2015

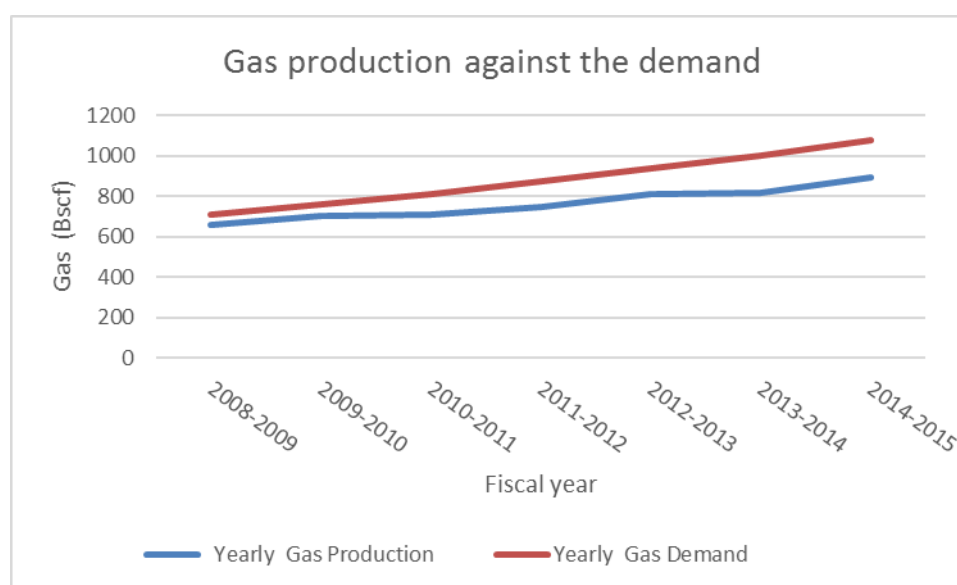
Table 28 : Production vs Demand

Fiscal Year	Yearly Gas Production (Bscf) *	Daily Average Gas Production (MMcfd)*	Yearly Gas Demand (Bscf) **	Daily Average Gas Demand (MMcfd)**
2008-2009	656.63	1799.00	706.28	1935
2009-2010	703.68	1927.90	757.74	2076
2010-2011	708.47	1941.00	813.22	2228
2011-2012	746.42	2045.00	872.72	2391
2012-2013	811.03	2222.00	936.23	2565
2013-2014	820.50	2279.16	1004.5	2752
2014-2015	890.60	2440.00	1077.85	2953

(*) Source : HCU Data Bank

(**) Source: Report on Future Scenarios for the Bangladesh Petroleum Sector Development, Gustavson, LLC 2011 Bangladesh Gas Demand Forecast Scenarios (Base Case)

Figure 24 : Production vs Demand from 2009-2015



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