হাইড্রোকার্বন ইউনিট
জ্বালানি ও খনিজ সম্পদ বিভাগ
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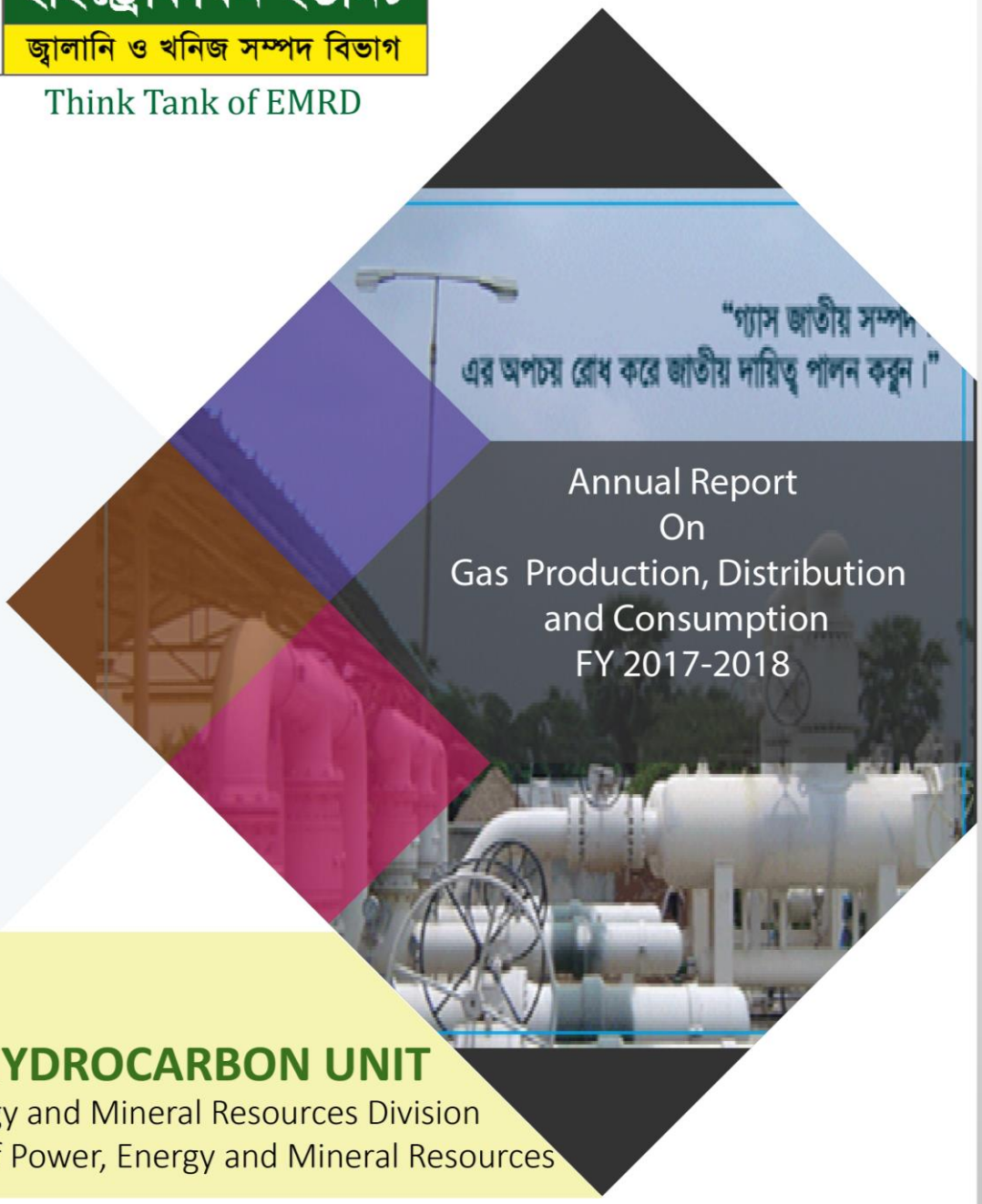

Annual Report On Gas Production, Distribution and Consumption FY 2017-2018

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 2017 to June 2018. 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: 30 August 2018

Md. Harun-Or-Rashid Khan

Director General

Table of Contents

List of Tables

List of Figures

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 28.69 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 distributers is collected from MIS report of Petrobangla. In 2017-18 fiscal years total production of gas logged 960.77 Bcf and daily average production was 2632.25 MMcfd. During the year well wise maximum daily gas production was 1198.17 MMcfd and well wise minimum gas production was 0.68MMcfd. 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 decrease in production over the year was quite high. In 2016-17 fiscal years total gas production was 972.06 Bcf and daily average production 2663.19 MMcfd.

In 2017-18 decrease of annual gas production was 11.29 Bcf and daily gas production was 30.93 MMcfd. Total producing gas field was 19. Gas production is largely depended on Bibiyana, Titas, Jalalabad and Habiganj gas fields. This four gas fields provided 83.76 percent (2204.78 MMcfd out of total daily gas production is 2632.25 MMcfd)

During the year 110 wells in 19 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 110 wells were flowing. During this year National Companies produced 385.34 Bcf gas from 66 wells which equals to 1055.72 MMcfd. Minimum gas production was recorded from Rupgonj gas field (0.68 MMcfd). During the year average daily production from Srikail gas field was 35.42 MMcfd.

Chevron and Tullow Oil these two international companies remained active during the period. IOCs production logged 575.43 Bcf which equals to 1576.53 MMcfd. .

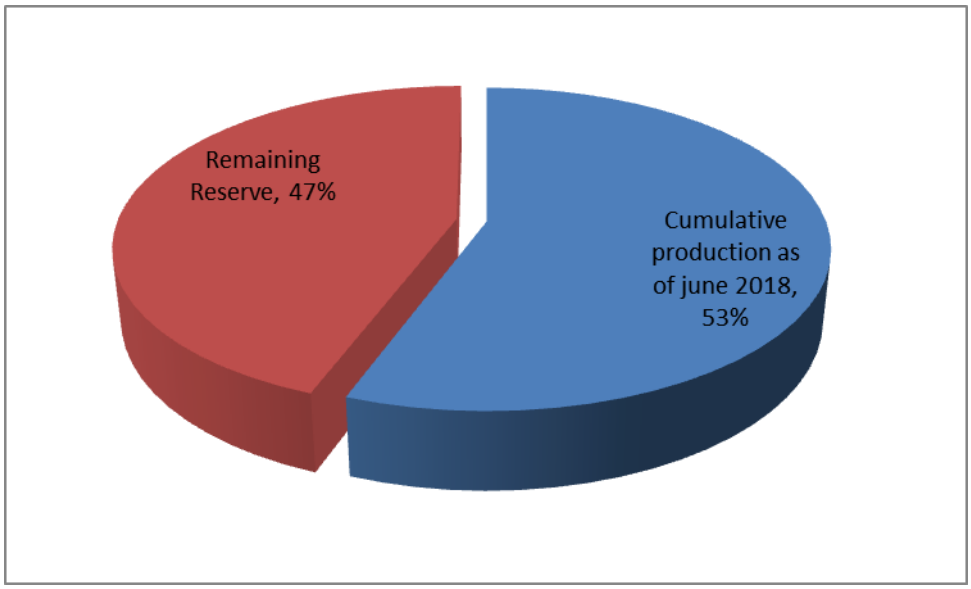
Report on annual gas production of this year 2017-18 is prepared using daily gas and condensate production data. Information on gas and condensate production was received from the gas production companies. Information on gas purchase and sales is collected from MIS report (April 2018) of Petrobangla.

In the current year four gas fields, Bibiyana, Titas, Jalalabad and Habiganj gas fields produced 804.75 Bcf gas and average gas production was 2204.78 MMcfd. Remaining 156.02 Bcf gas is produced by 15 gas fields which equals to 427.45 MMcfd.

Reserve and Production up to June 2018 at a glance

Gas Initially in Place (Proven + Probable)	35,796.19 Bcf	35.80 Tcf
Recoverable (Proven + Probable)	28,685.40 Bcf	28.69 Tcf
Cumulative Production as of June 2018	15963.39 Bcf	15.96 Tcf
Remaining Reserve	12722.01 Bcf	12.72 Tcf

Figure 1 : Gas already Consumed & the Remainder



3.0 Gas Productions: (National Gas Producing Companies)

Three national and two international companies produced 960.77 Bcf gas and well wise average daily gas production was 2632.25 MMcfd. During this year decrease in gas production was 11.29 Bcf and daily average gas production was 30.93 MMcfd.

Out of total production national companies share was 1055.72 MMcfd. Total production of national companies during the year was 385.34 Bcf. In the past year total production by national companies was 1066.5 MMcfd. 66 wells were open for production during the year.

Out of total production IOCs share was 1576.53 MMcfd. Total production of IOCs during the year was 575.43 Bcf. IOCs produced this volume of gas using 44 wells. During this year maximum gas production was recorded from Bibiyana Gas field. Table (Below) compares company wise gas production for 2017-18.

MMcfd	BAPEX	BGFCL	SGFL	Chevron	Tullow	Total
2017-18	97.53	**827.35**	**130.84**	1484.30	92.23	2632.25

During the year maximum condensate recovery was 9066.11 bbl/day from Bibiyana gas field. Jalalabad gas field occupied second position and daily condensate recovery was 1085.49 bbl/day. Condensate recovery from Kailas Tila gas field was 559.26 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
2017-18	125478.74	53071.58	24881	690794.38	12511.93

In 2017-18 fiscal year Bangladesh Petroleum Exploration and Production Company (BAPEX) and two gas producing companies (BGFCL and SGFL) operating 20 gas fields in the country. Among them 17 fields are in production and 3 fields are suspended. During the year total production of national companies logged 385.34 Bcf, which equals to 1055.72 MMcfd. National companies produced through 66 wells i.e., average well wise production was 15.99 MMcfd. Well wise maximum production was 100.87 MMcfd (Bibiyana 1) and minimum production was 10.2 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 9 gas fields i.e. Begumganj, Shahbazpur, Salda, Fenchuganj, Semutang, Sundalpur , Srikail,Rupgonj and Feni gas fields. Among them Feni is suspended for a long time. Rupganj, Sundalpur and Srikail are three discoveries by BAPEX. Geologically Bangura and Srikail could be a single anticline. During the year the company produced 35.60 Bcf gas and daily average gas production rate of 97.53 MMcfd. During the year 39.31 thousand bbl condensate was recovered.

3.1.1 Begumganj Gas Field:

Gas production of Begumganj is suspended since August 2016.

3.1.2 Fenchuganj Gas Field:

During the year this field produced 4.70 Bcf gas and daily average gas production rate of 12.88 MMcfd. In addition to gas, from this field during the year 1708.46 bbl condensate was recovered.

3.1.3 Salda Nadi Gas Field:

Salda Nadi gas field is a small gas field. During the year one well was producing. During the year this field gas produced 1.06 Bcf and daily average gas production rate of 2.91 MMcfd. In addition to gas, from this field during the year 100.31 bbl condensate was recovered..

3.1.4 Shahbazpur Gas Field:

Shahbazpur gas field in located in Shahbazpur i.e. Bhola island. Gas supply is limited within the island. During the year this field gas produced 15.26 Bcf and daily average gas production rate of 41.81 MMcfd. In addition to gas, 2262.10 bbl condensate was recovered during the year from this field

3.1.5 Semutang Gas Field:

This gas field was discovered in 1970-71 by 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 0.46 Bcf and daily average gas production rate of 1.26 MMcfd. In addition to gas, from this field during the year 41.40 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 0.94 Bcf and daily average gas production rate of 2.57 MMcfd. In addition to gas, from this field during the year 15.88 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 12.93 Bcf and daily average gas production rate of 35.42 MMcfd. In addition to gas, from this field during the year 34.90 thousand bbl condensate was also recovered. It may be mentioned here that geologically Srikail is part of Bangura structure. Tulllow is producing from this structure. A joint study on Srikail and Bangura can be initiated for better understanding of the structure.

3.1.8 Rupgonj Gas Field:

During the year this field gas produced 0.25 Bcf and daily average gas production rate of 0.68 MMcfd. In addition to gas, from this field during the year 279.60 bbl condensate was also recovered.

3.1.9 Feni Gas Field

Feni gas field was handed over to NIKO Resources (Bangladesh) Ltd. and BAPEX for operation as per order of Ministry of Energy and Mineral Resources, Government of the People's Republic of Bangladesh. This gas field is suspended for a long time.

3.2 Bangladesh Gas Fields Company Ltd (BGFCL):

This is the second largest gas producer of the country behind chevron. The company operates Titas, Habiganj, Bakhrabad, Narshingdi, Meghna and Kamta gas fields. Among them Kamta is suspended for a long period. During the year this company gas produced 301.98 Bcf and daily average gas production rate of 827.35 MMcfd. In term of gas reserve, Titas is the largest gas field of the country. During the year 192.46 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 195.42 Bcf and daily average gas production rate 535.40 MMcfd. In addition to gas, 158.9 thousand bbl condensate was recovered from this field during the year.

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 79.90 Bcf and daily average gas production rate of 218.90 MMcfd. In addition to gas, from this field during the year 4.29 thousand bbl condensate was recovered.

3.2.3 Bakhrabad Gas Field:

During the year this field gas produced 12.02 Bcf and daily average gas production rate of 32.94MMcfd. In addition to gas, from this field during the year 5.42 thousand bbl condensate was recovered.

3.2.4 Narshingdi:

During the year this field produced 10.02 Bcf gas and daily average gas production rate of 27.46 MMcfd. In addition to gas, from this field during the year 16.21 thousand bbl condensate was recovered.

3.2.5 Meghna Gas Field:

During the year this field gas produced 4.62 Bcf and daily average gas production rate 12.65MMcfd. Gas production rate was quite stable. In addition to gas, from this field during the year 7.8 thousand bbl condensate was recovered.

3.2.6 Kamta Gas Field:

This Gas field is suspended for a long time.

3.3 Sylhet Gas Fields Ltd:

This company operates five gas fields i.e. Kailas tila, Rashidpur, Beani bazar , Sylhet and Chatak. Chatak is suspended for a long time. During the year this company gas produced 47.76 Bcf and average daily gas

production rate of 130.84 MMcfd. During the year 282.28 thousand bbl condensate was recovered. Brief description of the gas fields are provided below.

3.3.1 Kailas Tila gas field:

This is the main producer of SGFL. During the year this field gas produced 22.96 Bcf and average gas production rate of 62.91 MMcfd. During the year four 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 204.13 thousand bbl condensate was recovered.

3.3.2 Rashidpur Gas Field:

During the year this field gas produced 19.51 Bcf and average gas production rate of 53.45 MMcfd. In addition to gas, from this field during the year 11.73 thousand bbl condensate was recovered.

3.3.3 Beani Bazar Gas Field:

During the year this field gas produced 3.5 Bcf and average gas production rate of 9.60 MMcfd. In addition to gas, from this field during the year 55.02 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 1.79 Bcf and average gas production rate of 4.89 MMcfd. In addition to gas, from this field during the year 11.40 thousand bbl condensate was also recovered.

3.3.5 Chatak Gas Field:

This gas field is suspended for a long time.

4.0 Gas Productions (International Companies):

Chevron, Tullow and Santos are three international oil and gas companies (IOCs) operating in the country. During the year Chevron and Tullow gas produced 575.43 Bcf and average daily gas production rate of 1576.53 MMcfd and Santos was not in operation since October 2013. In average per well gas production of IOCs wells is much higher than that of the national companies. IOCs produce 1576.53 MMcfd using 44 wells and average per well production of IOCs well is 35.83 MMcfd. During the year 3805.25 thousand bbl condensate was recovered by the IOCs and average daily recovery of condensate was 10.42 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 541.77 Bcf and average daily gas production was 1484.30 MMcfd. In addition to gas, this company producer 3706.37 thousand bbl condensate was recovered.

4.1.1 Bibiyana Gas field:

During the year Bibiyana Gas field gas Produced 437.33 Bcf and average daily gas production rate of 1198.17MMcfd. In addition to gas, from this field during the year 3309.31 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 92.09 Bcf and average daily gas production rate of 252.30 MMcfd. In addition to gas, from this field during the year 396.2 thousand bbl condensate was also recovered.

4.1.3 Moulavi Bazar gas field:

During the year Moulavi Bazar gas field gas produced 12.34 Bcf and average daily gas production rate of 33.82 MMcfd. In addition to gas, from this field during the year 1.03 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 33.67 Bcf and average daily gas production rate of 92.23 MMcfd. In addition to gas, from this field during the year 98.88 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. This gas field is is suspended at October 2013.

5.0 Gas Production:

During the year gas production has been recorded 960.77 Bcf and average daily gas production was 2632.25 MMcfd. Sector wise gas consumption during the year (till April) 819.49 Bcf and average daily gas supply rate of 2245.18 MMcfd is shown in Table 27 and Figure 22.

Table 1 : Company wise Gas Production in FY 2017-2018

SI No.	Name of Company	Total well	Production well	Suspended well	Bcf	MMcfd
1.	BAPEX	35	12	23	35.60	97.53
2.	BGFCL	52	42	10	301.98	827.35
3.	SGFL	29	12	17	47.76	130.84
4.	Chevron	44	39	5	541.77	1484.30
5.	Tullow	7	5	2	33.67	92.23
6	Santos	9	0	9	Suspended	Suspended
Total		**176**	**110**	**66**	960.77	2632.25

Source: HCU Data bank

Figure 2 : Company wise Gas Production

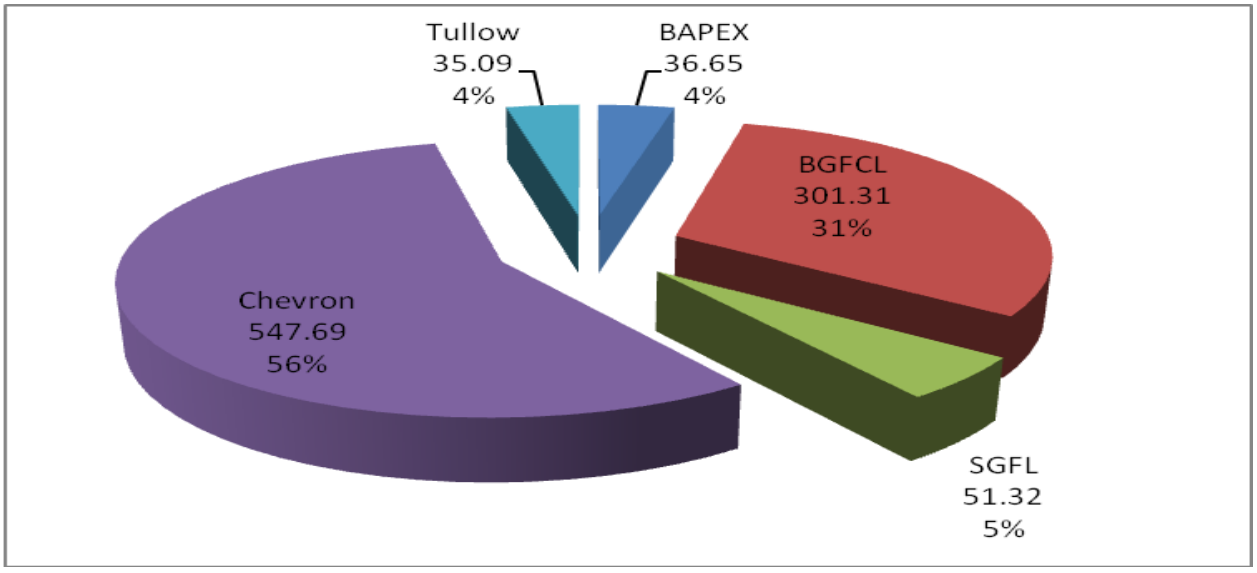


Table 2 : Field wise Gas Production in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	0	3	0.00	0.00
2.	Shahbazpur	5	3	2	15.26	41.81
3.	Semutang	6	2	4	0.46	1.26
4.	Fenchuganj	5	2	3	4.70	12.88
5.	Salda Nadi	4	1	3	1.06	2.91
6.	Srikail	4	3	1	12.93	35.42
7.	Sundalpur	2	1	1	0.94	2.57
8.	Rupgonj	1	0	1	0.25	0.68
9.	Feni	5	0	5	0.00	0.00
10.	Meghna	1	1	-	4.62	12.65
11.	Narshingdi	2	2	-	10.02	27.46
12.	Habiganj Gas field	11	7	4	79.90	218.90
13.	Bakhrabad	10	6	4	12.02	32.94
14.	Titas Gas field	27	26	1	195.42	535.40
15.	Kamta	1	0	1	0.00	0.00
16.	Bibiyana Gas field	26	26	-	437.33	1198.17
17.	Moulavi Bazar	9	6	3	12.34	33.82
18	Jalalabad Gas field	9	7	2	92.09	252.30
19.	Kailas Tila	7	4	3	22.96	62.91
20.	Sylhet	8	1	7	1.79	4.89
21.	Rashidpur	11	5	6	19.51	53.45
22.	Beani Bazar	2	2	-	3.50	9.59
23	Chatak	1	0	1	0.00	0.00
24	Bangura	7	5	2	33.67	92.23
25	Sangu	9	0	9	0.00	0.00
Total		**176**	**110**	**66**	960.77	**2632.25**

Source: HCU Data bank

Figure 3 : Field wise Gas Productions

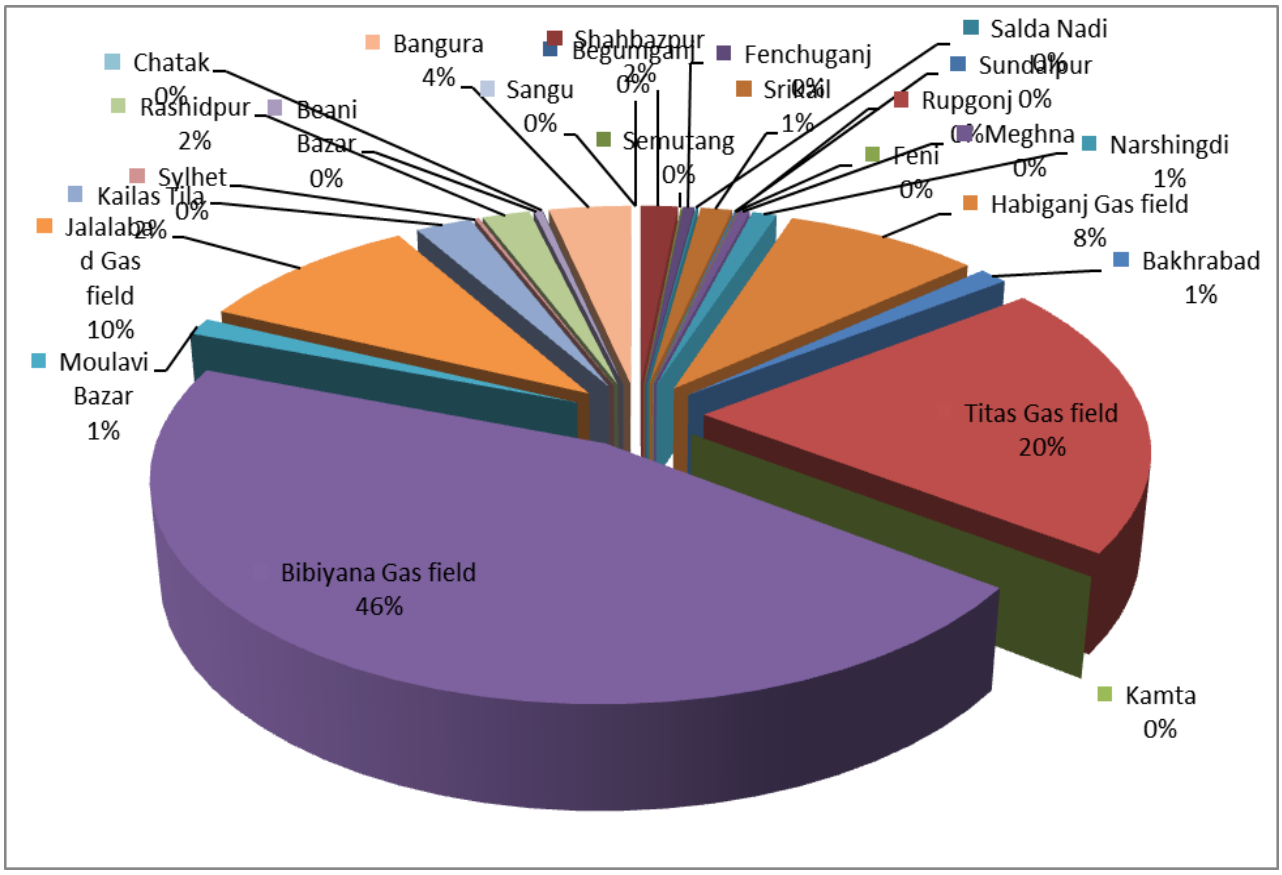


Table 3: Major four (4) Gas producing fields in FY 2017-2018

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Habiganj Gas	11	7	4	79.90	218.90
2.	Titas Gas field	27	26	1	195.42	535.40
3.	Bibiyana Gas field	26	26	0	437.33	1198.17
4.	Jalalabad Gas field	9	7	2	92.09	252.30
Total		73	66	7	804.75	2204.780886

Source: HCU Data bank

Figure 4 : Major four (4) Gas producing fields

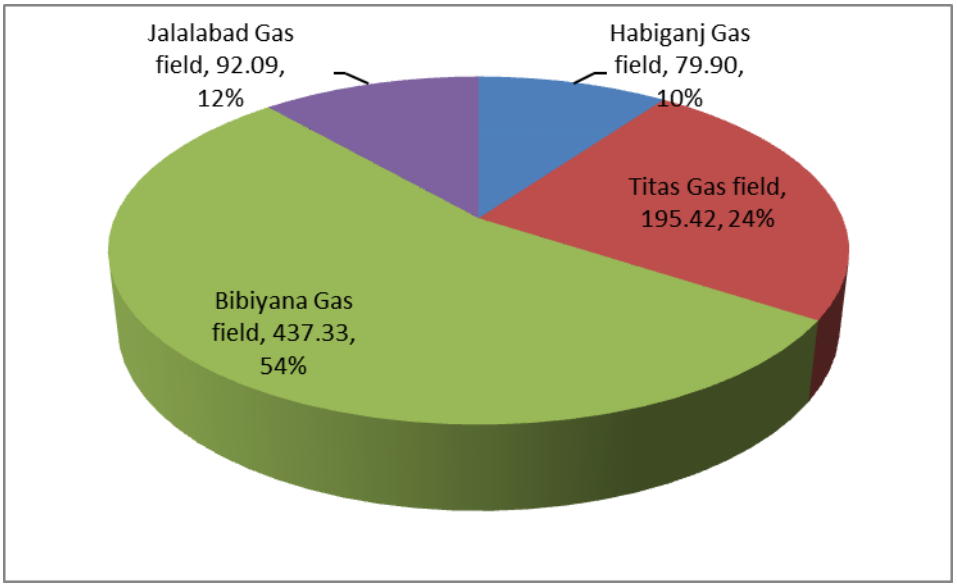


Table 4 : Comparison of Annual Gas Production by National Companies in FY 2017-2018

SI No.	Name of National Company	Total well	Production well	Suspended well	Bcf	MMcfd
1.	BAPEX	35	12	23	35.60	97.53
2.	BGFCL	52	42	10	301.98	827.35
3.	SGFL	29	12	17	47.76	130.84
Total		116	66	50	385.34	1055.72

Source: HCU Data bank

Figure 5 : Comparison of Annual Gas production by National Companies

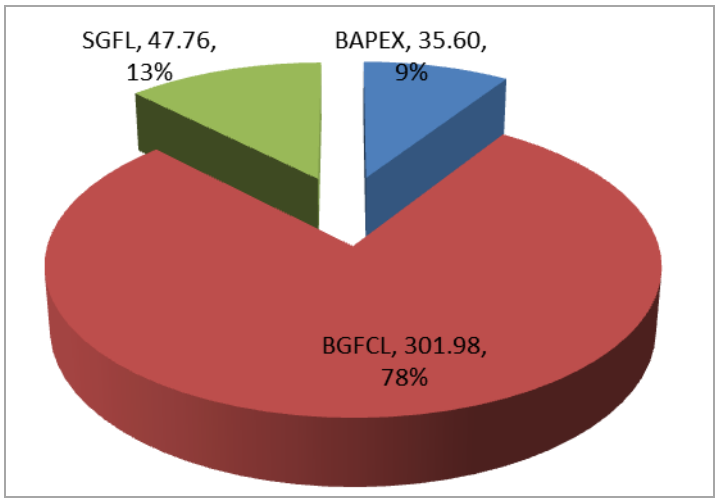


Table 5 : Field wise Annual Gas Production of Gas Fields Under National Companies, FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	0	3	0.00	0.00
2.	Shahbazpur	5	3	2	15.26	41.81
3.	Semutang	6	2	4	0.46	1.26
4.	Fenchuganj	5	2	3	4.70	12.88
5.	Salda Nadi	4	1	3	1.06	2.91
6.	Srikail	4	3	1	12.93	35.42
7.	Sundalpur	2	1	1	0.94	2.57
8.	Rupgonj	1	0	1	0.25	0.68
9.	Feni	5	0	5	Suspended	Suspended
10.	Meghna	1	1	0	4.62	12.65
11.	Narshingdi	2	2	0	10.02	27.46
12.	Habiganj Gas field	11	7	4	79.90	218.90
13.	Bakhrabad	10	6	4	12.02	32.94
14	Titas Gas field	27	26	1	195.42	535.40
15.	Kamta	1	0	1	Suspended	Suspended
16	Kailas Tila	7	4	3	22.96	62.91
17	Sylhet	8	1	7	1.79	4.89
18	Rashidpur	11	5	6	19.51	53.45
19	Beani Bazar	2	2	0	3.50	9.59
20	Chatak	1	0	1	Suspended	Suspended
Total		116	66	50	385.34	1055.72

Source: HCU Data bank

Figure 6 : Field wise Annual Gas production of National Companies

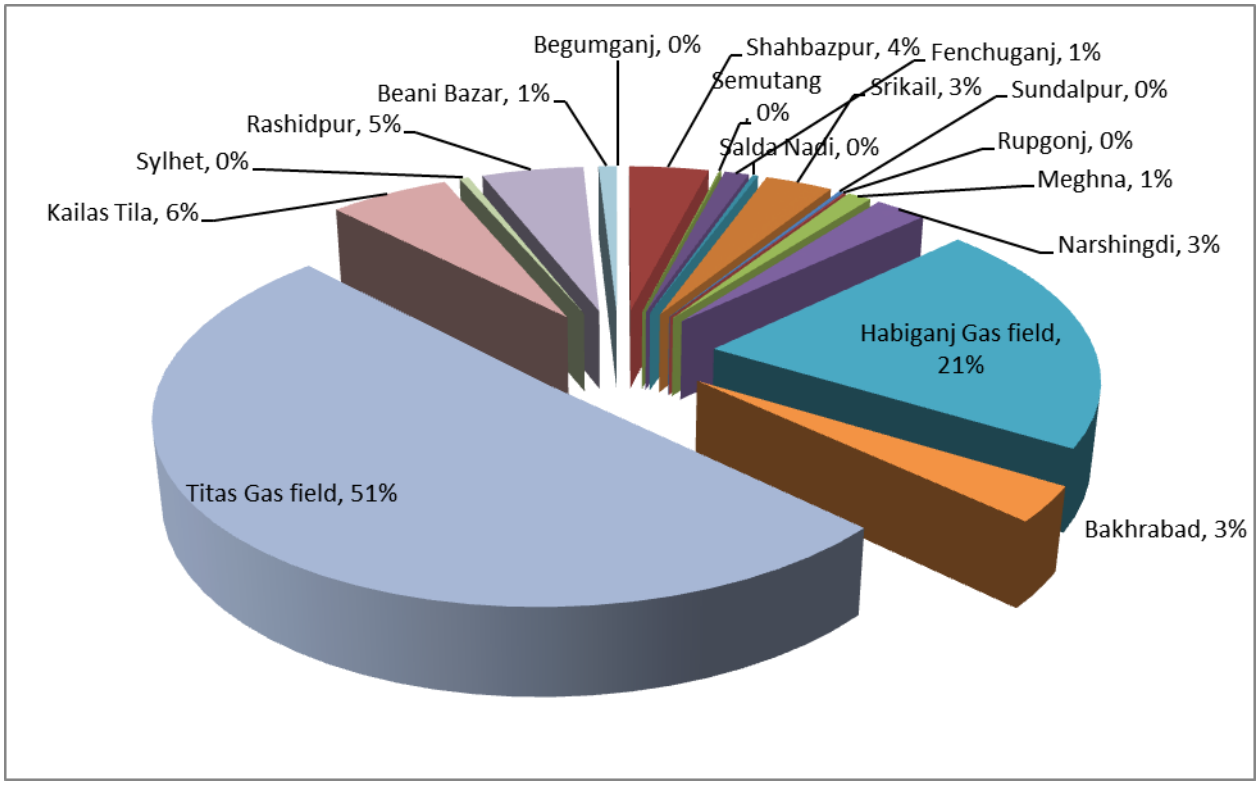


Table 6 : Field wise Gas Production in BAPEX in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	0	3	0.00	0.00
2.	Shahbazpur	5	3	2	15.26	41.81
3.	Semutang	6	2	4	0.46	1.26
4.	Fenchuganj	5	2	3	4.70	12.88
5.	Salda Nadi	4	1	3	1.06	2.91
6.	Srikail	4	3	1	12.93	35.42
7.	Sundalpur	2	1	1	0.94	2.57
8.	Rupgonj	1	0	1	0.25	0.68
9	Feni	5	0	5	Suspended	Suspended
		35	12	23	35.60	97.53

Source: HCU Data bank

Figure 7 : Field wise Gas Production in BAPEX

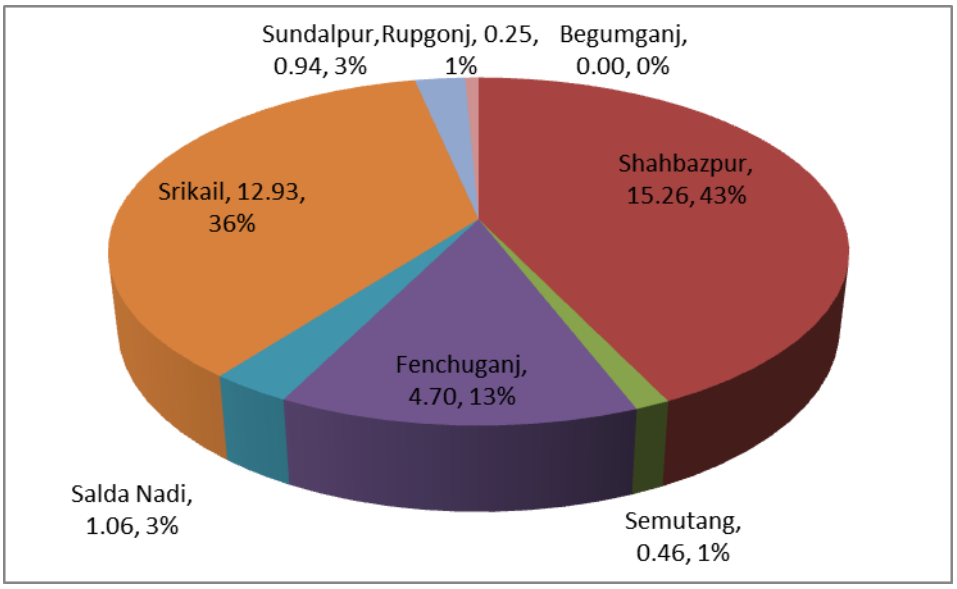


Table 7 : Field wise Gas Production in BGFCL in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Meghna	1	1	0	4.62	12.65
2.	Narshingdi	2	2	0	10.02	27.46
3.	Habiganj Gas field	11	7	4	79.90	218.90
4.	Bakhrabad	10	6	4	12.02	32.94
5.	Titas Gas field	27	26	1	195.42	535.40
6.	Kamta	1	0	1	Suspended	Suspended
		52	42	10	301.98	827.35

Source: HCU Data bank

Figure 8 : Field wise Gas Production in BGFCL

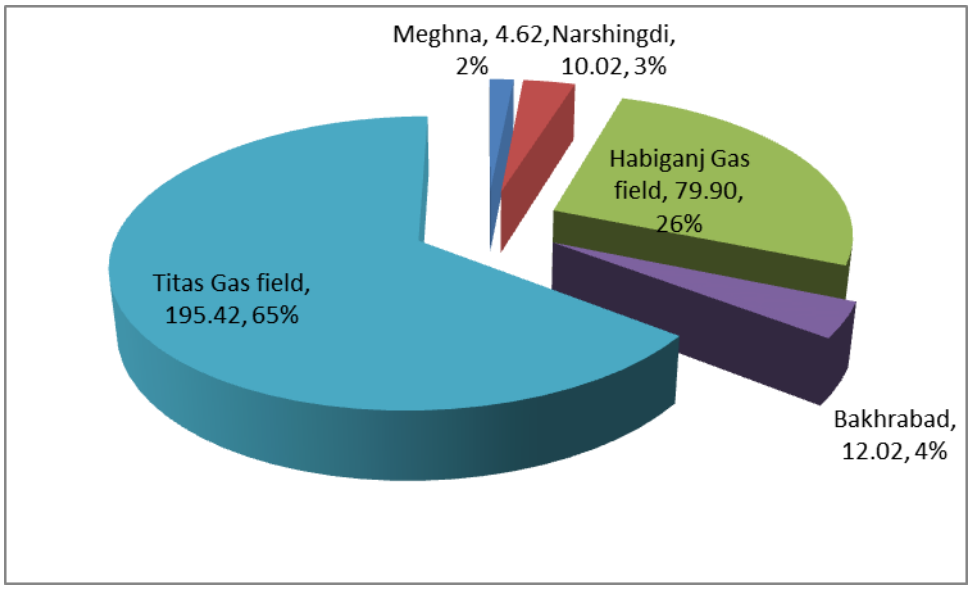


Table 8 : Field wise Gas Production in SGFL in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Kailas Tila	7	4	3	22.96	62.91
2.	Sylhet	8	1	7	1.79	4.89
3.	Rashidpur	11	5	6	19.51	53.45
4.	Beani Bazar	2	2	0	3.50	9.59
5.	Chatak	1	0	1	Suspended	Suspended
	Total	29	12	17	47.76	130.84

Source: HCU Data bank

Figure 9 : Field wise Gas Production in SGFL

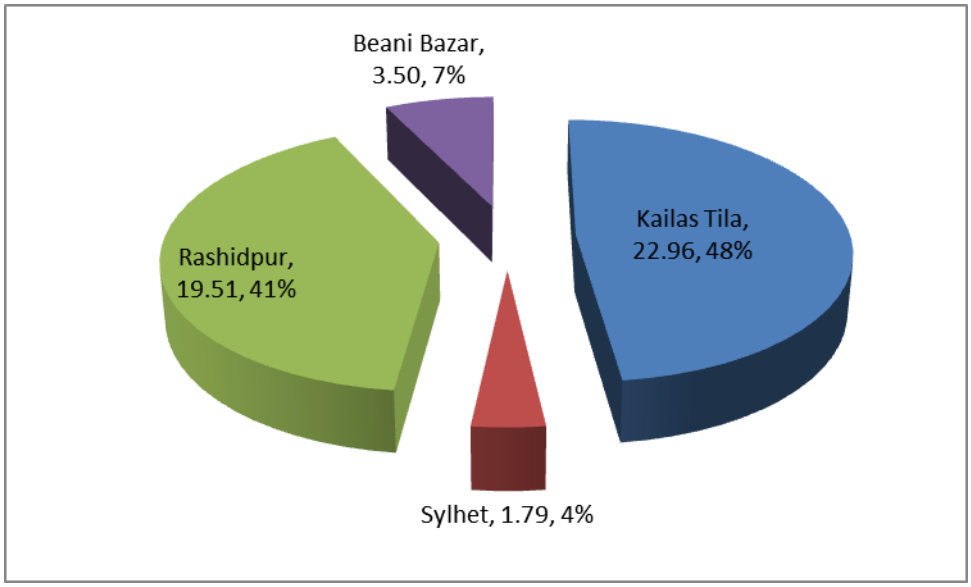


Table 9 : Comparison of Annual Gas Production by International Companies in FY 2017-2018

SI No.	Name of Company	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Chevron	44	39	5	541.77	1484.30
2.	Tullow	7	5	2	33.67	92.23
3.	Santos	9	0	9	Suspended	Suspended
Total		60	44	16	575.43	1576.53

Source: HCU Data bank

Figure 10 : Comparison of Annual Gas Production by International Companies

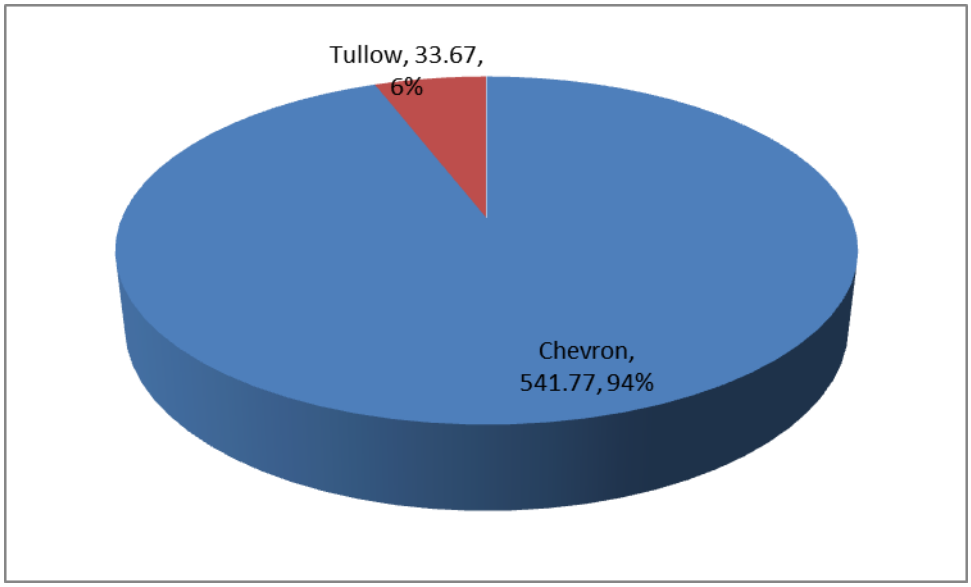


Table 10 : Field wise Gas Production by IOCs in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Bibiyana Gas field	26	26	0	437.33	1198.17
2.	Moulavi Bazar	9	6	3	12.34	33.82
3.	Jalalabad Gas field	9	7	2	92.09	252.30
4.	Bangura	7	5	2	33.67	92.23
5.	Sangu	9	0	9	Suspended	Suspended
	Total	60	44	16	575.43	1576.53

Source: HCU Data bank

Figure 11 : Field wise Gas Production of IOCs

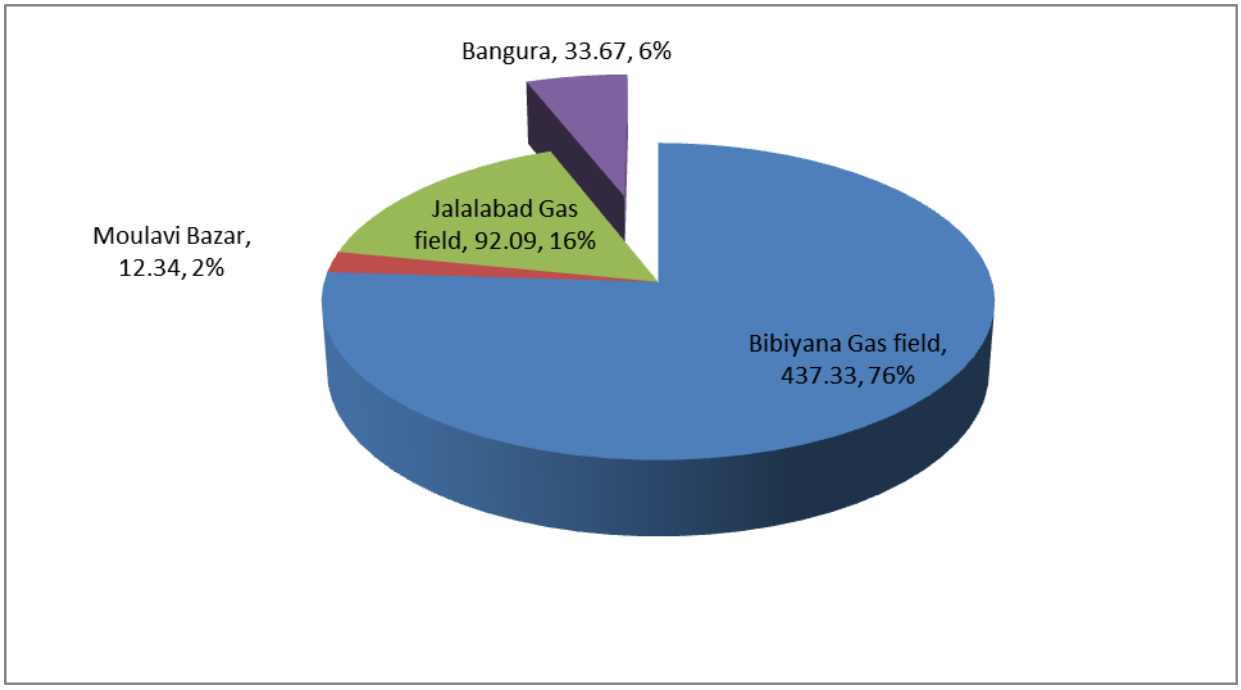


Table 11 : Field wise Gas Production by Chevron Operated Gad Fields in FY 2017-2018

[

SI No.	Name of Gas field	Total well	Production well	Suspended well	Bcf	MMcfd
1.	Bibiyana Gas field	26	26	0	437.33	1198.17
2.	Moulavi Bazar	9	6	3	12.34	33.82
3.	Jalalabad Gas field	9	7	2	92.09	252.30
	Total	44	39	5	541.77	1484.30

Source: HCU Data bank

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

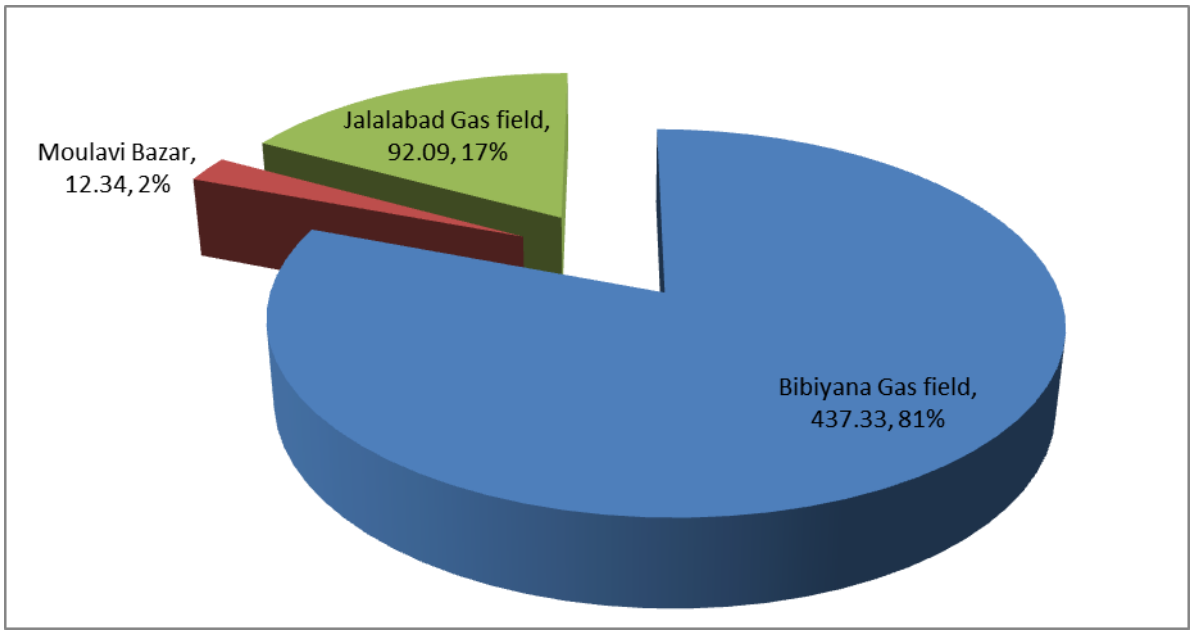


Table 12 : Field wise Condensate Recovery in FY 2017-2018

SI No.	Name of Gas field	Total well	Production well	Suspended well	bbl/year	bbl/month	bbl/day
1.	Begumganj	3	0	3	2262.10	188.51	6.20
2.	Shahbazpur	5	3	2	41.40	3.45	0.11
3.	Semutang	6	2	4	1708.46	142.37	4.68
4.	Fenchuganj	5	2	3	100.31	8.36	0.27
5.	Salda Nadi	4	1	3	34903.62	2908.64	95.63
6.	Srikail	4	3	1	15.88	1.32	0.04
7.	Sundalpur	2	1	1	279.60	23.30	0.77
8.	Rupgonj	1	0	1	2262.10	188.51	6.20
9.	Feni	5	0	5	Suspende	Suspended	Suspen
10	Meghna	1	1	0	7802.24	650.19	21.38
11	Narshingdi	2	2	0	16214.25	1351.19	44.42
12	Habiganj Gas field	11	7	4	4029.82	335.82	11.04
13	Bakhrabad	10	6	4	5416.00	451.33	14.84
14	Titas Gas field	27	26	1	158995.14	13249.59	435.60
15.	Kamta	1	0	1	Suspende	Suspended	Suspen
16	Bibiyana Gas field	26	26	0	3309131.1	275760.93	9066.1
.17	Moulavi Bazar	9	6	3	1029.76	85.81	2.82
.18	Jalalabad Gas field	9	7	2	396204.24	33017.02	1085.4
.19	Kailas Tila	7	4	3	204129.12	17010.76	559.26
20	Sylhet	8	1	7	11397.77	949.81	31.23
.21	Rashidpur	11	5	6	11725.74	977.15	32.13
.22	Beani Bazar	2	2	0	55024.69	4585.39	150.75
23	Chatak	1	0	1	Suspende	Suspended	Suspen
.24	Bangura	7	5	2	98880.00	8240.00	270.90
25	Sangu	9	0	9	Suspende	Suspended	Suspen
Total		176	110	66	4319291.2	359940.94	11833.

Source: HCU Data bank

Figure 13 : Field wise Condensate Recovery in BBL/Day

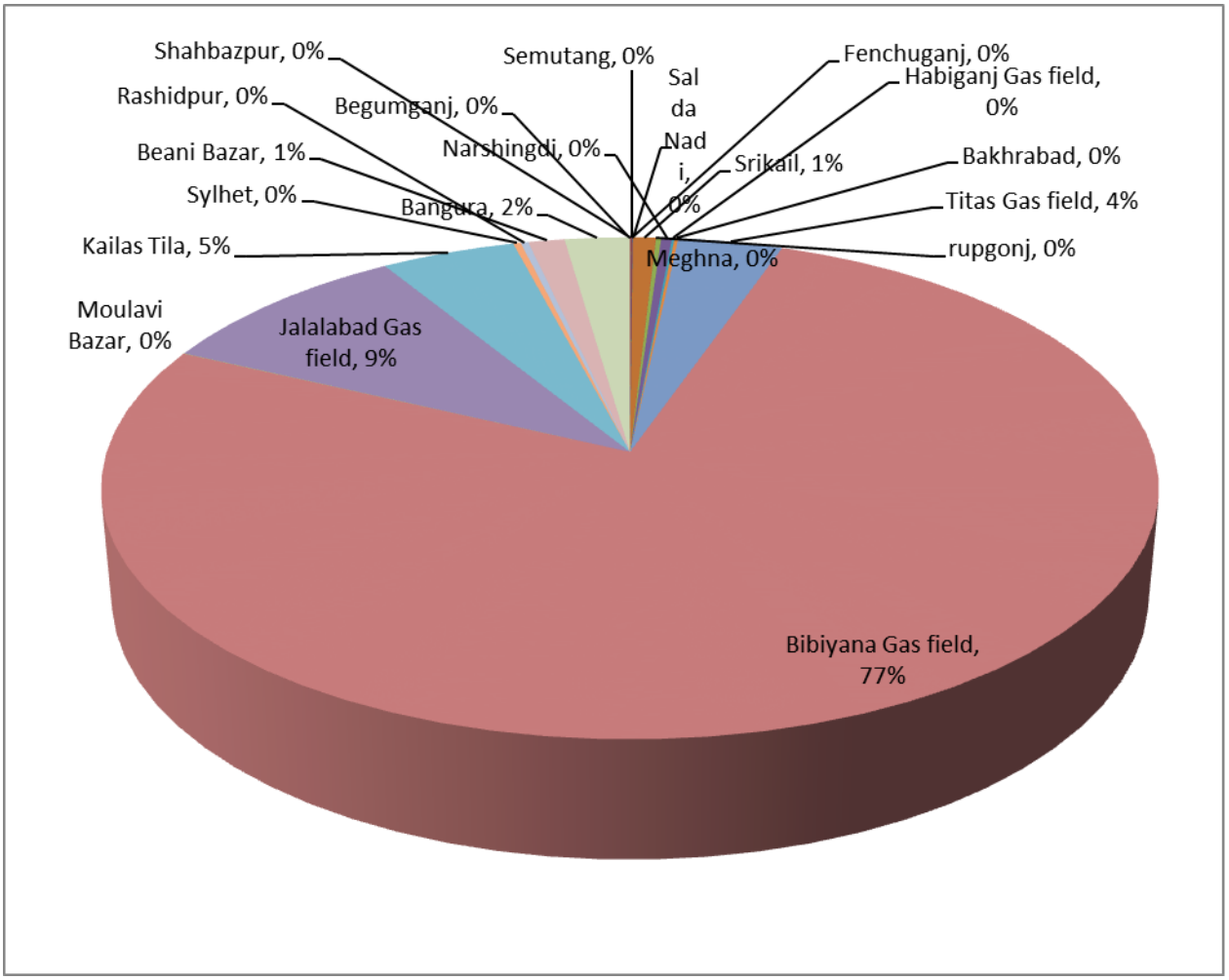


Table 13 : Comparison of Condensate Production by National Companies in FY 2017-2018

SI No.	Name of National Company	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	BAPEX	35	12	23	39311.37	3275.95	107.70
2.	BGFCL	52	42	10			
3.	SGFL	29	12	17	192457.45	16038.12	527.28
Total		116	66	50	514046.14	42837.18	1408.35

Source: HCU Data bank

Figure 14 : Comparison of Condensate production by National Companies

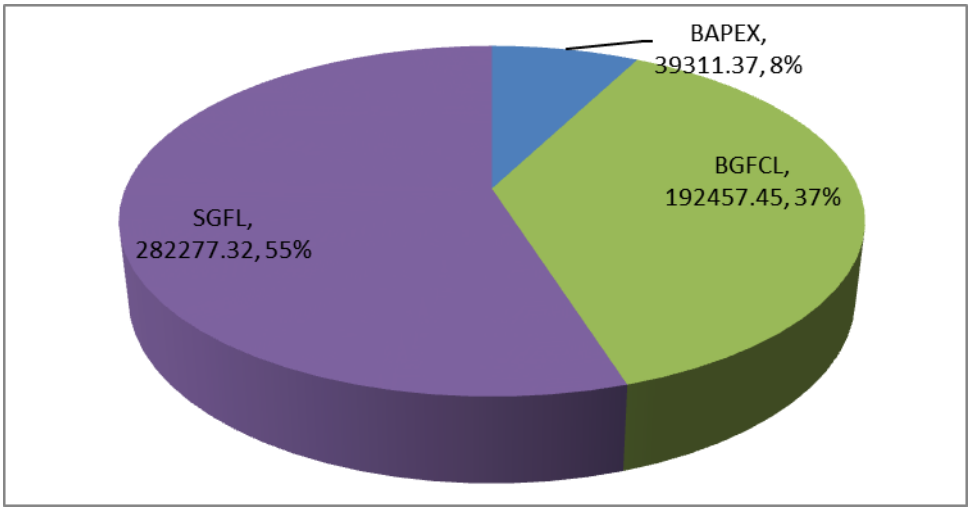


Table 14 : Comparison of Condensate Production by IOCs in FY 2017-2018

SI No.	Name of Company	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	Chevron	44	39	5	3706365.13	308863.76	10154.43
2.	Tullow	7	5	2	98880.00	8240.00	270.90
3.	Santos	9	0	9	Suspended	Suspended	Suspended
Total		60	44	16	3805245.13	317103.76	10425.33

Source: HCU Data bank

Figure 15 : Comparison of Condensate production by International Companies

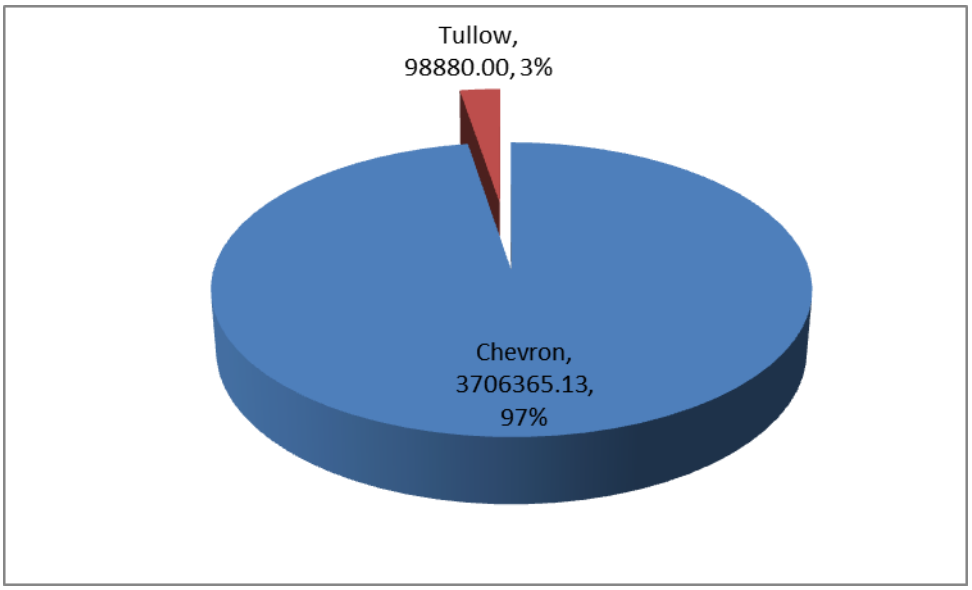


Table 15 : Field wise Condensate Production in BAPEX in FY 2017-2018

SI No.	Name of Gas field	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	Begumganj	3	0	3	0.00	0.00	0.00
2.	Shahbazpur	5	3	2	2262.10	188.51	6.20
3.	Semutang	6	2	4	41.40	3.45	0.11
4.	Fenchuganj	5	2	3	1708.46	142.37	4.68
5.	Salda Nadi	4	1	3	100.31	8.36	0.27
6.	Srikail	4	3	1	34903.62	2908.64	95.63
7.	Sundalpur	2	1	1	15.88	1.32	0.04
8.	Rupgonj	1	0	1	279.60	23.30	0.77
9	Feni	5	0	5	Suspended	Suspended	Suspended
Total		35	12	23	39311.37	3275.95	107.70

Source: HCU Data bank

Figure 16 : Field wise Condensate Production in BAPEX

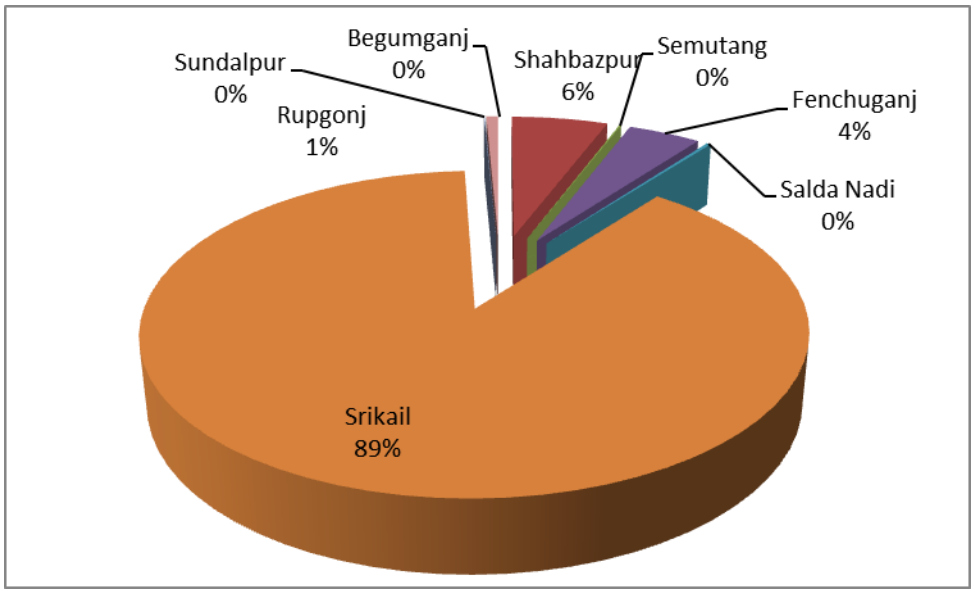


Table 16 : Field wise Condensate Production in BGFCL in FY 2017-2018

SI No.	Name of Gas field	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	Meghna	1	1	0	7802.24	650.19	21.38
2.	Narshingdi	2	2	0	16214.25	1351.19	44.42
3.	Habiganj	11	7	4	4029.82	335.82	11.04
4.	Bakhrabad	10	6	4	5416.00	451.33	14.84
5.	Titas Gas field	27	26	1	158995.14	13249.59	435.60
6.	Kamta	1	0	1	Suspended	Suspended	Suspended
Total		52	42	10	192457.45	16038.12	527.28

Source: HCU Data bank

Figure 17 : Field wise Condensate Production in BGFCL

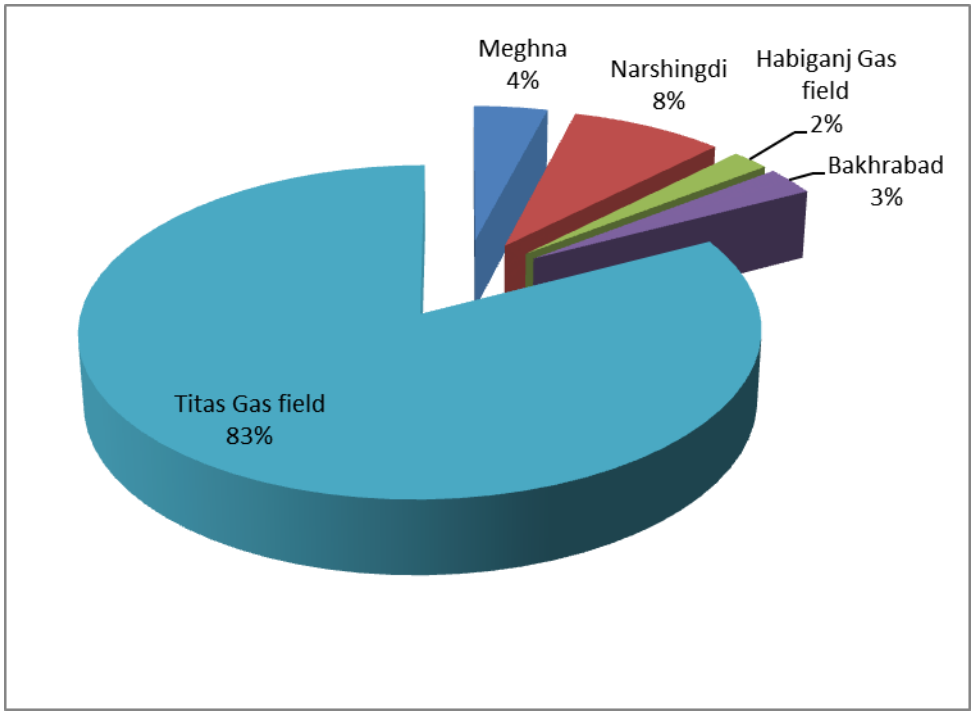


Table 17 : Field wise Condensate Productions in SGFL in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	Kailas Tila	7	4	3	204129.12	17010.76	559.26
2.	Sylhet	8	1	7	11397.77	949.81	31.23
3.	Rashidpur	11	5	6	11725.74	977.15	32.13
4.	Beani Bazar	2	2	0	55024.69	4585.39	150.75
5.	Chatak	1	0	1	Suspended	Suspended	Suspended
Total		29	12	17	282277.32	23523.11	773.36

Source: HCU Data bank

Figure 18 : Field wise Condensate Productions in SGFL

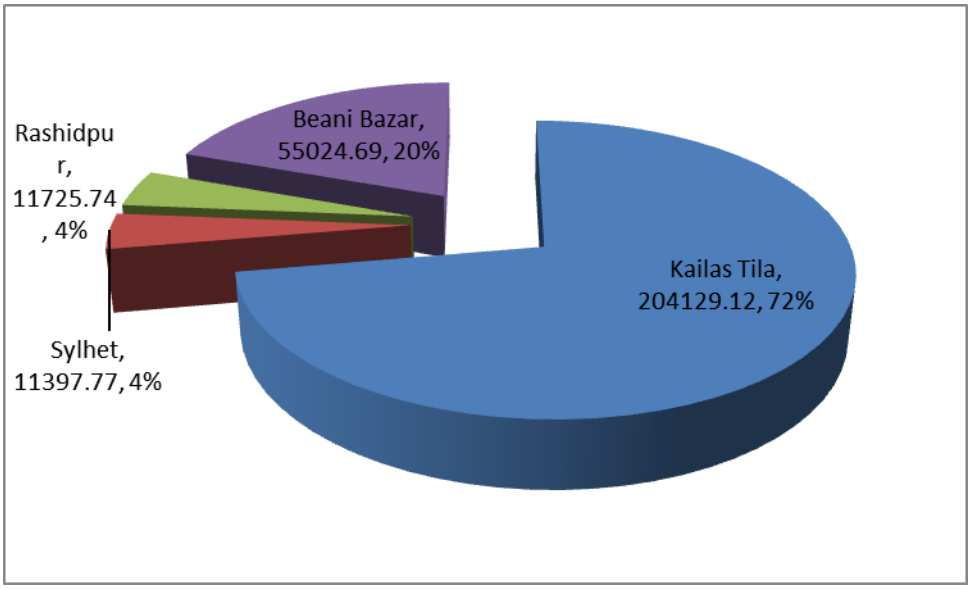


Table 18 : Field wise Condensate Production by IOCs in FY 2017-18

SI No.	Name of Gas field	Total well	Production well	Suspended well	BBL/Year	BBL/Month	BBL/Day
1.	Bibiyana	26	26	0	3309131.12	275760.93	9066.11
2.	Moulavi Bazar	9	6	3	1029.76	85.81	2.82
3.	Jalalabad Gas field	9	7	2	396204.24	33017.02	1085.49
4.	Bangura	7	5	2	98880.00	8240.00	270.90
5.	Sangu	9	0	9	Suspended	Suspended	Suspended
Total		60	44	16	3805245.13	317103.76	10425.33

Source: HCU Data bank

Figure 19 : Field wise Condensate Production by IOCs

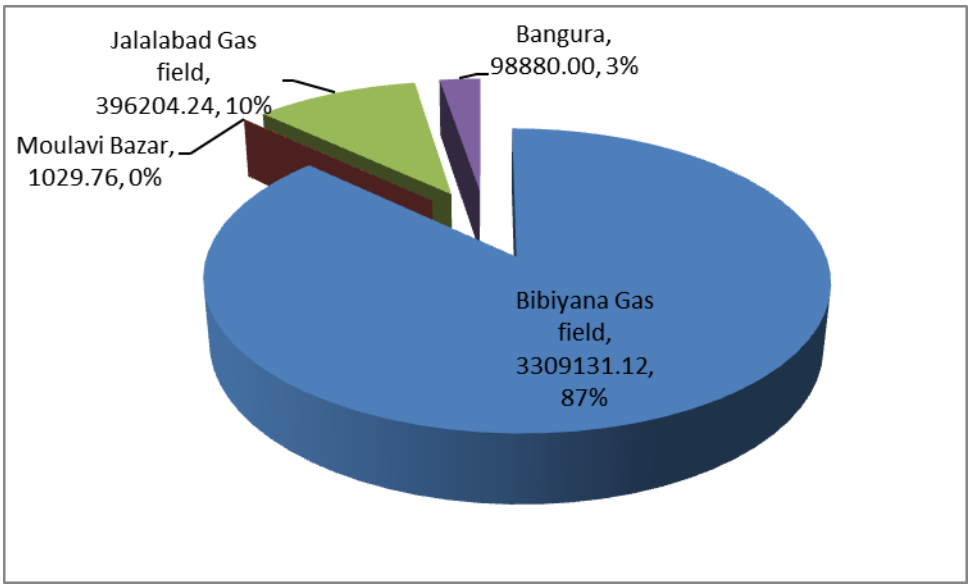
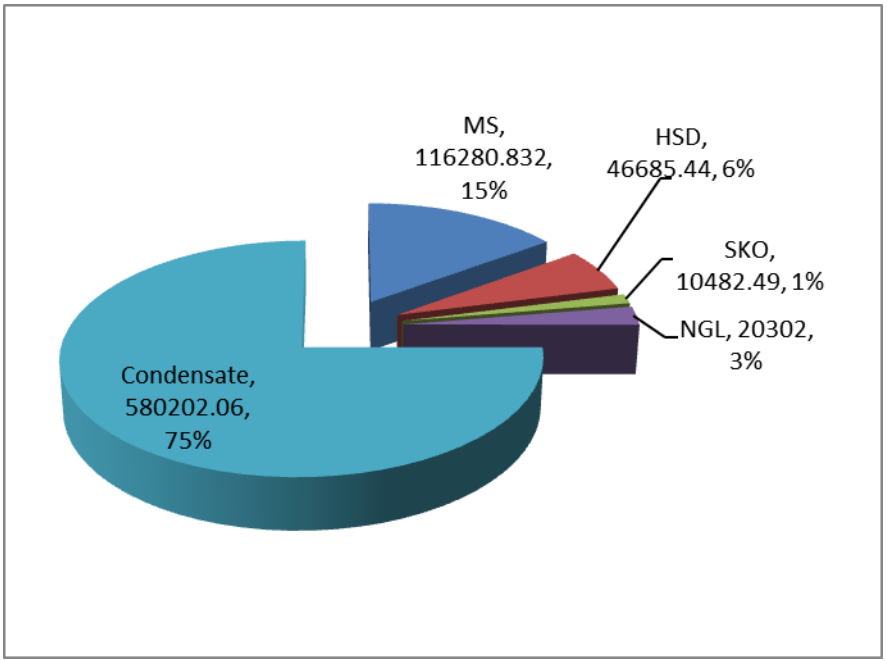


Table 19 : Annual Recovery of Liquid in 1000 Liter FY 2017-2018

SI	Name of Product	Liter
1.	MS	116280.832
2.	HSD	46685.44
3.	SKO	10482.49
4.	NGL	20302
5.	Condensate	580202.06
Total		**773952.82**

Source: MIS Report, Petrobangla

Figure 20 : Annual Recovery of Liquid in 1000 liter



6.0 Gas distribution scenario in the FY 2017-18 (till April)

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 (TGTDCL)
- 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:

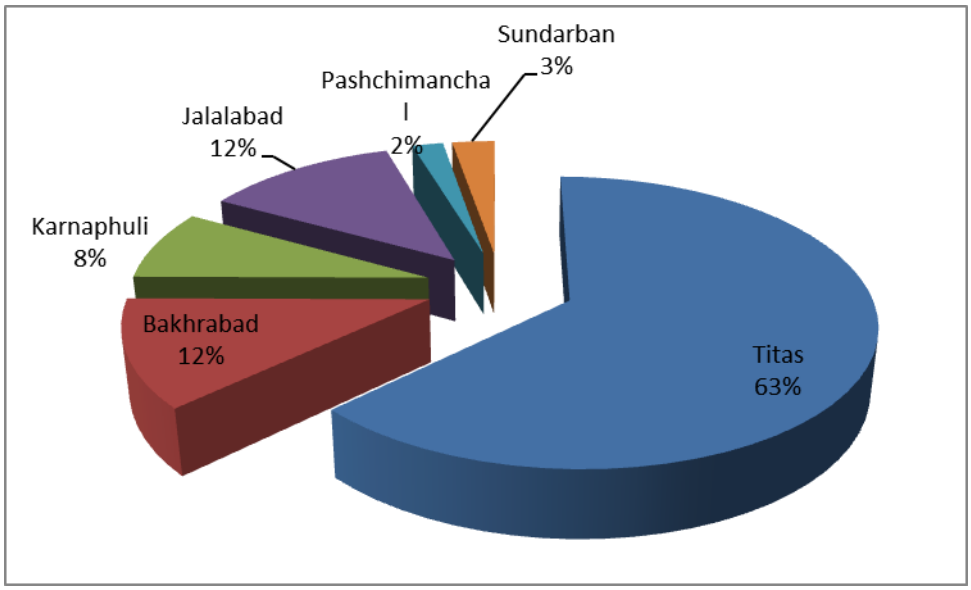
Amount of Gas purchase by different distribution companies from the production companies of Petrobangla & IOCs is shown below:

Table 20 : Amount of Gas Purchase by Distribution companies (till April)

Name	Titas	Bakhrabad	Karnaphuli	Jalalabad	Pashchimanchal	Sundarban	Total
MMCM	**14428.26**	2784.65	1823.61	2805.58	451.87	621.87	**22915.84**
BCF	509.46	98.33	64.39	99.07	15.96	21.96	809.16

Source: Petrobangla MIS Report

Figure 21 : Gas Purchase by Distribution Companies



6.2 Gas distribution in different sectors by distribution companies (till April):

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 (TGTDCL) (till April)

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	56.19622	4929.27	10.83731	1155.58	0	0	1.70971	103.96	0.24378	35.33
Non-Govt. organization	90.86863	11662.75	0	0	114.1369	29832.72	113.9776	24720.86	3.535696	1938.15
Total	**147.06484**	**16592.02**	**10.83731**	**1155.58**	**114.13693**	**29832.72**	**115.68728**	**24824.82**	**3.7794765**	**1973.48**

Consumer	Brick fields		CNG		Households		Total	
	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)
Govt. organization	0	0	0.208576	43.15	1.330092	624.01	70.526	6891.3
Non-Govt. organization	0	0	22.93678	20927.54	85.05558	21910.85	430.5112	110992.9
Total	**0**	**0**	**23.145352**	**20970.69**	**86.385668**	**22534.86**	**501.03718**	**117884.17**

Source: Petrobangla MIS Report

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

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	64.56222	5784.61	1.279281	98.27	0.008121	3.6	0	0.1	0	0.09
Non-Govt. organization	15.86443	1420.52	0	0	2.833981	810.06	1.793042	469.41	1.204777	193.33
Total	**80.426646**	**7205.13**	**1.27928 13**	**98.27**	**2.84210 19**	**813.66**	**1.79304 18**	**469.51**	**1.20477 72**	**193.42**

Consumer	Brick fields		Households		Tea		CNG		Total	
	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)
Govt. organization	0	0	0.423367	112.48	0	0	0	0	66.27299	5999.06
Non-Govt. organization	0	0	15.01522	3873.01	0	0	5.453983	4977.16	42.16544	12190.03
Total	**0**	**0**	**15.438591**	**3985.49**	**0**	**0**	**5.4539826**	**4977.16**	**108.43842**	**18189.09**

Souce: Petrobangla MIS Report

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

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	2.506657	230.34	6.833897	525.83	0.463267	147.38	0.992211	225.22	0.003531	0.5
Non-Govt. organization	4.982594	447.54	8.295731	2679.11	10.50296	3008.95	11.72928	3120.52	1.098847	573.33
Total	**7.489251**	**677.88**	**15.129629**	**3204.94**	**10.966227**	**3156.33**	**12.721487**	**3345.74**	**1.1023782**	**573.83**

Consumer	Brick fields		Households		Tea		CNG		Total	
	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)
Govt. organization	0	0	0.973144	261.67	0	0	0.061439	56.26	11.83415	1447.2
Non-Govt. organization	0	0	17.65712	4661.32	0.011299	3.07	4.326181	3936.01	58.60401	18429.85
Total	**0**	**0**	**18.630262**	**4922.99**	**0.0112992**	**3.07**	**4.3876206**	**3992.27**	**70.438154**	**19877.05**

Source: Petrobangla MIS Report

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

Consumer	Electricity		Fertilizer factory		Captive Power		Industries		Commercial	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	44.22277	3923.4	11.41276	1290	0.329619	63	0.27224	51.4	0	0
Non-Govt. organization	19.57763	1735.4	0	0	4.893436	1325.1	7.354861	1603.1	0.632791	295.2
Total	**63.8004**	**5658.8**	**11.41276**	**1290**	**5.223055**	**1388.1**	**7.627101**	**1654.5**	**0.632791**	**295.2**

Consumer	Brick fields		Households		Tea		CNG		Total	
	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)	Amount (Bcf)	Price (million taka)
Govt. organization	0	0	0	0	0	0	0.431135	103.7	56.5978	5434.5
Non-Govt. organization	0	0	0.788472	165.5	3.852144	3436.7	6.448277	1664.4	43.54772	10225.4
Total	**0**	**0**	**0.788472 3**	**165.5**	**3.8521 445**	**3436.7**	**6.879412**	**1768.1**	**100.14552**	**15659.9**

Source: Petrobangla MIS Report

Table 25 : Gas sell by Pashchimanchal Gas Company Limited (till April)

Consumer	Electricity		Captive Power		Industries		Commercial		CNG		Households		Total	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	6.8996093	633.91	0	0	0.0818133	22.39	0.0003531	0.21	0	0	0.1569883	43.79	7.1387639	700.31
Non-Govt. organization	1.85723538	323.67	1.1726451	347.33	1.12607121	268.26	0.1991484	102.09	2.00995113	1822.55	3.93314559	1038.48	10.2981968	3902.38
Total	8.75684469	957.58	1.1726451	347.33	1.20788448	290.65	0.1995015	102.3	2.00995113	1822.55	4.09013385	1082.27	17.4369608	4602.69

Source: Petrobangla MIS Report

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

Consumer	Electricity		Captive Power		Industries		Commercial		CNG		Households		Total	
	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)	Amount (Bcf)	Price (million Tk)
Govt. organization	21.7754651	1948.88	0	0	0	0	0	0	0	0	0	0	21.7754651	1948.88
Non-Govt. organization	0	0	0.037817	10.29	0.078847	21.67	0.003248	1.55	0	0	0.101339	25.72	0.221252	59.23
Total	21.7754651	1948.88	0.03781701	10.29	0.07884723	21.67	0.00324852	1.55	0	0	0.1013397	25.72	21.9967176	2008.11

Source: Petrobangla MIS Report

7.0 Gas consumption scenario in the FY 2017-18 (till April)

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

Table 27 : Sector wise Gas Consumption in FY 2017-18 (till April)

(1CM=35.31CF)

SI No.	Name of Specification	MMCM	Bcf	MMcfd
1.	Power	9326.36	329.31	902.23
2.	Industry	3939.84	139.12	381.14
3.	Captive	3803.69	134.31	367.97
4.	Fertilizer	1094.85	38.66	105.92
5.	Commercial	196.04	6.92	18.96
6.	Domestic	3724.87	131.53	360.34
7.	CNG	1100.23	38.85	106.44
8.	Tea estate	22.65	0.80	2.19
Total		**23208.52**	819.49	2245.19

Source: MIS Report, Petrobangla

Figure 22 : Sector wise Gas Consumption

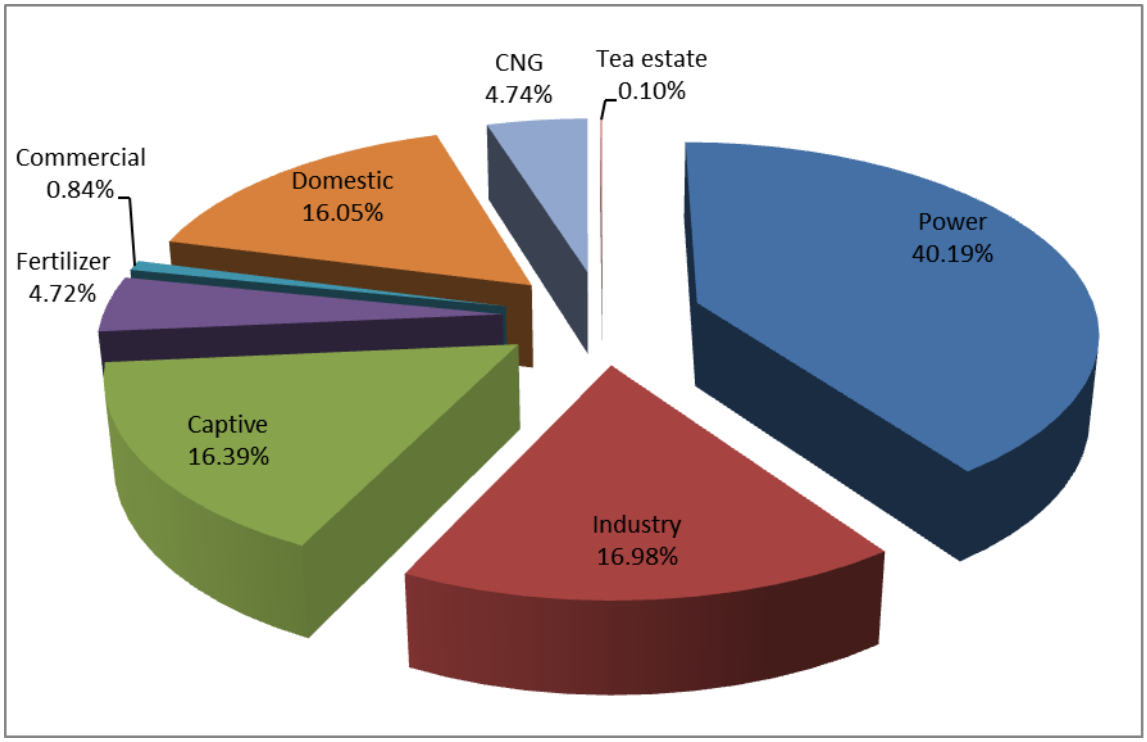
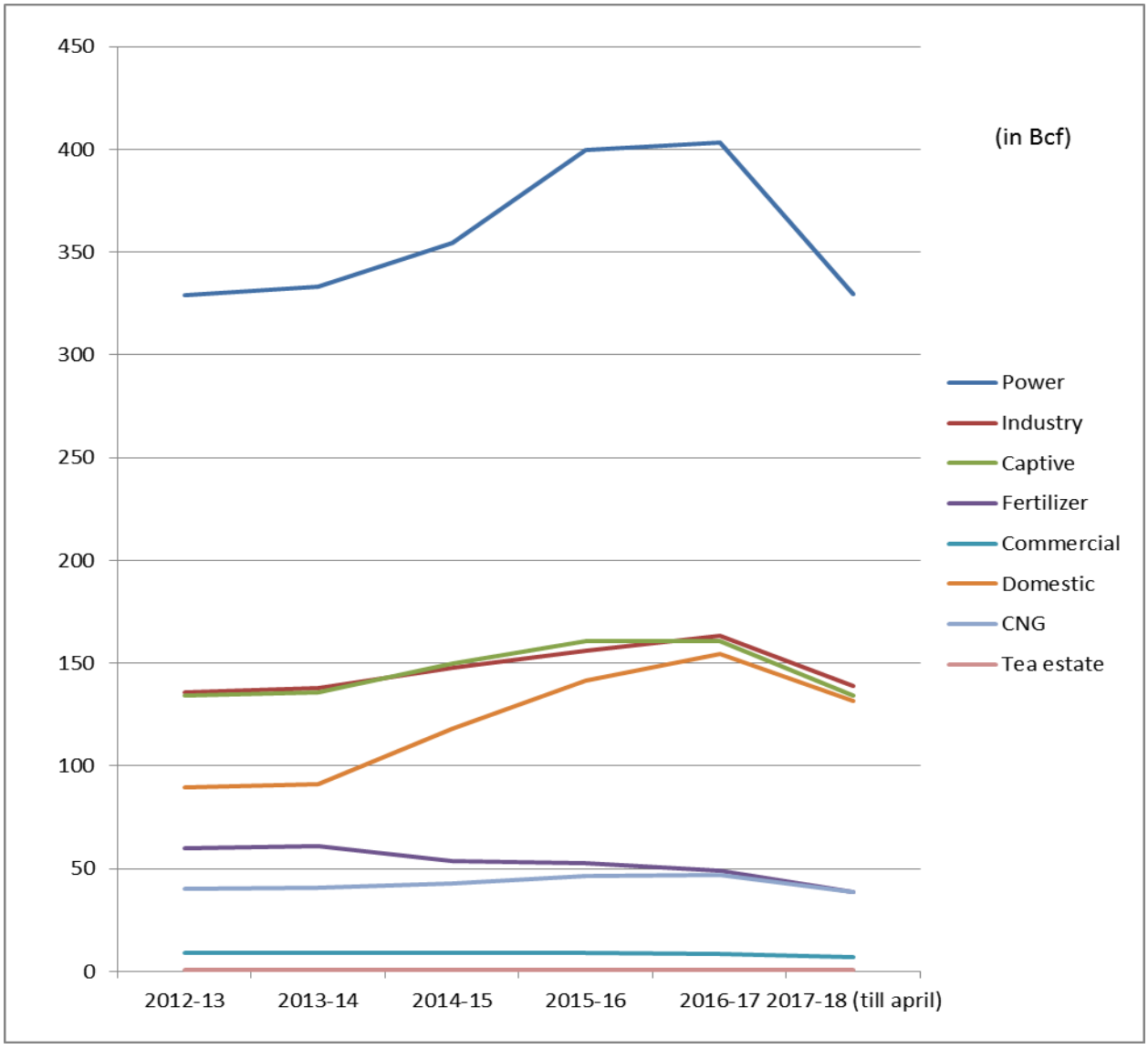


Table 28 : Fiscal Year Sector wise Gas Consumption (till April)

(in Bcf)

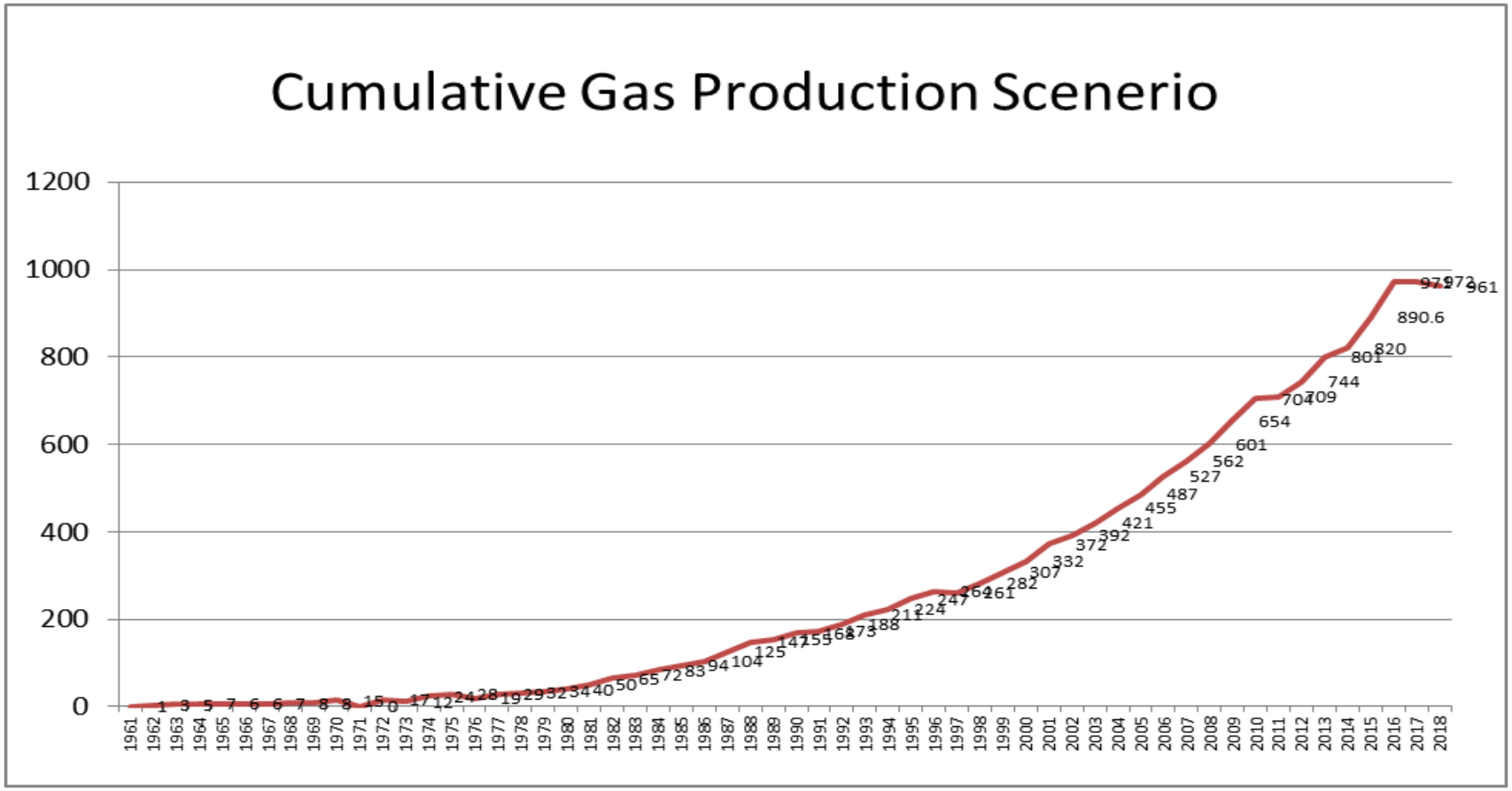
Fiscal Year	Power	Industry	Captive	Fertilizer	Commercial	Domestic	CNG	Tea estate	**Total**
2012-13	328.80	135.72	134.12	59.94	8.80	89.73	40.15	0.79	**798.05**
2013-14	333.37	137.61	135.98	60.78	8.93	90.98	40.70	0.80	**809.15**
2014-15	354.71	147.70	150.02	53.81	9.09	118.17	42.92	0.80	**877.22**
2015-16	399.59	155.98	160.83	52.62	8.98	141.44	46.46	0.91	**966.81**
2016-17	403.51	163.10	160.48	49.10	8.65	154.40	46.95	0.97	**987.16**
2017-18(till April)	329.31	139.12	134.31	38.66	6.92	131.53	38.85	0.80	**819.49**

Figure23: Fiscal Year Sector wise Gas Consumption (till April)



8.0 Cumulative Gas Production Scenario

Figure24 : Gas production from the beginning till now



9.0 Gas production against the demand of Bangladesh From 2009 to 2018

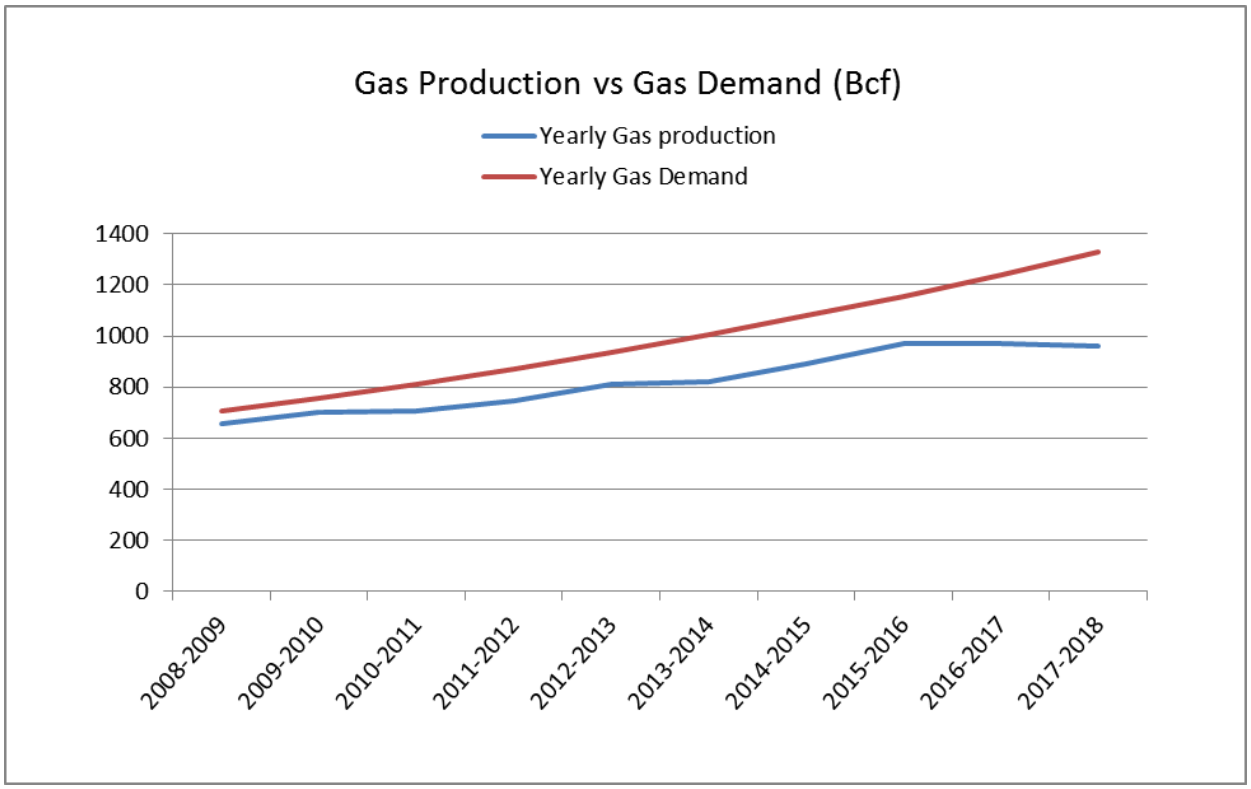
Table 29 : Production vs Demand

Fiscal Year	Yearly Gas Production (Bcf) *	Daily Average Gas Production (MMcfd)*	Yearly Gas Demand (Bcf) **	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
2015-2016	971.54	2661.75	1156.69	3169
2016-2017	972.06	2663.20	1241.00	3400
2017-2018	960.77	2632.25	1331.89	3649

(*) 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 25 : Production vs Demand from 2009-2018

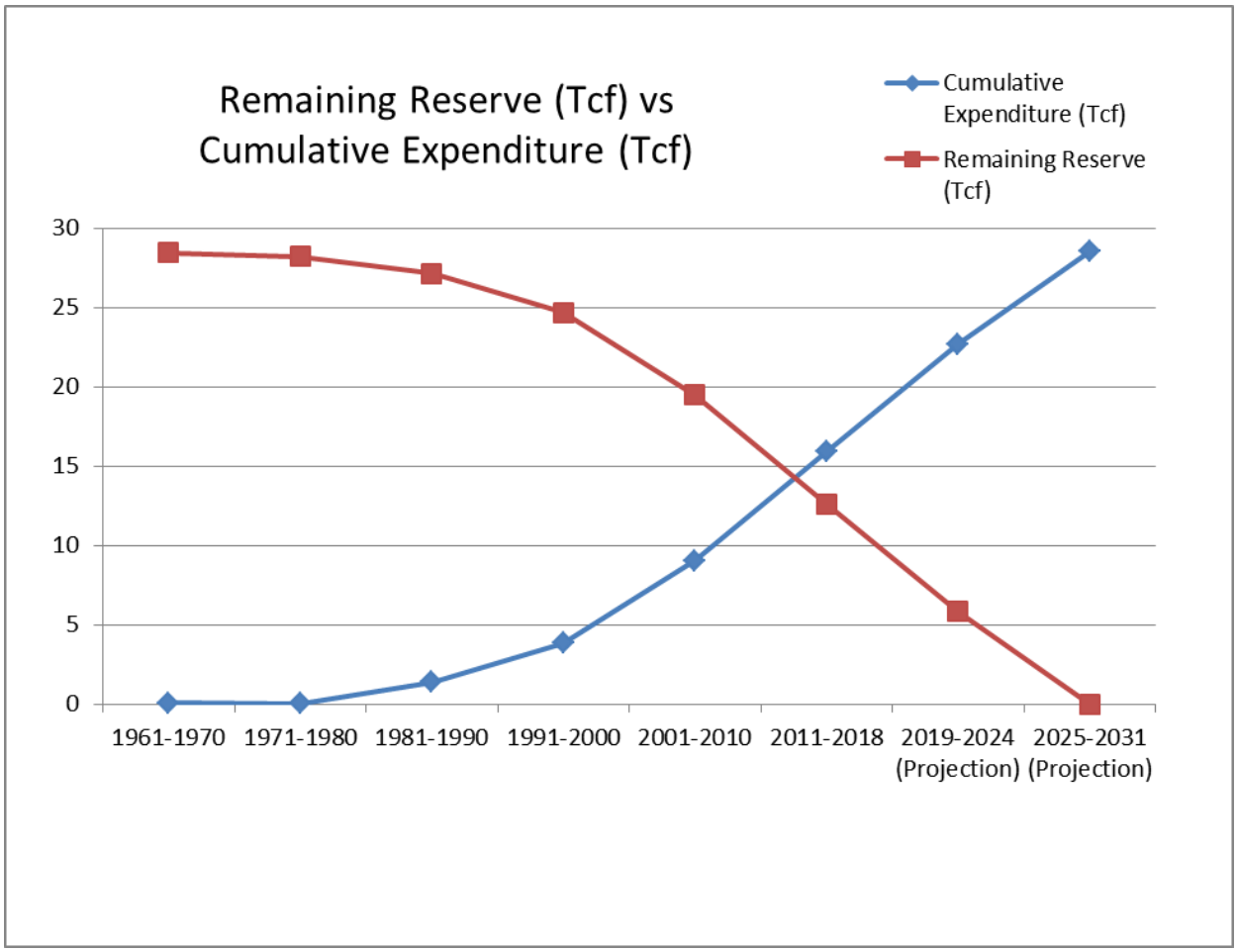


10. Gas remaining reserve against expenditure of Bangladesh from 1961-2031

Table 30 :Gas remaining Reserve vs Expenditure

Year	Expenditure (Tcf)	Remaining (Tcf)
Recoverable(Proven+Probable)	0.000	28.52
1961-1970	0.066	28.45
1971-1980	0.235	28.22
1981-1990	1.063	27.16
1991-2000	2.489	24.67
2001-2010	5.175	19.49
2011-2018	6.87	12.62
2019-2024 (Projection)	6.804 (Projection)	5.816
2025-2031 (Projection)	5.816 (Projection)	0.00

Figure 26: Remaining Reserve (Tcf) vs Cumulative Expenditure (Tcf)



আসুন, যানবাহনসমূহকে অটোগ্যাসে রূপান্তর করি...
জাতীয় সম্পদ প্রাকৃতিক গ্যাস সাশ্রয় করি...

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"Energy misused, cannot be excused"

-আমাদের ঘরে যদি এখনো কয়েল স্টার্টার যুক্ত টিউবলাইট থেকে থাকে, আসুন আজই LED টিউবলাইট দ্বারা প্রতিস্থাপন করি।

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১। LPG ব্যবহার করুন..
অবৈধ গ্যাস সংযোগ থেকে বিরত থাকুন
২। CNG নয়, অকটেন দিয়ে গাড়ি চালান...
গাড়ির ইঞ্জিনের আয়ুষ্কাল বাড়ান

চলুন আজই যানবাহনসমূহ AUTO GAS (LPG) এ রূপান্তর করি...

* CNG এর তুলনায় LPG কনভার্শনে ৫০% কম খরচ হয়
* ৩-৫ মিনিটে ট্যাংকে ফুয়েল ভর্তি হয়, লম্বা লাইনে দাঁড়িয়ে অপেক্ষা করার প্রয়োজন পরে না
* CNG এর তুলনায় সিলিন্ডারে জায়গা, ওজন ও প্রেশার কম দরকার
* রক্ষণাবেক্ষণের খরচ কম
* পেট্রোলের তুলনায় AUTO GAS -এ খরচ প্রায় ৫০% কম
* গ্যাসোলিন ও ডিজেলের তুলনায় নিঃসরণ কম

Hydrocarbon Unit

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