

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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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: 1557.0 ST- III: 494.0 |
| d) | Technical Minimum (MW) | ST -I& II: 820.3 ST-III: 257.8 |
| e) | Type of Fuel | Bituminous/ Sub-Bituminous coal |
| f) | Region | Eastern Region-1 |
| g) | Bid Area | E1 |
| h) | Fixed Cost (paise/KWh up to one decimal place) | ST -I & II: 82.4 ST- III: 149.2 |
| i) | Variable Cost (paise/KWh up to one decimal place) | ST -I & II: 259.0 ST- III: 254.2 |
| j) | Ramp-Up Rate (MW/Min) for each unit | For 200 MW Stage I:1.83MW/Unit/Min For 500 MW Stage II:4.71MW/Unit/Min For 500 MW Stage III: 4.69 MW/Unit/Min For commercial stage I : 14.92 MW/ 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 | ST-I, II & III: Cold: 360 Minutes ST-I, II & III: Warm: 240 Minutes |
| m) | Any other information | 840 min for RSD in case of unit shutdown period is more than 5 days as boiler will be kept under preservation. |



SHYAM KEJRIWAL
SE(COMMERCIAL), 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 **16/02/2021 TO 15/03/2021**

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| 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) | 1194(421+773) |
| 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: 104.8 ST-II: 108.9 |
| i) | Variable Cost (paise/KWh up to one decimal place) | ST-I: 222.0 ST-II: 210.5 |
| j) | Ramp-Up Rate (MW/Min) for each unit | ST-I/II: 1.91/4.69 |
| k) | Ramp-Down Rate (MW/Min) for each unit | ST-I/II: 1.91/4.69 |
| 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 Start Up Time for Cold Start Up (in min) for each unit (For RSD in case of unit shutdown period is more than 5 days as boiler will be kept under preservation.) | Stage I- 840 min Stage II-840 min |



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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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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 | Bituminous/ Sub-Bituminous coal |
| f) | Region | ER-I |
| g) | Bid Area | ER-I & II, NER |
| h) | Fixed Cost (paise/KWh up to one decimal place) | ST- II: 184.0 |
| i) | Variable Cost (paise/KWh up to one decimal place) | ST- II: 260.1 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 6.19 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 6.19 |
| l) | Start-Up from Cold Start and Warm Start (in Min) for each unit | Cold: 2100 Warm: 900 |
| 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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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) | 945 |
| d) | Technical Minimum (MW) | 511.23 |
| e) | Type of Fuel | Bituminous/Sub-Bituminous coal (Start up with HFO/LDO) |
| f) | Region | ER |
| g) | Bid Area | |
| h) | Fixed Cost (paise/KWh up to one decimal place) | 95.9 |
| i) | Variable Cost (paise/KWh up to one decimal place) | 185.3 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 4.65 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 4.65 |
| 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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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) | 250.0 |
| i) | Variable Cost (paise/KWh up to one decimal place) | 220.2 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 2.28 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 2.28 |
| l) | Start-Up from Cold Start and Warm Start (in Min) for each unit | Cold: 480* Warm: 300 |
| m) | Any other information *Start Up Time from RSD (in case of unit shutdown period is more than 5 days as boiler will be kept under preservation.) | 840 min |

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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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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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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 **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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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TO: NODAL AGENCY (NLDC, DELHI)

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

Name of the Owner Organization : KBUNL

Validity of the information: From 16/02/2021 TO 15/03/2021

Date: 12.02.2021

| 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) | 372.645 |
| d) | Technical Minimum (MW) | 195.195 |
| 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) | 263.7 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 1.77 MW/Min |
| k) | Ramp-Down Rate (MW/Min) for each unit | 1.77 MW/Min |
| l) | Start-Up from Cold Start and Warm Start (in Min) for each unit | Cold: 360 Min Cold: 840 Min (If called after more than 5 days as Boiler will kept under preservation) Warm: 240 Min |
| 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 16/02/2021 TO 15/03/2021

Date: 12.02.2021

| 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) | 984.38 |
| d) | Technical Minimum (MW) | 541.41 |
| e) | Type of Fuel | Bituminous/ Sub-Bituminous coal (Start up with LDO and HFO) |
| 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) | 235.6 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 4.92 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 4.92 |
| 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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TO: **NODAL AGENCY (NLDC, DELHI)**

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

Name of the Owner Organization : **NPGCL**

Validity of the information: From **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| 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) | 340.31 |
| e) | Type of Fuel | Domestic Coal |
| f) | Region | ER1 |
| g) | Bid Area | E1 |
| h) | Fixed Cost (paise/KWh up to one decimal place) | 253.9 |
| i) | Variable Cost (paise/KWh up to one decimal place) | 215.3 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 6.19 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 6.19 |
| l) | Start-Up from Cold Start, Warm Start and Hot start (in Min) for each unit | Cold: 2100 Warm: 900 Hot: 120 |
| m) | Any other information | Nil |



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

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

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

Validity of the information: From **16/02/2021 TO 15/03/2021**

Date: **12.02.2021**

| S.No. | Title/Parameters | Values/Data |
|-------|---|---|
| a) | Number of Generating Units | 1x800 MW |
| b) | Total Installed Capacity (MW) | 800 MW |
| c) | Maximum Possible Ex-Bus Injection (MW) (including overload , if any) | 787.5 |
| d) | Technical Minimum (MW) | 412.5 |
| e) | Type of Fuel | Primary: Bituminous/Sub-Bituminous coal, Secondary: LDO |
| f) | Region | Eastern Region |
| g) | Bid Area | E1 |
| h) | Fixed Cost (paise/KWh up to one decimal place) | 211.5 |
| i) | Variable Cost (paise/KWh up to one decimal place) | 111.2 |
| j) | Ramp-Up Rate (MW/Min) for each unit | 7.5 |
| k) | Ramp-Down Rate (MW/Min) for each unit | 7.5 |
| l) | Start-Up from Cold Start, Warm Start and Hot start (in Min) for each unit | Cold: 2220 Warm: 1500 |
| m) | Any other information | Nil |



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