

CHAPTER-II

PERFORMANCE AUDIT

2.1 Beas Valley Power Corporation Limited

Executive Summary

The Government of Himachal Pradesh decided (February 1999) to take up the execution of the Uhl Hydro Electric Project Stage-III through a Special Purpose Vehicle (SPV) namely Himachal Pradesh Jal Vidyut Vikas Nigam Ltd., which was subsequently renamed (November 2006) as Beas Valley Power Corporation Limited (Company).

The project initially estimated to cost ₹431.56 crore for commissioning (March 2007) during 10th Plan is now anticipated to be completed at a cost of ₹940.84 crore by September 2014 involving cost overrun of ₹509.28 crore. This has resulted in increase in *per* MW cost from ₹4.32 crore envisaged in the DPR to ₹9.41 crore *per* MW and *per* unit cost of ₹2.35 to ₹3.94. The delay in commissioning the project has caused surrendering (October 2007) interest subsidy incentive of ₹5.63 crore.

{Paragraph 2.1.8.1 & 2.1.8.2 (ii)}

The project cost of Uhl Stage-III HEP was irregularly increased by ₹4.00 crore by charging the proportionate cost of 10 MW Ghanvi Stage-II HEP and assets created by HPSEBL which have no relation with this project.

{Paragraph 2.1.8.3(i)}

The Company did not observe standard procedure as laid down in CPWD manual, guidelines issued by the Central Vigilance Commission and non adoption of uniform criteria while finalising the bidding documents/contract agreements.

{Paragraph 2.1.8.3(ii)}

The Company incurred avoidable extra expenditure of ₹19.18 crore due to non compliance of various contractual and statutory provisions besides blocking of funds of ₹67.93 lakh on abandoned works.

(Paragraph 2.1.8.5)

The Company did not hand over the sites duly developed to the contractors in time resulted in extra expenditure of ₹38.61 crore on account of entry tax, overrun charges, insurance premium, hiring of mobile crane and price escalation.

(Paragraph 2.1.8.6.2)

Introduction

2.1.1 The Government of Himachal Pradesh decided (February 1999) to take up the execution of Uhl Hydro Electric Project (Stage-III) by the Himachal Pradesh State Electricity Board (HPSEB) through Special Purpose Vehicle (SPV) namely Himachal Pradesh Jal Vidyut Vikas Nigam Limited, a company fully owned and promoted by the HPSEB which was subsequently renamed (November 2006) as Beas Valley Power Corporation Limited (Company). The Detailed Project Report (DPR) of the project was revised (October 1999) from 70 MW to 100 MW by utilising water of Neri and Rana Khad with designed potential of 391.19 million units (MUs) during 90 *per cent* dependable year¹ and 437.10 MUs during 50 *per cent* mean year¹. Accordingly, the Techno Economic Clearance (TEC) was accorded (September 2002) by the Central Electricity Authority (CEA) for ₹ 431.56 crore for commissioning (March 2007) during 10th Plan. For execution of the project, a loan amounting to ₹ 331 crore was arranged from the Power Finance Corporation (PFC). The project was taken up for execution in October 2002 and now has been targeted for completion in September 2014. The cost of project was revised (March 2010) to ₹ 940.84 crore.

Organisational set up

2.1.2 The monitoring and control at Government level is done by the Principal Secretary (Multi Purpose Projects & Power – MPP&P) to the Government of Himachal Pradesh. The Managing Director is the executive head of the Company who is assisted by three Superintending Engineers (Works, Civil & Mechanical and Electrical) and Finance & Accounts Wing.

Audit objectives

2.1.3 The objectives of the performance audit were to assess whether:

- the project has been planned and implemented in strict compliance with norms, conditions and regulations laid down for establishment of hydro power projects;
- the contracts were awarded with due regard to economy and in a transparent manner;
- the execution of project was managed economically, effectively and efficiently;
- all claims of the contractors were properly scrutinised and passed in an efficient manner;

¹ For Mean and Dependable years, the run off the river data collected for any number of years is arranged in descending order. Mean year is the middle year. 90 *per cent* Dependable year is the 90/100th year of total years for which data is collected.

- the manpower requirement was realistic and its utilisation optimal; and
- there was a proper monitoring system in place to review the execution of project so as to take corrective measures to overcome deficiencies identified.

Scope of Audit

2.1.4 A performance audit was conducted from November 2012 to April 2013 to cover the execution of Uhl Hydro Electric Project (Stage-III) since November 2006 covering all the three circles (Design, Civil and Electro Mechanical) and Managing Director Office.

Audit Methodology

2.1.5 The performance audit commenced with an entry conference with the Managing Director of the Company in January 2013 explaining scope of audit, audit objectives and criteria. Records relevant to identification of project, allotment, approvals, statutory clearances, execution and environmental impact were scrutinised. Audit findings have been discussed with the Managing Director of the Company in an exit conference held on 14 October 2013 and the replies of the Management received in October 2013 have been considered while finalising the report. The replies of the State Government were, however, awaited (October 2013).

Audit criteria

2.1.6 The audit criteria adopted for achievement of the audit objectives were:

- Guidelines issued by the Union Ministry of Power (MoP), CEA and the Central Water Commission (CWC) from time to time relating to development of hydro power projects.
- Agreements entered into with various contractors.
- Central Electricity Act, 2003; National Electricity Policy and Plan; Guidelines issued by the Union Ministry of Environment and Forests (MoE&F); Central Vigilance Commission (CVC) and Hydro Power Policy, 2006 of Government of Himachal Pradesh.

Audit Findings

2.1.7 Audit findings, arising from performance audit are discussed in succeeding paragraphs:

Financial Position

2.1.8 The financial position of the Company for the past five years ending March 2013 is given in **Table 2.1.1**.

Table 2.1.1

(₹ in crore)

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13
A. Liabilities					
Paid up Capital ²	146.84	173.04	214.54	259.16	282.25
Borrowings	198.69	298.95	388.98	467.00	526.50
Current Liabilities & Provisions	16.29	32.31	35.05	40.32	101.03
Total	361.82	504.30	638.57	766.48	909.78
B. Assets					
Gross Block	25.74	26.02	28.73	35.26	34.70
Less: Depreciation	1.01	1.42	1.92	2.71	3.39
Net Block	24.73	24.60	26.81	32.55	31.31
Capital Works-in-Progress	299.32	428.18	544.60	668.45	791.36
Current Assets, Loans and Advances	37.05	50.80	66.44	64.76	86.39
Assets not in use	0.72	0.72	0.72	0.72	0.72
Total	361.82	504.30	638.57	766.48	909.78
Debt equity ratio	1.35:1	1.73:1	1.81:1	1.80:1	1.87:1
IDC³ Capitalised	47.08	76.84	118.08	169.70	230.29

The paid up capital increased from ₹ 146.84 crore in 2008-09 to ₹ 282.25 crore in 2012-13 and the debt equity ratio also increased from 1.35:1 to 1.87:1 due to increase in borrowing from ₹ 198.69 crore to ₹ 526.50 crore during the same period. The Company is yet to start commercial operations and therefore, it is not preparing its profit and loss accounts.

2.1.8.1 Time and Cost overrun

The Techno-Economic Clearance (TEC) for the construction of project was accorded (September 2002) by the Central Electricity Authority (CEA) with loan of ₹ 302.09 crore and equity of ₹ 129.47 crore with commissioning date of March 2007. The project is now targeted to be completed at a cost of ₹ 940.84 by September 2014 involving cost overrun of ₹ 509.28 crore mainly due to delay in completion of works. The date of award of various works, due date of completion, present status and delay/time overrun under each of the components ending March 2013 is detailed in **Appendix 2.1.1**, which shows that the delay in completion of works ranged between 12 and 72 months. The percentage increase in cost of main components ranged between 65 and 407 per cent and overall increase in cost was 118 per cent as per details given in

² The HPSEB has made investment in the Company by arranging loan from Banks

³ Interest during construction.

Appendix 2.1.2. The time and cost overrun resulted in increase in *per MW* cost from ₹ 4.32 crore envisaged in the DPR to ₹ 9.41 crore *per MW* and *per unit* cost of ₹ 2.35 to ₹ 3.94. The main reasons for delay in completion of works were obtaining forest clearance for quarry sites four years after the receipt of TEC and environmental clearance, late handing over of sites by the Company to the contractors and non synchronisation of award of civil and electromechanical works with the progress of works.

2.1.8.2 The delay in execution of project resulted in:

(i) Generation loss

The delay of more than six years (March 2013) in commissioning the project has resulted in potential energy loss of ₹ 940.00 crore⁴ including deferment of royalty payments of ₹ 112.80 crore at the rate of 12 *per cent* of deliverable energy to the State Government.

(ii) Loss of interest subsidy incentive

The Company availed interest subsidy incentive of ₹ 5.63 crore for this project under “Accelerated Generation and Supply Programme” (March 2003) of Government of India, MoP applicable for projects to be completed during 10th plan. The MoP directed the PFC (September 2007) to recover the subsidy along with interest in respect of projects which could not be completed within stipulated period. Accordingly, subsidy of ₹ 5.63 crore along with interest thereon amounting to ₹ 23.25 lakh had to be refunded (October 2007) by the Company.

The reasons such as delay in obtaining clearances and timely handing over of sites to the contractors were controllable by proper planning and effective monitoring by the Management whereby the cost of the project could have been minimised so as to reduce the generation cost. The other factors for increasing in cost and time overrun are discussed in succeeding paragraphs.

2.1.8.3 Other factors contributing increase in project cost

(i) Irregular booking of unrelated cost

The Deputy Chief Engineer (Electrical Design), HPSEBL, Sunder Nagar was assigned the preparation of tender documents, award of Electro-Mechanical works and approval of drawings in respect of 10 MW Ghanvi (Stage-II) HEP of the HPSEBL. In addition to this, the office was also assigned similar works of Uhl (Stage-III) HEP of the Company.

The entire employees cost and administrative & general expenses up to March 2012 amounting to ₹ 14.32 crore of this office had been fully charged to Uhl (Stage-III) HEP of the Company instead of allocating the same to both the projects proportionately. On this being pointed out in audit (January 2013), the office started bifurcation of expenditure between these two

⁴ 383.67 MUs x ₹ 3.57 (2007-08) + 383.67 MUs x ₹ 4.06 (2008-09) + 383.67 MUs x ₹ 4.04 (2009-10) + 383.67 MUs x ₹ 4.02 (2010-11) + 383.67 MUs x ₹ 4.41 (2011-12) + 383.67 MUs x ₹ 4.40 (2012-13)= ₹ 939.99 crore.

projects. The expenditure of ₹ 1.98 crore for the year 2012-13 was however allocated in the ratio 28:72. The allocable portion in respect of previous years expenditure to Ghanvi project in the same ratio works out to ₹ 4.00 crore which had been irregularly booked to the project.

(ii) *Deviation from standard guidelines and procedure*

The Company did not observe standard procedures as laid down in CPWD manual and guidelines issued by the CVC besides non adoption of uniform criteria while finalising the bidding documents/contract agreements as discussed below:

- The Company provided interest free mobilisation advances to M/s AIPL between November 2010 and February 2011 paid out of borrowed funds due to linking of its recovery with the progress of work instead of time bound manner as *per* CVC guidelines (April 2007).

The Management stated (October 2013) that decision to provide interest free advance had been taken by the competent authority after looking into ground realities and accordingly provision was made in the contract agreement. The reply was not acceptable as the interest free advance was paid out of borrowed funds and as such recoveries thereof should have been made in a time bound manner.

- The provisions regarding payment of price escalation for justified extended period on the basis of prices/wages prevailing at the time of stipulated date of completion or as prevailing for the period under consideration whichever is less was not inserted in the contract agreements in respect of four civil works with schedule completion period ranged from 24 months and 30 months as prescribed under Section 33.10 (3) of form CPWD 7 and 8.

The Management stated (October 2013) that the price escalation was paid strictly as *per* clause-10(C) of contract agreement. The reply was not acceptable as in all these cases the clause-10(C) was not applicable whereas; clause-10(CC) is applicable where the stipulated period of completion are more than 18 months which prescribed for payment on the basis of prices/wages prevailing at the time of stipulated date of completion or for the period under consideration whichever is less.

- The contract for supply and erection of Hydro Generating equipments in respect of Ghanvi Stage II was awarded (April 2008) by HPSEBL (own project) to M/s VA Tech Escher Wyse Flovel Limited, Faridabad with price adjustment subject to a ceiling of 15 *per cent* (plus or minus) of the contract price as compared to the ceiling limit of 20 *per cent* applied to the contract awarded to BHEL in respect of Uhl Stage III project of the Company, though both tenders were processed by the same wing of the HPSEBL in the year 2006.

The Management stated (October 2013) that the price variation claim (PVC) ceiling of 20 *per cent* in case of Uhl Stage-III and 15 *per cent* in case of Ghanvi have been approved by the HPSEB after deliberations. Also the

quantum of work and completion time period for both the projects were different and could not be compared. The reply does not justify the acceptance of extra five *per cent* ceiling for price adjustment in the case of Uhl Project as compared to Ghanvi Stage II.

- While preparing bid documents, tenders and executing agreement (April 2003) with M/s. SSJV Pvt. Ltd. (Contractor), a provision for contractor's profit on extra and substituted items was kept at 25 *per cent* as against 20 *per cent* prescribed under Para 3.5 of the Guidelines for Preparation of Project Estimates for River Valley Projects issued by CWC. However, after rescinding the contract (April 2008) with the contractor, the provision of 20 *per cent* was restored while awarding the balance works to M/s CCPL and M/s Abir Infrastructure Pvt. Ltd.

The Management admitted (October 2013) that 25 *per cent* profit was only for extra items beyond the BOQ. The reply was not acceptable as the component of profit and overhead charges should have been kept as *per* the CWC guidelines and DPR.

- Tenders for the construction of Balancing-cum-Storage Reservoir of the project with an estimated cost of ₹ 15.98 crore were invited in June 2005 with earnest money (EM) at the rate of 0.25 *per cent* of the estimated cost as against one *per cent* prescribed under Clause 2 of the Standard Contract Clauses for domestic bidding circulated (April 2005) by Ministry of Statistics and Programme Implementation, Government of India.

The Management stated (October 2013) that the conditions governing the contract were approved by the BOD with the concurrence of the finance wing. The reply was not acceptable as the Company should have safeguarded its financial interests by inserting the clause in the contract as *per* the provisions *ibid*.

- Due to non insertion of standard clause as per CPWD Form 7/8 for recovery of security deposits from running bills of the contractors, the Company could not forfeit the required amount of security deposits in respect of 11 contracts awarded for construction of residential accommodation and execution of water supply scheme, the contracts of which were rescinded between November 2008 and May 2010.

The Management admitted (October 2013) that the Company was not aware of the latest amendments carried out in the CPWD manual and thus could not incorporate the same in the agreements executed during and after 2004.

(iii) Construction of buildings on unsafe site

The Company constructed non residential buildings (March 2009) after incurring an expenditure of ₹ 51.45 lakh. The assets so created were badly damaged (July 2009) before occupation due to land slides and had to be abandoned as *per* the recommendation (January 2012) of the Sr. Geologist. It was only after land slide that the Company came to know that the site on which constructions was made was unsafe being land slide prone area. This resulted in increase in cost of project by ₹ 51.45 lakh without any benefit.

The Management stated (October 2013) that no other site with requisite area/space was available and blasting in surrounding areas done for construction of project had also contributed to destabilise the zone. The reply was not acceptable as the area was prone to land slides which were also confirmed by the geologist deployed by the company.

Award of Civil works

2.1.8.4 The civil works of the Project mainly comprises of construction of reservoir, Head Race Tunnel (HRT), Trench Weir and intake structures, Aqueduct and Surge shaft, Pen Stock, Power House and Tail Race Channel *etc.* These works were divided into ten packages for the purpose of award and were awarded by the Company to eight contractors for a total cost of ₹ 220.74 crore. The scrutiny of contract agreements executed with various contractors showed that the Company incurred an avoidable expenditure of ₹ 56.67 lakh in following cases:

2.1.8.4.1 Undue favour to contractors

Clause 9.12 Chapter-IX Volume-II of the contract agreement executed with M/s SSJV provides that blasting for construction of HRT and its adits⁵ shall be permitted only after making adequate provisions for the protection of persons, the works and public & private properties. It further stipulates that any damage done to the works or property by blasting shall be repaired by the contractor at his own cost. A sum of ₹ 17.27 lakh was paid (September 2008) by the Company to the owners of the houses and cowsheds (119 numbers in six villages) damaged between April 2003 and June 2003 due to blasting done by the contractor. The Company instead of recovering the same from the contractor as *per* the provisions *ibid.* charged the same to the project.

The Management stated (October 2013) that the work of HRT executed by the contractor was rescinded in April 2008 and the payment of damages was released in September 2008, therefore, the recovery could not be effected from the firm. The reply was not acceptable as recovery should have been made from the contractor immediately from the bills passed after June 2003.

2.1.8.4.2 Avoidable expenditure on award of work after rescinding

After rescinding the work from M/s SSJV in April 2008, the balance work of HRT was awarded (30 September 2008) to M/s CCPL for ₹ 59.94 crore with scheduled completion period of 24 month.

The work awarded to M/s CCPL was also rescinded (July 2010) as the contractor failed to achieve the targets and the left out work was further awarded (October 2010) to third contractor (M/s AIPL) at risk and cost of earlier contractors. In order to take up the lining work of tunnel by M/s AIPL, removal of 10,552.22 M³ compact/loose muck involving expenditure of ₹ 83.91 lakh left out by the previous contractors was required. Out of this 5,202.77 M³ compact/loose muck had been removed by incurring an

⁵ A nearly horizontal passage from the surface in a tunnel.

expenditure of ₹ 39.40 lakh and the remaining work was in progress (March 2013). The amount had neither been recovered from the defaulting contractors nor included in the claims/counter claims filed against the contractor before the Arbitration.

The Management stated (October 2013) that once the HRT works are completed and final quantities are worked out, the revised cost on actual basis will be recoverable from the contractors. The reply was not acceptable as the Company would not be able to recover this amount due to non inclusion of above expenditure in the counter claim filed before the Arbitrator.

Execution of Civil Works

2.1.8.5 The scrutiny of records relating to execution of civil works showed that the Company incurred an avoidable extra expenditure of ₹ 19.18 crore due to non compliance of various contractual and statutory provisions besides blocking of funds of ₹ 67.93 lakh on abandoned works as discussed in the following paragraphs:

2.1.8.5.1 *Extra payment to contractors*

The work for construction of 8,477 meters long HRT (RD 424 meters to 8,901 meters) of the project was awarded (April 2003) to M/s SSJV for ₹ 69.58 crore. While executing the work the firm was directed to undertake controlled blasting at certain portions of HRT.

Audit noticed (December 2012) that though there was no provision in the tender documents/contract agreement for payment of extra rates to the contractor for adopting different methodology of work yet the contractor was paid additional rates quoted by him in December 2003 over and above the agreed rates and an amount of ₹ 70.23 lakh was paid between September 2004 and March 2008 without approval of the competent authority.

The Management stated (October 2013) that the counter claim against the contractor has been filed before the Arbitral Tribunal to recover the payment released on above account.

2.1.8.5.2 *Non compliance with statutory provisions*

Section 21 of the Contract Labour (Regulation and Abolition) Act, 1970 provides that a contractor shall be responsible for payment of wages to each worker employed by him. Further, every principal employer shall nominate a representative to be present at the time of disbursement of wages by the contractor and it shall be the duty of such representative to certify the amounts paid. In case the contractor fails to make payment of wages within the prescribed period then the principal employer shall be liable to make payment of wages and recover the amount from the contractor.

Audit noticed (December 2012) that wages for the period from January 2008 to March 2008 was not paid to the workers by the contractor. The workers represented (10 April 2008) to the Company as well as to Labour Officer, Mandi for releasing of their wages and on the direction (28 April 2008) of

Labour Officer, the Company released (May 2008) the unpaid wages amounting to ₹ 45.26 lakh. The payment so made could have been avoided, had the Company regularly nominated its representative as *per* the provisions *ibid.* and on the basis of his report the payment of ₹ 21.21 lakh released on 11 March 2008 to contractor could have been withheld for adjustment against wages payable for January/February 2008.

Thus, failure of the Company in observing the provisions of the Act *ibid.* resulted in avoidable payment of ₹ 45.26 lakh.

The Management stated (October 2013) that the audit version regarding accumulation of amount due to non deployment of representative by the Company was not true as no such situation has arisen in the previous years ever since the award of work. Moreover, the amount has been placed as counter claim in the ongoing arbitration case between the contractor and the Company. The reply was not acceptable as this situation could have been avoided by adhering the statutory provisions *ibid.*

2.1.8.5.3 Non compliance with the contractual terms

Clause 18 (Volume-I) of contract agreements entered into with various contractors for execution of different civil packages stipulates that the contractor shall supply without charges the requisite number of persons with the means and materials, necessary for the purpose of counting, weighing and assisting in measurement or inspection of the work or material. Failing their doing so, the same may be arranged by the Engineer-in-charge at the expense of the contractors.

Audit noticed (February 2013) that neither the workers were provided by the concerned contractors nor the Company asked them to provide as and when required. For assisting in measurement or inspection of the works or material, 641 work orders for deployment of labour were issued (2005-13) by the Company on which an expenditure of ₹ 1.28 crore was incurred. Instead of recovering this amount from the contractors the same was charged to project cost resulting in an undue favour to the contractors.

The Management stated (October 2013) that outsourcing has been done due to scarcity of requisite manpower to watch the interest of work. The reply was not acceptable as it was mandatory on the part of the contractors to provide the required manpower and in case of scarcity of manpower the expenditure incurred on their behalf should have been recovered from them.

2.1.8.5.4 Undue favour to the contractor

The construction work of Balancing-cum-Storage Reservoir was awarded (June 2007) to M/s TRG at a cost of ₹ 36.23 crore with scheduled completion period of 24 months. The said work could not be completed in time owing to delay in finalisation of construction drawings by the Company (first drawing was issued during January 2008). The work was also badly hampered due to non arrangement of required quantity of Steel and Cement by the Contractor due to increase in cost and on the request of the contractor, the Company devised a new price variation formula to compensate hike in prices by

amending existing formula under clause 10-C (b) (ii) of the agreement. The said package was still incomplete though provisional extension up to 30 June 2013 was allowed to the contractor.

Audit noticed (March 2013) that due to change in price escalation formula, the Company had to bear extra financial burden of ₹ 8.17 crore.

The Management stated (October 2013) that there was sharp hike in the prices of steel and cement hence new formula after splitting steel and cement component was devised. The reply was not acceptable as any future increase in prices as compared to the base price was already covered in the price escalation formula incorporated in the agreement. Further, the Company had to amend the formula to cover the price escalation due to delay in finalisation of construction drawings.

2.1.8.5.5 Non-recovery of mobilisation advances as per the agreed schedule

The Company granted Mobilisation Advance of ₹ 3.48 crore (July 2003 and December 2003 ₹ 1.74 crore each) and Machinery Advance of ₹ 2.00 crore (February 2003 and May 2006) to M/s SSJV (Contractor) as *per* clause 8.13 of the agreement with the condition that recovery would start from the stage the value of work done reaches 20 *per cent* and should be effected in such a way that the full advance including interest is recovered by the time value of work done reaches 80 *per cent* of the contracted amount. In addition to this a Special Advance of ₹ 2.00 crore (₹ 1.00 crore each in March 2007 and April 2007) was also allowed to speed up the progress of work which was not covered in the agreement. Thus, the contractor was paid ₹ 7.48 crore of total advance.

Audit noticed (March 2013) that the contract was rescinded in April 2008 and the Company thus was obliged to recover the full advance of ₹ 7.48 crore along with interest paid to the contractor. Against this the Company recovered only ₹ 3.83 crore thereby leaving ₹ 6.21 crore (*i.e.* advance of ₹ 3.65 crore and interest amounting to ₹ 2.56 crore as of March 2013) un-recovered.

The Management stated (October 2013) that the Company had now filed a civil suit (March 2011) in the High Court of Himachal Pradesh for recovery of outstanding advances.

2.1.8.5.6 Non-recovery of machinery rent

As *per* Clause 8.9 Vol-I Chapter-III of contract agreement, M/s Continental Construction Projects Limited (Contractor) was also provided machinery worth ₹ 3.05 crore by the Company on rent for the execution of balance work of HRT. Due to slow progress of work, the contract was rescinded (27 July 2010).

Audit noticed (December 2012) that the machinery rent was not recovered regularly every month from the contractor's running bills before rescinding the contract resulting in accumulation of rent of ₹ 42.68 lakh. Non recovery of rent also resulted in loss of interest thereon ₹ 23.30 lakh ending March 2013.

The Management stated (October 2013) that recovery had to be started after the contractor completed 20 *per cent* of the value of work and only 18.92 *per cent* work could be completed by the contractor till rescission of the work. The reply was not acceptable as the rent due should have been recovered regularly from the running bills instead of linking the same with progress of work.

2.1.8.5.7 *Blockade of funds on abandoned works*

The work for lift water supply scheme from river Beas to Project colony at Chullah was awarded (December 2006) to M/s Ashwani Goswami for ₹ 49.19 lakh with scheduled completion period of nine months. Due to slow pace of work the Company rescinded the contract (May 2010) after incurring an expenditure of ₹ 22.71 lakh and has not been re-awarded so far (March 2013) and the requirement of water has to be met by digging (February 2009) a Bore Well at a cost of ₹ 12.24 lakh.

Further, the construction work of Type IV buildings (Block-I and Block-II) was awarded (November 2005 and April 2007) at a cost of ₹ 73.02 lakh to two contractors. The construction work of Block I was stopped by M/s Ashwani Goswami after incurring an expenditure of ₹ 9.26 lakh. The contract was rescinded in November 2008 and was re-awarded in October 2009 but the contractor has not started the work though more than four years period has elapsed. M/s Maa Simsa Construction Company also stopped the construction work of Block II after receiving the payment of ₹ 35.96 lakh (89 *per cent* of work) during March 2012 and was incomplete till date (March 2013).

Thus, due to non completion of construction, the Company blocked funds of ₹ 67.93 lakh on the abandoned water supply scheme and partially constructed residential buildings.

The Management stated (October 2013) that a sum of ₹ 33.64 lakh had been deposited with Irrigation & Public Health (I&PH) Department in April 2013 for completion of lift water supply scheme but the work was yet to be started. As regards construction of buildings, the Management stated that the work relating to Block I could not be started due to filing of case by the contractor and the action to rescind the work relating to Block II would be taken up very shortly.

2.1.8.5.8 *Avoidable expenditure due to non allotment of vacant accommodation*

The Company constructed 78 sets (Type-I to III) of residential accommodation at project site, Chullah between February 2010 to March 2012 at a cost of ₹ 2.27 crore.

Audit scrutiny showed (March 2013) that the Company utilised only 39 sets out of total 78 sets up to March 2012. The remaining 39 sets had not been allotted so far (March 2013). The Company had hired a bus from HRTC to provide transport facility to its staff from Paprola to Project site (to and fro

100 Kms). The Company is also paying HRA and Conveyance Allowance to these employees availing bus facilities.

Thus, failure of the Company to allot vacant accommodation and to discontinue the transport facility after March 2012, resulted in an avoidable expenditure of ₹ 21.46 lakh (hiring of bus: ₹ 13.47 lakh, conveyance allowance: ₹ 5.41 lakh and HRA: ₹ 2.58 lakh) during 2012-13.

The Management stated (October 2013) that efforts are being made to allot the balance accommodation to the contractors/executing agencies on current market rates.

2.1.8.5.9 Extra financial assistance to contractors

The Company extended undue financial assistance of ₹ 4.80 crore to contractors over and above the contractual terms and conditions as discussed below:

(i) Clause 8.5 (b) Vol-I of the contract agreement entered into (30 October 2010) for execution of balance work of HRT with M/s AIPL stipulates that the electrical system for lighting *etc.* shall be handed over to the contractor for use on 'AS IS WHERE IS BASIS' and maintenance of the existing electrical system as the work progresses shall be done by the contractor at his own cost as *per* requirement.

Audit observed (January 2013) that the contractor procured additional 2.042 Km Armored Cable and 400 KVA servo voltage stabilizer *etc.* costing ₹ 17.62 lakh and the reimbursement of which was made (July 2011) to the contractor in violation of the agreement.

The Management stated (October 2013) that the material and equipments were provided to the contractor after approval of the BOD and on completion of the work the contractor would return the same to the Company. The reply was not acceptable as any further extension/augmentation of the existing system was to be done by the contractor at his own cost.

(ii) Clause 10 (i)(a) of the contract agreements entered into with five contractors⁶ for execution of six civil packages provided that the contractors shall be responsible for arranging all materials required from the source(s) acceptable to the Company. Clause 10(d), further stipulates that if the contractors request the Company for issue of any material as may be available in the stores but not stipulated in the contract, the same may be issued to them for execution of works, however, the contractors have to pay the stock issue rates, storage charges (3 *per cent*), supervision charges (10 *per cent*) or the market price whichever is higher.

All the above mentioned contractors requested the Company for arranging cement for them. Since cement was the main item to be used in civil works as such it was not required to be supplied by the Company. The Company

⁶ M/s Pilot Engineers, M/s TRG Industries, M/s CCPL, M/s SSJV and M/s PES Engineers.

arranged the same by procuring cement from the H.P. State Civil Supply Corporation Limited and supplied to them regularly from September 2004 onwards.

Audit scrutiny (February 2013) showed the Company supplied total 4.80 lakh cement bags to these contractors during the period from September 2004 to March 2013 by procuring the same on rate contract for Government works without excise duty including storage and supervision charges ranging between ₹ 144 and ₹ 202 *per bag* against market rates which ranged between ₹ 168 and ₹ 338 *per bag*. Not only this, the recoveries were also made at stock issue rates including storage and supervision charges instead of at market price which was higher. This resulted in short recovery of ₹ 4.62 crore from five contractors on the supply of 4.80 lakh cement bags up to March 2013.

The Management stated (October 2013) that the contractors had not been given undue benefits as 13 *per cent* extra was being charged from them for supplying the cement departmentally in the interest of work for timely completion of project. The reply was not acceptable as the Company should have charged market price which was higher than stock issue rates (including 13 *per cent* departmental/handling charges) for issue of cement as *per* the terms and conditions of the contract.

2.1.8.5.10 Non recovery of damages

The retaining wall of Bassi Power House switchyard of HPSEBL, Joginder Nagar collapsed (July 2012) and damaged Tail Race Junction and control structure *etc.* of Uhl HEP-III Project of the Company. The losses on above account were assessed (November 2012) to ₹ 58.54 lakh by the Company. The Company requested (16 January 2013) the HPSEBL to recover this loss from the concerned contractor so that restoration work could be started.

Audit, however, noticed (February 2013) that neither the loss has been recovered nor restoration work started so far (March 2013).

The Management stated (October 2013) that the matter has been taken up with the contractor through HPSEBL for restoration of damaged structure.

Execution of Electro Mechanical Works

2.1.8.6 The Electro-Mechanical Works of the Project comprising of supply and erection of Hydro Generating Equipment and allied works were awarded to 11 contractors at a total cost of ₹ 133.66 crore between February 2007 and March 2012. The scrutiny of records relating to award and execution of these works revealed cases of avoidable extra expenditure of ₹ 39.82 crore as discussed below:

2.1.8.6.1 Avoidable payment due to faulty agreement

The contract for supply Hydro Generating Equipment was awarded to BHEL for ₹ 100.84 crore (February 2007) with completion period of August

2009. Further, as *per* the agreed price adjustment formula the price escalation was subject to a ceiling of 20 *per cent* (*plus/minus*) of the total ‘contracted price’. The contractor was to be paid 10 *per cent* of the total ex-works amount as an interest free advance with in 15 days after signing of the contract {clause (1) (a)}.

Audit noticed (March 2013) that in two other contracts entered into (February 2010 and June 2012) with the contractors of Uhl Stage III⁷ and Ghanvi Stage II⁸ for supply of 415 V AC LT Switchgears Systems, the price adjustment ceiling of 20 *per cent* has been applied on ‘90 *per cent* of the contract price’ after deduction of 10 *per cent* value of advance paid on signing of the agreement. The overall ceiling of 20 *per cent* for BHEL should also have been applied on 90 *per cent* of the contract price instead of total contracted price as the Company had also paid 10 *per cent* amount in advance to BHEL. Thus, imposition of 20 *per cent* ceiling limit on total contract price instead on 90 *per cent* value resulted in excess payment of price escalation of ₹ 1.21 crore to BHEL.

The Management stated (October 2013) that the contract with BHEL was signed earlier whereas other two contracts as referred in para were signed later on and hence these could not be used as guidelines for contracts already signed. The reply was not acceptable as the basic principle for imposition of restriction on contract price after deduction of interest free advance remained unchanged even with the passage of time.

2.1.8.6.2 Extra expenditure due to delay in handing over the sites

The Company awarded supply and erection of Hydro Generating equipments, its associated auxiliaries, Transformers and EOT crane to BHEL (Contractor) for ₹ 117.36 crore on 15 February 2007. The contractor was to supply the entire material/equipments up to 15 August 2009 and erection work was to be completed by 15 April 2010 on the developed sites to be provided by the Company.

It was noticed in audit (January 2013) that the sites were actually handed over in April 2009 against the agreed schedule of December 2007. Due to delay in handing over the sites the contractor could not start the work as per schedule dates. Consequently the Company had to incur an extra expenditure of ₹ 38.61 crore as detailed below:

- overrun charges of ₹ 3.55 crore for the period from 16 April 2010 to 31 March 2013 paid to the contractor for keeping establishment idle at site;
- additional charges amounting to ₹ 1.63 crore on hiring of mobile crane instead of EOT crane which could not be operationalised due to non construction of required columns and beams;
- entry tax of ₹ 1.84 crore (imposed from 7 April 2010 by the State Government) on goods received after 7 April 2010;

⁷ M/s Prathoma Switchgears Private Limited.

⁸ M/s JVV Electro Tech Private Limited.

- insurance premium of ₹ 0.22 crore on comprehensive insurance policy for material beyond the contract completion period to June 2013;
- price escalation amounting to ₹ 13.55 crore on the material received after scheduled supply period of 16 August 2009 to 31 March 2013;
- incurring liability of ₹ 16.04 crore on account of removal of escalation limit of 20 *per cent* on price variation in respect of balance material received after December 2010 and erection work executed after April 2010;
- interest loss of ₹ 1.30 crore⁹ on 132 KV SF6 circuit breakers: ₹ 1.78 crore and Butterfly Valves: ₹ 3.10 supplied by M/s ABB Limited and M/s TB Hydro Flovel Valves respectively between June 2009 to May 2012 which were lying unutilised (March 2013);
- interest loss of ₹ 0.48 crore on advance payment of ₹ 5.41 crore released to BHEL between March 2009 and March 2010 for supply of equipments of power house which were supplied late (120 to 919 days) due to non availability of site.

The Management admitted (October 2013) these facts and stated that due to non availability of civil fronts, the contract could not be completed in scheduled period of time and had to pay these charges.

The reply was not acceptable as these payments could have been avoided had the Company awarded the erection and supply of Hydro Generating equipments after proper planning for ensuring handing over the sites.

2.1.8.6.3 Non adjustment of advances

Against the works for supply and erection of Hydro Generating equipments awarded (February 2007) to BHEL, the initial 10 *per cent* advances of ₹ 10.08 crore on *ex works* amount of supply part (₹ 100.84 crore) and another 10 *per cent* mile stone advance of ₹ 10.08 against Bank Guarantee of ₹ 20.16 crore was allowed by the Company in September 2007 and March 2009 respectively as *per* the terms and conditions of the agreement. Both the advances were to be recovered in proportion to the value of items delivered at site up to the scheduled date of supply, *i.e.*, 15 August 2009. The materials were, however, not supplied by BHEL in time as the Company failed to provide sites/civil fronts by 15 December 2007 as *per* the agreed schedule. The developed sites were actually provided to BHEL by the Company in April 2009.

Audit noticed (April 2013) that due to delay in handing over the site, BHEL had to defer the supply and out of total advance of ₹ 20.16 crore only ₹ 4.59 crore could be adjusted up to the schedule date of supply, *i.e.*, 15 August 2009. The amount of ₹ 15.57 crore remained outstanding for recovery after the scheduled date of supply of material and had to be adjusted in piece meal thereafter and an amount of ₹ 1.16 crore was still to be adjusted

⁹ Calculated at the rate of 14 *per cent per annum*.

(March 2013). Thus, due to failure in providing civil fronts, the company suffered an interest loss of ₹ 3.81 crore on late adjustment/unadjusted advances after the scheduled date of supply (15 August 2009) to March 2013.

Further, BHEL had also not replaced two Generating Transformers (GTs) which were damaged during transportation in January 2011 and June 2012 against which the Company had released payment of ₹ 3.92 crore during October 2010. This resulted in locking up of borrowed funds with consequential interest loss of ₹ 1.32 crore for the period from November 2010 to March 2013. This interest loss was avoidable had the Company adjusted the payment made against the supply of these GTs from subsequent payments released to BHEL for other electromechanical works of the power house.

Thus, the Company suffered interest loss of ₹ 5.13 crore on unadjusted advances and funds blocked on non replacement of damaged GTs.

The Management stated (October 2013) that the amount of advance was being recovered in proportion to the value of equipment delivered. Further, in respect of GTs, the Management stated that the payments have been made as *per* the terms and conditions of contract. The reply was not acceptable as there was abnormal delay in supply of material due to which the advance could not be recovered in time and the loss of interest was avoidable had the Company adjusted the advances against other payments released to BHEL.

Blockade of fund on Transmission Lines

2.1.9 The construction of 132 KV D/C Chullah–Hamirpur transmission line for evacuation of power from this project was started in July 2005 by the then HPSEB (now HPSEBL) with completion period of December 2009. In anticipation of construction work, the HPSEB procured line material valuing ₹ 7.98 crore between July 2006 and April 2009 and the payment was also released immediately after receipt of material from time to time. However, the work relating to erection of towers was started during May 2008 *i.e.* after a delay of 18 months from the receipt of last consignment (November 2006) of tower material and the work of stringing and sagging of the conductor & earth wire was awarded (May 2011) 24 months after the receipt of last installment of conductor. The line was completed in February 2013 but has not been test charged so far and was lying idle. The Company did not synchronise the procurement of material with the progress of associated civil work of the project, which ultimately placed an avoidable interest burden of ₹ 6.12 crore¹⁰ on the project for the period August 2006 to March 2013.

The Management stated (October 2013) that land owners were not allowing to start the work at site without making payments to them. The reply was not acceptable as the work should have been awarded only after resolution of right of way problems.

¹⁰ Calculated at the rate of 14 *per cent per annum* at which the funds were arranged from PFC.

2.1.10 Quality Control

2.1.10.1 Non-rectification of sub-standard works

Clause 14 Volume-I of conditions governing the contract stipulates that if work has been executed with unskillful workmanship or with materials of any inferior description, the contractor shall, on demand in writing, which shall be made within the period of guarantee (Clause 39 vi), forthwith rectify and reconstruct the work so specified. In the event of his failing to do so, the Engineer-in-charge may rectify or re-execute the work as the case may be at the risk and expense of the contractor.

Audit scrutiny (February 2013) showed that required strength in some portion of concreting in HRT, Penstock and Reservoir was not achieved by the contractor. The value of work on the days of taking samples which failed the tests worked out to ₹ 64.04 lakh. The Company had initiated no action either to get the sub-standard works rectified from the contractors or to get them rectified at the risk and cost of the contractor as *per* the terms and conditions of the contract *ibid*. Therefore, the Company not only extended undue financial benefits to the contractors but also compromised with the quality and life of the Project.

The Management stated (October 2013) that in some cases concrete cubes had not achieved the required strength due to the reasons that proper care might have not been taken by the field staff at the time of casting of such concrete cubes. Further, during transporting the cubes for testing the edges of the cubes some times breaks and compressive strength remained below the required strength. The reply itself points towards negligence on the part of field staff thereby defeating the very purpose of conducting of such tests.

2.1.10.2 The construction of HRT was awarded to M/s SSJV in April 2003. After completion of work from outlet phase up to intermediate adit, the steel support system was found displaced/bulged out in some portion due to excessive pressure exerted by the poor stratum. The engineer of the Company responsible for supervision of this work failed to get the simultaneous concreting done from the contractor before releasing the payments. Subsequently, the remaining work was rescinded (April 2008) and rectification work was felt necessary before handing over the adit to other contractor. The repair work was completed (May 2010) at a cost of ₹ 16.21 lakh which had not been recovered from the Contractor so far (March 2013).

The Management stated (October 2013) that the claim against the contractor has been filed before the Arbitrator and the matter was *sub judice*.

Extra expenditure on Local Area Development Activities (LADA)

2.1.11 In accordance with the provision of Hydro Power Policy, 2006, the expenditure of 1.5 *per cent* of the cost of the HEP above five MW is required to be made for LADA by the developers. Accordingly, the Company made a

provision of ₹ 14.11 crore for Local Areas Development Activities (LADA) in the cost estimates of the project. On the direction of LADC, the Company is executing the scheme itself and a sum of ₹ 10.87 crore had been spent up to March 2013 on LADA.

Audit scrutiny showed (March 2013) that departmental charges at the rate of 11 *per cent* amounting to ₹ 1.20 crore on expenditure incurred (₹ 10.87 crore) ending March 2013 had not been charged on the works executed by the Company under the scheme. This resulted in an extra expenditure of ₹ 1.20 crore on LADA.

The Management stated (October 2013) that the matter had been taken up with the Chairman of LADC in April 2012 and the Chairman has agreed to take up the issue with the Government of Himachal Pradesh for clarification which was still awaited.

Environmental Issues

2.1.12 Encroachment on forest land

The Company obtained permission for diversion of 19.4478 hectare of forest land for the construction of this project from the MoE&F in August 2004 after payment of Net Present Value and Compensatory Afforestation of ₹ 1.69 crore. During construction, the Department of Forest (DoF), Government of Himachal Pradesh noticed (November 2007) encroachment on 5.2667 hectare of forest land in Joginder Nagar range and raised a bill of ₹ 3.77 crore (including penalty of ₹ 93.28 lakh) towards violation of forest land. The DoF directed (22 February 2008) the Company to get the joint demarcation done by 31 March 2008 and if it is established that the forest area has actually been diverted over and above the approved diversion, the Company apart from getting the excess area regularised under Forest Conservation Act, 1980, shall also be liable to pay the amount for damages caused as *per* the bill raised. The DoF has repeatedly asked the Company (September 2009, December 2009 & May 2010) to deposit the amount. The Company had initiated no action either to get the land demarcated so as to ascertain the actual encroachment, if any, or settle the case with the DoF (March 2013).

The Management stated (October 2013) that the Company was constantly in touch with the revenue department for completing the re-demarcation process and the Company had not deposited any payment on account of penalty. The reply confirms the fact that the issue remained unsettled for over seven years after the encroachment was noticed.

Conclusion

The Project scheduled for Commissioning in March 2007 could not be completed and has now been scheduled for completion in September 2014. The abnormal delay in completion contributed to increase in cost of the project from ₹ 431.56 crore to ₹ 940.84 crore besides irregular booking of expenditure. Apart from this, non adoption of standard contract

clauses/procedures and guidelines prescribed by the Government of India, CVC/CWC and instructions of CPWD manual *etc.* while preparing the bidding documents also contributed towards increase in cost. The delay further resulted in an energy loss worth ₹ 940.00 crore including deferment of royalty payments of ₹ 112.80 crore to the State Government by more than six years. The main reasons for delay were failure in timely processing of forest clearances for quarry sites and mismatch in planning for award/construction of various civil and electro-mechanical works. The Company also failed to monitor the works of the contractors and accepted the terms and conditions beyond contractual obligations. Further, while awarding and executing various civil and electromechanical works; the Company did not comply with various contractual and statutory provisions which resulted in avoidable payments to the contractors and loss of interest to the Company.

Recommendations

The Company may consider:

- strengthening of monitoring mechanism to avoid further cost and time overrun in future;
- ensuring compliance to standard contract clauses/guidelines as prescribed by the Government of India, Central Vigilance Commission/Central Water Commission and provisions of CPWD manual;
- awarding construction works after obtaining all required clearances; and
- ensuring synchronisation of civil and electromechanical works before award so as to avoid mismatch in construction activities and consequent financial losses.

The matter was reported to the State Government in July 2013; their reply was awaited (November 2013).

2.2 Power Purchase Agreements (PPAs)

Executive Summary

As *per* Hydro Power Policy notified (December 2006) by the State Government, the developer was permitted to establish, own, operate and maintain the Hydro Electric Project up to 40 years. Thereafter, the projects are to be transferred to the State Government.

To accelerate the development of small hydro projects a target of capacity addition of 409.94 Mega Watt (MW) was fixed during the period 2008-13, against which only 208.80 MW could be achieved.

(Paragraph 2.2.7.1)

In case of Neogal Hydro Project (15 MW), suitable clause for the recovery of survey and investigation expenditure was not inserted in the Implementation Agreement (IA); in absence of which the Company would not be able to recover survey and investigation expenditure of ₹ 4.81 crore.

(Paragraph 2.2.7.2.2)

The Company inserted a clause regarding provision of free power at 12 *per cent* in the PPA of Neogal Hydel Project instead of at 15/20 *per cent* as was envisaged in the Supplementary Implementation Agreement. This would result in total loss of free power to the State Government ₹ 41.20 crore during the entire operation life of the project.

(Paragraph 2.2.7.2.3)

The HPSEBL failed to recover survey and investigation charges of ₹ 3.24 crore from three private parties as *per* the terms and conditions of the PPA.

(Paragraph 2.2.7.3.1)

Though 28 hydro projects were commissioned after delays, no action to recover liquidated damages (LD) amounting to ₹ 3.71 crore was initiated by the HPSEBL as *per* provisions of PPAs.

{Paragraph 2.2.7.3.3(ii) to (iv)}

At the end of March 2013, an amount of ₹ 1.23 crore (including penalty of ₹ 6.93 lakh) on account of operation and maintenance (O&M) was recoverable from 11 power producers.

{Paragraph 2.2.7.3.5(i)}

The Company has not initiated any action on the directions of the Appellate Tribunal of Electricity issued in September 2009 for fixation of tariff based on project specific cost and capacity utilisation factor (CUF) actually achieved resulting in an extra payment of ₹ 52.50 crore.

(Paragraph 2.2.7.4.1)

Introduction

2.2.1 The State Government notified (December 2006) its Hydro Power Policy with the objectives of speeding up power development in the State, making power sector a major source of revenue to the State and providing employment to the people of the State besides development of local areas. The Hydro Power Policy, 2006 was further revised in November 2009 by the State Government in pursuance of Government of India New Hydro Power Policy of 2008. As *per* policy in respect of private sector participation, the developer was permitted to establish, own, operate and maintain the project. The offered period for the projects up to 5 MW was 40 years after 30 months from the date of signing the Implementation Agreement (IA) and for the projects above 5 MW it was 40 years from the date of commencement of commercial operation. Thereafter, the projects are to be transferred to the State Government free of cost and free from all encumbrances. The power generated by the projects up to 5 MW was to be purchased by HPSEB (now HPSEBL).

The State Government before implementation of Hydro Power Policy, 2006 fixed the flat *per* unit rate (1996) at ₹ 2.25 in respect of Hydro Projects up to 5 MW. After the implementation of Hydro Power Policy in December 2006 *per* unit rate was revised to ₹ 2.50. In respect of 31 projects (up to 5 MW) these rates were further revised to ₹ 2.95 *per* unit by the State Electricity Regulatory Commission in February 2010. The Hydro Power Policy, 2006 of the State Government also provides for exemption of royalty in the form of free power to be paid by the developers of projects up to 5 MW to the State Government up to 12 years of operation.

2.2.1.1 Steps in the allotment of Hydro Power Projects to Independent Power Producers (IPP)

The main steps in the allotment of hydro power project to the IPPs are such as survey and investigation, allotment of project, signing of MOU between the State Government and IPP, feasibility report, detailed project report, statutory clearances, implementation agreement, power purchase agreement,

construction, completion/commissioning and realising the benefits by the State/Country and IPP *etc.*

Organisational Set up

2.2.2 The Principal Secretary (MPP & Power), Government of Himachal Pradesh is the administrative head in the Government, responsible for formulating policies relating to hydro power development in the State. The Director Energy and Himachal Pradesh Energy Development Agency (HIMURJA) have been designated as nodal agencies for hydro power development involving IPP. The allotment of power projects up to 5 MW has been entrusted to HIMURJA and above 5 MW to the Director of Energy. The Power Purchase Agreements (PPAs) are being executed by the Chief Engineer (Commercial) on behalf of Himachal Pradesh State Electricity Board Limited (HPSEBL).

Audit Objectives

2.2.3 The audit objectives of the performance audit were to assess whether:

- the PPAs were finalised in line with the established guidelines/rules/regulations of the Government;
- the PPAs were implemented as *per* stipulated terms and conditions; and
- an effective monitoring mechanism to assess the implementation of PPAs was in place.

Scope of Audit

2.2.4 The performance audit of 29 PPAs out of total 114 PPAs executed between the period March 2000 to March 2013 was conducted during May 2013 to July 2013 by test check of records relating to 25 PPAs (23 commissioned between June 2002 and June 2012) up to 5 MW and 4 PPAs above 5 MW (all commissioned between February 2008 and May 2013) in the office of the Director of Energy, Chief Executive Officer - HIMURJA, State Load Dispatch Centre, Shimla and HPSEBL (Head office and nine divisions receiving supply of power). The sample was selected by simple random sampling without replacement method.

Audit Methodology

2.2.5 The performance audit commenced with an entry conference with the Principal Secretary (Multi-Purpose Projects and Power), Government of

Himachal Pradesh in May 2013 explaining scope of audit, audit objectives and criteria. Records relevant to execution of PPAs with IPPs by the HPSEBL were scrutinised during the period May 2013 to July 2013 for the period April 2008 to March 2013. Audit Findings have been discussed with the Managing Director of the Company in an exit conference held on 31 October 2013 and the replies of the Management received in November 2013 have been incorporated while finalising the Report.

Audit Criteria

2.2.6 The audit criteria adopted for achievement of audit objectives were: -

- Electricity Act, 2003, Hydro Power Policy of Government of India/State Government and Rules and Regulations issued there under.
- Tariff orders for generating stations of IPPs issued by SERC from time to time.
- Model Power Purchase Agreement issued by HPERC in March 2003.
- PPAs/supplementary PPAs entered into by the State Electricity Board with various IPPs, Detailed Project Report (DPR), MIS reports from Regional Load Dispatch Center, Electrical Utilities and Generators (IPP).

Audit Findings

2.2.7 The following are the audit findings:

2.2.7.1 Status of PPAs executed by the Company

The PPAs for 114 projects with total installed capacity of 711.75 MW were entered into by the HPSEBL for injection of power at specified interconnection points designated by the Company during the period from June 1997 to March 2013. Out of these, 71 Hydro Projects with installed capacity of 591.15 MW were operational (March 2013) and remaining 43 projects (120.60 MW) were at various stages of implementation. 106 projects (up to 25 MW) with installed capacity of 409.94 MW were scheduled to be commissioned during the period 2008-13. However, it was noticed that only 45 projects with installed capacity of 208.80 MW could be

commissioned ending March 2013 as detailed in **Table-1**.

Table-1

(in MW)

Sl. No.	Description	2008-09	2009-10	2010-11	2011-12	2012-13
1	Capacity at the beginning of year	52.25	97.75	128.75	191.05	240.05
2	Capacity addition as <i>per</i> PPA/IAs	79.95	71.44	112.40	95.70	50.45
	Capacity addition as <i>per</i> PPA/IAs (in nos.)	19	18	32	21	16
3	Actual addition	45.50	31.00	62.30	49.00	21.00
	Actual addition (in No.)	9	7	16	8	5
4	Capacity at the end of the year	97.75	128.75	191.05	240.05	261.05
5	Shortfall in Capacity Addition	34.45	40.44	50.10	46.70	29.45
6	Percentage of shortfall	43.09	56.61	44.57	48.80	58.37

There was a short fall (ranging between 43.09 and 58.37 *per cent*) of 201.14 MW in capacity addition during 2008-13. Due to the gap in demand and supply, the Board had to draw 676.79 MUs (2008-12) over and above the scheduled energy from Northern Grid at higher rates during 2008-09 to 2011-12 as compared to the rate of ₹ 2.95 *per* unit allowed by the State Electricity Regulatory Commission in February 2010. Non completion of projects within the stipulated period had resulted in an extra expenditure of ₹ 84.26 crore on purchase of power from other sources during 2008-12.

It was observed (June 2013) that there were deficiencies in PPAs and their implementations. There were shortcomings in contract and project management during execution by HIMURJA, HPSEBL and the Director Energy, Government of Himachal Pradesh in many cases. Further, the provisions for levy of liquidated damages (LD) and extension charges were not adequate to cover the extra expenditure incurred by the Board on purchase of power from other sources. Even these LD were not imposed despite the fact that such punitive provisions were inserted in the PPAs. These have been discussed in the subsequent paras.

2.2.7.2 Deficiencies in finalisation of PPAs

Audit scrutiny of 29 PPAs executed by the HPSEBL with the various IPPs showed following deficiencies when compared with IAs, model PPA and guidelines issued by the State Electricity Regulatory Commission (SERC).

2.2.7.2.1 *Creation of reserves for capital maintenance*

As *per* Chapter 9 of the National Electricity Policy (NEP), renovation and modernisation activities are aimed at overcoming problems in operating units caused due to generic defects, design deficiency and ageing by re-equipping, modifying, augmenting them with latest technology/systems. R&M activities are undertaken in projects operating at Plant Load Factor¹ (PLF) of 40 *per cent* and below after assessing the performance and requirement of the units. Further, refurbishment activities are aimed at extending economic life of the units by 15 to 20 years which have served for more than 20 years or operating at PLF below 40 *per cent*. Necessary permission and clearance for R&M and refurbishment activities from SERC/CEA/State Government are to be obtained.

The PPAs executed by the HPSEBL with IPPs did not address the issue regarding creation of capital reserves for capital maintenance and in absence of which it was not clear as to how the extension of project life after completion of 20 years or refurbishment of plant in case PLF falls below 40 *per cent* would be ensured.

2.2.7.2.2 *Non insertion of clause for recovery of Survey and Investigation Charges*

In case of Neogal Hydro Project (15 MW) suitable clause for the recovery of survey and investigation expenditure was not inserted in the IA signed during January 2006 between the IPP and the Government of Himachal Pradesh. As a result, the HPSEBL would not be able to recover survey and investigation expenditure of ₹4.81 crore including interest of ₹1.11 crore up to March 2013.

The Management admitted (November 2013) that since there was no governing clause in the IA as such the same was not enforceable for recovery.

2.2.7.2.3 *Incorrect provision of rates for free power/royalty*

Clause 6.3 of the Supplementary Implementation Agreement (SIA) entered into (January 2006) with an IPP² for the execution of Neogal Hydel Project (15 MW) provides that if the developer fails to commission the project within the stipulated period for reasons solely attributable to the IPP except circumstances beyond its control, the quantum of royalty in the form of free power to the State Government shall be enhanced from 12 *per cent* to 15 *per cent* for first 12 years and thereafter 20 *per cent* for the remaining life (28 years) of the project. The project scheduled for commissioning during July 2009 was actually commissioned after a delay of 45 months in May 2013.

¹ PLF is the actual percentage utilisation of Generating Plant as compared to its designed capacity during the year.

² M/s Om Power Corporation.

Audit noticed (July 2013) that the delay in commissioning the project was solely attributable to the developer as was evident from the notice issued by the HPSEBL for levy of LD, the developer was liable to pay free power to the Government at the rate of 15/20 *per cent* as *per* the provisions of the SIA *ibid*. The HPSEBL while executing the PPA (October 2006) with the developer failed to insert the provisions of royalty in the form of free power at the enhanced rates as *per* the IA *ibid*. and inserted clause regarding free power at the rate of 12 *per cent* for the entire project life instead of 15/20 *per cent* for the delay in commencement of the project. This would result in total loss of free power to the State Government amounting to ₹ 41.20 crore during the entire operation life of the project.

The Management stated (November 2013) that deduction of royalty at the rate of 15 *per cent* had been started from September 2013. The reply, however, does not address the issue as to how the recovery was started without amending the existing PPA.

2.2.7.2.4 Non furnishing of Performance Guarantee (PG)

Article 9 of the PPAs provides that the IPP should furnish PG for ₹ 20.00 lakh *per* MW in the shape of irrevocable Bank Guarantee/letter of credit on completion of debt servicing period or ten years from the COD which ever is earlier and valid for the remaining agreement period of 40 years. However, no provision for the submission of details of debt service period entered into by IPP with financial institutions to the HPSEBL was made in the PPAs. Thus, the actual due date for receipt of PG in respect of 70 commissioned projects could not be verified in audit.

2.2.7.3 Implementation of PPAs

PPAs entered into with IPPs govern the conditions for proper monitoring during construction, synchronisation, operation and maintenance (O&M), determination of purchase rate of power, levy of LD, payment of rents, taxes, cess, fee, revenues, duties and adherence to all the rules and regulations pertaining to the same.

Audit observed (June 2013) that the HPSEBL and HIMURJA did not enforce the terms and conditions of the agreements in many cases resulting in non/short recovery of LD, Local Area Development Fund (LADF), royalty, extension charges, *etc.* as discussed below: -

2.2.7.3.1 Non recovery of Survey and Investigation Charges

As *per* the provisions of the Hydro Power Policy, 2006 and Implementation Agreements (IA), the developer shall reimburse to the HPSEBL, the amount spent by the Board on survey/investigations and infrastructural works of the project along with interest at the rate of 10 *per cent per annum* compounded

annually from the date of incurring of such expenditure up to the date of actual reimbursement; within three months of signing of IA.

Audit observed (July 2013) that in case of three³ projects action to recover survey and investigation expenditure amounting to ₹ 3.24 crore incurred by the Board had not been initiated so far (July 2013) with delay ranged between 53 and 135 months from the date of signing of IA even after their commissioning despite provision for the same in the Hydro Policy/IA.

The Management stated (November 2013) that the notices have been served to deposit the survey and investigation charges as *per* the provisions of the PPAs. However, in respect of two projects (Sarwari II and Joiner) recoveries can not be enforced due to absence of recovery clause in their respective IAs.

2.2.7.3.2 Non/short levy of Local Area Development Funds

The Hydro Power Policy, 2006 provides that 1.5 *per cent* of the final cost of the projects above 5 MW and one *per cent* of the final cost of projects up to 5 MW shall be contributed towards LADF. The guidelines notified by the State Government for the management of LADF provide that:

- initially the LADF will be worked out on the basis of project cost as *per* DPR and on completion of project; the LADF will be worked out on the final completion cost. The balance amount worked out on the basis of final cost shall be deposited by the developer within one year of the commercial operation date (COD).
- contribution by the developer shall be made prior to the commissioning of the project in the following manners: -
 - (a) 10 *per cent* amount within three months of signing of IA;
 - (b) 15 *per cent* amount within 18 months of signing of IA; and
 - (c) balance 75 *per cent* in three equal installments during construction period.

In case of failure to adhere time schedule, the project developer shall be liable to pay interest at the rate of 12 *per cent* on the amount due on LADF.

Audit scrutiny of records showed that:

- (i) In case of 13 projects (**Appendix 2.2.1**) which were under construction, IPPs failed to deposit first two installments (10 *per cent* and 15 *per cent*) of LADF within the stipulated time. LADF amount and interest thereon worked out to ₹ 65.32 lakh and ₹ 38.28 lakh respectively.

³ Patikari, Sarwari and Joiner.

(ii) In case of 19 commissioned projects (**Appendix 2.2.2**), LADF amounting to ₹ 3.77 crore had not been deposited by the developers. The delay ranged between six and 67 months from the date of commissioning. Besides, recovery of interest on LADF worked out to ₹ 1.44 crore (July 2013).

The HIMURJA as a nodal agency and the respective Deputy Commissioners failed to monitor the timely receipt of funds as *per* LADA guidelines and ensure that funds are recovered on final cost of the project.

(iii) Guidelines issued by the State Government stipulated that the LADF charges are recoverable on final cost of project, yet no action to procure the details of final cost/revised DPRs from the developers to work out the actual recovery had been initiated by HIMURJA so far (July 2013). It may be relevant to mention that the State Electricity Regulatory Commission (SERC) in its tariff order (December 2007) had taken *per* MW cost of project at ₹ 6.50 crore whereas as *per* Techno Economic Clearance (TEC) the project cost was less than the bench marked cost. Based on the bench marked cost of 15 projects commissioned after December 2007, potential short recovery of LADF and interest there on worked out to ₹ 2.16 crore and ₹ 0.79 crore respectively (**Appendix 2.2.3**).

(iv) Further, in nine projects allotted to IPPs prior to implementation of Hydro Power Policy, 2006 which were executed and commissioned during 2008-11, action to revise the IA was not initiated by the State Government due to which LADF amounting to ₹ 1.50 crore could not be recovered (July 2013); and

(v) The Government of Himachal Pradesh in pursuance of clause and clause 10.1 (b) and clause 10.2 (d) of the Hydro Power Policy, 2008 of Government of India, notified (November 2009) that an additional one *per cent* free power would be provided by IPPs which would be earmarked for LADF so as to provide regular source of income for welfare schemes, creation of additional infrastructure *etc.* on continuous basis over the life of the project. The above said provision was applicable to all projects commissioned/under execution and projects to be allotted in future. It was further provided that a suitable clause may be inserted in IA/SIA and wherever required SIA be signed with each developer to fulfill the requirement of the notification.

Audit observed (June/July 2013) that in the case of 57 IPPs/developers additional one *per cent* free power worked out to ₹ 4.91 crore could not be recovered during the period from 2010-13 due to non execution of supplementary agreements.

2.2.7.3.3 *Non-levy of Liquidated Damages*

(i) In case of PPAs entered into prior to 2004; no provisions for levy of liquidated damages (LD) for delay in completion had been made. Though necessary clause to recover LD is being inserted in all PPAs executed after 2004 but non insertion of this clause in respect of four⁴ PPAs had resulted in loss of ₹ 27.90 lakh from developers for delay in completion so far (June 2013).

(ii) Article 16.2 of PPA entered into with IPPs stipulates that if all the generating units are not synchronised on or before the scheduled date specified in the concerned PPA, the IPP shall be liable to pay to the Board (now HPSEBL) LD for delay at the rate of ₹ 1000/- *per MW per day* subject to the maximum for 180 days after which it would constitute IPP event of default. Audit observed (July 2013) that:

(a) In case of 20 commissioned projects (**Appendix 2.2.4**) up to 5 MW, the synchronisation work of generating machines could not be completed within the stipulated period. Out of these, the delays in the cases of Panwi and Dunali projects were more than five years. In case of 17 projects which were completed with delays between November 2007 and May 2011, no action to recover the LD of ₹ 1.13 crore had been initiated by the HPSEBL as of July 2013.

(b) Similarly, the synchronisation work of four⁵ projects (above 5 MW) was completed after a delay ranging between 71 and 180 days. Out of these, three projects were commissioned between January 2008 and October 2012 and one project during May 2013, but no action to recover LD in accordance with the provisions of PPAs had been initiated so far (May 2013). The bank guarantee in respect of two projects had also been released without recovering the LD. This had resulted in non recovery of LD of ₹ 67.53 lakh.

(c) In case of two projects⁶, extension for IA was allowed by the nodal agency after recovering extension charges for 57 and 63 months. Similarly, in 11 other projects, extension in COD was allowed up to the actual date of completion without intimation to the Company. Since the rates for charging of LD (₹ 30,000 *per MW per month*) were three times of the extension charges (₹ 10,000 *per MW per month*) the developers preferred to approach the nodal agency for extension of COD instead of paying LD. In this situation the Company could not invoke the LD clause of 13 PPAs resulting in loss of ₹ 97.96 lakh (**Appendix 2.2.5**) to the Company.

⁴ Sechi, Sahu, Chandni and Timbi.

⁵ Toss, Patikari, Beas Kund and Neogal.

⁶ Bailji Ka Nallah-II (3.5 MW) and Masli (5 MW).

(iii) Clause 6.20 of IA entered into (November 2001) with the Independent Power Producer⁷ for the execution of 16 MW Patikari Hydro Electric Project stipulates that in case the COD is delayed beyond the scheduled date for reasons other than a Government default or a *force majeure*, the IPP shall pay to the Government for each day delay LD equivalent to 50 *per cent* of the amount corresponding to the average *per day* quantity of Government supply computed on the basis of annual generation (90 *per cent* dependable year) at the Bulk Supply HT tariff rate prevalent at that time. The total LD payable shall in no case exceed ₹ 6.00 lakh *per MW* of the uncommissioned capacity. The LD shall be payable by the IPP on monthly basis and in the event of default; the IPP shall be liable to pay interest at a rate being charged by State Bank of India on short term unsecured loan *plus 3 per cent per annum plus* interest tax.

Audit observed (July 2013) that the power producer failed to achieve the scheduled COD (31.08.2007) and the commercial operation of first unit was achieved on 6 February 2008 *i.e.* after a delay of 158 days. No action to recover the LD of ₹ 46.05 lakh⁸ had been initiated by the HPSEBL so far (March 2013) which further resulted in interest loss of ₹ 27.63 lakh⁹.

(iv) As *per* Hydro Power Policy, 2006 and IA, in the event of delay in COD of the project, the quantum of free power to the first party (State Government) shall be 12 *per cent plus* two tenth (0.2) percentage points for each period of 73 days or part thereof falling between the scheduled COD and actual COD of the project. This amount was payable in ten equal monthly installments from actual COD in addition to normal free power.

Audit observed (July 2013) that the scheduled COD for Beas Kund Hydro Project (9 MW) was 31 January 2012 and the project was actually commissioned (07 June 2012) after a delay of 127 days. The IPP was liable to pay an amount of free power component amounting to ₹ 45.61 lakh to the State Government for this delay which has not been recovered so far (July 2013).

The Management stated (November 2013) that upto October 2013 a sum of ₹ 1.08 crore had been recovered and for the recovery of balance amount notices had been served and the recovery would be effected from their energy bills if the amount is not paid during the notice period.

2.2.7.3.4 Loss on execution of PPA for lesser installed capacity

Implementation Agreement (IA) for construction of Toss Hydel Project (5 MW) was between the IPP¹⁰ and HIMURJA in July 2004. As *per* the provisions of the IA, the developer has to execute PPA with HPSEBL within

⁷ M/s East India Petroleum Ltd.

⁸ (2046890 KWh x ₹ 2.25 *per unit*).

⁹ Calculated at the rate of interest of 12 *per cent per annum* for five years (April 2008 to March 2013).

¹⁰ M/s Sai Engineering Foundation, Shimla.

3 months from signing of the IA. The project was commissioned during December 2008; however, the PPA was entered into with HPSEBL during January 2009 after 53 months from signing of the IAs after commissioning of the project.

Audit noticed (July 2013) that the construction of the project was not done as *per* approved DPR. The IPP instead of installation of two 2x2500 KW units, installed single machine of 5 MW by providing pen stock of 1500 mm diameter against the designed diameter of 1100 mm.



(Penstock of 5MW Toss Hydro Electric Project with scope for 20 MW)

During March 2009, another IA for enhanced capacity of 20 MW was entered into with the State Government wherein it was also mentioned that the developer had already carried out necessary investigations and submitted the DPR for enhanced capacity of 20 MW against the allotted capacity of 5 MW. This was indicative of the fact that the developer had already taken up the construction of 20 MW project and PPA for 5 MW was signed with HPSEBL only to avoid payment of royalty which was exempted in respect of projects up to 5 MW. The developer synchronised 2nd unit of 5 MW on 31 May 2009 (*i.e.* within 79 days of signing of IA) with HPSEBL system and balance capacity of 10 MW was yet to be commissioned. The HPSEBL is purchasing power generated from additional capacity of 5 MW without any PPA.

Thus, by execution of IA for 5 MW instead of 20 MW the developer avoided payment of royalty amounting to ₹ 80.62 lakh¹¹ during the operation of first unit of 5 MW from December 2008 to May 2009. Further, the HPSEBL is purchasing power from other projects of the capacity above 5 MW at a rate ranging between ₹ 2.20 *per* unit and ₹ 2.25 *per* unit under short/long term

¹¹ 3224906 KWh x 2.50=₹ 80.62 lakh.

agreements. The purchase of power without signing of revised PPA as was required after enhancement of capacity from 5 MW to 20 MW was not only contrary to the provisions of the Hydro Power Policy, 2006 but also resulted in an extra expenditure of ₹ 4.45 crore¹² during the period from June 2009 to March 2013. This would increase further till the signing of revised PPA.

The Management stated (November 2013) that the Company would execute the necessary PPA for enhanced capacity as per HPERC regulations and adjustment of tariff shall be done thereafter, which validated the contentions of audit.

2.2.7.3.5 Operation and maintenance charges for inter connection

Clause 6.2 of the agreement entered into for operation and maintenance (O&M) of inter connection facilities (required as *per* clause 3.3 of the PPA) with the power developers stipulates that HPSEBL shall intimate the tentative amount of normal O&M of inter connection facilities for each ensuing year on or after 15th February of preceding year. IPPs were liable to pay the tentative amount within one month of intimation failing which a penalty at the rate of 1.5 *per cent per* month was leviable. In this connection, Audit noticed (July 2013) the following:

(i) At the end of March 2013, an amount of ₹ 1.23 crore (including penal interest of ₹ 6.93 lakh) was recoverable from 11 power producers as detailed in **Appendix 2.2.6**. In addition to this, the demand for O&M charges for the year 2013-14 amounting ₹ 24.46 lakh had not been raised by the concerned units against six projects.

(ii) Inter-connection point for Shyang and Tangling projects as *per* their PPAs was fixed at 220 KV Sub-station, Boktoo, but due to non-construction of the said Sub-station the IPPs were allowed to inject power in Board's system as temporary arrangement at Boktoo through existing 22 KV Nathpa - Pooh feeder without entering into supplementary agreement for recovery of O&M expenses. As a result, no O&M charges were being recovered from the IPPs since January 2009 (Shyang project) and December 2010 (Tangling).

Further, the generation of these two projects was being metered at respective power houses and their transmission losses are being deducted on the basis of standard formula, whereas, as *per* clause 2.2.72 of the respective PPAs the losses have to be deducted at the rate of 4.5 *per cent*. This had resulted in less deduction of transmission losses to the extent of 2.46 MUs (up to March 2013) valued at ₹ 72.54 lakh.

¹² 177.95 MUs x 25 *paise* being the difference in rates as compared to the rate of ₹ 2.25 *per* unit for the projects above 5 MW installed capacity.

2.2.7.4 Failure to initiate action against higher tariff

2.2.7.4.1 In compliance with the statutory provisions, the SERC issued tariff orders on 31 small hydro projects and other issues in December 2007. As *per* these orders: -

- (i) the capital cost for tariff determination was considered at ₹ 6.5 crore *per* MW which was inclusive of LADF and other charges;
- (ii) if the developers get any capital subsidy/incentive from MNES/State Government, such subsidy/incentive shall not be adjusted against the capital cost;
- (iii) based on the normative PLF of 45 *per cent* adopted by the different States, the SERC determined normative value of 45 *per cent* for PLF for tariff determination against 68 *per cent* PLF considered in 140 DPRs submitted by IPPs; and
- (iv) the commission also fixed norms for O&M at 2.25 *per cent* of capital cost with 4 *per cent* escalation every year against CERC norms of 1.5 *per cent*.

Based on the above, fixed rate of ₹ 2.50 *per* unit (as *per* PPAs and Hydro Power Policy) was revised (December 2007) to ₹ 2.87 *per* unit. These rates were further revised to ₹ 2.95 *per* unit by the SERC in February 2010.

The Company filed an appeal against the orders of the SERC issued in December 2007, before the Appellate Tribunal for Electricity, Delhi (Tribunal) in the year 2008 (Appeal No. 65 of 2008). The Tribunal partly allowed the appeal of the Company and held (September 2009) that promoters and the Company shall be entitled to apply to the Commission for fixing project specific capital cost for any project in case the normative capital cost is not suitable to either of them. Similarly, if capacity utilization factor (CUF) of 45 *per cent* for a specific project is contested by either party, it may approach the Commission with the site specific CUF.

Audit scrutiny (July 2013) showed that out of these 31 projects, the project cost of 15 projects as *per* TEC was much below the benchmark cost of ₹ 6.50 crore *per* MW (**Appendix 2.2.7**). The Company had not ascertained the actual completion cost of each project so as to approach the Commission for fixation of tariff based on project specific cost. Further, 19 projects actually achieved CUF ranging between 47 and 78 *per cent* (**Appendix 2.2.8**) which was higher compared to the normative CUF of 45 *per cent* considered for fixation of tariff.

In view of above, the Company should have approached the Commission for fixation of tariff based on project specific capital cost and actual CUF. The Company has not initiated any action on the directions of the Tribunal issued

in September 2009 *ibid.* resulting in an extra payment of ₹ 52.50 crore¹³ (Appendix 2.2.9) on purchase of 1,166.71 MUs during 2008-13.

The Management stated (November 2013) that there is no prudence in challenging each and every order of the Commission which has the role of protecting the interest of all stake holders including consumers.

The reply was not acceptable as it was equally the duty of the Company to safeguard its financial interests which were compromised by not initiating action as per the decision of the Appellate Tribunal *ibid.*

2.2.7.4.2 The developer of 5 MW Marhi Hydro Project, which was commissioned during January 2007, was also allowed the benefit of enhanced rates of ₹2.95 *per unit*. As these rates were revised after considering the payment of LADF and other charges which were not paid by the developer so far and similar benefit of these revised rates has not been allowed to eight IPPs (completed before the implementation of Hydro Power Policy) who have also not paid these charges. The HPSEBL did not raise this issue before the SERC and on the purchase of 137.93 MUs of power from this project during the period from April 2008 to March 2013, the HPSEBL passed on extra burden of ₹ 6.21 crore on the consumers which would further increase to ₹ 42.22 crore during the remaining operation life (40 years) of the project.

Monitoring

2.2.8 The Hydro Power Policy, 2006 stipulates that an agreement executed with the IPP shall remain in force up to the period of 40 years from the scheduled commercial operation date. Thereafter, the project shall be reverted to the State Government free of cost and free from all encumbrances. Accordingly, HIMURJA and Director of Energy (nodal agency for hydro power development involving IPP) should ensure the quality of construction of project and execution of works as *per* DPR so that the assets would remain in good condition at the time of reversion to the State Government on completion of 40 years.

2.2.8.1 Scrutiny of records in audit (July 2013) showed that no such monitoring mechanism was in place to ensure the quality of the civil and electro-mechanical works of the IPPs. Further, there was no mechanism to check the final/revised cost of the project based on which recovery of LADF, Workers' Welfare Cess and tariff was to be determined.

2.2.8.2 Non-creation of an authority for management of Hydro Power Project

The Hydro Power Policy, 2006, envisages creation of an authority for Hydro Power Project safety, management of water flow and discharge, release of

¹³ 1166.71 MUs x (₹ 2.95 *per unit* - ₹ 2.50 *per unit*) = ₹ 52.50 crore.

water downstream from the diversion point, upkeep/maintenance of the assets of the project besides imposing fine/penalty for violations. It was noticed that such an authority was not established as of July 2013. Resultantly, the required checks over water flow, upkeep/maintenance of the project and release of water downstream *etc.*, remained to be declined.

2.2.8.3 Non execution of works as per approved DPRs

Article 3 of the PPAs envisages that the IPP shall design and construct the project in accordance with the Prudent Utility Practices, relevant technical specification and in line with the provisions of DPR. The IPP shall also furnish to HPSEBL half yearly progress report by 31 March and 30 September every year indicating achievement *vis-à-vis* targets, spillages, if any, and the remedial action intended to be taken. However, no provision for the physical verification of assets on completion of project, submission of revised DPR, cost audit and model specification of machines have been made in any of the 29 PPAs test checked in audit. Due to non submission of revised DPRs and actual cost of the project, actual expenditure incurred on Local Area Development Activities and payment of workers' welfare cess by the Company, could not be ascertained.

Audit further observed (June 2013) that in case of seven¹⁴ hydel projects commissioned during June 2004 to February 2012, the residential colonies were not constructed by the IPPs though there was a provision for the construction of permanent buildings at a cost of ₹ 2.62 crore in their DPRs. The Company had failed to ensure the execution of work as *per* the provisions of the DPRs. The deviation in construction work would not only result into direct loss to the Government at the time of taking over the project after completion of 40 years but also placed extra burden on the consumers due to fixation of tariff after considering this cost.



(Residential colony at Marhi, Hydro Electric Project 5 MW)

¹⁴

Aleo, Beas Kund, Sarbari II, Tangling, Rakchad, Sechi and Maujhi.

2.2.8.4 Non-establishment of Multi-Disciplinary Committee

As *per* the Hydro Power Policy, a multi disciplinary committee under the chairmanship of the Chief Minister was to be constituted to monitor the issues arising during the implementation of the projects such as employment related monitoring, relief and rehabilitation, review of progress of LADC's schemes, Environmental Impact Assessment (EIA) plan, restoration of facilities which got damaged because of implementation of the projects, quality control mechanism of the project, *etc.* Audit noticed that such a Committee was not constituted in the State as of July 2013.

Conclusion

The performance audit has disclosed non-compliance of the provisions of Hydro Power Policy, Implementation Agreements (IAs) and Power Purchase Agreements (PPAs), inefficient monitoring mechanism at the level of the Company and delay in completion of projects. The PPAs did not address the issue regarding creation of capital reserves for capital maintenance to ensure extension of project life. Survey and investigation charges were not recovered by the Company from the Independent Power Producers (IPPs) as per the provisions of the PPAs. There was short recovery of Local Area Development Fund (LADF) from various developers. Though, 28 hydro projects were commissioned after delays, no action to recover liquidated damages was initiated by the Company as *per* provisions of PPAs and power was being purchased from one project without entering into PPA at higher rates. The Company had also not initiated any action on the directions of the Appellate Tribunal of Electricity issued in September 2009 for fixation of tariff based on project specific cost and capacity utilisation factor (CUF) actually achieved resulting in an extra payment to IPPs. Higher tariff rate allowed to one project without recovery of LADF also resulted in an extra expenditure. Lack of monitoring led to non-construction of residential buildings by seven IIPs. These deficiencies could have been prevented by establishing an Authority/Multi-Disciplinary Committee as envisaged in the Hydro Power Policy to ensure compliance of various provisions thereof and management of Hydro Power projects.

Recommendations

The Government/Company may consider to:

- ensure compliance of various terms and conditions of the Implementation Agreement/ Power Purchase Agreement incorporating suitable clauses as *per* Hydro Power Policy and model Power Purchase Agreement to safeguard the financial interests of the Government/Company;

- insert a suitable liquidated damages clause for imposition of adequate penalty so as to ensure timely completion of project;
- introduce a system to ascertain the actual completion cost of each project and to verify the execution of works as *per* the provisions of the Detailed Project Report (DPR) so as to approach the Commission for fixation of project specific tariff; and
- strengthen monitoring mechanism to resolve the issues arising during the implementation of the projects so as to ensure timely completion of the projects and review the progress of local area development schemes for overall efficient execution of projects.

The matter was reported to the State Government in September 2013; their reply was awaited (November 2013).