Chapter II

Performance Audit relating to Government Company

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Gujarat Urja Vikas Nigam Limited

2 Performance Audit of Power Purchase Agreements entered into with Independent Power Producers

Executive Summary

The Electricity Supply Act was amended (1991) to open up generation of power to the private sector, as State Electricity Boards (SEB) began to suffer huge losses and fresh investments in the power sector were not forthcoming. The Independent Power Producers (IPPs) were to operate on a cost plus model and enter into Power Purchase Agreements (PPAs) with the SEBs who were responsible for transmission and distribution.

PPAs with IPPs both private and State owned were entered into under cost plus approach up to January 2006, after which competitive bidding was made compulsory for all new generation plants set up under the private sector. In respect of State owned IPPs, cost plus approach based on GERC tariff orders was allowed up to January 2011, after which competitive bidding was made compulsory for them also. The Ministry of Power, in January 2005, issued guidelines for determination of tariff by bidding process for procurement of power.

Planning

During the period 2008-09 to 2012-13, the gap between actual installed capacity of Government of Gujarat (State as a whole) and capacity required to meet the registered unrestricted demand changed from a deficit of 4,020 MW to a surplus of 6,822 MW due to the capacity addition made by the GUVNL.

Finalisation and signing of MOUs/PPAs for purchase of Non Renewable Energy (NRE)

The GUVNL executed 22 PPAs for 9,265.07 MW with its generating subsidiary, Gujarat State Electricity Corporation Limited (GSECL). Besides, the GUVNL also entered into 20 PPAs with IPPs other than GSECL for a capacity of 12,089 MW.

The increase in capital cost of the PPA entered into with Bhavnagar Energy Company Limited will increase the levelised tariff by ₹0.13 per Kwh leading to an annual burden of ₹38 crore on public.

Deviation from standard bidding documents in respect of provisional bills led to monthly loss of rebate ranging from ₹16.60 lakh to ₹3.31 lakh related to three IPPs.

Provisions in PPAs for NRE

Change of delivery point subsequent to finalisation of PPA led to passing of undue benefit to Essar Power Gujarat Limited for ₹587.50 crore during the tenure of the PPA.

Incentive payments made to three IPPs on their Deemed Generation declared on Naphtha prior to September 2002 disregarding the GoI Notification of November 1995 coupled with belated legal action for recovering the erroneous payments led to a loss of ₹396.39 crore.

Operationalization of PPAs for NRE

Non-compliance with the provisions of PPA as regards to the date of operationalising the tariff parameters led to excess expenditure of ₹5.36 crore.

The GUVNL incurred an interest loss of ₹3.17 crore due to non-adherence to provisions of PPA with Essar Power Gujarat Limited regarding Liquidated damages.

Monitoring mechanism

Inadequate monitoring of commercial operation of 250 MW expansion plant of Gujarat Industrial Power Company Limited led to belated recovery of Liquidated Damages of ₹11.37 crore and consequential loss of interest for ₹ 2.11 crore.

Renewable energy

Contracting excess capacity under solar policy by the GUVNL led to excess burden of ₹473.20 crore on the consumers of the state.

Reduction in levelised tariff by ₹0.21 per unit on account of availment of excise duty and customs duty benefit by solar power developers was not passed on to the GUVNL and the same was not monitored by Gujarat Energy Development Agency.

Conclusion

Instances of losses or passing of undue benefits to IPPs were noticed due to non-adherences to Standard Bidding documents, GoI notifications, GERC orders and terms of PPA and also due to weak monitoring mechanism with the GUVNL/GEDA.

Recommendations

The GUVNL may consider consulting STU in planning evacuation of power well in advance. Adherence to the provisions of GOI notifications/guidelines, GERC orders and terms of PPAs should be ensured and the GUVNL should also refrain from contracting excess capacity from costlier sources.

Introduction

2.1 The Electricity (Supply) Act, 1948 established the Central Electricity Authority (CEA) for coordinated development of power sector and State Electricity Boards (SEBs) were formed at the state level to look after generation, transmission and distribution of electricity in the State in an integrated fashion. In 1991, the Electricity (Supply) Act was amended to open up generation of power to the private sector; as SEBs began to suffer huge losses and fresh investments in the power sector were not forthcoming. The Independent Power Producers (IPPs) were to operate on a cost plus model and enter into Power Purchase Agreements (PPAs) with the SEBs who were responsible for transmission and distribution. The Electricity Act, 2003 replaced all the existing Electricity Laws and provided a legal framework for reforming and restructuring the power sector. Besides, the Act liberalised captive power policy, allowed open access to transmission and distribution lines, introduced stringent penalties for power theft and made setting up of Electricity Regulatory Commissions mandatory. The Ministry of Power also issued (January 2005) guidelines for determination of tariff by bidding process for procurement of power.

Power Scenario in Gujarat

2.2 Prior to the commencement of the reform process in India in 1991, the electricity scenario in Gujarat (Generation, Transmission and

Distribution) was mainly controlled by the Gujarat Electricity Board (GEB). GEB started entering into PPAs with IPPs in February 1994 soon after the opening up of the generation sector for the private parties by Government of India (GoI) in 1991. As a part of Power Reform Process, the Gujarat Electricity Industry (Reorganisation & Regulation) Act, 2003 was passed by the Government of Gujarat (GoG) to restructure the electricity sector in the State. Accordingly, erstwhile GEB was reorganised from 01 April, 2005 in to seven Companies[1] with functional responsibilities of Trading, Generation, Transmission and Distribution.

The GUVNL purchases power from its generating subsidiary, other IPPs, captive power producers and central sector and allocates various sources of power supply to the DISCOMs based on the category of consumers they cater to. The power so procured is sold to them and other purchasers through the transmission network of GETCO. This system has been approved by GERC. The glossary of terms used in the performance audit report has been given in ***Annexure 7***.

The PPAs entered into by the erstwhile Gujarat Electricity Board (GEB) were earlier reviewed and reported in the C&AG's Audit Report (Commercial), Government of Gujarat for the year ended 31 March 1996 and 31 March 1999. The Reports (February 2000 January 2004) were discussed by the Committee on Public Undertakings, however, no recommendations were made.

Power Generation at a Glance

2.2.1 The particulars of installed capacity in the State are given below:

Table 1: Sector wise and Fuel wise installed capacity in the State

Fuel	Installed Capacity (in MW) (As of March 2013)				
	State Sector	Private Sector	Central Sector	Total	Percentage of total Capacity
Non Renewable Energy (NRE)					
Coal	3,930	5,105	2,385	11,420	51.31
Lignite	1,040	0	0	1,040	4.67
Gas	1,546	2,502	424	4,472	20.09
Hydro	547	0	232	779	3.50
Nuclear	0	0	559	559	2.51
Renewable Energy (RE)					
Solar	23	834	0	857	3.85
Wind	265	2,828	0	3,093	13.90
Biomass	0	31	0	31	0.14
Mini Hydel	0	6	0	6	0.03
Total	**7,351**	**11,306**	**3,600**	**22,257**	
Percentage	**33.03**	**50.80**	**16.17**		

(**Source:** Information furnished by GUVNL)

[1] GUVNL- Gujarat Urja Vikas Nigam Limited (Holding Company), GSECL- Gujarat State Electricity Corporation Limited (Generation), GETCO- Gujarat Energy Transmission Corporation Limited (Transmission) and four Distribution Companies *i.e.* PGVCL- Paschim Gujarat Vij Company Limited, UGVCL- Uttar Gujarat Vij Company Limited, MGVCL- Madhya Gujarat Vij Company Limited, DGVCL- Dakshin Gujarat Vij Company Limited.

Organisational set-up of the GUVNL

2.3 The GUVNL is under the administrative control of the Energy and Petrochemicals Department of the GoG. The Management is vested with a Board of Directors (BoD) comprising of the Chairman, Managing Director (MD) and three other Directors appointed by the GoG. Out of three other Directors, one Director was Principal Secretary (Expenditure) Finance Department, GoG and two were appointed as independent Directors. The MD is assisted by functional heads *viz*., General Manger (Commerce) and General Manager (Finance and Accounts).

Audit Objectives

2.4 The objectives of performance audit were to ascertain as to whether:

- The State Government planned the creation of generating capacities under IPP mode in accordance with the National Electricity Plan and National Tariff Policy and implementation thereof was monitored in an effective manner.
- The MOUs/PPAs entered into by the GUVNL were in line with the established guidelines/rules/ regulations, the provisions in the PPAs entered were in the interest of the power utilities and were operationalised as per the terms and conditions of the agreement.
- An effective monitoring mechanism was in place.
- The PPA imposed any obligation on the purchaser to fulfil responsibilities related to creation of infrastructure and whether it envisaged any implicit or explicit penalties in case of failure to deliver on any of the obligation and *vice versa* for the producers.

Audit Criteria

2.5 The audit criteria derived from the following were adopted for assessing the achievement of the audit objectives:

- Electricity Act, 2003 and related Rules, Regulations and Policies; National Electricity Plan and National Tariff Policy;
- Tariff orders for generating stations of IPPs issued by Central Electricity Regulatory Commission (CERC) and Gujarat Electricity Regulatory Commission (GERC) from time to time;
- Standard bidding documents including model power purchase agreement issued by Ministry of Power in March 2009;
- Regulations issued from time to time by the GERC regarding power purchase and adjudication matters;

- Tender and bidding documents, Request for Quotation (RFQ), Request for Proposal (RFP), Detailed Project Report (DPR) etc., in relation to PPAs. Power exchange quotes and rates obtained in the bid, Monthly Information System (MIS) reports from Regional Load Dispatch Center, Electrical Utilities, Generators (IPPs), *etc.*;

- Power Purchase Agreements entered into by the GUVNL with various IPPs and supplementary PPAs if any entered into. Decisions of Board of Directors (BODs) and MIS reports submitted to Board;

- Documents regarding planning of IPPs and its time schedules, targets for commissioning / addition of projects, *etc*.

Scope and Methodology of Audit

2.6 The Performance Audit of PPAs with IPPs by GUVNL was conducted during January 2013 to June 2013. The scope of the performance audit was the examination of selected PPAs entered into by the GUVNL during the period 2008-09 to 2012-13. The GUVNL had entered into 42 PPAs comprising of 22 PPAs for 9,265.07 MW for NRE with its generating subsidiary Gujarat State Electricity Corporation Limited (GSECL) and 20 PPAs with IPPs other than GSECL for a capacity of 12,089 MW. The details of these PPAs are given in ***Annexure 8***. In case of RE based on solar and wind power, 436 PPAs (77 for Solar and 359 for Wind) with contracted capacity of 2,651 MW (Solar 823.50 MW and Wind 1,827.50 MW) were entered into with power producers. Of the 20 PPAs entered into with IPPs other than GSECL, 10 PPAs[2] for a capacity of 6,080 MW (28.47 *per cent* of total NRE capacity), 28 PPAs for a Capacity of 575 MW (69.82 *per cent* of contracted solar power) and 16 PPAs for a capacity of 616.90 MW (33.76 *per cent* of contracted wind power) were selected. The NRE sample has been selected so as to cover the PPAs entered prior to and after unbundling of GEB, based on two part tariff and competitive bidding and projects which are operational and in progress. In respect of RE, the number of PPAs being large in number, the sample selection has been made of PPAs with higher capacity from those entered into during the review period. We have discussed our findings for Non-Renewable energy and Renewable energy separately.

The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives to top Management, scrutiny of the records at the GUVNL Head Office, Vadodara and the Gujarat Energy Development Agency[3](GEDA), Gandhinagar, interaction with the audited entity personnel, analysis of data based on audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft Performance Audit Report to the Management and the concerned Department for comments.

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[2] PPA referred at Sl. no. 23, 24, 25, 28, 32, 33, 34, 35, 36 and 40 in Annexure 8.

[3] Sponsors, co-ordinates and promotes research programmes and provide technical and financial assistance for formulation of projects in renewable sources of energy in the State.

We explained our objectives, scope and methodology for the performance audit during an entry conference held on 09 April 2013 at the level of Principal Secretary Energy and Petrochemicals Department (E&PD) and Managing Director of the GUVNL. Subsequently the audit findings were reported to the Company and the State Government in August 2013 and discussed in an 'Exit conference' held on 14 October 2013, which was also attended by the Principal Secretary E&PD and Managing Director of GUVNL. The views of the Management have been incorporated in the Report.

Trading Activities of the GUVNL

Purchase of Power by GUVNL

2.7.1 The cost of power purchase of the GUVNL from different sources during the period 2008 to 2013 as given in the **table 2** as follows:

Table 2: Cost of power purchase

Particulars		2008-09	2009-10	2010-11	2011-12	2012-13
(a) Power purchased from Central/State sector						
Central Sector	Mus	16,371.35	18,072.08	16,872.01	18,171.98	19,400.36
	₹ Per unit	2.36	2.00	2.19	2.64	2.56
GSECL	Mus	25,998.26	26,137.39	25,163.88	25,951.18	21,416.76
	₹ Per unit	2.73	2.81	3.01	3.21	3.74
IPP (State own)	Mus	4,913.01	5,314.46	5,398.79	5,070.23	5,169.67
	₹ Per unit	2.84	2.47	2.72	3.13	3.04
Percentage to total purchase		**84.78**	**82.89**	**78.44**	**74.73**	**62.78**
Total power purchase from Central/State sector (Mus)		47,282.62	49,523.93	47,434.68	49,193.39	45,986.79
Cost per unit (₹)		**2.61**	**2.48**	**2.68**	**2.99**	**3.17**
(b) Power purchased from private sector						
IPP (Private)	Mus	5,653.24	6,857.06	11,243.81[4]	13,880.67	22,562.17
	₹ Per unit	4.99	3.68	3.16	3.16	3.02
Bilateral and Trade	Mus	985.40	31.82	0.00	0.00	0.00
	₹ Per unit	6.60	6.99	0.00	0.00	0.00
Power Exchange	Mus	2.67	21.67	0.00	7.67	0.00
	₹ Per unit	8.19	6.47	0.00	4.36	0.00
Others (Renewable)	Mus	1,847.29	2,785.34	1,793.49	2,744.96	4,704.51
	₹ Per unit	3.43	3.48	3.37	4.07	5.95
Unscheduled Interchange	Mus	0.00	526.31	0.00	0.00	0.00
	₹ Per unit	0.00	3.90	0.00	0.0	0.00
Percentage to total purchase		**15.22**	**17.11**	**21.56**	**25.27**	**37.22**
Total power purchase from private sector (Mus)		8,488.60	10,222.20	13,037.30	16,633.30	27,266.68
Cost per unit (₹)		4.84	3.65	3.19	3.31	3.53
Total power purchase (a+ b)	Mus	55,771.22	59,746.13	60,471.98	65,826.69	73,253.47
	₹ Per unit[5]	**3.12**	**2.87**	**3.05**	**3.36**	**3.61**

(Source*:* Annual Accounts of the Company and data furnished by the GUVNL***)***

[4] The increased purchase of power from Private IPPs was mainly due to supply of power from APL.
[5] Inclusive of Transmission charges paid to PGCIL and wheeling charges paid to GETCO.

The above table shows that, the purchase of power from the private sector increased to 37.22 *per cent* (2012-13) from 15.22 *per cent* (2008-09). Of this increase, the share of Private IPPs in power purchased from private sector, increased to 82.75 *per cent* (*i.e.* 22,562.17 Mus) in 2012-13 from 66.59 *per cent (i.e.* 5,653.24 Mus*)* indicating an increase of 300 *per cent* in purchase of power from them during 2008-09 to 2012-13. The power purchase cost of the 5,005[6] MW of capacity commissioned during 2010-11 to 2012-13 through competitive bidding, ranged from ₹ 2.25 to ₹ 2.89 per unit, which significantly reduced the unit cost of purchase from private IPPs from ₹ 3.16 per unit (2010-11) to ₹ 3.02 per unit (2012-13). During the year 2010-11, the power purchased from central sector reduced to16,872.08 Mus from 18,072.08 Mus in 2009-10 due to availability of cheaper power tied up from Adani Power Limited and therefore the costlier power from NTPC Kawas and Gandhar and other central generating stations was scheduled only when required. Similarly, the purchase of power from GSECL was also reduced by 937.51 Mus during the year 2010-11.

The table also shows that per unit purchase cost from GSECL and State owned IPPs increased during 2008-09 to 2012-13 from ₹ 2.73 to ₹ 3.74 and ₹ 2.84 to ₹ 3.04 respectively, which resulted in reduction of units purchased from them. The reason attributable for this was (i) the increased variable cost of GSECL plants due to ageing effect (ii) usage of indigenous coal and reduction in the allocation of cheaper gas in respect of gas based State owned IPPs and consequent higher variable cost. As merit order purchase is decided based on variable cost, the above increase in per unit variable cost pulls down these generating stations in merit order leading to lesser dispatch instructions from State Load Despatch Centre (SLDC).

[6] 2,000 MW from Adani Power Limited , 1,000 MW from Essar Power Gujarat Limited, 1,805 MW from Coastal Power Gujarat Limited and 200 MW from Aryan Coal Beneficiation Private Limited.

Sale of power by GUVNL

2.7.2 The details of units sold to different categories of consumers are as shown below:

Table 3: Summary of units sold to different categories of consumers

(Rate per unit in ₹)

Year	2008-09		2009-10		2010-11		2011-12		2012-13	
Name of Consumers	**Units sold (Mus)**	**Rate per unit**	**Units sold (Mus)**	**Rate per unit**	**Units sold (Mus)**	**Rate per unit**	**Units sold (Mus)**	**Rate per unit**	**Units sold (Mus)**	**Rate per unit**
DGVCL	10,323.98	3.83	11,248.06	3.59	11,463.24	3.84	12,539.18	4.31	13,228.70	4.71
UGVCL	13,512.43	2.75	15,601.78	2.55	15,622.59	2.92	16,235.35	3.20	18,400.60	3.33
PGVCL	19,188.69	2.50	21,066.41	2.31	21,045.12	2.63	22,777.72	2.92	25,771.75	3.09
MGVCL	6,667.51	3.37	7,176.93	3.17	8,108.19	3.30	8,431.42	3.57	8,682.97	3.83
Total of DISCOMs[7]	**49,692.61**	**2.96**	**55,093.18**	**2.75**	**56,239.14**	**3.06**	**59,983.67**	**3.37**	**66,084.02**	**3.56**
Licensees	4,564.95	3.74	903.81	3.95	41.36	5.73	27.82	6.13	21.93	7.07
Unscheduled Interchange	553.28	6.03	1,852.48	4.53	0.00	0.00	0.00	0.00	0.00	0.00
Trading in Exchange	313.34	7.95	827.28	5.02	3,514.78	3.66	1,580.38	2.99	1,934.66	3.26
Bilateral	462.25	7.71	924.79	5.69	676.70	5.05	4,234.82	4.04	5,212.86	4.12
Miscellaneous[8]	184.79		144.59		-		-		-	-
Total Sale	**55,771.22**	**3.12**	**59,746.13**	**2.90**	**60,471.98**	**3.11**	**65,826.69**	**3.41**	**73,253.47**	**3.61**

(Source: Information furnished by GUVNL***)***

The rate per unit of electricity sold to DISCOMs is fixed on the basis of the consumer profile of the DISCOMs. From the above table it could be seen that the rate of electricity sold to DGVCL ranged between ₹ 3.83 per unit to ₹ 4.71 per unit and as regards MGVCL the same ranged from ₹ 3.37 per unit to ₹ 3.83 per unit. The per unit rate of DGVCL and MGVCL were higher than the average rate of electricity charged to DISCOMs. However, the rate per unit of electricity charged to PGVCL ranged from ₹ 2.50 per unit to ₹ 3.09 per unit and the same as regards UGVCL, ranged from ₹ 2.75 per unit to ₹ 3.33 per unit which were lower than the average rate per unit of electricity due to larger number of agricultural consumers in PGVCL and UGVCL.

Audit Findings

Planning

2.8 The CEA publishes Electric Power Survey (EPS) report estimating electric demand for a period of five years as per directives of Ministry of Power (MoP), Government of India. The projection made in the EPS

[7] These were all distribution companies of the holding Company GUVNL.

[8] Represents the difference of 184.79 and 144.59 Mus during the year 2008-09 and 2009-10 respectively between purchase and sales of number of units by the Company which was on account of the delivery point of sales being different from that of purchase, accounting of transmission losses of the energy sold through bilateral agreement as per terms of agreement.

forms the basis for the States/State utilities to plan and prepare for augmentation of the power requirement on both short and long term basis to meet their future demand. The comparative picture of maximum/peak demand as estimated in the EPS, as registered in the State and actually catered to is shown below:

Table 4: Maximum demand catered in the State

Sl. No	Particulars	2008-09	2009-10	2010-11	2011-12	2012-13
1	Actual installed capacity of the State including RE (MW)	11,348	13,792	15,430	18,832	22,257
2	Unrestricted demand registered in the State (MW)	12,294	10,848	11,296	11,401	12,348
3	Demand catered (MW)	9,437	9,883	10,461	11,209	12,348
4	Installed capacity required to meet Unrestricted Demand registered (In MW) (At 80 *per cent* availability)	15,368	13,560	14,120	14,251	15,435
5	Gap/(Surplus) (1-4) in installed capacity to meet Unrestricted Demand (MW)	4,020	(232)	(1,310)	(4,581)	(6,822)
6	Gap/(Surplus) (2-3) in catering demand(MW)	2,857	965	835	192	0
7	Peak demand as per 17th EPS (In MW) (For Gujarat State)	12,422	13,042	13,692	14,374	15,305

(**Source:** Information furnished by GUVNL)

The above table shows that the actual installed capacity of the State increased from 11,348 MW (2008-09) to 22,257 MW (2012-13). However, there was a gap of 4,020 MW (2008-09) in the installed capacity required to meet unrestricted demand of the State, which turned into a surplus of 6,822 MW in 2012-13 due to capacity addition of 10,909 MW during the period 2008-09 to 2012-13. Though, there was addition of capacity of 10,909 MW as stated above, the State was not able to cater to the demand and the gap ranged from 2,857 MW to 192 MW. The reasons attributed to such gap was that out of 4,172 MW of gas based capacity, 3,000 MW was lying idle for want of gas, generation from renewable sources with capacity of 3,987 MW is infirm with 20 *per cent* capacity utilisation factor and hydro capacity is bound to irrigation programme. Besides, the unrestricted demand of the State was much lower than that estimated in 17th EPS due to operationalization of open access, increasing contribution of service sector, increased awareness among various class of consumers towards usage of energy efficient devices, establishment of captive power plant and wind projects for their own consumption for un interrupted supply and economic benefit leading to low demand.

Non Renewable Energy

Finalisation and Signing of PPAs

2.9 PPAs with IPPs (Private as well as State owned) were entered into under cost plus approach under MOU route up to January 2006 and after which competitive bidding was made compulsory for all new generation plants set up under the private sector. In respect of State owned IPPs, cost plus approach was allowed up to January 2011 and after which competitive bidding was made compulsory for them also. All PPAs entered into by the GUVNL were to be approved by the GERC.

In case of cost plus PPAs, tariff is determined by the GERC under Section 62 of the Electricity Act, 2003 whereas in case of competitive bidding PPAs the tariff as determined by transparent bidding process is adopted by the GERC under Section 63 of the Act. The typical process involved in execution of PPAs under competitive bidding is as under:

Preparation of bidding documents as per MOP Guidelines

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Approval of bidding documents by the Gujarat Electricity Regulatory Commission

↓

Adoption of the two stage bidding process comprising of Request for Quotation (RFQ) and Request for Proposal (RFP)

↓

Issuance of RFP to qualified bidders

↓

Obtaining approval of Gujarat Electricity Regulatory Commission to the deviations, if any

↓

Constitution of Committee for evaluation of the bids

↓

Award of the contract to the lowest bidder

↓

Submission of final PPA to Gujarat Electricity Regulatory Commission for adoption of tariff under section 63 of the Electricity Act, 2003

The deficiencies in finalisation and signing of PPAs are discussed in succeeding paragraphs:

Purchase of power at a high cost

2.9.1 The GUVNL executed (November 2010) PPA with Bhavnagar Energy Company Limited[9] (BECL) for purchase of 500 MW (250 MW x 2 Units) of power from their lignite based power plant at village Padva, District Bhavnagar. This was based on a capital cost of ₹ 3,615 crore and a levelised tariff of ₹ 3.32 per Kwh (cost *plus* approach), as accepted by the GoG in January 2010. As per the PPA, the Scheduled Commercial

[9] A Government of Gujarat Company.

Operation Date (SCOD) for Unit-I was 18 February 2013 and for Unit-II was 18 May 2013. The BECL sought (April 2012), extension of six months for the SCOD due to delay in civil work on account of geological variance in sub-soil strata of the project land which necessitated redesign of piles and pile caps. The same not being event under "*Events of Force Majeure*" as provided in PPA, GUVNL decided (August 2012) to levy liquidated damages.

However, considering the above factors put forth by BECL, GoG agreed (May 2012) to increase the project cost from ₹ 3,615 crore, as given in the PPA, to ₹ 3,800 crore. The revision in SCOD by six months will increase the project cost to ₹ 3,950 crore (Revised project cost ₹ 3,800 crore *plus* Capitalisation of interest for ₹ 150 crore[10] during the extended construction period). Notwithstanding the higher levelised tariff of ₹ 3.32 per Kwh already agreed to by the GUVNL as compared to tariff (₹ 2.34 per Kwh to ₹ 2.89 per Kwh) of competitive bidding PPAs, the increase in the project cost will result in increasing levelised tariff by ₹ 0.13 per Kwh. Such increased levelised tariff will burden the GUVNL with an extra purchase cost of ₹ 38 crore[11] per annum.

The Management/Government replied (November 2013) that audit had worked out the losses on the assumption that the GUVNL will agree for the enhancement of project cost and revision of SCOD, but in this regard, the GUVNL had not yet taken any decision. The reply was not acceptable as the increased cost of project had already been approved by the GoG. GUVNL has no other option but to accept the revised cost with applicable liquidated damages. As such, the implication as pointed out by Audit will remain, irrespective of the fact that the GUVNL had not taken any decision so far (November 2013).

Deviation from standard bidding guidelines

2.9.2 The Standard Bidding Documents issued (March 2009) by Ministry of Power for 'Determination of Tariff by Bidding process for Procurement of Power by Distribution Licensees', contained an enabling clause for raising provisional bills by the seller on the last day of the billing month. Such a provisional bill would comprise of the capacity charges based on the declared capacity for the entire month and energy charges for the energy scheduled up to 25th of the month as per Regional Load Despatch Centre (RLDC)/SLDC data. The payment of provisional bills so raised within five days entitled the buyer to a rebate of 2.25 *per cent* of the amount due under the provisional bill, which would reduce at the rate of 0.05 *per cent* for each day, up to fifth day of the month. At the time of final bill, rebate of two *per cent* would be available if payment of differential amount is made on the next day and thereafter it would reduce by 0.033 *per cent* for each day. In case, the above provision did not exist, payment of normal bills within seven days of its raising only entitled the buyer to a maximum rebate of two *per cent*. Thus, the provisional bills

[10] Calculated at 10 *per cent* per annum for six months on the admissible debt component of ₹ 3,000 crore.

[11] 500 MW X 8,760 X 1,000 X 75 *per cent* PLF less 11*per cent* auxiliary consumption x ₹ 0.13 = ₹ 38 crore.

entitled the buyer to an additional rebate of 0.25 to 0.05 *per cent* depending on the date of payment of provisional bill.

The GUVNL entered (May/June 2010) into three PPAs for 25 years with three IPPs under Case-I competitive bidding for procurement of power of 2,610 MW without provisional bill clause. GERC approved (November 2009) deviations taken by GUVNL in the bid documents of these PPAs stating that the deviations proposed by GUVNL would not make any substantial change in the billing and payment procedure between seller and procurer. The PPAs were approved by the GERC in August 2011.

The details of these Long Term PPAs are given in the **Table 5** as follows:

Table 5: The Long Term PPAs signed with the bidders without provisional bill clause

Name of Bidder	Capacity (in MW)	Levelised Tariff per Kwh (in ₹)	Date of signing
			Scheduled COD
KSK Mahanadi Power Company Limited	1,010	2.345	3 June 2010
			June 2015
Shapoorji Pallonji Energy (Gujarat) Private Limited	800	2.800	15 May 2010
			May 2015
Essar Power Gujarat Limited	800	2.800	15 May 2010
			May 2015

(**Source**: As per the information furnished by GUVNL)

Audit observed that the non-insertion of the clause for raising provisional bills deprived the GUVNL of the possibility of earning an additional rebate ranging from 0.25 to 0.05 *per cent* for each month. The loss per month on account of the deletion would amount to ₹ 16.60 lakh to ₹ 3.31 lakh from the first day to the fifth day considering capacity and energy charges at normative availability of 85 *per cent* and also considering interest of 10.60 *per cent* on borrowed funds.

The Management/Government replied (November 2013) that the standard bidding documents allowed the buyer to deviate from the prescribed conditions. Further, the provision for rebate on provisional bills payment, being a commercial condition, had been deleted with the approval of GERC before inviting bids. Hence, the bidders had quoted their tariff considering the same. The reply is not acceptable as the above provision is only an enabling clause which will not get factored into the tariff calculation as it is up to the selected bidder whether or not he wants to raise the provisional bill. Moreover, GUVNL has been availing of such rebates on provisional bills from Adani Power Limited and Essar Power Gujarat Limited for capacity of 1,000 MW each without any reported financial difficulties. Lastly, GUVNL does not lose anything by keeping the enabling provision for provisional bill.

Provisions in Power Purchase Agreements

Undue benefit due to change in delivery point

2.10.1 The GUVNL invited (February 2006) Request For Quotation (RFQ) for three bids[12] for 2,000 MW each for procurement of power on long term basis wherein "Delivery Point" was stated as "generator switch yard bus-bar" if the project was Gujarat based and connected to the State Transmission Utilities (STU) grid and in other cases the "nearest Central Transmission Utility (CTU) interconnection point". In the pre-bid meeting organised (May 2006) for all the three bids, the GUVNL agreed to change the delivery point from generator switch yard bus-bar to the nearest transmission substation of STU for projects located in Gujarat State for sake of uniformity with outside Gujarat parties and the same was modified and incorporated (July 2006) in the bid documents as well. GUVNL instructed (July 2006) the bidders to indicate the nearest existing 220 KV or 400 KV substation as the inter connection point or to approach the STU immediately for determination of the nearest point of interconnection.

The RFP bid by Essar Power Gujarat Limited (EPGL) was submitted on 03 January 2007 wherein Delivery point, without consulting STU *i.e.* Gujarat Energy Transmission Corporation Limited (GETCO), was fixed as "220 KV Vadinar substation". EPGL being the lowest bidder, PPA was signed (February 2007) with them for purchase of 1,000 MW of power at the levelised tariff of ₹ 2.4006 per Kwh for 25 years which was worked out by considering delivery point as 220 KV substation of GETCO at Vadinar and the same was approved by GERC in December 2007. In view of fixation of delivery point as 220 KV Vadinar substation, GUVNL requested (March 2007) GETCO to initiate necessary action for evacuating 1,000 MW power from 220 Vadinar substation. However, GETCO intimated (March 2007) that no 220 KV substation existed at Vadinar. In view of non-existence of 220 KV substation at Vadinar, EPGL in the meeting with GETCO agreed (March 2007) to set up 400 KV switch yard in place of the originally planned 220 KV switch yard from where GETCO would directly evacuate power to its 400 KV Hadala substation. Therefore, the delivery point of EPGL was changed from 220 KV Vadinar substation of GETCO to 400 KV switch yard bus bar of EPGL. The change in delivery point was approved by GERC in November 2009.

As a result of the change in delivery point from 220 KV Vadinar substation of GETCO to 400 KV switchyard bus bar of EPGL post signing of PPA, there was a saving to EPGL of ₹ 52 crore[13] as they were not required to construct the transmission lines from switchyard to Vadinar substation of GETCO. Further, the change in delivery point also resulted in saving in line losses of 89.26 Mus worth ₹ 21.42 crore per annum to EPGL. The above saving was not passed on to GUVNL as the tariff had

[12] No.01//LTPP/2006, No 02/LTPP/2006 and No.03/LTPP/2006.

[13] Capital cost of 220 KV switch yard including transmission line ₹ 132 crore *less* Capital cost for setting up 400 KV switch yard bus bar as worked out by GETCO was ₹ 80 crore.

been quoted based on the higher cost of delivery and there was no enabling provisions in the PPA to pass on such saving at later stage.

As a result of the bidder quoting a delivery point and GUVNL accepting the same without consulting GETCO, there was an undue benefit to EPGL to the extent of ₹ 587.50 crore[14] during the tenure of PPA.

The Management/Government replied (November 2013) that for supply of power at 400 KV level EPGL was required to construct 400 KV switchyard bus bar with much higher investment as compared to evacuation of power at 220 KV level. It was also stated that as quantum of power to be delivered at bus bar was creating problem for outside Gujarat parties, the bidders were asked to identify on their own or in consultation with STU, the substation where power could be supplied.

The reply was not acceptable as the selection of appropriate substation was possible had GETCO been consulted before inviting bids. Further, the loss commented by Audit is the net loss after comparing both the capital cost and other costs involved under both the scenarios as submitted by GETCO. Thus, the fact remains that non consultation with GETCO before inviting bids led to undue benefit to the seller due to change in delivery point post execution of PPA.

Payment of incentive in contravention to statutory notification

2.10.2 Under Section 43A of the Electricity (Supply) Act, 1948, the GoI issued the Notification dated 30 March 1992, which *inter alia* stipulated the factors in accordance with which the tariff for sale of electricity by IPPs to the Board/other persons was required to be determined. The above Notification was amended in November 1995 whereby in case of Naphtha based plant deemed generations was not to be considered for incentive payment[15].

However, the GUVNL (erstwhile GEB) continued to make the payments towards incentive on Deemed Generation (DG) of Naphtha based plants of power generators with whom PPAs were entered into either prior to or after November 1995. The payments of ₹ 653.90 crore were made during the period from 1998-99 to 2005-06 related to three PPAs as given in **Table 6**. Belatedly, GUVNL filed (September 2005) petition to GERC for recovery of incentive payments made on DG for naphtha based plants and allowing them to adjust the future tariff payable to the power generators. GERC ordered (February 2009) that the claims for ₹ 396.39 crore of the GUVNL for the period before September 2002 were barred by limitation and the decision was also upheld by the Appellate Tribunal for Electricity in January 2010 and Honourable Supreme Court in September 2011. Hence, the claims for ₹ 257.51 crore only were admitted for adjusting

[14] ₹ 21.42 crore per annum for 25 years *plus* ₹ 52 crore.

[15] The incentive payment is to be made upon the power plant achieving generation level including deemed generation and excluding non-deemed generation beyond agreed normative PLF of 68.5 *per cent* in any year.

against the future tariff payable to the power generators as shown below in **Table 6**:

Table 6: Details of claims and Disallowance of incentive claims

Sl. No.	PPA with name of IPPs	Date of PPA	Total amount of incentive claimed by GUVNL (₹ in crore)	Period of claim	Claim allowed (₹ in crore)	Claim disallowed (₹ in crore)
1	Essar Power Limited (EPoL)- 300 MW	30 May 1996	119.50	1998-99 to June 2005	37.40	82.10
2	Gujarat Industrial Power Company Limited (GIPCL)- 160 MW	01 August 1996	8.71	2000-01 to 2002-03	1.08	7.63
3	Gujarat Paguthan Energy Corporation Private Limited (GPECL)- 655 MW	03 February 1994	525.69	1997-98 to September 2005	219.03	306.66
Total			**653.90**		**257.51**	**396.39**

(**Source**: -Information furnished by GUVNL)

Audit observed that GUVNL was aware about the inadmissibility of payment of incentive on deemed generation to Naphtha based plants in October 1999 however, took belated legal action for the recovery of payments made leading to a loss of ₹ 396.39 crore.

The Management/Government replied (November 2013) that erstwhile GEB had raised the issue relating to payment of incentive on DG of Naphtha based plants with power generators as early as October 1999. It was only on recommendation of High Level Committee in July 2005; the matter was referred to GERC for adjudication. The reply was not acceptable in view of the fact that the GUVNL having realised the unacceptability of the incentive payments as early as in October 1999, should have registered its claim as per PPA provisions immediately in order to avoid claims barred by limitation.

Irregular reimbursement of tax

2.10.3 The GoI under Section 43A of the Electricity (Supply) Act, 1948, issued the notification on 30 March 1992, which *inter alia* stipulated the factors in accordance with which the tariff for sale of electricity by IPPs to the Board/other persons was required to be determined. As per the notification, the two part tariff (*i.e.* cost plus basis) for sale of electricity from thermal power generating stations comprised of the recovery of annual fixed charges (interest on loan, depreciation, operation and maintenance, taxes on income, return on Equity and interest on working capital) and variable charges. As per the notification dated 30 March 1992, the tax on income, if any was to be computed as expense at actuals. The said notification was amended on 9 June 1998 wherein it was clarified that the tax on return on equity (ROE) and extra rupee liability on account of foreign exchange rate variation only should be considered for reimbursement purpose and tax on other income streams if any accruing to the generating company was not to be considered for reimbursement of tax.

GUVNL (erstwhile GEB) entered (February 1994) into a PPA with Gujarat Paguthan Energy Corporation Private Limited (GPECL) for purchase of 655 MW of power for a period of 20 years. As per PPA, taxes on income was payable with respect to operating the power station or otherwise with respect to GPECL's business related to the power station. Further, as per Article 6.5 of the PPA any amendment to the GoI Notification dated 30 March 1992 was to be taken into account for tariff calculation.

Audit observed that, the GUVNL, while calculating amount to be reimbursed towards tax, included the component of incentive as a part of RoE. This resulted in excess reimbursement of Income tax on incentive amounting to ₹ 43.04 crore during the period 2007-12.

The Management/Government replied (November 2013) that the GoI Notification was only a guideline and power generation being a new business for private parties at that time, the deviation from guideline must have been agreed by the GUVNL. The reply was not acceptable as the Article 6.5 of the PPA clearly provides that any amendment in the notification was also to be considered for tariff calculation. Hence, the fact remains that the reimbursement of tax on incentive to GPECL was in violation of the notification.

Operationalisation of Power Purchase Agreements

Payment of higher tariff

2.11.1 The GUVNL signed PPA (26 February 2007) with Aryan Coal Beneficiation Private Limited (ACB) for supply of 200 MW power on long term basis from their power plant at Chhattisgarh with the Scheduled Commercial Operation Dates (SCOD) for Unit-I and II as 26 February 2010 and 26 August 2010 respectively. From the date of signing of PPA, the PPA came into effect. As per the terms of PPA, ACB was required to deliver the contracted power at inter-connection point of GETCO and Central Transmission Utility (CTU). Accordingly, Sipat Pooling substation of Power Grid Corporation of India Limited (PGCIL) was declared (June 2008) as inter-connection point by PGCIL. The Sipat Pooling substation was expected to be commissioned by December 2010, however, the same was delayed and was put under commercial operation only on 01 April 2012. In the meantime, as the long term open access was not available due to non-completion of Sipat pooling substation, it was decided (December 2010) to evacuate power from ACB through alternate arrangements[16] under Short Term Access (STOA). GUVNL agreed (April 2011) to off-take power in varying quantum to the extent of availability of

[16] Loop in Loop Out (LILO) from existing PGCIL Korba-Bhatpur 400 KV Single circuit line of PGCIL with dedicated transmission line of ACB under Short Term Access

transmission corridor till commercial commissioning of Sipat pooling substation, not to levy liquidated damages for availability below 75 *per cent* and to apply provisions of PPA only after the commissioning of Sipat pooling substation. ACB commercially commissioned its Unit I on 13 December 2011 and started supplying power under alternate arrangement to GUVNL. The Unit II was declared commercially operational on 21 June 2012.

As per PPA, for the purpose of payment of purchase of power, the contract year was defined as the period commencing from COD and ending on immediate succeeding March 31 and thereafter each period of 12 months beginning on 1 April and ending on 31 March. As ACB commercially commissioned its Unit I on 13 December 2011 without commissioning of Sipat pooling substation the provisions of PPA should have been applied from that date. However, GUVNL paid first year consolidated tariff of ₹ 2.0718 per Kwh on scheduled generation for the period January 2012[17] to April 2012. After commercial commissioning of Sipat Pooling substation in April 2012, GUVNL again paid first contract year tariff (being higher than second year tariff) for the period May 2012 to March 2013. GUVNL should have made the payment for power at consolidated tariff of ₹ 2.0718 per Kwh for the period January 2012 to March 2012 (being the financial year ending immediately following the commercial operation date) and second contract year tariff (*i.e.* ₹ 2.0183 *per* Kwh) for the period April 2012 to March 2013 as per the terms of PPA. Not doing so has resulted in excess payment of ₹ 5.36 crore due to the difference between the first year tariff and second year tariff for the period April 2012 to March 2013. Besides, GUVNL did not recover an amount of ₹ 3.69 crore towards liquidated damages for shortfall in availability of power as per the provision of PPA.

The Management/Government replied (November 2013) that as per terms of PPA, ACB had the option not to supply power up to 01 May 2012, and they agreed to supply whatever quantum of power as was available under STOA. PGCIL put Sipat pooling station under COD from 01 April 2012 and accordingly the SCOD was modified to 01 May 2012 for the purpose of this agreement. Thus, as per PPA the 1st contract year was 01 May 2012 to 31 March 2013.

The reply was not acceptable since the COD was 13 December 2011 and therefore the provisions of PPA were to be made applicable from the date of COD as per Article 6.4 of PPA. Further, by declaring commercial commissioning of Unit I, ACB had secured its interests and became entitled to energy and capacity charges without being liable to supply the contracted quantity under STOA.

Loss due to non- adherence to provisions of PPA

2.11.2 The GUVNL entered into PPA with Essar Power Gujarat Limited (EPGL) for purchase of 1,000 MW of power at Delivery point from their

[17] 14 to 31 December 2011, the billing was done for variable cost for the infirm power supplied.

2 X 600 MW Salaya Power Project. As per PPA, the SCOD for Unit I was 26 February 2011 and for Unit II was 26 August 2011 which was extended up to 23 November 2011 for both the Units as the switch yard of EPGL could not be charged due to high voltage witnessed on the transmission lines. As against the extended SCOD as stated above, the Unit I and II commenced commercial operation on 1 April 2012 and 15 June 2012 respectively. Due to delay in providing contracted capacity by EPGL, the GUVNL under Article 4.6[18] of PPA, worked out ₹ 221.25 crore[19] towards Liquidated Damages (LD). The LD was adjusted from the invoices of EPGL for supply of power for the period November 2011 to September 2012 for ₹ 262.62 crore which was not allowed under Article 11 of PPA. Aggrieved by the deduction of LD of ₹ 221.25 crore from the monthly energy bills, EPGL filed (January 2013) petition with GERC seeking direction of GERC requiring GUVNL to refund the amount already deducted from the monthly energy bills in contravention of PPA terms.

GERC directed (31 January 2013) the GUVNL to refund 90 *per cent* of the deducted amount of LD immediately to EPGL and to deduct 10 *per cent* of the amount so refunded to EPGL from the monthly bills raised by EPGL till the refunded amount is recovered entirely. In view of the order of GERC, the GUVNL refunded (February 2013) LD of ₹ 199.13 crore (being 90 *per cent* of ₹ 221.25 crore) to EPGL.

Audit observed that, the GUVNL, under Article 4.6.3 of PPA was empowered to recover LD of ₹ 221.25 crore within ten days of the commencement of commercial operation. In case of failure by EPGL to make the necessary payment, the GUVNL had right to invoke the available bank guarantee (BG), in this case ₹ 75 crore, and recover the balance amount from EPGL immediately. However, the GUVNL instead of following the above provisions, deducted LD of ₹ 221.25 crore from the monthly bills of EPGL which was held as inappropriate and invalid by GERC. The non-compliance of Article 4.6 of PPA, led to refund of ₹ 199.13 crore in February 2013 resulting in interest loss of ₹ 3.17 crore[20].

The Management/Government replied (November 2013) that EPGL was in process of discussion with the GUVNL as regards recovery of LD from energy bills but contested the same after expiry of the bank guarantee. It was further stated that the GUVNL had not incurred any loss as they have recovered interest at the rate of 12 *per cent* on the 50 *per cent* of LD amount which was simultaneously paid as an advance to EPGL as sought by them. The reply was not acceptable as GUVNL should have first invoked the provisions of the PPA and sufficiently documented the same before recovering the LD from the monthly bills. Had the required procedure been followed, the action of GUVNL could not be set aside.

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[18] Liquidated Damages for delay in providing contracted Capacity.

[19] For unit I for the delay 130 days ₹ 82.50 crore and for the unit II for the delay 205 days ₹ 138.75crore.

[20] The interest loss represents the difference between the interests earned during November 2011 to September 2012 on the amount of liquidated damaged recovered from the bills till the refund of the said amount in February 2013; with the interest that could have been earned up to February 2013 by compliance to Article 4.6.

The above order for refund has arisen because of PPA provisions not being followed before the recovery from bills. Further, the interest earned on the advances given by the GUVNL has already been factored in the loss calculation.

Monitoring mechanism

2.12 To ensure compliance of the applicable guidelines and PPA clauses, a separate wing was created in the GUVNL consisting of professionally qualified people. GERC also plays an important role to ensure compliance of various rules and regulations and adjudicates disputes between parties. However, there were certain instances noticed of weak monitoring. One such case is detailed below:

Belated recovery of Liquidated Damages

2.12.1 The GUVNL entered (October 2009) into PPA with Gujarat Industrial Power Company Limited (GIPCL) for purchase of 250 MW power from the expansion plant of Surat Lignite Power Project. As per PPA, the SCOD for Unit I was 31 December 2009 and for Unit II was 31 March 2010 which was achieved on 19 April 2010 and 28 April 2010 respectively. The total LD to be recovered from the GIPCL as per PPA worked out to ₹ 11.62 crore. As per Article 4.7.3 of PPA, the recovery of LD was to commence from the first monthly bill raised by the seller and entire amount to be recovered not later than 60 days (*i.e*. on or before 26 June 2010) from the date on which the Unit actually achieved COD.

Audit observed that the GUVNL belatedly recovered (April 2012) ₹ 11.37 crore of LD from the invoice of February 2012. Delay in recovery of LD of ₹ 11.37 crore for 21 months resulted in loss of interest of ₹ 2.11 crore[21].

The Management/Government replied (November 2013) that the payments made to GIPCL towards monthly invoices were on *ad hoc* basis as the project cost was not finalised by GERC. It was further stated that GUVNL had already retained an amount of ₹ 80 crore which was more than the LD amount of ₹ 11.37 crore. After reconciliation based on GERC order, GUVNL paid about ₹ 27 crore over and above the refund of retained amount of ₹ 80 crore. As such GUVNL has not suffered any interest loss. The reply was not acceptable as the withholding of ₹ 80 crore and subsequent release thereof, after reconciliation, was due to difference in perception as regards cost of project, disbursement of loan and interest payment there against, ascertainment of Debt-Equity ratio, lack of clarity as to application of norms and price of lignite to be considered for payment and were not in any way connected with levy of LD.

[21] Calculated at ₹ 11.37 crore (₹ 11.62 crore liquidated damages less ₹ 0.25 crore recovered from sale of infirm power) X 10.60 *per cent* (average borrowing rate for the year 2010-11) X 21 Months = ₹ 2.11 crore.

Renewable Energy

2.13 The deficiencies observed in respect of PPAs based on Renewable Energy are discussed in succeeding paragraphs.

Award of solar projects to ineligible bidders

2.13.1 In order to promote green and clean power in the State using solar energy, the GoG declared (06 January 2009) Solar Policy 2009 under which Solar power generators (SPGs) installed and commissioned up to 31 March 2014 were eligible for the incentive declared under this policy for a period of 25 years from the date of commissioning or for the life span of the SPG, whichever was earlier. The tariff was fixed at ₹ 15 per unit and ₹ 11 per unit for the Solar Photovoltaic Project (SPV) and Solar Thermal (ST) projects respectively for the initial 12 years starting from the date of COD and thereafter at ₹ 5 per unit and ₹ 4 per unit for SPV and ST projects respectively from 13th year to 25th year. As per the policy, the developers desirous to set up solar power project were to submit requisite details to the Gujarat Energy Development Agency (GEDA)[22], and to satisfy the financial and technical criteria prescribed in the policy. Thereafter, the details submitted by the developers were scrutinised at GEDA for allocation of solar capacity.

Audit observed that in respect of 10 cases (***Annexure 9***), even though project developers did not fulfil either financial/technical criteria or both the criteria, they were allocated solar capacity by GOG. Further, in four out of 10 cases, the object clause of Memorandum of Association (MoA) of developer who were registered under the Companies Act, 1956 did not envisage power generation activity to be pursued by them.

The Management/Government stated (November 2013) that all the solar project developers had implemented and commissioned their solar projects and thereby Government was able to achieve objective of the Solar Policy, 2009. The fact, however, remains that the award of solar capacity to the developers in violation of criteria prescribed in solar policy 2009 vitiates the very purpose of such criteria.

Excess capacity creation under solar power

2.13.2 As per the Solar Policy 2009, a maximum of 500 MW solar power generation was envisaged up to 31 March 2014. The quantum of power that could be injected in the grid from all renewable resources (purchase by distribution licensees, captive power consumption and third party sale) was to be restricted to a maximum of 10 *per cent* of the procurement of power. Further, within the limit of 10 *per cent*, GERC was to decide the sub-limit for procurement of power from each renewable source.

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[22] A Nodal agency to Sponsors, co-ordinates and promotes research programmes and provide technical and financial assistance for formulation of projects in renewable sources of energy in the state.

Against the ceiling of 500 MW, capacity of 958 MW was setup by developers till November 2010, for which the GUVNL signed PPAs on the directives of the GoG. However, the subsidy support of ₹ 2,016 crore for 2012-13 sought by GUVNL (November 2010) to cover up the additional burden due to higher cost of solar power was rejected (January 2011) by GoG.

GERC *vide* order dated 17 April 2010 stipulated minimum Renewal Purchase Obligation (RPO) in respect of renewable sources. The **Table 7** below shows the quantity of renewable power under different sources that the GUVNL should have purchased *vis-à-vis* actual purchase of power.

Table 7: Purchase of renewable power from different sources

Particulars		2010-11	2011-12	2012-13
Purchase of power excluding renewable and book adjustments (In Mus)		58,906.65	63,250.84	68,622.98
Wind Power Purchase	As per RPO (in per cent)	4.50	5.00	5.50
	As per RPO(in Mus)	2,650.80	3,162.54	3,774.26
	Actual purchase(in Mus)	1,543.94	2,325.30	3,414.52
	Actual purchase(in per cent)	2.62	3.68	4.98
	Average Purchase price per unit	3.39	3.42	3.37
Solar Power Purchase	As per RPO (in per cent)	0.25	0.50	1.00
	As per RPO(in Mus)	147.27	316.25	686.23
	Actual purchase(in Mus)	2.39	163.03	1,139.92
	Actual purchase(in per cent)	0.004	0.26	1.66
	Average Purchase price per unit	15.00	15.00	14.04
Bio Mass, Bagasse and Others	As per RPO (in per cent)	0.25	0.50	0.50
	As per RPO(in Mus)	147.27	316.25	343.12
	Actual purchase(in Mus)	19.00	87.52	76.05
	Actual purchase(in per cent)	0.03	0.14	0.11
	Average Purchase price per unit	3.68	3.97	3.89

(**Source**: - Information furnished by GUVNL)

The above table shows that GERC while laying down the minimum RPO had sought to achieve an economical mix of the various sources of renewable power to put the least burden on the consumer. The solar power component had been kept at the bare minimum in view of its high fixed cost.

However, the GUVNL/the GoG in disregard to this economical mix as proposed by GERC, had approved development of solar projects far in excess resulting in purchase of 1,139.92 Mus of solar power in 2012-13 against the stipulated 686.23 Mus. This excess purchase of 453.69 Mus led to excess burden of ₹ 473.20 crore[23] and consequently passing of the burden to consumers through increased average cost of power of the GUVNL.

The Management/Government stated (November 2013) that the RPO specified by GERC was minimum percentage of total power purchase. Further, the solar power tie up by GUVNL was in line with the policies of State as well as Central Government for accelerated development of renewable energy sources. The reply was not acceptable as by exceeding the maximum limit in respect of solar power, GUVNL had not achieved the minimum limit prescribed in respect of other sources and consequently passed on additional burden to the consumers.

Excess tariff payment due to not considering available exemptions

2.13.3 As per Clause 10 (Sale of Energy) of Solar Policy 2009, any subsidy/incentive received by SPGs from any source should be reduced from the rate for purchase of power from SPG developers except the benefit of accelerated depreciation under the Income Tax Act.

GERC issued (January 2010) tariff order for procurement of solar power by the distribution licensees and others from SPGs for a period of 25 years. The tariff was worked out after reckoning the benefit of accelerated depreciation under the Income Tax Act and the then prevailing applicable duties and taxes.

Audit observed that the GoI *vide* notification no.15/2010/Excise dated 27 February 2010, exempted components required for initial setting up of a solar power generation project or facility from levy of excise duty under Central Excise Tariff Act, 1985. Similarly, *vide* notification no.30/10-custom dated 27 February 2010, GoI granted custom duty exemption on items on which excise duty exemption as stated above was granted, in excess of five *per cent* ad valorem duty[24]. Accordingly, Ministry of New and Renewable Energy (MNRE) was authorised to issue the exemption certificate and the application for availing such exemption was required to be routed through the concerned State Department/Designated Agency[25].

A test check of 27 cases (***Annexure 10***) out of 77 SPG cases allotted revealed that the application for seeking excise duty exemption for ₹ 70.51 crore and customs duty exemption for ₹ 83.52 crore had been forwarded to MNRE. However, GEDA had not compiled data regarding exact amount of exemption actually availed by respective developers and forwarded the same to the GERC for working out its impact on the levelised tariff as the notional capital cost of ₹ 16.50 crore per MW and ₹ 13 crore per MW for Solar Photovoltaic and Solar Thermal Projects respectively was without considering the above exemptions. The levelised

[23] Calculated at ₹ 10.43 per unit (₹ 14.04 *less* ₹ 3.61) x 453.69 Mus = ₹ 473.20 crore.

[24] Vide notification dated 06-01-2011, further exemption from whole of the additional duty of customs leviable under section 3 of Customs Act was also granted.

[25] Gujarat Energy Development Agency was designated as State Agency by GERC *vide* notification no.4 of 2010.

tariff of the 27 SPGs listed in ***Annexure 10*** would reduce by ₹ 0.21 per unit due to consequent reduction in capital cost. The issue of availment of exemption of Excise and Customs duty by the SPGs was not taken up by GEDA and GUVNL before GoG. Due to this the benefit of such exemption has not been passed on to the GUVNL till date by SPGs.

The Management/Government stated (November 2013) that the GERC had set aside a petition for revision in solar tariff filed by GUVNL based on improved parameters. The reply was not acceptable as the non-consideration of exemptions in the capital cost of the project led to passing of undue benefit on to developers and burdens the consumers of the State.

Conclusion

While finalising PPAs with IPPs, the GUVNL did not consider the requirements of Standard Bidding Documents as regards to provisional bills. Provisions in the PPA regarding non-payment of deemed generation on Naphtha based generation and non-reimbursement of tax on incentive payments were violated. An instance of change in delivery point after execution of PPA to the disadvantage of the GUVNL was also noticed. In the operationalisation of PPAs, tariff rates higher than applicable rates were paid and liquidated damages for delay in commissioning were belatedly levied. Capacity under costlier solar power was created in excess of what was required by GERC Orders and many developers selected did not satisfy the technical and financial criteria prescribed under Solar Policy. There was no mechanism at Government level to monitor that incentives availed by solar power developers under Customs and Excise at a later stage were passed on through lower tariff to the GUVNL.

Recommendations

For better management of PPAs the GUVNL may consider:

- **Consulting STU in planning evacuation of power well in advance to avoid subsequent change in evacuation system;**
- **Seeking immediate legal advice in the cases involving interpretation of terms and conditions and huge financial implications;**
- **Adhering to the provisions of GoI notifications and PPAs in letter and spirit so as to avoid any loss arising on that account; and**
- **Refraining from contracting excess capacity from costlier sources.**

The GoG may also consider:

- **Setting up a mechanism to ensure compliance of required parameters by developers.**