

## RAJYA SABHA

Thursday, the 20th November, 1980/  
29th Kartika 1902 (Saka)

The House met at eleven of the clock, Mr. Chairman in the Chair.

### ORAL ANSWERS TO QUESTIONS

MR. CHAIRMAN: Question Nos. 41 and 46 are on the same subject. Therefore we can club them together.

#### Contract to U.S.A. software for Radar project

\*41. SHRI ARVIND GANESH KULKARNI†:

SHRI S. W. DHABE:

Will the Minister of DEFENCE be pleased to state:

(a) whether it is a fact that the Electronics Radar Development Establishment, Bangalore, placed a contract on M/s. C.C.C.C., U.S.A., for Software for a radar project;

(b) if so, what is the value of the contract and its present position;

(c) whether the Department of Electronics were consulted in this regard; and

(d) whether Tata Institute of Fundamental Research, who are internationally known for data processing Software were consulted?

THE MINISTER OF STATE IN THE MINISTRY OF DEFENCE (SHRI SHIVRAJ V. PATIL): (a) Electronics Radar & Development Establishment (LRDE), Bangalore had signed a contract with M/s. 4C (USA) for the development of a Radar Data Processor (RDP), including Software which forms a part of it.

(b) The contract was for Rs. 46.64 lakhs but it was cancelled as the firm was unable to give a bank guarantee.

(c) The necessity of taking assistance from a foreign firm was established by a Technical Committee of which the Deptt. of Electronics and Bharat Electronics Ltd were members.

(d) No, Sir.

#### Transmitter for radar project

\*46. SHRI S. W. DHABE:

SHRI ARVIND GANESH KULKARNI†:

Will the Minister of DEFENCE be pleased to state:

(a) whether Electronics Radar Development Establishment, Bangalore placed a contract for development of a transmitter for a radar project with a firm in U.S.A.;

(b) if so, whether the Department of Electronics were consulted in this regard;

(c) whether the Bharat Electronics Limited expressed their inability to do the job; and

(d) what is the amount of the contract and its present status?

THE MINISTER OF STATE IN THE MINISTRY OF DEFENCE (SHRI SHIVRAJ V. PATIL): (a) Electronics & Radar Development Establishment (LRDE), Bangalore have placed a contract on a U.S. firm for development of a power amplifier of a transmitter for a radar.

(b) and (c) Yes, Sir.

(d) The contract is for Rs. 70 lakhs and it is progressing as per schedule.

SHRI ARVIND GANESH KULKARNI: Sir, about this contract—under question No. 41—which was placed with the firm, may I know from the hon. Minister whether there is a rule that for contract exceeding Rs. 5 lakhs permission has to be obtained from the Department of Electronics

†The question was actually on the floor of the House by Shri Arvind Ganesh Kulkarni.

and, if so, whether any permission was obtained while this contract was placed? I know that this was done during the Janata Government's time and they have got very little interest in developing indigenous technology. So, I would like to know whether the Government will now make it clear that the Government's entire interest is in developing indigenous technology and whether such a practice of placing orders with the US firm by breaking the rules will be forthwith suspended as it inhibits the growth of indigenous technology. And in this connection, may I also know whether the Director of Electronics Radar and Development Establishment has any special interest in placing this contract?

**SHRI SHIVRAJ V. PATIL:** Sir, Bharat Electronics Limited were the members of the Technical Committee and they were consulted before this contract was placed. And the contract was given to a foreign firm in order to get modern technology. Attempts are being made to develop indigenous technology. But whenever it is not possible to develop modern technology within the available time or within a short time, contracts are given to foreign firms to get the modern technology. We are certainly trying to be self-reliant and trying to develop the technology here. But wherever it is necessary, we do take assistance from foreign firms and with the help of the technology we get from outside, we develop indigenous technology on that basis.

**SHRI ARVIND GANESH KULKARNI:** I am sorry my good friend is giving his reply in half-hearted confidence. My basic emphasis was on development of indigenous technology. Leave aside which Government placed the order or allowed this firm to supply this material. You have not made it clear whether the Department of Electronics itself was consulted because it is being entrusted to develop this technology. Has the Director of

the Electronics Radar Development Establishment made any attempt to develop this technology upto the required standard? That was the thrust of my question, namely, development of indigenous technology. I want an affirmation that for developing this sensitive technology our technicians will be given the first preference rather than importing it. My second question is this. I am not asking many questions...

**MR. CHAIRMAN:** You are entitled to two questions on the first one and one question...

**SHRI ARVIND GANESH KULKARNI:** I do not want it. I do not want to waste the time of the House. Question No. 46 is also on the development of indigenous technology. I have alleged there that the Department of Electronics was not consulted. I do not want to give anybody's name. But the Director was very much interested in this. You will be surprised to know that a technician is being posted in America and he has been wasting his time there for the last six months. Is this the way that the Department of Electronics should function? I want a complete assertion by the Government that this Government at least will develop the technology indigenously and our scientists are quite competent to do that.

**SHRI SHIVRAJ V. PATIL:** The Director was consulted in this matter. He was one of the members of the Technical Committee and only after getting his opinion the contract was placed.

The second question is about development of indigenous technology. The contract which we have entered into with the USA firm is one-time contract. We are getting the technology from the USA firm and on the basis of that technology we are trying to develop our own technology also. Wherever there is a modern

technology available outside, we are trying to make use of that also. On the question whether we could have developed that technology or not, I would not say that we would not have been able to develop it. The time factor has also to be taken into consideration. The question is whether we could do it in a given time. If we are not able to do it in a given time, then we get the technology from outside and with the help of that technology we develop our own.

The hon. Member has said that a scientist is wasting his time in the foreign country. He is not wasting his time. He is participating in the development of the power amplifier there. After participating in the development of power amplifier there, he will come back fully equipped with the knowledge and knowhow which will be utilised by us for the development of indigenous technology in this country. We are developing indigenous technology and we do not want to rely on others. We are trying to do all these things within the time which would be helpful to us.

**DR. BHAI MAHAVIR:** The hon. Minister said in his reply to the first question that the Tata Institute of Fundamental Research was not consulted while placing this contract. I hope he is aware that Prof. R. Narasimhan of that Institute has been awarded the Hari Om Trust Award by the Prime Minister recently for his research in applied sciences and he is an acknowledged world authority on software. May I know if it was a proper decision to place this order before making use of whatever expertise was available in India? Sir, as I see it, both these questions relate to the import of items which are positively available within the country. For example, in the case of this software, I would like to ask him whether the Department of Electronics has not claimed in one its annual reports recently that they are in a position to export computer data soft-

ware. And, Sir, similarly, with regard to the second question also, transmitters are being made in India by the BEL and they exported Rs. 80 crores' worth of radar as per their annual report for 1979-80. Sir, we are exporting these things and still we are placing contracts outside for the import of similar things. Out of the question as to where the contracts are placed, you see, three significant points emerge: One is that we don't need these imports. Secondly, the contracts are not placed properly with proper sanction. Thirdly, they have been done in a manner which is suspicious. So, I would like to ask him pointedly whether the honourable Minister will confirm or deny the fact that this contract which was placed with M/s CCCC of the USA is practically closed and the money has been paid, but we have not got anything in return for the money paid, and now this particular establishment is looking for some other party to place a similar contract. I would like to ask him if he is aware of this and, if he is not aware of these facts, whether he would look into these facts and enlighten us. My friend mentioned that it was done in the previous Government's time. Maybe it is so. But we are not now concerned with the question as to which political party was heading the Government at that time. It is a matter concerning our defence and it is essential that our expertise is put to use rather than that we should go out and get things in a very suspicious and fishy manner. Sir, I would like him to enlighten us on these points.

**SHRI RAMANAND YADAV:** Sir, this side also.

**SHRI SHIVRAJ V. PATIL:** Sir in one question so many questions are asked and I shall attempt to answer all the questions that have been put.

The first question relates to the consultation with the Tata Institute of Fundamental Research. Sir, the Tata

Institute of Fundamental Research is having some know-how relating to data processing. But that know-how is not sufficient. The Tata Institute of Fundamental Research has not been able to develop the know-how which will be able to process the data relating to objects which are moving at a great speed, objects which take sharp turns, objects which cross each other. The know-how with the Tata Institute of Fundamental Research is not sufficient for our purpose and that is why we are trying to get this know-how from outside by contracting with a foreign firm.

DR. BHAI MAHAVIR: Is Prof. Narasimhan not an authority on that?

SHRI SHIVRAJ V. PATIL: I am not saying that; I am not saying that. What I am saying is whatever was available with the Tata Institute of Fundamental Research at that time was not sufficient. I am not saying that a particular scientist will not be able to develop that kind of technology in the future. But what I am saying is that it was not available at that time...

DR. BHAI MAHAVIR: What about the present?

SHRI SHIVRAJ V. PATIL: ...and it was necessary for us to get it from outside and that was why we did it.

DR. BHAI MAHAVIR: Are you sure that they do not have it at present?

SHRI SHIVRAJ V. PATIL: What I am saying is that it was not available at that time and so, we did it. But our attempt is to take the assistance from the Tata Institute of Fundamental Research also for the indigenous development. We are not shutting them out. We are trying to take their assistance also and also the assistance of all the scientific knowledge that is available in our

country for the development of indigenous capability. Now that would be our direction; that would be our policy. But in this case, we took the know-how from outside. We tried to take the know-how from outside.

The second question is about the composition of the contract. We entered into the contract with that firm. But they did not give us the reverse guarantee for the money we were going to pay them, and that is why this contract could not be gone into. We are trying to get this know-how from other firms. This contract has fallen through. We are not now doing anything with that firm.

DR. BHAI MAHAVIR: But the money is paid all the same. (*Interruptions*). I would like you to contradict it.

(*Interruptions*)

SHRI ARVIND GANESH KULKARNI: The money is not paid as yet.

(*Interruptions*)

SHRI SHIVRAJ V. PATIL: I am saying that the contract was not entered into, because they were not in a position to, or they did not, give us the reverse guarantee for the money we were going to pay them.

SHRI PILOO MODY: That we heard.

SHRI SHIVRAJ V. PATIL: Reserve guarantee they had to give for the money we were paying. But they were not giving us the reverse guarantee. We have not entered into the contract with them. The contract fell through. That is why I am saying that... (*Interruptions*).

MR. CHAIRMAN: Please sit down.

SHRI RAMANAND YADAV: Sir... (*Interruptions*) Unless you entered into...

MR. CHAIRMAN: Mr. Yadav, when the hon. Minister is answering the question, please do not intervene. I will tell you:

‘दो चीज तीरएँ अकलस्त दम फरो वस्तन

ववसते गुप्तान व गुप्तन वववे खमोशी”

दो चीजें अकल से खारिज हैं। एक तो यह कि चुप बैठना जब बोलने का वक्त हो और दूसरी चीज खामोशी के वक्त बोलना।

श्री रामानन्द यादव :

I protest against this remark by the Chair . . . (Interruptions).

सभापति जी, हम अपने राइट को प्रोटैक्ट करना चाहते हैं आपके माध्यम से यह रिमार्क आपका अच्छा नहीं है। सभापति जी, मेरी बात सुन लीजिए। . . . (Interruptions)। आपने बड़ा ही अन-चैरिटेबुल रिमार्क किया है और यह अच्छा नहीं है। बात यह है कि हम आनसर जानना चाहते हैं मंत्री जी, जब आनसर सेटिस्फैक्टरी नहीं होगा तो हर मेम्बर को अधिकार है बोलने का. . . (Interruptions)

श्री सभापति :

I am telling you. (Interruptions)

मैंने आपका नाम लिख कर रखा है। आपका जब वक्त आयेगा तो बोलिये। (Interruptions)

श्री रामानन्द यादव : यह हमारा राइट है, हम आनसर से सेटिस्फाई नहीं हैं तो चाहते हैं कि मंत्री जी इस हाउस को सेटिस्फाई करें।

श्री सुन्दर सिंह भण्डारी : श्रीमन्, शेर का उल्टा असर हो रहा है, कृपया शेर न बोलें।

श्री सभापति : अब मैं उनका दूसरा शेर सादी का शेर सुना दूँ ? . . . (Interruptions)

“तामर्दे सुखन न गुफता बाशद

ऐवो हुनर्श न हुफता बाशद”

जब तक आदमी न बोला हो ता उसका ऐवा हुनर छिपा रहता है।

SHRI SHIVRAJ V. PATIL: What I was saying is that this reverse guarantee was not given by the firm. The contract fell through. That is what I was saying. (Interruptions). There was no contract at all.

SHRI PILOO MODY: ‘The contract fell through’—what does it mean? How much money have you paid?

SHRI SHIVRAJ V. PATIL: Well, there was no contract entered into, because they did not give us the reverse guarantee. There was no question of our making the payment to that firm. We have not paid anybody. (Interruptions). When I say that the reverse guarantee was not given and the contract fell through, did it not mean that?

SHRI PILOO MODY: It does not mean that. Now we are satisfied.

SHRI SHIVRAJ V. PATIL: So, Sir, I think, I have answered all the points.

DR. BHAI MAHAVIR: No, Sir. He has not answered the point as to whether the Department of Electronics has claimed that they are in a position to export software and whether the B.E.L. exported Rs. 80 crores worth of radar equipment and at the same time we are placing contracts for imports from outside. If so, why?

SHRI SHIVRAJ V. PATIL: Sir, this is a different question. But I am answering that. Sir, we have some technology, some know-how for the data processing. But this is a particular kind of technology, a particular

kind of knowhow. This is a very sophisticated technology. We may have a technology and we may develop upon it. We may have the most modern technology also with us. This is a technology which is used for processing the data when the aircraft move with a great speed, take turns and when different objects cross each other. Now, for this purpose, the automatic data processing system has to be developed. The question is whether that kind of data processing knowhow is available with us or not, and if that kind of knowhow is not available with us, whether we would be interested in developing that kind of knowhow even with the help of foreign firms and foreign collaboration also. In this case, that is what actually we have tried to do. We have tried to get the knowhow from outside on one term contract basis and develop it here only. What was exported was something different and what was tried to develop was something different.

**SHRI NARASINGHA PRASAD NANDA:** Sir, the hon. Minister said that the contract fell through because there was no reverse guarantee. In fact, the answer supplied by the hon. Prime Minister was that there is no contract. If there is no contract, then what kind of technical knowhow were you getting by putting one of your officers for training in the United States of America for the last six months? That is number one. Secondly, from the kind of answer given by the hon. Minister would it be correct to say that we have not developed that technical knowhow for development of power amplifiers and transmitters for the radar projects? These are the two specific questions that he should answer.

**SHRI SHIVRAJ V. PATIL:** Sir, this difficulty has arisen because the hon. Member has come a little late.

We are answering the two questions together.

**SHRI NARASINGHA PRASAD NANDA:** I come to the House before the hon. Minister came here.

**MR. CHAIRMAN:** We don't keep a time-keeper here.

**SHRI SHIVRAJ V. PATIL:** Sir, in the first question, what is involved is the software, and in the second question, what is involved is the power amplifier. Our scientists in the foreign countries are participating in the development of the power amplifier. And that contract is being performed. The first contract has fell through and that is why we are not in a position to perform the first contract. As far as the second contract is concerned, we are getting assistance, the development is going on there and our scientists are participating in that development. And by doing that, they will be able to get the technology necessary for us.

**SHRI NARSINGH NARAIN PANDE:** Sir, the hon. Minister while giving the reply stated that the contract has been cancelled. I wanted to know whether it is a fact that at the time the contract was entered into, all these implications which the Minister has clarified just now were taken into consideration or not.

**SHRI SHIVRAJ V. PATIL:** Well, Sir, the contract is not entered into. It was in the process of negotiation. And because they did not give the reverse guarantee, we have not entered into a contract. And we are getting the knowhow from a different firm.

**SHRI NARSINGH NARAIN PANDEY:** Sir, my question is very simple. My question is whether at the time of entering into the contract—this contract was completed or not. It is not my question whether at that time that Government which has entered into the contract has taken all these precautions which the hon. Minister has just now said or not. This is my question.

**SHRI SHIVRAJ V. PATIL:** Sir, there are two aspects to this question. One is technical and the second is legal. As far as the technical aspect is concerned, the firm was quite capable of giving us the necessary know-how. We contracted with the firm and we tried to get the know-how from that firm. The legal aspect of it is that certain formalities are to be fulfilled before a contract is made. Here, the reverse guarantee was to be given by the firm. They did not give the reverse guarantee and so the contract could not be completed. The contract could not be entered into and this has fallen through.

**श्री रामानन्द यादव :** सभापति महोदय, जनता पार्टी के राज्य में यह कांटेक्ट देने का प्रयास किया गया था और (Interruptions) अमरीका को देने का प्रयास किया गया था। इतिहास साक्षी है कि जब कभी हिन्दुस्तान पर विपत्ति आई है और पड़ोस के किसी होस्टाइल कंट्री से युद्ध हुआ है तभी उसी समय अमरीका के साथ सामान सप्लाई करने के जो हमारे एग्रीमेंट हुए, उसको उसने बन्द कर दिया। इसमें दूसरी बात हमें यह मालूम होती है कि जनता पार्टी हमारे डिफेंस को भी अमरीका को मार्टगेज कर देना चाहती थी।

**श्री शेख अब्दुल रहमान :** यह क्वश्चन है या भाषण है... (Interruptions)

**श्री रामानन्द यादव :** जरा सुन लीजिए। यह साफ्टवेयर यूज होता है मिलिटरी परपोजेज के लिए, डाटा प्रोमिस के लिए...

**श्री सभापति :** आपका मवाल क्या है

**श्री रामानन्द यादव :** मैं सवाल पूछ रहा हूँ, मुझे एक्सप्लेन करने दीजिए। सभापति जी, जब दूसरे भूमिका बांधते हैं तो आप उनको तो रोकते नहीं और जब मैं भूमिका बांधता हूँ तो मुझे रोकते हैं। मुझे पहले एक्सप्लेन करने दीजिए। तो मैं यह कह रहा

था कि यह जो जनता पार्टी के राज्य में अमरीका के साथ डिफेंस को भी मार्टगेज कर देने की कोशिश की गई थी यह उसका एक ज्वलंत उदाहरण है। मैं सरकार से यह जानना चाहता हूँ कि इस प्रकार के सेंसिटिव वयर्ज के लिए सामान लेने के लिए अमरीका से टेंडर लेने का क्यों प्रयास किया गया जबकि यह देखा गया कि पिछले कुछ सालों में अमरीका ने हमें लड़ाई के सामान के या दूसरे एग्रीमेंट्स के तहत सामान देना बन्द कर दिया मैं यह भी जानना चाहता हूँ कि उस समय की सरकार ने इस साफ्टवेयर के लिए क्या ग्लोबल टेंडर इनवाइट किए थे? अगर ग्लोबल टेंडर इनवाइट किया तो किन किन मुल्क से...

**श्री पीलू मोदी :** मालूम है ग्लोबल टेंडर क्या होता है?

**श्री रामानन्द यादव :** यह तो आप ही जानते हैं क्योंकि आप पूंजीपतियों के रक्षक भी हैं और भक्षक भी हैं। तो मैं यह जानना चाहता हूँ कि क्या सरकार ने ग्लोबल टेंडर इनवाइट किए थे, अगर मंगवाए थे तो किन किन मुल्कों से टेंडर आए थे? हमारे यहां के साइन्टिस्ट्स ने उसकी कम्पैरेटिव स्टडी भी की होगी, इकोनोमिक वायबिलिटी भी देखी होगी, या उसको समझ कर इस ग्लोबल टेंडर में किन किन मुल्कों का नामजूर किया गया और क्यों किया गया? मैं यह भी जानना चाहता हूँ कि किन किन मुल्कों का स्वीकार किया गया था? अमरीका का विशेष रूप से स्वीकार करने का क्यों प्रयास किया गया?

(Interruptions)

**श्री शिवराज बी. पाटिल :** सभापति महोदय, यह जो टेक्नोलोजी या नो-हाऊ हमें चाहिए थी, जिसकी जरूरत थी यह दुनिया के किस मुल्क से हमें मिल सकती है, यह देखने की कोशिश जरूर की गई। कई देशों से देखने की हम ने कोशिश की लेकिन अन्त में ऐसा स्पष्ट हुआ कि अमरीका की जो फर्म

है वह हमें टेक्नोलॉजी देने के लिए तैयार है। ऐसा जब हमें पता चला तो वह करने की कोशिश हमने की। अब यहां पर ग्लोबल टेंडर बुलाने की बात माननीय सदस्य ने की है, ऐसी चीजों में तो ग्लोबल टेंडर नहीं बुलाए जा सकते। जहां तक टेक्नालॉजी का सवाल है, यह तो टेंडर पर, कांटेक्ट पर नहीं हो सकती। जहां भी में उपलब्ध होती है वहां से हम टेक्नोलॉजी लेने की कोशिश करते हैं। अगर वह एक देश में हो तो वहां जायेंगे, दूसरे देश में हो तो वहां जायेंगे, तीसरे देश में हो तो वहां जायेंगे, वहां से लेने की कोशिश करेंगे। टेंडर करके तो ऐसी टेक्नालॉजी का पता अपने को मिल नहीं सकता है। हमारे सम्मानीय सदस्य ने पूछा है कि अमेरिका से क्यों लिया है दूसरे देश से क्यों नहीं लिया है। तो दूसरे देश से भी लेने की कोशिश जरूर हुई है मगर दूसरे देश में जाने के बाद वहां पर कुछ ऐसी चीजें हमें मिल रही थी जिसके अन्दर जो पार्ट्स हैं वे पार्ट्स फिर हमको उसी देश से लेने जरूरी थे। अगर हम समझें कि एक देश से ले लें टेक्नालॉजी तो उसके बाद जो दूसरे पार्ट हैं वे उसी देश से लेना जरूरी होता। इस प्रकार से हम किसी एक देश पर निर्भर न रहे, हम अनेक देशों से चाहें जरूरत महसूस हो तो पार्ट ले सकें ऐसी हमारी कोशिश थी। दूसरे देशों से हमने लेने की कोशिश की और हमें ऐसा लगा उन देशों से ये चीजें लेने के बाद हमको उसके जो स्पेयर पार्ट हैं या दूसरे पार्ट हैं वे उन्हीं देशों से लेने की जरूरत पड़गी और वह टेक्नालॉजी पूरी तरह से वहां से मिलने की उम्मीद नजर नहीं आयी तो उस समय हमारी पिछली सरकार ने यू० एस० ए० की उस फर्म से लेने की कोशिश की जिसके अन्दर जो पार्ट हैं वह हम किसी दूसरे मुल्क से ले सकते हैं और उसका एक

इंस्ट्रुमेंट बनाकर दे सकते थे। अब उन्होंने कम्परेटिव स्टडी का सवाल किया है। सभापति महोदय कम्परेटिव स्टडी का सवाल तो बहुत मुश्किल होता है टेक्नालॉजी में, कोई एक इंस्ट्रुमेंट एक देश से आ जाये, दूसरा इंस्ट्रुमेंट दूसरे देश से आ जाये और तीसरा इंस्ट्रुमेंट तीसरे देश से आ जाय तो एक इंस्ट्रुमेंट में एक चीज अच्छी होगी दूसरी चीज अच्छी नहीं होगी, दूसरे इंस्ट्रुमेंट में एक चीज अच्छी होगी दूसरी चीज अच्छी नहीं होगी, और तीसरे इंस्ट्रुमेंट में तीसरी चीज अच्छी होगी कोई और अच्छी नहीं होगी। अतः ऐसे जो सोफिस्टिकेटेड इंस्ट्रुमेंट होते हैं उसके अन्दर कम्पेरीजन करना मुश्किल होता है इसलिए हम ये करते हैं कि जो हमारा उद्देश्य है उसकी पूर्ति के लिए कौन-सा इंस्ट्रुमेंट हमारे काम में आ सकता है, कौन-सा इंस्ट्रुमेंट लेने से हमारे उद्देश्य की पूर्ति हो सकती है, यह हम सामने रखते हैं और जो इंस्ट्रुमेंट लेने के बाद हमारे उद्देश्य की पूर्ति होती है हम वह इंस्ट्रुमेंट लेने की कोशिश करते हैं? सिर्फ कम्पेरीजन करने से ऐसा सवाल हल नहीं हो सकता। इसलिए इसके अन्दर कम्पेरीजन करने का कोई सवाल नहीं है।

श्री सभापति . आखिरी सप्लीमेंटरी मिस्टर राममूर्ति ।

SHRI P. RAMAMURTI: The hon. Minister had stated in his reply that it is not a case that our technologists are not capable of developing this technology but it is a question of time factor. This is the specific thing he said. I want to know when they had not consulted the Tata Institute of Fundamental Research where you have got a top technologist in this field and without enquiring from him as to what will be the time factor involved in developing this technology by ourselves, how could



the Government come to the conclusion that the time factor is very important and that we cannot develop it within this time? I do not say whether this Government or the previous Government did it but I want to know how did the Government come to the conclusion that it cannot be developed within this time? Actually one year has been wasted and we have not even been able to enter into a contract. Therefore, without consulting our technologists with regard to the time factor, how did the Government enter into this contract?

**SHRI SHIVRAJ V. PATIL:** Sir, I am trying to answer two questions at a time, question No. 41 and 46. With respect to question No. 41, the software technology, we were not certain whether we would be able to develop it or not but we are not going to take any pessimistic view. In the long future we would be able to develop this software technology also in our country. As far as question No. 46 is concerned, our scientists were not in a position to develop it within the foreseeable future. Sir, as far as Question No. 46 is concerned, the time factor is important. As far as Question No. 41 is concerned, this is in regard to our capacity to develop in the near future. These two things are coming together. Perhaps, because of this, some apprehension has arisen. The second question was, how we have taken a decision without consulting the Tata Institute of Fundamental Research.

**SHRI P. RAMAMURTI:** I asked a question about the time factor.

**SHRI SHIVRAJ V. PATIL:** I have answered the question. The time factor relates to Question No. 46 and our capacity to develop relates to Question No. 41. I am answering two questions. Because of this, the two things are coming together. As far as Question No. 41 is concerned, we are not in a position to say whether we would be able to develop that kind of technology in the near future. May be, after ten or fifteen or twenty years, after a long time, in the future, we may be able to develop that. Are we ready to wait

till such time? As far as the power amplifier is concerned, we could have developed it, but we could not have developed it in time. (*Interruptions*) The question about time factor is in relation to Question No. 46. The question had been asked, why did we not consult the Tata Institute of Fundamental Research. Our scientists in the Tata Institute of Fundamental Research do meet, do talk and do consult. They know what is the standard of development in regard to a particular technology over there also. So, having known that and having informally talked with others, they had come to the conclusion that in a matter like this, it would not be possible to wait for a long time, so that they took the decision and they accepted the assistance from outside.

**SHRI P. RAMAMURTI:** I must congratulate the hon. Minister for his capacity to evade the question.

**MR. CHAIRMAN:** The difficulty has arisen because you had asked a question which refers to two questions. The time factor in regard to two questions has been adequately answered by the hon. Minister.

\*42. [*The questioners (Shri Santosh Kumar Sahu and Shri M. R. Krishna) were absent. For answer vide cols. 32-33 infra.*]

#### Recommendations of the Indian Science Congress Association

\*43 **DR. LOKESH CHANDRA:**†

**SHRI BISHAMBHAR NATH PANDE:**

Will the PRIME MINISTER be pleased to state:

(a) whether Government have considered the recommendations of the Indian Science Congress Association to utilise various alternative energy sources, with particular emphasis on hydrogen production from water; and

†The question was actually asked on the floor of the House by Dr. Lokesh Chandra.