



FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

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

FIFTY SIXTH REPORT
(Presented on 24th January, 2018)

SECRETARIAT OF THE KERALA LEGISLATURE

THIRUVANANTHAPURAM

2018

FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC UNDERTAKINGS
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FIFTY SIXTH REPORT

On

The Kerala Water Authority

**[Based on the Report of the Comptroller and Auditor General of
India (General and Social Sector) for the year ended 31 March,
2011, 2013, 2014]**

CONTENTS

| | <i>page</i> |
|--|-------------|
| Composition of the Committee .. | v |
| Introduction .. | vii |
| Report .. | 1 |
| Appendix I : .. | 25 |
| Summary of main Conclusions/Recommendations | |
| Appendix II : .. | 29 |
| Notes furnished by Government on the Audit Paragraph | |
| Appendix referred to in the Audit Reports | |
| Appendix 3.5 .. | 54 |
| Appendix 3.6 .. | 55 |

COMMITTEE ON PUBLIC UNDERTAKINGS (2016-2019)
COMPOSITION OF THE COMMITTEE

Chairman:

Shri C. Divakaran.

Members:

Shri T. A. Ahammed Kabeer

Shri K. B. Ganesh Kumar

Shri C. Krishnan

Shri S. Rajendran

Shri Thiruvanchoor Radhakrishnan

Shri P. T. A. Rahim

Shri Raju Abraham

Shri Sunny Joseph

Shri C. F. Thomas

Shri P. Unni.

Legislature Secretariat :

Shri V. K. Babu Prakash, Secretary

Shri G. Mathewkutty, Joint Secretary

Shri P. B. Suresh Kumar, 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 Fifty Sixth Report on The Kerala Water Authority based on the Report of the Comptroller and Auditor General of India for the year ended 31 March, 2011, 2013, 2014 relating to the Public Sector Undertakings of the State of Kerala.

The aforesaid reports of the Comptroller and Auditor General of India for the year ended on 31st March 2011, 2013 and 2014 were laid on the Table of the House on 23-3-2012, 10-6-2014 and 23-3-2015 respectively. 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 11-1-2017.

This Report was approved by the Committee(2016-2019) at its meeting held on 17-1-2018.

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 Water Resources Department of the Government Secretariat and The Kerala Water Authority 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-Water Resources and Finance Department and the officials of the Kerala Water Authority who appeared for evidence and assisted the Committee by placing their views before it.

Thiruvananthapuram,
17th January, 2018.

C. DIVAKARAN,
Chairman,
Committee on Public Undertakings.

REPORT
ON
THE KERALA WATER AUTHORITY

AUDIT PARAGRAPH 3.2.6 & 3.4.9 (2010-11)

Irregular refund of Works Contract Tax

The Kerala Water Authority allowed irregular refund of works contract tax amounting to ₹ 50.95 lakhs to a contractor in violation of statutory provision.

The Kerala Water Authority (KWA) awarded (March 2003) the work of 'Water Supply Augmentation to Parur Municipality' to the Kerala State Construction Corporation Limited (KSCC), a Government of Kerala undertaking. The work was executed by KSCC through a consortium of three ⁴⁷ contractors including M/s Noble Tech Engineering (P) Limited, Palarivattom, Kochi.

As per the notice inviting tenders (NIT) the rate of work contract tax (WCT) under the Kerala General Sales Tax (KGST) Act, 1963, was indicated as two *per cent* in respect of civil contracts and five *per cent* in respect of other contracts. It was also mentioned therein that tax would be deducted as per the rate applicable from time to time. Further, Section 7 (7C) of the KGST Act, stipulated that every awardee was required to obtain from the contractor at the time of every payment, a quarterly certificate issued by the Department of Commercial Taxes (assessing authority) showing the tax liability in relation to the works contract. Accordingly, the KSCC produced a certificate to KWA issued by the Department of Commercial Taxes in December 2003, specifying the rate of tax at 9.66 *per cent* in respect of M/s Noble Tech Engineering (P) Limited (contractor).

As per the certificate, the KWA recovered WCT at the rate of 9.66 *per cent* from the bills of the contractor. In April 2005, the KSCC represented to the KWA that an amount of ₹ 1.35 crore had been recovered in excess towards WCT if the

47 M/s Noble Tech Engineering (P) Limited, M/s S&S Private Limited and Shri Pathrose George Karamen.

rate of two *per cent* mentioned in the agreement was adopted. Consequently, the Chief Engineer (CE), Central Region, Kochi decided (August 2005) to revise the WCT to the rate of 2.3 ⁴⁸ *per cent* and passed an order to refund the difference between 9.66 *per cent* and 2.3 *per cent*. This order was subsequently revised and it was decided to refund ₹ 50.95 lakh (difference between 5.75 ⁴⁹ *per cent* and 2.3 *per cent*) to the contractor, who was directed to claim the difference between WCT of 9.66 *per cent* and 5.75 *per cent* directly from the Department of Commercial Taxes.

The Department of Commercial Taxes stated (November 2005) that the orders issued by the CE were against the statutory obligation as envisaged in Section 10 of KVAT Act, 2003. It stated that it was up to the contractor to approach the Department of Commercial Taxes for getting refund of excess payment or for future adjustment as per rules which could only be considered on completion of the assessment for the respective year. This advice was ignored and KWA refunded (June 2007) ₹ 50.95 lakh to the contractor.

Thus the refund of ₹ 50.95 lakh given from the KWA funds to the contractor was irregular and beyond the powers of KWA. The Government stated (July 2009) that KWA had passed (May 2009) orders to recover the amount irregularly refunded to the contractor. The amount had, however, not been recovered (June 2011).

The matter was referred to the Government in July 2011. Their reply had not been received (October 2011).

Avoidable payment of Power Factor Penalty

Failure to install static capacitors/capacitors with sufficient rating by KWA and other departments resulted in power factory penalty of ₹ 6.61 crores.

48 Two per cent Sales Tax + 15 per cent additional Sales Tax

49 Five per cent Sales Tax + 15 per cent additional Sales Tax

As per the tariff orders issued by the Kerala State Electricity Regulatory Commission (KSERC), the following incentive and penalty are applicable to High Tension and Extra High Tension consumers for Power Factor (PF) improvement:

Table 3.8: Power Factor penalty and incentive

| Power Factor range | Penalty |
|-----------------------------------|---|
| Power Factor below 0.90 | One per cent energy charge for every 0.01 fall in Power Factor from 0.90 |
| Power Factor range | Incentive |
| Power Factor between 0.90 to 1.00 | 0.15 per cent of energy charges for each 0.01 unit increase in Power Factor from 0.90 |

Source: Tariff orders of Kerala State Electricity Regulatory Commission

KSERC recommended that static capacitors should be installed for power factor improvement. A detailed analysis of the electricity bills of the offices of the Kerala Water Authority (KWA) and other Government departments/ autonomous bodies revealed that the Kerala State Electricity Board (KSEB) charged PF penalty to the tune of ₹ 6.61 crore due to the PF being below 0.90 during the period from April 2005 to March 2011. Out of the total PF penalty of ₹ 6.61 crore charged by KSEB, it was noticed that the major share of the penalty amounting to ₹ 4.35 crore pertained to KWA. At a belated stage, the energy management core team of KWA instructed (January 2010) the Executive Engineers of all Divisions to install capacitors within two months in all pumping stations to avoid penalties. The capacitors were, however, not installed (March 2011) and many of the Divisions continued to pay the PF penalty. Thus, the failure of the KWA and other Government departments/autonomous bodies to install static capacitors/capacitors with sufficient rating resulted in PF penalty amounting to ₹ 6.61 crore till March 2011. The incentive which could have been received for PF between 0.90 and 1.00 could not also be availed of.

The matter was referred to Government in July 2011. Their reply had not been received (October 2011).

[The Audit Paragraph 3.2.6 & 3.4.9 contained in the Report of the C&AG for the year ended 31st March 2011]

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

AUDIT PARAGRAPH 3.5 (2012-13)

Financial Management of Kerala Water Authority

3.5.1 Introduction

The Kerala Water Authority (KWA) was established under Kerala Water and Wastewater Ordinance, 1984 to provide for the development and regulation of water supply and wastewater collection and disposal. The Ordinance was replaced by the Kerala Water Supply and Sewerage Act (Act), 1986. KWA is the major institution/Statutory authority in the State, implementing the drinking water policy/programmes of the State and Central Government. The State and Central Governments provide substantial financial assistance to KWA for taking up activities related to water supply and wastewater.

The objective of audit was to ascertain whether the overall management of finances in KWA was economic and efficient. Audit was conducted during April 2013 to July 2013, covering the period 2008-09 to 2012-13.

The audit findings are discussed in the following paragraphs:

3.5.2 Sources and management of fund flow

The major sources of funds of KWA are grants from the State Government and Government of India (GOI), loans from State government and financial institutions and revenue collected for supply of water and sewerage charges. Major requirements of fund are categorised under capital cost of projects, establishment charges and operation and maintenance charges(O&M). Receipts and utilisation of funds during 2008-09 to 2012-13 are given in **Table 3.5**.

Table 3.5: Receipts and expenditure during 2008-09 to 2012-13

(₹ in crore)

| Period | Grant | | Loan | | Deposit & other receipt | Revenue from water and sewerage charges | Total receipts ¹³³ | Total Expenditure |
|--------------|----------------|---------------|----------------|---------------|-------------------------|---|-------------------------------|-------------------|
| | State Govt. | GOI | State Govt. | Bank | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2008-09 | 186.21 | 106.97 | 379.00 | 263.01 | 58.46 | 223.87 | 1217.52 | 1458.43 |
| 2009-10 | 509.54 | 154.47 | 315.00 | 6.60 | 48.97 | 314.80 | 1349.38 | 1430.08 |
| 2010-11 | 480.58 | 148.77 | 94.67 | 6.90 | 45.62 | 355.40 | 1131.94 | 1127.48 |
| 2011-12 | 429.68 | 124.46 | 230.10 | 0.78 | 77.03 | 351.96 | 1214.01 | 1204.61 |
| 2012-13 | 564.20 | 249.71 | 240.00 | 25.88 | 99.33 | 384.49 | 1563.61 | 1621.47 |
| Total | 2170.21 | 784.38 | 1258.77 | 303.17 | 329.41 | 1630.52 | 6476.46 | 6842.07 |

Source: Budget documents of KWA for the period up to 2011-12 and cash flow statement and plan progress report for 2012-13.

As seen from the above table, total expenditure increased from ₹ 1458.43 crore in 2008-09 to ₹ 1621.47 crore in 2012-13. The revenue collection from water and sewerage charges was the major source of revenue of KWA. Collection of revenue from water and sewerage charges as share of total receipts increased from 18.38 per cent in 2008-09 to 24.58 per cent in 2012-13. At the same time, grant-in-aid from the State Government increased from 15.29 per cent in 2008-09 to 36.08 per cent of the total receipts in 2012-13.

Out of the total grant-in-aid of ₹ 2170.21 crore provided by the State Government during this period, ₹ 895.03 crore was for meeting non-plan expenditure as shown in **Appendix 3.5**. While Revenue expenditure was in the range of ₹ 586.87 crore (2010-11) and ₹ 739.43 crore (2008-09), revenue collection ranged between ₹ 223.87 crore (2008-09) and ₹ 384.49 crore (2012-13). Though there was steady increase in revenue collection during the

¹³³ Accounts of KWA finalised only up to 2007-08. The figures were adopted from the budget documents of KWA

period, it accounted for only 50 per cent of revenue expenditure. Grant-in-aid received from the State Government/GOI for non-plan expenditure increased from ₹ 123.26 crore in 2008-09 to ₹ 265.50 crore in 2012-13. Thus, KWA was depending heavily on Government for meeting revenue expenditure.

During 2008-09 to 2012-13, out of the total revenue expenditure of ₹ 3260.26 crore, the total establishment expenditure was ₹ 1614.93 crore (49.53 per cent) and other expenditure including O & M, power charges etc., was ₹ 1645.33 crore (50.47 per cent). In 2008-09, the establishment expenditure was ₹ 243.30 crore and it increased to ₹ 428.82 crore in 2012-13, showing an increase of 76.25 per cent. During this period, payment of power charges was ₹ 604.69 crore, which was 18.54 per cent of the total revenue expenditure.

Poor revenue collection mechanism led to an increase in arrears in collection of water charges from ₹ 340.77 crore in March 2011 to ₹ 532.83 crore in March 2013 as discussed in paragraph 3.5.4.2.

Audit noticed that plan funds amounting to ₹ 153.22 crore for the period 2008-09 to 2012-13 were diverted for revenue expenditure due to insufficiency of non-plan funds received from Government. Due to paucity of non-plan funds, the payment of electricity charges was in arrears and there was accumulated arrear of ₹ 377.34 crore as on 31 March 2013, which would be a heavy drain on the resources of KWA.

Government admitted (November 2013) the diversion and stated that the diverted amount would be recouped on receipt of sufficient non-plan grant.

3.5.3 System of control over expenditure

3.5.3.1 Slow pace in utilisation of plan grant from Government

The Government provided grant to KWA for implementation of State plan schemes. The grant was released in instalments, subject to utilisation of grant already released. Table 3.6 below gives the details of allotment, release and utilisation of State Government grant during the five year period 2008-2013.

Table 3.6: Allotment, release and utilisation of grant*(₹ in crore)*

| Year | Budget Provision | Release | Utilisation | Percentage of utilisation with respect to Budget provision |
|--------------|------------------|-----------------------|----------------|--|
| 2008-09 | 260.00 | 79.00 | 69.85 | 27 |
| 2009-10 | 351.61 | 351.61 ¹³⁴ | 308.49 | 88 |
| 2010-11 | 371.20 | 280.86 | 184.08 | 50 |
| 2011-12 | 298.79 | 238.16 | 259.84 | 87 |
| 2012-13 | 353.82 | 335.55 | 348.68 | 99 |
| Total | 1635.42 | 1285.18 | 1170.94 | 72 |

Source: Details of budget figures and progress reports collected from KWA

Audit noticed that while the percentage of utilisation of grant ranged between 27 and 99, the overall utilisation was 72 *per cent* of the total provision during the period. As a result, KWA surrendered ₹ 350.24 crore of the budget provision during this period due to slow progress/non-implementation of projects. KWA had also been diverting plan funds, as discussed in the paragraph 3.5.2 above.

3.5.3.2 Delay in implementation of projects

KWA was operating 2214 water supply schemes as of December 2013. Audit noticed that projects which were taken up as early as in 1998 had not been completed even as of March 2013. As per information collected in respect of 14 schemes, delay in implementation of the projects ranged from 19 months to 12 years due to delay in identification/taking possession of land, obtaining permission from National Highway Authorities/Railways, power connection, etc., as detailed in **Appendix 3.6**. The investment of ₹ 142.85crore on these projects, thus, remained unproductive. The delay in completion of the projects has denied

134 Includes ₹ 10 crore for drought relief works.

benefits intended to the population covered under the schemes, besides loss of revenue through water charges to KWA.

3.5.3.3 Energy conservation activities

KWA is one of the highest consumers of electricity in the State. Most of the water supply schemes were commissioned decades ago and the motor pumps installed in the schemes were partially worn out. It was envisaged by KWA that proper rehabilitation and timely maintenance works would help in power saving by 50 per cent. As part of energy conservation measures, KWA formulated schemes to install high efficiency pumps and motors.

The Government released (2009-2013) grant of ₹ 5.15 crore to KWA, and NABARD sanctioned (2010-11) a loan of 28.98 crore for these activities. Audit noticed that KWA had utilised only ₹ 1.56 crore and ₹ 7.25 crore respectively out of State Government release and NABARD loan up to September 2013.

In view of the increasing annual electricity charges from ₹ 113.10 crore in 2008-09 to ₹ 184.00 crore in 2012-13 and accumulated arrears ₹ 377.34 crore, KWA should have devoted more attention for timely completion of such schemes with the funds already sanctioned by the Government and NABARD. Government replied (November 2013) that installation of capacitors was required for avoiding power factor penalty and KWA was taking action to install capacitors from the balance funds available under the scheme.

3.5.4 Management of receipt and receivables

3.5.4.1 Collection of water supply charge and sewerage charge

The KWA supplies potable water to domestic, non-domestic and industrial consumers. The supply of water to BPL families is free of cost. Section 15 (iii) of the Kerala Water Supply and Sewerage Act, 1986 empowers the KWA to levy water supply charge and sewerage charge from Government, Local Bodies, Institutions and individuals. The details of collection of revenue and collection efficiency during the five year period 2008-09 to 2012-13 are given in **Table 3.7.**

Table 3.7 : Revenue collection during 2008-09 to 2012-13

(₹ in crore)

| Year | Budget Estimate | Demand | Collection | Percentage of collection with reference to the demand |
|--------------|-----------------|-----------------------|------------------------------|---|
| 2008-09 | 174.29 | 259.09 | 222.78 | 86 |
| 2009-10 | 262.40 | 359.78 | 313.54 | 87 |
| 2010-11 | 337.47 | 349.88 | 351.71 | 100 |
| 2011-12 | 356.85 | 521.01 ¹³⁵ | 353.36 | 68 |
| 2012-13 | 384.28 | 370.87 | 354.48 | 96 |
| Total | 1515.29 | 1860.63 | 1595.87¹³⁶ | |

Source: Budget documents and DCB

Audit noticed the following:

- According to Section 23 of the Act, the KWA shall not carry on its operations at a loss after taking credit of Government grant and shall so fix and adjust its rates and taxes (with previous approval of Government) to enable it to meet the cost of its operation, maintenance and debt service and achieve an economic return on its fixed assets. Since 1999, the water and sewerage charges were revised only in 2008. The KWA submitted proposals to Government in October 2011 and in October 2013 for revising the water and sewerage charges. The decision of Government on the proposal is still pending.
- Efficiency in collection of revenue was lacking as observed by the absence of prompt and regular billing and non-functioning of Revenue Monitoring Committee.
- Complete and accurate data of all consumers is a pre-requisite for raising proper demand. There was no computerised database of consumers in 56 out of the 78 sub divisions.

135 Includes ₹ 150 crore demanded by KWA for one time settlement of dues from LSGIs

136 Variation with column 7 of Table 3.5 was due to the non-inclusion of centage charges

- According to Section 32 of the Act, KWA shall fix the cost of collection and disposal of waste water according to volume. Though this section enables the KWA to augment its revenue, this has not been invoked till date (September 2013). Instead, KWA was only collecting an initial one time charge of ₹ 1000 and ₹ 2000 from domestic and non-domestic consumers respectively. In the sewerage maintenance division, Thiruvananthapuram, during the period 2008-13 as against the total expenditure of ₹ 76.49 crore on maintenance of sewage works, the revenue generated through one time collection worked out to only ₹ 1.98 crore (2.58 per cent).

3.5.4.2 Arrears in collection of revenue

The demand register maintained by the KWA did not exhibit year-wise arrears. The category-wise arrears in collection of water charges was as given in Table 3.8.

Table 3.8: Arrears in Collection of Revenue

| Category | Arrears (₹ in crore) | | |
|--------------|----------------------|---------------|---------------|
| | As on 31-3-11 | As on 31-3-12 | As on 31-3-13 |
| Domestic | 69.15 | 86.46 | 92.38 |
| Non-domestic | 188.52 | 226.15 | 268.95 |
| Industrial | 33.96 | 31.21 | 33.32 |
| Local Bodies | 49.14 | 156.85 | 138.18 |
| Total | 340.77 | 500.67 | 532.83 |

Source: DCB statements

The outstanding arrears of water charges increased from ₹ 340.77 crore in March 2011 to ₹ 532.83 crore as on 31 March 2013. Non-domestic consumers, Government and Autonomous Bodies constituted major defaulters.

Audit noticed that the measures taken (issuing notices, initiating revenue recovery action) by the KWA to reduce the arrears were not effective as the arrears of revenue kept mounting year after year. Section 14 (c) of the Kerala

Water Authority (Water Supply) Regulation 1991 empowers KWA to disconnect the water supply, if the water charges were not paid within the prescribed time limit. The accumulation and increase of arrears shows that the provisions in the Act were not enforced by KWA, especially against those consumers with long pending arrears.

About 18 per cent of the arrears as on 31 March, 2013 were from Government Institutions and Autonomous Bodies. The system introduced by Government for centralised payment of dues of these institutions with effect from January 2013 has not been implemented by the KWA so far.

The KWA replied (October 2013) that about 30 per cent of the arrears related to unidentified water connections and bad debts. It was also stated that claim had been lodged with Department of Local Self-Government for deducting water charges from the budget allocation made by Government.

The reply of the Authority is not acceptable as it is their responsibility to take steps to optimize recovery of arrears and to reduce bad debts. It is also their responsibility to locate the unidentified water connections to enable billing and collection.

3.5.4.3 Non-Revenue Water

Non-Revenue Water (NRW) indicates the revenue receivable from water lost through leakage, theft, etc. Reduction in NRW to acceptable levels is vital for the financial sustainability of the water utility. According to the Ministry of Urban Development, 20 per cent of total production can be considered as a bench mark value of NRW. Water Audit conducted by KWA in Thiruvananthapuram division in May 2012 indicated NRW of 40.75 per cent. The estimated revenue loss on account of NRW in Thiruvananthapuram division alone worked out to ₹ 26.76 crore¹³⁷ in 2012-13.

| | | |
|--|---|----------------|
| 137 Total demanded | : | ₹76.40 crore |
| NRW | : | 40.75 per cent |
| Therefore, the demand of ₹ 76.40 crore represents 59.25 per cent of the total production | | |
| Total production : ₹ 76.40 crore x 100 = ₹ 128.94 crore | | |
| 59.25 | | |

Bench mark value of NRW as per Ministry of Urban Development - 20 per cent
 Loss of NRW after allowing bench mark value = 40.75 per cent - 20 per cent
 Loss = ₹ 128.94 crore x 20.75 per cent
 = ₹ 26.76 crore

In order to evaluate theft and leakage, KWA decided to constitute anti-theft squads in each Circle Office. However, squads were constituted so far only in two Circles out of nine Circles.

3.5.4.4 Income generating activities

Section 23 of KWA Act permits KWA to establish income generating activities. The Government released to KWA ₹ 2.20 crore during 2008-09 to 2009-10 for establishing a Drinking Water Bottling unit at Aruvikkara in Thiruvananthapuram District, capable of generating a profit of ₹ 3.61 crore annually. The work awarded in May 2010 was terminated in July 2011 as the contractor did not turn up to commence the work.

The work was tendered five times but the work could not be awarded due to reasons like quoting of high rates, lack of experience, etc. The Superintending Engineer, PH Division, Thiruvananthapuram reported that the failure of the implementation of the scheme was on account of lack of professionally prepared project report. In June 2013, KWA entrusted to M/s. Kerala Industrial and Technical Consultancy Organisation (KITCO) the task to prepare a revised detailed project.

Government replied (November 2013) that the work would be tendered shortly.

3.5.5 Internal controls

The main objective of internal control system is to gear up the supervisory controls and management system in the organisation to allow for proper co-ordination and control over implementation of various programmes. Systematic accounting, internal audit and statutory audit to pin point systemic or other deficiencies are the tools for effective internal control. Lapses in the internal control mechanism which had an impact on the financial control of the KWA are mentioned in the following paragraph:

3.5.5.1 Delay in finalisation of accounts

A better and prompt financial reporting system is required to have accurate financial data and information for proper decision making and management. KWA

finalised the accounts only up to 2007-08. The delay in finalisation of accounts would affect the effective management of the resources of KWA besides, it being against the provisions of KWA Act (Section 29).

The KWA replied (October 2013) that the accounts up to 2011-12 would be completed within six months.

3.5.6 Conclusion

The revenue collection was not sufficient to meet even 50 per cent of revenue expenditure, and KWA depended heavily on Government. Urgent management intervention is called for to initiate measures for revenue maximisation as well as for controlling non-plan revenue expenditure. The accumulated arrears of electricity charges to be paid as on March 2013 was ₹ 377.34 crore. Several projects taken up as early as 1998 had not been completed as of March 2013. Utilisation of funds under energy conservation activities was not adequate. There was an outstanding arrears of ₹ 532.83 crore towards water charges and major defaulters included Government Departments and Autonomous Bodies. KWA started water audit of non-revenue water only recently and in Thiruvananthapuram division alone there was an annual revenue loss of ₹ 26.76 crore, on account of water lost from leakage, theft, etc.

[The Audit Paragraph 3.5 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.

AUDIT PARAGRAPH 5.9 (2013-14)

Unfruitful expenditure on a Water Supply Scheme

Kerala Water Authority (KWA) on behalf of Government of Kerala (GoK) is entrusted with the task of providing quality drinking water and sewage services to the people of the State. The Villages of Cheruthuruthy and Nedumpura in Thrissur district were identified (1980) by the State Government as problem villages related

to drinking water needs. The existing small water supply schemes of these villages were inadequate hence, a comprehensive scheme to supply safe drinking water to these villages was planned with the loan assistance of Life Insurance Corporation of India (LIC) in March 2000 at a project cost of ₹ 8.95 crore. The water for the scheme was to be drawn from the Bharathapuzha river with intake site at Macherykadavu, about 500 metres upstream to a railway bridge at Cheruthruthy. After completion of certain components the work (approximately 40 per cent of work) at a cost of ₹ 2.37 crore, KWA stopped availing loans from LIC due to interest rates and difficulty in arranging Government Guarantee for each loan, etc.

The major unfinished components of work like four Million Litres per Day (MLD), Water Treatment Plant, Ground level reservoir, compound wall and part of the distribution system were subsequently proposed to be completed with financial assistance from National Bank for Agriculture and Rural Development (NABARD). GoK accorded administrative sanction in July 2008 for the NABARD assisted Rural Drinking Water Supply Scheme (RDWSS) at a total project cost of ₹ 8.14 crore¹³⁴ the basis of a Detailed Engineering Report (DER) submitted (May 2008) by KWA.

The work was divided into two packages. Package I included construction and commissioning of four MLD Water Treatment Plant, 10.42 lakh Litre Sump and compound wall at Athiraparambu and Package II included items of work like supplying, laying, testing and commissioning of distribution network of various sizes including 50m Railway line crossing through overbridge. It was noticed during audit that the Railways had, as early as in August 2008, informed KWA that as per Railway rules, no crossing could be permitted on or within 15 m of any structure. However, KWA awarded (May 2010) the work on Package I for ₹ 3.74 crore and package II (March 2009) for ₹ 3.59 crore.

134 Fund provided by LIC : ₹ 237 lakh, NABARD : ₹ 577 lakh

Against the original targeted dates of September 2011 and March 2010 for completion of Packages I and II respectively, about 10 per cent of works¹³⁵ under Package I and portion of distribution lines which has to cross the railway over bridge at Cheruthuruthy under Package II remains to be completed (October 2014). While the target date for Package I had been revised to December 2014, the work on Package II has come to a standstill from September 2011 onwards for want of Railway's permission. Requests of KWA (January 2010 and 2012) seeking permission to lay pipes through the over bridge at Cheruthuruthy were rejected (January 2012) by the Railways. Attempts by KWA to lay distribution lines across the railway track by "push jack method"¹³⁶ or to lay the pipe line through the footpath portion of over-bridge also did not materialize.

The Superintending Engineer, KWA admitted (August 2014) that the objective of the scheme was not achieved as the work of laying pipes across railway tracks was not executed for want of approval from railways. GoK stated (October 2014) that since there was no restrictions on laying pipelines through railway overbridges prior to 2008, the objection from Railways was unexpected.

The reply fails to explain why KWA went ahead with the awarding of Packages I and II in May 2010 and March 2009 respectively when it was already known in August 2008 that the Railways had refused permission to lay distribution lines across railway structures.

The inadequate planning in implementation of RDWSS has resulted in unfruitful expenditure of ₹ 4.67 crore¹³⁷ and resultant non-achievement of objective of providing adequate and safe drinking water to two villages.

[The Audit Paragraph 5.9 contained in the Report of the C&AG for the year ended 31st March 2014]

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

135 The pending work relates to completion of water treatment plant

136 Push jack method is a method by which horizontal pipe is laid below existing services like Railways, Highways, etc. where general method of pipe laying like trenching is not available

137 Package I: ₹ 6.68 crore

Package II: ₹ 2.99 crore

1. The Committee was quite displeased to note that water supply projects like Kattappana Ayyappankovil, Elappara, Vellathooval-Konnathadi, Vandanmedu-Anakkara, Ayirooppara etc. had not reached completion even after so many years of their commencement and also the sluggish progress of the incomplete projects at Cherthala, Kozhikkode and Pattuvam which causes inordinate delay and ultimately render the schemes thoroughly ineffective.

2. The Committee enquired about the reason for surrendering the allotted funds to the Government of India as pointed out in the audit report. The Secretary, Water Resources Department informed that certain funds so surrendered was in respect of the State plan and not anything from the Centre. She also added that an amount of ₹ 272 crores was pending towards NRDWP (National Rural Drinking Water Project) scheme from Central Government.

3. With regard to the meagre utilisation of funds allotted, the Committee pointed out that Kerala Water Authority had forfeited ₹ 350.24 crore of the budget provision due to slow progress or non-implementation of projects. The Committee opined that the diversion of plan funds by the Water Authority, was a deliberate and grave error. The Secretary, Water Resources Department admitted that Kerala Water Authority had problems in implementation of projects. That was why it couldn't obtain a portion of the fund for the JICA (Japan International Co-operation Agency) Project. She also informed that the project had not been fully wound up despite the fact that the funding for the project had been stopped with effect from 2015.

4. The Committee criticized the Kerala Water Authority for allowing irregular refund of Works Contract Tax (WCT) amounting to 50.95 lakh given in excess to a contractor in violation of statutory provisions of the KVAT, 2003. The Finance Manager and Chief Accounts Officer, Kerala Water Authority informed that measures were taken to recover the amount from the contractor during the final settlement of bills.

5. The Committee opined that the inordinate delay in settling accounts was highly improper, and that it could be termed only as financial mismanagement.

6. The Committee observed that when the decision was taken to release payment to the contractor on 14-3-2006 the code of conduct for the Assembly election was in force. The Committee directed that a probe should be conducted so as to take action to recover the excess amount from the contractor. The Secretary, Water Resources Department assured the Committee that action would be taken and responsibility fixed on the concerned officials.

7. When the Committee enquired about the present status of installation of capacitors to mitigate power factor penalty, the Technical Member, Kerala Water Authority reported that as per the data up to November 2016, for about 30 schemes both the power factor penalty and incentive were comparable amounts with a penalty of around ₹ 11 lakh against an incentive of ₹ 11,85,000 lakh.

8. The Committee observed that the main source of income of Kerala Water Authority is collection of water charges. The Committee enquired about the tariff revisions introduced by the authorities. The Committee also sought details about the Revenue Monitoring Committee established in the Kerala Water Authority that ensures efficacy with regard to the collection of revenues. In response, the Finance Manager replied that the water and sewerage charges had been revised in 2009 and 2014. He explained that the meetings of the Revenue Monitoring Authority were held on the backdrop of the meetings by the Executive Engineer that were taking place regularly. He also added that the Assistant Executive Engineers were entrusted with the task of revenue collection since the Revenue Monitoring Committee could not hold any meeting in such capacity. The Committee expressed its dissatisfaction on the non functioning of the Revenue Monitoring Committee.

9. The Committee accused the Water Authority for not providing enough water connections in some areas inspite of their abundant water source. The Committee asserted that a circular had been issued prohibiting the laying of new pipe lines until the ongoing works were completed. Upon that, the Secretary informed that the circular referred by the Committee had been limited to a few places and did not have a wide range applicability. However, the matter had been brought to the attention of the Board of Directors. The Committee suggested to provide water connections to consumers from Ranni Major Irrigation Project until

Jalanidhi Project was commissioned. The Secretary, Water Resources Department agreed to take necessary steps to ensure the same.

10. The Committee directed to complete the ongoing Kottayam Water supply scheme and provide water connections to consumers as early as possible. The Committee also sought assurance to solve the problems faced by the people who were deprived of their pipe connections due to KSTP road works. The Secretary, assured that both the issues would be resolved by providing new connections to the needy people.

11. In the light of recent drought, the Committee desired to know whether Kerala Water Authority intended to install kiosks in all villages. The Witness replied that kiosks were being installed by the local Panchayats and not by the Water Authority. The Committee wanted the department to submit a detailed resolution on the remedial measures that could be taken against the drought related problems.

12. The Committee observed that out of the 2214 schemes of Water Authority, 14 to 20 schemes were remaining incomplete. It was also pointed out that the Water Authority could not ensure a proper study and investigation before implementation of project and criticised the unscientific way the Authority was heading forth with its projects.

13. The Committee desired to know the reason for the mammoth disparity incurred between the total expenditure and the revenue generated under the sewerage maintenance division, Thiruvananthapuram during the period from 2008 to 2013 with a revenue of ₹ 1.98 Crore against the expenditure of ₹76.49 Crore. The Finance Manager and Accounts Officer, Kerala Water Authority explained that there was no provision for levying sewerage charge prior to the tariff revisions with effect from 1-10-14. As a result, no such amount could be collected during that period. But presently, Kerala Water Authority started collecting sewerage charges.

14. The Committee enquired about the mechanism adopted by Kerala Water Authority to collect water charge arrears. The Witness reported that water charge arrears were classified into four categories-domestic, non-domestic, industrial and

local bodies. Among those, the arrear of local bodies amounting to ₹ 200 crore - formed the major portion. The witness also revealed that the arrears of last 2 years were pending, of which Government Departments owed the maximum amount. He also reported that there were unidentified water connections that had to be charged with fines and penal interest. He added that out of the 18 lakhs consumers 13.50 lakhs were included in the computer network ABACUS (Advanced Billing Utility System). The remaining 5 lakhs who were excluded due to network problem would be included by using some other network. On that basis the real arrear amount and the details of unidentified water connections could be discovered. If a water connection should be certified as unidentified, it should be verified first. The witness reported that Water Authority has decided to complete this process step by step within one year. He also pointed out that the greatest problem faced by Water Authority is the shortage in the number of staff.

15. When the Committee enquired about the number of consumers included in the computer database, the witness reported that 13,50,000 consumers and 70% of the consumers in the Subdivision area were provided with water connection. The Committee accused that metre reading was not being done properly by Water Authority. Besides this drinking water was being stolen for some flats. The Committee desired to know if Water Authority had employed any method to prevent water theft. The witness replied that theft discovery squads were active in all divisions.

16. The Committee suggested that Water Authority should find out where water theft was happening. The Secretary, Water Resources Department admitted that Water Authority did not have metres at all plant outlets. She also added that the officers concerned were planning to instal bulk metres at production level, main distribution level and at household level.

17. The Committee enquired whether Water Authority has any plans to withdraw from the distribution of water and the witness opined that it depends upon policy decision and if local bodies were made capable the problem can be solved at that level. The witness stated vehemently that the entire production was done by the Water Authority and that it alone had the technical capacity to procure water. The Committee suggested that the distribution of drinking water should not be detached from Kerala Water Authority.

18. The Committee observed that the performance of the Water Authority was not up to the mark. The Committee criticized the Authority's mismanagement and financial anarchism. It found fault with the Authority for being a failure in timebound collection of arrears and in locating water theft. The Committee accused the Authority for not commissioning projects in time.

19. The Committee criticized that the Water Authority was not the best executor. The witness admitted the same and remarked that there was a nexus between operators and locals or between officers and contractors. She asserted that the nexus could be curtailed and affirms that production and distribution of water were the core objectives. She claimed that Water Authority was trying its best to collect arrears and to improve its efficiency in all respects.

20. The Committee enquired details regarding the present position of completed projects. The witness reported that the Water Authority was given with 9 schemes for distribution and they were trying to get funds for their operation. The witness also remarked that lack of funds hinder the progress of ongoing projects.

21. When the Committee enquired about the method of including the projects in KIIFB, the witness stated that DPR for line comprehensive schemes had been prepared and uploaded.

22. When the Committee commended that the Kuriyot Mala Project was lying incomplete the witness replied that the matter would be examined.

23. The Committee observed that as Water Authority had a big staff pattern comprising of Chief Engineer, Executive Engineer, Assistant Engineer, Overseer, Meter reader etc. and it should supply water to the public without failure. The Committee wanted the Water Authority to act as the holding Company of ground water, major and minor irrigation.

24. The Committee observed that the projects which should be completed within 2 years were usually getting delay up to 12 years. The Committee also pointed out that there were issues regarding the quality of pipe and suggested to implement methods which helps to improve the efficiency and to rectify the drawbacks.

25. The Committee suggested that steps had to be taken for fund allocation to acquire land while a project was under preparation. The witness agreed and admitted that the Water Authority was incapable of looking into each and every corner of the State and that the Government was not in a position to increase its staff strength. She added that the treated water supplied by Water Authority was of good quality and nobody else can provide such quality. She reminded that eventhough the Authority had been badly managed, it had become one of the most technically competent organisations. She suggested that the local Panchayats should take the responsibility so that efficiency of service delivery could be improved.

26. The Committee directed that if the Panchayat was not efficient enough, the responsibility to supply water should not be bestowed upon it. The Committee also suggested that if the responsibility to supply water was shared with Panchayat, Water Authority would provide professional help also and the witness agreed to do the same.

27. The Committee desired to know why sanction was given to lay pipeline over railway track. The Technical member, Kerala Water Authority reported that the Railway authorities had agreed to construct a bridge over the railway track and that its design was under preparation. He added that when the design was ready the estimate amount too would be decided. When the Committee referred to the long pendency of the work that began in 2008, the witness explained that the railway authorities were answerable for the delay.

28. The Committee pointed out that the Government accorded administrative sanction in July 2008 for the NABARD assisted Rural Drinking Water Supply Scheme at a total project cost of ₹ 8.14 crore on the basis of a Detailed Engineering Report submitted by the Water Authority. The Secretary, Water Resources Department explained that NABARD schemes were reimbursement schemes and that the expenditure would be reimbursed only after the completion of projects. She agreed to give clarifications after checking how much amount remained to be reimbursed.

29. The Committee observed that the Water Supply Scheme in Vandanmedu-Anakkara Village had not been commissioned even after 15 years. Land was not acquired after spending an amount of 5 crores 18 lakhs over the scheme.

30. The Committee visited the Anakkara-Vandanmedu Project area on 25-1-2017 and analysed the aspects which rendered the project a failure. During the Witness Examination the Witness reported that the main water source of the project was Amayar and that due to the protest on the part of the local people and delay in acquisition of land, construction of weir across the river was hindered. He also added that Amayar at present suffers from water scarcity.

31. The Committee observed that the project become a failure due to lack of proper understanding in the supply of basic facilities and expressed its strong contempt in abandoning the project after 25 years and incurring an expenditure of 5.18 crore.

Recommendations

32. The Committee vehemently criticizes KWA for inordinate delay in the completion of Water Supply Schemes rendering them thoroughly ineffective. The Committee strongly recommends to take drastic measures to complete the ongoing projects and ensure water connection to consumers with out delay.

33. The Committee observes that, violating statutory provision of the KVAT, 2003, the Water Authority irregularly refunded works contract tax amounting to 50.95 lakh to a contractor in 2007 and the amount had not been recovered so far. The Committee exhorts to probe into the matter and take immediate steps to recover the excess amount from the contractor.

34. The Committee observes that the power factor penalty amounting to ₹ 4.35 crore was imposed on Water Authority by KSEB in 2011 due to failure in installing static capacitors in the pumping stations of KWA. The Committee wants to know the present status of installation of static capacitors in KWA.

35. The Committee expresses dissatisfaction over the financial mismanagement in KWA and the practice of diverting plan funds. The Committee recommends to recoup the diverted amount within the financial year.

36. The Committee observes that KWA surrendered ₹ 350.24 crore of budget provision during 2008-2013 due to non-implementation of projects in time. Therefore the Committee urges to implement the projects in timebound way and avoid delay in acquiring land, obtaining permission from National Highway Authorities/Railways.

37. The Committee notes that the revenue collection was not sufficient to meet even 50 per cent of revenue expenditure. Therefore the Committee recommends that KWA should initiate urgent measures to maximise revenue collection as well as to curb non-plan revenue expenditure.

38. The Committee recommends to take necessary steps to recover arrears of ₹ 532.83 crore towards water charges defaulted mainly by Government departments and autonomous bodies.

39. The Committee expresses its dissatisfaction on the purposeful lagging of the drinking water supply scheme related to Cheruthuruthy and Nedumpura Village in Thrissur districts and thereby denying drinking water to these villages and causing an unfruitful expenditure of 4.67 crore. The Committee wanted to furnish a report on the present status of this project.

40. The Committee observes that the Kottayam Water Supply Scheme, Kuriyotmala Project, Katappana, Ayyappankoil, Elappara, Water Supply Projects etc. are still incomplete even after so many years of their commencement and recommends to examine the factors hindering the progress of these projects. The Committee wants to furnish a detailed report on the incomplete Water Supply schemes of Water Authority.

41. The Committee suggests that the simultaneous collection and distribution of water will render the water supply projects fruitful and effective in time and recommends to take necessary steps to carry out this likewise.

42. The Committee expresses its dissatisfaction on the non functioning of the Revenue Monitoring Committee in Kerala Water Authority and recommends to strengthen the Revenue Monitoring Committee to ensure effective collection of revenue and to computerise the accounting system.

43. The Committee recommends that steps should be taken to allocate fund for acquiring land even while a project is in its budding stage.

44. The Committee exhorts to take rapid action to provide consumers with water connections from Ranni Major Irrigation Project until Jananidhi Project gets commissioned.

45. The Committee accuses the Water Authority for not providing enough Water Connection in some areas and recommends to facilitate pipe extension to areas which face water scarcity. It also emphasizes the timely allotment of fund for the installation of distribution of lines nearing completion.

46. Considering the water scarcity and drought related issues the Committee wants to furnish details regarding the installation of water kiosks in every village.

47. The Committee expresses its dissatisfaction that the Water Supply Scheme in Vandanmedu-Anakkara Village has not been commissioned or even the land was not acquired after a period of 15 years and with an expenditure of 5 crores 18 lakhs and abandoned the scheme. The Committee recommends that viability of the project should be ensured before commissioning the scheme and directs to furnish the report of the Vandanmedu Panchayat giving assurance to procure land for the project and the original project report of the said scheme.

48. The Committee evaluates that the performance of the Water Authority is not up to the mark. It directs that the Authority should locate spots where water loss from leakage, theft etc., takes place and take urgent steps to curb it. Committee also suggests that for carrying out proper water audit, metres should be installed at all the main water supply schemes.

49. The Committee recommends that the Kerala Water Authority should adhere to the prevailing water distribution system and impose methods to expand the institution rather than switching over to bulk water system proposed by different sources.

50. The Committee opines that the Water Authority should make genuine effort to improve professionalism. The Committee emphasizes the necessity of sufficient study before preparing projects. It also recommends the cancellation of indefinite projects and fix responsibility and recover the amount from the officers responsible.

Thiruvananthapuram,
17-1-2018.

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 | 32 | Water Resources | The Committee vehemently criticizes KWA for inordinate delay in the completion of Water Supply Schemes rendering them thoroughly ineffective. The Committee strongly recommends to take drastic measures to complete the ongoing projects and ensure water connection to consumers with out delay. |
| 2 | 33 | Water Resources | The Committee observes that, violating statutory provision of the KVAT, 2003, the Water Authority irregularly refunded works contract tax amounting to 50.95 lakh to a contractor in 2007 and the amount had not been recovered so far. The Committee exhorts to probe into the matter and take immediate steps to recover the excess amount from the contractor. |
| 3 | 34 | Water Resources | The Committee observes that the power factor penalty amounting to ₹ 4.35 crore was imposed on Water Authority by KSEB in 2011 due to failure in installing static capacitors in the pumping stations of KWA. The Committee wants to know the present status of installation of static capacitors in KWA. |
| 4 | 35 | Water Resources | The Committee expresses dissatisfaction over the financial mismanagement in KWA and the practice of diverting plan funds. The Committee recommends to recoup the diverted amount within the financial year. |

| (1) | (2) | (3) | (4) |
|-----|-----|-----------------|---|
| 5 | 36 | Water Resources | The Committee observes that KWA surrendered ₹ 350.24 crore of budget provision during 2008-2013 due to non-implementation of projects in time. Therefore the Committee urges to implement the projects in timebound way and avoid delay in acquiring land, obtaining permission from National Highway Authorities/ Railways. |
| 6 | 37 | Water Resources | The Committee notes that the revenue collection was not sufficient to meet even 50 per cent of revenue expenditure. Therefore the Committee recommends that KWA should initiate urgent measures to maximise revenue collection as well as to curb non-plan revenue expenditure. |
| 7 | 38 | Water Resources | The Committee recommends to take necessary steps to recover arrears of ₹ 532.83 crore towards water charges defaulted mainly by Government departments and autonomous bodies. |
| 8 | 39 | Water Resources | The Committee expresses its dissatisfaction on the purposeful lagging of the drinking water supply scheme related to Cheruthuruthy and Nedumpura Village in Thrissur district and thereby denying drinking water to these villages and causing an unfruitful expenditure of 4.67 crore. The Committee wanted to furnish a report on the present status of this project. |
| 9 | 40 | Water Resources | The Committee observes that the Kottayam Water Supply Scheme, Kuriyotmala Project, Kattappana, Ayyappankoil, Elappara, Water Supply Projects etc. are still incomplete even after so many years of their commencement and recommends to examine the factors hindering the progress of these projects. The Committee wants to furnish a detailed report on the incomplete Water Supply schemes of Water Authority. |

| (1) | (2) | (3) | (4) |
|-----|-----|-----------------|---|
| 10 | 41 | Water Resources | The Committee suggests that the simultaneous collection and distribution of water will render the water supply projects fruitful and effective in time and recommends to take necessary steps to carry out this likewise. |
| 11 | 42 | Water Resources | The Committee expresses its dissatisfaction on the non functioning of the Revenue Monitoring Committee in Kerala Water Authority and recommends to strengthen the Revenue Monitoring Committee to ensure effective collection of revenue and to computerise the accounting system. |
| 12 | 43 | Water Resources | The Committee recommends that steps should be taken to allocate fund for acquiring land even while a project is in its budding stage. |
| 13 | 44 | Water Resources | The Committee exhorts to take rapid action to provide consumers with water connections from Ranni Major Irrigation Project until Jalandhi Project gets commissioned. |
| 14 | 45 | Water Resources | The Committee accuses the Water Authority for not providing enough Water Connection in some areas and recommends to facilitate pipe extension to areas which face water scarcity. It also emphasizes the timely allotment of fund for the installation of distribution of lines nearing completion. |
| 15 | 46 | Water Resources | Considering the water scarcity and drought related issues the Committee wants to furnish details regarding the installation of water kiosks in every village. |
| 16 | 47 | Water Resources | The Committee expresses its dissatisfaction that the Water Supply Scheme in Vandanmedu-Anakkara Village has not been commissioned or even the land was not acquired after a period of 15 years |

| (1) | (2) | (3) | (4) |
|-----|-----|-----------------|---|
| | | | and with an expenditure of 5 crores 18 lakhs and abandoned the scheme. The Committee recommends that viability of the project should be ensured before commissioning the scheme and directs to furnish the report of the Vandammedu Panchayat giving assurance to procure land for the project and the original project report of the said scheme. |
| 17 | 48 | Water Resources | The Committee evaluates that the performance of the Water Authority is not up to the mark. It directs that the Authority should locate spots where water loss from leakage, theft etc. takes place and take urgent steps to curb it. Committee also suggests that for carrying out proper water audit, metres should be installed at all the main water supply schemes. |
| 18 | 49 | Water Resources | The Committee recommends that the Kerala Water Authority should adhere to the prevailing water distribution system and impose methods to expand the institution rather than switching over to bulk water system proposed by different sources. |
| 19 | 50 | Water Resources | The Committee opines that the Water Authority should make genuine effort to improve professionalism. The Committee emphasizes the necessity of sufficient study before preparing projects. It also recommends the cancellation of indefinite projects and fix responsibility and recover the amount from the officers responsible. |

APPENDIX II

NOTES FURNISHED BY GOVERNMENT ON THE AUDIT PARAGRAPH (Audit Report 2010-11)

| Sl No. | Audit Paragraph | Reply Furnished by Government |
|--------|-----------------|--|
| 1 | 2 | 3 |
| 1 | 3.2.6 | <p>Kerala Water Authority has awarded (March 2003) the work of Water Supply Augmentation to Paravur Municipality to the Kerala State Construction Corporation Ltd (KSCC) a Government of Kerala undertaking. The work was executed by the Kerala State Construction Corporation Ltd through consortium of three Contractors.</p> <p>As per agreement conditions the payments were made to M/s Kerala State Construction Corporation Ltd and the statutory recoveries also made. Later, considering the request of the contractor, the then Chief Engineer (CR) has noticed that the Work Contract Tax (WCT) recovered from the firm was not in order and issued an order (Order No. KWA/ CE/CR/HUDCO/2711/97/Vol V dated 23.08.2005) to release the excess amount recovered from the contractor. Further, the above orders amended vide order No. KWA/CE/CR/HUDCO/ 2711/97/Vol V dated 14.03.2006 of the then Chief Engineer (CE) with conditions and releasing the amount. Based on the above orders Kerala Water Authority has released the excess amount of WCT ₹ 50,95,059/- recovered to M/s Kerala State Construction Corporation Ltd. Later, RAO of Kerala Water Authority vide their</p> |

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| 1 | 2 |
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audit No.RAO/ KWA/III/IR/2-21/357/1116 dated 15.01.09 informed that the WCT refunded is irregular and to be recovered from the Contractor. On receipt of the audit remarks, Kerala Water Authority has taken steps to recover the refunded amount from the Contractor as and when the next bill comes for payment. It is worthwhile to note that the work is not yet finalized and not settled the final claim and payments as certain disputes with the contractor is pending, waiting for the decisions from the KSCC. The amount of ₹ 50.95 lakhs refunded will be adjusted from the next bill and only the balance payment will be made while making final payment to M/s Kerala State Construction Corporation Ltd, the Contractor.

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| 1 | 2 | | 3 |
| 2 | 34.9 | | <p>Kerala Water Authority had already initiated action to install static capacitors wherever needed for improving power factor. Instructions are already communicated to avoid power factor penalty. But due to lack of funds Kerala Water Authority is not in a position to avoid penalty fully. Now this is undertaken as per the availability of funds and in places KWA is receiving incentive. In a short duration this will be fully covered.</p> |

NOTES FURNISHED BY GOVERNMENT ON THE AUDIT PARAGRAPHS

(Audit Report - 2012-2013)

| Sl. No. | Audit Para. No. | | Reply furnished by Government |
|---------|-----------------|--|--|
| 1 | 2 | | |
| 1 | 3.5 | | 3 |
| 2 | 3.5.1 | | |
| 3 | 3.5.2 | | <p>The main source of Income of Kerala Water Authority is collection of water charges. From the formation of Kerala Water Authority it has never earned any surplus Income and is continuously running at deficit, which is made good to some extent by the non-plan grant received from Government. Government of Kerala provide non-plan grant every year by providing a marginal increase of around 10% only. The increase in revenue collection and non-plan grant was not at all in the same percentage of increase in the revenue expenditure of the Authority. The revision of water charges of Kerala Water Authority is done with the approval of Government. The last revision of water tariff before 31/3/2013 was sanctioned by Government during 2008 only (ie with effect from 01/9/2008). Since 2008 the power charges, establishment expenses, Operation and Maintenance had increased 5 times up to 31-03-2013. In this situation, the revenue available was too inadequate to meet the operational obligations, establishment expenditure, and re-payment obligation of funds borrowed for execution of drinking water projects in the past as well as for settlement of O.T.S with KSEB. As per Table 3.5 to the Audit Report, total receipts and expenditure for the year 2012-13 is shown as ₹ 1,563.61 Crore & ₹ 1,621.47 Crore respectively; in which, the total receipts were taken as per the cash flow statement for the year and the expenditure was taken from the progress report for the year which includes share debit also. The share debit varies from 5% to 12.50% and the expenditure is also met from the opening balance available. Regarding revenue expenditure, Water Authority was constrained to utilize plan fund for making repayment of loans taken from financial institutions.</p> |

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| | | <p>Water Authority had utilized an amount of ₹ 153.22 Crore from 2008-09 to 2012-13 from Capital for payment of electricity charges and repayment of Principal and interest to LIC schemes guaranteed by government and Banks to avoid penal interest and rebate. During the financial year 2008-09 there was a diversion of ₹ 90.58 Crore from capital funds to revenue as it was diverted mainly for making payments to KSEB for power charges for 2008-09 to avoid disconnection of power supply. Water Authority requested Government for an additional allotment of ₹ 60.00 Crore under Non Plan-Grant for the recoupment of amount diverted for payment of power charges upto August 2008. However no amount was sanctioned.</p> <p>The latest tariff revision was sanctioned by the Government during October 2014 only. In the tariff revision, Government did not increase the tariff revision to the consumers who consume up to 15 KL per month. By doing so, there is a decrease of ₹ 82.15 Crore in the expected total revenue from the tariff revision proposed by Water Authority and is agreed to be made good by the Government in addition to the non-plan grant. Government of Kerala has implemented 9th pay revision to the employees of Water Authority and revision of pension of pensioners of Water Authority during 2012 without any financial assistance. Increase in power charges, huge arrears towards pension revision arrears and pensionary benefits to pensioners and decrease in the expected additional income from tariff revision has again resulted in deficit which in turn slowed the recoupment of the funds already diverted from plan funds. Due to the insufficiency of funds, no funds has been allotted to Kerala Water Authority as non-plan grant for recouping the funds already diverted from plan funds.</p> |

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| 4 | 3.5.3 3.5.3.1 |

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The total amount shown ₹ 1953.60 Crore as allotment from State Government includes the Government of India allocation towards ARP & Technology Mission Matching Assistance schemes. However the Utilization of ₹ 1170.94 Crore represents the funds utilized for the implementation of various water supply schemes from the State Government Grants only as detailed below:

| Year | Allotment | GoI Share included in Col 2 | Net allotment | Release | Utilisation | Percentage of utilisation - Net allotment |
|--------------|-----------------|-----------------------------|-----------------|-----------------|-----------------|---|
| A | B | C | D=B-C | E | F | G |
| 2008-09 | 359.00 | 99.00 | 260.00 | 79.00 | 69.85 | 26.87 |
| 2009-10 | 359.61 | 8.00 | 351.61 | 341.61 | 308.49 | 87.74 |
| 2010-11 | 439.20 | 68.00 | 371.20 | 280.86 | 184.08 | 49.59 |
| 2011-12 | 366.79 | 68.00 | 298.79 | 238.16 | 259.84 | 86.96 |
| 2012-13 | 421.82 | 68.00 | 353.82 | 335.55 | 148.60 | 42.03 |
| TOTAL | 1,946.42 | 311.00 | 1,635.42 | 1,275.18 | 1,170.94 | 71.60 |

| 1 | 2 | 3 |
|---|---------|--|
| 5 | 3.5.3.2 | <p>Status of various schemes are as follows:</p> <p><u>1. CARWSS to Kattappana and Ayyappancovil Villages</u></p> <p>> The following components are completed.</p> <ol style="list-style-type: none"> 1. Well cum pump house 2. Raw Water Pumping main 3. Clear Water Pumping Main (2 Nos.) 4. Clear Water Gravity Main(2 Nos.) 5. Service reservoirs (5 Nos.) 6. Distribution System (Zone I,II & VI) <p>> Work awarded for the following components are in progress:</p> <ol style="list-style-type: none"> 1. Treatment plant: 2. Distribution System (Zone III IV & VII) 3. Gravity Main partially in progress (Narianpara top to Idukkikavala) <p>> Work awarded, but not started yet.</p> <ol style="list-style-type: none"> 1. Distribution system in zone-V (one part) <p>The following components of the scheme are to be completed and arranged in SLSSC as the AS amount of the Kattappana and Ayyappancovil scheme was exhausted. A detailed engineering report of ₹ 900/-Lakh was sanctioned under SLSSC 2015, and the proposal was selected under SLSSC 2015 vide order no: KWA/JB/PSM-2/331/2015 dt.22-09-2015 of Managing Director, Kerala Water Authority. For the completion of the Scheme, these components are to be completed and further AS is to be obtained.</p> <ol style="list-style-type: none"> 1. Distribution system in zone V (Partly) 2. Raw water Pumpset and clear water pump set. 3. Transformers, Sub stations and allowed electro mechanical works. |

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2. CARWSS to Elappara and adjoining Villages

The following components are already completed:

Treatment plant, Service reservoirs, Raw water pumping main, Raw water Pump set, clear water pumping main, clear water pump set, transformers, power connection obtained, Distribution system from master tank and Reilupara tank are completed.

Trial run and commissioning work are in progress. The already sanctioned AS amount was exhausted by the above mentioned component works of the scheme. Hence the following component works were arranged in NRDWP scheme.

Work completed in NRDWP scheme.

1. Distribution system I and gravity main in Elappara Panchayath completed.

2. Distribution system and gravity main in Peruvanthanam-Kokkayar panchayath-80% completed. Remaining 20% is pending for want of road cutting sanction from PWD NH Division, Muvattupuzha. Necessary road cutting charges of Rs.114.00 lakh was remitted to PWD NH Division, by way of treasury cheque and is awaiting sanction for the road cutting from them.

3. Distribution system and gravity main in Peerumedu and Vandiperiyar Panchayath Package-I were awarded and partly completed; Remaining part of the component work is pending for want of road cutting sanction from PWD NH Division, Muvattupuzha. Necessary road cutting charge was remitted to PWD by way of treasury cheque.

General

The Scheme was delayed due to the change in the original capacity of treatment plant for additional coverage in a few adjoining Village. The original capacity of treatment plant was 6.5 MLD. But it was

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| | | <p>enhanced to 9.5 MLD for covering Vagamon Village which was not included in the original estimate of the scheme. Consequently a delay was occurred due to the re-estimation and re-tendering. There was an objection from the part of Helebouria Estate authority who has to grant necessary permission to lay pipe line through land in their possession. Hence further delay occurred.</p> <p>3. CARWSS to Vellathooval and Konnathady Villages</p> <p>➤ Completed Component Works:</p> <p>Well cum pump house</p> <ol style="list-style-type: none"> 1. 16 Nos. of GL tank 2. Treatment plan is nearing completion- 90% completed. 3. Raw Water pumping main -completed. 4. Distribution System in Zone I,II,III, IV,VI,VIII,IX completed in Vellathooval Panchayat. Almost 90% of the distribution network in Vellathooval Panchayat is completed. 5. Clearwater pumping main in vellathooval Panchayat from Treatment Plant to main tank completed. 7. Gravity main in vellathooval Panchayat is partly completed. The remaining part of the work is in progress. <p>➤ Work is to be completed under this scheme.</p> <ol style="list-style-type: none"> 1. Raw water and clear water pump set 3 Nos are pending. 2. Sub stations and allied electro mechanical work is pending for want of completion of the treatment plant. 3. With the completion of the above mentioned component work the AS amount will be exhausted. But the following component work of Konnathadypanchayat is pending for want of funds as the already sanctioned AS IS exhausted. <p>➤ Component work pending to be completed due to lack of funds i.e. further administrative sanction is required,</p> <ol style="list-style-type: none"> 1. Three (3) numbers GL tank for which the land was not obtained from the relevant Panchayat. |

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| | 2 | | <p style="text-align: center;">3</p> <p>2. Clear water pumping main and gravity main in Konnathady Panchayat</p> <p>3. Distribution system in Zone 10, 11, 12, 13, 14 are to be</p> <p>4. Pumps & Motors and power connection.</p> <p>All these pending works in Konnathady panchayath are to be arranged in separate AS under SLSSC as the already sanctioned AS amount was exhausted.</p> <p>4. CARWSS to Vandannmedu and Anakkara Villages.</p> <ol style="list-style-type: none"> 1. Well cum pump house completed. 2. Raw Water Pumping Main completed except PWD road crossing. 3. Treatment Plant (90% completed and balance to be arranged) 4. Raw Water pump set erected. 5. Clear Water Pumping main completed. 6. Clear Water pump set to be arranged. 7. Service reservoirs completed. 8. Distribution system Distribution zone 1a, b, c and d completed. Zone 2 and 3 to be arranged. 9. Power connection not obtained. 10. Weir: As per original proposal 5m height weir was proposed and submitted to the Panchayat to hand over the land for an area of 5.6 hectare which is likely to be submerged when the construction of weir is over. It is not surrendered by the Panchayat authority till date. The Panchayat authority agreed to hand over the site for submergence up to 2.75m. This is not sufficient for full coverage. Hence the Panchayat authorities has been requested to surrender the land up to 5m height. The scheme can be completed only after the completion of weir and balance work of Treatment plant. <p>Balance works are to be arranged in separate AS amount. A new proposal for ₹ 2500 lakhs for the augmentation of Vandannmedu and Chakkupallam water supply scheme is under process. The existing CARWSS to Vandannmedu and Anakkara Villages was delayed</p> |
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| | | <p>because the Vandannmedu Panchayat authority had not handed over required land of 4.50 hectare for the construction of the weir and for submerge areas.</p> <p><u>The component work to be arranged in separate AS amount are as follows:</u></p> <ol style="list-style-type: none"> 1. Road restoration charges of KSTP Road and crossing of pipes. 2. Balance work of treatment plant. 3. Distribution system in Zone II and III 4. Power connection. <p><u>5. ARWSS to Edacode & adjoining villages</u></p> <p>All works completed and scheme commissioned on 28/8/2014 and handed over to Water Supply Division, Attingal on 16/10/2014.</p> <p><u>6. ARWSS to Kazhakkuttam, Menamkulam villages</u></p> <p>Works of all components completed. Trial run works are in progress. The scheme is expected to be commissioned by 31/12/2015.</p> <p><u>7. ARWSS to Iroppara village</u></p> <p>All the common components of the scheme already completed and partially commissioned, the finishing works of GLSR at Udayapuram, Supplying and laying distribution line, Supply & erection of pump sets at Pullannivila and Power connection, etc. for Zone - I are progressing. The GLSR is expected to be completed by 31.01.2016. The distribution network from tank is expected to be completed before 31.03.2016. The Zone - I of the scheme is expected to be commissioned by June 2016.</p> <p>The works in Zone - II of the scheme is not yet started due to non-availability of land for constructing OHSR at Charumoodu, which is to be purchased and handed over to Water Authority by Pothencode Panchayat.</p> |

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| | | <p>8. ARWSS to Varkala phase-I: All works completed and the scheme was officially commissioned on 19/02/2014.</p> <p>9. ARWSS to Ottasekaramangalam Phase-I All works completed, waiting for KSEB power connection at WTP, Kalippara. The scheme targeted to commissioning on January 2016.</p> <p>10. ARWSS to Ottasekaramangalam Phase-II All works completed, waiting for KSEB power connection at WTP, Kalippara. The scheme targeted to commissioning on January 2016.</p> <p>11. SPAN-Augmentation of existing RWSS to Kunnathukal Panchayat. The scheme is partially commissioned on 29/4/2014. Land for the OHSR is available now. The Construction of OHSR at Kottukonam and transmission main for 1.00 Km are to be arranged.</p> <p>12. SPAN- RWSS to Azheer, Kizhuvillam and Keezhattinjoor Villages All Works of the scheme are completed & commissioned on 20/07/2012 except transmission main to Mananakku tank. The road cutting permission of NH & PWD at Attingal palace road are not received till date.</p> <p>13. SPAN-RWSS to Pallichal, Balaramapuram & Vilaveorkkal Panchayat Construction of treatment plant completed. Supplying and laying of clear water pumping mains completed. Pump erection work is in</p> |

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| | | <p>progress. Distribution network for Pallichal & Balaramapuram Panchayats are in progress. Land for the new OHSR at Vilavoorikal is to be received. The scheme partially commissioned on 14/7/2014.</p> <p>14. SPAN- RWSS to Kazhakkootam OG</p> <p>Works of all components completed. Trial running works are in progress. The scheme is expected to be commissioned by 31/12/2015.</p> |
| 6 | 3.5.3.3 | <p>Water Authority had already initiated actions to identify penalties coming under power charges and to reduce power cost by avoiding penalties imposed by KSEB and also by controlling load to bare minimum needed. On detailed study Water Authority had noticed the power factor penalty coming in the power charges and had commenced actions to install static capacitors in the system to improve power factor and thus to avoid penalty to achieve incentive. For the installation of necessary capacitors ₹ 5.00 Lakh each were allotted to all the circle offices and the same have been implemented.</p> <p>Water Authority is having more than 300 HT connections and more than 1000 medium voltage connections and minor schemes. In order to avoid power factor penalty static capacitors has to be placed in all the schemes. Water Authority is using induction motors as prime movers of the pumps to have high starting torque and varying speed characteristic. But at the same time induction motors causes inductive load and it will bring down the power factor of the system. So in all schemes capacitors is a must. This generates requirement of funds. Water Authority is also taking actions to install capacitors from the balance of funds available under energy conservation in schemes and is achieving incentive in that place.</p> <p>As part of energy conservation measures, Water Authority formulated schemes to install high efficiency pumps and motors and is implementing under NABARD assistance. Out of the total amount sanctioned under NABARD (2010-11) as loan of ₹ 28.98 Crore for these activities, Water Authority expended ₹ 20.72 Crore till 30/9/2015.</p> |

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| 7 | 3.5.4 3.5.4.1 | T | <p>The Government has vide GO (MS) No.24/2015/PD Dated 29-0-2015 has ordered, inter alia, to settle an amount of ₹ 500.00 Crore being the electricity duty payable by KSEB to Government, towards the power charges payable by Kerala Water Authority. Thus the total liability has reduced by ₹ 500.00 Crore. Moreover Water Authority has started remitting power charges to KSEB as per the direction of Government vide GO (MS) No. 24/2015/PD dated 29/6/2015.</p> <p>Vide G.O (Rt) No. 816/09/LSGD dated 30/3/2008, it was decided to have a one time settlement of dues as on 31/03/2008 from Water Authority from Urban and Rural Local Governments of the State. It was reckoned that the dues would come to ₹ 250.00 Crore. Hence, the dues were reckoned as ₹ 250.00 Crore as on 31/3/2008. Since the same was taken in DCB statement prior to 01/4/2008, the same is not shown in the DCB for the period from 01/4/2008 onwards. The details of revenue collection and collection efficiency as per records are given below:</p> <table border="1" data-bbox="828 543 1399 775"> <thead> <tr> <th rowspan="2">Year</th> <th rowspan="2">Budget Estimate</th> <th colspan="2">Demand *</th> <th colspan="2">Collection</th> <th colspan="2">Percentage of collection with reference to the demand</th> </tr> <tr> <th>D,ND,I[#]</th> <th>LSGD</th> <th>D,ND,I</th> <th>LSGD</th> <th>D,ND,I</th> <th>LSGD</th> </tr> </thead> <tbody> <tr> <td>2008-09</td> <td>174.29</td> <td>180.70</td> <td>78.38</td> <td>165.44</td> <td>57.34</td> <td>92%</td> <td>73%</td> </tr> <tr> <td>2009-10</td> <td>262.4</td> <td>239.25</td> <td>70.52</td> <td>212.12</td> <td>38.34</td> <td>89%</td> <td>83%</td> </tr> <tr> <td>2010-11</td> <td>337.47</td> <td>249.16</td> <td>87.83</td> <td>219.59</td> <td>83.78</td> <td>88%</td> <td>95%</td> </tr> <tr> <td>2011-12</td> <td>356.85</td> <td>277.08</td> <td>93.93</td> <td>217.12</td> <td>59.23</td> <td>78%</td> <td>63%</td> </tr> <tr> <td>2012-13</td> <td>384.28</td> <td>280.00</td> <td>105.17</td> <td>230.54</td> <td>81.99</td> <td>82%</td> <td>78%</td> </tr> </tbody> </table> <p>@ D=Domestic, ND=Non Domestic, I=Industrial</p> <p>*Demand includes fine also. As per Accounts Manual fine is income of KWA receipt only. Hence inclusion of the same in demand resulted in reduction in percentage of collection.</p> <p># As per one time settlement KWA had received an amount of ₹ 211.40 crore till date leaving a balance of ₹ 38.60 crore towards 5th installment.</p> | Year | Budget Estimate | Demand * | | Collection | | Percentage of collection with reference to the demand | | D,ND,I [#] | LSGD | D,ND,I | LSGD | D,ND,I | LSGD | 2008-09 | 174.29 | 180.70 | 78.38 | 165.44 | 57.34 | 92% | 73% | 2009-10 | 262.4 | 239.25 | 70.52 | 212.12 | 38.34 | 89% | 83% | 2010-11 | 337.47 | 249.16 | 87.83 | 219.59 | 83.78 | 88% | 95% | 2011-12 | 356.85 | 277.08 | 93.93 | 217.12 | 59.23 | 78% | 63% | 2012-13 | 384.28 | 280.00 | 105.17 | 230.54 | 81.99 | 82% | 78% |
| Year | Budget Estimate | Demand * | | | | Collection | | Percentage of collection with reference to the demand | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | D,ND,I [#] | LSGD | D,ND,I | LSGD | D,ND,I | LSGD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2008-09 | 174.29 | 180.70 | 78.38 | 165.44 | 57.34 | 92% | 73% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2009-10 | 262.4 | 239.25 | 70.52 | 212.12 | 38.34 | 89% | 83% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2010-11 | 337.47 | 249.16 | 87.83 | 219.59 | 83.78 | 88% | 95% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011-12 | 356.85 | 277.08 | 93.93 | 217.12 | 59.23 | 78% | 63% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 384.28 | 280.00 | 105.17 | 230.54 | 81.99 | 82% | 78% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | 2 | | 3 On an analysis of the above tables, the collection from Domestic, Non-Domestic and Industrial consumers came to 85.21% and the collection from local bodies came to 78.15% till 31/3/2013. <ul style="list-style-type: none">● Steps have been taken to collect maximum revenue by assigning targets to all the field offices of Water Authority.● Water Authority is in the process of implementing e-abacus throughout the state. On completion of the same, accurate data of all the consumers will be readily available.● The DCB statement maintained by the RMC is based on the primary data, collected division wise. DCB statement maintained in the accounts is correct and is maintained properly, sub-division wise, after tallying collection and cash. The opening balance is properly maintained in accounts. Hence the DCB as per accounts is correct.● According to the tariff revision approved by government with effect from 01/10/2014 Sewerage charges will be applicable @ 10% of water charges payable by those consumers who have availed sewerage connections. |
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| 8 | 3.5.4.2 | | <p style="text-align: center;">3</p> <p>The total arrears in collection of revenue as per our records as on 31/3/2013 comes to ₹ 489.95 crore. Major portion of the arrears are from Non domestic and Local bodies (74%). It includes surcharge and compounding interest of 2% per month carried over from the previous years. About of 30% of the arrears are from unidentified water connection and bad debts. Steps are already taken to locate the unidentified connections. In addition to this Water Authority had extended One Time Settlement facility and leak benefit to the customers viz., Trivandrum Rubber Works, Women's & Children Hospital, Thycaud, Kehrion, Regional Cancer Centre, Railways, St. Chithra Poor Home etc. It will come around ₹ 12.00 Crore. Above ₹ 4.00 Crore of the arrears is the penalty/fine from consumers which was erroneously accounted as demand. Necessary directions have been issued to remove the same from the data base for proper accounting. Thus the actual arrears of water charge is less than the amount stated in audit enquiry for the year 2012-13.</p> <p>The average collection from local bodies amounts to ₹ 80.00 crore per year (as on 31/3/2013). Monthly bills/invoices are being issued by respective Panchayats/Municipalities and Corporation and more than 60% of the local bodies are remitting the water charges directly to the department. For the balance dues, the RMC (Revenue Monitoring Cell) had lodged the claim with directorate of local self-government and they are deducting the water charges from the Non plan grant and remitting the same to Water Authority at suitable intervals. More over the arrears stated above includes fine @2% per year. Water Authority has appointed territory managers to collect the arrears. In addition to the above, Water Authority had started implementing ABACUS (Advanced Billing Accounting Collection Utility System) throughout the state and 70 % of the implementation is over. On completion of the implementation of the system, accurate data of all the consumers will be readily available. Water Authority had started installation of special disconnection device in 8 section offices under PH Division, Trivandrum on an experimental basis. It is presumed that the same will enhance our capability of making disconnections easier and</p> |
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| | | | <p>will reduce the arrears of water charge. Accordingly the arrears as stated could be reduced substantially.</p> |
| 9 | 3.5.4.3 | | <p>NRW is a major concern for all water utilities in the world and NRW management has been gaining importance in INDIA also. The NRW level in developing countries is upwards of 50%, India being no exception. Unfortunately most utilities including Water Authority do not have exact information on quantity produced or distributed and so an accurate amendment of NRW is not possible. The MOUD, GOI has now come up with Bench mark figures for various water and sanitation services. The water utilities are required to strive and reach the bench mark levels. Obviously NRW reduction is a complex, time consuming and capital intensive activity and substantial reduction is possible only over a long duration. Water Authority recognizing the importance of NRW reduction has constituted an NRW management unit with the objective of managing NRW and reaches benchmark levels. The NRW in any system can be calculated only by measuring the total water produced and distributed through the distribution mains and comparing it with the billing data. This initial procedure of measuring the water produced, distributed and billed and correlating this is known as water audit. In order to ascertain the exact quantity of losses through leakages and to fix and rectify it, further extensive studies are needed. To assess the quantity of water distributed, the initial step involves fixing of meters in the water mains. Though KWA has initiated steps for fixing of meters in the distribution lines of new schemes, the existing schemes lack such measurement method and only rough estimations are available. The data regarding billing also is to be available for correlating with the production and finding out the NRW.</p> |

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| | | | <p>As stated previously, in order to manage water loss, the water supply system first must be measured and monitored. To initiate water audits on the local systems, KWA will have to install bulk meters in all the mains in all the water supply schemes and collect the revenue billing data. Installation of bulk meters and computerized revenue billing are the most essential initial steps towards conducting a successful water audit. The Non-Revenue Water Management Unit has been established in KWA from March 2012 and since then we have taken initiatives for installing bulk meters in all schemes in a phased manner for measurement of water distributed. This involves collecting data about pipe sizes, pressure and procurement of meters and installation of the same. This requires considerable time and can only be completed over a period of time subject to availability of funds. A successful NRW reduction strategy depends on identifying priority areas of the network and the network operating policy which need attention, and also on introducing methodologies and policies to assess, monitor and control elements of NRW – real losses, apparent losses, and unbilled consumption. Perhaps the two most important components of NRW are the real losses and the apparent losses. These components are the ones which need much resource in terms of logistics, staffing and finance in order to control water losses. The third component, unbilled authorized consumption can be controlled fairly well without much resource. It is therefore important to develop the appropriate strategies for controlling water losses especially through real and apparent losses if meaningful achievements are to be made and the outcome would justify the efforts put in. The starting point to deal with water losses in any water utility is to understand the network system of the utility.</p> <p>Water Authority is operating distribution networks with an outdated infrastructure, and does not have asset maps or database and traditionally Water Authority has poor focus on maintenance. One of the fundamentals of network management is zoning. The principle of zoning is well established – by dividing the network into smaller “sectors”, field people can understand and more easily analyze pressure and flow profiles and problem areas. Such zones are</p> |

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| 1 | 2 | <p style="text-align: center;">3</p> <p>operationally easier to manage, and allow monitoring and control systems to be implemented more easily. Effective metering is an essential feature of network management, particularly for measuring flows into and out of each zone measured, to provide data for the water balance calculation. Continuous flow measurement at the source or reservoir outlets with data transmitted instantaneously to the operational centre is the ideal, but digital data loggers can be effective substitutes. Effective management of the network relies on the ability to monitor flows continuously, at a minimum of hourly intervals throughout the day. An accurate population count is also of prime importance, as derived data such as per capita demand provide information on growth of demand over time, leakage, etc. Zonal flow monitoring is the cornerstone of active leakage management in district metered areas (DMAs). If network records are poor, a network survey is essential before zoning and DMA design can take place, and for accurate leak detection and location to be carried out.</p> <p>Identifying the importance of NRW, Kerala Water Authority has taken bold steps in this direction. We have constituted an NRW Management Unit solely for focus into NRW reduction. The various activities targeted by the unit are:</p> <ul style="list-style-type: none"> • Mapping of Network: The work is mainly done in Trivandrum. All available old maps and drawings are collected digitized and preliminary survey is being carried out. Preparation of GPS maps of all the transmission lines from Aruvikkara Plant is in progress. Projects have been initiated for water conservation and leakage loss by District Metering Area (DMA) studies. • Innovative Leak Detection : Latest leak detection processes are being initiated to prevent major losses in transmission mains. The technology currently being tested is Smart ball, which is a methodology different from conventional technologies where a computer programmed instrument is inserted into the pipe to check for leaks. The pilot project is |
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| | | <p>currently being carried out in Trivandrum city which may be replicated to other cities on success.</p> <ul style="list-style-type: none"> • Conventional Leak Detection: Leak detection using conventional equipment is also carried out. A major leak in Trivandrum city near the ChakkaBridge was recently identified and plugged. Similarly minor unidentified leaks are also traced out across the city. • Bulk Metering: In order to have an assessment of the water being produced and actual quantity distributed to the consumers, bulk meters are to be provided in all plant outlets, tank inlets and in transmission mains. TWSS is one of the projects through JICA project selected for the study and procurement of bulk meters is in progress. • Improved Metering: Improving metering accuracy to facilitate production distribution gap is a major concern. Under registering of domestic meters and posting of wrong readings and huge readings in bulk consumers are a major contribution to NRW of KWA. Two different approaches are taken in this regard. In case of domestic connection, a pilot study is proposed in an area having around 3000 connections, in which the existing meters will be replaced by FCRI tested meters for assessing the difference in metered quantity before and after fixing of meter. In the case of bulk consumers, the proposal is to replace the meters of top 100 consumers with a SMART meter enabled with GPRS for automated meter reading and billing. • Pump house Automation: Incorrect pumping duration and non-monitoring of levels and flows leads to misuse and wastage of water in pump houses. In order to prevent this automation is proposed. For large pump houses high end technology with total automation solution and SADA developed by CDAAC is proposed whereas for small pump houses with submersible pumps, programmable automatic pump regulators are proposed. Both these projects are under way. |

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| | | A | <p>• Automation of Water Filling Station: In order to curb the malpractices in water distribution through tanker Lorries, automation of filling station is proposed.</p> |
| 10 | 3.5.4.4 | | <p>The proposed project for the installation of a Packaged Drinking Water Plant at Aruvikkara was long overdue and the project could not be materialized even though fund was earmarked way back in 2008-09. It may be noted that, Kerala Water Authority had taken earnest efforts to materialize the project in time.</p> <p>Kerala Water Authority had invited five tenders as detailed below-</p> <p>> In the first tender, only one firm participated and is rejected by the Government, since the quoted rate was high and also that it was a single tender.</p> <p>> The second tender was awarded to M/s. Shivam Water Treaters on 15/05/2010 but even though Kerala Water Authority had co-operated earnestly with the contractor for successful implementation of the project, the contractor had abandoned the project, the reasons of which was not disclosed to Kerala Water Authority. Kerala Water Authority terminated the work on 22/07/2011 & forfeited the EMD, Security Deposit and Contractors registration fee amounting to ₹ 7.00 Lakhs in total.</p> <p>> The third and fourth tenders were invited on 12/2011 and 2/2012 respectively, and only one firm quoted for the tender. The tender submitted was defective in each time and hence rejected.</p> <p>In the meantime, the Authority had discussed the subject in detail and noted that one among the reason for lukewarm response in previous tenders called for, may be the provision of marketing clause included in the NIT. Hence the Authority decided to exclude the provisions of marketing in the NIT and to retender.</p> <p>> In the subsequent tender on 7/2012, two tenderers had quoted and could not be settled since the valid tenderer's quoted amount was</p> |

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abnormally high.

The Authority had again discussed the subject and decided to revise the DPR by incorporating technological advancement and to re-estimate the project cost since the previous DPR was prepared way back in 2007. Accordingly, M/s KITCO was addressed to prepare a DPR by incorporating the latest Technological advancements. M/s KITCO had submitted the draft DPR and the same was placed before the Authority. The Authority in its meeting held on 30/09/2013 resolved to issue revised AS for an amount of ₹ 10.00 Crore for the project.

The CE (SR) has approved the estimates for Civil Works, Electrical Works and Plant & Machinery for the above work amounting to for an amount ₹ 9.60 Crore and three tenders were placed. According to the competitive tenders submitted, the following works were awarded and work order issued. The contractors were also executed the agreement for the work and preliminary works started.

| Work | Contractor (M/s) | Work Order Date | Agreement Date |
|-----------------|----------------------------|-----------------|----------------|
| Civil Work | Chicago Contractions P Ltd | 01/10/2015 | 17/10/2015 |
| Electrical Work | Imperial Engineering Co. | 04/09/2015 | 22/09/2015 |
| Plant & Machine | Sweet Water Technology | 03/09/2015 | 12/10/2015 |

The Chief Engineer (SR) have been submitted with a request for revised AS of ₹ 14.00 crore so as to include the balance works such as fire fighting works, etc and also to include the tender excess of the above three works.

Kerala Water Authority had made earnest efforts in its part and more specifically the Authority is constantly monitoring the project. It can only be said that, even though wide publicity was given and e-tendering system adopted, good/reputed manufacturers did not turn up for the tender in the past.

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| 11 | 3.5.5 | | The status of finalisation of Accounts of Water Authority is as follows: | | | |
| 12 | 3.5.5.1 | | Financial Year | Status of Preparation of Accounts | Status of Audit of Accounts | Remarks |
| | | | 2008-09 | Prepared | Completed | Accounts placed before LA on 29/6/2015 |
| | | | 2009-10 | Prepared | Completed | |
| | | | 2010-11 | Prepared | Completed | Printed Accounts Submitted to Govt. of Kerala on 30/7/15 Accounts placed before LA on 01/12/2015. |
| | | | 2011-12 | Prepared | Audit Completed. Separate Audit Report Received | Audited Accounts and Separate Audit Report is received from AG on 12/8/2015 and Board approved on 25/9/2015 which is under Printing (forwarded to printing on 12/10/2015) |
| | | | 2012-13 | Prepared | Audit by AG is Completed. | Awaiting Separate Audit Report from AG. (Reply to Draft Audit report submitted on 19/8/2015 & clarification on 21/10/2015) |
| | | | 2013-14 | Prepared | Under submission to AG for audit | Placed in the Board of KWA on 17/12/2015. |
| | | | 2014-15 | Under Preparation | | |

NOTES FURNISHED BY GOVERNMENT ON THE AUDIT
PARAGRAPHS

(Audit Report 2013-2014)

| Sl. No. | Audit Paragraph | | Reply furnished by Government |
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| 1 | 5.9 | | <p>Kerala Water Authority submitted before the Railways a detailed sketch for laying pipe through footpath portion of railway overbridge. But the Railways informed that the present rules do not allow the pipe line work within 15m of any railway structure. At the time of preparing the project during 2000, this rule was not in force. As the Railway objected to the proposal, Kerala Water Authority submitted a new proposal to cross the railway line by "push jack method". A joint inspection was conducted with railway authorities, but alignment of proposal was not finalized. Considering the urgency of the matter,</p> |

| 1 | 2 | | 3 |
|---|---|--|--|
| | | | <p>Kerala Water Authority approached the District Collector on 29/09/2013 seeking help for getting sanction from the Railways. A meeting was convened by the District Collector but the railway authorities did not attend the meeting.</p> <p>The Railway authorities informed on 12/03/2015 that for considering the proposal, a processing charge of Rs.400 has to be remitted. Kerala Water Authority remitted the amount on 19/03/2015. The sanction from the Railways has not yet been received and the matter is being pursued.</p> |

Appendix 3.5
Details showing the Receipt and Expenditure (Revenue and Capital)
 (Reference: Paragraph 3.5.2; Page 103)

REVENUE (Non Plan)*(₹ in crore)*

| Year | State Govt. Grant | Revenue Collection | Others | GOI Grant | Total Grant (col.2+col.5) | Total Revenue Receipts | Total Revenue Expenditure |
|--------------|-------------------|--------------------|---------------|--------------|---------------------------|------------------------|---------------------------|
| 2008-09 | 107.21 | 223.87 | 291.46* | 16.05 | 123.26 | 638.59* | 739.43* |
| 2009-10 | 167.93 | 314.80 | 39.96 | 15.28 | 183.21 | 537.97 | 611.12 |
| 2010-11 | 199.72 | 355.40 | 31.80 | 14.04 | 213.76 | 600.96 | 586.87 |
| 2011-12 | 191.52 | 351.96 | 56.55 | 11.93 | 203.45 | 611.96 | 623.81 |
| 2012-13 | 228.65 | 384.49 | 20.59 | 36.85 | 265.50 | 670.58 | 699.03 |
| Total | 895.03 | 1630.52 | 440.36 | 94.15 | 989.18 | 3060.06 | 3260.26 |

* including loan amount of ₹ 250 crore availed from Bank towards one time settlement of electricity charges

CAPITAL (Plan)*(₹ in crore)*

| Year | Financial assistance from the State | | GOI Grant | Others | Total Capital Receipts | Expenditure of State Govt. | | GOI | Others | Total Expenditure |
|--------------|-------------------------------------|----------------|---------------|---------------|------------------------|----------------------------|----------------|---------------|---------------|-------------------|
| | Grant | Loan | | | | Grant | Loan | | | |
| 2008-09 | 79.00 | 379.00 | 90.92 | 30.01 | 578.93 | 69.85 | 495.37 | 85.48 | 68.30 | 719.00 |
| 2009-10 | 341.61 | 315.00 | 139.19 | 15.61 | 811.41 | 308.49 | 315.57 | 137.12 | 57.78 | 818.96 |
| 2010-11 | 280.86 | 94.67 | 134.72 | 20.73 | 530.98 | 183.90 | 172.91 | 140.06 | 43.74 | 540.61 |
| 2011-12 | 238.16 | 230.10 | 112.53 | 21.26 | 602.05 | 259.84 | 193.07 | 112.07 | 15.82 | 580.80 |
| 2012-13 | 335.50 | 240.00 | 212.86 | 104.62 | 893.03 | 348.68 | 264.38 | 211.90 | 97.48 | 922.44 |
| Total | 1275.18 | 1258.77 | 690.22 | 192.33 | 3416.40 | 1170.76 | 1441.39 | 686.63 | 283.12 | 3581.81 |

Appendix 3.6
Statement of Incomplete Schemes
 (Reference: Paragraph 3.5.3.2; Page 104)

(₹ in crore)

| Sl. No. | Name of scheme | Year of commencement | Original date of completion | Delay (in months as on July 2013) | Estimated cost | Upto date expenditure | Remarks |
|--------------|---|----------------------|-----------------------------|-----------------------------------|----------------|-----------------------|---|
| 1 | CARWSS to Kattappana & Ayyappanocivil villages | 2001 | 31-3-2006 | 88 | 23.14 | 9.50 | Treatment plant not completed |
| 2 | CARWSS to Elappara & adjoining villages | 2000 | 31-3-2005 | 100 | 21.98 | 27.52 | Gravity mains and distribution not completed |
| 3 | CARWSS to Vellathooval and Konnathady villages in Idukki district | 2000 | 31-3-2005 | 100 | 25.24 | 12.17 | Pumping main, gravity main - work in progress -80 per cent completed |
| 4 | CARWSS to Vandamedu and Anakkara villages | 1998 | 31-3-2001 | 148 | 5.29 | 5.18 | Land for construction of weir not surrendered |
| 5 | ARWSS to Edacode and adjacent villages | 2003 | 2006 | 79 | 7.71 | 7.27 | Pump set erection not completed |
| 6 | ARWSS to Kazhakuttom-Meriamkulam (Part) villages | 2003 | 2006 | 79 | 3.82 | 4.49 | NH road cutting sanction to be received |
| 7 | ARWSS to Inorpara village | 2003 | 2006 | 79 | 5.45 | 5.45 | NH road cutting sanction to be received |
| 8 | ARWSS to Varkala phase I | 2002 | 2005 | 91 | 5.02 | 5.09 | Balance works included in SLSSC 2010 sanctioned project NRDWP |
| 9 | ARWSS to Ottasekharamangalam Phase I | 2002 | 2005 | 91 | 8.60 | 4.43 | PWD road cutting sanction to be obtained, power connection not obtained |
| 10 | ARWSS to Ottasekharamangalam Phase II | 2002 | 2005 | 91 | 12.35 | 13.28 | Power connection not obtained |
| 11 | Augmentation of WSS to Kunnathukal Panchayath | 2008 | 31-12-2011 | 19 | 16.49 | 10.21 | Land required not handed over by Panchayath |
| 12 | RWSS to Azhoor, Kizhuvilam, Keezhattungal villages | 2008 | 31-12-2011 | 19 | 18.95 | 18.25 | NH road cutting sanction to be obtained |
| 13 | CWSS to Palliohal, Balaramapuram and Vilavoorkal Panchayaths | 2008 | 31-12-2011 | 19 | 38.62 | 13.24 | Land to be obtained for OHSR |
| 14 | SPAN-UWSS to Kazhakuttom | 2006 | 17-3-2011 | 28 | 7.61 | 6.77 | Railway cutting sanction to be obtained |
| Total | | | | | 200.27 | 142.85 | |

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