

### Statement

*Terms of References of Law Commission  
to be re-constituted from 14-12-1981  
to 13-12-1984.*

(1) To keep under review the system of judicial administration to ensure that it is responsive to the reasonable demands of the times and in particular to secure —

(a) elimination of delays, speedy clearance of arrears and reduction in costs so as to secure quick and economical disposal of cases without affecting the cardinal principle that decisions should be just and fair.

(b) simplification of procedure to reduce and eliminate technicalities and devices for delay so that it operates not as an end in itself but as a means of achieving justice.

(c) improvement of standards of all concerned with the administration of justice.

(2) To examine the existing laws in the light of Directive Principles of state Policy and to suggest ways of improvement and reform and also to suggest such legislation as might be necessary to implement the Directive Principles and to attain the objectives set out in the preamble to the Constitution.

(3) To revise the Central Acts of general importance so as to simplify them and to remove anomalies, ambiguities and inequities.

(4) To recommend to the Government measure for bringing the statute book up-to-date by repealing obsolete laws and enactments or parts thereof which have outlived their utility.

(5) To consider and to convey to the Government its views on any other subject relating to law and judicial administration that may be referred to it.

12. 18 hrs.

### CALLING ATTENTION TO MATTER OF URGENT PUBLIC IMPORTANCE

POWER SHORTAGE IN INDIFFERENT  
PARTS OF THE COUNTRY WITH  
PARTICULAR RELEGANCE TO  
MAHARASHTRA

SHRI CHITTA BASU (Barasat) :  
Sir, I call the attention of the Minister of Energy to the following matter of urgent public importance and I request that he may make a statement thereon :—

“Power shortage in the different parts of the country with particular reference to Maharashtra.”

12. 18 hrs.

[MR. DEPUTY SPEAKER *in the Chair*]

THE MINISTER OF ENERGY (SHRI A.B.A. GHANI KHAN CHAUDHURI) : Sir, Power is such a vital input for the country's economic activities that I can fully appreciate the anxiety of the Hon. Members in regard to power shortages prevalent in some parts of the country. As I have assured the House on more occasions than one, my Ministry is fully alive to the situation and has been taking all possible measures to bring about a steady improvement in the performance of the power sector.

2. At the outset, may I remind the hon. Members that, in order to be in a position to cater for the emerging power requirements in the different sectors of the economy and to sustain a high rate of growth, we projected an ambitious programme of adding nearly 20,000 MW of new generating capacity during the Sixth Plan period. With this order of expansion of installed capacity in

[Shri A.B.A. Ghani Khan Chaudhari]

the country our expectation was that there would be virtually no power shortage in the Western, Eastern and North-Eastern regions, while the Southern region might have a marginal energy shortage. It was only in the Northern region that the capacity deficit would persist for some time longer and would be wiped by the middle of the Seventh Plan. I must admit that actual performance in terms of addition of new capacity during 1980-81 was not commensurate. As against a target of 2687 MW, 1643 MW of new capacity was commissioned and 180 MW rolled last year, the slippage amounting to 32%. In the Current year, there will be some improvement, with the likely commissioning of 2300 MW as against the target of 3212 MW. It is apparent that a massive task would remain to be done during the remaining three years of the Plan period. There is no doubt that slippages in the commissioning schedule have contributed in a large measure to the power shortage in different parts of the country.

3. The second reason why power shortages have persisted in certain regions is the low capacity utilisation of thermal power plants. As the Hon. Members are aware the plant load factor had touched nearly 56% in 1976-77. Thereafter it declined steadily and has been between 44-45% during the last three years. Since the proportion of thermal generating capacity in the total power generation capacity is rising the performance of the thermal power plant is crucial for maintaining reasonable levels of power supply.

4. It would be legitimate to ask why there should be such a high order of slippages in commissioning of new capacity and why the performance of the thermal power plants should be unsatisfactory and what steps are being taken to overcome these deficiencies. As far as power

projects are concerned. I can assure the Hon. Members that they are being intensively monitored. Projectwise reviews are carried out by the Central Electricity Authority and the Working Group of Planning Commission during the Annual Plant discussions. This is followed by a round of discussions by Central Electricity Authority with the main equipment manufacturers and project authorities in February-March, to firm up the commissioning schedules for the following year. I have been holding at periodical intervals Regional and All India Conferences of Power Ministers. In addition, at the official level, my Ministry carries out detailed reviews with each State to appraise the mid-year progress. There have also been quarterly review meetings in the Planning Commission. Thus, there is no lack of monitoring of power projects. Yet it has not been possible to arrest slippages in commissioning of new power plants. As I have explained on other occasions to the Hon. Members, delays in supply of plant and equipment by the manufactures, weaknesses in project management leading to lack of synchronism in various activities needed to achieve different mile-stones and, in a few States, mis-match between flow of funds to State Electricity Boards and project requirements, have been the main causes leading to non-adherence to the commissioning programmes. These problems have been identified for quite some time and in order to improve the situation, my Ministry have issued guide lines setting out the manner in which project management can be strengthened and systematised, with a proper management information system, contract planning, etc. Some improvement is visible in the recent months, but much remains to be done.

5. I have also had occasion in the past to mention to the Hon. Members the various measures we have taken to improve the per-

formance of thermal power stations. In order to avoid a situation in which shortage of coal limits power generation, we have been able to achieve a substantial improvement in the quantum of coal supplies to power houses. Between April and October, 1981, 25 million tonnes of coal were supplied to thermal stations, as against only 20 million tonnes in the corresponding period last year. Attention is also being paid to the quality coal by introducing joint sampling arrangements, installation of coal crushers, etc. We have also set up a Task Force especially for the 200 MW units; a similar Task Force for the 100—120 MW units is now being constituted. There has also been some improvement, as a result of our efforts, in availability of spares. As a result of all these measures, there has been a marked improvement in thermal power generation. Between April and November, 1981, 45.17 billion units were generated by our thermal power plants as against 38.24 billion units during the corresponding period last year, registering an increase of 18.1%. In terms of plant load factor, this amounts to an increase of 3.4%. Thanks to the improved performance of the thermal power plants and the comfortable storage position in the hydro reservoirs in the country, with the exception of Rihand in UP and Balimela in Orissa, the overall power situation in the current year has been distinctly better than what it was during the first half of 1980-81. This will be apparent from the fact that between April and November, 1981, the total power generation in the country has been 80.99 billion units, which was, in fact, slightly in excess of our target. Compared with generation during the same period last year, power generation has been 11.8% higher. For the year as a whole, the target of generation from utilities has been fixed at 122 billion units and I am glad to be able to inform the Hon. Members that we are confident of achieving this target.

6. All the four Southern States are presently free from power restrictions of any kind. As a result of a 29.1% increase in power generation in the North-Eastern region, the position is comfortable with only some peak period restrictions. Another region which has shown a surge in power generation this year has been the Eastern region with an increase of 21.4% in generation between April and October, 1981, compared with the similar period last year. The main credit for this heartening performance should go to DVC. Between April and October 1981, DVC generated 3522 million units, which was 45.4% higher than the corresponding period last year. A direct consequence of this improved performance is apparent in the improved production performance in the steel and coal sectors, whose requirements have been almost full met.

I am afraid the position is not as happy in the Northern and the Western Regions. In the Northern Region the power deficit is most acute in Uttar Pradesh, Punjab and Haryana also face problems during periods of peak agricultural demand though, right now, there are only some restrictions on industries in these two States. Rajasthan's power supply situation is influenced largely by the functioning of the Atomic Power Station. Occasionally when one or both units go out of commission, this State also faces severe power shortage. Honourable Members will be glad to know that there has been a steady improvement in power availability in Delhi. Badarpur and Indraprastha Power Stations have been able to maintain a high level of generation and we have been able to render assistance upto 200 MW whenever possible, to the neighbouring systems of the Northern Region. As regards the Western Region, the position in Gujarat is

[Shri A.B.A. Ghani Khan Chadri] satisfactory. But Madhya Pradesh suffers from both energy and capacity shortage which should get reduced next year with commissioning of one new capacity.

Let me now deal with the power situation in Maharashtra. As Honourable Members are aware, the Subordinate Engineers are on strike from 20th November 1981. Nevertheless because of efforts made by all concerned, it has been possible to maintain a generation level of 2400-2500 MW as against the normal generation level of 2800-2900 MW. Some assistance has also been given by the neighbouring States. Power restrictions now operate only on industries in Greater Bombay. As Honourable Members will appreciate, the resolution of the present situation is a matter primarily concerning the State Electricity Board and the State Government and it would not be appropriate for me to suggest a precise course of action. My view has always been that, in SEBs which employ large manpower, industrial relations must receive continuing attention so that disruptions can be avoided. It is obvious that a power supply system which depends for its successful operation on various categories of technical and other personnel, calls for industrial peace. This will be possible only if both the management and different categories of the employees have appreciation of each others point of view. I have no doubt that the Government of Maharashtra is fully alive to the situation and would be taking whatever measures are necessary. On my part, I have offered to the Chief Minister to assist in power supply from neighbouring systems to the extent possible.

Before I conclude, let me make a brief reference to the Committee on power (Rajadhyaksha Committee) which has made a number of recommendations to bring about an

all round improvement in the functioning of the power sector. With the massive investments we are making in this sector, it is necessary that the Central and the State Government put their heads together and initiate measures, technical as well as financial, which will contribute to the viability of the industry. So far, the response of the State Governments to the recommendations of the Rajadhyaksha Committee has not been forthcoming in full measure. I am still hopeful that we will soon be in a position to take concrete decisions on steps needed to set the power industry on a stable and self-sustaining basis.

May I conclude by assuring Honourable Members that we are doing our best to improve viability and overcome power shortages in the country.

MR. DEPUTY-SPEAKER : Shri Ghani Khan Choudhury has created record because he has replied in fifteen minutes. He has given full facts. I think Shri Chitta Basu is confused as to what question he should put.

SHRI CHITTA BASU : Sir, as you have yourself mentioned that the Statement is quite long, I do not grudge it. As a member of fact, this Statement really depicts the power position in different parts of the country. Anyway, he has his own way of depiction. I don't accept that his depiction is correct. After all, it is a long statement giving his point of view and giving his own way of interpretation of things.

But the conclusion he has sought to draw is quite unsatisfactory. An attempt has been made by him to make an impression in the House that the situation has improved and would be improving in the near future also. Sir, this is a complacent statement and I think this is not correct and the Government should come out with more concrete and

specific steps that the government proposes to take to meet the challenges on the power front.

Now, according to the Statement, the power supply today is satisfactory and the shortfall is only of 10%. Sir, I don't like to answer him by giving my own arguments. To begin with I only want to refer to you certain statements made by another Minister of his Cabinet, the Minister of Industry, Mr. Chanana. Mr. Chanana in a statement on 7th November, 1981 said and I quote from the report in the Indian Express :

"That the shortage of power on a countrywide basis was as much as 15%. This would amount to 15 million units a day."

While the Power Minister says that the shortfall is of the order of 10% of our requirements, . . .

MR. DEPUTY-SPEAKER :  
When was that statement made, date.

SHRI CHITTA BASU : Date is 7th November.

MR. DEPUTY-SPEAKER : It would have come down by this time.

SHRI CHITTA BASU : It would have come down. I think, why are you not going on that seat.

MR. DEPUTY-SPEAKER : I am only helping you.

SHRI CHITTA BASU : Then he makes a statement on November 7 that power shortage is of the order of 15 per cent, and this Minister comes to the House and says that it is of the order of 10 per cent!

Now you can understand in what way the Power Minister is dealing with the power crisis in our country. He is under-estimating the shortfall, under-estimating the challenge which we face today.

Again, a tall claim was made by our friend Mr. Mahajan. On September 1, 1981, he, in the course of a reply to a question in this House, said :

'India will be free from current power crisis in the next four years. In fact, a surplus of 3,485 million units was expected by the end of 1984-85.'

THE MINISTER OF STATE  
IN THE MINISTRY OF ENERGY  
(SHRI VIKRAM MAHAJAN) :  
1985 has not yet come.

SHRI CHITTA BASU : All right. This is a statement. Now, I have got a report or analysis made by Mr. D. R. Ahuja. It is of November 4, 1981. He says, that the country is likely to face a power shortage to the extent of 6,593 megawatt by 1984-85.

SHRI VIKRAM MAHAJAN :  
What are the credentials of Mr. Ahuja?

SHRI CHITTA BASU : He is a journalist. He has done an analysis and he has drawn that conclusion. Based on certain calculations, that is the conclusion he has drawn. He came to the conclusion that the power shortage will be of the order of 6,593 megawatts by 1984-85, even after the addition of 19,000 megawatts of power that we expect. If you want, I can quote the reasons given. On the basis of the analysis and conclusion he made this statement. Now, the Minister is very much angry with Mr. Ahuja.

Now, let us come to his own department. The latest review of the progress in the commissioning

[Shri Chitta Basu]

of the projects carried out by Energy officials indicates that only 50 per cent of the 3,212 new capacity scheduled to be commissioned during the current financial year will be attainable by March 1982.

**SHRI A. B. A. GHANI KHAN CHAUDHURI** : Well, I stated it in my statement.

**SHRI CHITTA BASU** : This is from the Ministry. This is the analysis made in your statement.

**SHRI A. B. A. GHANI KHAN CHAUDHURI** : I have said this in my statement.

**SHRI CHITTA BASU** : Therefore, my point is that slippage is a very important factor in this matter. He has remarked that it has come down to 22 per cent but his Ministry says that it is of the order of 40 per cent. As I have mentioned they have noticed your performance and on the basis of the performance and analysis they have come to the conclusion that the slippage is of the order of 40 per cent and you claim that it is 20 per cent. First, you claimed a shortfall of 10 per cent and another Minister makes it 15 per cent. You claim 22 per cent slippage and the Department says it is 40 per cent.

Now, I come to Mr. Mahajan. With this rate of slippage the Sixth Plan target is not going to be fulfilled. Only two years are left, or only three years are available for the Sixth Five Year Plan to be over.

**SHRI VIKRAM MAHAJAN** : Three and a half years.

**SHRI CHITTA BASU** : Three and a half years? Thank you. Would it be possible to cover up this kind of slippage at the rate of 40% and reach the target of the sixth plan? This is nothing but

hoodwinking the people and the House. If you do not misunderstand me, I would say, he is indulging in bluffing the country.

**MR. DEPUTY-SPEAKER** : Mr. Ghani Khan Chaudhuri would be the last person to do it.

**SHRI CHITTA BASU** : If anybody knows the economics of it, he will realise it. Is it possible to cover up 40% slippage in these three years? You say the situation would be quite satisfactory after the sixth plan. It is merely, hoodwinking the House. If you will not be annoyed, I would say, it is just bluffing the House.

The slippage does not merely concern shortage of power; it does not cause hardship to the industry and consumer alone. There are wide repercussions. This slippage goes to contribute to cost escalation and if cost escalation is not arrested, the entire economy falls. I think you would agree with me. Therefore, the sixth plan is being sabotaged by his inactivity, by his non-performance, by his mal-functioning on the energy front and the entire sixth plan, the entire national economy, is going to be disrupted and distorted by these gentlemen sitting here. Therefore, this cost escalation has to be taken into consideration. Even in the sixth plan, I would say the planning is bad...

**MR. DEPUTY-SPEAKER** : I think this is not a personal attack on the Minister.

**SHRI CHITTA BASU** : No, Sir. I am very sorry.

**MR. DEPUTY-SPEAKER** : You must criticise the Government only.

**SHRI CHITTA BASU** : When I say Mr. Ghani Khan Chaudhuri, I only mean the Minister of Energy. I am very glad he comes from my State. (Interruptions). He should understand our feelings : there is

nothing personal. There is no anger of a personal kind. If there is any anger, it is anger to safeguard the interests of the country. If he has been hurt, I apologise to him.

Anyway, I was saying that one of the reasons is bad planning. I raise this question because you want to have the problems solved by the sixth plan. There is bad planning on the power front. There is regional imbalance. I am sure you would like to know something about West Bengal, because everybody is very much concerned.....

**SHRI SOMNATH CHATTERJEE (JADAVPUR) :** Motivatedly concerned.

**SHRI CHITTA BASU:** Motivatedly concerned about West Bengal's power situation. It is for the House to realise what is the outcome of bad planning. In West Bengal, the growth rate of power generation between 1970-71 and 1978-79 was only 1.6%. There is no addition to generation capacity between 1970-71 to 1974-75. This is the period when he was Energy Minister in the State and there was no addition to generation capacity in West Bengal. The consumption of power during the period 1965-66 to 1979-80 declined from 114 KW to 113 KW against an increase in Gujarat from 83 KW to 240 KW.

In Maharashtra it has increased from 106 KW to 223 KW, in Karnataka from 55 KW to 153 KW and in Tamil Nadu from 89 KW to 181 KW. But the per capita power consumption in West Bengal has declined from 114 KW to 113 KW. We want that this imbalance in planning should be rectified.

The Sixth Five Year Plan allocations have also discouraged us. Look at the eastern region. With 33 per cent of the country's population, it has a share of 17 per cent only of the country's total generating capacity of 29,000 MW. During the Sixth Plan period, out of the additional generation capacity of 17,000 MW, the eastern region will get only 3400 MW against 5000 MW for western, 4800 MW for northern and 4200 MW for the southern regions. The generation capacity in the State of West Bengal has been proposed to be increased by 1788 MW only. So, my friends sitting opposite, would understand the impact of bad planning in power in the entire eastern region particularly in the State of West Bengal. I do not want to say much on this point.

I again point out that slippage is the main problem. What steps does the Government propose to take to minimise the slippage and finally eliminate it? He has taken one course i.e. to take away the power of the State Government. His entire prescription is to divest the State Governments of their powers in the administration of power generation and that more powers should be concentrated in the Ministry in Delhi and the CEC. They want to encroach upon the rights of the State. Only by taking away the power from the States can this slippage be minimised or eliminated? Other steps are needed in this regard. May I know what other steps Government proposes to take?

A very big policy decision is going to be made in power front. It is very much disquieting and we have a very great apprehension about it. Recently, the Uttar Pradesh Government in its Cabinet meeting held on 6th November, has decided to allow the private sector to enter the field of commercial power generation and they have sought permission from the Government of India in this regard. The Chief

[Shri Chitta Basu]

Minister of Uttar Pradesh says that Birlas, Tatas and Indian Explosives Ltd. have come with very good proposals to set up commercial power generation plants in the State. I think, it is necessary for me to say on behalf of this side of the House that we are very much opposed to the idea of handing over power front to the private sector. This would be contrary to the Industrial Policy Resolution adopted by this House. Therefore, would the hon. Minister make it clear that they would not allow the private sector to enter into this front and it should be exclusively under the public sector ?

Now, I come to.....

Mr. DEPUTY-SPEAKER: The last point.

SHRI CHITTA BASU : Last but one.

Sir, he has raised the question of industrial relations in the power plants. I do agree, and while coming to discuss the situation in Maharashtra, the strike of the SEB employees comes to our attention, I mean, the junior engineers. It is said the responsibility lies with the State Electricity Board and not with the Junior engineers. The reason is, there was an agreement reached between the SEB in Maharashtra and the Junior Engineers on the 18th March 1979. In 1981, even till today, this agreement which was reached, has not been implemented. And the SEB refuses to implement it. Therefore, while everybody appreciates the necessity of improving industrial relations in the power generation industry, it is they who are responsible for creating an abnormal situation, a non-peaceful situation, in the industrial relations

on the electricity front. Again, in U.P. the power workers agreement has not been implemented and if this agreement arrived at after consultations is not implemented, how can you think that there will be peaceful industrial relations in the power sector ?

Coming to Maharashtra, it is reported that in the SEB of Maharashtra some person has been nominated as the Member of the Board who hardly knows the difference between kilowatt and kilogram. He has got nothing to do with power, nothing to do with technology. He has been nominated because---again the personal thing will come here---somebody wants him to be there. Therefore, this kind of non-qualified, unqualified, nontechnical persons are being put in the State Electricity Boards. This needs to be corrected.

Finally, I sense and I apprehend that there is a move on the part of his Ministry for large-scale technology and equipment import while indigenous capability in the manufacture of power equipments is adequately available in the country. This is because of the fact the World Bank has been demanding it since long. Now, an IMF loan has been obtained and obtained on the specific assurances being given by the Government that this power front could be made open to the multinationals, to the imperialists, to the private sector. Would the hon. Minister clarify the position and give the assurance to the House that this power front is not open for the multinationals and the indigenous capability already available should be further strengthened so that we can have a self-reliant economy in our country ? I think these points should be replied as far as possible by you.



(Interruptions)\*\*

MR. DEPUTY-SPEAKER :  
This should not be recorded.

SHRI A.B.A. GHANI KHAN CHAUDHARI : Sir, the hon. Member in his rhetoric has tried to convey that we have not been doing any thing. Far from it, we are pursuing the matter and doing our best. There have been very many opinions with regard to power generation. We have our own opinion, that means, the opinion of the Planning Commission and the Central Electricity Authority. According to their projections we are being guided. Some people say—I do not like to dispute them, I have no data to dispute them—that the Central Electricity Authority's projection and the Planning Commission's projection is on conservative side. The Planning Commission projection is 11% growth annually. On this 11% growth I have said this in my speech, if we can achieve the target of 20,000 M.W. well except in Northern Region, we will be able to do away with power shortage. I quite appreciate the hon. Members concern about slippages. Obviously it is a matter of concern for all of us. Now slippages are where? Are they in the Central Sector? In super thermal power there is no slippage. Slippage is in the state Sector. What do we do with the State Sector then? If we impose any ideas of ours, in that case we will hear from that side that we are taking away the rights of the State Governments. When the country suffers, then at the top of their voice they say that we are just a silent spectator and we are not doing anything. We are in a fix. We do not know what to do and what not to do. Let us take the case of West Bengal. What has happened in West Bengal. What

about the fifth unit of Bandel? Well, it should have come. Why it is not coming. I am not blaming any Government. But I am telling you the state of affairs. What about Kolaghat? Nothing has happened.

Kolaghat is making some progress, but scheduling.... (Interruptions)

You have said, I have not objected.

MR. DEPUTY-SPEAKER :  
Let him complete.

SHRI VIKRAM MAHAJAN :  
What he is saying is that slippages are more.

SHRI A.B.A. GHANI KHAN CHAUDHURI : Slippages are there. That is what I am trying to impress upon you all. If we do not try to have consensus against the slippages, I am not justifying Maharashtra or I am unjustifying West Bengal. sector.

MR. DEPUTY-SPEAKER :  
He says slippages are in the State Sector more than the Central Sector.

SHRI VIKRAM MAHAJAN :  
He says there is none in the Central Sector. These are only in the State

MR. DEPUTY-SPEAKER :  
Yes, only in the State Sector.

SHRI A.B.A. GHANI KHAN CHAUDHURI : Slippages are there. Several times I have sat with them. Planning Commission people have sat with them. Some State Electricity Boards do not have money. Their plan outlay on account of power is very much disappointing. Sometimes I hear the criticism that we are not giving them techno economic approval. What to do with techno economic approval if you

\*\*Not recorded.

[Shri A.B.A. Ghani Khan Chaudhari]

cannot mobilise the resources. The resources have to be mobilised and have to be spent on the power sector. But there are very many examples. I can quote. I can show how diversion of funds has happened, how fund is diverted. I do not want to go into the details on this. But I can assure the Members of the Opposition that we are very much concerned about the slippages and obviously we have got to do some thing on this and we are thinking about it. In my mind I have thought about that. Probably at the end of the Sixth Five Year Plan we will be achieving 17,000 and odd and not 20,000. We are thinking to find a way out if not immediately at the end of the Sixth Five Year Plan but one year thereafter or so we can get the benefit of 20,000 M.W. For example we have given green signal, with Japanese aid, to have 1,000 M.W. to Anpara B to U.P. Like this, we have to think of something to combat the slippages. But even then, I do say, with all humility that the State Governments must provide with the fund which they have promised on the power sector. They should have a fair deal with the contractors and other suppliers so that they can get the equipments in time.

13 hrs.

With regard to equipments I want to make it quite clear on the floor of the House. We are putting a lot of emphasis on the supply of indigenous sets and equipments. There is no running away from that. At the same time, we also stress that BHEL or other undertaking should stick to the schedule period of delivery and make efforts to improve the quality so that the State Electricity Boards do not have any grievances. Obviously, there is no hard and fast rule. But I am persuading the State Governments and the State Electricity Boards not to ask for imported sets but they should depend on the BHEL. We are doing this, and to some extent,

we are successful. But it does not mean that we have not given some State Electricity Boards a chance to get imported sets. But our emphasis remains on the indigenous sets manufactured by BHEL. There is no running away from this. I can assure the hon. Member that whether there is International Monetary Fund or this or that, it has no relevance with my answering this question.

Now, about the private sector, our country has a mixed economy. Everybody does know that I have said this. If somebody wants to invest some money for having a power plant, they can do so; but only up to the generation part is concerned. As far the distribution part, it will be left to the State Government. Nothing more, nothing less. I have not received any proposal from the U.P. Government about the private sector. I do not know. The hon. Member may be right but so far as I am concerned, I have not got any proposal from them.

SHRI CHITTA BASU : If you receive the proposal, what would be your reaction ?

SHRI A. B. A. GHANI KHAN CHAUDHARI : I have told you the principle.

MR. DEPUTY-SPEAKER : He has told you the principle that only the generation part is allowed and not distribution. That he has made it very clear.

SHRI A.B.A. GHANI KHAN CHAUDHARI : These are the basic principles which we are trying to follow. It is unfair to say that we have not made any head-way in the power sector. It is a wrong statements and I will challenge it here on the floor of this House.

With regard to the strike in Maharashtra, well, I have the full facts here. But in the interest of the State. I do not want to enter into

controversy at the present moment. In my own way, I am making an all-out effort to see that the problem is solved. At the moment, I donot want to say more than this. This will not be in the interest of the State and also in interest of the striking engineers. We are trying to help Maharashtra in whatever way we can. I think these are the points which I wanted to make.

SHRI KRISHNA CHANDRA HALDER : (Durgapur) We can meet after lunch.

SHRI VIKRAM MAHAJAN : If three are only three or four members let us finish it.

MR. DEPUTY-SPEAKER : If all the hon. Members are very short in their speech, we can complete it by 13-15 hours or so.

The rule is, for the Calling Attention it is only half an hour. You will not take more time hereafter if you are allowed to remain hungry. Therefore, we shall continue. Shri Zainul Basher. (*Interruptions*).

SHRI KRISHNA CHANDRA HALDER : We may continue after lunch.

MR. DEPUT-SPEAKER : All right. The House stands adjourned to meet again at 14.05 hrs.

13.05 hrs.

*The Lok Sabha adjourned for Lunch till five minutes past Fourteen of the Clock.*

*The Lok Sabha re-assembled after Lunch at Seventeen Minutes past Fourteen of the Clock.*

[MR. DEPUTY-SPEAKER in the Chair.]

CALLING ATTENTION TO MATTER OF URGENT PUBLIC IMPORTANCE—*contd.*

POWER SHORTAGE IN DIFFERENT PARTS OF THE COUNTRY WITH PARTICULAR REFERENCE TO MAHARASHTRA—*contd.*

SHRI ZAINUL BASHER (GHAZIPUR) : We have a very detailed statement from the hon. Minister. It appears that he has a full grip over the problems. My friend, Mr. Chitta Basu was speaking very harshly. I was very carefully listening to his arguments. ....

MR. DEPUTY-SPEAKER : One request to you. We have to take up the Private Member's Business at 3 p.m. Therefore, please be short.

SHRI ZAINUL BASHER : I shall be as short as possible.

MR. DEPUT-SPEAKER : Otherwise, I would have allowed you as much time as I have allowed to Mr. Chitta Basu.

SHRI ZAINUL BASHER : I do not know why our friends from West Bengal sitting there are so emotional when Mr. Ghani Khan Choudhary, our hon. Energy Minister speaks.....

MR. DEPUTY-SPEAKER : That is parochialism.

SHRI ZAINUL BASHER : It shows the capacity of efficiency of the hon Minister....

DR. SUBRAMANIAM SWAMY (BOMBAY NORTH EAST) : They are afraid of him.

**SHRI ZAINUL BASHER :**  
Frankly speaking, I had no good opinion so far as the working of this Ministry....

**DR. SUBRAMANIAM SWAMY :** What a condemnation it is !

**SHRI ZAINUL BASHER :**  
But, Sir, for two years I have been seeing his hard work and his grasp over the problems and his ability to solve them. I have begun admiring him. So far as the power portfolio is concerned, this is one of the most difficult portfolios in our Government and the way he has handled it, it goes to his credit and I must congratulate him.

Sir, he has to work under a certain handicapped situation. He has no control over the State Power Boards. Most of the State Boards are sick babies. How can we expect the hon. Minister to account for them ? Shri Chitta Basu, while speaking (*Interruptions*)

**MR. DEPUTY-SPEAKER :**  
Anything spoken while sitting will not be recorded.

**SHRI ZAINUL BASHER :**  
Sir, Shri Chitta Basu while speaking mentioned that the power shortfall was of the order of 15%. The hon. Minister is of the opinion that there is a shortfall of 10%.

But, the power position now in our country is fluctuating day by day. The power availability may be more to-day or more tomorrow and it may be less tomorrow or it may be as it is to-day. We are living in a very uncertain situation. There is no two opinion about it. Power is a must for our progress whether it be agricultural progress or industrial progress. I agree with Mr. Basu that if we do not get control over power, our Sixth Plan target will not be fulfilled. It is only by maintaining the pro-

gress in the power sector that we shall be able to achieve the Sixth Plan target in power. We have fixed targets for power in the agricultural and industrial and other sectors. There are no two opinions about it so far as the importance of power is concerned. To-day the Minister is honest enough to admit that there are certain States which are facing acute power shortage. I come from U.P. The hon. Minister has stated in his statement that U.P. faces a most acute power shortage in this country. We are getting power for two to three hours only daily and our agriculture is suffering ; our farmers are suffering. Recently, the U.P. Government was forced to disconnect power to the industrial sector for twenty days almost a month. That was the situation. The Energy Minister had to rush to U.P. specially to Mirzapur where the Obra thermal power plant is situated. He has studied the problems. He has also sent a special team from the Centre to study the problems. I have not been informed about it. I would like the Minister to kindly tell me what action he is going to take to solve the dimmed power situation in U.P. We find in the statement that the power position in U.P. if we believe the Minister, is such that I do not think he is going to solve it until the middle of the Seventh Plan. That these progress of the completion of power projects. We find that it will not be even possible after the 7th Five Year Plan period. I have read a newspaper report and I find that most of the power projects are being delayed. The Minister also admits that in his statement. That is because of the non-availability of power equipments or because of the failure of the manufacturers of these equipments to supply the equipments, transformers and other things to the power projects. This is a very shocking thing to know as I have said. If we do not maintain the progress in our power sector, we

cannot achieve the planned target which we have set in the Sixth Five Year Plan. But the Minister is handicapped. So far as the Central sector is concerned he is maintaining good progress but so far as the State sector is concerned most of the power houses are in a mess. There is only 40 per cent capacity utilisation of the installed capacity.

So, Sir, we shall have to think of this problem in a national perspective. Many potential hydro-electric projects could not be taken up because of inter-state disputes regarding river waters. Further, Sir, we find that coal is found only in certain areas of the country and there are transport bottlenecks so far as transportation of coal is concerned. Then our coal is of inferior quality with more ash content with the result that we are transporting ash also thus resulting in costlier power production.

Sir, how can the Minister be expected to achieve the target when the States are not coming forward and are only looking forward to the Centre for more and more power supply from the national grid? It is the need of the hour that power is taken in the national sector even if we have to amend our Constitution for this purpose we should do it. Power has the same importance as Railways and Communications. I would like to submit that at least the generation part of the power should be nationalised and distribution part may be retained with the States and suitable Constitutional amendments to that effect be brought forward.

Sir, the Rajadhyaksha Committee on Power has made this recommendation and, I think, the opinion of the State Governments was ought but I find that State Governments are hesitant and are not coming forward to agree with the recommendations of the Rajadhyaksha Committee. The Central

Government has to be bold enough to persuade the States that so far as this vital sector is concerned the progress of this country is dependant on this sector and the Centre cannot set it aside. It has to fulfil its Constitutional obligations. Even if the Constitution has to be amended it has to be amended and the power sector should be taken under the Union List. Then we shall be able to solve the problems. Until and unless this is done, I am afraid, even at the end of the Eighth, Ninth and Tenth Plan we shall not be able to tide over the power crisis that we face in this country. Sir, I have been a member of the Estimates Committee and last year we examined the power generation issue. We visited certain States and complaints were received by us regarding non-availability of equipment particularly from the BHEL.

Even the equipments supplied by BHEL to these power Boards are not of good quality. We have received many complaints because the Power Board Engineers are not allowed to check them before delivery. Such complaints are received from many States. We found many cases where there are inter-State disputes so far as hydro-electric potentialities are concerned. These projects are being kept pending for years and years together. These could be not completed because of disputes between the States. Hydro-electricity can be produced very cheaply; it can be produced quickly also. But we could not utilise all these because of such disputes because power is under the State sector.

I ask the Minister: What action does he propose to take to bring the power sector, at least the generation part of it, under the Central sector? Will he come forward with Bill to amend the Constitution as is required in this case?

[Shri Zaigal Barber]

Then my second question is this : The hon. Minister has agreed with us that the capacity utilisation is not more than 40%. May I know what action is being taken by the Minister for more utilisation of the installed capacity of the power plants under the Power Boards ? Sir, these have become white elephants. UP is the second biggest employer in the country next to Railways. In Maharashtra we are facing a crisis. The subordinate engineers have gone on strike. In U.P. also we are facing the same problem. Every year the same problem is being felt whether it is in respect of subordinate engineers or junior engineers or the workers. The result is that industrialisation suffers because of these causes. These power boards have come to be white elephants and they are not able to do anything worthwhile. I would like to ask : What action do you propose to take for the massive utilisation of the installed capacity ? What action is being taken to have good industrial relations in the power boards ? I have already stated that U.P. is facing a serious power crisis. The hon. Minister admitted that they get only 2 or 3 hours of power supply. The Central team went to U.P. They went to investigate the real state of affairs and to know what steps are being taken to help agricultural production. I hope that after the Central team went there, power supply position would become very efficient. Still, it is only given 5 or 6 hours. In eastern U.P. power supply is given only for 2 or 3 hours. What steps are being taken by the Government to improve the power supply position in U.P. ?

SHRI A.B.A. GHANI KHAN CHAUDHURI : I agree that power position in U.P. is not very bright. The main loadfactor in U.P. power stations in the first 6 months of this year is only 36% as against the all India average of 44.7%. The Central Government's task force has been deputed to UP thermal power stations to identify areas of deficiencies and suggest remedies to improve thermal performance.

MR. DEPUTY-SPEAKER : What action are you going to take ?

SHRI A.B.A. GHANI KHAN CHAUDHURI : Not only have we deputed task force, we have also advised the Chief Minister of UP that if the situation demands, we can get experts from abroad to find out the deficiency and to increase the plant load. The plant load is an important factor. If we have to achieve our target, we have to come to the all-India average of 1966-67, i.e. 55%. If we cannot achieve that, I am afraid, this shortage will persist. UP has got an installed capacity of 3162 MW. During the 6th Plan period, we are adding another 1728 MW, if there is no slippage. If we add up this, it comes to 5340 MW. Even beyond the 6th Plan period, we apprehend some shortage and for that we have cleared Unapara B Project of 1000 MW and I think, during the first year of the 7th Plan, things may become better. This is for U.P.

It is not that we want to shift the responsibility. The basic fact remains that the State Electricity Boards have to be activated. The composition of the State Electricity Boards has to be done on the basis of the recommendations of the Rajadhyaksha Committee. It was a very expert committee and it made certain recommendations. Unfortunately, we are getting no response practically from any Board. No Board is interested in that. They think that if they accept these recommendations, probably they will lose much of the powers which they enjoy. I agree with the hon. Member that in the national interest, we should not take a stand on a regional basis. We should see how we can solve this vexed problem. Here, the question of parochialism and the question of any particular State should not stand in the way. You will be surprised to hear that even the national grid line has not been accepted ; the 'load dispatch' system that we want to introduce has not yet been accepted. These are musts if you want to carry power from one place to another. Unfortunately, we are not getting good response. These are the basic fundamentals.

They think that if they accept these recommendations, probably they will lose much of the powers which they enjoy. I agree with the hon. Member that in the national interest, we should not take a stand on a regional basis. We should see how we can solve this vexed problem. Here, the question of parochialism and the question of any particular State should not stand in the way. You will be surprised to hear that even the national grid line has not been accepted; the load despatch system that we want to introduce has not yet been accepted. These are musts if you want to carry power from one place to another. Unfortunately, we are not getting good response. These are the basic fundamentals.

We are trying to have a consensus among the States for resolving these problems. One year has passed. I am pursuing the matter. It is a disappointment for me, but I can assure the House that I will pursue the matter vigorously and will try to convince the Chief Ministers to come to our line of thinking. Even we will suggest to them to have bilateral understanding. Even if they want to modify Rajadhyaksha Committee's recommendations, we are prepared to accept that, but some sort of consensus has to be evolved to resolve this vexed problem.

श्री हरश चन्द्र सिंह रावत (भलमोड़ा):  
 उपाध्यक्ष महोदय, मंत्री महोदय ने कहा है कि यू० पी० की पावर पोजीशन बड़ी खराब है। कोटा के एटामिक पावर प्लांट से जितनी पावर जेनीरेशन होती है, वह राजस्थान के काम में आती है। उसी तरीके से हमारे यू० पी० में जैसे नरोरा का एटामिक पावर प्लांट है उस से जो पावर जनरेट होती है वह क्यों नहीं आप यू० पी० को ही देते हैं ?

श्री विक्रम महाजन : अभी शुरू कहाँ हुआ है ?

श्री हरश चन्द्र सिंह रावत : सिद्धांततः देने की बात तो तय करने की है क्योंकि यू० पी० की पावर पोजीशन अभी तो सुधारने

वाली है नहीं। ऐसे ही सिंगरोली का विद्युत् केन्द्र है उस में हमारा शेयर बढ़ाए। उस की पावर को शेयर करने के बारे में यू० पी० गवर्नमेंट ने आप के पास प्रोपोजल भेजा है। नाफ्था झखड़ी की जल-विद्युत् परियोजना है, उस की पावर को भी शेयर करने का प्रोपोजल आप के पास भेजा है लेकिन आप की तरफ से इन का कोई क्लियरेंस नहीं मिला है। मैं जानना चाहता हूँ कि क्या आप का मंत्रालय इन की पावर जनरेशन को शेयर करने के बारे में भेजे गए प्रोपोजल्स को स्वीकार करेगा ?

दूसरा प्वाइण्ट यह है कि यू० पी० की थर्मल और हाइड्रोएलेक्ट्रिक की कई परियोजनायें आपके मंत्रालय के पास पड़ी हैं जैसे ऊंचाहार की 152 करोड़ की परियोजना है, भानपारा (बी) की 472 करोड़ की परियोजना है, देहरीघाट की 229 करोड़ की परियोजना है, रोझा परियोजना 319 करोड़ की है, जवाहरपुर परियोजना 324 करोड़ की है, परिच्छा 212 करोड़ की, भानपारा (सी) 643 करोड़ की परियोजना है। ऐसे ही मनेरी माली जलविद्युत् योजना है, खारा परियोजना है, पाला मनेरी और इस तरह से एक लम्बी लिस्ट है इन परियोजनाओं की जो उत्तर प्रदेश सरकार ने आपके पास प्रस्तावित की हैं जिनको आपके मंत्रालय की स्वीकृति मिलनी है। इनमें से कई परियोजनायें ऐसी हैं जो 1977-78 से प्रस्तावित हैं। माना कि पहले की गवर्नमेंट तो कोई काम करने वाली थी नहीं, वह ऐक्शन लेने वाली गवर्नमेंट नहीं थीं लेकिन आपने जिस मुस्तैदी के साथ पावर फ्रंट पर कार्य किया है उससे हम यह उम्मीद कर सकते हैं कि आपकी मुस्तैदी और आपके अन्दर जो कैपसिटी है काम करने की उसका लाभ उत्तर प्रदेश को तो मिलेगा और आप इन परियोजनाओं को क्लियर करके जल्दी से जल्दी उत्तर प्रदेश सरकार को भेजेंगे।

[श्री हरीश चन्द्र सिंह रावत]

आपने अभी राजाध्यक्ष कमेटी की बात कही है। अभी विद्युत् मंत्रियों की बैठक में भी आपने यह बात कही थी और उसमें कुछ गाइडलाइन्स भी उनको दी थीं कि किस तरीके से स्टेट एलेक्ट्रिसिटी बोर्ड या राज्यों के विद्युत् मंत्रालयों को काम करना चाहिए। मैं यह जानना चाहता हूँ कि कौन कौन से ऐसे प्रान्त हैं जहाँ के लोग राजाध्यक्ष कमेटी की सिफारिशों को मानने से इन्कार कर रहे हैं।

दूसरी बात यह है कि कई दफा स्टेट एलेक्ट्रिसिटी बोर्ड्स को जो आप फण्ड्स देते हैं, कई उनमें से उसको डाइवर्ट कर देते हैं और ठीक प्रकार से उसको यूटिलाइज नहीं करते हैं तो इसको चेक करने के लिए आप क्या कर रहे हैं? जब सेण्ट्रल पूल से पैसा जाता है तो निश्चित तौर पर उसकी चेकिंग होनी चाहिए।

इनमें से कौन कौन से ऐसे विद्युत् बोर्ड हैं जिनकी फंक्शनिंग के बारे में आपको असंतोष है और आपने उनको सुधारने के लिए क्या क्या सुझाव दिए हैं, उन सुझावों पर कहीं तक अमल किया गया है—यह मैं जानना चाहता हूँ।

आपने थर्मल पावर जेनरेशन के क्षेत्र में तो बहुत अच्छा काम किया है जो प्रशंसनीय है। लेकिन थर्मल जेनरेशन की एक सीमा है क्योंकि हमारे भूगर्भ में जो कोयला है, एक सीमा पर आ कर वह चूक जायेगा। लेकिन जो हाइड्रो-जेनरेशन है वह लम्बे समय तक चलने वाला है। मैं एटामिक और सोलर एनर्जी पर नहीं जाऊंगा लेकिन इस का कुछ इस तरीके से सर्वे होना चाहिए कि कितनी इसकी कीपेसिटी है और कौन कौन से ऐसे एरियाज हैं जहाँ इन का उत्पादन बढ़ाया जा सकता है। क्या इस विषय में कोई ऐसा

सर्वे आप ने कण्डक्ट किया है और यदि किया है तो उस पर किस तरीके से काम करने के लिए आप का मंत्रालय सोच रहा है।

एक प्वाइण्ट मैं यह जानना चाहता हूँ— 1978 और 1979 में जो हाइड्रो-जेनरेशन हुआ था थर्मल जेनरेशन हुआ, वह क्या था और आज क्या है? कितने मेगावाट जेनरेशन आज है? 1979 में कितना पावर शार्टेज था और आज कितना पावर शार्टेज है?

एक बात पश्चिमी बंगाल के बारे में जानना चाहता हूँ वहाँ तो आप बड़ी मुस्तैदी से उन का मुकाबला कर ही रहे हैं। जो मार्क्ससिस्ट लोग हैं वे आप पर बहुत छींटाकसी करने की कोशिश कर रहे थे। जब उन का वक्त था तो वह कुछन-कुछ कहते जा रहे थे। पश्चिमी बंगाल में 1977 तक जब कांग्रेस, गवर्नमेंट थी तब वहाँ क्या पावर पोजीशन थी और आज वहाँ पावर-पोजीशन क्या है? कितना उस में इन्फ्रा हुआ है, यह बतलाने का कृपा करें।

SHRI A. B. A. GHANI KHAN CHAUDHURI : I can assure the hon. Member that U.P. will have a share of 850 Megawatts from the Singrauli power station. It has been allotted. There is no controversy. As soon as the super power station comes into generation, they will get their share.

श्री हरीश चन्द्र सिंह रावत : उपाध्यक्ष जी, मैंने एक स्पेसिफिक प्रश्न किया है कि सेण्ट्रल पूल के जो प्लाण्ट हैं, जैसे कोटा का एटामिक पावर प्लाण्ट है, इस समय उसकी पोजीशन बहुत खराब है, सभी तरफ से उसमें लीकेज हो रहा है जिसको आप चेक नहीं कर पा रहे हैं तो उसको सुधारने



के लिए आप क्या कदम उठा रहे हैं, या नहीं उठा रहे हैं—यह प्वाइण्ट तो है ही परन्तु उसके साथ-साथ जो वहाँ पर जनरेशन होगा उसको किस तरह से आप यू० पी० के साथ शेयर करेंगे—यह मैं जानना चाहूँगा।

SHRI A. B. A. GHANI KHAN CHAUDHURI : About Rajasthan i.e. RAPP, Unit No. 1 has been allotted to that State ; and about No. 2, no decision has been taken. That is what exactly I was going to say. And about Narora..... (Interruptions) I can reply to only one person.

MR. DEPUTY-SPEAKER : Reply only to Mr. Rawat.

SHRI A. B. A. GHANI KHAN CHAUDHURI : About Narora, there will be 470 MWs which will be distributed according to Central formula. There is nothing new in it. With regard to projects which are pending before us, I can assure you that quite a large number of projects were given techno-economic approval. If you want, I can give more; but that will not solve the problem, because it requires mobilization of the resources. If they don't get the resources, practically they are not doing justice to all these approvals which I have sent to U.P. Government—because they don't have the funds. That is one part of the story.

Giving approval will alone not solve the problem. We have to find out resources ; and in the mobilization of resources, I am prepared to help U.P. Government.

DR. SUBRAMANIAM SWAMY : What about IMF ....

MR. DEPUTY-SPEAKER : Don't reply to Dr. Swamy .

DR. SUBRAMANIAM SWAMY : Sir, under rule 355, may I ask a question ? That rule permits me to ask a question.

MR. DEPUTY-SPEAKER : I want your cooperation, Dr. Swamy.

SHRI A. B. A. GHANI KHAN CHAUDHURI : With regard to West Bengal, one hon. Member belonging to Forward Bloc made a reference and said that from 1972 to 1977, not one unit had been added. I am afraid it is not the correct position.

SHRI CHITTA BASU : During 1974-75.

SHRI A. B. A. GHANI KHAN CHAUDHURI : I do not know about 1972. I know that in 1974, 1975 and 1976 we have added two units—110 MW each at Santaldih. The third unit was ready when your Government came. After the third unit, you have added only one. That is your achievement, if I am allowed to say it. It is no use cursing me. Why don't you take up the matter with your Chief Minister who is a very energetic person and ask him to solve this problem ? We are here to help them. I have myself taken the initiative and gone to him a number of times and asked him what kind of experts he required. He gave the impression of saying that his men were fit to solve the problem. Then why do you curse me ? How does the Centre come into the picture ? We are prepared to help you, whenever you ask for any help. Whenever they ask anything we give. The West Bengal Chief Minister wanted a Chairman from the Central Sector. I have given him. I have given him some personnel also. I can assure you that we will do the same thing for any State that comes for help to us.

SHRI SOMNATH CHATTERJEE : Please tell us how many proposals have been scuttled.

SHRI A. B. A. GHANI KHAN CHAUDHURI : I do not like to enter into any controversy.

(Interruptions).

SHRI CHITTA BASU : Just a minute.

MR. DEPUTY-SPEAKER : He is replying to Mr. Rawat.

(Interruptions).

MR. DEPUTY-SPEAKER : Have you finished ?

SHRI A. B. A. GHANI KHAN CHAUDHURI : Yes.

MR. DEPUTY-SPEAKER : Now, the next item.

Shri Bhishma Narain Singh.

14:51 hrs.

#### BUSINESS OF THE HOUSE

THE MINISTER OF PARLIAMENTARY AFFAIRS AND WORKS AND HOUSING (SHRI BHISHMA NARAIN SINGH) : With your permission, Sir, I rise to announce that Government Business in this House during the week commencing 7th December, 1981, will consist of :—

(1) Consideration of any item of Government Business carried over from today's Order Paper.

(2) Consideration and passing of :—

(a) The Central Silk Board (Amendment) Bill, 1981.

(b) The Plantation Labour (Amendment) Bill, 1981, as passed by Rajya Sabha.

(c) The Chit Funds Bill, 1980, as reported by the Select Committee.

(d) The Sales Promotion Employees (Conditions of Service) Amendment Bill, 1980, as passed by Rajya Sabha.

(3) Discussion and voting on :—

(a) Supplementary Demands for Grants (General) for 1981-82.

(b) Demands for Excess Grants (General) for 1979-80.

(4) Discussion on the Motion given notice of by Sarvashri N.K. Shejwalkar and Phool Chand Verma for annulment of All-India Services (Death-Cum-Retirement Benefits) Amendment Rules, 1981, at 5 p.m. on Wednesday, the 9th December, 1981.

(5) Further discussion on the International Situation on Thursday, the 10th December, 1981, after disposal of questions.

MR. DEPUTY-SPEAKER : There are about nine hon. Members who have given some subjects to be included in the Business. Shri Harikesh Bahadur.

SHRI HARIKESH BAHADUR (Gorakhpur) : Two points I would like to suggest to be included in the agenda.

MR. DEPUTY-SPEAKER : You simply read.

SHRI HARIKESH BAHADUR : First point is : The situation in the entire North-Eastern Region including Assam is very sensitive and serious. Government is a total failure.... (Interruptions).