



**FOURTEENTH KERALA LEGISLATIVE ASSEMBLY**

**COMMITTEE  
ON  
PUBLIC UNDERTAKINGS  
(2016-2019)**

**SIXTY SIXTH REPORT**  
(Presented on 22nd March, 2018)

**SECRETARIAT OF THE KERALA LEGISLATURE  
THIRUVANANTHAPURAM**

**2018**

FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE  
ON  
PUBLIC UNDERTAKINGS  
(2016-2019)**

**SIXTY SIXTH REPORT**

**On**

**The action taken by Government on the Recommendations contained  
in the Thirty Fifth Report of the Committee on Public Undertakings  
(2011-2014) relating to Kerala State Electricity Board, based on  
the Report of the Comptroller and Auditor General of India  
for the year ended 31-3-2006, 31-3-2007 and 31-3-2008  
(Commercial)**

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COMMITTEE ON PUBLIC UNDERTAKINGS (2016-2019)

**COMPOSITION**

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Shri C. Divakaran.

*Members :*

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Shri Sunny Joseph

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Shri P. Unni.

*Legislature Secretariat :*

Shri V. K. Babu Prakash, Secretary

Shri A. Abdul Kharim, Additional Secretary

Shri Mathewkutty G., Deputy Secretary

Smt. Deepa V., Under Secretary.

## INTRODUCTION

I, the Chairman, Committee on Public Undertakings (2016-2019) having been authorised by the Committee to present the Report on their behalf, present this Sixty Sixth Report on the Action Taken by Government on the Recommendations contained in the Thiry Fifth Report of the Committee on Public Undertakings (2011-2014) relating to the Kerala State Electricity Board Limited based on the Reports of the Comptroller and Auditor General of India for the year ended 31 March 2006, 2007 and 2008 (Commercial).

The Statement of Action Taken by the Government included in this Report was considered by the Committee constituted for the year (2016-2019) in its meetings held on 30-11-2016.

This report was considered and approved by the Committee at its meeting held on 12-3-2018.

The Committee place on record its appreciation for the assistance rendered to them by the Accountant General (Audit), Kerala during the examination of the Action Taken Statements included in this Report.

Thiruvananthapuram,  
12th March, 2018.

C. DIVAKARAN,  
*Chairman,*  
*Committee on Public Undertakings.*

## **REPORT**

This report deals with the action taken by Government on the recommendations contained in the Thirty Fifth report of the Committee on Public Undertakings (2011-2014) relating to Kerala State Electricity Board based on the Report of the Comptroller and Auditor General of India for the year ended 31 March 2006, 2007 and 2008 (Commercial).

The Thirty Fifth Report of the Committee on Public Undertakings (2011-2014) was presented to the House on 28<sup>th</sup> January, 2014. The Report contained 9 recommendations in Para numbers 9, 10, 11, 12, 19, 20, 22, 26 and 27 of which the Government furnished Action Taken Statements to all of them. The Committee (2016-2019) considered the Action Taken Statements furnished by the Government at its meeting held on 30-11-2016.

The Committee accepted the reply to the recommendation in Para Nos. 12, 19, 20, 22, 26 and 27 without remarks. These recommendations and the replies furnished by the Government form Chapter I of the Report.

The Committee accepted the replies to the recommendations in Para Nos. 9, 10 and 11 with remarks. These recommendations, the replies from Government and the remarks of the Committee form Chapter II of the Report.

CHAPTER I

REPLIES FURNISHED BY THE GOVERNMENT ON THE  
RECOMMENDATIONS OF THE COMMITTEE WHICH  
HAS BEEN ACCEPTED BY THE COMMITTEE  
WITHOUT REMARKS

Sl. No.	Para No.	Department Concerned	Conclusions/ Recommendations	Action Taken by the Government
1	2	3	4	5
1	12	Power	The Committee further recommends that appropriate steps should be initiated to identify the officials responsible for the loss and stringent action should be taken against them after fixing the liability.	It is hereby informed that the officers who arranged for storage-cum-erection insurance of Kakkad Hydro Electric Project during the period of 1988-1993 were already retired. Also most of the officers who are alleged to have delayed lodging claim and filing appeal before IRDA also retired. Even though KSEB had filed an appeal before the IRDA, for revising the compensation amount, same was also rejected. The matter was taken to the High Power Committee constituted by Government for settling disputes between Public Sector Companies/bodies,

				<p>and the committee examined the matter and directed that competent officials from Kerala State Insurance Department and KSEB may examine each claim in detail, rectify defects if possible and work out an agreeable solution within one month. Accordingly a meeting was convened and in the meeting KSID intimated that, since a resurvey has already been conducted and the second surveyor also found that asset was under insured and hence the claim cannot be considered. It is also informed that since KSID is a Govt. Department and KSEB, a Public Sector Undertakings under the control of Govt., there is no issue of misuse/loss of public money in the subject case.</p>
2	19	Power	The Committee notices that the Board had released the amount for extra	Sabarigiri Hydro Electric Project, the second largest generating station of the KSEB



			<p>work well in advance before seeking the opinion of the CEA. Though the payment made was explained to be based on the decision of the expert engineers of Board, the Committee expresses its doubt whether both Board and CEA examined the issue on the different condition in the contract as CEA objected extra payment. The Committee opines that as the decision of Board differed from the opinion of CEA, either of them have to be termed incompetent; The Committee strongly criticises the action of the Board in seeking advice from CEA after making a decision based on examination conducted by its own engineers. The</p>	<p>system having an installed capacity of 300 MW (6x50 MW) was commissioned during 1966. The machinery comprises of vertical shaft Pelton turbines and generators, both of 'Allis Chalmers, USA, who stopped manufacturing of Hydro generators and turbines. The excitation is of conventional rotating type and the Governors were cabinet actuator type. The equipment was tendered during 1960 as per the specification and technology available at that time.</p> <p>Since many of the project components have crossed their useful life span, the machines were experiencing frequent breakdowns. All the spares obtained with the units at the time of installation had exhausted and it became very difficult to procure additional spares due to the change in technology.</p>
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			<p>Committee also remarks that the advice seems to be sought due to the fear that the decision arrived at was not fair at large. The Committee recommends that before awarding extra work to the contractor the Board should seek expert advice from competent authority, whether the work intended to be done as extra will come under the ambit of original work so that unwarranted expenditure can be avoided in future.</p>	<p>Moreover, the wear and tear of the units had resulted in deterioration of efficiency of the units. All these factors forced the Board to proceed with the Renovation and Modernization (R&amp;M) of the units. While finalizing the project report and tender specifications, it was decided that only the generator of Unit # 6 need be replaced with new core and windings, since the other five units had already been rewound with 55 MW capacity consequent to some major breakdowns. Thus, only unit # 6 was uprated to 60 MW while the other five units remain with a capacity of 55 MW each. However, the turbine runners of all the six units were replaced with 60 MW runners, so that in future the capacity of remaining five units can also be increased by changing the generator winding alone.</p>
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			<p>The extra works proposal submitted by the firm was thoroughly examined by the expert engineers of KSE Board. After convincing its necessity, various levels of negotiations were also conducted with the firm for getting the rock bottom rate. Based on the report and recommendation of the Chief Engineer, Board accorded sanction to award the extra works amounting to ₹ 78, 88, 445/to M/s V.A. Tech Hydro and extra work amounting to ₹ 3,81,473/to M/s L &amp;T on 12/2004.</p> <p>When the issue of unforeseen extra works was placed for sanction, the Board desired to know the opinion of an expert from CEA, on the necessity of work and reasonability of the cost of works and accordingly the opinion of CEA was sought. The CEA team</p>
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				<p>conducted a site visit for ' examining the matter land submitted their report. According to CEA's opinion, out of the 11 extra works sanctioned by KSEB, 5 of them could not be treated as extra as the same could be carried out within original scope or by using the existing parts as such.</p> <p>The Board came to the conclusion that awarding of extra work is in the best interest of the Board and in accordance with relevant clauses in the agreement. Considering the long term perspective, the works were essential for the trouble free operation of the machines. Thus ₹ 51.08 lakh cannot be considered as loss due to unwanted extra work but only a payment for the extra work carried out by the contractor as per contract which also improved the overall performance and efficiency of the</p>
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				<p>machines. Considering the total expenditure incurred for the RMU of Sabarigiri HEP (₹ 102.63 Crore including extra works), this objected amount is only 0.5% . It may be noted that due to the early decision taken by KSEB before getting the expert opinion of the CEA , the spillage of the reservoir was avoided during the year 2005-06, which resulted in saving of crores of rupees.</p> <p>The matter was referred to CEA only for getting a second Opinion for future guidance for other machines.</p>
3	20	Power	<p>The Committee recommends that liability should be fixed upon the officers responsible for the loss sustained by the Board and details regarding the action taken should be intimated to the Committee without delay. The Committee</p>	<p>The Board as per the Order dated 22-1-1999 decided to arrange the work of Renovation, Modernization and Uprating of Sabarigiri HEP by inviting global tender and sanction was accorded for an estimate of ₹ 112 crore as per the Order dated 1-9-2000. Subsequently, as per the</p>

			<p>also recommends that should be furnished with a detailed report regarding the reasons for the unwarranted haste in awarding the extra work before ascertaining the reasonableness of the work and additional expenditure.</p>	<p>BC (FB) No. 439/2002 dated 30-3-2002, the work was awarded to the lowest bidder M/s V.A Tech Hydro, Austria for ₹ 94.64 crore. The Chief Engineer (O &amp; M) Hydro executed the agreement on 28-7-2002. The completion period of contract as per the agreement was 48 months from the date on which the contract became effective. The contract became effective on 27-1-2003 (date of opening of letter of credit in favour of the contractor). The scheduled date of completion was on 26-1-2007.</p> <p>M/s V.A Tech started site inspection on 25-2-2003. While the site inspection was on around, a fire accident occurred at Moozhiyar Power house on 7-3-2003. As so many statutory official procedures (investigation by concerned departments like Inspectorate of</p>
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				<p>Factories 7 Boilers, Electrical Inspectorate and Police Department etc.) are to be completed consequent to the fire accident, the work was in a suspended stage from 7-3-2003 to 25-7-2003 ie; more than 4 months were lost from the schedule without any work.</p> <p>On completion of the formalities, the units # 6 &amp; 5 were handed over to M/s V.A Tech on 25-7-2003 for the RMU works. As per the agreed schedule, the time period for completing the RMU work of Unit # 6 was 52 weeks (1 year) ie; up to 24-7-2004.</p> <p>After dismantling and conducting required tests on unit No.6, the firm had identified the extra Works and submitted their offer for the extra works as per Clause 22 of the contract agreement. clause No. 22 stipulates that:</p>
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				<p>"On dismantling, detailed inspection and testing conducted on parts, if some parts/components/equipments are found to be defective which are not included in the scope of tender specifications, replacement/repairs to the above parts shall be treated as extra work. For the extra works, the rate, terms and conditions and the influence on the completion period of this purchase order shall be reported by the contractor to the Chief Engineer. Within reasonable time from the date of receipt of the above mentioned report the Chief Engineer shall convey the Board's decision to the contractor".</p> <p>The following works (refurbishment of existing parts and replacements of existing items with new one) were identified as extra work.</p>
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				<p>1. Machining of the trunnions in MIV and machining of the seat for the rotor seal to maintain Coaxiality (work) ₹ 8,53,266 /-</p> <p>2. Supply Of self lubricated bearings of main inlet valve (supply) ₹ 196802/-</p> <p>3. Replacement of connecting flange at the up stream and down stream side of MIV (Supply) ₹ 7,76,278/-</p> <p>4. Machining of the runner coupling flange of the turbine shaft (work) ₹ 9,02,390/-</p> <p>5. Replacement of Water Guard with new one-(supply)-₹ 6,89,875/-</p> <p>6. Site machining of distributor bores, (work) ₹ 13,86,079/-</p> <p>7. Replacement of flow guide with new one (supply) ₹ 13,24,244/-</p> <p>8. Jet alignment using precision equipments (work) ₹ 8,05,600 /-</p> <p>9. Supply of Guide ring in the dismantling flange portion of MIV ₹ 1,57,000/-</p>
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				<p>10. Repair works connected with the thrust collar including machining ₹ 9,54,000/</p> <p>11. Repair welding on upper and lower brackets ₹ 3,02, 500/ -</p> <p>The extra works proposal submitted by the firm was thoroughly examined by the expert engineers of KSE Board After convincing its necessity, various levels of negotiations were also conducted with the firm for getting the rock bottom rate. Based on the report and recommendation of the Chief Engineer, sanction was accorded by the Board to award the extra works amounting to ₹ 78,88,44 5/- to M/s V.A Tech Hydro and extra work amounting to ₹ 3,81,473/- to M/s L&amp;T.</p> <p>When the issue of unforeseen extra works was placed for sanction, the Board desired to know the opinion of an</p>
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				<p>expert from CEA, on the necessity of work and reasonability of the cost of works and accordingly the opinion of CEA was sought. The CEA team conducted a site visit for examining the matter and submitted their report. According to CEA's opinion, out of the above 11 extra works sanctioned by KSEB, 5 of them (item No. 4,5,6,7,8) could not be treated as extra as the same could be carried out within original scope or by using the existing parts as such. The financial commitment for the above objected items is ₹ 51.08 lakh.</p>
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The following points may be noted in this regard. Sabarigiri Hydro Electric Project is the second largest generating station of the KSEB system With an installed capacity of 300 MW, on which KSEB largely depend for meeting the peak demand.

				<p>The renovation work was scheduled to be carried out on the units one by one with the intention to utilize maximum quantity of water for generation, avoiding the spilling of water. The Board was aware that the delay in putting back unit # 6 would derail the schedule of entire renovation work. More than 4 months were already lost due to the accident.</p> <p>Unit # 6 was already under shut down during 2003-04 as per schedule. Because of the issue of extra work, the unit could not be put into service during monsoon of 2004-05. Board was very particular that the unit # 6 had to be commissioned before the onset of the monsoon for the year 2005-06 to avoid spilling.</p> <p>The total cost of RMU works of Sabarigiri HEP as per the original Order</p>
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				<p>is ₹ 94.64 Crore and that of Unit #6 is ₹ 17 Crore (approx).</p>
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Out of the 11 items of extra works arranged by K.S.E Board on Unit # 6, the CEA offered a different opinion only in the case of 5 works having a total additional financial commitment of ₹ 51.08 lakh. Comparing the total financial commitment of the RMU works of unit #6, this amount comes only around 3%.

The extra works proposal forwarded by the firm was thoroughly examined and analysed by the expert engineers of the KSEB and fully convinced its need and necessity.

KSEB is very particular to see that the renovated machines should ensure trouble free operation for the next 20-25 years and hence cannot take any risk on account of minute extra works.

				<p>The extra works were arranged at rock bottom rate after conducting various levels of negotiation meetings.</p> <p>It may be noted that once the machine was forced to shut down even due to minor internal problems, it will take time to put back the machines in service. There is complicated and time consuming procedures such as removal of the runner, identification of defects, rectification of faults, re-fixing the runner, balancing etc are to be successfully completed before the machines are put back into operation.</p> <p>The matter was referred to CEA, only for getting a second opinion in View of the forth coming RMU works of the balance units.</p> <p>The O &amp; M activities of the machines of Sabarigiri HEP were being carried out by</p>
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			<p>KSEB Engineers since its commissioning during the year 1966 and they are very much experienced and aware of the conditions of the machines, than any other team. Even though CEA has very good technical capability, KSEB Engineers has got the practical experience with the machines and they are competent to analyse the issues relating to Sabarigiri machines.</p>
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The timely award of extra works of unit #6 has enabled the Board for the commissioning of the unit on 1-7-2005, thus to avoid spilling of dam during the monsoon of 2005-06 and to utilize the full water potential during the year, resulted in savings of Crores of rupees.

The CEA has not taken in to account of the relevant clause on the Agreement (clause no. 22) with M/s V.A Tech while offering their remarks.

				<p>As per tender documents, conditions of contract for Design-Build and Turnkey" first edition 1995 prepared by the Federation of International Des Ingenieurs-Conseils (FIDIC) forms a part of agreement.</p> <p>As per Clause 4.11 of FIDIC "if sub surface conditions are encountered by the contractor which in his opinion, were not foreseeable by an experienced contractor, he shall give notice to the employer's representative so that employer's representative can inspect such conditions and proceed in accordance with the sub clause 3.5 to agree or determine</p> <p>(a) Any extension of time to which contractor is entitled and</p> <p>(b) The additional cost due to such conditions which shall be added to the contract price and shall notify the contractor accordingly.</p>
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				<p>It is hereby concluded that awarding of extra work is in the best interest of the Board and in accordance with relevant clauses in the agreement. Considering the long term perspective, the works were essential for the trouble free operation of the machines. Thus ₹ 51.08 Lakh cannot be considered as loss due to unwanted extra work but only a payment for the extra work carried Out by the contractor as per contract which also improved the overall performance and efficiency of the machine. Considering the total expenditure incurred for the RMU Of Sabarigiri HEP [₹ 102.63 Crore (approx) including extra Works], this objected amount is only 0.5% (approx). It may be noted that due to the early</p>
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				<p>decision taken by KSEB before getting the expert opinion of the CEA, the spillage of the reservoir was avoided during the year 2005-06, resulted in saving of Crores of rupees.</p> <p>The matter was referred to CEA only for getting a second opinion for future guidance for other machines.</p> <p>It may also be noted that, the officers who had taken the decision for award of extra works of unit #6, were already retired from service of KSEB. Moreover, in View of the above facts, it is prayed that, the observation of the CoPU on the subject matter may kindly be reviewed and its recommendations to fix the liabilities on the officers who had taken bonafide decisions in the best interest of Board, may kindly be dropped.</p>
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4	22	Power	<p>The Committee understands that the department has not furnished the reply to draft audit paragraph in time. The Committee opines that had the Board furnished the reply to audit para in time the same would not have found place in the Audit Report.</p>	<p>It may please be noted that top priority is being given by Kerala State Electricity Board for answering to draft/ audit paras within the due dates. But in some rare cases delay may occur since data may have to be collected from many field offices or huge volume of data is required etc.</p> <p>In the given case the draft para is issued by Accountant General on 28-5-2007 and received in, KSE Board on 4-6-2007. The time limit prescribed by Accountant General was six weeks. The reply on required details with respect to storage level of Idukki Dam, Generation Statistics, Power purchase rates etc. could not be consolidated in time. Though earnest efforts were made to furnish the reply within the due date the consolidation of all these data was time consuming and hence</p>
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				<p>there occurred some delay in finalising the reply. The reply was submitted after vetting by the then Chairman, KSE Board on 24-9-2007.</p> <p>Taking into account the recommendation of the Committee in its right sense, Board has taken all possible steps to ensure that the replies to Draft / Audit paras are submitted within the prescribed time and no delay occur in future.</p>
5	26	Power	<p>The Committee finds that if the Board had been vigilant enough to stock vital spare parts, generation could not have been stopped for 40 days, and that thereby produced more power.</p>	<p><u>Para 26 &amp; 27</u></p> <p>The 2x 7.5 MW Kallada Small Hydro Electric Project, commissioned in 1994, utilizes the water from the reservoir of Kallada Irrigation project.</p>
6	27	Power	<p>The Committee therefore recommends that there should be an effective mechanism in KSEB to ensure that critical</p>	<p>On 1-12-2005, Generator No. 1 &amp; 2 were tripped due to the failure of servo motor and thyristor respectively. The faulty thyristor in the</p>

components are always therein the inventory for having a sound supportive system to avoid instances like this in future. The Committee wants to be furnished with a report regarding the details of liability fixed against the officers responsible and the present position of the action taken for recovering the losses raised in the audit objection.

exciter panel of unit No. 2 was replaced immediately with the Spare one kept in the stock. But this thyristor also failed when the machine was tried to put back into service. As there was no more spare thyristor available in the stock and considering the time taken for the repair of the servomotor of unit #1, it was decided to take out the thyristor of unit No.1 and put back the unit No. 2 in service. Accordingly the unit #2 was put back in service on 1-12-2005 itself. The unit No. 1 was put back in service only on 10-1-2006 after rectification of oil servo motor problem and replacement of thyristor in the excitation panel.

Audit has observed that the defective servomotors of Unit No. 1 was repaired on 10-12-2005, but generation could resume only

				<p>on 10-1-2006, after; installation of a new thyristor at a cost of ₹ 9,750/-. Due to delay in replacement of the defective thyristor in Unit No.1, the Board lost generation of 5.17 million Units of power valued at ₹ 2.02 Crore for 30 days when there was sufficient discharge of water from the reservoir. Audit noticed that the thyristor had developed defects in 2002 also and the same was replaced through purchase from BHEL. But the Board did not keep adequate spares of this low value item to avert generation loss in emergent situations.</p> <p>Thyristor comes in the list of slow moving inventories. Slow moving spares are kept at bare minimum quantity. As per agreement condition with original supplier of generating equipments for a project, it is natural to specify the required</p>
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			<p>spares for the smooth running of the generating units for a certain period in the future. M/s BHEL, the OEM of Generator, Exciter, Turbine &amp; Governor of Kallada HEP, which was commissioned in 1994, had supplied spare thyristors along with many other spares. It may be noted that one spare thyristor was available in stock during the failure of the unit # 2, in 1-12-2005. . Eventhough, the failed thyristor was replaced with this spare, unfortunately the same also failed during the trial run.</p> <p>Every year, the Central Electricity Authority, under Ministry of Power, fixes the generation target in the succeeding year for each generating stations. The Generation target fixed for Kallada Power Station for 2005-06 by CEA was 55 MU in 2005-06, But the actual</p>
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			<p>generation was 64.11 MU which is more than the Generation Target, fixed by Central Electricity Authority. The average annual generation for the project for the last 9 years with effect from 2005-06 was 59.1 MU.</p> <p>The following steps were taken to ensure the availability of critical spares:—</p> <p>In generation wing, every month there will be review meetings on Operation and Maintenance of power stations held at Chief Engineer level, Circle level and Division level, to review the progress of maintenance works. The Circle level meeting is convened by the Deputy Chief Engineers and Division level meeting is convened by the Executive Engineers. The officers in the rank of Assistant Engineers and above, who are taking care of the Operation and Maintenance</p>
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				<p>works and in charge of store of a Power station are attending the meeting. In this review meeting, the progress of current maintenance activities, analysis of previous maintenance works, planning and scheduling of future maintenance works, availability of spares, purchase plan for required spares etc. are reviewed and finalized. Apart from the above monthly meeting Board level periodical review meetings will also be conducted by the Director in charge of Generation. As per the recommendations of the Public undertakings Committee, strict instruction has been issued by the Board to ensure the availability of critical spares in power station and to include this as an agenda in the monthly review meeting.</p> <p>The following actions were taken to tackle the situations.</p>
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				<p>1. The timely action taken by K.S.E Board personnel, helped to put back one of the two units (Unit No. 2) of Kallada SHEP on the day of break down itself.</p> <p>2. The generating station has out performed in the year 2005-06 with respect to the target fixed by Central Electricity Authority.</p> <p>3. Considering the low failure rate of thyristor, one spare thyristor was available in stock during the breakdown. The failure rate of thyristor is very low.</p> <p>4. Eventhough, there is a generation loss due to the non availability of one machine, the audit have taken only the average generation of unit No.1 for arriving the calculation of generation loss. Since the unit No. 2 was also in service for the above period (September, October and November), the total generation of the</p>
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				<p>station should have been taken for the average generation calculation. It may be noted that the monthly generation of unit 2 for the above 3 months period is 2.42, 5.04 and 2.59 MU respectively and the total monthly generation of the station is 7.67, 10.29 and 7.5 MU respectively. If we calculate the average generation loss based on the total generation, the average generation is only 4.25 MU instead of 5.17 MU assessed by the audit. The amount loss assessed will also be reduced accordingly. The maximum units that can be generated by one generator is only 5.4 MU.</p>
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5. The main reason for the prolonged shut down of unit No. 2 is the failure of servomotor and its subsequent time consuming rectification works and not due to the non availability of a spare thyristor alone.

				<p>It may be noted, the excitation system of both the generators of Kallada Power station was replaced with new one in the year 2012-13. For the new excitation system, Board purchased 6 Nos. of thyristors and kept as spare (3 Nos. each for unit 1&amp;2). As recommended by the Hon'ble Committee, necessary steps for ensuring the availability of critical spares in Power stations, have already been taken by the Board. No such incidents of generation loss due to the unavailability of critical spares were reported since then.</p> <p>From the above stated facts it may be concluded that there is no wilful negligence or lapses on the part of any of the officers of the Board and also that the generation loss arrived by Audit is a hypothetical figure. Hence no actions have been initiated against any of the Board officers in this regard.</p> <p>In the light of the above explanation, the recommendation may kindly be dropped.</p>
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## CHAPTER II

ON THE  
 REPLIES FURNISHED BY THE GOVERNMENT RECOMMENDATIONS OF  
 THE COMMITTEE WHICH HAS BEEN ACCEPTED BY THE  
 COMMITTEE WITH REMARKS

Sl. No.	Para No.	Department Concerned	Conclusions/ Recommendations	Action Taken by the Government
1	2	3	4	5
1	9	Power	The Committee finds that the assets of Kakkad Hydro Electric Project insured by KSEB for ₹ 18.85 crore actually included the escalation cost of the equipments, but the failure on the part of the Board to specifically mention the escalation cost in the schedule to the insurance policy led to under 5 assessment of 65.39% of the claims by Kerala State Insurance Department stating	<p><u>Para 9, 10 and 11</u></p> <p>The 2x25 MW Kakkad Hydro Electric Project was evolved by KSE Board as a second stage to utilize the water potential of the Pampa Basin. The order for supply of generating equipments for Kakkad Power station was placed with M/s BHEL on 27-5-1981 by the Chief Engineer (Operation) for a contract amount of ₹ 1063.11641 Lakh. The cost of two generators with exciter, PMG, air and oil coolers along with CO<sub>2</sub> equipment as per order dated 27-5-1981 was ₹ 389.87 lakh. The price variation clause was also envisaged in the agreement.</p>

			to be a case of under insurance.	M/s BHEL started delivery of equipment at site from 1983 onwards. The equipments were being insured with Kerala State Insurance Department (KSID) to cover the risk during transit from BHEL's factory to the site. Subsequently, Board vide B.O No. TC2-1907/88 dated 22/10/1988 had accorded sanction for opening storage Cum erection insurance policy with Kerala State Insurance department for the generating equipment of Kakkad Hydro Electric Project for a period from 7/88 to 5/91 by paying ₹ 12,29,367/- in four instalments. The electrical parts of the project was insured for ₹ 18.85 crore in Policy No. KSID/SCE/5153/89. The premium amount of ₹ 12,29,367/- was later revised to ₹ 10,47,589/-. The policy was extended till 20-11-1999. The total amount of premium paid
2	10	Power	The Committee observes that the Board had taken a decade in claiming the insurance that too, much below the original cost and took another 4 years to go for an appeal against KSID. The Committee View this as an unpardonable act and negligence on the part of KSEB in dealing with a serious issue like this. The Committee points out that improper valuation of the insured item and failure to record the value in the Schedule of insurance resulted in the under valuation of assets. The Committee opines that had	

			<p>KSEB taken steps to claim the insurance in time the entire loss could have been realised as the whole assets were reinsured with United India Insurance.</p>	<p>during the above period is ₹ 42,10,086/-.</p> <p>DETAILS OF COMPENSATION AMOUNT RECEIVED</p>
3	11	Power	<p>The Committee recommends that KSEB should seek expert opinion before insuring assets so that the insured amount is adequate to make good the loss in case of any contingency and in case any accident occurs immediate steps should be taken to claim the insurance at the earliest.</p>	<p>While the erection work of the project was in progress a fire accident occurred on 28-10-1992, causing damages to the stator assembly of the 25 MW Unit No. 2 Generator, which was kept very close to the downstream wall. The accident was reported to M/s KSID on the same day itself.</p> <p>After the accident, the Board arranged the repair/replacement of the damaged stator bars of generator No. 2 for a total expenditure of ₹ 1,31,26,399/- including cost of transportation. The Chief Engineer (O&amp;M) Hydro has furnished claim bill to M/s J.B. Boda Surveyors Pvt. Ltd., the surveyor of M/s KSID on 23-6-1999. Subsequent to</p>

				<p>this, M/s United India insurance Company Ltd. (Co-insurer of KSID) has informed that the maximum claim amount on this claim would be ₹ 38,48,242/-only and the damaged equipment is under-insured. The Discharge receipt for ₹ 38,48,242/was furnished by the Deputy Chief Engineer under protest subject to sanction of the Board.</p> <p>The subject matter was taken up by the Board and it was decided to take up the matter with KSID for revising the compensation amount in respect of fire accident, and to claim balance amount with interest for the delay in payment. The Board had also decided to file appeal before IRDA (Insurance Regulatory, Development Authority), if M/s KSID declines the claim of KSE Board.</p> <p>Board filed an appeal before the Insurance Regulatory and</p>
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				<p>Development Authority (IRDA).</p> <p>The IRDA referred the matter to KSID for reconsideration. KSID has appointed another Surveyor Sri. M. Abdul Rahman, Thiruvananthapuram, to examine this claim. Based on the report of Sri. M. Abdul Rahman, KSID informed IRDA that argument filed by KSEB before the Hon'ble IRDA authorities is baseless and they are not liable to pay any additional amount. The IRDA informed the matter to the Board. The Board took up the matter with High Power Committee in Government. The High Power Committee directed that competent officials from KSEB and KSID may examine the claim in detail, rectify defects if possible and work out an agreeable solution within one month. Accordingly, a meeting was held between KSEB and KSID officials on 27-4-2011. In the said</p>
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				<p>meeting, it was decided not to reconsider the claim of KSEB.</p> <p>It may be noted that, KSE Board had been arranging insurance of Projects with Kerala State Insurance Department only as per the directions contained in Government Circulars issued from time to time till 1999. The implication of rules and regulations related to arranging insurance of machineries in industrial installations against fire and other hazards seriously affect the claims disbursed by the insurance company in the event of an accident. The sum insured for insuring the assets shall be the true value of the asset under consideration. Both under insurance (Ensuring an asset below its true value so that the premium shall be less) or over insurance (insuring an asset at higher value than its true value so that the insurance can claim larger amounts in case of an</p>
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			<p>accident even though the premium is proportionately high) are not permitted. The sum insured be either the depreciated value of the machinery or the reinstatement value of the machinery.</p>
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The insurance on depreciated value is applicable only for commissioned projects. All the machinery undergoes depreciation and its true value decreases in due course of time. The sum insured for the asset (machinery) is its depreciated value and premium is fixed according to the depreciated value of the asset. The premium paid shall be lesser and lesser year after year if no accident occurs. If an accident occurs the sum reimbursed by the insurance company shall be only the depreciated value of the destroyed machinery. In order to claim the reinstatement value of an asset consequent to an

				<p>accident, (the cost involved in restoring this assets afresh like installing brand new machinery etc.) the asset shall be insured for its reinstatement value every year. Usually this value shall be higher than the cost of installation of the assets in the previous year. Hence the premium to be paid shall be proportionately higher and higher year after year.</p> <p>At the same time if the premium of arranging insurance with an insurance company in the market is low, it may become feasible for the same utility to arrange insurance with an insurance company. In the case of Kakkad HEP, the main allegation is that the equipments were not insured taking into consideration its escalation of costs. The PUC observed that the assets of Kakkad HEP insured by KSEB for ₹ 18.85 crore actually included the escalation cost of the equipments, but the</p>
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			<p>failure on the part of the Board to specifically mention the escalation cost in the schedule to the insurance policy, led to the under assessment of 65.39% of the claim by Kerala State Insurance Department (KSID) stating to be case of under insurance. The PUC also opined that improper Valuation of the insured item and failure to record the value in the Schedule of insurance resulted in the under valuation of assets. The insurance cover against damage during storage- cum-erection of a project can be taken only on invoice value of equipments or its reinstatement value. Insuring on depreciated cost is not applicable for storage cum erection insurance. The Board insured assets of Kakkad in the year 1988 at its invoice value.</p>
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In Kakkad Project, the damaged equipment was a generator. The cost of 25 MW generator including

				<p>erection charge at the time of taking insurance (1988) was ₹ 176.51 lakh. The cost of such a generator at the time of accident (1992) was ₹ 510 lakh ( as per details given by BHEL). The percentage rate of increase for 4 years was approximately 189%. The average percentage increase per year comes to <math>(189/4)=47\%</math> of the original value. As per insurance rules for getting the actual expenditure met by the Board for repairing any damage due to an accident occurred during insured period, the project should be insured at its reinstatement cost, ie. the total sum insured mentioned in the insurance policy should be exactly equal to the reinstatement cost of the project.</p> <p>The Kakkad Project was commissioned in 1999. The extension of insurance to cover the risk during Storage-cum- Erection continued up to 1999. If</p>
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			<p>Board insured the project on reinstatement basis, the total premium amount might have been paid is approx ₹ 154/- lakh and total premium up to the time of accident is ₹ 34.81 lakh. But the actual premium paid by the Board for insuring the project on fixed amount basis during the entire period is ₹ 42.1 lakh and the amount paid up to the time of accident was ₹ 17.81 lakh only. The final compensation received from KSID is ₹ 38.48 lakh.</p> <p><b>Conclusion</b></p> <p>For Kakkad project, if KSE Board went for insurance on reinstatement basis, the premium to be paid would be very high.</p> <p>The insurance of Kakkad Project was arranged in 1988 and only one insurer was in the field i.e. KSID. Had the Board renewed insurance for the assets of Kakkad every year from 1988 to 1999, based on the</p>
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				<p>reinstatement cost in the respective years (instead of extending the validity period based on the insured amount of 1988), definitely the Board would have remitted huge amount (₹ 154/- lakh) as insurance premium to KSID by 1999 which is more than the expenditure incurred (₹ 131.26 lakh) by the Board to repair the damage occurred in the accident. Since the chance of occurrence of accident is very little, KSEB will loose substantial amount by way of premium, insured on reinstatement basis.</p> <p>The insurance companies further informed that Standard Fire and Special Peril plus Earth Quake policy does not give any cover for the equipment which happened to be the source of fire or other accident.</p> <p>Considering the above facts, Board dropped that proposal.</p>
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*Remarks:—*The Committee expressed its displeasure for furnishing a vague reply and remarked that there was grown negligence on the part of KSEB in recovering the compensation amount from the defaulters.

Thiruvananthapuram,  
12th March, 2018.

C. DIVAKARAN,  
*Chairman,*  
*Committee on Public Undertakings.*

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