

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 **16.11.2016 to 15.12.2016**

Date: **09.11.2016**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST #1& II :3*200+2*500 MW
b)	Total Installed Capacity (MW)	1600 MW
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	ST #1& II :1496.5 MW
d)	Technical Minimum (MW)	ST #1& II :1047.6 MW
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 #1& II :78.8 P/KWh
i)	Variable Cost (paise/KWh up to one decimal place)	ST #1& II :244.8 P/KWh
j)	Ramp-Up Rate (MW/Min) for each unit	For 200 MW:1/MW/Unit/Min For 500 MW:2.5/MW/Unit/Min
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	Cold: For 200 MW-300Min Cold: For 500 MW-390Min(Ansaldo) Warm: For 200 MW-180Min Warm: For 500 MW-270Min(Ansaldo)
m)	Any other information	Nil

Signature of Authorized Signatory
A.K.BANDYOPADHYAY
MEMBER SECRETARY, ERPC

Format AS3: RRAS Provider Parameters by ERPC

FROM : **ERPC**

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

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

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

Validity of the information: From **16.11.2016 to 15.12.2016**

Date: **09.11.2016**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4*210MW+3*500MW
b)	Total Installed Capacity (MW)	2340MW
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	2245MW (803+1442)MW
d)	Technical Minimum (MW)	1638MW (588+1050)MW
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal
f)	Region	Eastern Region
g)	Bid Area	
h)	Fixed Cost (paise/KWh up to one decimal place)	St-I 101.6 Paise/Kwh St-II 115.7 Paise/Kwh
i)	Variable Cost (paise/KWh up to one decimal place)	St-I 261.0 Paise/Kwh St-II 247.4 Paise/Kwh
j)	Ramp-Up Rate (MW/Min) for each unit	Stage-I/II: 1.5/2.5 MW/Min/Unit
k)	Ramp-Down Rate (MW/Min) for each unit	Stage-I/II: 1.5/2.5 MW/Min/Unit
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Stg-I: 480/200 Min Stg-II: 400/170 Min
m)	Any other information	Nil

Signature of Authorized Signatory
A.K.BANDYOPADHYAY
MEMBER SECRETARY, ERPC

Format AS3: RRAS Provider Parameters by ERPC

FROM : ERPC

TO : NODAL AGENCY (NLDC, DELHI)

Name of the RRAS Provider Generating Station: NTPC Barh

Name of the Owner Organization : NTPC Ltd

Validity of the information: From 16.11.2016 to 15.12.2016

Date: 09.11.2016

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST# II: 2*660 MW
b)	Total Installed Capacity (MW)	1320MW
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	ST# II: 1244 MW
d)	Technical Minimum (MW)	ST# II: 871 MW
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: 191.0 Paise/Kwh
i)	Variable Cost (paise/KWh up to one decimal place)	ST# II: 251.8 Paise/Kwh
j)	Ramp-Up Rate (MW/Min) for each unit	3MW/MIN
k)	Ramp-Down Rate (MW/Min) for each unit	3MW/MIN
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 400 Mins Warm: 240 Mins
m)	Any other information	Nil

Signature of Authorized Signatory

A.K.BANDYOPADHYAY

MEMBER SECRETARY, ERPC

Format AS3: RRAS Provider Parameters by ERPC

FROM: ERPC

TO: NODAL AGENCY (NLDC, DELHI)

Name of the RRAS Provider Generating Station: TSTPP-I

Name of the Owner Organization : NTPC Ltd

Validity of the information: From 16.11.2016 to 15.12.2016

Date: 09.11.2016

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*500 MW
b)	Total Installed Capacity (MW)	1000 MW
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	960
d)	Technical Minimum (MW)	2*350 MW
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)	90.9 Paise/Kwh
i)	Variable Cost (paise/KWh up to one decimal place)	157.6 Paise/Kwh
j)	Ramp-Up Rate (MW/Min) for each unit	1.6 MW/MIN
k)	Ramp-Down Rate (MW/Min) for each unit	1.6 MW/MIN
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 360 Mins Warm: 180 Mins
m)	Any other information	Nil

Signature of Authorized Signatory
A.K.BANDYOPADHYAY
MEMBER SECRETARY, ERPC

Format AS3: RRAS Provider Parameters by ERPC

FROM : **ERPC**

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

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

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

Validity of the information: From **16.11.2016 to 15.12.2016**

Date: **09.11.2016**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*170
b)	Total Installed Capacity (MW)	510
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	504
d)	Technical Minimum (MW)	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
i)	Variable Cost (paise/KWh up to one decimal place)	116
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

Signature of Authorized Signatory
A.K.BANDYOPADHYAY
MEMBER SECRETARY, ERPC

Format AS3: RRAS Provider Parameters by ERPC

FROM : **ERPC**

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 **16.11.2016 to 15.12.2016**

Date: **09.11.2016**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*20
b)	Total Installed Capacity (MW)	60
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	63*
d)	Technical Minimum (MW)	17
e)	Type of Fuel	Water
f)	Region	Eastern Region
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	177.0
i)	Variable Cost (paise/KWh up to one decimal place)	177.0
j)	Ramp-Up Rate (MW/Min) for each unit	N.A
k)	Ramp-Down Rate (MW/Min) for each unit	N.A
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	N.A
m)	Any other information	Nil

*As per availability of water in the Rangit Reservoir.

Signature of Authorized Signatory
A.K.BANDYOPADHYAY
MEMBER SECRETARY, ERPC