42

STANDING COMMITTEE ON ENERGY

(2018-19)

SIXTEENTH LOK SABHA

MINISTRY OF POWER

Stressed/Non-Performing Assets in Gas based Power Plants

FORTY SECOND REPORT

LOK SABHA SECRETARIAT
NEW DELHI

January, 2019/Pausha, 1940 (Saka)

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Presented to Lok Sabha on 4th January, 2019

Laid in Rajya Sabha on 4th January, 2019

सत्यमेव जयते

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SECRETARIAT

1.	Ms. Rimjhim Prasad	Joint Secretary
2.	Shri N.K. Pandey	Director
3	Ms. Deepika	Executive Assistant

INTRODUCTION

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Forty Second Report on 'Stressed/Non-Performing Assets in Gas based Power Plants' pertaining to the Ministry of Power.

2. The Committee had a series of discussion on the subject on 22nd February, 2018, 20th August, 2018 and 15th November, 2018 with representatives of the Ministry of Power, the Ministry of Petroleum and Natural Gas, Lending Banks and Developers/Promoters of the Stressed Gas based Power Projects.

3. The Committee wish to express their thanks to representatives of the Ministry of Power, the Ministry of Petroleum and Natural Gas, Lending Banks and the Developers/Promoters of the Stressed Gas based Power Projects, for appearing before the Committee and furnishing the desired information on the issues related to the subject.

4. The Report was considered and adopted by the Committee at their sitting held on 2nd January, 2019.

5. The Committee place on record their appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

6. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

NEW DELHI
2nd January, 2019
12 Pausha, 1940 (Saka)

Dr. Kambhampati Haribabu
Chairperson,
Standing Committee on Energy

PART-I

NARRATION ANALYSIS

I. INTRODUCTORY

1.1 Electricity is a concurrent subject and as per the Electricity Act 2003, Electricity generation is a delicensed activity. Accordingly, any State or generating company can setup a gas based power project taking into consideration issues like viability, availability of gas etc. Out of India's total Power Installed capacity of about 345 GW, the Gas-Based capacity is about 25 GW. Although the share of gas based capacity in terms of installed power is 7.2 %, but its share in terms of generation is only 3.8 % as 14305.30 MW of Gas based capacity is stranded due to non availability of domestic gas and un-affordability of imported gas as a consequence of which a large amount of assets in this sector have turned out to be non-performing/ unproductive.

1.2 The gas based power plants in the country are facing increasing shortfall of domestic Gas since 2011-12 and these plants run at very low PLF of about 24 %. The normative Gas requirement to operate the existing Gas based Power Plants at 85% PLF is about 102 MMSCMD. However, the total domestic Gas allocated to power projects is 87.12 MMSCMD and average domestic gas supplied during the year 2017-18 was only 25.71 MMSCMD. Further, due to high cost of imported gas (RLNG), cost of generation on RLNG is substantially higher than domestic gas, which makes it difficult for scheduling in merit order dispatch.

1.3 During the last few years, a huge generation capacity have been added in India. But the demand has not increased in commensuration with the large capacity

addition, which has led to reduction in peak shortage of Power in the country. Also, the power has become available from other sources at a much cheaper rates. In renewable sector, the recent bids received for solar/wind power is less than Rs. 3/kWh. Therefore, States are reluctant to buy high cost power generated from Gas based Power Plants. However, the current scenario can be improved with the increased availability of affordable domestic gas for power sector.

1.4 In view of huge capacity addition target of 175 GW from intermittent Renewable Energy, Gas based capacity will play a vital role in balancing of the grid due to its higher ramp up rate and quick start time. Gas based Projects also have other benefits like they produce clean energy (less CO_2 emission, no particulate matter), utilize less resources in terms of land and water etc. Given the limitations on use of Coal due to environmental consequences, gas is likely to play an increasingly important role in the Country's Power Sector.

1.5 Investments ranging from INR 4 - 5 crores per MW have been made into these stranded gas based projects, out of which approx. 70% - 80% of the capital cost has been financed by banks using public money. Further there has been an additional cost escalation ranging from 50%-75% of the original project cost on account of delays primarily due to non-availability of gas. These plants are now unable to service their debt obligations to their lenders and are on the verge of becoming NPAs and need attention of Government of India for their revival. Failure to hand-hold these stranded gas based projects would see these plants going to NCLT. Even under Bankruptcy

Proceedings, these plants are unlikely to find buyers till the status of gas availability improves.

1.6 The demand for electricity is expected to pick up pace as a result of various programmes and policies of the Government. Further, the Ministry of Petroleum and Natural Gas has assured this Committee that the domestic production of gas would undergo a significant jump in the years to come. So, there is likelihood that this stranded capacity may be meaningfully absorbed in power system in next 3 to 4 years. In this light, it is extremely critical to preserve the existing Gas based Power capacity for future economic benefits.

II

GAS BASED POWER PLANTS

2.1 The Committee were apprised that out of total installed capacity of 3,44,719 MW as on 30th September 2018, a capacity of 24,867 MW (about 7.2%) is from gas based (including liquid fuels) power plants. However, only 23,813 MW capacity (excluding liquid fuel) is being monitored by CEA. Out of the total monitored capacity, a capacity of 20,904 MW is connected with Main Pipeline/Gas grid and 2909 MW is connected with isolated gas fields. In addition, around 3000 MW of new gas based capacity is under construction/ready for commissioning in the immediate future if gas is made available. The sector wise details of the gas based power plants are as under:

- Central Sector-6,878 MW (28.9%)
- State Sector-6,643 MW (27.9%)
- Private Sector - 10292 MW (43.2%)

2.2 The Ministry submitted that the total gas based generation during the year 2017-18 was 49.77 BU (around 3.8% of the total generation) out of which the generation from domestic gas was about 37 BU.

2.3 The Ministry of Power furnished that a capacity of 14305 MW was classified as stranded under the scheme of Utilization of gas based power plants. The capacity of 14,305 MW includes commissioned as well as new gas based capacity which was ready for commissioning. Details, as submitted by the Ministry, are as under:

"• 5,194 MW capacity which has pre dominantly Krishna-Godavari (KG) D6 gas allocation. Gas supply to these power plants from KGD6 is nil since, 2013. Out of which 100 MW Vatwa CCPP has been retired.

• 3,762 MW capacity has been commissioned without any gas allocation.

- 5,349 MW gas based capacity was in the category of ready for commissioning. Out of which 2348 MW has been commissioned without gas allocation."

2.4 A List of stranded gas based capacity, as submitted by the Ministry, is given below**.**

S. N.	Name of the Power Station	Name of the Developer	Installed Capacity (MW)	Operational Capacity (MW)	Zero date/ Order Place Date
CENTRAL SECTOR					
1	Ratnagiri (RGPPL-Dhabhol) Maharashtra	NTPC & JSW(JV)	1967	1967	05-1999
Total (CS)			**1967**	**1967**	
STATE SECTOR					
2	PRAGATI CCGT-III, Delhi	Pragati Power Corp. Ltd.	750	750	05-2008
3	DHUVARAN CCPP(GSECL), Gujarat	Gujarat State Electricity Corp. Ltd.	112	112	03-2004
4	UTRAN CCPP (GSECL), Gujarat	Gujarat State Electricity Corp. Ltd.	374	374	04-2007
5	PIPAVAV CCPP Gujarat	GSPC Pipavav Power Comp. Ltd.	702	702	03-2008
6	DHUVARAN CCPP (GSECL), Gujarat	Gujarat State Electricity Corp. Ltd.	376.3	376.3	
7	HAZIRA CCPP EXT, Gujarat	Gujarat State Electricity Corp. Ltd.	351	351	01-2008
TOTAL(SS)			**2665.3**	**2665.3**	
TOTAL (PUBLIC)			**4632.3**	**4632.3**	
PRIVATE SECTOR					
8	VATWA CCPP (Torrent), Gujarat	Torrent Power	100		Retired
9	RITHALA CCPP (NDPL) Delhi	NDPL	108	108	05-2008
10	ESSAR CCPP Gujarat	Essar Power	300	300	
11	UNOSUGEN CCPP, Gujarat	Torrent Power	382.5	382.5	07-2010
12	DEGEN MEGA CCPP, Gujarat	Torrent Power	1200	1200	07-2010

13	GAUTAMI CCPP Andhra Pradesh	GVK Gautami Power Ltd	464	464	03-2004
14	GMR-KAKINADA (Tanirvavi) Andhra Pradesh	GMR Energy	220	220	
15	JEGURUPADU CCPP (GVK) Andhra Pradesh	GVK Industries Ltd.	220.5	220.5	01-2004
16	KONASEEMA CCPP Andhra Pradesh	Konaseema Power	445	445	02-2004
17	Kondapalli Extn CCPP Andhra Pradesh	Lanco Power	366	366	11-2007
18	VEMAGIRI CCPP Andhra Pradesh	GMR Energy	370	370	12-2003
19	SRIBA INDUSTRIES Andhra Pradesh	PCIL Power & Holding Ltd.	30	30	
20	RVK ENERGY Andhra Pradesh	RVK Energy	28	28	
21	Silk Road Sugar Andhra Pradesh	Silk road sugar	35	35	
22	LVS POWER Andhra Pradesh	LVS Power	55	55	
23	GMR Vemagiri Ext., Andhra Pradesh	GMR Energy	768	768	09-2009
24	Kondapalli Extn. St. III, Andhra Pradesh	Lanco Power	742	742	01-2010
25	SAMALKOT EXT. Andhra Pradesh	Reliance Infra	2400	-	07-2010
26	CCGT by PANDURANGA Andhra Pradesh	Panduranga Energy	116	-	05-2010
27	GAS ENGINE by Astha, Telangana	Astha Power	35	-	03-2011
28	Kashipur Sravanthi ST-1 &II, Uttarakhand	Sarvanthi Energy	450	225	11-2010
29	BETA Infratech CCGT, Uttarakhand	Beta Infratech	225	-	12-2010
30	GAMA Infraprop CCGT, Uttarakhand	Gama Infra Prop	225	225	07-2010
31	CCGT by Pioneer Gas Power Ltd. Maharashtra	Pioneer Gas Power Ltd.	388	388	
Total (Pvt.)			**9673**	**6572**	
Total			**14305.3**	**11204.3**	

2.5 When asked if these Gas based Plants were set up without finalization of Fuel Supply Agreement, the Ministry in its reply stated as under:

> "Out of 14,305 MW, a capacity of 5,194 MW has been allotted domestic gas. Balance 9,111 MW has no allocation of domestic gas and are commissioned/being implemented without any Gas Supply Agreement."

2.6 On being asked about the reasons for continuing construction of gas-based power plants to the tune of 3,000 MW despite the fact that there was very little hope of gas supply to these plants, the Ministry in its reply stated as under:

> "These power plants were planned with the expectation of considerable increase in the volume of domestic gas production, particularly from KG D6 field. However, the production of gas from this field reduced drastically to nil supply for power sector since March 2013.
>
> In view of shortage of gas, Ministry of Power had issued an advisory in March 2012 for the developers to not plan power projects based on domestic gas till 2015-16, as projections for 2014-15 and 2015-16 given by MoP& NG could not support any new capacity."

2.7 On being asked about the causes for stress in Gas based Power Plants, the Ministry furnished the following information:

> "The shortage of domestic gas supply to the power plants. Further, the power plants are not able to generate power on imported RLNG at affordable rate to the DISCOMS, consequently the power is not scheduled."

2.8 The weighted average cost of generation from different sources, as furnished by the Ministry, is given below:

Source	**Weighted average rate of sale of Power (Rs./kWh)**
Coal	3.35
All India Hydro	2.41
Solar	3.00
Wind	3.50
Exchange Rate Price	3.25

2.9 On being asked about the prevailing tariff scenario of the Gas based Power, the Ministry furnished the following:

"As per information available in the Annual report of CERC for 2016-17, tariff for various types of generating stations regulated by CERC are as under:

(Rs. /kWh)

Type of Plant		**Capacity Charge**	**Energy Charge**
Coal	Pit Head	0.61 to 1.58	1.37 to 2.52
	Non-Pithead	0.74 to 2.98	1.14 to 3.65
Lignite		0.67 to 2.33	2.88 to 4.54
Gas		0.50 to 1.84	1.30 to 3.85

2.10 Typical costs of generation on different types of gas supplied to NTPC DADRI Gas power plant in Uttar Pradesh, as submitted by the Ministry, are given below:

Type of Gas	**Delivered Gas price (GCV BASIS) USD/MMBTU**	**Energy charge rate– (ECR) (Rs/KWH)**
APM Gas	5.08	2.86
PMT Gas	8.27	4.65
Non APM Gas	5.87	3.30
Div APM	6.14	3.45
Div PMT	9.33	5.24
GAIL Spot RLNG	12.34	6.53

2.11 Discussing about the cost of generation in Gas based Power Plants, the Secretary, Ministry of Power deposed:

"if we look at the price, the landed price today or over the recent periods at the power plants is $ 12-13 for an imported RLNG after regasification and transportation. So, in generation, it would mean about Rs. 6.50 to Rs. 7.00 as the generation cost, which is a variable cost and add another Rs. 1.50 to it and the imported gas based power tariff will be about Rs. 8.00. Last time, we had mentioned that on an average coal tariff is around Rs. 3.35 today. Some plants may be at Rs. 5, which are the new ones where the depreciation has not taken place, but the national average is Rs. 3.35; solar average is around Rs. 3.00, which is going down; wind is at Rs. 3.50; and looking at the depreciated hydro plants the national average is Rs. 2.41. At this comparison, Rs. 8.00 tariff gas is the one, which we find very difficult to sell."

2.12 When asked about the details of total investment and debt outstanding of the gas projects, the Ministry replied that 70% to 80% of the project cost was in the form of loan from FIIs and commercial banks. The details of total investment and debt outstanding of the gas based Power Projects are given below**.**

S. No	Name of the Project	Installed capacity	Lead Bank	Total investment and Debt outstanding as on 30.06.2018
1	(Ratnagiri)RGPPL Anjanvel	640.00 MW	IDBI	Total invest 12786 Cr. Debt out as on 30.06.2018: 1744 Cr. as sustainable loan & 3696 Cr. as unsustainable loan
2	(Ratnagiri)RGPPL Anjanvel	663.50	IDBI	Total invest 12786 Cr. Debt out as on 30.06.2018: 1744 Cr. as sustainable loan & 3696 Cr. as unsustainable loan
3	(Ratnagiri)RGPPL Anjanvel	663.50	IDBI	Total invest 12786 Cr. Debt out as on 30.06.2018: 1744 Cr. as sustainable loan & 3696 Cr. as unsustainable loan
4	Pragati Power Station-III Bawana	750	PFC	Total capital investment - Rs. 4948.16 Crs Plus Rs. 144.98 cr. CWIP capital Debt outstanding Rs. 1648.31 crs.
5	Dhuvaran CCPP-1	112	BOB	Invest: 428 Cr. Debt Outstanding 45 Cr.
6	Utran CCPP-1	374	GSFS	Total investment: 1354 cr. Debt outstanding 248 cr.
7	Pipava Power Company Ltd.	702	SBI	Total Estimated invest. 3029 Cr. Outstanding Debt 1109 cr.
8	Dhuvaran CCPP-1	376.3	BOB	Invest 1619 Cr. Debt Outstanding 287 Cr.
9	HAZIRA CCPP EXT	351	NA	No information available
10	VATWA CCPP (TORRENT)	100	NA	No information available
11	RITHALA CCPP (NDPL)	108	SBI	No information available
12	Essar Power Ltd.	300	LIC	WDC of Fixed Assets – 52 Cr.

13	UNOSUGEN Brown Field Expansion of Sugen	382.5	SBI	Total investment : Rs. 1864.64 Crs. Debt Outstanding Rs. 972.73 crs.
14	DGEN Mega Power Project (Gujarat)	1200	SBI	Total investment Rs. 5639.26 crs.
15	M/s GVK-Gautam Power Generation Ltd.	464	IDFC	1200 Crs.
16	GMR energy Ltd. (Brage Mounted Power Plants), Kakinada	220	No term load	Invest 610 Cr. (for all units)
17	M/s GVK Jegurupadu Extension Project (Phase-II)	220.5	IDBI	480 Crs.
18	M/s Konaseema Gas Power Ltd.	445	IDBI	2109 Crs.
19	Lanco Kondapalli Extension CCPP stage-II	366	Axis Bank	Total investment -Rs. 1188 crores. Debt outstanding-Rs. 717.48 crors. (Including interest outstanding of Rs. 232.14 crores)
20	M/s GMR Vemagiri Power generation Ltd.	370	IDBI	No information available
21	SRIBA INDUSTRIES	30		No information available
22	RVK ENERGY	28		No information available
23	SILK ROAD SUGAR	35		No information available
24	LVS POWER	55		No information available
25	GMR Rajahmundry Energy Ltd.	768	IDBI	Total investment Rs. 4923 Crs.
26	Lanco Kondapalli CCPP Stage-III	742	Axis Bank	Total investment-Rs. 3614 crores. Debt outstanding-Rs. 1176.91 crs. (Including interest outstanding Rs. 688.24 crores)
27	SAMALKOT Ext. (Reliance infra)	2400	IDBI	No information available
28	PANDURANGA CCPP (Andhra Pradesh)	116	Andhra Bank	Total investment-Rs. 540 crores. Debt outstanding -Rs. 660 crors. (Including interest outstanding)
29	Gas Engine by Astha	35		No information available
30	Kashipur Gas Based Power Plant	450	IFCI	Total investment-Rs. 3016.26 crs. Debt outstanding- Rs 2128.59 crs.

31	Beta Infratech Private Ltd.	225	PNB	Total investment-Rs. 1846 crores. Debt outstanding-Rs 1395 crores.
32	Gama CCPP Kashipur	225	BOB	Total investment-Rs. 1077 crores. Debt outstanding-Rs 706.27 crs.
33	Pioneer Gas Power Ltd.	388	IFCI	Total investment-Rs. 1776 crores. Debt outstanding-Rs 1900 crores. (Including accrued interest)
	Total	**14305.3**		

III

STATUS REGARDING DEMAND, SUPPLY AND CONSUMPTION OF NATURAL GAS

3.1 The Ministry submitted that the domestic Natural gas production in the country during 2017-18 was about 31.73 Billion Cubic Meter (BCM) as against 31.14 BCM in 2015-16. The net production of domestic natural gas as well as liquefied natural gas (LNG) import for the years 2014-15, 2015-16, 2016-17 and 2017-18 is given below:

Years	Net Production of domestic gas (MMSCMD)	LNG Import (MMSCMD)	Total Gas Supplied (MMSCMD)
2014-15	89.57	50.78	140.35
2015-16	85.31	58.38	143.69
2016-17	84.51	67.42	151.93
2017-18*	86.93	72.13	159.06

*Provisional (Source: MOPNG, PPAC)

3.2 Discussing about the Natural gas production in the country, the Secretary, Ministry of Petroleum and Natural Gas deposed:

> "From 2011-12 to 2016-17 domestic gas production has been continuously declining. In 2011-12 the domestic gas production was 45.56 billion cubic meters which has come down to 31.90 billion cubic meters in 2016-17. In 2017-18 this declining trend has been reversed and there is an increase in domestic production. We have marginally gone up to 32.64 billion cubic meters. Both gas and crude availability domestically is of great concern to the Government."

3.3 The Committee were apprised that in India, Natural gas produced from domestic sources is being allocated to different sectors by Central Government as per

policy guidelines issued from time to time. Presently, City Gas Distribution (CGD) and Fertilizer sector has higher priority over Power Sector. As informed by the MoPNG, Government vide order dated 28.06.2010 issued guidelines on pricing and commercial utilization of Non-APM gas produced by National Oil Companies (NOC). As per the said guidelines, MoP&NG directed NOC's producing non-APM gas to approach customers in the following order of priority:

a. Gas based fertilizers plants

b. LPG plants.

c. Power plants supplying to the grid.

d. City Gas Distribution systems for domestic & transport sectors.

e. Steel, refineries & petrochemicals plants for feedstock purposes.

f. City Gas Distribution systems for industrial & commercial customers.

g. Any other customers for captive & merchant power, feedstock of fuel purposes.

Subsequently, MoPNG vide guidelines dated 14.11.2013, 03.02.2014 & 20.08.2014 placed Gas Allocation/Supply to City Gas Distribution (CGD) entities for PNG (Domestic) and CNG (Transport) purpose under no cut category. Domestic gas (APM, PMT, Non-APM, Ravva) is being supplied to the consumers including power plants as per prevailing policy of MoPNG and subject to availability of gas from upstream suppliers.

3.4 When asked if the empowered group of Ministers in 2009 recommended highest priority in gas allocation to power plants, the Ministry stated as under:

> "EGOM of May, 2008 accorded one of the highest priorities to the power sector in utilization of domestic natural gas and decided that consumers belonging to any of the priority sectors should be in a position to actually consume gas as and when it becomes available.

EGOM of January, 2009 decided that necessary allocations from KG-D6 fields will be made to gas-based projects in the pipeline as and when they are ready to commence production.

As per EGoM Minutes of Meeting held on 27.10.2009, point (o) 'Amongst all fall back customer, the requirement of power sector would be firstly met and, thereafter, all the remaining customers should be supplied gas on pro rata basis'."

3.5 Average supply of domestic gas to various sectors in last 3 years in MMSCMD, as submitted by the Ministry, is given below:

Sl. No.	Sector	FY No. 2015-16		FY 2016-17		FY 2017-18	
		Domestic	**RLNG**	**Domestic**	**RLNG**	**Domestic**	**RLNG**
1	Fertilizer	25.11	18.73	21.52	20.75	18.79	21.29
2	Power	22.90	7.45	25.00	6.82	25.71	7.25
3	CGD	10.74	6.88	11.72	8.42	12.76	10.65
4	Other Sectors	9.63	29.12	10.90	33.99	13.92	34.00
Total		**68.38**	**62.18**	**69.14**	**69.98**	**71.18**	**73.19**

3.6 The Committee were informed that due to inadequate domestic production, country has been importing LNG to meet the shortfall in demand of natural gas. Many LNG terminals are in operation for regasification of imported LNG. The details of existing LNG terminal (Operational) are given below:

Name of Terminal	Promoters	Capacity (MMTPA)**
Dahej (Gujarat)	Petronet LNG Ltd	15
Hazira (Gujarat)	Hazira LNG Pvt. Ltd	5
Dabhol (Maharshtra)	RGPPL	1.3*
Kochi (Kerala)	Petronet LNG Ltd	5
Total (MMTPA)		26.3
Total (MMSCMD)		~ 95

Source : MOPNG

* to be increased to 5 MMTPA (Million Metric Tonne Per Annum) after commissioning of break water facility.

**1 MMTPA of LNG = 3.60 MMSCMD (million metric standard cubic meter per day)

3.7 Further, regasification terminals of about 38.5 - 39.5 MMTPA (including proposed break water facility at RGPPL) are being planned on the eastern and western coasts of India by different entities.

Pricing of Natural Gas

3.8 The Committee were apprised that the price of Natural Gas produced from domestic fields is determined as per the Pricing formula envisaged in New Domestic Natural Gas Pricing Guidelines, 2014. Under these guidelines, the price of domestic natural gas is linked to the international prices of natural gas. The domestic gas price for the period October,18 to March,19 has been fixed at $3.36/MMBTU at well head.

3.9 Basic price of Natural gas since 01.11.2014 as per New Domestic Natural Gas Pricing Guidelines, 2014 of the Government, as submitted by the Ministry, is given below:

S. No.	Period	Basic Gas Price (US$ per MMBTU)
1	November 2014 to March 2015	5.05
2	April 2015 to September 2015	4.66
3	October 2015 to March 2016	3.82
4	April 2016 to September 2016	3.06
5	October 2016 to March 2017	2.50
6	April 2017 to September 2017	2.48
7	October 2017 to March 2018	2.89
8	April 2018 to September 2018	3.06

3.10 The Ministry informed that the natural gas can be imported in the form of RLNG, which has to be regasified at regasification terminal in India. This process involves extra cost of 1.0-1.5$/MMBTU. Apart from the basic cost of domestic natural gas/RLNG, VAT (as high as 26%), CST and entry tax, pipeline tariff, marketing margin

by gas transporter is to be levied. Also, in case of RLNG, service tax on regasification is levied. In the new GST regime natural gas has been kept outside of GST.

3.11 The details of Gas price at power plant, as furnished by the Ministry, is given below:

	Gas Price at power plant ($/MMBtu)
Domestic	4.0-5.5*
RLNG	10 – 12**

*Include Basic price + Transportation cost + various taxes and duties etc.
**Include Imported gas price at port (7.5-8.0$/MMBtu) + regasification cost(1-1.5$/MMBtu) + Transportation cost (1.0$/MMBtu) + Marketing margin (0.5$/MMBtu) + various taxes and duties etc.

3.12 Explaining the reasons for higher cost of RLNG, the Ministry stated that:

> "The price of RLNG at port is around $7.50-8.00/MMBTU (excluding regasification, transportation charges, marketing margin, various taxes & duties etc,). The price of imported gas varies as per the international market. Besides, the landed price in Rupee terms depends upon exchange rate fluctuation also. Apart from the price of LNG, States levy very high taxes/ duties on the sale of re-gasified LNG, such as VAT and entry tax, which further increase the landed cost of gas at the power stations. At present, the landed cost of gas after re-gasification, etc. at power plant is around $10-12/MMBTU. At this cost and present exchange rate, the fuel cost of generation on RLNG would be around Rs 5.5/kWh to Rs 6.5/kWh. Adding another Rs. 1.5/kWh for the fixed cost, the total cost of power becomes Rs.7.0-8.0/kWh. Due to high price of imported gas (RLNG), cost of generation on RLNG is substantially higher than other sources, which makes it difficult for scheduling in merit order dispatch."

Supply of Natural Gas to the Power Sector

3.13 The Committee were apprised that the Normative Gas requirement to operate the existing Power plants of capacity of 23,813 MW at 85% Plant Load Factor (PLF) is about 102 MMSCMD. However, the total domestic gas allocated to power projects is 87.05 MMSCMD and average gas supplied to these gas based power plants during the

year 2017-18 was only 30.72 MMSCMD (including 7.92 MMSCMD of imported RLNG). The gas grid connected capacity had received 21.16 MMSCMD gas during the year 2017-18 and achieved average PLF of around 20% only and gas based capacity connected with isolated gas field had received 9.55 MMSCMD gas and achieved a PLF of 51 %. Therefore, the average Plant Load Factor of gas based generation capacity in the country during 2017-18 is about 22.86%.

3.14 Discussing about the PLF of Gas based Power Plants in the country, the Secretary, Ministry of Power deposed:

> "The capacity of Central sector is 29 per cent; State is 28 per cent; and private is 43 per cent. So, we have a large capacity under the private sector. The PLF of Central sector stations is only 31 per cent; State is 29 per cent; and private further down at 16 per cent. This lays down the problem vis-à-vis the State, Centre and the private plants. In 2009-2010, the PLF of gas-based plants used to be 67 per cent, which has now come down to 24 per cent as the national average for all sectors."

3.15 The details of domestic gas supplied to power sector and shortfall against the allocated quantity, as furnished by the Ministry, are shown in table below:

(in MMSCMD)

Years	Monitored Capacity (MW)	Domestic Gas Allocation	Average Domestic Gas Supplied	Shortfall of domestic gas	% Shortfall	Average RLNG supplied	Total Gas Supply
2013-14	20385	84.31	25.65	58.66	70%	1.48	27.13
2014-15	21666	84.31	23.61	60.70	72%	1.59	25.20
2015-16	23076	87.09	22.90	65.46	75%	6.63	28.26
2016-17	24037	87.05	25.00	64.35	74%	6.89	29.59
2017-18	23843	87.12	25.71	64.32	74%	7.92	30.72
2018-19 (Apr'-Aug'18)	23813	87.10	22.00	65.10	74%	9.27	31.28

3.16 As per data available in CEA, the details of gas supply position to gas based power stations during 2017-18 and during 2018-19 (Apr-June,18) is summarized as under:

(Figures in MMSCMD)

2017-18

Category	APM (Administered Price Mechanism)	Non APM	KGD-6	RLNG (Import) (Regasified Liquefied Natural Gas)			Total
				Long Term	E-bid	SPOT	
Gas allotted	45.65	9.09	32.37	7.48	-	-	94.60
Gas Consumed/ Supplied	15.54	7.26	0.00	3.27	-	4.64	30.72

2018-19 (April-June, 18)

Category	APM (Administered Price Mechanism)	Non APM	KGD-6	RLNG (Import) (Regasified Liquefied Natural Gas)			Total
				Long Term	E-bid	SPOT	
Gas allotted	42.94	11.74	32.37	7.48	-	-	94.54
Gas Consumed/ supplied	14.47	7.84	0.00	4.66	-	5.86	32.84

MMSCMD: Million Metric Standard cubic Meter per day

3.17 Explaining the Gas Supply position to Gas based Power Plants, the Ministry stated as under:

> "The domestic gas supply to gas based power plants is very less as compared to the actual allotted quantity due to less availability of domestic gas. This has resulted in significant gas based capacity being operated at sub optimal level. The supply of gas from KG D6 field is also NIL to power sector since March, 2013. Moreover, the gas supply to gas based power stations is further curtailed to fulfill the obligations of meeting the City Gas Distribution (CGD)."

3.18 Further explaining the Gas Supply position to Gas based Power Plants, the Secretary, Ministry of Petroleum and Natural Gas deposed:

"Out of total 71 million metric standard cubic meters now available for allocation of domestic gas, power consumes the largest amount of domestic gas. This is around 26 million metric standard cubic metres. That comes to 36 per cent of the total domestic gas supply. So, my submission to the hon. Committee is that it is not that we are ignoring power. About 50 per cent of India's domestic requirement of gas is now met by the imported gas. The imported gas used by power sector is just ten per cent and other sectors, except CGD, are using much more than this. This is just to say that we are trying our best to give what is possible to the power sector. The fact is that the power sector is getting the maximum benefit out of the available domestic gas supply."

3.19 When asked about the reasons for non-supply of domestic gas to power plants, the Ministry in its reply stated as under:

"Domestic gas (APM, PMT, Non-APM, Ravva) is being supplied to the consumers including power plants as per allocation made by MoP&NG and subject to availability of gas from upstream suppliers.

Further, over a period of time, availability of domestic gas from upstream suppliers (Majorly APM gas from ONGC, PMT gas from PMT JV etc.) has decreased leading to less availability of domestic gas to customers including to power sector.

The production of natural gas has gone down in the country and therefore present gas supplies are not meeting the gas allocations. However, supply of Domestic Gas to Power sector has increased in last 2 years. At present, Power sector is the largest consumer of domestic gas in the country."

3.20 When queried about the number of gas-based plants that were getting supply of gas for their operation, prior to discovery of gas in KG D6 Basin, the Ministry stated as under:

"The KGD-6 gas got infused into the system in early 2009. As per annual report prepared by CEA for monitoring of gas supply to Gas based power projects, there were total 44 no. of gas based power plants of the capacity of 13577.60 MW during the year 2008-09. 42.83 MMSCMD gas was allotted to these 44 power plants, out of which, 36.69 MMSCMD average gas was supplied/consumed during the year 2008-09."

3.21 When asked about the power plants connected to KG D6 Basin and if any plant is getting supply of gas from KG D6 Basin today, the Ministry stated as under:

> "As per information available in Central Electricity Authority, there are 30 nos. of gas based power plants with a capacity of 14504 MW having allocation from KG D6. The allocations from KG D6 to these plants were on firm basis, however with no supply commitment. The supply of gas from KG D6 field to power sector is nil since March, 2013."

3.22 When asked about the reasons for low production from the KG D6 field, the Ministry stated as under:

> "The peak flow of the gas in D-6 fields was expected to be about 80 MMSCMD, by the end of the year 2009, and to increase further in subsequent years. With the expectation of considerable increase in the volume of production from this field, a number of gas based plants were taken up for implementation in the country even without firm allocation of gas to them."

3.23 The Ministry stated that the Supply to Power sector from KG D6 has become zero since FY 2013-14 as per MoP&NG reverse cut order on supply of KG D6 Gas dated 30.03.2011. The Average production of KG D6 since 2010-11 is as under:-

(in MMSCMD)

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Production	55.35	42.32	25.74	13.54	11.91	10.33	7.45	5.5
Supply to power sector	26.43	23.23	8.38	0	0	0	0	0

3.24 Discussing about the availability of Gas from KG D6 Basin, the Secretary, Ministry of Petroleum and Natural Gas deposed:

> "In 2010-11, the production was 55 million metric standard cubic metres. At that time, 26.43 per cent was given to the power sector. It came down in 2011-12 from 55 MMSCMD to 42 MMSCMD; in 2012-13 from 42 MMSCMD to 25 MMSCMD; in 2013-14 from 25 MMSCMD to 13 MMSCMD; in 2014-15 from 13 MMSCMD to 11 MMSCMD; in 2015-16, it came down to 10

MMSCMD; in 2016-17, it came down to 7.45 MMSCMD; in 2017-18, it came down to 5.5 MMSCMD; and today it is as good as nil. When this happened, there was a drastic reduction in the availability of gas to the power sector. From 2013-14 onwards, power sector is not getting any gas from this KG-D6 basin."

3.25 When asked if the Government assured in the past that 143 MMSCMD gas would be made available and had this assurance triggered the setting up of power plants in the country, the Ministry stated as under:

"As per minutes of meeting of EGoM meeting held on 20.07.2010, the point 1(a)is quoted below:

The present availability of indigenous gas is around 143 MMSCMD, which includes KG D6 production of around 60 MMSCMD. KG D6 is being produced in accordance with the scheduled earlier indicated by the Directorate General of Hydrocarbon and is being utilized by priority sectors in accordance with EGoM decisions. The EGoM noted the projections regarding the total availability of indigenous gas from all sources…..

With the New Exploration Licensing Policy (NELP), gas exploration in India has been given impetus and the KG D6 gas got infused into the system in early 2009. The peak flow of the gas in KG D6 fields was expected to be about 80 MMSCMD, by the end of the year 2009, and to increase further in subsequent years. With the expectation of considerable increase in the volume of production from this field, a number of gas based plants were taken up for implementation in the country."

3.26 On being asked about the reasons for non-fulfillment of the above mentioned assurance and commitment, the Ministry stated as under:

"One of the reason for non-fulfillment of the commitment was due to non-availability of gas in KG D6 fields as expected of 80 MMSCMD by the end of the year 2009."

3.27 When asked about the possibility of improvement in Gas supply to Power Sector, the Ministry stated as under:

"The domestic gas is being supplied to the power sector as per current production level and as per prevailing guidelines of MoP&NG. Domestic natural gas supply to power sector can improve only in case production levels increase in future."

"Further, RLNG (Imported) gas is under Open General Licence which is sold on mutually agreed terms between Buyers and Sellers on Market based mechanism. Power plants can source RLNG as per their requirement."

3.28 Assuring the Committee about the increase in domestic Gas production in the near future, the Secretary, Ministry of Petroleum and Natural Gas deposed:

"Pursuant to a series of steps taken by the Government, we are now reasonably confident that domestic production of gas would undergo a significant jump in the years to come. In 2019-20, our estimate is that it will go up to 45.50 billion cubic meters; in 2020-21, it will go up to 49.50 billion cubic meters; and in 2021-22, it will go up to 60.50 billion cubic meters."

IV

STEPS TAKEN BY THE GOVERNMENT

4.1 The Committee were apprised that in order to improve utilization of gas based capacity in the country, Government of India in consultation with the state governments sanctioned a scheme (known as e-bid RLNG scheme) for importing Spot Re-gasified Liquefied Natural Gas (RLNG) in 2015-16 and 2016-17 for the stranded gas based power plants as well as for plants receiving domestic gas. The scheme provided for financial support from PSDF (Power System Development Fund). The scheme also envisaged sacrifices to be made collectively by all stakeholders, including the Central and State Governments by way of exemptions from applicable taxes and levies/duties on the incremental RLNG being imported for the purpose. The outlay for the support from PSDF was fixed at Rs 7500 crores (Rs 3500 crores and Rs 4000 crores for the year 2015-16 and 2016-17 respectively). The Scheme ended on 31.03.2017.

4.2 Some of the details about the above mentioned scheme, as provided by the Ministry, are given below:

i. "The power produced under the scheme was to be supplied to the DISCOM at a tariff not exceeding Rs. 4.70/kWh in the case of stranded gas plants and Rs. 3.39/kWh per unit for the domestic gas plants.

ii. During the later phases of the scheme, due to availability of sufficient affordable power in the country, many states, such as Telangana, Andhra Pradesh refused to sign PPAs with gas plants resulting in lower participation. As such, only few plants operated under the scheme and total generation under the scheme was less than that quoted by the bidders during the auction

iii. Under the scheme, certain exemptions / waivers required from the states were not extended by the states of Gujarat, Maharashtra, Madhya Pradesh and Jharkhand."

4.3 List of stranded Gas based Power Plants supported under the scheme, as furnished by the Ministry, is given below:

S. No	Name of the Project	Developer	State	Installed Capacity (MW)
1	RATNAGIRI (RGPPL-DHABHOL)	NTPC	Maharashtra	1967
2	PRAGATI CCGT-III	Pragati Power Corporation Ltd	Delhi	750
3	DHUVARAN CCPP(GSECL)	Gujarat State Electricity Corporation Ltd	Gujarat	488.3
4	UTRAN CCPP(GSECL)	Gujarat State Electricity Corporation Ltd	Gujarat	374
5	PIPAVAV CCPP	GSPC Pipavav Power Company Ltd	Gujarat	702
7	HAZIRA CCPP EXT	Gujarat State Energy Generation Ltd	Gujarat	351
8	GAUTAMI CCPP	GVK Gautami Power Ltd	Andhra Pradesh	464
9	GMR - KAKINADA (Tanirvavi)	GMR Energy	Andhra Pradesh	220
10	JEGURUPADU CCPP (GVK) PHASE- II	GVK Indutries Ltd	Andhra Pradesh	220.5
11	KONASEEMA CCPP	Konaseema Power	Andhra Pradesh	445
12	KONDAPALLI EXTN CCPP .	Lanco Power	Andhra Pradesh	366
13	VEMAGIRI CCPP	GMR Energy	Andhra Pradesh	370
14	SRIBA INDUSTRIES	PCIL Power & Holdings Ltd.	Andhra Pradesh	30
15	RVK ENERGY	RVK Energy	Andhra Pradesh	28
16	SILK ROAD SUGAR	SILK ROAD SUGAR	Andhra Pradesh	35
17	LVS POWER	LVS Power	Andhra Pradesh	55
18	GMR-Rajamundry Energy Ltd.	GMR Energy	Andhra Pradesh	768
19	KONDAPALLI ST-3 CCPP (LANCO)	Lanco Power	Andhra Pradesh	742
20	SAMALKOT EXP	Reliance Infra	Andhra Pradesh	2400

21	CCGT by Panduranga	Panduranga Energy	Andhra Pradesh	116
22	Rithala CCPP (NDPL)	NDPL	Delhi	108
23	VATWA CCPP*	Torrent Power	Gujarat	100
24	ESSAR CCPP	Essar Power	Gujarat	300
25	UNOSUGEN CCPP	Torrent Power	Gujarat	382.5
26	DGEN Mega CCPP	Torrent Power	Gujarat	1200
27	MANGAON CCPP	Pioneer Gas Power Ltd	Maharashtra	388
28	Gas Engine by ASTHA	Astha Power	Telengana	35
29	KASHIPUR CCPP(SRAVANTHI)	Sravanthi Energy	Uttarkhand	225
30	KASHIPUR SRAVANTHI ST-II	Sravanthi Energy	Uttarkhand	225
30	Beta Infratech CCGT	Beta Infratech	Uttarkhand	225
31	GAMA CCPP	Gama Infraprop	Uttarkhand	225
Total				**14305.3**

* VATWA CCPP was retired in 2016-17

4.4 The reverse e-auction for the scheme was conducted in four phases i.e. Phase I, II and III and IV and salient details, as stated by the Ministry, are given in the table below:

Details	**Phase-I (1st June to 30th Sept 2015)**	**Phase II (1st Oct 2015 to 31st Mar 2016)**	**Phase III (1st April to 30th Sept 2016)**	**Phase-IV (1st Oct 2016 to 31st Mar 2017)**
Auction month	May 2015	Sept 2015	March 2016	Sept 2016
Total capacity for bidding (MW)	24149.77	24149.77	24149.77	24149.77
Target PLF by EPMC	35%	50%	30%	60%
Gas available for bidding (MMSCMD)	10	15	8	18
Gas Allocated in e-auction (MMSCMD)	9.40	13.89	7.62	9.93
Gas actually drawn (MMSCMD)	5.50	7.77	4.64	3.43
Total bid Capacity (MW)	10270.06	11717.64	5941.5	5069.5
Total generation as per Bids (BUs)	5.7	12.47	6.79	8.8
Actual Electricity generated (BUs)	3.68 (actual)	7.17(actual)	4.14(actual)	2.99 (actual)
Subsidy paid by Govt of India (Rs. crores)	496	790	-(117)	223

4.5 Stating the reason for discontinuation of the above mentioned scheme, the Ministry stated as under:

> "In view of improved power situation and consequent lower participation during the last phase of the scheme, no public purpose would have been served by providing subsidy to these plants. Rather any additional generation from gas plants will reduce the demand from the coal based thermal plants which are already running at a low PLF because of excess of supply over demand, thus transferring the stress from gas based plants to the coal based thermal plants. It may be mentioned here that many of the coal based plants do not have power purchase agreements and stranded stressed due to lack of demand of power from the state."

4.6 Discussing about the e-bid RLNG scheme, the Secretary, Ministry of Power deposed:

> ".....a scheme supported by the Government from the Power System Development Fund as a subsidy, at that point of time the tariff fixed was Rs. 4.70 and the scheme ran well for a few quarters. But subsequently due to other capacity additions and cheaper tariff available from other sources, even Rs.4.70 turned out to be a high tariff. In the last two quarters of the scheme, there were no takers. There were other issues like waivers, transmission charges within the State, VAT concessions from the State Governments which were initially given and later on withdrawn."

4.7 when asked about the initiatives taken by the Government to improve the production of Gas in the Country, the Ministry stated as under:

> "Government have taken following policy initiatives to enhance domestic gas production:
>
> a) Issuance of New Domestic Gas Pricing Guidelines,2014 which has linked the domestic gas prices with the global gas markets i.e. HH(USA), NBP(UK), Alberta(Canada) and Russia.
> b) Implementation of Hydrocarbon Exploration & Licensing Policy (HELP),2016
> c) Discovered Small Field Policy
> d) Pricing & marketing freedom for High Pressure High Temperature (HPHT) discoveries."

4.8 Discussing about the initiatives taken by the Government to improve the production of Gas in the Country, the Secretary, Ministry of Petroleum and Natural Gas deposed:

> "The Government has taken a series of measure, policy decisions to enhance both gas and crude production. One is gas pricing reforms and marketing freedom has been given; extension policy for NELP has been approved by Government by paying 10 per cent of royalty charges, discovered small field policy has been put in place; early monetization of CBM policy in place now; exploration and exploitation of unconventional hydrocarbon policy in place, enhanced oil recovery, enhanced hydrocarbon in place; unified policy for extraction of all hydrocarbons in place now; definition of petroleum has been amended to include all hydrocarbon so there should not be any confusion as to what can be extracted, mined and not mined.
>
> To assess the potential of country in respect of availability of gas, National Seismic Programme has been launched. Pursuant to that, data in respect of large amount of area in the country has been collected and put in public domain. Open Acreage Licensing Policy allows the Government and private individuals to choose areas where they would want to explore. Under the first Open Acreage Licensing Policy we have given more than 60,000 sq. kms. of land for exploration. Earlier what was being explored was 90,000 sq.kms. With this it is going to jump to 1.5 lakh per km. The next process has already started. We are going to the Empowered Committee of Secretaries soon and that will allow the second phase.
>
> We have also assessed with latest technology re-assessment of prognostic resources which indicates that our resources have actually increased from 28 to 42 billion tonnes. A lot of policy prescriptions that would be a great incentivisation for production have been put in place. Since, this is a sector where the time taken for gestation is slightly long, it will take some time, especially in crude but in gas we are very confident that from next year onwards, there would be a significant jump."

4.9 When asked if a possibility of co-generation could be explored in these plants to save them from becoming NPA, the Ministry stated as under:

> "Out of total 14305 MW stranded gas based capacity, 14270 MW is Combined Cycle Power Plants. The heat in the exhaust flue gas of combined

cycle gas turbine is already in used for steam generation which is further used to generate electricity."

4.10 When asked about the future of Gas based Plants in our country and if they could remain competitive, the Ministry stated as under:

> Domestic Gas is economical for operation of a Gas based Power station. The present cost is 3.06 $/MMBTU which after inclusion of Taxes and transportation varies in the range of 4.5-5.5 $/MMBTU which translates to energy charge of Rs.2.5-3.0 per unit. However, due to reduction of gas from KGD6, availability of natural gas to the Power Sector has seen a drastic reduction from a maximum of 59.3 MMSCMD in 2010-11 to 29.59 MMSCMD in 2016-17. The allocation of domestic gas supply to the power sector has been reducing for the last 6-7 years and the situation does not seem likely to improve.
>
> There was a shortfall of 87.86 MMSCMD of Gas supply for Gas based Power Plants in 2016-17 considering normative gas requirement at 85 % PLF. Also, during the year 2017-18, Gas based plants were running at a PLF of around 22.86 %. The spot price of imported RLNG is around 10 $/ MMBTU which after inclusion of transportation and taxes varies around 12 $/MMBTU. At this price of RLNG, the energy charges translates to Rs. 6 per unit which renders gas based plants uncompetitive to run on imported RLNG."
>
> "For gas based power to be affordable, it has to be priced at around Rs.3/kWh, and to achieve such pricing the cost gas at burner tip should not be more than $5.5-6.0/MMBTU. Thus, LNG DES price of around $4/MMBTU is likely to be affordable in the Indian grid. This will require power to be subsidized by Rs.3-4/kWh appx. (It is subject to change in the international prices of gas and exchange rate fluctuation)."

4.11 Further discussing about the future of Gas based Plants in our country, the Chairman, SBI deposed:

> "For gas-based power plants, honestly, if I have to submit, there seems to be no solution. It is because even when the gas was at around 2½ dollars, even then these plants had viability issue. When these plants were set up, the underlying assumption was that the domestic gas from the Kaveri Basin will be available at a cheap price. Based on that, all these investment decisions were taken. So, it is unfortunate that even though we are having a 22,000 megawatt

capacity, yet it is not viable. The idea at that time was that it was a clean energy and as compared to thermal power plant, we need to promote clean energy. Now, we are in a situation where the renewable energy itself has become almost at par with thermal or even, I think, in some cases, it is priced lower than the thermal. So, in such a scenario, the power cannot be sold at Rs. 9 and Rs. 10. Even last time when we were trying to find out a solution, a scheme came out in 2015 from the Power Ministry where they gave some subsidies from the Power Sector Development Fund (PSDF). There was a period when the gas plants did not avail that benefit. It was because at that time crude prices went almost below 30 dollars and import rate gas became viable for these plants. Even with a lot of concessions from the Central Government and the State Governments, the plants could operate at around 30 per cent PLF. So, in the current scenario when the gas price is so high and when there are constraints in the supply of domestic gas, it seems that as if we are groping in the dark. There is no other solution. We have to write off this investment."

V

VIEWS OF DEVELOPERS/PROMOTERS OF STRANDED GAS BASED POWER PLANTS

5.1 The Committee had a discussion with the developers/promoters of stranded Gas based Power Plants, wherein they presented their views about the reasons for Gas based Power Plants being stranded and the suggestions to revive these Power Plants. The Association of Power Producers also submitted a note detailing the proposed solutions for reviving stranded Gas based Power Plants.

5.2 Some of the relevant information submitted by the developers/promoters of stranded Gas based Power Plants, are given below:

"1) Power sector was accorded one of the highest priority from RIL's KG D6 basin which can be witnessed through various EGOM minutes of meeting and press notes. EGoM meeting dated 27th October, 2009 assigned high priority to power sector by allocating 52 MMSCMD out of the total 67 MMSCMD out of the total 67 MMSCMD gas available from RIL's KG D6.

2) Also Ministry of Petroleum & Natural Gas on 11th October, 2010, while replying to IPPs had categorically mentioned "power sector has been accorded one of the highest priorities by EGoM" and "consumer belonging to priority sector should be in a position to actually consume gas as and when it becomes available and there will be no reservation of gas". The "allocations will be considered for power projects in the pipeline, as and when, such projects are ready to commence production.

3) Project developers went ahead to achieve financial closure with the support of the investors, financial institutions and banks for 9000 MWs capacity based on-

i) The gas advisory given by Ministry of Petroleum and Natural Gas that sufficient gas is available for these plants.

ii) Assurance given by Ministry of Petroleum and Natural Gas/EGoM to allocate gas, as and when plants are ready for commissioning.

4) RIL KG D6 gas production was forecasted at ~120 MMSCMD. However after attaining peak production of 60 MMSCMD in 2010, it started depleting and became zero by 2013.

5) Ministry of Power and Natural Gas informed RIL to apply pro-rata cut on the gas supplies to all the consumers including power sector despite being assigned highest priority for supply of KG D6 gas. Thereafter, Ministry of Petroleum and Natural Gas circular dated 30th March, 2011 notified that instead of pro-rata cut in gas supplies to all the consumers, cut will now be applied in the reverse order of priority i.e. in case gas availability is insufficient to meet the firm demand of the four priority sectors, cuts may be applied in the following order:

1. CGD
2. Power
3. LPG
4. Fertilizer

The implementation of the above circular proved detrimental and practically crippled the gas based power plants operating on RIL KGD6 gas.

6) The net outcome was that ~15000 MW of gas capacity became stressed/stranded due to substantial reduction in gas supplies from RIL KGD6 alongwith enactment of sudden change in policy from pro rata cut to reverse order of priority from April 2011 onwards.

7) Investments ranging from INR 4-5 crores per MW were made by the developers into these projects, out of which approx. 70%-80% of the capital cost has been financed by banks using public money. Further there has been an additional cost escalation ranging from 50%-75% of the original project cost on account of delays primarily due to non-availability of gas.

8) These plants are now unable to service their debt obligations to their lenders, have become NPA or are on the verge of becoming NPAs and need attention by Govt. of India for the revival."

5.3 Explaining the current tariff scenario in the country, the developers/promoters of stranded Gas based Power Plants furnished the following information:

"1) Recent short term tenders indicated that the tariff is going beyond INR 5.0/kwh and is becoming an acceptable power procurement cost for Discoms. This may trigger the push in long term tariff in upcoming bids.

2) Independent report by CRISIL indicated that post FY 20, tariff of INR 4.00/kwh and above will be discovered in the electricity sector.

3) Recently, PTC concluded bid for medium term procurement of 1900 MW (coal based projects) at a tariff of INR 4.24/kwh.

4) Further mandatory installation of FGD in coal power stations is expected to further increase tariff by INR 0.35-INR 0.50/kwh.

5) Thus the tariff of INR 4.00/kwh from a gas based power plant can be considered as a sustainable tariff from FY 19."

5.4 Explaining about the difficulties faced by KOWEPO in operation of its Gas based Plant in India, its representatives deposed:

"KOWEPO had identified India as the destination for its first foreign investment in 2011-12. India was the most friendly nation for us. Based on a detailed review of the stated position on gas availability and comfort letter received from the Indian Government in relation to gas allocation for power generation and various reports and policies stated by multiple Government agencies, this investment also has the unique distinction of being the first FDI from a Korean Government company into India's power sector. In the year 2015, our company was one of the beneficiaries of the Government's e-BID RLNG Scheme, which however lasted only for two years. The Scheme was not renewed after March, 2017 and the gas-based plants became stranded again; and so was our project. We were saddened that the implementation of the Scheme was also in a manner that it did not result in any benefit to the power plants or lenders across the sector. For example, our power plant at Raigad could not operate for force majeure reasons and issues relating to operation of the gas transmission pipeline but it resulted in imposition of penalties and added to the losses being suffered."

5.5 Given below are the suggestions/demands submitted by the developers/ promoters for revival of stranded Gas based Power Plants:

"**1) Re-introduction of E-RLNG scheme and Extending the following exemptions that were made available to gas based power plants during E-RLNG scheme.**

a) Exemption of Value Added Tax (VAT) by the respective State Governments

b) GST waiver on Regasification and gas transportation charges
c) 50% reduction on pipeline tariff charges
d) 75% reduction on marketing margin
e) 50% reduction on regasification charges
f) Power Transmission Charges and losses exempted for interstate transmission.

2) Affordable gas supply to gas based projects

a) To operate 20 GW at 50% PLF around 45 MMSCMD of gas is required.
b) ONGC gas from Deep water fields-
- Existing 5.45 MMSCMD of ONGC gas should be allocated to power sector.
- Separate bucket for power sector needed for ONGC gas from deep water fields (similar to coal auction)
- It is envisaged that production of gas from deep water fields including all sources may reach ~40 MMSCMD by 2022. A part of this (~20 MMSCMD) should be allocated to power sector as being done in coal.
- An aggregator, like GAIL/GSPC, to supply for the gas on behalf of the gas based power plants.

c) Balance gas requirement for stranded power plants to be met from RLNG.
d) Another alternative of diverting of APM gas from non-core sector to power sector can be explored as non-core sector can withstand the high RLNG due to un-regulated sector but power being regulated sector cannot bear the market driven cost of RLNG. It is to be noted that around 13 MMSCMD of APM gas is being given to non-core sector out of which 9 MMSCMD is grid connected and can be given to power sector.

3) Due to extreme stress in the Gas segment, a central agency should be appointed for allocation of gas in equitable manner rather than irrational bidding observed in the last auction of PSDF Scheme.

4) Since the gas based power plants would be competing predominantly with the Coal based plants and considering the average power price for the base load RTC at around Rs. 3.40 to Rs. 3.55 per unit, it is suggested that the support may be provided in the range of Rs. 2.60 to Rs. 3.00 per unit.

5) Till the new domestic gas of 20 MMSCMD is made available to power sector, the requirement may have to be supplemented by more RLNG, for which the budgetary support needs to be provided to keep the power tariff from gas plants affordable.

6) Apprx. Rs. 53000 cr. has been collected through clean energy cess till July 2017. Hon'ble Supreme court, in one of its order, stated that Clean Energy Cess which was collected prior to 1st July, 2017 must be used only for environment purpose. This fund can be used for supporting gas based power plant which is also a clean energy source.

7) Once the gas is available for a stranded plant operation at a PLF of 50%, to tie up the power supplies to the DISCOMs, GOI support will be required in one of the following operating mechanisms, as mentioned below:

- Gas Purchase Obligation similar to RPO considering gas being the clean source of energy.
- PTC/SECI to work as aggregator for procuring gas based power and selling to States.
- Operation of these plants as peaking plants at different tariff to be determined by GoI/ Regulatory Commission.
- Upcoming Renewable bids to be called based on RTC power which will cater the balancing requirement wherein renewable players can choose any fuel source to provide RTC power to DISCOMS.
- Gas based projects to be considered for ancillary services by giving priority to them.

8) Other support from the Government

- Inclusion of Natural gas under GST and 5% GST to be levied in line with coal for sale as well as transportation.
- In light of gas exchange hub, the present gas allocation to power plants should not be removed as this may make the operating plants (at low PLF) stranded leading to increase the list of stranded plants in India.
- Lenders should agree for restricting proposal and to extend support for providing WC/LC/BG.
    - Since most of the gas based projects are in NPA, banks have shown reluctance to provide any term loan, Working Capital Facilities.
    - Even Non-fund based limits like BG and LC are denied by banks as all these projects are currently classified as NPA

- Companies with the role of Re-insurer should also be directed to provide insurance coverage (after reasonable assessment) for stranded power plants to commence the operation."

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Part – II

Observations/ Recommendations of the Committee

1. The Committee note that out of the total installed capacity of about 345 GW, a capacity of 24,867 MW is from Gas based Power Plants. However, 14,305 MW of gas based capacity is stranded due to shortage of domestic gas supply and competitive tariff scenario. There are 31 stranded gas based power plants which include one power plant of Central Sector (1967 MW), six power plants of State Sector (2665.30 MW) and 24 power plants of Private Sector (9673 MW). It means a majority of the stranded gas based plants belong to the private sector.

The Committee also note that these power plants were planned with the expectation of considerable increase in the volume of domestic gas production, particularly from KG D6 field. But the projections regarding availability of domestic gas have turned out to be terribly wrong as the production from KG D6 field has reduced drastically to zero supply for power sector since March, 2013. The Committee feel that since these gas based power plants were set up on the basis of the Government's assurance regarding supply of gas, it becomes incumbent upon the Government to help them come out of stress.

The Committee are apprised that an investment ranging from INR 4 - 5 crores per MW has been made into these projects and approx 70% - 80% of the project cost has been financed by the banks using public money. It means a sum of about Rs. 65,000 crores have been invested into 14,305 MW of stranded capacity, out of which about 50,000 crores have been funded by the banks. The committee feel that since this stranded gas based capacity involves a significant amount of public money, it can not be allowed to become junk. Allowing slippages of these projects

tantamount to causing wastage of national resources which we can ill-afford irrespective of many practical hurdles and unforeseen impediments in our way. The Committee are of the opinion that efforts should be made to ensure these plants remain an asset to the country.

Keeping in view of the above, the Committee recommend that the Government should hand-hold these stranded gas based power plants and provide them requisite support so that they can come out of stress.

2. The Committee note that in view of increasing Renewable Energy Capacity which is intermittent in nature, the Gas based Capacity can be utilized for peaking demand due to its higher ramp up rate and quick start time. These Plants can play a role in balancing of the Grid by maintaining uninterrupted electricity supply, especially when Solar Plants shuts down in the evenings and coal based plants take time to ramp up. The Committee, therefore, recommend that Gas based Plants can be operated as Peaking Plants as they can switch on quickly when there is high demand and running these plants as Peaking Plants will also optimize the use of scarcely available domestic natural gas.

3. The Committee note that the domestic natural gas production in the country during 2017-18 was about 86.93 MMSCMD as against 89.57 MMSCMD in 2014-15. From 2011-12 to 2016-17, domestic gas production had been continuously declining, while in 2017-18, there was a slight increase. The import of RLNG has been continuously increasing from 50.78 MMSCMD in 2014-15 to 72.13 MMSCMD in 2017-18 and about 50% of the country's requirement of gas has now been met by the imported gas. Further, the total domestic gas allocated to power projects is 87.12 MMSCMD and the average domestic gas supplied to gas based power

plants during 2017-18 was only 25.71 MMSCMD which is 70% short of the allocation. Due to this shortfall, the PLF of gas based power plants has come down to 24% which used to be 67% in 2009-10.

Notwithstanding the above, the Committee have been assured by the Ministry of Petroleum & Natural Gas that the production of domestic gas would undergo a significant jump in the years to come i.e. it is expected to go up to 60.50 billion cubic meters by 2021-22. The Committee hope that this time the Ministry has made a realistic assessment unlike in the case of KG D6, which triggered the setting up of gas based power plants in the country.

The Committee, therefore, recommend that, the Ministry should be cautious in making future projections with respect to the availability of domestic natural gas so as to avoid the implications caused by KG D6, as such situations reflects poorly on the credibility and reliability of the Government's projections and policies.

4. The Committee note that the peak flow of the gas from KG D6 was expected to be about 80 MMSCMD by the end of the year 2009 and to increase further in subsequent years. But the production from KG D6 started declining from 55.35 MMSCMD in 2010-11 to 5.5 MMSCMD in 2017-18 and today the production is as good as nil. This decline is contrary to the estimates made. The Committee also note that as per Guidelines issued by the Government in 2010, Gas based Power Plants were put above the City Gas Distribution (CGD) Systems for domestic and transport requirements in order of priority for allocation of domestic Natural Gas. However, as per Guidelines issued in the years 2013 and 2014, Gas allocation/supply to the CGD Systems was placed under no cut category, consequently giving CGD higher priority than Power Sector.

Further, in view of the decrease in the production from KG D6, the Government issued an order to apply pro-rata cuts in the supply of natural gas to all the stakeholders. However, it was notified that if the gas production is insufficient to meet the demand of the core sectors, then cuts could be imposed in the reverse order of priority. This reverse cut policy proved detrimental to power sector leaving it in a fix.

The Committee are of the view that these policy flip-flops crippled the gas based power plants consequently making them stranded. These plants are now unable to service their debt obligations and are on the verge of becoming NPAs. The Committee find that instead of taking a holistic view for resolution of the problem, as is where is approach has been adopted. This kind of approach is fraught with inconceivable consequences for the sector as well as the Country, besides compromising the reliability of policy of the Government.

The Committee hope that the Ministry would avoid such erratic policy shifts in the future. The Committee, therefore, recommend that some consistency and predictability should be maintained in policy making so as to avoid giving sudden shocks to the stakeholders concerned. Also any policy/guidelines with respect to the change in allocation of gas should be prospective and it should not impact the existing users.

5. The Committee note that the present condition of the gas-based power plants is largely due to non-fulfillment of commitment regarding supply of domestic gas by the Government. The changes in policy for domestic gas allocation have made these plants unviable jeopardizing the huge public investment. The Committee also note that the RLNG is under Open General Licence and can be sold on mutually agreed terms between

Buyers and Sellers on Market Based Mechanism and power plants are allowed to source RLNG as per their requirement. The Committee appreciate the fact that RLNG has been put under Open General Licence and there are no restrictions on its import. However, the Committee feel that since the cost of producing power from RLNG is unaffordable and makes it difficult for scheduling in merit order dispatch, importing RLNG even under open general licence does not help in making the stranded Gas based Power Plants viable. The Committee have also been apprised that one of the gas-based power plants has been established with the co-operation of South Korean Government and decline in the availability of gas has also affected this plant. International co-operation and commitment in addition to foreign investment are the angles which need to be taken care of, so the Committee desire that gas should also be supplied to this plant. The Committee, therefore, recommend that the Government should explore all possibilities to revive these stranded gas-based plants which may inter-alia include assured gas allocation to stranded Gas based Power Plants from ONGC deep-water fields, diversion of domestic gas from non-core sectors to power sector and cost moderation of RLNG till sufficient domestic gas is made available.

6. The Committee note that before the KG D6 gas got infused into the system in 2009, there were 44 number of gas based power plants of the capacity of 13577.60 MW in the country and 42.83 MMSCMD gas was allotted to these 44 power plants, out of which 36.69 MMSCMD gas was supplied/consumed during the year 2008-09. It is beyond comprehension of the Committee that when power sector could have been supplied with 36.69 MMSCMD of gas even before the infusion of KG D6 gas, then why the gas supply to power sector got reduced after KG D6.

Further, the peak flow of gas from KG D6 fields was expected to be about 80 MMSCMD and consequently with the expectation of considerable increase in the volume of production, a number of gas based plants were taken up for implementation. 30 number of gas based power plants with a capacity of 14,504 MW were allocated gas from KG D6 on firm basis but without any commitment regarding supply of Gas. However, the supply of gas from KG D6 field to power sector is nil since March 2013 as a result of which these plants are now stranded. Even Banks/lenders issued credit facilities to these plants on the basis of the projections/assumptions made regarding the increase in production of gas.

The Committee are dismayed to note that State Bank of India, the largest lender in the county, does not have any solution regarding these stranded plants and wants to write off the investment made in these gas based plants. In the opinion of the Committee, such an attitude of the lenders reflects that they just want to shrug off the responsibility of this crisis by referring the stressed plants to the NCLT. The committee are disappointed with the attitude of the Ministry as well as the Banks/lenders towards this problem. The Committee feel that the Ministry and the Banks/lenders, both are responsible for this crisis. The Ministry owe the responsibility for superfluous projections regarding production of gas from KG D6 and the banks for unrealistic lending of public money. Instead of ensuring how these stranded power plants can be efficiently utilized, there is an air of despondency and increasing clamour to send these plants to NCLT.

The Committee, therefore, recommend that the Ministry of Petroleum & Natural Gas should come out with the reasons, in the lucid terms, for zero production of gas from KG D6 as the estimated production of 80 MMSCMD that was envisaged earlier and the steps taken by the

Government against those who are responsible for this gross miscalculation about the production of gas from KG D6 which has put the reliability of the Ministry at stake. The Committee also recommend that the banks/lenders should own the responsibility and work towards finding the appropriate solution in the national interest.

7. The Committee note that due to inadequate domestic production, the country has been importing RLNG to meet the shortfall in supply of natural gas and LNG terminals are in operation for re-gasification of imported LNG. The Committee observe that all the existing operational LNG terminals (of the capacity of 95 MMSCMD) are situated on the West Coast of the country, whereas the eastern coast has been completely neglected. Although the Ministry is said to have planned re-gasification terminals on the Eastern coast, but nothing has materialized till date. The Committee want the Ministry to speed up the work related to building of new re-gasification terminals. As the eastern coastal region has many gas based power plants which are stranded due to lack of supply of natural gas, the Committee, therefore, recommend that the Ministry should focus on building LNG re-gasification terminals at the east coast of the country in a time bound manner as it would cost less for the industries/plants at the eastern side to source gas from east coast terminals than piping the fuel across the country from the West coast.

8. The Committee note that the price of natural gas produced from domestic fields is determined as per the pricing formula envisaged in New Domestic Natural Gas Pricing Guidelines, 2014, under which, the price of domestic natural gas is linked to the prices at US Henry Hub, Canada's Alberta Gas, UK's National Balancing Point (NBP) and Russian Hub. Natural gas prices in the country are revised every six months. Also,

the price of natural gas is dollar denominated that keeps on fluctuating, so having a long term PPA with DISCOMs is a challenge for Gas based Power Plants.

The Committee observe that the price of domestic natural gas has been increasing from a low of $ 2.48/MMBTU (April, 2017 to Sept., 2017) to $ 3.36/MMBTU (Oct., 2018 to March, 2019). The gas price at power plants remains in the range of $ 4.0 - 5.5/MMBTU for domestic gas and $ 10-12/MMBTU for RLNG.

The Committee observe that the Government has already introduced pricing and marketing freedom for High Pressure-High Temperature (HPHT) discoveries and now the free-market pricing for natural gas produced from all fields is under active consideration. The Committee are of the opinion that because of shortage in availability of gas and demand being much higher than supply, the free-market pricing will result in exorbitant prices. Although free market pricing may be beneficial to the producers of natural gas but this will be detrimental to the users such as power sector which is regulated and where more than 50% of the gas based capacity is already stranded.

The Committee have come to know that the Ministry of Petroleum and Natural Gas has proposed removal of Power Sector from the priority allocation. The Committee are of the view that Power Sector being a regulated Sector needs domestic gas allocation more than any other Sector. It will be a major setback for this sector and may make even operational gas based plants stranded. The Committee, therefore, recommend that:

i) The Government should rethink its plan of introducing free market pricing for natural gas as any attempt to gain at the cost of

consumers will be counter-productive and may not be in the public interest.

ii) Any proposal for removal of Power Sector from the priority allocation should also be reconsidered.

9. The Committee note that apart from the basic cost, VAT (as high as 26%), CST & entry tax, pipeline tariff, marketing margin by gas transporter etc. are levied on domestic natural gas/RLNG. In case of RLNG, re-gasification process involves an extra cost of $ 1.0-1.5/MMBTU and service tax on re-gasification is also levied. Consequently, the gas price at power plants goes up in the range of $ 4.0-5.5/MMBTU for domestic gas and $ 10-12/MMBTU for RLNG.

The Committee observe that while the Coal has been included and taxed at 5% GST, Natural Gas has been kept outside the GST purview. The Committee feel that natural gas being a cleaner fuel should not be placed at a disadvantageous position *vis-a-vis* other sources of energy like coal. The Committee, therefore, recommend that natural gas should be brought under GST, so that the taxes get rationalized and gas becomes cheaper and affordable.

10. The Committee note that in order to improve utilization of gas based capacity in the country, the Government came out with E-Bid RLNG scheme in 2015 for importing spot Re-gasified liquefied Natural Gas (RLNG) for the stranded gas based power plants. The Scheme provided financial support from PSDF (Power System Development Fund). The Scheme also included exemptions from applicable taxes and levies/ duties. However, the Scheme was discontinued in 2017 as many States such as Telangana, Andhra Pradesh, etc. refused to sign PPAs with gas based plants and exemptions/waivers required were not extended by the

States of Gujarat, Maharashtra, Madhya Pradesh and Jharkhand. It is beyond comprehension that why the States did not cooperate, when the scheme was introduced after consultation with the States concerned. The Committee observe that the other reason, given by the Ministry, for discontinuation of the Scheme is that any additional generation from gas based plants would have reduced the demand from the coal based thermal plants. The Committee feel that the natural gas is cleaner fuel, so the Ministry may consider giving it due priority over coal.

As the electricity demand is expected to pick up and the Committee have been assured of significant jump in the production of domestic gas in the near future, so there is a need to hand hold these stranded gas based power plants for next 2-3 years. The Committee, therefore, recommend that:

i) The Government should come up with a scheme like E-Bid RLNG Scheme to support these stranded plants in the intervening period with necessary exemptions, waivers and desired modifications.

ii) The financial support/subsidies required for the scheme may be sourced from Power System Development Fund/National Clean Energy Fund/Budgetary Grants. The Ministry of Power should pursue the same with the Ministry of Finance.

iii) The power so produced under the scheme may be used for bundling with other low cost power as has been done by NTPC earlier.

iv) RLNG may be pooled with the domestic gas through an aggregator such as GAIL, so as to achieve a reasonable price.

11. The Committee have come to know that the National Clean Energy Fund (NCEF) was created out of cess on Coal at Rs. 400 per tonne to provide financial support to clean energy initiatives and an Inter Ministerial Group chaired by the Finance Secretary was constituted to approve the project/schemes eligible for financing under NCEF. The coal cess collected from 2010-11 to 2017-18 amounts to Rs. 86,440.21 crore, out of which only Rs. 29,645.29 crore have actually been transferred to NCEF. Whereas, the amount financed from NCEF for projects is only 15,911.49 crore i.e. only about 19% of the total amount collected as coal cess.

The Committee feel that the this fund should be used for its intended purpose i.e. to support clean energy initiatives and it should not be diverted to compensate GST losses. Diversion of this fund to unrelated activities reflects poorly on our commitment towards cleaner environment and shows Government's apathy towards clean energy projects. Since it is levied on coal as that is a polluting fuel, so the amount collected should be used to promote cleaner fuel. The Committee, therefore, recommend that financial support should be extended to gas based power projects from NCEF for their sustainability as natural gas is also a clean energy source. The Ministry of Power should pursue this matter with the Ministry of Finance.

New Delhi;
2nd January, 2019
12 Pausha , 1940 (Saka)

DR. KAMBHAMPATI HARI BABU
Chairperson,
Standing Committee on Energy

ANNEXURE - I

MINUTES OF THE TWELFTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2017-18) HELD ON 22ND FEBRUARY, 2018 IN COMMITTEE ROOM NO. '53' PARLIAMENT HOUSE, NEW DELHI

The Committee met from 1130 hrs. to 1240 hrs.

PRESENT

LOK SABHA

Dr. Kambhampati Hari Babu - Chairperson

2. Shri Om Birla
3. Shri Bhagat Singh Koshyari
4. Shri Jagdambika Pal
5. Shri Vinayak Bhaurao Raut
6. Shri Bhanu Pratap Singh Verma
7. Shri Nagendra Kumar Pradhan

RAJYA SABHA

8. Shri Oscar Fernandes
9. Shri Shamsher Singh Manhas
10. Shri S. Muthukaruppan
11. Dr. Anil Kumar Sahani

SECRETARIAT

1.	Shri A.K. Singh	-	Additional Secretary
2.	Shri N.K. Pandey	-	Director
3.	Smt. L. Nemjalhing Haokip	-	Under Secretary

WITNESSES

1.	Ms. Shalini Prasad	Additional Secretary, MoP
2.	Shri Aniruddha Kumar	Joint Secretary, MoP
3.	Shri R.K. Verma	Chairperson, CEA
4.	Shri Gurdeep Singh	CMD, NTPC
5.	Shri P.D. Siwal	Member, CEA
6.	Shri Pankaj Batra	Member, CEA

2. At the outset, the Chairperson welcomed the Members of the Committee and the representatives of the Ministry of Power to the sitting of the Committee and apprised them of the agenda and focus area for the discussion and the provisions of Directions 55(1) and 58 of the Directions by the Speaker.

3. During the discussion, the representatives of the Ministry made a power-point presentation on the subject "Stressed/Non-performing Assets in Gas based Power Plants" which *inter-alia* covered Installed Generation Capacity, Generation from Gas based Power Plants, Sector-wise Gas based Capacity, Overview of Gas based Capacity, Geographical Map of Gas based Power Generation in India, Gas requirement and availability for Power Sector, Gas Supply from KGD6 to all Sectors, PLF of Gas based Power Plants, Allocation of Natural Gas, Natural Gas consumption Sector-wise, E-Bid RLNG Scheme, Details of contribution by different Stakeholders, PSDF Scheme - details and outcomes, Declining participation in the Scheme, Power Supply position, Typical cost of generation (at NTPC Dadri), Natural Gas Price Trend, Cost of generation from different sources, Other issues related to import of Gas, Industry Suggestions, etc.

4. The Committee *inter-alia* also deliberated upon the following points with the representatives of the Ministry of Power:

(i) Details of the Gas based Power Plants which are stressed and the quantum of finances at stake.

(ii) Reasons for Stressed/Non Performing Assets in Gas based Power Plants.

(iii) PLF of Gas based Power Plants.

(iv) Disruption in supply of Natural Gas and fluctuation in its pricing leading to financial distortion.

(v) Gas requirement and availability for Power Sector.

(vi) Withdrawal of DISCOMs from PPA leading to loss of Revenue to Generators.

(vii) Prevailing tariff scenario w.r.t. Gas based Power Plants.

(viii) Terms and tenure of loan granted and precautionary measures taken before sanction/disbursement of loan.

(ix) Coordination system among banks, promoters, Government and other stake holders.

(x) Whether these assets can be taken over and made operational with the Government intervention.

(xi) Details of efforts made and planned to address this issue.

5. Thereafter, the Members sought clarifications on various issues relating to the subject and the representatives of the Ministry responded to the same. The Committee directed the representatives of Ministry to furnish written replies to those queries which could not be readily responded to by them.

The Committee then adjourned.

The verbatim proceedings of the Sitting of the Committee have been kept for record.

ANNEXURE - II

MINUTES OF THE TWENTIETH SITTING OF THE STANDING COMMITTEE ON ENERGY (2017-18) HELD ON 20TH AUGUST, 2018 IN COMMITTEE ROOM 'D' PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee met from 1500 hrs. to 1700 hrs.

PRESENT

LOK SABHA

Dr. Kambhampati Hari Babu - Chairperson

2. Shri Om Birla
3. Shri Jagdambika Pal
4. Shri Ravindra Kumar Pandey
5. Shri Vinayak Bhaurao Raut
6. Shri Bhanu Pratap Singh Verma
7. Shri Nagendra Kumar Pradhan

RAJYA SABHA

8. Shri Oscar Fernandes
9. Shri Shamsher Singh Manhas
10. Smt Viplove Thakur
11. Shri Narain Dass Gupta

SECRETARIAT

1. Shri A.K. Singh - Additional Secretary
2. Shri N.K. Pandey - Director
3. Smt. L. Nemjalhing Haokip - Under Secretary

WITNESSES

Ministry of Power		
1.	Shri Ajay Kumar Bhalla	Secretary
2.	Shri Sanjiv Nandan Sahai	Additional Secretary
3.	Smt. Archana Agrawal	Joint Secretary
Ministry of Petroleum and Natural Gas		
4.	Shri Dr. M.M. Kutty	Secretary
5.	Shri Ashish Chatterjee	Joint Secretary
PSUs/Autonomous Body/Statutory Body		
6.	Shri Pankaj Batra	Chairperson, CEA
7.	Shri Gurdeep Singh	CMD, NTPC
8.	Shri Shashi Shanker	CMD, ONGC
9.	Dr. V.P. Joy	DG, Directorate General of Hydrocarbons

2. At the outset, the Chairperson welcomed the Members of the Committee and the representatives of the Ministry of Power and the Ministry of Petroleum and Natural Gas to the sitting of the Committee and apprised them of the agenda and focus area for the discussion and the provisions of Directions 55(1) and 58 of the Directions by the Speaker.

3. During the discussion, the representatives of the Ministry of Power made a power-point presentation on the subject "Stressed/Non-performing Assets in Gas based Power Plants" which *inter-alia* covered Installed Generation Capacity, Electricity Generation in Billion Units (2017-18), Sector-wise Gas based Capacity, Overview of Gas based Capacity, Gas requirement and availability for Power Sector, PLF of Gas based Power Plants, Allocation of Natural Gas, Gas Supply Position (2017-18), Stranded Gas Based Capacity, E-Bid RLNG Scheme, Details of contribution by different Stakeholders, PSDF Scheme - details and outcomes, Declining participation in the Scheme, Weighted Average Rate of Sale of Power from different Sources, Natural Gas Price, Typical cost of generation (at NTPC Dadri), Issues related to import of Gas, Power Supply Position, RGPPL Project (1967 MW) Status, Geographical Map of Gas Based Generation in India, Gas Price Build Up, Gas Supply from KGD6 to all Sectors, etc.

4. The Committee *inter-alia* also deliberated upon the following points with the representatives of the Ministry of Power:

(i) Details of the Gas based Power Plants which are actually operational.

(ii) Reasons for Stressed/Non Performing Assets in Gas based Power Plants.

(iii) PLF of Gas based Power Plants and how does it compare with Coal based Power Plants.

(iv) The details of the Gas Based Power Plants which are showing stress along with the quantum of finances at stake.

(v) Reasons for disruption in supply of Natural Gas.

(vi) Gas requirement and availability for Power Sector.

(vii) The prevailing tariff scenario w.r.t. Gas based Power Plants and different methodology for determination of tariff.

(viii) The production from the KG D6 field has not been on expected lines - its impact on supply of Gas to the Power Sector.

(ix) Future of Gas based Plants in our country.

(x) Whether these assets can be taken over and made operational with the Government intervention?

(xi) Coordination system among banks, promoters, Government and other stake holders.

(xii) Details of efforts made and planned to address this issue.

5. Thereafter, the Members sought clarifications on various issues relating to the subject and the representatives of both the Ministries responded to the same. The Committee directed the representatives of the Ministry of Power and the Ministry of Petroleum and Natural Gas to furnish written replies to those queries which could not be readily responded to by them.

The Committee then adjourned.

The verbatim proceedings of the Sitting of the Committee have been kept for record.

ANNEXURE - III

MINUTES OF THE FIFTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2018-19) HELD ON 15TH NOVEMBER, 2018 IN MAIN COMMITTEE ROOM, PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee met from 1100 hrs. to 1315 hrs.

PRESENT

LOK SABHA

Dr. Kambhampati Hari Babu - Chairperson

2. Shri Bhagat Singh Koshyari
3. Shri Ravindra Kumar Pandey
4. Shri M.B. Rajesh
5. Shri Tokheho
6. Shri Bhanu Pratap Singh Verma
7. Shri Nagendra Kumar Pradhan

RAJYA SABHA

8. Shri Oscar Fernandes
9. Shri Shamsher Singh Manhas
10. Shri S. Muthukaruppan
11. Shri Narain Dass Gupta

SECRETARIAT

Ms. Rimjhim Prasad	-	Joint Secretary
Shri N.K. Pandey	-	Director
Smt. L. Nemjalhing Haokip	-	Under Secretary

WITNESSES		
Ministry of Power		
1.	Shri Ajay Kumar Bhalla	Secretary
2.	Shri Sanjiv Nandan Sahai	Additional Secretary
3.	Smt. Archana Agrawal	Joint Secretary
Ministry of Petroleum and Natural Gas		
4.	Shri Dr. M.M. Kutty	Secretary
5.	Shri Ashish Chatterjee	Joint Secretary
PSUs/Autonomous Body/Statutory Body		
6.	Shri Prakash S. Mhaske	Chairperson, CEA
7.	Shri Gurdeep Singh	CMD, NTPC
8.	Shri P.V. Ramesh	CMD, REC
9.	Shri Shashi Shanker	CMD, ONGC
10.	Shri B.C. Tripathi	CMD, GAIL
11.	Dr. V.P. Joy	DG, Directorate General of Hydrocarbons
Project Developers/Promoters		
12.	Shri N.K. Kothari	Chairman & MD, RRVUN
13.	Shri A.K. Garg	MD, Ratnagiri Gas & Power Pvt. Ltd.
14.	Shri Jigish Mehta	ED, Torrent Energy
15.	Shri Ashish Basu	CEO, GMR Energy Ltd.
16.	Shri Suresh Medikonda	CEO, Lanco Power Ltd.
17.	Shri Ram Lal Goyal	Chairman, GAMA Infraprop
18.	Shri Shwet Ketu	CEO, Sravanthi Energy Ltd.
19.	Shri Nitin Malkan	Vice President, CLP India Ltd.
20.	Shri Ki-Seon Kwon	CEO, Pioneer Gas Ltd.
21.	Shri John Fernandes	Director, GVK Energy
22.	Shri K.V. Reddy	Advisor, Panduranga Energy
23.	Shri R.S. Negi	GM, Torrent Power Ltd.
Banks/ Financial Institutions		
24.	Shri Rajnish Kumar	Chairman, SBI
25.	Shri Sunil Mehta	MD & CEO, PNB
26.	Shri S. Harisankar	MD & CEO, Punjab and Sind Bank
27.	Shri Ajay K. Khurana	MD & CEO, Syndicate Bank
28.	Shri Emadi Sankara Rao	MD & CEO, IFCI Bank
29.	Shri Aditya Puri	MD, HDFC Bank
30.	Shri Rajiv B. Lal	MD & CEO, IDFC Bank
31.	Shri T.N. Manoharan	Chairman, Canara Bank
32.	Shri Rana Kapoor	MD & CEO, Yes Bank
33.	Shri Amitabh Chaudhary	MD & CEO, Axis Bank

34.	Shri P.S. Jayakumar	MD & CEO, Bank of Baroda
35.	Shri Karanam Sekar	MD & CEO, Dena Bank
36.	Shri S.S. Mallikaarjuna Rao	MD & CEO, Allahabad Bank
37.	Shri J. Packirisamy	MD & CEO, Andhra Bank
38.	Shri R. Subramanian	MD & CEO, Indian Overseas Bank
39.	Shri Pallav Mohapatra	MD & CEO, Central Bank of India

2. At the outset, the Chairperson welcomed the Members of the Committee and the representatives of the Ministry of Power, the Ministry of Petroleum and Natural Gas, Banks/Financial Institutions and Project Developers/ Promoters to the sitting of the Committee and apprised them of the agenda and focus area for the discussion and the provisions of Directions 55(1) and 58 of the Directions by the Speaker.

3. During the discussion, the Secretary, Ministry of Petroleum and Natural Gas deposed that from 2011-12 to 2016-17, domestic gas production had been continuously declining. In 2011-12, the domestic gas production was 45.56 billion cubic meters which came down to 31.90 billion cubic meters in 2016-17. In 2017-18, this declining trend had been reversed and there was marginal increase in domestic production. He assured the Committee that the domestic production of gas would undergo a significant jump in the years to come - in 2019-20, it would go up to 45.50 billion cubic meters; in 2020-21, it would go up to 49.50 billion cubic meters; and in 2021-22, it would go up to 60.50 billion cubic meters.

4. The Committee *inter-alia* also deliberated upon the following points with the representatives of the Ministry of Power, the Ministry of Petroleum and Natural Gas, Banks/Financial Institutions and Project Developers/ Promoters:

(i) The details of the Gas Based Power Plants which are showing stress along with the quantum of finances at stake.
(ii) Reasons for Stressed/Non Performing Assets in Gas based Power Plants and how these Projects can be made viable.
(iii) Details of the Gas based Power Plants which are actually operational.
(iv) PLF of Gas based Power Plants and how does it compare with Coal based Power Plants.
(v) Reasons for disruption in supply of Natural Gas.

(vi) Gas requirement and availability for Power Sector and the reasons for huge difference in quantity of gas allocated and gas actually supplied.
(vii) The prevailing tariff scenario w.r.t. Gas based Power Plants.
(viii) Reasons behind low production from the KG D6 field.
(ix) Future of Gas based Plants in our country.
(x) Coordination among banks, promoters, Government and other stake holders.
(xi) Details of efforts made and planned to address this issue.

5. Thereafter, the Members sought clarifications on various issues relating to the subject and the representatives responded to the same. The Committee directed the representatives of the Ministry of Power and the Ministry of Petroleum and Natural Gas to furnish written replies to those queries which could not be readily responded to by them.

The Committee then adjourned.

The verbatim proceedings of the Sitting of the Committee have been kept for record.

ANNEXURE - IV

STANDING COMMITEE ON ENERGY

MINUTES OF THE 8th SITTING OF THE STANDING COMMITTEE ON ENERGY (2018-19) HELD ON 2nd JANUARY, 2019 IN ROOM NO. '111', PARLIAMENT HOUSE ANNEXE EXTENSION, NEW DELHI

The Committee met from 1600 hrs. to 1645 hrs.

PRESENT

Dr. Kambhampati Haribabu - Chairperson

LOK SABHA

2. Shri Om Birla
3. Dr. Arun Kumar
4. Dr. (Smt) Pritam Gopinath Munde
5. Shri Ravindra Kumar Pandey
6. Shri Bhanu Pratap Singh Verma

RAJYA SABHA

7. Shri Narain Dass Gupta
8. Shri Manish Gupta
9. Shri Javed Ali Khan
10. Shri Shamsher Singh Manhas

SECRETARIAT

1. Ms. Rimjhim Prasad - Joint Secretary
2. Shri N.K. Pandey - Director

2. At the outset, the Chairperson welcomed the Members of the Committee and apprised them of the agenda for the sitting. Thereafter, the Committee deliberated upon the following draft Reports:-

(i) Stressed/Non-performing Assets in Gas Based Power Plants

(ii) Hydro Power

3. After discussing the contents of the Report in detail, the Committee adopted the aforementioned draft with minor changes. The Committee authorized the Chairperson to finalize these Reports and present the same to both the Houses of Parliament in the current Session.

4. x x x x x x x x x x x

The Committee then adjourned.

x - Not related to this Report