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STANDING COMMITTEE ON ENERGY
(2003)
THIRTEENTH LOK SABHA

DEPARTMENT OF ATOMIC ENERGY

“NUCLEAR POWER GENERATION-
TARGETS AND ACHIEVEMENTS”

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

THIRTY-SECOND REPORT



LOK SABHA SECRETARIAT
NEW DELHI

February, 2003 / Magha, 1924 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON ENERGY (2003)

Shri Sontosh Mohan Dev - Chairman

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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
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24. Shri Raghuraj Singh Shakya
25. Shri Manoj Sinha
26. Shri Chandra Pratap Singh
27. Shri Tilakdhari Prasad Singh
28. Shri Shibu Soren
29. Shri B. Venkateshwarlu
30. Prof. Ummareddy Venkateswarlu

* Nominated to the Committee w.e.f. 24.1.2003.

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 Ahmed 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 | - | Additional Secretary |
| 2. | Shri P.K. Bhandari | - | Director |
| 3. | Shri R.S. Kambo | - | Under Secretary |
| 4. | Shri P.C. Tripathy | - | Assistant Director |

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 | |

INTRODUCTION

I, the Chairman, Standing Committee on Energy having been authorised by the Committee to present the Report on their behalf, present this Thirty-Second Report on Action Taken by the Government on the recommendations contained in the 25th Report of the Standing Committee on Energy (2002-03) on the subject "Nuclear Power Generation-Targets and Achievements" relating to the Department of Atomic Energy.

2. The Twenty-fifth Report of the Standing Committee on Energy was presented to Hon'ble Speaker, Lok Sabha on 28th December, 2001 and to Lok Sabha on 7th March, 2002. Replies of the Government to all the recommendations contained in the Report were received on 3rd July, 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 Government on the recommendations contained in the Twenty-fifth 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-Fifth Report (Thirteenth Lok Sabha) of the Standing Committee on Energy on the subject "Nuclear Power Generation - Targets and Achievements" relating to the Department of Atomic Energy which was presented to Hon'ble Speaker, Lok Sabha on 28.12.2001 and to Lok Sabha on 7.3.2002.

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

SI. Nos. 1,2,3,4,5,6,7,12,14,15,16,17,18,19,20,22 & 24.

- (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: -
Nil

- (iv) Recommendations/observations in respect of which final replies of the Government are still awaited: -
SI. Nos. 8, 9,10,11,13,21 & 23.

3. The Committee desire that the final replies in respect of the recommendations which have been categorised as interim replies 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-fifth Report.

(A) Upgrading of Nuclear Power Plants

Recommendation (SI. No. 3, Para No. 2.84)

6. The Committee had noted that the present installed capacity of Nuclear Power Plants in the country was 2720 MWe which was less than 3 per cent of the total electricity generation. As per perspective plan drawn by DAE, the capacity of Nuclear Power Stations might go up to 9,935 MWe by the end of the 11th Plan i.e. 2012. The Nuclear Power Stations proposed for 10th and 11th Plans had been identified which included TAPP - 3&4, Kaiga 3,4,5&6, Kudankulam - 1&2, RAPP - 5,6,7&8. The Committee had further noted that the Department had a programme of achieving 20,000 MWe by the year 2020. If the plan of DAE to attain 20,000 MWe materialised, the share of nuclear power in the total electricity generation would go up to around 7 per cent at that time. Taking into consideration the projected generation by non-nuclear projects by the end of 2020, the Committee had desired that DAE should redouble their efforts to achieve their targeted capacity addition. The Committee had also recommended that the Department should also consider the upgrading of existing Nuclear Power Stations as well as go in for super and more mega Atomic projects in future.

7. In their reply, the Department of Atomic Energy have stated that the capacity addition envisaged in 20000 MWe by the year 2020 programme of DAE is through 220/500 (uprated to 540) MWe PHWRs, 500 MWe PFBR/FBRs, 300 MWe AHWR and 1000 MWe LWRs. The capacity of 500 MWe PHWR, first of its kind and presently under construction at Tarapur, Maharashtra has been uprated to 540 MWe. This is being further enhanced to about 680 MWe with some changes in design, for setting up future PHWRs. In addition, with a view to taking advantage of existing infrastructure, the policy, of utilisation of the full power potential at a site is being followed. For regular plant life extension and upgradation, actions are being undertaken at all nuclear power stations to ensure continuation of operations with enhanced safety. The Government have also granted mega-project concessions to all nuclear power projects of capacity 440 MWe or more.

8. **The Committee had recommended that the Department of Atomic Energy (DAE) should endeavour to uprate the existing Nuclear Power Plants so as to increase the share of atomic power in the total electricity generation in the country. DAE have informed them that the capacity of 500 MWe Pressurised Heavy Water Reactors have been uprated to 540 MWe and that this is being further enhanced to 680 MWe with some changes in design. The Committee are pleased to know this development. The Committee have observed that DAE are in the process of setting up Light Weight Reactors of 1000 MWe capacity. The Committee, however, find that there has been no commitment on the part of DAE to build super and mega Atomic Power Projects in future. The Committee are of the view that subject to technical constraints, super and mega Atomic Power Projects of capacity ranging**

between 1000 MWe and 3000 MWe are preferable to traditional capacity of 220 / 500 MWe on economic considerations. The Committee reiterate their earlier recommendation and stress that the Government should endeavour for such projects.

(B) Separate Corpus Fund for pre- project activities

Recommendation (SI. No. 8, Para No. 2.89)

9. The Committee had noted that the Nuclear Power Corporation of India Limited (NPCIL) was obtaining partial financial sanctions for pre- project activities of specific projects prior to obtaining project financial sanctions. This would no doubt go a long way in reducing the gestation period of Nuclear Power Projects to quite some extent. The Committee had recommended that the Ministry of Finance/Planning Commission should consider the feasibility of setting up a separate Corpus Fund for pre-project activities relating to Nuclear Power Projects in the Country.

10. The Department of Atomic Energy have stated in their reply that they will pursue and take necessary action in this matter to meet the intent of the Recommendation.

11. In this connection, the Ministry of Finance have stated that a separate Corpus Fund for pre-project activities relating to Nuclear Power Projects in the country would have to be created and sustained out of the General revenues through annual budgetary allocations within the Plan Outlay fixed for the Department. Earmarking of the Plan Outlay for the Fund would result in blocking of scarce resources in the form of balances in the Fund. The Department would lose the flexibility to reallocate funds if so required because of change in priorities from pre-project activities to other Plan activities, which may fall outside the purview of the Fund. Also, the principle behind such a Fund may have to be extended to Plan Projects in other sectors. A Multiplicity of such Funds in different sectors would undermine the entire Budgetary system of allocating scarce resources among competing priorities so as to ensure their optimum utilisation in the development process. The balance of advantage, therefore, lies in continuing with the existing system of annual budgetary allocation to meet the expenditure on specific pre-project activities of individual projects. Notwithstanding the above, Ministry of Finance would endeavour to ensure that funds are made available from time to time for pre-project activities of Nuclear Power Projects in accordance with the priorities fixed by the Department of Atomic Energy.

12. The Planning Commission. in their reply, have stated that they agree to the suggestion of the Standing Committee to create a Corpus Fund for taking up essential pre-project activities prior to the sanction of a Nuclear Power Plant subject to the condition that such activities could be carried out for only those

projects which are provided for in the Plan Outlay for the Department of Atomic Energy and that the Corpus Fund may be created out the Plan Outlay for the Department.

13. The Committee had recommended that the Ministry of Finance/Planning Commission should consider the feasibility of setting up a separate Corpus Fund for pre-project activities relating to the Nuclear Power Projects in the Country. In this connection, they have been informed by the Ministry of Finance that if such a Fund is created, the same would have to be created and sustained out of the General revenues through annual budgetary allocations within the Plan Outlay fixed for the Department. The Ministry of Finance have further informed the Committee that earmarking of the Plan Outlay for the Fund would result in blocking of scarce resources in the form of balances in the Fund. They have opined that it would be advantageous to continue with the existing system of annual budgetary allocation to meet the expenditure on specific pre-project activities of individual projects. The Planning Commission have agreed to the above recommendation of the Committee with the riders that pre-project activities of individual projects could be carried out only for those projects which are provided for in the Plan Outlay of the Department and that the Corpus Fund may be created out of the Plan Outlay fixed for the Department. The Committee concur with the views of the Planning Commission and desire that the Government should create such a Corpus Fund. At the same time, the Committee recommend that the Government should augment Plan Outlay of DAE for meeting the expenditure of this Corpus Fund. They consider that this Fund will prove to be a boon for reducing the gestation period of Nuclear Power Projects.

(C) Selection of new sites

Recommendation (SI. No. 9, Para No. 2.90)

14. The Committee had observed that the future plan of the Department of Atomic Energy for capacity addition revealed that new units had been proposed in the existing or under construction Atomic Power Stations except Kudankulam. The Committee had further observed that a Site Selection Committee had been constituted which was in the process of investigating new sites. The Committee had desired that the Government should expedite the process of investigation and select new sites.

15. The Department of Atomic Energy, in their reply, have stated that the Site Selection Committee (SSC), constituted by them has since completed work on exploring additional potential of existing sites and additional sites in the southern Electricity Region for locating new Nuclear Power Plants. The Committee is now in the process of investigating sites in the western, northern and eastern regions of the country. Thereafter, an overall review of all the regions is proposed to be

carried out. The site investigation process involves different agencies, where from data is requested to be collected. In addition, analysis on aspects such as seismicity requires to be done by experts. Based on the present status it is expected that the Site Selection Committee would complete the work by December, 2002.

16. The Committee had recommended that the Site Selection Committee (SSC) should expedite the process of investigating and selecting the new sites in the various regions of the country for setting up of Nuclear Power Projects. They have been informed by the Department that the said Committee has since completed its work pertaining to the Southern Electricity Region only and that the work relating to the remaining three zones is in progress which is expected to be completed by December, 2002. The Committee hope that SSC has completed its job relating to these zones as per schedule. They would like to be apprised of the details in this regard. Further, the details of the sites investigated/selected in the zones where the work has already been completed by SSC, may also be conveyed to the Committee at the earliest. Further, the Committee recommend that the Government should complete the process of investigation and selection of new sites in a time bound programme.

It has been brought to the notice of the Committee that a number of assurances are given to land oustees by the Department of Atomic Energy and State Governments at the time of acquisition of land for the purpose of setting up of Nuclear Power Stations. These assurances are seldom honoured. The land oustees run from pillar to post to have these assurances fulfilled. The Committee desire that all such assurances given to land losers should be fulfilled in letter and spirit.

(D) Evacuation facilities at Kaiga Atomic Power Station

Recommendation (SI. No. 10, Para No. 2.91)

17. The Committee were unhappy to note that adequate power evacuation outlets for evacuation of power from the Kaiga Atomic Power Station had not yet been put in place and that frequent grid failures/ disturbances had resulted in many shut downs in case of the two units of the project. Though the first 400 KV double circuit line in respect of Kaiga 1&2 Project had been completed by the Power Grid Corporation of India Limited, the second 400 KV line had been held up for about two years for want of clearance from the Ministry of Environment and Forests (MoEF). The Department had stated that NPCIL and PCCIL were in constant touch with the Department of Forests, Government of Karnataka and MoEF for expeditious clearance. However, the Committee had felt that NPCIL/ PCCIL had not taken timely action in the matter. They were of the opinion that the process of establishment of evacuation outlets should have been thought of ab-initio and completed much earlier. This demonstrated lack of co- ordination and

faulty planning process on the part of NPCIL and PCCIL. The Committee had recommended that the Department should intensify their efforts and settle the issue without any further delay. The Committee had also desired that on the lines of NTPC and PCCIL, NPCIL should enter with an indemnification Agreement with transmission utility, where under utility was compensated in the event of delay in the commissioning of the projects.

18. In their reply, the Department of atomic energy have stated that the subject matter of grid disturbances in the nuclear power units at Kaiga-1&2 has been followed-up actively with the regional grid authorities by the station to identify the reasons for such disturbances and take necessary and appropriate measures to prevent unit outages. At Kaiga-1&2, the problem relates specifically to the non-availability of adequate power evacuation lines for which installation of additional 400 KV line is being followed up by NPCIL with PGCIL. The Department of Forests, Environment and Ecology, Government of Karnataka have forwarded recommendation for forest clearance for 400 KV Kaiga-Narendra line to MoEF for approval by the Government of India. This is being followed up with MoEF and PGCIL.

Apart from this, certain logistic modifications have been incorporated at Kaiga-1&2 by NPCIL to prevent outages in case of grid disturbances. As a result of these modifications and also because of active follow-up with regional grid authorities, the number of outages due to grid disturbance at Kaiga have also come down during the last few months. The performance of the units during grid disturbances continues to be under observation in the light of the modification carried out. Interaction with State/Regional grid authorities will be continued.

19. **The Committee had expressed their displeasure over the fact that adequate outlets for evacuation of power from the Kaiga Atomic Power Station had not been put in place. They were unhappy to note that the second 400 KV Line had been held up for about two years for want of clearance from the Ministry of Environment and Forests (MoEF). In this connection, the Committee have been informed that the Department of Forests, Environment and Ecology, Government of Karnataka have forwarded the recommendation for forest clearance for the additional 400 KV Line to MoEF for approval and that the Nuclear Power Corporation of India Limited (NPCIL) is following up the matter with MoEF and the Power Grid Corporation of India Limited (PGCIL). The Committee would like the Department of Atomic Energy/NPCIL to vigorously pursue the matter and get the second 400 KV Line installed without any further delay. The Committee had also desired that NPCIL should enter an Indemnification Agreement with PGCIL on the lines of the National Thermal Power Corporation (NTPC) which would enable the Utility to get compensation in the event of delay in the commissioning of projects. However, the reply of DAE is silent on this vital point. They would like the Department to specify**

the reasons for ignoring this recommendation as also the steps taken/proposed to be taken by DAE / NPCIL to implement the same.

(E) Private Sector/joint Venture participation

Recommendation (SI. No. 13, Para No. 2.94)

20. The Committee were contented to note that NPCIL was exploring the possibilities of forming joint Venture with State Electricity Boards/ Public Sector Undertakings/ Reputed Corporates for setting up of Atomic Power Stations. The Committee had noted the proposal of the Department to set up Kaiga-3&4 (2x220 MW) and RAPP-5&6 (2x220 MW) Projects under joint Venture, subject to amendment in the Atomic Energy Act, 1962. In this context, the Committee. had pointed out that nuclear power generation was largely in private hands in the USA and U.K. The Committee welcomed the efforts of DAE to invite private sector. They had recommended that tie-up with them should be limited to only non-strategic components of the Nuclear Power Programme. It should be left to the discretion of DAE entirely to determine as to which component of the Nuclear Power Programme were strategic in nature. The Committee had also desired that DAE should take proactive role in enthusing reputed corporates/MNCs in the country and abroad for investing in the Indian Nuclear Power Programme. This would not only meet the obligation on the part of DAE to reduce the gestation period but also infuse much needed resources for the projects.

21. In their reply, the Department of Atomic Energy have stated that since all aspects of private sector/joint venture participation, including the aspects of safety and regulation of nuclear power and the amendments of the Atomic Energy Act are to be considered before a decision in this regard is taken, it will take some more time for a final decision in this regard.

22. The Committee had expressed satisfaction that the Nuclear Power Corporation of India Limited (NPCIL) was exploring the possibilities of forming Joint Venture with State Electricity Boards/ Public Sector Undertakings/reputed corporates for setting up of Atomic Power Stations. They had advised the Department of Atomic Energy to take a proactive role in enthusing reputed corporates/Multi National Companies for investing in the Indian Nuclear Power Programme. In this connection, the Department have informed that since all aspects of Private Sector/joint Venture participation, including the aspects of safety and regulation of nuclear power and the amendments of the Atomic Energy Act, 1962 are to be considered before taking a decision in this regard, it will take some more time to finalise the matter. The Committee desire that the said decision of the Department be conveyed to them within six months of the presentation of this Report.

(F) Fixation of Tariff for Nuclear Power Plants

Recommendation (SI. No. 14, Para No. 2.95)

23. The Committee had noted that unlike Central Power Generating Stations, the tariff in Atomic Power Stations was not within the purview of the Central Electricity Regulatory Commission (CERC). In terms of Clause 22 (b) of the Atomic Energy Act, the Central Government decided the tariff in consultation with the Central Electricity Authority (CEA). In this contest, the Committee had pointed out that while determining the tariff of Atomic Power Stations, the Central Government/ CEA should take into consideration the factors which encouraged competition, efficiency, economic use of resources, good performance, optimum investment and similar other parameters governing tariff fixation by CERC so that uniformity in tariff fixation between nuclear and non-nuclear power stations was achieved.

24. In their reply, the Department of Atomic Energy have stated that though the fixation of tariff for Nuclear Power Plants is not within the purview of CERC, DAE do take into consideration the relevant factors to the extent possible, for nuclear power in order that the tariff of nuclear power is competitive with tariff of power from other Central Power Generating Stations.

25. The Committee find that fixation of tariff for Nuclear Power Plants is not within the purview of the Central Electricity Regulatory Commission (CERC). The Department of Atomic Energy (DAE) determine such tariff after due consultation with the Central Electricity Authority (CEA). The Committee are of the opinion that while determining tariff, certain factors which encourage competition, efficiency, economic use of resources, good performance, optimum investment and similar other parameters should govern tariff fixation by CERC so that uniformity in tariff fixation between nuclear and non-nuclear power stations is achieved. In this context, the Committee would like to state that in their 31st Report (13th Lok Sabha, Para No. No. 13.23), they have recommended applicability of CERC over tariff for nuclear power so as to ensure a level playing field. The Committee would like to recommend that CERC should also fix tariff for nuclear power.

(G) R&M of Nuclear Power Stations

Recommendation (SI. No. 15, Para No. 2.96)

26. The Committee had noted that the designed life of the Nuclear Power Stations in the country was 40 years. The operating Nuclear Power Stations were subjected to monitoring for assessing the health of equipments and systems. In service inspection were also carried out regularly. Based on the results of such inspections, replacement, repair and renovation programmes were taken up as might be necessary. The Committee had pointed out that through R&M, the designed life of a power station could be increased and was the least cost option available with the Plant Authorities to increase production. RAPP-1&2 had

already undergone R&M indigenously and successfully. TAPS- 1&2 was in the process of undergoing R&M. The Committee had desired that taking into consideration the resource crunch in NPCIL, the Department should avail concessional finance available under the Accelerated Power Development Programme (APDP) being implemented by the Ministry of Power/ Power Finance Corporation for undertaking R&M.

27. The Department of Atomic Energy, in their reply, have stated that R&M works for RAPS-2 have been completed during the years 1996-98 and the unit has been performing satisfactorily since then R&M works are also continuing for TAPS-1&2. RAPS-1 has been shut down since April, 2002 for detailed in-service inspection and a decision regarding continuation of its operations will be taken after completion of inspection and assessment of the health of Components/Systems. R&M works for MAPS-2 have been started from January, 2002. Similar R&M works for MAPS-1 are planned to be started in the year 2003. Based on these R&M works, the enhancement of operating life is possible. The Department have also stated that there is a provision of R&M levy of 5 paise/kWh in the tariff of Nuclear Power. The expenditure on R&M works is proposed to be met from the funds available with NPCIL under the Head - R&M Levy and market borrowings. Since R&M works are to be taken progressively for different power stations and present funds are adequate, it is not proposed to approach Ministry of Power/Power Finance Corporation for the present. However, the recommendation of the Committee will be kept in view for availing finance at a later date if it is attractive for NPCIL.

28. The Committee are surprised to find that Nuclear Power Stations are collecting 5 paise / kwh from consumers as R&M levy. The levy so collected forms a component of nuclear power tariff. The Committee are of the view that when thermal and hydel power stations of Central PSUs and State agencies can meet the expenditure on R&M without imposing any cess and levy, there is no justification, whatsoever, for DAE to burden a consumer with such a tax. This amounts to unnecessary enrichment of DAE at the cost of poor consumers since very little R&M activity has been undertaken by the Department. The Committee, therefore, recommend that R&M levy be abolished. DAE can source cheap and concessional resources available with PFC and APRDP for undertaking R&M on the lines of other thermal and hydel units. The Committee would like to be apprised of the action taken by the Government in this regard.

(H) Outstanding dues of NPCIL

Recommendation (SI. No. 21, Para No. 3.26)

29. The Committee were concerned to note that NPCIL had been plagued by the problem of non-realisation of huge arrears from the various State Electricity Boards (SEBs)/Power Utilities. The total outstanding amount had accumulated to

a whopping Rs. 3387 crore as on 31st October, 2001. The Committee had recommended that NPCIL should negotiate with SEBs for settlement of such dues and persuade them to open a Letter of Credit to ensure regular payment. The company should also approach the Central Government to deduct the dues from the Central Plan devolution to the respective States. If all such efforts failed to yield the desired results and some SEBs continued to be persistent defaulters, NPCIL might divert power from such defaulting SEBs to those SEBs who were willing and able to pay. The Committee had also recommended that NPCIL should explore the possibilities and feasibility of supply of power to such bulk consumers as Railways, Municipalities, Industrial Estates, etc. who were willing to pay. This would enable better revenue realisation for NPCIL.

30. The Department of Atomic Energy, in their reply, have stated that NPCIL has been successful with the beneficiary SEBs to open the Letters of Credits for the energy drawn by them from the Nuclear Power Stations. In view of the recommendations of the Ahluwalia Committee, many of the SEBs would issue the bonds. Subsequent to the issue of these bonds, defaults in payments of current energy bills by SEBs would attract deductions from the Central Plan devolutions without any ceiling on deduction. NPCIL has been identifying persistent defaulters and has been recommending to MoP for diversion of power either in part or full from such defaulting SEBs to those SEBs who are willing and able to pay. NPCIL has also explored the possibility and feasibility of supply to Railways, a bulk consumer. The technical feasibility is being studied along with Railway authorities for supply of power directly to the Railways from NPCIL's stations in Western Region to enable better revenue realisation.

31. **The Committee had expressed concern over the non- realisation of huge arrears from the various State Electricity Boards (SEBS) due to the Nuclear Power Corporation of India Limited (NPCIL) over the years. They had asked NPCIL to negotiate with SEBs for settlement of such dues. In this connection, they have been informed that many of the SEBs would issue the requisite bonds in view of the Ahluwalia Committee recommendations. The Committee would like to know as to the number of SEBs which have since issued the said bonds as well as the action being taken by DAE in respect of the remaining SEBS. The Committee have also been informed that NPCIL has been identifying the persistent defaulters and recommending to the Ministry of Power for diversion of power from such defaulting SEBs to those who are willing and able to pay. In this connection, they would like to be apprised of the details of persistently defaulting SEBs identified so far and the details of cases referred to the Ministry of Power for diversion of power. It has further been informed to the Committee that NPCIL is exploring the technical feasibility of supply of electricity to Railways. In this connection, the Committee would like to state that when Railways can negotiate and enter MoU with Power PSUs like the National Thermal Power Corporation (NTPC) and National Hydro-electric Power Corporation (NHPC) to supply power to them, there is nothing which should prevent NPCIL from**

undertaking such an exercise. The Committee reiterate their earlier recommendation and desire that NPCIL should supply power to bulk consumers like Railways, Municipalities and Industrial Estates without any further delay. They can also consider trading of power through Power Trading Corporation.

(I) Dues of NPCIL to DAE

Recommendation (SI. No. 23, Para No. 3.28)

32. The Committee had noted the proposal of NPCIL that the arrears, including the current year's payables, by NPCIL to the Department of Atomic Energy on account of fuel and heavy water be adjusted against the outstanding dues payable by SEBs to NPCIL. For this purpose, the bonds to be issued by SEBs had to be earmarked under the custody of the Department of Atomic Energy. The Committee felt that it was a reasonable suggestion and should, therefore, be considered for implementation.

33. The Department of Atomic Energy in their reply, have stated that the matter is under consideration of DAE in line with the recommendations made by the Committee.

34. The Committee had recommended that the arrears of the Nuclear Power Corporation of India Limited (NPCIL) to the Department of Atomic Energy (DAE) on account of fuel and heavy water may be adjusted against the outstanding dues payable by the State Electricity Boards (SEBs) to NPCIL by earmarking the bonds of SEBs under the custody of DAE. In this connection, they have been informed that the matter is under consideration of DAE. The Committee await further details in this regard.

CHAPTER-II

RECOMMENDATION /OBSERVATION THAT HAVE BEEN ACCEPTED BY THE GOVERNMENT

Nuclear Power Programme

Recommendation (SI. No. 1, Para No. 2.82)

The Committee note that the saga of the Indian Nuclear Programme started with setting up of 2x200 MWe Boiling Water Reactor units at Tarapur. Now at the beginning of the 21st century, the capacity has reached 2,720 MWe in spite of Technology Control Regime. The somewhat tardy growth in the Nuclear Power Sector has also been attributed to time taken for development of indigenous technology so much so that the import contents in a PHWR Nuclear Power Station is only about 10%. Most of the equipment/components are now indigenously manufactured. The Import is restricted to proprietary components/special materials which are not available indigenously or imported based on economic consideration. Inputs like fuel, heavy water for the PHWR programme are also from the infrastructure developed within DAE units. The lack of financial resources too contributed in retarding the growth of nuclear power. The Committee find that during the 8th Plan period, it was proposed to achieve a nuclear power capacity of 10,000 MWe by the year 2000 AD. Accordingly, the outlay for the Sector was projected at Rs. 9,037 crore. Rs. 4,098 crore was proposed as budgetary support for the Plan period. However, due to resource crunch, only Rs. 761 crore was approved. For IEBR component, Rs. 15,125 crore was proposed as outlay only Rs. 3,500 crore was approved. This resulted in shelving of the Tarapur Atomic Power Station - 3&4 and other future projects of the 8th Plan, for which advance procurement action had been initiated and substantial financial commitments made. Kudankulani Project was also not taken up owing to resource crunch. Similarly, in the 9th Plan, as against the proposed outlay of Rs. 6640.90 crore, only Rs. 5187 crore was approved. Taking into consideration that the Nuclear Power Programme in the country has matured with the capacity factor being as high as 80%, technological innovations underway and associated Indian industrial base, both under public and private sectors, to support the programme widened, the Committee desire that in order to sustain the programme, total budgetary support is a prerequisite. The budgetary support also becomes inevitable due to limitation of NPCIL in mobilising external resources due to Technology Control Regime. The resources mobilised internally are not adequate to meet the requirement. The Committee, therefore, recommend that the Government should continue to extend adequate budgetary support for the programme. This will not only tempt DAE to achieve self-reliance but also trigger the growth in the associated engineering industry for developing additional supports and augmenting manufacturing capabilities of the existing suppliers. The Committee hope and trust that DAE will leave no stone unturned in ensuring faster growth of the Nuclear Power Sector.

Reply of the Government

The recommendations are noted. DAE will put in all efforts to achieve what has been recommended.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002.]

Recommendation (SI. No. 2, Para No. 2.83)

The Committee note that the growth in the Nuclear Power sector in the country has not been encouraging. Capacity addition through nuclear power began in the 1960s with setting up of 2x200 MWe (present capacity 2x160 MWe) plant at Tarapur. In the 1970s, there was an addition of only 220 MWe (present capacity 100 MWe) through Rajasthan Atomic Power station (RAPS-1). The eighties saw an addition of 660 MWe (present capacity 540 MWe) through RAPS-2 and Madras Atomic Power station (MAPS) - units 1&2. There was an addition of 880 MWe through Narora Atomic Power station (NAPS) - units 1&2. Recently, an addition of 880 MWe has been made through Kaiga-1&2 and RPAS-3&4. Thus, not a single decade has seen a capacity addition of 1000 MWe till date. The Committee feel that this trend has to be reversed by the Department through concerted efforts.

Reply of the Government

In the last decade (1991-2000), the actual capacity addition has been 1760 MWe through commencement of commercial operations for NAPS-1&2 (2x220 MWe), KAPS-1&2, (2x220 MWe) RAPS-3&4 (2x220 MWe) and Kaiga - 1 & 2 (2x220 MWe).

In this decade, progressively by December 2008, capacity addition of 3960 MWe is expected by completion of TAPP-3&4 (2x540 MWe), Kaiga-3&4 (2x220 MWe), RAPP-5&6 (2x220 MWe) and Kudankulam (2x1000 MWe) projects which are presently under construction.

More projects are also to be undertaken progressively with a view to reach capacity of 20000 MWe by the year 2020. X Plan proposals presently under the consideration, of Government of India are on the basis of a target of reaching nuclear ,air generation capacity of 9935 MWe by the end of 11th Plan.

DAE / NPCIL will put in all efforts as recommended by the Committee.

[DAE O.M. No.6/4(10)/2001-P,dated 28th June, 2002]

Recommendation (SI. No. 3, Para No. 2.84)

The Committee note that the present installed capacity of Nuclear Power Plants in the country is 2726 MWe which is less than 3 per cent of the total electricity generation. As per perspective plan drawn by DAE, the capacity of Nuclear Power Stations may go up to 9,935 MWe by the end of the 11th Plan i.e. 2012. The Nuclear Power Stations proposed for 10th and 11th Plans have been identified and included TAPP-3&4, Kaiga- 3,4,5&6, Kudankulam – 1 & 2, RAPP - 5,6,7&8. The Committee further note that the Department have a programme of achieving 20,000 MWe by the year 2020. This would approximately constitute 5 per cent of the total electricity generation in the country. The Committee have further noted that the financial outlay required for the entire programme would be to the tune of Rs. 1,11,941 crore with budgetary support of Rs. 33,507 crore from the Central Government. If the plan of DAE to attain 20,000 MWe materialises, the share of nuclear power in the total electricity generation would go up to around 7 per cent at that time. Thus, there may not be any significant increase in the share of nuclear power in the years to come. In this context, the Committee would like to point out that by the end of 5th Plan, the average capacity of Atomic Power Stations ranged between 160 and 220 MWe. Similar position may prevail by the end of 9th Plan. However, as per the perspective plan drawn by DAE, we may go in for capacity up to 540 MWe (TAPP - 3&4, RAPP - 7&8 and PFBR) and 1000 MWe (Kudankulam - 1&2, LWR-3) during 10th and 11th Plans. Though delayed, yet it is a healthy sign in our march towards attaining high degree of nuclear energy. But we may not be able to catch up with the countries like France, Lithuania, Belgium, Slovak, Republic, Ukraine, Bulgaria, Korea, Etc. who have 76,73,56,53,47,45 and 40 per cent share from nuclear energy respectively. Taking into consideration the projected generation by non- nuclear projects by the end of 2020, DAE should redouble their efforts to achieve their targeted capacity addition. The Committee, therefore, would like to recommend that the Department should also consider the uprating of existing Nuclear Power Stations as well as go in for super and more mega Atomic projects in future. This will not only result in increasing the much needed share of atomic power but also conferring mega status to Atomic Power Stations, thereby resulting in cheaper power.

Reply of the Government

The capacity addition envisaged in 20000 MWe by the year 2020 programme of DAE is through 2201500 (uprated to 540) MWe PHWRs, 500 MWe PFBR/FBRs, 300 MWe AHWR and 1000 MWe LWRs. The capacity of 500 MWe PHWR, first of its kind and presently under construction at Tarapur, Maharashtra has been uprated to 540 MWe. This is being further enhanced to about 680 MWe with some changes in design, for setting up future PHWRs. In addition, with a view to take advantage of existing infrastructure, policy of utilisation of the full power potential at a site is being followed.

Coolant channel Replacement and other Plant upgradation works have been completed for RAPS-2 with total indigenous effort and this unit has been

operating satisfactorily since completion of these works in July 1998. Life extension and upgradation actions have also been undertaken at TAPS-1 & 2. These units are performing satisfactorily after 32 years since commencement of commercial operations in the year 1969. Replacement of coolant channels at MAPS-2 has been commenced from January 2002.

For regular plant life extension and upgradation, actions are being undertaken at all nuclear power stations to ensure continuation of operations with enhanced safety.

Government has also granted mega-project concessions to all nuclear power projects of capacity 440 MWe or more.

[DAE O.M. No. 6/4(10)/ 2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 8 of Chapter I of the Report)

Recommendation (SI. No. 4, Para No. 2.85)

The Committee note that there are 6 operating Nuclear Power Stations with 14 units in the country with a net capacity of 2503 MWe.

Thus, the average net capacity comes out to about 179 MWe. The average net nuclear capacity of countries like France, Lithuania, Belgium etc. is over 1000 MWe. Even countries like Brazil, China and Pakistan, whose nuclear power share in the total electricity generation is less than that of India, are having an average net nuclear capacity of 972 MWe, 722 MWe and 212 MWe respectively. The Committee therefore, recommend that the Department of Atomic Energy should endeavour to increase the average net nuclear capacity -by concentrating on higher capacity Nuclear Power Projects.

Reply of the Government

The relative small net nuclear capacity per unit has to be considered in the context of the path of self reliance and indigenisation chosen by the Department from its inception, the options available in the beginning, the need to optimally utilise the limited resources for uranium in the country and three stage programme to ultimately exploit the vast thorium resources in the country. The smaller reactors of about 200/ 220 MWe size selected, during early part of the programme suited very well to the available electricity grids in the country at that time. These have performed quite satisfactorily and will continue to be a part of the nuclear power capacity for years to come through R&M works which are periodically undertaken for all nuclear power stations. These reactor units will continue to keep the average net capacity per unit to about current levels. However, action has

already been taken for construction of larger unit size reactors. With completion of 8 units [TAPP-3&4 (2x540), Kaiga-3&4 (2x220 MWe), Kudankulam (2x1000 MWe) and RAPP-5&6 (2x220 MWe)] progressively by the year 2008, the average net capacity per unit will increase to about 300 MWe. The long- term programme envisages capacity addition through larger size units namely 680 MWe PHWRs, 1000 MWe Light Water Reactors and 500 MWe Fast Breeder Reactors and the average capacity per unit will rise progressively.

[DAE O.M. No. 6/4(10)/ 2001-P dated 28th June, 2002]

Recommendation (SI. No. 5, Para No. 2.86)

The Committee find that taking into consideration the limited resources of uranium and vast resources of thorium, the Department of Atomic Energy have embarked upon a three-stage nuclear power programme in the country. In the first stage, Pressurised Heavy Water Reactors are to be built up using uranium as feed stock and heavy water as moderator and coolant. Thorium-uranium fired Fast Breeder Reactors are proposed to be taken up in the second stage. The third and the ultimate stage would use thorium fired Light Water Reactors. The Committee have also noted that the country is on the threshold of entering into the second stage and accordingly, a 40 MW FBTR has been set up at Indira Gandhi Centre for Atomic Research (IGCAR). The FBTR, an experimental Fast Reactor, has given experience in design, engineering, construction, commissioning and operation of Fast Reactors. It is also proposed to design 500 MW Prototype Fast Breeder Reactor (PFBR). Taking into consideration that PFBR will be precursor to Fast Breeder Reactor Technology, the Committee recommend that total budgetary support should be extended to this venture. The Committee are of the view that such hi-technology be promoted and patronised and constraints of funds should not come in way of implementation of second and third stages of Nuclear Power Programme. The Committee also desire that the Department of Atomic Energy should make an assessment of the fuel, heavy water and other inputs needed for different stages of Nuclear Power Programme and fine tune their plans and policies accordingly.

Reply of the Government

The Committee's Recommendations are noted. DAE will put in all efforts to secure adequate budgetary Support for, PFBR. DAE is periodically reviewing the different linkages required for the nuclear power programme as recommended by the Committee. Based on the allocation of funds and other linkages, plan and policies will be fine- tuned from time to time.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 6, Para No. 2.87)

The Committee note that the Central Government has accorded financial sanction for construction of Advanced Light Water reactors Project (2x1000 MWe) at Kudankulam. The project has also got clearance from The Atomic Energy Regulatory Board (AERB). The Committee have been informed that Russia has agreed to tie up with India in the construction of the project. While Russian side will carry out- the entire design of the plant besides supplying material and equipments, Indian side will be responsible for design and development of infrastructure, construction, erection, commissioning, operation and maintenance of the plant. The Committee feel that it is the track record of the Department that has enabled them to get the co-operation from Russian side. If the Department / NPCIL had not been on a strong footing, perhaps the Russian side would not have come forward to offer assistance. The Committee hope that the project would be completed expeditiously.

Reply of the Government

Following the financial sanction for the project accorded by Government of India in November 2001, an MoU and a General Framework Agreement were signed between Indian and Russian sides for further implementation of the project, during the visit of the Indian Prime Minister to Russian Federation in November 2001.

The Contract, for elaboration of the Working Documentation, equipment 'with long manufacturing period and first priority items' have been signed with M/s ATOMSTROYEXPORT.

On the project construction front. excavation works for Unit-1 area and the confirmatory tests have been completed. The Work order for the construction of the Reactor buildings, Reactor auxiliary buildings and Main Control Room has been issued in Jan 2002. The first pour of concrete has been already achieved in March 2002. The construction of first phase of infrastructure buildings and facilities at Kudankulam site as well as first phase of township has been completed.

All activities are on schedule. The scheduled date of commercial operation of the first unit in December 2007, second unit in December 2008 will be met.

[DAE O.M. No. 6/4(10)/ 2001-P dated 28th June, 2002]

Recommendation (SI. No. 7, Para No. 2.88)

The Committee appreciate that the Government have taken a number of measures such as formulation of large size supply-cum- erection package, parallel working of civil, mechanical and electrical works, upgradation of construction technology, etc. for reducing the gestation period of Nuclear Power Projects in the country. Their efforts seem to have borne fruit considering the fact that Kaiga - 1

&2 and RAPP- 3&4 Projects have been effectively completed in six and a half years instead of the earlier trend of eight years. The Committee are further pleased to note the resolve of the Department to complete the TAPP - 3&4 and Kaiga - 3&4 Projects ahead of schedule and with a reduced cost as well. It will be a great achievement on the part of the Department if that can be done and would act as a model for other Ministries/ Departments of the Government. It has been brought to the notice of the Committee that as a result of shortening of gestation periods of Kaiga - 3&4/RAPP - 3&4 Projects, there has been a saving of more than Rs. 1000 crore. The Committee recommend that the savings effected should be utilised for the execution of their future projects such as Kaiga - 5&6 and RAPS - 5&6.

Reply of the Government

With an objective to utilise entire savings (on account of reduced estimated cost and change of Debt: Equity ratio from 1:1 to 2:1) in Kaiga- 3&4 project, a proposal to set up two additional units of 220 MWe each (RAPP-5&6) at Rawatbhata, Rajasthan has been accorded project financial sanction and the works have commenced. The estimated completion cost of RAPP-5&6 is Rs. 3072 crore comprising of Rs. 2700 crore as base cost and Rs. 372 crore as IDC with scheduled commencement of commercial operations of RAPP-5 in August 2007 and RAPP-6 in February 08. The first pour of reactor concrete is planned for August 2002.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 12, Para No. 2.93)

The Committee have noted that advance action was taken by DAE duly approved by the Government of India to procure long delivery and critical equipment and materials required for TAPP - 3&4 and other Atomic Power Projects. However, due to severe resource crunch during 8th Plan, where under as against an outlay of Rs. 14,400 crore, only Rs. 4119 crore was approved resulting in the deferment of commissioning of the units of TAPP - 3&4 to 10th Plan. The Committee are of the firm view that this injudicious action the part of the Government cost NPCIL heavily in terms of burden on account of inventory expenditure and locking-up of scarce resources in unproductive ventures. The Committee cannot but deplore the action of the Central Government which led time and cost overruns of Atomic Power Projects. The Committee recommend that the Government should take corrective measures and ensure that such incidents do not recur in future. The Committee would like to be apprised of the corrective measures taken in this regard.

Reply of the Government

The Committees observations are noted. During the 9th plan, higher (Rs.3711 crore as compared to Rs. 1360 crore for the 8th Plan) budgetary support to the nuclear power sector was provided -by the Government. Targeted capacity addition of 880 MWe, by completion of RAPP 3&4 (2x220 MWe), and kaiga 1&2 (2x220 MWe), has been achieved on receipt of financial sanction, works on TAPP 3&4 (2x540 MWe), kaiga 3&4 (2x220 MWe), Kudankulam 1&2 (2x1000 MWe) and RAPP 5&6 (2x220 MWe) have also commenced.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (51. No. 14, Para No. 2.95)

The Committee have noted that unlike Central Power Generating Stations, the tariff in Atomic Power Stations is not within the purview of the Central Electricity Regulatory Commission (CERC). In terms of clause 22 (b) of the Atomic Energy Act, the Central Government decides the tariff in consultation with the Central Electricity Authority (CEA). In this context, the Committee would like to point out that while determining the tariff of Atomic Power Stations, the Central Government/CEA should take into consideration the factors which encourage competition, efficiency, economic use of resources, good performance, optimum investment and similar' other parameters governing tariff fixation by CERC so that uniformity in tariff fixation between nuclear and non-nuclear power stations, is achieved. The Committee would like to be apprised of the action taken by the Government in this regard within 3 months of the presentation of this Report.

Reply of the Government

Though the fixation of tariff for nuclear power plant is not. within the purview of CERC, DAE do take into consideration the relevant factors to the extent possible, for nuclear power in order that the tariff of nuclear power is competitive with tariff of power from other Central Power Generating Stations.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 25 of Chapter I of the Report)

Recommendation (SI. No. 15, Para No. 2.96)

The Committee note that the design life of the Nuclear Power Stations in the country is 40 years. The operating Nuclear Power Stations are subjected to monitoring for assessing the health of equipment and systems. In service inspections are also carried out regularly. Based on the results of such inspections, replacement, repair and renovation programmes are taken up as may be necessary. The Committee would like to point out that through R&M, the designed life of a power station can be increased and is the least cost option available with the Plant Authorities to increase production. RAPP-1&2 has already gone through R&M indigenously and successfully. TAPS-1&2 is in the process of undergoing R&M. The Committee desire that taking into consideration the resource crunch in NPCIL, the Department should avail concessional finance available under the Accelerated Power Development Programme (APDP) being implemented by the Ministry of Power/ Power Finance Corporation for undertaking R&M. the Committee would like to be apprised of the outcome thereof.

Reply of the Government

R&M works for RAPS-2 have been completed during the years 1996-98 and the unit has been performing satisfactorily since then. R&M works are also continuing for TAPS-1&2. RAPS-1 has been shut down since April 2002 for detailed in-service inspection and a decision regarding continuation of its operations will be taken after completion of inspection and assessment of the health of Components/Systems. R&M works for MAPS-2 have been started from January 2002. Similar R&M works for MAPS-1 are planned to be started in the year 2003. Based on these R&M works, the enhancement of operating life is possible.

There is a provision of R&M levy of 5 Paise / kWh in the tariff of Nuclear Power. The expenditure on R&M works is proposed to be met from the funds available with NPCIL under the Head - R&M Levy and market borrowings. Since R&M works are to be taken progressively for different power stations and present funds are adequate, it is not proposed to approach Ministry of Power/Power Finance Corporation for the present. However, the recommendation of the Committee will be kept in view for availing finance at a later date it is attractive for NPCIL.

[DAE O.M. No. 6/4(10)12001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 28 of Chapter I of the Report)

Recommendation (SI. No. 16, Para No. 2.97)

The Committee have noted that to attract the best talent amongst the young scientists and engineers to the Nuclear Power Programme, Up to four increments are sanctioned to the trainees who passed out from the Bhabha Atomic Research Centre Training School. Moreover, to improve knowledge and skill, a large number of training programmes for different levels are conducted periodically in the country and abroad. It has been brought to the notice of the Committee that a large number of scientists have deserted the organisation for want of incentives, proper facilities and benefit. The Committee strongly recommend that there is an imperative need to offer suitable incentives like flexible working hours, mobility of scientists, deputation abroad for further study/research, housing, creche facilities, etc. The Committee are of the firm opinion that human resources development should form a thrust area of any organisation. Accordingly, the Committee recommend that the Government should review the incentives/ remunerations paid to young scientists and engineers lest the Nuclear Power Programme is derailed for want of adequate technically qualified manpower.

Reply of the Government

Human Resource Development has been given due consideration from the very beginning of the nuclear Programme in the country. The requirement of qualified manpower for the Programme are finalised years ahead of the actual requirement so as to ensure that the programme does not suffer on account of non availability of technically qualified manpower. The merit promotion scheme of the Department of Atomic Energy, performance linked incentives in the different stations of NPCIL, awards and prizes for excellent performance, job satisfaction and other welfare measures for the employees and their families are some of measures adopted by DAE towards retaining the trained manpower. In addition, the remuneration, promotions, incentives and other facilities are periodically reviewed by the Government.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (51. No. 17, Para No. 3.22)

The Committee are happy to observe that the physical performance of the Nuclear Power Corporation of India Limited (NPCIL) has been quite satisfactory during the 9th Plan period. The anticipated generation during the 9th Plan is likely to be 29 per cent higher than the target set in this regard. Besides, the annual targets set for each year of the Plan during the Annual Plan formulations

have also been exceeded. Moreover, the company registered an average annual capacity factor of 77 per cent during the first 4 years of the Plan. This is no doubt a very encouraging sign for which NPCIL deserves to be congratulated. At the same time, the Committee note that the projected generation and capacity factor of almost all the operating stations during 2001-02 are less than the actual generation and capacity factor during 2000-01. The committee would like to know reasons for the reversal of the positive trend during the terminal year of the 9th Plan.

Reply of the Government

The trend in improvement of generation has in fact continued for all the five years of the IX Plan. The estimated generation and capacity factor for the year 2001-02, given in NPCIL's submission in September 2001, were the projected figures (consisting of the actual generation upto August 2001 and generation targets from September 2001 to March 2002). However, the actual figures for 2001-02 show progressive, improvement. This is clearly seen in the Table below which gives the targets, actual generation and capacity factors for the full year 2001-02. The generation in million units and the capacity factors for the year 2000-01 are also included for ready reference.

Year	2000-01			2001-02	
STATION	ACTUALS		Target Generation	ACTUALS	
	Generation	Capacity Factor %		Generation	Capacity Factor %
TAPS-1&2	2408	86	1870	2502	89
RAPS-2	1600	91	1208	1498	86
MAPS-1&2	2515	84	1850	2245	85
NAPS-1&2	3044	79	2700	3335	87
KAPS-1&2	3495	91	2700	3571	93
KGS-1&2	1900	70	2680	2999	78
RAPS-3&4	1735	75	2510	3049	79
TOTAL	16696	82	15518	19199	85

Resulting out of progressive and consistent improvement in the performance of operating stations, the generation of about 69147 Million Units, during the 9th Plan, has been about 33 % higher than the target (51854 MUs) set for the Plan. The generation at 69147 MUs for the period 1.4.1997 to 31.3.2002 (IX Plan) has exceeded, by 21 %, the target (56965 MUs) set for the same period on the basis of Annual Plans. The average annual capacity factor of NPCIL units for last five years have shown a progressively increasing trend from 71 % (year 1997-98) to 85 % (2001-02).

Thus the positive trend has been ensured for all the five years of the 9th Plan.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 18, Para No. 3.23)

The Committee are constrained to note that out of the approved 9th Plan outlay of Rs. 5187.43 crore in respect of NPCIL, an amount of Rs. 4764.50 crore only is expected to be utilised by March 2002. The actual expenditure has fallen short of the approved outlay during each of the first four years of the Plan. Though the budgetary support provided to NPCIL during this period has been utilised, the company has registered shortfalls in the utilisation of the Internal and Extra Budgetary Resources (IEBR). The Committee have, on numerous occasions in the past, advised the Department to set realistic and achievable IEER targets for its Public Sector Undertakings. They reiterate the same so that there is no setback to the Plan activities of the Department.

Reply of the Government

The actual utilization of the 9th Plan outlay is Rs. 4702.59 crore as against the approved outlay of Rs. 5187.43 crore. The shortfall in utilization was mainly due to delay in commencement of construction activities of TAPP 3&4, Kaiga 3&4 and Kudankulam (KK) projects. While entire budgetary support has been utilized, the utilisation of IEER was lower to the extent actual expenditure fell short of the targeted budget. However, the marginal (9%) under utilisation of IX Plan Outlay has not affected the project schedules of the on going schemes of the X Plan and the committed completion dates are likely to be met. Keeping in view the advice of the committee to set the budget targets on a realistic level, the target set for the year 2001-02 at BE stage was Rs. 1173.21 crore taking into account the commitments entered and progress of the ongoing works against ongoing projects. However, considering the all round progress of ongoing projects and receipt of project financial sanctions for KK and RAPP 5&6 projects, higher target was set in RE 2001-02 stage at Rs. 1365 crore. The actual expenditure against this RE target has been Rs. 1350.93 crore. The BE target of Rs. 149.00 crore of IEER for the year 2001-02 was revised to Rs. 482.00 crore at the RE stage and the actual utilisation has been Rs. 467.93 crore.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 19, Para No. 3.24)

The Committee are, however, pleased to note that the overall financial performance of NPCIL has been very encouraging during the 9th Plan period. The company earned a profit before tax amounting to Rs. 223.07 crore, Rs. 1122.60 crore and Rs. 520.00 crore during 1999-2000, 2000-01 and 2001-02 (upto September, 2001) respectively. This speaks volumes of the efficacy of the company. The Committee are further pleased to note that NPCIL has been able to

mobilise Rs. 330 crore by issuing bonds through private placement during December 2000 and a further amount of Rs. 329.40 crore during March 2001. More pleasing is the fact that CRISIL has given the triple 'A' rating to the bonds issued by NPCIL. This is indicative of credit worthiness and strong bottom lines of the company. The Committee hope that the amounts raised by NPCIL through issue of bonds would give a boost to the Nuclear Power Programme being undertaken by the company.

Reply of the Government

The Committee's observations are noted. Market borrowings consistent with the programme requirements will be raised.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (Sl. No. 20, Para No. 3.25)

The Committee have been informed that NPCIL is presently having an operating base of 2720 MWe which is not sizeable to generate adequate internal surpluses to support its Nuclear Power Programme. The Committee have further been informed that the provision of adequate budgetary support would be essential until a nuclear power capacity of 10,000 MWe is achieved. The Department aim to reach this capacity towards the end of the 11th Plan. The Committee, therefore, recommend that adequate budgetary support be provided to the Department until the end of the 11th Plan period.

Reply of the Government

The recommendations of the committee have been taken into consideration while framing the proposals for 10th Plan. These will also be kept in view during the 11th Plan finalisation and the required budgetary support will be sought.

[DAE O.M. No. 6/4(10)/ 2001-P dated 28th June, 2002]

Recommendation (Sl. No. 22, Para No. 3.27)

The Committee find that M.S. Ahluwalia Committee has suggested some measures for the recovery of arrears of PSUs. These suggestions, which have by and large been accepted by the Central and State Governments, inter-alia, provide that the principal outstanding and 40 per cent of the delayed payment charges would be settled through issue of bonds by the respective State Government. These bonds shall have a lock-in period of 5 years and are redeemable at the rate of 10 per cent beginning with the sixth year from the date of issue. Thus, the principal amount and 40 per cent of the interest can be recovered in a period of 15 years from the date of issue of bond. The acceptance of Ahluwalia Committee Report may result in some loss to NPCIL since 60% delayed payment charges payable by SEBs would be waived off. Taking into consideration the precarious

financial health of SEBs, the Committee is inclined to accept the contention of the Ahluwalia Committee and advise NPCIL to vigorously pursue with the SEBs for the expeditious issue of such bonds.

Reply of the Government

As recommended by the Committee, NPCIL has been pursuing with the SEBs for reconciliation of outstanding dues upto 30.9.2001 and with the respective State Governments to sign the tripartite agreements to facilitate issue of bonds as envisaged in the Ahluwalia Committee accepted recommendations accepted by the Government of India.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 24, Para No. 3.29)

The Committee note that the recovery of dues from SEBs through CPA route is presently restricted to 15 per cent of the value of the total Plan assistance to the States. The Department of Atomic Energy have viewed that this recovery is meagre and suggested that the ceiling of 15 per cent should be removed so that the entire outstanding amount is liquidated in three to four yearly instalments. The Committee do not concur with the view of the Department as they feel that removal/ increase in the ceiling of 15% would tell upon the already precarious financial health of the State Governments leading to avoidable hardships for them.

Reply of the Government

Since all the States will be signing the tripartite agreement in terms of Ahluwalia Committee recommendations, the recovery of past dues will be done through tax free bonds and for future dues provisions of the tripartite agreement are likely to ensure timely payments to NPCIL.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

CHAPTER III

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

-NIL -

CHAPTER IV

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

-NIL-

CHAPTER V

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

Recommendation (SI. No. 8, Para No. 2.89)

The Committee note that the Nuclear Power Corporation of India Limited (NPCIL) is obtaining part financial sanction for pre project activities of specific projects prior to obtaining financial sanctions. This would no doubt go along way in reducing the gestation periods of Nuclear Power Projects to quite some extent. The Committee recommends that the Ministry of Finance/Planning Commission should consider the feasibility of setting up a separate Corpus fund for pre-project activities relating to the Nuclear Power Projects in the Country.

Reply of the Department of Atomic Energy

The observations are noted. DAE will also pursue and take necessary action in this matter to meet the intent of the Recommendation to carry out pre project activities and financing the same.

[DAE O.M. No. 6/4(10)l 2001-P dated 28th June, 2002]

Reply of the Ministry of Finance

“A separate Corpus Fund for pre-project activities relating to Nuclear-Power Projects in the country would have to be created and sustained out of the General revenues through annual budgetary allocations within the Plan outlay fixed for the Department. Earmarking of the plan outlay for the Fund would result in blocking of scarce resources in the form of balances in the Fund. The Department would lose the flexibility to reallocate funds if so required because of change in priorities, from pre-project activities to other Plan activities, which may fall outside the purview of the Fund. Also, the principle behind such a fund may have to be extended to Plan Projects in other sectors. A Multiplicity of such funds in different sectors would undermine the entire Budgetary system of allocating scarce resources among competing priorities so as to ensure their optimum utilization in the development process. The balance of advantage, therefore, lies in continuing with the existing system of annual budgetary allocation to meet the expenditure on specific pre-project activities of individual projects.

Notwithstanding the above, Ministry of Finance would endeavour to ensure that funds are made available from time to time for pre-project activities of Nuclear Power Projects in accordance with the priorities fixed by the Department of Atomic Energy”

[M/o Finance O.M. No. 53/3/2002-IA dated 11th December, 2002]

Reply of the Planning Commission

Planning Commission agrees to the suggestion of the Standing Committee to create a Corpus Fund for taking up essential pre-project activities prior to the sanction of a nuclear power plant subject to the condition that such activities could be carried out for only those projects which are provided for in the Plan outlay for the Department of Atomic Energy and that the Corpus Fund may be created out of the Plan outlay fixed for the Department.

[Planning Commission O.M. No. 1-22/4/1/2002-P&E dated 27th June, 2002]

Comments of the Committee

(Please see para 13 of Chapter I of the Report)

Recommendation (SI. No. 9, Para No. 2.90)

The Committee have observed that the future plan of the Department of Atomic Energy for capacity addition reveals that new units have been proposed in the existing or under construction atomic Power stations, except Kudankulam. The Committee have further observed that a Site Selection Committee has been constituted which in the process of investigating new sites. The Committee desire that the Government should expedite the process of investigation and select new sites.

Reply of the Government

The Site Selection Committee (SSC), constituted by Department of Atomic Energy, has since completed work on exploring additional potential of existing sites and additional sites in the Southern Region for locating new Nuclear Power Plants. The Committee is now in the process of investigating sites in the western, northern and eastern regions of the country. Thereafter an overall review of all the regions is proposed to be carried out.

The site investigation process involves different agencies, where from data is requested to be collected. In addition, analysis on aspects

such as seismicity requires to be done by experts. Based on the present status it is expected that the Site Selection Committee would complete the work by December 2002.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 16 of Chapter I of the Report)

Recommendation (Sl. No. 10, Para No. 2.91)

The Committee are unhappy to note that adequate power evacuation outlets for evacuation of power from the Kaiga Atomic Power Station have not yet been put in place and that frequent grid failures/ disturbances have resulted in many shut downs in case of the two units of the project. Though the first 400 KV double circuit line in respect of Kaiga-1&2 Project has been completed by the Power Grid Corporation of India Limited, the second 400 KV line has been held up for about two years for want of clearance from the Ministry of Environment and Forests (MoEF). The Department have stated that NPCIL and PGCIL are in constant touch with the Department of Forests, Government of Karnataka and MOEF for expeditious clearance. However, the Committee feel that NPCIL/PGCIL have not taken timely action in the matter. They are of the opinion that the process of establishment of evacuation outlets should have been thought of ab-initio and completed much earlier. This demonstrates lack of co-ordination and faulty planning process on the part of NPCIL and PGCIL. The Committee recommend that the Department should intensify their efforts and settle the issue without any further delay. The Committee also desire that on the lines of NTPC and PGCIL, NPCIL should enter with an Indemnification Agreement with transmission utility, whereunder utility is compensated in the event of delay in the commissioning of the projects. The Department should vigorously pursue the matter of frequent grid disturbances with regional grid authorities as unstable grid conditions would not only damage critical equipment but also adversely affect the Plant Load Factor (PLF) of the project.

Reply of the Government

The subject matter of grid disturbances in the nuclear power units at Kaiga-1&2 has been followed-up actively with the regional grid authorities by the station, to identify the reasons for such disturbances and take necessary and appropriate measures to prevent unit outages.

At Kaiga-1&2 the problem relates specifically to the non- availability of adequate power evacuation lines for which installation of additional 400 K V line is being followed up by NPCIL with PGCIL. The Department of Forests, Environment and Ecology, Government of Karnataka have forwarded

recommendation for forest clearance for 400 KV Kaiga- Narendra line to MoEF for approval by the Government of India. This is being followed up with MoEF and PGCIL.

Apart from this, certain logic modifications have been incorporated at Kaiga- 1&2 by NPCIL to prevent outages in case of grid disturbances. As a result of these modifications and also because of active follow-up with regional grid authorities the number of outages due to grid disturbance at Kaiga have also come down during the last few months. The performance of the units during grid disturbances continues to be under observation in light of the modification carried out. Interaction with State/ Regional grid authorities will be continued.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 19 of Chapter I of the Report)

Recommendation (Sl. No. 11, Para No. 2.92)

The Committee note that the work relating to acquisition of land for the Kudankulam and Kaiga-3&4 Projects has already been completed, while land for establishing the exclusion zone for TAPP-3&4 Project is yet to be acquired. The Committee have been informed that the Government of Maharashtra has already issued the Notification and declared most of the awards in connection with acquisition of land for TAPP-3&4 exclusion zone development. They have also been informed that negotiations between the State Government and the project affected persons are on in regard to rehabilitation package and compensation for land. The Committee desire that the Department should take an active interest in the matter and impress upon the Government of Maharashtra to complete the necessary formalities expeditiously. As regards undertaking of welfare measures in the surrounding areas of Nuclear Power Plants, the Committee have been informed that NPCIL actively participate in a variety of welfare activities in the areas of education, health care, repair of roads, furniture for schools etc. and that such facilities have been extended at all the Nuclear Power Project sites in the country. The Committee appreciate this policy of the Government. The Committee find that taking into consideration that Atomic Power Stations are located in secluded, farflung and remote areas, the welfare schemes become all the more important. The Committee recommend that the Department should make a periodic review of the welfare/ community development measures undertaken by them in the various Nuclear Power Plants in the country, especially in the recently completed Kaiga Plant.

Reply of the Government

DAE / NPCIL have taken active interest and pursued the matter of land acquisition and rehabilitation of the project affected persons for TAPP-3&4 with the State Government both at Headquarters and District levels. The land acquisition and implementation of the rehabilitation package for TAPP-3&4 is responsibility of the State Government. NPCIL has to provide necessary funds. The status of land acquisition and rehabilitation of the project affected persons is as follows:

1. For acquisition/transfer of 206 Ha of land, out of 11 awards/proposals, 10 awards have been issued. The remaining awards i.e. Gaothan land of Akkarpatti village admeasuring 4.8 Ha is yet to be declared.
2. Physical possession of 119 Ha of land has already been given to NPCIL and boundary wall construction is in progress.
3. The land for rehabilitation of villagers has been identified by State Government and rehabilitation package is being prepare by State Govt. for which interactive meetings are in progress.
4. State Government is being requested to finalise the rehabilitation package at the earliest and the matter is being pursued.

The Company will continue its policy on welfare measures in the surrounding areas around nuclear power plants and also review it periodically as recommended by the Committee.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Recommendation (SI. No. 13, Para No. 2.94)

The Committee are contented to note that NPCIL is exploring the possibilities of forming joint Venture with State Electricity Boards/ Public Sector Undertakings/Reputed Corporates for setting up of Atomic Power Stations. The Committee have noted the proposal of the Department to set up Kaiga-3&4 (2x220 MW) and RAPP-5&6 (2x220 MW) Projects under joint Venture, subject to amendment in the Atomic

Power Act, 1962. In this context, the Committee would like to point out that nuclear power generation is largely in private hands in the USA and UK. The Committee welcome the efforts of DAE to invite private sector. They would like to recommend that tie-up with them should be limited to only non-strategic components of the Nuclear Power Programme. It should be left to the discretion of DAE entirely to determine as to which component of the Nuclear Power Programme are strategic in nature. The Committee also desire that DAE should

take proactive role in enthrusting reputed corporates/MNCs in the country and abroad for investing in the Indian Nuclear Power Programme. This will not only meet the obligation on the part of DAE to reduce the gestation period but also infuse much needed resources for the projects.

Reply of the Government

Since all aspects of private sector/joint venture participation, including the aspects of safety and regulation of nuclear power and the amendments of the Atomic Energy Act are to be considered before a decision in this regard is taken, it will take some more time for a final decision in this regard. The Committee's observations are noted.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 22 of Chapter I of the Report)

Recommendation (51. No. 21, Para No. 3.26)

The Committee are concerned to note that NPCIL has been plagued by the problem of non-realisation of huge arrears from the various State Electricity Boards (SEBs)/Power Utilities. The Total outstanding amount has accumulated to a whopping Rs. 3387 crore as on 31st October 2001. This will not only have a deleterious impact on the liquidity position of the company but also adversely affect the upcoming power stations. The Committee recommend that NPCIL should negotiate with SEBs for settlement of such dues and persuade them to open a Letter of Credit to ensure regular payment. The company should also approach the Central Government to deduct the dues from the Central Plan devolutions to the respective States. If all such efforts fail to yield the desired results and some SEBs continue to be persistent defaulters, NPCIL may divert power from such defaulting SEBs to those SEBs who are willing and able to pay. The Committee also recommend that NPCIL should explore the possibilities and feasibility of supply of power to such bulk consumers as Railways, Municipalities, Industrial Estates, etc. who are willing to pay. This would enable better revenue realisation for NPCIL.

Reply of the Government

NPCIL has been successful with the beneficiary SEBs to open the letters of credits for the energy drawn by them from the nuclear power stations. In view of the recommendations of the Ahluwalia Committee, many of the SEBs would issue the bonds. Subsequent to the issue of these bonds, defaults in payments of current energy bills by SEBs would attract deductions from the Central Plan devolutions without any ceiling on deduction. NPCIL has been identifying

persistent defaulters and has been recommending to MoP for diversion of power either in part or full from such defaulting SEBs to those SEBs who are willing and able to pay. NPCIL has also explored the possibility and feasibility of supply to railways, a bulk consumer. The technical feasibility is being studied along with railway authorities for supply of power directly to the railways from NPCIL's stations in Western Region to enable better revenue realization.

[DAE O.M. No. 6/4(10)/ 2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 31 of Chapter I of the Report)

Recommendation (Sl. No. 23, Para No. 3.28)

The Committee have noted the proposal of NPCIL that the arrears, including the current year's payables, by NPCIL to the Department of Atomic Energy on account of fuel and heavy water may be adjusted against the outstanding dues payable by SEBs to NPCIL. For this purpose, the bonds to be issued by SEBs have to be earmarked under the custody of the Department of Atomic Energy. The Committee feel that it is a reasonable suggestion and should, therefore, be considered for implementation.

Reply of the Government

The matter is under consideration of DAE in line with the recommendations made by the Committee.

[DAE O.M. No. 6/4(10)/2001-P dated 28th June, 2002]

Comments of the Committee

(Please see para 34 of Chapter I of the Report)

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

SONTOSH MOHAN DEV
Chairman
Standing Committee on Energy

ANNEXURE I

MINUTES OF THE FHZS'ISFI'NNG OF THE SUB-COMMFITEE 'F' ON ACTION TAKEN REPORT OF THE STANDING COMMITTEE ON ENERGY (2003) HELD ON 14.02.2003 IN COMMMEE 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 Shri - 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 (2002-63) 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.

ANNEXURE II

MINUTES OF THE SECOND SITTING OF THE STANDING COMMITTEE ON ENERGY (2003) HELD ON 14.02.2003 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

(Vide Para 4 of Introduction)

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

I.	Total No. of Recommendations made	24
II.	Recommendations that have been accepted by the Government	17
	(Vide Recommendation at SI. Nos. 1,2,3,4,5,6,7,12 14,15,16,17,18,19,20,22&24)	
	Percentage of Total	70.83%
III.	Recommendations which the Committee do not desire to pursue in view of the Government's Replies	3 Nil
IV.	Recommendations in respect of which replies of the Government have not been accepted by the Committee	3 Nil
V.	Recommendations in respect of which final replies of the Government are still awaited (Vide Recommendations at SI. Nos. 8, 9,10,11,13,21&23)	
	Percentage of Total	29.17 %