

CENTRAL ELECTRICITY AUTHORITY
PERFORMA FOR UPGRATING/DERATING/RETIREMENT OF COAL BASED THERMAL UNITS/STATION
(strike if not applicable and add wherever applicable)

1	Name of Power Station						
	Brief description of Plant, Address, Location and Salient Feature						
	Detail of two contact persons Mobile no., Email Address, Telephone No. Fax No.						
2	Unit size and number						
	Derated/uprated Capacity (if applicable)						
3	Make & Efficiency (Design)						
	Boiler						
	Turbine						
	Unit heat rate (design)						
4	Date of commissioning						
5	No. of operating hours since commissioning.						
6	Energy generated since commissioning in MU						
7	a) Whether any R&M activity has been carried out, if so when and result thereof.						
	b) Expenditure incurred in the above R&M activities.						
8	Whether any major accident has occurred if so details thereof along with details of reason & follow up action/ remedial measures taken.						
9	Monthly Peak Load in MW (sustained for one hour) for the last one year.						
10	Yearly average data for the following for the last five years (strike if not applicable)						
11	LAST FIVE YEARS (when unit was operative)	Design value	2010-11	2011-12	2012-13	2013-14	2014-15
	a) Specific Primary FUEL Consumption in --/kWh.						
	b) Specific Secondary FUEL Consumption in/kWh.						
	c) Auxiliary Power Consumption(MU)						
	d) Generation (MU)						
	e) Forced outage						
	f) Planned outage						
	g) Partial Loss						
	h) PLF						
	i) Peak Hours PLF						
	j) Turbine Heat Rate						
	k) Unit Heat Rate						
	l) Station Heat Rate						
	m) Availability						
	n) Linkage and Present Receipts (Name of coalfield, Grade, GCV etc.)						
o) Type of CW system (Open/Closed)							
p) Auxiliary steam Pressure							
q) Ejector pressure							

	r) Sealing header pressure						
	s) System of Firing in the Furnace (Conrner, Front, Front Rear)						
	t) Details of Regenerative System describing extractions, drips, condensate flow, feed water flow and deaerator connections						
	u) Power Evacuation						
	v) Transmission voltage						
11	Cost of Generation(Rs/kWh)						
12	a) Number & dates of major maintenance including annual and capital maintenance and operating hrs between the overhauls hrs. since commissioning. b) details of major works done in each overhaul						
13	Details of the constraints causing restrictions on the generating capability						
14	Detail reasons FOR UPRATION/ DERATION/ RETIREMENT OF COAL BASED THERMAL UNITS/STATION						

CENTRAL ELECTRICITY AUTHORITY
TECHNICAL PARTICULARS OF THE UNIT
(strike if not applicable and add wherever applicable)

		Design value	2010-11	2011-12	2012-13	2013-14	2014-15
I	BOILER						
A)	Steam capacity (t/h)						
B)	Steam Parameters						
	Pressure kg/cm ²						
	Temperature oC						
C)	Fuel input (t/h)						
D)	Efficiency (%)						
II	AUXILIARIES						
A)	No. of mills required for rated capacity						
B)	No. of mills stand by						
C)	Capacity of each mill (t/h)						
D)	Degree of fitness/fineness						
III	TURBINE						
A)	Stop valve valve Steam parameters						
	Pressure ata						
	Temperature oC						
B)	Control stage Pressure						
C)	Condenser vacuum kg/cm ²						
D)	Exhaust- hood Temperature						
E)	Condition of Regenerating system (LP/HP heaters etc.)						
IV	AUXILIARIES						
A)	Boiler Feed Pumps						
	Nos. Running						
	Nos. Stand by						
B)	Condensate Pump capacity (t/h)						
C)	Condensate Flow (t/h)						
D)	Make up Water (t/h)						
V	GENERATOR						
A)	Output (MW)						
B)	Stator Insulation Resistance (Mohm)						
C)	Rotor Insulation Resistance (Mohm)						
D)	Stator Winding Temp.(*C)						

*All Actual data are based on typical integrated one hour data.

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COAL DATA

RAW COAL STOCK AND UNLOADING AND FEEDING PROBLEMS, NECESSITATING OIL SUPPORT

	2010-11	2011-12	2012-13	2013-14	2014-15
OIL CONSUMPTION/Year					

a) TYPE OF MEDIA ATOMISATION					
b) SIZE OF OIL TIPS-START-UP BURNERS - LOAD CARRYING BURNERS					
ATOMISATION PRESSURE					
OIL PRESSURE MAINTAINED					

IGNITERS

a) TYPE					
b) KEPT IN SERVICE CONTINUOUSLY					

MILLS

a) TYPE AND NO. OF MILLS					
b) NO. OF MILLS REQUIRED FOR MCR					
c) LOAD REDUCTION IF TWO MILLS ARE OUT					
d) NO. OF HRS. TWO MILLS WERE OUT. YEARWISE					
e) OIL CONSUMPTION DUE TO OUTAGE OF MILLS-YEAR WISE					

AVERAGE TIME TO SYNCHRONISE/FULLY LOAD THE UNIT (UNIT WISE)

TYPE OF START	AS PER MANUFACTURER	ACTUAL	REASONS FOR VARIATIONS		
HOT - SYNCH. LOADING					
WARM - SYNCH. LOADING					
COLD - SYNCH. LOADING					

NO. OF HRS. FOLLOWING AUXILIARIES WERE OUT (UNIT WISE)

YEAR	2010-11	2011-12	2012-13	2013-14	2014-15
1 CW PUMP					
1 BF PUMP					
1 CE PUMP					
1 ID FAN					
1 FD FAN					
1 PA FAN					

ANY PERMANENT RESTRICTION ON LOAD AND REASONS THEREOF (e.g. SHAVING OFF OF TURBINE, SALT DEPOSITION, POOR VACUUM)

2010-11	2011-12	2012-13	2013-14	2014-15

UPTO WHAT LOAD OIL BURNER IS KEPT IN SERVICE

2010-11	2011-12	2012-13	2013-14	2014-15

IN CASE OIL CONSUMPTION IS ATTRIBUTED TO POOR COMBUSTION IN THE FURNACE, PLEASE ELABORATE KEEPING IN VIEW COAL BURNER NOZZLES; WIND BOX PRESSURE, TILTING MECHANISM

FREQUENCY AND DURATION OF SOOT BLOWING PER DAY IN THIS UNIT

DESIGN				
ACTUAL				

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	Diagrams/PPD
1	Heat Balance Diagram (All Load Cases)
2	Boiler Predicted Performance Data (All Load Cases)
3	Boiler Arrangement Diagram
4	Boiler Pressure Part Details(SH,RH,LTSH & ECON)
	Area
	Number of tubes
	Outer Diameter
	Thickness