answer is yes. As far as the existing projects are concerned, the whole Orissa scene is that out of 1,185 MW, 470 MW comes from the thermal power station at Talcher. Rest all comes from hydel proiects at Hirakud, Balimela Rengali and Muchkund. Therefore, if reservoirs are not full, as far as the hydel projects are concerned, we are in difficulty. As far as the working of the existing Talcher Thermal Power Station is concerned, as was stated by my colleague unfortunately the performance is that although they have improved slightly, it is still below 40 PLF (Plant Load Factor). We can only help the State. I personally went to Talcher. We are trying to help them in improving their machinery, equipment and also coal supply so that they can improve the performance. I feel confident that we will be able to achieve something,

MR. SPEAKER: Next question. Shri D.N. Reddy.

PROF. MADHU DANDAVATE: Sir, you do not look at the ladies. She wanted to add something.

MR. SPEAKER: Ladies always add.

Collaboration Arrangement for Distributed Digital Control System

*169. SHRI D.N. REDDY: Will the Minister of INDUSTRY be pleased to state:

- (a) Whether a distributed digital control system for power station has been developed in India indigenously by the Corporate Research Development Division of the Bharat Heavy Electricals Ltd., Hyderabad and has been installed at the Andhra Pradesh State Electricity Board's Hydro-electric plant in Srisailam and in MIDHANI's captive power plant;
- (b) whether BHEL has entered into a collaboration arrangement with Born Bobery of Switzerland to manufacture the same system; and
 - (c) if so, the reasons thereof?

THE MINISTER OF STATE IN THE DEPARTMENT OF PUBLIC ENTER-

PRISES (PROF. K.K. TEWARY):
(a) Corporate Research & Development
Division of BHEL has not developed a
Distributed Digital Control System. It has
developed a Programmable Logic Controller which has been installed at Srisailam
Hydro Electric Plant & Midhani Steel
Rolling Mill.

(b) and (c). BHEL has entered into a collaboration agreement with Brown Bobery of Switzerland for Distributed Digital Control System, which has not been developed indigenously.

PROF. MADHU DANDAVATE: Mr. Tewary has got up ten minutes earlier.

[Translation]

MR. SPEAKER: He is your colleague, you should have told him.

[English]

SHRI D.N. REDDY: Sir, will the hon. Minister state whether it is a fact that the Distributed Digital Control System is more accurate and improves productivity in various industries and power stations? If so, when does the Bharat Heavy Electricals expect to manufacture this system with the technical knowhow from Switzerland and what are the financial implications?

PROF. K.K. TEWARY: Mr. Speaker, Sir, as the question has been framed, it appears that there is some misunderstanding in the mind of the hon. Member. He has mistaken one system for another. What we have entered into collaboration with actually this Switzerland company is the Distributed Digital Control System We have indigenously developed another system which is different from the one that I have just mentioned. This is a Programmable Logic Control or PLC. * By way of clarification I can inform the hon. Member and the august House that D.D.C. are computer based system for complete automatic control of complex processes in industrial process and power generating plant. system is applied to larger units and they are dependable systems. On the other hand P.L.C. which has been developed

indigenously by BHEL by comparison is very limited in its role as it only ensures safety of an equipment or small process by means of sequencing and inter-locking off and on operations. At present the present technology used-micro-processes-is carrying out this task. P.L.C. does not perform automatic task of continuously changing process parameters.

SHRI D.N. REDDY: What is the financial implication? He has not said anything aobut that.

HON, MEMBERS: Zero.

PROF. K.K. TEWARY: This agreement was keeping in view the market demand and also in order to be in competition-locally in the country and internationally. We have already received orders for this equipment in two places. BHEL has been able to secure orders for Rs. 7 crores for Rajghat and Khaparkheda projects. This technology has been taken to keep BHEL in the competitive world market

THE MINISTER OF INDUSTRY AND MINISTER OF PETROLEUM AND **NATURAL GAS** (SHRI DATT TIWARI): NARAYAN I am just supplementing to what my colleague just now mentioned.

Our terms of collaboration are lumpsum payment of 2.5 million Swiss Franc net of Indian taxes in four instalments. The first instalment is 25% after agreement come into force and capital goods clearance obtained. The second instalment-35% on receipt of document. Third instalment 25% after despatch of contract products-of net ex-factory price of Rs. 25 lakhs or four years after the agreement comes into force. Fourth instalment and last 15% after the commissioning of contract products of ex-factory selling price of 25 lakhs but not later than four years from the contracting date.

Royalty: It is 5% subject to tax until the Company receives 4 lakhs Swiss Francs net of Indian Taxes and 2.5% thereafter.

SHRI D.N REDDY: Is it a fact that bulk of the production capacity of BHEL has been effected by strikes and other difficulties? How does it compare with the previous years 2

Oral Answers

PROF. K.K. TEWARY: He is not clear. Please ask him to repeat the question.

SHRI D.N. REDDY: He is all round

PROF. K.K. TEWARY Why do you get obsessed with zero?

SHRI D.N. REDDY: I am not getting obsessed.

PROF. K.K. TEWARY: You were not clear and I asked you to repeat.

SHRI S. JAIPAL REDDY: He has been promoted from Zero Hour Member to a Minister.

MR. SPEAKER: Everything starts from zero. (Interruptions)

PROF. K. K. TEWARY: You remained zero. This is including your party.

MR. SPEAKER: Do you mean that he was the hero of the Zero Hour.

AN HON. MEMBER: He was opposed to the hero, may be the villian of the zero hour. (Interruptions)

SHRI D.N. REDDY: It it a fact that production capacity of the BHEL was effected last year as compared to the previous year? If so, why? Is it a fact that there were strikes and other difficulties in the last one year which has effected production.

HON. MEMBERS: Zero.

PROF. K.K. TEWARY: It is difficult to answer that. Productivity has not been affected, to the best of my knowledge. BHEL's last year's performance was good. The projected profit and overall performance of BHEL in 1985-86 and 1986-87 are going to be landmarks in the history of this Company BHEL.