

ANNEXURES

Annexure-1
Statement showing investment made by State Government
in Public Sector Undertakings whose accounts were in arrears
(Referred to in paragraph 1.12)

(₹ in crore)

Sl. No.	Sector and Name of the PSU	Year up to which accounts finalised	Paid up capital as per latest finalised accounts	Arrear years in which investment received	Investment made by State Government during the years in which accounts are in arrear		
					Equity	Loan	Grants/ Subsidy
A : Working Government Companies							
1.	Punyashloka Ahilyadevi Maharashtra Mendi Va Sheli Vikas Mahamandal Limited	2010-11	4.73	2011-12 to 2013-14	1.24	--	22.20
2.	The Maharashtra Fisheries Development Corporation Limited	2009-10	2.75	2010-11 to 2013-14	1.29	--	1.52
3.	Maharashtra Co-operative Development Corporation Limited	2005-06	6.47	2006-07 to 2013-14	1.52	--	--
4.	Maharashtra Small Scale Industries Development Corporation Limited	2010-11	14.50	2011-12 to 2013-14	--	--	6.97
5.	Maharashtra State Handicapped Finance and Development Corporation Limited	2009-10	6.43	2010-11 to 2013-14	32.00	--	6.07
6.	Mahatma Phule Backward Class Development Corporation Limited	2010-11	326.24	2011-12 to 2013-14	285.39	--	22.81
7.	Sant Rohidas Leather Industries & Charmakar Development Corporation Limited	2008-09	73.21	2009-10 to 2013-14	208.00	--	49.95
8.	Vasantrao Naik Vimukta Jatis & Nomadic Tribes Development Corporation Limited	2011-12	131.28	2012-13 to 2013-14	46.00	--	12.04
9.	Maharashtra State Road Development Corporation Limited	2011-12	773.56	2012-13 to 2013-14	--	179.02	208.00
10.	Maharashtra Tourism Development Corporation Limited	2011-12	15.39	2012-13 to 2013-14	--	--	154.22
11.	Maharashtra Ex-Servicemen Corporation Limited	2011-12	4.95	2012-13 to 2013-14	10.00	--	--
12.	Mahila Arthik Vikas Mahamandal	2011-12	2.67	2012-13 to 2013-14	0.07	--	44.59
Total			1,362.18		585.51	179.02	528.37

Annexure-2
Glossary of terms used in Performance Audit Report of
Maharashtra State Road Development Corporation Limited
(Referred to in paragraph No.2.1)

Sl. No.	Term	What it refers to.
1.	Public Private Participation	A Public Private Partnership (PPP) is the arrangement involving participation of both the Government and Private Sector to complete the infrastructure project.
2.	Built, Operate and Transfer	Private Sector builds an infrastructure project, operates it and after recovery of the cost transfers ownership of the project to the Government.
3.	Concession Agreement	Concession Agreement grants to the concessionaire the concession set forth therein including exclusive rights, license and authority to construct, operate and maintain the project for a period specified in the agreement.
4.	Concessionaire	Person or firm that operates a business within the premises belonging to another (the grantor) under a concession.
5.	Special Purpose Vehicle	A legal entity created solely to serve a particular function.
6.	Joint Venture	A Joint Venture is a business agreement in which the parties agree to develop, for a finite time, through a new entity and contributing to the capital of the new entity.
7.	Viability Gap Funding	This indicates the gap between the estimated cost of the project and estimated revenue there from. The financial viability gap usually arises from long gestation periods and inability to increase user charges to make the project viable.
8.	Chainage	An imaginary line used to measure the distance, often corresponding to the centre of a straight road.
9.	Operation, Maintenance and Transfer	As per operation, maintenance and transfer (OMT) arrangements, private parties operates an infrastructure projects during the period specified in the agreement and transfers ownership of project to the Government thereafter.
10.	Securitisation	It is a type of OMT contract wherein the entire cost of project is collected upfront from the contractor by assigning toll collection rights during the concession period quoted by the contractor.
11.	Net Present Value	NPV is a central tool in discounted cash flow (DCF) analysis and is a standard method for using the time value of the money to appraise long-term projects.
12.	IRR	Internal Rate of Return (IRR) is a rate of return used in capital budgeting to measure and compare the profitability of investments.
13.	Benkelman beam deflection measurement test	This test covers the determination of the rebound deflection of a pavement under a standard wheel load and tyre pressure, with or without temperature measurements.

Annexure-3
Statement showing details of projects executed by the Company,
Projects executed on BOT basis and Projects selected for audit scrutiny
(Referred to in paragraph No.2.3)

Sl. No.	Projects executed by the Company	Projects selected from completed sections/components	Projects selected from ongoing sections/components	Sl. No.	Projects executed on BOT basis	Project selected for audit scrutiny
1	Mumbai-Pune Expressway			1	IRDP Baramati* District-Pune	Two projects (Bhiwandi-Kalyan-Shil Phata and securitisation contract for Mumbai entry points assigned on operation, maintenance and transfer basis) were selected
2	Western Freeway Project (Bandra-Worli-Nariman point Sea Link)		Selected	2	Bhiwandi Kalyan Shil Phata	
3	NASGM Project	Selected	Selected	3	Chalisgaon By-pass	
4	Mumbai Flyover Project			4	IRDP Kolhapur	
5	IRDP Nagpur	Selected	Selected	5	Karmala Bypass	
6	IRDP Amravati	Selected		6	Katol Bypass	
7	IRDP Aurangabad	Selected	Selected	7	Miraj ROB	
8	IRDP Nanded			8	ROB at Warora, District Chandrapur	
9	Satara Kagal Road					
10	IRDP Nandurbar					
11	ROB Phase I (in various cities)					
12	IRDP Pune					
13	IRDP Solapur					
14	IRDP Latur					
15	Thane-Ghod-bunder Road					
16	Satara - Chalkewadi - Patan Road					
17	Mumbai Trans Harbour Project		Selected			
18	Water Transport Project		Selected			

*IRDP Baramati was initially executed by the Company. This project was assigned on BOT basis with augmentation work in October 2010

Annexure-4
Statement showing analysis of reasons for avoidable delay
in completion of overhauls and consequent loss of generation
(Referred to in paragraph 4.3.4)

Sl. No.	Name of TPS, unit and installed capacity	Prescribed time (days)	Actual time taken (days)/ period	Avoidable delay worked out by audit (days)	Loss of generation during avoidable delay* (MUs)	Energy charges (₹ per unit)	Sale value (₹ in crore) = Col. (6*7* 10,00,000)	Audit observations
1	2	3	4	5	6	7	8	9
A. Non availability of spares								
1.	Chandrapur (unit 3) 210 MW	25 (AOH)	(35) 10 August 2012 to 14 September 2012	5	18.60	2.09	3.89	<p>The delay of five days occurred due to non-availability of seal rings and flat springs required for overhaul of Turbine Generator (TG) sets. The turbine overhaul was ultimately carried out by utilising used springs removed from other units. Audit observed that the Company was aware that there was no stock of seal rings and flat springs since September 2010. However, the supply order was placed only on 6 August 2012 just before start of overhaul. Thus, delay of five days was avoidable.</p> <p>The Management stated (November 2014) that order for seal rings and flat springs was placed before start of overhaul. The reply of the Company was not convincing as due to non-availability of the material, the existing used material had to be reconditioned and utilised which led to delay in Annual Overhaul.</p>
2.	Khaperkheda (unit 5) 500 MW	25 (AOH)	(37) 26 August 2013 to 2 October 2013	2	14.21	2.06	2.93	<p>The delay occurred due to non-availability of special Tools and Plants (T&P) required for turbine overhaul. The same was arranged from other Thermal Power Station (TPS) after commencement of overhaul leading to delay. The Company should have ensured availability of critical materials prior to taking up overhaul. Thus, delay of two days was avoidable.</p> <p>The Management stated (November 2014) that required T&P were not handed over by Bharat Heavy Electrical Limited (BHEL), Original Equipment Manufacturer (OEM) even after repeated requests since commissioning of the unit. It was further stated that care will be taken in future to keep available these special T&P from OEM required for unit overhauls.</p>

* Calculated considering actual plant load factor (PLF) of that particular unit during the respective year, period of avoidable delay and installed capacity of that unit

Sl. No.	Name of TPS, unit and installed capacity	Prescribed time (days)	Actual time taken (days)/ period	Avoidable delay worked out by audit (days)	Loss of generation during avoidable delay* (MUs)	Energy charges (₹ per unit)	Sale value (₹ in crore) = Col. (6*7* 10,00,000)	Audit observations
1	2	3	4	5	6	7	8	9
3.	Khaperkheda (unit 4) 210 MW	35 (COH)	(43) 3 January 2011 to 15 February 2011	8	36.84	2.15	7.92	The overhauling of the High Pressure Turbine (HPT) was carried out during Capital Overhaul (COH). In case damages to seals/blades are detected, the same have to be transported to OEM workshop which leads to delay in overhaul. Hence, it is a generally accepted practice in power sector to keep a spare HPT module as capital insured spare for immediate replacement of damaged rotor for reduction in overhaul time as well as to increase HPT efficiency. Audit observed that the Company had no spare HPT module in stock. The Company had to get the damaged components of High Pressure (HP) rotor repaired by transporting the same to BHEL workshops at Haridwar and Hyderabad which resulted in extension of COH of the three units by 8 , 17 and 15 days respectively. The Management stated (November 2014) that delay in COH occurred as the HPT related work had to be carried out at BHEL's workshop. It was further stated that a spare HPT module for unit 7 of Chandrapur will be procured.
4.	Khaperkheda (unit 2) 210 MW	35 (COH)	(52) 1 June 2012 to 23 July 2012	17	52.15	2.42	12.62	
5.	Chandrapur (unit 7) 500 MW	45 (COH)	(60) 29 June 2011 to 28 August 2011	15	106.33	1.93	20.52	
Total - A				47	228.13		47.88	
B. Delay in award of work contracts for overhaul								
6.	Parli (unit 3) 210 MW	35 (COH)	(104) 22 November 2011 to 6 March 2012	47	115.64	2.58	29.37	The COH of unit planned during April-May 2011 was not carried out due to critical grid condition. Meanwhile, the unit was under forced outage from 15 November 2011 due to damages in Low Tension (LT) panel of turbine board caused by fire accident. Anticipating 45 days required for repairs, the Company declared COH from 22 November 2011-26 December 2011. The damaged LT panels were repaired and commissioned on 18 January 2012. However, the unit was resumed on 6 March 2012 due to delay in completion of COH. It was observed that the process of inviting tenders was initiated after declaration of COH and works of Turbine were started from 23 December 2011 and boiler from 12 January 2012 though the COH was declared from 22 November 2011. The Company should have finalised tenders for COH planned in April-May 2011 and awarded contracts with annual validity so that work starts immediately after the declaration/closure of unit for overhaul. Thus, lack of proper planning resulted in delay of 47 days (from 19 January 2012 to 5 March 2012) in resumption of unit.

* Calculated considering actual plant load factor (PLF) of that particular unit during the respective year, period of avoidable delay and installed capacity of that unit

Audit Report No.2 of PSUs for the year ended 31 March 2014

Sl. No.	Name of TPS, unit and installed capacity	Prescribed time (days)	Actual time taken (days)/ period	Avoidable delay worked out by audit (days)	Loss of generation during avoidable delay* (MUs)	Energy charges (₹ per unit)	Sale value (₹ in crore) = Col. (6*7* 10,00,000)	Audit observations
1	2	3	4	5	6	7	8	9
7.	Parli (unit 4) 210 MW	25 (AOH)	(47) 31 August to 17 October 2011	21	51.67	2.58	13.33	<p>The AOH of the unit was planned in July 2011. The AOH was actually declared from 31 August 2011. Audit observed that the contract for overhauling of TG set was awarded on 21 September 2011 and the work started from the same day which caused avoidable delay of 21 days in completion of overhaul.</p> <p>The Management stated (November 2014) that overhauls were not scheduled in both the cases at Sl. No.6 and 7 and hence proposals were initiated and contracts awarded after declaration of overhaul. As such there was no delay and loss of generation due to delay in work orders. The reply of the Company was not acceptable as the majority of the overhauls planned by the Company were deferred due to critical grid condition. As the overhaul of unit 3 and 4 was planned in April-May 2011 and July 2011 respectively, tenders should have been finalised and contracts awarded with annual validity so that work starts immediately after the closure of units to ensure completion of re-scheduled overhauls within the prescribed time.</p>
8.	Chandrapur (unit 4) 500 MW	25 (AOH)	(57) 16 August 2011 to 12 October 2011	4	14.18	1.93	2.74	<p>The AOH of the unit 4 planned in June 2011 was actually declared from 16 August 2011. Audit observed that the work order for overhauling of TG set was awarded on 20 August 2011 after commencement of overhaul which resulted in avoidable delay of four days in completion of overhaul.</p> <p>The Management stated (November 2014) that work of turbine overhaul was to be started from 21 August 2011 after cooling of the turbine. Thus, there was no generation loss due to placement of order on 20 August 2014.</p> <p>The reply of the Company was not acceptable. The Company should have issue the work order well in advance considering that overhaul was planned in June 2011. It was further seen that penalty for four days was waived off (November 2011) by the Company considering delay in placing the work order.</p>

* Calculated considering actual plant load factor (PLF) of that particular unit during the respective year, period of avoidable delay and installed capacity of that unit

Sl. No.	Name of TPS, unit and installed capacity	Prescribed time (days)	Actual time taken (days)/ period	Avoidable delay worked out by audit (days)	Loss of generation during avoidable delay* (MUs)	Energy charges (₹ per unit)	Sale value (₹ in crore) = Col. (6*7* 10,00,000)	Audit observations
1	2	3	4	5	6	7	8	9
9.	Paras (unit 3) 250 MW	28 (AOH)	(37) 19 August 2011 to 26 September 2011	9	34.57	1.69	5.84	As per OEM manual, various checks including Low Pressure Turbine (LPT) blade inspection were to be carried out after first year of operation. During the initial stages of planning BHEL offered (15 February 2011) to carry out LPT overhaul and turbine bearing inspection simultaneously during the period of AOH within a period of 15 days. However, the TPS decided not to take up LPT overhaul on the plea that its running hours were less than that recommended by OEM which was contrary to the actual recommendation of BHEL. When BHEL reiterated (19 August 2011) LPT overhaul, TPS agreed (25 August 2011) to take up LPT overhauling and contract for the same was awarded on 2 September 2011. The BHEL completed the turbine overhaul activities on 21 September 2011. If the LPT overhaul was taken up immediately with commencement of AOH, the delay of nine days could have been avoided. The Management accepted (November 2014) that delay in overhaul was due to LPT overhaul. It was further stated that they will take care in future.
Total - B				81	216.06		51.28	
C. Non-availability of scaffolding system								
10.	Bhusawal (unit 4) 500 MW	35 (AOH)	(46) 6 August 2014 to 20 September 2014	11	68.92	2.55	17.57	The delay of 11 days was due to non-availability of Company's own scaffolding system required for boiler overhaul. The Company had to depend on a contractor for supply of scaffolding material during AOH who completed the supply/erection of scaffolding in 18 days as compared to prescribed time of five days which led to delay in completion of AOH. Penalty for the delay was nominal. Audit observed that there was inordinate delay on part of the Company to procure its own scaffolding system. The budgetary offer for procurement of one set of scaffolding system at TPS (for unit 4 and 5) was received in October 2009. The administrative approval for the same was however accorded by Head Office (December 2011) at an estimated cost of ₹ 2.75 crore. The tender for procurement was invited in June 2013 after 17 months from the date of administrative approval. The tender was cancelled (February 2014) being response from a single bidder. The tender was re-floated in June 2014 and the offers were yet to be finalised (October 2014).
Total - C				11	68.92		17.57	
Grand Total (A + B + C)				139	513.11		116.73	

* Calculated considering actual plant load factor (PLF) of that particular unit during the respective year, period of avoidable delay and installed capacity of that unit