

Chapter II

Performance Audits relating to Government Companies

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Dakshin Gujarat Vij Company Limited, Madhya Gujarat Vij Company Limited, Paschim Gujarat Vij Company Limited and Uttar Gujarat Vij Company Limited

2.1 Implementation of Re-structured Accelerated Power Development and Reforms Programme in Gujarat

Executive Summary

Introduction

Government of India (GoI), Ministry of Power (MoP), launched Restructured Accelerated Power Development and Reforms Programme (R-APDRP) in July 2008. The main objectives of the scheme were:

- (i) to reduce Aggregate Technical and Commercial (AT&C) losses to 15 per cent in power distribution companies on a sustainable basis and
- (ii) to establish reliable and automated systems for collection of accurate baseline data and to adopt Information Technology (IT) for energy accounting/ auditing and for billing.

The scheme covered urban areas with a population of more than 30,000 as per census 2001. The scheme was to be implemented in two parts viz., Part A and Part B. Part A consisted of works for establishment of the baseline data and Part B consisted of distribution strengthening works. The scheme also included Supervisory Control and Data Acquisition (SCADA) System. This was meant for big towns with a population of more than four lakh and annual input energy of 350 million units. The GoI (MoP) launched (December 2014) a new scheme titled Integrated Power Development Scheme (IPDS). All the components of R-APDRP which remained incomplete (December 2014) were to be subsumed in the IPDS as a separate component.

The Performance Audit covers the implementation of the GoI assisted R-APDRP in Gujarat including the components subsumed in the IPDS. It covers the period from the introduction of the scheme in July 2008 to 31 March 2016.

In Gujarat, the works in respect of all 84 Part A projects have been completed but the Third Party Independent Evaluating Agency (TPIEA) certification is yet to be carried out. Similarly in respect of Part B projects, out of 62 towns wherein the works were undertaken, the works have been completed in 60 towns. The TPIEA verification of all these works is yet to be taken up. The works in respect of all six SCADA projects are in progress.

Audit Findings

There was a delay in the implementation of SCADA projects right from the point of inviting the tender. A time period of eight months was taken for inviting the tender after the date of approval of the Detailed Project Report (DPR). In the case of Madhya Gujarat Vij Company Limited (MGVCL) there was a further delay of 16 months and in the case of Dakshin Gujarat Vij Company Limited (DGVCL), Paschim Gujarat Vij Company Limited (PGVCL) and Uttar Gujarat Vij Company Limited (UGVCL), there was a further delay of 18 months in the award of work. The works are still in progress due to delay in execution by the contractor.

Disaster recovery site was changed from Pune to Ahmedabad. This was in spite of the fact that Ahmedabad falls in severe intensity zone for earthquakes as classified by Gujarat State Disaster Management Authority.

Irregular inclusion of Departmental overheads and supervision charges in DPR cost and final project cost, not envisaged in the guidelines, was noticed in Part B projects. This was to the extent of ₹ 61.78 crore. It will result in overdrawal of loan of ₹ 15.44 crore.

In the 60 Part B projects which had been completed, the Power Distribution Companies (DISCOMs) were able to achieve the target of reduction of AT&C losses to 15 *per cent* in 39 towns. In 21 towns where the targeted reduction in AT&C losses was not achieved, the AT&C losses ranged from 15.31 to 46.17 *per cent* in 2015-16. The DISCOMs lost an opportunity to save ₹ 60.71 crore in these 21 towns for the year 2015-16.

We test-checked five out of the 21 towns wherein the targeted reduction of AT&C losses was not achieved. This was done to understand reasons for the non-reduction of AT&C losses. We observed that works like installation of High Voltage Distribution System, underground cables, static meters, junction boxes, armoured cables etc., were not executed as envisaged in the DPR. Reasons for the same were not available on record.

It was observed that there was reduction in outages in DGVCL and MGVCL. In PGVCL, the outage persisted. This indicated the need for improving load management and maintenance of power lines to enhance the quality of service to the consumers.

Introduction

2.1.1 Government of India (GoI), Ministry of Power (MoP) launched Restructured Accelerated Power Development and Reforms Programme (R-APDRP, hereinafter referred as the Scheme) in July 2008. This was a central scheme of the Eleventh Five Year plan. The main objectives of the Scheme *inter-alia* included the following:

- to reduce Aggregate Technical and Commercial (AT&C)¹ losses to 15 per cent in power distribution companies on a sustainable basis;
- to establish reliable and automated systems for collection of accurate baseline data; and
- to adopt Information Technology (IT) for energy accounting/ auditing and for billing.

The scheme covered urban areas with a population of more than 30,000 as per census 2001. The scheme was to be implemented in two parts viz., Part A and Part B. Part A consisted of works for establishment of the baseline data and Part B consisted of distribution strengthening works. The scheme also included Supervisory Control and Data Acquisition (SCADA) System. This was for big towns with a population of more than four lakh and annual input energy of 350 million units (MUs).

The scheme provided for 100 per cent loan for Part A and SCADA projects and 25 per cent loan for Part B projects from GoI. This was to be disbursed through Power Finance Corporation Limited (PFC). The balance funds (75 per cent for Part B) were to be raised by the power distribution companies from Financial Institutions (FIs) or own arrangement. The entire loan given under Part A and SCADA projects was to be converted into grant on completion of the projects. This was subject to the projects being completed within the scheduled time period and certified by a Third Party Independent Evaluating Agency (TPIEA). In respect of Part B projects, up to 50 per cent of the loan against Part B projects was to be converted into grant in five equal tranches. This was subject to the town achieving 15 per cent AT&C losses on a sustainable basis for a period of five years and certification by the TPIEA.

In Gujarat, R-APDRP was implemented by all the four power distribution companies (DISCOMs)² viz., DGVCL, MGVCL, PGVCL and UGVCL. They were under the administrative control of the Energy and Petrochemicals Department (the Department), Government of Gujarat (GoG). **Table 2.1.1** shows the number of projects and cost sanctioned in respect of Part A, Part B and SCADA projects in Gujarat.

Table 2.1.1: Detailed Project Reports approved for Part A, Part B and SCADA Projects

DISCOMs	Part A		Part B		SCADA System	
	No. of towns	Cost (₹ in crore)	No. of towns	Cost (₹ in crore)	No. of towns	Cost (₹ in crore)
DGVCL	11	30.81	8	200.56	1	14.84
MGVCL	17	89.49	13	177.86	1	26.18
PGVCL	36	75.11	35	656.66	3	63.67
UGVCL	20	35.31	6	89.12	1	33.82
Total	84	230.72	62	1,124.20	6	138.51

Source: As per information furnished by the DISCOMs.

¹ The AT&C losses comprise two elements 1) **Technical Losses**- These losses take place due to transformation losses at various levels and losses on distribution lines due to inherent resistance and poor power factor in the electrical network. 2) **Commercial Losses**- These are caused by illegal consumption of electrical energy, which is not correctly metered, billed and revenue collected. The AT&C losses are calculated by the power distribution companies using the following formula:
1 - (units sold/units sent out x amount collected/amount assessed) x100.

² Dakshin Gujarat Vij Company Limited (DGVCL), Madhya Gujarat Vij Company Limited (MGVCL), Paschim Gujarat Vij Company Limited (PGVCL) and Uttar Gujarat Vij Company Limited (UGVCL).

The works in respect of Part A projects have been completed but the TPIEA certification is yet to be done. In respect of Part B projects, out of 62 towns, the work has been completed in 60 towns. The TPIEA verification is yet to be taken up in the above 60 towns. The work in respect of SCADA projects is in progress in all the six towns (July 2016).

The GoI (MoP) launched (December 2014) a new scheme titled Integrated Power Development Scheme (IPDS) with the objective of:

- Strengthening of the sub-transmission and distribution network;
- Metering of distribution transformers/ feeders/ consumers;
- IT enablement of the distribution sector and strengthening of the distribution network. This was for completion of targets laid down under R-APDRP for 12th and 13th Plans. The approved outlay for R-APDRP was to be carried forward to IPDS.

The IPDS would help in further reduction of the AT&C losses, establishment of an IT enabled energy system and improvement in collection efficiency. The components of R-APDRP which remained incomplete (December 2014) were subsumed in the IPDS as a separate component.

A Performance Audit (PA) Report of the Comptroller and Auditor General of India on the R-APDRP, Union Government, Ministry of Power was tabled in the Parliament on 07 December 2016. The PA covered the implementation of the R-APDRP across all the 29 States (including Gujarat) upto 31 March 2015.

Scope of Audit

2.1.2 The present PA highlights the implementation of the R-APDRP in the State of Gujarat including components subsumed in the IPDS. The status in the present PA has been updated upto 31 March 2016. The financial impact of the reduction in AT&C losses as a result of the implementation of the R-APDRP in Gujarat has also been brought out. It covers the period from the introduction of the scheme in July 2008 to 31 March 2016. The sample selected for the purpose of Audit is given in **Table 2.1.2**:

Table 2.1.2: Projects selected for test-check in Audit and selection percentage

Type of Projects	Number of projects	Total cost (₹ in crore)	Projects selected in Audit	Cost of selected projects (₹ in crore)	Percentage of selection	
					Projects	Financials
Part A	84	230.72	25	145.32	29.76	63.00
Part B	62	1,124.20	25	897.36	40.32	79.82
SCADA System	6	138.51	6	138.51	100.00	100.00
Total	152	1,493.43	56	1,181.19	36.84	79.09

Source: As per the information furnished by the DISCOMs.

In selecting the projects for test-check in Audit, the high cost projects were prioritised and a balanced coverage of all the DISCOMs was ensured.

Audit Objectives

2.1.3 The Performance Audit was conducted with the following objectives:

- **Planning:** To assess whether the initiative and planning required for the implementation of the scheme was appropriate and adequate;
- **Implementation:** To assess whether the scheme had been implemented in an efficient, effective and economical manner with effective monitoring. The funds were released commensurate with the progress of the work;
- **Reduction in AT&C losses:** To ascertain whether the AT&C losses in the towns selected for Part B projects had reduced as envisaged; and
- **Quality of service:** To ascertain whether the implementation of the scheme had reduced outages in the supply of electricity and increased consumer satisfaction to that extent.

Audit Criteria

2.1.4 The audit criteria adopted for assessing the achievement of the audit objectives were:

- Guidelines of the R-APDRP and other Guidelines issued by the Ministry of Power (MoP)/ PFC in relation to the scheme implementation;
- National Electricity Act 2003 and the Policy formulated there under;
- Quadripartite agreement between the State Government, the PFC, the GoI and the DISCOMs;
- Guidelines for inviting Request For Proposal by the DISCOMs;
- Original and revised Detailed Project Reports (DPR) and performance parameters set in the DPR;
- Tender documents and terms and conditions of work orders;
- Guidelines for incentive schemes and actual schemes framed by the DISCOMs; and
- Minutes of the Steering Committee and Minutes of the Board meetings of the DISCOMs.

Audit Methodology

2.1.5 The methodology adopted for attaining the audit objectives consisted of examination of records at the Head offices and selected units of DISCOMs. We had an interaction with the personnel of the DISCOMs, analysed the data with reference to the audit criteria and raised audit queries. The audit findings were discussed with the Management of the DISCOMs. The draft performance audit report was issued to the Management and the concerned Department for comments.

The audit objectives and methodology were explained to the Management and Department at an entry conference held on 10 June 2015. This was while conducting an all India performance audit (PA) of the Scheme. The Audit findings of the all India PA were discussed in an exit conference held on 12 January 2016. During the exit conference the fact that this PA would be updated and incorporated in the State Audit Report was also intimated. The above updation was conducted during the period April to July 2016 and an exit conference was held on 20 October 2016. This was attended by the officials of the DISCOMs and Gujarat Urja Vikas Nigam Limited (GUVNL), the holding Company of all the four DISCOMs.

Audit Findings

2.1.6 Audit findings in respect of the test-checked projects have been discussed under four broad headings:

- **Planning:** covering selection of towns, formulation of DPRs and award of works;
- **Implementation:** covering implementation of the projects sanctioned and awarded;
- **Reduction in AT&C losses:** covering impact of the scheme on AT&C losses; and
- **Quality of service:** covering reduction of outages in supply of electricity as a result of the scheme.

Annexure 3 gives details regarding the cost of the projects, release of instalments and present status for the 56 test-checked R-APDRP projects.

Planning

2.1.7 The planning process involved identifying the towns where the works of Part A, Part B and SCADA projects could be undertaken as per the R-APDRP guidelines. The DPR for each of the identified towns (Projects) for Part A, Part B and SCADA works was prepared separately. These DPRs were forwarded to the nodal agency (PFC) for onward transmission to the Steering

Committee³ of the GoI for approval. For preparing DPRs for Part A and SCADA projects, the DISCOMs appointed consultants from among the panel of consultants approved by the PFC. The open bidding process was adopted for the appointment. In case of Part B projects, DPRs were prepared departmentally.

Upon approval of the DPR by the Steering Committee, the DISCOMs invited tenders for award of work from agencies empanelled by the PFC/ MoP. The DISCOMs awarded Part A works to M/s Tata Consultancy Services Limited and SCADA system to M/s Chemtrols Industries Limited. The Part B works were carried out departmentally by all the DISCOMs.

We observed that the DPRs to a large extent were prepared as per the R-APDRP guidelines. In respect of award of works, major delays were noticed in the invitation and finalisation of tenders of SCADA projects. There was also delay in the execution of SCADA projects. Our findings are discussed below:

Delay in award of SCADA works

2.1.7.1 We observed that all the six SCADA projects were still pending to be completed (July 2016). The **Table 2.1.3** summarises the various stages in respect of SCADA works:

Table 2.1.3: Stages in respect of SCADA works

(Cost ₹ in crore and Delay in months)

Particulars	DGVCL	MGVCL	PGVCL	UGVCL
Project areas	Surat	Baroda	Rajkot, Jamnagar and Bhavnagar	Ahmedabad
Approved Project cost	14.84	26.18	63.67	33.82
Work awarded cost	11.72	18.79	43.83	21.66
DPR approval date	December 2010	December 2010	December 2010	December 2010
Date of inviting of tender	29 August 2011	29 August 2011	29 August 2011	29 August 2011
Date of award of work	04 April 2013	25 February 2013	15 April 2013	01 April 2013
Scheduled completion date of the Project	18 October 2014	12 August 2014	15 October 2014	1 October 2014
Extended due date of completion	March 2017	March 2017	December 2016	December 2016
Delay in award of work from invitation of tender ⁴	18	16	18	18
Delay in completion of project (Expected with reference to scheduled completion date and extended due date)	29	31	26	26

Source: As per information furnished by the DISCOMs

It can be seen from **Table 2.1.3** that a period of eight months was taken for inviting the tender after the date of approval of DPR. MGVCL invited the

³ Steering Committee consists of the Secretary of Ministry of Power and Ministry of Finance, Chief Engineer of Central Electricity Authority, Member of Planning Commission, Chairman and Managing Director (CMD) of PFC, CMD of Rural Electrification Corporation and representative of the respective State Government.

⁴ A period of one month has been allowed for tender finalisation for calculating delay. The scheme guidelines allows only a period of 15-25 days as evident from the RFP documents of SCADA projects.

tender on behalf of all the four DISCOMs. The delay was due to improper planning and delay in preparation of tender documents. There was a further delay of 16 months in the case of MGCVCL and 18 months in the case of other three DISCOMs in the award of works. This was because after the tender invitation by MGCVCL the tender finalisation work was shifted (December 2011) to UGVCL by GUVNL⁵. The reasons for shifting the tender finalisation work were not furnished to Audit. UGVCL had to call for a lot of information from MGCVCL on the technical bids due to shifting of the work. The tenders were subsequently finalised (20 January 2012) by UGVCL.

The contractor also did not complete the work within the original time schedule for completion (i.e. August/ October 2014). The contractor executed the works slowly since its award; despite the matter being regularly pursued by the DISCOMs with the contractor and the PFC. The activities such as supply and installation of hardware/ software, Disaster Recovery Site and factory acceptance test were pending (March 2016). PFC has now extended (May 2016) the completion date of the SCADA projects to December 2016/ March 2017.

The Management of all the DISCOMs furnished a consolidated reply which was received from GUVNL, the holding company. The reply stated (October 2016) that the delay was due to re tenderisation having to be done due to a large number of queries in the original tender floated. The SCADA building was not ready in PGVCL, DGVCL and UGVCL but was ready only in MGCVCL. It was further stated that after the invitation of tender for the second time, the tendering process was shifted from MGCVCL to UGVCL. The Management also stated that the finalisation took a longer time as the contract was floated for the first time. The technical and price bid evaluation was therefore a very challenging job. The delay in the execution by the contractor was in spite of repeated follow up by DISCOMs. The penal provisions in the contract for delay would, however, continue to apply.

Audit is of the opinion that delay in tender finalisation could have been avoided with better planning considering the experience of the DISCOMs. The SCADA system is an important element of the R-APDRP works and the DISCOMs need to ensure its completion at least within the extended period. This will help in better monitoring and better quality of service to the consumers.

It is recommended that contracts be finalised within a reasonable time to avoid delays in award of contracts. Action may be taken for the early completion of the projects.

Implementation of the Scheme

2.1.8 In Gujarat, all the 84 Part A projects have been completed by the due date/ extended due date (2012-13 to 2014-15). Of the 62 Part B projects, 54 projects were completed (2012-13 to 2014-15) in all respects. In six Part B projects only the works relating to SCADA forming part of the Part B projects

⁵ This was done by a high level committee formed by GUVNL.

were pending (July 2016). Remaining two projects were scheduled for completion in February 2019. Audit also observed that none of the six exclusive SCADA projects were completed (July 2016).

The status of implementation of all the total 152 projects undertaken in Gujarat and expenditure incurred against them are given in **Table 2.1.4:**

Table 2.1.4: Implementation status of the R-APDRP projects

(Amount ₹ in crore)

Particulars	DGVCL	MGVCL	PGVCL	UGVCL	Total
Part A Projects					
No. of projects	11	17	36	20	84
Approved cost	30.81	89.49	75.11	35.31	230.72
Expenditure incurred	27.56	77.00	65.27	28.80	198.63
Completion status	Completed	Completed	Completed	Completed	
Part B Projects					
No. of projects	8	13	35	06	62
Approved cost	200.56	177.86	656.66	89.12	1,124.20
Expenditure incurred (March 2016)	181.06	133.50	447.71	51.37	813.64
Completion status* (July 2016)	7 completed	10 completed	32 completed	5 completed	
*(Out of eight works shown incomplete in six projects only SCADA works forming part of Part B works were pending. Two projects were scheduled for completion in February 2019)					
SCADA Projects					
No. of projects	1	1	3	1	6
Approved cost	14.84	26.18	63.67	33.82	138.51
Expenditure incurred	1.53	3.56	5.70	2.14	12.93
Completion status	WIP	WIP	WIP	WIP	

Source: As per information furnished by the DISCOMs

The overall implementation of the projects was satisfactory. We observed instances of non-installation of High Voltage Distribution System (HVDS), change in disaster recovery site and inclusion of supervision charges in the cost of the project in violation of guidelines. These observations are discussed below:

Non execution of HVDS in project towns

2.1.8.1 Installation of HVDS is one of the measures for reduction in AT&C losses as theft cannot take place from high voltage lines. These lines also have lesser technical losses due to lower conductor resistance. The HVDS takes the distribution transformers closer to the consumer premises. This increases the length of the high voltage lines connecting the feeders⁶ to the distribution transformers. This in turn reduces the length of the final distribution lines connecting the distribution transformers to the consumer premises from where theft takes place.

⁶ Electric power is normally generated at 11-25 KV in a power station. To transmit over long distances it is then stepped up to 400 KV, 220 KV or 132 KV as necessary. Power is carried through a transmission network of high voltage lines. These lines terminate into a 33 KV (or 66 KV) substation where the voltage is further stepped-down to 11 KV for power distribution to load points through a distribution network of lines at 11 KV and lower. The power network, which generally concerns the common man, is the distribution network of 11 KV lines or feeders downstream of the 33 KV substations.

Installation of HVDS was not required and accordingly not included in the DPR of Part B projects of UGVCL. In PGVCL the work of HVDS was executed as per the DPR. In MGVCL and DGVCL the DPR of the project towns envisaged installation of a total of 395 HVDS (194 in MGVCL and 201 in DGVCL). It was, however, observed that only 85 HVDS (72 in MGVCL and 13 in DGVCL) were installed by these two DISCOMs.

In Surat, Jambusar, Mehmudabad and Borsad towns no HVDS work was taken up by DGVCL and MGVCL though it was envisaged in the DPRs. In Godhra, town of MGVCL only 28 HVDS were installed against the envisaged 85 HVDS in the DPR. We observed that in 2015-16 AT&C losses was 20.67 *per cent* in Godhra and 21.36 *per cent* in Jambusar. Audit is of the opinion that installation of HVDS as envisaged could have helped in reducing the AT&C losses to the required levels and in sustaining it.

The Management stated (October 2016) that certain locations selected for HVDS were coming under municipality/ nagarpalika/ private land. In these locations construction of transformer centres was not being allowed by respective owners. It was further stated that in such areas other works for reduction of losses were carried out. The Management also stated that though HVDS works had not been carried out as envisaged, the AT&C losses had reduced in most towns.

The reply is not convincing as it does not specifically mention what were the alternative works carried out. Even now in five towns of DGVCL and MGVCL the targeted reduction of AT&C losses to 15 *per cent* has not been achieved.

Change in the Disaster Recovery Site (DRS) location

2.1.8.2 A DRS helps to recover and restore technology infrastructure and operation if the primary data centre becomes unavailable. This may happen due to occurrence of any disaster, such as fire, flood, terrorist threat or any other disruptive event. MGVCL submitted a DRS proposal (10 February 2009) to PFC for assistance of ₹ 27.26 crore under Part A of R-APDRP. This was approved (June 2009) by PFC. After inviting tenders, the work of DRS at Pune was awarded (27 October 2009) to M/s Tata Consultancy Services Limited at a cost of ₹ 14.22 crore. Due to integration issue of the DRS for both the R-APDRP and e-Urja⁷ requirements, GUVNL decided (April 2010) to change the DRS from Pune to Ahmedabad. The new site decided in Ahmedabad was Gujarat Narmada Valley Fertilizers & Chemicals Limited (GNFC) infotower.

We observed that the Gujarat State Disaster Management Authority had classified Ahmedabad under severe earthquake intensity zone. Gujarat State had suffered major earthquakes in 1819, 1845, 1847, 1848, 1864, 1903, 1938, 1956 and 2001. Looking to the history of earthquakes in the state, the originally proposed Pune site was more appropriate for the establishment of

⁷ e-Urja is a customised Enterprise Resource Planning system which integrates all the seven power sector companies.

the DRS. Pune was a medium risk area from the point of view of occurrence of an earthquake. Having a disaster location centre at a different place was always more advisable.

The Management stated (October 2016) that the GNFC infotower was not affected in the 2001 earthquake in Gujarat. Having the DRS at Ahmedabad would also enable better management of activities like infrastructure, manpower and network administration. It was also stated that the site at Pune would entail a higher project cost and higher expenditure for bandwidth requirements. Management also contended that PFC had been informed (May 2010) of the change in location.

The reply is not convincing as MGVCCL intimated the fact of change of site only to the implementing agency for execution of the work. Only a copy of this intimation was endorsed to PFC and no specific approval was obtained from PFC for a change in DRS. The fact that the GNFC infotower was not affected in a particular earthquake does not make it earthquake resistant considering its seismic zone location.

Inclusion of departmental overheads and supervision charges in DPR and final project cost of Part B works in violation of guidelines

2.1.8.3 The Guidelines for Part B projects issued by the PFC stipulate that “*the cost estimates in the DPR should not include any departmental overhead expenses and cost of consultancy. All such expenditures should be borne by the utility*”. The guidelines stipulated that a certificate to the above effect had to be given by the utilities while submitting the DPR. Thus departmental overheads could neither be included in the DPRs nor in the final project cost. This was because the final project cost was based on the cost of the DPR.

We observed that all the DISCOMs had worked out the estimated cost in the DPR based on standard cost data rates of the DISCOMs. This included overheads comprising three *per cent* contingency charges, two *per cent* storage charges and two *per cent* transportation charges on material cost, 15 *per cent* supervision charges on material and labour cost and 15 *per cent* provident fund contribution on labour cost.

UGVCL included all the above overheads and supervision charges in the DPR. PGVCL excluded supervision charges while preparing the DPR but included other overheads. DGVCL and MGVCCL had also prepared the DPR based on standard cost data but their cost data sheets for the relevant years of DPR were not furnished to Audit. All the four DISCOMs certified in the DPR that they had not included any departmental overhead expenses in the estimated cost of the DPR.

We observed that the rates adopted for preparing the DPR were also used for working out the final execution cost of the project. Therefore, the overheads got included in the final project cost. The inclusion has been quantified in respect of UGVCL and PGVCL where relevant cost data sheets were available. DGVCL in the final project cost further included 25 *per cent*

departmental overhead and supervision charges. This was over and above the cost of execution worked out as per DPR estimates inclusive of overheads. The inclusion of these departmental overhead and supervision charges in the final project cost has been tabulated in **Table 2.1.5:**

Table 2.1.5: Departmental overheads and supervision charges included in works executed

Name of DISCOMs	No of Part B projects	Departmental overheads and Supervision charges (₹ in crore)
DGVCL	8	26.51
PGVCL	35	30.45
UGVCL	6	4.82
Total	49	61.78

Source: As per information furnished by the DISCOMs

On one hand the DISCOMs included departmental overhead and supervision charges of ₹ 61.78 crore in contraventions of the R-APDRP guidelines. On the other hand, the DISCOMs certified in the DPR that they had not included such charges. This resulted in over booking of expenditure by ₹ 61.78 crore in the three DISCOMs and overdrawal of loan to the extent of ₹ 15.44 crore⁸

The Management stated (October 2016) that DISCOMs had submitted DPR of Part B works based on prevailing standard cost data. This was also approved by PFC. It was also stated that no head office supervision charges was included in the DPR. It was also contended that the scheme guideline regarded the turnkey mode of execution as preferable, wherein overheads were always included. Part B works being executed departmentally, incidental expenditure like transportation and storage as included in turnkey contracts were included in the costing.

The reply is not convincing as the DISCOMs while submitting the DPRs, certified that they had not included the departmental overhead charges. The reply of the Management is contradictory in itself. On one hand it has been stated that overheads have not been included. On the other hand it has also been stated that only incidental expenditure as included in turnkey contracts has been included in departmental works.

Release of Funds

2.1.8.4 As per R-APDRP guidelines, in respect of Part A and SCADA projects 30 *per cent* of the project cost is released during project approval. Sixty *per cent* is released based on claims raised by DISCOMs upon certification of the work. The last tranche of 10 *per cent* is released after certification of the work by TPIEA. In Part B projects the DISCOMs are entitled to only 25 *per cent* of the project cost. Hence 15 *per cent* of the project cost is released on approval of the project and 10 *per cent* after TPIEA certification. Thus, except in case of the initial tranche of 30 *per cent*, funds lying unutilised are rare.

The details of funds sanctioned and released by the GoI/ PFC as loan for the project till March 2016 is given in **Table 2.1.6:**

⁸ Entitlement of loan under Part B is only 25 *per cent* of the project cost.

Table 2.1.6: Status of receipt of funds from GoI/ PFC as on March 2016

Name of the DISCOM	Amount of loan eligible as per the approved project cost (Amount: ₹ in crore)						Fund released so far by GOI/ PFC (₹ in crore)		
	Part A (100 per cent)		Part B (25 per cent)		SCADA System (100 per cent)		Part A	Part B	SCADA System
	Number	Amount	Number	Amount	Number	Amount	Amount	Amount	Amount
DGVCL	11	30.81	8	50.14	1	14.84	17.67	30.08	4.45
MGVCL	17	89.49	13	44.46	1	26.18	71.60	26.70	7.90
PGVCL	36	75.11	35	164.17	3	63.67	60.35	98.51	19.09
UGVCL	20	35.31	6	22.28	1	33.82	21.63	3.81	10.15
Total	84	230.72	62	281.05	6	138.51	171.25	159.10	41.59

Source: As per information furnished by DISCOMs

The summary of eligible loan funds pending to be received from GoI/ PFC by the DISCOMs with the reasons thereof is given in **Table 2.1.7**:

Table 2.1.7: Balance funds from GoI/ PFC pending for receipt as on March 2016
(₹ in crore)

Name of the project	Eligible loan funds	Expenditure incurred	Funds released	Funds pending receipt	Reasons for the funds pending for receipt
Part A	230.72	198.63	171.25	27.38	The balance amount mainly consists of (1) final release of 10 per cent of the project cost to be released after completion of TPIEA certification of Part A projects and (2) the pending amount of 3 rd instalment claimed by DGVCL and UGVCL in April 2013 and September 2015 respectively.
Part B	281.05	203.41	159.10	44.31	The balance amount consists of the final instalment of 10 per cent of project cost yet to be claimed by the DISCOMs due to non-completion of TPIEA verification of Part B projects.
Total	511.77	402.04	330.35	71.69	
SCADA System	138.51	12.93	41.59	-	Only the first instalment of 30 per cent had been released and balance is pending as projects are yet to be completed. As expenditure of only ₹ 12.93 crore has been incurred there is no fund pending receipt.

Source: As per information furnished by the DISCOMs

Annexure 3 gives details regarding the cost of the projects, release of instalments and present status for the 56 test-checked R-APDRP projects

Current status of the project

2.1.8.5 In Part A projects, the loan along with interest would be converted into grant once the required system is established and certified by the TPIEA. It was noticed that all the DISCOMs had completed the Part A works within the stipulated time period. All the 84 Part A projects were declared go-live by the DISCOMs between 2012-13 and 2014-15 (December 2014) and the fact intimated to the PFC. The PFC on 9 May 2013 intimated GUVNL that M/s PricewaterhouseCoopers (PwC) had been appointed as the TPIEA for Gujarat.

The Management stated (October 2016) that PwC had submitted its report to PFC on 1 September 2016. The conversion of loan and interest into grant was pending as the report of the TPIEA (PwC) was pending acceptance by the PFC. The DISCOMs had incurred an expenditure of ₹ 198.63 crore (March 2016) in respect of Part A works and received ₹ 171.25 crore till

March 2016. In respect of Part B projects two out of the 62 projects were pending completion and hence TPIEA verification was pending.

Reduction in AT&C losses

2.1.9 In respect of Part B works only 25 per cent of the project cost was to be given as loan by the GoI. Fifty per cent of the loan against Part B projects was convertible into grant on the completion and certification of Part B projects. This was also subject to the condition that the towns were able to achieve the AT&C losses of 15 per cent and sustain the same for a period of five years. All the Part B projects except Anand and Dahod (MGVCL - scheduled for completion by 28 February 2019) have been completed. Out of the 60 completed towns, in 39 towns the AT&C loss targets of 15 per cent were achieved as envisaged. It was not achieved in 21 towns wherein the AT&C losses ranged from 15.31 to 46.17 per cent in 2015-16. The extent of AT&C losses reduction in the 21 towns where the targeted reduction up to 15 per cent was not achieved is shown in **Table 2.1.8**:

Table 2.1.8: Towns in which AT&C loss reduction targets were not achieved till 2015-16

Sl. No.	Towns	Baseline AT&C losses ⁹ (in per cent)	AT&C Loss in 2015-16 (in per cent)	Percentage Reduction in AT&C losses w.r.t. baseline data (above 50 per cent)	Percentage Reduction in AT&C losses w.r.t. baseline data (20 to 50 per cent)	Percentage Reduction in AT& C losses w.r.t. baseline (5 to 20 per cent)
1	2	3	4	5	6	7
col. 3 (-) col. 4/col.3x100						
DGVCL						
1	Jambusar	39.21	21.36		45.52	
2	Rajpipla	34.08	15.31	55.08		
3	Vyara	28.08	17.93		36.15	
MGVCL						
4	Godhra	31.65	20.67		34.69	
5	Chaklasi	39.06	18.26	53.25		
PGVCL						
6	Saverkundla	46.26	42.10			8.99
7	Rajula	44.11	19.26	56.34		
8	Kodinar	67.55	46.17		31.65	
9	Una	34.83	21.33		38.76	
10	Bagasara	45.78	16.65	63.63		
11	Palitana	34.77	18.53		46.71	
12	Gariyadhar	48.01	17.76	62.09		
13	Jamnagar	29.02	23.21		20.02	
14	Khambhaliya	28.83	16.97		41.14	
15	Wankaner	31.62	15.66	50.47		
16	Gondal	25.45	21.70			14.73
17	Jasdan	25.37	21.55			15.06
18	Limdi	29.04	16.11		44.52	
19	Dhangadhra	34.76	23.11		33.52	
20	Than	33.23	16.22	51.19		
UGVCL						
21	Viramgam	39.01	22.76		41.66	

Source: As per information furnished by the DISCOMs

⁹ Baseline AT&C losses is calculated as per the components given in the formula shown under R-APDRP by the TPIEA (National Productivity Council) with reference to three billing cycles i.e. six months average. The baseline data is for the period August 2009 to January 2010 for MGVCL, PGVCL and UGVCL and for the period January 2010 to June 2010 for DGVCL.

Table 2.1.8 shows that even in the above 21 towns there was reduction in losses in most of the towns except Savarkundla, Gondal and Jasdan. Compared to the baseline data, the AT&C losses in 2015-16 reduced by more than 50 *per cent* in seven towns and between 20 and 50 *per cent* in 11 towns.

Annexure 4 gives the details of savings achieved by the DISCOMs due to reduction in AT&C losses in the 60 completed Part B towns. It also includes the above 21 towns. It also indicates savings not achieved by the DISCOMs during 2015-16 in the 21 towns where AT&C losses of 15 *per cent* were not attained. The results are summarised in **Table 2.1.9**:

Table 2.1.9: Financial impact due to reduction in AT&C losses as a result of Part B works

Name of the DISCOM	AT&C losses in MUs before R-APDRP	AT&C losses in MUs after Part B works (2015-16)	Reduction in AT&C losses in MUs	Financial benefit ¹⁰ (₹ in crore)	No of towns where 15 <i>per cent</i> AT&C losses not achieved	Savings not achieved (₹ in crore)
MGVCL	226.98	173.75	53.23	31.67	2	7.08
PGVCL	814.09	708.95	105.14	57.41	15	50.88
DGVCL	252.70	179.57	73.13	46.29	3	1.41
UGVCL	62.66	71.58	-8.92	-4.14 ¹¹	1	1.34
Total	1,356.43	1,133.85	222.58	131.23	21	60.71

Source: As per information furnished by DISCOMs

As a result of the R-APDRP Part B works completed in 60 towns, the DISCOMS achieved a loss reduction of 222.58 MUs. At the prevailing average sale rate of the respective DISCOMs for 2015-16, this translated to a financial benefit of ₹ 131.23 crore. The DISCOMs could have further saved ₹ 60.71 crore in 2015-16 if the 15 *per cent* AT&C losses had been achieved in the 21 towns.

The Management stated (October 2016) that DISCOMs are making efforts to reduce AT&C losses. They were replacing bare conductors with aerial bunch conductors, replacing energy meters, carrying out installation checking etc. Even in towns where targeted AT&C losses of 15 *per cent* have not been achieved there has been reduction in the AT&C losses. It was further stated that high outstanding dues of water works connections of Nagarpalika was also one of the reasons for the high AT&C losses.

Works not carried out

2.1.9.1 Out of the above 21 towns where the AT&C loss reduction targets were not achieved we test-checked five towns¹² for detailed scrutiny.

¹⁰ The financial benefit has been calculated by multiplying the reduction in AT&C losses in MUs achieved as a result of implementation of Part B works by the average per unit revenue realisation of the DISCOMs which ranged from ₹ 4.64 per unit to ₹ 6.33 per unit (provisional) for the year 2015-16.

¹¹ The AT&C losses in terms of absolute numbers had increased from 62.67 MUs before execution of Part B works to 71.57 MUs after the execution of Part B works. However, the same AT&C losses as a percentage to the total units sent out reduced from 11.80 to 6.17. The above negative figures related to all six towns of UGVCL are given in **Annexure 4**.

¹² Towns having high percentage of AT&C losses were selected in such a way as to cover atleast one town of each DISCOM. The names of the towns are Bagasara, Kodinar, Virangam, Jambusar and Godhra.

In the 39 towns where the AT&C loss reduction up to 15 per cent was achieved we test-checked four towns¹³ for detailed scrutiny. This was done to understand the reasons for non-achievement of targeted reduction.

We observed in Audit that certain works contributed to reduction in the AT&C losses. These were installation of underground cables, installation of HVDS, armoured cables, junction boxes and static meters. Underground cables connecting the 11 KV feeders to the distribution transformers reduce the possibility of theft. Similarly, armoured cables connecting the low tension poles to the consumer premises reduce the possibility of theft as they are difficult to tap. HVDS takes the distribution transformers closer to the consumer premises. This reduces the length of the low voltage final distribution lines wherein thefts mainly take place. Static meters increase the efficiency of meter recording at the consumer end. The position of the above works in the five test-checked towns is shown in **Table 2.1.10**.

Table 2.1.10: Position of works in test-checked towns where targeted reduction of AT&C losses upto 15 per cent was not achieved

Towns	Particulars	HVDS (in nos)	Junction boxes (in nos)	Static meters (in nos)	Underground cables (in kms)	Armoured cables (in nos)
Bagasara	DPR	40	2,400	6,855	0	2,085
	Actuals	40	1,600	4,875	0	2,075
Kodinar	DPR	14	2,400	7,405	0	1,744
	Actuals	14	1,700	7,405	0	1,373
Viramgam	DPR	0	0	0	0.470	12,410
	Actuals	0	0	0	0	12,410
Jambusar	DPR	4	0	6,046	0	5,000
	Actuals	0	0	3,999	2.29	0
Godhra	DPR	85	10,000	38,625	65	40,250
	Actuals	28	5,338	46,865	44	6,103

Source: As per information furnished by the DISCOMs

There was nothing available on record as to why certain works were not fully undertaken and why certain works were not envisaged in some towns. In the four test-checked towns¹⁴ where the targets of AT&C losses were achieved, we observed that the towns had executed the envisaged works. Audit is, therefore, of the opinion that executing the works as envisaged in the DPRs, can help in reducing the AT&C losses to the level of 15 per cent.

The Management stated (October 2016) that in the Godhra town, 12 to 50 per cent of the works done were done in the three high loss feeders. In respect of the other three DISCOMs it was stated that most of the envisaged works were carried out. Some of the works which were not executed was due to difficulty in their execution. In such cases approval of the competent authority had been taken for the purpose.

The fact, however, remained that the reduction of AT&C losses was not achieved in the above five towns to the level of 15 per cent. Also, the reply did not state which authority had approved the non-carrying out of works.

¹³ Keshod, Kalol, Vapi and Padra.

¹⁴ Vapi (DGVCL), Padra (MGVCL), Keshod (PGVCL) and Kalol (UGVCL).

The DISCOMs need to prepare a time bound action plan for reduction of AT&C losses to the level of 15 *per cent* in all the 21 towns. They should also ensure that the required works are carried out and results achieved. The feeders which are contributing to the non-achievement of targets have since been identified; special action plan can be prepared for these feeders.

Feeder wise losses in the towns test-checked in Audit

2.1.9.2 We conducted a feeder wise analysis in respect of the five towns selected for test-check. This was to determine which feeders were actually contributing to the high AT&C losses:

In Bagasara town there were two 11 KV feeders having 35 *per cent* and 51 *per cent* AT&C losses in 2010-11. This reduced to 22 and 11 *per cent* in 2015-16 respectively thereby reducing the total losses for the town from 46 to 17 *per cent*. The collection efficiency in the second feeder also improved significantly (from 65 to 100 *per cent*) contributing to the reduction in AT&C losses. Implementing the envisaged works of junction boxes and static meters in the town could help in reducing the AT&C losses in the first feeder also. Here the collection efficiency was already good.

In Kodinar town, there were three 11 KV feeders with AT&C losses of 63, 61 and 39 *per cent* in 2010-11. This reduced to 52, 48 and 40 *per cent* respectively in 2015-16. Consequently for the town as a whole the AT&C losses reduced from 68 to 46 *per cent* during the above period. The collection efficiency in these three feeders was nearly 100 *per cent*. Executing the envisaged works of junction boxes and armoured cables could have, therefore, further reduced the losses.

The Management stated (October 2016) that in respect of the above towns many works envisaged in the DPRs were carried out. The others were not required, hence, not carried out and the competent authority had approved the same. The reply is not convincing as the reduction of AT&C losses was not achieved in both the towns to the level of 15 *per cent*. It was also not clear from the reply as to which authority had approved the non-carrying out of works.

In Viramgam there were three feeders having AT&C losses of 37, 42 and 53 *per cent* in 2010-11 with collection efficiency of 81 to 84 *per cent*. The AT&C losses in 2015-16 improved to 16 and 12 *per cent* in the first two feeders whereas it improved to only 37 *per cent* in the third feeder. The collection efficiency improved to 100 *per cent*. Resultantly the AT&C losses of the town improved from 39 to 23 *per cent* during the same period. In the first two feeders there was improvement in the collection efficiency and reduction in the units lost leading to reduction in the AT&C losses. In the third feeder though collection efficiency improved, the units lost did not reduce much resulting in AT&C losses remaining at 37 *per cent*. **Table 2.1.10** shows that works like HVDS, junction boxes and static meters were not envisaged in the DPR. The DISCOM could have considered planning and implementing some of these works at least for the third feeder wherein the AT&C losses were high. No reasons were on record for not envisaging the

said works in the DPR.

The Management in its reply (October 2016) gave no reasons regarding the said works not being envisaged.

In Jambusar, the existing feeder was bifurcated into two in 2014-15 and both the feeders had AT&C losses of 19 and 26 *per cent* in 2015-16. For the town as a whole the AT&C loss was 21 *per cent* for the year 2015-16. In both the feeders collection efficiency was 96 to 100 *per cent*. Thus controlling the loss of units was necessary to bring down the AT&C losses. **Table 2.1.10**, shows that the envisaged works for HVDS, static meters and armoured cables were not carried out in this town. This could have helped in further reducing the AT&C losses to 15 *per cent*.

The Management stated (October 2016) that in Jambusar the AT&C losses had reduced to 17.19 *per cent* in June 2016. It was further stated that Jambusar town being in the vicinity of rural area had many theft prone pockets. The reply is not convincing as the loss of June 2016 is only for the quarter ending in that month. Management has not given any reasons for the envisaged works in the DPR not being carried out.

In Godhra town, three out of the 15 feeders had high AT&C losses of 75, 79 and 61 *per cent* in 2010-11. They continued to have losses of 73, 80 and 62 *per cent* in 2015-16 also. The collection efficiency in the three feeders was above 90 *per cent*. For the town as a whole the AT&C losses reduced from 32 *per cent* in 2010-11 to 21 *per cent* in 2015-16, but the target of 15 *per cent* was not achieved. There were five other feeders having AT&C losses above 15 *per cent* but the major contribution to the AT&C losses of the town was by these three feeders. **Table 2.1.10** shows that the works envisaged in the DPR like HVDS, junction boxes, underground cables and armoured cables were not fully carried out.

The Management stated (October 2016) that in the Godhra town, 12 to 50 *per cent* of the works done were done in the three high loss feeders. The reply is not convincing as the losses in these three feeders continue to be high indicating that works were not carried out to the extent required.

It is necessary that the DISCOMs identify the feeders with high losses and carry out the required works on an urgent basis. This will help in reduction of the AT&C losses in the above 21 towns to the level of 15 *per cent*,

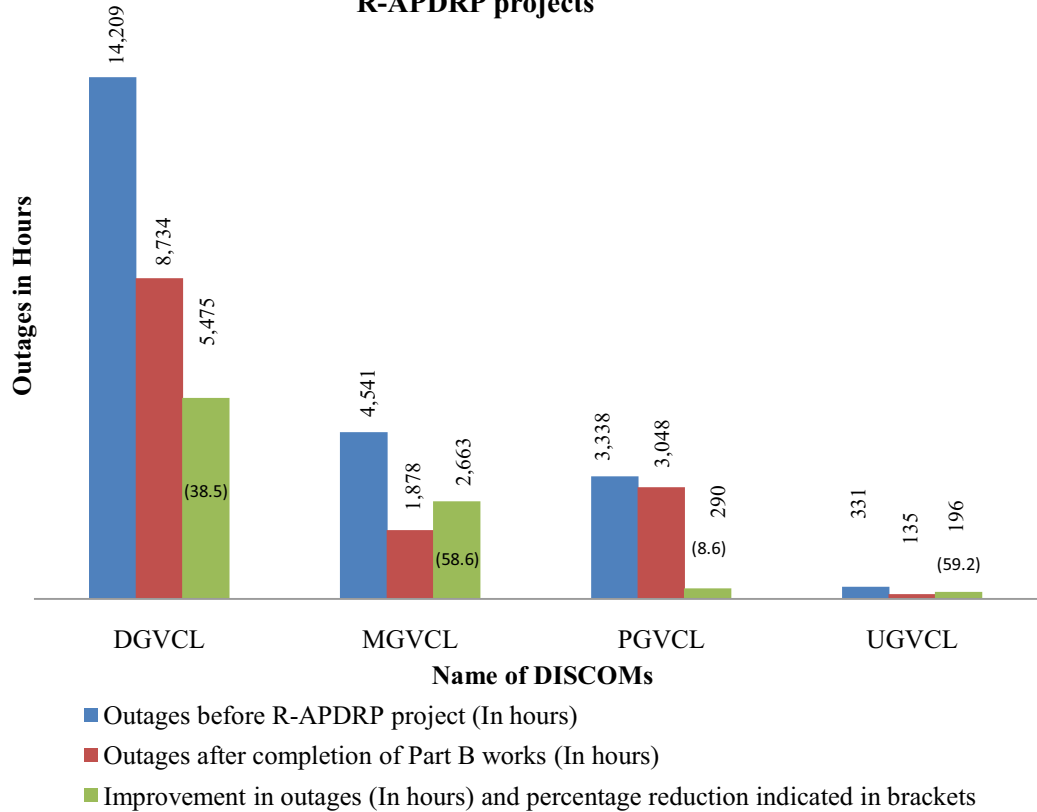
It is recommended that the DISCOMs identify the reasons for the non-reduction of losses to the stipulated levels in the 21 towns. The specific works required feeder wise must be decided so that the target for the town as a whole is achieved.

Quality of service

2.1.10 One of the ancillary objective of the R-APDRP was to improve the quality of service to consumers. We compared the outages of the four

DISCOMs¹⁵ at the start of the implementation of R-APDRP and after the completion of Part B works (2015-16). We found that there was a significant reduction in the outage hours as given in **Chart 2.1.1**.

Chart 2. 1. 1: Outages before and after R-APDRP projects



Source::As per information furnished by the DISCOMs

The **Chart 2.1.1** shows that there was reduction in outages in DGVCL and MGVCL. The reduction in outages in DGVCL and MGVCL cannot directly be established to R-APDRP. The strengthening of load management system and other works done under R-APDRP, however, contributed to the improvement. In PGVCL there was not much reduction in outages indicating the need for improving load management and maintenance of power lines. In UGVCL, the outages were on the lower side and, therefore, the reduction was not significant.

The Management stated (October 2016) that the PGVCL towns were mostly in coastal areas. Here periodical maintenance activity would be required for avoiding major break downs at line level as well as substation level. It was further stated that PGVCL had planned to convert majority overhead lines into underground cables.

We observed that the DISCOMs had not undertaken any Consumer Satisfaction Survey to verify the benefit that accrued from the R-APDRP.

PGVCL may initiate proper measures for improving load management and maintenance of power lines.

¹⁵ MGVCL, DGVCL and UGVCL for the year 2008-09 and PGVCL for the year 2011-12.

Conclusion

2.1.11 The R-APDRP was implemented in Gujarat in 84 towns for Part A projects, 62 towns for Part B projects and six towns for SCADA projects. The objective of R-APDRP was to reduce the AT&C losses to 15 *per cent* in power distribution companies on a sustainable basis for five years. This was to be done by establishing reliable and automated systems for collection of accurate baseline data. All the works of Part A and Part B (except two towns in respect of Part B) were completed. The works related to SCADA projects were still in progress.

We noticed certain deficiencies in the planning and implementation of R-APDRP by the DISCOMs. There was a delay in awarding tender of SCADA projects resulting in the works remaining in progress till date. In the 60 Part B projects which had been completed, the DISCOMs were able to achieve the target of reduction of AT&C losses to 15 *per cent* in 39 towns. In the 21 towns where the targeted reduction of AT&C losses could not be achieved, the AT&C losses ranged from 15.31 to 46.17 *per cent* in 2015-16. The DISCOMs could have saved ₹ 60.71 crore in 2015-16 by containing AT&C losses in these 21 towns. Prevalence of more outages in PGVCL impacted the quality of services to consumers.

The matter was reported to Government/ Management (August 2016); the Government reply is awaited (December 2016).

2.2 Material Management of Power Distribution Companies

Executive Summary

Introduction

Gujarat Electricity Board (GEB) was unbundled with effect from 1 April 2005 into seven separate companies. They had functional responsibility for generation, transmission, distribution and trading of electricity. Gujarat Urja Vikas Nigam Limited (GUVNL) was created as a holding company of the remaining six subsidiary companies. The distribution of electricity was vested with the four Power Distribution Companies (DISCOMs). The DISCOMs were Dakshin Gujarat Vij Company Limited (DGVCL), Madhya Gujarat Vij Company Limited (MGVCL), Uttar Gujarat Vij Company Limited (UGVCL) and Paschim Gujarat Vij Company Limited (PGVCL). They catered to the consumers in south Gujarat, central Gujarat, north Gujarat and Saurashtra region respectively.

The creation and maintenance of the distribution network requires purchases of different kind of materials and their storage at convenient locations.

The material requirement was assessed based on the average consumption during previous periods and the requirement of material for the ongoing works.

The present Performance Audit covers the period from 2011-12 to 2015-16. It includes assessment of material requirement, procurement of material and stores management by the DISCOMs. In the above performance audit we noticed aberrations mostly in respect of quantity allocation to new bidders, allocation to Gujarat based firms, guarantees taken and placement of repeat orders. This led to favouring ineligible bidders impacting ₹ 61.41 crore and additional expenditure of ₹ 3.39 crore.

Audit Findings

Upon unbundling of the GEB in April 2005, the DISCOMs continued to follow the Purchase Policy 2000 of the erstwhile GEB. GUVNL circulated (March 2011) Purchase Guidelines to all its subsidiary companies. This was to further streamline and amend existing purchase policies, procedures and practices being followed. The major differences between the Purchase Policies of 2000 and 2011 were in the definition of new bidders and allotment of items to new and regular bidders. We found that the above Purchase Policies had not been uniformly adopted by all the DISCOMs. The uniformity in Purchase Policy was required at least in the purchases under centralised procurement where one DISCOM was finalising the tender for all the DISCOMs.

MGVCL, PGVCL and UGVCL placed Purchase Orders (POs) on new parties in excess of individual limits prescribed in violation of the Purchase Policies. MGVCL in two tenders allotted quantity in excess of

the allowable limit of 10 per cent amounting to ₹ 13.65 crore. PGVCL, in ten tenders covering 16 items allotted excess quantity to new bidders to the extent of ₹ 28.95 crore. UGVCL in one tender covering one item allotted excess quantity to new bidders to the extent of ₹ 4.05 crore.

MGVCL and UGVCL awarded POs worth ₹ 4.93 crore to new ineligible bidders. The Purchase Policy required the new bidders to quote lesser than the lowest regular bidder to be eligible for any allocation.

Fifty per cent of tendered quantity was to be allotted to Gujarat based firms as per Purchase Policy 2011. For this, the final cost of the product quoted by the Gujarat based firms could not be more than 15 per cent of the cost quoted by the firms from outside Gujarat. PGVCL awarded a PO worth ₹ 3.62 crore to a Gujarat based firm though its rate was 15.55 per cent higher than the lowest outside Gujarat based firm and hence was ineligible.

In five tenders finalised (March 2012 to October 2014) by PGVCL and UGVCL, the bank guarantee rates for the warranty period was two per cent. The Purchase Policy 2011 as amended by GUVNL (February 2012), stipulated guarantee rate of five per cent for large units and outside Gujarat firms. The same was three per cent for Gujarat based Medium Small and Micro Enterprises (MSME) units. Thus, all the four DISCOMs under recovered bank guarantee to the extent of ₹ 6.21 crore in 43 POs.

In two tenders finalised by DGVCL and PGVCL for purchase of transformers of various sizes, the new bidders were allocated lesser than the allowable quantity of 10 per cent. These quantities were allocated to regular bidders at higher rates due to which an avoidable expenditure of ₹ 3.27 crore was incurred.

Introduction

2.2.1 Gujarat Electricity Board (GEB) was unbundled with effect from 1 April 2005 into seven separate companies¹⁶. They had functional responsibilities for generation, transmission, distribution and trading of electricity respectively. Gujarat Urja Vikas Nigam Limited (GUVNL) was created as a holding company of the remaining six subsidiary companies. The distribution of electricity was vested with four Power Distribution Companies DISCOMs viz., DGVCL, MGVCL, UGVCL and PGVCL They catered to the consumers in south Gujarat, central Gujarat, north Gujarat and Saurashtra region respectively. The area of coverage of these four DISCOMs and their respective distribution network is shown in **Table 2.2.1**.

¹⁶ Gujarat State Electricity Corporation Limited (GSECL), Gujarat Energy Transmission Corporation Limited (GETCO), Uttar Gujarat Vij Company Limited (UGVCL), Dakshin Gujarat Vij Company Limited (DGVCL), Madhya Gujarat Vij Company Limited (MGVCL), Paschim Gujarat Vij Company Limited (PGVCL) and Gujarat Urja Vikas Nigam Limited (GUVNL).

Table 2.2.1: Area of coverage and distribution network of DISCOMs as on 31 March 2016

Name of the DISCOM	Area (Square KMs)	LT Lines	HT Lines	Total Transformer Centers	No. of Consumers (in lakh)
		(in KMs)			
DGVCL	23,307	48,692	47,018	1,15,076	28.58
UGVCL	49,950	69,766	94,435	2,22,666	31.95
PGVCL	99,771	1,31,357	1,52,032	5,63,381	52.42
MGVCL	23,854	66,079	52,971	1,11,736	29.08
Total	1,96,882	3,15,894	3,46,456	10,12,859	142.03

Source: Information provided by the DISCOMs

A Performance Audit on the issue of “Material Management and Inventory Control of Transmission and Distribution Materials of the Gujarat Electricity Board” was included in the Audit Report (Commercial), Government of Gujarat¹⁷ for the year ended 31 March 2002.

The creation and maintenance of the distribution network requires purchases of different kinds of materials¹⁸ and their storage at convenient locations. The procurement process usually starts in the month of October of each year based on requirements received from user departments of the DISCOMs. The material requirement was assessed based on the average consumption during previous periods and the requirement of material for the ongoing works.

The Government of Gujarat (GoG) made e-procurement mandatory from 1 January 2007. This was for purchase of any item above ₹ 50 lakh by State Government departments and public sector enterprises. This limit was revised to ₹ five lakh in August 2011. The DISCOMs are utilising the platform of M/s (n) Code Solutions¹⁹ for the tendering process. The DISCOMs use their oracle based software e-Urja for the purpose of maintenance of data in relation to procurement of material. The software is used from the stage of Request for Quotations to the stage of final payment. The stores of the DISCOMs also use a Fox-Pro based software for maintaining data relating to stock. Both the softwares are operated parallelly for the purpose of generation of the required data.

The procurement process takes place in two different ways viz., Central Procurement Process (CPP) and non-CPP methods. Under the CPP method, three major items i.e., cables, conductors and transformers are purchased by DISCOMs. Here a particular DISCOM finalises the tender of one type of material (say transformers) based on the aggregate requirement of all the four DISCOMs. After finalisation of the tender, the suppliers are selected and the DISCOM wise quantity is allocated to each of them. The four DISCOMs place Purchase Orders (POs) on the selected suppliers based on their own requirement. Under the non-CPP method, the DISCOMs purchase material for their own requirement except those which fall under CPP. The procedure to be followed in respect of non-CPP purchase was the same as for CPP purchase.

¹⁷ The Committee on Public Undertakings (COPU) discussed (November 2004) the Report and made one recommendation. The Action Taken Report on the recommendation was also discussed by the COPU in January 2014.

¹⁸ Materials like cables, transformers, conductors, meters, insulators, etc.

¹⁹ A division of Gujarat Narmada Valley Fertilizers & Chemicals Limited.

All purchases, except for certain small items like office furniture, fans, small machines, machine tools *etc.*, were done by inviting open tenders.

The total purchases made by the DISCOMs through CPP and non-CPP process during the period 2011-12 to 2015-16 are given in **Table 2.2.2**:

Table 2.2.2: Year wise Purchases made by DISCOMs during 2011-2016

(₹ in crore)

Name of the DISCOM	2011-12	2012-13	2013-14	2014-15	2015-16	Total
PGVCL	744.38	941.66	837.46	1,130.21	965.15	4,618.86
MGVCL	180.75	301.77	270.53	324.78	348.96	1,426.79
DGVCL	217.10	385.37	381.73	440.31	374.14	1,798.65
UGVCL	214.46	420.07	356.05	548.97	333.01	1,872.56
Total	1,356.69	2,048.87	1,845.77	2,444.27	2,021.26	9,716.86

Source: Information compiled from accounts of DISCOMs.

Organisational set-up

2.2.2 The management of the DISCOMs is vested with the Board of Directors (BoD) of the respective DISCOMs. The Managing Director (MD) is the Chief Executive Officer. He is assisted by heads of various departments viz., Project, Technical, Finance and Accounts and Human Resources. The BoD had also constituted various Committees like Audit Committee, Project cum Procurement Committee *etc.*, for its assistance. The procurement department of the Corporate Office is headed by a Chief Engineer/ Additional Chief Engineer. Each DISCOM also has under its control Circle Offices, Division offices and Regional Store Offices (RSOs). These are headed by Superintending Engineers, Executive Engineers and Deputy Engineers respectively.

Scope of Audit

2.2.3 The present Performance Audit covers the period from 2011-12 to 2015-16. It includes assessment of material requirement, purchase of material and stores management by the DISCOMs. Out of the four DISCOMs, the DISCOMs having the lowest inventory (MGVCL) and the highest inventory (PGVCL) were selected for detailed scrutiny of records. The procurement for certain important materials were done through CPP. We, therefore, test-checked the purchases made through CPP by all the four DISCOMs. We also test-checked the non CPP purchases made by the selected DISCOMs, viz., MGVCL and PGVCL.

We selected 98 (100 *per cent*) CPP POs awarded by DGVCL and UGVCL and 233 (50 *per cent*) CPP POs awarded by MGVCL and PGVCL. In case of material purchased under non-CPP POs by MGVCL and PGVCL, the following sample selection was made.

- Out of 33 POs placed during September 2011 to September 2015 having value of more than ₹ 10 crore, 17 POs were selected.
- Out of 512 POs placed during April 2011 to December 2015 having value between ₹ one crore and ₹ 10 crore, 10 POs were selected.

For assessing the stores management of DISCOMs, two RSOs each²⁰ of MGVL and PGVL were test-checked in Audit.

Audit Objectives

2.2.4 The Performance Audit of the DISCOMs was conducted with a view to ascertain whether:

- proper assessment of requirement of material was made before procurement both under CPP and non-CPP methods;
- there was an effective and efficient system of material procurement which ensured timely purchase of material in an economic and transparent manner;
- the accounting of material and stores management was done properly, the physical verification of stock was done regularly at the stores level and there was a sound monitoring and control system at the Corporate Office level; and
- the materials were stored properly and protected against loss and the scrap materials were auctioned on a regular basis at the stores level.

Audit Criteria

2.2.5 The following audit criteria were adopted for assessing the performance of the DISCOMs:

- DISCOMs' budgetary plan for procurement and Board minutes and agenda;
- Purchase Policy 2000/ 2011 of the DISCOMs and amendments thereof and guidelines/ circulars of the GUVNL and Central Vigilance Commission;
- Procurement contracts and repairing contracts of vendors;
- Circulars and Corporate Office instructions regarding proper storage of material and policy related to scrap;
- Guidelines, instructions and directions of the State Government and Gujarat Electricity Regulatory Commission.
- Guidelines of the Reserve Bank of India in case of contracts with foreign suppliers; and
- Various manuals of GUVNL and respective DISCOMs relating to purchase, procurement, storage, disposal of scrap etc.

²⁰ RSOs in MGVL: (i) Lalbaug (Vadodara) (ii) Chhani (Vadodara); and in PGVL (i) Rajkot (ii) Jamnagar.

Audit Methodology

2.2.6 The methodology adopted for attaining the audit objectives involved explaining the audit objectives to the top management. This was done through an entry conference. The records were examined at the Corporate Office and stores level and interaction was done with the audited entity personnel. The data was analysed based on the audit criteria, discussions were held with the Management and audit queries were raised. The draft performance audit report was issued to the Management and the concerned Department (Energy & Petrochemical Department) for comments. The audit findings were also discussed in an exit conference with the Management.

The entry conference with the Management and the State Government representatives was held on 26 February 2016. The exit conference was held on 20 October 2016, which was attended by the officials of all the four DISCOMs and the holding company GUVNL.

Audit Findings

2.2.7 The audit findings have been discussed under the broad headings of procurement of material and inventory control, stores management and disposal of stock. In the procurement process we found lack of uniformity in the adoption of purchase policies, violation of these policies and delays in the finalisation of tenders. In case of inventory control and stores management, we found instances of non disposal of scrap.

Procurement of material

Purchase Policies and Procedures

2.2.8 Upon unbundling of the GEB in April 2005, the DISCOMs continued to follow the Purchase Policy 2000 of the erstwhile GEB. The Purchase Policy laid down procedures and practices to be adopted for vendor registration, item/supplier classification, tender evaluation, negotiation etc. An amendment to the Purchase Policy of 2000 was made in 2005 allowing a higher allocation to new parties for certain items.

For the first time after unbundling, GUVNL circulated (March 2011) Purchase Guidelines to all its subsidiary companies. This was to further streamline and amend existing purchase policies, procedures and practices being followed. The major differences between the Purchase Policies of 2000 and 2011 were in the definition of new bidders and allocation of critical²¹ and non-critical items²² to new and regular bidders. The differences in the Purchase Policies are as given in **Table 2.2.3**:

²¹ All types of meters, Current Transformers Potential Transformers (CTPT) units, ring type CTs, CTs, PTs, transformers, breakers, isolators, relays, insulators 11 KV and above including bus post insulators, Moose and Zebra conductors and all types of cables.

²² All material which are not mentioned as critical items are non-critical items.

Table 2.2.3: Comparison of Purchase Policy of 2000 and 2011

Sl. No.	Purchase Policy 2000	Purchase Policy 2011
1.	A new party is one which has not supplied similar or higher specification material to erstwhile GEB or equivalent organisations. Such a party is called “new 1” party. A new party after the first supply will be considered as “new 2” and only after the second supply as a regular party.	A new party is one which has not supplied similar or higher specification material to GEB/ GUVNL and its subsidiaries. A new party will become a regular party only after it executes two orders successfully. There was no concept of “new 1” and “new 2” party.
2.	A “new 1” party could be allotted 10 per cent of the total quantity and “new 2” party could be allotted 25 per cent of the total quantity in any tender. As per amendment made in August 2005, for certain items, the above percentage could increase to 30 and 40 per cent respectively.	In respect of tender for critical items, new parties put together could be allotted up to 30 per cent of the total ordered quantity but limited to 10 per cent for each party. In respect of tender for non-critical items the allocation to new parties could be up to 50 per cent of the total ordered quantity but limited to 30 per cent for each party.
3.	In case orders were to be placed on more than one party, a new party had to match the price of lowest new party and a regular party had to match the price of the lowest regular party. After the amendment to the Purchase Policy in August 2005, price of new party had to be lesser than the lowest regular party to be offered any quantity.	A new party which quotes higher than the lowest regular party was not to be offered any quantity.

We found that the above Purchase Policies had not been uniformly adopted by all the DISCOMs. The Purchase Policy 2011 was adopted by the PGVCL and UGVCL in July 2011 and December 2011 respectively. DGVCL did not place the Purchase Policy 2011 in its BoD and continued to be governed by the Purchase Policy 2000. The BoD of MGCVCL adopted (April 2011) the Purchase Policy 2011 subject to the date of implementation being decided by the Managing Director. The date of its implementation was not decided (March 2016).

From the above, it is clear that the Purchase Guidelines of 2011 circulated by GUVNL were not uniformly adopted by all the DISCOMs. The uniformity in Purchase Policy was required at least in the CPP purchases where a single DISCOM finalised the tender for all the DISCOMs. This would have ensured uniformity in the quantity allocation to new and regular bidders. We reviewed the implementation of the Purchase Policies against the respective policies adopted/ followed by the DISCOMs. The instances of violation noticed are discussed below:

Excess allocation to new bidders

2.2.8.1 MGCVCL, PGVCL and UGVCL placed POs on new parties in excess of individual limits prescribed under the respective Purchase Policies. MGCVCL, in two tenders covering two items, allotted quantity to new (*new 1*) bidders in excess of the allowable limit of 10 per cent. This resulted in excess allotment of ₹ 13.65 crore to new (*new 1*) bidders in violation of the Purchase Policy 2000 followed by MGCVCL. PGVCL and UGVCL placed POs on new parties for critical and non-critical items in excess of individual limits of 10 and 30 per cent and overall limits of 30 and 50 per cent respectively. PGVCL, in 10 tenders covering 16 items, allotted quantity to new bidders in

excess of allowable limits to the extent of ₹ 28.95 crore. UGVCL, in one tender covering one item, allotted excess quantity to new bidders to the extent of ₹ 4.05 crore. The allocations made by both PGVCL and UGVCL violated the Purchase Policy 2011 adopted by them. Thus, the three DISCOMs placed POs valuing ₹ 46.65 crore on new bidders in violation of the Purchase Policies adopted by them.

PGVCL stated (October 2016) that for the above tenders it had followed the Purchase Policy 2000 as amended in August 2005. UGVCL did not give any specific reply.

The reply of PGVCL is not convincing as it should have invited tenders as per the Purchase Policy 2011 which was adopted by it.

Allocation to ineligible new bidders

2.2.8.2 Allocation could be made to new bidders only if their rates were not higher than the lowest regular bidder as per Purchase Policies 2000 and 2011. We observed that MGCVCL and UGVCL had given POs to new bidders though their quoted rates were higher than the rates of the lowest regular bidder. They were, therefore, not entitled to any allocation. **Table 2.2.4** shows the quantum of purchase orders given to ineligible new bidders:

Table 2.2.4: Allocation to ineligible new bidders

Tender number	Name of the new bidder awarded purchase order	Regular bidder lowest rate (in ₹)	New bidder rate (in ₹)	Ordered value on new bidder (in ₹)
Centralised purchase initiated by UGVCL (Based on Effective rate adopted for evaluation)				
371- transformer 16 KVA	M/s Alfa transformers	79,427	86,504	37,77,753
371- transformer -25 KVA	M/s Alfa transformers	1,00,914	1,09,560	2,90,26,484
Non centralised purchase by MGCVCL				
2017- LT Cable 1C x 35 + 25 mm ²	Ekank Cables, Vadodara	33,027	33,553	1,04,72,175
2028- LT PVC Cable 2C x 2.5 mm ²	Himachal Aluminium & Conductors, H.P.	556	565	22,46,298
2023- LT PVC Cable 2C x 4 mm ²	Himachal Aluminium & Conductors, H.P.	759	860	24,46,540
1019- GI Wire 8 SWG	R.K. Wire, Kolkata	53,135	55,892	13,51,786
Total				4,93,21,036

Source: Compiled in Audit from information provided by DISCOMs

Thus, MGCVCL and UGVCL awarded POs worth ₹ 4.93 crore to new bidders in violation of their Purchase Policy. There was, however, no loss to the DISCOMs as the new bidders finally matched their price with the price of the lowest regular bidder.

MGVCL stated (October 2016) that the regular bidder had not offered full quantity. Allotment to new bidders was therefore made in the financial interest of the company. UGVCL stated (October 2016) that the regular bidder had offered lesser quantity than required; hence, quantity allocation was made to the new (*new I*) bidders.

The reply of MGCVCL is not convincing as in tender nos. 2017 and 1019 the regular bidder had offered the full tendered quantity. The Purchase Policy does not provide for any exception in cases where the regular bidder was unable to

offer full quantity. There were no reasons on record as to why the additional allocation was made to ineligible new (*new I*) bidders. The reply of UGVCL is not convincing as in respect of 16 KVA category the lowest regular bidder was ready to supply nearly 100 *per cent* quantity. The DISCOMs could have also placed repeat orders for additional 25 *per cent* quantity on the regular bidders.

Favour to ineligible Gujarat based firms

2.2.8.3 Clause 4.10.2 of the Purchase Policy 2011 provided that 50 *per cent* quantity of the tender was to be allotted to Gujarat based firms. This was subject to the final cost (*end cost*) without tax quoted by the Gujarat based firms not being more than 15 *per cent* of the final cost (*end cost*) without tax quoted by the non-Gujarat based firms. In a tender for disc insulators floated by PGVCL, the lowest Gujarat based firm quoted 15.55 *per cent* more than the lowest outside Gujarat firm. The Gujarat based firm was, therefore, not eligible for any allocation. PGVCL, however, awarded the PO worth ₹ 3.62 crore²³ to the Gujarat based firm in violation of its Purchase Policy.

PGVCL stated (October 2016) that PO was given to the Gujarat based firm considering its performance and marginal increase in rate over 15 *per cent*.

The reply is not convincing as there were no recorded reasons for relaxing conditions of the Purchase Policy 2011.

Short collection of Bank Guarantees

2.2.8.4 Purchase Policy of 2000 and 2011 provided that the bidders were required to give bank guarantee for the warranty period at the following rates:

Table 2.2.5: Rates of bank guarantee for the warranty period

Particulars	Purchase Policy 2000	Purchase Policy 2011
Bank guarantee for warranty period in respect of cables, conductors, insulators and steel items for all suppliers.	Two <i>per cent</i>	Five <i>per cent</i>
Bank guarantee for warranty period for Gujarat based Micro, Small and Medium (MSME) Enterprises	Not applicable	Three <i>per cent</i> (as per GUVNL Board resolution dated 7 February 2012)

The Purchase Policy 2011 stipulated rates of five *per cent* and three *per cent* depending on the type of firms as shown in **Table 2.2.5**. In five tenders²⁴ finalised (March 2012 to October 2014), PGVCL and UGVCL kept two *per cent* bank guarantee rates for the warranty period. Thus, all the four DISCOMs under recovered bank guarantee for the warranty period. In the 43 POs placed against the above five tenders there was under recovery to the extent of ₹ 6.21 crore²⁵.

²³ Purchase Order (dated 12 September 2012) against tender no. 400 was issued to M/s Sun Insulators Private Limited, Ahmedabad (Gujarat based firm). The quantity ordered was 1,48,950 disc insulators at the rate of ₹ 243.37 *per insulator* {final cost (*end cost*) with VAT}.

²⁴ Pertaining to cables, conductors and disc insulators.

²⁵ Short recovered bank guarantee: DGVCL - 2 POs - ₹ 0.17 crore, MGVCL - 15 POs - ₹ 1.76 crore, PGVCL - 9 POs - ₹ 2.19 crore and UGVCL - 17 POs - ₹ 2.09 crore.

PGVCL and UGVCL stated (October 2016) that the tenders were invited according to GUVNL resolution of March 2006. Here a bank guarantee rate of two *per cent* was specified for the warranty period.

The reply is not convincing. After the adoption of Purchase Policy 2011, the tenders were to be invited as per the extant policy as amended till the date of tender.

Avoidable expenditure due to less allocation of quantities to new bidders

2.2.8.5 The Purchase Policy 2000 provided that up to 10 *per cent* quantity could be allocated to the new bidders. The Purchase Policy 2011 provided that up to 10 *per cent* quantity could be allocated to each new bidder subject to an overall ceiling of 30 *per cent*.

We analysed the percentage and quantum of allocation made to the new bidders in respect of CPP tenders. In the 31 CPP tenders finalised during the period April 2011 to February 2016, a total of 1,069 bidders (767 regular and 302 new) participated. Of these, 343 regular bidders and 66 new bidders got POs. The percentage of successful bidders to total bidders was 44.72 and 21.85 *per cent* in respect of regular and new bidders respectively. Against the total quantity²⁶ tendered, the regular bidders got 92.28 *per cent* and the new bidders got only 6.86 *per cent* of the tendered quantity.

We also observed that in two tenders finalised by DGVCL and PGVCL the new bidders were allocated lesser than 10 *per cent* quantity. These quantities were allocated to regular bidders at higher rates resulting in avoidable expenditure of ₹ 3.27 crore as shown in **Table 2.2.6**:

Table 2.2.6: Lesser than maximum permissible allocation to new bidders

(Quantity in numbers and Amount in ₹)

Sl. No	Tender no. and category	Name of new bidder	Tender quantity	Offered quantity by the bidders	Allotted quantity	Less quantity allocated ²⁷	Difference of rate between new and regular supplier ²⁸	Amount
CPP tenders (Critical Items- Transformers)								
1.	9032- 10 KVA	M/s B&C Energy Private Limited	91,345	4,568	2,300	2,268	1,972.91	44,74,560
2.	390-10 KVA	M/s Rajasthan Powergen Transformers	32,915	5,500	1000	2,291	4,735.70	1,08,49,489
3.	390-16 KVA	M/s P.P Industries	11,000	10,000	500	600	4,355.78	26,13,468
4.	390-25 KVA		11,000	5,000	500	600	4,116.29	24,69,774
5.	390-63 KVA		18,880	5,000	500	1,388	5,611.48	77,88,734
6.	390-100 KVA		12,643	6,000	500	764	5,935.12	45,34,432
	Total							3,27,30,457

Source: Compiled in Audit from information provided by DISCOMs

²⁶ Some items under tender no 9020 were scrapped later on, hence percentage of total quantity put to tender is 99.14 (92.28 + 6.86).

²⁷ The difference has been calculated by considering the maximum allowable quantity to new bidders or the offered quantity whichever was lesser and reducing from it the actual quantity awarded.

²⁸ This represents the effective rate of the transformer including taxes and loaded losses (load losses and no load losses). Transformer losses are produced by the electrical current flowing in the coils and the magnetic field alternating in core. The losses associated with the coils are called the load losses, while the losses produced in the core are called no-load losses.

DGVCL stated (October 2016) that large supplies were pending from the firm, M/s B&C Energy Private Limited. Hence lesser quantity was allocated to the firm.

The reply of DGVCL is not convincing because DGVCL finalised two tenders i.e., 9020 and 9032 at very short intervals. Most of the supplies were pending for tenders for which the supplier still had time to supply. It is also pertinent to mention that the DISCOMs placed repeat orders subsequently on this supplier. This showed that there were no issues with the supplier.

PGVCL stated (October 2016) that the supply and quality of performance of the new bidder was not known and therefore lesser quantity was considered.

The reply is not convincing as the quantity for new bidders was restricted to 10 *per cent* considering all the risk aspects. The rates of new bidders being lesser; it was financially beneficial for the DISCOMs to allot full permissible quantity of 10 *per cent* to the new bidders.

Delays in tender finalisation

2.2.9 GUVNL had stipulated a time span of 105 days (including prototype testing) for the completion of the entire tender process up to order placement. This included the time taken from receiving indents for requirement of material to final placement of purchase orders on selected bidders.

We observed that a total of 31 CPP tenders were finalised by the four DISCOMs during 2011-12 to 2015-16. Out of these only three tenders could be finalised within the stipulated timeline. In the remaining 28 tenders, there was a delay ranging from 2 to 162 days beyond the stipulated timeline. Out of these, in 16 tenders the delay was more than 90 days. In the procurement done at the DISCOM level under non CPP, we observed the delay was very minimal. Reasons for delay in finalisation of CPP tenders were not on record.

UGVCL and MGVCL while accepting the fact, stated (October 2016) that they would strive in future to adhere to the stipulated time line. PGVCL attributed the delay to various factors like delay in technical scrutiny, large number of bidders and various administrative delays. DGVCL had stated that the time frame for completion of the tender process was four months and most of the tenders were completed within the same.

The contention of PGVCL is not convincing since the time limit of 105 days was fixed after considering all these issues. The contention of DGVCL was not as per the circular issued by GUVNL. Audit is of the opinion that the DISCOMs should have adhered to the timelines stipulated by GUVNL. Delay can also affect the works for which the material is being procured.

Extra expenditure due to not placing repeat orders

2.2.10 The POs provided that the DISCOMs had the right to place repeat orders up to 25 *per cent* of the ordered quantity. This had to be done within the validity period of the original order and on the same terms and conditions of the original purchase order. Whenever the DISCOMs finalised a new tender,

comparison was made between the rates under the existing tender and rates received in the new tender. If the new tender rates were higher, it was beneficial for the DISCOMs to procure material under the existing tender by invoking the repeat order clause. We observed that UGVCL did not exercise its right to place repeat orders in respect of purchase of 10 KVA transformers as detailed in **Table 2.2.7:**

Table 2.2.7: Loss due to non placement of repeat orders

Sl. No.	Tender number	Name of Supplier	Quantity allocation (in number)	Effective rate ²⁹ per unit (in ₹)	Effective rate ³⁰ per unit in next tender finalised (in ₹)	Repeat order quantity	Effective loss (in ₹)
			A	B	C	D = A X 25 per cent	E = D X (C-B)
1	9032	B&C Energy Infra P Ltd.	625	53,737.43	55,489.95	156	2,73,393
2	111	NJA Industries	1,600	50,036.80	51,019.94	400	3,93,256
3		DankeTechno electro	2,160	50,036.80		540	5,30,896
Total extra expenditure							11,97,545

Source: Compiled in Audit from information provided by DISCOMs

UGVCL had incurred extra expenditure worth ₹ 11.98 lakh due to not placing of repeat orders.

UGVCL stated (October 2016) that they had placed repeat orders on the suppliers. Audit, however, did not get any supporting records pertaining to the placement of repeat orders.

DISCOMs may ensure adoption of uniform Purchase Policy so that the provisions of purchase policies can be adhered to by all the DISCOMs.

Inventory control, stores management and disposal of scrap

2.2.11 After placing the PO, the DISCOMs issue instructions to the supplier to deliver the material to a specific RSO or divisional store. The material is thereafter received and stored in the RSO and divisional store of the respective DISCOMs. Upon the receipt of the material, general checks are exercised to ascertain its conformity with the purchase order. Samples were also sent to an independent testing agency³¹ for detailed testing. The year-end value of the inventory held by each DISCOM during the period 2011-12 to 2015-16 is given in **Table 2.2.8.**

²⁹ It represents the unit final cost (*end cost*) with tax of five per cent + price variation (at the time of next tender opening) + loaded losses.

³⁰ Unit final cost (*end cost*) with tax (five per cent) + loaded losses.

³¹ Normally testing is done by Electrical Research and Development Association (ERDA). ERDA is a cooperative research institution created by the Indian Electrical Industry and Utilities with the support of Government of India and Government of Gujarat.

Table 2.2.8: Inventory position of DISCOMs as on 31 March of respective years

(₹ in crore)

DISCOMs	2011-12	2012-13	2013-14	2014-15	2015-16
PGVCL	420.34	425.49	457.36	530.53	491.82
MGVCL	165.86	236.89	189.16	199.96	183.13
DGVCL	205.91	256.22	258.01	281.50	260.41
UGVCL	221.26	265.59	272.46	382.51	350.08

Source: Information provided by DISCOMs as per compiled accounts

MGVCL had five and PGVCL had six RSOs as on 31 March 2016, out of which four³² were selected for test-check in Audit. The bifurcation of inventory into active, slow-moving, non-moving³³ and scrap in respect of the test-checked RSOs is given in **Table 2.2.9**:

Table 2.2.9: Inventory position in test-checked RSOs as on 31 March of the respective years

(Amount: ₹ in crore)

Particulars	Active material	Slow moving material	Non moving material	Scrap	Total material	Percentage of active material to total material
MGVCL						
2011-12	30.43	0.02	2.18	0.87	33.50	90.84
2012-13	49.20	2.47	1.94	1.36	54.97	89.50
2013-14	41.00	1.41	0.99	1.57	44.97	91.17
2014-15	36.32	1.40	1.18	1.82	40.72	89.19
2015-16	35.17	0.12	0.75	1.57	37.61	93.51
PGVCL						
2011-12	25.01	0.13	0.69	0.92	26.75	93.50
2012-13	27.58	0.06	0.98	0.99	29.61	93.14
2013-14	23.04	0.21	0.48	1.23	24.96	92.31
2014-15	25.11	1.59	9.64	1.36	36.12	69.52
2015-16 ³⁴	9.44	0.48	0.28	1.64	11.84	79.73

Source: Information provided by DISCOMs

The **Table 2.2.9** shows that the percentage of active material held ranged between 89.19 and 93.51 *per cent* in MGVCL during 2011-12 to 2015-16. In respect of PGVCL it ranged between 69.52 and 93.50 *per cent* during the same period.

2.2.11.1 The DISCOMs disposed-off the scrap through online auctions conducted by M/s MSTC Limited, a Government of India Undertaking. Each DISCOM fixed a reserve price for a particular scrap material. If any bidder quoted equal to or more than the reserve price, the material was sold off automatically. If the highest bid was below the reserve price, each DISCOM had fixed a threshold limit up to which it could approve the sale based on the rate received. Below the threshold limit, the bids got rejected.

Audit test-checked the records regarding auction of scrap in RSO Jamnagar

³² In MGVCL, Lalbaug (Vadodara) and Chhani (Vadodara) and in PGVCL, Rajkot and Jamnagar.

³³ **Active:** If an item of material was transacted (i.e. received/issued) within a period of three months, **Slow moving:** If an item of material was not transacted within a period of three months but was transacted within a period of six months and **Non moving:** If an item of material was not transacted within a period of six months or above.

³⁴ Data related to Rajkot RSO was not furnished for the year 2015-16.

and RSO Rajkot of PGVCL. It was observed that in Jamnagar, 10 items³⁵ amounting to ₹ 32.18 lakh were lying as on 31 March 2016. Auctions for these were attempted nine to eighteen times between March 2014 and March 2016. Similarly, nine items³⁶ amounting to ₹ 32.83 lakh were lying in Rajkot as on 31 December 2015. Auctions for these were attempted 11 to 25 times between March 2014 and December 2015.

We observed that the scrap could not be sold due to general recession in the commodity markets and low prices. This blocked up scarce space at RSOs.

PGVCL stated (October 2016) that reserve price of scrap was applicable for all the RSOs. In some RSOs the material was sold while it remained unsold in other RSOs.

Conclusion

2.2.12 The creation and maintenance of the distribution network requires purchases of different kinds of materials and their storage at convenient locations. Audit examination of assessment, procurement and storage activities of the DISCOMs revealed deficiencies in certain areas. There was no uniformity in adoption and applicability of purchase policies amongst the DISCOMs. The quantity allocation to new and regular bidders was made according to the Purchase Policy being followed. There was no uniformity in Purchase Policy in the Central Procurement Process tenders as well. We also observed that the DISCOMs did not adhere to certain provisions of the purchase policies and tender conditions. Aberrations were mostly in respect of quantity allocation to new bidders, allocation to Gujarat based firms, guarantees taken and placement of repeat orders. This led to additional expenditure of ₹ 3.39 crore and favouring ineligible bidders with contracts valued at ₹ 61.41 crore.

The matter was reported to Government/ Management (August 2016); the Government reply is awaited (December 2016).

³⁵ (i) Single Phase meters Metal static (ii) Plastic static (iii) Polycarbonate, (iv) Three Phase meters Metallic static (v) Plastic static, (vi) Miscellaneous iron scrap, (vii) CTPT units, (viii) MS scrap, (ix) Empty oil barrel scrap; and (x) PVC aluminium wire.

³⁶ (i) Single Phase meters Metal static (ii) Plastic static (iii) Metallic (iv) Polycarbonate (v) Miscellaneous iron scrap, (vi) ACSR conductor (vii) GI wire (viii) PVC aluminium wire and (ix) PVC armoured service wire.