

**34**

**STANDING COMMITTEE ON ENERGY  
(2003)**

**THIRTEENTH LOK SABHA**

**DEPARTMENT OF ATOMIC ENERGY**

**DEMANDS FOR GRANTS (2002-2003)**

*[Action Taken by the Government on the recommendations contained in the  
Twenty-Seventh Report of the Standing Committee on Energy  
(Thirteenth Lok Sabha)]*

**THIRTY FOURTH REPORT**



**LOK SABHA SECRETARIAT  
NEW DELHI**

*February, 2003 / Magha, 1924 (Saka)*

**COMPOSITION OF THE STANDING COMMITTEE  
ON ENERGY (2003)**

Shri Sontosh Mohan Dev                      *Chairman*

**MEMBERS**

*Lok Sabha*

2. Shri Basudeb Acharia
3. Shri Prasanna Acharya
4. Shri Prakash Yashwant Ambedkar
5. Shri Vijayendra Pal Singh Badnore
6. Shri B. Satyanarayana
7. Shri Jagmeet Singh Brar
8. Shri Lal Muni Chaubey
9. Shri Bal Krishna Chauhan
10. Shri A.B.A. Ghani Khan Choudhury
11. Shri Bikash Chowdhury
12. Shri Laxman Giluwa
13. Dr. S. Jagathrakshakan
14. Shri P.R. Khunte
15. Shri Arun Kumar
16. Shri Subodh Mohite
17. Shri K. Muraleedharan
18. Shri Ali Mohmad Naik
19. Shri Ravindra Kumar Pandey
20. Shri Dalpat Singh Parste
21. Shri Amar Roy Pradhan
22. Shri Harpal Singh Sathi
- \*23. Md. Shahabuddin
24. Shri Raghuraj Singh Shakya
25. Shri Manoj Sinha
26. Shri Chandra Pratap Singh

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\* Nominated to the Committee w.e.f. 24.01.2003

(iv)

27. Shri Tilakdhari Prasad Singh
28. Shri Shibu Soren
29. Shri B. Venkateswarlu
30. Prof. Ummareddy Venkateswarlu

*Rajya Sabha*

31. Shri Devdas Apte
32. Shri Santosh Bagrodia
33. Shri S.M. Laljan Basha
34. Shri Jayanta Bhattacharya
35. Shri Dara Singh Chauhan
36. Shri Aimaduddin Ahmad Khan (Durru)
37. Shri Ajay Maroo
38. Shri B.J. Panda
39. Shri Matilal Sarkar
40. Shri Gaya Singh
41. Shri Veer Singh
42. Shri D.P. Yadav
43. Vacant
44. Vacant
45. Vacant

SECRETARIAT

- |                       |                             |
|-----------------------|-----------------------------|
| 1. Shri John Joseph   | <i>Additional Secretary</i> |
| 2. Shri P.K. Bhandari | <i>Director</i>             |
| 3. Shri R.S. Kambo    | <i>Under Secretary</i>      |
| 4. Shri P.C. Tripathy | <i>Assistant Director</i>   |

COMPOSITION OF THE SUB-COMMITTEE 'F'  
ON ACTION TAKEN REPORTS

- Shri Sontosh Mohan Dev — *Chairman*
2. Shri Tilakdhari Prasad Singh — Convenor
  3. Shri Basudeb Acharia
  4. Shri Prakash Yashwant Ambedkar
  5. Shri Vijayendra Pal Singh Badnore
  6. Shri Santosh Bagrodia



## CONTENTS

	PAGE
COMPOSITION OF THE STANDING COMMITTEE ON ENERGY	(iii)
COMPOSITION OF THE SUB-COMMITTEE 'F' ON ACTION TAKEN REPORTS	(v)
INTRODUCTION	(vii)
CHAPTER I Report	
CHAPTER II Recommendations/Observations that have been accepted by the Government	67
CHAPTER III Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies	68
CHAPTER IV Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee	69
CHAPTER V Recommendations/Observations in respect of which final replies of the Government are still awaited	73

### ANNEXURES

I. Minutes of the First Sitting of the Sub-Committee 'F' on Action Taken Reports held on 14.2.2003	75
II. Minutes of the Second Sitting of the Standing Committee on Energy (2003) held on 14.2.2003	77
III. Analysis of Action Taken by the Government on the Recommendations contained in the Twenty-Seventh Report of the Standing Committee on Energy (Thirteenth Lok Sabha)	80

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## INTRODUCTION

I, the Chairman, Standing Committee on Energy having been authorised by the Committee to present the Report on their behalf, present this 34th Report on the Action taken by the Government on the recommendations contained in the 27th Report of the Standing Committee on Energy on Demands for Grants (2002-03) of the Department of Atomic Energy.

2. The Twenty-seventh Report of the Standing Committee on Energy was presented to Lok Sabha on 23rd April, 2002. Replies of the Government to all the recommendations contained in the Report were received on 28th November, 2002.

3. The sub-Committee on Action Taken Reports as well as Standing Committee on Energy considered and adopted this Report at their sitting held on 14th February, 2003.

4. An analysis of the Action Taken by the Government on the recommendations contained in the Twenty-seventh Report of the Committee is given at Annexure-III.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in the body of the Report.

NEW DELHI;  
February 14, 2003  
Magha 25, 1924 (Saka)

SONTOSH MOHAN DEV,  
*Chairman,*  
*Standing Committee on Energy.*

## CHAPTER-I

### REPORT

This Report of the Committee deals with Action taken by the Government on the recommendations contained in the Twenty-seventh Report (Thirteenth Lok Sabha) of the Standing Committee on Energy on 'Demands for Grants (2002-03) of the Department of Atomic Energy' which was presented to Lok Sabha on 23rd April, 2002.

2. Action Taken Notes have been received from the Government in respect of all the recommendations contained in the Report. These have been categorised as follows :-

(i) Recommendations/Observations that have been accepted by the Government:

Sl. Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11 & 12

(ii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies:

Nil.

(iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee:

Sl. No. 8

(iv) Recommendations/Observations in respect of which final replies of the Government are still awaited.

Sl. No. 7

3. **The Committee desire that final reply in respect of the recommendation which has been categorised as interim reply by the Committee should be furnished to them at the earliest.**
4. **The Committee also desire that utmost importance should be given to the implementation of recommendations accepted by the Government. In case it is not possible for the Government to implement the recommendations in letter and spirit for some reason or the other, the matter should be reported to the Committee in time with reasons for non-implementation.**
5. The Committee will now deal with the Action Taken by the Government on some of their Recommendations/Observations made in the Twenty-Seventh Report.

**(A) Budgetary Allocation**

**Recommendation (Sl. No. 1, Para No. 2.23)**

6. The Committee were concerned to note that there were wide variations between the Budget Estimates (BE) and the Revised Estimates (RE) in respect of the Department of Atomic Energy during the year 2001-02. BEs of all the three Sectors had been reduced at RE stage during the year. It was matter of great concern that the plan BE of all the three Sectors had been substantially reduced at RE stage during the year. This reduction in the Power, I & M and R & D Sectors had been to the tune of Rs. 153 crore, Rs. 97.86 crore and Rs. 41.14 crore respectively. The reduction in the R & D Sector had been stated to be owing to shelving of the proposal for the purchase of ready built flats from Air India, delay in delivery of equipment by a German company, etc. As regards the reduction in the I&M Sector, the same had been attributed to delay in procurement of equipments and delay in awarding consultancy contract. Regarding the power Sector, the Committee had been informed that BE for the Nuclear Power Corporation of India Limited (NPCIL) amounting to Rs. 1024.21 crore was reduced to Rs. 883 crore at RE stage as a post budget decision by the Ministry of Finance. The

Committee did not approve of the said decision of the Ministry of Finance as such an action would tend to hinder the growth of the Nuclear Power Sector. The Committee had desired that the Department of Atomic Energy should make all out efforts to utilise their budgetary allocations so as to avoid the need for a cut at RE stage.

7. In their reply, the Department of Atomic Energy, *inter-alia*, have furnished the following details in respect of their various units :-

#### Power Sector

- (i) Nuclear Power Corporation of India Limited (NPCIL)

The outlay of NPCIL 2001-02 has been increased from Rs. 1173.21 crore to Rs. 1365.00 crore at Revised Estimate. Though there was an increase in the overall outlay of NPCIL, the budgetary support from the Government has been reduced to Rs. 883 crore in RE as a post budget decision by the Ministry of Finance. However NPCIL has augmented its IEBR to Rs. 482 crore from Rs. 149 crore in the RE stage. The observation of the Committee has been noted and NPCIL will make all out efforts to utilise the budgetary support in full to avoid any reduction in the outlay.

- (ii) Bhabha Atomic Research Centre (BARC)

The reduction at RE stage was due to delay in the supply of equipment such as Heavy Duty Master slave Manipulator by PSU (M/s. HMT, Bangalore).

- (iii) Indira Gandhi Centre for Atomic Research (IGCAR)

Variation to the extent of Rs. 450.00 lakhs is towards slow progress in the manufacture of technology development based Machinery & Equipment required for PFBR. Reduction in BE provisions to the tune of Rs. 500.00 lakhs is delay in identification of consultants and finalization of Consultancy Contracts. The contract could be entered into only in November 2000 and work was started afterwards only.

Consequently first payment could be released only in March 2001. Further, slow progress of major work “Site Infrastructure Development and Materials Procurements” resulted in less expenditure to the tune of Rs. 1.29 crores. Payment could not be released as the selection of parties for consultancy services took considerable time and hence the contract could be entered into only in Nov. 2002. However, all such aspects and other contingencies will be taken into account while making budget provisions for the ensuing years to avoid reduction from original grant.

#### **R & D Sector**

##### **(i) IGCAR**

There were 29 schemes in all under “R & D Sector” and one of those schemes was “3 mgd Water Supply”. This is being executed as “Deposit Work” by Tamil Nadu State Govt. The approval for the above work was issued by Tamil Nadu Govt. only on 31.3.2001. There was opposition from public in the nearby villages to the execution of the above work since they apprehended that water might not be available for the villages if the project was implemented. Only after convincing the public the sub-surface barrier work could be commenced. This required enormous efforts on the part of the PWD authorities and Local Administration of Tamil Nadu Govt. and they had to convene meetings with the local public for appraising the real situation and for convincing them. The above exercise took a long time and the work could be started only after the public protests were satisfactorily solved. For the construction of head-works, the land has to be transferred from the Revenue Department to PWD and this also involved some delays due to the long procedure involved within the State Govt. Hence the reduction to the tune of Rs. 4.75 crores was made on this account. The reduction to the tune of Rs. 0.77 crore was in other schemes. After overcoming the above problems, Ground Water Division has commenced the works in full earnestness and the work has gained real momentum only after April 2002. It is expected that the work would be completed by end of second quarter 2003-04. IGCAR is following up the above work and there is no delay or lapse on the part of IGCAR in executing the work.

(ii) **Centre for Advanced Technology (CAT)**

Funds at the RE stage had been surrendered since there was an uncertainty in the supply of items such as X-ray generator, Turbo pumps, BL components, QPS power supply, PMP Jacks, Conical thrust bearings, Superconductivity magnets etc. The Committee's recommendations have been noted for compliance.

(iii) **Directorate of Construction, Service and Estate Management (DCSEM)**

A budget provision of Rs. 1924.00 lakhs has been made based on the various schemes in hand and also considering certain projects proposed to be taken up during the year. However, the overall progress of these schemes in hand and also proposed schemes for the year 2001-02 have been reviewed while preparing the Revised Estimate and the requirement of funds have been reduced to Rs. 1020.00 lakhs resulting in the reduction of Rs. 904.00 lakhs from the Budget Estimates. There was certain set back in the progress of work from that of originally estimated when the budget was prepared in respect of purchase of ready built flats from Air India, extension of School Nos. 1 & 3, renovation of OYC building and construction of Convention Centre/Senior Officers' Guest House which have been deferred to X plan. Provision made for modernisation of lifts of IV-D building at Anushaktinagar could not be utilised as this proposal was not approved since the average life of the existing lifts were not over. However, on review, above provisions have been reduced to the extent of Rs. 1020.00 lakhs from Rs. 1924.00 lakhs in the Revised Estimate 2001-2002 and the actual expenditure was to the tune of Rs. 9.64 crore.

(iv) **Variable Energy Cyclotron Centre (VECC)**

During the year 2001-02 the provision in BE was Rs. 25.12 crore whereas the provision was reduced to Rs. 20.00 crore at RE, thus leading to a variation amounting to Rs. 5.12 cr. The main shortfall occurred under the Superconducting Cyclotron Project is in the following areas :

- a) Construction of cyclotron building (civil works)

- b) Electrical services, compressed air system, Radiation shielding door, low conductivity water system and AC Ventilation system.
- c) Procurement of spares for Liquid Helium plant from France.
- d) Release of final payment to M/s Heavy Engineering Corporation, Ranchi, for magnet frame.

During the course of the civil construction works certain modifications in the construction were found very much essential considering health physics aspects and also other various related sub-systems. Quite obviously this resulted in considerable delay in other areas as mentioned in (b) above. The Liquid Helium plants spares were scheduled to be delivered by March, 2002 but could not be procured within the financial year. Due to escalation in the cost of magnet frame and also due to delivery of the magnet frame at the fag end of the financial year, final payment could not be released within the financial year. However, all their short falls were anticipated earlier and therefore provision at RE was made accordingly.

(v) **Atomic Minerals Directorate for Exploration and Research (AMD)**

The reduction is due to anticipated delay in receipt of imported items, such as Thermal Ionization Mass Spectrometer (TIMS).

**I & M Sector**

(i) **BARC**

In respect of I & M Sector (Regular Schemes) the reduction in expenditure was mainly due to the delay in execution of Civil Works for High Blocks in respect of the project Revamping of PREFRE (ROP). Further due to the delay in Civil Works fabrication and installation of major equipment were not persued for want of site and to avoid the storage of the finished equipment in the open. In respect of the project Augmentation of Facilities for Plutonium based Fuels (PRAFUL) provision for civil works could not be utilized due to slow progress of the work since the priority was to adhere to security arrangements after 11th September 2001 and consequently the execution of Electrical Work also got delayed. The delivery of major items



like TMS and SEM required under the project was delayed by the suppliers for want of export licence in the country of origin and hence the provision for M & E could not be utilized. Due to non-clearance of site by IREL, DAE provision for Civil Works in respect of the project Production and Processing of Uranium Compounds had to be surrendered. The delay in Civil Works resulted in surrender of provision for M&E also under the project. Though there was fast progress in civil works in respect of the project 6300 M-3/d Combined MSF-RO Desalination Plant to be set up at Kalpakkam, provision made for items like Membrane and MSF Plant material could not be utilized. The provision made for payment to M/s. L & T for sea water intake and steam supply were spilled over to next year resulting in surrender of the provision. Thus it can be seen that due the unforeseen difficulties which presented themselves during the actual execution, the provisions were reduced at RE stage. In respect of New Technology Development Programme (NTDP) the shortfall was due to delay in the finalisation of Engineering & Procurement Contract and provisions were reduced at RE stage. The complex nature of the strategic assignment of the Project resulted in procedural delays which were unavoidable.

**(ii) Nuclear Fuel Complex (NFC)**

In the Capital Section, BE has been reduced from Rs. 1200 Lakhs to Rs. 800 lakhs at RE stage due to the reduction of provision under the following project :

Dovetailing of 37 element Fuel Bundle for TAPS:

Saving is mainly due to delay in finalisation of specifications/ procurement in respect of 'Sintering Furnace', 'Ammonia Cracker' and 'Roll Compacting Press'

**2. Replacement and Augmentation of Zirconium Sponge Plant:**

Saving is mainly due to delay in delivery of Forklifts, procurement of Vacuum Pumps through IICT and delay in procurement of Hydraulic Press.

3. Advanced Materials Processing and Characterisation facilities:

One of the major equipments 'Electron Beam Melting Furnace' is not manufactured in the country and has to be imported. The quotation received from abroad far exceeded the expected price. As a result of which alternatives, such as indigenous manufacturing by importing only the critical parts, is being explored, hence savings.

4. Residential Training School Complex:

- (i) Saving is due to delay in taking up of construction work of Training School Hostel due to delay in receipt of financial sanction.

(iii) Indian Rare Earths Ltd. (IREL)

Delay in getting approval for the JVs projects led to non-utilisation of budgetary support.

(iv) IREL DAE Projects:

A decision to enhance the project capacity for the Thorium retrieval & reprocessing plant to 2000 MT per annum which would produce abundant quantities of Uranium and Plutonium for the other projects was sanctioned at 10 stages.

(v) Electronics Corporation of India Ltd. (ECIL)

During the year 2001-2002, in respect of sales and production, the BE targets were fixed at Rs. 530 crore each. While finalizing RE there was no revision or scaling down. (The actuals for the year stood at Rs. 599 crore sales and Rs. 623 crore of production). With regard to capital investment, an expenditure target of Rs. 28 crore was envisaged in the BE for the year 2001-2002. The impact of US sanctions, which seriously hampered the progress of the related projects during the previous three years continued for a major part of this year also. These restrictions were eased subsequently by the US Govt. but adequate time was not available for the company to revalidate some of the offers made before 1998 by the US sources, in respect of test/manufacturing

equipments for these capital projects. Also uncertainty in Telecom business forced the company to delay certain investments on technologies needed in this sector. Taking into account these factors, the expenditure target was lowered to Rs. 20 crore in RE from Rs. 28 crore in BE.

(vi) **Board of Radiation and Isotope Technology (BRIT)**

The reduction in the Budget Estimates at the RE stage during the year 2001-02 has been mainly in respect of the ACHF Project (Augmentation of Cobalt Handling Facility) due to the following reasons:-

- (a) The Design, Safety Review Committee (DSRC) works and finalization of tender documents could not be completed in the time envisaged. Recognizing the delay, the BE was revised at RE stage.
- (b) The delay in preparation of architectural drawing by A&CE Division due to their pre-occupation with other urgent works and subsequent time taken by them in preparation of Schedule of quantities and Technical Specifications for floating of civil tender, the budget under the Major Head Works could not be utilized. The schedule of quantities and technical specifications were available only by 26.03.02 and numeration plan drawings were received on 5.04.02 from A & CE Division, BARC. Hence, RAPS (executing agency) could not spend the funds.
- (c) Another reason being, NPCIL has designed the absorber Rod transportation flask. It requires another flask for loading and unloading operation of absorber rods. It is risky to handle two flasks at a time. Hence Hot Cell Utilization Committee has asked NPCIL to redesign the flask.
- (d) The provision meant for Master Slave Manipulators (MSMs) could not be utilised as intimated by DRHR, BARC had placed a repeat order for 4 pairs of MSMs with Directorate of Purchase & Stores, DAE. However, due to some technical reasons, DPS could not place a repeat order for MSMs which resulted in raising of a fresh indent *vide* No. BARC/CWZS/DRHR/00/01-02/538 dated 20.02.02.

8. As regards reduction in the NPCIL budget at RE stage, the Ministry of Finance have stated that the budgetary allocations of individual Ministries/ Departments are based on the proposals received from them and the need to balance the competing demands. The revised estimates are based on the trend of actual expenditure in the first 7-8 months of the year as also on the actual expenditure incurred in the previous financial year(s). In the absence of midstream evaluation by the Ministry of Finance, there is a possibility of avoidable savings with reference to voted appropriations. The Ministry of Finance have also stated that in the case of Nuclear Power Schemes, for the year 1999-2000 the budget estimate was Rs. 2385.37 crore. In spite of this being scaled down, on the basis of a midterm review to Rs. 2320.67 crore, it is observed that the actual expenditure of the Department was only Rs. 2317.63 crore. The position during the fiscal year 2000-2001 was also similar. The actual requirement of funds at RE stage was estimated at Rs. 2367.20 crore as against the budgetary figure of Rs. 2530.34 crore. Actual expenditure was, however, only Rs. 2348.68 crore. In 2001-2002, the expenditure of the department is Rs. 2494.67 crore (provisional), which is again lower than the revised estimates of Rs. 2552.89 crore. The RE itself was lower than the BE of Rs. 2596.28 crore. They have added that notwithstanding the above, the recommendation of the Committee has been noted and will be kept in view by the Ministry of Finance.

9. **The Committee had expressed concern over the fact that there were wide variations between the Budget Estimates (BE) and the Revised Estimates (RE) in respect of the Department of Atomic Energy (DAE) during 2001-02. In this connection, DAE had informed the Committee that BE for the Nuclear Power Corporation of India Limited (NPCIL) had been reduced from Rs. 1024.21 crore to Rs. 883 crore at RE stage as a post budget decision by the Ministry of Finance. The Committee had not approved of the said decision of the Ministry of Finance on the ground that such an action would hinder the growth of the Nuclear Power Sector. The Ministry of Finance have attempted to justify the said action by stating that the Revised Estimates are based on the trend of actual expenditure in the first 7-8 months of the year as also on the actual expenditure incurred in the previous financial year(s). In the absence of midstream evaluation by that Ministry, there is a possibility of avoidable savings**

with reference to voted appropriations. The Ministry of Finance have also stated that in the case of Nuclear Power Schemes, the Department of Atomic Energy have not been able of fully utilise even the scaled-down budgetary allocations during the last few years. As regards reduction in BE at RE stage for their various units, DAE have cited reasons like delay/uncertainty in supply of equipments, slow progress in the manufacture of technology development machinery and equipment, delay in identification of consultants, slow progress of some major work, delay in clearance by State Government, public opposition to some work, delay in acquisition of land, deferment of same items of work, modifications in the scope of same work, change in priority of work to adhere to security arrangements following the incident of 11.9.2001, difficulty in procuring imported equipments, delay in getting approval for some Joint Venture Projects, the impact of US sanctions, delay in finalisation of the Design Safety Review Committee works, etc. In the opinion of the Committee, most of the above grounds cited by DAE are not such which could not have been anticipated earlier. They desire the Department to make an in-depth analysis of such factors beforehand so as to make their case stronger and not be subjected to a cut at RE stage at the hands of the Ministry of Finance. The Committee feel that the cuts effected by the Ministry of Finance at RE stage were fully justified in the light of the performance of the Department of Atomic Energy during the last few years as it could not utilise fully even the reduced amount. The Committee, therefore, feel that there is an urgent need to review the whole planning and budgeting process in the Department so that realistic physical and financial targets are projected in Budget.

The Committee have taken note of considerable delay in the implementation/execution of a plan/programme at the onset of a new financial year on account of bureaucratic delays. At times, it takes about 5-6 months before the actual physical work starts. Then, such work is subjected to a host of reviews by a plethora of agencies. These systematic devices no doubt bring an element of accountability and transparency but at the same time contribute largely to cost and time overruns. The Committee would like the Department to take corrective steps to streamline their budgeting process.

**(B) AHWR and PFBR Projects****(Recommendation (Serial No. 7, Para No. 2.46))**

10. The Committee were pleased to note that the Bhabha Atomic Research Centre (BARC) had already completed the detailed engineering design and development of major nuclear systems of the Advanced Heavy Water Reactor (AHWR). Equally pleasing was the fact that the Indira Gandhi Centre for Atomic Research (IGCAR) had also completed substantial R&D activities relating to the Prototype Fast Breeder Reactor (PFBR). They had hoped that the Project Report for AHWR Project, which was scheduled to be issued by March, 2002 had been issued as scheduled. As regards PFBR Project, the Committee had desired that the Department/IGCAR should tie up with the Tamil Nadu Pollution Control Board to expedite the issuance of the 'No Objection Certificate'. Meanwhile, the Detailed Project Report (DPR) should be kept ready and as soon as the 'No Objection Certificate' was issued by the Tamil Nadu authority, the same should be submitted to DAE and finalised quickly. The Committee had hoped that the construction work on the Projects would be started before long and the projects completed in a time-bound manner. At the same time, the Department might also consider the feasibility of setting up more such projects in other parts of the country after evaluating the suitability of the locations.

11. In their reply, the Department of Atomic Energy have stated that the Tamil Nadu Pollution Control Board has already issued 'No objection certificate' during March, 2002. Clearances from MOEF is expected by Nov. 2002. The Detailed Project Report (DPR) has already been submitted to DAE for approval. AERB clearances for manufacture of long delivery NSSS Mechanical Components and Excavation were issued in February and July 2002 respectively. On completion of review of Civil Engineering Design which is expected in Feb. 2003, the clearance of AERB for "first pour of concrete" is expected by March 2003 and the financial sanction from Government is expected in 1st/2nd quarter of 2003-04.

**12. The Committee were earlier informed that the Project Report for the Advanced Heavy Water Reactor (AHWR) Project was scheduled to be issued by March, 2002. However, the reply of the Department does**

not mention as to whether this Report has been issued. If this has not been issued, the Committee would like to know the reasons for delay in this regard. Further, the reply of the Department states that the Detailed Project Report (DPR) has already been submitted to the Department of Atomic Energy (DAE) for approval. The Committee presume that this DPR refers to the Prototype Fast Breeder Reactor (PFBR). The Committee would like to know the salient features of this DPR as also the action taken by the Department thereon. They hope that the clearance of the Ministry of Environment and Forests, which was expected by November, 2002, has already been obtained. The Committee desire that the detailed facts in this regard be conveyed to them within six months of the presentation of this Report.

(C) Joint Venture Projects

**Recommendation (Serial No. 8, Para no. 2.55)**

13. The Committee had noted with concern that a number of Joint Venture (JV) Projects of the Indian Rare Earths Limited (IREL) had run into rough weather. JV for the Bhimli Project in Andhra Pradesh had not found favour with the Ministry of Environment and Forests owing to concern for the Olive Ridley Turtles along the coast. Similarly, JV for the Kudiraimozhi Project in Tamil Nadu had also not materialised following objections by the Government of Tamil Nadu to release 465 hectares of reserved forest area for the project. The Committee had further noted that obtaining various clearances from the Ministry of Environment and Forests and State Pollution Control Boards took a lot of time leading to cost and time overruns. The Committee had felt that the Government should first clearly evaluate the benefits to be derived from any projects *vis-a-vis* its environmental costs before they gave permission to any Ministry/Department to start a project. But once a project was given permission to start, clearances from environmental and Pollution Control Boards should automatically come in a time bound manner. Again, JV with Austpac Resources, Australia for synthetic rutile production had not been possible due to lack of clearance from the Foreign Investment Promotion Board (FIPB) on the ground that synthetic rutile production was not a desired value addition. The Committee had felt that the production of synthetic rutile through JV with Austpac Resources, Australia would enhance

the competitive capability of IREL. The Committee, therefore, had recommended that the Department of Atomic Energy should impress upon the FIPB that the product had got the desired value addition capacity and that they be allowed the Joint Venture. However, in the alternative they should also explore the possibility of indigenous technology.

14. The Department of Atomic Energy, in their reply, have stated that in respect of Bhimli project as well as Kudiraimozhi project, the Company had earlier obtained approval from the Environmental Ministry of the respective State Governments. However, these ran into rough weather when the EIA/EMP reports for the projects were submitted to MOFE for its final clearance. In respect of Austpac, FIPB had given clearance for JV with WSIL at Kudiraimozhi which involved only synthetic rutile production. The same yardstick was not extended to the JV proposal with Austpac at Orissa by FIPB. The Department have further stated that the JV with Austpac envisages setting up of pilot plant for technology demonstration and the same has not found favour with FIPB so far. As far as Bhimli Project is concerned, the matter of getting clearance from MOFE is being vigorously followed up.

The Department of Atomic Energy have also stated that manufacturing of synthetic rutile from ilmenite itself is a value addition. Out of 80 lakh tonnes of ilmenite produced all over the world, 76 per cent is converted into intermediate value added materials like synthetic rutile or slag before their final conversion to pigment. A comparison of the selling price of both ilmenite and synthetic rutile would further testify to the above position. Selling price of ilmenite is of the order Rs. 3000/- Rs. 35000/- per tonne whereas that of synthetic rutile (containing 96 per cent or higher TiO<sub>2</sub>) is Rs. 23,000/- per tonne. Approximately 1.7 to 2.0 tonnes of ilmenite (i.e. ilmenite worth Rs. 6000/-) is required to produce 1 tonne of synthetic rutile (worth about Rs. 23,000/-) These differences would speak of the value addition in manufacturing synthetic rutile.

15. **The Committee have been informed that the Joint Venture (JV) with Austpac Resources, Australia for setting up of pilot plant for synthetic rutile production has not yet materialised as the proposal has not found favour with the Foreign Investment Promotion Board (FIPB) so far presumably on the ground that synthetic rutile production is not a desired value addition. The Committee find that out of 80 lakh tonnes of**



ilmenite produced world over, 76 per cent is converted into intermediate value added materials like synthetic rutile or slag before their final conversion to the pigment. Further, a comparison of sale price of ilmenite and synthetic rutile also testifies this position. The selling price of ilmenite is Rs. 3000-3500/- per tonne, as compared to synthetic rutile, containing 96 per cent or higher titanium di-oxide (TiO<sub>2</sub>) whose sale price is Rs. 23,000 per tonne and approximately 1.7 to 2.00 tonnes of ilmenite are required to produce one tonne of synthetic rutile. The Committee do not, thus, share the contention of FIPB that there is no value addition. The Committee desire that the Department of Atomic Energy (DAE) should prevail upon FIPB about the desired value additional capacity of the product. The Committee also desire the FIPB should review their decision of not treating synthetic rutile production as a value addition product. Taking into consideration that this is a value addition product, the Committee recommend that FIPB should permit the Indian Rare Earths Limited to go in for this Joint Venture.

DAE have also informed that they are vigorously pursuing the matter of getting clearance for the Bhimli JV Project with the Ministry of Environment and Forests (MoEF). However, the steps taken/being taken by the Department for obtaining clearance for the Kudiraimozhi JV Project from MoEF have not been intimated to the Committee. The Committee would like to be apprised of the details of action taken by DAE for obtaining clearance for these two projects as also the outcome thereof. The Committee also desire that their earlier recommendations should be forwarded to the Ministry of Environment and Forests for comments and compliance.

**(D) Waste Immobilisation Plant**

**Recommendation (Serial No. 12, Para No. 2.72)**

16. The Committee were pleased to note that a Waste Immobilisation Plant was being set up at Kalpakkam through indigenous efforts, using locally available materials and equipments barring a few items. However, the Committee were unhappy to note that the plant which was envisaged to be completed in 1995, was likely to be completed only in 2005. There had also been a 50 per cent cost overrun on the project. As against the sanctioned cost

of approximately Rs. 50 crore, an amount of Rs. 75 crore was likely to be spent on the project as per the present estimates. The delay had been attributed to the lack of experienced manpower, restrictions imposed by the Government on the recruitment of fresh manpower, deployment of available manpower for the implementation of other on-going projects, etc. The reasons advanced by the Department were hardly convincing. The Committee had recommended that any restrictions put by the Government on fresh recruitment should not be made applicable to the Department of Atomic Energy and other similar scientific Departments so that important technical/research projects were not affected for want of trained personnel. The Committee had felt that the Department should have put in concerted efforts to check the time and cost overruns on the project. Another area of concern was that the Department had failed to fully utilise the budgetary support provided for this project during 1997-98, 1998-99 and 1999-2000. Considering the fact that the resources were scarce, the Department should have productively utilised whatever allocations were made. The Committee had hoped that the Department would adhere to the current completion schedule of the project.

17. In their reply, the Department of Atomic Energy have stated that every effort has been directed towards achieving the completion target. Process reviews have been completed and remotisation systems have been finalised. Tenders for main process piping are being invited. Balance equipment & machinery are under procurement. Installation of piping, remote handling systems and other equipment & machinery will be completed in next 2½ years and the plant will be ready for commissioning. With above activities in hand, it is assessed that the plant will be commissioned by December 2005 while meeting the time schedule, it is also borne in mind that further cost overrun is not incurred on the project.

18. **The Committee had expressed their anguish over the cost and time overruns on the Waste Immobilisation Plant (WIP) at Kalpakkam. They had further pointed out the failure of the Department to fully utilise the budgetary allocations made for the project over the years. They expect that the Department would reverse this trend and fully utilise the allocations on this project in future and that the project would be completed within the extended time-frame. The Committee had recommended that restrictions put by the Government on fresh**

**recruitments should not be made applicable to the Department of Atomic Energy. However, they find that the reply of DAE is silent on this vital point. The Committee would like to be apprised of as to whether DAE have taken up this matter with the nodal Ministry/Department. If not DAE should immediately take the necessary action in the matter. The Committee would like to be apprised of the action taken in the matter within six months of presentations of this Report.**

## **CHAPTER II**

### **RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN ACCEPTED BY THE GOVERNMENT**

#### **A. BUDGETARY ALLOCATION**

##### **Recommendation Serial No. 1, (Para No. 2.23)**

The Committee are concerned to note that there are wide variations between the Budget Estimates (BE) and the Revised Estimates (RE) in respect of the Department of Atomic Energy during the year 2001-02 BEs of all the three sectors have been reduced at RE stage during the year. While this reduction has been negligible in the R&D Sector with just Rs. 6.22 crore, the same in the Power and I&M Sector has been as much as Rs. 43.39 crore and Rs. 145.81 crore respectively. More distressing is the fact that the Plan BE of all the three sectors has been substantially reduced at RE stage during the year. This reduction in the Power, I&M and R&D sectors has been to the tune of Rs. 153 crore, Rs. 97.86 crore and Rs. 41.14 crore respectively. The reduction in the R&D Sector has been stated to be owing to shelving of the proposal for the purchase of ready built flats from Air India, delay in delivery of equipment by a German company, ect. As regards the reduction in the I&M Sector, the same has been attributed to delay in procurement of equipments and delay in awarding consultancy contract. Regarding the Power Sector, the Committee have been informed that BE for the Nuclear Power Corporation of India Limited (NPCIL) amounting to Rs. 1024.21 crore was reduced to Rs. 883 crore at RE stage as a post budget decision by the Ministry of Finance. The Committee do not approve of the said decision of the Ministry of Finance as such an action would tend to hinder the growth of the Nuclear Power Sector. The Committee desire that the Department of Atomic Energy should make all out efforts to utilize their budgetary allocations so as to avoid the need for a cut at RE stage.

### Reply of the Department of Atomic Energy

The reasons for variations between budget Estimates and Revised Estimates during the year 2001-02 are furnished below :

#### Power Sector

##### (1) Nuclear Power Corporation of India Ltd. (NPCIL)

The details of allocation for the Power Sector and break up of Budgetary Support & IEBR for Nuclear Power Corporation of India Limited (NPCIL) are as follows :

Rs. in crores

2001-02								
Head	Budget Estimates			Revised Estimates			Reduction in BE	
	Plan	Non Plan	Total	Plan	Non Plan	Total	Total	Plan
<b>Power Sector</b>								
	1093.00	1503.28	2596.28	940.00	1612.89	2552.89	43.39	153.00
<b>NPCIL</b>								
Budgetary Support	1024.21		1024.21	883.00		883.00	141.21	141.21
IEBR	149.00		149.00	482.00		482.00	(-) 333.00	(-) 333.00
Total Outlay	1173.21		1173.21	1365.00		1365.00	-)191.79	(-) 191.79

It may be seen that the outlay for NPCIL 2001-02 has been increased from Rs. 1173.21 crore to Rs. 1365.00 crore at Revised Estimate. Though there was an increase in the overall outlay of NPCIL, the budgetary support from the Government has been reduced to Rs. 883 crore in RE as a post budget decision by the Ministry of Finance. However NPCIL has augmented its IEBR

to Rs. 482 crore from Rs. 149 crore in the RE stage. The observation of the Committee has been noted and NPCIL will make all out effort to utilise the budgeetary support in full to avoid any reduction in the outlay.

**(ii) Bhabha Atomic Research Center (BARC)**

The Budget Estimates and Revised Estimates during the years 2001-02 in respect of Bhabha Atomic Research Center (BARC) are as under :

Rs. in crores		
	<b>Budget Estimate</b>	<b>Revised Estimate</b>
Power	38.00	37.00

The reduction at RE stage was due to delay in the supply of equipment such as Heavy Duty Master slave Manipulator by PSU (M/s HMT, Bangalore).

**(iii) Indira Gandhi Centre for Atomic Research (IGCAR)**

The Budget Estimates and Revised Estimates during the year 2001-02 in respect of Indira Gandhi Centre for Atomic Research (IGCAR) are as under:

(Rs. in crores)		
Budget Estimate	Resvised Estimate	Variation
30.79	20.00	(-) 10.79

Variation to the extent of Rs. 450.00 lakhs is towards slow progress in the manufacture of technology development based Machinery & Equipment required for PFBR. Reduction in BE provisions to the tune of Rs. 500.00 lakhs is delay in identification of consultants and finalization of Consultancy Contracts. The contract could be entered into only in November 2000 and work was started afterwards only. Consequently first payment could be released only in March 2001. Further, slow progress of major work "Site Infrastructure Development and Materials Procurements" resulted in less expenditure to the tune of Rs. 1.29 crores.

### Remedial Measures

Payment could not be released as the selection of parties for consultancy services took considerable time and hence the contract could be entered into only in Nov. 2000. However, all such aspects and other contingencies will be taken into account while making budget provisions for the ensuing years to avoid reduction from original grant.

### R & D Sector

#### (i) IGCAR

Regarding Non-Plan (Revenue) Budget against the BE of Rs. 36.47 crore the actual expenditure was of the order of Rs. 64.02 crore. Hence, there was no less spending.

As regards the **Plan Budget** the position is as under :

<u>Sector</u>	<u>Original</u> <u>Grant</u>	<u>Revised</u> <u>Estimate</u>
		(Rs in crores)
<b>(a) R &amp; D and Housing :</b>	59.00	53.48
Variation	: (-) 5.52 crores	

In this connection it may be mentioned that there were 29 schemes in all under "R & D Sector" and one of those schemes was "3 mgd Water Supply". This is being executed as "Deposit Work" by Tamil Nadu State Govt. The approval for the above work was issued by Tamil Nadu Govt. only on 31.3.2001. There was opposition from public in the nearby villages to the execution of the above work since they apprehended that water might not be available for the villages if the project was implemented. Only after convincing the public the sub-surface barrier work could be commenced. This required enormous efforts on the part of the PWD authorities and Local Administration of Tamil Nadu Govt. and they had to convene meetings with the local public for appraising the real situation and for convincing them. The above exercise took a long time and the work could be started only after the public protests were satisfactorily solved. For the construction of head-work, the land has to be transferred from the Revenue Department to PWD and this also involved

some delays due to the long procedure involved within the State Govt. Hence the reduction to the tune of Rs. 4.75 crores was made on this account. The reduction to the tune of Rs. 0.77 crore was in other schemes.

#### Remedial Action

After overcoming the above problems, Ground Water Division has commenced the works in full earnestness and the work has gained real momentum only after April 2002. It is expected that the work would be completed by end of second quarter 2003-04. IGCAR is following up the above work and there is no delay or lapse on the part of IGCAR in executing the work.

#### (ii) Centre for Advanced Technology (CAT)

(Rupees in Crores)

BE 2001-02	RE 2001-02	Actuals
Rs. 57.27	Rs. 50.59	Rs. 52.14

Funds at the RE stage had been surrendered since there was an uncertainty in the supply of items such as X-ray generator, Turbo pumps, BL components, QPS power supply, PMP Jacks, Conical thrust bearings, Superconductivity magnets etc. The Committees recommendations have been noted for compliance.

#### (iii) Directorate of Construction, Services and Estate Management (DCSEM)

	Budged Allotment	Revised Estimate	(Rs. in lakhs) Variation
Trombay Township Project	1673.00	899.00	774.00
Other Housing	251.00	121.00	130.00
<b>Total</b>	<b>1924.00</b>	<b>1020.00</b>	<b>904.00</b>

A budget provision of Rs. 1924.00 lakhs has been made based on the various schemes in hand and also considering certain projects proposed to be taken up during the year. However, the overall progress of these schemes in hand and also proposed schemes for the year 2001-02 have been reviewed while preparing the Revised Estimate and the requirement of funds have been reduced to Rs. 1020.00 lacs resulting the reduction of Rs. 904.00 lacs from the Budget Estimates. There was certain set back in the progress of work from that of originally estimated when the budget was prepared in respect of purchase of ready built flats from Air India, extension of School No. 1 & 3, renovation of OYC building and construction of Convention Centre/Senior Officers Guest House which has been deferred to Xth plan.

Provision made for modernisation of lifts of IV-D building at Anushaktinagar could not be utilised as this proposal was not approved since the average life of the existing lifts were not over.

However, on review above provisions have been reduced to the extent of Rs. 1020.00 lacs from Rs. 1924.00 lacs in the Revised Estimate 2001-2002 and the actual expenditure was to the tune of Rs. 9.64 crore.

**(iv) Variable Energy Cyclotron Centre (VECC)**

During the year 2001-02 the provision in BE Rs. 21.12 cr. whereas the provision was reduced to 20.00 cr. at RE, thus leading to a variation amounting to Rs. 12 cr. The main short fall occurred under the Superconducting Cyclotron Project is in the following areas:

- (a) Construction of cyclotron building (civil works)
- (b) Electrical services, compressed air system, Radiation shielding door, low conductivity water system and AC ventilation system.
- (c) Procurement of spares for liquid helium plant from France.
- (d) Release of final payment to M/s Heavy Engineering Corporation, Ranchi, for magnet frame.

During the course of the civil construction works certain modifications in the construction were found very much essential considering health physics aspects and also other various related sub-systems. Quite obviously this resulted considerable delay in other areas as mentioned in (b) above. The



Liquid Helium Plant spares were scheduled to be delivered by March, 2002 but could not be procured within the financial year. Due to escalation in the cost of magnet frame and also due to delivery of the magnet frame at the fag end to the financial year, final payment could not be released within the financial year.

However, all this short falls were anticipated earlier and therefore provision at RE was made accordingly.

**(v) Atomic Minerals Directorate for Exploration and Research (AMD)**

Rs. in crores

	Budget Estimate	Revised Estimate
R&D	8.95	8.00

The reduction is due to anticipated delay in receipt of imported items, such as, Thermal Ionization Mass Spectrometer (TIMS).

**& M Sector**

**(i) BARC**

(Rs. in crores)

	B.E	R.E	A.E
I & M (Regular Schemes)	115.00	70.00	63.28
NTDP	115.00	75.00	71.85

In respect of I & M Sector (Regular Schemes) the reduction in expenditure was mainly due to the delay in execution of Civil Works for High Blocks in respect of the project Revamping of PREFRE (ROP). Further due to the delay in Civil Works fabrication and installation of major equipment were not persued for want of site and to avoid the storage of the finished equipment in the open. In respect of the project Augmentation of Facilities

for Plutonium based Fuels (PRAFUL) provision for civil works could not be utilized due to slow progress of the work since the priority was to adhere to security arrangements after 11th September 2001 and consequently the execution of Electrical Work also got delayed. The delivery of major items like TIMS and SEM required under the project was delayed by the suppliers for want of export licence in the country of origin and hence the provision for M&E could not be utilized. Due to non-clearance of site by IREL, DAE provision for Civil Works in respect of the project Production and Processing of Uranium Compounds had to be surrendered. The delay in Civil Works resulted in surrender of provision for M&E also under the project. Though there was fast progress in civil works in respect of the project 6300 M-3/d Combined MSF-RO Desalination Plant to be set up at Kalpakkam, provision made for items like Membrane and MSF Plant material could not be utilized. The provision made for payment of M/s. L&T for sea water intake and steam supply were spilled over to next year resulting in surrender of the provision. Thus it can be seen that due the unforeseen difficulties which presented themselves during the actual execution, the provisions were reduced at RE stage. In respect of New Technology Development Programme (NTDP) the shortfall was due to delay in the finalisation of Engineering & Procurement Contract and provisions were reduced at RE stage. The complex nature of the strategic assignment of the Project resulted in procedural delays which were unavoidable.

**(ii) Nuclear Fuel Complex (NFC)**

The approved Budget Estimates for 2001-2002 and Revised Estimates for 2001-2002 under Revenue and Capital heads of account are as furnished below:

(Amt. in Rs. Lakhs)

Sector	Budget Estimates 2001-2002	Revised Estimates 2001-2002	Variation
Revenue Section	46110.00	45818.00	292.00
Capital Section	1200.00	800.00	400.00

Detailed reply to the above savings are as furnished below:

### 1. Revenue Section

Budget Estimates 2001-2002 and Revised Estimates 2001-2002 under various sub-heads of Revenue Section, Nuclear Fuel Complex is as furnished below:

(Amt. in Rs. lakhs)

Sector	Budget Estimates 2001-2002	Revised Estimates 2001-2002	Variation
Fuel Fabrication Facilities	43792.00	43642.00	150.00
Stainless Steel Seamless Tube Plant	1530.00	1487.00	43.00
Estate Management	285.00	283.00	2.00
Departmental Canteen	103.00	100.00	3.00
<b>Total Nuclear Fuel Complex</b>	<b>45710.00</b>	<b>45512.00</b>	<b>198.00</b>
Grand-in-aid to Atomic Energy Education Society	400.00	306.00	94.00
<b>Total Revenue</b>	<b>46110.00</b>	<b>45818.00</b>	<b>292.00</b>

The provision made for additional posts under the heads of account 'Salaries' of Rs. 198.00 lakhs under various facilities of Revenue Section in Budget Estimates 2001-2002 has been reduced in Revised Estimates, hence the saving.

### 2. Capital Section

Budget Estimates 2001-2002 and Revised Estimates 2001-2002 under

various Project under Capital Section, Nuclear Fuel Complex is as furnished below:

(Amt. in Rs. lakhs)

Sl. No.	Name of the Scheme	Budget Estimates 2001-2002	Revised Estimates 2001-2002	Variation
1.	Pilot Plant for Development of Pyro-Chemical Process	15.00	55.00	(+) 40.00
2.	Modernisation and Replacement Scheme for the Existing Plant	126.00	151.00	(+)25.00
3.	Titanium Sponge Project (New Zirconium Oxide and Sponge Project, Palayakayal)	75.00	78.00	(+)3.00
4.	Dovetailing of 37 Element Fuel Bundle for TAPS.	308.00	200.00	(-)108.00
5.	Replacement and Augmentation of ZSP	230.00	125.00	(-)105.00
6.	Advanced Materials Processing and Characterisation facilities	358.00	151.00	(-)207.00
7.	Residential Training School Complex	88.00	40.00	(-)48.00
	Total	1200.00	800.00	(-)400.00

Reduced provision of Rs. 400.00 lakhs has been proposed in Revised Estimates 2001-2002 due to the reduction of provision under the following projects:

**1. Dovetailing of 37 Element Fuel Bundle for TAPS**

Saving is mainly due to delay in finalisation of specifications/ procurement in respect of 'Sintering Furnace', 'Ammonia Cracker' and 'Roll Compacting Press'.

**2. Replacement and Augmentation of Zirconium Sponge Plant**

Saving is mainly due to delay in delivery of Forklifts, procurement of Vacuum Pumps through IICT and delay in procurement of Hydraulic Press.

### 3. Advanced Materials Processing and Characterisation facilities

One of the major equipment 'Electron Beam Melting Furnace' is not manufactured in the country and has to be imported. The quotation received from abroad far exceeded the expected price. As a result of which alternatives, such as indigenous manufacturing by importing only the critical parts, is being explored hence savings.

#### Residential Training School Complex

Saving is due to delay in taking up of construction work of Training School Hostel due to delay in receipt of financial sanction.

#### (iii) Indian Rare Earths Ltd. (IREL)

	(Rs. in crore)		
	2001-02		
	BE	RE	Actual
IEBR	24.50	22.70	27.57
B.S.	0.50	0.00	0.00
Total	25.00	22.70	27.57

Reason : Delay in getting approval for the JV projects led non-utilisation of budgetary support.

#### (iv) IRE-DAE Projects

	(Rs. in crore)		
	2001-02		
	BE	RE	Actual
Plan	1.00	0.00	0.00

Reason : A decision to enhance the project capacity for the Thorium retrieval & reprocessing plant to 6000 tpa as against 1200 tpa which would produce additional quantities of Uranium took time. The entire provision was surrendered at RE stage.

**(V) Electronics Corporation of India Ltd. (ECIL)**

During the year 2001-02, in respect of sales and production, the BE targets were fixed at Rs. 530 crore each. While finalizing RE there was no revision or scaling down. (The actuals for the year stood at Rs. 599 crore sales and Rs. 623 crore of production).

With regard to capital investment, an expenditure target of Rs. 28 crore was envisaged in the BE for the year 2001-2002. The impact of US sanctions, which seriously hampered the progress of the related projects during the previous three years continued for a major part of this year also. These restrictions were eased subsequently by the US Govt. but adequate time was not available for the company to revalidate some of the offers made before 1998 by the US sources, in respect of test/manufacturing equipments for these capital projects. Also uncertainty in Telecom business forced the company to delay certain investments on technologies needed in this sector.

Talking into account these factors, the expenditure target was lowered to Rs. 20 crore in RE from Rs. 28 crore in BE.

**(VI) Heavy Water Board (HWB)**

Plan & Non Plan Budget Estimates and Revised Estimates for the year 2001-2002 in respect of Heavy Water Board is as under.

(Rs. in crore)

	BE 2001-02	RE 2001-02	
PLAN		22.14	
NON PLAN			

There is no reduction in BE (Plan) at RE stage. The BE (Plan) has been augmented to Rs. 22.14 crores in RE from RS. 21.00 crores.

The reduction of Rs. 25 crore in Non-Plan Expenditure at RE stage is mainly due to reduction in energy consumption on account of measures adopted in HWP. As against the budgetary provision of Rs. 290.86 crores towards energy cost the actual expenditure for the year 2001-2002 works out to Rs. 252.71 crores (i) due to reduction in coal consumption as against the estimated quantity of 6.54 lakh MT of coal the actual consumption works out to 5.44 lakh MT during the year 2001-2002 on account of effective introduction of combustion control technology in running Captive Power Plant at HWP, Manuguru, (ii) due to extended shut down of HWP, Tuticorin for 94 days as against 76 days originally envisaged on account of delayed restart of the SPIC's NH3 Plant, and (iii) due to reduced on stream hours on account of unexpected MSEB power failures occurred 22 times during the year at RCF, Thal.

**(vii) Board of Radiation and Isotope Technology (BRIT)**

The reduction in the Budget Estimates at the RE stage during the year 2001-2002 has been mainly in respect of the ACHF Project (Augmentation of Cobalt Handling Facility) due to the following reasons :-

The Design, Safety Review Committee (DSRC) works and finalization of tender documents could not be completed in the time envisaged. Recognizing the delay, the BE was revised at the RE stage.

The delay in preparation of architectural drawings by A & CE Division due to their pre-occupation with other urgent works and subsequent time taken by them in preparation of Schedule of quantities and Technical Specifications for floating of civil tender, the budget under the Major Head Works could not be utilized. The schedule of quantities and technical specifications were available only by 26.03.02 and numeration plan drawings were received on 5.04.02 from A & CE Division, BARC. Hence, RAPS (executing agency) could not spend the funds.

Another reason being, NPCIL has designed the absorber Rod transportation flask. It requires another flask for loading and unloading operation of absorber rods. It is risky to handle two flasks for at a time. Hence Hot Cell Utilization Committee has asked NPCIL to redesign the flask.

The provision meant for Master Slave Manipulators (MSMs) could not be utilized as intimated by DRHR, BARC. DRHR, BARC had placed a repeat order for 4 pairs of MSMs with Directorate of Purchase & Stores, DAE. However, due to some technical reasons, DPS could not place a repeat order for MSMs which resulted in raising of a fresh indent *vide* No.BARC/CWZS/DRHR/00/01-02/538 dated 20.02.02.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

### **Reply of the Ministry of Finance**

The budgetary allocations of individual ministries/departments are based on the proposals received from them and the need to balance the competing demands. The revised estimates are based on the trend of actual expenditure in the first 7-8 months of the year as also on the actual expenditure incurred in the previous financial year(s). In absence of midstream evaluation by this Ministry, there is a possibility of avoidable savings with reference to voted appropriations. This would also result in inefficient resource allocation to the extent that departments which may require additional funds are deprived of needed funds.

Further, it may be mentioned that in the case of Nuclear Power Schemes, for the year 1999-2000 the budget estimate was Rs. 2385.37 crore. In spite of this being scaled down, on the basis of a mid-term review, to Rs. 2320.67 crore it is observed that the actual expenditure of the Ministry was only Rs. 2317.63 crore. The position during the fiscal year 2000-2001 was also similar. The actual requirement of funds at RE stage was estimated at Rs. 2367.20 crore as against the budgetary figure of Rs. 2530.34 crore. Actual expenditure was, however, only Rs. 2348.68 crore. In 2001-2002, the expenditure of the department is Rs. 2494.67 crore (provisional), which is again lower than the revised estimates of Rs. 2552.89 crore. The RE itself was lower than the BE of Rs. 2596.28 crore.

The action on the part of Ministry of Finance in allocating/reallocating resources across ministries/departments to enable an optimal allocation and use of resources may kindly be viewed in the above context.



Notwithstanding the above, the recommendations of the Committee have been noted and will be kept in view by the Ministry of Finance.

[Ministry of Finance and Company Affairs, Department of Economic Affairs  
O.M. No. 7 (1)-B (SD)/2002 dated 19th August 2002]

### Comments of the Committee

(Please see para 9 of Chapter I of the Report)

#### Recommendation Serial No. 2, (Para No. 2.24)

The Committee note with concern that the Department of Atomic Energy have not been able to utilise a huge amount of Rs. 391.50 crore out of the budgetary support component during 2000-01. Out of a total budgetary support of Rs. 4942.99 crore, the actual expenditure has been only Rs. 4551.49 crore during the year. All the three Sectors of the Department – Power, Industries & Minerals (I&M) and Research & Development (R&D) – have registered shortfalls amounting to Rs. 181.67 crore, Rs. 146.15 crore and Rs. 63.68 crore respectively.

The Committee are also unhappy to note that there has been a shortfall of as much as Rs. 241.57 crore in the Plan expenditure out of the budgetary support component. The shortfalls in Plan expenditure in the Power, I&M and R&D Sectors have been to the tune of Rs. 91.08 crore, Rs. 99.29 crore and Rs. 51.20 crore respectively. The shortfall in the R&D Sector have been attributed to difficulties/delay in procurement of equipment, delay in preparation of Detailed Technical Report, delay in finalisation of consultancy contract, delay in purchase of ready – built flats, lack of approval for Joint Venture Projects, etc. which are mostly administrative in nature and could have been foreseen and avoided through proper advance planning. The Committee recommend that the Department should endeavour to avoid such delays in future as far as possible.

As regards the Power Sector, the Committee have been informed that the approved budgetary support of Rs. 83 crore in respect of the Nuclear Power Corporation of India Limited (NPCIL) was reduced to Rs. 749 crore at the Revised Estimates stage during 2000-01 and this amount of Rs. 749 crore

was utilised during the year. The Committee would like to be apprised of the reasons for reduction of the approved budget at RE stage during 2000-01. Taking a serious view of the failure of the Department to fully utilise the budgetary allocations year after year, the Committee recommend that the Department should review and strengthen the budgetary mechanism and planning process so as to ensure full utilisation of the allocated amount.

### **Reply of the Government**

#### **Power Sector**

The reasons for shortfall in expenditure during 2000-01 are furnished below:

**(i) Nuclear Power Corporation of India Limited (NPCIL)**

The reduction of Budgetary Support from Rs. 834 crore at the BE stage to Rs. 749 crore at the RE stage for the year 2000-01 was on account of lower anticipated expenditure of TAPP-3&4, Kaiga-3&4 and deferment of CCR works for MAPS-1.

The observation of the Committee are noted and NPCIL is taking all actions to formulate realistic outlays, timely placement of orders, expediting the delivery of equipment and monitoring of the budget utilisation.

**(ii) Indira Gandhi Centre for Atomic Research (IGCAR)**

**Power-Prototype Fast Breeder Reactors**

Original Grant	26.00
Actual Expenditure	18.53
Variation	-)7.47 crores

#### **Position/Comments**

Less expenditure to the tune of Rs. 5.16 crores was due to delay in identification of consultants and finalization of consultancy contracts. This

could be entered into only in November, 2000 and consequently first payment could be started only in March, 2001. Further, slow progress of major work- 'Site Infrastructure Development and Material Procurement' under PFBR-Phase II' resulted in less expenditure to the extent of Rs. 2.31 crores.

#### Remedial action

Payment could not be released as the selection of parties for consultancy services took considerable time and hence the contract could be entered into only in November 2000. However, all such aspects and other contingencies will be taken into account while making budget provisions for the ensuing years to avoid reduction from the original grant.

#### I & M Sector

The reasons for shortfall of expenditure during 2000-01 are furnished below:

##### (i) BARC

In respect of BARC the position was as under:

	BE	RE	AE
I & M	47.00	47.00	45.40
NTDP	100.00	80.00	49.98

(Rs. in crores)

Under Regular Schemes also the BE was retained as RE 2000-01, however the stack in expenditure had been mainly as an integrated fuel reprocessing and waste management was planned to be constructed and therefore time was well spent on evolving the new design concept and plant design specifications were undertaken. The shortfall in expenditure under New Technology Development Programme (NTDP) has been due to the delays in the award of Engineering Service Contract to execute the Project. Considerable time was also spent in the developmental efforts than anticipated leading to delay in production and supply of Special grade raw materials. The

circumstance could not be anticipated at the time of formulation of the BE and hence the shortfall in expenditure.

Detailed reasons are as under:

#### Development of Materials and Crystals

The savings have occurred due to the slow progress of Civil Works (finishing works) in clean rooms due to various reasons and therefore though POs for clean benches, air showers, piping (M&S) were released, they had to be postponed as the clean rooms were not ready.

#### 2. Nuclear Fuel Development Programme

The savings have been due to slow progress in major works and delay in procurement of M&E and M&S which were affected by the technology control regime and alternate vendors had to be sourced and payments could not be effected.

#### 3. Advance in Nuclear Medicine

There was delay in finalisation in purchase of PET cyclotron. Since it had to be cleared by many agencies like DCSEM, TMH, Radiation Protection Physicists, WIPRO GE Engre's and many others, to house the machine. Civil works were also delayed and led to delay in placing the PO.

#### 4. Research in Chemical Sciences

Though POs were placed for equipments like High Temp., X-ray diffractometer, Atomic force Microscope, Ultrafast Ti sapphire Oscilloscope supplies were affected by export sanctions and payments did not materialised.

#### 5. Advance Precision Fabrication Facility

The procurement of the Jig boring machine was delayed and file closed twice by expert committee. The third indent was delayed due to export sanction and PO for the same was placed with M/S. SIP, Switzerland.

6. Advance Reactor Experimental Facility

Savings were on account of delay in procurement of Reactor Pressure Vessel, outdoor performance transformer and delay in civil works at P4 site. Procurement of Reactor pressure vessel was delayed due to dealing with new material not handled earlier. Civil works had to re-tendered and hence could not commence.

7. Waste Immobilisation Project-3B Tarapur

A decision has been taken to construct an integrated Fuel reprocessing and WMF at Tarapur. It was necessary to evolve a new design concept for realizing the integration of back end fuel cycle. Since it was being done for the first time alternatives were worked out to finalize design concept and more time than anticipated was lost. Having finalized the combined layout for the plot plan, plant design specification was being prepared and reviewed by design review committee, tender for the Engg. Services consulting will be invited.

8. Revamping of PREFRE

Radiation monitoring equipment such as contamination monitors, air monitors which are normally scheduled for procurement once the construction of facility reaches a certain stage due to delay in civil works, procurement of equipments were deferred on special areas to store the sensitive instruments.

9. New Technology Development Project

The shortfall in expenditure in NTDP has been due to procedural delay in the award of Engg. Services contract. The imposition of Technology control extended upto component level supplies and sourcing took considerable time. Non materialization and supply orders of special grade raw material which took development efforts could not materialize as anticipated since procedures were being evolved for the first time. Awarding of contract took some time.

**(ii) IGCAR****Fuel Reprocessing**

Original Grant	15.00
Actual Expenditure	7.92
Variation	-) 7.08 crores

**Position/Comments**

The reduction in expenditure to the extent of Rs. 5.20 crores was on account of delay in procurement of materials due to design improvement, fabrication of many types of lead bricks to suit the site conditions and also due to difficulty in award of cell piping contracts since the piping drawings were carried out through external agency for the first time and thereby delay in identifying suitable vendor for these specifications. The equipment Far Infra Red-Fourier Transform Infra Red Spectrometer and Infra Red accessories which were expected to be received before March 2001 were received only in April 2001. This also resulted in less expenditure during 2000-01.

**Remedial action**

The payment could not be released due to the reasons given above which could not be avoided and was beyond our control. However, due care is being taken to formulate the budget proposals in a more realistic manner to avoid the reduction from original grant.

**(iii) NFC**

The approved Budget Estimates for 2000-2001 and Actual Expenditure 2000-2001 under Revenue and Capital heads of account are as furnished below:

(Rs. Lakhs)

Sector	Budget Estimates 2000-2001	Actual Expenditure 2000-2001	Variation
Revenue Section	45353.00	43843.06	1509.93
Capital Section	2000.00	327.07	1628.25

Detailed reply to the above savings are as furnished below:

**1. Revenue Section**

Budget Estimates 2000-2001 and Actual Expenditure 2000-2001 under various sub-heads of Revenue Section, Nuclear Fuel Complex is as furnished below:

(Rs. in Lakhs)

Sector	Budget Estimates 2000-2001	Actual Expenditure 2000-2001	Variation
FUEL FABRICATION FACILITIES	43080.00	41720.31	(-) 1359.69
STAINLESS STEEL SEAMLESS TUBE PLANT	1500.00	1524.43	(+)24.45
ESTATE MANAGEMENT	273.00	207.40	(-)65.60
DEPARTMENTAL CANTEEN	100.00	85.88	(-)14.13
TOTAL NUCLEAR FUEL COMPLEX	44953.00	43538.02	(-)1414.97
GRAND-IN-AID TO ATOMIC ENERGY EDUCATION SOCIETY	400.00	305.04	94.96
TOTAL REVENUE	45353.00	43843.06	(-)1509.93

Savings is mainly due to non-revision of MDU rate by UCIL/DAE as budget was proposed based on the anticipated increased rate as intimated by UCIL (Rs. 942.20 lakhs), reduction in increased power tariff by M/S APTRANSCO (Rs. 220.30 lakhs) and savings under salaries (due to LTC ban) and other establishment charges (Rs. 347.43 lakhs) in which the savings under the head Grant-in-Aid to AEES of Rs. 94.96 lakhs also included.

## 2. Capital Section

An amount of Rs. 371.75 lakhs was spent during the year 2000-2001 against the approved Budget Estimates of Rs. 2000 lakhs resulted in saving of Rs. 1628.25 lakhs.

(Amt in Rs. Lakhs)

Sl. No.	Name of the Project	2000-2001		
		Budget Estimates	Actual Expr.	Variation
1.	Pilot Plant for Development of Pyro-Chemical Process	50.00	49.25	(-)0.75
2.	Modernisation and Replacement Scheme for the Existing Plant	242.00	55.63	(-)186.37
3.	New Uranium Oxide Fuel Project (NUOFP)	34.00	43.06	(+)9.06
4.	New Uranium Oxide Fuel Assembly Project (NUFAP).	4.00	1.62	(-)2.38
5.	New Zircaloy Fabrication Project (NZFP)	105.00	6.35	(-)98.65
6.	Titanium Sponge Project (New Zirconium Oxide and Sponage Project, Palayakayal)	50.00	47.56	(-)2.44
7.	Dovetailing of 37 Element Fuel Bundle for TAPS.	515.00	8.13	(-)506.87
8.	Augmentation and Replacement schemes for the Existing Plant	500.00	14.91	(-)485.09
9.	Advanced Materials Processing and Characterisation facilities	500.00	145.24	(-)354.76
10.	Residential Training School Complex			
	<b>Total</b>	<b>2000.00</b>	<b>371.75</b>	<b>(-)1628.25</b>



The main reasons for major savings under various projects are as furnished below:

**1. Modernisation and Replacement scheme for Existing Plants**

The reasons for savings of Rs. 186.37 lakhs are as furnished below:

Closing of file 'End Cap Weld Evaluation UT System' : "This equipment is first of its kind. With great effort specifications were prepared as per our requirement and an order (CAP/6382/QAF/XXX/2389 dt. 26-2-2000) was placed on M/s Microscan Instruments Pvt. Ltd. But during inspection certain specifications were not matching with specified features in PO, hence the firm was asked to replace the equipment with correct features. In spite of repeated reminders it was not done by the party. Hence the order was cancelled and file closed as funds could not be utilised in time"

Delay in procurement of 'Vacuum Drum Filter' : "Local manufacturers could not offer the item namely 'Vacuum Drum Filter' as per the designed specifications, hence the item had to be re-tendered four times and indigenous vendors had to be developed. Finally the order could be placed on 1.12.2000 and the equipment was delivered in August, 2001."

Delay in procurement of 'Spectroscopy Furnace' : "Few leading Indian firms, who are marketing this imported special purpose dust-free 'Muffle Furnace for Spectroscopy Analysis' failed to respond to our tender as well as re-tender, probably due to export-embargo reasons. This may be because the firms had to declare the details of end-user for such special type equipment. This situation was not anticipated earlier as the firms were confident of importing and supplying the item. Therefore we had to finally close the case file."

Delay in procurement of 'CNC lathe/Grinding machine' : "Was due to delay in receipt of technical clarifications from the parties on the feasibility and economy of doing our job which is a specialised one".

Delay in receipt of Slurry Extraction Unit (CAP/6706/XXXI/2149/dt. 13.1.01)

Before placement of Order : "The delay was due to technical discussions with two lowest offers, price negotiations, file processing for file clearance in SEC, approval in EC, budget clearance etc."

After PO was placed : “The raw material offered by party (M/s. S. V. Engg.) for approval was rejected 3-4 times as they were not as per specification. The repeated inspection (*i.e.* testing, sampling, and analysis) of raw material at NFC Control Laboratory took time, and the final approval of raw material could be given to the party on 7-Sep-2001. This repeated rejection of raw material caused them to ask for extension of delivery period 3 times, which was agreed to.”

Delay in procurement of ‘Demineralization Plant’ : as the processing took more time than anticipated.

Delay in procurement of ‘Plasma TIG Welding Machine’ : due to embargo.

## **2. New Zircaloy Fabrication Project**

Saving of Rs. 98.65 lakhs was due to the delay in procurement of ‘Ultrasonic Test Equipment’.

## **3. Dovetailing of 37 Element Bundle for TAPS**

Savings of Rs. 506.87 lakhs is due to the following reasons:

Efforts are directed towards 100% indigenisation of equipment for this project. The 37 Element Fuel Assemblies for the forthcoming PHWR of 500 Mwe of Tarapur will be manufactured on an industrial scale for the first time in the country. The specifications of Uranium Oxide Pellets and the Fuel Tubes in terms of dimension, particularly are different. Hence, a lot of efforts were directed towards conceptualising the lay out and getting the state-of-the art equipment in consultation with the local and indigenous manufacturers. Many of the equipments are to be custom-made for the first time in the country. The 37 Element PHWR 500 fuel assembly would be manufactured by a more advanced process, including total containment of radioactivity, proper ventilation system and automation. In addition, a boundary condition of the project was to retrofit the fabrication facility in the existing building. Hence, finalisation of layouts took time and major civil works could not be initiated on time.

It may be appreciated that developing indigenous equipment in high-tech area like nuclear fuel fabrication in a developing country like ours takes time. As such, it is difficult or not possible to import these equipments. Indigenous efforts and development even though slow in the initial phase would bring dividends in the long run and strengthen our self-reliant programme on nuclear fuel fabrication.

#### **4. Special Materials and Alloy Development Project**

Replacement and Augmentation of Zirconium Sponge plant.

Savings of Rs. 485.09 lakhs was due to the following reasons:

The project Site was relocated due to safety considerations, and accordingly the lay out was modified to suit the new site, it took time for finalisation of construction plan of New Zirconium Sponge Plant Building and the order on M/s ULVAC (India) for import of Rotary Piston Mechanical Pumps and Roots Pumps could not materialise due to sanctions. Hence there was savings under this project.

#### **5. Advanced Materials Processing and Characterization facilities**

Savings of Rs. 354.76 lakhs was due to the following reasons:

Delay in receipt of the order acceptance by the supplier due to embargo for the imported items such as Scanning Electron Microscope, High Temperature Dilatometer.

The equipment 'Servo-Hydraulic Universal Testing Machine' is a sophisticated state-of-the-art laboratory equipment which is available only from foreign suppliers. However, this equipment is under the list of embargo items from many foreign suppliers. There was a delay in finalisation of configuration of the equipment after discussion with experts in this field so that it may not fully attract embargo provision. Also, there was delay in obtaining provisional export clearance from the bidders who have quoted in our case file No. HRP/NFC/TPT/CAT/38 part I for this item.

Budget Estimates are now prepared based on a realistic basis keeping in view of the production target and project planning. The progress of Revenue Expenditure and Capital Expenditure are being reviewed on a monthly basis in the Executive Committee Meeting to avoid large scale savings.

**(iv) Heavy Water Board (HWB)**

Plan & Non plan Budget Estimates & Actual expenditure for the year 2000-2001 in respect of Heavy Water Board is as under:

(Rs. in crore)

	BE 2000-2001	Actuals 2000-01	Variations
Plan	12.28	9.27	3.01
Non-Plan	427.27	445.72	26.55

The shortfall in expenditure under Plan (Capital) Schemes is mainly due to time extension required to be granted in due date of BRP tender and calling for rebids resulted in overall delay of Major Modifications to HWP (Baroda). As against the BE of Rs. 558 lakh the actual expenditure was Rs. 110.18 lakh resulting in non-utilisation of Rs. 447.82 lakh due to (a) M/s Ammonia Casale, Switzerland did not accept the PO supply of ejectors on account of embargo by their Government (b) difficulties faced in procurement of imported items likes canned motor pumps and diaphragm pumps. Accordingly the allocation was reduced to Rs. 130 lakh at RE stage. The shortfall has been partially offset by higher expenditure on essential urgent schemes under Minor Modification of the extent of Rs. 122.51 lakh due to inclusion of number of minor modifications to improve the performance of operating plants for which enhanced provision was made in RE with the approval of Board/DAE.

The savings of Rs. 26.55 crore in respect of Non-plan expenditure as compared to BE 2000-2001 is due to reduction in specific energy consumption (steam & power) due to implementation of energy saving schemes and optimising D2O production. It may please be noted that the specific energy consumption was less by about 6.5% as compared to the best achieved during previous year resulted in saving of Rs. 20 crore in actual expenditure. Further

savings are on account of cost of Naphtha which has come down to Rs. 12057/MT from Rs. 14000/MT, postponement of water cess payment amounting to Rs. 82.71 lakh to M/s GSFC due to other disputed amount and reduction in coal consumption due to receipt of better quality of coal.

**(v) Indian Rare Earths Ltd. (IREL)**

I & M Sector-Indian Rare Earths Limited:

(Rs. in crore)

	2000-01		
	BE	RE	Actual
IEBR	55.06	22.00	20.65
B.S.	5.00	0.00	0.00
Total	60.06	22.00	20.65

Non-receipt of approval for the JV projects proposed by the Company

I & M Sector IRE-DAE projects:

(Rs. in crore)

	2000-01		
	BE	RE	Actual
Plan	3.50	1.90	1.90

Recasting the scope of the Thorium retrieval and reprocessing the project.

**(vi) Atomic Minerals Directorate for Exploration and Research (AMD)**

(Rs. in Lakhs)

	BE 2000-2001	RE 2000-2001	Actuals
I & M	390.00	500.00	340.00

The marginal shortfall is due to delay in procurement of 2 drill rigs-which have since been procured during 2001-2002.

**R & D SECTOR**

The reasons for shortfall in expenditure during 2000-01 are furnished below

**(i) BARC**

The budgetary utilisation under BARC during 2000-01 are as under

(Rs. in crores)

	Budget Estimate	Revised Estimate	Actual Expenditure
R & D	100.00	100.00	86.85

In respect of R & D Sector due to the satisfactory trend of expenditure the BE was retained as RE 2000-01. However, the shortfall in expenditure has been mainly due to the imposition of technology control regime which extended upto the component level and was not anticipated. Measures are adopted to explore alternate sources to minimize surrenders on this account in future.

**(ii) VECC**

As regards the actual expenditure during 2000-01, there was a savings of Rs. 4.27 cr. corresponding to BE. The reasons for the savings were due to (a) Delay in the constructional activities of the superconducting cyclotron (b) Deferment of final payment of the magnet frame to HEC, Ranchi; (c) Cancellation of the order of fabrication of cryostat by M/s. Airliquide, France; (d) Non-materialisation of the supply of superconducting wire from M/s. IGC Advanced Superconductor, USA; (e) Procedural delay affecting the procurement schedule of BaF2 crystals from China and NIM/CAMAC instruments from foreign suppliers, etc.

Civil part of the Superconducting Cyclotron building is almost complete. Works regarding other services like Air-conditioning, LCW are going on in full swing.

Magnet frame has been fabricated and already delivered at VECC site. The case of fabrication of cryostat was retendered and M/s. Airliquide, France have already started the job after clearance of technical drawings given by VECC.

Procurement of Superconducting wire has been taken up with SINP, Kolkata and the material is ready for inspection.

BaF2 crystals from China and NIM/CAMAC instruments have been received.

(iii) AMD

(Rs. in lakhs)

	BE 2000-2001	RE 2000-2001	Actuals
R & D	725.00	803.00	597.37

The conspicuous shortfall is due to non-receipt of one single Machinery & Equipment item viz. Thermal Ionisation Mass Spectrometer (TIMS) at an estimated cost of Rs. 237.00 lakh. A provision has therefore, been made in 2001-2002 for the procurement of the same.

(iv) DCSEM

(Rs. in lakhs)

	Budget Estimate	Actual Expenditure	Variation
Trombay Township Project	4227.00	1431.64	2838.36
Other Housing Schemes	330.00	114.43	215.57
Total	4600.00	1546.07	3053.93

Against Budget Estimate of Rs. 4600.00 lacs during the year 2000-2001, the actual expenditure was only 1546.47 lacs resulting under-utilisation of 3053.93 lacs.

An amount of Rs. 2185.00 lacs was provided in the budget towards purchase of ready built flats from Air India. However, the purchase could not be materialised during the year. The budget provisions have been made towards various schemes under construction considering timely receipt of clearance from Municipal Corporation etc. The delay in receipt of these clearances have been resulted slow progress of work and substantial reduction in expenditure. The expenditure on infrastructure facilities such as drainage, sub station, roads etc. which has been originally met from the Department was shared by NPCIL adjusted during the year resulted substantial reduction in expenditure compared to the original budget estimate.

The budget estimates are being reviewed periodically based on the physical progress as well as expenditure involved from time to time. Efforts are being made to utilise the fund allotted.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

**Recommendation Serial No. 3, (Para No. 2.25)**

The Committee are unhappy to note that the actual utilisation of the internal and Extra Budgetary Resources (IEBR) during 2000-01 has been to the tune of Rs. 353.46 crore as against a target of Rs. 493.06 crore, resulting in a shortfall of Rs. 139.60 crore. While the Nuclear Power Corporation of India Limited (NPCIL) has contributed Rs. 101.54 crore to the shortfall, the remaining shortfall amounting to Rs. 38.06 crore has been caused by the Indian Rare Earths Limited (IREL). While the IEBR targets for NPCIL and IREL during 2000-01 were Rs. 438 crore and Rs. 55.06 crore respectively, these organisations spent only Rs. 336.46 crore and Rs. 17 crore respectively during the year.

It seems that no targets for IEBR generation was set for the year 2000-01 in respect of the other two Public Sector Undertakings viz. the Electronics Corporation of India Limited (ECIL) and Uranium Corporation of India Limited (UCIL). The Committee presume that the poor financial



health of ECIL resulted in fixing of nil IEBR target for the undertaking. However, the case of UCIL is beyond comprehension. The Committee would like to be apprised of the factual position in this regard. The Committee also find that there is a wide variation between BE and RE of 2001-02 in respect of IEBR generation. BE amounting to Rs. 175.50 crore has been enhanced to Rs. 504.70 crore at RE stage. The Committee are at a loss to understand the rationale behind the fixation of unrealistic IEBR targets year after year. They understand that the capacity of the Department to raise external resources is negligible. Besides, the position of internal accruals of the Department is also not very healthy. Therefore, the Committee recommend that the Department should set realistic IEBR targets so that there is no setback to the planned activities of the Department.

### Reply of the Government

#### (i) NPCIL

IEBR of NPCIL for the year 2000-01 was set at Rs. 438 crore based on the financing pattern of projects consistent with the project schedules. The revision of IEBR was essentially due to lower anticipated expenditure of TAPP-3 & 4, Kaiga-3 & 4 and deferment of CCR works for MAPS-1.

The observation of the Committee with respect to setting up of realistic IEBR targets are noted and all efforts will be made for the same.

#### (ii) IREL

	(Rs. in crore)		
	2000-01		
	BE	RE	Actual
IEBR	55.06	22.00	17.00

The break up of shortfall is furnished below :

Reduction of IREL schemes

**Chavara**

(i) Dry-Mill expansion (-) Rs. 13.00 crore (due to land acquisition problem)

(ii) Change-over from 11 KV to 110 KV (-) Rs. 1.00 crore.

**Total Chavara – Rs. 14.00 crore**

**Manavalakurichi**

(i) Additional Wet Concentrator (-) Rs. 4.25 crore

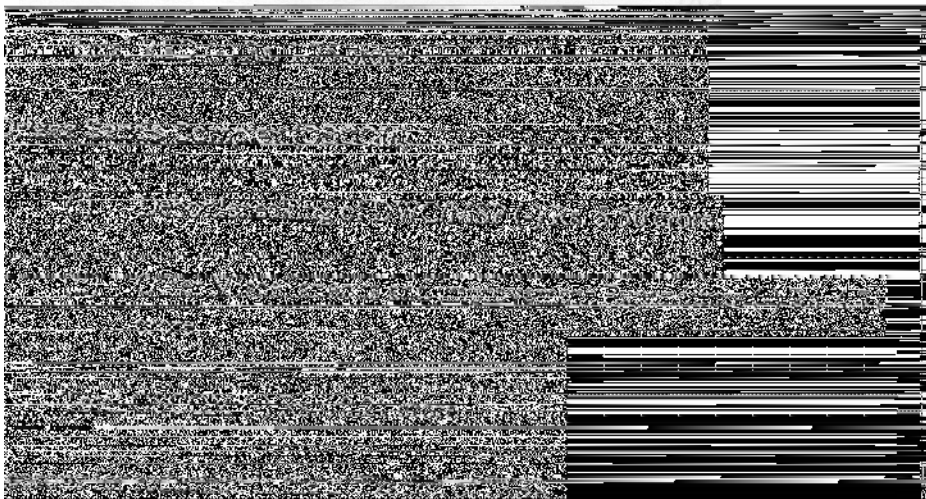
(ii) Monazite Segregation (-) Rs. 300.00 crore

(iii) Purification of limenite (-) Rs. 1.20 crore.

**Total MK (-) Rs. 8.45 crore**

**Rare Earths Division (RED)**

(i) Nd. Metal (-) Rs. 1.75 crore.



1. Delay in approval of the financial restructuring proposal of the Company. The Company could not generate IEBR as envisaged in view of the large liability of the company towards the Govt. for repayment of its loan, outstanding interest together with penal interest totaling Rs. 200 crore.

The Company had to keep provisions for meeting unreasonable claims made by the Department of Expenditure by Charging excise duty on some of the mineral products of the company, which the Company had contested at various levels including COD.

(iii)

The ability of the company to generate IEBR was seriously affected during the first three years of IX Plan period, because of the losses suffered during that period. Inclusion of ECIL in the Entities List released by U.S. Department of Commerce for imposing sanctions, adversely affected the sales performance of the company during 1998-99 because the procurement of some essential components and important test/manufacturing equipment were hindered. Indigenous substitutes by in-house R & D helped the company to recover from the impact, but it took some time before it happened in the period 2001-2002. These were the reasons behind fixing of Nil IEBR target in the year 2000-01.

However, anticipating a substantial improvement in profit in 2001-2002, based on the concerted efforts put in and various remedial measures taken by the Company, an IEBR target of Rs. 28 crore was fixed in the BE. The actual IEBR achievement i.e., Rs. 86 crore during 2001-2002 (profit + Depreciation) is far higher than this target. The company is confident of generating sufficient IEBR in the X Plan period to support the investments envisaged.

(iv)

There was anticipated delay in taking up the strategic projects.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

**Recommendation Serial No. 4, (Para No. 2.26)**

The Committee note that the 9th Plan outlay of the Power, I&M and R&D Sectors was Rs. 5498.50 crore, Rs. 1368.50 crore and Rs. 1500 crore respectively. As against this, the actual expenditure in the first four years of the 9th Plan by these Sectors had been Rs. 3699.44 crore, Rs. 562.38 crore and Rs. 1105.89 crore. By adding the RE amount of the final year of the 9th Plan i.e. 2001-02, the cumulative total for the three Sectors comes to Rs. 5121.44 crore, Rs. 827.22 crore and Rs. 1523.75 crore. This cumulative total in the power and I&M Sectors is far short of the 9th plan outlay. This shortfall in the Power and I&M Sectors is to the extent of Rs. 377.06 crore and Rs. 541.28 crore respectively. The Committee are equally perturbed by the fact that in each of the first four years of the 9th Plan, the actual expenditure incurred by all the three Sectors has been less than BE. The Department have admitted that the actuals of the entire 9th Plan would be less than the total outlay. The Committee would like to be apprised of the projects of the Department that have been affected as a result of under-utilisation of funds. Considering the fact that the resources are scarce, they would like the Department to take corrective measures in this regard and ensure that realistic targets are fixed for 10th Plan taking into consideration all the constraints experienced during 9th Plan.

**Reply of the Government**

**(i) NPCIL**

Out of the IX Plan outlay of Rs. 5498.50 crore for the Power sector, the outlay for NPCIL was Rs. 5187.43 crore. The actual utilisation at Rs. 4702.59 crore is short of the outlay by Rs. 484.84 crore. This amounts to about 91% utilisation. The under utilisation has been in respect of the TAPP-3&4, Kaiga-3 & 4 projects and MAPS-1 CCR works. TAPP-3&4 project, kept in abeyance since 1991 due to financial resource crunch, was revived in the year 1998. The project was resumed in 1999. The actuals for the project were Rs. 1000 crore. The project was planned for the IX Plan. However, based on detailed inspection of coolant channels of MAPS-1, it was decided that the operations could be continued for some more time before taking up

En masse Coolant Channels Replacement. Accordingly, the expenditure in respect of MAPS-1 Collant Channels Replacement works had been intentionally postponed to X Plan since continuation of operation of this unit was permitted by AERB.

The target of capacity addition of 880 MWe in the IX Plan by completion of Kaiga-1&2 and RAPP-3&4 had been achieved. In the X Plan capacity addition of 1300 MWe through completion of TAPP-3&4 (2x540 MWe) and Kaiga-3 (220 MWe) is planned. The work on these units is progressing as per schedule and the set targets will be met.

NPCIL is taking all necessary measures as recommended by the Committee to set realistic targets and also achieve them.

(ii) **BARC**

	(Rs. in Crores)	
	Total Outlay	Exp. 1997-2002
Power	111.07	110.17

From the total outlay of Rs. 111.07 crores Power 99% has been utilized. As far as BARC is concerned, under power sector the budgetary allocation has been utilised almost completely.

**I&M SECTOR**

(i) **BARC**

	(Rs. in Crores)	
	Total Outlay	Exp. 1997-2002
	525.00	360.47

From the total outlay of Rs. 525.00 Crores under I&M only 68% of budgetary allocation has been utilized.

Under I&M the execution of schemes and the corresponding under utilization of funds were due to factors not foreseen and which presented

themselves at the time of execution of the project. Factors like Export sanctions, delay on account of adherence to strict security instructions, changes to suit evolving technology, and compliance to Safety requirements etc. have all contributed to the under utilization of funds under the Sector.

Provisions have not been utilized as anticipated mainly under I&M mainly on account of New Technology Development Project a Project with strategic connotation and was sanctioned during the late 1998. The provision have been underutilization due to delay in awarding Engg. Services contract for execution of the Project. Non materialization of raw material from PSUs, requirement of additional developmental efforts and lack of responsive bidders of the contract have all contributed to the persistent shortfall under the Project. Since time was well spent in involving design and development activities for the first time in the back drop of technology regime and evolving safety constraints a perceptible impact on the expenditure profile may not be discerned. Engineering Services Contracts for Additional Waste Tank Farm and SFSF the two components of NTDP have been finalized and third is in the process of being finalized. Therefore the pace of budgetary utilization is expected to accelerate from the next financial year.

(ii) **IREL**

I&M Sector-Indian Rare Earths Limited: 9th Plan Outlay v/s Actual expenditure:

	(Rs. crore)	
	9th Plan	
	Outlay	Expenditure (Prov.)
IEBR	168.50	94.91
B.S.	55.00	0.00
Total	223.50	94.91

Year-wise Expenditure (Rs. crore)

1997-1998	16.33
1998-1999	10.75
1999-2000	19.61
2000-2001	20.65
2001-2002	27.57
Total	94.91

1. In the light of Corporate Plan the Company decided to merge some of the minor schemes envisaged during the 9th Plan together with its expansion schemes.
2. Delay in approval of the financial restructuring of the Company, the Company could not generate IEBR required for implementing some of thme schemes.
3. Three JVs of the Company could not proceed in view of non-receipt of Governmental approvals.

I&M Sector-IRE-DAR Projects: 9th Plan Outlay v/s Actual expenditure;

	(Rs. crore)	
	9th Plan	
	Outlay	Expenditure (Prov.)
Plan	15.00	3.48

A decision to enhance the project capacity for the Thorium retrieval & reprocessing plant to 6000 tpa as against 1200 tpa which would produce additional quantities of Uranium.

**(iii) ECIL**

The Company's IX FYP outlay was Rs. 210 crore comprising of Rs. 75 crore of Budgetary Support and Rs. 150 crore of IEBR. Projects valied at Rs. 87 crore were approved by the Board and taken up for implementation. The Budgetary Support of Rs. 75 crore was provided by the Department of Atomic Energy. The company's inability to generate sufficient IEBR during the years 1997-2000 for investment in capital schemes resulted in restricting the investments in only such projects that were linked to executable customer orders. The emphasis was on improvement of sales performance aimed at bringing about Comapany's trunaround. In respect of some projects in Antennas and Radio/ Telecommunications area, the anticipated expenditure could not be fully incurred due to:

Acute procurement difficulties as a result of US sanctions which affected procurement of some critical components.

Delay in choice of technology by DoT for creating telecommunication infrastructure across the country and the resultant unpredictability in telecom business

Delay in receipt of some orders, forcing the company to defer investments in such cases

The measures taken by the company to overcome the impact of U.S. sanctions by indigenising critical sub-systems and locating alternative sources yielded results and an amount of Rs. 51 crore could be expended towards the approved projects. In addition, procurement commitments were also made to the extent of Rs. 4 crore.

The Schemes that could not be implemented during the IX Plan are being reviewed, keeping in view of the fast obsolescence in technologies involved and are being recast as new schemes in the X FYP period.

**(iv) IGCAR**

Realistic budgets are being fixed for 10th Plan Projects taking into consideration all the constraints experienced during 9th Plan.

**(v) NFC**

The Titanium Sponge Project was initially envisaged to be implemented during IX Plan period could not be taken up. The Plan allocation marked for Titanium Sponge project was not utilised in full during the IX plan period due to the following reasons:

The project was initially envisaged to be implemented as joint venture in 1993-94 and the same did not materialise. The scope of the project was revised in mid-1999 for putting up 400 tpa Titanium Sponge Plant and 500 tpa Zirconium Oxide Plant and the proposal submitted to the Department for sanction. Subsequently, The Department advised that the matter relating to Titanium Sponge Plant be discussed with M/s Kerala Minerals & Metals Limited prior to finalisation. Finally the project is now revised as "New Zirconium Oxide and Sponge Project" and the project report is awaiting AEC's approval and is expected to be taken up during X Plan period.



**(vi) HWB:**

The total expenditure under Plan (Capital) Schemes in respect of I&M Sector of Heavy Water Board during the IX Plan was Rs. 56.78 crore as against the outlay of Rs.53.94 crore. It is stated that overall allocation under IX Plan has been fully utilised and in fact slightly in excess of the approved outlay and the question of under utilisation of funds under I&M Sector for HWB does not arise. The excess expenditure over the outlay has been provided by re-appropriation from within the outlay allocated to the Department under I&M Sector with the approval of Planning Commission. However, the observations communicated by Standing Committee on Energy has been noted for compliance.

**R&D Sector****(i)**

<b>Total Outlay</b>	<b>Exp. 1997-2002</b>
	(Rs. in Crores)
368.18	360.47

From the above it is seen that under R&D Sector 97% of budgetary allocation has been utilized.

BARC is basically an R&D unit where mostly scientific projects and operational plants are being set up. Under R&D a large number of schemes are being pursued by BARC and most of the projects are technology-intensive and highly complex. Technology intensive projects also require mastering of the technology in the requisite area and contribute to self reliance and more time than anticipated is spent. The marginal shortfall has been due to execution of projects in the scenario of Technology Control regime wherever import of M&E are involved. The Projects are also required to adhere to evolving safety requirements and keep pace with continued technological evolution leading to changes in scope and hence provisions could not be utilized to the fullest extent. Concerted efforts however are made to utilize the allocation to the fullest extent.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

**E. ADVANCED HEAVY WATER REACTOR****Recommendation Serial No. 5, (Para No. 2.44)**

The Committee note that the Department have an ambitious programme of achieving a capacity of 20,000 MWe nuclear power by the year 2020. They fell that the likely shut down of the old Atomic Power Stations like the Rajasthan Atomic Power Project-1 and the focus of the Goernment to promote the Hydel Sector may further shrink the already low share of nuclear power in the total electricity generation in the country. The Committee, therefore, desire that the Government should redouble their efforts to meet the set target. The Committee also recommend that a perspective plan should be formulated by the Department to achieve the target of 20,000 MWe by 2020 and also to enhance the share of nuclear power from the present level of about 3 per cent to 10 per cent of the total electricity generation in the country. The Committee further recommend that the Department should expeditiously identify the areas in various parts of the country, especially in West Bengal, Assam and Himachal Pradesh to set up Nuclear Power Projects. The action taken in the matter may be conveyed to the Committee within six months of the presentation of this Report.

**Reply of the Government**

1. The Rajasthan Atomic Power Station (RAPS) Unit I was shut down on 30.4.2002 on the expiry of its operating license and in accordance with the stipulations of the Atomic Energy Regulatory Board (AERB). Detailed inspection is to be taken up for a decision of the continuation of operations of RAPS-1 after progressive upgradation of different systems. The matter is being approached in two stages. In the first stage, the proposal is to carry out a detailed inservice inspection and approach the AERB for the possibility of resumption of operations after the implementation of certain upgrades. In the second stage, full refurbishment is proposed, including a long-term solution for the leakage problem from the end-shield. Actions on the foregoing lines are already in progress. All actions will be subject to detailed safety review by AERB before the unit can commence long-term operations. A clear picture, however, will emerge after the results of detailed inspection

are available. Coolant channel replacement and upgradation work has been completed for RAPS-2, and the unit has been performing satisfactorily since then. Enmasse Coolant Channel replacement and upgradation work has been initiated at MAPS-2, and the unit is expected to come back online during the year 2003-04. By replacing the coolant channels and with other plant upgradations, the operation of Pressurised Heavy Water Reactors with enhanced safety and extended life is possible. The Department of Atomic Energy/Nuclear Power Corporation of India Ltd. has the capability for refurbishment and life extension of nuclear power reactors.

2. The existing nuclear power capacity in operation in the country is 2,720 MWe with a share of about 3% of the total generation capacity. One of the reasons for slow growth of nuclear power in our country is the indigenous technology development phase that was required for the nuclear power programme. Despite restrictive trade barriers that been prevalent internationally in this area, the indigenous technology development has been successfully gone through.
3. The Vision-2020 of the Department of Atomic Energy (DAE) aims at achieving a total nuclear power capacity of about 20,000 MWe by the year 2020. The proposals for the X Plan have been formulated and are now under finalisation. Based on these proposals, the total nuclear power capacity by the end of the X Plan is anticipated to reach 4020 MWe [addition of 1300 MWe during X Plan, from TAPP-3&4- 2x500 MWe (now being uprated to 2x540 MWe) and Kaiga-3-220 MWe]. These projects are presently under construction. The total nuclear capacity is expected to increase to 6680 MWe progressively by December 2008 with the completion of Kaiga-4 (220 MWe) Kudankulam-1&2 (2X 1000 MWe) and RAPP-5&6 (2X220 MWe). Construction work on these projects has commenced. By the end of the XI Plan, the total nuclear power capacity is projected to grow to 9935 MWe (that is with an addition of 5915 MWe during XI plan). A total nuclear power capacity of about 20,000 MWe by the year 2020 is envisaged by further addition of units. The important steps taken by the Department towards achieving its 20,000 MWe programme are:

Increase in unit size from 220 MWe to 500 MWe (being uprated to 540 MWe). Proposals are under consideration to further increase the rating to 680 MWe.

1000 MWe Light Water Reactors have been introduced as an additionality to the PHWR programme. This also enables accessing external funds and faster growth of nuclear power.

Work on 500 MWe Prototype Fast Breeder Reactor is planned to commence in the 10th Plan. 20,000 MWe programme envisages setting up of more FBRs after completion of PFBR.

An Advanced Heavy Water Reactor (AHWR), being developed by BARC, is proposed for construction as a technology demonstrator for utilisation of Thorium for power generation. Work on this project is expected to commence in the 10th Plan.

4. NPCIL is constantly working towards enhancing the capacity addition at a faster rate, both by reducing the gestation period of projects and by setting up new projects. New construction strategies are being evolved, where :

Mechanical and electrical installation works are carried out in parallel with the civil construction;

Lead time for procurement is reduced by adopting "Large package approach" in major contracts;

Pre-project and advance procurement activities are being

<p>...the first unit of a standardised twin unit station in five years from the first pour of concrete, and the second unit in six to nine months thereafter.</p>	<p>6. The aim is to complete the first unit in five years and the second unit in six to nine months thereafter.</p>
<p>...no significant avenues of recourse to overseas financing, and has mainly to rely on Government budgetary support in domestic borrowings and internal surpluses. As the capacity base is small, it cannot generate adequate surpluses to finance a large nuclear power programme until a capacity of about 10,000 MW is reached. The present planning is aimed at</p>	<p>6. Nuclear power has no significant avenues of recourse to overseas financing, and has mainly to rely on Government budgetary support in domestic borrowings and internal surpluses. As the capacity base is small, it cannot generate adequate surpluses to finance a large nuclear power programme until a capacity of about 10,000 MW is reached. The present planning is aimed at</p>

achieving this capacity and will depend on availability of financial resources.

7. The Site Selection Committee (SSC) of the Department of Atomic Energy is evaluating sites for setting up of future nuclear power stations, in the southern, western, northern and eastern regions of the country. At present, nuclear power projects are being set up at sites for which clearances have already been obtained. With a view to utilise the available infrastructure at existing sites, the potential of these sites for setting up additional units is also being evaluated so that the setting up of these units at these sites can be taken up expeditiously. As regards sites in Assam and Himachal Pradesh, it may be mentioned that the whole of Assam and a significant portion of Himachal Pradesh falls in Seismic Zone V as per IS 1893 (1984 edition). The sites falling in Seismic Zone V are not considered suitable as per the Code of Practice of AERB on Safety in Siting of Nuclear Power Stations. In view of the higher seismic potential of sites in Assam and Himachal Pradesh, it is difficult to locate nuclear power stations of the present design in these regions. As the sites offered by West Bengal Government were not found suitable, the State authorities have been requested to propose new sites. The SSC is exploring other sites for setting up nuclear power stations in different parts of the country.
8. Site clearances on the environmental angle from the Ministry of Environment and Forests, Government of India and on the safety angle from the Atomic Energy Regulatory Board are needed thereafter. The Setting up of a nuclear power plant in any region depends upon several factors, including the different energy options available to the region, the availability of a suitable site, the future nuclear power programme and the availability of financial resources.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

**Recommendation Serial No. 6, (Para No. 2.45)**

The Committee note that the Tarapur Atomic Power Project (TAPP)-3&4 (2X540) MWe) was accorded financial sanction in 1991 at an estimated cost of Rs. 2427 crore. Subsequently, the project cost was revised to Rs. 6421 crore in 1997. The Committee have been informed that the anticipated completion cost of the project is Rs. 6760 crore including escalation and Interest During Construction (IDC). Thus, there has been enormous time and cost overruns on the project. The Committee are also unhappy to note that as against the approved 9th Plan outlay of Rs. 1973 crore for the project, the anticipated utilisation is only Rs. 1410 crore. Thus, there has been a huge shortfall of Rs. 563 crore. The shortfall in the utilisation of allocation in the year 2000-01 has been to the tune of Rs. 121.42 crore. The shortfall in the utilisation of 9th Plan outlay had been attributed to delay in commencement of the project which could start only after obtaining approval for the revised cost estimates. The Committee feel that the process of obtaining approval for Revised Estimates, etc. should not be allowed to hold up the construction work and other related activities. Once a decision to start work on a project had been taken in principle, then cost estimation, etc. and construction work should be allowed to go side by side for, the whole project cost is not to be spent in one go and secondly, holding up of construction work while awaiting approval for revised cost estimates would result in further time and overruns. The committee also not that there would be a shortfall of about 3.5 per cent in the 9th Plan physical target of the project. The committee expect the Department to make an in-depth analysis of the various factors responsible for physical and financial shortfalls and take remedial measures in this regard. They hope that the present completion schedule of October, 2005 and July, 2006 for the two units of the project would be adhered to. As recommended by the Committee in their earlier Reports, this period should be brought down to about five years.

**Reply of the Government**

The project was accorded financial sanction in 1991 but the execution of the project was kept in abeyance due to financial resource crunch. No work at the site was, therefore, commenced. Thus, it is not a case of cost or time over-run of the project but a conscious decision by the Government to defer

receipt of imported equipment have been cited as reasons for delay on these projects. The Committee, while appreciating the difficulties experienced by the Department of Atomic Energy in procuring machines and equipments for its various projects, feel that sufficient efforts are not being made to encourage the domestic industry throughout the country to develop new infrastructure. etc. required by the Department. The Committee would like the department/ IREL to critically analyse the factors leading to delays and take advance/ timely action to minimize such delays.

### **Reply of the Government**

The two projects at Chavara, (MRP-II and Microzir plant) and one project at MK, (additional recovery of zircon/rutile) were taken up towards the end 8th plan and were planned as continuing schemes during the 9th plan and completed within the approved project schedules. In respect of MRP-II, cost overrun was strictly not overrun on the cost and was the customs duty component not included and shown as project cost earlier. Board of Directors of IREL have critically analysed the factors responsible for the cost and time overrun.

The Company is actively encouraging indigenous industry and import is considered only when there is no proper/suitable indigenous supply.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

### **G. BOARD OF RADIATION AND ISOTOPE TECHNOLOGY (BRIT)**

#### **Recommendation Serial No. 10, (Para No. 2.65)**

The Committee are unhappy to note that the Board of Radiation and Isotope Technology (BRIT) has utilised just over one-third of the Plan budgetary allocation during 2000-01. Out of a total Plan BE of Rs. 18 crore, it has utilised a meagre Rs. 6.18 crore. Delay in receipt of equipments, delay in commencement of civil work and phased modifications of the existing facilities have been cited as reasons for non-utilisation of Plan budgetary allocation by the organisation. The Committee find that the organisation had also failed to

fully utilise the Plan budgetary allocation during 1998-99 and 1999-2000 and this fact had been commented upon by the Committee last year. The Committee do not appreciate the same mistake being repeated year after year. The Committee do not appreciate the same mistake being repeated year after year. The Committee also note that the Plan BE of 2001-02 amounting to Rs. 8.50 crore has been reduced to Rs. 6 crore at RE stage. They would like to be apprised of the reasons for such reduction as also the measures taken by the organisation to ensure full utilisation of budgetary allocations in future.

### **Reply of the Government**

The reduction of Plan BE at the RE stage during 2000-01 was mainly due to the following reasons:-

M/s ECE of France who were to supply teleflex cables and gears for Project DDRE&TF could not supply the material in time. The material has since been received and payment released.

2. In respect of Augmentation of Cobalt Handling Facility, the inability of the foreign firm to supply Hot Cell equipment and the delay in receipt of detailed architectural drawings from A & CE Division, BARC because of which civil works could not be taken up as envisaged resulted in substantial savings. Ident has been raised to get the material from other reliable suppliers. In addition, Cobalt Pellets have been loaded in our Power Reactors for future use.

The non-commitment of foreign firms to supply the Freeze Drying unit and lead glass required for project TC 99 m Generator due to sanctions necessitating a reduction in BE at the RE stage. The Unit had since been received and installed.

Continuous monitoring has been instituted and efforts are being put to ensure that the concerned agencies utilize the funds allocated to them in time.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]



**Recommendation Serial No. 11, (Para No. 2.66)**

The Committee are unhappy to note that the project of the Board of Radiation and Isotope Technology (BRIT) for augmentation of production of cobalt-60 which was scheduled to be completed by 31-3-2001, is now scheduled to be completed by 31.3.2004. Though the Department have stated that no cost overrun on the project is envisaged, the Committee are not inclined to accept the claim. Either there has been over-estimation of cost earlier or the cost has not been re-assessed properly at present. The delay on the project has been attributed to additional workload connected with the revamping of RAPP COF following the mandatory regulatory reappraisal and preoccupation of the service engineering departments with other ongoing projects. The Committee can understand the delay caused by additional workload connected with the revision in the scope of the project following the mandatory regulatory reappraisal. However, they cannot accept the fact that the cumulative delay on the project is also due to the preoccupation of the service engineering departments with other on-going projects and the consequent inability to give the expected priority for this project. The Committee do not approve of this lackadaisical approach of the Department. The Committee recommend that considering its importance, the project should be given due attention by the Department. They also recommend that the project should be completed within the extended time-frame.

**Reply of the Government**

The remarks of the Committee have been taken note of.

The pressure of regular operations of the Programme is a crucial factor affecting the execution of the Project functions. While it is necessary to have an official totally familiar to the Operational functions to be responsible for the Project, special efforts for additionally deploying senior/dedicated engineer/officer for specific areas/operations for the period of the Project is envisaged in future for more effective Project progress/monitoring. With these measures it will be ensured to complete the project in the extended timeframe as well as utilize the budgetary allocation to the full extent.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

**H. Waste Immobilisation Plant, Kalpakkam****Recommendation Serial No. 12, (Para No. 2.72)**

The Committee are pleased to note that a Waste Immobilisation plant is being set up at Kalpakkam through indigenous efforts, using locally available materials and equipments barring a few items. This will go a long way in suitably conditioning and storing the radioactive wastes emanating from the various nuclear installations in the country. However, the Committee are unhappy to note that the plant which was envisaged to be completed in 1995, is likely to be completed only in 2005. There has also been a 50 per cent cost overrun on the project. As against the sanctioned cost of approximately Rs. 50 crore, an amount of Rs. 75 crore is likely to be spent on the project as per the present estimates. The delay has been attributed to the lack of experienced manpower, restrictions imposed by the Government on the recruitment of fresh manpower, deployment of available manpower for the implementation of other on-going projects, etc. The reasons advanced by the Department are hardly convincing. The Committee recommend that any restrictions put by the Government on fresh recruitment should not be made applicable to the Department of Atomic Energy and other similar scientific Departments so that important technical/research projects are not affected for want of trained personnel. The Committee feel that the Department should have put in concerted efforts to check the time and cost overruns on the project. Another area of concern is that the Department have failed to fully utilise the budgetary support provided for this project during 1997-98, 1998-99 and 1999-2000. Considering the fact that the resources are scarce, the Department should have productively utilised whatever allocations were made. The Committee hope that the Department would adhere to the current completion schedule of the project.

**Reply of the Government**

Committee's observations have been noted and every effort has been directed towards achieving the completion target. Process reviews have been completed and remotisation systems have been finalised. Tenders for main process piping are being invited. Balance equipment & machinery are under procurement. Installation of piping, remote handling systems and other

equipment & machinery will be completed in next 2½ years and the plant will be ready for commissioning. With above activities in hand, it is assessed that the plant will be commissioned by December '2005. While meeting the time schedule, it is also borne in mind that further cost overrun is not incurred on the project.

### CHAPTER III

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated  
November 22, 2002]

#### **Comments of the Committee**

(Please see Paragraph 18 of Chapter I of the Report)

equipment & machinery will be completed in next 2½ years and the plant be ready for commissioning. With above activities in hand, it is assessed the plant will be commissioned by December, 2002. While meeting the schedule, it is also borne in mind that further cost overrun is not in the project.

### CHAPTER III

[Department of Atomic Energy, O.M. No. 132(2)/2002-Budget]

#### RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

(Please see Paragraph 18 of Chapter I of the Report)

- Nil -



Committee, therefore, recommend that the Department of Atomic Energy should impress upon the FIPB that the product has got the desired value addition capacity and he be allowed the Joint Venture. However, in the alternative they should also explore the possibility of indigenous technology.

#### CHAPTER IV

#### RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

##### F. Indian Rare Earths Limited (IREL)

##### Recommendation Serial No. 8, (Para No. 2.55)

The Committee note with concern that a number of Joint Venture (JV) Projects of the Indian Rare Earths Limited (IREL) have run into rough weather. JV for the Bhimli Project in Andhra Pradesh has not found favour with the Ministry of Environment and Forests owing to concern for the Olive Ridley Turtles along the coast. Similarly, JV for the Kudiraimozhi Project in Tamil Nadu has also not materialized following objections by the Government of Tamil Nadu to release 465 hectares of reserved forest area for the project. The Committee note that obtaining various clearances from the Ministry of Environment and Forests and State Pollution Control Boards take a lot of time leading to cost and time overruns. The Committee feel that the Government should first clearly evaluate the benefits to be derived from any project vis-a-vis its environment costs before they give permission to any Ministry/Department to start a project. But once a project is given permission to start, clearances from environment angle and Pollution Control Boards should automatically come in a time bound manner. Again, JV with Austpac Resources, Australia for synthetic rutile production has not been possible due to lack of clearance from Foreign Investment Promotion Board (FIPB) on the ground that synthetic rutile production is not a desired value addition. The Committee feel that the production of synthetic rutile through JV with Austpac Resources, Australia would enhance the competitive capability of IREL. The



Committee, therefore, recommend that the Department of Atomic Energy should impress upon the FIPB that the product has got the desired value addition capacity and he be allowed the Joint Venture. However, in the alternative they should also explore the possibility of indigenous technology.

### Reply of the Government

It may be stated that in respect of Bhimli project as well as Kudiraimozhi project, the Company had earlier obtained approval from the Environmental Ministry of the respective State Governments. However, these ran into rough weather when the EIA/EMP reports for the project were submitted to MoEF for its final clearance. In respect of Austpac, FIPB had given clearance for JV with WSIL at Kudiraimozhi which involved only synthetic rutile production. The same yardstick was not extended to the JV proposal with Austpac at Orissa by FIPB.

It may also be noted that the JV with Austpac envisages setting up of pilot plant for technology demonstration and the same has not found favour with FIPB so far.

As far as Bhimli Project is concerned, the matter of getting clearance from MOEF is being vigorously followed up.

An application was submitted by Austpac Resources N.L, an Australian Company to the Foreign Investment Promotion Board (FIPB) in March, 2000 seeking approval for foreign investment in a 10,000 tpy Demonstration Synthetic Rutile Plant in Orissa based on the patented technologies of Austpac Resources. For the said purpose, a Joint Venture Company 'AusRutile India Pvt. Ltd.', was established in collaboration with Indian Rare Earths Limited (IREL), a Public Sector Company under the administrative control of the Department of Atomic Energy. FIPB recommended the proposal for the approval of the Hon'ble Minister for Commerce & Industry, New Delhi on 17th April 2000. Although the matter was being constantly pursued, clearance for the Joint Venture could not be obtained.

During January 2001 representatives of IREL and AusRutile met the Joint Secretary concerned in the Ministry of Commerce & Industry. On

15th June, 2001 the Joint Secretary advised the representatives that Austpac should submit a revised proposal providing for the production of Titanium Dioxide ( $\text{TiO}_2$ ) pigment. Although AusRutile *vide* its letter dated 20.6.2001 informed the Ministry of Commerce & Industry as to why such a proposal could not be submitted at that stage, the Ministry of Commerce & Industry *vide* their letter dated 2.11.2001 informed that the proposal was found wanting from value addition angle.

It is the considered opinion of the Indian Rare Earths Limited and the Department of Atomic Energy that manufacturing of Synthetic rutile from ilmenite itself is a value addition. Out of 80 Lakh tonnes of ilmenite produced all over the world, 76% is converted into intermediate value added materials like synthetic rutile or slag before their final conversion to pigment. A comparison of the selling price of both ilmenite and synthetic rutile would further testify to the above position. Selling price of ilmenite is of the order of Rs. 3000/- to Rs. 3500/- per tonne whereas that of synthetic rutile (containing 96% or higher  $\text{TiO}_2$ ) is Rs. 23,000/- per tonne. Approximately 1.7 to 2.0 tonnes of ilmenite (*i.e.* ilmenite worth Rs. 6000/-) is required to produce 1 tonne of synthetic rutile (worth about Rs. 23,000/-). These differences would speak of the value addition in manufacturing synthetic rutile. The intention of the proposed Joint Venture with AusRutile is to first demonstrate the technology, supply around 3000 to 4000 tonnes of samples to selected pigment producers around the world for test marketing, prior to entering into long term contracts. Depending on the response AusRutile proposes to build a world class industrial plant of 100-200,000 tpy SR capacity, depending on the  $\text{TiO}_2$  supply-demand situation in three to five years from now. By then the infrastructure availability of the region would improve considerably. Once India has a project with the sustained production of 100-200,000 tpy SR, it would be possible to attract pigment producers to India.

IRE would take up 26% share in the Joint Venture Company AusRutile and the balance would be contributed by Austpac as per policy guidelines of Government of India. A demonstration plant with a 10,000 ton per annum synthetic rutile capacity is proposed to be set up at a total cost of Rs. 23 crore of which IRE's share would be Rs. 6 crore.



As approval from Ministry of Commerce and Industry has not been forthcoming, Austpac Resources vide its letter dated 21.11.2001 have informed that they are considering construction of the demonstration plant in Australia itself and would like to withdraw their application from the joint Venture with IRE. However, they have still expressed hope to develop the AusRutile project as a full scale production facility in Orissa with the support of Government of India. The Department would like the Committee to take up this matter with the Minister of Commerce and Industry and impress upon him the importance of the project and expedite clearance.

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated November 22, 2002 and O.M. No. 7/4(1)/98-PSU/Vol. II/498 dated 21st May, 2002]

#### **Comments of the Committee**

(Please see paragraph 15 of Chapter I of the Report)

The 'No Objection Certificate' during March, 2002. Clearance from MoEF is expected by Nov. 2002. The Detailed Project Report (DPR) has already been submitted to DAE for approval. AERB clearances for manufacture of long delivery NSS Mechanical Components and Excavation were issued in February and July 2002 respectively. On completion of review of Civil Engineering Design which is expected by March 2003, the clearance of AERB for first pour of concrete is expected by March 2003 and the financial

## CHAPTER V

### RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWAITED

#### Recommendation Serial No. 7, (Para No. 2.46)

The Committee are pleased to note that the Bhabha Atomic Reserach Centre (BARC) has already completed the detailed engineering design and development of major nuclear systems of the Advanced Heavy Water Reactor (AHWR). Equally pleasing is the fact that the Indira Gandhi Centre for Atomic Research (IGCAR) has also completed substantial R&D activities relating to the Prototype Fast Breeder Reactor (PFBR). The Committee would like to congratulate the Department on achieving these important milestones. They hope that the project Report for AHWR Project, which was scheduled to be issued by March, 2002 has been issued as scheduled. As regards PFBR Project, the Committee desire that the Department/IGCAR tie up with the Tamil Nadu Pollution Control Board to expedite the issuance of the 'No Objection Certificate'. Meanwhile, the Detailed Project Report (DPR) should be kept ready and as soon as the 'No Objection Certificate' is issued by the Tamil Nadu authority, the same should be submitted to DAE and finalised quickly. The Committee hope that the construction work on the Project would be started before long and the projects completed in a time bound manner. At the same time, the Department may also consider the feasibility of setting up more such projects in other parts of the country after evaluating the suitability of the locations.

#### Reply of the Government

##### (i) IGCAR

The Tamil Nadu Pollution Control Board has already issued

'No Objection Certificate' during March, 2002. Clearance from MoEF is expected by Nov. 2002. The Detailed Project Report (DPR) has already been submitted to DAE for approval. AERB clearances for manufacture of long delivery NSSS Mechanical Components and Excavation were issued in February and July 2002 respectively. On completion of review of Civil Engineering Design which is expected in February 2003, the clearance of AERB for 'first pour of concrete' is expected by March 2003, and the financial sanction from Government is expected in 1st/2nd quarter of 2003-04

Recommendation Serial No. 7 (Para No. 2.46)

[Department of Atomic Energy, O.M. No. 1/2(2)/2002-Budget/dated November 22, 2002]

#### Comments of the Committee

(Please see Paragraph 12 of the Chapter I of the Report)

NEW DELHI; SONTOSH MOHAN DEV,  
February 14, 2003 *Chairman,*  
Magha 25, 1924 (Saka) *Standing Committee on Energy.*

Reply of the Government

(i) ICAR

The Tamil Nadu Pollution Control Board has already issued



76

The Sub-Committee then took up for consideration the following draft Reports :-

(i) Action Taken Report on the recommendations contained in the 28th Report (13th Lok Sabha) on the subject 'Nuclear Power Generation - Targets and Achievements.'

**ANNEXURE - I**

**MINUTES OF THE FIRST SITTING OF THE SUB-COMMITTEE 'F' ON ACTION TAKEN REPORTS OF THE STANDING COMMITTEE ON ENERGY (2003) HELD ON 14TH FEBRUARY, 2003 IN COMMITTEE ROOM 'E' PARLIAMENT HOUSE ANNEXE, NEW DELHI**

The Sub-Committee met from 15.00 hrs. to 15.30 hrs.

**PRESENT**

Shri Sontosh Mohan Dev — *Chairman*

Shri Tilakdhari Prasad Singh — *Convenor*

**MEMBERS**

3. Shri Vijayendra Pal Singh Badnore

4. Shri Santosh Bagrodia

**SECRETARIAT**

1. Shri P.K. Bhandari — *Director*

2. Shri R.S. Kambo — *Under Secretary*

2. At the outset, the Chairman of the Standing Committee on Energy welcomed the Members to the first sitting of the Sub-Committee.

3. The Sub-Committee then took up for consideration the following draft Reports :-
- (i) Action Taken Report on the recommendations contained in the 25th Report (13th Lok Sabha) on the subject 'Nuclear Power Generation – Targets and Achievements'.
  - (ii) Action Taken Report on the recommendations contained in the 26th Report (13th Lok Sabha) on the subject 'Small Hydro Power Programme – An Evaluation'.
  - (iii) Action Taken Report on the recommendations contained in the 27th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Department of Atomic Energy.
  - (iv) Action Taken Report on the recommendations contained in the 28th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Ministry of Non-Conventional Energy Sources.
  - (v) Action Taken Report on the recommendations contained in the 29th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Ministry of Power.
  - (vi) Action Taken Report on the recommendations contained in the 30th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Department of Coal.
4. The Sub-Committee adopted the aforesaid draft Reports with minor additions/deletions/amendments.

*The Sub-Committee then adjourned.*

SECRETARIAT

1. Shri P.K. Bhardwaj — Director  
 2. Shri R.S. Kamboj — Under Secretary

**ANNEXURE II**

**MINUTES OF THE SECOND SITTING OF THE STANDING COMMITTEE ON ENERGY (2003) HELD ON 14TH FEBRUARY, 2003 IN COMMITTEE ROOM 'E' PARLIAMENT HOUSE ANNEXE, NEW DELHI**

The Committee met from 16.00 hrs. to 17.00 hrs.

**PRESENT**

Shri Sontosh Mohan Dev — *Chairman*

**MEMBERS**

2. Shri Vijayendra Pal Singh Badnore
3. Shri Lal Muni Chaubey
4. Shri Bikash Chowdhury
5. Shri Ali Mohmad Naik
6. Shri Harpal Singh Sathi
7. Shri Tilakdhari Prasad Singh
8. Shri Manoj Sinha
9. Shri B. Venkateshwarlu
10. Shri Devdas Apte
11. Shri Santosh Bagrodia
12. Shri Jayanta Bhattacharya
13. Shri Dara Singh Chauhan
14. Shri Ajay Maroo
15. Shri B.J. Panda
16. Shri Gaya Singh



## SECRETARIAT

1. Shri P.K. Bhandari — *Director*
2. Shri R.S. Kambo — *Under Secretary*

2. At the outset, the Chairman, Standing Committee on Energy welcomed the Members to the sitting of the Committee.

3. The Committee then took up the following draft Reports, as adopted by the Sub-Committee 'F' on Action Taken Reports, for consideration :—

- (i) Action Taken Report on the recommendations contained in the 25th Report (13th Lok Sabha) on the subject 'Nuclear Power Generation – Targets and Achievements'.
- (ii) Action Taken Report on the recommendations contained in the 26th Report (13th Lok Sabha) on the subject 'Small Hydro Power Programme – An Evaluation'.
- (iii) Action Taken Report on the recommendations contained in the 27th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Department of Atomic Energy.
- (iv) Action Taken Report on the recommendations contained in the 28th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Ministry of Non-Conventional Energy Sources.
- (v) Action Taken Report on the recommendations contained in the 29th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Ministry of Power.
- (vi) Action Taken Report on the recommendations contained in the 30th Report (13th Lok Sabha) on Demands for Grants (2002-03) of the Department of Coal.

4. The Committee adopted the aforesaid draft Reports with minor additions/deletions/amendments.

5. The Committee also authorized the Chairman to finalise the above-mentioned Reports after making consequential changes arising out of factual verification by the concerned Ministries/Departments and to present the same to the Houses of Parliament.

*The Committee then adjourned.*

ANNEXURE III  
(This Part of Introduction)

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE  
RECOMMENDATIONS CONTAINED IN THE TWENTY-SEVENTH  
REPORT OF THE STANDING COMMITTEE ON ENERGY  
(THIRTIETH LOK SABHA)

I	Total No. of Recommendations made	15
II	Recommendations that have been accepted by the Government (The recommendations at Sl. Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11 & 12)	10
	Percentage of total	66.67
III	Recommendations which the Committee do not desire to pursue in view of the Government's replies	Nil
IV	Recommendation in respect of which replies of the Government have not been accepted (The recommendation at Sl. No. 8)	1
	Percentage of total	6.67
V	Recommendation in respect of which final replies of the Government are still awaited (The recommendation at Sl. No. 7)	1
	Percentage of total	6.67



The Committee also authorized the Chairman to finalise the above-mentioned Reports after making consequential changes arising out of factual verification by the concerned Ministries/Departments and to present the same to the Houses of Parliament.

The Committee then adjourned.

### ANNEXURE III

(Vide Para 4 of Introduction)

#### ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS CONTAINED IN THE TWENTY-SEVENTH REPORT OF THE STANDING COMMITTEE ON ENERGY (THIRTEENTH LOK SABHA)

I.	Total No. of Recommendations made	12
II.	Recommendations that have been accepted by the Government (Vide recommendations at Sl. Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11 & 12)	10
	Percentage of total	83.33
III.	Recommendations which the Committee do not desire to pursue in view of the Government's replies	Nil
IV.	Recommendation in respect of which replies of the Government have not been accepted (Vide recommendation at Sl. No. 8)	1
	Percentage of total	8.33
V.	Recommendation in respect of which final replies of the Government are still awaited (Vide recommendation at Sl. No. 7)	1
	Percentage of total	8.33