

new techniques, new designs and improvements under introduction.

The ONGC technologists participate in various international conferences, seminars and training courses and these assist in improving their technological knowledge.

The ONGC has also set up a small group of technologists to examine the merits of setting up a specialised laboratory and research facilities in offshore technology and to define the facilities required, location, inter-relationship with institutes of Technology and Universities.

The efforts of the ONGC in this are supported by Engineers India Ltd. which has a substantial Ocean Engineering Division that design a variety of offshore structures for the Oil and Natural Gas Commission. The Division has with the assistance of various scientific groups in Institutes of Technology, undertaken research in a number of aspects of the design of offshore structures so as to enhance its capability in this field in order to meet the likely future requirements of the Oil & Natural Gas Commission.

#### Flaring Off of Natural Gas at Bombay High

\*431. SHRI ATAL BIHARI VAJPAYEE:

SHRI SURAJ BHAN:

Will the Minister of PETROLEUM, CHEMICALS AND FERTILIZERS be pleased to state:

(a) whether natural gas worth about Rs. 10 lakhs is flared off each day at Bombay High in spite of the fact that working group after working group has been appointed to help Government to arrive at a decision as to how to utilise the gas in Bombay and nearby areas and that their final report even after five years, is yet to be received and acted upon;

(b) *ad hoc* arrangements made for the utilisation of natural gas;

(c) since which date the gas is being flared off and the estimated loss up-to-date;

(d) whether in some areas of Bombay City there exists gas pipeline connections; and

(c) if so, the reason, why no use has been made of these pipelines for distribution of flared off gas?

THE MINISTER OF PETROLEUM, CHEMICALS AND FERTILIZERS (SHRI P. SHIV SHANKAR): (a) It is associated gas which has had to be flared. No free gas has been flared at all.

Associated gas is produced along with crude oil. It takes time to use such gas which is best utilised in the manufacture of fertilizers, petrochemicals etc., since a wide variety of facilities involving large investments, have to be erected for this purpose. Moreover at the start of oil production, it is not possible to accurately assess how much associated natural gas will in fact be produced; this assessment itself requires that oil wells be on production for some time. Since the production of crude oil, which in Bombay High is almost ten times the amount of associated gas produced is of very high priority, it could not be deferred though it was recognised that the full utilisation of associated natural gas as it would be produced, would not be possible to arrange within the time-phasing set for rapidly increasing the production of crude oil in the early years. Nevertheless advance action was taken to see how best to utilise the associated natural gas that was expected to be produced as a consequence of the rapid production of crude oil. The Government of India set up a Working Group in 1977 and its recommendations on how to utilise associated natural gas were accepted. This Working Group recommended that about 0.83 million cubic metres per day natural gas should be made available for supply to domestic consumers and textile mills in Bombay City. In 1978 the Government of India asked the Government of Maharashtra to work out the modalities of distributing this quantity of natural gas in the Bombay City; the Government of Maharashtra set up a Study Group but the Study Group has not been able to submit a final report. In view of this the Ministry of Petroleum, Chemicals and Fertilizers had a number of meetings with the members of the Study Group and

representatives of the Maharashtra Government to see if it could assist it in finding solutions to the problems which it had not been able to overcome. These discussions were followed up in meetings held by the Minister of Petroleum with the Chief Minister of Maharashtra. As a result an approach of how to distribute gas to consumers in Bombay city has been formulated and a decision on this is expected to be taken shortly.

The quantity of associated natural gas flared has declined rapidly by creating a number of outlets for it even though the new fertilizer plant in Thal Vaishet is not yet ready and the difficulties experienced by the Maharashtra Government in implementing a scheme for the distribution of natural gas in the Bombay City. While all the associated natural gas had to be flared until the pipeline to transport the gas was completed in July 1978. Thereafter supply of associated natural gas commenced to the fertilizer plants of Rashtriya Chemicals & Fertilizers in Trombay and to the Tata Electric Company. The quantity of associated natural gas increased rapidly connected with the rapid increase in the production of crude oil. Thus even though the utilisation of gas increased from 0.8 million cubic metres per day at the end of 1978|79 to 2 million cubic metres per day in 1981|82. The quantity of associated natural gas that had to be flared in 1981|82 was 1.8 million cubic metres per day. However, from the end of July 1982 with the commissioning of the gas turbines of the Maharashtra State Electricity Board last month there is little or no flaring taking place now.

The production of associated natural gas will increase further in the coming months with the commissioning of a further offshore process platform in the Bombay High field but outlets have been created in advance so that this increased availability is also expected to be properly utilised.

To ensure the optimum utilisation of natural gas in the future which requires the erection of pipelines and a wide variety of facilities and infrastructure, in March 1982 the Ministry appointed a Task Force comprising representative of the Oil & Natural Gas Commission Engineers India Ltd., Oil

Coordination Committee and the Department of Petroleum, The Task Force has already submitted its first report on the utilisation of offshore natural gas year by year for the next twenty years: adequate outlets have been identified so that even if there is some delay in offtake by some consumers, others will be able to fully absorb the gas that might become available.

(b) LPG (cooking gas) is being extracted from the associated natural gas. The balance associated natural gas is being supplied to Rashtriya Chemicals & Fertilizers Ltd., Tata Electric Company and the Maharashtra State Electricity Board.

Additional outlets that have been created are the refineries in Bombay and an ammonia-cum-nitric acid plant that is due to be commissioned very shortly.

(c) Associated natural gas has had to be flared from the commencement of production of crude oil in 1976; till June 30, 1982 the total quantity flared is 1958.711 MMM<sup>3</sup>. Putting a value on this gas will not be appropriate since it could neither be stored nor fully utilised during this period.

(d) and (e) The Bombay Gas Company has a coal gas pipeline supply network of about 550 kilometres in an area in the Bombay City. These coal pipelines are not suitable for the distribution of natural gas without extensive modifications requiring large investment. Studies on what modifications will have to be made and the investments on these are nearing completion.

#### Supply of Kerosene|Diesel to Small Consumers

\*432. SHRI RAJESH PILOT: Will the Minister of PETROLEUM, CHEMICALS AND FERTILIZERS be pleased to state:

(a) what criteria and controls are exercised by Government to ensure supply of kerosene and diesel to small consumers (district-wise), commensurate with population and needs;

(b) what are the guidelines if any for fixing the quota for kerosene and diesel to various States;