



**STANDING COMMITTEE ON  
PETROLEUM & NATURAL GAS  
(2022-23)**

**SEVENTEENTH LOK SABHA**

**MINISTRY OF PETROLEUM & NATURAL GAS**

**Review of Implementation of CBG (SATAT)**

**SEVENTEENTH REPORT**



**LOK SABHA SECRETARIAT  
NEW DELHI**

*19<sup>th</sup> December, 2022 /28<sup>th</sup> Agrahayana 1944 (Saka)*

CP&NG NO.

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**MINISTRY OF PETROLEUM & NATURAL GAS**

**['Review of Implementation of CBG (SATAT)']**

*Presented to Lok Sabha on 21.12.2022*

*Laid in Rajya Sabha on 21.12.2022*



**LOK SABHA SECRETARIAT  
NEW DELHI**

*19 December, 2022 / 28<sup>th</sup> Agrahayana 1944 (Saka)*

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**COMPOSITION OF THE STANDING COMMITTEE ON PETROLEUM & NATURAL  
GAS (2022-23)**

Sl. No.	Name of Members
<b>LOK SABHA</b>	
<b>Shri Ramesh Bidhuri - Chairperson</b>	
2	Dr. Ramesh Chand Bind
3	Shri Pradyut Bordoloi
4	Shri Girish Chandra
5	Smt. Chinta Anuradha
6	Shri Dilip Saikia
7	Shri Topon Kumar Gogoi
8	Shri Naranbhai Bhikhabhai Kachhadiya
9	Dr. Kalanidhi Veeraswamy
10	Shri Santosh Kumar
11	Shri Rodmal Nagar
12	Shri Mitesh Rameshbhai Patel
13	Shri Unmesh Bhaiyyasaheb Patil
14	Shri M.K. Raghavan
15	Shri Chandra Sekhar Sahu
16	Shri Gajanan Chandrakant Kirtikar
17	Dr. Bharatiben Dhirubhai Shiyal
18	Shri Janardan Singh Sigrival
19	Shri Lallu Singh
20	Shri Vinod Kumar Sonkar
21	Shri Ajay Tamta
<b>RAJYA SABHA</b>	
22	Shri Shaktisinh Gohil
23	Smt. Kanta Kardam
24	Shri Mithlesh Kumar
25	Shri Pabitra Margherita
26	Shri Rambhai Harjibhai Mokariya
27	Shri Surendra Singh Nagar
28	Dr. Sasmit Patra
29	Shri Subhas Chandra Bose Pilli
30	Dr. V. Sivadasan
31	Shri Ravichandra Vaddiraju

**SECRETARIAT**

1	Shri Y.M. Kandpal	Joint Secretary
2	Shri H. Ram Prakash	Director
3	Shri Deepak Kumar	Assistant Executive Officer

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## **INTRODUCTION**

I, the Chairperson, Standing Committee on Petroleum & Natural Gas having been authorised by the Committee, to submit the Report on their behalf, present this Seventeenth Report on the subject 'Review of Implementation of CBG (SATAT)'.

2. The Committee took briefing of the representatives of the Ministry of Petroleum & Natural Gas/PSUs, the Ministry of Finance (Deptt. of Financial Services and Deptt. of Revenue), Ministry of Chemicals & Fertilizers (Deptt. of Fertilizers), Ministry of Agriculture & Farmers Welfare (Department of Agriculture, Cooperation & Farmers Welfare) and Ministry of New & Renewable Energy, Indian Biogas Association and entrepreneurs of CBG plants in connection with examination of the subject Review of Implementation of CBG (SATAT) at their sittings held on 05.01.2022, 08.06.2022, 28.07.2022 & 04.08.2022.

3. The Report was considered and adopted by the Standing Committee on Petroleum and Natural Gas on 19.12.2022.

4. The Committee wish to express their thanks to the representatives of the Ministry of Petroleum and Natural Gas/PSUs and other Ministries/stakeholders for placing their views before them and furnishing the information desired in connection with examination of the subject.

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

**New Delhi;**  
**19<sup>th</sup> December, 2022**  
**28<sup>th</sup> Agrahayana, 1944 (Saka)**

**RAMESH BIDHURI,**  
***Chairperson,***  
***Standing Committee on***  
***Petroleum & Natural Gas.***

## CHAPTER-1

### **Introduction**

India is one of the fastest growing economies in the world and energy availability is a major component of the growth paradigm. Considering the domestic availability of fuels and India's import dependence in fossil fuels, India's energy security will remain vulnerable until alternative fuels to substitute/supplement petro-based fuels are developed based on indigenously produced renewable feedstock. To address these concerns, Government has set a target to reduce the import dependency by 10 per cent by 2022. Government has prepared a road map to reduce the import dependency in Oil & Gas sector by adopting a five-pronged strategy which includes, increasing Domestic Production, **Adopting biofuels & Renewables**, Energy Efficiency Norms, Improvement in Refinery Processes and Demand Substitution.

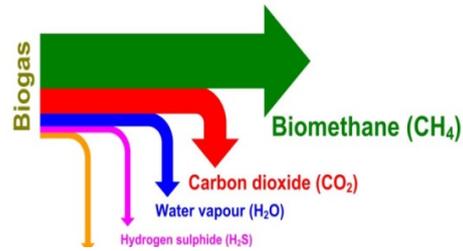
1.1 In this regard, National Policy on Biofuels - 2018 aims to increase usage of biofuels in the energy and transportation sectors of the country during the coming decade. The Policy creates a synergy with the ongoing initiatives of the Government such as Make in India & Swachh Bharat Abhiyan and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation. The scope of the Policy encompasses 'bio-CNG' as a biofuel which can be used as transportation fuel or in stationary applications. Bio-CNG has been defined as Purified form of bio-Gas whose composition & energy potential is similar to that of fossil based natural gas and is produced from agricultural residues, animal dung, food waste, MSW and Sewage water.

As part of initiative under the National Biofuel Policy, 2018, Ministry of Petroleum & Natural Gas has launched the **Sustainable Alternative Towards Affordable Transportation (SATAT)** initiative in October, 2018 for promoting use of Compressed bio gas (bio-CNG) in the CNG (transport) and PNG (Domestic) sector of City Gas Distribution (CGD) supplies of natural gas. SATAT was launched on 1st October 2018 aiming to establish an ecosystem for production of CBG from various waste/ biomass sources in the country. SATAT has envisaged developing 5000 CBG plants with total CBG production capacity of 15 Million Metric Tonne Per Annum (MMTPA) i.e. equivalent to 54 MMSCMD of gas by 2023-24. SATAT initiative offers a potential for investment of about Rs. 1.75 lakh crores (5000 Plants) and generating about 75,000

direct employment opportunity. This initiative synergizes with Swachh Bharat Mission/COP-21/COP-26 commitments/ AtmaNirbhar Bharat.

### 1.2 **Compressed Bio Gas (CBG)** :Waste /

Bio-mass sources like agricultural residue, cattle dung, sugarcane press mud, municipal solid waste and sewage treatment plant waste, etc. produce bio-gas through the process of anaerobic decomposition. The bio-gas is purified to remove hydrogen sulfide (H<sub>2</sub>S), carbon dioxide (CO<sub>2</sub>), water vapor and compressed as Compressed Bio Gas (CBG), which has methane (CH<sub>4</sub>) content of more than 90%.



**Fig. 1 : Components of biogas**

1.3 CBG has calorific value and other properties similar to CNG and hence the same can be utilized as an environment-friendly fuel in usage of transport & industrial/commercial sector. Production of CBG would have multiple benefits viz. reduction of natural gas import, reduction of GHG emission, reduction in burning of agriculture residues, remunerative income to farmers, employment generation, effective waste management etc. Further, bio manure is a coproduct of CBG production process which contains micro and macro nutrients as well as organic carbon. The same can be utilized in agriculture sector to promote organic farming and reduce the uses of chemical fertilizer.

### **Current Status under SATAT:**

1.4 Oil and Gas Marketing Companies (OGMCs) viz. IndianOil, HPCL, BPCL, GAIL and IGL have been inviting EoI from potential investors/entrepreneurs to procure CBG for further selling to automotive and commercial customers. Oil & Gas Companies are signing Commercial Agreements for 15 years for procurement of CBG, to be further extended mutually. As per SATAT initiative, procurement price of CBG purified as per IS 16087: 2016 standards, compressed at 250 bar pressure and delivered to OMC Retail Outlets in cascades was fixed at Rs. 46/kg + applicable taxes for period from 1.10.2018 to 31.3.2024. Minimum procurement price will not be lower than Rs. 46/kg + applicable taxes up to 31.3.2029. Recently, due to rise in Retail Selling Price (RSP) of CNG and other factors, representation was received from CBG Plant owners to increase the procurement price of CBG. Detailed deliberations were held with Oil & Gas Marketing Companies and other stakeholders on SATAT scheme. Based on the discussions, Oil &

Gas Companies had offered a revised procurement price of CBG which is indexed to the CNG price. The details of the revised procurement price of CBG are provided below:-

- The minimum procurement price of CBG will not be lower than Rs. 46/kg + applicable taxes for the period up to 31.3.2029.
- The Retail Selling Price of CBG in a market shall be at par with RSP of CNG (as provided by the authorized CGD entity).

1.5 In order to ensure offtake of CBG, MoPNG has issued guidelines for synchronization of CBG in CGD network. The CBG –CGD Synchronization Scheme has been successfully implemented on a pan India basis from 19.04.2021. At present, 24 Tripartite Agreements have been signed with various CBG producers and CGD entities across the country for supply of Biogas/CBG to CGD networks.

1.6 In accordance with MoP&NG policy guidelines dated 26.10.2021, GAIL had commenced supplies of APM/NAPM gas and Biogas to all CGD entities at the Weighted Average Price. Subsequently, the MoP&NG policy guidelines dated 6.5.2022 has also been implemented from 16.05.2022 for supply of pooled natural gas and Biogas to CGD entities at Uniform Base Price.

Further, the procurement price of Biogas offered to CBG Producers under CBG – CGD Synchronization Scheme has been revised upwards to Rs 1082/MMBTU + taxes. In addition, the Producers would receive compressions charges/pipeline compression charges/transportation charges as applicable for the Biogas/CBG supplied.

1.7 Around 40 additional CBG plants are expected to be commissioned by March, 2023.

### **Coordination Mechanism**

1.8 The Committee desired to know the role of CBG in the objectives of the Natural Policy in Biofuel in India to which MoPNG in their written reply have submitted the following:-

“ The National Policy on Biofuels announced in the year 2018 by Government of India put thrusts on the productions of advanced biofuels such as 2nd Generation (2G) Ethanol, Compressed Biogas (CBG), Waste to Fuels, Drop-in fuels etc. through utilization of indigenous feedstocks. Further, Government

of India has set a target to increase the share of gas in the energy mix from the current about 6.5 per cent to 15 per cent in 2030 to make India a Gas based economy. Augmentation of CBG shall help in achieving this target.

Production of CBG shall increase the green energy mix, reduce import dependence, create employment, especially in semi urban & rural areas and reduce pollution. This will create value and employment in the rural economy across the supply chain from biomass collection to plant operation. CBG has zero associated carbon emissions. Usage of CBG shall assist in achieving climate change goals of India as per the Paris Agreement 2015/2022.

The production of CBG is in alignment with Government of India schemes like Atmanirbhar Bharat, Make in India and Swachh Bharat. The CBG production also be in alignment with GOBAR-DHAN Scheme to effectively utilize cattle dung.

<b>Feedstock</b>	<b>Tentative Feedstock Requirement for production of 1 Ton CBG as per Conventional Technology</b>
Agriculture Residue	10 ton
Press Mud	25 ton
Spent Wash	10 KL
Municipal Solid Waste	20 ton
Cattle Dung	50 ton
Napier Grass	10 ton

The various feedstocks of biogas are waste / bio-mass sources like agricultural residue, cattle dung, sugarcane press mud, municipal solid waste, etc.

The various feedstock wise CBG potential are as under: -

The above table is indicative and CBG production shall vary as per technology, feedstock quality, etc.

So far 37 CBG/biogas plants have been commissioned under SATAT initiative. Designed CBG production capacity of these plants is around 225 ton per day. These plants are supplying their produced CBG from 51 stand-alone CBG Retail Outlets; 12 Geographical Areas under CBG-CNG synchronization scheme and also to industrial customers. List of CBG/biogas plants is at Annexure-1”.

1.9 The Committee sought to know the current share of bio-gas in the country and the targets fixed by the Ministry to which MoPNG in their written reply have stated the following:-

“Under the SATAT initiative the government envisages the setting up of 5,000 CBG plants with a production target of 15 MMTPA of CBG by 2023-24. However, as on 1<sup>st</sup> August 2022, only 37 CBG/ biogas plants have been

commissioned. So far OGMCs have sold around 9000 tons of CBG. MoPNG is continuously coordinating with stakeholders to increase the production of CBG”.

1.10 Asked by the Committee as to whether any review has been conducted by the Ministry regarding implementation of SATAT and if so, its major findings, the MoPNG in their written reply, have furnished the following:-

“Periodic review meetings are being held by MoPNG and OGMCs on implementation of SATAT initiative. It has been observed that the CBG sector is still in developing stage in the country. It needs to be supported with various fiscal incentive and policy interventions. Major finding emerged during the review meetings with stakeholders are as under:

- a. Considering the various environmental, social and economic benefits, enhanced focus is required to improve the production of CBG.
- b. Production of CBG is required to meet the incremental demand of the Natural Gas in the country.
- c. Expeditious financing and lower interest and lower collateral is required for propagation of CBG projects.
- d. Support of State Government is required to ensure long term supply of biomass at a reasonable price.
- e. Biomanure is a coproduct and revenue stream of CBG projects. Assured offtake of biomanure is required to improve viability of the projects.
- f. Assured offtake of entire quantity of CBG with long term agreement is imperative to attract investment in this sector.
- g. Allocation of land for CBG projects and biomass storage by the State Government.
- h. Expansion of Pipeline infrastructure for injection of CBG in CGD network”.

1.11 The Committee enquired as to whether any technology for CBG production is available in the country to which MoPNG in their written reply have stated the following:-

“Waste / Bio-mass sources like agricultural residue, cattle dung, sugarcane press mud, municipal solid waste and sewage treatment plant waste, etc. produce bio-gas through the process of anaerobic decomposition. The bio-gas is purified to remove hydrogen sulfide (H<sub>2</sub>S), carbon dioxide (CO<sub>2</sub>), water vapor and compressed as Compressed Bio Gas (CBG), which has methane (CH<sub>4</sub>) content of more than 90%.

There are various technologies available for production of CBG. Anaerobic Digestion is used for the production of Biogas which includes technologies like continuous stirred tank reactor (CSTR), plug flow, 2 stage reactors, Upflow Anaerobic Sludge Blanket (UASB), etc.

Further, various technologies are used for removal of hydrogen sulfide, such as Biological Fixation, Iron chloride dosing, Water scrubbing, Activated Carbon, Iron Hydroxide or Oxide and Sodium Hydroxide etc.

Technologies used for removal of Carbon dioxide, are Pressure Swing Adsorption (PSA), Water Scrubbing, Membrane Separation, Chemical Scrubbing - Mono Ethyl Amine (MEA), Di Ethyl Amine (DEA) Methyl Di-Ethyl Amine (MDEA) etc.

The gas is compressed through a compressor. Various national and global technology providers are working in this field. Depending upon the requirement, combinations of these technologies are being used by CBG project developers".

1.12 The Committee sought to know whether the oil PSUs can invest in setting up of CBG Plants as part of their regular business operations to which the MoPNG in their written reply have stated that:-

“Under SATAT initiative PSU Oil & Gas Marketing Companies (OGMCs) namely IOCL, HPCL, BPCL, GAIL and IGL are inviting Expression of Interest (EoI) from potential entrepreneurs to set up CBG plants and to procure CBG from them for sale as automotive & industrial fuel. IndianOil is working as National Coordinator of SATAT initiative and GAIL is acting as Coordinator for synchronization of CBG with CNG. Beside this role of OGMCs are:

1. Handholding of prospective entrepreneurs in technology, financing, statutory approvals and other aspects to facilitate setting up CBG Plants.
2. Coordination with various Government Departments/Agencies; Financial institutions; State Government and other stake holders to arrange and implement various enablers for development of CBG sector.
3. Arrangement of CBG equipment through coordination and inviting Global Expression of Interest for identification of technology providers and equipment suppliers.
4. R&D work e.g. Indian Oil R&D Centre has developed IBG-Max, IBG-Plus and Bio-Xceed technologies on CBG. IndianOil is finalizing offering of technology for setting up of CBG Plants, inoculums for enhancing CBG production from CBG Plants and additives for enhancing quality of Fermented Organic Manure.
5. To create awareness among entrepreneurs and investors.

In addition, OGMCs have planned to set up few CBG and Biogas Plants to encourage entrepreneurs for setting up CBG projects. Construction activities are in progress at few places. Further, OGMCs are making investment on installation of CBG dispensing equipment viz. Compressor, Cascade and Dispensing Unit for marketing of CBG”.

“Oil PSUs have planned to set up few CBG and Biogas Plants as demonstration projects. Some of them are as follows:

S No.	Oil PSUs	Location	Feedstock	CBG / Biogas production capacity	Status of project
1	IOCL	Hingonia, Rajasthan	Jaipur, 100 TPD Cattle Dung	6-8 TPD	Work in progress
2	IOCL	Gorakhpur, Uttar Pradesh	200 TPD Paddy Straw + 40 TPD	28 TPD	Work in progress

			Cattle Dung		
3	IOCL	Betul, Madhya Pradesh	5 TPD Cattle Dung	200 m3/day	Commissioned
4	IOCL	Hoshangabad, Madhya Pradesh	5 TPD Cattle Dung	200m3 /day	Commissioned
5	IOCL	Gorakhpur, Uttar Pradesh	5 TPD Cattle Dung	200 m3/day	Commissioned
6	GAIL	Ranchi, Jharkhand	150 TPD MSW	5 TPD CBG	Work initiated
7	HPCL	Badaun, Uttar Pradesh	140 TPD biomass	14 TPD	Work initiated

In addition, Indian Oil is also in discussion with a German CBG Plant operator for setting up agriculture residue to CBG Plants through a Joint Venture Company”.

1.13 The Indian Biogas Association (IBA) submitted the following representation on SATAT to the Committee:-

- (i) Periodic upward revision of Bio-CNG/ CBG price by indexing it to the CNG market price.
- (ii) Creation of ‘Bio-gas-Fertilizer Fund” to provide credit guarantee and Generation Based Subsidy (GBI) to this sector
- (iii) Building decentralized Bio-CNG gas grid infrastructure and integration with CGD and national natural gas grid infrastructure.
- (iv) Policy for injection of CBG to CGD and replacement of LPG cylinders under UjjawalaYojna with bio-CNG under SATAT initiative.
- (v) Introducing Policy for statutory mixing of CBG in the natural gas mix.
- (vi) Creation of “Organic Fertilizer distribution and utilization Infrastructure” for doubling farmers income.

### **Challenges in setting-up CBG Plants**

1.14 The Committee inquired about the kind of risks associated with CBG plants to which the MoPNG in their written reply have furnished that:-

“The following are some of the perceived risks of CBG Plants: -

- (i) Lack of steady supply of feedstock at long term stable price.
- (ii) Discontinuation of available subsidies viz. Central Financial Assistance by MNRE
- (iii) Demand of CBG in the region and competition with other replaceable fuel
- (iv) Marketing of Bio manure (FOM/LFOM) at remunerative price”.
- (v) The tentative Internal Rate of Return (IRR) of CBG projects is about 7-9% (without CFA)”.

Submitting about the general problems being faced by CBG plant entrepreneurs and the kind of ecosystem required for the viability of the plant, the representative of M/s Verbio Enterprises, during the oral evidence submitted the following:-

“The very fact that SATAT has a target of 5,000 plants until 2023, and less than one per cent has been erected or under implementation, that means that there is no gap but there is a fundamental disconnect over here as far as business case is concerned..... There is also a very clear lack of understanding or limitation of experience, in Satark, one size fits all is the approach. आप कोई भी वेस्ट लाएं, फूड वेस्ट, वेजिटेबल वेस्ट, एमएसडब्ल्यू, एग्री वेस्ट, सभी को एक समान ट्रीट किया जाता है. जबकि food waste is a revenue stream, MSW is a revenue stream for the producer. म्यूनिसिपैलिटी से छः सौ से सात सौ रुपए टन प्रोड्यूसर्स को मिलता है। हमें तीन हजार से साढ़े तीन हजार रुपए प्रति टन खर्च करना पड़ता है। मेरे लिए वह कॉस्ट है, तो किसी के लिए वह रेवेन्यू है। फूड वेस्ट और वेजिटेबल वेस्ट वाला ज्यादा कम्प्लेन नहीं करेगा, because if I am their side, I would also not complain. I don't want to pinpoint anybody but this is the gaps we are having. स्टबल बर्निंग की बहुत प्रॉब्लम है, अगर हम यह फंडामेंटल पॉइंट नहीं समझेंगे, तो यह सॉल्व नहीं हो सकता है। Differential pricing, feed stock-based pricing हमें करनी पड़ेगी या किसी तरह से प्रोड्यूसर को वह कॉम्पनसेट किया जाए। मैं पराली के लिए जो खर्च कर रहा हूँ, तीन हजार से साढ़े तीन हजार रुपए हमारा लैंडेड, फ्रॉम फार्म टू फीड है। यह सिर्फ कलेक्शन कॉस्ट नहीं है। हमने इसमें पूरी कॉस्ट इंकलूड की है, जो मुझे साल भर स्टोर करना है, उसे बचा कर रखना है, कवर करना है, हम ने अपने प्लांट में वेदर स्टेशन लगाया है। क्योंकि मैं डिस्ट्रिक्ट लेवल वेदर मॉनिटरिंग पर डिपेंड नहीं कर सकता हूँ, क्योंकि मुझे अपने प्लांट के लोकेशन पर पता होना चाहिए कि किस दिन बारिश होने वाली है। जैसे आज-कल-परसों, we have the rain probability of 80 to 100 percent, that means, I have to keep them covered. हमें अनकवर भी करना पड़ता है, अगर मॉस्चर हाई होता है, तो हमें उसे सूखने का मौका भी देना पड़ता है। अनकवरिंग-कवरिंग मैकेनिज्म हम पूरा मैनेज करता हैं। Feed stock is very complex thing. बहुत कॉम्प्लैक्स है। हमें इसकी मैनेजमेंट बहुत ध्यान से करनी पड़ती है। पूरा स्टोरेज इन्फ्रास्ट्रक्चर और जो पूरा प्रोटेक्शन है, वह हमारा है। हमें स्टेट और सेंटर से कुछ नहीं मिलता है। हमारा प्लांट 20 एकड़ की जमीन पर है। इसके अलावा हमने 40 एकड़ satellite storage locations की है। अभी हमारा प्लांट फुल कैपेसिटी पर नहीं है। हमारा प्लांट सिर्फ 25 प्रतिशत कैपेसिटी पर है। जब यह 100 प्रतिशत कैपेसिटी पर आएगा, तो मुझे लगभग 80 एकड़ से सौ एकड़ जमीन चाहिए होगी, जिसमें पराली स्टोर होगी और यह इसको फीड करेगा।

जो एमएनआरई की तरफ से जो था, वह एकदम से बीच में डिसकन्टिन्यू कर दिया गया है, जब हम ने इन्वेस्ट कर दिया, this assistance was withdrawn. अभी सुनने को मिल रहा है कि यह अप्रूव हो गया है और इसको दोबारा रीइंस्टेट करेंगे, लेकिन मुझे इस चीज की क्लैरिटी नहीं है कि जो प्लांट इस दौरान बने हैं, वे इसके लिए ऐप्लिकेबल रहेंगे या नहीं। That is not clear.

The next very major point is, हमें यह चीज बहुत अच्छी तरह समझनी पड़ेगी, यह इंडिया का केस नहीं है, यह वर्ल्डवाइड है कि यह प्रोडक्ट अपने दम पर कमर्शियली खड़ा नहीं हो सकता है। इसके तीन रेवेन्यू स्ट्रीम चाहिए। सबसे पहले gas-crafted, जो हमारा आईओसीएल के साथ है, that is a good arrangement. Second is bio manure. अकेला गैस पर इसकी कमर्शियल वायबिलिटी नहीं है। यह सिर्फ हिन्दुस्तान में नहीं है, हर जगह यही है। Bio Manure is carbon rich product. हमारी सॉयल के लिए यह बहुत अच्छा प्रोडक्ट है। मैं आपको उदाहरण देता हूँ। जर्मनी में एक बहुत ही सिम्पल पॉलिसी है, जो अपनी जमीन से लिया है, आपको उसे वापस करना है।

..... there is no provision for offtake of biomanure. छः सौ से साढ़े छः सौ टन प्रतिदिन, अगर इतने वॉल्यूम में फुल कपैसिटी में जेनरेट होगा, तो आप सोच सकते हैं कि इसके लिए हमें कितना स्टोरेज एरिया चाहिए होगा, इसके साथ ही इसके हैंडलिंग की व्यवस्था भी करनी होगी। यह इसका एक मेजर पॉइंट है, जो अभी हमारे केस में तो सॉल्व नहीं हुआ है। 27 मई को एक मिनिस्ट्री ऑफ केमिकल एंड फर्टिलाइजर से एक नोटिफिकेशन आई थी, जिसमें यह मैनडेट किया गया है कि fertilizer companies have been mandated to offtake this manure. But that notification does not detail any implementation कि किस प्राइस पर जाएगा, क्या लॉजिस्टिक्स रहेंगे, उसमें कुछ नहीं है। कौन-सी कम्पनियाँ हैं, कब से वह इफेक्ट में आ गया, so, there is no clarity. At the moment, this manure which is a very rich product as far as carbon is concerned is just lying on our locations”.

1.15 When the Committee asked about any successful CBG Plant model that can be replicated, the representatives of M/s Ever Enviro during the oral evidence submitted that:-

“..... हमने एशिया का कूड़ा वेस्ट प्लांट, जो हमारा वेट वेस्ट होता है, इंदौर में लगाया और प्रतिदिन 17 हजार केजी बायो सीएनजी प्रोड्यूस कर रहे हैं, जिससे कि इंदौर शहर की 400 बसेस प्रतिदिन चल रही हैं। जहां तक कूड़े की बात है, यह माडल सक्सेसफुल है। हम अर्बन लोकल बॉडी इंदौर म्यूनिसिपल कांफोरिशन को ढाई करोड़ रुपये प्रतिवर्ष रायल्टी दे रहे हैं।

हम ढाई करोड़ रुपये प्रतिवर्ष रायल्टी दे रहे हैं, हमें एक भी पैसा अर्बन लोकल बॉडी से नहीं मिल रहा है। हमारा जो बायो सीएनजी मॉडल है, जिसे माननीय प्रधान मंत्री जी ने जबसे इनाॅग्रेट किया है, तब से आज तक 72 देशों ने इस मॉडल को एक्सेप्ट किया है। वर्ल्ड बैंक से लेकर आईएफसी तक ने इसे एक्सेप्ट किया है। मैं एक सक्सेसफुल मॉडल की बात कर रहा हूँ। जैसा कि मैंने बताया कि हम लोगों को 100 प्लांट्स को वर्ष 2025 तक ऑपरेशनल करके दिखाने का मैनडेट दिया गया है और उस कड़ी में हम कूड़े के प्लांट्स लगा रहे हैं। दिल्ली में ऑलरेडी एक प्लांट बन रहा है, भोपाल में बन रहा है, उत्तर प्रदेश में 16 प्लांट्स आ रहे हैं। एग्रीकल्चर वेस्ट के हमारे 11 प्लांट्स पंजाब में पराली के ऊपर बन रहे हैं, जो अगले साल जून तक ऑपरेशनल हो जाएंगे। हम उत्तर प्रदेश, कर्नाटक तथा अन्य प्रदेशों में जो शुगर मिल्स से निकलता है, उसके लिए प्रेस मड के भी प्लांट्स रहे हैं।

सर, इसके अलावा माननीय प्रधान मंत्री जी ने जो गोवर्धन स्कीम अनाउंस की, उसके बेसिस पर भी हम कैटल डंग को भी यूज कर रहे हैं और साथ ही साथ एनर्जी क्रॉप हेतु साउथ इंडिया में हम प्लांट्स लगा रहे हैं। हमारा मैनडेट यह है कि 80 लाख टन कार्बन डाई ऑक्साइड का एमिशन करने से हम रोकेंगे और कॉप-26 में हमारे प्रधान मंत्री जी ने जो कमिटमेंट दिया है, उसमें हम बहुत बड़े भागीदार हैं। आज जब हमारे 100 प्लांट्स चलेंगे, तो उससे 75 हजार लोगों को रोजगार मिलेगा और 10 करोड़ लोगों को एमिशन से डायरेक्टली या इनडायरेक्टली फायदा होगा। यह एक bird's eye view है। इंदौर में 15 एकड़ प्लांट, जिसका माननीय प्रधान मंत्री जी ने 19 फरवरी को उद्घाटन किया था। जब प्लांट का कॉन्स्ट्रक्शन चल रहा था, तब आदरणीय श्री धर्मेंद्र प्रधान जी ने भी विजिट किया था। अगर हम देखें तो 5 हजार प्रोजेक्ट्स लगाने का जो टारगेट है, वह पॉसिबल है। इसमें कोई डाउट नहीं है। आज की डेट में जो प्राइजिंग मैकेनिज्म दी गयी है, we put our record कि पीएनजी ने और स्टैंडिंग कमेटी के लिए we put our appreciation कि इस मैकेनिज्म से प्रोजेक्ट्स से वायबल हैं, लेकिन जैसा कि हमारे कुलीग ने बोला कि जो पॉलिसीज बनाई गई हैं, उनका इम्प्लीमेंटेशन ग्राउंड पर नहीं हो रहा है।

.....सर, ओवरऑल मैं यह कहना चाहता हूँ कि ऑलरेडी सब पॉलिसीज हैं, दे आर इन प्लेस, उनका ग्राउंड में इम्प्लीमेंटेशन होना जरूरी है। यह दिन दूर नहीं है कि सचमुच वर्ष 2023 तक 5 हजार प्लांट्स का सपना जरूर साकार होगा। हम इसमें सक्षम हैं। हम लोग इस बात के लिए हैं और हम आगे से आगे इनिशिएटिव लेंगे। धन्यवाद”।

1.16 Elaborating on the future and possibility of achieving CBG production as envisaged in the SATAT and the steps required for the same, the representative of the Indian Bio-gas Association made this following submission during the oral evidence:-

“हम डिसेंटलाइज्ड गैस फील्ड्स की बात कर रहे हैं। हम यह चाह रहे हैं कि पूरे हिन्दुस्तान के अंदर पेट्रोलियम गैस का सब्सीट्यूशन, टू ए वैरी गुड एक्सटेंट, हम इसमें दे पाएं। हमने इस नाते कहा है कि ये डिसेंटलाइज्ड गैस फील्ड्स होंगे। तमाम सदस्यों ने जो-जो समस्याएं बताई हैं, उनका इसमें समावेश होगा। मैं यह कहना चाह रहा हूँ कि यह एक बायो रिफाइनरी होगी। जैसे उसमें हमने यह कहा, मैं कोट करता हूँ कि यह सिर्फ बायोगैस प्लांट नहीं है, यह बायोगैस फर्टीलाइज़र प्लांट भी है। यह साथ में एक्सकेवेंजर है। सर, हम कितनी भी तरक्की कर लें, अगर हमको साफ-सफाई या स्वच्छ भारत मिशन के अंदर सारे वेस्ट को डिस्पोज़ करना है, जिससे हम स्वस्थ रह सकें तो wet and loose leafy bio-mass, only one technology is there which is affordable even today and it is doable technology. Nothing is to be imported. वह बायोगैस टेक्नोलॉजी है। तो यह scavanging का काम करेगा। हम पॉल्युशन की बात करते हैं, पॉल्युशन एबेटमेंट की बात करते हैं, एनवायरमेंट फ्रेंडली की बात करते हैं, पीएम ने जो कमिट किया हुआ है, उसमें कितने पर्सेंट तक हम इसे कर सकते हैं, लेकिन उसके लिए हमको नए सिरे से, अच्छे तरीके से इंटीग्रेटेड तरीके से सोचने की जरूरत है। सर, इसमें हमने जो बातें लिखीं, पहले जो टाइटल इटसेल्फ है, उसमें हमने तमाम शब्दों का समावेश इसीलिए किया है ताकि एक ही टाइटल में यह पता लग जाए कि क्या-क्या इसमें इनक्लूडिड है। हम इससे कैमिकल्स बना सकते हैं। एक समय आएगा, अगर पेट्रोलियम में काफी कमी आई तो हमको कैमिकल्स के लिए बायोरिसोर्सिज़ पर वापस जाना पड़ेगा। वे सारे कॉन्सेप्ट हम अभी शुरू कर सकते हैं, टेस्ट कर सकते हैं। सर, यह देखें इस वाले को, बड़ी विचित्र बात है कि हम सबसे नए सेक्टर हैं, हमारे पास कोई सपोर्ट नहीं है, हमारी कोई इंडस्ट्री नहीं है, लेकिन जो दाम हमको दिया जा रहा है, इसको अभी एक-दो लोग कह रहे थे कि बढ़ा बढ़िया है। ज़रा तुलना कर लेते हैं। यहां पर हमें जो प्राइस दी जा रही है, इथेनॉल की कैलोरिफिक वैल्यू, बायोसीएनजी की कैलोरिफिक वैल्यू से हाफ है, लेकिन इस टेबल में देखें उनको हमसे ढाई गुना ज्यादा पैसा दिया जा रहा है, लेकिन हीट वैल्यू हमसे आधी है तो करीब चार गुना पैसा हम इनको ज्यादा दे रहे हैं। हमें क्यों नहीं दिया जा रहा है? जो सीएनजी के साथ हम कम्पीट करते हैं, जिसमें सैकड़ों सालों से तमाम देशों ने, टेक्नोलॉजी ने, हमारी इंडियन ऑयल कम्पनीज़ ने, जिसमें भारत सरकार ने इनवेस्ट किया है, इतना बड़ा इन्फ्रास्ट्रक्चर खड़ा किया है, तब जा कर आज की तारीख में हम सीएनजी को इम्पोर्ट कर के, कुछ डॉमिस्टिक प्रोड्यूस कर के इस लैवल पर दे पा रहे हैं। हमारे वाले सेक्टर के लिए वह इनवेस्टमेंट कहां से आएगा? जब तक वह नहीं आएगा यह खड़ा नहीं होगा। अगर यूक्रेन और ईरान जैसी लड़ाई हो गई तो हमारे डिफेंस के लिए, जो स्ट्रेटेजिक वैल रिक्वायरमेंट है, वही अवेलेबल नहीं होगा। लेकिन अगर हम डिसेंटलाइज़ गैस बना रहे हैं, बायोमास बेस्ड, वह स्ट्रेटेजिक फ्यूल हम इसमें पा सकते हैं, अदर दैन एम्पलॉयमेंट और सब जो हुआ वह तो होगा ही होगा, उसको तो हम डिनाइ ही नहीं करते हैं, लोकल लैवल पर डिसेंटलाइज़ लैवल पर। सर, इसमें पाएं कि हमको सबसे पूअरेस्ट कैटेगरी में रखा गया है। 1.04 हमें दे रहे हैं और दूसरों को ढाई दे रहे हैं या किसी को कुछ दे रहे हैं। आखिर ऐसा क्यों?

.....उसमें यह है कि टैक्नोलॉजी सकी mixed fuel feeding and not single fuel feeding. Today, those options are there and that is where technologies' intervention will also be required. It is not so simple. तो कभी सिर्फ पराली के बेस पर हम नहीं कर सकते हैं। आगे हमने प्राइस में कहा है अभी जो प्राइस सतत में मिली हुई है, वह भी इन्होंने कम के करके आंका हुआ है। वह सिर्फ कैटलडंग और काओमैन्योर के ऊपर जो प्राइस आ सकती है, उस पर इन्होंने फिक्स किया है।

..... सर, 'इंटरवेन्शंस नीडेड' में हमने यह कहा कि हम लॉन्च करेंगे। तमाम मिशन्स लॉन्च हो गए। बायोमास मिशन, जिसमें जला देंगे, वह भी लॉन्च हो गया। बहुत सारे मिशन्स लॉन्च हो गए। यहां तक कि 'स्वच्छ भारत' मिशन भी लॉन्च हो गया। जब हम मंत्रालय में थे, वर्ष 2008 से हम यह कहते आ रहे हैं कि हमारे लिए बायोगैस फर्टिलाइज़र मिशन आप बना दीजिए। पता नहीं लोगों को क्या तकलीफ है कि आज तक बायोगैस फर्टिलाइज़र मिशन नहीं बना। खैर, अभी हमने उसे थोड़ा-सा मोडिफाई किया है कि अब हम उसको बायो-रिफाइनरी मिशन लॉन्च करेंगे। पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय की जो बायो-फ्यूएल पॉलिसी है, वह केवल लिक्विड फ्यूएल और गैसियस फ्यूएल की बात करती है। एम.एन.आर.ई. की जो बायो-फ्यूएल पॉलिसी थी, वह केवल लिक्विड फ्यूएल की बात करती थी। अभी भी बायो-फ्यूएल पॉलिसी में सॉलिड फ्यूएल इन्क्लूडेड नहीं है। हम यह कह रहे हैं कि solid fuel, liquid fuel and gases fuel and all these three types of fuels are available through our biomass resources”.

### **Single Window Clearance**

1.17 Various statutory approvals required for setting up CBG Plants, are detailed as under: -

1. Change in Land Use (applicable for non-industrial land)
2. District Industry Centre registration
3. NOC and Licence from Fire Department
4. NOC and Licence from Health & Safety
5. Approval from District Town & Country Planning
6. Approval from Local Panchayat
7. Plant running licence from Block Development Officer
8. Consent to Establish & Operate from Pollution Control Board
9. Consent to Establish & Operate from Petroleum and Explosives Safety Organization, etc.

The above list may vary as per State specific requirements. Many approvals are required before setting up of the Plant. (LOP Q7)

1.18 The Committee enquired about the role of various Ministries in the implementation of CBG Plants and steps being envisaged by MoPNG for coordinating with other Ministries and Agencies, the Ministry in their written reply have submitted that:-

“Ministry of Petroleum and Natural Gas is coordinating with various ministries to create enabling ecosystem for CBG projects under SATAT initiative. MoPNG has conducted many meetings with stakeholder Ministries as and when required and

written number of letters to them. With the rigorous efforts of MoPNG and its PSUs Dept. of Agriculture & Farmer Welfare (DA&FW) has included bio manure produced from CBG plants as Fermented Organic Manure (FOM) and Liquid Fermented Organic Manure (LFOM) under Fertilizer Control Order; RBI has included CBG projects under Priority Sector Lending; CPCB has categorized CBG projects under 'White Category' on case to case basis; MNRE has provided list of institutes for technology evaluation and validation of Detailed Project Reports; Canara Bank has been nominated as the lead bank for CBG activities.

Further, this Ministry is coordinating with MNRE for continuation of Central Financial Assistance scheme under Waste to Energy Programme; DA&FW to promote FOM/LFOM; Department of Fertilizer to seek Market Development Assistance and assured off-take of Bio-manure; Dept. of External Affairs for external financial assistance; Department of Expenditure for continuation of CFA of MNRE; Department of Revenue to resolve tax related issue in CBG blended with CNG; MoHUA for MSW based CBG projects; DHI to promote manufacturing of CNG/CBG vehicles.”

1.19 The Committee sought to know the efforts by MoPNG to coordinate with State Governments, urban municipal bodies, local bodies, etc. in setting up of CBG plants under SATAT scheme to which the Ministry in the written reply have furnished that:-

“MoPNG has sought support of State Governments through various letters and series of meetings. MoPNG has requested various State Governments to form Coordination Committee for effective implementation and monitoring of SATAT initiative. At present, State Level Coordination Committees have been formed in the State of Haryana, Punjab, Uttar Pradesh, Chhattisgarh and Andhra Pradesh to discuss and create ease in statutory approvals and regulatory clearances for CBG Plants. IndianOil has posted Nodal Officers in State Capitals to assist CBG Plant owners and facilitate clearances”.

1.20 The Committee desired to know the response so far from State Governments, Urban Municipal Bodies, Local Bodies, etc. towards setting up of CBG plants under SATAT scheme to which the MoPNG in their written reply have furnished that: -

“State Level Committees have been constituted for implementation and monitoring of SATAT initiative in States of Haryana, Punjab, Uttar Pradesh and Chhattisgarh. Government of Haryana has notified biomass clusters in the state to enable steady supply of biomass.

OGMCs have been coordinating with various Municipal Bodies, Local Bodies, etc. and some of them have responded positively for putting up CBG plants in their jurisdictions.

Assistance is required from State Governments, Municipal Bodies, Local Bodies, etc. to ensure larger deployment of CBG Plants. For the same, following enablers are requested from State Governments: -

1. Encourage use of Municipal Solid Waste, Sewage Treatment Plant Waste, Press Mud and Bagasse etc. for production of CBG.

2. Creation of robust biomass and waste supply chain with policy to ensure steady supply of Biomass at sustainable long-term price.
3. Providing subsidies on biomass aggregation & storage equipments under Sub Mission on Agricultural Mechanization (SMAM) Scheme.
4. Creation of enabling ecosystem for marketing and application of Bio-manure (FOM/LFOM).
5. Removal of double taxation on CNG sales through CBG outlets and vice versa (CBG is under GST and CNG is under VAT).
6. Promotion of CBG / CNG vehicle in locations with upcoming CBG plants and conversion of existing vehicle & tractors into CBG/CNG”.

1.21 The Committee enquired about any scheme for allotment of land for setting up a CBG plant to which the Ministry in the written reply have furnished that:-

“This Ministry has requested various State Government to allocate land for CBG plant and for storage of biomass. OGMCS are also taking up the matter with state Government as per requirement. IndianOil has nominated Nodal officers at various states to facilitate LOI holders in dealing with various local authorities for acquiring land”.

1.22 The following are some of the similar schemes like SATAT:-

1. GOBAR-DHAN Scheme by Department of Drinking Water & Sanitation promotes conversion of bio waste to ensure cleanliness which includes Individual Household, Community, Cluster and Commercial CBG projects.
2. Scheme for Energy from Urban, Industrial and Agricultural Waste/ Residue by Ministry of New & Renewable Energy) provided Central Financial Assistance (CFA) for setting up CBG Plants. The CFA scheme was valid up to 31.3.2021.

SATAT initiative promotes entrepreneurs to set up CBG Plants with off-take and marketing of CBG by Oil & Gas Marketing Companies.

1.23 The Committee wanted to know whether MoPNG has conducted any meetings with Industry Bodies, Association of Industries for promotion of CBG plant to which the MoPNG in their written reply have stated that:-

“Number of meetings at Ministry level as well as at industry level have been conducted with Indian Sugar Mill Association (ISMA), Federation of Indian Chambers of Commerce & Industry (FICCI), Confederation of Indian Industry (CII), Associated Chambers of Commerce and Industry of India (ASSOCHAM) and other Industry bodies to promote CBG. Meetings have also been held with State Level chapters of the Industry Associations to create awareness on CBG”.

### **Letters of intent (Lols) for CBG Plants**

1.24 When the Committee sought details about the number of Lols issued under SATAT by OGMCS the following information was furnished (Background note 06.06.2022):-

Company	Number of LOIs issued	Land Finalized	Financial Closure	CBG plant commissioned/ sale initiated (No. of CBG Plants)	CBG sale initiated (No. of Retail Outlets)	CBG sale initiated (No. of CBG injection points)
IOCL	2249	156	37	18	31	0
BPCL	299	37	7	7	12	0
HPCL	413	64	28	3	1	0
GAIL	255	45	18	6	1	1
IGL	47	26	7	1	0	1
<b>Total</b>	<b>3263</b>	<b>328</b>	<b>97</b>	<b>35</b>	<b>45</b>	<b>2</b>

1.25 The Committee wanted to know the reasons for delay in commissioning of plants as the number of applications is 3263 and only 35 have been completed to which the MoPNG in their written reply have submitted that:-

1. "Since the launch of SATAT initiative, initially the investor sentiment was slow because of lack of familiarity with the sector which delayed financial closure. After that, due to advent of COVID-19 pandemic, entrepreneurs setting up CBG Plants were affected to a great extent which delayed the setting up of CBG Plants. Now it is picking up momentum. So far 16 Plants have been commissioned and initiated supply of CBG. 37 more Plants are in various stages of construction.
2. In addition, setting up of CBG Plants have been constrained due to various factors including lack of availability of biomass/ waste at reasonable price on long term basis, non-extension of Central Financial Assistance by Ministry of New & Renewable Energy, lack of low-cost financing for CBG Plants, lack of enablers from State Governments, issues in marketing of Solid & Liquid Fermented Organic Manure, etc.
3. For development of CBG sector in the country following enablers are requested:-
  - a. Arrangement of low-cost finance
  - b. Extension of CFA scheme of MNRE
  - c. Market Development Assistance for Bio manure marketing; Benchmark pricing and assured off-take of bio manure by Department of Fertilizer
  - d. Creation of robust biomass supply chain to ensure sustainable supply at a reasonable price.
  - e. Resolving of issue of double taxation on sale of CBG from CNG RO and vice versa as well as CBG blended with CNG".

Some of the enablers required to improve the conversion rate of Lols are as under:-

- i. Financing of CBG projects: Because of thin margin and risk perceived, banks and financial institutions are sceptical about CBG projects. Low-cost funding at lower collateral is imperative for expeditious development of this sector. Further, risk sharing facility along with credit guarantee scheme need to be introduced to improve the availability of finance at lower interest rates and lower collateral.
- j. Bioamss/feed stock supply chain: Support of State Government is required to establish biomass to ensure availability of feedstock at an assured price on long term basis. State government should provide subsidies on biomass aggregation equipment; notify biomass clusters for CBG plants; engage Farmers Producers Organizations/ Custom Hiring Centres (FPOs/CHCs) etc. for aggregation and storage of biomass in the catchment areas of CBG plants and provide them incentive on operative expenses of biomass equipment; State Government should also encourage production of CBG from other feed stocks such as press mud, MSW, sewage water etc.
- k. Bio manure Marketing: At present there is no established mechanism for offtake of biomanure (FOM/LFOM) which is a major co product and revenue stream for CBG plants. Department of Fertilizer has been requested to provide Market Development Assistance on sale of FOM, fixing of benchmark price and suitable modalities for mandatory offtake of FOM by fertilizer companies. ICAR, State Agriculture Universities, Research Centres, KVKs etc. should take up research, demonstration and extension activities for promotion of FOM/LFOM among farming community.
- l. Physical incentive: Central Financial Assistance (CFA) by MNRE is one of the major incentives/subsidies for setting up of CBG plants. However, the continuation of the CFA beyond March 2021 under Waste to Energy Programme of MNRE is still pending. MNRE may issue the notification and guidelines for continuation of CFA.
- m. Assured Offtake of CBG: OGMCs are signing long term commercial agreement for offtake of CBG. Government has issued the guidelines for co-mingling of domestic gas with CBG for CNG (T)/PNG (D) segments of CGD network to facilitate offtake additional quantity. Further, State Government should promote CNG/CBG vehicles and tractors to enhance consumption of CBG.
- n. Land: Expeditious allocation of land to CBG producers by the State Government would be helpful in developing CBG Projects.
- o. Issue of double taxation: Exemption of Central Excise Duty and VAT or bringing NG/CNG under the ambit of GST to solve the problem of double taxation when CBG is comingled and sold in CNG(T) and PNG(D) sectors.

Other Enablers: State Specific subsidies on CBG Plants during initial phase; Facilitate entrepreneurs in obtaining necessary permission / registration / approvals etc. for establishment of CBG plants; Single window clearance towards CBG Plants; Courses on CBG technology, feedstock management, manure enrichment, marketing, O&M in State universities / technical institutes / Agricultural institutes”.

1.26 The Committee further enquired whether any duration for validity of Lol has been fixed to which the Ministry in the written reply have stated that:-

“Yes, OGMCs have fixed the period of validity between three months to two years from the date of issuance of LOIs. Beyond that the extension is being given on case-to-case basis”.

1.27 The Committee sought to know the mechanism and criteria followed by Oil PSUs for issue of Lol to which the Ministry in the written reply have submitted that:-

“Entrepreneur has to apply EOI (Expression of Interest) online on the website of chosen respective OGMC. Qualification criteria has been fixed by OGMCs and is available in the EOI floated. The evaluation methodology adopted by OGMCs (IOCL, HPCL, BPCL& IGL) is given below. The EOI applicants have to obtain 35 marks to qualify for obtaining LOI under SATAT initiative.

<b>S.No.</b>	<b>QualificationCriteria</b>
(i)	Number of Years'Experience of the Firm in any sector As on date of application
a)	More than or equal to 5 years
b)	More than or equal to 2 years, but less than 5 years
c)	Less than 2 years
(ii)	Past Experience in preceding 10 years (As on date of application) project execution including supply, installation, commissioning Facilities to produce biogas or past experience in any other proje working energy/healthcare/social/welfare/infrastructure/power/biomass/transpo
a)	Minimum 1 project with investment between INR 5 – INR 10 cro each
b)	Minimum 1 project with investment between INR2–INR5 Crore each
c)	Minimum 1project with investment between INR1–INR2 crore each
d)	Minimum 1project with investment of upto INR1 crore
(iii)	Turn over(Average of last 3 Financial years as per audited balan sheet)
a)	More than or equal to INR 5 crore

b)	More than or equal to INR 3 crore, but less than INR 5 crore
c)	More than or equal to INR 1 crore, but less than INR 3 crore
d)	Less than INR 1 crore
(iv)	Technical competencies & tie-ups
a)	Possessing in-house technical know-how/Tie up with technology provider on digester
b)	Possessing in-house technical know-how / Tie up with technology provider on purification system
c)	Possessing in-house technical know-how / Tie up with technology provider on compressor

On receipt of EOI, OGMCs evaluate the details submitted and award LOI to successful applicants”.

1.28 The Committee desired to know whether Ministry has held any meeting with Lol holders about the reasons for not starting the project to which the MoPNG in their written reply have furnished that:-

”MoPNG and OGMCs have conducted meetings with Lol holders on the progress of the CBG projects. OGMCs have deputed dedicated team of officers to coordinate with Lol holders. Based on inputs received from Lol holders/entrepreneurs various enablers like assured price for offtake of CBG with long term agreements by OGMCs; inclusion of bio manures produced from CBG plants as Fermented Organic Manure and Liquid Fermented Organic Manure under Fertilizer Control Order 1985; inclusion of CBG projects under ‘White Category’ by CPCB; inclusion of CBG projects under Priority Sector Lending by RBI; loan products from various Banks for financing of CBG projects have been provided. In addition, MoPNG has issued policy guidelines for co-mingling of CBG with Natural Gas in CGD network to facilitate marketing of CBG. Further, MoPNG is regularly coordinating with Lol holders to resolve their issue and to encourage development of CBG projects”.

1.29 The Committee wanted to know whether Sugar Mills have been roped in to set up CBG plants as adequate feedstock may be available with them to which the MoPNG in their written reply have stated that:-

“Meetings/conferences has been held with Indian Sugar Mill Association (ISMA) to create awareness among sugar mill owners to set up CBG Plants. Meeting was held with sugar industry & Indian Sugar Mill Association (ISMA) on 22.1.2019 to provide details on SATAT initiative to sugar mills. A conference on CBG for sugar mill owners was held in Meerut, Uttar Pradesh on 5.10.2021 to

promote setting up of CBG Plants. In addition, regular interactions are held through various Biofuels and Ethanol forums with Sugar Mill owners to encourage them to set up CBG Plants.

Based on the various interactions, 9 CBG Plants using sugarmill press mud as feedstock have been commissioned under SATAT initiative. Various other CBG Plants are under construction / being planned on press mud/spent wash-based feedstock”.

**Banking Assistance to CBG Plants:-**

1.30 The Committee discussed difficulty in getting institutional credit facility for CBG projects and sought desirability of bringing a credit guarantee scheme for the CBG sector to improve the performance of SATAT scheme to which Department of Financial Services (DFS) in their written reply have submitted that:-

“CBG Projects are being considered for finance by Banks and provided finance after techno-commercial appraisal based on their viability. Nevertheless, availability of Credit Guarantee Schemes for CBG financing may provide additional comfort to banks and help in enhancing flow of credit to CBG projects. Credit Guarantee scheme is administered by the concerned Ministry/Department implementing the loan/credit scheme. A few examples of such schemes vis-à-vis their credit programme and governing Ministry/Department are tabulated below.

<b>Credit Guarantee Scheme</b>	<b>Loan/Credit Scheme</b>	<b>Ministry/Department</b>
Credit Guarantee Fund Trust for Micro and Small Enterprises	Loans to MSME Sector	Ministry of Micro, Small and Medium Enterprises
Credit Guarantee Fund for Micro Units (CGFMU)	Pradhan Mantri Mudra Yojana (PMMY)	Ministry of Finance
Credit Guarantee Fund for Skill Development	Skill Loan Scheme	Ministry of Skill Development and Entrepreneurship

(CGFSSD)		
Credit Guarantee Fund for Education Loans (CGSEL)	Education Loans	Ministry of HRD
Loan Guarantee Scheme for the Covid affected Tourism Service Sector (LGSCATSS)	Loans to tourism sector	Ministry of Tourism

1.31 The Committee desired to know whether Reserve Bank of India has included CBG Projects under priority lending and if yes, how much loan has been disbursed to projects under SATAT by the Indian Banking Sector to which DFS in their written reply have submitted that:-

As per extant guidelines of Reserve Bank of India (RBI) on Priority Sector Lending (PSL), loans for Agriculture Infrastructure category subject to an aggregate sanctioned limit of Rs 100 crore per borrower from the banking system is classified under Priority Sector. Agriculture Infrastructure, *inter-alia*, include:-

- (i) Loans for construction of oil extraction/processing units for production of bio-fuels, their storage and distribution infrastructure.
- (ii) Loans to entrepreneurs for setting up of Compressed Bio Gas (CBG) plants”.

Details of Loan Disbursed Under CBG Projects by Banks.

Project Sanctioned		Disbursed
No of Accounts	Amount in crore	Amt in crores on 18.08.2022
13	169	185

1.32 The Committee desired to know the rate of interest of scheduled commercial banks for priority sector lending to which DFS in their written reply have submitted that:-

“The rate of interest (RoI) charged on priority sector loans by banks has been deregulated, as per directives issued by Department of Regulation (DoR), RBI. As RoI is deregulated, respective Banks are offering rate of interest as per their Board approved policy.

As intimated by banks, Rate of Interest in case of CBG Projects is linked with Marginal Cost of Funds Based Lending Rate (MCLR)/Repo linked lending rate (RLLR) and it depends on borrower rating and security coverage”.

1.33 Elaborating about the problems being faced by CBG plants in taking loans from banks, the representative from M/s Phoenix India during the oral evidence submitted:-

“सर, मेन पॉइंट बैंकिंग सेक्टर से आता है। बैंकिंग सेक्टर के बारे में हम दो-तीन चीजों का जिक्र करना चाहेंगे। सीनियर्स ब्रीफ कर देंगे। सर, सबसे पहले, जिसके पास एक से ज्यादा एलओआई हैं, जैसे मेरे पास एचपीसीएल के बहुत सारे एलओआई हैं। जिसके पास एक से ज्यादा एलओआई हैं, उनको बैंक से कहा जा रहा है कि आप एक-एक करके लोन एप्लाइ करिए, उसको चुकता करिए, फिर दूसरा लोन पास होगा। अगर ऐसा है तो जिसके पास बीस एलओआई हैं और जैसे मेरे पास फिलहाल 54 एलओआई हैं। अगर हम इस तरह से लोन लेंगे तो हम मर जाएंगे, उसके बाद प्रोजेक्ट बनेगा। यह कैसे हो पाएगा? यह पहला पॉइंट है। मैं तीन-चार पॉइंट ही बोलूंगा, ज्यादा नहीं बोलूंगा। दूसरा पॉइंट कोलैटरल सिक्योरिटी का है। एक मार्जिन के बाद कोलैटरल सिक्योरिटी मांगी जा रही है कि कोलैटरल सिक्योरिटी के बिना बैंक लोन देना नहीं चाहती है। हालांकि, हम लोग जानते थे कि जब रिज़र्व बैंक ऑफ इंडिया का क्लॉज आया था, जो हम लोगों को पेपर भेजा गया था, उसमें यह क्लियर था कि कोलैटरल सिक्योरिटी नहीं लगेगी। यह दूसरा पॉइंट है। तीसरा पॉइंट यह है कि हर जगह पर हर किसी को बैंक एंटरटेन नहीं कर रहा है। जिन-जिन बैंकों का जिक्र किया गया है, वहां बोला जा रहा है कि जहां पर प्लान बनेगा, उसके बगल वाली जो ब्रांच है, वहीं पर अप्लाइ करने के लिए बोला जा रहा है। ऐसी बहुत सारी ब्रांचेज़ हैं। मैं खुद ऐसी 50 ब्रांचेज़ को जानता हूं। मैं खासकर बिहार और झारखण्ड स्टेट की बात कर रहा हूं। इसमें बैंक एंटरटेन नहीं कर रहा है”।

### **Collateral Security for CBG Plants**

1.34 The Committee sought details of collateral security and for financing CBG projects, the Ministry may also provide information on the and terms and conditions of the banks for project financing and also whether there is purchase agreement between OMCs and CBG plant for offtake of CBG gas taken at collateral by finance institutions to which DFS in their written reply have submitted that:-

“Information on the terms and conditions of the banks for project financing in general are as follows:

The requirement and aspects may differ from case-to-case basis depending on the industry and project type. Banks undertake project finance proposals after careful consideration of various aspects like:-

- (i) Debt-Equity ratio
- (ii) Project Cost
- (iii) Source of Finance
- (iv) Infrastructural requirements (technological aspects, plant & machinery, raw material, power, water, manpower, statutory approvals, etc.)
- (v) Marketability
- (vi) Financial viability
- (vii) Arrangements for the Product Offtake
- (viii) Cash flows from the Project

(ix) Repayment mechanism etc.

B. For financing CBG projects, the banks demand collateral security

There is no specific requirement for obtaining Collateral Security for financing CBG projects, subject to mortgageability of the Project land. In the cases, where Primary Security of Project land is not mortgageable, an equivalent amount of collateral has been stipulated, as a risk mitigant measure”.

C. Consideration of the purchase agreement between OMCs and CBG plant for offtake of CBG gas as a collateral.

“The Purchase agreement between OMCs and CBG plant for offtake of CBG gas cannot be considered as a collateral by financial institutions. However, a firm commitment / agreement for offtake of CBG will definitely provide adequate comfort by the OMCs, for sanctioning of the loans by the Banks for CBG projects”.

1.35 The Committee wanted to know whether Ministry is planning to access cheap credit for SATAT from international financing agencies to which DFS in their written reply have submitted that:-

“All matters related to lending from international agencies are being handled by the Department of Economic affairs, Ministry of Finance. Ministry of Petroleum may take up the matter regarding lending from agencies like World Bank, Asian Development Bank with Department of Economic Affairs”.

1.36 The Committee desired to know whether NABARD is refinancing loans extended by banks to CBG projects to which DFS in their written reply have submitted that:-

“All activities made eligible under priority sector lending definition of RBI can be refinanced by NABARD to the eligible lending institutions. Construction of oil extraction /processing units for production of bio fuels, their storage / distribution of infrastructure and setting up of compressed bio gas plant are also eligible for NABARD’s refinance”.

1.37 The Committee desired to know the viability of Insertion of 'Escrow Clause' in the agreement between LOI holder and OMC/CGD to which MoPNG in their written reply have submitted that:-

“The escrow clause in the commercial agreement between LOI holder and OMCs has been included on request from State Bank of India to make the CBG agreements bankable. The escrow clause provides provision of an escrow account where the proceeds from the sale of CBG shall be deposited by OMCs. The escrow account shall be used first for repayment of loan amount to banks and subsequent payment shall be made to CBG Plant owner. This shall ensure loan repayment and bankability of the CBG Plants”.

1.38 The Committee pointed out that the CBG entrepreneurs are facing difficulties in obtaining loans as banks are imposing severe conditions of collateral security, the representative of DFS during the oral evidence submitted that:-

“.....हर लोन बैंक उस प्रोजेक्ट की कॉमर्शियल वायबिल्टी की बेसिस पर देता है। चाहे वे 40 हों, एक हो या पांच हों, हर प्रोजेक्ट को नॉर्मली इवैल्यूएट किया जाता है कि वह प्रोजेक्ट वायबल है कि नहीं। हो सकता है कि किसी एक आंत्रेप्रिन्योर ने अगर इकट्ठे 40 एलओआई लिए हों तो बैंक को ऐसा लगता हो कि इनमें से सारे 40 प्रोजेक्ट्स अभी वायबल नहीं हैं और उन्होंने सोचा हो कि आप एक प्रोजेक्ट का चला लीजिए, उसकी वायबिल्टी दिखा दीजिए।

उस एक प्रोजेक्ट के बाद बैंक में भी कांफिडेंस बनता है कि हाँ, यह व्यक्ति इस तरह के बिजनेस को चला सकता है, तो हम अगले लोन के लिए सोचें। ....सर, आपने जो दूसरी बात लैण्ड को कोलैट्रल रखने के बारे में कही है, हमारे पास बैंकों से जो फीडबैक है, वह यह है कि इस तरह के जो ज्यादातर एलओआई होल्डर्स हैं, उनके पास लीज़होल्ड लैण्ड है। अगर आपके पास लीज़होल्ड लैण्ड है तो उसे कोलैट्रल परपज के लिए मॉर्गेज नहीं किया जा सकता है। बैंक के लिए दो चीजें आती हैं, यह लोन की वैल्यू के ऊपर होता है कि कितना लोन दिया जा रहा है तो उसके अनुसार बैंक चाहेगा कि जो प्राइमरी सिक्योरिटी के रूप में आपकी प्लांट एंड मशीनरी उनके पास हाइपोथिकेट हो। उसके अलावा अगर कोई गैप रह जाता है तो उसके लिए कोई कोलैट्रल प्रॉपर्टी मांगते हैं। यह बैंकिंग का अपना तरीका है, उसमें उन्हें एक सिक्योरिटी चाहिए होती है। उसके लिए अक्सर लैण्ड की बात की जाती है। अगर लैण्ड लीज़होल्ड है, जिसके ऊपर वह अपना प्लांट लगा रहा है तो लीज़होल्ड लैण्ड को बैंक सिक्योरिटी के तौर पर नहीं रख सकता है। उसके लिए फ्रीहोल्ड लैण्ड चाहिए। इसलिए अक्सर प्लांट प्रॉपर्टी के अतिरिक्त लैण्ड कीजरूरत उनको पड़ जाती है। सर, आपने इसमें एक अन्य मुद्दा बताया था, जो डायरेक्टली हमसे संबंधित नहीं है, आपने क्रेडिट गारन्टी फण्ड की बात कही थी। यदि क्रेडिट गारन्टी फण्ड जैसी कोई चीज बनती है तो उससे भी बैंकों में थोड़ा कांफिडेंस आएगा कि अगर लोन में डिफाल्ट होता है तो शायद उनको उतना कोलैट्रल न लेना पड़ा और उसमें उनके पैसे की भरपाई होने की कोई उम्मीद बनती है। यही मेरी टिप्पणी है”।

### **Financing for CBG Projects:-**

1.39 When the Committee wanted to know about the standardization and quality control of the plant and machinery and finance schemes made available by IREDA, the representative of the MNRE during the oral evidence stated that:-

“Sir, from MNRE perspective, the earlier scheme ‘Waste-to-Energy’, in which CBG was one of the components, had the validity up to 31<sup>st</sup> March, 2021. After that, we went with the National Bio Energy Programme to the Ministry of Finance. We got the decision in September 2022 that we could continue the programme to meet only the earlier liabilities. जो लाइबिलिटीज क्रिएट की गई थीं, उसके लिए हम पांच सौ करोड़ रुपये दे रहे हैं। But, Sir, we continued our follow up. जून महीने में मिनिस्ट्री ऑफ फाइनेंस ने एक ईएफसी वापस बुलाई थी। उसमें वह स्कीम अप्रूव हो चुकी है। Now, we will continue the programme with additional outlay which will have CBG as the component also. उसकी जो गाइडलाइन्स हैं, वे अभी अप्रूवल स्टेज में हैं। वह भी जल्दी रिलीज हो जाएगी।

Secondly, Sir, you mentioned about IREDA. IREDA is giving loan for CBG projects also. अभी रिसेंटली उन्होंने बहुत सारे प्रोजेक्ट्स लिए हैं, including PFC, REC. For this also, we will recommend them. But IREDA, which is under MNRE, is definitely giving loans for CBG projects.

सर, हमने नेशनल इंस्टिट्यूट ऑफ बायोएनर्जी में स्टैंडर्ड्स बनाने के लिए एक कमेटी बनाई थी। उन्होंने अभी उस स्टैंडर्ड्स का फर्स्ट ड्राफ्ट दिया है। We have submitted it to BIS. वह बी आईएस के रिव्यू में है। उसके बाद, एक प्रोसेस से, we will come into the making of standards for CBG as well”.

1.40 When the Committee wanted to know Whether IREDA is refinancing loans extended to CBG projects, the Ministry have submitted that:-

“IREDA has financed greenfield CBG projects after due diligence. Moreover, it may be noted that IREDA Policy for financing CBG projects include both Greenfield and commissioned projects. However, no Company has approached IREDA for refinancing of commissioned projects till date”.

### **Cost of CBG Plants**

1.41 The Committee wanted to know the cost of a CBG plant as worked out by the Ministry and gestation period for CBG plants to which the MoPNG in their written reply have furnished that:-

“The capital cost for setting up a CBG Plant varies largely as per capacity, feedstock, technology, location and other factors. Tentative project costs based on various feedstocks are provided below:

<b>S. No.</b>	<b>Feedstock</b>	<b>Plant Capacity</b>	<b>CBG Output</b>	<b>Project cost</b>
1	Paddy Straw	100 TPD	12 TPD	70-80 Cr
2	Press Mud	100 TPD	5 TPD	25-30 Cr
3	Cow Dung / Chicken Litter	100 TPD	5 TPD	~31 Cr

The construction period for a CBG Plant is about 12-18 months”.

1.42 The Committee sought to know information/details have been brought out by the Ministry/PSUs about the CBG plants under SATAT giving details regarding the availability of technology, equipments, skilled manpower, raw material etc. in the country to which the MoPNG in their written reply have furnished that:-

“Oil PSUs have brought out information/details about the CBG plants under SATAT giving details regarding the availability of technology, equipments, raw material etc. The same are detailed below: -

1. IndianOil has created a dedicated portal on SATAT initiative (<https://satat.co.in>). The portal has details on SATAT initiative documents, financing of CBG Plants, technology providers, enablers on CBG, Government Policies, Frequently Asked Questions, details on manure marketing. The portal has detailed learning

modules on CBG technology and financing. The portal also offers learning opportunities in plant operation & maintenance, equipment suppliers, technology, manure, etc. and is regularly updated with latest details.

2. A detailed white paper on CBG detailing CBG production process, technologies, enablers, etc. has been prepared. The same has been provided as part of Expression of Interest on SATAT initiative”.

**PRICING OF CBG**

1.43 The Committee sought a comparative statement for pricing of natural gas from different sources as targeted by OMCs for marketing/sale of CBG to which the MoPNG in their written reply have stated that:-

“Oil & Gas Companies have offered a procurement price of CBG of Rs. 46/kg + applicable taxes purified as per IS 16087: 2016 standards, compressed to 250 bar pressure and delivered to Retail Outlets in cascades. The procurement price of CBG shall remain valid from 1.10.2018 to 31.3.2024. There will be periodic revision in procurement price with effect from 1.4.2024, however minimum procurement price will not be lower than Rs. 46/kg + applicable taxes for the period from 1.4.2024 to 31.3.2029.

The price of CBG including compression charges, at Rs. 46/Kg + GST translates to approximately USD 12.4/MMBTU.

The price of Domestic Natural Gas (01.10.2021 to 31.03.2022) declared by PPAC is USD 2.90/MMBTU.

The cumulative monthly average price of DES West India Marker, as per Platts LNG daily dated 24.01.2022, is USD 20.538 / MMBTU”.

1.44 The Committee wanted to know and breakup of price payable by OGMCs to CBG plants to which the MoPNG in their written reply have stated that:-

“As per the SATAT initiative, procurement price of CBG purified as per IS 16087: 2016 standards, compressed at 250 bar pressure and delivered to OMC Retail Outlets in cascades was revised from 1.6.2022 and is detailed as under: -

- The minimum procurement price of CBG will not be lower than Rs. 46/kg + applicable taxes for the period up to 31.3.2029.
- The Retail Selling Price of CBG in a market shall be at par with RSP of CNG (as provided by the authorized CGD entity).
- The following slabs for CBG procurement price have been decided, which will be the procurement price of CBG delivered at Retail Outlet of OGMCs situated at any distance (up to 75 km one way) as per IS 16087 2016 specification (or its latest version) and compressed at 250 bar pressure: -

S No	Lower Retail Selling	Higher Retail Selling	Procurement	Procurement
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	Price of CBG in Slab	Price of CBG in Slab	price of CBG	price of CBG
	including tax	including tax	Without GST	With GST
	Rs./kg	Rs./kg	Rs./kg	Rs./kg
1	Retail Selling Price of CBG up to 70		54.00	56.70
2	70.01	75.00	55.25	58.01
3	75.01	80.00	59.06	62.01
4	80.01	85.00	62.86	66.01
5	85.01	90.00	66.67	70.01
6	90.01	95.00	70.48	74.01
7	95.01	100.00	74.29	78.01

- Note: For further increase in slabs beyond Rs. 100/kg, procurement price will be extrapolated as per the above. If the RSP of CBG falls below Rs. 70/kg, there will be immediate revision in the procurement pricing.

Additional transportation cost for transportation of CBG beyond 75 km (one-way distance) from CBG Plant shall be paid separately as per agreed slabs, based on mutual discussion: -

<b>One way Distance of CBG Plant to Retail Outlet / Selling Point</b>	<b>Additional cost of transportation of CBG Rs./kg (without GST)</b>
Above 75 km – upto 100 km	5.0
Above 100 km – upto 125 km	6.4
Above 125 km – upto 150 km	7.8

**CBG-CGD Synchronization** – The procurement price of Biogas offered to CBG Producers under CBG–CGD Synchronisation Scheme is Rs 1082/MMBTU + taxes. In addition, the Producers would receive compressions charges/pipeline compression charges/transportation charges as applicable for the Biogas/CBG supplied”.

1.45 The Committee wanted to know the mechanism for fixing the CBG price based on feedstock basis or calorific value of the gas to which the MoPNG in their written reply have stated that:-

“Under CBG-CGD Synchronization scheme, the procurement price of CBG paid to CBG producers has been revised to Rs.1082/MMBTU w.e.f 01.06.2022. This price is equivalent to ~Rs 46/Kg excluding compression charges (i.e. 54 Rs/Kg – 8 Rs /Kg), with methane content of ~90% in Biogas]. In addition, CBG producers would receive Biogas compression charge of Rs.8/Kg (at 200-250 bar pressure) for delivery at Retail Outlet OR Compression charge of Rs.2/Kg for injecting in the MDPE/Steel pipeline of CGD entity.

The procurement price of Bio-CNG/biomethane to the CBG producers will be increased on a pro rata basis depending on the purity (higher percentage of methane content) of Bio-CNG/biomethane received”.

1.46 The Committee wanted to vis-a-vis has been price of CNG and whether the Ministry has plans to review pricing at periodic intervals given the high volatility in international prices for natural gas to which the MoPNG in their written reply have submitted the following:-

“CBG price are decided by OGMCs participating in SATAT. As per the present CBG pricing mechanism, CBG pricing is indexed to the Retail Selling Price (RSP) of CNG in the market. With an increase in the Natural Gas price, there shall be an increase in RSP of CNG and an automatic increase in CBG procurement price as per the slabs mentioned above. Accordingly, there shall be an automatic review and increase of CBG procurement price once there is increase in CNG price.

The procurement price of CBG shall be valid for one year or till next revision (which may arise out of dip in CNG price, etc.) whichever is earlier. If the RSP of CNG falls below Rs 70/Kg, CBG procurement price will be reviewed on industry basis”.

### **Gas Synchronisation Scheme**

#### **Bio-methane Injection to Gas-Pipelines**

1.47 The Committee desired to know the difference in price of CBG under SATAT Scheme and gas synchronisation scheme by OMCs and GAIL respectively, to which the MoPNG in their written reply have submitted that:-

“The procurement price of CBG by GAIL under CBG CGD Synchronisation Scheme is a single price across India which discounts the compression charge component. The same is included in case of sale of CBG through cascades (at 200-250 bar) under SATAT initiative”.

1.47A The Committee asked whether there is any phase-wise (short term and long term) plans for blending quota/mix of co-mingled CBG in the total domestic gas supply to the CGD sector to which MoPNG in their written reply submitted that:-

- (i) “Domestic natural gas is supplied to CGD entities at a Uniform Base Price (UBP) on a pan India basis. However, the Retail Selling Price of PNG/CNG is fixed by the CGD entities based on their respective cost structure and margins, CAPEX, OPEX, demand, etc. in a particular GA.
- (ii) The CBG-CGD synchronization scheme envisages the share of co-mingled CBG in the total domestic gas supplied to CNG (T) and PNG (D) segment of CGD sector reach up to 10%. The scheme will be reviewed after a period of three years or as and when the percentage of CBG in the overall mix of CNG(T)/PNG(D) in the CGD sector reaches 10% whichever is earlier”.

1.48 The Committee sought to know the infrastructure transportation of CBG from plant to the injection points and whether the plans of integrating pipeline infrastructure with CBG plants to which MoPNG in their written reply submitted that:-

“As regards the connectivity for injection of CBG in CGD network under the CBG-CGD Synchronization Scheme, the responsibility of connecting the CBG plant with the CGD network and ancillary activities up to a distance of 10 KMs from the plant to the injection point would lie with the Biogas/CBG producers. In this regard, it is also envisaged that with the progressive development of CGD network in the GAs the issue of connectivity, especially for distance of 10 km and above shall be taken care of. Further, CGD entities are being sensitized about planning their pipeline and other infrastructure in synergy with the upcoming CBG plants so as to promote the injection of CBG in their network”.

1.49 The Committee wanted to know the initiatives undertaken for biomethane injection quota in Natural gas grid, and CNG to which MoPNG in their written reply submitted that:-

“For injection of CBG, GAIL has come up with the CBG CGD Synchronization Scheme for blending CBG into local CGD network for sale in CNG(T) and PNG(D) sectors. Currently, CBG blending is <1% of CNG consumed which progressively expected to go up to 10% as more and more CBG plants are commissioned. This Ministry is working for further streamlining of CBG-CGD synchronization scheme”.

1.50 The Committee wanted to know OMCs by CBG about differential price mechanism for delivery of gas at different locations to which the MoPNG in their written reply have stated that:-

“Oil & Gas Companies have offered a procurement price of CBG of Rs. 46/kg + applicable taxes purified as per IS 16087: 2016 standards, compressed to 250 bar pressure and delivered to Retail Outlets in cascades (within 25 Km). The procurement price of CBG shall remain valid from 1.10.2018 to 31.3.2024. There will be periodic revision in procurement price with effect from 1.4.2024, however minimum procurement price will not be lower than Rs. 46/kg + applicable taxes for the period from 1.4.2024 to 31.3.2029.

The above-mentioned pricing under SATAT initiative is uniform across India”.

1.51 The Committed sought to know the price offered to buy CBG is attractive enough for the investors to which the MoPNG in their written reply have stated that:-

“The pricing offered under SATAT initiative has resulted in 16 commissioned CBG Plants and 37 more Plants are in various stages of construction. However, at various forums entrepreneurs have requested for increasing CBG procurement price under SATAT”.

Elaborating about the CBG pricing during oral evidence the representative of Phoenix India submitted that:-

“.....the gas pricing is good and we have no problem with that. The problem is that right now there is no value for the bio-manure. That is why, I was suggesting that if we are getting a price of anything between Rs. 4 to 6 per kilogram of bio-manure which is getting produced, that will make the business case extremely viable. If there is a carbon value on top of it, that definitely makes it very attractive. But let us go step by step. I think the first thing to be done is the bio-manure inclusion and acknowledgement”.

1.52 The Committee pointed out that the GAIL India Ltd. is finalising the operational modalities for the supply of CBG blended with domestic gas and whether it includes setting a uniform price of City gas / PNG across all CGD entities (private/PSUs) to which the MoPNG in their written reply have stated that:-

“Domestic natural gas is supplied to CGD entities at a Uniform Base Price (UBP) on a pan India basis. However, the Retail Selling Price of PNG/CNG is fixed by the CGD entities based on their respective cost structure and margins, CAPEX, OPEX, demand, etc. in a particular GA”.

1.53 The Committee desired to know the quality specifications fixed for CBG by OMCs and how is the quality checked, to which the MoPNG in their written reply have stated that:-

“The quality of CBG supplied by the CBG Plant is of automotive grade and in conformity to IS 16087:2016 standards or its latest version. Additionally following shall also be met

- i. CBG shall be free from liquids over the entire range of temperature and pressure encountered in storage and dispensing system.
- ii. The CBG shall be free from particulate matter such as dirt, dust, etc.

- iii. CBG delivered shall be odorized similar to a level found in local distribution (ref. IS 15319)

CBG Plants have online Gas Chromatograph/ Gas Analyzer and all relevant testing equipment to ensure that the quality of each cascade of CBG delivered to OGMCs meets all parameters of the above said BIS Standards. Test reports/ quality certificates duly certified by the CBG Plant owner accompanies with every Cascade of CBG supply”.

1.54 The Committee wanted to know the difference in the pricing of CBG depending on the various feedstocks, the representative of Ever Enviro submitted that:-

“यह फीड स्टॉक टू फीड स्टॉक डिपेंड करता है। पराली में आउटपुट ज्यादा है, लेकिन कॉस्ट है। जैसे म्युनिसिपल सॉलिड वेस्ट में है, अगर मेरे पास 100 टन म्युनिसिपल सॉलिड वेस्ट है, तो उससे 3.2टन गैस निकलेगी और अगर मेरे पास 100 टन पराली है तो उससे 14 टन गैस निकलेगी। म्युनिसिपल सॉलिड वेस्ट में, जैसे मैं तो रॉयल्टी दे रहा हूँ, क्योंकि मेरा प्लांट इतना बड़ा है। जो प्रोडक्शन की कॉस्ट आती है, नंबर वन, वह प्लांट साइज पर डिपेंड करती है, छोटा प्लांट वायबल नहीं है। नंबर टू, आपका ऑप्टिक कितनी दूरी पर है। आज जो हमारी स्कीम आयी है, वह 75 किलोमीटर तक का एक रेट एक समान है। किसी का अगर 10 किलोमीटर है तो उसके लिए वायबल हो जाएगा, लेकिन अगर उसे 75 किलोमीटर जाना है तो रेट वायबल नहीं होगा। यह टेक्नोलॉजी के ऊपर, आपके प्लांट की कैपेसिटी के ऊपर डिपेंडेंट है, 2.5 रुपये का कोई मतलब ही नहीं है। अगर 2.5 रुपये होता तो आज 5 लाख प्लांट लग जाते”।

1.55 The Committee asked about the potential end consumers and calorific value of CBG to which the MoPNG in their written reply have stated that:-

“The potential customers of CBG are vehicles and industries towards replacement of petrol, diesel and CNG. CBG is also sold to commercial customers as replacement of LPG”.

“The calorific values of CBG and Natural Gas are as under:

The typical calorific value range for CBG is 8100-8800 Kcal/SM<sup>3</sup> (GCV).

The typical calorific value range for Natural Gas (Domestic & Imported) is 9150-9800 Kcal/SM<sup>3</sup>”

### **Taxation structure on CBG Industry**

1.56 The Committee wanted to know various types of taxes imposed on CBG and its by products like Liquid fermented organic manure and what steps are being taken for rationalization of the same.

“Presently, CBG/biogas is covered under GST @ 5%. Branded and packed Fermented Organic Manure is covered under GST @5%. However, Natural gas is outside GST and is liable to State VAT / Central Sales Tax. Further, conversion of natural gas to CNG is liable to Central Excise Duty. Accordingly, when Biogas is mixed with natural gas for compression to CNG, the same may be taxed for Excise Duty and VAT, apart from GST on Biogas. This Ministry has requested Department of Revenue to exempt the excise duty on the quantity of CBG blended with CNG until Natural Gas is bring under the ambit of GST”.

**A. Income Tax Issues:-**

1.57 The Committee sought to know the impact of recent amendments in the Income Tax Act, 1961, leading to an ambiguity on the continuance of exemption available to CBG plants in respect of corporate tax under Section 80 JJA and whether exemption from payment of corporate tax is still available to CBG plants under section 80 JJA of Income Tax Act to which Department of Revenue (DoR) have in the written reply have submitted that:-

“With regard to the above it may be noted that section 80JJA of the Income-tax Act, 1961 (the Act) provides for deduction of 100% from the profits and gains derived from the business of collecting and processing or treating of biodegradable waste for generating power or producing bio-fertilizers, bio-pesticides or other biological agents or for producing bio-gas or making pellets or briquettes for fuel or organic manure for a period of five consecutive assessment years beginning with the assessment year in which such business commences.

Accordingly, all the assessees, including corporates engaged in production of bio gas may avail of the deduction under section 80JJA of the Act for a period of five consecutive assessment years beginning with the assessment year in which such business commences. It may be pertinent to note that at present there is no sunset clause applicable to the profit linked deduction under section 80JJA of the Act.

It may be pertinent to mention that if the domestic companies engaged in the business of producing bio-gas have opted for the concessional taxation regime of 22% (plus applicable surcharge and cess) under section 115BAA of the Act or the concessional taxation regime, applicable to new domestic manufacturing companies, of 15 % ( plus applicable surcharge and cess) under section 115BAB of the Act, they shall not be eligible to claim the deduction under section 80JJA of the Act as the option under the concessional taxation regimes is available to domestic companies subject to the condition that they, inter-alia, do not avail any specified exemptions and deductions under the Act”.

1.58 Elaborating further on the issue whether the exemption is available to all plants or the same is subject to some eligibility conditions and whether the Ministry proposes to extend the duration of exemption in view of poor performance of SATAT scheme and development of domestic sources of energy to which DoR have in the written reply have submitted that:-

“Under section 80JJA of the Act 100% profit linked deduction is applicable to all assessees on their income derived from the business of collecting and processing or treating of bio-degradable waste for generating power or producing bio-fertilizers, bio-pesticides or other biological agents or for producing bio-gas or making pellets or briquettes for fuel or organic manure for a period of five consecutive assessment years beginning with the assessment year in which such business commences. The other condition for availing this deduction is that the

return for the assessment year is required to be filed before the due date for such assessment year.

The deduction under section 80JJA of the Act can be availed by the assessee for a period of five consecutive assessment years beginning with the assessment year in which the business of collecting and processing or treating of biodegradable waste for generating power or producing bio-fertilizers, bio-pesticides or other biological agents or for producing bio-gas or making pellets or briquettes for fuel or organic manure commences.

An assessee is eligible to claim deduction under section 80JJA of the Act if he has profits or gains derived from the business of collecting and processing or treating of bio-degradable waste for generating power or producing bio-fertilizers, bio-pesticides or other biological agents or for producing bio-gas or making pellets or briquettes for fuel or organic manure. As mentioned above the return is also required to be filed before the due date.

There is no proposal to extend the period of exemption regime as the deduction is available from the year of commencement of production of bio-gas.”

## **B. GST issues in CBG Plants:-**

1.59 When the Committee wanted to know as to what steps are being taken by the Department of Revenue to address the concerns of the CBG entrepreneurs, regarding harmonization of tax structure related to CBG the representative of the DoR during the oral evidence submitted that:-

“कुछ प्रश्न जीएसटी, एक्साइज, वाएब्लिटी ऑफ प्लांट्स इत्यादि पर हुए। मैं माननीय समिति का ध्यान इस ओर आकृष्ट करना चाहूंगा कि जो बायोगैस प्लांट्स थे और रिन्युएबल के और प्लांट्स हैं, जैसे सोलर पावर और सोलर पावर जेनरेटर, इन सबको एक साथ क्लब करके उन पर जीएसटी लगता था। पहली बार जीएसटी की दर 5 प्रतिशत थी। पर, समस्या यह थी कि यह 5 प्रतिशत की दर देखने में अच्छी लगे कि शायद वह इनकी हेल्प कर सके, पर तथ्य यह है कि अगर आप इन प्लांट्स पर या मशीनरी पर या मैनुफैक्चरिंग आइटम्स पर 5 प्रतिशत की दर लगाएंगे तो वास्तव में यह नुकसानदेह है। इससे होता यह है कि जैसे बायोगैस प्लांट्स या सोलर सेल्स या और जो रिन्युएबल हैं, इनके सारे इनपुट्स और इनपुट सर्विस और कैपिटल गुड्स, सभी पर 18 प्रतिशत का जीएसटी लगता है। अब अगर इस पर भी 5 प्रतिशत लगे तो जो एक्जुमुलेटेड आईटीसी के इश्यूज आते हैं, उसकी वजह से डोमेस्टिक मैनुफैक्चरिंग वाएबल नहीं रहता है और इसका मतलब यह है कि अगर डोमेस्टिक मैनुफैक्चरिंग वाएबल न रहे और उनके एक्जुमुलेटेड आईटीसी रहें तो 5 प्रतिशत करने का मतलब है कि फिर ये आइटम्स देश में नहीं बनेंगे। फिर आपको उसे इम्पोर्ट ही करना पड़ेगा क्योंकि domestic manufacturing cannot survive the unlevel playing field which is created vis-à-vis imports. इसके परिणामस्वरूप, इन्वर्टेड ड्यूटी स्ट्रक्चर में जीएसटी में आने के बाद बहुत काम हुए हैं। आपने देखा होगा कि दो-तीन सालों में हमने जीएसटी में काफी सारे आइटम्स की रेट्स को कैलिब्रेट किया है। इसका मतलब कि इनपुट साइड पर जो जीएसटी रेट्स हैं, वे आउटपुट साइड के रेट्स से कम न हों। आउटपुट साइड के रेट्स हमेशा ज्यादा होना चाहिए ताकि पीछे से जो क्रेडिट आ रहा है, वे यूज हो सकें। हम लोगों ने केवल बायोगैस प्लांट्स के लिए कोई स्पेशल डिस्पेनसेशन नहीं किया है।

...सर, आपने दूसरा इश्यू यह भी उठाया था कि बायोगैस प्लांट्स के जो इक्विपमेंट्स हैं, उनमें क्या आता है, इसमें कुछ सन्देह है और जब असेसमेंट की बारी आती है, जैसे अगर कम्प्रेसर आया या इस तरह के आइटम्स आए तो असेसिंग ऑफिसर द्वारा सन्देह व्यक्त होता है और उसमें विवाद पैदा होता है। पर, हमारी जो नोटिफिकेशन है, उसे हम दोबारा क्लैरिफाई भी कर सकते हैं। जैसा कि कमेटी कह रही है, हम इस विषय को क्लैरिफाई करने की कोशिश करेंगे। बेसिकली, इसमें हमने तीन चैप्टर्स के नाम दिए हैं – 84, 85 और 94। उस पर आने वाले जो भी आइटम्स हैं, जिसमें मेजॉरिटी ऑफ आइटम्स आते हैं,

उन सब पर अगर बायो गैस प्लांट के लिए इनपुट है और अगर वेएनड्यूस के लिए दिए जा रहे हैं तो उस पर प्रतिशत का ही रेट है। हम लोग इसे उचित तरीके से क्लैरिफाई करने की कोशिश करेंगे।

सर, तीसरा इश्यू यह था कि बायोगैस जीएसटी के दायरे में है, सीएनजी एक्साइज के दायरे में है और एक आइटम बायोगैस जीएसटी के दायरे में और दूसरा सीएनजी एक्साइज के दायरे में होने से शायद इस पर डबल टैक्सेशन होता है क्योंकि इसमें होता यह है कि मान लीजिए कि बायोगैस पर 5 प्रतिशत जीएसटी लगा। उसके बाद बायोगैस को कम्प्रेस करके सीएनजी के साथ मिक्स किया गया और फाइनली सीएनजी बिकी तो सीएनजी पर 14 प्रतिशत की एक्साइज ड्यूटी लगती है और वैट भी लगता है। इसलिए मंत्रालय का प्रस्ताव है या उद्योगों का जो सुझाव है, उनका यह कहना है कि चूंकि बायोगैस मिक्स होकर अल्टीमेटली सीएनजी बनता है और बायोगैस में जीएसटी अगर लग गया है तो उतना वेवर बाद में मिलना चाहिए। आप यह कह सकते हैं कि दोनों चीजें अगर ड्यूटी पेड हैं और मिक्स हो रही हैं तो शायद दोबारा से एक्साइज ड्यूटी न लगे। पेट्रोल और डीजल में एथेनॉल ब्लेंडिंग और जो बायो-डीजल ब्लेंडिंग होती है, उसमें इस तरह के कंसेशन हैं कि अगर दोनों मिक्स होकर आए तो उसमें दोबारा एक्साइज ड्यूटी नहीं लगाते हैं। इस विषय में हम एमओपीएनजी से बात कर रहे हैं। इस विषय में कुछ तथ्य हैं, जो आपके लिए जानना जरूरी है। जब अगर कोई ड्यूटी रिडक्शन होता है या कंसेशन हम देते हैं, तो उसकी संभावना यह होती है कि वह पास ऑन होगा, तब तो उस कंसेशन को देने का फायदा है। अगर ऐसी संभावना बनती है कि वह पास ऑन नहीं होगा, वह एब्जावर्ड हो जाएगा, तब वित्त मंत्रालय को विचार करना पड़ेगा कि इसमें किसका फायदा हो रहा है। ..... एमओपीएनजी को हमने रिसेंटली लिखा भी है। इस पर विचार करके हम लोग आपके पास आएं कि हमने क्या विषय लिया और जल्दी कोशिश करेंगे कि इस काम को करें। मूलभूत मुद्दा यह है कि क्या नेचुरल गैस को जीएसटी में लाया जाए और क्या उससे समाधान होगा? यह सच है कि जब तक जीएसटी में नहीं आएगा, यह कैसकेडिंग इश्यूज़ कुछ-कुछ रहेंगे। मान लीजिए आपने सीबीजी कर भी दिया, तो प्लांट में जो टैक्स लगा रहा है, जो 12 पर्सेंट जीएसटी लग रहा है, वह तो फिर भी इम्बेड होगी और सर्विसेज़ में जो जीएसटी लग रही है, वह भी इम्बेड होगी। इसलिए वह कैसकेडिंग तो होगी, जब तक यह एक चीज न बने। इश्यू यह है कि स्टेट्स को नेचुरल गैस से काफी रेवेन्यू मिलता है, सेंटर को कोई खास रेवेन्यू नहीं मिलता है। हमारे लिए रेवेन्यू का मुद्दा नहीं है। 1500 से 2000 करोड़ रुपये का ही रेवेन्यू ही सिर्फ हमें मिलता है। स्टेट्स को अगर आप देखें तो करीब दस हजार करोड़ रुपये का रेवेन्यू इसमें आएगा। उनके लिए जीएसटी काउंसिल में आकर यह मानना कि नेचुरल गैस को जीएसटी में लाएं, यह एक बड़ा मुद्दा है। इसमें इनफॉर्मल चर्चा नहीं हो पाई। उनकी तरह से बहुत ज्यादा यह नहीं है कि वे पेट्रोलियम प्रोडक्ट्स को लाना चाहेंगे। हम लोग प्रयास करते हैं, हमने डिस्कस किया है। हो सकता है कि भविष्य में ऐसा हो पाए।”।

1.60 The Committee desired to know the GST slab for biogas plant-related equipment & parts to which the Ministry submitted the following:-

“GST rate on all renewable energy devices (including CBG plants) and the parts for their manufacture has been increased from 5% to 12% as per the

recommendations of the 45<sup>th</sup> GST Council. This was done in order to remove the inverted duty structure as most of the inputs for these renewable energy devices and their parts attract a GST rate of 18%”.

1.61 The Committee further enquired whether the increase in GST slab has resulted in higher GST mop up and the quantum in GST mop up to which the Ministry submitted the following:-

“The increase in GST rate on all renewable energy devices (including CBG plants) was done to address the inverted duty structure vis-à-vis the inputs for these equipment which attract 18% rate of GST and not to increase in GST mop up”.

Continuing further, the Committee sought to know input credit scheme under GST for CBG plant & machinery to which the Ministry submitted the following:-

“Under GST regime, Suppliers are entitled to take credit of input tax paid on their inputs, input services or/ and capital goods which are used or intended to be used in the course or furtherance of his business, subject to such conditions and restrictions as are prescribed under the GST law and rules made thereunder. Such eligible input tax credit can be availed and utilized for offsetting tax liability on outward supply”.

1.62 The Committee pointed out that on CBG both VAT and GST are levied to which the Ministry have submitted that:-

“There are no items on which both GST and VAT is levied. Only GST is levied on biogas at a concessional rate of 5%”.

1.63 The Committee sought to know the structure of duty on ethanol which is also an energy product and whether both VAT & GST are levied on ethanol and how duty structure of CBG is different from that of ethanol, to which the Ministry have furnished the following in their written reply:-

“Ethanol attracts GST at the rate of 5% when supplied to Oil Marketing Companies for blending with motor spirit. Otherwise, ethanol attracts 18% GST. VAT is not levied on ethanol”.

1.64 The Committee sought clarity in the definition of biogas plant under GST Act. and at times falling under the scanner of Indirect Taxation Officials due to the certain items such as compressor, up-gradation units, balloons (membranes), etc., when procured at concessional GST rate, to which the Ministry have furnished the following in their written reply:-

“GST rate on the parts for manufacture of renewable energy devices, including CBG plants, covered under S. No. 201A of notification No. 01/2017-CT (Rate) (Annexure) attract GST rate of 12%. Therefore, if items like compressor, upgradation units, and balloons (membranes) are procured for use in

manufacture of Bio-Gas plant or waste-to-energy device plant/ devices, they will attract a GST rate of 12%”.

1.65 The Committee sought to know the steps taken to bringing a uniform tax regime for CBG and its likely substitute petroleum products (NG, PNG, LPG) as this creates an anomaly (particularly for marketing companies) in the swift substitution/ switching/ blending of CBG with petroleum products, to which the Ministry have furnished the following in their written reply:-

“Currently, while biogas and LPG attract GST levy, Natural gas attracts central excise duty and VAT.

Article 279 A (5) of the Constitution prescribes that the Goods and Service Tax Council shall recommend the date on which the goods and services tax shall be levied on petroleum crude, high speed diesel, motor spirit (commonly known as petrol), natural gas and aviation turbine fuel (ATF). Further, as per section 9(2) of the CGST Act, inclusion of these products in GST will require the recommendation of the GST Council.

So far, the GST Council, in which the States are also represented, has not made any recommendation for inclusion of natural gas under GST”.

1.66 The Committee desired to know the different GST rate for Turnkey contract of the biogas plant wherein the supply is charged at 12% GST and service at 18%. And the steps taken to bring a uniform tax regime for procurements in CBG projects to which the Ministry have furnished the following in their written reply:-

“If renewable energy devices are supplied, by a supplier, along with supplies of services related to construction or engineering or installation or other technical services for these renewable energy devices, then the value of supply of goods shall be deemed as 70% and the value of supply of services shall be deemed as 30%. (S. No. 201A of notification No. 01/2017-CT (Rate) refers). Further, GST rates are decided by the GST Council in its meetings and no recommendation has been made by the Council regarding change in GST rates for procurements made in CBG projects. No inputs have been received in this regard from the line Ministry i.e. Ministry of Petroleum and Natural Gas, either”.

**Central Financial Assistance to CBG Plants:-**

1.67 When the committee have come to know the reasons for discontinuing Central Financial Assistance which was earlier provided to CBG plants and Whether the Ministry proposes to restart the Central Financial Assistance to CBG plants in view of pathetic performance of SATAT scheme to which MNRE in written reply hav submitted that:-

“The Ministry of New and Renewable had been implementing “Programme on Energy from Urban, Industrial and Agricultural Wastes / Residues” till 31.03.2021.

Under the programme, Central Financial Assistance (CFA) was provided for setting up of CBG plants.

Further, for continuation of scheme beyond 31.03.2021 till 2025-26, a consolidated proposal named National Bio-Energy Programme was submitted to EFC. Now, EFC has recommended Phase-1 of the Program with a budget outlay of Rs. 858 Crore, which also includes the committed liabilities. While, the National Bioenergy Program will be implemented in two phases with a total budget outlay of Rs. 1715 Crore from 2021-22 to 2025-26”.

1.68 Further, the Committee wanted to know Whether the Ministry proposes to enhance the central financial assistance to offset the rising inflation and thereby cost of setting up the plant, to which MNRE in their written reply stated that:-

“Further, it is to mention that performance evaluation of “Programme on Energy from Urban, Industrial and Agricultural Wastes / Residues” implemented during FY 2018-19 to FY2020-21, Third Party recommended to keep the rate of CFA for CBG projects unchanged. Accordingly, CFA rates for CBG projects implemented under National Bio-Energy Programme will remain unchanged as i.e. Rs. 4.00 crore for 4800 kg per day of CBG”.

1.69 The Committee further wanted to know the status of formulation of standards for terms and definitions, construction and design, operation, technical specs, emission standards, safety etc. and by when the same is expected to be made enforceable that by the Ministry. In this regard, the Ministry have submitted that:-

“The draft biogas plant standards and guidelines have already been submitted to BIS by MNRE on 20th Apr 2022. Now, BIS has constituted three sub-committees to finalize the draft for small-, medium- and large-scale biogas plants separately and as informed by BIS, it is expected to finalize the draft and publish it by Dec 2022”.

1.70 The Committee wanted to know the steps being taken to provide carbon credits and its trading and offset mechanism in general and also in specific with respect to CBG plants to which the Ministry have submitted that:-

“The Energy Conservation (Amendment) Bill, 2022, administered by Ministry of Power and introduced in the Parliament, inter alia, seeks to establish carbon credit markets in India. The bill proposes to insert a new clause (w) in section 14 of the principal Act, after clause (v) as given below:—  
(w) specify the carbon credit trading scheme”

1.71 When the Committee wanted to know whether the CBG plant owners are also applying for carbon credits and what is the mechanism adopted for the same the representative of the Verbio industries during the oral evidence informed that:-

“The question is, what is the value we are getting for that claim? For example, we did this exercise. There is a consulting firm based out of Indore. They did our complete evaluation. They gave a value of \$5 per tonne of carbon dioxide for one carbon credit. To be honest, with the effort which will go into this and getting \$5 for one tonne is not really worth the effort. That is why we did not proceed with that topic. So, right now, there is no institutionalised mechanism wherein a fair

value can be allocated for that carbon credit. Yes, we can get it but then there has to be a fair value allocation”.

**Role of KVK, FPOs and CHC in CBG plants:-**

1.72 When the Committee discussed agricultural extension machinery including Krishi Vikas Kendras (KVK), FPO, etc. to make special efforts to propagate utilization of ‘Organic Ferment Manure’ the representative of the Ministry submitted that:-

“आपने जो प्रश्न किया है, उसमें तीन कंपोनेंट्स हैं। आपने एक्सटेंशन के बारे में जानना चाहा है कि जो जैविक अपशिष्ट है, उसके उपयोग को बढ़ावा देने के लिए कृषि मंत्रालय क्या कदम उठा रहा है। हमारा जो एक्सटेंशन विंग है, उसके दो कंपोनेंट्स हैं। एक स्टेट का एक्सटेंशन विंग है और दूसरा आईसीएआर का कृषि विज्ञान केन्द्र के माध्यम से एक्सटेंशन विंग है। उनके जो संस्थान हैं, उनके माध्यम से डिमॉन्स्ट्रेशंस किए जाते हैं। जैविक खेती की बढ़ोतरी के लिए जो आईसीएआर के नेटवर्क ऑफ इंस्टीट्यूट्स हैं, जिनके माध्यम से जैविक कृषि को बढ़ावा दिया जाता है। उसके अंतर्गत विभिन्न क्रॉप्स हैं, उनके पैकेज ऑफ प्रैक्टिसेज़ बनाए गए हैं। इनके जो पैकेज ऑफ प्रैक्टिसेज़ हैं, इसमें कैसे-कैसे जैविक इनपुट्स का उपयोग होगा, उसके बारे में केवीकेएज़ के माध्यम से जानकारी प्रदान की जाती है और फॉर्मर फ्रीड डिमॉन्स्ट्रेशंस किए जाते हैं। दूसरा, आपने एफपीओज़ का जिक्र किया है। भारत सरकार जैविक खेती की दो परियोजनाएं क्रियान्वित करती है। एक पीकेवीवाई नाम से परंपरागत कृषि विकास योजना है। दूसरा मिशन ऑर्गेनिक वैल्यू चेन डेवेलोपमेंट फॉर नॉर्थ-ईस्ट रीज़न है। उत्तर पूर्वी क्षेत्र के लिए एक विशेष परियोजना है। इन दोनों परियोजनाओं के अंदर किसानों के समूह बनाए जाते हैं। इन समूहों के अंतर्गत जैविक खेती को बढ़ावा देने के लिए इनपुट्स को सपोर्ट दिया जाता है। उनको टेक्नोलॉजी, वैल्यू एडिशन और सारी चीजें प्रोवाइड की जाती हैं। इसी परियोजना के अंदर कस्टम हायरिंग सेंटर्स का भी प्रावधान है, जो जैविक इनपुट्स हैं, उसके माध्यम से किसानों और क्लस्टर्स में प्रोवाइड कराए जाते हैं। महोदय, मैं यह भी निवेदन करना चाहूंगा कि जब कंप्रेस्ड बायो गैस संयंत्रों की बात आई थी, तो उससे दो तरह के आउटपुट्स आते हैं। एक तो फर्मेंटेड ऑर्गेनिक मैन्योर है और दूसरा लिक्विड फर्मेंटेड ऑर्गेनिक मैन्योर है। किसी भी खाद इनपुट को बाजार में बेचने से पहले आवश्यक है कि एक फर्टिलाइजर कंट्रोल ऑर्डर है, जो कि एसेंशियल क्मोडिटीज़ एक्ट के अंतर्गत प्रचलित हुआ है, उसमें इन खादों को शामिल किया जाता है। कृषि मंत्रालय ने वर्ष 2020 में इनको फर्टिलाइजर कंट्रोल ऑर्डर के अंतर्गत शामिल किया है। जो लिक्विड और सॉलिड जैविक इनपुट्स जेनरेट हो रहे हैं, इनको कोई भी इंटरप्रेन्योर अपने मार्केटिंग चैनल के जरिए पूरे देश के किसानों को बेच सकता है। उसमें किसी तरह की पाबंदी नहीं है”।

Elobarating further on the issue:-

“मैंने निवेदन किया है कि इसके अंदर इनपुट खरीदने का प्रावधान है, जिसके लिए किसानों को परियोजना के माध्यम से सपोर्ट दिया जाता है। किसानों के लिए बाजार में जितने तरह के जैविक इनपुट्स उपलब्ध हैं, उनको फ्रीडम है कि वे उसमें से क्या चुनें। जो आउटपुट आ रहा है, संयंत्रों से जो खाद आ रही है, उनको उसका डिमॉन्स्ट्रेशन केवीके और कृषि विश्वविद्यालयों के माध्यम से हम करा सकते हैं, ताकि उनकी क्षमता के बारे में किसानों को जानकारी हो सके और वे इनको भी चूज कर सकें। साथ ही, कंपनीज को भी इसमें आगे आना पड़ेगा, ताकि इसकी मार्केटिंग हो और इसके बारे में किसानों को बताया जा सके”।

1.73 When the Committee further wanted to know about the demonstration projects for management of crop stubble and agriculture residue. The representatives of MoA submitted that:-

“मैंने टेक्नोलॉजी की बात की है कि मंत्रालय द्वारा जैविक खेती में किस तरह के टेक्नोलॉजी और किस तरह के पैकेज ऑफ प्रैक्टिस तैयार किए गए हैं, जिससे किसान अलग-अलग तरह के क्रॉप्स ले सकते हैं। वह स्टैंडर्डिजेशन कृषि मंत्रालय द्वारा किया गया है। इनपुट का जो इंडिपेंडंस है, वह किसानों पर छोड़ा गया है और स्कीम के अंदर इनपुट के लिए पैसा किसानों को प्रोवाइड किया जा रहा है। मैंने यह निवेदन किया है”।

1.74 The Committee further wanted to know about the role of NABARD in providing assistance to CBG plants, the representative of MoA submitted that:-

“गवर्नमेंट्स को लेंडिंग करते हैं या स्टेट गवर्नमेंट्स के कारपोरेशंस को लेंडिंग करते हैं। इसके अलावा, नाबार्ड ज्यादातर बैंक्स को रीफाइनेंस करता है ताकि वे बैंक्स आगे एग्रीकल्चर के क्षेत्र में लेंडिंग कर सकें, जिनमें को-ऑपरेटिव बैंक्स, रीजनल रूरल बैंक्स हैं”।

### **Bio-manure offtake issues:-**

1.75 The Committee desired to know whether Agriculture and Fertilizer Ministries have been involved for off take of bio-manure so that the financial viability of CBG plants are improved upon to which the MoPNG in the written reply have submitted that:-

“Ministry of Agriculture and Ministry of Chemical & Fertilizer are yet to create any policy for off-take of bio-manure. Ministry of Fertilizer has been requested to provide Market Development Assistance for FOM (@Rs. 1500/ton) and direct Fertilizer Companies for mandatory off-take of Fermented Organic Manure (FOM) / bio-manure along with chemical fertilizer. Ministry of Agriculture has been requested to create enabling ecosystem for promotion of bio-manure through research and extension activities. Such measures will increase viability of CBG Plants under SATAT initiative”.

1.76 When the Committee wanted to know about the market for fermented organic manure/digested bio-gas slurry and the price and if any subsidy is provided by the government, the representative of Department of Fertilizers (DoF) during the oral evidence submitted that:-

“फर्मेंटेड बायो मैन्योर को पिछले साल ही एफसीओ के अन्दर लाया गया था। अगर आप एफसीओ में देखेंगे, तो इसमें 10 से ज्यादा ऑर्गेनिक फर्टिलाइजर्स हैं, उनमें फर्मेंटेड ऑर्गेनिक मैन्योर भी हैं। जहाँ तक इसमें सब्सिडी या सपोर्ट की बात है, हमारे यहाँ पहले एक मार्केट डेवलपमेंट असिस्टेंस होता था, वह सिर्फ सिटी कम्पोस्ट के लिए था। सिटी कम्पोस्ट का ज्यादा खर्च नहीं हो रहा था और उसकी क्वालिटी में भी कुछ फॉल्ट थी, इसलिए एमडीए चला नहीं, इसलिए हमें डीओई ने बताया कि उसको बन्द कर दिया जाए। वह बन्द हो गया है। अब आगे के लिए हमने एक एमडीए स्कीम बनाया है, जिसमें सारे ऑर्गेनिक और बायो फर्टिलाइजर्स इंकलूडिंग फर्मेंटेड बायो मैन्योर के लिए हमने एक ईएफसी नोट बनाकर डीओई को भेजा है। अभी यह विचाराधीन है। दूसरी बात, इसमें जहाँ तक ऑर्गेनिक मैन्योर की बात है, तो उसमें 1500 रुपए प्रति मीट्रिक टन मार्केट डेवलपमेंट असिस्टेंस देने का प्रावधान है। यह तो चल ही रहा है। इसके अलावा, हमने सारे पीएसयूज और हमारी कम्पनी को, जहाँ पर कम्प्रेस्ड बायो गैस के प्लांट्स लगे हैं, उनके लिस्ट देते हुए, हमने उनको कहा है कि जो वहाँ से मैन्योर बनता है, आप इनको बास्केट एप्रोच में सारे स्टेट्स या फार्मर्स को अपने आउटलेट्स में उपलब्ध कराएंगे।

यह दूसरी चीज है, जो हमने की है। इसकी मॉनिटरिंग अभी शुरू नहीं की है। हाल ही में मिनिस्ट्री ऑफ पेट्रोलियम एंड नेचुरल गैस के साथ एक मीटिंग हुई थी। थर्ड पॉइंट है, जैसा कि प्राइस के

बारे में कहा जा रहा है, प्राइस तो हम किसी का भी निर्धारित नहीं करते, अनलेस यूरिया एक ही है, डिपार्टमेंट ऑफ फर्टिलाइजर्स प्राइस फिक्स करता है, अदरवाइज सारे मार्केट फोर्स के हिसाब से ही हैं। इसके संबंध में मिनिस्ट्री ऑफ पेट्रोलियम एंड नेचुरल गैस के साथ एक मीटिंग करेंगे। इसे देख लेंगे कि इसे किस तरह करें, जिससे जो भी इंटरप्रेन्योर्स उसमें जो भी लगाएं, उनको फायदा हो। इसमें आगे कार्यवाही की जाएगी, लेकिन हमारे स्तर से एमडीए के लिए और बास्केट एप्रोच के लिए हमने सबको बता दिया है। जहां तक फार्मर्स का इश्यू है, एग्रीकल्चर के जॉइंट सेक्रेट्री यहां पर हैं। इनसे पहले मैं वहां जॉइंट सेक्रेट्री थी। वहां ऑर्गेनिक फार्मिंग की स्कीम हैं, जिनमें फार्मर्स को एक स्कीम के अंतर्गत एक परंपरागत कृषि विकास योजना है, जिसके तहत उन्हें यह मिलता है, हम मार्केट डेवलपमेंट असिस्टेंस देते हैं। अतः दोनों तरफ से हम इसको बढ़ावा देने की कोशिश कर रहे हैं”।

### **MARKET DEVELOPMENT ASSISTANCE FOR CBG**

1.77 The Committee note that a market development assistance of at least rupees 1500/- per tone was earlier being given to the manufacturers of city compost under the Swachh Bharat Mission Scheme. The Committee desired to know whether the above market development assistance is available for CBG plants based on municipal solid waste to which MoPNG in their written reply submitted that:-

“The Government had approved the policy on promotion of city compost which was notified by the Department of Fertilizers on 10.02.2016 wherein Market Development Assistance of Rs. 1500/- was provided for scaling up production and consumption of city compost.

The scheme of Market Development Assistance (MDA) for scaling up production and consumption of city compost has been discontinued after 30<sup>th</sup> September, 2021 based on the review of the MDA Policy and recommendations of Expenditure Finance Committee (EFC) in its meeting dated 2<sup>nd</sup> August, 2021”.

1.78 The Committee desired to know whether assistance from Fertilizers companies towards co-marketing of digestate along with chemical fertilizers through their dealers network and other related marketing entities to be extended to all the organic manure (including biogas plants) producing plants registered with Department of Fertilizers sector to which MoPNG in their written reply submitted that:-

“Vide letters dated 7.1.2022, 11.5.2022, 27.5.2022 and 19.7.2022, all fertilizer marketing companies have been requested to arrange for off-take of Fermented Organic Manure (FOM) and other organic and bio-fertilizers with chemical fertilizers as a “Basket Approach” to ensure balanced and integrated nutrient management for the crops.

A concept note to promote organic and bio-fertilizers by extending Market development Assistance (MDA) for organic fertilizers and bio-fertilizers has been sent to Department of Expenditure for In-principle Approval. Response from Department of Expenditure is awaited.

## **Training and Manpower**

1.79 The Committee wanted to know whether Ministry has taken up with Ministry of Skill Development or oil PSUs for training programme to address the issues of lack of sufficient trained manpower to which the MoPNG in their written reply have stated that:-

“Oil PSUs have taken various steps to enhance skill development for CBG sector:

1. They are offering handholding in technology, financing and other aspects to facilitate CBG Plants under SATAT initiative being set up by entrepreneurs. Various technical sessions have been held for prospective entrepreneurs with involvement of eminent technology institutes like IITs, IISc, etc. and technology providers to provide details on SATAT initiative to existing and new applicants.
2. A dedicated web portal on SATAT initiative (<https://satat.co.in>) has been developed. The portal has details on SATAT initiative documents, financing of CBG Plants, technology providers, enablers on CBG, Government Policies, Frequently Asked Questions, details on manure marketing. The portal has detailed learning modules on CBG technology and financing. The portal also offers learning opportunities in plant operation & maintenance, equipment suppliers, technology, manure, etc. and is regularly updated with latest details.
3. IndianOil is in discussion with Skill Council of Green Jobs for development of National Occupational Standards and Qualification Packages (QPs) for CBG sector. Skill Council for Green Jobs has developed various Qualification Packs on different job roles for production and utilization of Compressed Biogas. The training packages have been submitted for feedback from various Ministries which are expected to be finalized during meeting proposed on 27.1.2022 by Ministry of Skill Development”.

1.80 The Committee inquired into the efforts that have been done by MoPNG to create awareness among industries and prospective investors about the SATAT initiative and whether any meeting has been done with Industry Associations, Chambers, etc to which the MoPNG in their written reply have submitted that:-

(i)“The following are the various outreach programmes undertaken to increase awareness and popularity of SATAT initiative.

1. Series of Road shows on CBG & SATAT initiative were organized at various cities wherein Industry Associations, Chambers prospective investors, State Government officials, prospective entrepreneurs, students, academia etc. have participated.
2. A dedicated portal on SATAT initiative (<https://satat.co.in>) has been prepared. The portal has details on SATAT initiative documents, financing of CBG Plants, technology providers, enablers on CBG, Government Policies, Frequently Asked Questions, details on manure marketing. The portal has detailed learning modules on CBG technology and financing. Entrepreneurs can pose questions on the portal for clarification on SATAT initiative. Grievances can also be submitted at the portal for time bound resolution.

3. Series of Technical Seminars conducted for Industries, entrepreneurs, supply chain networks, etc. on various aspects of CBG Plants including technology, finance and marketing.
4. Radio Jingle in Hindi and regional languages (Marathi, Tamil, Telugu, Kananda, Bengali, Oriya, Malayalam etc) has been broadcasted on SATAT initiative.
5. Environment Day Celebrations were held on SATAT initiative where Hon'ble Prime Minister held live discussions with CBG Plants in presence of various stakeholders.
6. City wise exhibitions are being held on Biofuels & SATAT as part of Azadi Ka Amrit Mahotsav celebrations.
7. A Biofuels exhibition was held at Mahoba, Uttar Pradesh on Biofuels Day viz. 10.8.2021 which was inaugurated by Hon'ble Chief Minister of Uttar Pradesh. SATAT initiative was prominently displayed at the exhibition.
8. Awareness on SATAT initiative is being generated through social media".

### **Research & Development**

1.81 The Committee sought to know whether any research and development is being undertaken by any agencies to reduce the cost of production of CBG and improve efficiencies of the CBG plant so that the rate of return is made more attractive for the entrepreneurs to which the MoPNG in the written reply have submitted that:-

“IndianOil R&D Centre has developed IBG-Max, IBG-Plus and BioXeed technologies on CBG. IndianOil is finalizing offering of technology for setting up of CBG Plants, inoculums for enhancing CBG production from CBG Plants and additives for enhancing quality of Fermented Organic Manure. This shall increase the viability of CBG Plants and provide more attractive returns to entrepreneurs. HPCL R & D has undertaken research activities related to the development of a technology for converting lignocellulosic biomass into CBG. The technology called as HP-RAMP is being scaled up. Various Government Institutes like IIT Delhi, IICT-Hyderabad and other private agencies are also engaged in R&D work on CBG”.

In order to facilitate off-take of CBG, MoPNG has issued guidelines for synchronization of CBG produced under the SATAT initiative meeting the technical standards with the natural gas in CGD network. GAIL has been given responsibility for operationalization of the guidelines. As a consequence of the same CBG Injection of CBG in CGD network has been started at Nadiad, Gujarat and about 0.16 MMS CM CBG supplied”.

## **OBSERVATIONS/RECOMMENDATIONS**

### **PART II**

#### **RECOMMENDATION NO.1**

##### **IMPLEMENTATION OF SATAT**

The Committee note that India is one of the fast growing economies in the world and energy availability is a major component for any growing economy. Considering that the country is dependent to a large extent on import of crude oil for its hydrocarbon needs, it is vulnerable to the volatility of crude oil prices in the international market and this necessitates the nation to develop a strategy to insulate the economy by developing domestic ally produced alternative fuels. The Government of India has planned to promote usage of natural gas and to increase the share in energy mix from the current level of around 6.7 percent to 15 percent by 2030.

The Committee further note that the National Policy of Bio fuels 2018 aims to increase the role of Bio fuels in the energy and transport sector of the country and that the Ministry of Petroleum and Natural Gas has launched the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative in October 2018 which envisages developing 5000 CBG plants with total production capacity equivalent to 54 MMSCMD of gas by 2023-24. SATAT offers an investment potential of Rs. 1.75 lakh crores and generate about 75,000 direct employment.

The initiative promotes use of Compressed Bio Gas (CBG) in the CNG (transport) and PNG (Piped Natural Gas) sector of City Gas Distribution (CGD) supplies and is produced from agriculture residues, animal dung, food waste, Municipal Solid waste (MSW) and sewage water. This initiative also integrates the other objectives of the government namely doubling of farmers income, import reduction, employment generation, waste to wealth creation, etc, and which can help the country in meeting the commitments.

The Committee however note with regret that out of an ambitious target of developing 5000 CBG plants by 2023-24, only about 40 CBG plants have been set up so far which indicates that lots of ground need to be covered under SATAT scheme which is burdened by lack of clarity, procedural hurdles and has not enthused the investors/entrepreneurs to come forward to establish CBG plants so far. The Committee while observing that MoPNG is approaching this scheme

as a waste to energy or waste Management initiative for agricultural residue, desire that the Ministry should change its vision of SATAT as an initiative to produce natural gas domestically in a green and clean form.

The Committee, appreciate SATAT as a path breaking and transformational initiative of the Ministry and hope that if successfully implemented, SATAT would strengthen self reliance to meet the energy demands of the country. The Committee would, however, caution the Ministry not to rest on its laurels on the success in Ethanol Blended Petrol (EBP) programme but take proactive steps and be responsive to make the SATAT initiative successful too and recommend that it should ensure successful implementation by reviewing the progress at regular intervals and address various impediments that pulls back achieving of targets set under this initiative.

#### **RECOMMENDATION NO. 2**

##### **REVIEW OF LETTER OF INTENTS**

The Committee note that under the SATAT initiative, the production of CBG would have multiple benefits vis-à-vis reduction of natural gas import, reduction of green house gas (GHG) emissions, reduction in burning of agriculture residues, effective waste management, etc. The Committee further note that Oil and Gas Marketing Companies (OGMCs) invite Expression of Interest (EOI) from potential investors/entrepreneurs to procure CBG for further selling to automotive and commercial customers. Indian Oil Corporation is the nodal company for SATAT coordination.

The Committee have been informed by the Ministry that as on 1<sup>st</sup> June 2022, a total of 3263 Letter of Intents (Lols) have been issued by the Oil PSU's. Number of cases where land has been finalized is 328 and 97 Lols have achieved financial closure. The Committee observe that 35 CBG plants have been commissioned so far and around 40 plants are expected to be commissioned by March 2023.

The Committee observe that the same entrepreneur/investor has been issued a large number of Letters of Intents (Lols) and the reason given for issue of such multiple Lols is that the project involves getting clearances, approvals and many other supply chain issues and the plant can be set up as and when the necessary approvals are available in a given location. However the Committee have been informed by the entrepreneurs that the banks are not extending loans

for more than one project to the entrepreneur who is holding multiple Letters of Intents (Lols). The Department of Financial Services state that PSU Banks would like to see the execution of a few CBG plants to which they have already extended the loan.

However, the Committee suspect that the PSUs had issued multiple Letters of Intents (Lols) just to show that the targets under SATAT are on course of being achieved as it is evident that the same entrepreneur will not get finance for different projects from banks without providing adequate security and guarantees. The fact that out of 3263 Letters of Intents (Lols), hardly 40 plants have been commissioned with less than 24 months to go speak volumes of the progress made. Therefore, the Committee desire that there should be proper guidelines for issuance of Letters of Intents (Lols) to entrepreneurs including at multiple locations

The Committee deplore MoPNG/ PSU's for such deceptive methods to mislead about the targets and show that the progress under SATAT is good. The Committee while acknowledging the impact of COVID, would like the Ministry to review the Letters of Intents (Lols) issued so far in terms of progress made and take all corrective actions and aggressively attract new investors/entrepreneurs. The Committee, therefore recommend that the Ministry should set up a Committee to review the Letters of Intents (Lols) issued and also to frame guidelines for issue of fresh Letters of Intents (Lols).

### **RECOMMENDATION NO. 3**

#### **NBCC COORDINATION MECHANISM**

The Committee note that the Ministry of Petroleum and Natural Gas is implementing the National Policy of Bio Fuels 2018 which aims to increase use of bio fuel in the country. The Committee also note that the success of CBG (SATAT) scheme is very much contingent on the well coordinated efforts among various Ministries/Stakeholders/Organizations by resolving the challenges and bottlenecks in a time bound manner. This can be achieved by establishing a two-way communication between stakeholders and Govt. and within govt. bodies. There are roles for several Ministries for successful implementation of the CBG project and coordination amongst different Ministries is essential.

The Committee observe that the National Bio Fuel Coordination Committee(NBCC) is already in place as a coordination mechanism which has

representatives from various Ministries and headed by the Hon'ble Minister of Petroleum and Natural Gas to provide overall coordination, effective end-to-end implementation and monitoring of bio fuels. The Committee, however, find it surprising to note that since its inception, NBCC has held only one meeting till date which reflects the lack of seriousness by the Ministry to this mechanism for SATAT initiative. The Committee would, therefore, recommend that the MoPNG should convene meetings of NBCC at regular intervals to sort out issues in implementation of the programme and may also form sub committees involving the concerned Ministries to sort out specific and pointed issues.

#### **RECOMMENDATION NO. 4**

##### **SINGLE WINDOW CLEARANCE**

The Committee note that the Compressed Bio-Gas (CBG) plants need various approvals and clearances from different agencies of Central, State Govt. and local administration. The Committee note that the implementation of CBG (SATAT) has been delayed due to multiplicity of agencies involved in granting clearances and permissions. Self certification and undertaking may also be studied for feasibility in place of mandatory approvals and NOCs etc. as the case may be.

The Committee exhort the Ministry to consider issuing a blanket approval or with a half-yearly/yearly reconciliation mechanism and a forum for joint consultative mechanism involving elected representatives from local and state/district level should be evolved to iron out all the differences arising among various agencies and in this regard, there can be a "Infrastructure Approvals Committee" at State/District level which can take up such clearances and fast track them. The Committee observe that the Ministry should Coordinate with various Government Departments/Agencies including Financial institutions, State Governments and other stake holders to arrange and implement various enablers for development of CBG sector and Expeditious allocation of land to CBG producers by the State Government would be helpful in developing CBG Projects.

CBG (SATAT) is of national importance and therefore, there is a need to bring uniformity in permissions and clearances from various central / state / local bodies / departments to lay pipeline network. In order to streamline the process of approvals, the Committee desire that deemed approval mechanism should be put into place so that the necessary clearances and NoCs may be obtained in a

defined time period. The Committee, therefore, recommend that the Ministry should strive for a single-window mechanism for a fast track system of obtaining approvals and clearances which will help in reducing the time to process such permissions.

#### **RECOMMENDATION NO. 5**

##### **CENTRAL FINANCIAL ASSISTANCE (CFA)**

The Committee note that Ministry of New & Renewable Energy (MNRE) was implementing a scheme called Central Financial Assistance (CFA) for extending support to new and renewable energy projects. The Committee note that since April 2021, the Central Financial Assistance program for biogas/CBG projects has been discontinued and this has served as a major setback to the industry. The Committee have learnt that the CBG plants fall under new and renewable energy category and hence these plants are entitled for CFA. However, as the scheme is not in place, this facility is denied to entrepreneurs who come forward to set up CBG plants. The Committee strongly feel that to mainstream the industry, which is still in its introductory/nascent stage, the continuation of CFA scheme is important. The Committee recommend that MOPNG should take up with MNRE and Ministry of Finance for reintroduction of this Central Financial Assistance Scheme to incentivise and enthuse entrepreneur to set-up of CBG plants in the country.

The Committee also desire that MoPNG may consider to move towards Generation Based Incentive (GBI) instead of Capex-based subsidy for CBG plants which will provide incentives for producing gas and keep the plants running and functional rather than just setting up the plant. The Committee would like determination of appropriate GBI (price/per Kg of CBG) under different feedstocks to be estimated by the Ministry in this regard.

#### **RECOMMENDATION NO. 6**

##### **FINANCIAL INSTITUTION FOR PETROLEUM SECTOR**

The Committee note that there are many projects which are being implemented by the MOPNG to enhance the energy security of the country in the hydro carbon area including bio fuel projects for blending with petrol, diesel and gas. The Committee feel that with the plethora of initiatives being taken up by the Ministry, there is a need for financing these activities particularly at the initial

stage by understanding the risks and reward associated with the project for which the expertise is available in the Oil PSUs who are operating for a long time in this sector. The Committee, therefore desire that the Oil PSUs which have strong cash flows and healthy balance sheets and consistently profit making should come forward to setup a financial institution for financing all bio-fuel and clean energy projects that are launched or likely to be launched in the future by the Ministry.

There are institutions like Power Finance Corporation (PFC), Rural Electrification Corporation (REC), Housing & Urban Development. Corporation (HUDCO), Indian Renewable Energy Development Agency (IREDA) etc. in different Ministries of the Government for financing and monitoring specific sector projects. The Committee would desire the MoPNG should nudge the petroleum sector oil PSUs to establish a financial institution owned and managed by them as shareholders which will focus on clean, green and renewable energy bio fuel projects taken up by Ministry of PNG like Ethanol production for Ethanol Blended Petrol (EBP), Bio-diesel Projects, CBG projects, etc,. The Committee, therefore, recommend that Ministry should set up a PSU financial institution for funding oil and gas sector project under its administrative control.

#### **RECOMMENDATION NO. 7**

##### **BIO FUEL INFRASTRUCUTURE FUND**

The Committee note that the SATAT scheme is a laudable and ambitious initiative of the Government which can help the country to meet its energy requirements and strengthen the energy security. However, the action taken by the Ministry of Petroleum & Natural Gas to implement the scheme have been very lukewarm and indifferent. The Committee would still give the benefit of doubt to the Ministry as the country was fighting the Covid pandemic during the last two years. However, as the situation has improved to a considerable extent and economic activities have picked up, the Ministry should now focus on taking necessary steps to see that the SATAT initiative is implemented and all objectives and targets are met.

The Committee note that an scheme that may be replicated in this regard is the AIF (Agriculture Infrastructure Fund) facilitated by NABARD and the Ministry of Agriculture. In this regard, the Committee are of the view that a fund in the name of Bio Fuel Infrastructure fund in the Ministry of Petroleum and Natural Gas

may be created in a suitable way either from Oil Industry Development Board (OIDB) funds or budgetary allocations for development of this sector quickly and without waiting for other government agencies to finance them. Ministry may furnish the action taken in this regard.

#### **RECOMMENDATION NO. 8**

##### **COLLATERAL SECURITY FOR CBG PROJECTS**

The Committee note that Reserve Bank of India has included CBG projects under Priority Sector Lending and public sector banks are extending loans to CBG plants. Canara Bank has been nominated as Nodal Banker under SATAT. State Bank of India, Bank of Baroda, Canara Bank and some other banks have developed exclusive loan product for financing of CBG projects. World Bank, ADB and JICA are working for Detailed Project Report for multilateral cheaper credit to CBG plants.

However, the Committee note that the banks are not extending loans for more than one project to the same entrepreneur who is holding multiple Lol issued by Oil and Gas Marketing (OGMCs) companies. The Department of Financial Services state that they would like to see the execution of these plants to which they have already extended the loan. One of the hurdles faced by entrepreneurs is that the banks seek collateral security for financing the projects. The Committee have been informed by the entrepreneurs that the gas purchase agreement between the Oil and Gas Marketing Companies (OGMCs) and CBG plant operators for taking up the entire off-take of the gas at pre-determined price should also be taken into consideration by the Banks as a means of security and if required an escrow account between the three parties namely, CBG Plants Management, OGMCs and banks can be entered into where the banks may get their loan service from this account. The Committee are of the view that there is merit in this suggestion and recommend that MOPNG should hold consultation with Ministry of Finance on this issue and ease the collateral security burden on the entrepreneurs as in done under Ethanol Blended Petrol (EBP) Programme.

#### **RECOMMENDATION NO. 9**

##### **INVESTMENT IN CBG PROJECTS BY OIL PSUS**

The Committee note that CBG projects are being implemented with the expectation that private entrepreneurs and investors will come forward and the role of oil PSUs shall be to provide support to these projects in the form of

assured offtake of CBG produced from these plants. The Committee observe that IOC has invested in 5 CBG projects and GAIL and HPCL in one each whereas the upstream PSUs like ONGC and OIL which have specific mandate relating to production of natural gas and marketing of natural gas respectively have not invested in any project so far. The Committee find it surprising to note that PSUs are not interested in setting up of CBG projects on their own despite domestic natural gas production being a mandate of the upstream oil PSUs. The Committee, therefore, would like Oil PSUs to aggressively enter into CBG sector through company owned company operated (COCO) model or joint ventures with other OMCs/entrepreneurs.

Further, the OMCs also have a responsibility to meet the LPG demand in the country both in domestic and commercial sector and a large part of their LPG requirement is imported to meet the demand. These companies have restricted themselves to buy the Bio-gas from the CBG projects. The Committee feel this is unacceptable and want all the PSUs to invest and promote CBG projects seriously with their own investment. The Committee also expect that the Ministry should persuade the oil PSUs particularly upstream oil PSU's like ONGC, OIL and GAIL in particular to set up a good number of CBG projects in the country as this falls within their mandate of producing natural gas. The PSU's with their professional and project management competence should set aside sizeable fund for investment in these projects and able to execute the projects in time bound and efficient manner. This will also demonstrate the viability of these projects and will give confidence to investors. This will also allow the PSUs and the Ministry to gain valuable experience to sort out various issues and put in place required policy measures to ensure that the CBG initiative is successfully implemented and enhance the energy security of the nation. Therefore, the Committee recommend that all the OIL PSU's should seriously look into SATAT initiative and invest in CBG plants with their own funds.

#### **RECOMMENDATION NO. 10**

##### **ESTABLISHING A CREDIT GUARANTEE FUND (CGF)**

The Committee note the Entrepreneurs are facing huge problems in getting financial assistance for CBG plants. The Committee feel that lack of credit is one of the major factors due to which not many CBG plants have come up and therefore there is an urgent need to address access to credit by evolving innovative financial

mechanisms/products. The Committee suggest that there should be a Credit Guarantee Fund (CGF) established for CBG project financing, like the one launched under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) by Small Industries Development Bank of India (SIDBI) and Government of India for stimulating collateral-free lending to Micro Small and Medium Enterprises (MSME) borrowers and the same can be thought for CBG projects as well. This shall enable risk reduction of and instill confidence in the Financial Institutions for undertaking credit exposure in the CBG industry.

The Committee also recommend that there can be refinancing of loans by Indian Renewable Energy Development Agency Limited (IREDA) under MNRE that can directly enter into MoU with Public Sector Banks wherein every CBG project that meets certain basic needs (for being qualified as a potent project) would be provided the benefit of concessional rate lending by IREDA via the bank/NBFC for onward lending.

#### **RECOMMENDATION NO. 11**

##### **ASSURED BIO-MANURE OFFTAKE**

The Committee note that one of the major by-products of the CBG plants is the Bio-manure and there is no assurance for off take of bio manure or any other long term supply agreements at a reasonable and marketable price. The CBG plants cannot sustain themselves solely through production and marketing of Bio-gas and hence sale of bio manure will enhance the financial viability of CBG plants. The Committee also note that this bio-manure can solve the problems of nutrients of soil and also improve the soil health bringing innumerable benefits to the agriculture sector also. The Committee feel that a holistic view must be taken off the CBG plants and Bio-manure must be seen as revenue stream of CBG projects. The Committee further desire that in order to promote and popularize use of organic manure there should be clear earmarking 'Production date' and 'Best used before date, safety measures and means to prevent nutrient loss during transportation and similar other measures to educate and create awareness in the public domain so that there is no apprehension regarding their use.

MOPNG in coordination with Ministry of Agriculture through its agricultural extension machinery including Krishi Vikas Kendras (KVK), FPO, etc. must make special efforts to propagate utilization of 'Organic Ferment Manure' on farmland. The Committee therefore recommend that MoPNG should devise a mechanism in

consultation with Dept of Agriculture and Dept of Fertilisers to ensure assured off-take of bio-manure of entire quantity of CBG with long term agreement including the price and agencies assigned for purchase of bio manure to attract investment in this sector.

## **RECOMMENDATION NO. 12**

### **QUOTA FOR BIOMETHANE INJECTION IN NATURAL GAS GRID**

The Committee feel that Ministry should reorient its approach and the various facets of the scheme must be fully addressed and utilized. As the sources of CBG are diversified and scattered, the CBG plants must be seen as decentralized gas fields. The Committee feel that this will enhance the domestic gas production as the targets under CBG (SATAT) are equal to the current domestic natural gas production. The success of SATAT for sure will reduce dependence on import of natural gas and simultaneously generating new sources of income and employment within the country.

The Committee desire that the CBG plants with varying capacities must be channelized/synchronized with National Gas Grid. The Committee has learnt that Gas Utility major, GAIL (India) Limited is already in the process of finalizing the operational modalities for the supply of CBG co-mingled with domestic gas. The Committee suggest that while the process for the same may be expedited, there should be a uniform price of City gas/ PNG across all CGD entities (private/PSUs). One such mechanism to arrive at a uniform gas price may be through a gas pool pricing mechanism, as is presently applicable for Natural Gas supply to Fertilizer plants.

The Committee also recommend that there should be phase-wise (short term and long term) blending quota/mix of co-mingled CBG in the total domestic gas supply to the CGD sector. The success of ethanol blended petrol and diesel has already laid the precedent and the same may be adopted in this case as well.

### **RECOMMENDATION NO. 13**

#### **CBG OFF-TAKE PRICE**

The Committee note that the CBG plants have very low internal rate of return (IRR) and the CBG pricing needs to be remunerative to the marketing companies. The Committee appreciate the efforts made by the Ministry in raising the CBG prices to Rs. 54/kg plus GST and also pegging CBG prices with that of CNG this is expected to provide a cushion to marketing companies. The Committee however, are concerned to observe that this pricing does not take into account the feedstock by which CBG is produced. The Committee have learnt that this uniform pricing incentivizes certain feedstocks while discouraging others. The present benchmarking of CBG prices under SATAT to the CNG prices is a much-appreciated initiative towards achieving fair pricing of CBG. However, the pricing needs to be more robust and flexible upon factoring in the cost economics of a CBG plant for different feed stocks as well.

The Committee desire that a guideline needs to be issued by MoPNG in coordination with various agencies w.r.t. appropriate Market price for CBG that ensures the viability of a CBG plant, creating transparency in rational price discovery and promoting long-term investment plans of investors/promoters. The Committee further recommend that the Ministry should establish the pricing mechanism of CBG produced from different types of feed stocks and cues can be taken from the differential pricing (FRP) mechanism for bio-ethanol from different grades of molasses and a similar approach can be replicated in the case of CBG sector as well.

### **RECOMMENDATION NO. 14**

#### **MARKET DEVELOPMENT ASSISTANCE FOR BIO MANURE**

The Committee note that in the CBG plants, one of the revenue streams is selling of Bio-manure which is a bye product in the production of CBG. The Committee further note that the OGMCs under the MoPNG have already announced the price for purchase of CBG. The Ministry of Chemical and Fertilizers has also issued notification under Fertiliser Control Order (FCO) to treat the Bio-slurry as organic Bio-manure. The Committee note that the market development assistance was provided by the Department of Fertilisers for promotion and consumption of city compost has been discontinued after 30 September 2021. Therefore, the MoPNG should take the matter with Department of Fertilizers/Department of Expenditure for continuation of market development

assistance for offtake of fermented Bio-manure to ensure balance and integrated nutrient management for the crops. The Committee therefore recommend that the MoPNG to persuade Ministry of Finance for MDA for incentivizing CBG entrepreneurs.

#### **RECOMMENDATION NO. 15**

##### **FEEDSTOCKS ISSUES FOR CBG PRODUCTION**

The Committee note that the Biomass sources like municipal solid waste, sewage treatment plant waste, cattle dung, sugarcane press mud, agricultural residue etc. are some of the feedstocks to produce Biogas through the process of an aerobic decomposition. The availability of these feedstocks are varied in nature as the municipal solid waste and sugarcane press mud are available for most of the year, whereas, agriculture residue would be available only for couple of months in a year. This necessitates that CBG plants which use agricultural residue as feedstocks may also need huge land parcel to store the agriculture residue for the remaining part of the year as the residue is available only during harvest period.

Entrepreneurs who appeared before the Committee stated that there is huge uncertainty over the supply and price of agriculture residue as the farmers demand a higher price to supply to the CBG plant. The entrepreneur has limited choice as the feedstock has to be sourced from neighbouring region and transportation from longer distances will add the cost of feedstock. The entrepreneurs demand support from State Governments in the form of assured raw material supply and also land availability at concessional price for long term to store the feedstocks. However, the Committee note in the case of municipal solid waste there are no such problems as most of the cities and towns have huge land fills with the municipal wastes. Similarly, the sugar factories also has sugar press mud.

Therefore, the Ministry should focus on municipal solid waste and sugar press mud as the preferred feedstock for setting-up of CBG plant all over the country which the Committee feel is a low hanging fruit. The MoPNG should hold consultation/discussions with Ministry of Urban Development for nudging urban local bodies to setup CBG plant with the support of Oil PSU's / State Governments and use Municipal Solid Waste as feedstock. The CBG from these plants can be used for urban transport and City Gas Distribution (CGD) network

in these cities. Similarly, the Ministry of Petroleum and Natural Gas should discuss with concerned Ministry/Indian Sugar Mills Association (ISMA)/ Sugar mills to encourage them to invest in CBG plants as well, and sell them to OMCs with whom they already have good relationship due to ethanol blending programme, The Committee, therefore, recommend that MoPNG should prioritise its focus on municipal solid waste and sugarcane press mud as feed stocks to promote the CBG projects and make it a reality and successful rather than focus on agriculture residue which is saddled with problems .

The Ministry may also rope in urban municipal bodies, agriculture mandis, cooperative sector, fertilizer companies, Farmers' Producer Organisations (FPOs), Krishi Vigyan Kendra (KVK), NAFED etc. to promote CBG projects in their area of operations.

The Committee recommend the MOPNG to hold consultations with State Governments and endeavour to constitute State level coordination Committee in all states and to try to impress upon them to fix price for different types of bio mass so that there shall be no uncertainty about pricing and availability of bio mass for the CBG plants.

#### **RECOMMENDATION NO. 16**

##### **GST ISSUES IN CBG**

The Committee note that the Compressed Bio Gas under SATAT is basically used for bio CNG in transport sector and PNG in the domestic sector. The Ministry has also permitted the CBG produced from the CBG plants to be injected into the CGD network under the CBG-CGD Synchronization Scheme and the responsibility of connecting the CBG plant to the CGD network within a distance of 10 kms. would lie with bio gas producers.

The Committee note that at present various petroleum products are coming under different tax regimes. Bio gas is under GST and CNG is under excise duty and when CBG is mixed with CNG which is permitted , then it attracts double taxation as VAT is also levied in addition to excise duty. This cascading tax structure create confusions and the same gas attracts different tax application which may create complications and litigations and increase the tax burden and end price. The Committee desire that there is a need to have uniformity in the tax structure on the products likely CBG, CNG, PNG and when CBG is mixed with as

a CNG or PNG. The Committee, therefore, recommend that the Ministry of Petroleum and Natural Gas should hold consultations with Department of Revenue for clarity, rationalizing the tax structure and determination of applicable tax and if required, approach GST Council where required.

#### **RECOMMENDATION NO. 17**

##### **TAX ISSUES FOR CBG PLANTS**

The Committee note that Section 80JJA of the Income-tax Act, 1961 provides for deduction of 100% from the profits and gains derived from the business of collecting and processing or treating of biodegradable waste for generating power or producing bio-fertilizers, bio-pesticides or other biological agents or for producing bio-gas or making pellets or briquettes for fuel or organic manure for a period of five consecutive assessment years beginning with the assessment year in which such business commences.

The Committee feel that CBG plants must be seen as a sunrise industry and recommend that special concessions must be provided at nascent stage and unambiguous continuation of the 80JJA scheme under the new sections in the IT amendment shall be provided for the ten years which will serve as the much-needed impetus, particularly to the entrepreneurs/ Start-Ups foraying into the industry.

The Committee observe that the GST Council recently notified of escalation of GST slab from 5% to 12% for biogas plant-related equipment and their parts. This is expected to provide incentive to the domestic industry to avail the input tax credit under GST regime. However, the Committee note that, due to these ambiguities, clarifications are sought by Indirect Tax Officials from CBG plants.

The Committee note that clarity in tax issues goes a long way in attracting investments in a sector. The disparity intax structure for CBG Plants needs to be bridged with uniformity in the taxation of Goods and Services for all procurements in CBG projects. The Committee therefore recommend that these issues should be addressed by MoPNG in consultation with Department of Revenue.

#### **RECOMMENDATION NO. 18**

##### **AWARENESS AND TRAINED MANPOWER**

The Committee note that the CBG sector is still in its infancy and there are many risks involved in the business leading to a lot of hardships being faced by entrepreneurs and promoters. There is a lack of credit supply to the CBG sector and it is also plagued by structural constraints and not yet in a position to come up with a definite revenue stream.

The Committee therefore feel that there is an urgent need to create awareness among financial institutions regarding the viability and potentialities of CBG sector in generating employment and income opportunities, however, the gestation period is not fully developed or understood. The Committee also desire that all the bottlenecks and challenges facing the industry must be identified and modalities and solutions to them be properly identified and disseminated to the various stakeholders in a coordinated and time bound manner. The Committee therefore recommend that a proper plan has to be formulated to train the Financial Institution Officials (across the hierarchy) to dispel the notion of the undue inherent risk associated with CBG industry.

The Committee further note that the sector is still evolving and there is a lack of sufficient trained manpower and recommend that MoPNG in consultation with Ministry of Skill Development should prepare a curriculum/training module to impart skills in the sector to take care of the future manpower needs.

#### **RECOMMENDATION NO. 19**

##### **CARBON TRADING**

The Committee note that CBG (SATAT) scheme has immense potential in waste management in the country. CBG plants have a potential for an efficient management of stubble burning which causes immense environmental damage and consequently damaging the image of the country as a whole. An important feature of the CBG plants is that it converts bio-gas out of multiple feedstocks including waste material and therefore can contribute immensely towards Swachh Bharat Mission as well.

The Committee recommend that MoPNG in coordination with the MNRE should evolve a mechanism whereby they assess the carbon footprint that would be generated had CBG plants not managed the waste material. This will help the nation in achieving India's commitments of carbon net zero by 2070 made at COP-26 Glasgow. The carbon credits so generated by CBG plants can be monetized and improve its financial viability and revenue stream accordingly which provides a win-win situation for all the stakeholders .

#### **RECOMMENDATION NO. 20**

##### **Global Cooperation on Biofuels**

The Committee note that India is the third-largest consumer and importer of oil in the world. The Committee note that the Government has announced National Policy on Biofuels 2018 to promote and include biofuels in the country's

energy basket to target climate change concerns and also to reduce dependence on import of crude oil. The NPB-2018 envisages production and blending of ethanol, biodiesel and CBG as alternative fuels with traditional fuels like Petrol, Diesel and Natural Gas.

The Committee appreciate the efforts in achieving the 10 per cent ethanol blended petrol and hope that with a slew of measures being undertaken the target of 20 per cent blending can be achieved by 2024-25. This is expected to give a general boost to Biofuels which will also help achieve carbon reduction goals and commitments made at CoP26, Glasgow.

The Committee note that many of the countries like Brazil, US, Indonesia, China and Germany produce biofuels. It is hoped an alliance among such countries would create an ecosystem for fuel standards and engines as well as cooperation for a quicker adoption of latest state of the art technologies. This will pave way for global cooperation, funding and technology development which will help other countries also to fight carbon emission and climate change concerns. The Committee, therefore, recommend that India should pitch for a global cooperation on Biofuels on the lines of The International Solar Alliance (ISA).

New Delhi;  
19th December, 2022  
28<sup>th</sup> Agrahayana, 1944 (Saka)

RAMESH BIDHURI,  
Chairperson,  
Standing Committee on  
Petroleum & Natural Gas.

**MINUTES**  
**STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS**  
**(2021-22)**  
**SEVENTH SITTING**  
**(05.01.2022)**

The Committee sat on Wednesday, the 5 January, 2022 from 1100 hrs. to 1300 hrs. in Main Committee Room, PHA, New Delhi.

**PRESENT**

**Shri Ramesh Bidhuri - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Smt. Chinta Anuradha
3. Dr. Ramesh Chand Bind
4. Shri Naranbhai Kachhadiya
5. Shri Santosh Kumar
6. Shri Rodmal Nagar
7. Shri Mitesh Rameshbhai Patel
8. Shri Unmesh Bhaiyasaheb Patil
9. Shri Chandra Sekhar Sahu
10. Shri Janardan Singh Sigriwal
11. Dr. Kalanidhi Veeraswamy

**RAJYA SABHA**

12. Shri Birendra Prasad Baishya
13. Shri Ripun Bora
14. Shri Om Prakash Mathur
15. Shri Rambhai Mokariya
16. Shri Subhash Chandra Bose Pilli
17. Dr. V. Sivadasan
18. Shri A. Vijaykumar
19. Ch. Sukhram Singh Yadav

**SECRETARIAT**

1. Smt. Abha Singh Yaduvanshi - Additional Secretary
2. Shri H. Ram Prakash - Director
3. Shri Vinay Pradeep Barwa - Deputy Secretary
4. Shri Mohan Arumala - Under Secretary

**Representatives of the Ministry of P&NG**

1. Shri Pankaj Jain - Secretary
2. Dr. Navneet Mohan Kothari - Joint Secretary (Marketing)

### Representatives of IOCL

1. Shri S.M. Vaidya - Chairman
2. Shri S.S. Pandita - ED (Coord.)

### Representatives of BPCL

1. Shri P.S. Ravi - ED (Retail)

### Representatives of HPCL

1. Shri D.K. Pattanaik - ED

### GAIL

1. Shri Manoj Jain - CMD
2. Shri Sanjay Kumar - ED

2. At the outset, the Hon'ble Chairperson welcomed Members of the Committee and representatives of the Ministry of P&NG/Oil PSUs to the sitting of the Committee and informed that the sitting was convened to have a briefing on the subject "**Review of Implementation of CBG (SATAT)**". Thereafter, the representatives of the Ministry got themselves introduced to the Committee and then, made a power point presentation on the subject.

3. Thereafter, Members of the Committee raised several issues related to the subject such as progress made in meeting the targets of CBG, various bottlenecks being faced in the implementation of the scheme, efforts made to popularize the scheme, number of entrepreneurs and CBG plants under the scheme, financial incentives to promote participation, involving MoHUA and MNRE for an effective implementation of the scheme, timeline for commissioning of Letters of Intent (Lols), reasons for setting up of only 16 CBG plants against 2744, utilization of CSR funds for promotion of the scheme, evolving inter-departmental coordination for monitoring, revival of closed biogas plants, management of stubble burning and agricultural waste through CBG, financial

viability of CBG plants for promotion of entrepreneurship, cluster based approach involving various villages for CBG plants, integrated processing of biomass including municipal solid waste, training of manpower in coordination with the Ministry of Skill Development.

4. Thereafter, the Chairperson thanked representatives of the Ministry of P&NG/Oil PSUs for expressing their views and answering queries raised by the Members of the Committee. Further, to the queries where replies were not readily available, the Ministry was instructed to furnish the same to the Secretariat within ten days.

5. A copy of the verbatim proceedings is kept in the Branch for record.

**The Committee then adjourned.**

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**MINUTES**  
**STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS**  
**(2021-22)**  
**FIFTEENTH SITTING**  
**(08.06.2022)**

The Committee sat on Wednesday, 8<sup>th</sup> June, 2022 from 1200 hrs. to 1320 hrs. in Main Committee Room, PHA, New Delhi.

**PRESENT**

**Shri Ramesh Bidhuri - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Dr. Ramesh Chand Bind
3. Shri Girish Chandra
4. Shri Topon Kumar Gogoi
5. Shri Naranbhai Kachhadiya
6. Shri Unmesh Bhaiyyasaheb Patil
7. Shri M.K. Raghavan
8. Dr. Bharatiben Dhirubhai Shiyal
9. Shri Janardan Singh Sigriwal
10. Dr. Kalanidhi Veeraswamy

**RAJYA SABHA**

11. Shri Birendra Prasad Baishya
12. Smt. Kanta Kardam
13. Shri Om Prakash Mathur
14. Shri Rambhai Mokariya
15. Dr. V. Sivadasan
16. Shri A. Vijayakumar

**SECRETARIAT**

1. Shri Y. M. Kandpal - Joint Secretary
2. Shri Brajesh Kumar Singh - Deputy Secretary

### **Representatives of the Ministry of P&NG**

1. Shri Pankaj Jain - Secretary
2. Dr. Navneet Mohan Kothari - Joint Secretary

### **IOCL**

1. Shri S.M. Vaidya - Chairman, IOCL
2. Shri Shantanu Gupta - Exe. Director (AE&SD)
3. Shri J.S. Oberoi - Exe. Director (Coordn)
4. Shri Rajesh Nayyar - CGM (Coordn)

### **Representatives of GAIL**

1. Shri Manoj Jain - CMD
2. Shri M V Iyer - Director (BD)

### **Representative of HPCL**

1. Shri Pushp K. Joshi - CMD

### **Representative of BPCL**

1. Shri Arun Kumar Singh - C&MD

### **Representatives of IGL**

1. Shri Sanjay Kumar - MD
2. Shri Sanjeev Bhatia - VP

2. At the outset, the Hon'ble Chairperson welcomed Members of the Committee and apprised them about the agenda of the sitting i.e. **"Review of Implementation of CBG (SATAT)"**.

3. Thereafter, the representatives of the Ministry of petroleum & Natural Gas and Oil Marketing Companies (OMCs), GAIL and IGL were called in. After customary introduction, the representatives of the Ministry made a power point presentation to the Committee on progress made in the implementation of SATAT scheme since last sitting of the Committee held on 05.01.2022.

4. Thereafter, Members of the Committee raised several issues related to very slow progress of the scheme, very poor response to the Letter of Intents (Lols) issued by OMCs, availability of finance to entrepreneurs, withdrawal of government subsidy to CBG plants, coordination with various Ministries, setting

up of single window for regulatory clearances, status of planned CBG projects in Delhi, prices of CBG being given to producers and mechanism of its fixation, total production of CBG etc.

5. Further, the Committee also discussed various issues affecting the success of the SATAT scheme such as supply and pricing of organic manure and slurry, laying of infrastructure for taking off CBG from plants, injection of CBG into CNG pipeline, profitability of CBG plants etc.

6. The representatives of the Ministry/OMCs furnished clarifications to the queries raised by the Members. On some of the points on which the information was not readily available with the representatives, the Chairperson asked them to furnish written replies on the same within 7 days to the Lok Sabha Secretariat.

7. The Chairperson then thanked the representatives of the MoPNG/OMCs for giving valuable information on the subject before the Committee.

8. The witnesses then withdrew.

9. A copy of the verbatim proceedings is kept in the Branch for record.

**The Committee then adjourned.**

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**MINUTES**  
**STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS**  
**(2021-22)**  
**NINETEENTH SITTING**  
**(28.07.2022)**

The Committee sat on Friday, 28<sup>th</sup> July, 2022 at 1700 hrs. in Committee Room 'D', PHA New Delhi.

**PRESENT**

**Shri Ramesh Bidhuri - Chairperson**

**MEMBERS**

**LOK SABHA**

2. Shri Ramesh Chand Bind
3. Shri Pradyut Bordoloi
4. Shri Girish Chandra
5. Shri Mitesh Rameshbhai Patel
6. Shri Unmesh Bhaiyasaheb Patil
7. Shri M. K. Raghavan
8. Shri Janardan Singh Sigriwal
9. Shri Lallu Singh
10. Shri Ajay Tamta

**RAJYA SABHA**

11. Shri Birendra Prasad Baishya
12. Shri Rambhai Mokariya
13. Shri Subhas Chandra Bose Pilli

**SECRETARIAT**

1. Shri Y. M. Kandpal - Joint Secretary
2. Shri H. Ram Prakash - Director
3. Shri Brajesh Kumar Singh - Deputy Secretary

**Representatives and entrepreneurs from CBG Plants**

1. Dr. Jyoti Prakash Das - Phoenix India R&D Group
2. Shri Deepak Agarwal - IL&FS Environmental Infrastructure &

3	Shri Rohit Chauhan	Services Limited
4	Shri Ashish kumar	- Verbio India Pvt. Ltd.
5	Dr. A.R. Shukla	- Indian Biogas Association
6	Shri Abhijit Mukherjee	
7	Shri Atul Kharate	- IOT Biogas Pvt. Ltd.

### **Representatives of the Ministry of P&NG**

1. Shri Pankaj Jain - Secretary
2. Dr. Navneet Mohan Kothari - JS (Marketing & Gas Pricing)

### **Representatives of PSUs**

- 1 Shri S.M. Vaidya - Chairman, IOCL
- 2 Shri Arun Kumar Singh - CMD, BPCL
- 3 Shri Pushp K. Joshi - CMD, HPCL
- 4 Shri Manoj Jain - CMD, GAIL
- 5 Shri Sanjay Jain - MD, IGL
- 6 Shri M.V. Iyer - Director, GAIL
- 7 Shri Sukhmal Jain - ED, BPCL
- 8 Shri P.S. Ravi - ED, BPCL
- 9 Shri Shantanu Gupta - ED, IOCL
- 10 Shri Dilip K. Pattanaik - ED, HPCL
- 11 Shri Alok K. Gupta - ED, HPCL
- 12 Shri Shuvendu Gupta - ED, HPCL

2. At the outset, the Hon'ble Chairperson welcomed Members of the Committee and apprised them about the agenda of the sitting i.e. **"Review of Implementation of CBG (SATAT)"**.

3. In the first instance, the stakeholders of CBG plants were called in to give oral evidence to the Committee. After customary introduction, the representatives of the CBG plants gave a Power Point presentation with respect to functioning of the CBG plants. The Committee was also apprised of the various challenges / bottlenecks being faced in running CBG plants viz discontinuation of Central Finance Assistance (CFA), non-harmonised GST structure, issues of income tax on CBG, Financial Assistance for setting up CBG plants, need for pricing on calorific value, introducing interest subvention scheme, issues of collateral security, indexation of CBG price to CNG etc.,.

Subsequently, Members of the Committee raised several issues related to the subject like the facilities available to entrepreneurs for installing CBG plant, the availability of feedstock and their quality, review of Lol issued, the viability of CBG plants in the backdrop of wide swings in the price of CNG, the market for organic manure and slurry, the rate of return on the investment, feed-stock based pricing, carbon credit scheme etc.,. The stakeholders from CBG plants provided inputs on hurdles based by the scheme and also highlighted the various issues hampering the progress of CBG plants.

**Thereafter, the representatives of Ministry of Petroleum & Natural Gas and IOCL, GAIL, HPCL & BPCL were called in to give clarification on the various issues raised in the first half of the meeting.**

4. The officials clarified on the various aspects such as establishing an ecosystem for production of CBG from various waste/biomass sources in the country and envisaged developing 5000 CBG plants with total CBG production capacity of 15 Million Metric Tonne Per Annum (MMTPA) i.e. equivalent to 54 MMSCMD of gas by 2023-24, promoting use of Compressed bio gas (bio-CNG) in the CNG (transport) and PNG (Domestic) sector of City Gas Distribution (CGD).

5. Further, the need for de-centralized approach for setting up for CBG plants, tie-up with local municipal bodies/panchayats, synchronizing State and Centre efforts bringing economy of scale, technological intervention for mixed fuel feeding, bringing uniformity in taxation for CBG, introducing interest subvention scheme for CBG plants, encouraging farmers to participate in agricultural waste management through CBG plant also came up for discussion.

6. The representatives of the Ministry furnished clarifications to the queries raised by the Members. On some of the points on which the information was not readily available with the representatives, the Chairperson asked them to furnish written replies on the same within seven days to the Lok Sabha Secretariat. The Chairperson then thanked the representative of the MoPNG/PSUs for providing valuable information on the subject before the Committee.

7. The witnesses then withdrew.

8. A copy of the verbatim proceedings is kept in the Branch for record.

**The Committee then adjourned.**

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**MINUTES**

**STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS  
(2021-22)**

**TWENTIETH SITTING  
(04.08.2022)**

**The Committee sat on Thursday, 4<sup>th</sup> August, 2022 at 1500 hrs. in Main Committee Room, PHA New Delhi.**

**PRESENT**

**Shri Ramesh Bidhuri - Chairperson**

**MEMBERS**

**LOK SABHA**

11. Shri Ramesh Chand Bind
12. Shri Girish Chandra
13. Shri Topon Kumar Gogoi
14. Shri Naranbhai Kachhadiya
15. Shri Santosh Kumar
16. Shri Rodmal Nagar
17. Shri Mitesh Rameshbhai Patel
18. Shri M. K. Raghavan
19. Shri Chandra Sekhar Sahu
20. Shri Dilip Saikia
21. Dr. Bharatiben Dhirubhai Shiyal
22. Shri Janardan Singh Sigriwal
23. Shri Vinod Sonkar
24. Shri Ajay Tamta
25. Dr. Kalanidhi Veeraswamy

**RAJYA SABHA**

17. Smt. Kanta Kardam
18. Shri Rambhai Mokariya
19. Shri Subhas Chandra Bose Pilli
20. Dr. V. Sivadasan

## **SECRETARIAT**

1. Shri Y. M. Kandpal - Joint Secretary
2. Shri H. Ram Prakash - Director
3. Shri Brajesh Kumar Singh - Deputy Secretary
4. Shri Mohan Arumala - Under Secretary

### **Representatives of the Ministry of Petroleum and Natural Gas**

1	Shri Pankaj Jain	-	Secretary
2	Dr. Navneet Mohan Kothari	-	JS (Marketing & Gas Pricing)

### **Representatives of the Department of Financial Services & M/o Finance**

1	Shri Suchindra Misra	-	Addl. Secy
2.	Shri Bhushan Kumar Sinha	-	JS

### **Representatives of the Department of Revenue & M/o Finance**

1	Shri G.D. Lohani,	-	JS (TRU) CBIC
2.	Shri Raman Chopra	-	JS(TPL-II) CBDT

### **Representative of the DAC&FW M/o Agriculture**

1	Shri Priya Ranjan,	-	JS
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### **Representative of the MNRE**

1	Shri Dinesh Dayanand jagdale	-	JS
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### **Representatives of the Department of Fertilizers & M/o C&F**

1.	Ms. Neeraja Adidam	-	JS
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### **Representatives of GAIL & IOCL**

- 1 Shri Manoj Jain - CMD, GAIL
- 2 Shri M.V. Iyer - Director (BD), GAIL
- 3 Shri Sujoy Choudhary - Director (P&BD), IOCL
- 4 Shri Shantanu Gupta - ED, IOCL

2. At the outset, the Hon'ble Chairperson welcomed the Members to the sitting of the Committee. The Committee then took up for consideration the draft Action Taken Report on the recommendations contained in the Tenth Report (17th Lok Sabha) on

'Demands for Grants (2022-23) of MoP&NG' and adopted the same without any modifications.

3. Thereafter, the Committee took up for consideration Draft Action Taken Report on the recommendations contained in the Eleventh Report (17<sup>th</sup> Lok Sabha) on the subject 'National Gas Grid including PNG and CNG' and adopted the same without any modifications.

The Committee then authorised the Chairperson to present/lay the reports in both the Houses of Parliament.

**(The witnesses were then called in)**

4. Subsequently, the Hon'ble Chairperson welcomed Members of the Committee and apprised them about the agenda of the sitting i.e. **"Review of Implementation of CBG (SATAT)"**. Thereafter, the representatives of the MoPNG, M/o Finance, M/o Chemicals & Fertilizers, MNRE, M/o Agriculture & Farmer's Welfare were called in to give oral evidence to the Committee. After customary introduction, the Committee sought clarification on various issues such as stoppage of Central Financial Assistance, lack of clarity on income tax exemption, increase in GST rates on machinery and lack of clarity on definition of machinery, differential prices being paid for CBG by OMCs and GAIL, lack of infrastructure for CBG offtake, payment of uniform price for different raw material based CBG, marketing of organic manure produced as by-product, availability of finance, land and raw materials and the various steps taken to establish an ecosystem for production of CBG. Further, transportation on CBG establishment of credit guarantee fund, need for revision of Letters of Intents (Lols), pricing of agricultural residue/crop stubble, integrating Common Service Centre (CSC), Village Level of Entrepreneur (VLE), Co-operative societies and Farmers Producers Organizations (FPOs), Subsidy for CBG plants, licensing and offtake of fermented/liquid bio-manure, steps taken for establishing single window clearance system, financial assistance, CBG plants were also taken up by the Committee.

5. The representatives of the Ministry furnished clarifications to the queries raised by the Members. On some of the points on which the information was not readily available with the representatives, the Chairperson asked them to furnish written replies on the same within seven days to the Lok Sabha Secretariat.

The Chairperson then thanked the representatives of the various ministries for providing valuable information on the subject before the Committee.

The witnesses then withdrew.

6. A copy of the verbatim proceedings is kept in the Branch for record.

**The Committee then adjourned.**

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**MINUTES**  
**STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS**  
**(2022-23)**

**SIXTH SITTING**  
**(19.12.2022)**

The Committee sat on Monday, the 19 December, 2022 from 1530 hrs. to 1600 hrs. in Committee Room D, Parliament House Annexe, New Delhi.

**PRESENT**

Shri Ramesh Bidhuri - Chairperson

**MEMBERS**

**LOK SABHA**

2. Dr. Ramesh Chand Bind
3. Shri Girish Chandra
4. Smt. Chinta Anuradha
5. Shri Dilip Saikia
6. Shri Topon Kumar Gogoi
7. Shri Naranbhai Bhikhabhai Kachhadiya
8. Dr. Kalanidhi Veeraswamy
9. Shri Santosh Kumar
10. Shri Rodmal Nagar
11. Shri Mitesh Rameshbhai Patel
12. Shri M.K. Raghavan
13. Shri Janardan Singh Sigriwal
14. Shri Lallu Singh
15. Shri Ajay Tamta

**RAJYA SABHA**

16. Shri Mithlesh Kumar
17. Shri Rambhai Harjibhai Mokariya
18. Dr. Sasmit Patra
19. Shri Ravichandra Vaddiraju

**SECRETARIAT**

1. Shri Y. M. Kandpal - Joint Secretary
2. Shri H. Ram Prakash - Director
3. Shri Brajesh Kumar Singh - Deputy Secretary

2. At the outset, the Hon'ble Chairperson welcomed the Members to the sitting of the Committee. The Committee then took up for consideration the draft Report on the subject "Review of Implementation of CBG (SATAT)".

3. The Committee adopted the draft Report without any modifications and authorised the Chairperson to present/lay the reports in both the Houses of Parliament.

**The Committee then adjourned**

**Appendix-I**

List of CBG Plants commissioned/ initiated supply of CBG under SATAT initiative:

<b>Sr</b>	<b>LOI issuing OGMC</b>	<b>Name of the project</b>	<b>District</b>	<b>State</b>	<b>Feed Stock</b>	<b>Designed CBG Production Capacity (TPD)</b>	<b>Final Product</b>
1	IOCL	Noble Exchange Environment Solutions Pune LLP	Pune	Maharashtra	Food Waste	14	CBG
2	IOCL	Spectrum Renewable Energy Pvt. Ltd.	Kolhapur	Maharashtra	Press mud	6	CBG
3	IOCL	IOT Biogas Pvt. Ltd.	Namakkal	Tamil Nadu	Pressmud/Poultry Litter	15	CBG
4	IOCL	Green Earth Biogas Pvt. Ltd.	Surendranagar	Gujarat	Cattle Dung/Potato waste	5	CBG
5	IOCL	Bleach Energy	Anand	Gujarat	Animal Waste	2	CBG
6	IOCL	Glow Green Biotech	Surat	Gujarat	MSW/Cattle Dung	2.1	CBG
7	IOCL	Spectrum Renewable Energy Pvt. Ltd.	Rohtak	Haryana	Pressmud/Cattle Dung	6	CBG
8	IOCL	Sri Lakshmi Venkateshwarra Green Crops Power Projects Pvt. Ltd.	Y.S.R Kadapa	Andhra Pradesh	Press mud	3	CBG
9	IOCL	Clarus Bioenergy Pvt. Ltd.	Sangli	Maharashtra	Press mud	4	CBG
10	IOCL	Akshar Biotech Private Limited	Surat	Gujarat	Vegetable Waste	2.2	CBG
11	IOCL	T R Mega Foods and Beverages LLP	Ludhiana	Punjab	Animal Waste	5	CBG
12	IOCL	Solika	Hyderabad	Telangana	Animal	2	CBG

Sr	LOI issuing OGMC	Name of the project	District	State	Feed Stock	Designed CBG Production Capacity (TPD)	Final Product
		Energy Pvt. Ltd.	d	a	Waste		
13	IOCL	Indian Potash Limited	Muzaffarnagar	Uttar Pradesh	Press mud	9	CBG
14	IOCL	Vyzag Bio-Energy Fuel Pvt. Ltd.	Visakhapatnam	Andhra Pradesh	Municipal Solid Waste (MSW)	2	CBG
15	IOCL	Leafiniti Bioenergy Private Limited	Bagalkot	Karnataka	Press mud	10.2	CBG
16	IOCL	Energim Sustainable Solutions Cuddalore Pvt. Ltd.	Cuddalore	Tamil Nadu	Press mud	10.6	CBG
17	IOCL	Verbio India Pvt. Ltd.	Sangrur	Punjab	Agri Residue	30	CBG
18	IOCL	Sobti Engineering Works Pvt. Ltd.	Ghaziabad	Uttar Pradesh	Cattle Dung	2.4	CBG
19	GAIL	Shri Govardhanathji Energies LLP	Kheda	Gujarat	Agriculture waste	8	CBG
20	GAIL	Gobardhan Varanasi Foundation SPV	Varanasi	Uttar Pradesh	Cattle dung and other waste	2	CBG
21	GAIL	Hyderabad Integrated MSW Limited	Hyderabad	Telangana	MSW and others	2	CBG
22	GAIL	IL&FS Environmental Infrastructure & Services Limited	Indore	Madhya Pradesh	Bio degradable waste	19.7	CBG
23	GAIL	Mahindra Waste to Energy	Indore	Madhya Pradesh	MSW	0.7	CBG

Sr	LOI issuing OGMC	Name of the project	District	State	Feed Stock	Designed CBG Production Capacity (TPD)	Final Product
		Solutions Limited					
24	GAIL	Anarobic Energy Private Limited	Haridwar	Uttarakhand	Sewage Sludge, Press mud etc.	2.8	CBG
25	BPCL	JPS Agrotechs& Farms, Rohtak	Rohtak	Haryana	Cattle Dung	2	Biogas
26	BPCL	Sama chemo pvt.Ltd., Sangli	Sangali	Maharashtra	Press Mud	8	Biogas
27	BPCL	Siddapur Distilleries Ltd., Bagalkot	Bagalkot	Karnataka	Press Mud	8	Biogas
28	BPCL	Apex Green Energy Corporation, Bharuch	Bharuch	Gujarat	Press Mud	5.6	Biogas
29	BPCL	Aryan Associate and Company , Ujjain	Ujjain	Madhya Pradesh	Cattle Dung	2	CBG
30	BPCL	Jakraya Sugar Ltd.	Solapur	Maharashtra	Spent –wash	7	CBG
31	BPCL	Aryan Associate and Company, Vadodara	Vadodara	Gujarat	Vegetable waste	2	CBG
32	HPCL	SLR Energy	Cuddalore	Tamil Nadu	Multiple feedstock	2.8	CBG
33	HPCL	Phoenix India R & D Group	Birbhum	West Bengal	Cattle Dung	6	CBG
34	HPCL	Mahasankh Energy LLP.	Vellore	Tamil Nadu	Press mud / Vegetable Waste	2.8	CBG
35	IGL	PS Greengas	Muzaffarnagar	Uttar Pradesh	180-200 TPD of Press Mud	5	CBG

Sr	LOI issuing OGMC	Name of the project	District	State	Feed Stock	Designed CBG Production Capacity (TPD)	Final Product
					and Cowdung		