



FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC UNDERTAKINGS
(2019-2021)**

NINETY FIRST REPORT
(Presented on 18th June, 2019)

**SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM**

2019

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ON
PUBLIC UNDERTAKINGS
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NINETY FIRST REPORT

On

KERALA STATE ELECTRICITY BOARD LIMITED

**(Based on the Report of the Comptroller and Auditor General of India for
the year ended 31 March, 2013)**

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COMMITTEE ON PUBLIC UNDERTAKINGS (2019-2021)

COMPOSITION OF THE COMMITTEE

Chairman :

Shri C. Divakaran.

Members :

Shri K. B. Ganesh Kumar

Shri C. Krishnan

Shri Thiruvanchoor Radhakrishnan

Shri P. T. A. Rahim

Shri S. Rajendran

Shri Raju Abraham

Shri Sunny Joseph

Shri C. F. Thomas

Shri M. Ummer

Shri P. Unni.

Legislature Secretariat :

Shri V. K. Babu Prakash, Secretary

Shri P. B. Suresh Kumar, Joint Secretary

Shri G. Harish, Deputy Secretary

Smt. Reji D. O., Under Secretary.

INTRODUCTION

I, the Chairman, Committee on Public Undertakings (2019-2021) having been authorised by the Committee to present the Report on its behalf, present this Ninety First Report on Kerala State Electricity Board Limited based on the Report of the Comptroller and Auditor General of India for the year ended 31 March, 2013 relating to the Public Sector Undertakings of the Government of Kerala.

The aforesaid Report of the Comptroller and Auditor General of India for the year ended on 31 March 2013, was laid on the Table of the House on 10-6-2014. The consideration of the audit paragraphs included in this report and the examination of the departmental witness in connection thereto was made by the Committee on Public Undertakings constituted for the years 2016-2019 at its meeting held on 14-6-2017.

This Report was considered and approved by the Committee (2019-2021) at its meeting held on 8-5-2019.

The Committee places on record its appreciation for the assistance rendered by the Accountant General (Audit), Kerala in the examination of the Audit Paragraphs included in this Report.

The Committee wishes to express its thanks to the officials of the Power Department of the Government Secretariat and the Kerala State Electricity Board Limited for placing the materials and information solicited in connection with the examination of the subject. The Committee also wishes to thank in particular the Secretaries to Government, Power and Finance Departments and the officials of the Kerala State Electricity Board Limited who appeared for evidence and assisted the Committee by placing their views before it.

C. DIVAKARAN,

*Chairman,
Committee on Public Undertakings.*

Thiruvananthapuram,
8th May 2019.

REPORT

ON

KERALA STATE ELECTRICITY BOARD LIMITED

AUDIT PARAGRAPH 4.8, 4.9 (2012-13)

4.8 Deficiencies in settlement of revenue arrears of HT/EHT consumers

4.8.1 One Time Settlement Scheme

Kerala State Electricity Board (KSEB) had arrears of ₹ 917.54 crore of electricity charges due from High Tension/Extra High Tension⁸⁹ (HT/EHT) consumers as on 31 December 2004 which included ₹ 496.11 crore (54 percent) from private consumers. Hence, KSEB introduced (May 2005) One Time Settlement (OTS) Scheme to facilitate speedy and efficient settlement of pending disputed cases of arrears of HT/EHT consumers. Arrears of revenue included principal and interest. OTS envisaged reduction of interest rate subject to the clearance of all the arrears either in lumpsum or in installments. The Scheme was envisaged for two months from May to June 2005 and the consumer who was desired to avail the benefit of the Scheme had to apply on or before 30 June 2005. However, the scheme was further extended up to 31 March 2013 for different category of consumers with different time frame applicability conditions (Annexure 25).

Audit analysed the settlement of arrears under OTS Scheme during the period 2010-11 to 2012-13 and observed that:

- As on 31 March 2013, there were 1094 consumers having arrears valuing ₹1383 crore. Of these KSEB had settled arrears of 32 cases during the period 2010-11 to 2012-13 with outstanding dues of ₹85.98 crore under its OTS Scheme. KSEB, thus, could not achieve much progress in collection of arrears as only 32 out of 1094 consumers with outstanding dues of ₹85.98 crore could be settled during the period 2010-11 to 2012-13 by collecting an amount of ₹ 34.51 crore (₹26.31 crore towards principal and ₹8.20 towards interest). The year-wise details of cases settled, amounts outstanding, recovered and waived are shown in Annexure 26.

89 HT consumers – consumers supplied with electrical energy at a voltage of 11000/22000/33000 Volts and EHT consumers at voltage above 33000 Volts.

Settlement of arrears as per Government directives

4.8.2. Waiver of Minimum Demand Charges

The Government of Kerala (GoK) introduced (February 2006) Minimum Demand Charges⁹⁰(MD) waiver scheme which was modified from time to time. As per the scheme, GoK had given special directives to clear the arrears of closed industrial and plantation units with the conditions that the industrial units likely to avail the benefit should have functioned for minimum three years and the cases which had been settled earlier would not be re-opened. The waiver of MD charges levied during the closure period was applicable only to consumers belonging to industrial and plantation category and was valid up to 31 December 2012. The closed unit should also reopen within 31 December 2012 and function for a minimum period of six months after reopening. KSEB had adopted (September 2010) the Government order on waiver of MD charges on the condition that the amount so waived should be reimbursed by the Government in accordance with Section 65⁹¹ of the Electricity Act, 2003.

Audit analysed Waiver of MD Charges during the period 2004-05 to 2012-13 and observed the following:

- Though the Government aimed at revival of defunct industrial/plantation units by waiver of MD charges, 12 out of 28 units were not functioning as on date (January 2014) defeating the very purpose of the Scheme.
- KSEB had waived MD charges aggregating to ₹ 15.78 crore in respect of 28 consumers. Though KSEB preferred (July 2013) the claim with the Government, it did not reimburse the amount so far (January 2014).

Government stated that KSEB had preferred the claim with the Government and the follow ups were going on for the reimbursement.

90 Minimum Demand charges means fixed charges levied on HT/EHT consumers based on their contracted demand.

91 Section 65 states that if the State Government requires to grant any subsidy to any consumer in the tariff determined by SERC it shall be paid in advance in the manner as may be specified by the SERC provided no such direction of the State Government shall be operative if the payment is not paid in accordance with the provisions contained in this Section and the tariff by the SERC shall be applicable,

Special dispensations for two companies

KSEB settled arrears of two companies viz., Binani Zinc Limited (November 2010) and Punalur Paper Mills (August/December 2010) as per directives of GoK. In this regard Audit observed the following:

4.8.3 Binani Zinc Limited (BZL) had arrears of ₹ 51.69 crore as on 28 February 2011 due to a pending litigation over the authority of KSEB to revise the tariff. The Industries Department issued directions (November 2010) to settle the dues. It directed KSEB to adjust the amounts already remitted by them on previous occasions, first against principal (as against the normal practice of KSEB to adjust the amount remitted first against the penal interest) and to collect the balance in 32 installments with nine percent interest. It assured KSEB that the Department would reimburse KSEB any concession granted over and above that offered under the OTS scheme of KSEB.

Accordingly, KSEB worked out the amount to be remitted as per the Department directive at ₹ 27.29 crore and treated as settled (February 2011) the arrears of ₹ 51.69 crore. KSEB also allowed BZL to pay this amount in 32 monthly installments commencing from 30 March 2011 without levying interest. Had the KSEB settled the arrears under its normal scheme same should have been settled at ₹ 40.80 crore. The loss suffered by KSEB due to extension of concession over and above its normal OTS scheme was ₹ 19.55 crore as detailed below:

Table 4.21: Concession extended over and above the normal OTS Scheme

(₹ in crore)

Sl. No.	Item	Principal	Interest	Total
1	2	3	4	5
1	Amount to be remitted under normal OTS Schemes of KSEB	29.81	10.99	40.80
2	Settled amount on the basis of Department's directions*	13.60	13.69	27.29

*The amounts remitted by BZL during February 2004 to October 2010 which were earlier adjusted against penal interest were re-adjusted against the principal thereby bringing down the outstanding Principal of ₹29.81 crore to ₹13.60 crore

1	2	3	4	5
3	Concession granted over and above normal OTS scheme of KSEB	16.21	(-) 2.70	13.51
4	Differential Interest (between 15 and 9 per cent) due on sanctioning 32 instalments	--	6.04	6.04
5	Total dues from Government (3 + 4)			19.55

As against the total dues of ₹ 19.55 crore, KSEB later claimed (August 2011) ₹ 6.04 crore only being loss due to differential interest on settled amount payable in 32 monthly installments. KSEB did not claim the concession extended over and above the normal OTS Scheme amounting to ₹ 13.51 crore.

The Department did not reimburse even the claimed amount of ₹ 6.04 crore so far (January 2014) as Finance Department rejected the claim stating that the Government Order (GO) was issued without consulting them and no provision was made in the Budget for such payments.

The Power Department stated that as per GO the amount already paid by the consumer was to be adjusted against the principal, the interest was to be charged at the rate of nine percent on the balance principal and the consumer be allowed to remit the arrear amount in 32 installments. No interest was to be charged during the installment period. Such concession granted over and above OTS would be reimbursed by Government. It disagreed with the calculation of Audit stating that it was not matching with the accounts of KSEB.

The reply was not acceptable as the Department had assured⁹² reimbursement of the amount of concession granted by KSEB over and above that offered under OTS scheme of KSEB. In this case, as KSEB adjusted the payments already made against principal and applied interest rate at nine percent as per GO as against 15 percent permissible in cases where payment is made in installments this deviation should have been considered by KSEB for claiming reimbursement. Further, Audit

had worked out the loss on the basis of normal practice of adjusting the payments already made in the order of priority prescribed⁹³ in the Supply Code and by applying 15 percent, interest as the settlement was made in monthly installments and not in lumpsum.

4.8.4 The arrears of ₹ 16 crore payable by Punalur Paper Mills Limited, whose service was under disconnection from October 1992 due to non-payment of electricity charges, was settled (September 2011) at ₹ 0.95 crore by waiving ₹ 15.05 crore. This settlement was made as per Government Order (August/December 2010) adopted by Full Time Members (FTM) in September 2010 and Full Board in May 2012. While adopting the GO, KSEB also decided to approach the Government to make good the loss due to implementation of the order under Section 65 of the Electricity Act 2003. Audit observed that the Government had informed (July 2011) beforehand that Section 65 would not be applicable in this case. The decision of the Board to waive the dues without ensuring reimbursement from the Government resulted in a loss of ₹ 15.05 crore to KSEB.

Government stated that an MOU had been signed between the Government and the Company during 2002 after a series of high-level deliberations with various departments including KSEB. Government had given waiver of MD charges, incentive and subsidies, exemption in taxes, duties etc. in order to promote industries with a view to increase employment opportunities and such other benefit to society. The reply was not acceptable as KSEB failed to apprise the Government about the provisions of the Act and loss sustainable by giving concessions as per GO to safeguard its financial interest.

The revenue arrears as on 31 March 2013 stood at a high ₹ 1383 crore. Thus it can be seen from cases cited above that introduction of OTS and issue of special directives for settlement of arrears did not result in collection of even the reduced dues. Since the chance of settlement of arrears was not encouraging, stringent action against defaulters should be taken and revenue recovery proceedings initiated by KSEB as envisaged in the Codal provisions⁹⁴.

93 As per section 22 of Supply Code 2005, payments made by the consumer will be adjusted in the following priority.

1. Interest on duty arrears 2. Duty Arrears 3. Interest on electricity charge arrears 4. Electricity charge arrears 5. Current months due.

94 Clause 36 of KSEB Terms and Conditions of Supply, 2005.

4.9 Undue favour

Undue favour of ₹ 0.56 crore to contractor due to non-levy of penalty.

Kerala State Electricity Board (KSEB) commissioned Neri Mangalam Extension Scheme (NES) in May 2008 as an addition to the series of power development projects in Mudirapuzha Basin envisaged to utilise about 40 per cent (167 million cubic metre) of total spill water of existing Kallarkutty Reservoir to generate 58.27 MU per annum. The Hydro Mechanical and Electro Mechanical works of the NES (1x25MW) was carried out by a Consortium of Contractors⁹⁵ at a cost of ₹ 35.06 crore. The Provisional Acceptance Certificate (PAC) of the project was issued on 17 September 2008. Performance of the NES station was covered by a Bank Guarantee for ₹ 77.40 lakh for a period of three years up to 16 September 2011 which was further extended to 30 March 2013.

As per Clause H-47 of the tender conditions, forming part of the agreement executed (May 2003) by the KSEB, the Contractor was bound to ensure performance of the power project and to guarantee repair/rectify the defects free of charge for a period of three years from the date of completion of erection of machines and final tests or date of commercial operation whichever was later. If the defects occurring during the guarantee period were not rectified by the Contractor within reasonable time, penalty for the delayed period beyond reasonable time, at the rate of ₹ 50,000 per day, had to be charged for compensating the loss in generation. KSEB was empowered to fix the reasonable time for rectification, taking into account various aspects.

During the guarantee period, there were two major and three minor forced shutdowns due to machine fault. Audit noticed that, there was a delay of 111 days beyond the reasonable period of 20 days determined by KSEB after 38 days of shutdown for repair as indicated below:

95 VA Tech Escher Wyss Flovel Limited, Faridabad, VA Tech Hydro (P) Limited, Bhopal and Asian Techs Ltd. Ernakulam.

Table 4.22: Details of shutdown and time taken to rectify defect

Period of shutdown	Total No. Of days	Reason for shutdown	Reasonable time fixed by KSEB to rectify defect	Delay in excess of reasonable time(in days)
6-9-2011 to 23-2-2012	169	Water leakage through shaft seal	Within 20 days from 14-10-11 i.e. by 3-11-11 ⁹⁶	111

As seen from the above, the Contractor took 111 days more than the reasonable time for rectification of defects. Further, there was reported generation loss of 18.716 million units of electricity and KSEB had to incur an extra expenditure of ₹ 7.26 crore⁹⁷ towards purchase of electricity from outside sources.

The penalty recoverable as per the agreement worked out to ₹ 0.56 crore⁹⁸ for 111 days at the rate of ₹ 50,000 per day. KSEB, however, did not invoke any penalty for the delays as envisaged in Clause H-47 of the agreement even when there was reported generation loss. Further, in the absence of recorded reasons, Audit could not verify the rationale behind fixing ₹ 50,000 per day as penalty. In this context it is worth mentioning that in a similar contract for another project awarded to the same contractor, the penalty was fixed at ₹ 10,000 per day per 0.5 MW capacity of the project.

The Government stated (September 2013) that the Contractor was required to make some design changes to avoid recurrence of faults of the machine and therefore 169 days taken by the Contractor was reasonable and the design modification accrued advantages to the Board in long run. It was also stated that the Chief Engineer (Generation) had recommended for recovery of penalty to the extent of ₹ 12.50-lakh and same was not imposed considering the above benefits to KSEB.

96 The Chairman of KSEB convened a meeting with the Contractor on 14 October 2011 (after 38 days) and ordered to complete the rectification work within 20 days (i.e. by 3 November 2011). Thus, against a total delay of 169 days, 58 days were excluded and the balance 111 days only considered.

97 Reckoned at the average purchase price of ₹3.88 per unit during 2011-12

98 ₹50,000 x 111 days = ₹55,50,000

The reply was not acceptable as the Contractor started rectification work only on 10 February 2012⁹⁹ (157 days after shut down) and completed the work within 14 days and the machine was synchronized to grid on 23 February 2012. This indicated modification was a minor one and necessitated due to the defect in equipment.

Thus, the Board favoured the Contractor by not levying penalty amounting to ₹ 0.56 crore. This was despite reported generation loss of ₹7.26 crore.

[The Audit Paragraph 4.8 & 4.9 contained in the report of the C & AG for the year ended 31st March 2013]

The notes furnished by the Government on the Audit Paragraph are given in Appendix II.

Discussion and findings of the Committee

The Committee learnt that KSEBL had failed to recover arrears of electricity charges worth ₹ 973 crore due from High Tension/Extra High Tension (HT/EHT) consumers during the period 2010-11 to 2012-13 under One Time Settlement Scheme (OTS) introduced in 2005; and sought explanation in this regard from the concerned officials .

The witness explained that as on March 2013, HT/EHT consumers were having total arrears due amounting to ₹ 973 Crore. Out of this, ₹ 413 crore came under litigation cases and out of the remaining amount of ₹ 560 crore, State/Central Government Departments and institutions had arrears amounting to about ₹ 102 crore, Kerala Water Authority about ₹ 244 crore and Private consumers about ₹ 197 crore. Out of the total arrears of ₹ 973 crore, only the dues from private consumers (₹ 197 crore) could be recovered effectively and ₹85.98 crore had already been recovered. It was also difficult to compel Government institutions to settle their dues as they might stick on to lame excuses such as lack of enough budget provisions to pay the arrears. The witness further revealed that the dues can however be recovered without much difficulties by disconnection notices.

99 As per the detailed report (March 2012) of the Deputy Chief Engineer (Generation), Meencut on second forced shutdown.

The Committee pointed out that disconnecting electric connection in Government departments would adversely affect the public and besides it is not fair to make the public suffer for the lapse of Government Departments.

The Committee enquired whether the figures of arrears were correct and whether these arrears have been realised by the Board. The witness replied that the figures were correct and the success of the OTS scheme depends on the interest of the consumers in utilizing it. The Committee noted that through OTS Scheme, KSEBL, had recovered arrears from private consumers amounting to ₹ 85.98 crores, i.e. greater than 50% of the arrears due from private consumers.

The witness added that Kerala Water Authority (KWA) has the major share of pending dues amounting to ₹ 1500 crore i.e. (60-70%). KWA is well aware that the Board will not issue disconnection notice for non-payment of arrears. The Committee enquired about how much amount has been recovered from their plan fund and the witness replied that the said amount has not yet been recovered.

The Committee enquired about the dues pending with Local Self Government institutions. The witness replied that institutions under LSGD have arrears amounting to ₹ 190 crore and that it has been agreed to recover the amount from their plan funds.

The Committee demanded to know the details of arrears yet to be recovered by the Board. The witness replied that arrears amounting to about ₹ 2200 crore have yet to be recovered by the Board out of which the share of KWA amounts to about ₹ 1500 crores.

The Committee enquired whether the Board has taken measures to realise the arrears of ₹ 413 crore pending under litigation. The witness replied that measures have been taken by the Board to recover such dues and case has been filed through the Standing Council in this regard. At a meeting of Standing Councillors in Kochi, it was found that 58 petitions and 36 writ appeals have not been filed so far and a period of one month has been given for the settlement.

The Committee remarked that the financial management in KSEBL was indisciplined. The Committee opined that the main reason for its loss could be attributed to the lapse in the recovery of arrear dues and OTS Scheme implemented had also not helped KSEB to recover its dues.

The Committee enquired whether the OTS period has expired. The witness informed that the OTS period has expired and that the approval of SERC is essential for any OTS, and at present there are several OTS schemes under the Board. The witness further explained that KSEBL has not effected any disconnections for non-payment of dues last year, eventhough the Board has been facing serious financial crisis and has suffered a loss of ₹ 1650 crore this year.

The Committee wondered why huge losses occurred despite the hike in power tariffs. The witness replied that hike was only nominal and the economic benefits due to that would reflect only in the coming years.

The Committee remarked that KSEBL had not commissioned the projects in time and projects for long period had been pending for various reasons and KSEBL had retreated from its goal to produce power and its role had changed from that of a power producer to a power trader since the Board currently gives more priority to purchase and sell power than power production. The Committee enquired whether the Board has any new plans to overcome this situation. The witness explained that KSEB has currently 24 small Hydro Electric Projects. Many projects had been devised with the aim of producing 24-25 MW electricity, out of this 9 were ongoing projects. These projects were expected to supply 10 MW of electricity this year, 50 MW next year and 64 MW in the following year. The ultimate aim was to produce 300 MW electricity by 2020. They were mostly situated in Idukki, Kannur and Kozhikkode districts. The stalled Pallivasal Hydro Electric Projects has been revised and re-tendered. He added that about 70% of the electricity for domestic consumption of the State has been purchased by the Board from outside and Tariff rate fixed for the power producers in the State is 5 Rupees 36 paise.

With regard to the Rajiv Gandhi Combined Cycle Power Plant at Kayamkulam, the witness replied that the plant was almost ready and would become operational with the laying of pipeline. However, this might lead to escalation in power tariffs. The witness added that KSEB is focused on providing electricity at the cheapest possible rates in Kerala, at the same time, to enable this, KSEB has to give more importance to power purchase than domestic power production within the State.

To a query about the proposed Solar Plant at Kayamkulam, the witness replied that the project was being carried out by NTPC. Power rate was very high and the project was expected to yield 170-200 MW electricity.

The KSEBL official also informed the Committee that when compared to other states, KSEBL has surplus power at hand in the present situation and it intends to swap non peak power. Despite a 53% scarcity of rainfall in summer season, KSEBL had not imposed any power cut or load shedding on its consumers as it had purchased sufficient power from outside sources despite suffering a loss amounting to ₹ 1600 crore.

The Committee demanded to know KSEBL's plans of providing electricity in future on account of power scarcity. The witness explained that the existing contracts of KSEBL are of long term extending upto 25 years and in the present situation out of state's average demand of 4000 MW electricity, only 1500 MW can be produced domestically and 2500 MW has to be purchased from the outside sources. Thermal Power Supply from the Coal stations were going to be reduced due to changes in the climatic conditions. Even though Kayamkulam - LNG Projects was nearing completion the Power Supply from this will be of higher rate. Solar and wind generated electricity was also very expensive due to high costs on land. However, power was available for purchase at very low rates from outside sources. It was found that in India, power projects of 60000 MW capacity were currently in the implementation stage. At present, there were no barriers to power purchases from outside and this would enable KSEBL to provide electricity to its consumers at very low rates. Policy decisions have to be taken by the Government as to whether to produce electricity domestically or to purchase it from outside sources. N.T.P.C has proposed to provide Solar Power at rates of 3.10 per KWH to the State.

The Committee sought to know how the Board plans to produce 1500 MW of electricity within the State. The witness replied that domestic production target of 1500 MW electricity was expected to be made through the Hydro Electric Projects in the State along with the establishment of 200 MW Solar Park in Kasaragod district.

The Committee remarked that KSEBL must ensure that the domestic production of electricity should not fall below the target of 1500 MW. KSEBL must take drastic measures to increase the domestic production of electricity and the remaining power needed should be purchased from open market and provided to consumers.

The Committee enquired about the functioning of generators in various Hydel Power Projects of the Board. The witness replied that generators in Moolamattom Power Station and a generator of 150 MW in Idukki Power House were set to be shut down for renovation. A reactor in Sholayar Power Station was shut down for renovation. Annual renovation works were usually carried out during periods of low power demand. The renovation process was expected to be completed by March 2018. He also added that the Board has taken measures to replace old and worn out machinery with new ones.

The Committee enquired whether the Barapol Generator has started functioning. The witness informed that measures have been taken to operationalise the power station and that all the generators in the station have been repaired and made functional. He also added that the Barapol Project was a pilot project and there were no similar projects anywhere in the country.

The Committee enquired why the Board was unable to increase the number of small Hydro Electric projects within the State and noted that the Board has not invited tenders for even 10% of the proposed small Hydro Electric projects. The witness explained that the Board faces several set backs related to forest clearance, environmental clearance and non availability of land which hinders the tender proceedings. Projects like Anakkayam were located in Tiger Reserve Areas where the National Tiger Conservation Authority had blocked activities like tunneling and blasting and therefore the Board was unable to implement those projects.

The Committee sought explanation with regard to the arrears to be remitted to the Board by Binani Zinc Ltd. The witness replied that the Government had issued directions to the Board to provide concession to the Company through a package.

The Committee pointed out that the pending dues should be recovered soon by the Board as the Company was expected to be taken over by a private party for a new project.

The witness explained that the Board was carrying out negotiation with the Company, and as per the agreement the Company has informed that production would be started only after the settlement of arrears with the Board within 6 months. At present, the Company does not use electricity from the Board.

The Committee expressed its concern over the threat posed to the Kallada river due to the industrial discharges from the Company's Plant once the Company starts its operations. The Committee noted that several water supply schemes were associated with the Kallada river and hence poisoned water discharged from the Plant poses high risk to the public.

The Committee sought clarification about section 65 of the Electricity Act, 2003.

The witness explained that with the implementation of Electricity Regulatory System, KSEBL, being an independent distribution company, ought to be run in commercially viable manner. Its income should meet its expenditure. KSEBL should not provide any concessions/subsidies to any of its consumers. If such subsidies were to be given as per Government policy, it was obligatory for the Govt. to compensate the loss sustained by the Board by granting budget allocation.

The Committee pointed out that as per audit observations, an amount of ₹ 21,70,22,651 had been reimbursed by Govt. on account of subsidies granted to the Punalur Paper Mills by the Board in 2011 and enquired whether the said amount had been credited to the account of the Board. The witness replied that the Power Dept. has issued orders regarding reimbursing the amount to the Board but the Finance Department has refused payment citing lack of adequate budget provisions.

KSEBL has been able to avail a portion of the reimbursed amount through duty adjustments. The witness also brought to the notice of the Committee that bulk amount was still pending with the Govt. This amount has to be reimbursed as per section 65 of the act.

Observations/Recommendations

1. The Committee finds that arrears amounting to ₹ 2200 crore are yet to be recovered by the Board from various consumers out of which Kerala Water Authority has major share of ₹ 1500 crore. The Committee recommends to conduct a high level meeting of Water Resources, Local Self Government and Power departments for taking decision to recover the arrear dues from the plan fund of Kerala Water Authority.

2. The Committee observes that the One Time Settlement scheme implemented for settlement of arrears of HT/EHT consumers has not helped KSEBL to recover its dues and that this scheme is not successful in the case of State/Central Government departments and institutions/PSUs. The Committee recommends to take urgent steps to recover the arrear dues, from all State/Central Government departments, institutions and PSUs within three months and report to the Committee.

3. The Committee notes that HT/EHT consumers were having total arrears due amounting to ₹ 973 crore as on 31-3-2013 of which ₹ 413 crore came under litigation cases. The Committee wants to be furnished with present position of settlement of arrears pending under litigation.

4. The Committee demands a detailed report on the final settlement of dues of arrears of electricity charge by Binani Zinc Ltd. (BZL) to the Board.

5. Expressing its concern over the pollution threat posed to Kallada river in the premise of BZL, the Committee recommends that the Board in consultation with the Pollution Control Board should examine the state of water pollution in Kallada river as a result of industrial discharges from the Company's Plant when the Company starts functioning.

6. The Committee wants to be furnished with the details of action taken by the Board to reimburse the amount on account of subsidies given to Punalur Paper Mills in 2011 as per section 65 of the Electricity Act, 2003.

7. The Committee criticizes the Board for giving undue favour to the contractor of Nereamangalam Extension Scheme by not levying penalty,

amounting to ₹ 0.56 crore, for violating the tender conditions regarding the guaranteed repair/rectification of the defects within the stipulated time. The Committee opines that KSEBL incurred an extra expenditure of ₹ 7.26 crore during 2011-12 towards purchase of electricity from outside sources due to generation loss occurred by forced shutdown of the machinery. The Committee recommends to take stringent disciplinary action against the defaulted officials and to realise the penalty amount with interest from the accused contractor.

8. The Committee observes that the Board gives more priority to power purchase than power production. The Committee recommends to complete the ongoing projects, increase the number of small hydro electric projects and to modernise generators and wornout machinery in order to achieve targeted power production. The Committee also recommends to take adequate measures to ensure that domestic production of electricity should not fall below the target of 1500 MW.

9. The Committee recommends to improve captive generation of power in suitable places. The Committee urges that the Board should consider low cost projects and should devise new environment friendly technologies for power production.

10. The Committee opines that the Board should divert from conventional dam based power generation and wiers should be constructed for Hydro electric power production as it would considerably reduce costs as in the case of Gurumoorthy Project in Tamilnadu which produce electricity in 8 stations by using the same water.

Thiruvananthapuram,
8th May 2019.

C. DIVAKARAN,
Chairman,
Committee on Public Undertakings.

APPENDIX-I
SUMMARY OF MAIN CONCLUSIONS/RECOMMENDATIONS

Sl. No.	Para No.	Department Concerned	Conclusions/Recommendations
(1)	(2)	(3)	(4)
1	1	Power	The Committee finds that arrears amounting to ₹ 2200 crore are yet to be recovered by the Board from various consumers out of which Kerala Water Authority has major share of ₹1500 crore. The Committee recommends to conduct a high level meeting of Water Resources, Local Self Government and Power departments for taking decision to recover the arrear dues from the plan fund of Kerala Water Authority.
2	2	Power	The Committee observes that the One Time Settlement scheme implemented for settlement of arrears of HT/EHT consumers has not helped KSEBL to recover its dues and that this scheme is not successful in the case of State/Central Government departments and institutions/PSUs. The Committee recommends to take urgent steps to recover the arrear dues, from all State/Central Government departments, institutions and PSUs within three months and report to the Committee.
3	3	Power	The Committee notes that HT/EHT consumers were having total arrears due amounting to ₹973 crore as on 31-3-2013 of which ₹413 crore came under litigation cases. The Committee wants to be furnished with present position of settlement of arrears pending under litigation.

1	2	3	4
4	4	Power	The Committee demands a detailed report on the final settlement of dues of arrears of electricity charge by Binani Zinc Ltd. (BZL) to the Board.
5	5	Power	Expressing its concern over the pollution threat posed to Kallada river in the premise of BZL, the Committee recommends that the Board in consultation with the Pollution Control Board should examine the state of water pollution in Kallada river as a result of industrial discharges from the Company's Plant when the Company starts functioning.
6	6	Power	The Committee wants to be furnished with the details of action taken by the Board to reimburse the amount on account of subsidies given to Punalur Paper Mills in 2011 as per section 65 of the Electricity Act, 2003.
7	7	Power	The Committee criticizes the Board for giving undue favour to the contractor of Nereamangalam Extension Scheme by not levying penalty, amounting to ₹0.56 crore, for violating the tender conditions regarding the guaranteed repair/rectification of the defects within the stipulated time. The Committee opines that KSEBL incurred an extra expenditure of ₹7.26 crore during 2011-12 towards purchase of electricity from outside sources due to generation loss occurred by forced shutdown of the machinery. The Committee recommends to take stringent disciplinary action against the defaulted officials and to realise the penalty amount with interest from the accused contractor.

1	2	3	4
8	8	Power	<p>The Committee observes that the Board gives more priority to power purchase than power production. The Committee recommends to complete the ongoing projects, increase the number of small hydro electric projects and to modernise generators and wornout machinery in order to achieve targeted power production. The Committee also recommends to take adequate measures to ensure that domestic production of electricity should not fall below the target of 1500 MW.</p>
9	9	Power	<p>The Committee recommends to improve captive generation of power in suitable places. The Committee urges that the Board should consider low cost projects and should devise new environment friendly technologies for power production.</p>
10	10	Power	<p>The Committee opines that the Board should divert from conventional dam based power generation and wiers should be constructed for Hydro electric power production as it would considerably reduce costs as in the case of Gurumoorthy Project in Tamilnadu which produce electricity in 8 stations by using the same water.</p>

APPENDIX II
 NOTES FURNISHED BY GOVERNMENT ON THE AUDIT PARAGRAPH
 (AUDIT REPORT 2012-2013)

<i>Audit Paragraph</i>		<i>Reply Furnished by Government</i>
2		
4.8		
4.8.1		<p>As per the quarterly arrear statement as on March 2013, HT/EHT consumers were having a total arrear amounting to ₹973 crores. Out of which an amount of ₹413 crores comes under litigation. In the balance amounting to ₹560 crores, State/Central Government institution's share comes to about ₹102 crores. Minor Irrigation and KWA consumer's share comes to about ₹244 crores.</p> <p>It may please be noted that as per the quarterly arrear statement (abstract attached as Annexure for reference), private consumers have arrears only to the tune of Rs.197 crores (principal). The status of Revenue Recovery requisition initiated in respect of private consumers as on 31-03-2013 is furnished below.</p> <p>Principal amount (without litigation)- ₹104Cr.</p> <p>Principal amount (under litigation)- ₹48 Cr.</p> <p>As part of the OTS scheme, KSE Board had settled the outstanding arrears amounting to ₹8598 crores. As such, it can be seen that KSE Board had achieved commendable progress in settling the dues of private consumers. Government institutions usually do not show much interest in settling their dues under One time Settlement Scheme.</p>

1	2	3
		<p>From the feed back gathered from the consumers having arrear, as part of the follow up of the OTS Scheme, it is felt that they expected a further more reduction in the rate of interest for settling the arrears. Further, in the case of consumers having disputed arrears, they expected some reduction in the principal amount also for settling the arrears as they have agitated about the enforceability of raising the demand.</p> <p>In this connection, it may be noted that MD waiver is granted after obtaining the necessary certificates from the District Industries Officer as required under the Government Order. There is no specific condition laid down in the Order to withdraw the benefits granted if the unit shut down in a few months after availing the benefits. The only condition laid down in the order is that the unit should function six months after availing the benefit. The mode of working, the quantum of electricity to be consumed, number of people to be employed etc. are not included as a pre condition for granting the benefit once the unit is revived. There are District Industries Officers in all districts to watch these units and they are checking the misuse of the amnesty offered to the industrial units for its revival. An amount of ₹15.78 crores being the MD waiver granted have been included in the netting of dues amounting to ₹58.98 crores between the Government and KSEBL vide GO (M.S) No.17/2015/PD dated 13.05.2015 item No.ii(5)-Page 11 of Kerala Gazette No.1209.</p>

4.8.3

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M/s. Binani Zinc Ltd., consumer code -7/701 is an EHT consumer under Transmission Circle, Kalamassery with a contract demand of 18000KVA. The consumer submitted a representation before the Government for the settlement of 50ps tariff issue (Tariff increase with effect from 01-10-2002). Accordingly a joint meeting was convened by the Hon'ble Minister for Electricity and Honourable Minister for industries on 05-08-2010 for settling the issue. The arrear details of the consumer for the 50 Ps issue in connection with the revision of tariff from 10/2002 with normal interest (24%) is as given below.

Principal amount

- ₹ 30,04,50,254/-

Interest @ 24%

- ₹ 25,79,59,501/-

Total - ₹ 55,84,09,755/-

In this connection it may please be noted that in the audit para the amount to be remitted by the consumer under normal One Time Settlement Scheme of KSE Board Ltd., is noted as 29.81 crores is not correct. The interest rate prevailed at that time was 15% for normal One Time Settlement with instalment facility.

In the above meeting it has been proposed that the amount already paid by the consumer by way of court orders for ₹14 crores, as per Government direction ₹12,38,087-

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		<p>and the adjustment of interest on security deposit amounting to ₹35,38,792/- after deducting TDS, and the pre-92 benefit amounting to ₹1,96,91,709/- to be adjusted against the principal amount. After these adjustments the balance principal amount is to be charged interest @ 9% per annum and to allow the consumer to remit the balance amount in 32 monthly instalments. If the consumer fails to remit any of the instalment amount in due date, interest @ 9% is to be charged on belated instalment/ instalments.</p> <p>Government have examined the above proposal in detail and decided to accept the proposal and orders issued accordingly vide G.O dated 05-11-2010. It is also ordered that any concession allowed by the K.S.E.B Limited in addition to the prevailing One Time Settlement, such concession will be reimbursed by the Industries Department. Accordingly the Board issued orders vide B.O dated 07-01-2011 implementing the G.O dated 02-09-2010 (pre-92 tariff concession) and G.O dated 06-11-2010 (50 Ps. issue)</p> <p>The amount pending against the consumer (after adjusting the due amount to consumer against principal) as per G.O dated 02-09-2010, 06-11-2010 and B.O dated 07-01-2011 has been calculated and it comes to ₹ 27,28,77,264/-</p> <p>i.e., Principal amount - ₹ 13,59,81,665/- Interest @ 24% - ₹ 13,68,95,599/- Total - ₹ 27,28,77,264/-</p> <p>The consumer was allowed to remit the above amount in 32 instalments and the same was remitted promptly.</p> <p>The above facts were submitted by</p>

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	<p>the KSEB to the Government (Additional Chief Secretary to Government, Industries and Commerce) with the due request to reimburse the loss sustained by the Board by implementing the G.O dated 02-09-10 & 06-11-2010 as per Section 65 of Electricity Act 2003.</p> <p>Subsequently, Government have directed to furnish the detailed calculation statement regarding the reimbursement. Accordingly, detailed calculation statement has been submitted to the Government. In the earlier Government Order dated 06-11-2010 Government had directed to adjust the amount already paid by consumer against the principal amount. It may please be noted that Government of Kerala has also ordered that any concession allowed by the K.S.E.B Limited in addition to the prevailing OTS, that concession only will be reimbursed by the Industries Department. Here the concession over and above as per OTS is the concession allowed in interest rate. That is the difference between 15% and 9% (15% is the OTS rate with instalment facility). The interest loss comes to ₹ 6,04,70,097/- and the K.S.E.B Limited has requested to reimburse the same from Government in Industries Department. But Government could not reimburse the claimed amount of ₹6,04,70,097/- as Finance Department rejected the claim stating that the Government order was issued without consulting them and no provision was made in the Budget for such payments. The above order of the Finance Department is against the G.O dated 06-11-2010.</p> <p>The consumer made short remittance excluding the tariff hike from 10/02 to 11/07 and filed various cases before Hon'ble</p>

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	<p>Supreme Court, High Court and other Legal Forums. Hence, there was legal bar for effecting disconnection against the consumer. Later the consumer had withdrawn the case from the Legal Forums and submitted a request to the Government for settlement only after the withdrawal of the cases from various legal forums by the consumer. Hence K.S.E.B Limited was not in position to disconnect the service before the settlement of arrears. In this connection, it may please be noted that there was no laxity on the part of K.S.E.Board in disconnecting the service of the consumer at that point of time.</p>
4.8.4	<p>The Government as per G.O (MS) No.180/2010/ID dated 20-08-2010 had introduced a revival package for restarting the operation of M/s.Punalur Paper Mills. The package envisaged inter alia, the following concession from the part of K.S.E.Board.</p> <ol style="list-style-type: none"> 1. KSEBL will allow the company to settle energy charges at ₹ 44.78 lakhs with interest @ 6% from the date of disconnection. 2. KSEBL will waive all other charges including MD charges 3. Government will waive electricity duty. 4. KSEBL will restore power connection after receiving arrear energy charge and installation charge. <p>As decided in the FTM in its meeting held on 27-09-2010 KSEB decided to comply with the Government Order and approached the Government to make good the loss sustained by the Board as per Sec.65 of the Electricity Act, 2003. B.O (FM)No.2656/2010 dated 10-10-2010, was issued in this regard.</p>

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		<p>However, M/s.Punalur Paper Mills was not a matter of subsidizing a defaulter but a package for reviving an industrial unit and hence Sec.65 was not applicable in this case. Sec.65 of the Electricity Act speaks only about the subsidy the Government intends to provide to any consumer or class of consumers.</p> <p>The above Government Order was issued in good faith by giving waiver of MD charges incentive and subsidies, exemption in taxes, duties etc for promoting industries with a view to increase employment opportunities and such other benefit to society.</p> <p>In this regard please be noted that an amount of ₹21,70,22,651/- had been reimbursed by Government .</p> <p>Regarding Revenue Recovery Action, requisition for an amount of ₹524 crore (including interest) had been made to Revenue authorities of various Revenue Districts. Out of which, requisition for about ₹46 crore, against six defaulted consumers had been given during the past six months.</p> <p>In order to speed up the recovery process, representatives of the office discussed various issues with Palakkad and Chittur Deputy Tahsildars on 22nd and 23rd of March 2016. Co-operation of the Revenue Authorities was sought in this regard and it has been decided to work in close co-ordination with various Revenue Authorities to speed up the recovery proceedings.</p>

Query: Amount Due as of March 2013 in respect of HLT/RT Consumers						
Category	Agency Code	Consumer Name	Fact	Closing Balance 03/2013	Amount under Litigation 03/2013	Balance after Litigation 03/2013
CD Total				2777956	0	2777956
CPSU Total				245362704	59983619	185379085
CS Total				213648703	113449007	101199696
IS Total				47637049	0	47637049
KMA Total				2403047715	0	2403047715
LICENSES Total				165694359	14392539	21761820
MI Total				35021327	0	35021327
PPV Total				4823286398	2853658420	1969627978
SD Total				25561048	0	25561048
SCM Total				9274474	0	9274474
SPRU Total				1763378709	360163178	803215531
Grand Total				9734690442	4130186763	5604503679

NOTES FURNISHED BY GOVERNMENT ON THE AUDIT PARAGRAPHS
AUDIT REPORT 2012-2013

Sl No	Audit Paragraph	Reply Furnished by Government
1	2	3
4.9		<p>Neriamangalam Extension Scheme (NES) is envisaged to utilize part of spill water from Kallarkutty reservoir to generate power. Before commissioning of the NES project, there was frequent spillage from the Kallarkutty reservoir due to the low capacity of the reservoir. The NES project utilizes only 40% of the available spill water and hence there can be spillage every year, during peak of monsoon even when all the four generators of Neriamangalam scheme (3 units of the old powerhouse with capacity 17.55 MW each and 1 unit of NES of capacity 25 MW) are in operation.</p> <p>The contract agreement for NES was executed on 22nd May 2003 between KSEB and M/s V.A. Tech Escher Wyss Flovel Ltd (now M/s Andritz Hydro). The agreement authority from the part of KSE. Board Ltd. was Chief Engineer, Civil Construction (South). The contract completion period was 36 months from the date of signing the agreement or date of release of 10 % advance whichever is later. The guarantee period is 3 years from the date of completion of installation and final test on the pen stock pipes, specials, and electro mechanical machineries or three years from the date of commercial operation of systems involved whichever is later. The</p>

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		<p>Provisional Acceptance Certificate (PAC) was issued on 17/09/2008. As such the guarantee period is 3 years from 17/09/2008 i.e. up to 16/09/2011.</p> <p>As per clause H-47 of the contract agreement, if the contractor fails to rectify the defect during the guarantee period, if any, within a reasonable time a penalty @ Rs. 50,000/- per day shall be charged to compensate the loss in generation for the delayed period.</p> <p>During the period 6/09/2011 to 23/02/2012 (169 days), the unit was under shut down due to water leakage through shaft seal and for the subsequent rectification works. Audit admitted only 58 days (38+20) as reasonable time for repair and observed that the remaining 111 days (169-58 days) as the delay period and hence penalty should have been imposed on the contractor @ Rs. 50,000/-per day amounting to Rs. 0.56 crores (111 x 50,000/-). This is interpreted as an undue favour to the contractor by the Board.</p> <p>Emergency shut down of the machine at Neriamangalam Extension Scheme was taken on 26/08/2011 due to severe water leakage through shaft seal. On inspection by Board Engineers, it was observed that the slide ring (shaft seal) made of phenolic resin was worn out in a tapered manner. A detailed joint inspection of shaft assembly was conducted by M/s Andritz Hydro & the Board Engineers on 31/08/2011 and it was found that the slide ring made of phenolic resin has been considerably worn out and the metallic L shaped ring (counter raceway) on which the slide ring is bolted was also worn out. The rotating ring (Fastening ring) on which slide ring rubs have also started wearing along with adjacent bolts. M/s Andritz Hydro carried out the rectification work of shaft seal assembly with the spares available at site., and the machine was put back to operation on 4/09/2011.</p>

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The machine was again forced to shut down on 6/09/2011 due to the same problem. The matter was informed to M/s Andritz Hydro and requested for urgent rectification. But M/s Andritz Hydro refused to rectify the defects at free of cost and forwarded an offer amounting to Rs. 52 lakh (excluding taxes and duties) for the rectification works towards the cost of supply & erection of spare parts for the damaged shaft seal, as per letter dated 8/09/2011. The time period mentioned in their offer for completing the work was 3 to 4 months from the date of receipt of Work Order. Since the machine was under the performance warranty period (for another 10 days up to 16/09/2011), this offer was not accepted by the Board. The matter was intimated and the firm was requested to rectify the defects immediately as per the contractual obligation. Since the warranty period was almost over (only 10 days left), KSEB has taken a very stringent stand.

As M/s Andritz Hydro was demanding payment for replacing the damaged components, the matter was brought to the notice of the Board. The Chairman, KSEB convened a meeting with the firm on 14/10/2011 to sort out the issues. In the meeting, M/s Andritz Hydro projected that the problem was due to operational short coming. KSEB did not accept this argument. After detailed deliberation on various aspects, M/s Andritz Hydro finally agreed to complete the replacement work within 20 days by diverting the required spares from other similar projects, if needed.

As per the existing design, counter raceway and fastening ring were single pieces, around the shaft. Because of this single piece design, the runner has to be removed from the shaft for replacing the fastening ring. Thus the replacement of damaged fastening ring and counter raceway with new steel ring was a time consuming job.

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It may be noted that the actual work of replacing the shaft seal was started only after the meeting convened by the Chairman, KSEB on 14/10/2011 i.e., after 38 days (6/09/2011 to 14/10/2011) Andritz Hydro may be able to complete the work within 20 days as agreed in the meeting. But KSEB has taken a tough stand in this case. The reason for taking a tough stand was that the guarantee was over by 16/09/2011. Once they complete the rectification work within 20 days and the machine is accepted by KSEB, all further breakdowns had to be rectified by KSEB making huge payment to M/s Andritz Hydro, since the guarantee period was over by 16/09/2011.

So KSEB decided to have a thorough inspection on the condition of the seals by the technical experts of KSEB in this filed, after dismantling. On inspection, it was found that there is severe damage to the seal and any temporary rectification will relieve M/s Andritz Hydro from their contractual obligation (guarantee period only up to 16/09/2011) and KSEB will have to incur huge expenses in future for rectification of the seal damage.

Based on the inspection of the damaged shaft seal and scrutiny of the problems related with the repeated failure of the shaft seal in the past revealed that, it is better to request the OEM, M/s Andritz Hydro to carry out a modification in the design of the existing single piece fastening ring and counter raceway to two semi-circular pieces matching with the phenolic resin sliding ring and the fixing bolts of the machine parts. The Chief Engineer (Generation) proposed this design change, in order to make future replacement of slide rings (the shaft seal on worn out condition) easier and enabling replacement of the fastening ring without dismantling the turbine runner and associated assembling work and balancing of the unit. M/s

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Andritz Hydro vide letter dated 29/10/2011 informed the Chairman, KSE. Board that they would carry out the rectification of shaft seal assembly with newly designed (two piece instead of single) fastening ring and counter raceway and newly manufactured distance bushing to suit the modified fastening ring & counter race way. Accordingly, M/s Andritz Hydro forwarded a revised schedule for 56 days (21/10/2011 to 15/12/2011) for rectification work of shaft seal assembly. In this schedule, design, manufacture and assembly of new type of counter raceway, fastening ring and distance bushing were included. With this new design of spare parts, dismantling of turbine was not required for replacing fastening ring if wear & tear occurs in future.

It may be noted that the time period of 20 days offered by M/s Andritz Hydro for rectification work of shaft seal assembly in the meeting convened by the Chairman, KSEB is without considering the design change of the spare parts. In the audit para, the reasonable time of 58 days is arrived at by considering the above mentioned 20 days agreed by M/s Andritz Hydro for rectification work for mere replacement of the damaged parts by new ones of the same design available in the inventory of M/s Andritz Hydro.

Even after delivery of the materials as per the new design, the arrival of Andritz Hydro team to NES was further delayed due to the disturbances in Tamil Nadu and Kerala in connection with the Mullaperiyar issue. The team proposed to visit NES had to come from their Periyar site at Tamil Nadu. Hence they had to arrange an alternate team from other sites for this work. Mobilizing of skilled manpower from various sites took time and further delayed the work and the delay was not intentional. Hence it can be seen that the repair was done as per the new design under very special circumstances and demanding

conditions and without involving any expenditure on the part of KSEB, even though their original offer for carrying out the work without design modification was Rs. 52 lakh excluding taxes and duties with a time period of 3 to 4 months.

Advantages of modification in the design.

As per the original design, the counter race ring, fastening ring etc. are single piece steel rings. The dismantling and re-erection of these parts can be done only by removing and lowering the runner of the generating unit. Once the runner is removed from the shaft, major re-alignment and balancing of the complete machine is needed after the re-assembly of all the parts including runner. Minimum 45 days is required to complete the above activities such as removal of runner, re-assembly of the unit and final alignment and balancing of the machine. Hence shut down of the unit for a minimum 45 days is needed whenever the replacement of the fastening ring is necessitated. In order to avoid time delay, KSEB proposed a design change. Accordingly, M/s Andritz Hydro changed the design of these parts in two pieces instead of single piece existing machine parts needs careful re-design, preparation of new patterns etc. which are time consuming. Since the unit is envisaged to utilize the spill that would occur from Kallarkuty dam, the design modification is felt unavoidable as the unit can be put into service at the earliest, if any break down of shaft seal assembly occurs during the spill.

It may be noted that KSEB has benefited to a large extent due to the design change because now the rings can be dismantled and taken out as two pieces without dismantling the runner or any other part of the shaft, thus saving much time in the rectification of similar problems in future. No additional expenditure was incurred by the Board for the above mentioned

design modification and for the supply of redesigned counter race way and fastening ring along with the required accessories, even though the OEM had originally demanded Rs.52 lakhs for effecting replacement damaged parts without any design change.

Generation loss due to spill

There was spill from the Kallarkutty reservoir and associated generation loss from the scheme for the period from 6/09/2011 to 30/11/2011. It may be noted that the original delivery time for the spares as per the offer of OEM is 3-4 months showing that the work would be completed only in December 2011. From the log of water level kept at dam site, it is evident that there was no spill from the Kallarkutty reservoir from 1/12/2011. Hence KSEB has not suffered any "Generation Loss" during the periods after allowing reasonable time to rectify the defects based on the original offer of the OEM.

As per the audit para , the reasonable time for the said work is only 58 (38+20) days from 6/09/2011, the date of occurrence of breakdown. It may be noted that the additional time taken by the OEM is for the requested design modification and hence the time taken for completing the work as per our requirement without any payment can be taken as the reasonable time for completing the work. It may also be noted that the design modification served as a permanent solution to the repeating problems of shaft seal failure of NES machine.

As per the agreement condition H- 47 of Contract Agreement for Nerimangalam Extension Scheme " the Board shall decide the reasonable time for rectification taking in to account the various aspects". This particular Clause is included considering the following:-

The time taken to rectify each failure is different considering various factors like;

- a. The component of the system failed.

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- b. Nature of failure
 - c. Availability of spares
 - d. Technical complexity of the problem
 - e. Time required for dismantling of damaged equipment and erection of new spare
 - f. Technical skill required for carrying out the work
 - g. Whether any design change is required etc.

The reasonable time can be assessed only by a team of competent technically sound Engineers working in the generation field.

In this particular case KSEB had only two options available.

1. To accept the 20 days time period committed by M/s Andritz Hydro in the meeting convened by the Chairman. They were ready to proceed with temporary rectification and get relieved from the contractual obligations since the guarantee period expired on 16/09/2011.

Disadvantage of this option.

a. Any failure occurring in future will be the responsibility of KSEB and KSEB will be forced to pay huge amounts to M/s Andritz Hydro for rectification.

b. For failure of shaft seal, the time required for rectification will be more considering the single piece construction of seal requiring removal of the runner, refuting and balancing etc.

2. To inspect the damaged seal, analyze the problem with the help of technically competent Engineers and suggest suitable technical modification to avoid frequent failure and to reduce the replacement time.

KSEB opted this considering the following:-

- a. The guarantee period was over by 16/09/2011. So this was the last chance for KSEB to get the modifications done by Andritz hydro free of cost.

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b. Allowing temporary rectification and releasing the contractor from guarantee will be against the interest of KSEB. Had the modification done after the guarantee period, the expenditure might have been more than Rs. One Crore. Considering all the above, KSEB and its Engineers had done a remarkable job by getting the modification done free of cost even though the same was not under the scope of the contractor.

Reasonable time

Considering the design modifications done by M/s Andritz Hydro, the time taken is reasonable.

The observation of the audit that "The contractor started rectification work only on 10th February 2012 (157 days after shut down) and completed the work within 14 days and the machine was synchronized to grid on 23rd February 2012. This indicated that modification was a minor one and necessitated due to the defect in equipment" is absolutely wrong interpretation considering the following.

1. The 14 days taken is for the work of replacing the seal only. As explained earlier this is one of the major advantages of the design modification considering the fact that the seal can be replaced without removing the runner.

2. Designing and manufacturing a new seal for a machine which was in service for 3 years is a very difficult job. The process involves the following.

- a. Study the problem and find out the reason for failure.
- b. Taking all the measurements of the existing equipment.
- c. Designing a new system by design experts
- d. Discussions either at site or through phone and e-mail with KSEB Engineers regarding the new-design

e. Finalizing the design after incorporating the corrections suggested by KSEB

f. Selecting the material for each component

g. Manufacturing the items. Since this is very special item sufficient care is to be taken for manufacturing each and every component.

h. Packing, forwarding and transporting to site

i. Mobilizing the skilled man power

j. Dismantling the old items carefully and replacing the new modified seal carefully.

From the above it is very clear that the audit has considered item (j) only, but major time is required for items (a) to (j). It may also be noted that, during the subsequent years 2012- 13, 2013- 14 and 2014- 15 as on date, no shut down of NES machine due to water leakage through shaft seal is reported.

Conclusions

1. The failure occurred 10 days prior to completion of performance guarantee period.
2. KSEB might have allowed M/s Andritz Hydro to do a temporary rectification within 58 days and relieved them from the contractual obligation, favouring M/s Andritz Hydro.
3. Considering the lag end of the guarantee period, KSEB has taken a very positive step of studying the problem with the skilled Engineers of KSEB and suggested a modified design and got it implemented by the contractor without any additional expenditure to KSEB. Had the modification was done after the guarantee period, an amount of more than Rs. One Crore might have been incurred by KSEB.
4. Considering the various stages involved in the new design and manufacturing and the time lost in connection with the Mullaperiyar issue, the time consumed is reasonable.

5. There was no spill of water from the reservoir froth 1/12/2011 to the date of completion of the work & hence there was no generation loss.

6. The modification suggested by KSEB's Engineers was very good which is evident from the operation of the plant till date. There was no break down due to the fault of the shaft seal.

7. The modification has got the added advantages that the rectification can be done easily, in case of failure of shaft seal in future. This is evident from the fact that the rectification was completed within 14 days.

In the light of the facts detailed above, the Hon'ble Committee may please accept the report and drop the above recommendations.

P. P. SAJITHRA
Additional Secretary to Genl.
Power Department
Genl. Secretariat, Tumm.
Ph: 2519382

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Annexure 25

Statement showing Board Orders regarding OTS in Kerala State Electricity Board

(Referred to in paragraph 4.8)

Period of concession	To whom applicable	Interest rate (Percentage)	Conditions for eligibility
May to June 2005 (Original Scheme)	All consumers were eligible	12/18	Either one time settlement or instalment. Interest rate was 12 per cent for lump sum payment and 18 per cent, if paid in instalments. If instalments were availed, 25 per cent as 1 st instalment and the remaining in five equal monthly instalments
03.02.2009 to 31.03.2013	Public Sector undertakings, Government Departments, Government institutions and Local bodies	3	Lump sum payment of arrears
20.4.2009 to 31.03.2012	All consumers are eligible	9	Lump sum payment
		15	Settling arrears in six monthly instalments
24.6.2011 to 30.9.2011	For reopening/final settlement of Closed industrial units	3	Lump sum payment
		6	10 monthly instalments
01.02.2012 to 31.03.2012	For reopening/final settlement of Closed industrial units	3	Lump sum payment of principal before 31.03.2012
	For others	5	Lump sum payment of principal before 31.03.2012
27.7.2012 to 31.3.2013	For closed plantations and industrial units and other disconnected/dismantled services for a period of more than one year	3	Payment of principal in lump sum and interest within one month
		6	Four monthly instalments along with interest.
01.07.2012 to 31.03.2013	For reopening/final settlement of Closed industrial units	3	Payment of principal in lump sum and interest within one month
		6	Four monthly instalments along with interest.
	For others	5	Lump sum payment
		9	Four monthly instalments along with interest.

Annexure 26

Statement showing year-wise details of cases settled, amounts outstanding, recovered and waived by Kerala State Electricity Board

(Referred to in paragraph 4.8)

(₹ in crore)

	2010-11	2011-12	2012-13	Total
Number of cases settled	12	15	5	32
Arrears outstanding during the year of settlement				
Principal	3.51	7.49	15.31	26.31
Interest	4.02	13.99	41.66	59.67
Total	7.53	21.48	56.97	85.98
Amount recovered under OTS				
Principal	3.51	7.49	15.31	26.31
Interest	0.68	2.06	5.46	8.20
Total	4.19	9.55	20.77	34.51
Amount waived under OTS				
Principal	Nil	Nil	Nil	Nil
Interest	3.35	11.94	36.70	51.99
Total	3.35	11.94	36.70	51.99
Percentage of waiver to total interest due	83	85	88	87

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