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MINISTRIES OF POWER; COAL AND NEW & RENEWABLE ENERGY

POWER GENERATION – DEMAND AND SUPPLY

[ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS CONTAINED IN THIRTEENTH REPORT (FIFTEENTH LOK SABHA) OF THE COMMITTEE ON ESTIMATES]

COMMITTEE ON ESTIMATES
(2012-2013)

NINETEENTH REPORT

FIFTEENTH LOK SABHA

LOK SABHA SECRETARIAT
NEW DELHI

NINETEENTH REPORT

COMMITTEE ON ESTIMATES
2012-2013

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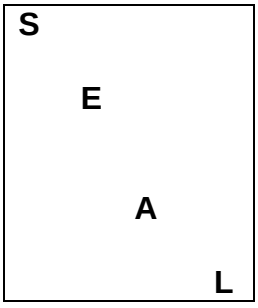

Presented to Lok Sabha on 19.12.2012

LOK SABHA SECRETARIAT
NEW DELHI
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4.	Shri Janmesh Singh	-	Committee Officer

INTRODUCTION

I, the Chairman of Committee on Estimates (2012-13) having been authorized by the Committee to submit the Report on their behalf, present this Nineteenth Report on action taken by the Government on the Recommendations contained in the Thirteenth Report (Fifteenth Lok Sabha) of the Committee on Estimates on the subject 'Power Generation – Demand and Supply' pertaining to the Ministries of Power; Coal and New & Renewable Energy.

2. The Thirteenth Report was presented to Lok Sabha on 28th December, 2011. Action Taken Notes on all the observations/recommendations, as related to respective Ministries, were received from the Ministry of Power on 7th September, 2012, the Ministry of Coal on 12th October, 2012 and the Ministry of New & Renewable Energy on 28th June, 2012. The Draft action taken report was considered and adopted by the Committee at their sitting held on 11th December, 2012.

3. An analysis of action taken by the Government on the recommendations contained in the Thirteenth Report of Committee on Estimates (Fifteenth Lok Sabha) is given in Appendix II.

New Delhi;
14 December, 2012
23 Agrahayana, 1934 (Saka)

FRANCISCO SARDINHA,
Chairman,
Committee on Estimates.

CHAPTER – I

REPORT

This Report of the Committee deals with the action taken by Government on the recommendations contained in the Thirteenth Report of the Committee on Estimates (Fifteenth Lok Sabha) on the subject 'Power Generation – Demand & Supply' pertaining to the Ministry of Power and Ministry of Coal and Ministry of New & Renewable Energy.

1.2 The Committee's Thirteenth Report (Fifteenth Lok Sabha) was presented to Lok Sabha on 28.12.2011. It contained 32 observations/recommendations. Action Taken Notes on all these observations/recommendations as related to respective Ministries have been received from the Ministry of Power on 7th September, 2012, the Ministry of Coal on 12th October, 2012 and the Ministry of New & Renewable Energy on 28th June, 2012.

1.3 Replies to the observations and recommendations contained in the Report have broadly been categorized as under:-

(i) Recommendations/Observations which have been accepted by the Government:
Para Nos. 6.1, 6.7, 6.8, 6.9, 6.10(i), 6.12, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20(ii), 6.20 (iii), 6.20 (iv), 6.20 (vi), 6.20 (viii), 6.20 (ix), 6.20 (x) & 6.20 (xii)

(Chapter II)
Total = 20

(ii) Recommendations/Observations which the Committee do not desire to pursue in view of Government's reply:
Para Nos. 6.3, 6.5 & 6.20 (vii)

(Chapter III)
Total = 3

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

Para Nos. 6.2, 6.6, 6.10 (ii), 6.13 & 6.20 (v) (Chapter IV)

Total = 5

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

Para Nos. 6.4, 6.11, 6.20 (i) & 6.20 (xi) (Chapter V)

Total = 4

1.4 The Committee desire that final replies in respect of comments contained in Chapter I of this report as well as the Recommendations contained in Chapter V of this Report for which only interim replies have been furnished should be furnished expeditiously.

1.5 The Committee will now deal with the action taken by Government on some of the recommendations in the succeeding paragraphs.

A. Eleventh Plan Targets

Observation/Recommendation (Sl. No. 2, Para No. 6.2)

1.6 While deploring the fact that the Government had initially set unrealistic targets, then reduced it at the mid-term appraisal stage, the Committee in their Original Report on the subject had recommended that the targets for the Twelfth Five Year Plan should be set up after carrying out a scientific analysis and by a real time assessment of all the factors involved in the construction of power plants, the limited coal supply etc. as well as the analysis of the delay causing issues during the Eleventh Five Year Plan.

1.7 The Ministry of Power in the action taken reply dated 7th September, 2012 has stated that the capacity addition requirement is based on the studies carried for determining the capacity addition required to meet the projected demand. During the 11th Plan, Planning Commission had fixed a capacity addition target of 78,700 MW. However, as per Mid-Term Appraisal (MTA) of Planning Commission in 2009, capacity addition target was revised to 62,374 MW. Out of which, capacity totaling to 54,964 MW was commissioned. Elaborating on the issue, the Ministry has stated that inspite of strenuous efforts made, some projects of 11th Plan did slip on account of exogenous/ endogenous factors, some of which include local issues like various demands and apprehensions of local people, environmental issues, contractual issues, delay in supply and erection, geological surprises like poor geological strata, formation of cavities and natural calamities like flood, earthquake etc.

Regarding the 12th Five Year Plan, the Ministry has stated that as per the Report of Working Group on Power, capacity addition of 75,785 MW comprising 9,204 MW Hydro, 63,781 MW Thermal and 2,800 MW Nuclear has been proposed. All the projects totaling to 75,785 MW have reportedly been firmed up based on a scientific analysis and the present status of implementation of the projects. It has been stated further that these projects have all the requisite inputs/clearances in place, and therefore have a high degree of certainty of materializing during 12th Plan.

1.8 With regard to the capacity addition proposal of 75,785 MW for the 12th Five Year Plan, the Ministry of Power has submitted that the projects have all the requisite inputs and clearances in place and therefore, have a high degree of certainty of materializing during the 12th Plan. The Committee hope that learning from past experience, the Ministry will make all out efforts to ensure that the proposed capacity addition is achieved without fail during the 12th Plan. The Ministry has not, however, clarified as to how the difficulties faced during the 11th Plan will be addressed, if they arise again during the 12th Plan.

Delays in project implementation during the 11th Plan have been partly attributed to contractual issues and geological surprises like poor geological strata, formation of cavities, etc. The Committee are of the strong view that contractual issues can be identified and sorted out beforehand as tendering and contracting are not new practices in the public sector infrastructure projects. The Committee, further feel that with advancements in the field of Geo-Sciences, Satellite Imagery etc., geological surprises can be prevented to a large extent by effectively utilizing the knowledge and inputs available with specialized bodies like Geological Survey of India. The Committee, therefore, reiterate their earlier recommendation and exhort the Ministry to take all necessary steps to ensure that project impediments are resolved expeditiously and projects are executed in time without time over-run during the 12th Plan.

B. Fund requirement for the power sector

Observation/Recommendation (Sl. No. 4, Para No. 6.4)

1.9 The Committee, while noting that it would be a monumental task to arrange huge funds for the power sector, had emphasized that the Government should streamline the funding procedure. Besides, they had urged that the recommendations of the sub-Committee of Group of Ministers on financial issues of the power sector and that of the High-Powered Committee should be seriously considered and implemented by the Government without any further loss of time. They had also desired to be apprised of the modalities and implementation status of National Electricity Fund (NEF).

1.10 The Ministry of Power in their action taken reply dated 7th September, 2012 has *inter-alia*, stated that the Sub-Committee of the Group of Ministers has submitted its interim report on 19th February, 2009 and final report on 6th October, 2010. The final report alongwith the interim report of the Sub-Committee has since been considered

and adopted by the Group of Ministers in its meeting held on 29th October, 2010. State related recommendations have been referred to State Governments for redressal. Tax related proposals have been referred to Ministry of Finance and the same are now under examination by the Ministry of Power in consultation with CEA, PFC and REC. The Ministry has also stated that since the National Electricity Fund (NEF) Scheme was approved on 13th December, 2011, no disbursement could be made in financial year 2010-11 and 2011-12.

1.11 No information has been furnished by the Ministry regarding the recommendations made by the High-Powered Committee consisting of representatives of various financial institutions and banks, formed to deliberate on the issue of availability of finance to Power Sector and the action taken thereon. The Ministry has also not explained as desired by the Committee the modalities of the National Electricity Fund. The Committee express their displeasure over the failure of the Ministry to furnish the requisite information. The Committee require the Ministry of Power to provide the desired information within a month from date of presentation of this report.

C. Foreign Direct Investment in power sector

Observation/Recommendation (Sl. No. 6, Para No. 6.6)

1.12 In order to attract greater FDI inflows, the Committee in their Report had emphasized that the policy regime in the power sector should be further liberalized and the Committee be apprised of the blue print, if any for the future strategy.

1.13 The Ministry of Power in the action taken reply dated 7th September, 2012 has stated as follows:-

> "As per extant policy, Foreign Direct Investment (FDI) up to 100% is permitted subject to the provisions of the Electricity Act, 2003, under the automatic route, for:

1. Generation and transmission of electric energy produced in hydro electric, coal/lignite based thermal, oil based thermal and gas based thermal power plants.
2. Non-Conventional Energy Generation and Distribution.
3. Distribution of electric energy to households, industrial, commercial and other users and
4. Power Trading"

1.14 The Ministry of Power has merely reproduced a portion of the policy document without explaining the steps taken or proposed to be taken to attract sufficient FDI to power sector. As brought out in the Economic Survey 2011-12, there are financial health and viability issues across the entire spectrum of power sector generation, transmission and distribution. In the present power sector scenario, all efforts need to be made to attract FDI as these funds bring along new technologies, inputs and skills sets. The Committee, therefore, strongly reiterate that the Ministry of Power should revisit the incentive structure for FDI in power sector and take proactive steps to attract desired quantum of FDI flows. It is essential that the Ministry also comes out with a blue-print to chalk out future strategies in this regard.

D. Pilferage of Coal

Observation/Recommendation (Sl. No. 10, Para No. 6.10 (ii))

1.15 The Committee had opined that a substantial portion of coal is pilfered due to lack of vigil and proper oversight on the part of coal companies and certain unscrupulous elements. They, therefore, had recommended that the reality of illegal activities of coal pilferage in coal mines and coal trading areas must be acknowledged and dealt with sternly by the Government. They also urged the Government to have an independent audit of coal production and actual dispatch on a quarterly basis.

1.16 The Ministry of Coal in their action taken reply dated 12th October, 2012 has stated as under:-

The subsidiary-wise information is as under:

Company	comments
ECL	The total command area is spread over seven districts of two states, i.e. West Bengal & Jharkhand operates 88 UG Mines and 17 OCP under 14 areas. The most of the mines located within villages. The stock yards and sidings are the main places which are prone to theft/pilferage of coal and transportation rote from stock yard to siding. The company engaged Departmental Security Personnel - 1857 Nos, CISF-940 Nos. and DGR sponsored agencies – 2109. For patrolling duty so as to control illegal mining as well as theft of coal and outsourcing patches, camps of CISF have been established at different location. The CISF parties made surprise raids and check on illegal mining as well as movement of coal. At all theft/pilferage prone places, the security arrangement has been made. Interaction jointly with CISF and Police Authorities have been made regularly to review the situation and make remedial actions.
BCCL	The following steps havebeen taken to curb the illegal mining – (i) conducting raids/patrolling at sensitive areas jointly with CISF/Internal Security and State Administration, (ii) Lodging FIRs with the local Police Station wherever such activities come to notice, (iii) Whenever any site is identified, prone to illegal mining, immediate steps are taken to fill the sites by Dozing, Blasting etc. so as to prevent the access to the exposed openings, (iv) A Task Force already exists, constituted by DC, Dhanbad to prevent illegal mining. Meetings of Task Force are also held to review the issues.
CCL	To check pilferage of coal in and around command areas by the internal security and other security arrangement vis-à-vis State Home Guards, DGR, CISF contingent are deployed. A high power committee has already been constituted by State Authorities, Deptt. of Home Affairs, Govt. of Jharkhand at State level as well as District level. Measures are taken to identify the points of theft and pilferages of coal from coal yards, sidings. The following steps are being taken to check theft/pilferage of coal. 1. Check posts have been erected at vulnerable points. 2. Most of the coal depots have been fenced with barbed wire. 3. Frequent surprise checks/raid is conducted by security team periodically with District Police Force to prevent coal theft/pilferage. 4. Regular and intensive patrolling. 5. Strengthening of internal security by deploying 1058 nos. of DGR sponsored Security, 672 Nos. of State Home Guards and 1368 Nos.

	of CISF personnel apart from 2060 nos. of Company's Security Personnel. 6. System of weighment with challan has been introduced while transporting coal from one point to another. 7. Liaison with district authority is maintained and review meetings are arranged every month, with concerned DC to curb illegal mining theft/coal pilferage. 8. Authorized loading inspector and weighbridge clerks are posted at all the Railway Sidings for monitoring the loading and dispatch arrangements. 9. Security guards are posted round the clock in all the railway sidings. 10. Effective liaison is also maintained with State Administration and Police for maintain law and order in the respective Railway Siding and to check the coal pilferage / illegal trading.
SECL	There are no major law & order problems which affect production and supply of coal. Regular co-ordination and liaison is carried out with State authorities and Police for security of coalfields. There are no reports of coal mafia activities in SECL There are no reports of illegal mining of coal in leasehold areas. Also there is no large scale theft/pilferage of coal and theft/pilferage of coal has been reduced days-after days.
NCL	There is no law & order problem reported in NCL so far. Adequate security arrangements are made available for guarding vulnerable points. The following steps have been taken to curb the menace. – ➢ Check posts have been established at he vulnerable points; ➢ Intensive round the clock patrolling by security with the help of local police; ➢ A system of Internal Intelligence collection under the leadership of Security Incharge of projects and at corporate level by GM(Security); ➢ Close liaison is maintained with local Law & Order authorities to track the criminals. Also periodic meeting is done with the Law & Order Authorities.
MCL	No major law & order problem for which production and supply of coal is being affected. There is an existing practice that the regular interaction/ meetings are being held between Management and State Govt. authorities of different levels to ensure preventive/proactive measures to resolve various issues pertaining to law & order. There is no illegal mining in command area and no theft of coal is going on large scale through Mafias/Smugglers or Un-social elements. The following steps are being taken to eradicate/minimize the

	pilferage/theft of coal in the command area. • Regular and intensive patrolling is being carried out by departmental security personnel and also with the local Police. • Surprise checks are being carried out frequently to find out if there is any illegal activity in the command area, particularly at loading points, weigh bridges and at entry/exist points. • All the security check posts and Railway siding have been strengthened. • To further upgrade the existing security system and to prevent losses of Co's property due to theft CISF is being inducted in MCL.
WCL	As per records available, there is no coal mafia operating in WCL

Coal India Limited has reported that audit of coal production is done by measuring coal stock as per " New Code for Uniform System of Maintenance, Control and Verification of Coal stock" in all mines of Coal India Limited on regular basis in the following manner:-

(i) Monthly measurement of coal stock is carried out by colliery surveyor,
(ii) Quarterly measurement is carried out by the coal stock measurement team constituted at area level,
(iii) Six monthly measurement is carried out by coal stock measurement team constituted at subsidiary company level and
(iv) Annual measurement as well as check measurement is carried out by coal stock measurement team constituted at CIL".

1.17 It is evident from the reply furnished by the Ministry that there have been proven instances of pilferage of coal, as witnessed by some of the coal companies particularly by BCCL and CCL in certain areas prone to coal pilferage like Dhanbad in Jharkhand, which is contradictory to the original stand taken by the Ministry. The Committee are also aware about several media reports citing instances of coal pilferage in coal-rich States. The Committee, therefore, strongly emphasize that the Ministry should take suitable steps to address the problem posed by pilferage of coal, in coordination with the Ministry of Railways. Also, the State Governments need to be suitably sensitized to come down heavily upon the coal mafias as the State Exchequers bear the maximum brunt of such illegal activities.

The Ministry of Coal has not responded to the specific recommendation of the Committee that an independent audit of coal production and actual dispatch should be carried out on quarterly basis. The Ministry has simply quoted the reply of the Coal India Ltd. conveying measurement of coal stock carried out by the Colliery Surveyors/coal stock management team. The Committee, are of the firm view that periodical audit of coal stocks by an independent team only can bring out the factual position at the ground level regarding coal pilferage. The Committee, therefore, urge the Ministry of Coal to take necessary action to ensure that independent audit is carried out periodically regarding coal production and actual dispatch.

E. Low Plant Load Factor (PLF)

Observation/Recommendation (Sl. No. 13, Para No. 6.13)

1.18 The Committee had observed that the Plant Load Factor (PLF) of the Central Sector Thermal Units was lower than that of private sector. They, therefore, had recommended that the Government should strive to raise the PLF of their thermal power plants. They had also emphasized for strict adherence to the schedule while carrying out renovation and modernizations works.

1.19 The Ministry of Power in their action taken reply stated as follows:-

(i) "The Renovation &Modernization (R&M) programme is primarily aimed at generation sustenance and overcoming problems arising due to:

- Generic Defects.
- Design Deficiencies /Modifications.
- Obsolescence of Equipments/systems.
- In adequacies due to Poor quality of Coal.
- Change in terminal parameters with reference to design.
- Stringent environmental conditions.
- Safety requirements.

(ii) R&M works are generally carried out after 1,00,000 hours of operation by thermal power plants. Under Life Extension (LE) programme the useful life of the thermal units is increased by another 15 to 20 years. Life Extension

activities are undertaken after 25 years of operation. There is need to check the remaining life of the components after about 20 years of life or 1,60,000 hours of operation lest it may result into serious failures. A detailed condition assessment along with performance evaluation of various systems / sub-systems is carried out to identify the modifications / replacements required to enable plant operation for a longer period so that during the extended life the plant operates efficiently and delivers the rated or higher capacity i.e. uprating with improved heat rate.

(iii) Based on discussions held with various utilities, the document "National Perspective Plan (NPP) for R&M and Life Extension of Thermal Power Stations up to the year 2016-17" was prepared by CEA in December 2009. Also, the guidelines for R&M/LE works of coal/lignite based thermal power stations had been revised.

(iv) Out of 53 units (7318 MW) for LE works and 76 units (18965 MW) for R&M works planned for 11th Plan, LE works in 13 units (1291 MW) and R&M work in 59 units (14855 MW) were completed during 11th Plan period.

(v) During 12th Plan LE works has been identified on 42 units (10672 MW) in Central Sector comprising 35 units (9202 MW) of NTPC, 4 units (840 MW) of DVC and 3 units (630 MW) of NLC. During 12th plan R&M works has been identified on 20 units (4341 MW) comprising 11 units (4050 MW) of NTPC and 9 units (291 MW) of NEEPCO".

1.20 With a view to raising the plant load factor in thermal power plants, Life Extension works and Renovation & Modernization works have reportedly been undertaken. The Committee, however, are disappointed to note that out of the 53 units (7318 MW) for Life Extension (LE) works and 76 units (18965 MW) for Renovation & Modernization (R&M) works planned for the Eleventh Five Year Plan, Life Extension works in only 13 units (1291 MW) and Renovation & Modernization works in 59 units (14855 MW) could be completed. The Committee would like to be apprised of the reasons for delay in completion of LE works in as many as 40 units and Renovation & Modernization works in 17 units. The Committee would also like to be informed as to how soon these works will be completed.

F. Implementation of Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY)

Observation/Recommendation (Sl. No. 19, Para No. 6.19)

1.21 In their Original Report on the subject, the Committee had noted improper implementation of RGGVY at various levels and insufficient or faulty coverage of eligible rural house-holds. The Committee, therefore, had recommended that the Government should continuously take feedback from certain panels like Inter-Ministerial Monitoring Committee and carry out proper audits through independent agencies. They had also emphasized that suitable changes should be incorporated in the scheme so as to also cover APL households. Further, the Committee had urged that higher capacity transformers should be installed in villages under RGGVY for future load expansion.

1.22 The Ministry of Power in the action taken reply dated 7th September, 2012 has stated as follows:-

> "Under RGGVY, electrification of un-electrified Below Poverty Line (BPL) households are being financed with 100% capital subsidy as per norms of KutirJyoti Programme. Households Above Poverty Line (APL) are required to pay for their connections at prescribed connection charges and no subsidy is given for this purpose. Infrastructure created under RGGVY is expected to be used for providing connections to APL by distribution utilities. While planning for infrastructure and DPRs, states were required to take into account load requirement of APL.
>
> Under Rajiv Gandhi Grameen VidyutikaranYojana (RGGVY), the number and size of the transformers is based on the number of connections to be provided in the village and the spread of households. Under RGGVY High Voltage Distribution System (HVDS) is encouraged wherein a number of 10, 16 & 25 KVA capacity transformers are installed instead of one bigger capacity transformer (without compromising the transformation capacity) to reduce T&D losses and to minimize power pilferage. The distribution transformers of adequate capacity in the villages have been installed to cater to the domestic lighting load and providing free connection to BPL households. Burning of transformers was primarily due to overloading. In 11th Plan, the transformers were provided keeping BPL load of 60 watt per family only. In view of the recommendation of the Committee, under 12th Plan, it is being proposed to provide transformation capacity on the basis of 250 watt load for BPL and 500 watt load for APL. States framed DPRs keeping in view the load requirement for next 5 years, therefore, factoring growth and load expansions".

1.23 The Committee appreciate that in pursuance to their recommendation, the Ministry has taken suitable steps to provide load expansion both for BPL and APL families and has proposed to provide enhanced transformation capacity for the same under the 12th Plan. However, in so far as various deficiencies in the implementation of Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) is concerned, the Committee, in their Original Report, had *inter-alia* recommended for its effective monitoring through various measures. The Committee regret that the issues raised by them have not been addressed satisfactorily. The reply does not indicate whether any action has been taken to obtain feedback from the Inter-Ministerial Monitoring Committee and take appropriate corrective action to ensure effective implementation of RGGVY. The Ministry's reply is also silent on the issue of conducting independent audits and surveys to ascertain the views of the beneficiaries regarding the quality and logevity of the infrastructure created under RGGVY. The Committee would await the Ministry's response in this regard.

G. Augmenting Budgetary Allocation of the Ministry of New & Renewable Energy

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (i)]

1.24 As sufficient Budgetary support is indispensable for carrying out any particular activity satisfactorily, the Committee had observed that the Budget of the Ministry of New & Renewable Energy is quite inadequate being only 0.24 per cent of the Union Budget Estimates for 2010-11 resulting in a lot of difficulties to the Ministry. Therefore, they had recommended that the said Budget needs to be increased to at least 1 per cent of the Union Budget and desired the Ministry to pursue the matter with the Planning Commission/Ministry of Finance for better allocation in next year's Budget.

1.25 The Ministry of New & Renewable Energy has inter alia stated as follows :-

> "During 2010-11, the budget allocation to the Ministry was Rs. 1000 crore which corresponds to only 0.26 % of the actual total Plan Expenditure of Rs. 3,79,029 crore. For FY 2011-12 ...the actual allocation by Ministry of Finance was Rs. 1200 crore which corresponds to 0.28% of the total Plan Expenditure (RE 2011-12) of Rs. 4,26,604 crore). ...The actual allocation BE 2012-13 has however been Rs. 1385 crore. The same corresponds to 0.27% of BE 2012-13 of Rs.

5,21,025 crore. While the Ministry would endeavour to hasten the pace of utilization of the existing allocation for the current year and seek enhanced allocation at RE stage, it will pursue with Planning Commission for a four-fold increase in its allocation at the time of Annual Plan discussions for FY 2013-14 with adequate and proper details as suggested by the Committee."

1.26 The Committee had recommended that the Budget of the Ministry of New & Renewable Energy needs to be increased to at least 1 per cent of the Union Budget. The Committee note that the Budgetary allocation to the Ministry of New & Renewable Energy has shown a very marginal increase from 0.26% in 2010-11 to 0.28 per cent in 2011-12 (RE) as percentage of actual total Plan Expenditure. For the current year 2012-13, the percentage is 0.27 per cent. The Ministry has informed that they would endeavour to seek from the Planning Commission enhanced allocation at RE Stage for the current year and a four-fold increase in the Budgetary allocation at the time of Annual Plan discussions for FY 2013-14. Considering the significance of new and renewable energy in the overall energy sector, the Committee would urge the Planning Commission to enhance allocation to 1 per cent of the Union Budget for the Ministry of New & Renewable Energy during 2013-14.

H. Assessing renewable energy potential

Observation/Recommendation [Sl. No. 20, Para No. 6.20(v)]

1.27 The Committee while taking note that there is no Direct Normal Irradiance (DNI) Map covering the entire country despite the fact that DNI Map is considered indispensible tool in proper assessment and full utilization of the solar potential in any region, had recommended that the project relating to the DNI map should be expedited and initiatives should be taken to prepare a high resolution energy map of India.

1.28 The Ministry of New & Renewable Energy in their action taken reply has stated as follows:-

"DNI is one of the critical inputs for ascertaining the techno-economic feasibility of any solar power project using concentrating collectors. It can be estimated to a fair degree from the data normally recorded by metrological department and facilitate initial identification of potential sites. However, DNI is a strong function of atmospheric turbidity and can vary in future at a given site depending on progress of urbanization and industrial activity in the region.

At present, 45 radiation observatories of IMD are equipped to monitor global solar radiation, while only a few measure DNI. 51 stations of CWET are additional where DNI as well as global solar radiation is monitored.

As a part of cooperation between National Renewable Energy Laboratory (NREL), USA and Solar Energy Centre of the MNRE, high-resolution solar resource maps have been prepared based on satellite data. CWET is also working on developing solar atlas based on actual measurements, and it is expected that preliminary draft of solar atlas would be ready in about one year time".

1.29 The Committee are constrained to note that the Ministry of New & Renewable Energy though acknowledges DNI as a critical input for ascertaining long term feasibility of solar projects yet has not indicated a clear road map for complete DNI mapping of India. The Committee are of the view that in the absence of such mapping, the potential sites cannot be fully identified and utilized. They, therefore, reiterate their earlier recommendation and recommend expeditious completion of the country's Solar atlas.

The Committee also regret to note that the Ministry of New and Renewable Energy has not indicated whether any action has been taken to prepare a high resolution renewable energy map of India. To tackle power deficit there is an urgent need to tap other renewable sources for generating power. Moreover, the Committee feel that with vast expanse and diverse renewable energy sources in our country, it is of utmost necessity to have high resolution renewable energy mapping, covering the entire country. The Committee expect the Ministry to ensure that a complete blue-print of such mapping of the country is made at the earliest and would like to be apprised of the progress in this regard.

CHAPTER –II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Observation/Recommendation (Sl. No. 1, Para No. 6.1)

India is a fast growing economy. Power is one of the critical inputs for the growth of economy and if the nation has to grow at a consistent rate of 8 to 9 per cent, the power generation capacity needs to be significantly augmented. Despite a rise in the installed power generation capacity over the past decades, the demands of fast growing economy like ours are not being met fully due to under-performance in the power sector in several fronts as well as shortage of required coal linkages. As a result the gap between demand and supply of power has been widening over the years. In terms of percentage, the supply of power was short by 7.1 percent in 2003-04, which has increased to 8.2 percent during April to August, 2011.

During the current year 2011-12, which is also the terminal year of the XIth Five Year Plan period, the Ministry of Power has reportedly kept the lowest ever target of only around 7,675 MW capacity addition, instead of the earlier target of 20,000 MW. The power sector in the country is bogged down by the problem of supply of coal. Coal based energy is the main source of Power in India. It would continue to play the main role in the years to come. Coal based power generation capacity has been given preference, in view of the large domestic coal reserves and the cost of power generation with domestic coal being cheaper when compared to other fuels. But of late, there have been certain issues with the supply of domestic coal to the power sector despite India being the fourth largest producer of coal in the World. As a result, the generation of power has suffered. The reliance on imported coal has also increased over the years. There are a number of issues related to the availability of coal to power sector.

In a scenario where power is not equitably available and coal based plants are causing environmental pollution by CO_2 emissions, it is inevitable that alternate sources of energy are seriously explored to power homes and industries. The estimated potential for power generation in the country from wind, small hydel, solar & biomass has been estimated at over 87,000 MW. Against this, the country's present installed capacity from various renewable energy sources is mere 21,125 MW. The Committee feel that holistic efforts are urgently required to meet the power deficit in the country. It is in this backdrop that the Committee had selected the subject 'Power Generation – 'Demand & Supply' for examination. The observation and recommendations of the Committee on the subject after a detailed study and scrutiny of the same are given in the subsequent paragraphs.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 7, Para No. 6.7)

The Hydroelectric potential in the country has been pegged at 1,48,701 MW, out of which 1,45,320 MW of the potential consists of hydro electric schemes having installed capacity above 25 MW. The Committee are constrained to note that out of the above identified capacity only 33,920.8 MW (23.34%) has so far been developed & another 14,707 MW (10.12%) is under process. Thus around 67% of the potential remains untapped so far. The Committee express their dissatisfaction over such huge under-utilization of the country's hydro potential.

As on 30th June, 2010, 98967.2 MW of Hydro Capacity is yet to be developed in the country. The Committee note that Government have planned to add 20334 MW of Hydro capacity during the XIIth Five Year Plan period. However, even if the stipulated capacity is added, after the XIIth Plan in 2016, around 78633 MW capacity of Hydro Power would remain untapped. In certain States like Haryana, Chhattisgarh, Goa, Bihar, West Bengal, Manipur, Nagaland, Himachal Pradesh, Mizoram etc. nearly 100% of the Hydro Power remains untapped. In the opinion of the Committee, such a huge under

utilization of the country's resources is highly deplorable. Besides being a relatively cheap and an environmentally benign source of power, the focus must shift towards full development of hydropower in future. The Committee, therefore, recommend that the Government should identify the projects for the XIIth Plan in right earnest and start the awarding procedure, in order to ensure timely execution of the projects. The Committee should be apprised about the progress achieved in this regard at the action taken stage.

The Committee are dismayed to note that a number of hydro power projects in the country are facing delays/suspensions due to difficulties in getting environmental clearance in time. This leads to an unwanted lock up of capital and resources which could have been used for other purposes. The Committee firmly believe that the Government of India should not promote any sort of 'Environmental Dogmatism', as the issues of environmental conservation & development need to be seen in unison. It would be impractical to allow one issue to overshadow the other. The Committee recommend that the Government should expeditiously resolve all the pending environmental issues in a pragmatic manner. As per the Ministry of Environmental & Forests, the major issues are concentrated on the Ganga River Basin in Uttarakhand and the Siang, Subansiri and Lohit Basins in North Eastern States. Various Environment Impact studies are stated to be underway by the Central Water Commission, IIT Roorkee and Wildlife Institute of India, Dehradun. The Committee note that these studies were entrusted to these authorities since the year 2009. They would like to be apprised of the progress made so far on the matter. They also desire that decisions taken thereafter should be in the overall interest of the country's development. The Committee are aware that the Ministry of Power is in touch with the Ministry of Environment and Forests, the various State Governments and the local stakeholders in the matter. They urge the Ministry of Power that it should prevail upon all stakeholders to fast track their consultations so that the delays/suspensions in various hydro power projects could be prevented.

Reply of the Government

Hydro Electric Projects for XIIth Plan:

A Working Group on Power has been constituted by the Planning Commission to formulate capacity addition for 12th Plan. The Working group on power has finalised tentative hydro capacity addition of 9204 MW (31 projects) during 12th Plan period. These 31 projects are already under construction. The region-wise / state-wise break up of these projects is given at ***Annex.-I***

Environment Impact Assessment Studies in North Eastern States:

It may be mentioned that in May, 2008, NHPC awarded the Downstream Impact Assessment Study for Lower Subansiri Project to Guwahati University in association with Dibrugarh University and IIT, Guwahati. The Expert Committee submitted its report in March, 2011 and proposed a number of structural and non-structural measures for mitigation of downstream impact of the project under construction by NHPC.

In addition, Report of the two member Technical Experts Committee consisting of Shri. C.D. Thatte, former Secretary (Water Resources) and Shri. M.S. Reddy, former Secretary (Water Resources) set up by Planning Commission vide OM dated 12.1.2011 to examine the technical aspects as well as downstream impact of Lower Subansiri Project is awaited. Subsequently, as desired by Govt. of Assam, a Joint Steering Group has also been constituted by NHPC in consultation with Govt. of Assam on 19.4.2011.

Downstream impact assessment study for Ranganadi St.-I and Pare HE Projects was awarded by NEEPCO to IIT, Guwahati in April, 2009 and a Draft Report in this regard was submitted in Oct. 2011. It is understood that final report in this regard is likely to be submitted by IIT shortly.

As regards the Environment Impact Assessment (EIA) Studies in North Eastern States, it may be mentioned that an Inter-Ministerial Group (IMG) was constituted by

Ministry of Water Resources (MoWR) under the Chairmanship of Secretary (WR) in August, 2009 to evolve a suitable framework to Guide and Accelerate the development of Hydropower in the North East Region (NER) which recommended that the sub-basin wise studies may be taken up in major tributaries of Brahmaputra. It was also recommended by the Group that CWC shall initially conduct the studies for Subansiri and Siang sub-basins in consultation with CEA and MoEF. EIA Studies for Subansiri and Siang Basins have since been undertaken by CWC and M/s. IRG System South Asia Ltd., have been awarded the work related to carrying out of EIA Study for Subansiri Basin while the EIA Study for Siang Basin has been entrusted to M/s. R.S Envirolink Technologies Pvt. Ltd. in Dec., 2011.

As per Work Plan Schedule, the Interim Reports for Subansiri and Siang sub-basin giving rapid assessment have been submitted to CWC by the Consultants. Both the Reports have been approved by CWC, subject to the condition that the comments and suggestions offered by the TAC Members would be incorporated and a corrected Interim Report would be furnished to MoEF for mid-term corrections/suggestions, if any. The corrected Interim Report for Siang Sub-Basin has since been received by CWC and sent to MoEF. The corrected Interim Report in respect of Subansiri Sub-Basin is, however, still awaited.

These reports are likely to be placed before Expert Appraisal Committee shortly for consideration. The draft final reports are scheduled to be submitted to CWC by 15.10.2012 and the final reports within 2 months of the approval of draft final reports by CWC.

The status of studies entrusted to IIT Roorkee and Wildlife Institute of India , Dehradun is as following:-

a) Study on assessment of Cumulative Impact of Hydropower Projects in Alaknanda and Bhagirathi Basins upto Devprayag – IIT Roorkee – Report prepared in December'2011.
b) Assessment of Cumulative Impacts of Hydroelectric Projects on Aquatic and Terrestrial Biodiversity in Alaknanda and Bhagirathi Basins, Uttarakhand – Wildlife Institute of India, Dehradun-Report prepared in 2012.

An Inter-Ministerial Group has been formed by MoEF under the Chairmanship of Shri B.K. Chaturvedi, Member, Planning Commission in the month of June,2012 with the following objective including others:-

“To suggest environmental flow requirement that could be prescribed for various stretches of Bhagirathi, Alaknanda and other tributaries of river Ganga, taking into account suggestions in the reports prepared by the IIT Roorkee, Wild Life Institute of India and any other available report on the subject that group wishes to consider.”

The Group is likely to give its report shortly.

The following bottlenecks are being faced in the development of hydropower projects which needs to be addressed by all the Stakeholders for preventing the delays/suspensions :-

- **Land acquisition problems:** Land acquisition is a persistent issue involved in the implementation of a hydro project. Acquisition of land for various locations of the project such as Dam, HRT, Power House, Switch yard etc. needs to be resolved before commencement of construction of the project.

- **Environment and forest issues:** Environment and Forest clearance issues also need to be addressed to ensure minimizing the delay in execution of HE Projects.

- **Rehabilitation & Resettlement issues:** Dislocation of the people from their houses/fields/workplaces etc. and their resettlement is a sensitive issue and the task involves a lot of time and money. Many times these issues lead to court cases resulting in delay in project execution/ completion.

- **Geological surprises:** Unfavorable geological conditions encountered during underground works which were not anticipated during survey and investigation is termed as geological surprises. Depending upon the gravity of the geological surprises like collapsing of tunnel, fault zones, cavity formation, emission of

dangerous gases, development of local stresses, ingress of water, etc. the completion of the project gets delayed.

- **Natural Calamities:** Natural calamities like unprecedented rain/flash floods, cloud burst, earthquake, etc. delay the completion of project.

- **Law & order problem & local issues:** Poor law and order in some of the states is also one of the reasons contributing to the delay in the implementation of hydro projects.

- **Performance of contractors and Contractual issues:** In few cases, poor performance by the contractors and also, due to other contractual issues, completion of the projects gets delayed.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 8, Para No. 6.8)

The Committee note that in order to utilize the optimum potential of power generated, pumped storage plants are used, particularly in those areas where availability of water is in abundance. However, the Committee find that these plants often store power by curtailing supply of power from those who need it most. They feel that pumped storage plants should continue to supply power till the scope of power consumption exists, since according to the Ministry, such plants are better for meeting of peak hour demand. The Committee are, thus of the opinion, that pumped storage plants should ensure that the existing demand for power is completely met before pumping back the water for re-generation of surplus power.

Reply of the Government

A few Pumped Storage Plants are in operation in the State Sector and they generally operate in pumping mode during the lean demand hours when the frequency profile is better so as to supply power to the consumers during the peak hours.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 9, Para No. 6.9)

The Committee note with great concern that mismatch between demand and supply of coal acts as a major hindrance in the generation of power. They have identified various issues in this connection, for instance the inadequate production of coal, slippage in supply, poor quality, excessive dependence on a single entity for supply, i.e. Coal India Limited (CIL) and the cost involved in coal washing. During the oral evidence , the Ministry of Power stated that the Ministry of Coal could not supply adequate quantities of coal to the power units. However, the Ministry of coal stated that during the year 2009-2010, maximum target for supply of coal was achieved. The Ministry of Coal, also took the stand that they sell coal at 50 percent of the international prices and further argued that the Power Sector was reluctant to bear the cost of washing coal for power generation as the quality of domestic coal was not good.

The Committee, in this regard, have learnt that a huge increase in the demand for coal due to the government's aim of providing 'Power to All by 2012' has put substantial pressure on the coal producing companies. The projected demand of coal for power generation in the current year is 457 million tones. The Committee feel that the Government should work out a long term plan for the same. The plan should specify not only the production targets to be achieved in the long run but also the measures to be taken in case any shortfall in demand is to be met. For this, initiative of CIL for strategic partnership with foreign coal companies and entry of private

players in coal mining are the developments to be taken forward seriously. The Committee desire that the long term plan should cover these aspects and specify ways and means to encourage such partnerships. Besides, they would specifically like to know the recommendations of the T L Shankar Committee on domestic coal production and the action taken on the same. The Committee further desire to be apprised of the New Coal Distribution Policy to streamline the supply of coal to the power sector in order to ensure that power generation is not adversely affected due to shortage of good quality coal.

Reply of the Government

The New Coal Distribution Policy of the Government stipulates that Coal India Ltd would be supplying coal to the power sector to the extent of 100% of the normative requirement through legally enforceable Fuel Supply Agreement with take or pay clause. In order to ensure the supply, CIL, if required, would be importing coal to bridge the gap between demand and the availability. CIL has also taken steps for augmenting coal washing capacity substantially so that good and consistent quality of coal can be supplied to power stations.

In view of the severe gap in demand-supply of coal in India, Coal India Limited(CIL) initiated the process of importing of thermal coal to India on a long term (10 years) basis by floating a global Expression of Interest (Eol) for contract for long Term Offtake of Coal (CLTO) in July, 2010.After the evaluation it was discovered that the "Price" quoted in 5 bids (for a total quoted quantity of 57 million tonne of imported coal for 10 years) from 2 companies were feasible. Feasibility implies that the quoted price was at a discount to the market rate of coal represented by Reference Coal Index (RCI).

8 Consumers in Power and 3 consumers in Cement Sector were approached for off-take of this coal but none of the consumers showed any interest. Since there was no interest of the consumers in power & cement sectors for the off-take of imported coal, the process of import of coal on long-term basis has not so far yielded any results.

As per extant policy, CIL will sign FSAs with power plants identified by Central Electricity Authority/Ministry of Power that have entered into PPAs and have been

commissioned or would get commissioned by 31st March, 2015. The FSAs will be signed for the full LOA quantity of coal for 20 years, reviewable after every 5 years with trigger level of 80% for disincentive and 90% for incentive.

The additional capacity of the power projects thus covered for coal supply during 12th Plan, which have come up/are likely to come up during 2009-10, 2010-11, 2011-12 and first three years of the 12th Plan, is restricted to around 60,000 MW, for which the total requirement is 252 MT. When taken together with 305 MT already allowed for the projects up to 31.3.2009, the total coal requirement comes to 557 MT.

To meet the requirements, e-auction quantity will be reduced progressively from 10% to 7% over the 12th Plan period. To meet the shortfall, if any, CIL would make arrangements with State/Central PSUs which have been allotted coal blocks for power plants and with State mining/industrial corporations and Central PSUs which are allocated coal blocks for commercial mining. To achieve the desired level of production, the required clearances have to be expedited
for the above said blocks by taking up with the State Governments and MoEF. If there is still a shortfall in meeting the FSA commitments, necessary imports will be made by CIL. CIL in consultation with CEA and other concerned agencies is working out the modalities of import and pricing of imported coal.

CIL has registered its 100% subsidiary Coal India African Limitada (CIAL) in Mozambique for exploration and development of two coal blocks allotted by Government of Mozambique through a bidding process. A Memorandum of Undertaking has also been signed by CIL with the Provincial Govt. of Limpopo, South Africa for acquisition, exploration and development of coal assets in the Limpopo Province of South Africa. The share or quantity of coal to be available from these sources for CIL cannot, however, be estimated at this stage.

The entry of Private Players in coal mining is guided by the provisions of the Coal Mines (Nationalisation) CM(N), Act, 1973. The private companies engaged in business of specified end users are only allowed to do coal mining in India. To allow coal mining by private companies for commercial mining requires amendment to CM (N) Act which is pending in Parliament.

The Expert Committee under the Chairmanship of Shri T.L. Shankar, constituted by the Government to draw a road map for coal sector in its report has, inter alia, recommended long term demand and supply prospects of Coal and Lignite, improving the procedures for approval of coal mines, Regulation and Governance in coal sector, restructuring of Coal India Ltd, improvement in productivity, technology upgradation in coal sector and human resource management in coal sector. Action on recommendations of the Expert Committee on Road Map for Coal Sector Reforms, which have been accepted, has been initiated and a road map indicating timelines for implementation of the same has been prepared and coal companies have been directed to implement the recommendations. Coal companies have accordingly been advised to take necessary action and quarterly report on implementation of recommendations of the Committee is also being regularly submitted.

Ministry of Coal
(OM. No. 54016/54/2011-CPD dated 12th October, 2012)

Observation/Recommendation [Sl. No. 10, Para No. 6.10 (i)]

In the opinion of the Committee, the present state of affairs in the matter of availability of coal to the power plants is unsatisfactory. They have been given to understand that the gap in supply of coal to the power utilities is mainly due to logistic and operational reasons. The number of rakes being provided by Railways to transport coal are insufficient. As against the demand of 185 rakes per day, only 156 rakes are available. In addition to this, the turnaround time at power stations is very slow which ultimately leads to low utilization of the rakes capacity. Besides, uncovered rakes used for coal transportation lead to pilferage or spoilage of coal in adverse weather conditions. The Committee note that there is a provision of Rail-Coal Interface meeting, and the issue of actual availability of rakes is regularly being discussed with the Railways in various fora . However, these efforts have fails to bring the required change in the situation. The Committee are of the opinion that resolution

of these issues require effective coordination between all the stakeholders i.e. Ministries of Coal, Power and Railways. The Committee, therefore, recommend that a permanent mechanism in the form of a Coordination Committee consisting of the Secretaries of Power and Coal Ministries and the Chairman, Railways Board be constituted at the earliest for this purpose.

The Committee further note that in some areas, the supply of coal gets affected due to frequent law and order problems. The Committee strongly urge that adequate security arrangements should be made in and around coal fields to permit seamless production & uploading of coal. The Government should also prepare contingency plans in coordination with the concerned State Governments to prevent loss of production from coalfields affected by Law & Order problems.

Reply of the Government

An Inter-Ministerial Sub-Group in the Ministry of Coal which also comprises representatives of Ministry of Power, Central Electricity Authority, NTPC, Railways and Planning Commission etc. regularly monitors the dispatch of coal to power stations and takes contingency decisions, as and when required, for prioritizing movement of coal, keeping in view the coal stock position at the power stations.

An Inter-Ministerial Committee headed by the Chairman, Railway Board to discuss the status of critical infrastructure for coal evacuation in potential coalfields has been constituted. The first meeting of the Committee was held on 26.6.2012 , which was inter-alia attended by the representatives of Ministry of Coal, CIL and coal companies. During the meeting, the following action points were identified:-

(i) Such review meetings between Railways and Ministry of Coal may be held on regular basis quarterly at the level of Chairman, Railway Board for expediting critical projects.

(ii) Impediments in terms of EC and FC in implementing critical rail links to be brought to the notice of PMO by Railways for amicable solutions.

(iii) Coal companies can take up construction of railway sidings through the Railway's empanelled contractors under the supervision of Railways subject to approval of Detailed Project Reports by the concerned authorities.

(iv) RITES to complete the construction of Piparwar railway siding by March 2013

(v) Ashoka siding to be approved shortly by the railways and implemented by South Eastern Railway

(vi) Chairman, Railway Board and Secretary (Coal) to meet Chief Minister and Chief Secretary of Chhttisgarhto impress upon them the need for expediting the proposed Special Purpose Vehicle (SPV) with SECL, Railways and State Government of Chhattisgarh. Follow up action is being taken accordingly.

Besides the above, regular monitoring of infrastructure constraints in supply of coal to power plants of the country is also undertaken in the Ministry of Power.

Law & Order is a state subject, hence primarily, it is the responsibility of State/ District Administration to take necessary deterrent action to stop/ curb theft/ pilferage of coal. However, Coal India Ltd has taken the following steps to check theft/ pilferage of coal :

(i) Check Posts have been established at the vulnerable points.

(ii) Wall fencing, lighting arrangements and deployment of armed guards round the clock have been done around the coal dumping yards.

(iii) Regular patrolling is conducted in and around the mine including OB dumps.

(iv) Armed guards have been deployed at all Railway sidings.

(v) Inter-action and liaison with district officials at regular intervals and holding meeting with DC & District Administration, every month.

(vi) Challans for coal transportation by trucks outside the district are being issued after fixing hologram and putting signatures of authorized officials of CISF to check pilferage.

(vii) Regular FIRs are lodged by the management of the collieries and CISF with local thana against the pilferage/theft of coal. A close watch on the activities of criminals is being maintained by CISF.

(viii) Management has been taking action for filling/dozing/sealing/blasting of the old/abandoned exposed coalfaces in phased manner.

Ministry of Coal
(OM. No. 54016/54/2011-CPD dated 12th October, 2012)

Observation/Recommendation (Sl. No. 12, Para No. 6.12)

(i) The Committee understand that the designs and specifications of the thermal units have improved a lost since the 1950's, with a gradual increase in the size of the generating units so as to improve their efficiency but are unhappy to note that the state of the art technology has not been adopted and implemented fully particularly in the PSUs of the Ministry of Power like NTPC etc. From 30 MW, the technology has moved to 600-800 MW, which is termed as super critical units. The Committee note that their advantage is better efficiency due to corresponding rise in the steam parameters, lower O&M costs in the long run as well as Green House Gas emissions. In the backdrop of the country's dependence on coal based thermal power generation as well as the very large capacity generation programme to be taken up in the near future, the Committee find a lot of scope for 660/800 MW supercritical units in India. The Committee also note that BHEL has brought out 600 MW units. They would like that the PSUs under the Ministry of Power like NTPC must utilize the Super Critical technology without any further loss of time. The Committee recommend that as far as possible the new capacity addition programmes of the Government should be undertaken by adopting more 660/800 MW supercritical units. The Ministry of Power has further informed that coastal stations can use the unit size of 800 MW, however, for inland stations, transportation of heavy equipment is an issue. In the opinion of the Committee, the Government should arrange logistics of transportation of heavy equipment & machinery for the inland stations to use supercritical units keeping in view its advantages in the long run.

The Committee further note that the Ultra Power Projects (UMPPs) of 4000 MW capacity have the potential to address the power deficit in the country but out of 16 UMPPs identified, 4 UMPPs have so far been transferred to the developers. The Committee, therefore, recommend that the transfer of the remaining UMPPs to developers should be expedited. All the pre-RfQ (Request for Quotation) activities in respect of the UMPPs in the pipeline should be completed at a faster pace, so that they can be awarded to the suitable party. For the 4 UMPPs already awarded, the Committee would like to be apprised about their implementation status. The Committee would also like to be informed by the Ministry of Power about the factors responsible for perceptible delays in getting requisite clearances from the respective State Governments for various UMPPs. They urge the Ministry to take further concrete action for clearance of these UMPPs without any further delay.

(ii) The Committee would also recommend that regional imbalances in the availability of power should be mitigated at the earliest by the Government, as they are a big hindrance in the balanced development of the nation. In the opinion of the Committee, a sturdy system of National Grid would go a long way in realizing faster evacuation of power from the surplus to the deficit areas and is definitely indispensable for mitigating regional imbalances. In this regard, the Committee are constrained to note that the inter regional transmission capacity by the end of 11th Plan is only likely to be 27,950 MW. Besides, in several areas, transmission lines have not been established. Under these circumstances, the Committee strongly recommend that a big push should be given to augment the inter regional transmission capacity of the country. As all regional grids have alreadybeen interconnected and developed in the form of the National Power Grid, the Committee expect that the regions facing acute power shortage would be benefitted by the exchange of operational surpluses. Those region/States, which are facing acute power deficit much above the national average of 9%, should get priority to meet their power deficit. Since the National Electricity Plan, prepared by the Central Electricity Authority, also includes perspective planning for Twelfth Plan, the Committee recommend that the issue of regional power imbalances

must be appropriately addressed therein. The Committee desire specific action to be taken on the same and would like to be apprised on it.

Reply of the Government

(i) Supercritical technology is being adopted by CPSUs – NTPC & DVC. All the three supercritical units of 660 MW of NTPC's Sipat have been commissioned. Three supercritical units of 660 MW each of NTPC's Barh Super Thermal Power Plant are likely to be commissioned in the 12th Plan. Out of the Bulk Tendering of 11 Units of 660 MW vizSolapur (2 units), Meja JV with UPRVUNL (2 units), Nabinagar JV with BSEB (3 units) &Mauda-II (2 Units) of NTPC and Raghunathpur-II (2 Units) of DVC. Notification of Awards (NOA) for Mauda, Solapur, Meja have already been placed. NOA for Nabinagar and Raghunathpur are likely to be placed shortly. Similarly, out of the Bulk Tendering of 9 Units of 800 MW of NTPC vizKudgi-I (3 Units),Darlipalli-I (2 Units), Lara-1 (2 Units) & Gajmara-1 (2 Units), NOA for Kudgi has been placed. For other projects, Award recommendations were approved by NTPC Board subject to Investment Approval,MoEF Clearance and availability of Land.

Supercritical units aggregatingto over 6000 MW capacity have been commissioned and large numbers of supercritical units are under construction. In the 12th plan, Supercritical units are likely to constitute about 50-60% of coal based capacity addition. Regarding 13th plan, it has been decided that coal fired capacity addition shall be through supercritical units only. All Ultra Mega Power Projects being implemented are necessarily required to adopt supercritical technology.

Ultra Mega Power Projects

The following four UMPPs have been awarded to the successful bidder.

Mundra in Gujarat : The project (5x800MW) was handed over to the Successful Bidder i.e., Tata Power Company Ltd., on 23.04.2007 at the evaluated levelised tariff of

Rs. 2.26367/kWh. Two units of Mundra UMPP of 800MW each have been commissioned on 25.02.2012 and 30.7.2012.

Sasan in Madhya Pradesh : The project was handed over to the Successful Bidder i.e., M/s Reliance Power Ltd., on 07.08.2007 at the evaluated levelised tariff of Rs. 1.19616/kWh. Boiler foundation work for Unit-I to Unit – V has been completed and for Unit – VI, it is in progress and major contract for main plant for other plants have also been awarded to the developer. First unit of 660 MW is expected to achieve COD in January 2013 and the last unit in June 2014.

Krishnapatnam in Andhra Pradesh : The project was handed over to Reliance Power Ltd., on 29.01.2008 at the levelised tariff of Rs. 2.33/kWh. Order for the main plant equipment has already been placed by the developer. The developer has stopped work at site, citing new regulation of coal pricing in Indonesia. Lead procurer namely APSPDCL has issued termination notice to CAPL stating that in view of the defaults and anticipatory breach having no alternative, the procurers together decided and elect to terminate the agreement. CAPL approached the High Court of Delhi, and the court passed an order which inter-alia stipulates that till the next date, no coercive steps be taken against the Petitioner by the Respondents. Subsequently, Hon'ble High Court ofDelhi has dismissed CAPL's petition and the Interim Order has been vacated. Thereafter, CAPL has filed appeal in Division Bench of Delhi High Court.

Tilaiya in Jharkhand : The project was handed over to M/s Reliance Power Ltd. on 07.08.2009 at an evaluated levelised tariff of Rs. 1.770 per kWh. . Major portion of the project land including main plant area are forest land. The final forest clearance has been received recently in November, 2010. Government land (855 ac) and Forest land (1220 ac)is yet to be handed over by State Government.

UMPPs at bidding stage

Chhattisgarh : The site for this UMPP is in district Sarguja. All the pre-RfQ activities for this UMPP had been completed and the RfQ for this UMPP has also been issued on 15.3.2010.

Orissa UMPP : The site for this UMPP is in village Bedabahal in SundergahDistrict. All the pre-RfQ activities for this UMPP had been completed and the RfQ for this UMPP has also been issued on 11.06.2010. The responses received for Orissa UMPP were opened on August 1, 2011 and are under evaluation. RfP is to be issued after finalization of Standard Bidding Documents which are under revision.

The coal blocks allocated to Chhattisgarh UMPPs have been marked as 'no go' by the Ministry of E&F. The matter has already been taken up with MoEF but not yet resolved. In view of this the last date of submission of RfQ for this project has been extended upto 3rd September, 2012.

UMPPs in pipeline:

- The site at Cheyyur in Kanchipuram district in Tamil Nadu has already been identified along with captive port at Panaiyur village. Various studies are underway to prepare EIA report for environment clearance. It is expected to bring this UMPP at bidding stage soon.
- The site for Second UMPP in Andhra Pradesh has been finalized at Nyunipalli village in Prakasham district of Andhra Pradesh and various activities for bringing the project to bid stage are being carried out.
- The sites in Jharkhand, Tamil Nadu & Gujarat for their second UMPPs are being examined by CEA/PFC.
- The officials from PFC and CEA have visited the coastal sites for Orissa additional UMPP from 22.2.2012 to 24.2.2012. One UMPP will be set up at Bijoypatna in Chandbali Tehsil of Bhadrak for coastal location and another UMPP will be set up at Narla&Kasinga Sub-Division of Kalahandi district for inland location.

Factors responsible for delays in getting requisite clearances

Resistance from local populace- : There has been considerable delay in site finalisation/land acquisition/conducting site-specific studies due to resistance from local populace against land acquisition. The cases being of Chhattisgarh, Maharashtra, Karnataka UMPPs and 2nd UMPP in Andhra Pradesh.

Environment and forest related issues particularly 'Go' and 'No-Go' issue of coal block : Due to 'No Go' categorization of the coal blocksby MoEF, the last dates for submission of RfQ for the Orissa and Chhattisgarh UMPPs were extended six and eleven times respectively. This issue effectively delays the Orissa UMPP by over one year. The coal blocks of Chhattisgarh UMPP, which is already delayed by more than 1½ years, have not yet cleared.

Long time is taken for obtaining environment and forest clearance for the projects which delays the bidding process and implementation of the projects. For the four awarded UMPPs time taken for environment and forest clearance is given below:

UMPP	Environment clearance from application date (No of days)	Forest Clearance from application date (No of Days)
Sasan	169	931
Mundra	249	1096
Krishnapatnam	351	not needed
Tilaiya	448	1208

- There has been enormous delay in obtaining water linkage for domestic coal based projects. Water linkage for Orissa and Chhattisgarh UMPPs were obtained after delay of over one and a half years.

- Due to non-availability of water, sites for additional UMPPs in Orissa are being identified at coastal locations so that sea water can be used for the project.

(ii) Inter-regional links are planned based on the assessment of the possible surpluses/deficits under seasonal and peak/off-peak operational scenarios. This assessment is carried out considering upcoming generation projects and the load growth in various regions. A number of inter-regional links, as given ***Annex.-II***, have been provisionally planned for the 12th Plan / early 13th Plan period:

POWERGRID has been implementing various transmission projects for generation capacity addition under central sector, Ultra Mega Power Projects (UMPP), grid strengthening projects and other projects, assigned to it from time to time. Presently POWERGRID carries about 50% of the total power of the country through various EHV transmission lines and has transformation capacity of more than 1,00,000 MVA. POWERGRID facilitates transfer of power within and across the regions for optimum utilisation of generation resources and for meeting power demand in various parts of the country.

By the end of 11th Plan, National Power Grid with inter-regional power transfer capacity of about 27,750 MW has already been established for facilitating transfer of power across the country.

Further, to cater to the growing capacity addition in future, POWERGRID is making all efforts to expand the existing inter-State transmission network in the country. During XII Plan, various high capacity HVDC and AC inter-regional links with total capacity of 38,400 MW have been planned to take care of inter-regional power transfer requirement of various planned generation projects including IPPs scheduled for commissioning in XII Plan. Implementation of these links is being/ shall be taken up matching with progress of generation projects.

In addition, in order to meet the growing power demand of the country, Government of India has envisaged capacity addition through private sector participation and a number of Independent Power Producers (IPPs) have been setting-up/ plan to set-up power generation plants of different capacity with various time schedules in the country. These power generation plants are mainly coming-up in resource rich States, i.e. Odisha, Jharkhand, Sikkim, Madhya Pradesh, Chhattisgarh, Tamil Nadu, Andhra Pradesh etc. and the power generated is required to be transmitted to load centers located across the States and Regions.

Being the nodal agency for grant of Long Term Access (LTA) to private producers, POWERGRID has undertaken development of high capacity transmission corridors for evacuation of large quantum of power from various IPP projects in consultation with CEA, beneficiaries and generation developers.

CERC has already granted regulatory approval for 11 nos. of High Capacity Power Transmission Corridors at an estimated cost of about Rs. 75,000 Crore. Implementation of these corridors is to be taken up by POWERGRID/ through Tariff Based Competitive Bidding in a phased manner matching with progress of generation projects. This shall go a long way in integrated development of transmission system in the country.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 14, Para No. 6.14)

The Committee note with dissatisfaction that one of the significant reasons for underachievement in the implementation of Power Generation Augmentation Programme is contractual disputes between the project authorities and the contractors and their vendors/sub-vendors. In the opinion of the Committee these disputes not only delay the projects, but also lock up the project resources for the disputed period. Such disputes need to be avoided at all costs by the Government. For this, it is essential that

appropriate model contract agreements addressing all future issues are prepared in advance and made available to the stakeholders. In addition, only those having technical expertise and efficient managerial skills should be given charge of power projects. As the power sector has now been thrown open for investment by the Private Sector, the Committee hope that better professional skills would be attracted in this sector to reduce occurrence of disputes. The Committee also recommend that the Government should revisit the system of awarding of contracts to assess whether any streamlining of the procedure is required in order to obviate disputes in future.

Reply of the Government

Keeping in view the difficulties encountered in implementation of Hydro projects, Model Standard Bidding Document (SBD) as a guide for Civil Works Contracts for execution of hydro-electric projects has been finalized after extensive consultations with all the stake holders. The draft SBD has also been approved by the Ministry and sent for vetting to Ministry of Finance / Law, CVC and CAG.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 15, Para No. 6.15)

The Committee are dismayed to observe that one of the important areas that has been neglected by the Ministry is that of shortage of skilled manpower in the power sector. The ambitious capacity addition programmes in the Power Sector would require commensurate increase in the supply of skilled manpower, as the skill requirement in this field is highly technical. Shortage of skilled manpower for erection and commissioning has been identified by the Ministry as one of the major bottlenecks in the implementation of ongoing power projects. The Committee would emphasize that development of a wide base of skilled manpower in the area of high pressure welding, fittings, instrumentation etc. to man various specialized requirements across the

Generation, Transmission, and Distribution Units is imperative. The Committee desire that the Government should immediately make an assessment of the manpower requirement across various trades and take remedial measures well in advance. They note that the Ministry have taken 'Adopt an ITI' initiative for this purpose. 2740 ITI trained persons including those from power trades have got placement in various sectors ofr economy, out of which 264 got placement in Power Sector since the inception of "Adopt an ITI" Scheme. The Committee are also of the view that the Government should look beyond the it is to impart specialized technical skills to the youth and absorb them in the power sector. As the Committee have already been informed about the training being imparted at 68 training institutes in the country, they would like the Ministry to assess as to whether it has actually addressed their need to have 1,50,000 skilled workers for power projects during the XIth Plan.

The Committee also note with concern the critical shortage of power equipment like Boilers & Turbines in the country, which is likely to adversely affect the capacity addition targets. They have been informed about an action plan being pursued by BHEL on the matter as well as launch of various Joint Ventures to produce and deliver various equipment. The Committee also find that most of these ventures are expected to complete their manufacturing facilities by the year 2011 or 2012. The Committee urge that the Ministry should monitor the progress and ensure that the production of requisite equipment commences on time.

Reply of the Government

I. Meeting the requirement of skilled manpower

The Ministry of Power formed 9 Sub Groups to assist the Working Group on Power constituted by Planning Commission. Sub Group-9 was constituted on Human Resources Development and Capacity Building with one of its objectives being reviewing and making broad assessment of manpower requirement in generation, transmission and distribution systems.

The Sub Group has reviewed the estimates of additional manpower requirement made in 2007 for the 11th Plan. It has projected the additional manpower requirement during 11th plan to be about 3.32 lakh out of which 2.55 lakh is estimated to be technical and 0.77 Lakh non-technical personnel. The Sub Group report has assessed that given the annual intake of 11.3 lakh, 4.15 lakh, 0.93 lakh and 11.15 lakh persons in Engineering, Management, Polytechnic and ITI institutes respectively, there is sufficient number of students passing out. However, skill set in a few areas does not match the industry requirement. The Sub Group has emphasized the need for augmentation in certain skills like high pressure welder, fabricator, fitter, electrician, plumber, etc.

To build the base of skilled manpower for 11th Plan and beyond, and to address the above issues, the Ministry of Power and the Central Electricity Authority initiated "Adopt an ITI" scheme in July 2007 by participating in the Directorate General of Employment & Training's Public Private Partnership (PPP) scheme for up-gradation of Government ITIs. Central Power Sector Undertakings have adopted 61ITIs (including 9 new ITIs being set up by NTPC) as indicated in ***Annexure-III***, Private Sector Companies 12 and State Government Companies 3.

To assess the effectiveness of the "Adopt an ITI" Scheme, in line with the recommendations in the Thirteenth Report of the Committee on Estimate on Subject "Power Generation – Demand and Supply", the Ministry of Power got a study conducted by the CEA in respect of ITIs adopted by CPSUs. From the Study, it is found that:

Post "Adopt an ITI" scheme; there has been increase in intake primarily in the trades of Welder, Electrician, Fitter, plumber, Computer Operator & Programming Assistant and Electronic Mechanic in the adopted ITIs.

In view of the reviewed additional requirement of total technical personnel of 2.55 lakh(out of which about 20% are technicians i.e. about 10,000/- per annum) during the 11th Plan as projected by the Sub Group 9 of the Working Group on Power, it is estimated that the annual intake of 7272 (no.) in adopted ITIs alongwith that in other

ITIs including Private ones should be able to meet the requirement of power industry. As per information available, 2740 ITI trained persons including those from power trades have got placement in various sectors of economy, out of which 264 got placement in Power Sector since the inception of “Adopt an ITI” Scheme.

Further, CPSUs have reported improvement in the quality of trainees and trainers(ITI instructors) by organizing practical training at the power plants/ site visits for the ITI students, arranging training of trainers by the CPSUs at their own establishment or at other institutes like NPTI, etc.

II. Monitoring the progress on production and delivery of power equipment

BHEL has made technology tie-ups for manufacture of super-critical boilers and turbine generators in the country. BHEL has also taken up capacity augmentation programme and have achieved capacity of 15,000 MW which is being extended to 20,000 MW per year. Several joint ventures have been set up in the country for manufacture of super-critical boiler and turbine generators. The total manufacturing capacity of about 14,000 MW for boiler and 15,000 MW for turbine generators per year is envisaged by these joint ventures. More such joint ventures are in the pipeline.

Government of India has approved bulk order for 660 MW and 880 MW super-critical units and bids for the same have already been invited by NTPC. As per the condition of the bulk orders approved by the Government, a Committee under Chairperson, CEA with members from Ministry of Heavy Industries and participating utilities to monitor the progress of the phased manufacturing programme of the bidders is in the process of being set-up.

CEA monitors the progress of all the thermal power projects under construction in the country. Intensive monitoring is done in respect of units which are likely to be commissioned during next two years. Supply of major equipments is also monitored for

these projects. Special attention is paid to the material which became critical for commissioning of the projects/units.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 16, Para No. 6.16)

The Nuclear Power Projects aggregating 3,380 MW constitute a major part of the overall capacity addition targets for the XI Five Year Plan. As per the expert opinion, the emissions from Nuclear Power Stations are low. Nuclear Power is economically viable and comparable to renewable sources. As nuclear is an environmentally benign source of power, the Committee is of the opinion that time has come to pool it with hydropower and thermal power, for which it needs the required thrust by the Government. The contribution of the Nuclear Energy needs to be augmented substantially from the present level of just two per cent in the power generation programme. The exemptions from the IAEA & Nuclear Suppliers Group (NSG) have set the stage to catapult India into the Nuclear power era. The Committee are aware that increasing nuclear power generation capacity is the mandate of the Department of Atomic Energy. They hope that the Ministry of Power are working in coordination with them to identify achievable capacity addition targets. The Committee are also of the view that there is still scope to enhance and improve the public perception of nuclear power in the country while the Government expands its Nuclear Power Programme in the years to come.

Reply of the Government

Nuclear Power is clean, environmentally friendly and potent source of energy, devoid of greenhouse gas emissions. In view of its merits, it is recognized that nuclear power can provide long term energy security to the country.

Improvement in fuel supplies, both domestic and imports as a result of fruition of international cooperation has increased nuclear power generation. The nuclear power

generation in 2012 is expected to be 32,000 Million Unit, the highest ever generation from nuclear source in the country.

On progressive completion of projects under construction, the current installed nuclear power capacity of 4,780 MW is expected to reach 10,080 MW by the end of 12th Plan proposals envisage commencement of work on eight 700 MW Pressurized Heavy Water Reactors, two 500 MW Fast Breeder Reactors and one 300 MW Advanced Heavy Water Reactor of indigenous design and eight Light Water Reactors each of 1,000 MW and higher capacity based on foreign technical cooperation. The Integrated Energy Policy of the Government envisages reaching a nuclear power capacity of 63,000 MW by the year 2032.

Public outreach programmes have been substantially enhanced to dispel the apprehensions regarding nuclear power and to create a conductive environment for rapid growth of nuclear power in the country. The outreach programmes include structured public awareness programmes in vernacular languages targeted for public at large, media, State Government officials, policy makers, decision makers, people's representatives, school and college students and teachers, etc. The methods adopted are awareness, lectures, interactive discussions, exhibitions, visits to nuclear power plants, web based campaigns, TV advertisements, radio jingles, etc. In addition, welfare programmes for the neighouring communities have also been enhanced as a part of CSR efforts.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 17, Para No. 6.17)

The Committee are pained to note that the Power sector is beset with high Transmission & Distribution (T&D) losses due to technical and commercial reasons. It results in the wastage of huge amount of power which could have been otherwise put to good use. It is also a financial drag on the power utilities, as the power losses translate

into revenue forgone. The Committee are surprised to learn that during the year 2008-2009, the Aggregate Technical & Commercial (AT&C) losses were nearly 28.44%. It is very high compared to developed nations, where these losses are mostly in single digits. While expressing their displeasure over such consistently high AT&C losses, the Committee feel that the institutional mechanism has failed to check it. They, therefore, strongly recommend that the Government needs to invest more to develop sturdy transmission network in the country, besides taking strict action against those States who fail to achieve targets in reducing AT&C losses. In the opinion of the Committee, it would go a long way in reducing technical losses.

The Committee are more perturbed about the commercial losses, which are nothing but pilferage of power, through drawal of unmetered electricity. It is a major bane for the power sector in India. The Committee, while acknowledging the amendment in Section 151 of the Electricity Act 2003, for strengthening action against theft / pilferage of electricity and making it a cognizable and non-bailable offence, recommend that swift, stringent and deterrent action must be taken against such offenders. The Committee are aware of the limited role of the Central Government vis-à-vis distribution issues. They would like the Government to raise this issue with the State Governments in all fora and suggest measures like installation of effective camera surveillance systems at select locations registering very high power thefts, installation of tamper proof/secured meters and Aerial bunched cables for LT lines. State Governments should be advised to undertake 100% metering of all areas and installation of feeder meters which are meant to assess commercial loss of power in their respective localities. The Committee also feel that in case commercial losses persist despite taking all the suggested measures, connivance of departmental staff cannot be ruled out. In such situations strong penal actions should be taken against officials found guilty. In the opinion of the Committee, the distribution losses cannot come down without the proactive intervention of the State Governments. The matter should therefore be taken up at the highest level with the State Governments. The Committee further feel that it should also be the responsibility of the consumers to

report cases of theft of power to concerned authorities, so that early action could be initiated to prevent pilferage of power.

In this regard, the Committee further note that the Restructured-Accelerated Power Development & Reform Programme (R-APDRP) has been introduced as a major programme, targeted to reduce the AT&C losses upto 15%, but its implementation has lacked steam. The Committee recommend that a reliable monitoring mechanism should be developed by the Government to oversee the proper implementation of the already sanctioned projects under R-APDRP.

Reply of the Government

1. In order to cater to the growing requirements of Inter-State transmission system, the POWERGRID proposes to double its investment for the XIIth Plan to Rs.1,00,000/- crore.

2. The AT&C losses in the country have shown reducing trend in the past few years and have reduced from 36.64% in 2002-03 to 27.15% in 2009-10

3(a) The responsibility of reduction of AT&C losses in distribution network is with the State Government. However, to address the issues related to high AT&C losses, the Restructured Accelerated Power Development and Reform Programme(R-APDRP) was launched by Govt. of India during 11th Plan as a Central Sector Scheme aiming to reduce the AT&C losses upto 15% in the selected towns/ cities having population of more than 30,000 (10,000 in special category states) as per 2001 census. The scheme is under various stages of implementation in the country.

3(b) Under R-APDRP, a monitoring mechanism is already in place. A Steering Committee under Secretary (Power) has been constituted for sanctioning and monitoring of the Projects. PFC is the Nodal Agency for implementation of the R-APDRP projects in the country and is conducting regular meetings with States /

implementing Agencies etc. to monitor the progress of the projects and to resolve the implementation issues, if any.

3(c) Based on the recommendations of standing committee and experience gained during R-APDRP implementation, following monitoring mechanism is being adopted for monitoring R-APDRP implementation:

- Regular Monitoring and review of the RAPDRP projects with all state utilities / ITIAs is being conducted by PFC and MoP at monthly intervals. In many cases, the intervals are less than a month.
- During such meetings the critical issues in implementation are discussed and it provides a forum for sharing of experiences / best practices among various utilities for resolving implementation related issues.
- The review meetings are also conducted regularly at state HQ with utilities and stakeholders by PFC /MoP to discuss the critical issues and find solutions for the same.
- The state power utilities and State Govt (through Distribution Reform Committee) also monitor the implementation of the project.
- The R-APDRP steering committee also reviews implementation of RAPDRP and issues guidelines / direction for taking corrective measures in this regard.

4(a) The matter of reduction of AT&C losses is being taken by Central Government with the State Governments at various forums including Conference of State Chief Ministers/ Power Ministers / Chief Secretaries, etc.

4(b) States have also been requested to constitute Distribution Reform Committee at the State level under the Chairmanship of Chief Secretary / Principal Secretary/ Secretary (Power/ Energy) to monitor the progress / achievement and targets of the scheme at State level.

5. A conference of Power Ministers was held in New Delhi on 13-07-2011 wherein the main theme as “viability of electricity distribution system” The deliberations were held on various issues including the measures to control the theft of electricity also. The Resolutions adopted during the Power Ministers Conference are as under.

(i) The State governments would ensure that the accounts of the utilities are audited upto the year 2009-10 and also ensure that the accounts of a financial year are audited by September of the next financial year, henceforth. Computerization of accounts would be undertaken on priority, if not done already.

(ii) The States would ensure that the distribution utilities file their Annual Tariff Revision Petition every year, by December – January of the preceding financial year to the State Regulators as stipulated by the National Tariff policy.

(iii) The Annual Tariff Revision Petition would be filed before the SERC, keeping in view the increase of the Power purchase cost (which accounts for nearly 70-80% of the Cost of supply) and states will ensure that the difference between ARR and ACS is not only bridged but is positive to generate internal surpluses which can be used for network expansion and maintenance.

(iv) The State governments would ensure automatic pass through in tariff for any increase in fuel cost by incorporating the same in the regulations, as provided in Section 62(4) of Electricity Act, 2003. (State Governments can issue directions to SERCs under Section 108 of the Electricity Act, 2003).

(v) The State governments would not only clear all the outstanding subsidies to the utilities, but ensure advance payment of subsidy as per the Section 65 of the Electricity Act, 2003 in future.

(vi) The eligibility criteria for inclusion of towns under R-APDRP assistance with population of 30000 (10000 for special category states) should be reduced to 15000 (5000 for special category states). All district headquarter towns in special category states should also be covered under R-APDRP, irrespective of their population.

(vii) The state governments would ensure payment of all outstanding dues from various departments of state government and institutions to the distribution utilities or release payments from the State budget directly.

(viii) The state governments would consider converting loans due from the state governments to the distribution utilities as state government equity to ensure capital infusion and improvement in net worth of utility.

(ix) The state governments would take effective steps to reduce AT&C losses to less than 15% by administrative measures, curbing pilferage of electricity and by setting up special police stations and special courts to deal exclusively with power theft related cases, if not done already.

(x) States would immediately initiate steps to appoint distribution franchises in urban areas through competitive bidding.

(xi) States would immediately invite bids for meeting the uncovered generation capacity gap viz- a -viz the requirement in their States by the end of 12th Plan. The process will be completed by March, 2012.

(xii) States would create a unit in their states for integrated planning of generation, transmission and distribution to meet the future requirement of their states.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 18, Para No. 6.18)

The Committee feel that there is a lot of scope to use Information Technology (IT) in distribution and its proper usage can lead to significant cuts in AT&C losses. Part A of R-APDRP comprises the dissemination of some popular IT tools in the power sector like Supervisory Control and Data Acquisition System (SCADA). Electricity is supplied in the country through a very complex power grid system and the losses that occur in transmission and distribution are very large in comparison with major developed countries. This occurs mainly due to inefficient safety, monitoring and control devices that are persisting in present distribution system. The most advanced automatic control system, which can perform the operations like monitoring and control is SCADA. SCADA is the application of computers in power system. Distribution automation is the major upgradation of any distribution system. This can be achieved by implementing SCADA. Some of the States & UTs like Gujarat and Chandigarh have reported huge

improvement in their power distribution system by establishing SCADA. The Committee, therefore, recommend that SCADA should be implemented across all the power distribution networks in the various States.

Reply of the Government

Under R-APDRP Part-A, funding for implementation of SCADA/DMS is envisaged for towns with population greater than 4 lakhs & annual input energy greater than 350MU. Till date, SCADA projects worth Rs.1443.48 Cr covering 63 towns (which are about 94% of 67 envisaged) in 15 states have been sanctioned & an amount of Rs.313.12 Cr disbursed. Further, schemes for SCADA installation in three towns of two states have been appraised& are under approval. It is expected that SCADA projects for balance towns will be sanctioned by the Steering Committee progressively.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 19, Para No. 6.19)

Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) is the flagship programme of the Government to provide access to electricity to all rural households in the country. The Committee regret to note that the programme has suffered due to improper implementation at various levels and insufficient or faulty coverage of eligible rural house-holds. The Ministry of Power has also cited certain major issues in RGGVY, for instance, late receipt of Detailed Project Report (DPRs) from States, poor rural electricity infrastructure etc. The Committee, in this regard, have been informed that the Government has set up an Inter-Ministerial Monitoring Committee and advised the States to form District Committees for the purpose. The Committee recommend that the Government should continuously take feedback from these panels, and convey it to the implementing agencies on the ground. Further, proper audits through independent agencies and surveys to seek views from the beneficiaries should be conducted to ensure quality and longevity of the infrastructure created under RGGVY as well as coverage of all eligible villages in the DPRs being prepared under the scheme.

The Committee are of the firm opinion that RGGVY can prove to be a golden opportunity to electrify all villages of the country and therefore its coverage should not be limited to just providing free connection to the BPL families. Poverty and deprivation in rural India is so pervasive that a water tight compartmentalization between APL & BPL households is highly untenable. In this scenario, leaving out APL households for electricity connection would lead to needless social strife and tensions. The Committee, therefore, would like to recommend that suitable changes should be incorporated under RGGVY so as to cover APL households too. As regards rural electrification under RGGVY, the Committee also note that the transformers set up in the villages for the purpose are small capacity transformers, which often break down due to their inability to cope with increased load. The Committee, therefore, recommend that higher capacity transformers need to be installed in villages under RGGVY, keeping in view the future load expansion brought in the wake of increased rural electrification and rising standards of living. The Committee feel that the Ministry should revisit various norms and guidelines under RGGVY in the light of their suggestions so that rural electrification in the entire country could become a reality.

Reply of the Government

Under RGGVY, electrification of un-electrified Below Poverty Line (BPL) households are being financed with 100% capital subsidy as per norms of Kutir Jyoti Programme. Households Above Poverty Line (APL) are required to pay for their connections at prescribed connection charges and no subsidy is given for this purpose. Infrastructure created under RGGVY is expected to be used for providing connections to APL by distribution utilities. While planning for infrastructure and DPRs, states were required to take into account load requirement of APL.

Under Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), the number and size of the transformers is based on the number of connections to be provided in the village and the spread of households. Under RGGVY High Voltage Distribution System (HVDS) is encouraged wherein a number of 10, 16 & 25 KVA capacity transformers are installed instead of one bigger capacity transformer (without compromising the

transformation capacity) to reduce T&D losses and to minimize power pilferage. The distribution transformers of adequate capacity in the villages have been installed to cater to the domestic lighting load and providing free connection to BPL households. Burning of transformers was primarily due to overloading. In 11th Plan, the transformers were provided keeping BPL load of 60 watt per family only. In view of the recommendation of the Committee, under 12th Plan, it is being proposed to provide transformation capacity on the basis of 250 watt load for BPL and 500 watt load for APL. States framed DPRs keeping in view the load requirement for next 5 years, therefore, factoring growth and load expansions.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20(ii)]

A number of regulations respectively govern various areas of the Renewable Energy sector like wind power, small hydro, solar photovoltaic etc. But, there is conspicuous absence of a comprehensive law which integrates these distinct sectors and provides them direction and a sense of purpose, in a holistic manner. The Committee recommend that the Government must strive to implement the National Renewable Energy Policy in a comprehensive manner that clearly sets a time-bound and ambitious target to be achieved and lays down a transparent and stable long-term incentive structure for promoting socially responsible private investment. Since renewable energy plants are capital intensive, a long-term and reliable incentive structure will earn the confidence of both public & private sector investors. This will also require suitable amendments in the Central Electricity Act, the Integrated Energy Policy & National Tariff Policy. In this connection, the Committee are aware that the Ministry of Power has already amended their Tariff Policy by fixing a minimum percentage of the total consumption of electricity in the area of distribution licensee from solar energy. However its implementation remains to be done. Overall, the Committee feel that the Government should mobilize all stakeholders and promote institutional linkages to provide a new thrust to its renewable energy programmes.

Reply of the Government

While the concern of the Committee is appreciated, it is submitted that the economic viability/ attractiveness of different renewable energy projects and accordingly the level of incentives required to attract private investment in the same is strongly linked with (i) the technological advancements and hence cost of technology in selected RE sector (e.g. in solar) and (ii) the cost of conventional energy alternatives, governed, in turn, by the global oil prices/ economic situation. As such, it is not feasible to put in place a stable long term incentive structure for all renewable energy technologies. Nonetheless, the Ministry regularly holds sector specific consultations with concerned major stakeholders to review and finalize its policies and programmes for each financial year and will continue to do so as well as mobilize and promote institutional linkages for further thrust to its programmes as suggested by the Committee.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20(iii)]

The estimated medium-term potential for renewable energy power generation in the country from wind, small hydro, solar & biomass has been estimated at over 87,000 MW. Despite having such a good potential, the Committee are distressed to note that the total installed capacity from all the Renewable sources as on 31.08.2011 stands abysmally low at 21,125 MW. In a scenario where burning of 127 fossil fuels have generated huge environmental debate and the availability of oil to the developing world is going down, this under utilization of existing renewable resources warrants immediate remedy. The Committee, while taking cognizance of several enabling measures ushered by the Government, are constrained to observe that they are not yielding the required results. As per the Electricity Act, 2003, National Electricity Policy 2006 & Tariff Policy, 2006, the SERCs are required to fix a minimum percentage of energy from renewable energy sources. According to Ministry of New & Renewable Energy, it does not intend to force this upon the States through laws in view of diverse trends in

economic viability/attractiveness to investors as well as availability cost of other available competing power supply options in States. The Committee feel that the Ministry is shirking from its responsibility of ensuring implementation of the above-mentioned Act and Policies. The Committee, therefore, recommend that the Ministry should atleast advise States rich in renewable energy resources to fully exploit the power potential of these sources and encourage and counsel them to formulate Policy & Plans in line with the Acts & Policies of the Central Government.

Reply of the Government

The recommendation of the Committee has been noted. The Ministry would lay increased emphasis on regular interaction with States at appropriate high levels to stress upon the need for speedy exploitation of the renewable energy potential available in their region as well as extend necessary technical support for the same apart from the existing various fiscal and financial incentives.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (iv)]

The estimated potential for power generation in the country from small hydro projects (SHPs) is 15,384 MW in Hilly States like J&K, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, as well as some states in the plains. The Committee are displeased to note that the Government has so far developed capacity of only 537 MW in the 10th Plan and 1400 MW has been targeted during the 11th Plan. Thus a major chunk of the available potential remains unexploited. As the State Governments play the biggest role in the development of SHPs, the Committee are of the opinion that various issues need to be addressed in close coordination with the State Governments.

Reply of the Government

The total installed capacity of small hydro projects, as on 31.3.2012 is 3395 MW and projects of about 1315 MW are in various stages of implementation. During the 11th Plan a capacity of 1419 MW was added and a target of 2100 MW has been fixed for the 12th Plan. As recommended by the Committee, the Ministry is working to accelerate pace of exploitation of small hydro in the country. In this direction, the Ministry has stepped up its efforts to closely interact with the States and emphasized on establishing a method of regular project-wise monitoring. It is strongly felt that project wise monitoring and regular interaction with the States and SHP developers can help to increase pace of implementation of the projects. Apart from regular interaction with the States with high small hydro potential, the Ministry has also interacted with the States with moderate potential to set up SHP projects. Now quarterly review meetings are being held with States for close monitoring of projects. Information regarding allotment of potential sites to the private sector, their implementation schedules and their Plan for next five years or so has been collected.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 20(vi)]

Recently a new technology of solar submersible pumps has come up, which has a huge potential to alleviate power woes of the farmers and saving of substantial amount of power from the national grid. The Committee recommend that Government should popularize & disseminate this technology among the farmers and simultaneously invest in Research & Development in this field.

Various State Governments are providing open ended power subsidies to the farmers and once this technology is adopted on a wider scale, it can greatly ease the burden of huge power subsidies carried by these State Governments. Therefore, the Committee recommend that the opinion of State Governments should also be taken on board, and they must be persuaded to invest in the solar submersible pump technology.

Reply of the Government

Under the Off-grid Solar Applications Scheme of Jawaharlal Nehru National Solar Mission, the Ministry has sanctioned 1600 solar water pumping systems in Rajasthan, 600 pump sets in Punjab, 75 pump sets in Haryana, 60 pump sets in Chhattisgarh, 45 pump sets in Uttar Pradesh and 11 solar pump sets in Maharashtra during 2011-12. These solar water pumping systems are expensive compared to the electrical pump sets or DG pump sets available in the market. These pump sets cannot provide water for crops like wheat, rice, sugarcane, cash crops etc. Both surface and submersible and DC/AC solar pump sets are available but the water output from these pump sets is not enough to irrigate field for most of the crops. It can be used for horticultural activities and can be coupled with drip irrigation system. Solar SPV pumping systems cannot replace the conventional electric pump sets due to initial high capital cost and technical limitations.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (viii)]

The potential of bio-gasifiers that use agricultural residue like rice husk to provide off grid power is enormous in the country and in the opinion of the Committee this must be adequately tapped. In certain areas, for instance Champaran District in Bihar, this programme has been running quiet successfully, and now time has come for it to be replicated in other parts of the country.

Reply of the Government

The Ministry is promoting multifaceted rice husk based power generation programme, especially for rice growing eastern part of the country which has the lowest per capita electricity consumption, comprising of eastern UP, Bihar, Orissa and West Bengal since December 2009. The programme aimed to provide electricity access to villages / hamlets for meeting unmet demand of electricity utilizing locally

available rice husk for domestic, commercial and industrial purposes based on sustainable model. So far 57 rice husk based gasifier systems have been installed for providing access to electricity for providing unmet demand of electricity in about 200 villages / hamlets in Bihar. Ministry has proposed a target for providing unmet demand of electricity through 1000 such systems during 12th plan period capable to provide electricity access in about 2000-2500 villages and hamlets."

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (ix)]

There are a number of unelectrified remote villages/hamlets in the country where grid connectivity would not be possible for a variety of reasons. Therefore, Small hydro power generation systems, biomass gasification based electricity generation systems, solar photovoltaic power plants etc. in distributed power generation mode need to be used depending upon the availability of resources for generation of required electricity. The Committee are of the considered view that the Government must pay attention to the Off-Grid Electrification of villages, as the power through these sources at the village level would be more reliable & predictable, and would save substantial expenditure towards erecting transmission network. In this connection, the Committee would like to draw the attention of the Government towards the imperative need of creating proper repair & maintenance systems for the Renewable Power infrastructure. Further, the Government should not only pursue the targets of addition to the installed capacity, but also focus at the actual generation of power from these projects in the long run. It has come to the notice of the Committee that the installed capacity of renewable power falls to disuse after initial operations. This dereliction should be avoided at any cost to ensure full tapping of renewable energy in a sustained manner.

Reply of the Government

The Ministry had been implementing Remote Village Electrification (RVE) programme for providing financial support for lighting/basic electrification in those

remote unelectrified census villages and unelectrified hamlets of electrified census villages where grid extension was not found feasible by the State Governments and hence were not covered under the Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY). Such villages were provided basic facilities for lighting/electricity through various renewable energy sources. Small hydro power generation systems, biomass gasification based electricity generation systems, solar photovoltaic power plants etc in distributed power generation mode were used depending upon the availability of resources for generation of required electricity. Where none of these options were found to be feasible, individual household based solar photovoltaic home lighting systems were supported on the requests of the state notified implementing agencies. The programme was implemented in states by state notified implementing agencies.

Remote, unelectrified census villages and hamlets of electrified census villages as covered under the Programme were identified by the state governments and were endorsed by the Rural Electrification Corporation (REC) for non coverage under the RGGVY for grid electrification. REC has endorsed 11438 remote villages and hamlets in 24 states as on 31/03/2012. The state-wise details of remote villages and hamlets in different states are given in following Table:

List of the remote unelectrified census villages/hamlets as endorsed by Rural Electrification Corporation (REC) as on 31/03/2012

Sl. No.	State	Number of villages/hamlets verified by REC	
1.	Karnataka	23	150
2.	Madhya Pradesh	972	
3.	Assam	2249	
4.	Maharashtra	362	
5.	Meghalaya	158	
6.	Arunachal Pradesh	145	
7.	Himachal Pradesh	1	
8.	Rajasthan	493	90
9.	Manipur	166	
10.	West Bengal	93	
11.	Gujarat	49	
12.	Orissa	2116	
13.	Jharkhand	832	
14.	Chhattisgarh	1112	

Sl. No.	State	Number of villages/hamlets verified by REC	
15.	Uttarakhand	182	52
16.	Uttar Pradesh	63	138
17.	Tamil Nadu	0	73
18.	Nagaland	11	
19.	Jammu & Kashmir	391	620
20.	Haryana	0	149
21.	Kerala	0	73
22.	Bihar	80	
23.	Andhra Pradesh	0	112
24.	Tripura	23	460
Total		9521	1917
Grand Total		11438	

As on 31/03/2012, 10120 remote unelectrified villages and 2640 unelectrified hamlets have been sanctioned. The state wise details are given in the following Table.

Sl. No.	State	Total Villages Sanctioned	Villages Completed	Ongoing villages	Total hamlets sanctioned	Hamlets completed
1.	Arunachal Pradesh	297	297	0	1	0
2.	Andhra Pradesh	0	0	0	13	13
2.	Assam	2192	1856	166	0	0
3.	Chhattisgarh	682	568	0	0	0
4.	Gujarat	38	38	0	0	0
5.	Haryana	0	0	0	286	286
6.	Himachal Pradesh	21	21	0	1	0
7.	Jammu & Kashmir	440	160	280	20	0
8.	Jharkhand	720	493	207	0	0
9.	Karnataka	22	16	2	57	14
10.	Kerala	0	0	0	607	607
11.	Madhya Pradesh	623	381	223	0	0
12.	Maharashtra	353	338	12	0	0
13.	Manipur	237	237	0	3	3
14.	Meghalaya	163	149	0	0	0
15.	Mizoram	20	20	0	0	0
16.	Nagaland	11	11	0	0	0
17.	Orissa	1720	602	1059	23	0
18.	Rajasthan	340	292	24	90	0
19.	Sikkim	0	0	0	13	13
20.	Tamil Nadu	0	0	0	184	101

Sl. No.	State	Total Villages Sanctioned	Villages Completed	Ongoing villages	Total hamlets sanctioned	Hamlets completed
21.	Tripura	85	60	23	944	715
22.	Uttarakhand	671	472	146	147	34
23.	Uttar Pradesh	284	98	18	223	86
24.	West Bengal	1201	1177	24	9	2
25.	Goa				19	0
Total		**10120**	**7286**	**2184**	**2640**	**1874**

Notes

170 villages in Assam, 114 villages in Chhattisgarh, 20 villages in Jharkhand, 4 villages in Karnataka, 19 villages in Madhya Pradesh, 3 villages in Maharashtra, 14 villages in Meghalaya. 59 villages & 9 hamlets in Orissa, 24 villages in Rajasthan, 2 villages in Tripura, 53 villages in Uttarakhand, and 168 villages in UP and 13 hamlets in Karnataka, 161 hamlets in Tripura and 51 hamlets in Tamil Nadu have been cancelled by the State Governments as they were taken up for grid electrification.

Repair and Maintenance of the systems installed under Remote Village Electrification Programme: Under the provisions of the Remote Village Electrification Programme, maintenance and long-term sustainability of installed systems was primarily the responsibility of the concerned state governments. The state governments also undertook to provide funds and ensure replacement of batteries and other major maintenance expenditures as and when required. The CFA sanctioned by the Ministry includes the cost of 5 years Annual Maintenance Contract with the suppliers. In addition, a set of suggestions for long term sustainability of SPV home lighting systems had been issued to the state implementing agencies. Training of local youth in O&M, formation of village committees, collection of a minimum user charge etc, were some of the other strategies proposed by the Ministry.

The Ministry provided additional financial support for organization of training of beneficiaries and awareness camps. The Ministry also insisted that the implementing agencies should ensure setting up of service centers by the vendors for each around 1000 households.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (x)]

Kerosene is consumed widely in the rural & semi-urban areas of the country towards lighting & cooking purposes. The Government of India is also providing subsidy for the purchase of kerosene, but a major portion of this subsidized kerosene is pilfered and sold in the black market. The Committee, therefore, are of the opinion that Government must make available solar lanterns & solar 'chullahs' to the rural poor and thereby discourage the use of subsidized kerosene. The subsidy which Government is giving on kerosene would be enough to fund this ambitious programme & therefore no additional resources would be required. The Committee are of the considered view that this may be taken up as a pilot project in certain districts.

Reply of the Government

To promote Solar lanterns, the Ministry is providing subsidy to individual beneficiaries @ 30% of lantern's cost limited to Rs.81/W_p for lanterns distributed through State Nodal Agencies and @ 40% of the cost limited to Rs.108/W_p for lanterns distributed through NABARD. During 2011-12, 78,900 nos. of Solar Lantern were distributed in different states in the country.

The Government is also providing 30% subsidy for promoting Solar Cookers in the country including rural areas. The Cookers are distributed through State Nodal Agencies as well as other accredited channel partners - including manufactures and NGOs. During 2011-12, subsidy was sanctioned for a total of 16,100 nos. box type solar cookers and 1,980 nos. dish-type solar cookers in few states (Madhya Pradesh, Himachal Pradesh, Gujarat, Orissa, J&K and Uttarakhand) where the programme is being implemented.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (xii)]

The Committee while making a note of various Research & Development activities being undertaken under the aegis of the Ministry are of the firm view that renewable energy should be made available to the masses at an affordable price. In other words the transition from the laboratory to the market must be smooth & swift. As regards solar energy, the Ministry has expressed hope to bring down the costs steadily and achieve grid parity by the year 2022. International Cooperation & R&D in renewable energy field have been underway with the signing of memoranda/agreements with 18 countries, as well as various externally – aided projects. The Committee, while appreciating such initiatives, feel that the Government must encourage innovation to develop indigenous technology in this field. The Committee also recommend that the Government should enhance funding towards Research & Development in a time bound manner, so that setting up of commercial plants to produce renewable energy could be materialized.

Reply of the Government

Under JNNSM, the Ministry has a comprehensive R&D policy to support project proposals from various research organizations, in the public as well as private sector. The emphasis of the policy is on result oriented research involving industry with a view to enhance reliability and efficiency of the systems and devices and develop newer materials which can lead to cost reduction in future. Thrust areas, identified in consultation with the experts, have been posted on MNRE website. In order to strengthen R&D programme for achieving targets under Mission, the following is submitted:

i) Constitution of Project Monitoring Committees comprising subject area experts which visit the projects once in about six months and closely interact with the investigators of the project to see status of progress of implementation. These Committees are also empowered to suggest any mid-course corrections in the project configuration, if required.

ii) The Ministry has also constituted Solar Energy Research Advisory Council under the chairmanship of Dr. Anil Kakodkar and having eminent scientists as members with a view to advice the Ministry on various technology related matter and oversee the strategy taking into account the on-going projects, availability of research capabilities and resources, international technology trends and possibilities of international collaboration.

In order to create indigenous capabilities and capacity, the Ministry has substantially enhanced budget estimates for R&D.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

CHAPTER – III

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

Observation/Recommendation (Sl. No. 3, Para No. 6.3)

The Committee have learnt that as per the report of the 17th Electric Power Survey (EPS), the demand of electrical energy in the country is likely to be around 2,18,209 MW for 2016-17 and 2,98,253 MW for 2021-22. These estimates show that the projected demand will be straightway doubled from 1,52,746 MW in 2011-12 in the next five years which requires a capacity addition of more than 1 lakh MW in the 12th Plan.

The Committee are of the considered view that the findings of the Power Survey must be incorporated into the policy formulations. Although the Ministry had worked out the requirement of capacity addition of 1,07,000 MW during 12th Plan to meet the projections made in the said survey, the Committee have serious doubts about achievement of the same, keeping in view the downward revision of the capacity addition targets of the 11th Plan. As power projects have a high gestation period, the Committee feel that capacity augmentation programmes should be envisaged for 7-8 years period and planned in a realistic manner. The committee are also of the view that five years plans are a narrow window for the implementation of power projects and thus in order to avoid inordinate delays in execution & obviate slippages in capacity addition targets, the Government must assess reasons for under achievement of previous targets, strive to address those earnestly & then resort to long term planning.

The Committee observe that the Captive Power Plants are playing a big role in meeting country's huge demand for power, as they provide an option for generating seamless & reliable power to various industries. As on March, 2011, the total installed capacity of captive power plants was 31,000 MW. These plants do not require elaborate transmission & distribution infrastructure & provide customized solutions for power.

Therefore, the Committee are of the opinion that the setting-up of Captive Power Plants should be encouraged by the Government. The Committee further note that the Ministry hopes for a capacity addition of around 13,000 MW during the 12th Five Year Plan by Captive Power Plants and hence recommend that the Government should come out with a policy to provide for duty free import of machinery for Captive Power Plants, as it would go a long way in augmenting the power generation capacity of the country.

Reply of the Government

Government has examined trends in supply of primary consumer energy and has also considered and examined energy requirement for the year 2016-17, 2021-22, 2031-32. Power projects have long gestation. Time taken from conceptualization to operationalization may take four or more years depending on critical assessment of several factors including its impact on environment, fuel availability, bankability and availability of land and water.

Government has examined in detail reasons for less than 100% achievement of its targets of 11th Plan, and thereafter, it has been decided to carefully select projects which can be operationalized for yielding benefits during 12th Plan. The requirement of capacity addition during 12th Plan has been accordingly decided to be kept at 75785 MW and also to make up for the deficit of nearly 8400 MW of 11th Plan. This is a subject of projects in pipeline that has a timeframe of 0-8 years.

Government is encouraging setting up of captive power plants and accordingly the statutory framework has done away with the requirement of approval/clearance of Ministry of Power and Central Electricity Authority for setting up a captive generation unit. The law also ensures non-discriminatory open access for transmission of electricity generated from a captive generating plant to the destination of its use subject to availability of transmission capacity. Captive power plant can also establish and maintain dedicated transmission lines. There is no proposal at present for allowing duty free import of equipment for captive plants.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 5, Para No. 6.5)

The State Electricity Boards (SEBs) have been unbundled into three distinct entities viz. Generation, Transmission & Distribution. Also with the enactment of the Electricity Act, 2003, these entities are supposed to be monitored and regulated by independent State Electricity Regulatory Commissions (SERC). Still, the State Governments play a predominant role indirectly, by virtue of providing funds to the SERCs. Moreover, many SERC Members in the State are former employees of the SEBs that they are now expected to regulate, independently. In such cases, SERCs are weakened since inception, which allows large State utilities to remain unresponsive to their regulations. The above-mentioned issues stem predominantly from a fundamental structural flaw in the current operational and regulatory structure of the power sector. Since the reforms in the sector have progressed only to the extent of unbundling and establishing regulatory bodies without actually changing ownership, the effectiveness of the regulator to regulate the utility (which is another arm of the Government) is obviously limited. The policy maker, the regulator and the utility are all different parts of the government. The Committee, therefore, recommend that there should be operational autonomy for the utilities, and functional & financial autonomy for the SERCs, which can be ensured by debarring employees/ex-employees of the SEBs to shift from one authority to the other in the same sector. Besides, as some States are still in the process of reorganizing their SEBs, the Committee desire that the Government should issue an advisory to all State Governments on this issue.

Para No. 6.5 of 13th Report of EC (15th Lok Sabha)

Reply of the Government

Section 131of Electricity Act 2003 provides for mandatory transfer of property, interest in property, rights and liabilities belonged to the State Electricity Board, to the State Government on such terms as may be agreed between the State Government and the Board for the purpose of re-vesting the same in the Government Company or in a company or companies in accordance with the transfer scheme.

Government of India has already taken initiative for reorganizing the State Electricity Board into separate entities of Generation, Transmission and Distribution segments with the purpose of making them self-sustaining and for the compliance of Electricity Act, 2003. The matter has also been taken up with States at highest level in writing and also in the Power Ministers Conferences from time to time, as result of which 18 SEBs out of 21 SEBs, have been reorganized. However, 3 states namely Bihar, Jharkhand and Kerala have not yet reorganized their SEBs. The extension has been granted by Government of India to them from time to time under the proviso to section 172(a) of the Electricity Act 2003.

As regard selection of members/chairperson, financial and functional autonomy of SERCs, it is mentioned that in order to ensure fair & transparent selection to the post of Chairperson/Member of SERCs, Section 85(1) of the Electricity Act, 2003 provides for constitution of a Selection Committee by the State Governments to be headed by a retired judge of the High Court. Further as per proviso to Section 89(2) of the Act, the Salary, allowances and other terms and conditions of service of the members, shall not be varied to their disadvantage after appointment.

Further Section 89(5) of the Act provides that "Any member ceasing to hold office as such shall

(a) not accept any commercial employment for a period of two years from the date he ceases to hold such office; and
(b) not represent any person before the Central Commission or any State Commission in any manner.

Explanation. - For the purposes of this sub-section "commercial employment" means employment in any capacity in any organisation which has been a party to the proceedings before the Appropriate Commission or employment in any capacity under, or agency of, a person engaged in trading, commercial, industrial or financial business

in electricity industry and includes a director of a company or partner of a firm or setting up practice either independently or as partner of a firm or as an advisor or a consultant.

Section 103(1) of the Act provides for establishment of separate fund by the State Govt. to be called as Electricity Regulatory Commission fund. The Source of the fund will be-

(a) any grants and loans made to the State Commission by the State Government under Section 102;
(b) all fees received by the State Commission under this Act;
(c) all sums received by the State Commission from such other sources as may be decided upon by the State Government.

(2) The Fund shall be applied for meeting –
(a) the salary, allowances and other remuneration of Chairperson, Members, Secretary, officers and other employees of the State Commission;
(b) the expenses of the State Commission in discharge of its function under Section 86; and
(c) the expenses on objects and for purposes authorised by this Act.

(3)The State Government may, in consultation with the Comptroller and Auditor-General of India, prescribe the manner of applying the Fund for meeting the expenses specified in clause (b) or clause (c) of sub-section (2).

As such there are sufficient provisions in Electricity Act 2003 for functional and financial autonomy of the SERCs and fair & transparent selection to the post of Chairperson/Member of SERC.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (vii)]

The Committee also strongly recommend that solar photovoltaic plants should be installed on the rooftops of all the public buildings in Urban and Rural areas, particularly in the Primary Health Centres (PHCs) and Panchayat Bhawans. The Ministry of New & Renewable Energy should urgently take up this matter with the Ministries of Urban and Rural development as this would help the Government to save a huge amount towards the cost of fuel for diesel gensets being run in various PHCs & Panchayat Buildings. The mobile towers using diesel gensets can also be converted into solar power utilizing entities. It would also stop the obnoxious practice of siphoning-off the diesel meant for the gen sets in the black market. Besides, the initial comparatively high installation cost of a PV Plant is quiet justifiable, vis-à-vis the cost incurred towards the fuel expenses.

Reply of the Government

The Ministry has sanctioned a number of projects for installation of standalone solar photovoltaic power plants on PHCs, CHCs, hospitals, police stations, jails, guest houses, schools, colleges, universities, educational institutions, tribal hostels, panchayat buildings, common service centres for meeting the electrical requirement where grid is either not available or very erratic. Some of these plants have been installed and a number of these systems are under various stages of installation in different parts of the country. Since the cost of the photovoltaic power plants is high compared to the alternatives, it can only meet small requirements of electricity in isolated places where the supply of electricity is very erratic. It cannot be made mandatory by the Ministry to be installed on all the Government buildings as the initial capital expenditure is very high. The existing scheme of the Ministry has provision for subsidy of 30% of the project cost limited to Rs.81/W_p in General Category States. Arranging balance cost of the project is difficult for the States. In Special Category States like North-Eastern States, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttarakhand, the Ministry provides 90% of the project cost. For these States mobilizing 10% of the project cost from their resources is difficult. The battery also needs replacement after a period of 5/6 years, which requires huge expenditure.

During 2010-11, the Ministry sanctioned installation of stand-alone SPV power plants at 200 nos. of telecom towers of private companies in Bihar (100 nos.) and Uttar Pradesh (100 nos.). Of these, 184 systems have been installed. Another project for installation of SPV power plants at 100 telecom towers in 11 States was sanctioned to BSNL. These plants are under different stages of installation. Availability of shadow free area close to telecom tower for installation of solar panels is, however, a general constraint. Safety and security of solar PV power plant also is an issue with telecom tower service providers.

Ministry of New and Renewable Energy
(OM No. F.No. 8/5/2010-P&C dated 22-6-2012)

CHAPTER – IV

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

Observation/Recommendation (Sl. No. 2, Para No. 6.2)

The Committee note that the capacity addition target for the 11th Plan was fixed at 78,700 MW which was reduced to 62,374 MW by the Planning Commission following the mid-term appraisal of the plan. Against this, till 31.10.2011 only 41,963 MW of the capacity has been commissioned. The Committee are aghast to note that only about 67 per cent of the scaled down target has been met in the last four years. Though a number of steps have been taken by the Ministry to meet the target of the 11th Plan including introduction of a New Accountability System, yet the Ministry of Power has apparently further reduced the Plan target to around 52,000 MW only. In the opinion of the Committee, monitoring the officials and engineers handling power projects and holding them accountable for lapses should have been in place much earlier. The Committee are apprehensive as to whether within the remaining period of the 11th Plan period, it would be possible to achieve even the reduced target by the Ministry of Power. Besides, slippages in the 11th Plan target would definitely spillover into the 12th Plan.

The Committee, therefore, are of the view that setting the target of 78,700 MW for the 11th Five Year Plan was completely unrealistic. The Committee deplore the fact that the Government had initially set unrealistic targets, then reduced it at the Mid-term appraisal stage. The Committee strongly recommend that the targets for the Five Year Plan should be set up after doing a scientific analysis and by a real time assessment of all the factors involved in the construction of power plants, the limited coal supply etc., as well as the analysis of the delay-causing issues during the 11th Plan. It is only when the targets are realistic that the slippages will be minimum. The Committee, therefore, strongly recommend that the Central Electricity Authority, which projects targets, may carry out necessary studies to prepare a realistic blueprint of the 12th Plan targets.

Reply of the Government

The Capacity addition targets are recommended by the Working Group on Power after incorporating the realistic assessment of Central Electricity Authority, which is the technical wing of the Ministry of Power. Chairman CEA is also a Member of the Working Group.

The capacity addition requirement for a Plan period is based on the studies carried out to determine the capacity addition required to meet the projected demand for electricity.

Planning Commission had fixed a capacity addition target of 78,700 MW during 11th Plan. At the time of setting of the target, this capacity was considered realistic for giving benefits during the 11th Plan. However, as per Mid-Term Appraisal (MTA) of Planning Commission in 2009, capacity addition target during 11th Plan was revised to 62,374 MW. This revision was necessitated after review of the status of the various power projects. Ministry of Power has not further reduced the Plan target to around 52,000 MW.

Capacity totaling to 54,964 MW was commissioned during 11th Plan, which is 88.1% of the mid-term appraisal target of 62,374 MW. As against the original target of 15,627 MW hydro power the realization was 5,544 MW. Similarly against the target of 3380 MW nuclear power the realization was only 880 MW. Many of the hydro and nuclear projects had to deal with evolving sentiments of local people.

In spite of strenuous efforts made, some projects of 11th Plan did slip on account of exogenous/ endogenous factors some of which are listed below:-

(i) Local issues like various demands and apprehensions of local people

(ii) Environmental issues

(iii) Contractual issues

(iv) Delay in supply and erection

(v) Geological surprises like poor geological strata, formation of cavities,

(vi) Natural Calamities like flood, earthquake etc.

The above mentioned factors are usually encountered at the time of actual execution of work and it is difficult to anticipate the same at the time of target fixation.

As per the Report of Working Group on Power for 12th Plan, considering the requirement of capacity addition in the 12th Plan, capacity addition of 75,785 MW comprising 9,204 MW Hydro, 63,781 MW Thermal and 2,800 MW Nuclear is proposed. All the projects totaling to 75,785 MW have been firmed up based on a scientific analysis and status of implementation of the projects at present. These projects have all the requisite inputs/clearances in place, and therefore have a high degree of certainty of materializing during 12th Plan. Issues pertaining to fuel i.e. availability of coal/gas, which may impact the 12th Plan capacity addition, have been identified and are being attended to at the highest level in the Government.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 6, Para No. 6.6)

The Government have opened up the power sector since 1991, and the investment measures were further liberalized by coming into force of the Electricity Act, 2003. Since the advent of economic reforms in India, Foreign Direct Investment (FDI) has played a big role in stimulating economic activity. The Committee note that the cumulative FDI inflow in the power sector from April 2000 to December 2009 was US $ 4,448 million. In the opinion of the Committee, it is not commensurate with the requirements of the power sector. The estimated fund requirement for power sector during XIth Five Year Plan was nearly Rs. 11 lakh crore. With the 12th Plan scheduled to start soon, the fund requirement for this sector is set to rise manifold. The Committee, therefore, recommend that in order to attract greater FDI inflows, the policy regime in the power sector should be further liberalized. The Committee would also like to be apprised of the blueprint, if any, made for the Government's future strategy on the matter.

Reply of the Government

As per extant policy, Foreign Direct Investment (FDI) up to 100% is permitted subject to the provisions of the Electricity Act, 2003, under the automatic route, for:

5. Generation and transmission of electric energy produced in hydro electric, coal/lignite based thermal, oil based thermal and gas based thermal power plants.
6. Non-Conventional Energy Generation and Distribution.
7. Distribution of electric energy to households, industrial, commercial and other users and
8. Power Trading.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation [Sl. No. 10, Para No. 6.10 (ii)]

The issue of pilferage of coal & alleged activities of 'coal mafia' engaged serious attention of the Committee during their deliberations with the Ministry of Coal. The Committee also noticed that the Ministry was rather unwilling to acknowledge the severity of the problem. The Committee are pained to note that even the Ministry's written replies on this issue were quite evasive and failed to specify the quantum of coal stolen and losses incurred on account of theft/ pilferage of coal. The Committee are of the view that the Ministry and various coal companies can not simply wash off their hands by arguing that maintenance of law & order is a State subject. In the opinion of the Committee , a substantial portion of coal is pilfered due to lack of vigil & proper oversight on the part of the coal companies too. The Committee are convinced that certain unscrupulous elements within the system are hand-in- glove with the 'coal mafias' which needs to be probed to fix accountability on the erring officials. The measures being taken by the coal companies to prevent illegal mining of coal need to be effective to show desired improvement in the current situation.

In this scenario, the committee strongly recommend that the reality of illegal activities of coal pilferage in coal mines and coal trading areas must be acknowledged and dealt with sternly at the earliest by the Government.

The Committee also recommend that an independent audit of coal production& actual dispatch should be carried out on a quarterly basis.

Reply of the Government

The subsidiary-wise information is as under:

Company	omments
ECL	The total command area is spread over seven districts of two states, i.e. West Bengal & Jharkhand operates 88 UG Mines and 17 OCP under 14 areas. The most of the mines located within villages. The stock yards and sidings are the main places which are prone to theft/pilferage of coal and transportation rote from stock yard to siding. The company engaged Departmental Security Personnel -1857 Nos, CISF-940 Nos. and DGR sponsored agencies – 2109. For patrolling duty so as to control illegal mining as well as theft of coal and outsourcing patches, camps of CISF have been established at different location. The CISF parties made surprise raids and check on illegal mining as well as movement of coal. At all theft/pilferage prone places, the security arrangement has been made. Interaction jointly with CISF and Police Authorities have been made regularly to review the situation and make remedial actions.
BCCL	The following steps havebeen taken to curb the illegal mining – (ii) conducting raids/patrolling at sensitive areas jointly with CISF/Internal Security and State Administration, (ii) Lodging FIRs with the local Police Station wherever such activities come to notice, (iii) Whenever any site is identified, prone to illegal mining, immediate steps are taken to fill the sites by Dozing, Blasting etc. so as to prevent the access to the exposed openings, (iv) A Task Force already exists, constituted by DC, Dhanbad to prevent illegal mining. Meetings of Task Force are also held to review the issues.
CCL	To check pilferage of coal in and around command areas by the internal security and other security arrangement vis-à-vis State Home Gurads,

	DGR, CISF contingent are deployed. A high power committee has already been constituted by State Authorities, Deptt. of Home Affairs, Govt. of Jharkhand at State level as well as District level. Measures are taken to identify the points of theft and pilferages of coal from coal yards, sidings. The following steps are being taken to check theft/pilferage of coal. 1. Check posts have been erected at vulnerable points. 2. Most of the coal depots have been fenced with barbed wire. 3. Frequent surprise checks/raid is conducted by security team periodically with District Police Force to prevent coal theft/pilferage. 4. Regular and intensive patrolling. 5. Strengthening of internal security by deploying 1058 nos. of DGR sponsored Security, 672 Nos. of State Home Guards and 1368 Nos. of CISF personnel apart from 2060 nos. of Company's Security Personnel. 6. System of weighment with challan has been introduced while transporting coal from one point to another. 7. Liaison with district authority is maintained and review meetings are arranged every month, with concerned DC to curb illegal mining theft/coal pilferage. 8. Authorized loading inspector and weighbridge clerks are posted at all the Railway Sidings for monitoring the loading and dispatch arrangements. 9. Security guards are posted round the clock in all the railway sidings. 10. Effective liaison is also maintained with State Administration and Police for maintain law and order in the respective Railway Siding and to check the coal pilferage / illegal trading.
SECL	There are no major law & order problems which affect production and supply of coal. Regular co-ordination and liaison is carried out with State authorities and Police for security of coalfields. There are no reports of coal mafia activities in SECL There are no reports of illegal mining of coal in leasehold areas. Also there is no large scale theft/pilferage of coal and theft/pilferage of coal has been reduced days-after days.

NCL	There is no law & order problem reported in NCL so far. Adequate security arrangements are made available for guarding vulnerable points. The following steps have been taken to curb the menace. – ➢ Check posts have been established at he vulnerable points; ➢ Intensive round the clock patrolling by security with the help of local police; ➢ A system of Internal Intelligence collection under the leadership of Security Incharge of projects and at corporate level by GM(Security); ➢ Close liaison is maintained with local Law & Order authorities to track the criminals. Also periodic meeting is done with the Law & Order Authorities.
MCL	No major law & order problem for which production and supply of coal is being affected. There is an existing practice that the regular interaction/ meetings are being held between Management and State Govt. authorities of different levels to ensure preventive/proactive measures to resolve various issues pertaining to law & order. There is no illegal mining in command area and no theft of coal is going on large scale through Mafias/Smugglers or Un-social elements. The following steps are being taken to eradicate/minimize the pilferage/theft of coal in the command area. • Regular and intensive patrolling is being carried out by departmental security personnel and also with the local Police. • Surprise checks are being carried out frequently to find out if there is any illegal activity in the command area, particularly at loading points, weigh bridges and at entry/exist points. • All the security check posts and Railway siding have been strengthened. • To further upgrade the existing security system and to prevent losses of Co's property due to theft CISF is being inducted in MCL.
WCL	As per records available, there is no coal mafia operating in WCL

Coal India Limited has reported that audit of coal production is done by measuring coal stock as per " New Code for Uniform System of Maintenance, Control and Verification of Coal stock" in all mines of Coal India Limited on regular basis in the following manner:-

(v) Monthly measurement of coal stock is carried out by colliery surveyor,

(vi) Quarterly measurement is carried out by the coal stock measurement team constituted at area level,

(vii) Six monthly measurement is carried out by coal stock measurement team constituted at subsidiary company level and

(viii) Annual measurement as well as check measurement is carried out by coal stock measurement team constituted at CIL.

Ministry of Coal
(OM No. 54016/54/2011-CPD dated 12th October, 2012)

Observation/Recommendation (Sl. No. 13, Para No. 6.13)

The Committee have learnt that among various parameters to measures the efficiency of Thermal Power Plants, Plant Load Factor (PLF) is most important, which measures the average load to the installed capacity of a power plant. The PLF of thermal units depends on a number of factors such as vintage of the Unit, forced & planned outages, availability of required quality & quantity of fuel etc. From the figures submitted to them regarding PLF of Central, State and Private Power Plants in the last 3 years, the Committee note that the PLF of plants in the private sector is between 85 to 91 percent which is more than the Central Sector thermal units where the PLF has remained in 84 to 86 percent bracket. In this backdrop the Committee feel that the Government should strive to raise the PLF of their thermal power plants. Wherever it is not possible to achieve these figures due to the vintage of the units, fresh Renovation & Modernization work should be initiated. The Committee also recommend that Renovation & Modernization works should be carried out within a stipulated time, to

avoid forced outages. Further, Life Extension (LE) works should be carried out only in those units which have the viability of running smoothly in future.

Reply of the Government

(i) The Renovation &Modernization (R&M) programme is primarily aimed at generation sustenance and overcoming problems arising due to:

- Generic Defects.
- Design Deficiencies /Modifications.
- Obsolescence of Equipments/systems.
- In adequacies due to Poor quality of Coal.
- Change in terminal parameters with reference to design.
- Stringent environmental conditions.
- Safety requirements.

(ii) R&M works are generally carried out after 1,00,000 hours of operation by thermal power plants. Under Life Extension (LE) programme the useful life of the thermal units is increased by another 15 to 20 years. Life Extension activities are undertaken after 25 years of operation. There is need to check the remaining life of the components after about 20 years of life or 1,60,000 hours of operation lest it may result into serious failures. A detailed condition assessment along with performance evaluation of various systems / sub-systems is carried out to identify the modifications / replacements required to enable plant operation for a longer period so that during the extended life the plant operates efficiently and delivers the rated or higher capacity i.e. uprating with improved heat rate.

(iii) Based on discussions held with various utilities, the document "National Perspective Plan (NPP) for R&M and Life Extension of Thermal Power Stations up to the year 2016-17" was prepared by CEA in December 2009. Also, the guidelines for R&M/LE works of coal/lignite based thermal power stations had been revised.

(iv) Out of 53 units (7318 MW) for LE works and 76 units (18965 MW) for R&M works planned for 11th Plan, LE works in 13 units (1291 MW) and R&M work in 59 units (14855 MW) were completed during 11th Plan period.

(v) During 12th Plan LE works has been identified on 42 units (10672 MW) in Central Sector comprising 35 units (9202 MW) of NTPC, 4 units (840 MW) of DVC and 3 units (630 MW) of NLC. During 12th plan R&M works has been identified on 20 units (4341 MW) comprising 11 units (4050 MW) of NTPC and 9 units (291 MW) of NEEPCO.

Ministry of Power
(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (v)]

In so far as solar energy is concerned, the Committee have learnt that the Government has embarked upon an ambitious Solar Mission of deploying 20,000 MW of grid connected solar power by the year 2022. In this regard, the Committee note further that Direct Normal Irradiance (DNI), which is the amount of solar radiation received per unit area by a surface that is always held perpendicular (or normal) to the rays that come in a straight line from the direction of the sun at its current position in the sky, is considered to be an indispensible tool in proper assessment and full utilization of the solar potential in any region. The Committee are dismayed to note that despite the ambitious JL Nehru Solar Mission, the Government is yet to prepare a complete DNI map covering the entire country that would make identification of high potential sites much easier. In this connection the Committee recommend that the Government must urge the Centre for Wind Energy Technology (CWET), Chennai to expedite the project relating to the DNI map of India on an urgent basis. The Committee also recommend that the Government should take initiative to prepare a high resolution Renewable Energy map of India.

Reply of the Government

DNI is one of the critical inputs for ascertaining the techno-economic feasibility of any solar power project using concentrating collectors. It can be estimated to a fair

degree from the data normally recorded by metrological department and facilitate initial identification of potential sites. However, DNI is a strong function of atmospheric turbidity and can vary in future at a given site depending on progress of urbanization and industrial activity in the region.

At present, 45 radiation observatories of IMD are equipped to monitor global solar radiation, while only a few measure DNI. 51 stations of CWET are additional where DNI as well as global solar radiation is monitored.

As a part of cooperation between National Renewable Energy Laboratory (NREL), USA and Solar Energy Centre of the MNRE, high-resolution solar resource maps have been prepared based on satellite data. CWET is also working on developing solar atlas based on actual measurements, and it is expected that preliminary draft of solar atlas would be ready in about one year time.

Ministry of New and Renewable Energy
(OM F.No. 8/5/2010-P&C dated 22-6-2012)

CHAPTER V

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

Observation/Recommendation (Sl. No. 4, Para No. 6.4)

The funds required for the XI Five Year Plan towards capacity addition, transmission, distribution and other projects was estimated as a whopping Rs. 10,59,515 crore. It would be a monumental task to arrange for such large funding, therefore, it is imperative for the Government to streamline the funding procedure for the Power Sector. In this context, the Committee note the recommendations of the Sub-Committee of Group of Ministers on financial issues to the Power Sector and would like that its recommendations should be taken on board by the Government at the earliest. The Committee understand that another High-Powered Committee consisting of representatives of various financial institutions and banks also exists to deliberate on the issue of availability of finance to the Power Sector. The Committee recommend that the recommendations of the afore-mentioned Committees should be seriously considered and implemented by the Government without any further loss of time**.** The progress in this regard should be submitted to the Committee at the Action Taken stage.

The Committee further note with displeasure that a National Electricity Fund (NEF) has been set-up by the Government for loans to be disbursed for Transmission & Distribution schemes as electricity distribution has been identified as the 'weakest part' in the Country's Power Sector due to heavy Aggregate Technical & Commercial (AT&C) losses by the Planning Commission in their mid-term appraisal. Such undesirable situation has led to the inability of most of the State Electricity Boards to raise funds or to do so only at very high rates of interest. The Committee also note the Ministry's expectation that the new fund will address this issue. The Committee, however, are aware that the Planning Commission has decided to get the NEF Scheme reformulated with two key changes, i.e. instead of PFC (Power Finance Corporation) and REC (Rural

Electrification Corporation) only, the loans would be disbursed by commercial banks too, and secondly, in the initial two years, only the distribution schemes would be targeted. The Committee would like to know, as to how apart from the current status of the reformulated NEF, the amount of Rs. 227.64 crore provided to the Ministry for NEF in the Annual Plan 2010-11 has been disbursed. The Committee also desire that the Ministry of Power should submit a detailed note on the modalities of the National Electricity Fund so as to enable them to go further into the issue.

Reply of the Government

A Sub-Committee of the Group of Ministers on financial issues of power sector was constituted by the Chairman of the GoM on 31st August, 2007 under the Chairmanship of Deputy Chairman, Planning Commission.

The Sub-Committee has submitted its Interim Report on 19th February, 2009 and final report on 6th October, 2010. The final report along with the interim report of the Sub-Committee has since been considered and adopted by the Group of Ministers in its meeting held on 29th October, 2010.

State related recommendations have been referred to State Governments for redressal at State level. Tax related proposals have been referred to Ministry of Finance.

Other recommendations were taken up in the form of CCI Note. It has been decided that Finance Ministry, Chairman, Planning Commission and Ministry of Power jointly discuss the matter first. The points raised by Ministry of Finance are under examination by the Ministry of Power in consultation with CEA, PFC and REC.

Cabinet Committee on Economic Affairs (CCEA) has approved the setting up of National Electricity Fund (Interest Subsidy Scheme) in its meeting held on 13th December, 2011 to provide interest subsidy aggregating to 8466 Crs on loan

disbursement amounting to 25,000 Crs to the State Power Utilities – both in public and private sector, to improve the distribution network. Guidelines for the scheme have been issued. A Steering Committee under the Chairmanship of Secretary (Power) has been constituted for sanctioning and monitoring of the Projects. Rural Electrification Corporation (REC) is the Nodal Agency to operationalize the programme. Since the scheme was approved on 13th December 2011, no disbursement could be made in F.Y. 2010-11 and 2011-12.

Ministry of Power

(OM No. 13/11/2012-OM dated 7th September, 2012)

Observation/Recommendation (Sl. No. 11, Para No. 6.11)

The Committee observe that there are multiple environmental concerns related to the coal sector and much attention has not been given by the Government to this aspect. Most of the coal reserves in India are situated in highly forested and tribal inhabited areas where the mining activities is perceived as a major challenge to environmental conservation and rehabilitation measures. The Committee are aware that a number of coal projects are facing difficulties due to delays in getting environmental clearances. According to the Ministry of Coal, in order to translate indicated reserves into proved category, detailed drilling of the particular land must be carried out. During oral evidence, the Committee were informed that the Ministry of Environment & Forests has serious reservations about sinking of boreholes in the forest area to ascertain the quality and quantity of the coal reserves. The Committee have learnt that though more boreholes per square kilometers were allowed by the Environment Ministry on a selective basis, it could not settle the issue permanently. The Committee feel that technical procedures cannot be compromised in such matters to save the huge cost and manpower involved in the coal mining activity and thus recommend that Government must allow requisite 15-20 boreholes per square kilometer, in order to confirm newer coal reserves and to expedite the process of bringing it to production stage.

The demarcation of the forest areas into 'Go' and ' No Go ' by the Ministry of Environment & Forests have generated a lot of debate in the recent past. While noting that the Ministry of Environment has relented a bit in its classification of 'No Go' areas and has allowed to run projects in these areas, the Committee feel that the environmental conservation vis-à-vis development can be balanced by a careful yet practical approach of both the stakeholders. The Committee deprecate any attempts of Environmental dogmatism which can jeopardize vital decisions. The Government needs to come out with a comprehensive policy on granting environmental clearance to the projects in the forest areas. The Committee desire that the Government should examine these issues sincerely. They would also like to be informed by the Ministry of Coal regarding the final decision taken in the matter at the earliest.

Reply of the Government

All out efforts to enhance exploration quantum and speed is getting affected due to non-availability of statutory prospecting permission for drilling in forest areas from Forest departments of States and MOEF, New Delhi. Exploration programme in number of blocks could not start due to non-availability of forest permission. In two blocks exploration work was closed prematurely. The problem will continue if the existing norm of upto 20 boreholes per 10 Km2 is not revised to 15-20 boreholes per Km2 for detailed exploration. Permissions for exploration in 21 blocks, applied under existing rules, are pending. Exploration in forest area of these blocks could not be taken up/remains incomplete .

In Sept 2009, MoEF issued a letter to conduct exploration in three Pilot Projects, namely, Bijul in Singrauli coalfield (MP), Chira North in Mand-Raigarh Coalfields (Chhatisgarh) and Baitarani East in Talcher Coalfields (Orissa) on trial basis to assess the impact of exploration on flora and fauna & again on 10.03.2010 conveying the approval of Central Government for trail exploratory drilling in same three blocks.

Local District Forest Officers (DFOs) issued permission, in May-June 2010, to carry out trial drilling in 2 blocks (Baitarani East, Orissa and Bijul, MP). Presently drilling is continuing in Baitarani East Block and Bijul block. Permission for exploration

in 3rd block (Chira North, Chhattisgarh) was received from local DFO Office in February, 2011 & drilling in this block has concluded.

1-1.5 Sq.Km.area was identified in the above three blocks and exploration completed in indentified areas of the respective blocks. Joint reports on Baitarani East block and Chira North Block have been submitted with the DFO, Angul and DFO, Korba respectively. Interim Status Report in respect of all these three blocks has been submitted to MoEF in the month of May 2011. Govt of MP has entrusted the job of impact assessment to State Forest Reach Institute, Bhopal. Joint report prepared by State Forest Research Institute , Madhya Pradesh and CMPDIL in respect of Bijul Block has been submitted to MoEF on 31.08.2012.

In the 5th meeting of the GoM held under the Chairmanship of the Finance Minister on 20th September, 2011, to consider the environmental & development issues relating to coal mining and other development projects, the GoM had accepted the recommendation to do away with the Go/No concept. Orders to this effect have been issued by MOEF on 31st August 2012.

Ministry of Coal
(OM No. 54016/54/2011-CPD dated 12th October, 2012)

Observation/Recommendation [Sl. No. 20, Para No. 6.20 (i)]

Our country is fortunate, being blessed with an abundance of sunlight, wind, water and biomass sources. The Committee feel that people in all walks of life are now more aware of the benefits of renewable energy, especially decentralized energy required in villages and semi-urban / urban centres. The Ministry of Non-Conventional Energy has the mandate to assess and promote renewable energy through solar thermal devices, solar Photo Voltaic, biogas units, small hydro power units, wind turbines etc. After holding due deliberations with the Ministry on this aspect, the Committee's recommendations are as under:

(i) Sufficient budgetary support is indispensible for carrying out any particular activity satisfactorily to the desired level. The Committee, however, observe that the budget of the Ministry of New & Renewable Energy is quite inadequate being only 0.24% of the Union Budget Estimates for 2010-11. Though the future of power sectors depends heavily on renewable energy sources, the fact that the Ministry is facing a lot of difficulties due to the budgetary constraints, was the high point of the oral evidence of this Ministry before the Committee.

The Committee believe that in view of the fact that there are huge energy disparities in the country, considerable investment in the renewable energy would give us manifold returns in the future. Such investments have the potential to improve the lives of the marginalized sections of society like rural poor, tribals & women. It would also come as a boon to the people living in remote & inaccessible areas. Therefore the Committee recommend that the budget of the Ministry of New & Renewable Energy needs to be increased to at least 1% of the Union Budget. They feel that the Ministry of New & Renewable Energy should accordingly work out the details of the requirements for Feed-in-Tariff, capital subsidy, risk guarantee, R&D, village minigrids, etc and pursue with the Planning Commission / Ministry of Finance with proper details for better allocation in next year's Budget.

Reply of the Government

During 2010-11, the budget allocation to the Ministry was Rs.1000 cr. which corresponds to only 0.26% of the actual total Plan Expenditure of Rs.3,79,029 cr.

For FY 2011-12, a total budget requirement of Rs.2275 cr. for various schemes/ programmes was projected to Planning Commission. Against this, the actual allocation by Ministry of Finance was Rs.1200 cr. which corresponds to 0.28% of the total Plan Expenditure (RE 2011-12) of Rs.4,26,604 cr.

For CFY 2012-13, a total budget requirement of Rs.2,979 cr. was agreed to at the time of Plan discussions in Planning Commission. The actual allocation BE 2012-13

has, however, been Rs.1,385 cr. The same corresponds to 0.27% of BE 2012-13 of Rs. 5,21,025 cr.

While the Ministry's would endeavor to hasten the pace of utilization of the existing allocation for the current year and seek enhanced allocation at RE stage, it will pursue with Planning Commission for a four-fold increase in its allocation at the time of Annual Plan discussions for FY 2013-14 with adequate and proper details as suggested by the Committee.

Ministry of New and Renewable Energy
(OM F.No. 8/5/2010-P&C dated 22-6-2012)

Recommendation [Sl. No. 20, Para No. 6.20 (xi)]

Power from Renewable Energy is a new frontier in the emerging market economy of energy, but the sector is beset with high cost issues, uncertainties and risks. As a result, entrepreneurs are reluctant to invest in the renewable sector. Due to incipient risks, banks are also rather un-willing to finance these projects. The Committee, therefore, recommend that a separate Risk Guarantee Fund for Renewable Energy Projects should be created out of the Clean Energy Fund without any delay. In the opinion of the Committee, the operationalization of such a fund would cover various types of technological & financial risks to the investors. The Committee are aware that such a fund, in operation in many countries, has proved to be highly successful. The corpus of the fund should be such as can meet the funding requirements of all major clean energy initiatives in the Country in future.

Reply of the Government

It is clarified that several renewable energy technologies, particularly small hydro, biomass, wind power are not new and have already reached commercial maturity, and do not projects face the same levels of issues relating to high costs, uncertainties and risks as in case of the solar power technologies now being promoted under the JNNSM. Also, the uncertainties/ risks in any specific case depend mainly by the rigorousness of

resource assessment undertaken at selected project site governing project capacity, the reliability of selected technology, the overall project design and the pattern/ sources of funding, domestic and foreign. These risks can be minimized in most cases through adequate consideration of all such factors at DPR preparation stage itself by competent consultants. The financial risks due to FOREX variations are common to all types of projects with significant foreign funding.

The government has already created the SPSF in case of the solar power projects taken up through NVVN route under phase-I of the JNNNSM. Nonetheless, the recommendation of the Committee for creation of a separate Risk Guarantee Fund for Renewable Energy Projects out of the NCEF will be forwarded for due consideration of the Ministry of Finance.

Ministry of New and Renewable Energy
(OM F.No. 8/5/2010-P&C dated 22-6-2012)

FRANCISCO SARDINHA,
Chairman,
Committee on Estimates.

New Delhi;
14 December, 2012
23 Agrahayana, 1934 (Saka)

Annexure – I

LIST OF HYDRO PROJECTS (TENTATIVE) FOR LIKELY BENEFITS DURING 12TH PLAN

S. No.	**NAME OF PROJECTS**	**DEVELOPERS**	**SECT.**	**Capacity for XIIth Plan (in MW)**
	Northern Region			
	Jammu & Kashmir			
1	Kishan Ganga	NHPC	C	330
2	Baglihar-II	PDC	S	450
	Himachal Pradesh			
3	Parbati-II	NHPC	C	800
4	Rampur	SJVNL	C	412
5	Kol Dam	NTPC	C	800
6	Kashang - I	HPPCL	S	65
7	Uhl-III	BVPC	S	100
8	Sawara Kuddu	PVC	S	111
9	Kashang II & III	HPPCL	S	130
10	Sainj	HPPCL	S	100
11	Tidong-I	Nuziveedu Seeds Ltd	P	100
12	Sorang	Himachal Sorang Power Pvt. Ltd.	P	100
13	TanguRomai-I	TanguRomai Power Generation Ltd	P	44
	Uttarakhand			
14	TapovanVishnugad	NTPC	C	520
15	SingoliBhatwari	L & T	P	99
16	PhataByung	Lanco Energy Pvt. Ltd.	P	76
17	Srinagar	AHPCo. Ltd.	P	330
		Sub total (Northern Region)		**4567**
	Western Region			
	-NIL-			
	Southern Region			
	Kerala			
18	Pallivasal	KSEB	S	60
19	Thottiar	KSEB	S	40
	Andhra Pradesh			
20	Lower Jurala	APGENCO	S	240
21	Pulichatala	APGENCO	S	120
		Sub total (Southern Region)		**460**
	Eastern Region			
	Sikkim			
22	Bhasmey	Gati Infrastructure	P	51

		Ltd.		
LIST OF HYDRO PROJECTS (TENTATIVE) FOR LIKELY BENEFITS DURING 12TH PLAN				
S. No.	**NAME OF PROJECTS**	**DEVELOPERS**	**SECT.**	**Capacity for XIIth Plan (in MW)**
23	Jorethang Loop	DANS Pvt. Ltd.,	P	96
24	Rangit-IV	Jal Power Corp. Ltd.	P	120
25	Teesta-VI	Lanco Energy Pvt. Ltd	P	500
26	Teesta-III	TeestaUrja	P	600
		Sub total (Eastern Region)		**1367**
	North-Eastern Region			
	Arunachal Pradesh			
27	Pare	NEEPCO	C	110
28	Kameng	NEEPCO	C	600
29	Subansiri Lower	NHPC	C	2000
	Mizoram			
30	Tuirial	NEEPCO	C	60
	Meghalaya			
31	New Umtru	MeECL	S	40
		Sub total (North-Eastern Region)		**2810**
	TOTAL (All India)			**9204**

	Annexure – II
Inter-regional links planned for 12th Plan and/or early 13th Plan	Capacity in MW
Between ER - NR :	
Gaya-Varanasi 765kV S/C	2100
Sasaram-Fatehpur 765kV S/C - line#1	2100
Barh-Gorakhpur 400kV D/C quad	1600
Sasaram-Fatehpur 765kV S/C - line#2	2100
Between ER - WR :	
Ranchi – WR(Bilaspur)Sipat Pooling Point 765kV S/C via Dharamjaigarh during 12th plan	2100
Ranchi- Dharamjaigarh 765kV S/C	2100
Jharsuguda -Dharamjaigarh-765kV D/C	4200
Between ER - NER :	
Bongaigaon-Siliguri 400kV D/C Quad to be LILOed at Alipurduar in 12th/13th plan	1600
Between NR - WR :	
Agra-Gwalior 765kV S/C line-1 at 765 kV(earlier at 400kV)	1000
Agra-Gwalior 765kV S/C line-2 at 765kV(earlier at 400kV)	1000
Gwalior-Jaipur 765kV S/C#1	2100
Gwalior-Jaipur 765kV S/C#2	2100
RAPP C&D- Shujalpur 400kV D/C	1000

Annexure - III

Location-wise list of ITIs adopted/ being adopted by CPSUs

S. No.	CPSU	ITI name	District	State	Existing / new ITI
1	NTPC	ITI Olpad	Surat	Gujarat	Existing
2	NTPC	ITI Pali	Korba	Chhattisgarh	Existing
3	NTPC	ITI Berhampore	Murshidabad	West Bengal	Existing
4	NTPC	ITI Begusarai	Begusarai	Bihar	Existing
5	NTPC	ITI Tapovan	Chamoli	Uttarakhand	Existing
6	NTPC	ITI Uttarkashi	Uttarkashi	Uttarakhand	Existing
7	NTPC	ITI Mouda	Nagpur	Maharashtra	Existing
8	NTPC	ITI Dhenukanal	Dhenkanal	Orissa	Existing
9	NTPC	ITI Anta	Baran	Rajasthan	Existing
10	NTPC	ITI Karimnagar	Karimnagar	Andhra Pradesh	Existing
11	NTPC	ITI Bhadragiri	Vizianagaram	Andhra Pradesh	Existing
12	NTPC	ITI Sundernagar	Mandi	Himachal Pradesh	Existing
13	NTPC	ITI Malviya Nagar	New Delhi	Delhi	Existing
14	NTPC	ITI Chenneerkara	Pathanamthitta	Kerala	Existing
15	NTPC	ITI Faridabad	Faridabad	Haryana	Existing
16	NTPC	ITI UnchaAmirpur	GautamBudh Nagar	U.P.	Existing
17	NTPC	ITI Pussore	Raigarh	Chhattisgarh	Existing
18	NTPC	ITI Naini	Allahabad	U.P.	Existing
19	NTPC	*Naktu	Sonebhadra	U.P.	New
20	NTPC	*Salakati	Kokrajhar	Assam	New
21	NTPC	*Chatra	Chatra	Jharkhand	New
22	NTPC	*Baloda	Janjgir	Chhattisgarh	New
23	NTPC	*Barkagaon	Hazaribagh	Jharkhand	New
24	NTPC	*Nabinagar	Aurangabad	Bihar	New
25	NTPC	*Solapur	Maharashtra	Maharashtra	New
26	NTPC	*Sahalwas	Jhajjar	Haryana	New
27	NTPC	*Korba	Korba	Chhattisgarh	New
28	NHPC	Reasi	Reasi	J&K	Existing
29	NHPC	Leh	Leh	J&K	Existing
30	NHPC	Uri	Baramulla	J&K	Existing
31	NHPC	Kargil	Kargil	J&K	Existing
32	NHPC	Ramban	Doda	J&K	Existing
33	NHPC	Roing (under CoE Scheme of World Bank)	Lower Dibang Valley	Arunachal Pradesh	Existing

34	NHPC	Tabarijo	Upper Sibansiri	Arunachal Pradesh	Existing
35	NHPC	Pokhra(under CoEScheme of World Bank)	PauriGarhwal	Uttarakhand	Existing
36	NHPC	Rudraprayag	Rudraprayag	Uttarakhand	Existing
37	NHPC	Tanakpur	Champawat	Uttarakhand	Existing
38	NHPC	Kanda	Bageshwar	Uttarakhand	Existing
39	DVC	Chatna	Bankura	West Bengal	Existing
40	DVC	Durgapur	Burdwan	West Bengal	Existing
41	DVC	Raghunathpur	Purulia	West Bengal	Existing
42	DVC, BHEL	KGITC, Bolpur(CoE)	Birbhum	West Bengal	New
43	DVC	Koderma	Koderma	Jharkhand	New
44	DVC	Hazaribagh	Hazaribagh	Jharkhand	Existing
45	DVC	Chaas	Bokaro	Jharkhand	Existing
46	DVC	ITC, Chandrapura	Bokaro	Jharkhand	New
47	DVC	Dhanbad	Dhanbad	Jharkhand	Existing
48	NEEPCO	Dirang	West Kameng	Arunachal Pradesh	Existing
49	NEEPCO	Haflong	DimaHasao(N.C. Hills)	Assam	Existing
50	NEEPCO	Yupia	Papumpare	Arunachal Pradesh	Existing
51	NEEPCO	Tinsukia(ITI for women)	BorguriTinsukia	Assam	Existing
52	NEEPCO	#Williamnagar	East Garo Hills	Meghalaya	Existing
53	PGCIL	Bhadrawati	Chandrapur	Maharashtra	Existing
54	PGCIL	Bargi	Jabalpur	M.P.	Existing
55	PGCIL	Buxar	Buxar	Bihar	Existing
56	PGCIL	Marhoura	Saran	Bihar	Existing
57	SJVNL	Berthin	Bilaspur	H.P.	Existing
58	SJVNL	Bangana	Una	H.P.	Existing
59	THDC	Gopeshwar	Chamoli	Uttarakhand	Existing
60	THDC	Chamba	TehriGarhwal	Uttarakhand	Existing
61	NHDC	Narmada Nagar (CoE)	Khandwa	M.P.	Existing

Appendix I

MINUTES OF THIRTEENTH SITTING OF COMMITTEE ON ESTIMATES (2012-13)

The Committee sat on Tuesday, the 11th December, 2012 from 1015 hrs. to 1100 hrs. in Room No. 52-B (Chairman's Chamber), Parliament House, New Delhi.

PRESENT

Shri Francisco Sardinha - Chairman

MEMBERS

1. Dr. Sanjay Jaiswal
2. Shri Bapi Raju Kanumuru
3. Dr. Thokchom Meinya
4. Shri Prabodh Panda
5. Smt. Yashodhara Raje Scindia
6. Shri S. Semmalai
7. Shri Jagdish Sharma
8. Shri Neeraj Shekhar
9. Shri Ganesh Singh
10. Shri Ijyaraj Singh
11. Smt. Annu Tandon

SECRETARIAT

1.	Shri A. Louis Martin	-	Joint Secretary
2.	Smt. Anita B. Panda	-	Director
3.	Dr. Yumnam Arun Kumar	-	Deputy Secretary

2. At the outset, the Chairman noted that the two newly elected Members of the Committee i.e. Shri Harish Chaudhary and Shri Mukul Wasnik, were not present and welcomed the other Members present. Thereafter, the Committee took up for consideration and adoption of following draft Reports:-

(i) Report on the subject 'Procurement and Storage of Foodgrains' pertaining to the Ministry of Consumer Affairs, Food and Public Distribution.

(ii) Action Taken Report on 13th Report of the Committee (15th Lok Sabha) on the subject 'Power Generation – Demand and Supply' pertaining to the Ministries of Power; Coal and New & Renewable Energy.

3. The Committee, then adopted the draft Report on 'Procurement and Storage of Foodgrains' subject to the following modifications:

(i) Para No. 7 of the Recommendations - To delete from line No. 18 to line No. 30 and add the following at the end of the Para:-

"The Committee feel that the poor farmers need incentive and support to grow coarse cereals which undoubtedly have high nutritive value and would urge the Government to explore the possibility of providing incentive on acreage basis to the farmers to cultivate coarse cereals in the country".

(ii) Para No. 9 of the Recommendations to be deleted.

4. Thereafter, the draft Action Taken Report on 13th Report on the subject 'Power Generation – Demand and Supply' pertaining to the Ministries of Power; Coal and New & Renewable Energy was adopted with an additional comment reiterating the Recommendation pertaining to 'Enhanced Budgetary Allocation of the Ministry of New & Renewable Energy'. The Committee emphasized that the Planning Commission should enhance their allocation to one per cent of the Union Budget during 2013-14.

5. The Committee then authorized the Chairman to finalize the said Reports in the light of modifications/additions suggested as well as the other consequential changes arising out of factual verification, if any, by the concerned Ministries and present the same to the Parliament.

6. The Committee, thereafter, proposed to undertake a study tour to Goa, Mangalore, Chennai and Port Blair from 10 to 15 January, 2013.

The Committee then adjourned.

Appendix II

ANALYSIS OF THE ACTION TAKEN BY GOVERNMENT ON THE RECOMMENDATIONS CONTAINED IN THE THIRTEENTH REPORT OF THE COMMITTEE ON ESTIMATES (FIFTEENTH LOK SABHA)

(i)	Total number of recommendations/observations	32
(ii)	Recommendations/Observations which have been accepted by the Government Sl. Nos. 1, 7, 8, 9, 10(i), 12, 14, 15, 16, 17, 18, 19, 20(ii), (iii), (iv), (vi), (viii), (ix), (x) & (xii)	20
	Percentage of total recommendations	62.51 %
(iii)	Recommendations/Observations which the Committee do not desire to pursue in view of the Government's reply Sl. Nos. 3, 5 & 20 (vii)	3
	Percentage of total recommendations	9.37 %
(iv)	Recommendations/Observations in respect of which Government's replies have not been accepted by the Committee Sl. Nos. 2, 6, 10 (ii), 13 & 20 (v)	5
	Percentage of total recommendations	15.62 %
(v)	Recommendations/Observations in respect of which final replies of Government are still awaited Sl. Nos. 4, 11, 20 (i) & (xi)	4
	Percentage of total recommendations	12.50%