

Format AS3: RRAS Provider Parameters by ERPC

FROM: ERPC

TO: NODAL AGENCY (NLDC, DELHI)

Name of the RRAS Provider Generating Station: FSTPP

Name of the Owner Organization : NTPC Ltd

Validity of the information: From 16/10/2019 TO 15/11/2019

Date: 14.10.2019

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST-I& II: 3*200+2*500 MW ST- III: 1*500 MW
b)	Total Installed Capacity (MW)	ST -I& II: 1600 ST- III: 500
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	ST - I& II: 1491.5 ST- III: 468.8
d)	Technical Minimum (MW)	ST -I& II: 820.3 ST-III: 257.8
e)	Type of Fuel	Coal
f)	Region	Eastern Region-1
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	ST -I & II: 83.5 ST- III: 150.8
i)	Variable Cost (paise/KWh up to one decimal place)	ST -I & II: 240.9 ST- III: 236.4
j)	Ramp-Up Rate (MW/Min) for each unit	For 200 MW: 1 For 500 MW: 2.5
k)	Ramp-Down Rate (MW/Min) for each unit	-do-
l)	Start-Up time from Cold Start(in Min) and Warm Start (in Min) for each unit	ST-I&II: Cold: For 200 MW-300 ST-I&II: Cold: For 500 MW-390 (Ansaldo) ST-I&II: Warm: For 200 MW-180 ST-I&II: Warm: For 500 MW-270 (Ansaldo) ST- III: Cold: For 500 MW-330 (BHEL) ST- III: Warm: For 500 MW-210 (BHEL)
m)	Any other information	Nil


for **MEMBER SECRETARY, ERPC**

No.: ERPC/Comml-II/AS-3

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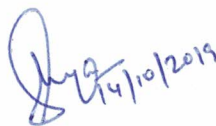
Name of the RRAS Provider Generating Station: **KAHALGAON STPP**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4*210MW+3*500MW
b)	Total Installed Capacity (MW)	2340
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	2237 (803+1434)
d)	Technical Minimum (MW)	1195(421+774)
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal
f)	Region	Eastern Region-1
g)	Bid Area	
h)	Fixed Cost (paise/KWh up to one decimal place)	ST-I: 106.2 ST-II: 110.1
i)	Variable Cost (paise/KWh up to one decimal place)	ST-I: 222.3 ST-II: 210.8
j)	Ramp-Up Rate (MW/Min) for each unit	ST-I/II: 1.5/2.5
k)	Ramp-Down Rate (MW/Min) for each unit	ST-I/II: 1.5/2.5
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	ST-I: 480/200 ST-II: 400/170
m)	Any other information	Nil


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Name of the RRAS Provider Generating Station: NTPC Barh

Name of the Owner Organization : NTPC Ltd

Validity of the information: From 16/10/2019 TO 15/11/2019

Date: 14.10.2019

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST- II: 2*660 MW
b)	Total Installed Capacity (MW)	1320
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	ST- II: 1237.5
d)	Technical Minimum (MW)	ST- II: 680.63
e)	Type of Fuel	Coal
f)	Region	ER-I
g)	Bid Area	ER-I & II, NER
h)	Fixed Cost (paise/KWh up to one decimal place)	ST- II: 187.0
i)	Variable Cost (paise/KWh up to one decimal place)	ST- II: 248.1
j)	Ramp-Up Rate (MW/Min) for each unit	3
k)	Ramp-Down Rate (MW/Min) for each unit	3
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 400 Warm: 240
m)	Any other information	Nil


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Name of the RRAS Provider Generating Station: **TSTPP-I**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*500 MW
b)	Total Installed Capacity (MW)	1000
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	940
d)	Technical Minimum (MW)	511.2
e)	Type of Fuel	Coal (Start up with HFO/LDO)
f)	Region	ER
g)	Bid Area	
h)	Fixed Cost (paise/KWh up to one decimal place)	97.4
i)	Variable Cost (paise/KWh up to one decimal place)	241.2
j)	Ramp-Up Rate (MW/Min) for each unit	1.6
k)	Ramp-Down Rate (MW/Min) for each unit	1.6
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 360 Warm: 180
m)	Any other information	Nil


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Name of the RRAS Provider Generating Station: Nabinagar TPP

Name of the Owner Organization : BRBCL

Validity of the information: From 16/10/2019 TO 15/11/2019

Date: 14.10.2019

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4*250 MW
b)	Total Installed Capacity (MW)	750
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	682.5
d)	Technical Minimum (MW) of each unit	137.5
e)	Type of Fuel	Coal + LDO
f)	Region	ER
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	239.5
i)	Variable Cost (paise/KWh up to one decimal place)	218.5
j)	Ramp-Up Rate (MW/Min) for each unit	1.33
k)	Ramp-Down Rate (MW/Min) for each unit	1.33
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 480 Warm: 300
m)	Any other information	Nil


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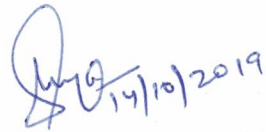
Name of the RRAS Provider Generating Station: **TEESTA-V HPS**

Name of the Owner Organization : **NHPC Ltd**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*170 MW
b)	Total Installed Capacity (MW)	510
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	504
d)	Technical Minimum (MW) of each unit	150
e)	Type of Fuel	Water
f)	Region	Eastern Region
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	116.3
i)	Variable Cost (paise/KWh up to one decimal place)	116.3
j)	Ramp-Up Rate (MW/Min) for each unit	50
k)	Ramp-Down Rate (MW/Min) for each unit	50
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Not Applicable
m)	Any other information	Nil


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TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **RANGIT HPS**

Name of the Owner Organization : **NHPC Ltd**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*20 MW
b)	Total Installed Capacity (MW)	60
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	63*
d)	Technical Minimum (MW) of each unit	17
e)	Type of Fuel	Water
f)	Region	Eastern Region
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	190.0
i)	Variable Cost (paise/KWh up to one decimal place)	190.0
j)	Ramp-Up Rate (MW/Min) for each unit	20
k)	Ramp-Down Rate (MW/Min) for each unit	20
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	15
m)	Any other information	Nil

*As per availability of water in the Rangit Reservoir.


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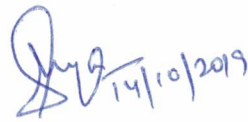
Name of the RRAS Provider Generating Station: **MTPS Stage -II**

Name of the Owner Organization : **KBUNL**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*195 MW
b)	Total Installed Capacity (MW)	390
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	372.64
d)	Technical Minimum (MW)	195.20
e)	Type of Fuel	Coal
f)	Region	ER-1
g)	Bid Area	-
h)	Fixed Cost (paise/KWh up to one decimal place)	273.4
i)	Variable Cost (paise/KWh up to one decimal place)	272.7
j)	Ramp-Up Rate (MW/Min) for each unit	1 MW/Min
k)	Ramp-Down Rate (MW/Min) for each unit	1 MW/Min
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 380 Warm: 280
m)	Any other information	Nil


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Name of the RRAS Provider Generating Station: **Maithon Power Limited**

Name of the Owner Organization : **TPCL**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*525 MW
b)	Total Installed Capacity (MW)	1050
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	984.375
d)	Technical Minimum (MW)	541.41
e)	Type of Fuel	Coal
f)	Region	Eastern
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	142.3
i)	Variable Cost (paise/KWh up to one decimal place)	268.5
j)	Ramp-Up Rate (MW/Min) for each unit	1.66
k)	Ramp-Down Rate (MW/Min) for each unit	1.66
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 720 Warm: 300
m)	Any other information	Nil


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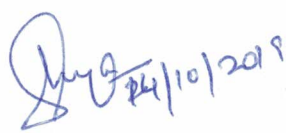
Name of the RRAS Provider Generating Station: **Nabinagar STPP**

Name of the Owner Organization : **NPGCL**

Validity of the information: From **16/10/2019 TO 15/11/2019**

Date: **14.10.2019**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	660 MW
b)	Total Installed Capacity (MW)	1980(3*660)
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	618.75
d)	Technical Minimum (MW)	363
e)	Type of Fuel	Domestic Coal
f)	Region	ER1
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	257.0
i)	Variable Cost (paise/KWh up to one decimal place)	226.9
j)	Ramp-Up Rate (MW/Min) for each unit	2
k)	Ramp-Down Rate (MW/Min) for each unit	2
l)	Start-Up from Cold Start, Warm Start and Hot start (in Min) for each unit	Cold: 360 Warm: 245 Hot: 110
m)	Any other information	Nil


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