CHAPTER IX: MINISTRY OF PETROLEUM AND NATURAL GAS

Brahmaputra Cracker and Polymer Limited

9.1 Irregular payment of Performance Related Pay

Brahmaputra Cracker and Polymer Limited paid ₹15.54 crore as PRP to the executives of GAIL in violation of the DPE guidelines which also led to additional outgo of ₹4.62 crore from GoI towards capital subsidy.

The Government of India (GoI) approved (April 2006) the Assam Gas Cracker Project. Accordingly, a joint venture agreement was entered into (October 2006) between GAIL India Limited (GAIL), Numaligarh Refinery Limited (NRL), Oil India Limited (OIL) and Government of Assam (GoA) for implementation of the above project. GAIL would be the main promoter with 70 *per cent* equity contribution. The remaining promoters would contribute 10 *per cent* each. Brahmaputra Cracker and Polymer Limited (the Company) was, therefore, formed in January 2007 for the above purpose. The cost of the project was estimated at ₹5,461 crore (May 2006) with capital subsidy of ₹2,138 crore by GoI. The project cost was subsequently revised (July 2016) to ₹9,965 crore with capital subsidy of ₹5,239.45 crore. As per the joint venture agreement, the promoters would provide management and technical support for implementation of the project by way of deputation of their qualified personnel in the Company. Accordingly, GAIL being the major promoter has been deputing its own executives to the Company since 2007-08 as per the requirement of implementation of the project.

The Company reimbursed the salary and allowances etc. of such deputed executives to GAIL which also included Performance Related Pay (PRP) of such executives applicable for GAIL. The project was commissioned in January 2016. The Company received capital subsidy of ₹5,088.80 crore (upto May 2019) from GoI (including net interest of ₹56.15 crore earned on such capital subsidy) which was 51 *per cent* of the approved project cost. After commissioning of the project, the Company did not earn any profit till 2017-18 and its accumulated loss was ₹919.70 crore upto 31 March 2018. It, however, earned a net profit of ₹68.97 crore during 2018-19.

DPE, GoI while revising the pay scale of below Board level and Board level executives as well as non-unionised supervisors in CPSEs w.e.f. 01 January 2007 issued directives[1] indicating that PRP to the executives of CPSEs should be directly linked to the profit of CPSEs and performance of the executives with reference to Memorandum of Understanding (MoU) rating of CPSE. It was also clarified that the executives, who were on deputation to other CPSEs, were entitled to draw the PRP applicable to the borrowing CPSEs.

In view of the above, PRP was not applicable to the executives of the Company during the period from 2007-08 to 2017-18 as the project was under implementation stage (upto 2015-16) and there was no generation of profit for the two-year period of 2016-17 and 2017-18.

[1] *Vide O.M. No. 2 (70)/08-DPE (WC)-GL-XVI/08 dated 26 November 2008*

Further, the Company did not frame any PRP policy for 2018-19 and no PRP was, therefore, paid to its executives.

Audit, however, observed that the Company reimbursed a total amount of ₹15.54 crore to GAIL during the period from 2007-08 to 2018-19 towards PRP of the executives of GAIL worked on deputation of which ₹9.06 crore (upto January 2016) was capitalised as part of the project cost. The above PRP of the deputed executives attributed on the basis of the profits/ performances of their respective positions in GAIL.

The executives of GAIL who worked in the Company on deputation were entitled to PRP, if any, applicable to the executives of the borrowing Company as per the directives of DPE vide O.M. dated 26 November 2008. Since the Company's own executives were not entitled to any PRP during the period from 2007-08 to 2018-19, the reimbursement of ₹15.54 crore by the Company to GAIL as PRP in respect of the executives worked on deputation during the above period was, therefore, not in line with the above directives of DPE. In this connection it is worth mentioning that had the above PRP not been paid by the Company to GAIL the project cost would have been lower by ₹9.06 crore and thereby the capital subsidy by GoI would also have been lower by ₹4.62 crore (51 *per cent* of ₹9.06 crore).

Thus, the payment of ₹15.54 crore by the Company to GAIL as PRP to the executives of GAIL who worked on deputation, was in violation of DPE guidelines and, therefore, irregular. Further, this has also resulted in additional outgo of ₹4.62 crore from GoI towards capital subsidy.

Management replied (August 2019) that the executives of GAIL were deputed at the Company for successful commissioning of the project and the PRP was paid as per the prevalent circular of GAIL.

The contention of Management is not acceptable since the executives of GAIL deputed in the Company were not entitled to PRP as per the directives of DPE. Further, payment of PRP by the Company on the basis of GAIL's circular was not acceptable as a circular cannot overrule the directives of DPE.

In this regard, DPE clarified (March 2020) that the executives on deputation from a holding company to a subsidiary company or *vice versa* would be entitled to draw allowances and variable pay/ PRP as applicable to borrowing CPSE and the Administrative Ministry/ Department of CPSEs should take necessary action to implement the guidelines issued vide OM dated 26 November 2008.

Hence, the payment of PRP amounting to ₹15.54 crore to the executives of GAIL was in contravention to the DPE guideline. It is recommended that irregular payment made to ineligible employees may be recovered.

The para was issued to the Ministry in October 2019; their response was awaited (June 2020).

Oil and Natural Gas Corporation Limited

9.2 Follow up IT Audit of the Financial and Controlling (FICO) modules

9.2.1 Introduction

Oil and Natural Gas Corporation Limited (ONGC), a public sector undertaking in the field of exploration and production of oil and gas, initiated a project called Information Consolidation for Efficiency (ICE) in October 2003 to realign its business processes under a common Enterprise Resource Planning (ERP) system. Project ICE envisaged utilisation of all 10 modules[2] of SAP and the system was implemented across the Company between October 2003 and January 2005. The main objective of ICE project was to optimise and standardise business processes for integrated information availability on real time basis and to eliminate duplication of activities to increase efficiency and transparency by capturing data at source point. The current version used by the Company is SAP ECC 6.0 EHP 7[3].

Audit reviewed Accounts Payable, Asset Accounting and Cost Centre Accounting sub-modules of the Financial and Controlling (FICO) modules in Eastern and Northern regions of the Company in 2007. The findings of audit were included in the CAG's Audit Report No.10 of 2008 (Chapter VII). The assurances provided during the previous audit were not acted upon. The current IT audit is a follow up audit on the recommendations of the previous report.

9.2.2 Past Audit Coverage

Audit Report No.10 of 2008 (Chapter VII) pointed out deficiencies in customisation, input controls and migration of data from legacy system. It was recommended in the Report that the Company should review and rectify the deficiencies by:

- strengthening input controls, validation controls and internal control procedures to ensure accurate, pertinent and complete capture of the data.
- mapping business rule relating to allocation of costs to respective cost centre.
- cleaning of migrated master data to rectify the errors that have crept into the ERP system and establishing comprehensive procedures for periodical review of master data.
- organising regular training programme to raise the level of user awareness and minimize errors of data input.

9.2.3 Audit objectives

Audit reviewed implementation of the recommendation of previous Report as instances of incorrect and incomplete data in the system were noticed in Audit. The current follow up audit of FICO module of SAP was conducted to ascertain whether:

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2 Financial (FI), Controlling (CO), Material Management (MM), Plant Maintenance (PM), Project Systems (PS), Investment Management (IM), Asset Management (AM), Treasury (FM), Sales & Distribution (SD), Business Information Warehouse (BW)

3 ERP Central Component 6.0 Enhancement Package 7

- input controls, validation controls and internal control procedures were strengthened by the Company to ensure accurate, pertinent and complete capture of data;
- business rules relating to allocation of costs to respective cost centre were adequately mapped into the system;
- master data migrated was cleaned to rectify the errors that had crept into the ERP system and whether comprehensive procedures for periodical review of data had been established;
- regular training programmes were organised to raise the level of user awareness and minimise errors of data input; and
- recommendations of the independent audit and CAG with respect to FICO Module have been complied with.

9.2.4 Scope of Audit

The current audit covered three sub-modules viz., Accounts Payable, Asset Accounting and Cost Centre Accounting out of six sub-modules of Financial and Controlling modules (two modules out of ten) for the period 2014-15 to 2017-18 for all Company Codes[4] of ONGC.

ONGC had appointed (August 2017) M/s KPMG to conduct functional audit on user authorisation management process and automated controls (inherent and configurable) for FICO modules. Audit obtained the Company's assurance and corrective action taken on the recommendations of M/s KPMG and thus, the issues brought out by the functional auditor have not been covered in the present audit.

9.2.5 Audit methodology

IT audit was conducted by adopting the following methodology:

- Entry conference was held with Management in August 2018.
- The table data of FICO and other related modules pertaining to the audit period, as furnished by the Company, was analysed using CAATs[5]. Data analysis included merging of certain data tables on common keys to identify issues. Data was also extracted using standard SAP reports and customised reports to corroborate the analysis of table data. The output files were shared with Management along with screen shots of Audit analysis while seeking response to Audit observations.
- Discussions, correspondence and questionnaire issued to Management and the feedback received.

Audit acknowledges Management's efforts in extracting/ sharing the table data. Exit Conference was held with Management on 01 May 2019. Report was issued to the Ministry on 06 May 2019 and the response obtained on 29 August 2019, which has been considered while preparing this report. Audit appreciates the positive response of Management/ Ministry

[4] *Company code refers to smallest organizational unit of external accounting for which a complete, self-contained set of accounts can be created such as the balance sheet and the profit and loss statement. It could also be a separate, but not independent, commercial place of work. ONGC has multiple company codes based on the organizational structure (Asset/ Basin/ Geographical location).*

[5] *Computer Assisted Audit Techniques*

in viewing the Audit observations from systemic point and for conducting detailed review based on indications emanating from the audit exercise.

9.2.6 Audit criteria

- Manuals/ Guidelines/ Circulars of the Company
- Accounting policy, Statutory requirements
- Business rules as per business blueprint and ICE reference manual for FICO modules
- IT Industry standards and best practices

9.2.7 Limitations of Audit

The data used for analysis is not from live environment, but from the table data provided by the Company. Audit, therefore, could not test dummy data to evaluate input controls/ validation controls comprehensively. Audit could not analyse the data vis-à-vis the Company's business processes and system requirements as envisaged in the Business Blueprint[6] as it was not made available to Audit. Management during Entry Conference stated that the Business Blueprint was an implementation stage document. The process documents provided later by Management was a user reference manual which was not as comprehensive, as the updated Business blueprint would have been to understand the business rules, requirements and the mapping in the ERP system.

9.2.8 Audit findings

The Company is mainly using three sub-modules of FICO module i.e. Asset Accounting, Accounts Payable and Cost Centre Accounting. The Asset Accounting sub-module is used for managing and supervising fixed assets with the SAP System. In Financial Accounting, it serves as a subsidiary ledger to General Ledger providing detailed information on transactions involving fixed assets. Accounts Payable sub-module manages and records accounting data for all the vendors. Payables are managed as per the payment program and the payments can be made using cheques, electronic transfers, etc. All the postings made in the Accounts Payable are updated in General Ledger simultaneously and the system maintains/ forecasts and generates standard reports that can be used to keep track of all the open items. Cost accounting in the company is facilitated by Controlling (CO) module in SAP which determines allocation of costs pertaining to acquisition, exploration, development, production, support activities etc. Cost center is the lowest unit for collecting costs.

The analysis of the table data pertaining to the above three sub-modules and audit findings emerging from such analysis are discussed in the following paragraphs.

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[6] ***Business Blueprint is a detailed description of the Company's business processes and system requirements. It documents the business processes at the time of implementation of the ERP, containing the relevant business scenarios, business processes and process steps organized in a hierarchical structure***

9.2.8.1 Master data deficiencies

i) Non-capturing of asset location in Asset Master table

The Asset Master table in SAP-ERP contains time-dependent asset allocation information and the asset location field in the table contains the details of the location where the asset is held. Location details of fixed asset are required to be maintained in the system to track fixed assets for the purposes of financial accounting, preventive maintenance and theft deterrence. Review of data in the table revealed that out of total 11,23,188 records, location field was blank in 7,48,521 records (66 *per cent*) and the Plant ID and location field was not available in 3,31,493 records (29 *per cent*). In the absence of this information, location-wise tracking of fixed assets and proper compliance of handing over/ taking over of assets in cases of custody transfers could not be ensured in the system.

Ministry replied (August 2019) that out of 7,48,521 records in which the location field was blank, 3,81,393 records have been corrected, Plant ID and location fields have been filled in 3,27,947 records as on 06 August 2019; continuous efforts are being made to update remaining records.

The assurance of updating provided during the previous audit was not acted upon. Audit noted the corrective action taken at the instance of Audit and assurance of the Ministry.

ii) Non capture of Asset in-charge

Asset in-charge field in ANLA[7] table denotes the custodian of the asset under whose charge the asset lies. It was observed that in 3,651 records out of 5,49,298 records, the field was either blank or the employee ID number was zero. Absence of this information in the system could lead to control gaps in monitoring the assets. The assurance provided for updating the data during the previous audit was thus not carried out.

Management replied (April 2019) that a report has been developed in the system to identify assets with invalid indenter/ custodian. Ministry replied (August 2019) that out of 3,651 records, corrective action has been taken for 2,150 records as on 6 August 2019 and continuous efforts are being made to update the rest. For future cases, the Ministry replied that a system control has been put in place to ensure that the custodian field in the asset master will not be blank.

Management may ensure completeness of asset location and asset custodian information in master data to utilise system functionalities for tracking and monitoring of assets.

iii) Incorrect classification of Assets

Audit noticed the Asset Master table upon joining with Asset Description table (ANKT[8]), using asset class field that the same assets were appearing under multiple classes. Test-check of few assets revealed the following:

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7 *ANLA is a standard SAP table which is used to store Asset Master Record Segment information*
8 *ANKT is a standard SAP table which is used to store Asset classes: Description information*

- 'Mobile', 'Solar Assets', 'DG Sets' etc. were appearing in multiple asset classes varying from production, furniture, office equipment, oil & gas production equipment etc.
- In one case, Solar Power CP station at KV School was found appearing under Asset Class 10414 – Engine & Compressor, which would normally govern Production Equipments.

Management replied (October 2018/ April 2019) that classification of asset is dependent upon its area of usage; the asset, 'Solar CP station' was inadvertently capitalised under Production Equipment (asset class 10414), which has since been corrected and reclassified under 'Renewal energy device'. Incorrect classification of Assets was pointed out in the earlier report. The assurance provided in the previous Audit has not been acted upon.

Audit recommended that considering the impact on the accounts, Management may conduct a detailed location-wise review of assets to ensure uniformity in asset classification.

Ministry accepted the recommendation and replied (August 2019) that a thorough review of the classification of assets is being undertaken across all units/ locations.

iv) Non-capture of Responsible cost centre/ Cost centre

The SAP system uses the cost centre assignment in the asset master record to determine the cost centre affected when the asset postings like fixed asset, depreciation, gain/ loss from asset sales are done. The responsible cost centre is responsible for the physical asset but would not carry the depreciation cost. Review of asset master table data revealed that out of 11,23,188 records, in 39,582 records the cost centre as well as responsible cost centre were blank.

Management replied (November 2018) that all the units have been advised to ensure that responsible cost centres are updated wherever internal order has been used in the asset master as cost object and cost centre is not blank. It further replied that (May 2019) the responsible cost centre field has been made mandatory for old and new assets. Ministry replied (August 2019) that out of 39,582 records, corrective action has been taken for 33,031 records and continuous efforts are being made to update remaining records.

The corrective action initiated at the instance of Audit is noted.

9.2.8.2 Control gaps

i) Ex-employees continue as custodian of asset

Asset custodian is the field in Asset Master which denotes the custodian of capital assets who is responsible for safe custody, physical verification and movement etc. of the assets. Audit analysed the data where the custodian name is mentioned in the Asset master table to see if any of the retired employees still continue to appear as custodian. To this end, the database of Asset master containing the assets custodian details was joined with that of SAP report on ex-employees based on the field Custodian/ ex-employee name. It was observed that 571 ex-employees (retired before 01 April 2014) continued as custodians in case of 11,369 assets valuing ₹87.43 crore.

Audit recommended that management may ensure appropriate controls in place to check the continuance of retired employees as custodians of assets.

Management/ Ministry replied (April 2019/ August 2019) that 441 out of 571 records pointed out by Audit have been removed as custodian of assets and a system based control for automatic transfer of assets lying in the employee's account and issuance of no objection certificate/ relieving order through system has been advised. Ministry further added that adequate controls are in place to check the continuance of retired employees as custodians and report has been provided to the locations for corrective actions for discrepant custodians in the asset masters.

The corrective action initiated at the instance of Audit is noted.

ii) Non/ Incorrect capturing of Bank Details of Vendor Master

The vendor master database contains information about the vendors that supply an enterprise. This information includes vendor name, vendor account number (vendor ID), bank account number etc. A review of the data of bank details of vendor master revealed that out of 1,57,804 records, the account holder's name was not captured in 2,206 records and the bank account number was not captured in 1,176 records. In two cases, it was noticed that the unique vendor ID was linked to more than one person and with different bank account numbers.

For enabling digital payment, bank key is used for identifying the individual branches for electronic banking in India, which is either MICR code (9 digits) or IFSC code (11 digits). Audit observed that in seven records under country code IN, the bank keys are neither in MICR code format nor in IFSC code format.

In 457 records, the vendor name and address were same though the vendors' IDs were different, indicating presence of duplicate vendors. The risk of fraud/ incorrect payments is accentuated by the presence of duplicate vendors/ fictitious records in the vendor master. Thus, the assurance provided during the previous audit on cleaning of duplicate vendors has not been acted upon.

Management replied (April 2019) that the bank details of the vendors having invalid bank key (IFSC) or blank bank account number have been reviewed and removed from vendor masters and vendors having blank account holder name have been blocked. Bank Account numbers of two vendors were rectified on the basis of HR master, being employee vendors. Further, a proper centralised process for creation of vendors has been put in place. It has the required validations for preventing duplicate vendors, different vendors with same address, same bank detail with valid IFSC etc.

Audit recommended Management to take a comprehensive review and address incorrect/ incomplete entries in master records by placing appropriate controls.

Ministry accepted (August 2019) that in 457 records, vendor name and address were same though vendor IDs were different indicating presence of duplicate vendors. Work centres were advised to review the records and block the vendor codes which are duplicate. Ministry further stated that corrective action has been taken after a comprehensive review of the vendor masters and appropriate and adequate controls for vendor masters have been ensured through Vendor Management System.

The corrective action taken at the instance of current Audit is noted.

iii) Overdue payments without block or justification

Payment block keys[9] denote the reasons for which the payment is kept pending/ being an open item. Similarly, blank entry in the payment block key means those items which are free for payment. During the scrutiny of open items pertaining to vendors in BSIK table for the year 2014-16[10], it was observed that 1,850 records (out of 40,91,895 records) had no payment block keys but were still pending for payment of ₹165.17 crore. The ageing of the payment dues from the posting date to a threshold date (31 March 2017) ranged from 90 to 1,096 days. Amounts lying as open items without payment block for such long periods is an indicator of ineffective controls on account payables.

Management replied (April 2019) that all the work centres have been advised to review open overdue payments list, to reverse the liability if the payments are not required to be made and to insert appropriate payment block if the payments are still to be made with the reason for holding such overdue payments.

Audit recommended that Management may consider implementing necessary checks to auto-review the open items at appropriate level through the system.

Ministry accepted the audit recommendation and replied (August 2019) that a serious view has been taken by ONGC and all work centres have been suitably advised. Ministry stated that only 60 items amounting to ₹15.54 lakh are pending as on 19 June 2019 for which necessary action is being taken. Besides, a mechanism has been developed wherein mail/ SMS alert with list of overdue payment on open items is provided to respective heads of finance on monthly basis to review such cases.

The corrective action taken at the instance of Audit is noted.

iv) Delay in posting data

As per the Finance Manual of the Company, maximum time allowed to post the documents is within 7th day of the succeeding month. During closure of accounts at the financial year end, accounts are kept open for posting adjustment and closing entries normally for two more accounting periods (till 31 May). Audit noticed that out of 19,703 records for which difference between the posting date and entry date was more than 30 days, 3,134 records amounting to ₹750.38 crore related to the document types pertaining to Bank Payment/

[9] ***e.g. A- blocked for payment, D- block for old cases, R – CVP rejection block, Stale cheque block and X – APP payment block***

[10] ***as data pertaining to 2017 FY could not be combined due to the data type discrepancies***

Receipt, Vendor Invoice, G/L Account, and CV Payment Posting. The delay in posting transactions showed that the control system on ensuring timely posting of financial payment document is not sufficient.

Ministry replied (August 2019) that corrective action has been initiated by the company for monthly closing of accounts to ensure that there is no undue time lag in the posting and entry date of documents as pointed by Audit. Corrective action initiated is noted.

v) Multiple usage of one time vendors

One time vendors supply the Company only once or very rarely. Master records are not created each time for such vendors and collective accounts are set up for them. These accounts are also referred to as one time accounts which do not contain any vendor-specific data. Therefore, data such as address, salesperson, bank details etc. must be entered at the time of purchase or invoice verification.

Audit analysed the data related to one time vendors in BSEC table (2,88,909 records). The records containing the one time vendors were joined with vendor master table and matched for the name and city. It was observed that some one time vendors had multiple matching records ranging from two to 86 and in same company code. This indicated that the one time vendor method is being used rather than creating vendor master data for regular vendors, which is not advisable. Repetitive payments to one-time vendors indicated presence of fraud risks. Management may like to focus on the company codes – MHN (Mehsana), SBS (Shibsagar), AMD (Ahmedabad) with more than 350 records of one time vendors and KKL (Karaikal), RJY(Rajamundhry) and DLI (Delhi) having more than 150 records each.

Management replied (April 2019) that necessary instructions have been issued to all the units for not using one-time vendor code for regular type of payments.

Audit recommended that Management may customise the controls to ensure one time vendor payment facility is not utilised for regular payments and put a limit on number of payments to one time vendor in a system.

Management accepted the recommendation in Exit Conference. Ministry stated (August 2019) that a system control has been put in place whereby a warning message is given, whenever a one time vendor is used and payment to one-time vendor is allowed only once based on unique identity like PAN/ Aadhar number.

vi) Continuing Non-Digital payments

ONGC is using Bank Communication Management (BCM) tool for making electronic payments with house bank SBI which are digitally signed. Internal guidelines of ONGC stipulated to make all payments through digital mode. Cheque payments, if necessary, were to be made with approval of Head of Finance. Analysis of data related to cheque payment during the period 1 April 2014 to 31 March 2018 revealed the following:

- Total 1,88,971 records (other than void cheques) valuing more than ₹2.50 lakh crore indicated that cheque payments still continue. Maximum cheques were issued at Company codes - Mehsana, Ahmedabad and Rajahmundry. In 7,399 records, the payment was made on weekends (Saturday and Sunday), of which more than 1,000 cheques were paid by four users valuing ₹9,069 crore. In 6,327 records, the vendor number is blank which included payments to private parties (other than statutory authorities/ banks).

- With regard to void cheques, it was found that in 234 records of total 14,363 void cheques, there was no reason recorded in the respective field. A standardised narration strengthens internal control.

Management replied (December 2018) that:

- Out of total 1,88,971 items, 1,153 items comprising of ₹2.025 lakh crore (approx.) are from Delhi and Dehradun units which belong to categories other than vendor payments. These payments related to investments and dividends, remittance to statutory bodies/ trusts, internal fund transfer, JV payments etc. Further, as per guidelines, cheque is also issued in favour of bank for payments to LCs, remittances, other forex payments etc. which are made through RTGS mode.
- Void reason no. 11 in system is without TEXT. System mapping has been initiated to make it specific as 'Others'.

Audit recommended that considering the repeated nature of transactions involved with the House bank and the feasibility, Management needs to digitise foreign exchange payments.

Management accepted the Audit recommendation and stated (April/ May 2019) that the possibilities of digitising the forex payments and investments are being looked into. Ministry stated (August 2019) that forex payments across all units and investments, repayments of loans/ interest are made through either digital mode or authority letters.

vii) Non-capturing of Item Text

Narration (item text) helps in bringing more objectivity and clarity to records which are captured in accounting documents. In the BSIK table (containing 40,91,895 records during the period 2014-16), the narration field of the transactions were blank in 8,517 records.

Management/ Ministry replied (April 2019/ August 2019) that instructions have been issued to the units to ensure that proper narration is maintained at the time of creating entry in the system.

viii) Non/ incorrect capturing of payment details

PAYR is a repository table containing the details of cheque payments made to vendors etc. On review of data (PAYR table) as furnished by the Company, Audit observed that out of 17,330 records where cheque encashment date is Nil, 2,422 records pertained to cheques which were not voided and more than three years old valuing ₹5,492 crore.

Management replied (April 2019) that detailed analysis was done and it was seen that 297 records pertained to LC/ Forex arrangement payments, 1,344 records were statutory payments made through online banking and 1,130 records pertain to OVL/ OBV Company codes.

Audit recommended Management to review the cases where online payments have been made but still appearing under cheque payment in the PAYR table.

Ministry replied (August 2019) that system check has been put in place, whereby cheque encashment date will not be blank. With regard to the online payments appearing in PAYR table, it was stated that cheque is also issued in favour of banks for payments to LCs, remittances, other forex arrangement payments etc. which are made through RTGS mode to prevent the possibility of duplicate payment.

The corrective action taken at the instance of Audit is noted.

9.2.8.3 Customisation deficiencies

i) Inconsistency in Statistical Key Figure (SKF) usage

A statistical key figure is a number providing information about non-monetary data relating to organisational units. These figures can be in reporting and in allocation and represent statistics in internal orders, cost centres and profit centres which are measured in quantity or time units and are used for allocation of costs.

To review the consistency in adoption of SKF across company codes and across the period, the tables COKA, COKP, COBK, COEPR, CSKU and SKF[11] were joined using the common fields and the following were observed:

- Description is blank in 63 cost centre groups and there were 66 cost centre groups which are likely duplicates and would need a review.
- There is no uniform practice across the Company for adoption of SKF for drilling costs.

Management/ Ministry assured (April 2019/ August 2019) corrective action in respect of blank description fields and for ensuring uniformity in cost allocations and stated that necessary changes will be taken in the SKFs during cost cycle 2019-20.

9.2.8.4 Validation checks and Input Controls

i) Lack of input control and validation of data

Input controls are application controls which ensure and protect the accuracy, integrity, reliability, confidentiality and completeness of information.

a) Asset accounting

System automatically picks the date of server as the entry date of the document. Transactions are normally posted after receipt of documents (for e.g. bills/ invoices).

It was observed that:

[11] ***These are controlling module tables which contain details of object number, cost element and statistical key figures***

- In 3,06,057 records, the document date was after the posting date. In eight records, document date is greater than the current date of audit i.e. September 2018 (e.g. 28 November 2018, 30 September 2019, 30 September 2201, 07 November 2201).
- 52,856 records indicated delay in posting the documents with the delay ranging 61 days to more than 10 years.

Management replied (April 2019) that the delay in timely posting the documents was mainly due to implementation of IND-AS and quarterly/ annual closing of accounts. It further stated that efforts are being made to minimise the gap by closing the accounts on monthly basis. Ministry stated (August 2019) that system check has been introduced where document date cannot be after system date and corrective action initiated for monthly closing of accounts.

b) Cost centre accounting

COBK is the document header data table of controlling object. A review of the data records (91,64,158 records) revealed that in 1,73,595 records, document date is greater than the system date i.e. 31 March 2018 (e.g. 22 May 2041, 25 April 2201, 23 May 2314, 02 December 2020 etc.). In 12 records, document date is not in order and another six records; document dates pertained to 2001-2011 while entry date/ posting date pertained to 2014-18.

Audit suggested Management to consider validating the document date entry.

Management replied (April 2019) that a validation will be put to the effect that document date is not after the system date by 30 April 2019. Ministry stated (August 2019) that system check has been introduced where document date cannot be after system date.

The corrective action taken at the instance of Audit is noted.

9.2.8.5 Segregation of duty

The segregation of duty principle requires that controls be built to ensure that there is proper segregation of duties for data entry and there are compensating controls in place where segregation of duty is not possible. It is generally accepted that creation, change and deletion of master records be vested in different individuals to ensure security of data and to avoid/ reduce potential damage from actions/ inactions of any one person. During scrutiny of the table, it was seen that in 1,30,733 records, master data has been created and changed by the same person.

Management/ Ministry replied (April/ August 2019) that two separate roles have been created for creation of asset and change in the Asset. Ministry further stated that the existing assignment of roles will be automatically removed with effect from 01 June 2019.

9.2.8.6 Training efforts

End user/ refresher training details to raise the level of user awareness and to minimise errors of data input were called for from Management. Management stated (April 2019) that every year refresher training is imparted to the end users. It was also explained that e-Learning is available through the web portal for benefit of the users.

Audit recommended that updated training engagement of users needs to be ensured to facilitate error free inputs to the system.

Ministry stated (August 2019) that action has been initiated for inclusion of SAP FICO Module trainings in annual calendar.

9.2.8.7 Conclusion

CAG's Audit Report 10 of 2008 (Chapter VII) pointed out deficiencies in customisation, input controls and migration of data from legacy system. It was recommended in the Report that the Company should review and rectify the deficiencies by strengthening the controls, mapping business rule relating to allocation of costs and periodical review of master data. Audit observed that some of the issues pointed out in the report were rectified by Management and some issues still persisted (details in ***Annexure-XXV***) despite assurances. Ministry had rectified the lapses only after they were pointed out again. Most of the issues pointed out in this report pertained to control gaps which included new issues also. Though periodical review of master data had been recommended, deficiencies still persisted in Asset Master Tables. Further, few issues on input controls and standardisation of cost allocation also still persisted.

These issues can be addressed by placing appropriate controls in addition to rectification of existing errors. Updated training engagement of users to enable error free inputs to the system also needs to be ensured. Consistency and uniformity across the organisation are desired in the financial procedures through the system.

Management may like to view these findings as indicative and conduct a systematic and periodic review. Ministry stated (August 2019) that post audit observations, ONGC has taken continuous efforts to take corrective measures and rectify the deficiencies.

9.3 Loss of revenue due to sale of crude oil containing Basic Sediments & Water above the norms as per sales agreement

Failure of ONGC to upgrade and create facilities within the approved time schedule to contain the basic sediments and water in the crude oil supplies within limits resulted in loss of revenue of ₹27.06 crore.

Oil and Natural Gas Corporation Limited (ONGC) entered (April 2002) into a Memorandum of Understanding (MoU) with Indian Oil Corporation Limited (IOCL) and Bharat Petroleum Corporation Limited (BPCL) for sale of crude oil. The sale price was subject to discount at slab rates, in case Basic Sediment & Water (BS&W) content in the crude oil exceeded 0.2 *per cent* by volume as detailed below:

Table 9.3.1

Discount for BS&W (volume in *per cent*)	Discount (US$ per barrel)
Less than 0.2 *per cent*	Nil
0.2 to less than & equal to 0.5 *per cent*	0.10
0.5 to less than & equal to 1.0 *per cent*	0.15
For every increase of 0.5 *per cent*	0.05

ONGC's oil fields in Assam are situated in Geleki, Lakwa, Rudrasagar and North Bank. Crude oil produced in these fields is collected at Central Tank Farms (CTFs) at Lakwa and Geleki fields, which is sent to Custody Central Tank Farms (CCTF) at Moran and Jorhat. The crude oil is finally supplied to Guwahati & Bongaigaon refineries of IOCL and Numaligarh Refinery of BPCL through pipeline of Oil India Limited (OIL). The oil produced from these fields has high BS&W content, due to which further processing of crude oil is required to bring down the BS&W content level below 0.2 *per cent* before supply to the refineries. In this regard, Audit observed that:

- Assam Renewal Plan (ARP) - Plan A, 'Revamping & Optimisation of Surface installation & Gas lift/ Pipeline network for Lakwa and Lakhmani fields and Moran CTF' with an estimated cost of ₹2,465.15 crore, was conceptualised way back in December 2005. One of the major deliverables of the project was to control the BS&W level below 0.2 *per cent*. The project was awarded in March 2009 with scheduled completion in March 2013; the project is still not completed.
- As against the targeted five GGS[12], four GGSs could be revamped under Plan – A; however, the revamped facilities failed to improve desired quality of crude oil as average BS&W content was around 0.2 to 1.799 *per cent* from 2015-16 to 2019-20 (till October 2019).
- ONGC envisaged additional steps viz., cleaning and repairing of tanks, to reduce the BS&W content in crude oil. However, Audit observed that out of 168 oil and effluent tanks installed in Assam Asset, 49 storage tanks are in Lakwa and Lakhmani fields which would be taken up for cleaning and repairing only after the ARP project is completed. In respect of remaining 119[13] storage tanks, only 40 tanks were cleaned and repaired till November 2019.
- Crude oil supplied from Assam Asset contained BS&W ranging from 0.164 to 0.417 *per cent* during the period April 2013 to October 2019 (the period subsequent to March 2013, scheduled completion of the project) resulting in price discount/ loss of revenue to ONGC amounting to ₹27.06 crore.

ONGC/ Ministry stated (November 2019/ March 2020) that:

- Revamping of one more installation (LKH GGS-5) has been completed and put in operation since May 2019. LKW GGS-1 has been commissioned in December 2019 and under trial run; LKW CTF is under progress. However, many times it becomes difficult to achieve the desired quality due to dynamic process conditions and CTF plays an important role as better settling and separation in CTF results in lesser BS&W in crude.
- Cleaning/ repairing of storage tanks is not a direct measure for BS&W reduction. However, cleaning/ repairing of tanks provide more ullage and more time for water to settle that indirectly facilitates to achieve better water separation and lesser BS&W

12 ***GGS- Group Gathering System- Here emulsion along with associated gas produced from the wells is collected, where liquid and gas is separated through Separator***

13 ***Out of 119 tanks, six are new tanks, seven tanks are not in use and five tanks are under repair.***

content. Further, 40 tanks have been cleaned upto 15 November 2019, work is in progress for five tanks and for the remaining tanks, the expected date of completion is April 2023.

- Assam Asset was striving hard to reduce BS&W in refinery dispatch and the consistent efforts have resulted in reduction of discount paid from ₹4.49 crore in FY 2017-18 to ₹1.91 crore in FY 2018-19. The range of BS&W was 0.297 to 0.164 *per cent* during the FY 2018-19 which reveals a significant improvement.
- Desired quality could not be achieved in the recent past due to (i) mixing of crude from revamped and under-revamped installations, (ii) Heater Treater equipments being more than 35 years old and needed to be replaced, (iii) repairing and cleaning of tanks in the running installations is a tedious and continuous process and can be done only sequentially linking refineries shutdown, (iv) more volume had to be dispatched to refineries to create ullage in GGSs/ CTFs leading to rise in BS&W in oil dispatch due to lesser settling time for final separation, etc.

The reply needs to be viewed in the light of the following:

- The LKW-GGS-1 has been commissioned in December 2019 (against the scheduled completion date of March 2013) and trial run completed (January 2020). The facilities on LKW - CTF is still in progress. Thus, the ARP, conceptualised way back in December 2005, is still not completed even after a period of more than 15 years.
- Desired level of BS&W content could not be achieved in all the four completed GGS, which was in the range of 0.2 to 0.584 *per cent* since commissioning.
- Additional steps viz., cleaning and repairing of tanks, use of oil soluble demulsifiers etc., could not bring down BS&W content in the Assam crude to the desired level.
- During the period of 2019-20 (till October 2019), the BS&W content was above the desired level of 0.2 *per cent* in all the months and ONGC sustained loss of revenue of ₹2.86 crore during the period. The expenditure on revamping to the extent of achieving the desired level of BS&W content has thus been rendered infructuous.
- ONGC should have addressed the issue in a time bound manner so as to ensure supply of quality crude to the OMCs.

Thus, ONGC sustained loss of revenue of ₹27.06 crore during the period April 2013 to October 2019, due to delay in implementing the Assam Renewal Project and resultant failure to maintain the BS&W contents within the prescribed norms.

India Oil Corporation Limited, Bharat Petroleum Corporation Limited and Hindustan Petroleum Corporation Limited

9.4 Implementation of de-regulation of pricing regarding major Petroleum Products

9.4.1 Introduction

Government of India (GoI) used to control prices of petroleum products through Administered Pricing Mechanism (APM) since July 1975. In 1997, it was decided to dismantle APM in a phased manner based on the recommendations of Strategic Planning Group on Restructuring of the Oil Industry (‘R’ group). In 1998, Fuel Oil, Low Sulphur Heavy Stock (LSHS) and Naphtha were de-regulated followed by Aviation Turbine Fuel (ATF) in 2001. Motor Spirit (MS) and High-Speed Diesel (HSD) were de-regulated with effect from midnight of 25/ 26 June 2010 and 18/ 19 October 2014 respectively.

Consequent to de-regulation, the prices of petroleum products are market determined and Oil Marketing Companies (OMCs) are free to determine the prices. Prices of MS/ HSD, which were being revised fortnightly, are being revised daily across all retail outlets in the country from 16 June 2017.

9.4.2 Audit Objectives and Scope

The objectives of the compliance audit were to report broadly on the following:

- Implementation of daily pricing mechanism and its monitoring by OMCs.
- Whether the de-regulation brought-in market competition in respect of MS/ HSD prices.

This audit mainly covered the period from 2014-15 to 2017-18 i.e. post de-regulation of HSD.

9.4.3 Audit Criteria

The audit criteria included the provisions of:

- GoI policy and circulars issued to de-regulate Retail Sales Price (RSP) of MS and HSD.
- The monitoring mechanism of daily pricing implemented by OMCs since 16 June 2017.

9.4.4 Audit Methodology

Entry conference was held with senior management of OMCs on 20 July 2018 wherein audit objectives, scope and methodology were discussed. The field audit was conducted during the period from August to November 2018. This included collection of statistical data from Retail Headquarters of OMCs and visits of audit teams to selected Retail Outlets (ROs) and offices controlling ROs. Out of total 55,013 ROs (as on 31 March 2017), 188 ROs were selected on sampling basis for detailed audit.

9.4.5 Audit Findings - Implementation of daily pricing on MS/ HSD and its monitoring by OMCs

OMCs effected daily change in the RSP of MS and HSD on trial basis in five cities with effect from 1 May 2017 and across the country from 16 June 2017 as against fortnight revision being followed till then. The decision was implemented through automated and non-automated ROs. The price changes are affected at the automated ROs through central server at 6 a.m. every day by generating price file, which gets updated in the system. In case of failure to update, the dealer manually updates the prices based on communication received through SMS, emails, web portal, mobile app etc. In case of non-automated ROs, the dealers change the prices daily on the basis of communication received from OMCs.

There were 55,013 retail outlets under the control of three OMCs[14] as on 31 March 2017, of which 22,014 were automated[15] and 32,999 were non-automated[16] retail outlets. Audit selected 188 ROs (automated - 61 and non-automated - 127) for test check based on statistical sampling. Detailed checking of daily price change along with bills was conducted for the months of January and May 2018 in respect of the selected ROs. Further, Inspection Reports of ROs (conducted by OMCs) for the year 2017-18, audit trails, registers including complaints etc. were also scrutinised during field visit.

Scrutiny of relevant records and information obtained from MoPNG and OMCs along with discussion held with concerned officers led to the following observations in areas of preparedness, implementation and monitoring by OMCs.

9.4.5.1 Adequacy of preparedness

Lack of automation of ROs and absence of sustained connectivity

- Automation of ROs with price push application along with sustained connectivity ensures prompt and correct change of prices as it eliminates manual intervention. OMCs had automated only 43 *per cent* of ROs in June 2017 at the time of implementation of the policy indicating lack of preparedness. As per directives (November 2017) of MoPNG, automation of all ROs were supposed to be completed by December 2018. However, only 80 *per cent* ROs were automated by three OMCs by December 2018 with a capex of ₹1,487 crore.

  Due to slow progress of automation, MoPNG included this as a parameter in the MOU targets for OMCs for the year 2018-19. IOCL and BPCL could automate 98 and 93 *per cent* of ROs respectively by March 2019 and HPCL could achieve complete automation after 20 months from implementation of daily pricing.

- In case of HPCL and BPCL, some of the ROs, which were compliant for daily price push, could not successfully receive the pushed price mainly due to lack of sustained connectivity. Review of data of HPCL for the period 16 June 2017 to 30 June 2018 showed that daily failure rate ranged between 9 and 88 *per cent* and for BPCL (from 20 June 2017 to 30 June 2018) the failure rate ranged between 59 and 93 *per cent*. None of the eight automated ROs of IOCL visited by Audit staff had sustained connectivity resulting in manual price change by the dealers.

- Daily RSP was changed by the dealers manually at the automated ROs instead of being pushed automatically by the central server during field visit of Audit staff. Details in this regard are tabulated below:

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[14] ***IOCL – 25,951, HPCL – 14,992 and BPCL – 14,070***
[15] ***IOCL – 9,925, HPCL – 5,033 and BPCL – 7,056***
[16] ***IOCL – 16,026, HPCL – 9,959 and BPCL – 7,014***

Table 9.4.1: Instances of manual changing of RSP at automated ROs

OMC	Name of controlling office	Auto mated ROs (Nos.)	No. of automated ROs where daily prices were changed manually on the day of visit	Automated ROs where daily prices were changed manually (in per centage)	No. of ROs having more than 51 instances of manual price changes since implementation
HPCL	Bhopal RRO	177	78 (03 September 2018)	44	104
	Indore RRO	200	32 (08 October 2018)	16	37
	Mumbai RRO	87	36 (16 October 2018)	41	Data not available
BPCL	Surat TO	189	111 (27 August 2018)	59	--do--
	Indore TO	179	102 (29 September 2018)	57	--do--
	Gwalior TO	106	73 (25 October 2018)	69	--do--
	Manmad TO	196	72 (31 October 2018)	37	--do--

- It can be seen from the above that manual price changes were rampant in respect of the outlets at Bhopal RRO, despite it being an automated one. In case of IOCL, the extent of manual intervention in automated ROs could not be ascertained for want of data relating to dissemination of daily prices by the server. However, in one of the ROs under the Gurugram Divisional Office of IOCL, the dealer intervened manually on 131 and 132 occasions before and after 6 a.m. for HSD and MS respectively during the period July 2017 to September 2018 in spite of successful auto price push.

OMCs attributed (April 2019) manual change of prices in automated ROs to lack of connectivity. HPCL stated that with the implementation of VSAT the problem will be addressed. MoPNG stated (February 2020) that the automation of ROs was not linked with the daily pricing which was implemented since June 2017. It facilitated the auto price push and in other ROs the daily pricing was implemented on manual basis. At present feasible and operative ROs have been automated and most of them have been provided with connectivity. Though there were manual operations in automated ROs, correct prices were charged.

The reply is to be viewed against the fact that implementation of daily pricing required automation of ROs with sustained connectivity to ensure prompt and correct charging of prices by the ROs. In its absence, mechanism to ensure correct change of pricing by the dealer and monitoring by the field officers was required. However, at the time of implementation of daily pricing, the OMCs lacked both and took time to achieve automation target which resulted in charging of incorrect prices to the consumers, as pointed out in para 9.4.5.2.

9.4.5.2 Change of daily prices by dealers

i) Lack of promptness in changing the prices by dealers

Audit scrutiny of records relating to revision of prices (price change reports/ logs) by the dealers at the selected ROs revealed the following:

- There were 3,463 instances in 91 out of 188 ROs (IOCL-40, HPCL-35 and BPCL-16) when dealers were not prompt in changing the prices at the prescribed time of 6 a.m. The daily prices were manually revised within the range of 587 minutes before 6 a.m.

and 1,078 minutes after 6 a.m. However, the timing of working hours of most of the ROs was displayed as 7 a.m. to 11 p.m. Thus, overcharging from customers by the dealers at such instances could not be ruled out.

- There were 95 instances (IOCL- 41, HPCL-54 and BPCL-nil) when prices were revised on higher side than the prevailing RSP for the day by the dealers resulting in overcharging which is a major irregularity in terms of Marketing Discipline Guidelines (MDG).

IOCL/ HPCL stated (February 2019/ April 2019) practical difficulties like greater number of dispensing units involved in change of prices, lack of connectivity, operation of ROs in shifts, repairing of printers, and automation of ROs etc. BPCL stated (April 2019) that corrective action such as issuing of detailed SOPs, guidelines to field officers and dealer network etc. has been initiated. BPCL further stated that work is underway for modifying the RO Inspection Report (ROIR) to ensure that the Sales Officer takes a print of the price log and attaches the same along with the ROIR.

MoPNG (February 2020) stated that currently auto price push with VSAT & Real Time transfer has been implemented at 68 *per cent* of the total automated ROs and will meet 100 *per cent* target by December 2020. It does not allow manual intervention. Even when manual intervention is required in case of connectivity failure, the system implements the revised price after the connectivity is re-established.

The instances pointed out by Audit indicate lack of monitoring of price change by the field officers of OMCs which resulted in delay in price change and charging of incorrect prices by the dealer. Recurrence of such cases is possible as the new system has not been implemented at all ROs. Audit appreciates that BPCL decided to bring in a procedure where the sales officer takes a print of the price log and attaches the same along with ROIR.

ii) Incorrect charging of prices by dealers

As per clause 1.6 (i) of the MDG applicable to OMCs effective from 8 January 2013, RO dealer should ensure charging of correct price. Scrutiny of transaction reports at the automated ROs, cash/ credit bills issued by dealers and daily sales record revealed cases of incorrect charging of prices. From the record made available at ROs visited by audit, 19 out of 86 ROs (IOCL), 2 out of 53 ROs (HPCL) and 2 out of 49 ROs (BPCL) had instances of over/ undercharging as detailed below:

Table 9.4.2: Instances of over/ undercharging

OMC	No. of ROs test checked	No. of ROs where over/ under charging noticed	Percentage of ROs where over/ under charging noticed	Instances of overcharging	Instances of undercharging
IOCL	86	19	22	109	104
HPCL	53	2	04	04	nil
BPCL	49	2	04	06	nil
Total	**188**	**23**	**12**	**119**	**104**

Source- Data furnished by the Management

OMCs accepted incorrect charging of prices pointed out by audit. IOCL attributed (April 2019) incorrect charging of prices to wrong prices communicated by the company to the dealers, absence of malafide intention by dealers, practical difficulties involved in changing of prices and that the dealers were cautioned for these errors. HPCL stated (April 2019) that new application viz., 'Retail Automation Dashboard' has been developed for monitoring/ tracking price change at the ROs through system. MoPNG stated (February 2020) that the extent of incorrect price changes was marginal which rules out wrong intention on the part of the dealers. However, the dealers were counseled in these cases. In one case, action was taken on the dealer in terms of the MDG guidelines. In future, the improvements in the automation and connectivity will take care of these lapses.

The cases of incorrect charging of prices were only indicative and were noticed at the ROs inspected on sample selection basis. These cases showed lack of proper monitoring by OMCs.

iii) Overcharging due to flaws in Automation system

Audit observed that overcharging occurred at an automated RO, under Mumbai DO of IOCL due to discrepancy in communication of rates through mail and server. The dealer implemented the rate communicated through auto generated mail which was higher than the rate pushed by the server, as detailed below:

Table 9.4.3: Details of overcharging due to system flaw

Bill No.	Date	Product	Rate charged to the customer (₹/ ltr)	Applicable rate (₹/ ltr)
64606	01 June 2018	MS	85.85	85.81
64606	01 June 2018	HSD	72.28	72.25
64573	01 June 2018	MS	85.85	85.81
64572	01 June 2018	HSD	72.28	72.25
64568	01 June 2018	HSD	72.28	72.25

Source- Data furnished by the Management

Further, the rate communicated through mail must have been implemented at all non-automated ROs and automated ROs where dealers manually changed the price due to connectivity issue.

Management accepted (April 2019) the discrepancy in communicating the rate by IOCL; however, the reply was silent about corrective action and impact of this discrepancy on non-automated and automated ROs where there was no connectivity. MoPNG did not offer any comment.

iv) Change of HSD prices on multiple occasions during the day

It was noticed at an automated RO under Goa Divisional Office of IOCL that the prices were changed on multiple occasions on the same days in May 2018 by the dealer using two different log-in IDs as the system break-down was frequent. Hence, charging of incorrect prices cannot be ruled out during those days as detailed below:

Table 9.4.4: Instances of change in HSD prices on multiple occasions during the day

No.	Date	Actual price (₹ per litre)	Time of pushing the prices	Prices changed by the dealer (₹ per litre)
1	20 May 2018	71.00	08.29 hrs	71.00
			20.48 hrs	71.05
2	21 May 2018	71.25	6.02 hrs.	71.25
			21.11 hrs	71.30
3	22 May 2018	71.52	6.11 hrs	71.52
			23.37 hrs	71.65
4	23 May 2018	71.79	6.03 hrs	71.79
			21.43 hrs.	71.80

Source- Data furnished by the Management

From the table it can be observed that the price changes by the dealer were on higher side which resulted in charging of incorrect prices.

IOCL stated (April/ May 2019) that the case was examined by a committee which reported (May 2019) that as the system break-down was frequent, the dealer used the Admin login shared by the vendor to avoid sale loss and customer inconvenience. Further, during May 2018 the dealer suffered minor loss due to net over/ under charging. MoPNG reiterated (February 2020) the management reply and added that the new automation system and connectivity has been installed at the subject RO to ensure auto price push and the dealer has been counseled for maintaining correct price in case of failure of the system.

Though the dealer might have suffered net loss during a particular month, fact remains that consumers were charged at incorrect prices in these instances. Further, these are the results of test checked cases and are indicative.

v) Non availability of transaction reports in the automation system

In case of IOCL, price change reports were not available in respect of an automated RO under M.P. State Office and two automated ROs under Gurugram DO. Hence audit could not verify promptness in change of prices and charging of correct prices by the dealers. The information was also not available in the Marketing Headquarters.

Management stated (April 2019) that the price change report was not available at these three outlets due to technical problem and the automation vendor has been cautioned to keep a backup. MoPNG did not offer any remarks.

vi) Incorrect display of RSP in HPCL and BPCL App/ Mobile number

HPCL and BPCL have developed mobile applications called "My HPCL App" and "Smart Drive" respectively for assistance to customers. These apps play important role for the customers in verification of the rates charged by the dealers. Audit test checked functioning of these 'Apps' and observed that:

- The RSP of MS and HSD at one of the ROs under East Zone of HPCL was showing as ₹77.87 per litre and ₹73.72 per litre respectively in the App on 31 August 2018 against the RSP of ₹78.14 per litre and ₹74.20 per litre which was higher by ₹0.27 per litre and ₹0.48 per litre respectively. HPCL stated (April 2019) that the mistake happened due to technical problem and corrective action would be taken through Information System.

- The BPCL App could not detect two ROs under East Zone and could not show the prices of petroleum products. It showed a message "No outlet found". BPCL stated (April 2019) that the problem occurred due to connectivity issue at that location.

Audit test checked facility provided to customers by BPCL to verify the correctness of RSPs of products on mobile number through SMS, at three ROs at Bhatinda and Dehradun. However, no reply was received for 7 out of 12 SMSs[17]. BPCL stated (April 2019) that it happened during initial phase due to some integration issues and the same have been addressed. MoPNG did not offer any remarks.

Malfunctioning of the Apps and SMS facility needs attention since it would improve confidence level of customers regarding the price charged.

9.4.5.3 Inspection of ROs by OMCs

Minutes of the Industry meeting held on 9 January 2013 prescribed minimum frequency of inspection of ROs by field officers of OMCs, which ranged from twice a year to four times a year depending on extent of automation. In the case of BPCL, 176 out of 14,762 ROs had shortfall in such inspections, while 2,454 out of 15,604 ROs in HPCL had shortfall in inspections. In the case of HPCL, 7 *per cent* of ROs had never been inspected and 9 *per cent* of ROs, had been inspected only once. IOCL did not provide the necessary data.

Further, field officers were required to report in the prescribed format about the charging of correct prices by the dealers during the mandatory inspections, but the formats did not require reporting of delays in change of prices. This has resulted in continued over/ under charging from costumers. Scrutiny of Inspection Reports revealed that field officers of 25 ROs of IOCL and 10 ROs of BPCL did not verify and report on the promptness in changing of RSPs and correctness of the price charged by dealers.

OMCs accepted the observation. BPCL stated (April 2019) that corrective action such as issuing of detailed SOPs, guidelines regarding updation of daily pricing, modifying the Retail Outlet Inspection Report etc. have been initiated.

MoPNG stated (February 2020) that suitable advices have been issued to step up the RO inspections.

Conclusion:

Lack of automation and sustained connectivity adversely impacted daily price change mechanism at ROs.

Lax implementation of daily pricing by dealers and non -monitoring on the part of OMCs led to charging of incorrect price to customers.

[17] ***Sent on 04 September 2018, 05 September 2018, 08 September 2018, 09 September 2018, 10 September 2018 and 11 September 2018***

Hindustan Petroleum Corporation Limited

9.5 Additional expenditure on energy charges

Visakh Refinery of Hindustan Petroleum Corporation Limited failed to install the capacitor banks to achieve unity/ near unity power factor, which resulted in payment of excess energy charges of ₹18.01 crore from April 2011 to March 2019.

Visakh Refinery (VR) of Hindustan Petroleum Corporation Limited (HPCL) entered (June 1986) into an agreement with Eastern Power Distribution Company of Andhra Pradesh Limited (EPDCL[18]) for import of power with Contracted Maximum Demand (CMD) of 13[19] Mega Volt Ampere (MVA). The demand/ energy charges payable to EPDCL were as per tariff regulations issued by Andhra Pradesh Electricity Regulatory Commission (APERC).

Prior to April 2011, consumers were billed on active energy consumption measured in kWh (Kilo Watt Hour). kWH represents the active energy consumed and converted into useful work, whereas Kilo Volt Ampere hours (kVAh) represents the apparent power[20]. The ratio of active power to apparent power is called as Power Factor (PF). A surcharge/ penalty was to be collected whenever PF was less than 0.90 until 31 March 2009, which was subsequently increased to 0.95 with effect from 1 April 2009.

APERC, vide tariff orders dated 22 July 2010, directed the licensees to explore the possibility of implementing kVAh based tariff (in place of kWh-based tariff) for all the High Tension (HT) consumers from 2011-12 onwards. In line with the directions, EPDCL introduced kVAh based billing from 2011-12 onwards to reduce the reactive power drawal from the system thereby ensuring better system management. The revised billing methodology was intended to drive the consumer to reach unity PF and to provide commercial disincentive for reactive energy indiscipline of consumers.

The consumers had to install power capacitors[21] at their end which would minimise the kVAh generation. If the capacitors were not installed or were not in proper service, the apparent power drawn would be in excess of active power. This would result in additional expenditure due to billing of energy on apparent power consumed in kVAh.

Audit observed that the Visakh Refinery of HPCL did not maintain unity or near unity PF. The active power drawn ranged between 81 *per cent* and 100 *per cent* of the apparent power transmitted by EPDCL during the period April 2011 to March 2019, despite the fact that the Refinery was to pay for the apparent power transmitted. It was further observed that though HPCL had already installed and commissioned Capacitor Voltage Transformer (CVT) at

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[18] ***Erstwhile Andhra Pradesh State Electricity Board***

[19] ***The CMD was enhanced to 24 MVA from May 2017 onwards***

[20] ***Electrical energy has two components viz. Active Energy (kWh) and Reactive Energy (kVArh). Vector sum of these two components is called as Apparent Energy and is measured in terms of kVAh***

[21] ***Capacitor is an electrical facility used for generation of reactive power. A capacitor helps to improve the power factor by relieving the supply line of the reactive power***

132 KV level to have a good PF and PF correction, it did not install the four capacitor banks[22] purchased (April 2012) in downstream substations. As a result, the Refinery paid ₹18.01 crore excess energy charges during the period April 2011 to March 2019.

Management replied (November 2019) that:

- Prior to 2010, surcharge was levied if PF was recorded below 0.90. This implies that 0.90 was an acceptable value considering vide range of industries and applications. Considering PF of 0.90, the excess energy charges would be ₹4.58 crore only for the period April 2011 to March 2019.
- The available capacitor banks were put online from October 2019 based on relay settings received from the consultant, which improved the PF to above 0.90. Final report of consultant was awaited.

The reply is not acceptable in view of the following.

- Levying penalty based on PF had been withdrawn by APERC from April 2011. APERC revised the method of billing energy charges from KWh to KVAh based billing since April 2011 and accordingly, the energy user (the Company) was required to maintain unity PF. Otherwise, the user was to incur extra expenditure if the active power was less than apparent power.
- Though the Company purchased four capacitor banks in April 2012 and received them in 2013, it put these capacitor banks online to use during October 2019 only after being pointed out by Audit. Had they been put to use immediately after purchase, the Company could have avoided the payment of excess energy charges.

The Ministry replied (March 2020) that:

- It was not practically possible to maintain unity PF considering various factors, viz., types of loads, application and dependency on grid behaviour. However, PF of 0.90 and above was the desirable PF for industries. Loss was computed hypothetically assuming a condition of unity PF.
- The Refinery maintained PF more than 0.90 for most of the period when Gas Turbine Generators (GTGs) were running in island mode[23]. However, to avoid losses due to tripping of Diesel Hydro Treater (DHT) and other process units, the parallel operations of GTGs were commenced from April 2016 due to which the PF was less than 0.90.
- As part of DHT project, a purchase order was placed in April 2012 for procurement of capacitor banks and same were received in 2013. However, DHT unit came into continuous service in 2015 and was fed by grid in island mode. Parallel operation was commenced in April 2016 only. Hence capacitor banks were not put to use immediately after purchase. Charging of capacitor banks while unit is online was not

[22] ***Capacitor bank is a group of several capacitors that are connected in a series or parallel with each other to store electrical energy***

[23] ***Power Plant is said to be in 'Island Mode' if it is disassociated from the Distribution System or Power Grid***

appropriate. So, it was decided to put these capacitor banks in continuous service during planned shutdown of DHT units.

The reply of the Ministry is not acceptable in view of the following:

- Since APERC revised the PF surcharge from 0.90 to 0.95 from 1 April 2009 onwards, PF of 0.95 and above was the desirable PF for industries and not PF above 0.90, as stated by the Ministry. Further, after change of billing methodology from April 2011, the consumers were supposed to maintain unity PF. The loss computed was not hypothetical but actual additional expenditure incurred due to drawal of apparent energy in excess of actual energy.
- Despite knowing the fact that charging of capacitor banks during operation of DHT was not appropriate, the Company did not install the capacitor banks along with commissioning of DHT (2015) and the same defeated the very objective of purchasing capacitor banks. Non-installation of these four capacitor banks purchased along with DHT lacked justification and resulted in additional energy charges. Management reply that PF was improved after installation of capacitor banks confirms the audit observation.
- Audit observation is not on operation of GTGs either in island mode or parallel mode but on non-installation of capacitor banks purchased along with DHT. Had the capacitor banks been installed along with DHT, it could have improved the PF during operation of GTGs either in island or parallel mode.

Thus, failure to install the available capacitor banks in a timely manner led to drawal of apparent power in excess of active power, which resulted in additional expenditure of ₹18.01 crore towards excess energy charges.