

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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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 :236.8 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

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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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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 228.1 Paise/Kwh St-II 216.1 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 |



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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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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: 253.7 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 |



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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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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) | 169.5 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 |



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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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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 |



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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 **16.01.2017 to 15.02.2017**

Date: **09.01.2017**

| 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.



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