

## 2.2 Performance Audit on ‘Irrigation Projects in Karnataka’

### Executive Summary

#### *Introduction*

In order to mobilize financial resources for speedy implementation of the major and medium irrigation projects within the targeted period, the Government of Karnataka established three Special Purpose Vehicles viz., Krishna Bhagya Jala Nigam Limited (KBJNL), Karnataka Neeravari Nigam Limited (KNNL) and Cauvery Neeravari Nigama Limited (CNNL) under the Companies Act, 1956.

#### *Objectives of the Performance Audit*

The performance audit was carried out to examine and analyse the reasons for non-achievement of the targeted creation of irrigation potential and socio-economic benefits as envisaged in the projects and to verify, examine and analyse whether the projects were executed as planned with a view to study reasons for cost and time overruns including extra financial implications (EFI).

#### *Audit Findings*

##### *Non-achievement of objectives*

Out of 78 works selected across 17 projects, 21 works were completed without any delay, 14 works were completed with a delay up to 57 months, 4 works were ongoing without any delay and 39 works were ongoing with a delay up to 62 months.

The objective of taking up these project viz., improvement of efficiency, arresting seepages, providing water to the tail-end reaches, filling MI tanks and supply of drinking water have been only partially achieved as the works are not fully completed. Further, the contemplated irrigation potential (52,937 ha) was yet to be achieved.

##### *Deficiencies in survey and design*

There were delays in completion of works due to deficiencies in survey and design viz., failure to propose an alternate alignment before taking up the work (KBJNL-NRBC

tributary 9A); improper survey and design resulted in EFI (CNNL-CC lining for Km.0 to 20 of Kabini RBC); change in the alignment to achieve savings in the cost was defeated as there was increase in cost (KBJNL - ALBC Km. 68 to 77); award of work for preparation of DPR to the consultant after commencement of the original work (KBJNL-modernisation of NLBC) etc.

##### *Deficiencies in estimation*

The estimates were inflated due to non deduction of initial lead of one kilometre while calculating additional lead charges (CNNL-Kattepura Anecut Canals); errors in adoption of item rates (CNNL-Package-I & V of modernization of VC Canal system and modernisation of Devaraya Anecut Canals); inclusion of overheads and taxes on the wrong base and provision of higher sales tax (CNNL-Alambur DWS); absence of standard/basis for utilizing the excavated soil; adoption of the item of work for embankment under the head ‘preliminary and maintenance works’ of Schedule of Rates instead of ‘canal and allied works’ (KRBC Km.0 to 60); and allowing weightage even on items falling under the heads ‘CD works’, ‘Maintenance works’ etc. (TLBC Main canal and distributaries).

##### *Deficiencies in tendering*

There were instances of inviting short-term tender without approval of the competent authority, non finalization of tenders within the validity period (KNNL - Varahi Common canal CC lining Km.12 to 13 and Km.13 to 14), faulty tender evaluation process (KBJNL-NRBC tributary 9A), extra expenditure due to defective tender clause (CNNL-Gulur Hebbur DWS) and variation from the standard tender document prescribed by the Government.

##### *Deficiencies in acquisition of land*

Due to deficiencies in acquisition of land, there were delays in completion of work (KNNL-construction of minors under Kamatagi tributary), award of work without acquiring land (KNNL-Varahi common

Canal) and delay due to non availability of land for dumping excavated soil (KNNL-GRBC).

**Deficiencies in execution**

There were deficiencies in execution, non-achievement of desired irrigation potential (KNNL-Varahi Project), non-synchronization of the work of branch canal along with the work of distributary (KBJNL-NRBC 9A), execution of excess thickness of lining as compared with the prescribed standard in all the three companies, delay in providing work-slips for enhanced quantities and handing over the site (C>NNL-CC lining from Km.83 to 84 of Tumkur Branch Canal), deeper excavation which was not need based (C>NNL-PSC Bridge across Hemavathy River) and defective geo-technical survey by the consultant (KNNL-Interconnecting canal work of Kalasabandura Nala).

There were instances of extra/ineligible payments viz., payment of EFI at enhanced rates for erection of box type steel cribs support (KBJNL-aqueduct of distributary 9A of NRBC), extra expenditure due to payment made for the thickness and length of MS Pipes as envisaged in the contract than actually executed by the contractor (C>NNL-Alambur DWS), payment of ineligible lead charges for dumping excavated soil and thereafter for re-use from dumping yard to the compaction area (KNNL-Construction of inter-connecting canal from Kalasa reservoir to Malapraba river from ch (-) 145 to 5005 metre (m)- Phase

II), approval for ineligible price adjustment for steel and cement (KNNL-Malaprabha RBC with CD from Km.131 to 142) and application of wrong index for price adjustment (KBJNL-aqueduct of distributary 9A and box culvert of NRBC).

There were instances of non-recovery towards various charges during execution viz, non-recovery of the cost of stones and charges for non-stacking (C>NNL-Package-II to V of VC Canal system, CC lining of Km.0 to 20 of Kabini RBC), non-recovery towards ledge cutting (C>NNL-CC lining of Km.0 to 20, Km.20 to 40 of Kabini RBC), non recovery for shrinkage quantity and payment for slipped muck (KBJNL-Remodelling of NLBC); Non-recovery of penalty for delay in execution of the work (KBJNL-Package I, III and IV of NRBC distributary 9A and C>NNL - KRBC Km.0 to 20, Km.20 to 40, Km.40 to 60 & KLBC Km.0 to 25.25).

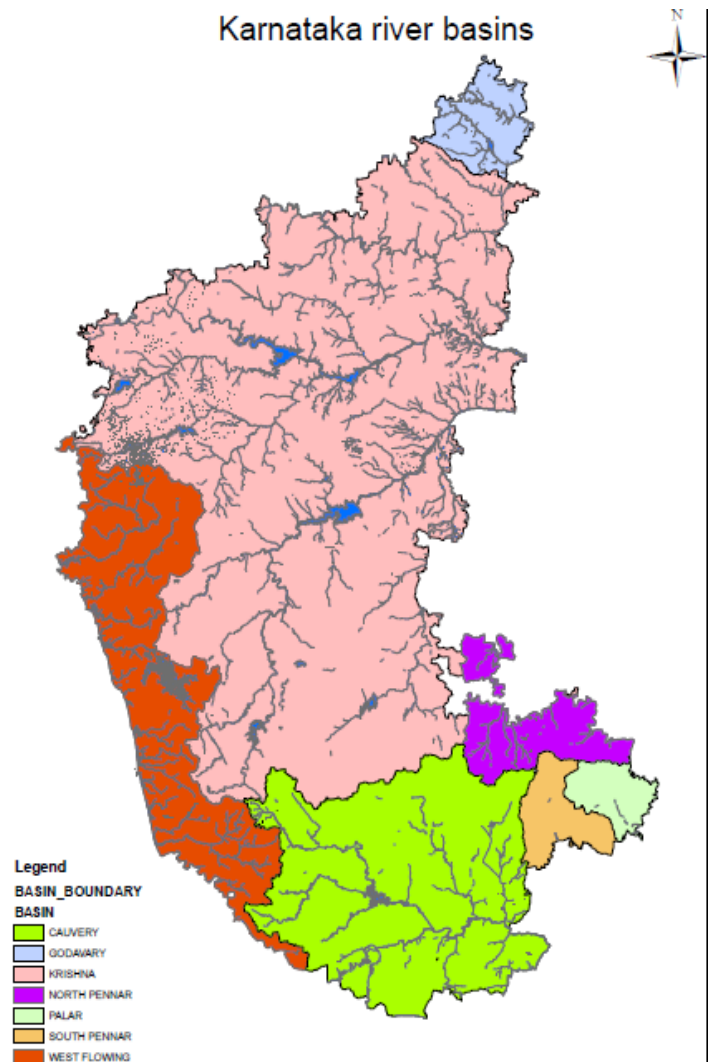
***Our conclusions and recommendations are given at the end of the Performance Audit Report.***

## Introduction

**2.2.1.** The geographical area of Karnataka is 1.92 lakh square kilometre (sq. km.) with a cultivable area of 1.41 lakh sq km. As of March 2014, there were 211 major and medium irrigation projects<sup>29</sup> (60 completed and 151 ongoing) in the State with a gross command area of 28.37 lakh hectares (ha), against the ultimate potential of the State estimated at 35 lakh ha.

In order to mobilise financial resources for speedy implementation of the major and medium irrigation projects within the targeted period, the Government of Karnataka (GoK) established three Special Purpose Vehicles under the Companies Act, 1956.

- Krishna Bhagya Jala Nigam Limited (KBJNL) was incorporated in August 1994 for implementation of the Upper Krishna Project (UKP).
- Karnataka Neeravari Nigam Limited (KNNL) was incorporated in June 1998 to expedite the completion of ongoing irrigation projects of Krishna Valley.
- Cauvery Neeravari Nigama Limited (CNNL) was incorporated in June 2003 to accelerate the implementation of projects in the Cauvery Basin.



<sup>29</sup> Culturable command area (CCA) of 10,000 ha or more are major irrigation projects; CCA between 2,000 ha and 10,000 ha are medium irrigation projects.

### **Organisational set up**

**2.2.2.** The Chief Minister of the State and the Minister of Water Resources are the Chairman and Deputy Chairman respectively of these three Companies. The administrative control of the Companies is with the Water Resources Department (WRD) headed by the Additional Chief Secretary. The Companies are headed by Managing Directors who monitor the day-to-day activities. The Technical Sub Committee (TSC) deliberates the projects/works, technical reports and approvals and submits its recommendations to the Board of Directors (BoD) for approval. The projects/works taken up are monitored at the field level by the Chief Engineers at the zonal offices. The circle offices and divisions assist the zonal offices. KBJNL has five zonal offices, six circle offices and 29 divisions, KNNL has seven zonal offices, 14 circle offices and 81 divisions, and CNNL has three zonal offices, eight circle offices and 28 divisions.

### **Audit Objectives**

**2.2.3.** The objectives of the performance audit were to

- examine and analyse the reasons for non-achievement of the targeted creation of irrigation potential and socio-economic benefits as envisaged in the projects.
- verify, examine and analyse whether the projects were executed as planned with a view to study reasons for cost and time overruns including extra financial implications.

### **Scope and Methodology of Audit**

**2.2.4** The present Performance Audit covered the works of Construction, Modernization, CC lining of canals and distributaries, Drinking Water Supply Schemes and works with Extra Financial Implications (EFI) / Extra Item Rate List (EIRL)<sup>30</sup> undertaken by the three Companies during 2008-09 to 2013-14. The works were selected based on random sampling method and are as follows.

- **KBJNL:** 21 works<sup>31</sup> in seven divisions covering six projects viz., Agasarahalla, Almatti, Almatti Left Bank Canal, Narayanpur Left Bank Canal, Narayanpur Right Bank Canal and Drinking Water Supply Schemes.
- **KNNL:** 60 works<sup>32</sup> in 22 divisions covering seven projects viz., Varahi, Malaprabha, Tungabhadra, Bennithora, Kalasabandura Nala, Dandavathi and Hippargi.

<sup>30</sup> When the work exceeds the approved/tendered quantities either due to increase in quantities, change in designs, entrustment of additional items not awarded *etc.*, EFI and EIRL are proposed.

<sup>31</sup> 16 works and five EFIs.

<sup>32</sup> 28 works and 32 EFIs.

- **CNNL:** 41 works<sup>33</sup> in 15 divisions, covering four projects viz., Hemavathi, Harangi, Kabini and Krishna Raja Sagar.

We explained the objectives of the performance audit to the Government and to the Management of the Companies during an ‘Entry Conference’ held in April 2014. The draft Performance Audit Report was issued to the Government in September 2014. The ‘Exit Conference’ was held in November 2014 wherein the audit findings were discussed with the Government represented by the Additional Chief Secretary to the Government of Karnataka, Water Resources Department and the Managing Directors of the three Companies. The views of the Government have been considered while finalising the Performance Audit Report.

### **Audit Criteria**

**2.2.5.** The Audit Criteria adopted for assessing the achievement of the audit objectives were derived from the following sources.

- Guidelines issued by WRD, Central Water Commission (CWC), Directions issued by TSC and BoD.
- Provisions of the Karnataka Transparency in Public Procurement (KTPP) Act, 1999, and KTPP Rules 2000, Land Acquisition Act, 1894. Guidelines issued by Central Vigilance Commission (CVC).
- Survey/ Investigation reports, specifications and targets in the Detailed Project Reports (DPR), Annual Work Programmes/Annual plans, Consultancy/third party reports, estimates and Bureau of Indian Standards (BIS)/specifications.
- Notice Inviting Tenders (NIT), agreement conditions, schedule of rates, bill of quantity.

### **Audit Findings**

**2.2.6** The audit findings are discussed in the succeeding paragraphs. The replies received from the Companies have been considered while finalizing the Performance Audit Report.

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<sup>33</sup> 34 works and seven EFIs.

**Status of works**

2.2.7. The status of works selected for Performance Audit is given below.

**Table 2.2.1: Status of selected works**

Company	No of works test checked (excluding EFI)	No of works completed in time	No of works completed with delay (months)	Increase in cost of the delayed works as compared to original cost (₹ in crore)	No of works under progress but with delay	Increase in cost of the delayed works as compared to original cost (₹ in crore)
KBJNL	16 <sup>34</sup>	5	Nil (0 to 6 months)	Nil	Nil (0 to 6 months)	Nil
			3 (6 months to 3 years)	3.05	2 (6 months to 3 years)	49.66
			1 (above 3 years)	48.87	2 (above 3 years)	Nil
KNNL	28	9	1 (0 to 6 months)	10.47	3 (0 to 6 months)	7.25
			5 (6 months to 3 years)	48.00	8 (6 months to 3 years)	60.38
			Nil (above 3 years)	-	2 (above 3 years)	6.13
CNNL	34 <sup>35</sup>	7	1 (0 to 6 months)	1.01	3 (0 to 6 months)	72.11
			3 (6 months to 3 years)	14.38	14 (6 months to 3 years)	167.61
			Nil (above 3 years)	Nil	5 (above 3 years)	64.42

(Source: Data compiled from information obtained from the Companies)

We observed that there were delays in projects leading to time and cost overruns, which resulted in non-achievement of the objectives. The extent of achievement of objectives (project-wise) is given in the table below.

**Achievement of objectives of the projects/works**

2.2.8 The following table summarizes the number of projects test checked and its present position with regard to achievement of objectives.

<sup>34</sup> Three works are in progress, but without delay.

<sup>35</sup> One work is in progress, but without delay.

**Table 2.2.2: Status of achievement of objectives of the selected works**

Project	No. of works test checked	Status of works	Extent of achievement of objective
<b>Krishna Bhagya Jala Nigam Limited</b>			
Almatti Left Bank Canal	1	<ul style="list-style-type: none"> <li>• Work in progress with a delay of 30 months.</li> </ul>	Irrigation facilities to be provided for 4,035 ha were not yet achieved
Narayanpur Left Bank Canal	3	<ul style="list-style-type: none"> <li>• All works were completed in time.</li> </ul>	Objectives of restoration of slips in canal, improvement of canal efficiency, elimination of canal seepages were achieved.
Narayanpur Right Bank Canal	6	<ul style="list-style-type: none"> <li>• 2 works were completed with delay up to 57 months.</li> <li>• 2 works were in progress without delay.</li> <li>• 2 works were in progress with delay up to 46 months.</li> </ul>	Irrigation potential to the extent of 15,700 ha was not achieved.
Drinking Water Supply Scheme	2	<ul style="list-style-type: none"> <li>• 1 work was in progress without delay.</li> <li>• 1 work was in progress with a delay of 31 months.</li> </ul>	Objectives of filling up irrigation tanks by lifting water from the River Krishna and Bhima for the purpose of irrigation, drinking and raising ground water table were not achieved.
Agasarahalla	1	<ul style="list-style-type: none"> <li>• Completed with a delay of 16 months.</li> </ul>	Objective of improvement in canal efficiency was achieved, but after delays.
Almatti	3	<ul style="list-style-type: none"> <li>• 2 works were completed in time.</li> <li>• 1 work was completed with a delay of 15 months.</li> </ul>	Objective of providing security for dam and allied works was achieved.
<b>Karnataka Neeravari Nigam Limited</b>			
Bennitora	2	<ul style="list-style-type: none"> <li>• Both works were ongoing with delay of 13 months.</li> </ul>	Objective of Improvement of efficiency and arresting seepage is not achieved.
Dandavathi	1	<ul style="list-style-type: none"> <li>• Not started - was to be completed by October 2011.</li> </ul>	Irrigation facilities for 17,500 ha are yet to be achieved.
Hippargi	4	<ul style="list-style-type: none"> <li>• One work completed with no delay.</li> <li>• Three works were completed with delay up to 28 months.</li> </ul>	Irrigation facilities for 74,742 ha are yet to be achieved. System is under trial run.
Kalasa-bandura Nala	5	<ul style="list-style-type: none"> <li>• All works were ongoing with a delay up to 49 months, out of which 2 works were rescinded.</li> </ul>	Objective of diverting water to Malaprabha river was not achieved.
Malaprabha	3	<ul style="list-style-type: none"> <li>• One work was completed without any delay.</li> <li>• 2 works were ongoing with delay up to 50 months.</li> </ul>	Improvement of efficiency and arresting seepage were not achieved.

Project	No. of works test checked	Status of works	Extent of achievement of objective
Tungabhadra	8	<ul style="list-style-type: none"> <li>7 works were completed with no delay.</li> <li>1 work ongoing with delay of one month.</li> </ul>	Objectives of restoration of slips in canal, improvement of canal efficiency, elimination of canal seepages were achieved.
Varahi	5	<ul style="list-style-type: none"> <li>3 works were completed with delay up to 20 months</li> <li>2 works ongoing with delay up to 18 months.</li> </ul>	Providing irrigation facilities to 15,702 ha was not achieved.
<b>Cauvery Neeravari Nigama Limited</b>			
Hemavathi	9	<ul style="list-style-type: none"> <li>4 works were completed without any delay.</li> <li>2 works were completed with a delay ranging up to 36 months.</li> <li>2 works were ongoing with delay up to 18 months</li> <li>1 work was ongoing within the original valid period.</li> </ul>	The objectives of improvement of efficiency, arresting seepages, providing water to the tail-end reaches, filling MI tanks, supply of drinking water <i>etc.</i> , have been partially achieved as the works are not fully completed.
Harangi	8	<ul style="list-style-type: none"> <li>2 works were completed without any delay.</li> <li>2 works were completed with delay up to 24 months</li> <li>4 works were ongoing with delay up to 34 months.</li> </ul>	Objectives of improvement of efficiency, arresting seepages, providing water to the tail-end reaches <i>etc.</i> , have been partially achieved as the works are not fully completed.
Kabini	10	<ul style="list-style-type: none"> <li>All works were ongoing with delay up to 62 months.</li> </ul>	The objectives of improvement of efficiency, arresting seepages, providing water to the tail-end reaches, filling MI tanks, supply of drinking water <i>etc.</i> , have not been achieved as the works are yet to be completed.
Krishna Raja Sagar	7	<ul style="list-style-type: none"> <li>1 work was completed without any delay.</li> <li>6 works were ongoing with delay up to 13 months.</li> </ul>	The objectives of improvement of efficiency, arresting seepages, providing water to the tail-end reaches <i>etc.</i> , have been partially achieved as the works are not fully completed.

(Source: Data compiled from information obtained from the Companies)

Out of 78 works selected across 17 projects, 21 works were completed without any delay, 14 works were completed with a delay up to 57 months, 4 works were ongoing without any delay and 39 works were ongoing with a delay up to 62 months.

The objectives of taking up these projects *viz.*, improvement of efficiency, arresting seepages, providing water to the tail-end reaches, filling MI tanks



and supply of drinking water have been only partially achieved as the works are not fully completed. Further, the contemplated irrigation potential (52,937 ha) were yet to be achieved.

**2.2.9** A summary of the main reasons for not achieving the objectives in the 17 projects test checked is given in the table below.

**Table 2.2.3: Nature of deficiencies in the selected projects**

Description	KBJNL	KNNL	CNNL	Referred in paragraph at
<b>Total number of projects in the three PSUs</b>	<b>6</b>	<b>7</b>	<b>4</b>	
<b>Nature of deficiencies</b>	<b>No of test checked projects which had deficiencies</b>			
Deficiencies in survey and design	4	1	2	2.2.10
Deficiencies in estimation	1	1	3	2.2.14
Deficiencies in tendering	5	7	4	2.2.15
Deficiencies in land acquisition	-	2	-	2.2.21
Deficiencies in execution of work	2	6	4	2.2.25

The observations are given in the succeeding paragraphs.

#### **Deficiencies in survey and design**

**2.2.10.** Prior to taking up irrigation works, surveys, plans, measurements and specifications as may be necessary for assessment of the suitability of the designs are to be undertaken and completed. The survey and investigation work is carried out by in-house engineers or outsourced to consultants. Based on the details collected about the site conditions, the estimate and Detailed Project Report (DPR) of the works are prepared. The works are taken up after receipt of technical sanctions and administrative approvals.

There were deficiencies in the survey and investigation, resulting in cost and time overruns. These instances are given in **Sl. No. 1 to 6 of Annexure-8**. A few illustrative cases of the deficiencies in survey and design are given below.

#### ***Non-identification of seepage in the canal***

**2.2.11.** The work of Katteपुरa Anecut canals (117 kms) in CNNL was awarded (May 2010) to SNC Power Corporation Limited (Contractor) for ₹ 121.39 crore. The excessive seepages in the canal over a length of 24.66 kms due to the presence of Harangi canal which passes in the vicinity were noticed by the contractor at the time of execution. This resulted in EFI of ₹ 12.99 crore.

Government stated (November 2014) that the sub-surface inflows during the monsoon period of canal networks occur, but it could not be noticed as the survey work was undertaken in the summer season.

The reply is not acceptable as CNNL was aware of the existence of Harangi canal in the vicinity and seepages existed in a vast length of 24.66 kms and hence the survey was deficient to that extent, resulting in extra expenditure.

### ***Change in designs***

**2.2.12.** The work of improvements from Km.61 to 65 and from Km.70 to 73 of Malaprabha Right Bank Canal in KNNL was proposed (March 2008) to be taken up to improve the flow of water.

We observed that though the tenders were invited<sup>36</sup> after approval of TSC in March 2008, the TSC visited the site in December 2008 and then approved (February 2009) the tender subject to the condition that the lining works were to be executed without steel reinforcement. This was because of the hard surface of the soil in the canal. This necessitated revision of contract with Sri.N.B.Hosmani (contractor), from ₹ 16.35 crore to (March 2010) ₹ 13.44 crore.

During the inspection (March 2010) of the work, the Chief Engineer observed variations in the top layer of the soil and also change in the side slope as against the design slope, necessitating concrete lining in hard embankment. The TSC approved (August 2010) the proposal for modifications.

The request of the contractor for higher rates was not agreed to by the KNNL and the contract was closed (January 2011). Thereafter, fresh tenders were invited twice (March 2011, November 2011<sup>37</sup>) and after the third attempt the tender was awarded (May 2012) to Sri.Kariyappa Devappa Chennur for ₹ 16.21 crore with completion date as May 2013. The contractor, however, commenced the work only in March 2014. The work was in progress in November 2014.

The proposal for changes after inviting tenders and awarding of the work indicates that the survey was deficient. These resulted in the work, which had to be completed by June 2010, not being completed as of November 2014 and thus defeated the objective of containing seepages for the last six years.

Government replied (November 2014) that the delay was due to sorting out technical problems faced during the process of finalising tenders as necessitated by the site conditions and could not be foreseen. The reply is not tenable, in as much as the condition of the site would have emerged during preliminary survey and this had not been factored in before preparing the estimates and inviting tenders.

### ***Non-adherence to the recommendations of the expert committee***

**2.2.13** The Expert committee nominated by TSC of KBJNL, which inspected (1 March 2007) the aqueduct from Km.8.18 to 10.48 of Distributary No.9A of Narayanpur Right Bank Canal, had directed KBJNL to ascertain the techno-economic feasibility of the proposal and confirm that the proposed alignment would not pass through the mines area of Hutti Gold Mines Company Limited (HGML).

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<sup>36</sup> In four packages: Km.61, 62 (package 11), Km.63, 64, 65 (package 12), Km. 70, 71 (package 14), Km.72, 73 (package 15).

<sup>37</sup> Together with additional works of ₹ 6.51 crore.

We observed that KBJNL, invited (22 March 2007) tenders without confirming from HGML and awarded the work to M/s.APR Construction Company for ₹ 25.78 crore. Subsequently, HGML informed (January 2008) that the proposed aqueduct was liable to be damaged due to vibration from heavy and secondary blasting from mining operations. The request of the contractor for enhanced rates was not agreed to and the work was rescinded (October 2010). The balance work was recast at ₹ 47.49 crore work and re-tendered (February 2011). The work was awarded (August 2011) for ₹ 67.27 crore to Sri.G.Shankar, who completed it at a cost of ₹ 73.21 crore in February 2014.

Thus, failure to take up the issue of the proposed alignment with HGML and propose an alternate alignment before taking up the work resulted in delay in execution by four years and consequent increase in cost of the project by ₹ 22.01 crore<sup>38</sup>.

Government replied (November 2014) that the TSC had accorded clearance for the work and tender proposals as per original estimate. The reply is not acceptable because the TSC during inspection stated that KBJNL should confirm that the proposed alignment would not pass through the mines area and the instructions of the TSC had not been complied with before inviting the tenders.

#### Deficiencies in estimation

**2.2.14** The key to effective contract management is the completion of all required preliminary steps before a contract is awarded *i.e.*, DPR should contain justification for taking up the work, details of survey and investigations conducted, estimates of cost and time prepared and availability of materials ensured.

We observed that the Companies failed to make proper estimation of costs, leading to undue delay and additional expenditure. The cases indicating the deficiencies in the estimation and its impact are given below.

**Table 2.2.4: Deficiency in estimation**

Deficiency	Inflating the estimate (₹ in crore)	Reply of the Government and remarks
Initial lead of one kilometre was not deducted while providing additional lead charges for two items <sup>39</sup> of work in Modernisation of Katteपुरa Anecut Canal in CNNL. In addition loading/unloading charges, which were already part of the rates were also included separately in the estimates.	1.00	Government accepted (November 2014) the observation and stated that recovery would be effected.

<sup>38</sup> ₹ 67.27 crore less (₹ 47.49 crore less 5 per cent below premium quoted by APR Constructions) less ₹ 0.13 crore savings.

<sup>39</sup> Providing impervious/pervious casing embankment with soil from borrow areas and providing and laying 80 mm thick in situ 'M15 grade' with 20 mm downsize for canal lining.

Deficiency	Inflating the estimate (₹ in crore)	Reply of the Government and remarks
There were errors in adoption of item rates <sup>40</sup> , in respect of Package-I and Package-V of modernisation of Vishweswaraya Canal system and Devaraya Anecut Canals in CNNL.	0.72	Government replied (November 2014) that the rates arrived at were correct.  The reply is not acceptable as difference in calculation was mainly due to the fact that negotiation in respect of Packages mentioned in the observation were held in the 3 <sup>rd</sup> quarter (2012-13), while the rates considered for updation were of 4 <sup>th</sup> quarter (2012-13) thereby overestimating the updated cost. Further, the adoption of basic rate in respect of grass turfing was incorrect.
While arriving at the item rate, the taxes (VAT) and other overheads were worked out on finished item rates instead of basic rates for the item of work <sup>41</sup> of construction of Raising main in Alambur DWS work of CNNL.  In addition, a component of sales tax at 10.36 <i>per cent</i> , which was not envisaged under the Statute, was provided in addition to composite value added tax at 4 <i>per cent</i> , in the estimate on 'finished rate less fabrication charges of materials'.  This resulted in inflating the cost per running metre (Rmtr) of MS pipes to ₹ 34,402 instead of ₹ 28,889 per Rmtr, thereby boosting the estimate by ₹ 24.23 crore for actual length of 43,953 Rmtr of raising main.	24.23	Government stated (November 2014) that while arriving at the estimated cost of MS Pipes, overheads, other charges, contractor's profit and a component of Sales Tax at 10.36 <i>per cent</i> were correctly considered. However, it is evident that the calculation of overheads, taxes on the final cost arrived at, and sales tax at 10.36 <i>per cent</i> in addition to the composite VAT at 4 <i>per cent</i> is incorrect. Hence, reply is not acceptable.
In respect of eight works <sup>42</sup> , excavated soil was under-utilized and in three works <sup>43</sup> , it was not utilized fully in CNNL. There was neither any standard/base proposed for utilizing the excavated soil nor were any soil test/quality control reports annexed to the estimates justifying the quantum of	8.68	Government replied (November 2014) that the excavated soil was not re-usable due to site conditions.  In support of their claim, no soil test report or Quality control reports of the excavated soil and

<sup>40</sup> Providing fabricating and placing in position steel bars, providing grass turfing to side slopes and filling murrum/gravel or by earth masters and power rollers.

<sup>41</sup> Item of work of manufacturing, providing, transporting, rolling, levelling, laying and jointing, testing, commissioning of Mild Steel (MS) pipes.

<sup>42</sup> Package-II, III, IV, V of Vishweshwaraya Canal system (30 *per cent*), Km.0 to 25.25 of Kabini Left Bank Canal (46.47 *per cent*) and CC lining to Km.0 to 20, Km.20 to 40 and Km.40 to 60 of Kabini Right Bank Canal (6.54 *per cent*).

<sup>43</sup> Modernisation of Chamaraja Anecut Canals, Modernisation of Mirle and Ramasamudra Anecut Canals and Modernisation of Devaraya Anecut Canals.

Deficiency	Inflating the estimate (₹ in crore)	Reply of the Government and remarks
non-usable excavated soil. Had the excavated soil been re-used in the works, additional cost of ₹ 8.68 crore paid for getting the balance quantum of soil for the works could have been avoided.		the borrowed soil by the contractor were furnished to audit. In the absence of the said reports, audit is unable to verify the veracity of the claim.
Though the works <sup>44</sup> were in the nature of providing fresh CC lining works, CNNL adopted the item of work for embankment under the head 'preliminary and maintenance works' instead of 'canal and allied works'.	1.79	Government contended (November 2014) that the item of works under the head 'canal and allied works' is for fresh works. Hence suitable specification for the items under 'preliminary and maintenance work' head was adopted.  During the review of works of modernization of Katteपुरa Anecut Canals, Mirle and Ramasaudra Anecut Canals, Chamaraja Anecut canals <i>etc.</i> , it was observed that the divisions adopted the correct item of work under 'Canal and allied works'. Hence, the reply is not acceptable.
During the execution (August 2008) of the work <sup>45</sup> in KBJNL, there were defects in estimate in working out the ground levels, quantities of surface boulders and strata classification. The Managing Director had also observed (January 2010) that although strata classification was done by a geologist; it was the ultimate responsibility of the Executive Engineers. The excavated quantity was 18.87 lakh cum as against the estimated quantity of 13.91 lakh cum, resulting in EFI/EIRL amounting to ₹ 7.82 crore.	7.82	Government replied (November 2014) that during the course of execution it was found necessary to carryout controlled blasting as per the actual site condition encountered and also mainly due to objection from the public in that area, due to which essential deviations were made in the alignment. Also, due to variation in ground levels, quantities of excavation exceeded the estimates.  Reply is not acceptable as the correctness of the site conditions in the survey should have been ensured by KBJNL. Failure to do so resulted in EFI of ₹ 7.82 crore.
In respect of five works <sup>46</sup> in KNNL, weightage of 25 <i>per cent</i> was allowed even on items falling under the heads 'Cross Drainage works', 'Maintenance works' <i>etc</i> in Schedule of Rates instead of allowing only for the items under 'Canal and Allied works'	22.64	Government replied (November 2014) that CD works were also part of 'canal and allied works' and assured to look into the payment of weightage in final bills.

<sup>44</sup> CC lining of Km.0 to 20, Km.20 to 40 and Km.40 to 60 of Kabini RBC.

<sup>45</sup> Construction of NRBC 9A Distributary Package-I, III & IV.

<sup>46</sup> Modernization of Tungabhadra LBC Main canal (Km.0 to 177) and distributaries of Tungabhadra LBC in five packages.

Deficiency	Inflating the estimate (₹ in crore)	Reply of the Government and remarks
resulting in additional financial burden of ₹ 11.25 crore. Further, in deviation to the SR stipulations, the payment of weightage was released in part bills resulting in interest loss of ₹ 11.39 crore <sup>47</sup> .		The reply is not acceptable as the SR has separate set of rates for CD works where the weightage was not provided.

### Deficiencies in tendering

**2.2.15** Tender means the formal offer made for supply of goods or services in response to an invitation for tender published in a Tender Bulletin. The Government of Karnataka enacted the Karnataka Transparency in Public Procurements Act, 1999, (KTPP), to ensure transparency in public procurement of goods and services by streamlining the procedure in inviting, processing and acceptance of tenders by Procurement Entities, and for matters related thereto.

**2.2.16** As per rule 17 of KTPP Rules, the Tender Inviting Authority shall ensure minimum bidding time of 30 days for works costing up to ₹ two crore and 60 days for works costing above ₹ two crore. Any reduction in the time has to be specifically authorized by an authority superior to the tender inviting authority with reasons to be recorded in writing.

We observed that

- CNNL had allowed less than 60 days (for works costing over ₹ two crore) in respect of 30 works. In respect of four works CNNL had sought approval for reduction of time under 17 (2) of KTPP Rules. The reasons for reduction of time were also not kept on record.
- In KBJNL, the stipulated period of 60 days was not provided for eight works and in respect of three works, the stipulated period of 30 days was not provided.
- In KNNL, the stipulated period of 60 days was not allowed in respect of all the selected works.
- Further, none of the Companies had adopted the Standard Tender Document as directed by the Government of Karnataka.

Government stated (November 2014) that due to urgency of work, the time limit prescribed could not be adhered to and this had the approval of higher authorities. The reply is not acceptable as approval of the higher authorities had not been obtained for the short term tender. It also does not explain the fact that works had not been completed within the stipulated time even though the works were said to have been taken up on urgent basis.

<sup>47</sup> Considering the period from last bill (January 2012/November 2012/June 2013) to till date (August 2014).

The cases indicating deficiencies in tendering are given in the following paragraphs.

***Non-acceptance of tender within the validity period***

**2.2.17.** Tenders were invited (March 2006) for the work of earth work excavation, formation of embankment and providing CC lining in Km.12 to 13 and Km.13 to 14 respectively of Common Canal of Varahi Project of KNNL. Several corrigenda changing the scope of work were issued over the next one and a half years, which resulted in opening the bids only in September 2007. The lowest quotes of Ramkey Infrastructures Private Limited at ₹ 3.91 crore and ₹ 4.58 crore were found acceptable. KNNL accepted (June 2008) the tender after the validity date (six months). The contractor refused to enter into an agreement as the rates were not acceptable to him. Though there were delays in paying compensation to farmers and obtaining clearances from the Forest Department, KNNL proceeded with the tendering process.

Both the works were re-tendered (December 2009) and were awarded (April 2010) to Sri.G.Shankar and Sri Manjushree Constructions. These works were completed in May 2012 and June 2013 at a cost of ₹ 10.75 crore and ₹ 13.24 crore respectively.

Thus, non-finalisation of the two tenders in time resulted in an extra cost of ₹ 15.50 crore.

Government accepted (November 2014) that the tenders could not be finalised in time, which resulted in the extra expenditure.

***Delay in award of work due to flaws in tendering***

**2.2.18** The Arkera branch canal which runs for 22.87 kms and Wadavatti branch canal which runs for 40 kms were proposed to be constructed on the distributary of NRBC of KBJNL with the objective of irrigating 5,522 ha and 8,678 ha respectively. The work of the main distributary of NRBC had been completed in February 2014.

The tenders for the work of construction of Arkera Branch Canal, in three packages, were invited in July 2011. However, the tenders were cancelled (January 2012) because of inclusion of a bidder in the financial bid even though the bidder had been disqualified in the technical bid.

Revised tenders were invited between March and July of 2012 and the works were awarded (June and September 2012) after a delay of 14 to 16 months. The work was to be completed in 12 months. However, it has not been completed till date (August 2014).

Similarly, tenders for works of Wadavatti branch canal were invited for ₹ 40.52 crore in four packages in March 2012 (package 1), March 2013 (package 2), November 2013 (package 3) and October 2013 (package 4). Package-1 should have been completed before September 2013 and the other packages by the end of December 2014. While the progress in respect of

Package-1 up to March 2014 was ₹ 9.32 crore, work on the other packages was yet to start (August 2014).

Defective tender evaluation process and non-synchronization of works resulted in delaying the project. The objective of providing irrigation facilities to 14,200 ha in the drought prone area (Deodurga and Manvi taluk in Raichur district), had not been achieved even after seven years.

The reply (November 2014) of the Government was silent on non-synchronization of works which resulted in the delay of the project.

***Extra expenditure due to defective tender clause***

**2.2.19** We observed that, in the work of providing drinking water to 52 villages of Gulur-Hebbur Hobli by CNNL at a cost of ₹ 55 crore, the part '*or at the rate entered in the agreement, which is / are lower*' in Clause 13(b) of the contract for regulating the payment beyond 125 per cent of estimated quantity, was deleted. This resulted in additional liability of ₹ 22.47 lakh.

Government replied (November 2014) that the deviation was due to oversight and the payment had been restricted to rates as per standard condition based on the audit observations, and that the Company should not bear any extra expenditure on this account.

***Insurance***

**2.2.20** As per condition no.1 of the Financial Bid, the Contractor shall provide necessary insurance to cover loss of damage due to fire, lightning, collapse, defective workmanship, flood, storm, theft, burglary, malicious damage, third party liability etc. The insurance had to be taken in the joint names of the Companies and the Contractor and a copy of the policy should be furnished to the Companies within two weeks from the award of the Contract. We observed that in respect of the test checked works, the contractors had not furnished any insurance document.

**Deficiencies in acquisition of land**

**2.2.21** The land required for the projects were acquired through Revenue Authorities and Special Land Acquisition Officers. The compensation for the land was paid to the landowners. The tender notification issued by the Companies included a condition that if any part or whole of land required for the work was not yet acquired, it should be the responsibility of the contractor to procure possession of such land by consent of the land owner before commencement of work at no extra cost to the Companies.

The cases where there were deficiencies in acquisition of land are given in the following paragraphs:

***Delay in completion of work due to land acquisition issues***

**2.2.22** The KNNL prepared (December 2005) the estimates for the construction of minors<sup>48</sup> under Kamatagi distributary<sup>49</sup>. Tenders were invited

<sup>48</sup> Canal having discharge of less than 25 cusecs.

<sup>49</sup> B1-36 of Shirur direct minor Km.1, 2, 3 and Shirur minor Km.1, 2, 3 - earthwork, lining and Cross drainage works.



in January 2006 and the work awarded (January 2006) to Dhileep Constructions at ₹ 98.70 lakh with a stipulation to complete the work in four months (May 2006).

We observed that KNNL had not provided clear site for execution. The 4(1) and 6 (1) notifications under the Land Acquisition Act, for acquiring the land were issued in April 2006/September 2009<sup>50</sup> and August 2007/May 2010 respectively. The land compensation award was issued in July 2009 / June 2011 after a further delay of two to four years. The work was completed in May 2012, after a delay of six years at a cost of ₹ 1.25 crore.

Failure to provide clear site resulted in a delay of six years in completion of the project and non achievement of creating irrigation potential in 642.88 ha, apart from extra expenditure of ₹ 0.27 crore.

Government (November 2014) stated that the situation was unavoidable as there were delays in payment of compensation to land owners.

The reply is not acceptable as notifications for acquisition of land were issued after awarding the work.

**2.2.23** KNNL invited (March 2006) tenders for the work of earthwork excavation, formation of embankment and providing lining including cross drainage works in Km.8.40 to 9 of Varahi Common Canal (VCC). After issue of six corrigenda for changes, KNNL entered into (June 2008) an agreement with the lowest bidder Durga Construction Company<sup>51</sup> (contractor) for ₹ 3.20 crore with a stipulation to complete the works by December 2009. Due to the problems encountered in land acquisition, completion of the work was delayed. KNNL extended the date of completion up to June 2011.

The work progressed very slowly as there was obstruction from Kumki landholders<sup>52</sup> due to non-payment of compensation and the financial progress achieved up to June 2011 was only ₹ 81.89 lakh. The matter of payment of compensation to Kumki landholders was taken up by KNNL with the Government in July 2011 and the Government approved (April 2012) the compensation.

The request (June 2011) of the contractor to pay the then current rates to complete the balance work was not accepted (September 2011) by KNNL and hence the contract was closed (June 2012). The balance work (₹ 2.38 crore) was put to tender by clubbing with other works<sup>53</sup> and awarded (March/April 2012) to SNC Power Corporation for ₹ 6.21 crore<sup>54</sup>.

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<sup>50</sup> For different stretches of land.

<sup>51</sup> Agreement was signed by Sri.K.Subsashchandra Shetty.

<sup>52</sup> Leased / un-authorized construction on government land.

<sup>53</sup> For Km.2 to 3, Km.3to 4, Km.8.4 to 9, Km.10 to 11, Km.14 to 18.725.

<sup>54</sup> Considering only the items related to the work.

We observed that the decision to award the works before paying compensation to landholders resulted in time and cost overruns.

Government confirmed (November 2014) the facts and stated that the situation was unavoidable as there were delays in payment of compensation to land owners.

***Delay in work due to non-availability of land for dumping excavated soil***

**2.2.24** The estimate for earthwork and lining of Ghataprabha Right Bank Canal (KNNL) - Km.144 and Km.145 (balance works) was awarded (March 2005) to Shri B.J.Jogi (contractor) at ₹ 2.73 crore with a stipulation to complete the work by September 2005.

The contractor could not complete the work within the stipulated time and could achieve a financial progress of ₹ 59.01 lakh only. The contractor represented (February 2006) that the work could not progress due to obstruction by farmers for dumping excavated of soil and for blasting, as the farmers were under the apprehension that water in their bore wells would go dry.

The Chief Engineer granted extension of time sought by the contractor on three occasions for completing the works (up to March 2006, January 2007 and August 2009) with application of penalty on per day basis<sup>55</sup>. Two additional works (road crossing, hard rock) with an extra financial implication of ₹ 67.33 lakh were also entrusted (December 2006/June 2011) and supplementary agreement was entered into in July 2011.

The contractor was not in agreement with levy of penalty while extending the time for completion. The contractor requested for short closure of the work, which was accepted (August 2011). The contractor had shown a financial progress of ₹ 2.70 crore and balance work to be executed amounted to ₹ 70.25 lakh.

KNNL re-tendered (June 2013) the balance work in two packages (Km.144 and Km.145 separately) and awarded them to Sri R. H.Yadahalli for ₹ 69.13 lakh (Km.144) and Sri. M. M. Mundewadi for ₹ 67.46 lakh (Km.145). While the contractor for Km.145 entered into an agreement in June 2014, the contractor for Km.144 did not execute the agreement.

We observed that the work, which should have been completed in six months (by September 2005), is still pending even after eight years, as there was obstruction to the dumping of excavated soil. In the interest of completion of work, KNNL should have taken action to acquire/lease land for dumping the excavated soil. As a result of the delay in execution, the cost of the work increased by ₹ 66.34 lakh.

This was accepted (November 2014) by the Government.

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<sup>55</sup> ₹ 25 per day (up to March 2006) and ₹ 150 per day (January to August 2009).

### **Deficiencies in execution of works**

**2.2.25** Execution is an important phase of completing the work. Necessary care has to be taken to ensure that the sites are handed over in time, the men and machinery mobilized, periodical monitoring undertaken and work executed as per approved design. We observed that there were deficiencies in the execution of works. The cases are given in **Sl. No. 7 to 17 of Annexure-8**. A few illustrative cases of the deficiencies in execution of works and billing are given below.

#### ***Non achievement of desired irrigational potential in Varahi project***

**2.2.26** The Varahi Project (KNNL) was approved (March 1979) by the GoK for ₹ 9.43 crore pending approval of the Central Government. After several deliberations and consequent modifications, the final project cost of ₹ 569.53 crore was approved (March 2006) by GoK. Necessary clearance from the Ministry of Environment and Forests (MoEF) was also obtained as the modifications required environmental clearance. Thus, after 26 years of proposal and preparation of DPR, the project work was finally started only in March 2006.

According to the modified proposal, the Project consisted of construction of diversion weir, common canal (VCC) for 18.725 kms, left bank canal (VLBC, 44.35 kms from off take point), right bank canal (VRBC, 43.0 kms from off take point) and lift canal (VLIC for 33 kms starting from 4<sup>th</sup>Km. of VLBC) to irrigate 15,702 ha of land. By the time KNNL was formed in December 2003, preliminary survey, construction of office buildings and staff quarters, and VLBC works from Km.0 to 4 and Km.7 to 10 had started and ₹ 34.16 crore had been spent (by GoK).

The work of construction of weir was completed in April 2009 at a cost of ₹ 73.20 crore, the work of VLBC up to 29<sup>th</sup> Km. was in progress (22<sup>nd</sup> Km. was complete) and the works of VRBC and VLIC were yet to be taken up. The total expenditure on the works of weir, VLBC and VRBC as of March 2014 was ₹ 541.90 crore.

The work of common canal (VCC) was made into 14 packages and work commenced between July 2007 and April 2012. Of these, six works were completed and eight works were under progress. The delay in the execution of these works ranged between six and 72 months. Due to delay and change in design, as against the contracted amount of ₹ 234.46 crore, expenditure of ₹ 257.40 crore including EFI of ₹ 98.85 crore had already been incurred as on August 2014.

The Varahi project was envisaged to make use of tail race discharge from Varahi Hydel Scheme to benefit the villages of Udupi and Kundapura taluks. This project, approved by GoK in 1979, was brought under the Accelerated Irrigation Benefit Programme (AIBP) and had been in receipt of central assistance under AIBP since 2007-08. The extension of the target date for completion of the project from 2010-11 to 2012-13 was accorded as the

project could not be completed on time. The completion date has now been extended to March 2015.

The objectives of AIBP were to accelerate ongoing irrigation projects and to realise bulk benefits from the completed projects. In spite of bringing the project under AIBP, KNNL failed to accelerate the works and ensure completion within the time-frame.

On a review of the works, it was noticed that there were instances of change in scope and design, deficiencies in tendering (Paragraph 2.2.17), not making available hindrance free land to the contractor and delay of compensation to the land owners by the revenue department (Paragraph 2.2.23). This led to adoption of subsequent Schedule of Rates, increased soil excavation and increased width of berm and consequent delay in completion of the project.

The project has been delayed and the amount of ₹ 541.90 crore spent (March 2014) on the project did not meet the intended objective of providing water to irrigate 15,702 ha of land in Udupi and Kundapura taluks.

Government accepted the above by stating (November 2014) that the delay was due to land acquisition issues, obtaining forest clearance, technical problems encountered on account of natural calamities and geological problems.

#### ***Unnecessary excavation for foundation***

**2.2.27** The work of construction of high level Pre-Stressed Concrete (PSC) Road Bridge across Hemavathy river with arrangements to ensure the existing drinking water supply to Holenarasipura town was technically sanctioned by the Chief Engineer, CNNL in January 2007. The work was awarded (April 2007) to Sri.S.Narayana Reddy for ₹ 28.36 crore, with stipulation to complete in 18 months.

During excavation, it was decided (May 2007) to excavate strata at foundation level at RL 823 further, and the additional cost worked out to ₹ 4.93 crore.

The proposals for extra expenditure were approved by the TSC and BoD in January 2011 and March 2012 respectively.

We observed that CNNL had *ex-post facto* referred (April 2010) the matter to the Superintending Engineer (Designs) to examine the necessity of going beyond the approved foundation level and the necessity of deepening the floor level in the same strata. The SE had opined (May 2010) that even under the worst loading conditions, jointed hard rock was capable of taking stress at designed level itself and excavation for foundation beyond RL 823 was not necessary. SE also opined that before going for further excavation in the foundation, a geologist should have inspected the site.

Referring the matter after the work was done to SE (Designs), who opined that it was not necessary, lacked justification and the expenditure of ₹ 4.93 crore was not need based.

**Excess thickness for cement concrete lining**

**2.2.28** The code (BIS-IS 3873 of 1993) for CC lining for canals prescribed the thickness of lining based on capacity of canal and depth of water. We observed that the Companies had provided extra thickness than the prescribed norm in the following canals.

**Table 2.2.5: Details of canals with excess thickness of CC lining**

Canal	Discharge capacity (cumecs)	Depth of canal (in metre)	Thickness of CC lining to be provided (mm)	Thickness of CC lining provided (mm)	Extra cost (₹ in crore)
Wadavatti branch canal	Less than 5	1.25	60	100	2.17
Arkera branch canal	Less than 5	1.35	60	100	2.40
Tungabhadra Left Bank Canal (TLBC) from Km.177 to 200	5-50	2.70	80	100	2.60
Distributary Nos. 17,21,25,31 and 32 (of TLBC) <sup>56</sup>	Less than 5	1.70	60/80	80/100	3.43
Km.6 to 19 of distributary No.6 under Naragund Branch Canal	Less than 5	1.20	60	80	1.26
Halyal, Karimasuthi east and Ainapur combined canals in Athani Division	5-50	1.70/ 1.75	80	100	0.34
Mandagere Right Bank Canal, Mandagere Anecut Left Bank Canal and Hemagiri Anecut Left Bank Canal	5-50	1.80/ 0.80	80	100	15.32

Government replied (November 2014) that the BIS standards specify minimum thickness and varied depending on site conditions. The reply did not provide any justification for using excess lining than the norms prescribed under the standards.

**Deficiencies in the construction of Inter-connecting Canal**

**2.2.29** The Inter-connecting Canal work of Kalasabandura Nala (KNNL) was awarded (August 2008 to February 2011) in four packages at a cost of ₹ 140.53 crore<sup>57</sup>, and was to be completed in May 2012. But none have been completed till August 2014.

We observed that the Geo-technical survey for this project was done by Karnataka Power Corporation Limited by taking limited trial bores. However, the TSC directed that estimates be prepared after taking trial bores at 30 metre intervals. Accordingly, geological investigation was carried out and a

<sup>56</sup> The H.S.Chinival committee appointed to study the canal suggested (December 2005) provision of CC lining of 100 mm by paver means for main canal of TLBC between Km.0 to 73.60.

<sup>57</sup> Further, one additional work (no. V), as an extension of work no. IV, was awarded in December 2013 at a cost of ₹ 73.32 crore.

geological report was obtained from Sri.G.R.Deshpande (consultants), who was a retired officer of KPCL. Both the surveys reported existence of hard rock, but the strata encountered during execution was different. As a result, a committee was formed to investigate, which again comprised of retired officers of KPCL who opined that soil investigation might sometimes be misleading. In view of the strata being different, KNNL had to change the method of execution from 'open cut canal' to 'cut and cover' from ch:750 to ch:2505, at a cost of ₹ 158.69 crore. This eventually led to additional expenditure of ₹ 54.54 crore apart from delaying the work by two years as of August 2014.

Due to the incorrect/unreliable report, not only was there an unreasonable delay in completion of the project, but also an increase in cost. As a result of the delay, the drinking water requirements of 13 towns of Hubli and Dharwad District and villages of Malaprabha basin were not met (August 2014).

Government replied (November 2014) that the geotechnical survey done by the first consultant was deficient and hence the second report was based on the actual site conditions. It also stated that the consultants had opined that soil investigation had its own limitations. The reply is not acceptable as trial pit was resorted to, as the first report was prepared unscientifically with the trial bores being taken at only five places. In spite of carrying out the soil test again, the hard rock said to have been present did not exist and a different stratum was encountered. Had the report been correct, the presence of hard rock should have been seen at least in some stretches. The report of the consultants was, therefore, inaccurate. KNNL should have entrusted this important work to a reputed organisation like the Geological Survey of India instead of entrusting it to a consultant, who was a retired official of KPCL. This incorrect report resulted in the Company having to incur extra expenditure.

### ***Non-recovery of penalty***

**2.2.30** Clause 2(d) of the tender agreement stipulates that in case of shortfall in progress of work, the contractor shall be liable to pay penalty equal to one *per cent* of the estimated cost of the balance work assessed according to the programme, for every day that the due quantity of work remains incomplete, provided that the amount of penalty to be paid shall not exceed 7.5 *per cent* of the estimated cost of the entire work.

In four works<sup>58</sup> executed by CNNL and three works<sup>59</sup> executed by KBJNL, the total penalty leviable as per above clause for delay in completion was ₹ 9.72 crore and ₹ 4.31 crore respectively. Against this, CNNL had recovered an amount of ₹ 5.40 lakh. The balance of ₹ 13.98 crore is yet to be recovered (August 2014).

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<sup>58</sup> Km.0 to 60 (three packages) of Kabini Right Bank Canal and Km.0 to 25.25 of Kabini Left Bank Canal.

<sup>59</sup> Package I, III and IV of NRBC distributary 9A.

Government accepted (November 2014) the observation and stated that the penalty amount would be recovered on case-to-case basis.

### **Acknowledgement**

We acknowledge the co-operation extended by the WRD and the three Companies in facilitating the conduct of audit.

### **Conclusions**

**We concluded that**

**In many works, proper survey and investigation had not been carried out. Estimates were inflated as there were errors in adoption of item rates and taxes. Process of acquisition of land was taken up after the works were awarded. There were instances where the works underwent major changes after the works were awarded. Different components / chainages were not synchronized. There was non-compliance to Statutes, contractual terms and conditions resulting in undue benefit to contractors and extra financial implications.**

**As a result , there was increase in the cost of the works and delays in the completion of projects leading to deprivation of the expected benefits thus affecting the livelihood of the farmers.**

### **Recommendations**

**We recommend that the Government**

- **institute a mechanism of the tender issuing authority certifying that acquisition of required land, payment of compensation and obtaining of forest/environmental clearances have been completed before issuing the tender.**
- **consider forming a cell to co-ordinate and expedite clearances from the statutory bodies.**
- **fix responsibility on the consultants for abnormal variations in survey so that extra financial implications are avoided.**
- **fix reasonable time limits for various stages in the tendering process in order to obtain competitive rates.**
- **direct the TSC to approve the tenders after ensuring that all related works in different chainages are synchronized to create the envisaged irrigation potential.**