

account of the disturbed conditions in the North-Eastern Region.

SHRI N. GOUZAGIN: I would like to know from the hon. Minister, firstly, whether he is aware that the project was already behind schedule of completion before the methane gas explosion took place and, if so, what were the reasons for the previous delay; secondly, what was the total amount sanctioned at the initial stage for the project and also the amount sanctioned now due to delay and also on account of price escalation and, thirdly, what is the total expenditure on services rendered by foreign experts. Since he has mentioned the presence of disturbed conditions in the North Eastern Region, I want to know from the hon. Minister what is the total loss in terms of human lives and machinery due to disturbed conditions in the North-Eastern Region.

THE MINISTER OF ENERGY (SHRI A. B. A. GHANI KHAN CHAUDHURI): Actually, this project was sanctioned in 1970 but the work on civil side was taken up only in 1973. The work had to be suspended due to the presence of methane gas. That is the main question that has been answered.

Now we think that we will be able to tres are required to train all the dri-complete it by 1982 and we have to spend about Rs. 99.42 crores.

SHRI N. GOUZAGIN: Please give the details of the amount sanctioned first and the losses in terms of human lives and machinery due to disturbed conditions at the Project.

SHRI VIKRAM MAHAJAN: The original cost of the Project was Rs. 10 crores. But it was a smaller Project. The capacity then was about 70 MW. We changed the entire design and after change of design, the power potential was raised. Now there are three units of 35 MW each. That raises the power potential also. That is one of the reasons why the cost has gone up and apart from that,

the cost escalation is there. Now we had to change the design. There are extensive changes in design of all the major components resulting in substantial increase in quantities of work done. There was a set-back in the construction of the tunnel because there was an accident due to methane gas and lives were lost. I will give you the number later on. The method of construction had to be changed because of the geo-technical problems which were faced during the construction itself. Now it is further delayed. We are trying to expedite the Project and we are hopeful that by December, 1982, the Project would be completed and the estimated cost of the Project would be Rs. 99 crores.

SHRI DIGVIJAY SINH: The Lok Tak lake in the Manipur valley is very famous for its sanctuary and the sanctuary will be upgraded to a National Park. Has the Ministry of Energy coordinated with the Ministry of Agriculture in seeing that the ecology of this sanctuary is conserved when this Project is implemented?

SHRI VIKRAM MAHAJAN: It is a good suggestion. We will pass it on.

SHRI N. GOUZAGIN: Sir, my question has not been replied to. You have not given the information as to how many lives were lost in the disturbed areas and what is the cost of the machinery lost and at the same time what is the expenditure on foreign experts. You have not given this information.

MR. SPEAKER: Next question.

News Report Captioned 'Energy from Wind'

*976. **SHRI A. K. ROY:** Will the Minister of ENERGY be pleased to refer to the cover story in 'Yojana' 1-15 March, 1981 under "Energy from Wind" and state:

(a) the concrete steps taken/proposed to be taken to harness such energy in Sixth Five Year Plan;

(b) whether any study has been made to measure average wind speed in hilly areas of Chhotanagpur or any part of Himalayan region where wind speed is apparently high, if so, facts thereof;

(c) whether cost calculation has been made to set up windmills of different sizes and capacities with or without electricity generation system if so, facts thereof;

(d) whether Government are aware of a windmill operation in Jadavpur University in Calcutta directly lifting water to irrigate garden without going through the process of electricity generation, if so, details thereof; and

(e) steps taken to use such process in Chhotanagpur area?

THE MINISTER OF STATE IN THE MINISTRY OF ENERGY (SHRI VIKRAM MAHAJAN): (a) to (e). A statement is laid on the Table of the House.

Statement

(a) The efforts in the area of wind energy utilisation are still in the R & D stage. In the Sixth Five Year Plan, demonstration projects for wind energy applications under various field conditions are proposed to be launched and two centres for conducting research and development in problems relating to utilisation of wind energy, are to be set up.

(b) While there are some records of wind speeds in hilly areas in locations where there are meteorological stations, no comprehensive study of wind speed in hilly area has yet been undertaken.

(c) Some studies have been made about cost calculations of wind mills of different sizes and capacities. In the case of horizontal axis wind mill designed by the National Aeronautical Laboratory for irrigation in small farms from shallow open wells, the cost of material and parts is about Rs. 7,000/- excluding cost of machinery

and fabrication charges. The Capital cost of the wind mill per set developed under the integrated rural project for development of wind mills taken up in Ghazipur in U.P. with the co-operation of the Netherlands Government has been estimated at about Rs. 6,800/- (Without the cost of the well). A low cost wind mill for pumping water has been designed by Murugappa Chettiar Research Centre, Madras which can be fabricated from local materials. The cost of such a windmill is reported to be Rs. 1,500/-.

(d) and (e). The information is being collected and will be laid on the Table of the House.

SHRI A. K. ROY: My question is to you, Sir, Please see the answer to my first question. (a) to (c) is replied. For (d) and (e), it is said that the information is being collected and will be laid on the Table of the House. I would like to know whether this type of part answer is permissible in starred question. That is my first question to you.

MR. SPEAKER: For that the Minister will reply.

SHRI A. K. ROY: My last question is "steps taken to use such process in Chhotanagpur area."

'Information is being collected on that. Government is to comment on that.' This is a very wonderful way of giving a reply. (Interruptions).

Any way, you give me that reply later on.

Sir, use of wind mill would be very effective in a poor country like ours. Wind mill reminds one of the tale of Don Quixote but in India it will be very effective. I tell you that the technology, instead of solving problems, some times creates problems. Here the simple way should have been how to convert the kinetic energy of the wind into the potential energy of the water so that it could be directly used. But I would like

to know why research is being conducted to convert the kinetic energy of the wind into the electrical energy and then to store it in a battery and carry the battery to the village and then use it. This is the way their total research is being conducted.

MR. SPEAKER: You can write a paper on it!

SHRI A.K. ROY: Sir, this is the wonderful way in which they are conducting research.

The second part is this. This type of irrigation is mostly needed in hilly areas, and they are conducting research in shore areas, beside river waters. That is why I ask this question whether Government will have a fresh look at it and try to commercialise as they have started with go-bar gas. It takes only Rs. 1500 to Rs. 8,000 to install one wind mill and start some irrigation. I want to know whether Government, in the Sixth Five-Year Plan, is ready to come out in a big way with wind-mills to irrigate our lands—away from the conventional sources.

THE MINISTER OF ENERGY (SHRI A. B. A. GHANI KHAN CHAUDHURI): It is in an experimental stage. There are some other difficulties. The hon. Member must be knowing. The potential of wind energy on a country-wide basis is yet to be surveyed. The data available, however, indicates that wind energy can be developed in the coastal areas of Karnataka, Gujarat, Maharashtra, Rajasthan and some other hilly areas. (Interruptions) It is not for the entire country. Efforts in the area of wind energy utilisation are still in the research and developmental stage. Ten big-sized wind mills have already been installed in the district of Ghazipur in U.P. with the cooperation of the Netherlands Government during the years 1978 and 1979. The working of these wind mills and their economics is being evaluated. The question of extending this facility to other areas of the country will be

considered after further detailed studies and investigations.

SHRI A. K. ROY: Anyway, it is a Don Quixotic answer. I want to specially emphasize to you that the Irrigation Ministry...

THE MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS AND DEPARTMENT OF PARLIAMENTARY AFFAIRS (SHRI P. VENKATASUBBIAH): It is not a Don Quixotic answer, as he says. (Interruptions)

SHRI A. B. A. GHANI KHAN CHAUDHURI: It is a categorical answer. (Interruptions)

SHRI A. K. ROY: What I say is that the Irrigation Ministry is acting in Chhota Nagpur area as a drowning Ministry. What they are doing in hilly areas, as you know, is this. The food cultivable lands are scarce and they are in the low-lying areas. And they are making very big dams there like Panchet Dam, Maithan Dam and Konar Dam, drowning hundreds and thousands of acres of the land of the poor people. That is why I ask him whether he would consider using wind mills in the Chhota Nagpur areas in a big way; and it can be done there because that has an uneven topography. For that, you are not to build any reservoir at a very high altitude; the uneven topography will come to your help in making ponds or reservoirs at a higher level; put some wind-mill and with that, you can irrigate the areas in the lower level instead of drowning it by constructing very big dams. Will the Minister consider this?

SHRI A. B. A. CHANI KHAN CHAUDHURI: Certainly we will consider. It is in the experimental stage, as I have said before....

SHRI A. K. ROY: What are you experimenting? Is there any single place in Chhota Nagpur where you are experimenting? (Interruptions)

MR. SPEAKER: You better ask the the Agriculture and Irrigation Ministry.

SHRI VIKRAM MAHAJAN: This question should be directed to the Irrigation Ministry.

PROF. N. G. RANGA: May I know whether the Government have any special engineering staff and department which are charged with the special responsibility of exploring the possibilities for developing the wind mill power and, then, what is more, also for encouraging specific State Governments to make their own experiments, to make their own estimates and also develop wind power according to their possibilities?

SHRI A. B. A. GHANI KHAN CHAUDHURI: This question should be addressed to the Science and Technology Department and not to us....
(Interruptions)

MR. SPEAKER: It is for the Energy.

PROF. N. G. RANGA: Would the hon. Minister consult the Department of Science?

MR. SPEAKER: He says that he is dealing with the energy problem and it is for the Irrigation Ministry.

PROF. N. G. RANGA: Let them take note of the suggestion.

MR. SPEAKER: We shall ask them.

Request for Increase in Royalty on Crude Oil by Gujarat

*977. **SHRI R. P. GAEKWAD:** Will the Minister of PETROLEUM, CHEMICALS AND FERTILIZERS be pleased to state:

(a) whether it is a fact that the Gujarat State Government had urged the Centre to review its decision to increase the royalty on crude oil for the State;

(b) whether it is a fact that the increased royalty on crude oil for the State is very inadequate; and

(c) the detailed demands of this State and the reaction of Government thereto?

THE MINISTER OF STATE IN THE MINISTRY OF PETROLEUM, CHEMICALS AND FERTILIZERS (SHRI DALBIR SINGH): (a) to (c). A Statement is laid on the Table of the Sabha.

Statement

(a) Yes, Sir.

(b) The rate of royalty payable on the indigenously produced crude oil is regulated under the Oilfields (Regulation and Development) Act, 1948. Proviso to Section 6 (A) (4) of the Act lays down that the Central Government shall not (a) fix the rate of royalty in respect of any mineral oil so as to exceed 20 per cent of the sale price of mineral oil at the oilfields or the oil well-head as the case may be or (b) enhance the rate of royalty in respect of any mineral oil more than once during any period of 4 years. On this basis, at present, the maximum permissible royalty of Rs. 61/1 per tonne is being paid with effect from 1-4-1981.

(c) The State Government of Gujarat had earlier submitted a detailed memorandum urging for upward revision in the rate of royalty. The main points raised in the memorandum which have now been reiterated are as follows:—

(i) Royalty should not be determined on the basis of the indigenous price which has no co-relation to the international market price.

(ii) Royalty should be fixed at 20 per cent *ad valorem* of the weighted average posted price of Middle-Eastern crudes plus 4 per cent as compensation for the loss in sales tax.

(iii) The posted price for the purpose of computing royalty should include the cost of transportation to the nearest Indian port and should