Annex – 2

(Tables)

Table 1: Test SHRs and degradation rates measured and revised performance trajectories.

	BHUSAWAL		CHANDRAPUR		KHAPERKHEDA		KORADI		NASIK		PARLI	
Year	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS
2009-10	2856	3013	2759	2760	2675	2811	3056	3245	2842	3070	2919	3093
2010-11	2864	2882	2753	2764	2683	2658	2834	3126	2851	2907	2826	3056
2011-12	2808	2960	2704	2669	2650	2608	2830	2848	2769	2887	2831	3052
2012-13	2792		2698		2613		2826		2756		2805	
2013-14	2764		2686		2606		2835		2736		2779	
2014-15	2743		2680		2607		2814		2719		2778	
2015-16	2739		2684		2607		2761		2715		2787	
2016-17	2717		2672		2606		2770		2685		2750	
2017-18	2682		2666		2614		2780		2655		2677	

Table 2: Test auxiliary power measured and revised performance trajectories

	BHUSAWAL		CHANDRAPUR		KHAPERKHEDA		KORADI		NASIK		PARLI	
Year	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS	CPRI CALCULATED	ACHIEVED BY TPS
2009-10	11.00	10.63	9.16	8.47	9.80	9.5	10.89	11.85	11.51	9.86	11.99	11.2
2010-11	11.07	11.44	9.06	10.03	9.80	9.76	10.89	12.75	11.68	10.56	13.14	11.74
2011-12	11.14	11.41	9.01	10.28	9.80	9.82	10.89	12.09	12.44	11.02	13.46	12.99
2012-13	11.20		8.91		9.77		10.81		12.77		13.76	
2013-14	11.15		8.84		9.74		10.81		13.35		14.02	
2014-15	11.10		8.75		9.71		10.51		13.48		14.21	
2015-16	10.29		8.71		9.70		9.91		13.41		14.57	
2016-17	10.36		8.46		9.70		9.91		13.24		14.34	
2017-18	9.53		8.25		9.70		9.91		13.07		14.10	

Table 3: Increase in SHR due to high rain (2010-11)

	Increase in SHR due to high rain (2010-11)	BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	2010-2011
Sl. No.	Particulars	Values	Values	Values	Values	Values	Values	Units
1	Fair season PLF (8 months)	73.81	73.51	82.53	60.97	70.83	66.53	%
2	Rainy season PLF (4 months)	41.86	49.01	68.13	49.35	54.1	40.52	%
3	Difference in PLF	31.95	24.50	14.402	11.620	16.73	26.010	%
4	Sensitivity factor for PLF Vs. SHR	2.829	2.83	2.829	2.829	2.829	2.829	kcal/kWh per 1 % PLF drop
5	Increase in SHR due to PLF	30.13	23.10	13.58	10.96	15.78	24.53	kcal/kWh
6	Fair season oil consumption (8 months)	3.24	2.00	1.22	6.29	4.26	5.92	ml/kWh
7	Rainy season oil consumption (4 months)	29.60	10.24	2.55	13.19	21.64	22.64	ml/kWh
8	Sensitivity factor for SOC vs. SHR	9.5	9.50	9.5	9.5	9.5	9.5	kcal/ml
9	Increase in SHR due to oil	83.47	26.09	4.21	21.85	55.04	52.95	kcal/kWh

Table 4: Increase in SHR due to low GCV (2010-11)

	Increase in SHR due to low GCV (2010-11)	BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	2010-2011
Sl. No.	Particulars	Values	Values	Values	Values	Values	Values	Units
1	Annual average GCV (normal conditions)	4337	3341	3359	3889	3756	3890	kcal/kg
2	Annual average GCV (abnormal year)	4019	3115	3045	3345	3457	3612	kcal/kg
3	Constant A0 in boiler efficiency equation	70.211	70.211	70.211	70.211	70.211	70.211	-
4	Constant A1 in boiler efficiency equation	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	-
5	Constant A2 in boiler efficiency equation	-6.00E-07	-6.00E-07	-6.00E-07	-6.00E-07	-6.00E-07	-6.00E-07	-
6	Boiler efficiency (normal conditions)	86.682059	84.8960314	84.9388714	86.026007	85.784878	86.02774	%
7	Boiler efficiency (low GCV year)	86.241183	84.325065	84.135785	84.905585	85.165291	85.499874	%
8	Factor affecting SHR	1.005	1.007	1.010	1.013	1.007	1.006	-
9	Normative SHR	2800	2800	2700	2800	2800	2800	kcal/kWh
10	Increase in SHR due to low GCV	14.31	18.96	25.77	36.95	20.37	17.29	kcal/kWh

Table 5: Increase in SHR due to low GCV (2011-12)

	Increase in SHR due to low GCV (2011-12)	BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	2011-2012
Sl. No.	Particulars	Values	Values		Values	Values	Values	Units
1	Annual average GCV (normal conditions)	4337	3341		3889	3756	3890	kcal/kg
2	Annual average GCV (abnormal year)	3846	2958		3243	3368	3258	kcal/kg
3	Constant A0 in boiler efficiency equation	70.211	70.211		70.211	70.211	70.211	-
4	Constant A1 in boiler efficiency equation	0.0064	0.0064		0.0064	0.0064	0.0064	-
5	Constant A2 in boiler efficiency equation	-6.00E-07	-6.00E-07		-6.00E-07	-6.00E-07	-6.00E-07	-
6	Boiler efficiency (normal conditions)	86.682059	84.8960314		86.026007	85.784878	86.02774	%
7	Boiler efficiency (low GCV year)	85.95037	83.8923416		84.655971	84.960146	84.693462	%
8	Factor affecting SHR	1.009	1.012		1.016	1.010	1.016	-
9	Normative SHR	2800	2800		2800	2800	2800	kcal/kWh
10	Increase in SHR due to low GCV	23.84	33.50		45.31	27.18	44.11	kcal/kWh

Table 6: Increase in AP due to heavy rain (2010-11)

	Increase in AP due to high rain (2010-11)	BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	
Sl. No.	Particulars	Values	Values	Values	Values	Values	Values	Units
1	Fair season PLF (8 months)	73.81	73.51	82.53	60.97	70.83	66.53	%
2	Rainy season PLF (4 months)	41.86	49.01	68.128	49.35	54.1	40.52	%
3	Difference in PLF	31.95	24.50	14.402	11.620	16.730	26.010	%
4	Sensitivity factor for PLF Vs. AP	0.091	0.091	0.091	0.091	0.091	0.091	per 1 % PLF drop
5	Increase in AP due to PLF	0.97	0.74	0.44	0.35	0.51	0.79	AP %

Table 7: Increase in secondary fuel oil consumption (2010-11)

Sl. No.	Increase in secondary fuel oil consumption due to high rain (2010-11)	BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	Units
1	Fair season oil consumption (8 months)	3.24	0.91	1.22	6.29	4.26	5.92	ml/kWh
2	Rainy season oil consumption (4 months)	29.64	10.24	2.55	13.19	21.64	22.64	ml/kWh
3	Increase in SOC due to high rains	8.80	3.11	0.44	2.30	5.79	5.57	ml/kWh

Table 8: Difference between achieved & allotted of SOC for all stations.

Sl. No.		BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	Units
1	Increase in SOC due to high rains	8.8	3.1	0.4	2.3	5.8	5.6	ml/kWh

Sl. No.		BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	Units
1	SOC achieved by TPS	9.4	4.5	1.6	8.3	9.1	8.3	ml/kWh

Sl. No.		BHUSAWAL	CHANDRAPUR	KHAPERKHEDA	KORADI	NASIK	PARLI	Units
1	Difference between achieved & allotted	7.4	2.5	-0.4	6.3	7.1	6.3	ml/kWh