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**OIL AND NATURAL GAS CORPORATION LIMITED
(ONGC LTD)**

**LOSS DUE TO FLARING OF HIGH PRESSURE GAS
[BASED ON C&AG PARA NO. 2.4 OF REPORT NO. 14 OF 2021]**

MINISTRY OF PETROLEUM AND NATURAL GAS

**COMMITTEE ON PUBLIC UNDERTAKINGS
(2025-26)**

**TWENTY-SECOND REPORT
(EIGHTEENTH LOK SABHA)**



**LOK SABHA SECRETARIAT
NEW DELHI**

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MINISTRY OF PETROLEUM AND NATURAL GAS

*Presented to Lok Sabha on 11 December, 2025
Laid in Rajya Sabha on 11 December, 2025*



**LOK SABHA SECRETARIAT
NEW DELHI**

December, 2025/, Agrahayana, 1947(Saka)

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COMPOSITION OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (2024-25)

Shri Baijayant Panda - Chairperson

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17. Shri Milind Murli Deora
18. Shri Narain Dass Gupta
19. Dr. Bhagwat Karad
20. Shri Surendra Singh Nagar
21. Shri Debashish Samantaray
22. Shri Arun Singh

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Shri Santosh Kumar Gangwar - Chairperson

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5. Shri Chandra Prakash Joshi
6. Smt. K. Kanimozhi
7. Shri Lavu Sri Krishna Devarayalu
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18. Dr. Anil Jain
19. Shri Prakash Javadekar
20. Dr. Amar Patnaik
21. Shri V. Vijayasai Reddy
22. Shri Binoy Viswam

*Elected as a Member of the Committee on Public Undertakings (2023-24) for the un-expired portion of the term of the Committee vide Bulletin Part-II Para No. 7765 dated 19.12.2023 vice Shri Uday Pratap Singh resigned as Member of Lok Sabha w.e.f. 06.12.2023

COMPOSITION OF COMMITTEE ON PUBLIC UNDERTAKINGS (2022-23)

Shri Santosh Kumar Gangwar - Chairperson

Members

Lok Sabha

2. Shri Sudip Banyopadhyay
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9. Shri Janardan Mishra
10. Shri Kinjarapu Ram Mohan Naidu
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12. Shri Ravneet Singh Bittu
13. Shri Sushil Kumar Singh
14. Shri Uday Pratap Singh
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19. Dr. Anil Jain
20. Shri Prakash Javadekar
21. Dr. Amar Patnaik
22. Shri M. Shanmugam

INTRODUCTION

I, the Chairperson, Committee on Public Undertakings (2025-26) having been authorized by the Committee to submit the Report on their behalf, present this Twenty-Second Report on 'Loss due to flaring of high pressure gas relating' to Oil and Natural Gas Corporation (ONGC) Limited [Based on Para 2.4 of C&AG Audit Report No. 14 of 2021].

2. The Committee on Public Undertakings (2022-23) of 17th Lok Sabha had selected the said subject for detailed examination. The subject was subsequently carried forward by the successor Committees in (2023-24) of 17th Lok Sabha and (2024-25) and (2025-26) in the 18th Lok Sabha to complete the unfinished task.

3. The Committee on Public Undertakings (2022-23) was briefed about the subject by the representatives of Comptroller and Auditor General of India (C&AG) on 20th March, 2023. The Committee thereafter took oral evidence of the representatives of Oil and Natural Gas Corporation Limited and Ministry of Petroleum and Natural Gas on 13th July, 2023.

4. The Committee (2025-26) considered and adopted the draft Report at their sitting held on 05th December, 2025.

5. The Committee wish to express their thanks to the representatives of Comptroller and Auditor General of India, Oil and Natural Gas Corporation Limited and Ministry of Petroleum and Natural Gas for tendering evidence before the Committee and furnishing the requisite information to them in connection with examination of the subject.

6. The Committee wish to express their sincere thanks to the predecessor Committee for their valuable contribution in examination of the subject.

7. 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;
08 December, 2025
17 Agrahayana, 1947(S)

BAIJAYANT PANDA
Chairperson
Committee on Public Undertakings

ACRONYMS

Sl.No.	Acronym	Full Form
1.	AEP	Asset Exchange Policy
2.	ATN	Action Taken Note
3.	BGC	Booster Gas Compressor
4.	C&AG	Comptroller and Auditor General
5.	COP29	29th Conference of the Parties to the UNFCCC
6.	DI&M	Directed Inspection and Maintenance
7.	DGH	Directorate General of Hydrocarbons
8.	DPR	Detailed Project Report / Daily Progress Report
9.	EDC	Expected Date of Completion
10.	GG	Gas Generators
11.	GGFR	Global Gas Flaring Reduction Partnership
12.	GTG	Gas Turbine Generator
13.	HP	High Pressure
14.	KPI	Key Performance Indicator
15.	MHRD	Mumbai High Redevelopment
16.	MoPNG	Ministry of Petroleum & Natural Gas
17.	OEM	Original Equipment Manufacturer
18.	OMG	Offshore Maintenance Group
19.	ONGC	Oil and Natural Gas Corporation
20.	PGC	Process Gas Compressor
21.	PPE	Personal Protective Equipment
22.	PRA	Production and Revenue Accounting
23.	PT	Power Turbines
24.	SAP	Systems, Applications and Products in Data Processing
25.	SCADA	Supervisory Control and Data Acquisition
26.	SDG	Sustainable Development Goals
27.	SOP	Standard Operating Procedure
28.	UNFCCC	United Nations Framework Convention on Climate Change
29.	UPS	Uninterrupted Power Supply
30.	US-EPA	United States Environmental Protection Agency
31.	ZRF	Zero Routine Flaring by 2030 Initiative

REPORT

PART-I

CHAPTER-I

INTRODUCTORY

A. BACKGROUND

1.1 Oil and Natural Gas Corporation (ONGC) Limited, a Maharatna Company, is the largest crude oil and natural gas Company in India, contributing around 71 per cent to Indian domestic production.

1.2 Historically, ONGC was set up in the form of Oil and Gas division, under Geological Survey of India, in 1955,. A few months later, it was converted into an Oil and Natural Gas Directorate. The Directorate was converted into Commission and christened Oil & Natural Gas Commission on 14th August 1956. In 1994, Oil and Natural Gas Commission was converted into a Corporation, and in 1997 it was recognized as Navratna Company. Subsequently, in the year 2010, it received Maharatna status.

1.3 ONGC has a unique distinction of being a company with in-house service capabilities in all areas of Exploration and Production of oil & gas and related oil-field services. As per Public Enterprises Survey (2023-24), ONGC contributed highest net profit (accounting for 11.82% Net Profit of ₹40,525.97 crore) amongst the Top 10 Central Public Sector Enterprises in the FY 2023-24. Further, During Financial Year 2024-25, the Company's Crude oil production from ONGC operated blocks was 19.598 MMT and Natural gas production was 19.654 BCM and a total of 2.596 MMT of Value-Added Products (VAPs) were also produced during the year. In terms of financial performance, the Company's revenue from operations stood at ₹ 1,37,846 crore and Profit After Tax (PAT) stood at ₹35,610 crore. The Company declared a total dividend payout of ₹ 15,411 crore, representing a payout ratio of 43.27%. Also, the Company has registered the highest-ever CSR expenditure of ₹929 crore in the Financial Year with significant focus on healthcare and nutrition. Of this, ₹ 93 crore was allocated to 45 Aspirational Districts.

1.4 **Vision** -To be global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance practices.

Mission -

- Dedicated to excellence by leveraging competitive advantages in R&D and technology with involved people.
- Imbibe high standards of business ethics and organizational values.
- Abiding commitment to safety, health and environment to enrich quality of community life.
- Foster a culture of trust, openness and mutual concern to make working a stimulating and challenging experience for our people.
- Strive for customer delight through quality products and services.

Integrated In Energy Business

- Focus on domestic and international oil and gas exploration and production business opportunities.
- Provide value linkages in other sectors of energy business.
- Create growth opportunities and maximize shareholder value.

Dominant Indian Leadership

- Retain dominant position in Indian petroleum sector and enhance India's energy availability.

Carbon Neutrality

- Strive to reduce CO2 emissions across the activity chain with the objective of achieving carbon neutrality.

With more than 60 years of Exploration, ONGC had discovered 8 of the 9 Producing basins of India.

1.5 The Committee during 17thLok Sabha selected the Audit Para for examination during 2022-23 and took briefing from C&AG on the subject on 20 March, 2023. The subject was subsequently carried forward during 2023-24, thereby taking oral evidences of Oil and Natural Gas Corporation (ONGC) Limited and Ministry of Petroleum and Natural Gas (MoPNG) on 13 July, 2023. The Committee further took-up the subject at the Study-visit of the Committee (16-20 January,2024) and undertook a field-visit to the Mumbai High Fields - Mumbai High North (MHN) Offshore Platform and held informal discussion with the representatives of ONGC on 18 January, 2024. Afterwards, since the examination of subject was complete and consequent to

dissolution of 17thLok Sabha, the Committee during 18thLok Sabha decided to carry forward the subject as part of unfinished work of the Committee. In subsequent paras of the report, various audit observations have been discussed and considered by the Committee and majority of the Committee Members opinion, including final comments of the C&AG, are included in second part of the report in the form of recommendations.

B. AUDIT FINDINGS AT A GLANCE

1.6 Audit in Para No.2.4 in C&AG Audit Report No. 14 of 2021 Union Government (Commercial) titled 'Loss due to flaring of High Pressure Gas', observed that High Pressure gas valuing ₹816.08 crore was flared in Mumbai High field of ONGC during 2012-13 to 2019-20 due to non-availability of standby Process Gas Compressors, power shut downs and frequent tripping of Process Gas Compressor.

1.7 Mumbai High is a major oil field operated by the Oil and Natural Gas Corporation Limited (ONGC). Gas produced along with crude oil is called associated gas. Separation of well fluid into oil, water and gas is done in three stages i.e., in High Pressure separator, Low Pressure separator and surge tanks at the various process platforms of Mumbai High field. Gas coming out of High Pressure separator at high pressure is known as High Pressure gas. The well fluid after separation in High Pressure separators is sent to Low Pressure separators where the balance gas, which is of lower pressure, gets separated. High Pressure gas coming out of High Pressure separator is further compressed in Process Gas Compressor and is fed to the wells for gas lift purpose and balance gas is transported to the oil and gas processing plant of ONGC located at Uran for further processing and sale to consumers.

Any disruption in compression due to power shutdown, tripping of Process Gas Compressor, process upsets, etc., leads to flaring¹ of valuable High Pressure gas due to inbuilt safety mechanism in the Process Gas Compressor. Thus, to maximize gas production, it is imperative that all equipment is maintained and run effectively so that there is no loss of production.

A. GIST OF THE AUDIT FINDINGS

¹In the event of tripping of Process Gas Compressor, the high-pressure gas coming out of High-Pressure separators by pass the Process Gas Compressor and gets automatically flared due to inbuilt safety mechanism in the system.

1.8 The C&AG's Audit Paragraph on the subject, identified reasons/grounds which led to loss of ₹816.08 crore during 2012-13 to 2019-2020 of HP gas which was flared in the Mumbai High field due to avoidable reasons as enumerated below:

a. Flaring due to Power shut down: Power supply is required for operating the control panels of Process Gas Compressor. During 2012-13 to 2019-2020, there were 62 instances of power shut down. This was because the battery banks at the process platforms were as old as 26 years and could not provide adequate back up during power shut down. Consequently, the control panels of Process Gas Compressors could not be operated which resulted in gas flaring.

b. Flaring due to non-availability of standby Process Gas Compressors (PGCs): Out of 29 PGCs, five were to be kept as standby for utilization during maintenance/overhaul/ breakdown of PGC. However, due to operational problems, all PGCs were required to be run. Thus, due to non-availability of standby during routine maintenance/ inspection jobs at platform and overhaul of PGCs, gas had to be flared. During 2012-19 there were 302 incidents where gas was flared due to non-availability of standby PGCs. In 2019-20, seven PGCs were not available for more than a month and there was no standby.

c. Flaring due to Tripping of PGCs: Total quantity of 196.947 mmscm HP gas was flared on account of frequent tripping of PGCs. As against the vision of Offshore Maintenance Group of ONGC to sustain 'zero trips', the instances of PGC trips were 2,534 during 2012-13 to 2019-20. This was on account of non-adherence to the overhauling schedule of the various components of the PGC like power turbine, compressors, gas generators are required to be overhauled at intervals as stipulated by original equipment manufacturer. The power turbine is required to be overhauled after 1,00,000 hours and compressors after 50,000 hours. There were delays in overhauling of these components of PGCs. Running hours of power turbine and compressors of 16 PGCs had far exceeded the stipulated hours.

d. Non replacement of the Control systems: Control systems PGCs are required to be replaced after 10 years. Out of 21 PGCs wherein the control

system was required to be replaced/upgraded, control system was replaced only in nine PGCs as at the end of March 2021. In two-year, period i.e., 2018-20 there were 163 instances of tripping due to issues related to control systems.

1.9 Audit while concluding the findings, recommended that '*ONGC should pay attention for preventive maintenance and adhere to the overhauling schedule as prescribed by the original equipment manufacturer so as to minimize the flaring of High Pressure gas at Mumbai High fields. ONGC may fix responsibility on the officials responsible for lapses which leads to avoidable flaring of High Pressure gas.*'

1.10 In its Action Taken Note (ATN), the Ministry of Petroleum and Natural Gas (MoPNG) stated that it had advised ONGC to review and augment its preventive maintenance system, create SOPs for flaring reduction, reassess the requirement for standby equipment and conduct a cost-benefit analysis for new facilities as detailed below:-

"XXXX XXXX XXXX XXXX, it can be seen that ONGC has taken various measures to reduce gas flaring. However, ONGC has been advised:

- i) to review and augment the preventive maintenance system based on observations of audit and best international safety practices and also considering the statutory/ regulatory requirements
- ii) to create SOPs/ guidelines for reduction of flaring across all offshore platforms after taking into account all possible circumstances leading to downtime. SOPs/ guidelines to specify the circumstances (including technical reasons) requiring flaring of high-pressure gas and low-pressure gas wherein high pressure and low pressure may be clearly differentiated to avoid any confusion.
- iii) to re-assess the requirement of standby equipment due to change in characteristics of the MH field to mature field. Such assessment may be made for other offshore fields also.

Further, ONGC may also carry out the cost-benefit analysis on creation of new facilities if required as against the notional revenue loss.

Audit can review the same in subsequent audits and may like to update the facts as regards to flaring of high pressure and low-pressure gas, after discussions with ONGC."

1.11. The Ministry while furnishing the ATNs (September, 2024) has mentioned that based on the ATN furnished by them, C&AG has mentioned that the progress of the various actions taken by ONGC will be seen in next Audit.

CHAPTER-II

FLARING DUE TO POWER SHUTDOWN

2.1 C&AG in Para 2.4 of their Report No. 14 of 2021 observed that power supply is required for operating the control panels of Process Gas Compressor. During 2012-13 to 2019-20, there were 62 instances of power shut down. This was because of the fact that the battery banks at the process platforms were as old as 26 years and could not provide adequate back up during power shut down. Consequently, the control panels of Process Gas Compressors could not be operated, which resulted in gas flaring.

2.2 When the Committee enquired about the reasons for not replacing the battery banks for the last 26 years and the obstacles therein, ONGC in their written reply stated as under:-

“Battery banks at process platforms are replaced as and when required. Considering the criticality of the system, ONGC took action for replacement/revamping of battery banks as under: MH Asset: i) Replacement completed on 18 Systems in 2019. ii) Replacement under execution for 49 systems Out of these 49 systems: Execution completed for 30 systems. Execution is in process for 19 systems.EDC-Dec2023. iii) Replacement/revamping of 82 systems: under process.EDC-Aug2024.

NH Asset: Asset has identified replacement of batteries at 27 unmanned platform out of which replacement at 11 Platforms have been completed. Remaining (16) will be completed by 31.7.2023.”

In response to the reply, Audit in their vetting comments observed as under:-

“The response is vague and not specific to the question.”

2.3 In a further submission, ONGC stated:

“Health of Battery Banks are monitored regularly. Replacement is taken up when the battery bank back- up capacity is reduced to 50%. Generally a Battery Bank has life of 15-20 years. Battery banks are taken up for replacement based on requirement. Accordingly, at MH Asset, during last 5 years 48 Battery Banks have been replaced. Presently, 19 battery banks are under replacement and 82 nos. have been identified for replacement within next 18 months for all process platforms.”

2.4 During the course of evidence, the Committee expressed concern over what appeared to be a basic lapse, questioning why, despite the availability of reliable

battery suppliers to other critical sectors including defence, ONGC continued to use 26-year-old battery backup systems. To this, ONGC in reply to steps taken by the Company to reduce incidents of power shut downs, submitted as under:

“To reduce the incidents of power shutdowns, the following steps are being taken: Regular overhauling of Gas turbines and alternators. Up gradation of Control system of Gas turbines of GTGs. Replacement of Battery banks as brought out at reply to Point No.19 above.

Further, recently new Gas Turbine Generators have been installed, which will improve availability & reliability of equipment thereby reducing the incidents of power shut downs. The details are as under: As part of Re-development of MH field, New Water Injection South (NWIS-R) was installed bridge connected to existing BHS Complex. On NWIS-R platform new Gas Turbine Generator of 9.4 MW was installed.

New Living Quarter (NLQ) Platform bridge connected to existing NQO platform was installed in North field. This NLQ platform has 3 x 7.4 MW new GTGs; commissioned in May 2023.”

2.5 The Ministry of Petroleum & Natural Gas in their Action Taken Note (ATN) provided the following status on replacement of battery banks:

“Presently 19 battery banks are under replacement in MH Asset. EDC: Dec 2023 3 New GTGs (8 MW each) at NLQ platform have been commissioned in May 2023.”

In response to the reply, Audit in their vetting comments observed as under:-

“The fact remains that all the battery banks are yet to be replaced. However as replacement job is in progress the same will be seen during next audit.”

2.6 The Committee also sought details of incidents of power shut down in all assets of the company from 2020 onwards. ONGC in a written reply submitted as under:

Asset & No. of Incidents of power shutdowns

Asset	No. of Incidents of power shutdowns		
	2020-21	2021-22	2022-23
MH Asset	Nil	2	2
NH Asset	Nil	6	Nil
B&S Asset	3	3	3

2.7 In the latest information provided to the Committee on 07.07.2025, the updated status on Battery Bank Replacement was furnished as follows:

“ **MH (Mumbai High)** Replacement of 51 Systems: Out of the 51 systems, replacement has been completed for 50. Installation, Testing, and

Commissioning (ITC) for the remaining 1 system has been completed. Expected Date of Completion (EDC): 30.09.2025.

Replacement/Revamping of 130 Battery Banks (110 + 20 systems): Indent was placed to NTA in May 2024. NTA has prepared the estimate and requested expenditure sanction (ES) from the respective indentors. Expenditure sanction was obtained and forwarded to NTA on 06.03.2025.

NH (Neelam-Heera) Battery replacement jobs have been successfully completed at 27 unmanned platforms.”

CHAPTER-III

FLARING DUE TO NON-AVAILABILITY OF STANDBY PROCESS GAS COMPRESSORS

3.1 Audit observed that out of 29 Process Gas Compressors, five were to be kept as standby for utilisation during maintenance/ overhaul/ breakdown of Process Gas Compressor. However, due to operational problems, all 29 Process Gas Compressors were required to be run. Thus, due to non-availability of standby Process Gas Compressors during routine maintenance/ inspection jobs at platform and overhaul of Process Gas Compressors, gas had to be flared. During 2012-13 to 2018-19, there were 302 incidents where gas was flared due to non-availability of standby Process Gas Compressors. In 2019-20, seven Process Gas Compressors were not available for more than a month and there was no standby Process Gas Compressor.

3.2 When asked about the justifications for non-availability of PGCs during the period 2012-19, ONGC in a written reply stated as under:

“In MH Asset, total 29 PGCs are installed; 11 in MH North Field and 18 in MH South Field. As per requirement, 10 PGCs are required to be run in North Field whereas 15 PGCs are needed to run continuously in South field. Thus, 25 PGCs out of the total 29 are required to be run for optimum performance of MH field, with 4 PGCs (3 in South field & 1 at North field) being kept on standby for utilization during maintenance/overhaul/breakdown of the PGC. As such PGCs were available during the entire period. During 2013-14 to 2015-16, overhaul of gas generators suffered as business transactions with Rolls-Royce, UK, (OEM of AVON make Gas Turbines) had to be stopped as per instructions from the Ministry of Defence. Subsequently, M/s. Siemens has taken over the Gas Turbine division of Rolls Royce and there after overhaul of Gas Turbines was improved.”

In response to the reply, Audit in their vetting comments observed as under:-

“Out of 29 PGCs, 5 were to be kept standby for utilisation during maintenance/ overhaul/ break down of PGCs. However, due to operational problems all 29 PGCs were put in operation. Thus, due to non-availability of standby PGCs, during routine maintenance, inspection jobs at platforms and overhaul of PGCs, gas had to be flared. During 2012-13 to 2018-19, there were 302 incidents where gas was flared due to non- availability of standby PGCs. In 2019-20 total 7 PGCs were not available for more than a month and there was no standby PGC.”

3.3 In a further submission on the issue, ONGC stated:

“In South Field, BHS, ICP and SHP Complexes have Gas interconnection lines between them. In case of tripping / Non availability of PGC at one of the complex, Stand by PGC at the complex is started. In the situation of non-availability of Stand by PGC at complex, Gas is diverted to other complex. Similarly in North Field there is Gas inter connection between MHN and NQO Complex. Further, a New PGC and a new BGC (Booster Gas Compressor) are proposed to be installed at MHN Complex under Mumbai High Redevelopment (MHRD) Phase-V project. This will cater to the additional gas and improve the availability of PGCs in North Field thereby reducing gas flared during tripping.”

3.4 During the course of evidence on 13.07.2023, the CMD, ONGC, highlighting the operational constraints, submitted as under:

“सर, इसमें जो दिक्कत है, वह भी आपको बता देता हूँ। जो प्लेटफॉर्म बने हैं, वे बड़े छोटे हैं। उसमें एडिशनल कम्प्रेसर लगाने की जगह भी नहीं है, नहीं तो स्टैंड-बाई दो-दो हैं। अगर रिफाइनरी में हमें कन्टेन करना होता है तो हम एक मशीन की जगह दो स्टैंड-बाई लगाते हैं, ताकि अगर एक फेल हो तो दूसरा आ जाए, दूसरा फेल हो तो तीसरा आए। इस प्लेटफॉर्म में जगह नहीं है। बॉम्बे हाई में जब हम नया प्लेटफॉर्म बना रहे हैं तो सारे प्लेटफॉर्म पर यह लिटरली ज़ीरो है क्योंकि नए प्लेटफॉर्म में हमने काफी रिडंडेंसी प्रोवाइड कर दी।”

3.5 On being asked about the number of platforms identified for improving infrastructure for having stand-by arrangements, ONGC in a written reply submitted:

“It is submitted that since 2012-13 ONGC in Western offshore has created infrastructure to reduce flaring as under:-

Major projects in western offshore

SL. No.	Status	Asset	Scheme / Project	Year of Completion	Approved Cost (Cr.)
1	Completed	MH Asset	Mumbai High North PH-II	2014	7133
2	Completed	MH Asset	Mumbai High South PH-II	2014	8813
3	Completed	B&S Asset	Additional Development of NBP (D-1) field	2014	2164
4	Completed	B&S Asset	Development of C-24 cluster (C-22, C-24, C-39-I, C-39-A)	2014	3690
5	Completed	NH Asset	Redevelopment of Heera and South Heera fields PH-II	2015	5608

6	Completed	MH Asset	Development of Cluster-7 Fields (B-192 & WO-24 structures)	2015	6639
7	Completed	B&S Asset	Development of B-193 Cluster fields	2015	5633
8	Completed	B&S Asset	Additional Development of Vasai East	2016	2477
9	Completed	B&S Asset	Reconstruction of BPA & BPB Platforms	2017	1139
10	Completed	MH Asset	Mumbai High North PH-III	2018	5813
11	Completed	B&S Asset	Development of C-26 Cluster Fields	2018	2592
12	Completed	MH Asset	Mumbai High South PH-III	2019	6069
13	Completed	NH Asset	Neelam Re-development Project	2019	2819
14	Completed	B&S Asset	4th Phase Development of NBP field	2019	969
15	Completed	B&S Asset	Enhanced recovery from Bassein field through Integrated Development of Mukta, Bassein and Panna Formations	2020	4620
16	Completed	MH Asset	Conversion of Sagar Samrat to Mobile Offshore Production Unit (MOPU)	2020	1790
17	Completed	MH Asset	Mumbai High South PH-IV	2021	3740
18	Completed	NH Asset	Development of R-Series fields including revival of R-12 (Ratna)	2021	4476
19	Completed	MH Asset	Mumbai High North PH-IV	2023	3229

20	Ongoing	NH Asset	Heera Red. PH-III	2023	2495
21	Ongoing	MH Asset	Development of WO-16 Cluster fields (WO-5, WO-15, and WO-16 along with B-119/121)	2023	2523
22	Ongoing	MH Asset	MHRD PH-V	2025	5263
23	U/tendering	Western Offshore	DUDP	2025	4144

- New GTG/PGC/BGC Units:
 - One new Gas Turbine Generator (GTG) of 11 MW has been commissioned at NWIS-R platform (June-2022).
 - Three new GTGs of 8 MW has been commissioned at NLQ platform (May-2023).
 - Hiring of 2 gas compressors for utilization of LP gas as fuel at FPSO at NBP (EDC April-24).
 - One new Booster Gas Compressor (BGC) & one new Process Gas Compressor (PGC) are planned at MHN platform and 1 PGCs at TCPP platform in Tapti Daman Block to improve availability of stand-by compressors and further reduction in flaring.”

3.6 The Ministry of Petroleum & Natural Gas in their ATN of October 2023 stated:

“As stated earlier, 25 PGCs out of the total 29 are required to be run for optimum performance of MH field, with 4 PGCs (3 in South field & 1 at North field) being kept on standby for utilization during maintenance/overhaul/breakdown of the PGC. Thus, 4 PGCs are available as stand-by. Further, in the upcoming Mumbai High Redevelopment Phase-V, additional PGC and Booster Gas Compressor (BGC) are being planned at MHN platform to improve availability of stand-by compressors and further reduce flaring; for which tenders were already invited.”

3.7 In a subsequent ATN, the Ministry further added:

“Further, ONGC has recently introduced Asset Exchange Policy (AEP) old/used generators/turbines will be exchanged with OEMs with new ones. This will help in reducing downtime of the equipment. It has been approved by ONGC Executive Committee (EC) in its meeting held on 19th July 2023 (Annexure-1). Asset Integrity Manager is taking further necessary action for its implementation to expedite overhauling/up-gradation with OEM.”

CHAPTER-IV

FLARING DUE TO FREQUENT TRIPPING OF PROCESS GAS COMPRESSORS

4.1 Audit observed that a total quantity of 196.947 mmscm High Pressure gas was flared on account of frequent tripping of Process Gas Compressors. As against the vision of Offshore Maintenance Group of ONGC to sustain 'zero trips', the instances of Process Gas Compressor trips were 2,534 during 2012-13 to 2019-20. The frequent tripping was attributed to delays in overhauling of main components like power turbine, compressors, and gas generators as stipulated by the original equipment manufacturer. Running hours of power turbine and compressors of 16 Process Gas Compressors had far exceeded the stipulated hours. The audit para also highlighted that 'Control systems' of PGCs, required to be replaced after 10 years, were not replaced in time. Out of 21 PGCs where the control system required replacement/upgradation, it was replaced only in nine PGCs as at the end of March 2021.

4.2 During the course of evidence, Members of the Committee pointed out the significant delays in overhauling and questioned whether the losses could have been avoided with timely maintenance. In response, the CMD, ONGC, explained the operational challenges:

“सर, एक बात और है कि जब ओवर हॉल होगा तो मशीन ऑपरेशन में नहीं रहेगी। अगर मशीनें कम हैं तो और ज्यादा फ्लेयर करना पड़ेगा। यह असोसिएटिड गैस है। सर, ओवरहॉल लेट होने के 2 कारण हैं। एक है कि ये सारे वेंडर विदेशी हैं, कोई भी इंडियन नहीं है। इनका एक शेड्यूल होता है। इनके पास मशीनें जानी हैं। दो साल का साइकल है। जब मशीन निकालेंगे, उसका क्रिटिकल कंपोनेंट खुल कर लंदन या ह्यूस्टन जाएगा। वहां फिर 6 महीने उनके यहां इनका रिपेयर शुरू हो जाएगा। इसलिए निकालने के पहले अगर हमारे पास रिडंडेंसी है, स्टेण्ड बाई है, तब तो ठीक है। अगर स्टेण्ड बाई नहीं है तो उस समय गैस ज्यादा फ्लेयर होगा, क्योंकि हम को तेल चाहिए।”

4.3 On the issue of delayed overhauls, ONGC in a written reply stated:

“During 2013-14 to 2015-16, overhaul of gas generators suffered as business transactions with Rolls-Royce, UK, (OEM of AVON make Gas Turbines) had to be stopped as per instructions from the Ministry of Defence. Subsequently, M/s. Siemens has taken over the Gas Turbine division of Rolls Royce and there after overhaul of Gas Turbines was improved. Overhauling of 3 nos. of Compressors completed during 22-23. Work Orders for overhauling of 5 nos. of compressors are placed and currently under execution.”

In response to the reply, Audit in their vetting comments observed as under:-

“During 2014-15 to 2019-20 there were 286 instances of tripping due to issues related to GG. The overhauling of compressors in respect of 9 PGCs was delayed, and the running hours ranged between 69674 hours to 183880 hours as against the norm of 50000 hours.”

4.4 To provide further evidence of the delayed overhauls, the Committee took note of the detailed servicing records submitted by ONGC, which showed significant deviations from OEM norms. For instance:

Data of last ten years regarding servicing/overhauling record of PGCs installed at all the platforms

Asset/ Platform	Year	No. of PGCs installed	Hour/Time stipulated by OEM for overhauling	Hours after which Actual servicing/overhauling performed on machine
MH Asset				
ICG TR-A	Nov. 18	4	Condition Based	184675
ICG TR-B	Feb.21			199336
BHS TR-A		4		220327
BHS TR-B				151861
MNP TR-A		4		75050
MNW TR-D	28.06.2019			109510
SHP TR-A	27.07.2012	10		146144
SHP TR-B	18.11.2020			180622
SHP TR-C	10.03.2022			208211
SHG TR-A	27.03.2017			155468
SHG TR-C	31.05.2012			127013
SHG TR-F	28.02.2014			125472
SHG TR-G	25.02.2020			
NQG TR-A	21.08.2020	7		226351
NQG TR-B	11.10.2020			205170
NQG TR-C	01.12.2022			193118
NQP TR-A	04.06.2019		164874	
NQP TR-C	01.06.2013		135502	
N&H Asset				
HRG PGC A	NOV.2017	7	Condition Based	180786
HRG PGC B	NOV. 2013			156421
HRG PGC IV	12.05.22			184417
HRG PGC V	19.09.22			166973
NLM PGC-A	13.10.2020	4		207628
NLM PGC-B	26.12.2015		169530	
NLM PGC-A	19.02.2013		142944	

B&S Asset				
BCPA2 BC-1	JAN.2019	11	Condition Based	75229
BCPA BC-A	MAR.2017			82512
BCPA BC-C	MAR.2019			119542
BCPA BC-B	APR.2014			71133
BCPB BC-C	27.12.2022	7	Condition Based	115017
BCPB BC-B	06.01.2015			63000
BCPB2 BC-A	19.06.2022			93330
BCPB2 BC-B	09.09.2022			61136
BCPB2 BC-C	28.10.2022			91887
BCPB2 BC-D	18.04.2022			87736

4.5 Regarding the status of action taken on control system replacement/upgradation, ONGC submitted the following details:

“ **MH Asset:** 8 PGCs are relatively new and hence control systems are not considered for replacement as of now. Control system of 12 PGCs have been upgraded. Order for 7 systems has been placed in Nov 2021 and presently under execution.

NH Asset: Control system up-gradation has been taken up for PGC-IV&V & TG-1, 2, 3, 4 at Heera and PGC-A, B, C at Neelam. Site visit completed by OEM in Nov-22. Detail scope of work has been discussed with operating crew and OEM in Jan-Feb2023. Detail offer from OEM is awaited.

B&S Asset:5 PGCs are relatively new and hence control systems are not considered for replacement. Control system up-gradation for 6 PGC has been awarded and order placed in Jan 2023, presently under execution.”

4.6 ONGC, on being enquired about formulation of ‘Zero Trip Vision’ Policy, submitted as under:-

“ONGC has not formulated ‘Zero Trip Vision’ policy. It is only aspiration goal set by Offshore Maintenance Services, internal ONGC group, to achieve ‘zero trips’ on account of technical reasons i.e. mechanical (vibration, temperature etc.), electrical (power shutdown) and instrumentation (Control system); for which OMG (Offshore Maintenance Group) is taking all efforts in carrying out timely Overhauls and control system revamping works.”

On this, the Audit in their vetting remarks, stated as under:-

“The instances of tripping of PGCs during the period 2012-13 to 2019-20 were 2534. Status of tripping for subsequent period was not made available to audit so as assess the improvement in the system.”

Adding to the above, ONGC also furnished the instances of tripping of PGCs for the period subsequent to the audit para as under:

2020-21: 270;

2021-22: 327;

4.7 ONGC further submitted a detailed plan for overhauling equipment up to 2025-26:

“Equipment & Overhauls/Up gradations executed (Year wise)

Equipment	Overhauls/Up gradations executed (Year wise)					Total
	18-19	19-20	20-21	21-22	22-23	
GG/GT	25	18	22	29	28	122
PT	3	3	2	4	6	18
Gas compressors	3	6	2	3	10	24
Control system	1	3	1	1	2	8

Equipment & Future Plan

Equipment	2023-24	2024-25	2025-26	Total
Gas Generators(GG)	32	26	26	84
Power Turbine (PT)	8	8	8	24
Gas Compressor	10	8	8	26
Control System	2	8	12	22

Since 2012-13 ONGC in Western offshore has created infrastructure to reduce flaring and detailed as stated under

XXXX XXXX XXXX XXXX
 (Information already depicted in tabular format @ para 3.5 (Chapter III)
 of the Report)

- New GTG/PGC/BGC Units:
 - One new Gas Turbine Generator (GTG) of 11 MW has been commissioned at NWIS-R platform (June-2022).
 - Three new GTGs of 8 MW has been commissioned at NLQ platform (May-2023).
 - Hiring of 2 gas compressors for utilization of LP gas as fuel at FPSO in NBP field is underway (EDC April-24).

- One new Booster Gas Compressor (BGC) & one new Process Gas Compressor (PGC) are planned at MHN platform and 1 PGCs at TCPP platform in Tapti Daman Block to improve availability of stand-by compressors and further reduction in flaring. NIT is planned shortly.
- In recently introduced Asset Exchange Policy (AEP) old/used generators/turbines will be exchanged with new. This will help in reducing downtime of the equipment. It has been approved by Executive Committee (EC) in its meeting held on 19th July 2023. OMS (Offshore Maintenance Services) is taking further necessary action for its implementation to expedite overhauling/up-gradation with OEM.

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4.8 In the latest information provided to the Committee, ONGC furnished the status of Equipment Overhauling for FY 2024-25:

“During FY 2024-25, the overhauling of key equipment was carried out successfully, exceeding planned targets across all categories. A total of 28 Gas Generators (GG) were overhauled against a plan of 26, 20 Power Turbines (PT) were completed compared to the planned 8. 9 Gas Compressors were overhauled against a target of 8, 10 Control Systems were completed versus the planned 8. The higher-than-planned execution reflects ONGC’s proactive approach to maintenance and operational reliability.”

CHAPTER-V

POLICY, MONITORING AND ACCOUNTABILITY

5.1 When asked about the policy of ONGC on Gas Flaring, the Company in a written reply stated:

“It is continuous endeavour of ONGC to have zero avoidable flaring. ONGC follows the principle that all gas produced should be utilized to the extent possible with available resources. The gas flaring is technical necessity for processing of oil and gas at offshore Platforms to maintain pilot flares for avoiding escape of unburnt hydrocarbon into atmosphere which is a safety hazard. ONGC is continuously striving towards minimizing gas flaring.”

In response to the reply, Audit in their vetting comments observed as under:-

“As brought out in the audit para, technical flaring involves low pressure gas. ONGC earns revenue from HP gas sales. Hence this gas is not meant to be flared. However, due to frequent tripping of PGCs and non-availability of standby PGC, the HP gas was being flared. In the audit para, the avoidable reasons for flaring of gas were summarised under three categories: (i) Power shut downs, (ii) Non availability of standby PGC, and (iii) tripping of PGCs”

5.2 To address the issue, ONGC framed a Standard Operating Procedure (SOP) for reduction of flaring of high-pressure gas, which was issued on 16.03.2023. The SOP outlines the following key steps to be taken in case of a PGC trip:

"1. In case of tripping of one PGC, Control Room must initiate immediate action to avoid Cascade tripping of PGCs.

2. Free Gas wells to be closed by SCADA (Supervisory Control and Data Acquisition) to reduce flaring.

3. If flaring is still high, closure of High GOR wells (in consultation with base team) to be carried out.

4. Standby PGC of the complex to be started immediately.

5. In case of non-availability of Standby PGC at process complex, divert additional Gas... by inter platform transfer for compression by PGCs / Standby PGC at other complex."

5.3 During the course of evidence, the issue of accountability for the losses incurred due to flaring was raised. The Secretary, MoPNG, submitted as under:

“सर, आपकी यह बात सही है कि जो पहले का लॉस हुआ है, जिस पर सीएजीकी रिपोर्ट आयी है, उसमें अभी अकाउंटेबिलिटी फिक्स नहीं हुई है। यह बात सही है।

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जब से यह रिपोर्ट आई है, तब से हमारा जोर सुधार पर ज्यादा रहा है कि हमें आगे के लिए कौन-सी चीजें सही करनी हैं। यह बात भी सही है कि जिम्मेवारी पर हमारा ज्यादा जोर नहीं रहा है। हमारा जोर इस बात पर रहा है कि इसमें सुधार कैसे हो और पूरी संस्था का बिहैवियर किस तरह से चेंज हो तथा किस तरह से उसमें बदलाव आए कि फ्लेयरिंग कम हो जाए या बंद हो जाए। लेकिन, जहां-जहां रेस्पॉसिबिलिटी वाली बात है, वह अभी तक फिक्स नहीं हुई है।”

5.4 During the course of evidence, Members of the Committee further pressed the issue of fixing responsibility to ensure systemic improvements in the future.

5.5 When asked whether any responsibility has been fixed on the officials of ONGC for lapses on flaring of High-pressure gas, the Company in a written reply stated:

“Continuous efforts are undertaken to bring down the flaring to bare minimum. ONGC is paying full attention for preventive maintenance of all critical major equipment and adhering to overhauling schedule as prescribed by original equipment manufacturer. It is evident from reduction in flaring that ONGC is not only taking immediate actions for addressing the factors causing flaring of HP gas, but also has definite future plans for containing flaring to minimal level as elaborated above. It may not be prudent to fix responsibility on individual(s) for system related issues. ONGC is committed to reduce the flaring to lowest levels.”

5.6 Regarding the monitoring mechanism, ONGC informed the Committee:

“Gas flaring is monitored on regular basis through Daily Progress Reports (DPR) at business unit level and also reviewed through various review meetings at Asset level and ONGC management level. Gas flaring reduction parameter has been also kept in annual performance contract of concerned Key Executives. It is also monitored as a part of annual planned Audits and also during testing of Operational Risk Control Matrix (ORCM). Further to monitor and address the gas flaring issues and make a robust monitoring mechanism, ONGC management has also decided that regular review of flaring at ONGC Board level shall be carried out on a quarterly basis.”

5.6 The Ministry of Petroleum & Natural Gas, in a post-evidence reply, informed about the improvements in monitoring:

“From FY 2024-25, four additional nodes have now been created in ONGC SAP system to provide break-up of gas flaring on account of the following:

- a) HP Flare due to PGC Tripping
- b) HP Flare due to PGC Non availability
- c) HP Flare due to PSD (Power Shut Down)
- d) HP Flare due to Other reason

The HP flare data on account of above heads has been entered in SAP w.e.f. 01.05.2024.”

In response to the reply, Audit in their vetting comments observed as under:-

“The new nodes in the SAP were introduced only in March 2024. Hence the extent of improvement in flaring will be known only in 24-25.”

5.7 The latest information provided to the Committee confirmed the implementation of the new data management system:

“The categorization of flaring events—specifically due to power shutdowns, non-availability of standby Process Gas Compressors (PGCs), and PGC trippings—has been created and is being maintained daily in the SAP-PRA system. This structured recording ensures accurate monitoring and traceability of flaring incidents. The data is readily accessible in SAP-PRA, and a screenshot from the MHN platform under MH Asset has been attached for reference.

SAP				
PRA: Measurement Point Volumetric Data				
DN Hier Node	Network ID	Measurement Point	Production	Std Vol UoM
MH	BHN GAS	BHN HP FLARE-OTHERS	01.06.2025	4.000 KCM
MH	BHN GAS	BHN HP FLARE-PGC NA	01.06.2025	0.000 KCM
MH	BHN GAS	BHN HP FLARE-PGCTRIP	01.06.2025	0.000 KCM
MH	BHN GAS	BHN HP FLARE-PSD	01.06.2025	0.000 KCM

CHAPTER-VI

ROLE OF DGH IN FORMULATING AND ENFORCING ROYALTY ON FLARED GAS

6.1 When asked whether the Ministry has issued any direction to ONGC & other oil producing Companies to reduce/ eliminate avoidable high pressure gas flaring, the Ministry in a written reply stated:

“As part of the efforts to reduce/eliminate avoidable gas flaring, DGH issued an advisory regarding payment of royalty on gas flaring in line with the provisions of Section 6A of the Oilfields (Regulation and Development) Amendment Act, 1969. Letters dated 20.12.2021 and 04.01.2022 with respect to the subject matter were issued to ONGC, OIL, Vedanta and other operators wherein the respective Operators were advised to make all out efforts to reduce flaring and restrict it to the level of technical flaring only and ensure payment of royalty on avoidable gas flared also.”

6.2 The Committee took note of the DGH's letter dated 04.01.2022 addressed to the CMD, ONGC, which highlighted the high level of flaring in several fields. The letter stated:

"Records reveal that in some of the fields, viz, Mumbai High, Ankaleswar, Jorhat, CY-ONN-2002/2, KG-ONN-2003/1, 4.3%, 8.2%, 69.8%, 100%, 91.1% of its production of natural gas has been flared during the FY 2020-21 respectively. Again during the H1 period of the FY 2021-22, 4.8%, 7.6%, 66.1%, 35.9%, 54.0% gas was flared in those areas respectively which is unacceptable."

"It may be noted that the present level of flaring is largely avoidable and natural gas so flared attracts payment of royalty under law."

6.3 During the course of evidence, the Dy. C&AG highlighted the issue of non-payment of royalty:

“In the meeting, as the Chairman, ONGC clearly stated to all the Committee Members that all high-pressure flaring is avoidable. Now, all the oil and gas companies have referred back to DGH saying that an SOP should be made as to what is avoidable and what is unavoidable for the royalty to kick off. On this issue if some clarity could be given.”

6.4 Responding to the issue, the Secretary, MoPNG, stated:

“...एक बात तो यह है कि शुरु में काफी सालों तक तो यह रहा कि अवॉइडेबल गैस फ्लेयरिंग पर रॉयल्टी चार्ज नहीं होती थी, लेकिन अब जब कि यह रॉयल्टी चार्ज हो रही है, तो एक तरह से

एक डिसइन्सेंटिव स्ट्रक्चर, एक पेनल्टी स्ट्रक्चर अब आ गया है कि अब यदि आप फ्लेयर करेंगे, तब भी आपको सरकार को रॉयल्टी देनी होगी, जबकि आपको कुछ पैसा नहीं मिलेगा।”

6.5 When a Member pointed out that despite the circular, no royalty had been paid, the Secretary, MoPNG, replied:

“If they have not paid, then the issue is that the amount is payable. If they have not paid, we will recover that amount. I do not think there is a dispute about that. So, we will recover that amount.”

6.6 However, in a subsequent written reply, ONGC stated its position on the applicability of royalty as under:

“As per section: 6A (3) of Oil Fields (Regulation & Development) Act, 1948 (ORD Act), Quote: (3) Notwithstanding anything contained in sub-section (1) or subsection (2) no royalty shall be payable in respect of any crude oil, casing head condensate or natural gas which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum, or natural gas, or both. Unquote: Flaring of gas is unavoidable in nature. Hence, royalty is not applicable in terms of Section 6A (3) of ORD Act, 1948. Hence, no royalty is being paid on gas flaring being unavoidable gas.”

6.7 The Ministry of Petroleum & Natural Gas, in their post-evidence reply, reiterated a similar stance:

“As per Section 6A (3) of Oilfields (Regulation & Development) Act, 1948 (ORD Act), “(3) Notwithstanding anything contained in sub-section (1) or subsection (2) no royalty shall be payable in respect of any crude oil, casing head condensate or natural gas which is unavoidably lost...” It is submitted that ONGC is making all efforts to reduce the flaring. However, the above provision provides exemption from payment of royalty on production of natural gas which is unavoidably lost. Flaring of High pressure gas is non-routine flaring and other gas being flared is also a safety requirement and thus unavoidable. Hence, no royalty is being paid on gas flaring being unavoidable gas flaring.”

The above reply of the Ministry has been in response to the following vetting remarks of Audit:-

“DGH in January 2022 had issued a communication regarding royalty on flaring. ONGC has however not paid any royalty on the gas flared as directed by DGH.”

CHAPTER-VII

FUTURE STRATEGY: DECARBONIZATION AND ELECTRIFICATION OF OFFSHORE ASSETS

7.1 In response to a query regarding ONGC's plan to wheel green electricity to Mumbai Offshore fields, the Company in a written reply stated:

“At present, ONGC is internally consuming ~5.4 mmscmd gas in the offshore assets for power generation and internal processes. ONGC has currently undertaken a study to evaluate the possibility of converting the power requirements of these offshore assets from gas power to grid power. The feasibility of electrification of western offshore assets by connecting it from onshore grid through sub-sea cables is being studied. Potential benefits envisaged from the project are as follows:

- This will free up gas for country's consumption promoting energy security
- It will decarbonise E&P operations at the offshore assets
- Possibility of wheeling green power (potential sources are currently being evaluated). However, operations of offshore assets require reliable power and various options for supply of the same are being evaluated. One of the key considerations for the project shall be significant infrastructure investment and long time horizon for power supply especially renewable power. This will also involve exploring ways of making the project viable. This may include premium pricing for gas so freed, waiver of duties, suitable grants, etc.”

7.2 Elaborating on its decarburization plan, ONGC submitted the following investment framework:

Mitigation Measure, 2030

Mitigation Measure	2030	
	Project Size	Investment (Rs. in Cr)
Energy Efficiency + Flare Reduction	Various projects at Asset levels	5,000
Renewables (Solar+ Onshore Wind)	5 GW	30,000
Green H2/G-NH3	180 KTPA GH2/1 MMT G-NH3	40,000
CBG/ Biogas	25 Plants	1,500
Offshore Wind	0.5 GW	12,500
Pump Storage Plant (PSP)	1 GW	7,000
CCUS	500 KTPA	1,000
Total Investment		97,000

7.3 Further, ONGC provided its investment framework till 2038 to achieve its net-zero carbon emissions goal:

Mitigation Measure	2030		2035		2038	
	Project Size	Investment (Rs. in Cr)	Project Size	Investment (Rs. in Cr)	Project Size	Investment (Rs. in Cr)
Energy Efficiency + Flare Reduction	Various projects at Asset levels	5,000	--	--	--	--
Renewables (Solar+ Onshore Wind)	5 GW	30,000	1 GW	5,000	1 GW	5,000
Green H2/G-NH3	180 KTPA GH2/ 1 MMT G-NH3	40,000	180 KTPA GH2/ 1 MMT G-NH3	40,000	--	--
CBG/ Biogas	25 Plants	1,500	--	--	--	--
Offshore Wind	0.5 GW	12,500	0.5 GW	12,000	1 GW	25,000
Pump Storage Plant (PSP)	1 GW	7,000	1 GW	7,000	1 GW	6,000
CCUS	500 KTPA	1,000	500 KTPA	1,000	1000 KTPA	2,000
Total Investment		97,000		65,500		38,000

CHAPTER-VIII

INTERNATIONAL COMMITMENTS AND INDIA'S ALIGNMENT

8.1 The Committee note that the issue of gas flaring is not only a matter of resource wastage but also a significant environmental concern with global implications. In this context, the Committee took note of India's and ONGC's commitments to international environmental protocols.

8.2 It was submitted to the Committee that ONGC is a signatory to the World Bank's "Zero Routine Flaring by 2030" initiative, which it endorsed in November 2015. ONGC provided the official definitions from the World Bank's Global Gas Flaring Reduction Partnership (GGFR) which categorise flaring as follows:

"Routine flaring of gas is flaring during normal oil production operations in the absence of sufficient facilities or amenable geology to re-inject the produced gas, utilize it on-site, or dispatch it to a market.

Safety flaring of gas is flaring to ensure safe operation of the facility.

Non-routine flaring of gas is all flaring other than routine and safety flaring."

8.3 The Ministry of Petroleum & Natural Gas informed the Committee that these efforts align with broader national and international goals. The Ministry stated:

"Goal 7 of UNFCCC Sustainable Development Goals (SDGs) is about ensuring access to clean and affordable energy, which is key to the development of agriculture, business, communications, education, healthcare and transportation."

8.4 The Committee were also informed about the global focus on reducing methane emissions, a potent greenhouse gas often associated with oil and gas operations. In this regard, ONGC provided data on its methane emissions for the last five years:

Methane Emissions in ONGC

FY	Fugitive methane (MMSCM)	Emission (MMT CO ₂ e)
2018-19	21.624	0.410
2019-20	20.569	0.390
2020-21	19.514	0.370
2021-22	18.975	0.360
2022-23	17.921	0.340

8.5 Regarding steps taken to curb these emissions, ONGC submitted:

"ONGC has entered into a collaboration through MoU with the US-EPA to detect and reduce fugitive emissions. The reductions are achieved through the implementation of "Directed Inspection and Maintenance program" (DI&M) wherein leaks are detected by undertaking survey through IR Camera and remedial measures are taken to arrest the leakage. Since 2007, ONGC has prevented approximately 20.48 MMSCM of methane gas leakages into the

atmosphere, with emission reduction of approx. 306,250 TCO₂e through this programme."

CHAPTER-IX

ANCILLARY ISSUES – WOMEN-FRIENDLY FACILITIES AT OFFSHORE PLATFORMS

9.1 During the study-visit of the Committee in January, 2024, the Committee undertook a field-visit to the Mumbai High North Offshore Platform. After the visit, the Committee held an informal discussion with the representatives of ONGC.

9.2 In the course of the discussion, the Committee, taking into account the field-visit undertaken earlier in the day, desired that ONGC Ltd. should scale-up their efforts in further reducing the high pressure gas flaring. The Committee further desired that the facilities at ONGC installations on Offshore Platforms may be made practically women friendly including design of women friendly dungarees and light yet strong and comfortable shoes for long wear work hours.

PART-II

OBSERVATIONS/RECOMMENDATIONS OF THE COMMITTEE

1. Overview

Oil and Natural Gas Corporation (ONGC) Limited, a Maharatna Public Sector Undertaking under the Government of India, stands as the country's largest producer of crude oil and natural gas, accounting for nearly 71% of the nation's total domestic output. Established in 1955 as a division under the Geological Survey of India, ONGC evolved through several structural reforms—from a Directorate to a Commission, and later into a Corporation in 1994. ONGC was granted Navratna status in 1997 and Maharatna status in 2010, acknowledging its strategic and financial importance. Over the decades, ONGC has developed comprehensive in-house capabilities across all facets of oil and gas exploration, production and related services. It has also made remarkable contributions to India's energy security by discovering 8 out of 9 producing basins. As per the Public Enterprises Survey 2023-24, ONGC achieved the highest net profit among CPSUs, contributing ₹40,525.97 crore, representing 11.82% of total CPSU profits. Further, in Financial Year 2024-25, the Company achieved a Profit After Tax (PAT) of ₹35,610 crore and declared a significant dividend payout of ₹15,411 crore. The Company also registered its highest-ever CSR expenditure of ₹929 crore, with a noteworthy focus on healthcare and nutrition in 45 Aspirational Districts. Thus, the Company is guided by a forward-looking vision to be a global energy leader with a commitment to sustainable growth, operational excellence, carbon neutrality and exemplary governance. Its mission is rooted in innovation, ethical standards, community well-being and customer satisfaction.

The Audit in Para No. 2.4 of C&AG Report No. 14 of 2021 has highlighted Operational shortcomings in ONGC's Mumbai High field leading to the flaring of high-pressure (HP) associated gas worth ₹816.08 crore between 2012-13 and 2019-20. The audit found that flaring primarily occurred due to three key reasons: (i) Power shut down - 62 instances of power shutdowns resulting from outdated 26-year-old battery banks, which were unable to support the operation of Process Gas Compressor (PGC) control panels; (ii) Non-availability of standby PGCs—although five of the 29 PGCs were designated as standby, operational issues required all to be used simultaneously, leading to 302 flaring incidents during maintenance; and

(iii) **Frequent Tripping of PGCs – With 2,534 trips reported due to delays in overhauling critical components like turbines and compressors, many of which had exceeded their recommended operating hours. Furthermore, the control systems of PGCs, due for replacement after 10 years, were upgraded in only 9 out of 21 units, causing 163 trip incidents between 2018 and 2020. These systematic maintenance gaps and infrastructure challenges have led to economic and environmental setbacks, affecting ONGC’s operational efficiency and its goal of achieving ‘zero tips’ in offshore maintenance.**

The Committee, in its in-depth examination of the Audit Para, are of the firm opinion that ONGC stands as a cornerstone of India's energy infrastructure. While its legacy in exploration and production remains unparalleled, the audit findings highlight the critical need for modernization of offshore infrastructure, timely upgradation of control systems and adherence to preventive maintenance practices. The Committee observe that these issues persisted for years, indicate towards lapse in preventive maintenance, asset management and risk assessment. While the Committee acknowledge the recent corrective actions initiated by ONGC and MoPNG post-audit, including the accelerated overhauling of equipment and the implementation of a daily monitoring in SAP-PRA (Systems, Applications, and Products in Data Processing - Production and Revenue Accounting) system, it underscores the need for robust accountability for previous shortcomings and sustained oversight to ensure that these reforms are institutionalised and yield tangible results.

To retain its leadership and align with its vision of carbon neutrality and operational excellence, ONGC must invest in robust systems, digital automation and equipment lifecycle management. These improvements will not only safeguard against future losses but also enhance the organization’s capability to meet India's growing energy demands sustainably. The Committee hope the following recommendations will assist the Company and the Government in their efforts to enhance operational efficiency, conserve national resources and work upon to achieve its intended objective of zero avoidable flaring.

2. Flaring due to Power Shutdown

The Committee note with concern the C&AG’s finding that 62 instances of power shutdown between 2012-13 and 2019-20 were a direct cause of avoidable high-pressure gas flaring. The root cause identified by Audit was the performance

issues in battery banks at process platforms, some of which were as old as 26 years and well beyond their operational life, to provide adequate power backup.

The Committee observe that ONGC's initial written response regarding the non-replacement of aged battery banks was termed as "vague and not specific" by Audit. In subsequent replies, ONGC stated that battery banks have a general life of 15-20 years and are replaced when their backup capacity reduces to 50%. The Company then provided a phased schedule for the replacement and revamping of numerous battery bank systems, with completion dates stretching from 2023 to 2025. The Ministry, in its ATN, confirmed that the replacement work was in progress. However, Audit in its vetting remarks rightly pointed out that "the fact remains that all the battery banks are yet to be replaced" and that the progress would be watched in future audits. The latest information indicates that while significant progress has been made, the complete replacement and revamping programme is still ongoing.

The Committee are of the firm opinion that the lack of timely replacement of critical battery banks, which were operating far beyond their standard service life, constitutes a serious lapse in preventive maintenance and asset management. This negligence directly compromised the operational stability of the platforms, leading to power shutdowns and consequent flaring of valuable national resources. The delay in addressing this fundamental issue, despite its clear operational and financial implications, points to systemic weaknesses in maintenance planning and oversight within ONGC. While the Committee acknowledge that a replacement plan is now being executed, this action is corrective rather than preventive and has come about only after being pointed out by Audit, however it is a good indicator for future.

The Committee, therefore, recommend that (i) ONGC should formulate and adhere to a time-bound asset replacement policy for all critical equipment, including battery banks, based on OEM guidelines and pre-defined performance degradation triggers. This policy should be integrated with a real-time health monitoring system for critical assets to enable proactive replacement before operational issues ii) Further, the Ministry of Petroleum & Natural Gas should direct ONGC to conduct an internal inquiry into the reasons for the inordinate delay in replacing the life-expired battery banks and submit a report to the Committee;

and(iii) The Committee further recommend that the new Gas Turbine Generators (GTGs) being installed should be supported by a robust, real-time monitoring and predictive maintenance framework to ensure their long-term reliability and prevent a recurrence of similar problems.

3. Flaring due to Non-availability of Standby PGCs

The Committee note from Audit finding that, against a requirement to maintain five standby Process Gas Compressors (PGCs), there were effectively none available as all 29 PGCs were being run to meet operational requirements. This lack of redundancy was a primary cause of gas flaring during routine maintenance, overhauls or breakdowns, leading to 302 such incidents between 2012 and 2019.

The Committee observe a variation in the replies. While ONGC claimed that four PGCs were available as standby, the Audit vetting comment reiterated its finding that operational problems necessitated running all compressors, leaving no effective standby. ONGC attributed the situation to increased gas production and operational needs of a maturing field, as well as external factors like the stoppage of business with an OEM. The Company also cited space constraints on older platforms as a barrier to installing additional standby units. Both ONGC and the Ministry have pointed to future remedial actions, such as the installation of new PGCs in the upcoming MHRD Phase-V project and the introduction of an Asset Exchange Policy (AEP) to reduce equipment downtime during overhauls.

The Committee are of the view that the non-availability of the mandated number of standby PGCs reflects significant gaps in operational planning and risk management. The standard industry practice of maintaining n+1 redundancy for critical equipment was clearly violated over a prolonged period. Citing increased operational demand as a reason, without concurrently planning for capacity augmentation, is indicative of poor strategic foresight. While the AEP and plans for new compressors are positive steps, they are delayed responses to a long-standing problem that should have been anticipated and addressed through proactive infrastructure planning.

In view of the above, the Committee recommend that (i) ONGC should conduct a comprehensive technical audit of all its aging offshore assets to

reassess the adequacy of standby capacity for all critical equipment against current and projected operational loads. Based on this audit, a time-bound action plan may be submitted to the Ministry within six months to bridge any gaps in redundancy, including through the installation of new bridge-connected facilities where space is a constraint; (ii) The Ministry of Petroleum & Natural Gas should closely monitor the implementation of this plan and the effectiveness of the new Asset Exchange Policy in improving equipment availability; (iii) The Committee further recommend that the Ministry should ensure the MHRD Phase-V project, which includes the installation of new PGCs, is completed without any time or cost overruns; and (ii) A formal review of the effectiveness of the Asset Exchange Policy (AEP) in reducing equipment turnaround time and improving standby availability should be conducted one year after its full implementation and the report of the same may be submitted to the Committee for comprehensive review.

4. Flaring due to Frequent Tripping of Process Gas Compressors

The Committee note with concern the C&AG's finding of 2,534 instances of Process Gas Compressor (PGC) trips between 2012-13 and 2019-20, which stands in stark contrast to the 'zero trips' vision of ONGC's Offshore Maintenance Group (OMG). The audit noted that the elevated rate of issues was linked to gaps in the maintenance regime, particularly delays in the scheduled overhauling of critical components such as power turbines and compressors, as well as the lack of timely upgrades to outdated control systems.

The Committee note that ONGC, in its replies and during evidence, acknowledged the delays in overhauling. It cited reasons such as the long turnaround times associated with foreign Original Equipment Manufacturers (OEMs), the lack of standby equipment which made it difficult to release machines for overhaul without increasing flaring and a period of suspended business with a key OEM. However, the Audit's vetting comments rightly underscored the gravity of the situation by highlighting that equipment was run for hours far exceeding the OEM-stipulated limits and that hundreds of trips were directly linked to these overdue components. While ONGC has now presented a detailed and accelerated plan for overhauls and control system upgrades and latest data indicates that these plans are being actioned, this does not mitigate the past issues in maintenance planning.

In the Committee's view, the frequent tripping of PGCs is a direct consequence of a gaps in preventive maintenance. The decision to repeatedly postpone mandatory overhauls and operate equipment beyond its certified run-hours represents a high-risk operational strategy that predictably contributed to equipment issues, production losses and environmental damage. The justification of avoiding flaring by delaying overhauls is a fallacious argument, as it only defers and ultimately exacerbates the problem. The recent progress on overhauls is a welcome corrective measure, and Committee is hopeful for its better implementation.

In view of the above, the Committee desire that (i) ONGC must ensure strict adherence to the overhauling schedules prescribed by Original Equipment Manufacturers (OEMs) for all critical rotating equipment;(ii) The 'zero trips' vision must be translated from a mere aspiration into a concrete, measurable Key Performance Indicator (KPI) with defined annual reduction targets for each asset; (iii) The Ministry of Petroleum & Natural Gas should institute a system for periodic independent audits of ONGC's maintenance records to verify compliance. The progress of the ongoing overhaul and control system upgrade plan must be reported quarterly to the ONGC Board and the Ministry, with any deviation from the schedule to be justified with compelling reasons; and (iv) The Committee also recommend that ONGC should develop a long-term strategy to reduce its dependence on foreign OEMs by promoting indigenous manufacturing of critical spares and developing in-house expertise for maintenance and overhauling, wherever feasible. For this, the Ministry of Petroleum and Natural Gas may prepare a proposal and submit the same for consideration of the Government for rolling-out a new area in manufacturing of critical spares for this sector, as an alternate to reduce dependency on foreign OEMs and also a step towards 'Atmanirbhar Bharat'.

5. Policy, Monitoring and Accountability

The Committee note an absence of accountability for the loss of ₹816.08 crore due to avoidable gas flaring over an eight-year period. Furthermore, the monitoring mechanisms in place during this period were limited, as they did not distinguish between different causes of flaring and did not trigger timely corrective actions.

The Secretary, MoPNG, stated during evidence that “accountability has not been fixed and that the emphasis has been on future improvements rather than past lapses. ONGC’s official stated that it would be “imprudent to fix responsibility on individual(s) for system-related issues.” The Committee note, however, that accountability may be better clarified at appropriate levels to enhance oversight and support the effective resolution of system-related challenges. On the monitoring front, the Committee note the positive development of quarterly reviews by the ONGC Board and the creation of specific nodes in the SAP system since May 2024 to track the root causes of flaring. However, as Audit has pointed out, this is a very recent development and its effectiveness is yet to be seen.

The Committee observe that both ONGC and the Ministry have been cautious in assigning accountability for the financial and resource challenges faced over time. While these issues have often been attributed to systemic factors, the absence of clearly defined responsibility at different levels of management may limit the effectiveness of corrective measures. The introduction of a granular monitoring system in 2024 was a constructive development, although it followed a period during which the challenges had already been present for some time. Strengthening oversight practices and ensuring timely interventions will be important to safeguard the Company’s future performance.

Therefore, the Committee would like to recommend that (i) The Ministry of Petroleum & Natural Gas should constitute a high-level inquiry to investigate the shortcomings and managerial lapses between 2012-13 and 2019-20 that led to the avoidable flaring of high-pressure gas. The inquiry must fix responsibility at appropriate levels for the challenges in ensuring timely maintenance, replacement and provision of standby equipment. The Committee must be apprised of the findings and action taken in this regard in stipulated time period; (ii) Furthermore, the new SAP-based monitoring system must be used to set stringent, quantifiable annual reduction targets for each category of flaring and the achievement of these targets must be made a critical component of the performance evaluation of senior management;(iii) The Committee further recommend that the inquiry should also examine the role of the ONGC Board and its relevant sub-committees during the period of lapse and suggest concrete measures to strengthen Board-level oversight on critical operational matters; and(iv) The findings of the inquiry should be used to reform the performance management and HR policies for key

operational executives, linking their appraisals and incentives directly to the health and reliability of the assets under their charge.

6. Role of DGH in Formulating and Enforcing Royalty on Flared Gas

The Committee note a conflicting views regarding the enforcement of royalty on flared gas. The Directorate General of Hydrocarbons (DGH), the upstream regulator, issued an advisory in December 2021/January 2022 for the levy of royalty on avoidable gas flaring. However, despite this directive, no royalty has been collected from ONGC or other operators.

The Committee note a difference in emphasis between the Ministry and ONGC regarding the royalty provision. During oral evidence, the Secretary, MoPNG, described the new royalty provision as a "disincentive structure" and assured the Committee that any applicable dues would be recovered. Subsequently, however, both ONGC and the Ministry, in their written submissions, adopted a legal interpretation based on Section 6A(3) of the Oilfields (Regulation & Development) Act, 1948, suggesting that gas flaring is "unavoidably lost" and therefore not liable for royalty. This position appear to differ from the earlier advisory issued by the DGH and the Ministry's own prior statements. The Audit's vetting comment confirms this non-compliance, stating unequivocally that ONGC has not paid royalty as directed by DGH.

The Committee note the differing positions of ONGC and the Ministry. The reliance on legal ambiguity in this matter may be perceived as an effort to avoid a levy that was designed to discourage unnecessary flaring. Such an approach reduces the effectiveness of the DGH's regulatory advisory and could dilute the Government's intent to discourage avoidable flaring. Furthermore, the assertion that all flaring is "unavoidable" appears inconsistent with the Committee's understanding that some instances were linked to lapses in maintenance and planning.

Therefore, the Committee recommend that (i) The Ministry of Petroleum & Natural Gas to consider addressing the differing interpretations of "unavoidably lost" gas. In consultation with the Ministry of Law & Justice, the Ministry should issue a policy directive that provides greater clarity on what constitutes 'avoidable' and 'unavoidable' flaring, particularly in relation to the levy of royalty; (ii)The DGH

directive must invariably be enforced in letter and spirit, and the DGH must be empowered to recover all applicable royalty dues from ONGC and other operators from the date of its original advisory; (iii) The Committee also recommend that the Ministry should consider proposing an amendment to the Oilfields (Regulation & Development) Act, 1948, to remove any ambiguity and explicitly provide for penalties or royalty on gas flared for avoidable reasons;(iv) Pending final legal clarification, the DGH should be directed to quantify the royalty amount payable by all operators since the date of its January 2022 advisory, so that recovery can be initiated without delay once the policy ambiguity is resolved. The Committee hope that decision in this regard will be taken in the best interest of the Company and the nation.

7. Future Strategy: Decarbonization and Electrification of Offshore Assets

The Committee note ONGC's forward-looking strategy to decarbonize its operations, including a feasibility study for the electrification of its western offshore assets and a comprehensive investment plan of approximately ₹2 lakh crore by 2038 to achieve its Net-Zero goal through investments in renewable energy, green hydrogen and other clean energy projects.

The Committee have taken note of ONGC's submission that it is studying the feasibility of connecting its offshore platforms to the onshore power grid *via* sub-sea cables. This initiative holds the potential to free up around 5.4 mmscmd of natural gas currently used for captive power generation, thereby enhancing India's energy security and significantly reducing the carbon footprint of its E&P operations. The Company has also presented a detailed, long-term investment framework for various decarbonization levers. However, ONGC has rightly pointed out that such a project would entail significant infrastructure investment and require policy support to ensure its viability.

The Committee are of the view that the electrification of offshore assets and the broader decarbonization strategy are commendable and vital initiatives that align with India's national commitments on climate change and energy transition. These long-term plans are crucial for the future sustainability of ONGC's operations. However, the success of these ambitious goals is contingent upon

meticulous planning, timely execution, and a supportive policy environment to overcome the significant technical and financial challenges involved.

Therefore, the Committee recommend that (i) ONGC, in coordination with the Ministry of Petroleum & Natural Gas, should finalize the feasibility study for the electrification of western offshore assets on a priority basis. A Detailed Project Report (DPR) with firm timelines, clear milestones and a robust funding mechanism should be prepared and submitted to the Government for consideration within one year; (ii) The Committee also urge the Government to proactively explore policy incentives, such as viability gap funding, tax benefits, or a premium pricing mechanism for the gas saved, to make this nationally significant strategic project economically viable. The Committee would like to be apprised of the progress of this initiative on a half-yearly basis;(iii) The Committee further recommend that the Ministry of Petroleum & Natural Gas should constitute an inter-ministerial task force, including representatives from the Ministries of Power, Finance and Environment, Forest & Climate Change, to develop a supportive policy framework for offshore asset electrification.

8. International Commitments and India's Alignment

The Committee note that ONGC's operational practices are situated within a global context of increasing environmental scrutiny and international commitments to reduce emissions from the oil and gas sector. Specifically, the Committee note ONGC's endorsement of the World Bank's "Zero Routine Flaring by 2030" initiative and the government's alignment with the UN's Sustainable Development Goals.

The Committee observe from the replies that ONGC has formally committed to the "Zero Routine Flaring by 2030" goal. The definitions of different types of flaring provided by ONGC, sourced from the Global Gas Flaring Reduction Partnership, offer a clear framework for this commitment. The Ministry has further contextualised these efforts within India's broader commitments to SDG-7 (Clean Energy). The data provided on methane emissions also shows a downward trend, and ONGC has outlined its collaboration with the US-EPA for a Directed Inspection and Maintenance (DI&M) program to further curb fugitive emissions.

The Committee are of the view that while ONGC's and the Ministry's stated commitments to international environmental standards are laudable, the findings of the Audit Para reveal a significant gap between these commitments and the operational reality on the ground during the audit period. The high levels of avoidable flaring due to maintenance and infrastructure challenges are inconsistent with the spirit of the "Zero Routine Flaring" initiative. While recent efforts to reduce flaring and methane emissions are positive, sustained action and transparent reporting are necessary to demonstrate genuine alignment with these global goals.

Therefore, the Committee recommend that (i) ONGC should formally embed its commitment to the "Zero Routine Flaring by 2030" initiative into its core operational strategy and the annual performance contracts of its key executives. To ensure transparency, the Company may - (a) Develop and publish a detailed, year-wise roadmap to 2030, outlining the specific technological and operational interventions planned to achieve this target. (b) Publicly report its progress against this roadmap annually, using internationally accepted definitions of routine and non-routine flaring; (ii) Furthermore, the Directed Inspection and Maintenance (DI&M) program for methane leak detection must be expanded to cover all of ONGC's operational assets, with its effectiveness verified through periodic third-party audits; (iii) In line with the Government of India's Net Zero 2070 target, the Committee also recommend that the Ministry of Petroleum & Natural Gas may establish a clear national roadmap for the entire Indian E&P sector to meet the 2030 zero routine flaring goal. As part of this, the Ministry should periodically benchmark the performance of Indian companies, including ONGC, against their global peers in both flaring intensity and methane emission reduction.

9. Ancillary Issues – Women-Friendly Facilities at Offshore Platforms

The Committee, during its field visit to the Mumbai High North offshore platform, observed the need to enhance the facilities for women employees working in such challenging environments.

This observation is based on the Committee's first-hand assessment during the study visit and subsequent informal discussion with ONGC representatives. The Committee noted the need for practical improvements to make the offshore work environment more conducive for women.

The Committee believe that as India strives for greater gender diversity and inclusivity across all sectors, it is imperative for a Maharatna company like ONGC to lead by example. Creating a safe, comfortable and practical work environment for women employees at its all operational locations, especially in challenging offshore and remote areas, is not just a matter of compliance but a fundamental requirement for attracting and retaining diverse talent. This includes providing appropriately designed personal protective equipment (PPE) and ensuring adequate living facilities.

Therefore, the Committee recommend that (i) ONGC conduct a comprehensive audit of all its offshore platforms and remote field installations to assess the adequacy and appropriateness of facilities for its women employees. This audit must be conducted in active consultation with women employees and external experts on gender-inclusive workplaces; (ii) Based on the audit's findings, ONGC should implement, in a time-bound manner, all necessary measures to create a fully inclusive and women-friendly work environment. These measures shall include, but not be limited to, ensuring safe and private residential quarters and establishing robust, easily accessible grievance redressal mechanisms; (iii) Particular emphasis must be placed on Personal Protective Equipment (PPE). ONGC is advised to provide gender-specific PPE, including properly designed dungarees and footwear, that is redesigned to meet women's ergonomic needs. To achieve this, ONGC should benchmark its PPE against that of global E&P companies that have successfully integrated women into active field roles and engage with renowned institutes that design such equipment to international standards.

New Delhi;
08 December, 2025
17 Agrahayana, 1947(S)

BAIJAYANT PANDA
Chairperson
Committee on Public Undertakings

Annexure I



ऑयल एण्ड नेचुरल गैस कॉर्पोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited

निगमित योजना / Corporate Planning

दीनदयाल ऊर्जा भवन, 5 नेल्सन मंडेला मार्ग, वसंत कुंज, नई दिल्ली - ११० ०७०
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Ref.: CP/ EC-588/2023-24/04(06)

Date: 28.07.2023

Subject: Minutes of 588th EC meeting (Part-2)

Please find enclosed Minutes of 588th EC meeting (Part-2) held on 19th July, 2023 at Delhi for kind perusal and necessary action.

Action Taken Report on EC's decision may please be updated on ECEPC Portal.

Anuja D Sinha
28th July 23
(Anuja D Sinha)

GM (Chem.) – I/c EC Cell

Distribution:

Director (T&FS)
Director (Production)
Director (Finance)
Director (Exploration)
Director (HR)

NOO:
EO to Chairman

	<p>EC accorded in principle approval for Development of WO-5-13 structure for oil & gas production project and directed that a Board agenda to this effect be submitted through PARC subsequent to PAS approval.</p> <p>EC further directed that tendering process be initiated for surface facilities pending price bid opening for the project.</p> <p style="text-align: right;">Action by: D (Prod) Time Frame: Immediate</p>
588.18	<p>Asset Exchange Policy of Gas Turbines Endorsed by: D(Prod) UID No: 82/2023</p>
588.18.01	<p>1.0 Preface</p> <ul style="list-style-type: none"> The objective of the Asset exchange policy is to complement the existing maintenance strategy in asset management plans. The Policy document starts with contextual conditions which created need for policy intervention. Subsequent sections explain the Asset Exchange Policy fundamentals, its relevance in ONGC and detailed deliberation by committee and its interaction with stakeholders. Document closes with recommendations in respect of Asset Exchange Policy which will help align maintenance strategy with organizational goals. <p>2.0 Background</p> <ul style="list-style-type: none"> ONGC operates 130 numbers of Gas Turbines to generate Power and drive Gas Compressors for production of oil & gas from its offshore facilities. From this Fleet of Gas Turbines, 126 Numbers are in operation at Western Offshore and 4 numbers are operating in High Pressure High Temperature / Eastern Offshore Asset (HPHT/EOA). In addition to these, eight (8) gas turbines are in Assam asset. Apart from these 130 machines, ONGC also owns 30 numbers additional Gas Turbines as floats, to meet any operational exigency as well as to facilitate overhauling of operational Gas Turbines. At present, ONGC has a policy of getting these gas turbines overhauled at OEM recommended Time between Overhaul (TBO). These turbines get overhauled at respective OEM's repair facilities. Over the period, it has been observed that despite the best efforts, these gas turbines have a long turnaround time for overhaul and it takes around a year to receive the turbine back, at the offshore platform (after overhaul). The timely availability of overhauled GTs has been further challenged due to the prevalent supply chain issues. Consequently, the overhauling cycle has been disrupted and despite having floats, some of the machines are not available on berth. Delay in overhauling has its own ramifications in terms of equipment availability, reliability and the increased risk of failure of the machine. The practice of owning floats to fill the gap of non-availability of old / used GT (overhauling period), is fading out fast globally due to following reasons: <ol style="list-style-type: none"> High cost of capital (float equipment) for keeping float GTs Challenges of Storage & Preservation of these units. Inordinate Delay in getting requisite number of overhauled GTs for replacement, due to ongoing supply chain crisis. Thus, to facilitate better availability and reliability of Gas turbines in ONGC, it is felt that a policy intervention with respect to Gas Turbine Overhaul is the need of the hour. <p>3.0 Present proposal</p> <ul style="list-style-type: none"> This Agenda has been prepared based on the committee report, which (the Committee) was constituted by Director (production), on Asset Exchange Policy for Gas Turbines at Offshore Installations (Annexure-1A). The agenda proposes implementation of Asset exchange Policy for all models of Solar Turbines, Siemens Energy and LM2500 model of BHGE make Gas Turbines. <p>4.0 Proposed Asset Replacement Policy</p>

	<p>b) Customs Duty implication: As the export of old engines of ONGC and import of exchanged engines of identical (or similar) types are classified under goods movement from / into India are a subject matter of compliance of Customs Law. Hence, the Customs Duty would be levied on Fair Market Value of the Goods, subject to certain adjustments as per valuation rules.</p> <p>EC was informed that after deliberation Committee had concluded that Asset exchange policy would be a useful tool at no Capital Cost investment and negligible Equipment Turnaround Time as the old machine (in operation) will be removed from the berth only after the new machine reaches the site. It was brought out that Asset Exchange Policy complements the existing Float policy of ONGC and together, these two mechanism would ensure higher equipment availability. Thus, implementation of the Asset Exchange Policy would provide ONGC with a structured and proactive approach to manage its Assets, like Gas Turbines by optimizing their utilization, minimizing downtime, and improving performance thus contributing to efficient and reliable operation of gas turbines in ONGC facilities.</p> <p>During deliberations, Chief TS apprised EC that ONGC operates 38 numbers of Waukesha Gas Engines to drive Gas Compressors for production of oil & gas from its onshore locations. It was brought out that presently, ONGC has a policy of getting these gas engines overhauled at On-site as per OEM recommended Time Between Overhaul (TBO). EC was apprised that recently M/s Waukesha had communicated about the problem of Waukesha make Gas Engine sub- assemblies especially Cylinder Heads refurbishment at India location. They had also intimated that old cylinder heads had been upgraded to new x-cooled head and it would not be possible to refurbish/ conversion of the old head in to new x cooled head at India location. Further, to reduce the downtime during overhaul, they had informed about the exchange program which would allow ONGC to order a refurbished engine and/or parts in advance, before returning the old engine or parts to Waukesha. It was brought out that M/s Waukesha also intimated that remanufactured engines and/or parts meet Waukesha's standards and specifications. Every refurbish/upgraded engine & part is remanufactured to the original specifications and designed to deliver as good or better than original performance backed by the same robust warranty as a new part or engine.</p> <p>In light of above deliberations and considering the benefits that would accrue to ONGC by adoption of the Asset Exchange Policy by the organisation, EC opined that the said policy can be agreed to. EC advised that under the policy the Waukesha Gas Engines, as brought out by Chief TS be also included. In view of the adoption of Asset Exchange policy for the equipment mentioned above EC further advised that no new Floats of Solar Turbines, Siemens Energy & LM2500 model of BHGE Make Gas Turbines and Waukesha Gas Engines be purchased after successful adoption of Asset Exchange Policy.</p> <p>EC further advised Asset Integrity Manager to submit a proposal on restructuring of Offshore Maintenance Services (OMS) as Asset Integrity Group for Western Offshore along with resource requirement and 4-5 number of major reforms that needs to be implemented to improve maintenance efficiency.</p>
588.18.03	<p>EC Decision: EC accorded approval to implement Asset Exchange Policy in respect of following equipment:</p> <ol style="list-style-type: none"> 1. For all models of Solar Turbines, Siemens Energy and LM2500 model of BHGE make Gas Turbines. 2. For Taurus 70 Gas Turbines (Serial Nos. 0730B and 0731B) installed at PLQP Platform, HPHT Asset. 3. For Waukesha Gas Engines installed at Onshore Locations. <p>EC directed that no new Floats of Solar Turbines, Siemens Energy & LM2500 model of BHGE Make Gas Turbines and Waukesha Gas Engines be purchased after successful adoption of Asset Exchange Policy.</p> <p style="text-align: right;">Action by: D (Prodn) / D(T&FS) Time Frame: Immediate</p>

APPENDIX- I

COMMITTEE ON PUBLIC UNDERTAKINGS
(2022-23)

MINUTES OF THE THIRTIETH SITTING OF THE COMMITTEE

The Committee sat on Monday, the 20th March, 2023 from 1500 hrs. to 1555 hrs. in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Santosh Kumar Gangwar - Chairperson

MEMBERS

Lok Sabha

2. Dr. Heena Vijaykumar Gavit
3. Shri Lavu Sri Krishna Devarayalu
4. Smt. Poonamben Hematbhai Maadam
5. Shri Arjunlal Meena
6. Shri Janardan Mishra
7. Shri Sushil Kumar Singh
8. Shri Uday Pratap Singh

Rajya Sabha

9. Shri Anil Desai
10. Shri Syed Nasir Hussain
11. Dr. Anil Jain
12. Shri Prakash Javadekar
13. Dr. Amar Patnaik
14. Ms. Indu Bala Goswami

SECRETARIAT

- | | | | |
|----|---------------------|---|---------------------|
| 1. | Shri Chander Mohan | - | Joint Secretary |
| 2. | Shri Santosh Kumar | - | Director |
| 3. | Shri G.C. Dobhal | - | Additional Director |
| 4. | Smt. Mriganka Achal | - | Deputy Secretary |

**REPRESENTATIVES OF OFFICE OF COMPTROLLER & AUDITOR
GENERAL,**

1. Shri Raj Ganesh Viswanathan - Dy. C&AG (Comm.) & Chairman Audit Board
2. Shri Guljari Lal - Director General (Commercial Audit)
3. Shri B.R. Mondal - Director General (Parliamentary Committee)
4. Shri Deepak Kapoor - Director General (Commercial-II)

2. At the outset, the Chairperson, COPU welcomed the Members and the representatives of the O/o C&AG and drew their attention to Direction 55(1) of the 'Directions by the Speaker' regarding confidentiality of briefing before the Parliamentary Committees. Thereafter, the representatives of O/o C&AG made a Power Point Presentation and briefed the Committee on 'Audit Para No. 2.4 of C&AG Report No. 14 of 2021 relating to loss due to flaring of high pressure gas relating to Oil & Natural Gas Corporation Limited (ONGC)' highlighting the issues that led to flaring of high pressure gas resulting in avoidable loss amounting to Rs. 816.08 crore. The major reasons in flaring of high pressure gas included power shut downs, non-availability of standby Process Gas Compressors, frequent tripping of Process Gas Compressor and issue of non-replacement of the Control Panels. The representatives of C&AG informed the Committee about the Action Taken Notes (ATNs) received from the Ministry of Petroleum & Natural Gas (M/o P&NG). The representatives of C&AG also apprised the Committee that they had flagged similar issue in their Audit Para earlier in 2014.

3. Thereafter, the Chairperson and Members raised queries and sought clarifications on various aspects of the Audit Para which among other included the very concept of 'Flaring', the manner it occurred, the impact of flaring on environment, maintenance of data, mechanism adopted in handling gas flaring practices by various other countries including Saudi Arabia, Russia etc. The Members also sought flaring data of other domestic private Companies engaged in upstream business, framing guidelines/ standard operating procedures (SOPs) for addressing both high & low gas flaring, battery's life, its maintenance and replacement schedule process, non-availability of standby Process Gas Compressors, tripping on account of non-overhauling of various components of the Power Gas Compressors such as power turbine, gas generators, compressors, inordinate delay in scheduled maintenance and

timely replacements of equipment, etc. The Members further sought clarification on the role of M/o P&NG in issuing guidelines for addressing the issue of flaring, fixing responsibility for the lapses resulting in losses due to high pressure gas flaring more than the acceptable technical norms, consideration of pay related performance, etc.

4. The representatives of the O/o C&AG responded to the queries except technical issues for which the Committee decided that the representatives of ONGC and the Ministry of Petroleum & Natural Gas be called for further detailed deliberations at a later date.

5. The Members also desired that a field-visit may be undertaken by the Committee at ONGC's Mumbai High facility to understand the technicalities involved in the subject at an appropriate time.

6. The Chairperson thanked to the representatives of the O/o C&AG for briefing the Committee and sharing valuable information with the Committee on such an important subject. Thereafter, the Chairperson announced that a Group Photograph of the Committee is scheduled for 27th March, 2023 which would be graced by the Hon'ble Speaker, Lok Sabha and desired the presence of all the Members for the Group Photograph.

The Committee, then, adjourned.

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APPENDIX- II

COMMITTEE ON PUBLIC UNDERTAKINGS (2023-2024)

MINUTES OF THE SEVENTH SITTING OF THE COMMITTEE

The Committee sat on Thursday, the 13^h July, 2023 from 1430 hrs to 1555 hrs. in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Santosh Kumar Gangwar - Chairperson

MEMBERS

LOK SABHA

2. Shri Janardan Mishra
3. Shri Nama Nageswara Rao
4. Shri Ravneet Singh

RAJYA SABHA

5. Dr. Radha Mohan Das Agrawal
6. Shri Syed Nasir Hussain
7. Dr. Anil Jain
8. Dr. Amar Patnaik
9. Shri Binoy Viswam

SECRETARIAT

1. Shri Neeraj Semwal - Joint Secretary
2. Shri Santosh Kumar - Director
3. Smt. Mriganka Achal - Deputy Secretary

OFFICE OF C&AG

1. Shri R G Viswanathan - Dy.C&AG(Commercial) & Chairman, Audit Board
2. Shri C.M. Sane - DG (Commerical Audit)
3. Shri B.R. Mondal - DG(Parliamentary Committee)
4. Shri Deepak Kapoor - DG (Commercial-II)
5. Shri Mohd. Faizan Nayyar - Director

**REPRESENTATIVES OF OIL AND NATURAL GAS CORPORATION (ONGC)
LIMITED**

- | | | | |
|----|-----------------------|---|-------------------------------|
| 1. | Shri Arun Kumar Singh | - | CMD |
| 2. | Shri Pankaj Kumar | - | Director (Production) |
| 3. | Smt. Pomila Jaspal | - | Director (Finance) |
| 4. | Shri C Mathvan | - | Executive Director |
| 5. | Shri Pawan Agrawal | - | Executive Director (Chief CP) |

2. The Chairperson welcomed the Members and the officers of C&AG at the sitting convened to take evidence of the representatives of Oil and Natural Gas Corporation Limited (ONGC) in connection with examination of 'Audit Para No. 2.4 of C&AG Report No. 14 of 2021 pertaining to ONGC Limited (ONGC) regarding loss due to flaring of high-pressure gas relating to Oil and Natural Gas (ONGC) Limited'. The representatives of C&AG made a brief presentation on the subject under consideration.

3. The presentation covered various issues relating to the background of the audit para mentioned as under: -

- (i) Loss due to flaring of High Pressure (HP) Gas due to avoidable reasons;
- (ii) Non-availability of Standby Process Gas Compressor (PGC);
- (iii) Frequent power shut down;
- (iv) Tripping of Process Gas Compressors;
- (v) Status of Action Taken Notes by the Ministry;

(The representatives of ONGC Ltd. were then called in)

4. The Chairperson welcomed the representatives of ONGC Limited and drew their attention to Direction 55(1) of the 'Directions by the Speaker' regarding confidentiality of evidence before the Parliamentary Committees. Hon'ble Chairperson enquired about the issues pertaining to the subject viz. the improvements carried out by the Company to limit avoidable flaring of high pressure gases and steps taken by them for overhauling of remaining PGCs as suggested by Original Equipment Manufacturers (OEMs) & whether ONGC has evaluated the performance of Offshore Maintenance Services (OMS) Group of the Company on efficiency in line with the reduced flaring targets set by the Company, etc.

5. The Members, then, sought clarifications on various issues relating to the subject as mentioned below:-

- i. The 'Zero Routine Flaring' by 2030 Initiative as defined in COP21 resolution and steps taken by ONGC in achieving the target of 'net zero carbon emission';
 - ii. Steps taken by ONGC in achieving 'zero flaring' of High Pressure(HP) gas as signatory to initiative undertaken by World Bank in 2015;
 - iii. Reasons behind variations in amount of gas flaring at various fields of ONGC; inability of ONGC to control the avoidable gas flaring; inadequate battery bank backup at the process platforms to prevent power shut-down; non-replacement of PGCs in time; lackadaisical approach of ONGC towards gas flaring; non-adherence to the timelines set by OEM for servicing of machines etc;
 - iv. Timeline set by ONGC for addressing the issue of HP gas flaring; fixing of responsibility of the Departments responsible for flaring of HP gases and action taken against officials for wastage of resources of the Country; allocations for regular upkeep and maintenance of machines/processors to regulate and reduce HP gas flaring, etc.;
 - v. Target fixed by ONGC on reduction of HP gas flaring and achievements made so far by ONGC towards reduction in gas flaring;
 - vi. Cost-benefit analysis done by ONGC on creation of new facilities; outlay for timely overhaul/revamp by ONGC;
 - vii. Data on HP gas flaring of ONGC vs. other private players like Vedanta, Reliance etc.; maintenance of data on unavoidable and avoidable HP gas flaring by ONGC and role of Internal Audit in pointing out deficiencies in HP gas flaring; and
 - viii. Royalty levied by Government of India on ONGC and other such companies on HP gas flaring and norms fixed by the Ministry.
6. The representatives of the ONGC Limited clarified on some of the issues such as decision of the Board of ONGC to first install the machine on the platform by the OEM and only thereafter taking the existing machine for overhauling and assurance of quarterly monitoring as against yearly monitoring of data on flaring of gas. In respect of points for which information was not readily available, the Chairperson while thanking the representatives of ONGC, desired that the written replies thereto may be furnished to the Committee Secretariat within 10 days.

[The witnesses then, withdrew]

A verbatim copy of the proceedings has been kept on record.

COMMITTEE ON PUBLIC UNDERTAKINGS (2023-2024)

MINUTES OF THE EIGHTH SITTING OF THE COMMITTEE

The Committee sat on Thursday, the 13^h July, 2023 from 1555 hrs to 1620 hrs. in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Santosh Kumar Gangwar - Chairperson

MEMBERS

LOK SABHA

2. Shri Janardan Mishra
3. Shri Nama Nageswara Rao
4. Shri Ravneet Singh

RAJYA SABHA

5. Dr. Radha Mohan Das Agrawal
6. Shri Syed Nasir Hussain
7. Dr. Anil Jain
8. Dr. Amar Patnaik
9. Shri Binoy Viswam

SECRETARIAT

1. Shri Neeraj Semwal - Joint Secretary
2. Shri Santosh Kumar - Director
3. Smt. Mriganka Achal - Deputy Secretary

OFFICE OF C&AG

- | | | | |
|----|--------------------------|---|--|
| 1. | Shri R G Viswanathan | - | Dy.C&AG(Commercial) &
Chairman, Audit Board |
| 2. | Shri C.M. Sane | - | DG (Commerical Audit) |
| 3. | Shri B.R. Mondal | - | DG(Parliamentary Committee) |
| 4. | Shri Deepak Kapoor | - | DG (Commercial-II) |
| 5. | Shri Mohd. Faizan Nayyar | - | Director |

REPRESENTATIVES OF MINISTRY OF PETROLEUM AND NATURAL GAS

- | | | | |
|----|-------------------|---|--|
| 1. | Shri Pankaj Jain | - | Secretary |
| 2. | Shri Sunil Kumar | - | Joint Secretary(E&BR) |
| 3. | Shri Gautam Singh | - | Addl. Director General
(Development), DGH |

(The representatives of Ministry of Petroleum and Natural Gas were called in after the representatives of ONGC Ltd. withdrew)

2. The Chairperson welcomed the representatives of Ministry of Petroleum and Natural Gas (MoPNG) in connection with examination of 'Audit Para No. 2.4 of C&AG Report No. 14 of 2021 pertaining to ONGC Limited (ONGC) regarding loss due to flaring of high-pressure gas relating to Oil and Natural Gas (ONGC) Limited' and drew their attention to Direction 55(1) of the 'Directions by the Speaker' regarding confidentiality of evidence before the Parliamentary Committees.

3. Hon'ble Chairperson while addressing the representatives of the MoPNG enquired about (i) role of the Ministry/ Directorate General of Hydrocarbons (DGH)/ Oil Industry Safety Directorate (OISD) in maintaining separate data by Exploration and Production of Crude Oil and Natural Gas by Companies on Low Pressure (LP) gas flaring/Technical Flaring and High Pressure (HP) gas flaring(both avoidable and unavoidable); (ii) norms laid down by the Ministry on flaring of LP and HP gas. Chairperson also sought clarification on investments made for upgrading the infrastructure to limit flaring to the earmarked/permissible norms, compliance by E&P Companies in submitting monthly data regarding flaring of gas to DGH/MoPNG; fixing responsibility for lapses; reduction of flaring to permissible levels and role of Government nominated Directors in curtailing the flaring of HP gas. Officials from the the Ministry briefed the Committee on issues pertaining to the subject and Ministry's decisions in the matter.

4. Thereafter, the Members and Chairperson, sought clarifications on the following issues relating to the subject:-

- i. Norms fixed for royalty on flaring of gas and amount of royalty received by the Government; HP gas flaring by ONGC that ranged from 69.8 % to 100 % of amount of gas produced at Jorhat (in Assam) and CY-ONN-2002/2 (in Tamil Nadu) Fields of ONGC;
- ii. Contribution of Government Directors on the Board of ONGC and intimating the Government on any issue of importance.
- iii. Directions/instructions issued by the Ministry/DGH/OISD regarding flaring of gas;
- iv. Comparative study made on flaring of gases with countries like Columbia and Norway where flaring is extremely low and steps taken by the Ministry towards Zero Flaring;
- v. Increasing monitoring by the Ministry to improve reduction of HP gas flaring;
- vi. Reconciling the accounts and recovery of amount in form of royalty/penalty from the erring Companies; and
- vii. Stringent enforcement of provisions on deviations by the Companies towards flaring.

5. The representatives of the Ministry of Petroleum and Natural Gas clarified on some of the issues on which information was readily available. In respect of points for which information was not readily available, the Chairperson while thanking the representatives of Ministry of Petroleum and Natural Gas desired that the written replies thereto may be furnished to the Committee Secretariat within 10 days.

[The witnesses then, withdrew and the Committee adjourned]

A verbatim copy of the proceedings has been kept on record.

APPENDIX- III

COMMITTEE ON PUBLIC UNDERTAKINGS (2025-2026)

COMMITTEE ON PUBLIC UNDERTAKINGS
(2025-26)

MINUTES OF THE FIFTEENTH SITTING OF THE COMMITTEE

The Committee sat on Friday, the 5th December, 2025 from 1000 hrs. to 1045 hrs. in Committee Room No. '2', Ground Floor, Extension to Parliament House Annexe, New Delhi.

PRESENT

Shri Baijyant Panda - **Chairperson**

MEMBERS

LOK SABHA

2. Shri Tariq Anwar
3. Shri Chandra Prakash Joshi
4. Shri Kaushalendra Kumar
5. Shri Shankar Lalwani
6. Shri B.Y. Raghavendra
7. Shri Mukesh Rajput
8. Shri Sukhjinder Singh Randhawa
9. Shri Prabhakar Reddy Vemireddy
10. Shri Lalji Verma

RAJYA SABHA

11. Dr. John Brittas
12. Shri Neeraj Dangi
13. Shri Milind Murli Deora
14. Dr. Bhagwat Karad
15. Shri Surendra Singh Nagar
16. Shri Debashish Samantaray
17. Shri Arun Singh

SECRETARIAT

- | | |
|-------------------------|--------------------|
| 1. Shri Anjani Kumar | - Joint Secretary |
| 2. Smt. Mriganka Achal | - Director |
| 3. Shri Tenzin Gyaltzen | - Deputy Secretary |

2. The Hon'ble Chairperson briefly apprised the Members on the Eleven draft Reports. The Committee then considered and adopted the following draft reports, without any changes/modifications: -

- i. Sagarmala Finance Corporation Limited (SFCL) (Comprehensive Examination);
- ii. Rural Electrification Corporation Limited (REC Limited) (Comprehensive Examination);
- iii. Nuclear Power Corporation of India Limited (NPCIL) (Comprehensive Examination);

- iv. Review of Performance of Petroleum & Natural Gas Sector CPSUs (Horizontal Examination);
- v. "Para No. 2.4 of C&AG Report No. 14 of 2021 regarding 'Loss due to flaring of High-pressure gas' relating to Oil & Natural Gas Corporation (ONGC) Limited. (Audit Based Examination);
- vi. Action Taken by the Government on the Observations/ Recommendations contained in the First Report (18th Lok Sabha) on "Procurement of hardware/software item to the tune of Rs. 890.34 Crores through strategic alliance" relating to National Informatics Centre Services Inc. (NICSII)" [Based on Audit Para No. 6.1 of C&AG Report No. 03 of 2021];
- vii. Action Taken by the Government on the Observations/ Recommendations contained in the Third Report (18th Lok Sabha) on "Undue enrichment through recovery of turnover tax from consumer" relating to Indian Oil Corporation Limited (IOCL) [Based on Audit Para No. 2.1 of C&AG Report No. 14 of 2021];
- viii. Action Taken by the Government on the Observations/ Recommendations contained in the Ninth Report (18th Lok Sabha) on "Industrial Finance Corporation of India Limited (IFCI Ltd)";
- ix. Action Taken by the Government on the Observations/ Recommendations contained in the Tenth Report (18th Lok Sabha) on "Design and Development (D&D) in Hindustan Aeronautics Limited (HAL)" [Based on Chapter-II of C&AG Report No. 18 of 2023];
- x. Action Taken by the Government on the Observations/ Recommendations contained in the Eleventh Report (18th Lok Sabha) on "Reviewing timely submission of Action Taken Notes (ATNs) on C&AG Paras/Reports (Commercial) by the Ministries/Departments"; and
- xi. Action Taken by the Government on the Observations/ Recommendations contained in the twelfth Report (18th Lok Sabha) on "IREL (India) Limited".

3. The Committee authorized the Chairperson to finalize the draft Reports on the basis of factual verification as suggested by the concerned CPSUs/Ministry/Department/C&AG and presentation of the same during the current session of Parliament.

The Committee, then, adjourned.

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