স্মার্ট বাংলাদেশের প্রত্যয়
জ্বালানির সাশ্রয়

ANNUAL REPORT ON

GAS PRODUCTION, DISTRIBUTION AND CONSUMPTION

2022-23

HYDROCARBON UNIT
Energy and Mineral Resources Division

P r e f a c e

Annual Report entitled Gas Production, Distribution 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, Distribution and Consumption for the period of July 2022 to June 2023. 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.gov.bd

Md. Shameem Khan
Director General

Summary

Annual gas production, Distribution and Consumption 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 2022-23 fiscal year total production of gas logged 803.61 Bcf and daily average production was 2201.67 MMcfd. During the year well wise maximum daily gas production was 1139.86 MMcfd and well wise minimum gas production was 0.69 MMcfd. During this period Total gas consumption was 932.275 BCF and power sector was the highest consumer (389.376 BCF)

Production is little lower than previous year. In 202121-22 fiscal year total gas production was 841.99 Bcf and daily average production 2306.83 MMcfd. In 2022-23 decrease of annual gas production was 35.66 Bcf and daily gas production was 97.70 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 84 percent (1849.85 MMcfd out of total daily gas production is 2201.67 MMcfd)

During the year 105 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 105 wells were flowing. During this year National Companies produced 300.70 Bcf gas from 66 wells which equals to 823.85 MMcfd. Minimum gas production was recorded from Semutang gas field (0.69 MMcfd).

Chevron and Tullow Oil these two international companies remained active during the period. IOCs production logged 502.91 Bcf which equals to 1377.82 MMcfd.

Report on annual gas production of this year 2022-23 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 2023) of Petrobangla.

In the current year four gas fields, Bibiyana, Titas, Jalalabad and Habiganj gas fields produced 675.19 Bcf gas and average gas production was 1849.85 MMcfd. Remaining 128.42 Bcf gas is produced by 16 gas fields.

At present, a total capacity of 1000 mmcfd LNG is added to the national grid. In 2022-23 fiscal year total 203.42 BCF LNG was inported.

During the year total condensate production was 2736941.46 bbl. Bibiyana gas field produced 1941431.45 bbl which was highest among the gas fields. Production is little higher than previous year. In 2021-22 fiscal year total condesate production was 2,565,664.54 bbl. In 2022-23 increase of annual condensate production was 171,276.92 bbl.

National Companies produced 443565.59 bbl condensate from 66 wells. Maximum condensate production was recorded from Kailastila gas field (145165.00 bbl). At the same time IOCs production logged 2294735.58 bbl.

Power sector was the highest consumer of natural gas (389.376 Bcf) followed by Industry (178.731 Bcf) and Captive (164.272 Bcf).

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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.

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 fromUSSR (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 decade new gas discoveries were made by both national and international companies.

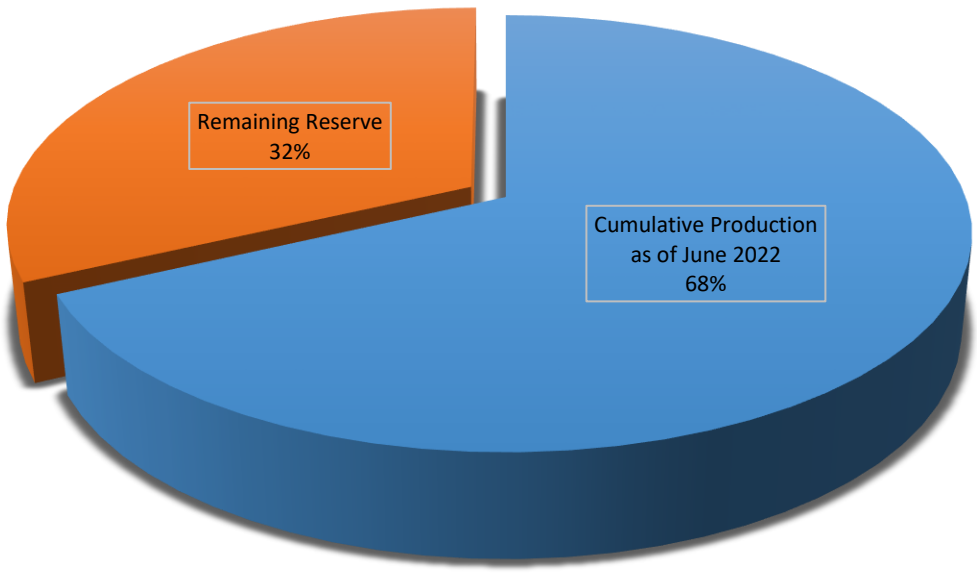
2.0 Gas Reserve and LNG

2.1 Gas Reserve and Production up to June 2023

Table 1: Reserve and Production up to June 2023 at a glance

Gas Initially in Place (Proven + Probable)	40,092.19 Bcf	40.09 Tcf
Recoverable (Proven + Probable)	29,926.10 Bcf	29.93Tcf
Cumulative Production as of June 2023	20,353.41 Bcf	20.35 Tcf
Remaining Reserve	9,573.09 Bcf	9.57 Tcf

Figure 1: Cumulative production of Natural Gas Vs Remaining Reserve



Cumulative production of Natural Gas Vs Remaining Reserve

2.2 Liquefied Natural Gas (LNG)

To meet the growing energy demand of the country, the government initiated the import of LNG from abroad. At present, a total capacity of 1000 mmcfd LNG is added to the national grid. Since August 2018, total 974.84 Bcf LNG is added to the national grid.

- Agreement with Excelerate Energy, Singapore has been signed for setting up FSRU. Already, floating LNG terminal of capacity daily 500 mmcf re-gasified LNG has been installed in Maheshkhali in Cox's Bazar district. SUMMIT LNG Terminal Co. (Pvt) Ltd. has signed the Agreement (BOOT) to set up FSRU at Maheshkhali in Cox's Bazar district with a capacity of supplying daily 500 mmcf re-gasified LNG.

Table 2: LNG Import up to June 2023 at a glance

Total LNG Import in June 2023	25.70	Bcf	0.03	Tcf
Cumulative LNG Import from August 2018 to June 2023	**978.84**	**Bcf**	**0.98**	**Tcf**
Cumulative LNG Import from July 2022 to June 2023	**203.42**	**Bcf**	**0.20**	**Tcf**

3.0 Gas Productions: (National Gas Producing Companies)

Three national and two international companies produced 803.61 Bcf gas and well wise average daily gas production was 2201.67 MMcfd. During this year decrease in gas production was 35.66 Bcf and daily average gas production was 97.70 MMcfd.

Out of total production national companies share was 823.85 MMcfd. Total production of national companies during the year was 300.70 Bcf. In the past year total production by national companies was 308.17 MMcfd. 66 wells were open for production during the year.

Out of total production IOCs share was 1377.82 MMcfd. Total production of IOCs during the year was 502.91 Bcf. IOCs produced this volume of gas using 39 wells. During this year maximum gas production was recorded from Bibiyana Gas field.

Table (Below) compares company wise gas production for 2022-23.

Year of Production	BAPEX (MMcfd)	BGFCL (MMcfd)	SGFL (MMcfd)	Chevron (MMcfd)	Tullow (MMcfd)	Total (MMcfd)
2022-23	132.27	599.12	92.45	1330.46	47.37	2201.67

During the year maximum condensate recovery was 5318.99 bbl/day from Bibiyana gas field. Jalalabad gas field occupied second position and daily condensate recovery was 829.15 bbl/day. Condensate recovery from Kailas Tila gas field was 397.71 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
2022-23	300659.167	17581.697	0	434523.926	22451.606

In 2022-23 fiscal year BAPEX, BGFCL and SGFL operating 20 gas fields in the country. Among them 16 fields are in production and 4 fields are suspended. During the year total production of national companies logged 300.70 Bcf, which equals to 823.85 MMcfd. National companies produced through 66 wells i.e., average well wise production was 12.48 MMcfd.

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 and Rupgonj are 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 48.28 Bcf gas and daily average gas production rate 132.27 MMcfd. During the year 64209.16 bbl condensate was recovered.

3.1.1 Begumganj Gas Field:

During the year this field produced 2.96 Bcf gas and daily average gas production rate of 8.10 MMcfd. In addition to gas, from this field during the year 819.00 bbl condensate was recovered.

3.1.2 Fenchuganj Gas Field:

During the year this field produced 4.78 Bcf gas and daily average gas production rate of 13.08 MMcfd. In addition to gas, from this field during the year 3043.00 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 1.46 Bcf and daily average gas production rate of 4.00 MMcfd. In addition to gas, from this field during the year 726.96 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 21.91 Bcf and daily average gas production rate of 60.03 MMcfd. In addition to gas, 2533.60 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 0.25 Bcf and daily average gas production rate of 0.69 MMcfd.

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 2.89 Bcf and daily average gas production rate of 7.91 MMcfd. In addition to gas, from this field during the year 144.60 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 14.04 Bcf and daily average gas production rate of 38.45 MMcfd. In addition to gas, from this field during the year 56942.00 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:

This field is suspended since November 2017.

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.

Bhola North (2018) and Jokiganj (2021) gas fields are two new discoveries by BAPEX. These two gas fields are not yet in commercial production.

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 218.68 Bcf and daily average gas production rate of 599.12 MMcfd. In term of gas reserve, Titas is the largest gas field of the country. During the year 144800.00 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 143.14 Bcf and daily average gas production rate 392.16 MMcfd. In addition to gas, 112936.00 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 52.38 Bcf and daily average gas production rate of 143.50 MMcfd. In addition to gas, from this field during the year 2346.00 bbl condensate was recovered.

3.2.3 Bakhrabad Gas Field:

During the year this field gas produced 12.51 Bcf and daily average gas production rate of 34.26 MMcfd. In addition to gas, from this field during the year 14169.00 bbl condensate was recovered.

3.2.4 Narshingdi:

During the year this field produced 9.46 Bcf gas and daily average gas production rate of 25.92 MMcfd. In addition to gas, from this field during the year 13212.00 bbl condensate was recovered.

3.2.5 Meghna Gas Field:

During the year this field gas produced 1.20 Bcf and daily average gas production rate 3.28 MMcfd. Gas production rate was quite stable. In addition to gas, from this field during the year 2137.00 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 (SGFL) :

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 33.74 Bcf and average daily gas production rate of 92.45 MMcfd. During the year 234556.43 bbl condensate was recovered. Brief description of the gas fields is provided below.

3.3.1 Kailas Tila gas field:

This is the main producer of SGFL. During the year this field gas produced 11.64 Bcf and average gas production rate of 31.90 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 145165.00 bbl condensate was recovered.

3.3.2 Rashidpur Gas Field:

During the year this field gas produced 16.01 Bcf and average gas production rate of 43.87 MMcfd. In addition to gas, from this field during the year 14085.48 bbl condensate was recovered.

3.3.3 Beani Bazar Gas Field:

During the year this field gas produced 4.10 Bcf and average gas production rate of 11.24 MMcfd. In addition to gas, from this field during the year 62663.00 bbl 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 1.99 Bcf and average gas production rate of 5.44 MMcfd. In addition to gas, from this field during the year 12642.95 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 and Tullow are two international oil and gas companies (IOCs) operating in the country. During the year Chevron and Tullow gas produced 502.91 Bcf and average daily gas production rate of 1377.82 MMcfd. In average per well gas production of IOCs wells is much higher than that of the national companies. IOCs produce 1377.82 MMcfd using 39 wells and average per well production of IOCs well is 35.33 MMcfd. During the year 2294735.58 bbl condensate was recovered by the IOCs and average daily recovery of condensate was 6286.95 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 485.62 Bcf and average daily gas production was 1330.46 MMcfd. In addition to gas, this company producer 2244905.58 bbl condensate was recovered.

4.1.1 Bibiyana Gas field:

During the year Bibiyana Gas field gas Produced 416.05 Bcf and average daily gas production rate of 1139.86 MMcfd. In addition to gas, from this field during the year 1941431.45 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 63.63 Bcf and average daily gas production rate of 174.32 MMcfd. In addition to gas, from this field during the year 302638.00 bbl condensate was also recovered.

4.1.3 Moulavi Bazar gas field:

During the year Moulavi Bazar gas field gas produced 5.94 Bcf and average daily gas production rate of 16.27 MMcfd. In addition to gas, from this field during the year 836.13 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 17.29 Bcf and average daily gas production rate of 47.37 MMcfd. In addition to gas, from this field during the year 49830.00 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 (Total Scenario):

During the year gas production has been recorded 803.61 Bcf and average daily gas production was 2201.67 MMcfd. Sector wise gas consumption during the year 932.275 Bcf (including LNG) and average daily gas supply rate of 2554.179 MMcfd is shown in Table 29 and Figure 22.

Table 3: Company wise Gas Production in FY 2022-23

SI No.	Name of Company	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	BAPEX	35	16	15	1	48.28	132.27
2.	BGFCL	51	51	38	13	218.68	599.12
3.	SGFL	29	22	13	9	33.74	92.45
4.	Chevron	44	44	34	10	485.62	1330.46
5.	Tullow	7	7	5	2	17.29	47.37
6	Santos	9	5	0	5	Suspended	Suspended
Total		175	**145**	**105**	**40**	803.61	2201.67

Source: HCU Data bank

Figure 2: Company wise Gas Production

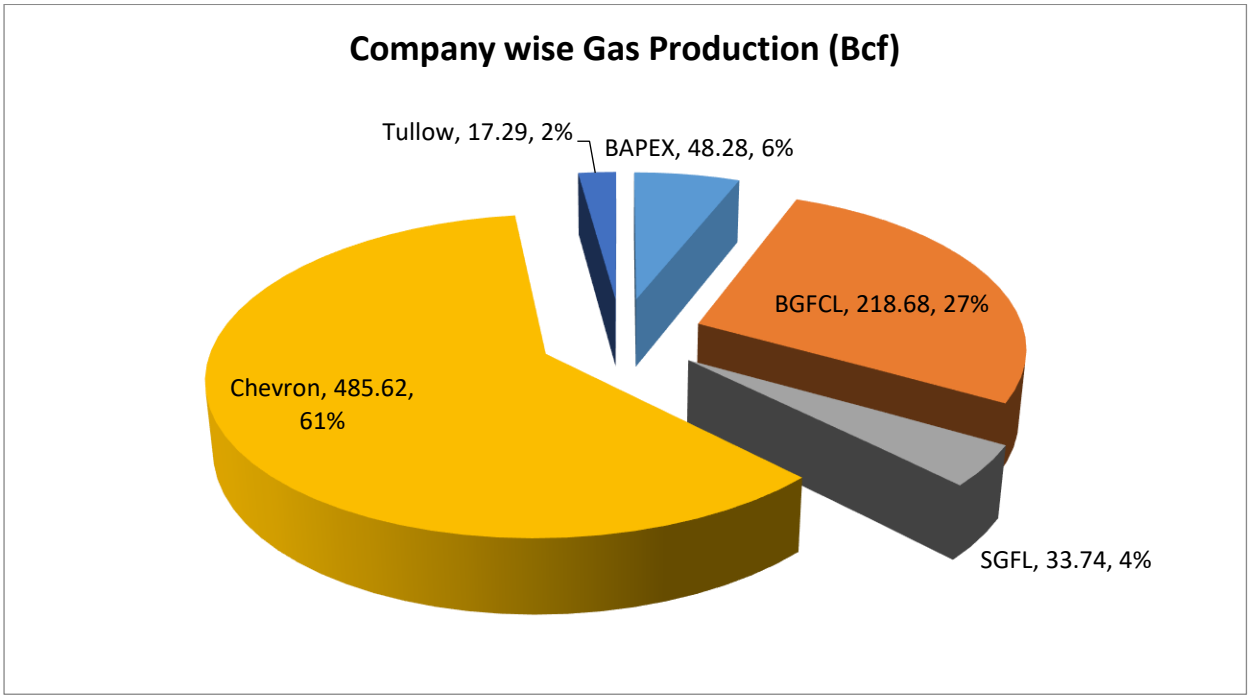


Table 4: Field wise Gas Production in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	1	1	0	2.96	8.10
2.	Shahbazpur	5	4	3	1	21.91	60.03
3.	Semutang	6	1	1	0	0.25	0.69
4.	Fenchuganj	5	2	2	0	4.78	13.08
5.	Salda Nadi	4	3	3	0	1.46	4.00
6.	Srikail	4	4	4	0	14.04	38.45
7.	Sundalpur	2	1	1	0	2.89	7.91
8.	Rupgonj	1	0	0	0	Suspended	Suspended
9.	Feni	5	5	0	5	Suspended	Suspended
10.	Meghna	1	1	1	0	1.20	3.28
11.	Narshingdi	2	2	2	0	9.46	25.92
12.	Habiganj Gas field	11	11	7	4	52.38	143.50
13.	Bakhrabad	9	10	6	4	12.51	34.26
14.	Titas Gas field	27	26	22	4	143.14	392.16
15.	Kamta	1	1	0	1	Suspended	Suspended
16.	Bibiyana Gas field	26	26	26	0	416.05	1139.86
17.	Moulavi Bazar	9	9	2	7	5.94	16.27
18.	Jalalabad Gas field	9	9	6	3	63.63	174.32
19.	Kailas Tila	7	7	3	4	11.64	31.90
20.	Sylhet	8	5	3	2	1.99	5.44
21.	Rashidpur	11	8	5	3	16.01	43.87
22.	Beani Bazar	2	2	2	0	4.10	11.24
23.	Chatak	1	0	0	0	Suspended	Suspended
24.	Bangura	7	7	5	2	17.29	47.37
25.	Sangu	9	0	0	0	Suspended	Suspended
Total		**175**	**145**	**105**	**40**	803.61	2201.67

Source: HCU Data bank

Figure 3: Field wise Gas Production

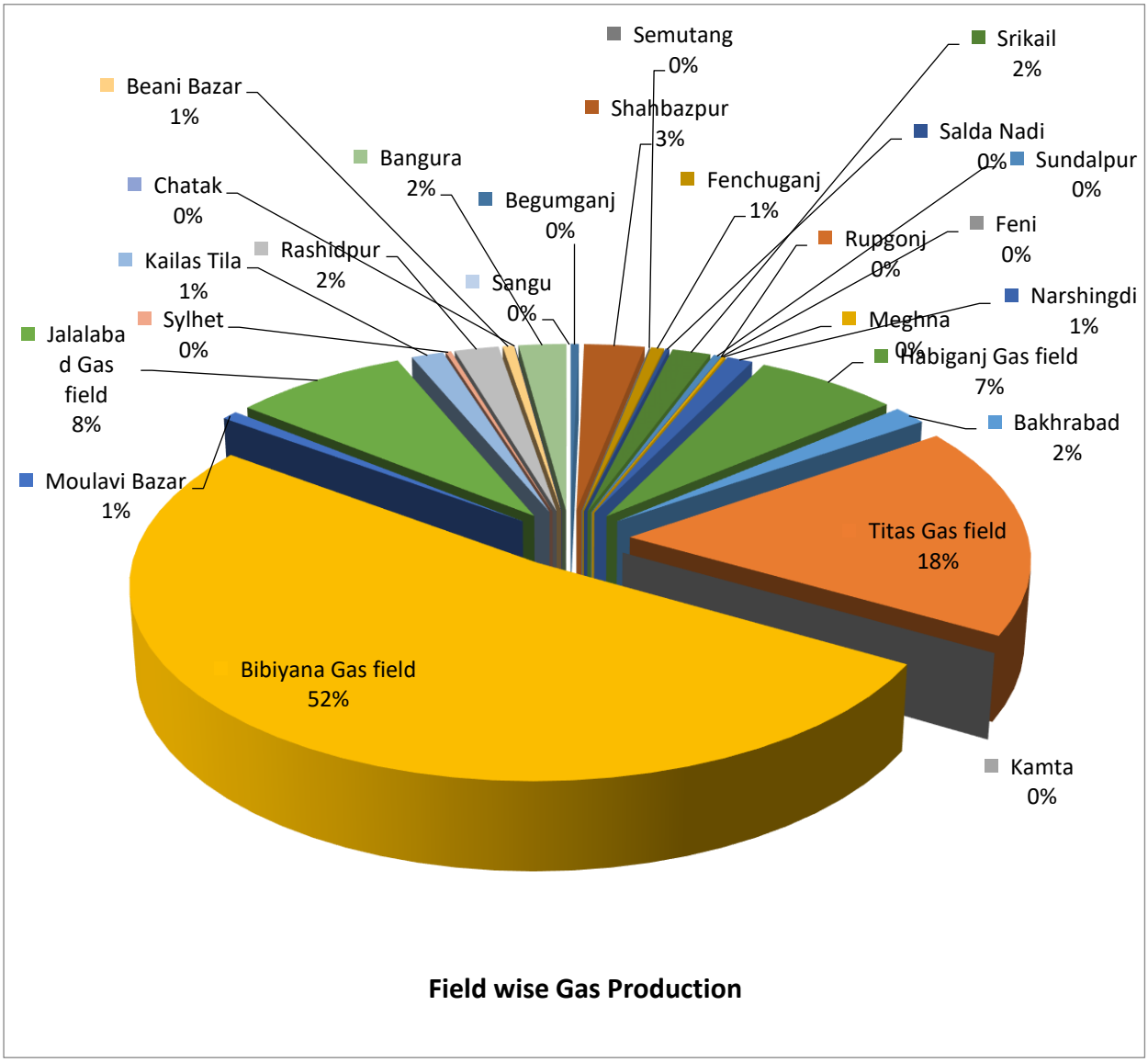


Table 5: Major four (4) Gas producing fields in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Habiganj Gas field	11	11	7	4	52.38	143.50
2.	Titas Gas field	27	26	22	4	143.14	392.16
3.	Bibiyana Gas field	26	26	26	0	416.05	1139.86
4.	Jalalabad Gas field	9	9	6	3	63.63	174.32
Total		73	72	61	11	675.19	1849.85

Source: HCU Data bank

Figure 4: Major four (4) Gas producing fields

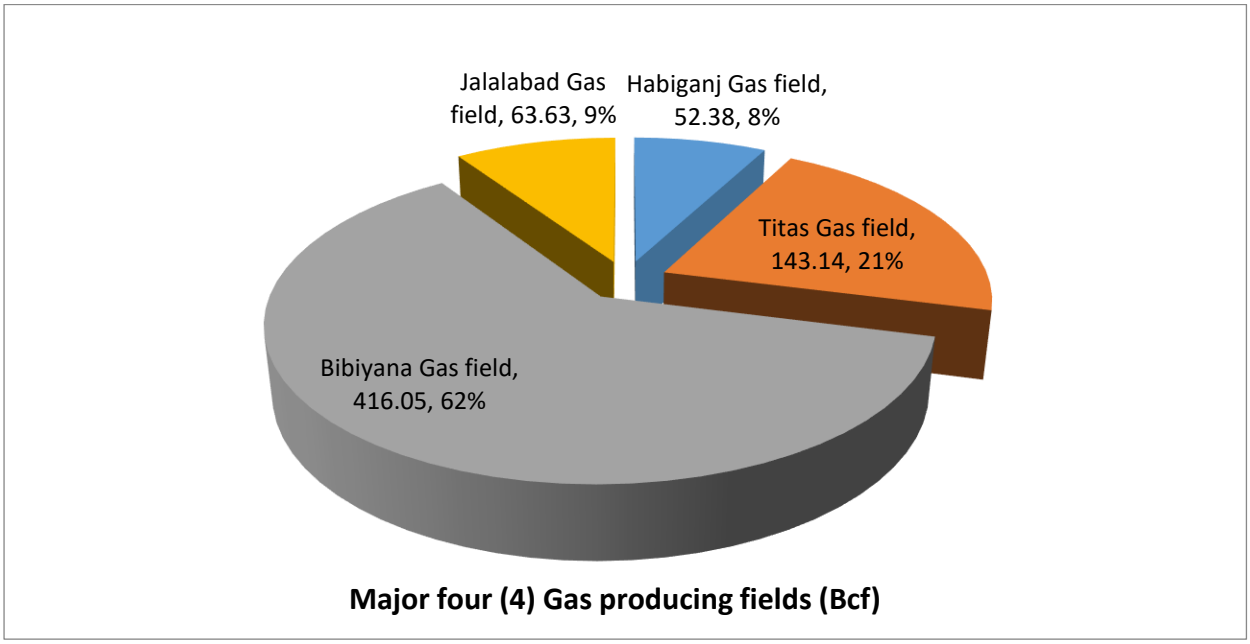


Table 6: Comparison of Annual Gas Production by National Companies in FY 2022-23

SI No.	Name of National Company	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	BAPEX	35	16	15	1	48.28	132.27
2.	BGFCL	51	51	38	13	218.68	599.12
3.	SGFL	29	22	13	9	33.74	92.45
	Total	115	89	66	23	300.70	823.85

Source: HCU Data bank

Figure 5: Comparison of Annual Gas production by National Companies

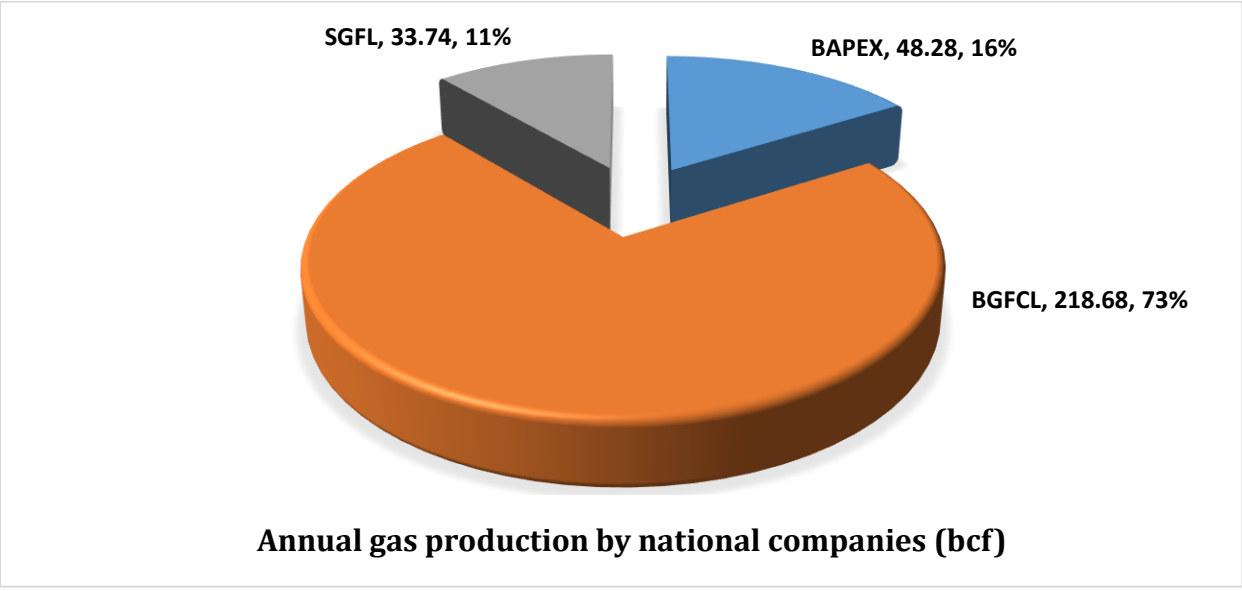


Table 7: Field wise Annual Gas Production of Gas Fields Under National Companies, FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	1	1	0	2.96	8.10
2.	Shahbazpur	5	4	3	1	21.91	60.03
3.	Semutang	6	1	1	0	0.25	0.69
4.	Fenchuganj	5	2	2	0	4.78	13.08
5.	Salda Nadi	4	3	3	0	1.46	4.00
6.	Srikail	4	4	4	0	14.04	38.45
7.	Sundalpur	2	1	1	0	2.89	7.91
8.	Rupgonj	1	0	0	0	0.00	0.00
9.	Feni	5	5	0	5	Suspended	Suspended
10.	Meghna	1	1	1	0	1.20	3.28
11.	Narshingdi	2	2	2	0	9.46	25.92
12.	Habiganj Gas field	11	11	7	4	52.38	143.50
13.	Bakhrabad	9	10	6	4	12.51	34.26
14.	Titas Gas field	27	26	22	4	143.14	392.16
15.	Kamta	1	1	0	1	Suspended	Suspended
16.	Kailas Tila	7	7	3	4	11.64	31.90
17.	Sylhet	8	5	3	2	1.99	5.44
18.	Rashidpur	11	8	5	3	16.01	43.87
19.	Beani Bazar	2	2	2	0	4.1033893	11.24
20.	Chatak	1	0	0	0	Suspended	Suspended
Total		115	94	66	28	300.70	823.85

Source: HCU Data bank

Figure 6: Field wise Annual Gas production of National Companies

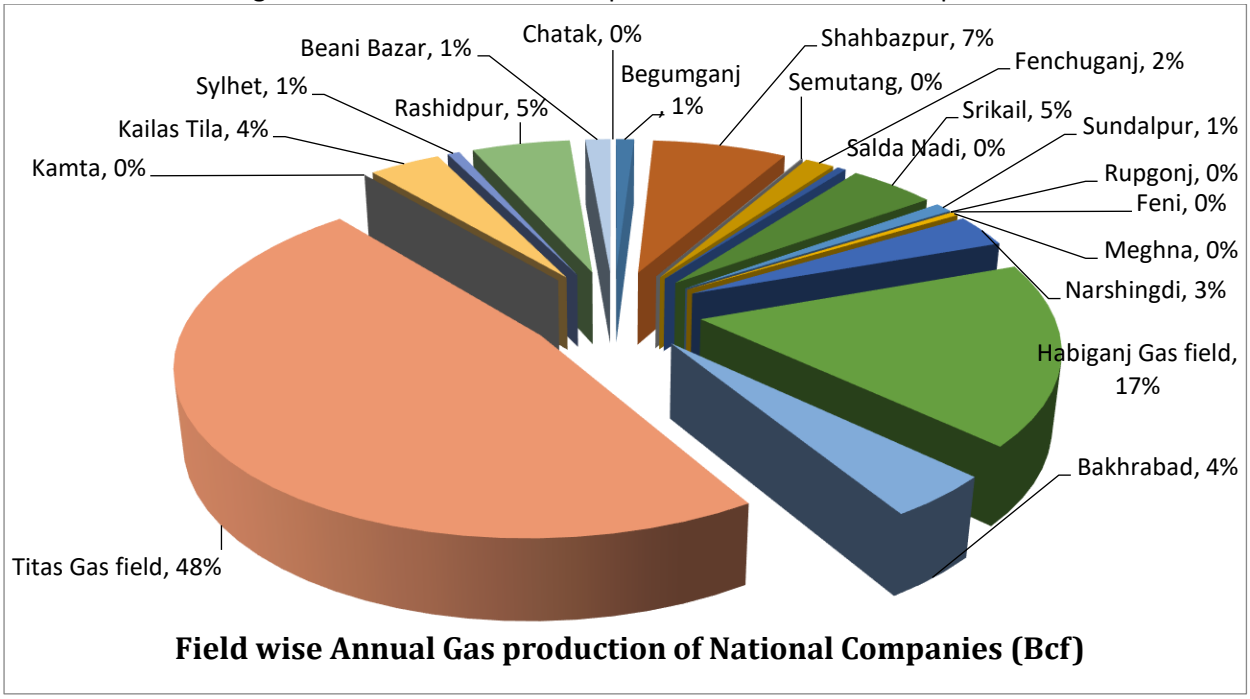


Table 8: Field wise Gas Production in BAPEX in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Begumganj	3	1	1	0	2.96	8.10
2.	Shahbazpur	5	4	3	1	21.91	60.03
3.	Semutang	6	1	1	0	0.25	0.69
4.	Fenchuganj	5	2	2	0	4.78	13.08
5.	Salda Nadi	4	3	3	0	1.46	4.00
6.	Srikail	4	4	4	0	14.04	38.45
7.	Sundalpur	2	1	1	0	2.89	7.91
8.	Rupgonj	1	0	0	0	Suspended	Suspended
9	Feni	5	5	0	5	Suspended	Suspended
Total		35	21	15	6	48.28	132.27

Source: HCU Data bank

Figure 7: Field wise Gas Production in BAPEX

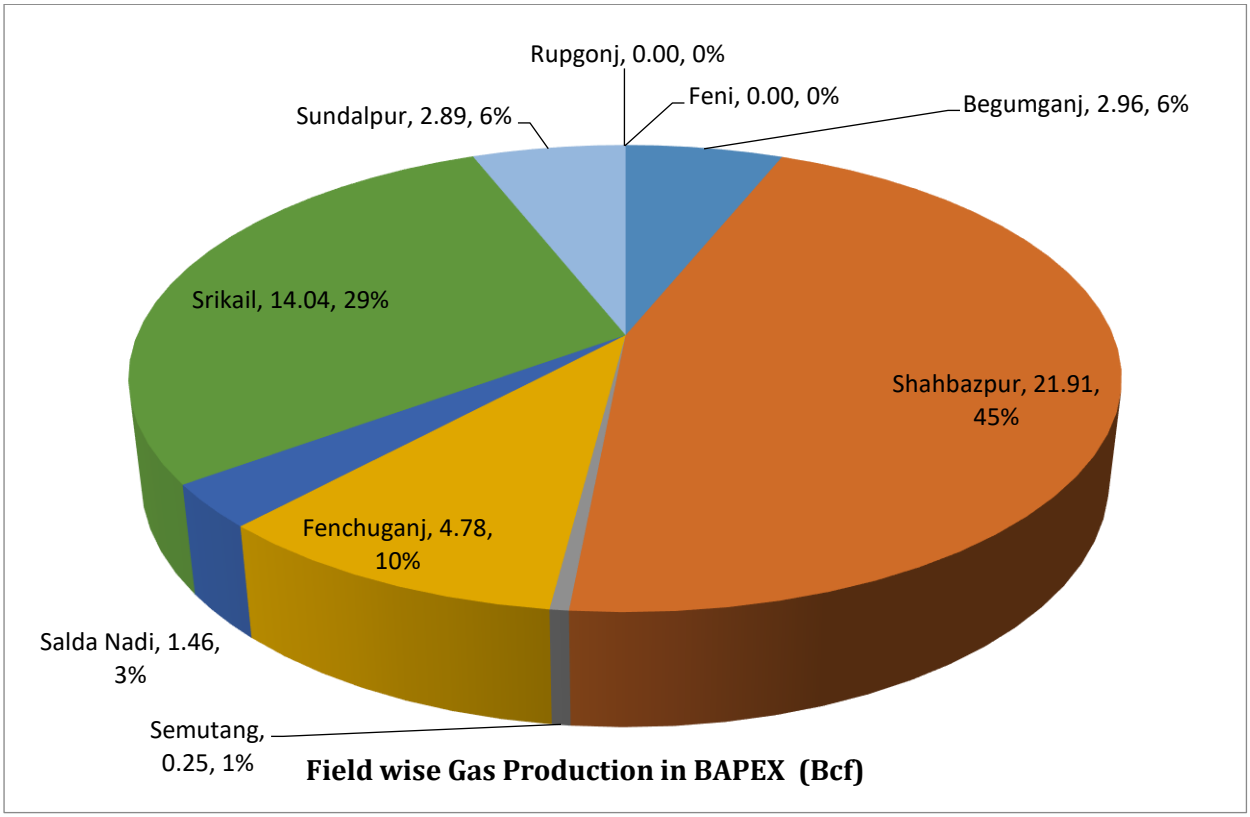


Table 9: Field wise Gas Production in BGFCL in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Meghna	1	1	1	0	1.20	3.28
2.	Narshingdi	2	2	2	0	9.46	25.92
3.	Habiganj Gas field	11	11	7	4	52.38	143.50
4.	Bakhrabad	9	10	6	4	12.51	34.26
5.	Titas Gas field	27	26	22	4	143.14	392.16
6.	Kamta	1	1	0	1	Suspended	Suspended
	Total	51	51	38	13	218.68	599.12

Source: HCU Data bank

Figure 8: Field wise Gas Production in BGFCL

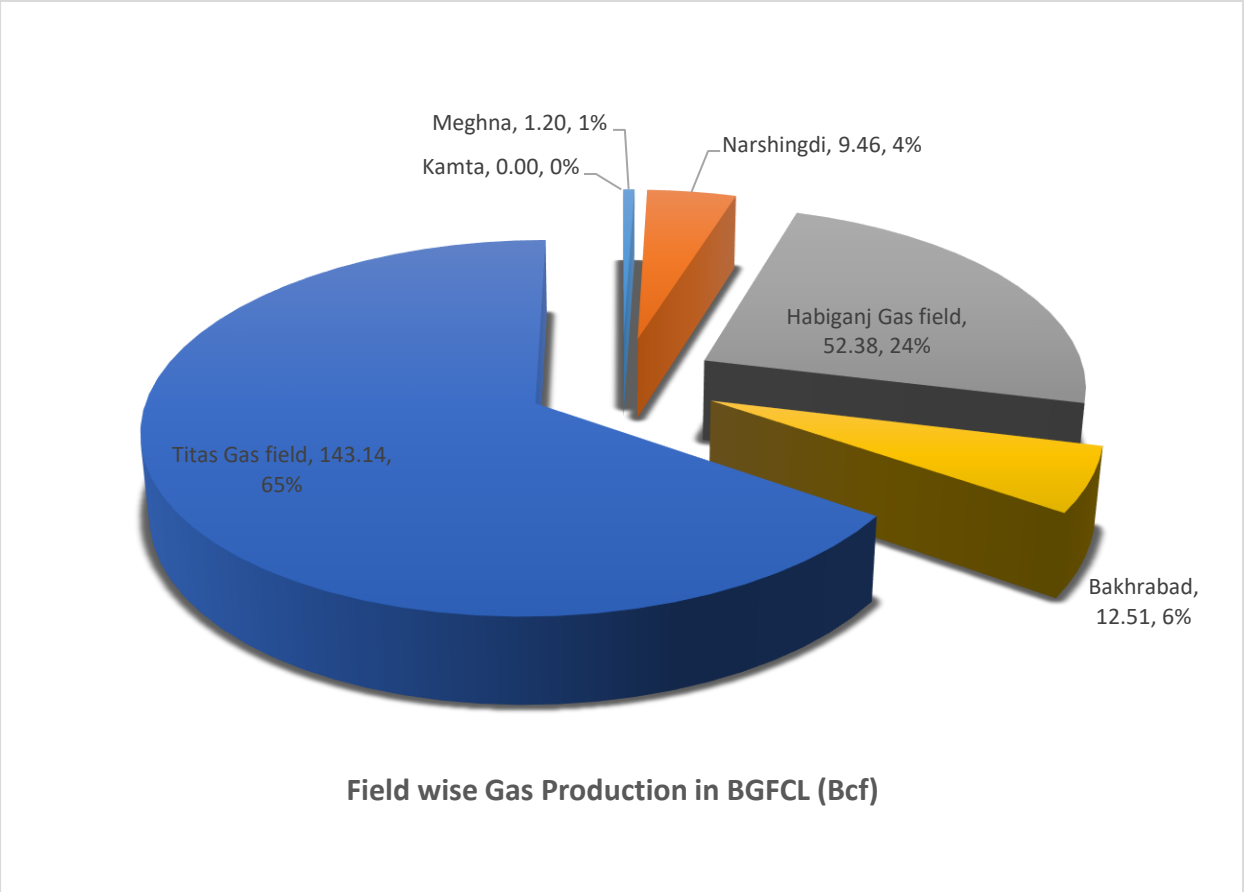


Table 10: Field wise Gas Production in SGFL in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Kailas Tila	7	7	3	4	11.64	31.90
2.	Sylhet	8	5	3	2	1.99	5.44
3.	Rashidpur	11	8	5	3	16.01	43.87
4.	Beani Bazar	2	2	2	0	4.10	11.24
5.	Chatak	1	0	0	0	Suspended	Suspended
Total		29	22	13	9	33.74	92.45

Source: HCU Data bank

Figure 9: Field wise Gas Production in SGFL

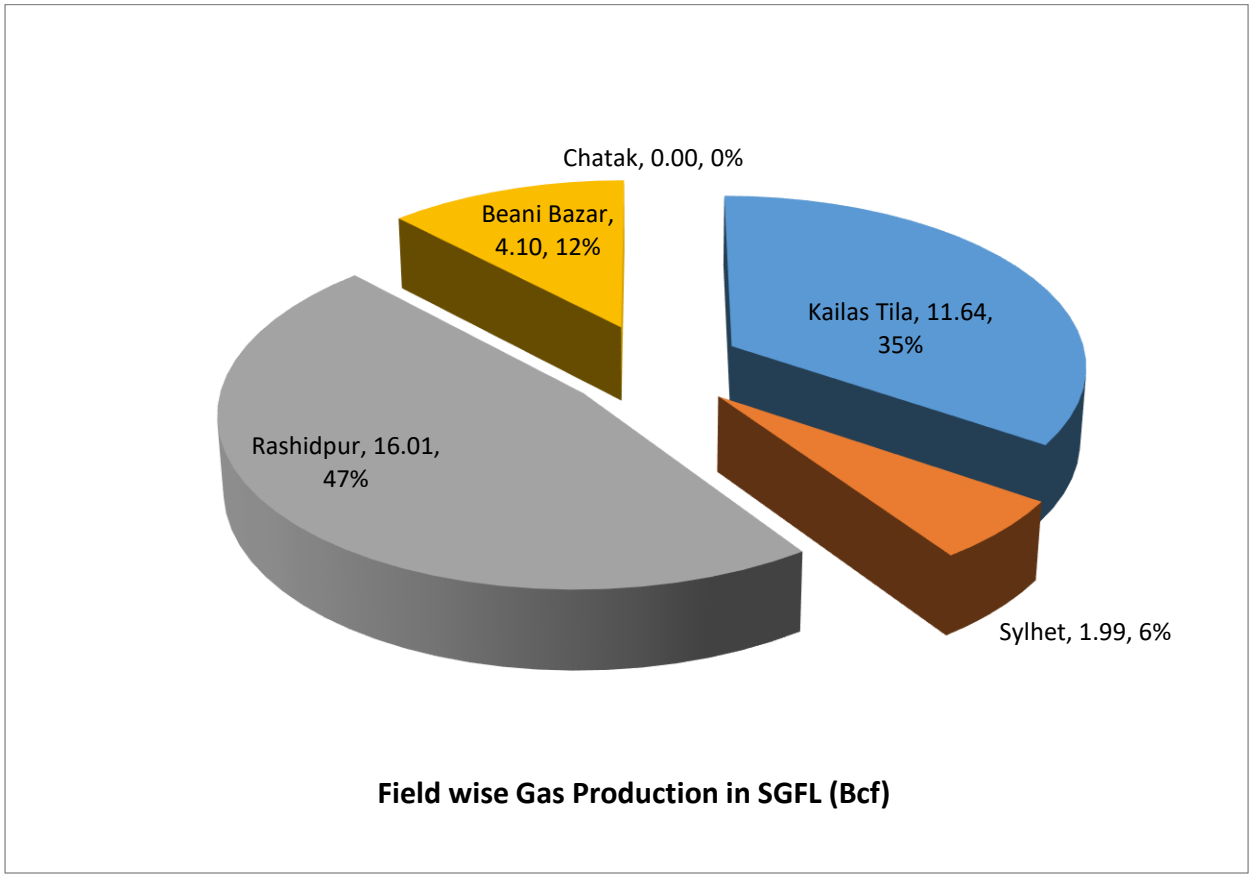


Table 11: Comparison of Annual Gas Production by International Companies in FY 2022-23

SI No.	Name of Company	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Chevron	44	44	34	10	485.62	1330.46
2.	Tullow	7	7	5	2	17.29	47.37
3.	Santos	9	0	0	0	Suspended	Suspended
Total		60	51	39	12	502.91	1377.82

Source: HCU Data bank

Figure 10: Comparison of Annual Gas Production by International Companies

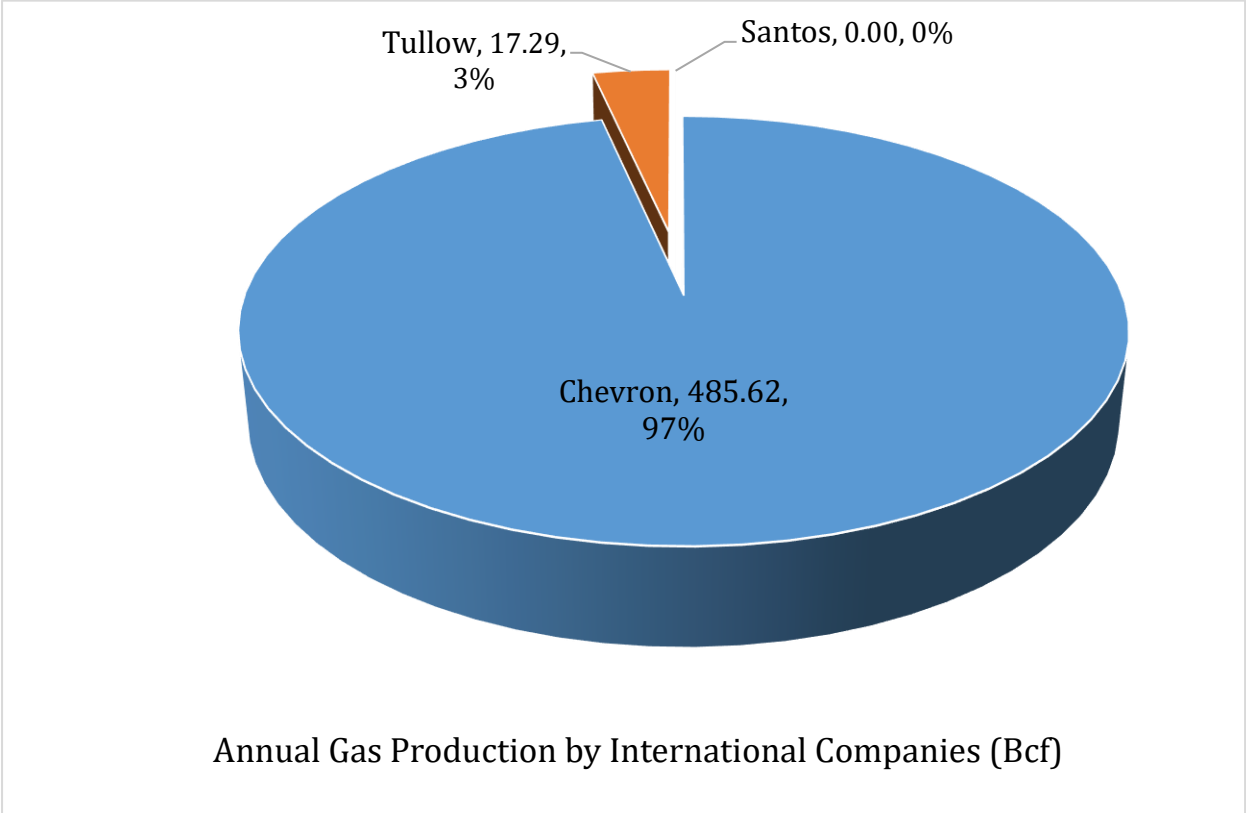


Table 12: Field wise Gas Production by IOCs in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Bibiyana Gas field	26	26	26	0	416.05	1139.86
2.	Moulavi Bazar	9	9	2	7	5.94	16.27
3.	Jalalabad Gas field	9	9	6	3	63.63	174.32
4.	Bangura	7	7	5	2	17.29	47.37
5.	Sangu	9	0	0	0	Suspended	Suspended
Total		60	51	39	12	502.91	1377.82

Source: HCU Data bank

Figure 11: Field wise Gas Production of IOCs

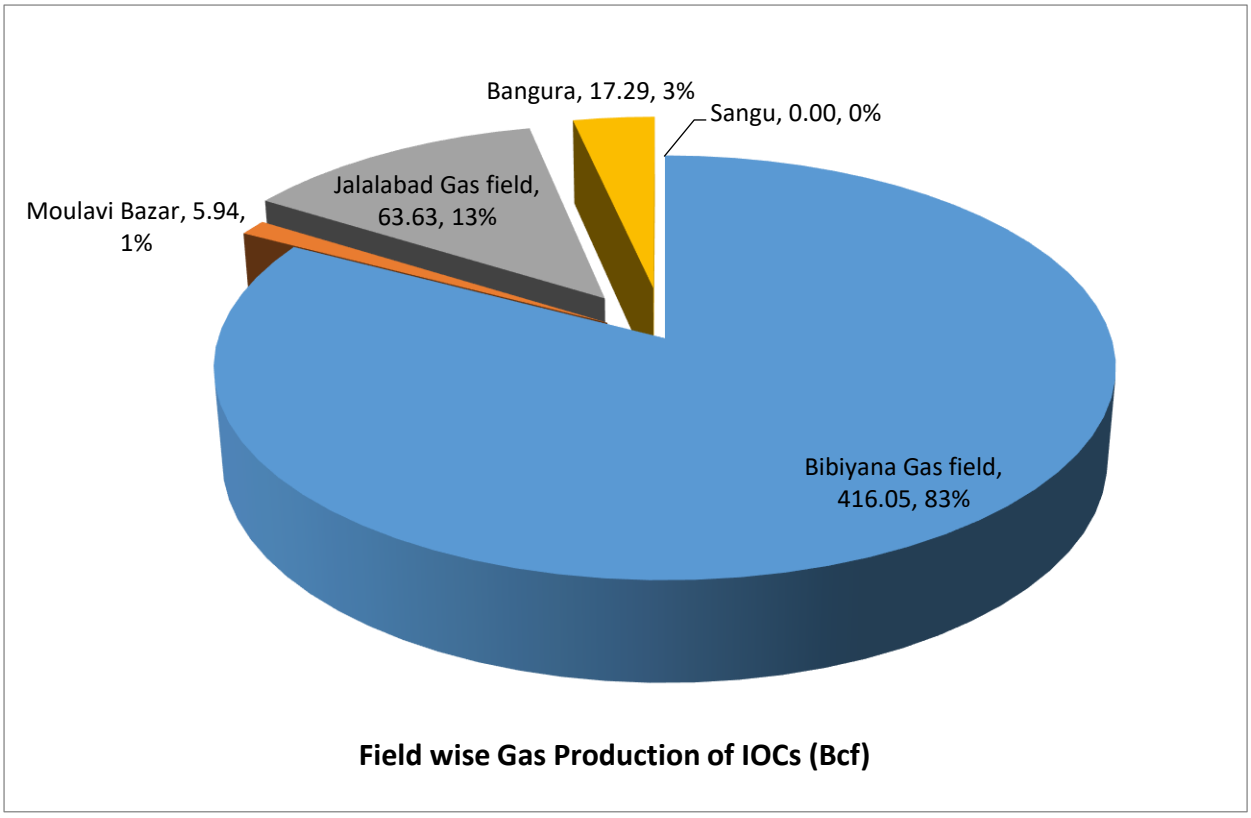


Table 13: Field wise Gas Production by Chevron Operated Gas Fields in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	Bcf	MMcfd
1.	Bibiyana Gas field	26	26	26	0	416.05	1139.86
2.	Moulavi Bazar	9	9	2	7	5.94	16.27
3.	Jalalabad Gas field	9	9	6	3	63.63	174.32
Total		44	44	34	10	485.62	1330.46

Source: HCU Data bank

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

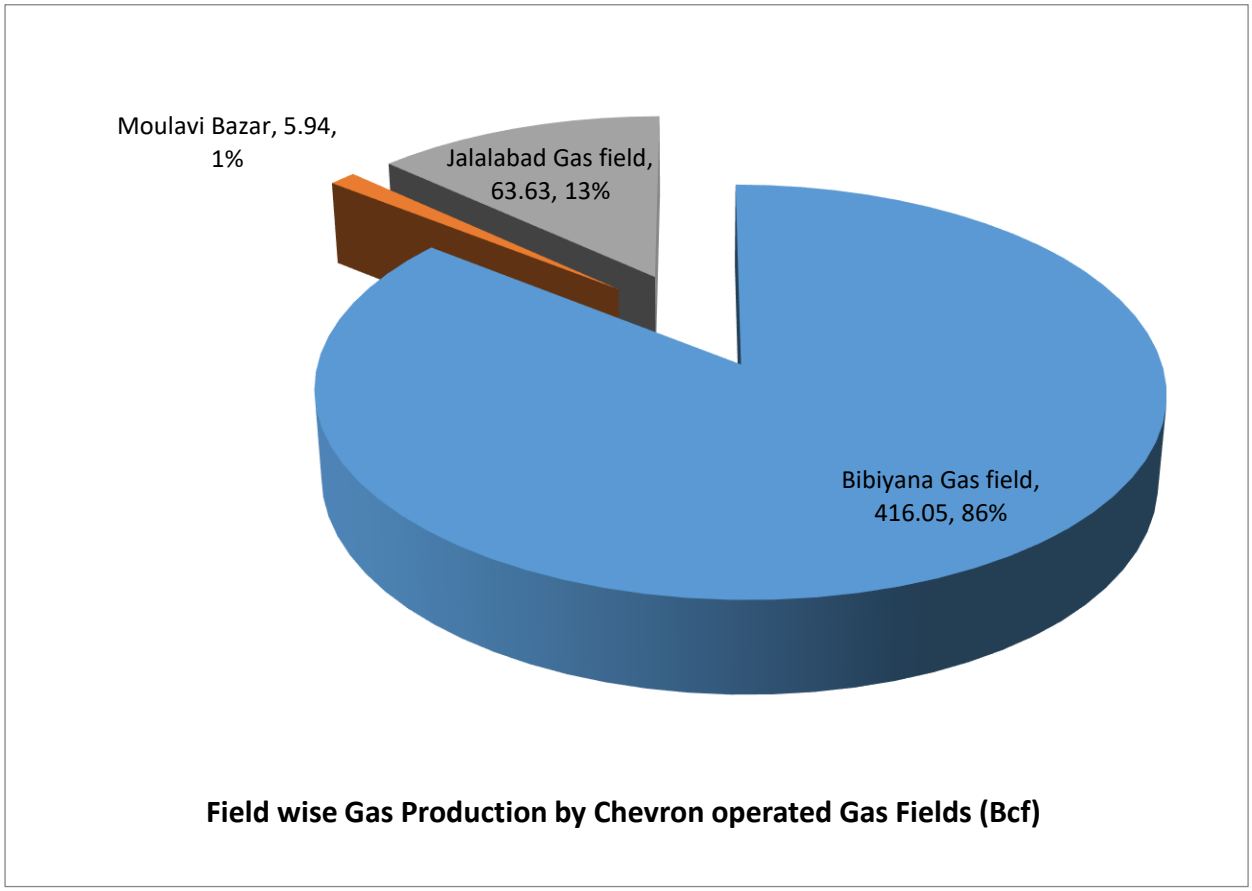


Table 14: Field wise Condensate Recovery in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/year	bbl/month	bbl/day
1	Begumganj	3	1	1	0	819.00	68.25	2.24
2	Shahbazpur	5	4	3	1	2533.60	211.13	6.94
3	Semutang	6	1	1	0	0.00	0.00	0.00
4	Fenchuganj	5	2	2	0	1683.29	140.27	4.61
5	Salda Nadi	4	3	3	0	726.96	60.58	1.99
6	Srikail	4	4	4	0	56942.00	4745.17	156.01
7	Sundalpur	2	1	1	0	144.60	12.05	0.40
8	Rupgonj	1	0	0	0	Suspended	Suspended	Suspended
9	Feni	5	5	0	5	Suspended	Suspended	Suspended
10	Meghna	1	1	1	0	2137.00	178.08	5.85
11	Narshingdi	2	2	2	0	13212.00	1101.00	36.20
12	Habiganj Gas field	11	11	7	4	2346.00	195.50	6.43
13	Bakhrabad	9	10	6	4	14169.00	1180.75	38.82
14	Titas Gas field	27	26	22	4	112936.00	9411.33	309.41

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/year	bbl/month	bbl/day
15	Kamta	1	1	0	1	Suspended	Suspended	Suspended
16	Bibiyana Gas field	26	26	26	0	1941431.45	161785.95	5318.99
17	Moulavi Bazar	9	9	2	7	836.13	69.68	2.29
18	Jalalabad Gas field	9	9	6	3	302638.00	25219.83	829.15
19	Kailas Tila	7	7	3	4	145165.00	12097.08	397.71
20	Sylhet	8	5	3	2	12642.95	1053.58	34.64
21	Rashidpur	11	8	5	3	14085.48	1173.79	38.59
22	Beani Bazar	2	2	2	0	62663.00	5221.92	171.68
23	Chatak	1	0	0	0	Suspended	Suspended	Suspended
24	Bangura	7	7	5	2	49830.00	4152.50	136.52
25	Sangu	9	0	0	0	Suspended	Suspended	Suspended
Total		**175**	**145**	**105**	**40**	2736941.46	228078.46	7498.47

Source: HCU Data bank

Figure 13: Field wise Condensate Recovery in bbl

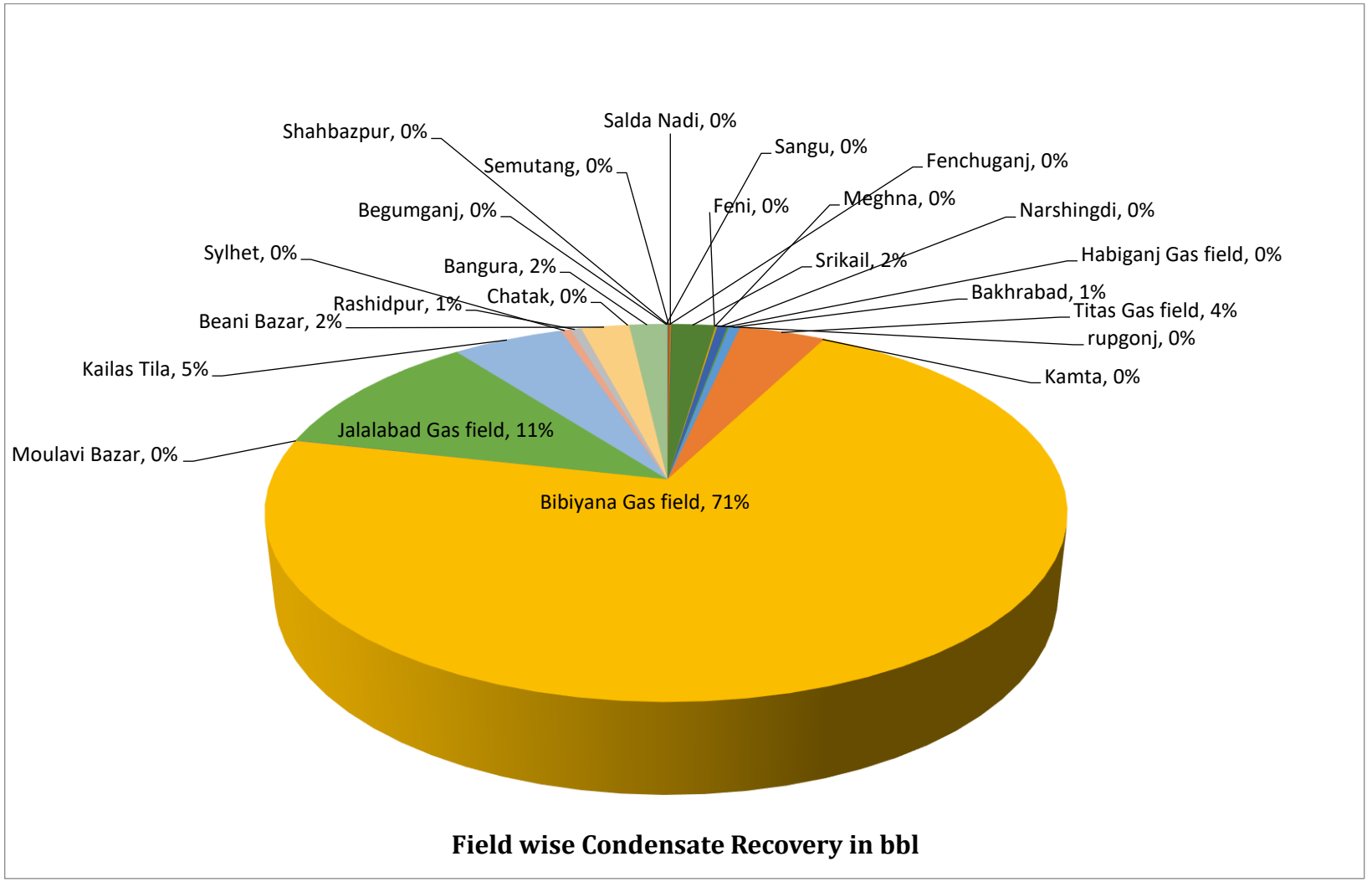


Table 15: Comparison of Condensate Production by National Companies in FY 2022-23

SI No.	Name of National Company	Total well	Productive well	Producing well	Suspended well	bbl/Year	bbl /Month	bbl/Day
1.	BAPEX	35	16	15	1	64209.16	5350.76	175.92
2.	BGFCL	51	51	38	13	144800.00	12066.67	396.71
3.	SGFL	29	22	13	9	234556.43	19546.37	642.62
Total		115	89	66	23	443565.59	36963.80	1215.25

Source: HCU Data bank

Figure 14: Comparison of Condensate production by National Companies

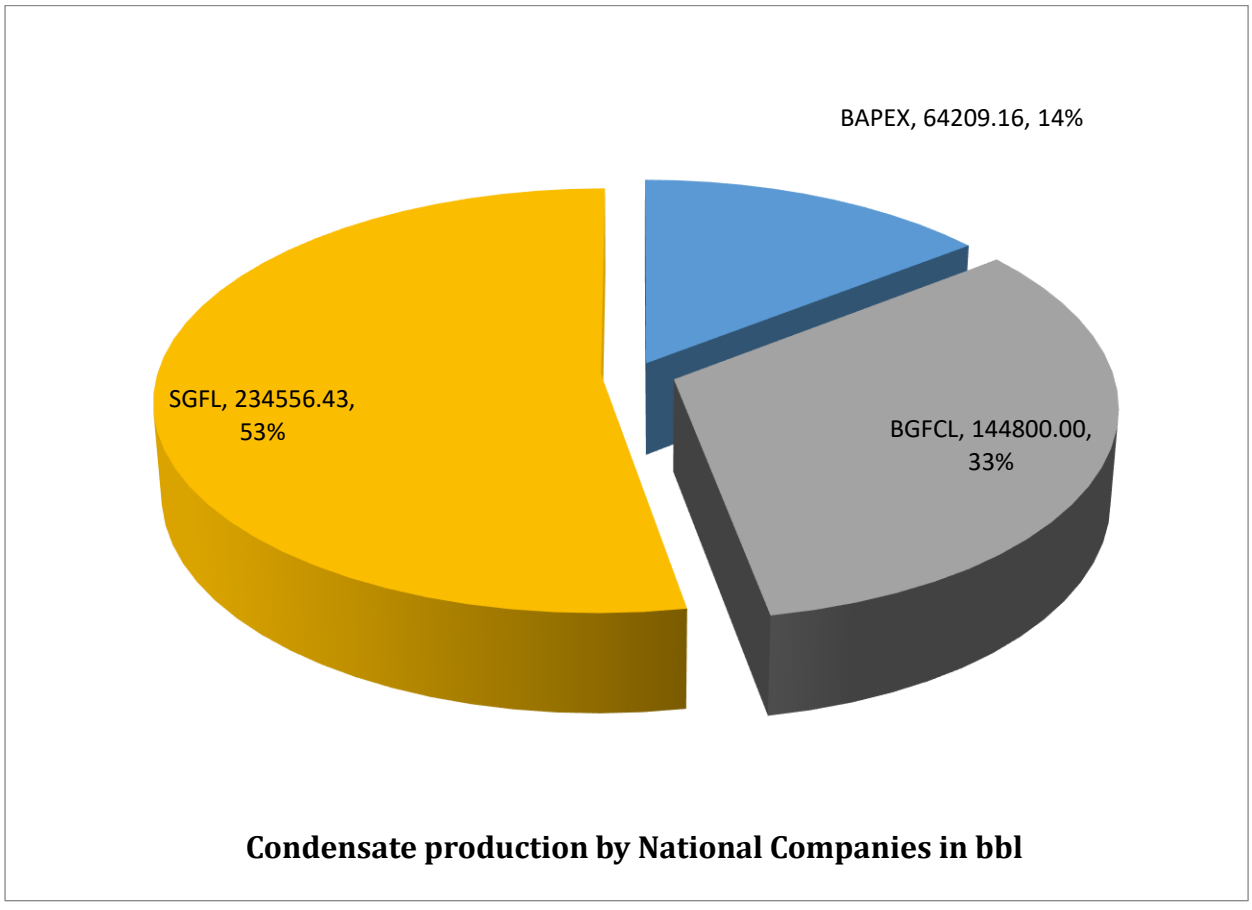


Table 16: Comparison of Condensate Production by IOCs in FY 2022-23

SI No.	Name of Company	Total well	Productive well	Producing well	Suspended well	bbl /Year	bbl /Month	bbl /Day
1.	Chevron	44	44	34	10	2244905.58	187075.47	6150.43
2.	Tullow	7	7	5	2	49830.00	4152.50	136.52
3.	Santos (Sangu)	9	0	0	0	Suspended	Suspended	Suspended
Total		60	51	39	12	2294735.58	191227.97	6286.95

Source: HCU Data bank

Figure 15: Comparison of Condensate production by International Companies

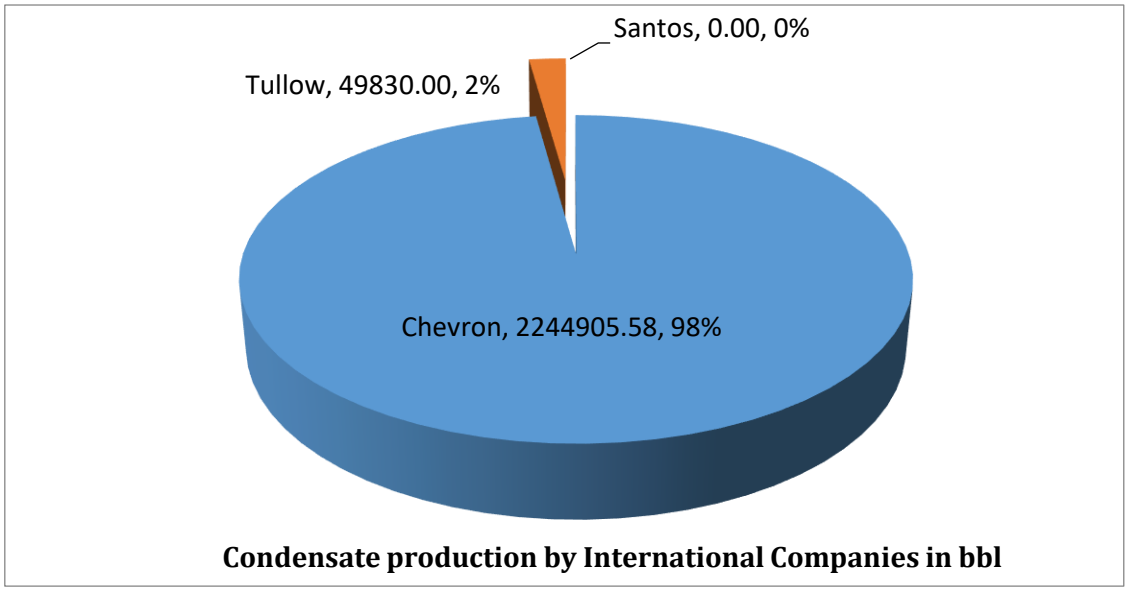
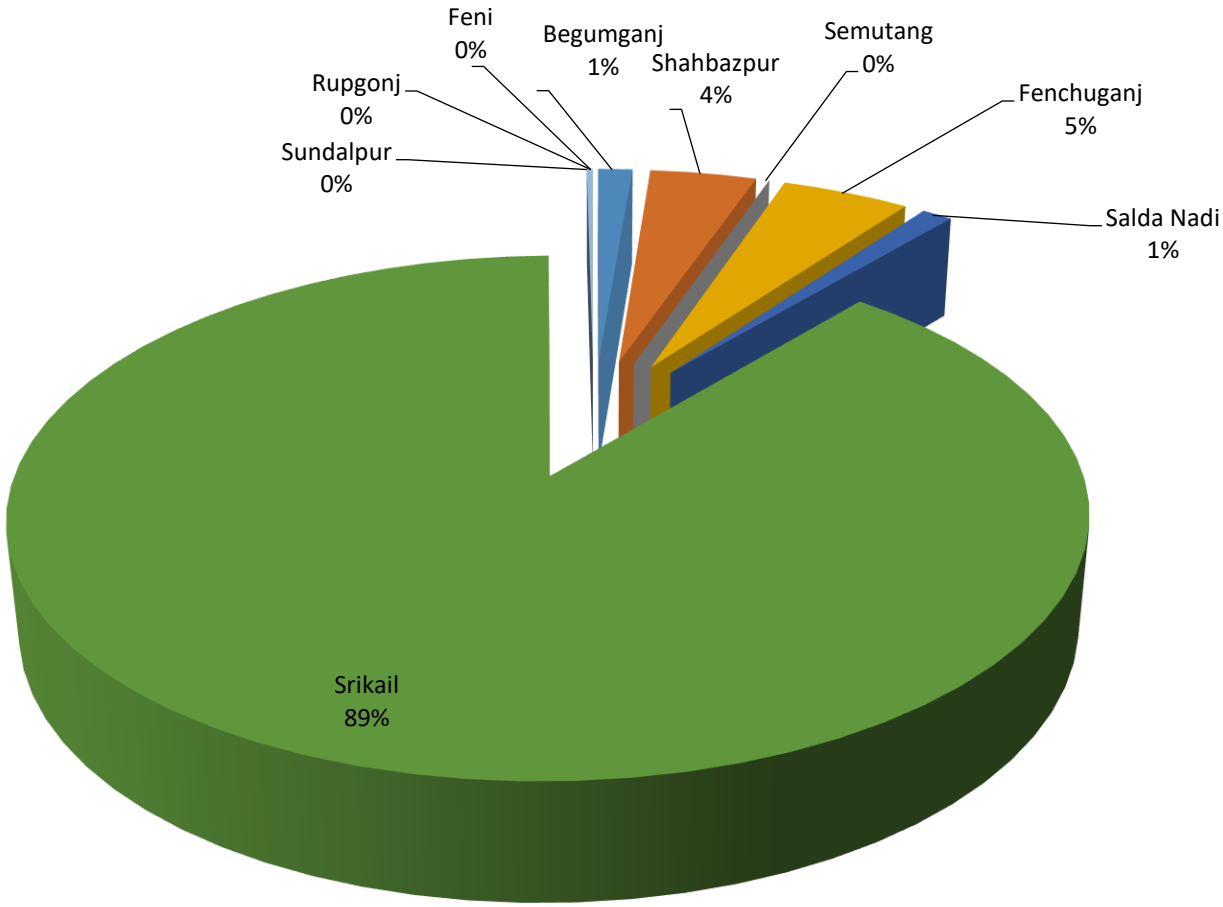


Table 17: Field wise Condensate Production in BAPEX in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/Year	bbl/Month	bbl /Day
1.	Begumganj	3	1	1	0	819.00	68.25	2.24
2.	Shahbazpur	5	4	3	1	2533.60	211.13	6.94
3.	Semutang	6	1	1	0	0.00	0.00	0.00
4.	Fenchuganj	5	2	2	0	3043.00	253.58	8.34
5.	Salda Nadi	4	3	3	0	726.96	60.58	1.99
6.	Srikail	4	4	4	0	56942.00	4745.17	156.01
7.	Sundalpur	2	1	1	0	144.60	12.05	0.40
8.	Rupgonj	1	0	0	0	Suspended	Suspended	Suspended
9	Feni	5	5	0	5	Suspended	Suspended	Suspended
Total		35	21	15	6	64209.16	5350.76	175.92

Source: HCU Data bank

Figure 16: Field wise Condensate Production in BAPEX



Field wise Condensate Production in BAPEX in bbl

Table 18: Field wise Condensate Production in BGFCL in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/Year	bbl/Month	bbl/Day
1.	Meghna	1	1	1	0	2137.00	178.08	5.85
2.	Narshingdi	2	2	2	0	13212.00	1101.00	36.20
3.	Habiganj field	11	11	7	4	2346.00	195.50	6.43
4.	Bakhrabad	9	10	6	4	14169.00	1180.75	38.82
5.	Titas Gas field	27	26	22	4	112936.00	9411.33	309.41
6.	Kamta	1	1	0	1	Suspended	Suspended	Suspended
Total		51	51	38	13	144800.00	12066.67	396.71

Source: HCU Data bank

Figure 17: Field wise Condensate Production in BGFCL

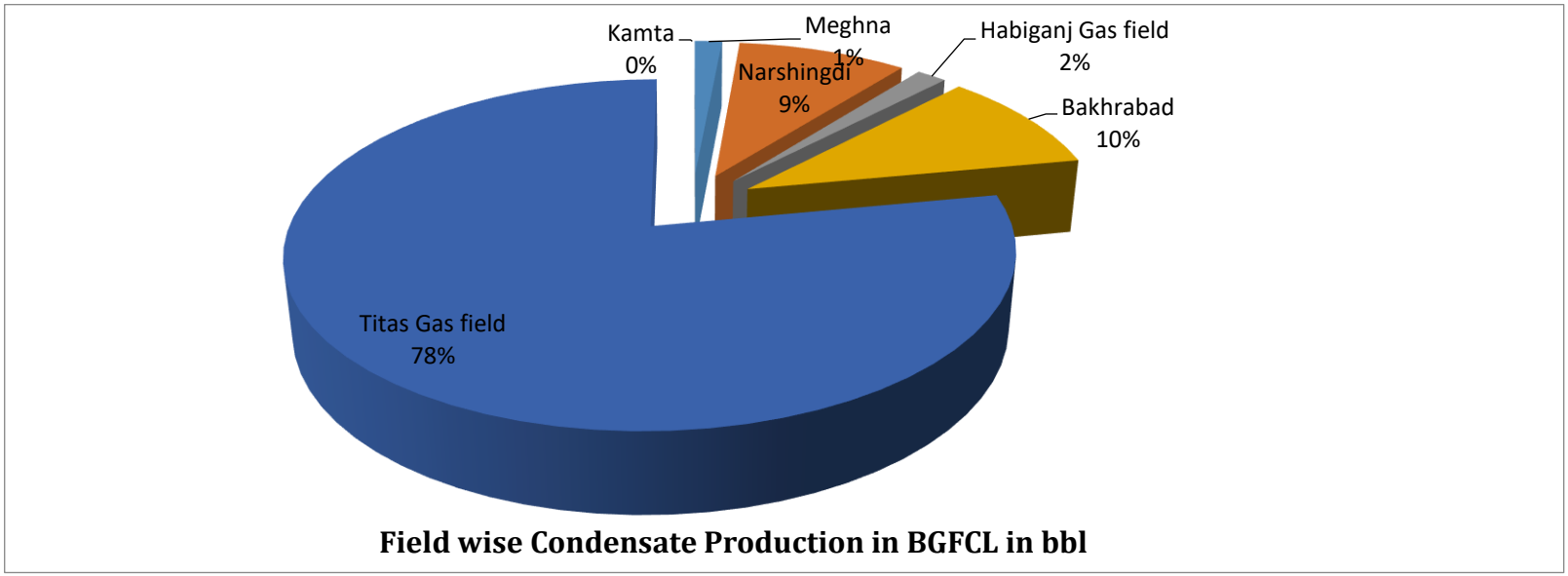


Table 19: Field wise Condensate Productions in SGFL in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/Year	bbl/Month	bbl/Day
1.	Kailas Tila	7	7	3	4	145165.00	12097.08	397.71
2.	Sylhet	8	5	3	2	12642.95	1053.58	34.64
3.	Rashidpur	11	8	5	3	14085.48	1173.79	38.59
4.	Beani Bazar	2	2	2	0	62663.00	5221.92	171.68
5.	Chatak	1	0	0	0	Suspended	Suspended	Suspended
Total		29	22	13	9	234556.43	19546.37	642.62

Source: HCU Data bank

Figure 18: Field wise Condensate Productions in SGFL

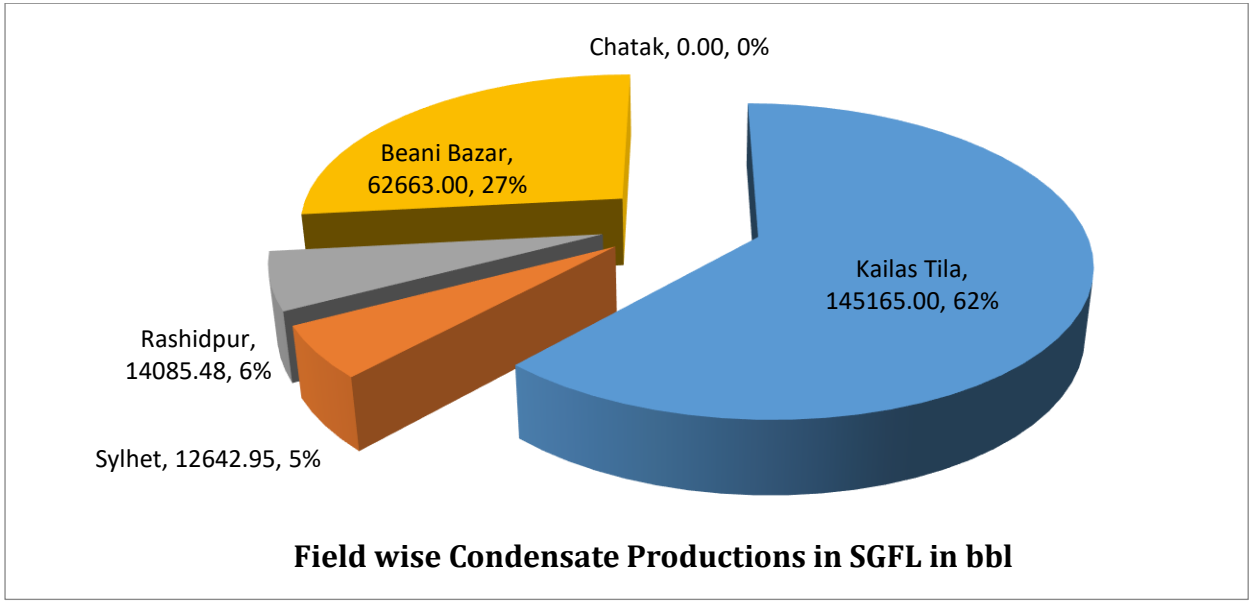


Table 20: Field wise Condensate Production by IOCs in FY 2022-23

SI No.	Name of Gas field	Total well	Productive well	Producing well	Suspended well	bbl/Year	bbl/Month	bbl/Day
1.	Bibiyana	26	26	26	0	1941431.45	161785.95	5318.99
2.	Moulavi Bazar	9	9	2	7	836.13	69.68	2.29
3.	Jalalabad Gas field	9	9	6	3	302638.00	25219.83	829.15
4.	Bangura	7	7	5	2	49830.00	4152.50	136.52
5.	Sangu	9	0	0	0	Suspended	Suspended	Suspended
Total		60	51	39	12	2294735.58	191227.97	6286.95

Source: HCU Data bank

Figure 19: Field wise Condensate Production by IOCs

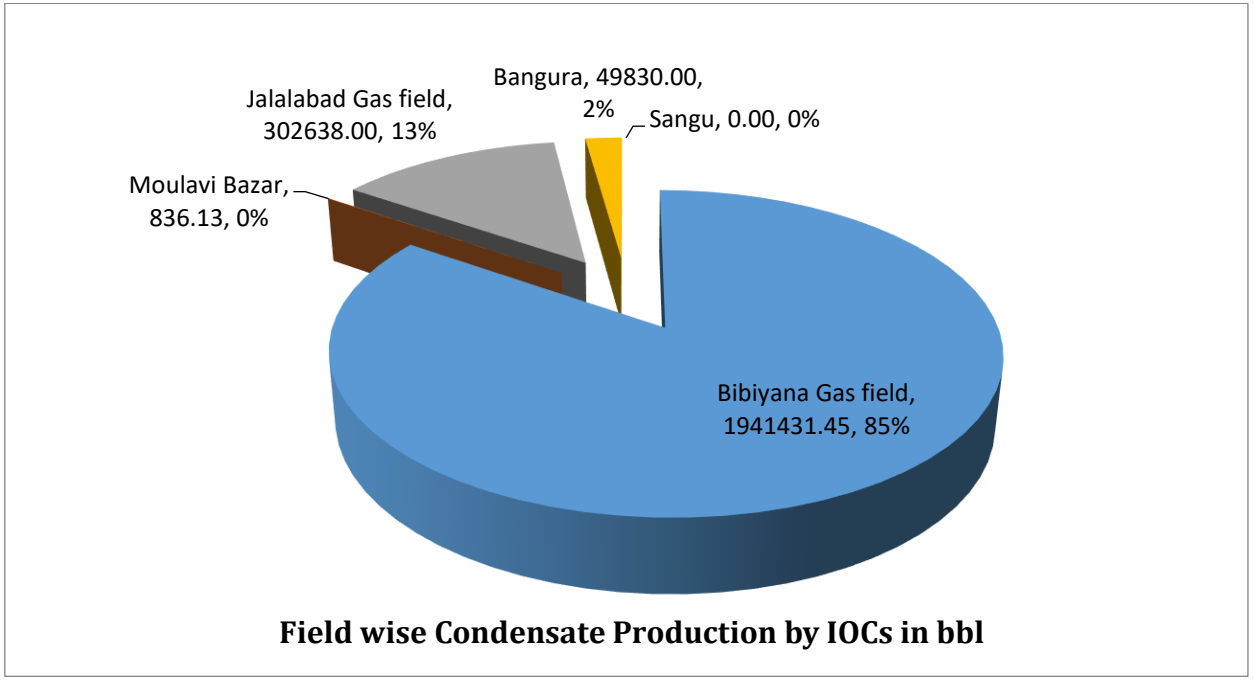
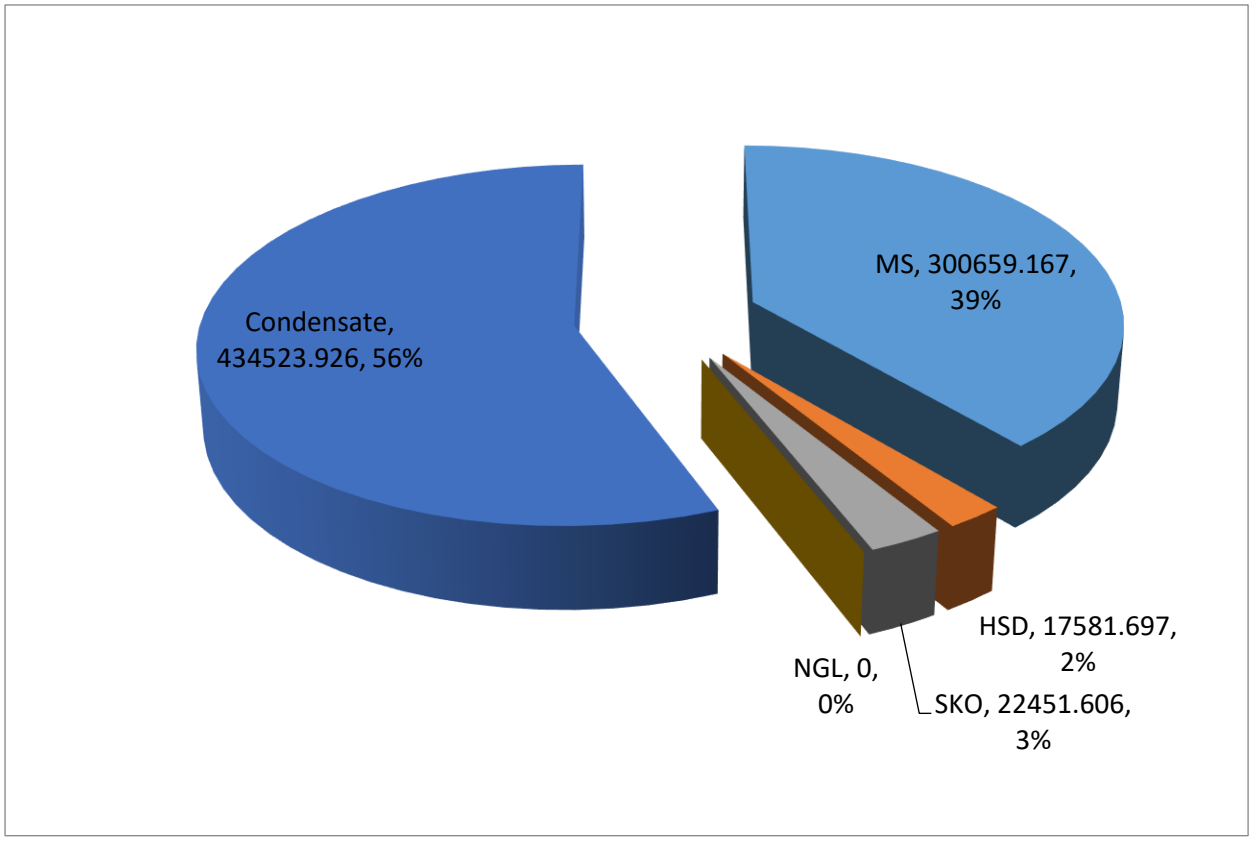


Table 21: Annual Recovery of Liquid in 1000 Liter FY 2022-23

SI No.	Name of Product	Liter
1.	MS	300659.167
2.	HSD	17581.697
3.	SKO	22451.606
4.	NGL	0
5.	Condensate	434523.926
Total		775216.40

Source: MIS Report, Petrobangla

Figure 20: Annual Recovery of Liquid in 1000 liter



6.0 Gas distribution scenario in the FY 2022-2023

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:

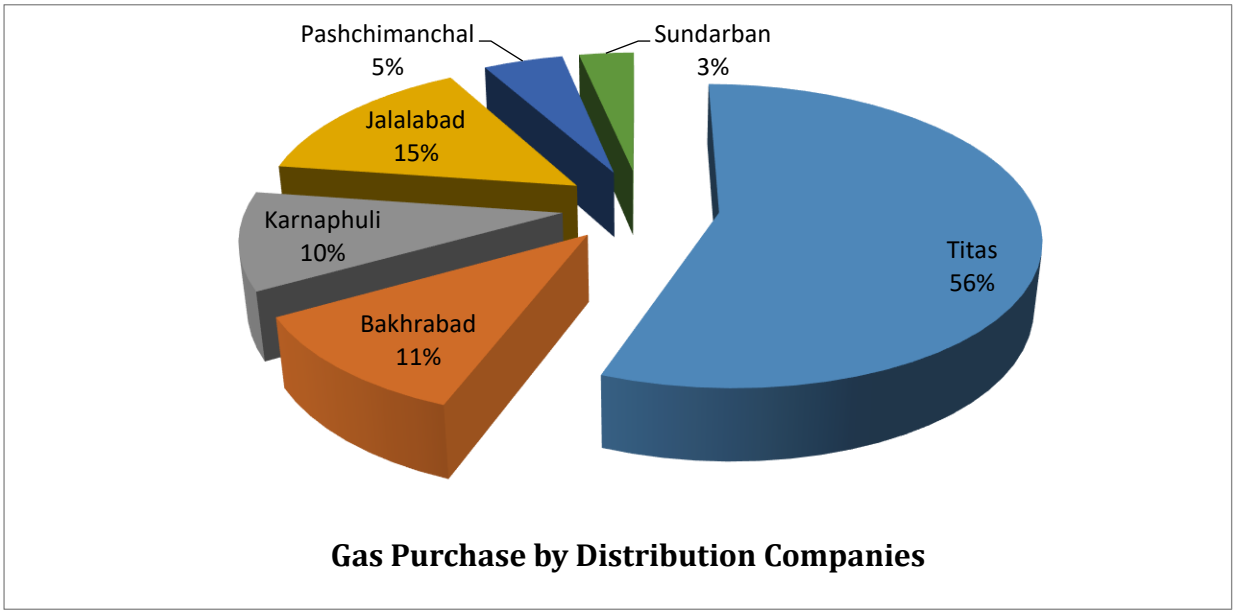
Amount of Gas purchase by different distribution companies from the production companies of Petrobangla & IOCs is shown below:

Table 22: Amount of Gas Purchase by Distribution companies

Name	Titas	Bakhrabad	Karnaphuli	Jalalabad	Pashchimanchal	Sundarban	Total
MMCM	15265.59	3037.00	2855.63	3995.50	1321.74	907.82	27383.28
BCF	539.03	107.24	100.83	141.08	46.67	32.06	966.90

Source: Petrobangla MIS Report

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 23: Gas sale by Titas Gas Transmission & Distribution Company Limited (TGTDCL)

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	64.34	18492.68	7.61	3573.59	0.35	207.90	0.16	78.58	0.05	44.93
Non-Govt. organization	78.48	33165.12	0.00	0.00	128.05	74155.58	143.90	74980.90	2.60	2157.46
Total	**142.83**	**51657.80**	**7.61**	**3573.59**	**128.40**	**74363.48**	**144.05**	**75059.48**	**2.65**	**2202.39**

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	0.00	0.00	0.06	59.22	0.57	276.41	73.14	22733.31
Non-Govt. organization	0.00	0.00	20.07	20149.56	81.49	28189.77	454.58	232798.39
Total	**0.00**	**0.00**	**20.13**	**20208.78**	**82.06**	**28466.18**	**527.72**	**255531.70**

Source: Petrobangla MIS Report

Table 24: Gas sale by Bakhrabad Gas Distribution Company Limited (BGDCL)

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	56.04	13703.55	9.74	4412.48	0.27	145.70	0.00	0.00	0.00	0.00
Non-Govt. organization	9.95	2548.58	0.00	0.00	2.51	1527.98	2.61	1424.32	1.18	706.51
Total	**65.98**	**16252.13**	**9.74**	**4412.48**	**2.78**	**1673.68**	**2.61**	**1424.32**	**1.18**	**706.51**

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	0.00	0.00	0.41	210.60	0.00	0.00	0.00	0.00	66.46	18472.33
Non-Govt. organization	0.00	0.00	12.03	6131.52	0.00	0.00	6.33	6274.45	34.60	18613.36
Total	**0.00**	**0.00**	**12.44**	**6342.12**	**0.00**	**0.00**	**6.33**	**6274.45**	**101.05**	**37085.69**

Souce: Petrobangla MIS Report

Table 25: Gas sell by Karnaphuli Gas Distribution Company Ltd. (KGDCL)

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	15.121	4372.030	6.036	2783.640	1.636	1065.760	1.067	628.230	0.000	0.710
Non-Govt. organization	3.336	754.520	15.003	10928.870	18.458	11044.710	16.641	9056.530	1.098	897.540
Total	**18.457**	**5126.550**	**21.039**	**13712.510**	**20.094**	**12110.470**	**17.709**	**9684.760**	**1.098**	**898.250**

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	0.000	0.000	1.026	512.230	0.000	0.000	0.037	38.690	24.924	9401.290
Non-Govt. organization	0.000	0.000	13.655	7057.040	0.019	6.910	5.214	5253.860	73.424	44999.980
Total	**0.000**	**0.000**	**14.682**	**7569.270**	**0.019**	**6.910**	**5.251**	**5292.550**	**98.348**	**54401.270**

Source: Petrobangla MIS Report

Table 26: Gas sell by Jalalabad Gas Transmission and Distribution System Limited (JGTDSL)

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	48.348	12047.000	11.711	5306.400	0.028	12.600	0.000	0.000	0.000	0.000
Non-Govt. organization	46.425	12043.600	0.000	0.000	9.861	6038.800	11.041	6035.900	0.689	545.000
Total	**94.773**	**24090.600**	**11.711**	**5306.400**	**9.888**	**6051.400**	**11.041**	**6035.900**	**0.689**	**94.773**

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	0.000	0.000	0.581	296.000	0.000	0.000	0.000	0.000	60.668	17662.000
Non-Govt. organization	0.000	0.000	5.138	2619.400	1.044	352.600	4.851	4808.700	79.049	32444.000
Total	**0.000**	**0.000**	**5.719**	**2915.400**	**1.044**	**352.600**	**4.851**	**4808.700**	**139.716**	**50106.000**

Source: Petrobangla MIS Report

Table 27: Gas sell by Pashchimanchal Gas Company Limited

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	16.998	4152.110	0.000	0.000	0.051	32.000	0.001	0.520	0.000	0.000	0.185	94.550	17.236	4279.180
Non-Govt. organization	19.857	4828.750	2.535	1537.750	2.168	1170.220	0.208	165.960	2.225	2205.580	3.189	1625.770	30.183	11534.030
Total	36.856	8980.860	2.535	1537.750	2.219	1202.220	0.209	166.480	2.225	2205.580	3.375	1720.320	47.418	15813.210

Source: Petrobangla MIS Report

Table 28: Gas sell by Sundarban Gas Company Limited (SGCL)

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	22.34	5782.41	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.34	5782.53
Non-Govt. organization	8.14	1543.74	0.58	354.97	1.10	599.78	0.00	0.84	0.00	0.00	0.17	86.52	9.99	2585.85
Total	30.48	7326.15	0.58	355.09	1.10	599.78	0.00	0.84	0.00	0.00	0.17	86.52	32.33	8368.38

Source: Petrobangla MIS Report

7.0 Gas consumption scenario in the FY 2022-23

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

Table 29: Sector wise Gas Consumption in FY 2022-23

(1CM=35.31CF)

SI No.	Name of Specification	MMCM	Bcf	MMcfd
1.	Power	11027.351	389.376	1066.783
2.	Industry	5061.775	178.731	489.675
3.	Captive	4652.284	164.272	450.061
4.	Fertilizer	1418.916	50.102	137.266
5.	Commercial	164.985	5.826	15.961
6.	Domestic	2848.559	100.583	275.569
7.	CNG	1198.603	42.323	115.953
8.	Tea estate	30.118	1.063	2.914
Total		**26402.591**	932.275	2554.179

Source: MIS Report, Petrobangla

Figure 22: Sector wise Gas Consumption

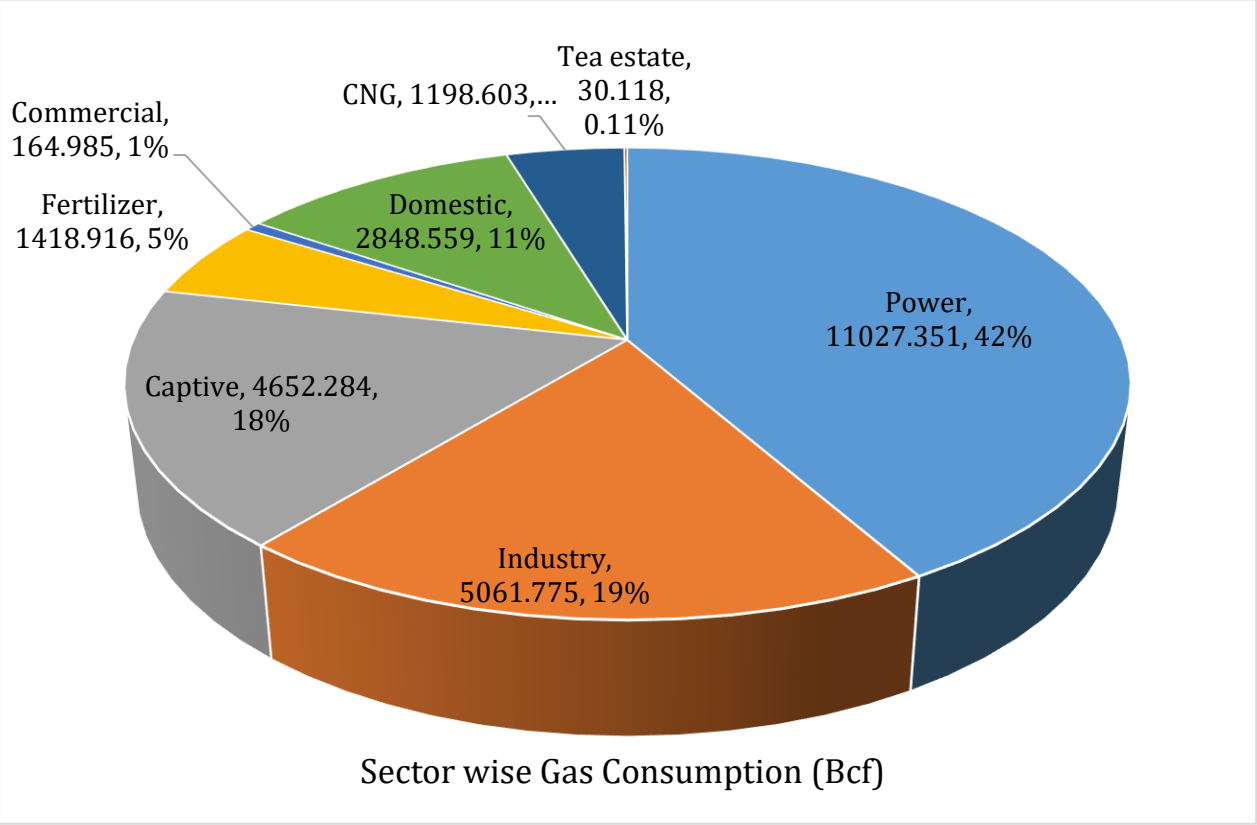
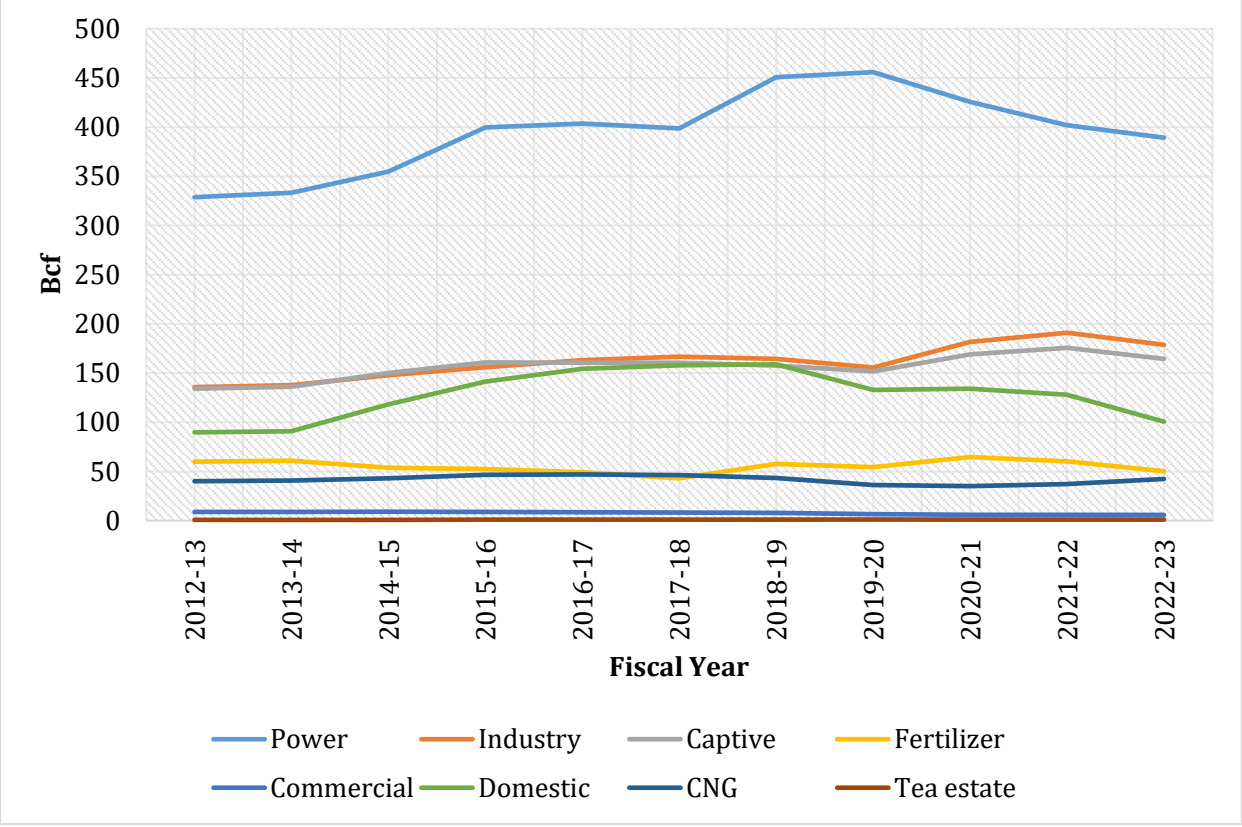


Table 30: Fiscal Year Sector wise Gas Consumption

(in Bcf)

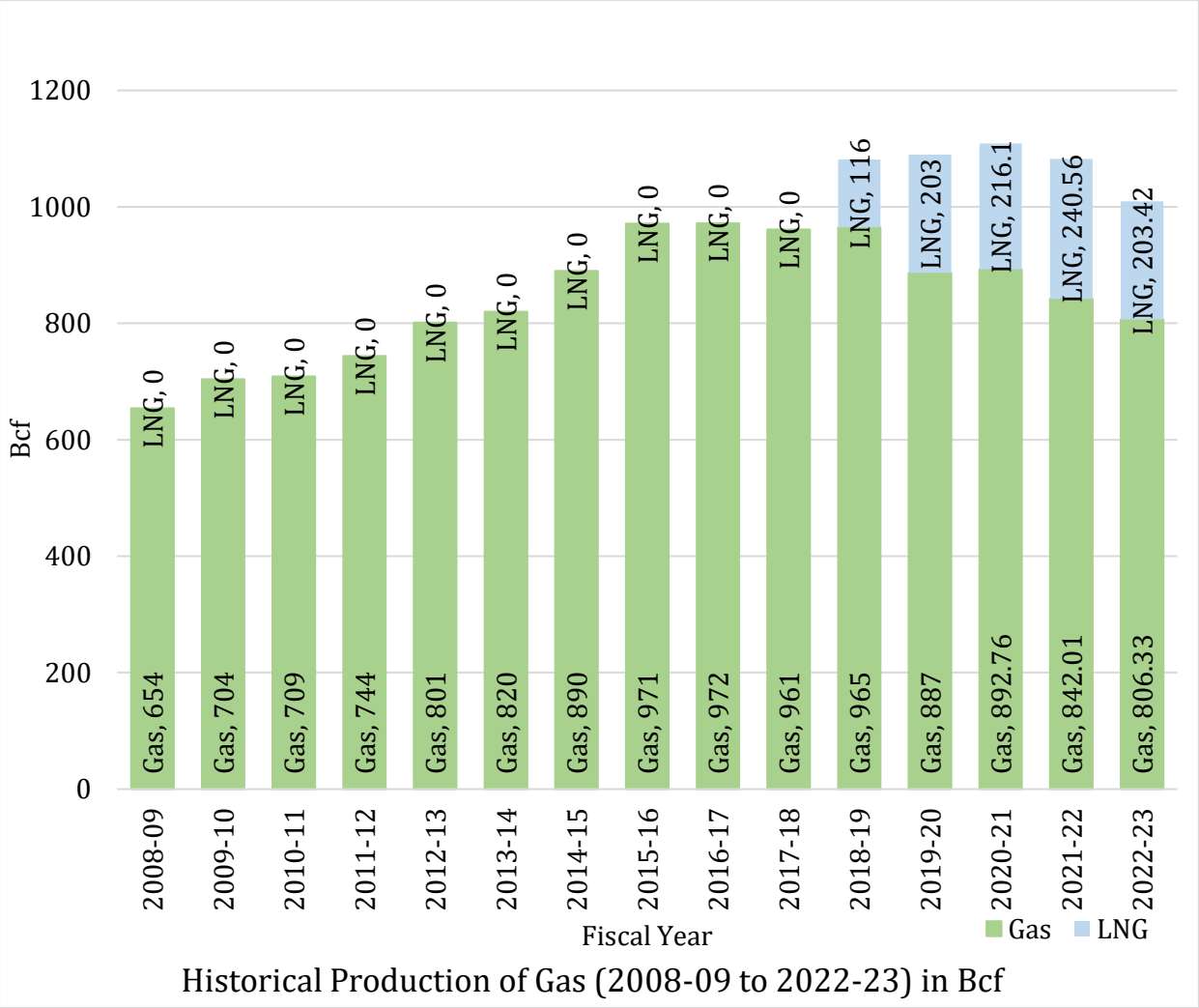
Fiscal Year	Power	Industry	Captive	Fertilizer	Commercial	Domestic	CNG	Tea estate	**Total**
2012-13	328.80	135.72	134.12	59.94	8.80	89.73	40.15	0.79	**798.05**
2013-14	333.37	137.61	135.98	60.78	8.93	90.98	40.70	0.80	**809.15**
2014-15	354.71	147.70	150.02	53.81	9.09	118.17	42.92	0.80	**877.22**
2015-16	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	398.59	166.53	160.51	42.97	8.17	157.93	46.19	0.94	**981.84**
2018-19	450.82	164.49	157.50	57.67	7.94	158.86	43.37	1.01	**1041.65**
2019-20	455.89	155.73	151.55	54.55	6.67	132.69	36.10	1.14	**994.31**
2020-21	425.70	181.75	169.05	64.65	6.02	134.17	35.07	0.98	**1017.38**
2021-22	401.93	190.99	175.685	60.365	5.975	127.830	37.301	1.102	**1001.180**
2022-23	389.37	178.73	164.27	50.10	5.825	100.58	42.32	1.063	**932.275**

Figure 23: Fiscal Year Sector wise Gas Consumption



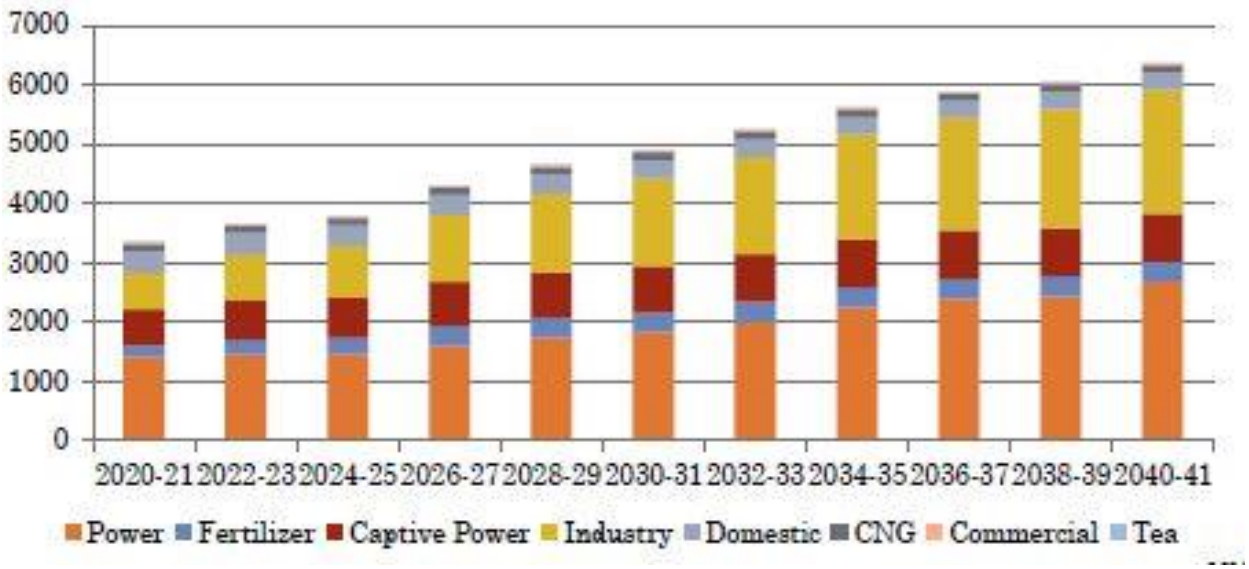
8.0 Historical Gas Production Scenario

Figure 24: Historical Production of Gas (2008-2023) in Bcf



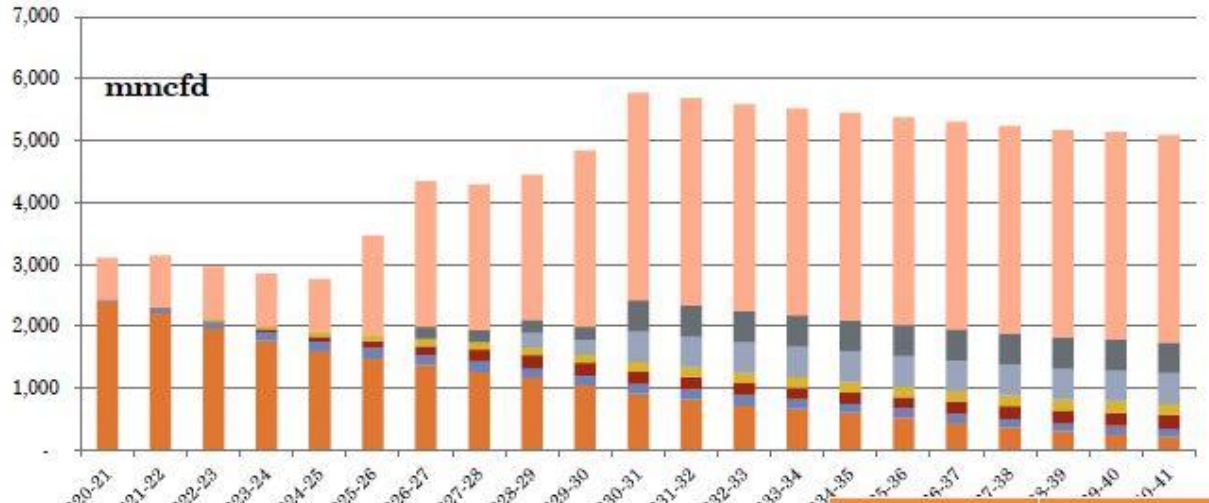
9.0 Gas demand vs Supply projection

Figure 25: Gas Demand projection



Source: Petrobangla

Figure 26: Gas supply projection



Financial Year	Import Dependency, %
2020-21	22
2030-31	67
2040-41	76

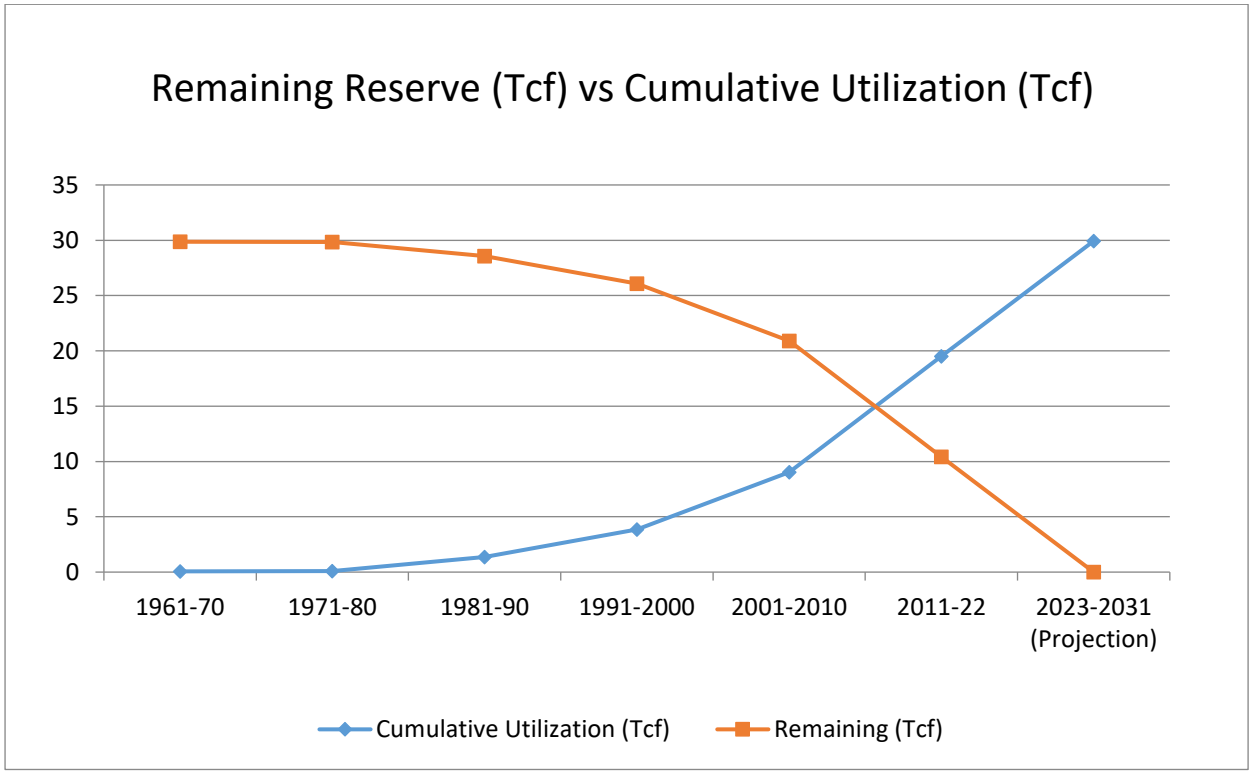
Source: Petrobangla

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

Table 31: Gas remaining Reserve vs Cumulative Utilization

Year	Cumulative Utilization (Tcf)	Remaining (Tcf)
Recoverable(Proven +Probable)	0.000	29.93
1961-1970	0.066	29.864
1971-1980	0.097	29.833
1981-1990	1.364	28.566
1991-2000	3.853	26.077
2001-2010	9.028	20.902
2011-2022	19.52	10.41
2023-2031 (Projection)	29.93	0

Figure 27: Remaining Reserve (Tcf) vs Cumulative Utilization (Tcf)



11. Conclusion

The government has taken several steps to deal with the reduction in the production of gas. Exploitation and exploration of domestic resources have been emphasized. Integrated Power and Energy Sector Master Plan has already been formulated. Gas exploration activities by BAPEX have been strengthened and some prospective wells have already been identified. Discoveries of more new wells are much expected in the future. Besides onshore, exploration activities are being undertaken in the offshore and fields with large amount of gas are expected. In some old gas fields, the 3D Seismic survey has revealed more reserves of gas than before. For example, using new technology Bibiyana gas field found an increase of its reserve and a further production for some additional periods will continue. The government has taken initiative to meet the demand of energy through import of LNG, already LNG supplies have started and more LNG will be added to the national grid in the next few years. GSMP has been formulated and new entrepreneur-friendly PSC has been revised. Moreover, government has taken several steps to boost up the coal sector. ERL expansion is underway and SPM project has been initiated and the progress of the project work is ongoing. When the ongoing & future planning of development work of BPC will be implemented then the energy security will be enriched for the mass people of Bangladesh. New horizon has been exposed in sea after settlement of maritime boundary with Myanmar and India. Cross border energy trade will get momentum. Considering all the perspectives, we hope that in the near future, Bangladesh is well prepared to meet the Energy demand and ensure the supply of uninterrupted energy for achieving the 8th FYP, SDG-2030 and Vision-2041.

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