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BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2021 (Part-6)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of June-2022
Ref: CE Trans. (O&M) U.O.I 255 dated 02.08.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of June-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month June-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.497%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 452 **Dated.....** 12-08-22

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

12/08/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

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BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2021 (Part-6)

Letter No. **Date**

From

Sri. Kumar Prasant
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of April-2022

Ref: CE Trans. (O&M) U.O.I No. 194 dated 25.05.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of April-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month April-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.26%**.

Yours faithfully

Sd/-
(Kumar Prasant)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No....331 **Dated.**23/06/2022

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

23/06/22

(Kumar Prasant)
Chief Engineer (System Operation)
BSPTCL, Patna

U.O.I. No....194.....

Dated.....25.5.22

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of APRIL 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of APRIL 2022 is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

197/CE(S.O)
25.05.22.

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

ESE/SLDC

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 240540

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 238459.1523

iii. AV_O = 238459.1523 / 240540

= 0.99134906

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (173 * 0.99134906) + 0 } / (173 + 0)] * 100

= 99.13 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 341130

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 337927.9976

iii. AV_O = 337927.9976 / 341130

= 0.99061238

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= { { (189 * 0.99061238) + 0 } / (189 + 0)] * 100

= 99.06 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 240540

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 238459.1523

iii. AV_O = 238459.1523 / 240540

= 0.99134906

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 341130

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 337927.9976

iii. AV_O = 337927.9976 / 341130

= 0.99061238

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (173 * 0.99134906) + 0 + (189 * 0.99061238) + 0 } / (173 + 0 + 189 + 0)] * 100

= 99.09 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 174787.4

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = ~~171126.77~~ 171801.53

iii. AV_O = 171126.77 / 174787.4

= 0.979056762 ~~0.979056762~~ 0.980056607

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{(41 * ~~0.979056762~~ 0.980056607) + 0 } / (41 + 0)] * 100

= 97.91 %

98.01 ✓

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = ~~387460.7~~ 397092

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = ~~370780.69~~ 389973

iii. AV_O = ~~370780.69 / 387460.7~~

= ~~0.956950397~~ 0.98206073

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{(~~45~~ * ~~0.956950397~~ 0.98206073) + 0 } / (~~45~~ + 0)] * 100

= ~~95.70 %~~ 98.21 %.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 174787.4

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 171126.77

iii. AV_O = 171126.77 / 174787.4

= 0.979056762

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 387460.7

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 370780.69

iii. AV_O = 370780.69 / 387460.7

= 0.956950397

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{(41 * 0.979056762) + 0 + (44 * 0.956950397) + 0 } / (41 + 0 + 44 + 0)] * 100

= 96.38 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8620

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8614.79

iii. AV_q = 8614.79 / 8620

= 0.999396134

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (197 * 0.999396134) + 0 } / (197 + 0)] * 100

= 99.94 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 6960

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 6949.01

iii. AV_q = 6949.01 / 6960

= 0.998421403

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (189 * 0.998421403) + 0 } / (189 + 0)] * 100

= 99.84 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 8620

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8614.79

iii. AV_q = 8614.79 / 8620

= 0.999396134

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 6960

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 6949.01

iii. AV_q = 6949.01 / 6960

= 0.998421403

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (197 * 0.999396134) + 0 + (189 * 0.998421403) + 0 } / (197 + 0 + 189 + 0)] * 100

= 99.90 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5020

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5015.93

iii. AV_q = 5015.93 / 5020

= 0.999188412

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (33 * 0.999188412) + 0 } / (33 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 3880

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 3875.64

iii. AV_q = 3875.64 / 3880

= 0.998875661

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (28 * 0.998875661) + 0 } / (28 + 0)] * 100

= 99.89 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF APRIL 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5020

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5015.93

iii. AV_q = 5015.93 / 5020

= 0.999188412

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 3880

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 3875.64

iii. AV_q = 3875.64 / 3880

= 0.998875661

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r=0

% TAFM of 220 KV AC systems:-

Ti	TNAi	Wi(Ti-Tnai)/Ti	% Availability
720	0.00	59.40	100.00
720	3.42	59.12	99.53
720	0.00	52.50	100.00
720	0.00	3960.00	100.00
720	0.00	3828.00	100.00
720	0.00	3960.00	100.00
720	0.00	5148.00	100.00
720	0.00	5491.20	100.00
720	0.00	5491.20	100.00
720	118.42	5183.64	83.55
720	124.40	5132.09	82.72
720	15.45	6070.87	97.85
720	12.25	6098.45	98.30
720	0.00	5592.84	100.00
720	0.00	5592.84	100.00
720	0.00	7920.00	100.00
720	0.00	9963.36	100.00
720	0.00	9963.36	100.00
720	12.82	10624.84	98.22
720	0.00	10817.40	100.00
720	0.00	627.00	100.00
720	0.00	554.40	100.00
720	19.07	610.40	97.35
720	0.00	554.40	100.00
720	0.00	3828.00	100.00
720	0.00	1188.00	100.00
720	6.35	2224.21	99.12
720	12.95	2203.64	98.20
720	0.00	6163.08	100.00
720	5.82	6113.29	99.19
720	6.35	4055.91	99.12
720	12.95	4018.40	98.20
720	0.00	4468.20	100.00
720	0.00	4468.20	100.00
720	0.00	307.28	100.00
720	0.00	307.28	100.00
720	0.00	307.28	100.00

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BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2021 (Part-6)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of May-2022
Ref: CE Trans. (O&M) email dated 07.07.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of May-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month May-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.45%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 212 **Dated.....** 22-07-22

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

22/7/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 3880

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 3875.04

iii. AV_q = 3875.04 / 3880

= 0.998721518

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (28 * 0. 998721518) + 0 } / (28 + 0)] * 100

= 99.87 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5335.51

iii. AV_q = 5335.51 / 5340

= 0.999159626

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 999159626) + 0 } / (35 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 6960

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 6956.80

iii. AV_q = 6956.80 / 6960

= 0.99954003

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (189 * 0. 99954003) + 0 } / (189 + 0)] * 100

= 99.95 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8698.28

iii. AV_q = 8698.28 / 8720

= 0.997508611

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 997508611) + 0 } / (199 + 0)] * 100

= 99.75 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 397097

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 392103

iii. AV_O = 392103 / 397097

= 0.987425035

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (45 * 0.987425035 0 } / (44 + 0)] * 100

= 98.74 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 174787.4

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 173553.31

iii. AV_O = 173553.31 / 174787.4

= 0.992933863

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (41 * 0.992933863 + 0 } / (41 + 0)] * 100

= 99.29 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 341130

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 337787.213

iii. AV_O = 337787.213 / 341130

= 0.99019968

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (189 * 0. 99019968) + 0 } / (189 + 0)] * 100

= 99.02 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF MAY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 242395

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 240920.5442

iii. AV_O = 240920.5442 / 242395

= 0.993916931

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (175 * 0. 993916931) + 0 } / (175 + 0)] * 100

= 99.39 %

U.O.I. No....255.....

Dated..02/08/2022.....

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of MAY & JUNE 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of MAY & JUNE 2022 is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 242395

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 241111.4132

iii. AV_O = 241111.4132 / 242395

= 0.99470436

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (175 * 0. 99470436) + 0 } / (175 + 0)] * 100

= 99.47 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 341130

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 338902.3952

iii. AV_O = 338902.3952 / 341130

= 0.993468759

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (189 * 0. 993468759) + 0 } / (189 + 0)] * 100

= 99.35 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 242395

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 241111.4132

iii. AV_O = 241111.4132 / 242395

= 0.99470436

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 341130

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 338902.3952

iii. AV_O = 338902.3952 / 341130

= 0.993468759

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (175 * 0. 99470436) + 0 + (189 * 993468759) + 0 } / (175 + 0 + 189 + 0)] * 100

= 99.40 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 174787.4

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 174360.92

iii. AV_O = 174360.92 / 174787.4

= 0.997560139

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (41 * 0. 991377248) + 0 } / (41 + 0)] * 100

= 99.76 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 387460.7 ~~394490~~ 397097

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 381062.96 ~~388022~~ 390651

iii. AV_O = 381062.96 / 387460.7

= 0.983487966 0.98367679

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (~~44~~ 45 * ~~0.983487966~~ 0.98367679) + 0 } / (44 + 0)] * 100

= ~~98.35~~ %

~~0.9838~~

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 174787.4

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 174360.92

iii. AV_O = 174360.92 / 174787.4

= 0.997560139

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 387460.7

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 381062.96

iii. AV_O = 381062.96 / 387460.7

= 0.983487966

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (41 * 0.997560139) + 0 + (44 * 0.983487966) + 0 } / (41 + 0 + 44 + 0)] * 100

= 98.79 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8713.32

iii. AV_q = 8713.32 / 8720

= 0.999233589

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 999233589) + 0 } / (199 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7054.39

iii. AV_q = 7054.39 / 7060

= 0.999205684

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0. 999205684) + 0 } / (191 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8713.32

iii. AV_q = 8713.32 / 8720

= 0.999233589

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7054.39

iii. AV_q = 7054.39 / 7060

= 0.999205684

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 999233589) + 0 + (191 * 0. 999205684) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5336.43

iii. AV_q = 5336.43 / 5340

= 0.999330688

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 999330688) + 0 } / (35 + 0)] * 100

= 99.93 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 4187.68

iii. AV_q = 4187.68 / 4200

= 0.99706713

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 99706713) + 0 } / (30 + 0)] * 100

= 99.71 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF JUNE 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5336.43

iii. AV_q = 5336.43 / 5340

= 0.999330688

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4187.68

iii. AV_q = 4187.68 / 4200

= 0.99706713

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 999330688) + 0 + (30 * 0. 99706713) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.83 %

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BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of July-2022
Ref: CE Trans. (O&M) U.O.I 282 dated 23.08.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of July-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month July-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.64%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No.....489 **Dated**02/09/2022

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

01/09/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – cetransom1.bsptcl@gmail.com, Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

U.O.I. No....282.....

Dated...23/08/2022

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of JULY 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17 Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of JULY 2022 is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 249671

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 247865.8311

iii. AV_O = 247865.8311 / 249671

= 0.992770406

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (180 * 0.992770406) + 0 } / (180 + 0)] * 100

= 99.28 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352030

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 349974.7115

iii. AV_O = 349974.7115 / 352030

= 0.99416048

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (193 * 0.99416048) + 0 } / (193 + 0)] * 100

= 99.42 %

132

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 249671

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 247865.8311

iii. AV_O = 247865.8311 / 249671

= 0.992770406

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352030

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 349974.7115

iii. AV_O = 349974.7115 / 352030

= 0.99416048

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (180 * 0.992770406) + 0 + (193 * 0.99416048) + 0 } / (180 + 0 + 193 + 0)] * 100

= 99.36 %

131

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 200989

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 199785.64

iii. AV_O = 199785.64 / 200989

= 0.99401292

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (43 * 0.99401292) + 0 } / (43 + 0)] * 100

= 99.40 %

130

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 456760.7

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 454112.49

iii. AV_O = 454112.49 / 456760.7

= 0.994202156

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (49 * 0.994202156) + 0 } / (49 + 0)] * 100

= 98.42 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 200989

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 199785.64

iii. AV_O = 199785.64 / 200989

= 0.99401292

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 456760.7

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 454112.49

iii. AV_O = 454112.49 / 456760.7

= 0.994202156

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (43 * 0.99401292) + 0 + (49 * 0.994202156) + 0 } / (43 + 0 + 49 + 0)] * 100

= 99.41 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8714.58

iii. AV_q = 8714.58 / 8720

= 0.999378771

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0.999378771) + 0 } / (199 + 0)] * 100

= 99.94 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 7052.72

iii. AV_q = 7052.72 / 7060

= 0.998969375

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0.998969375) + 0 } / (191 + 0)] * 100

= 99.90 %

126

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8714.58

iii. AV_q = 8714.58 / 8720

= 0.999378771

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7052.72

iii. AV_q = 7052.72 / 7060

= 0.998969375

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 999378771) + 0 + (191 * 0. 998969375) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.92 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5334.65

iii. AV_q = 5334.65 / 5340

= 0.998997696

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 998997696) + 0 } / (35 + 0)] * 100

= 99.90 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 4192.97

iii. AV_q = 4192.97 / 4200

= 0.998325119

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 998325119) + 0 } / (30 + 0)] * 100

= 99.83 %

1123

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF JULY 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5334.65

iii. AV_q = 5334.65 / 5340

= 0.998997696

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4192.97

iii. AV_q = 4192.97 / 4200

= 0.998325119

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0.998997696) + 0 + (30 * 0.998325119) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.87 %

1175

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of August-2022
Ref: CE Trans. (O&M) U.O.I No. 313 dated 16.09.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of August-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month August-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.33%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No. ~~530~~ 531 **Dated.** ~~26~~/09/2022

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

26/09/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

1169

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247335.15

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = ~~243052.94~~ 243086.87

iii. AV_O = 243052.94 / 247335.15

= ~~0.982686605~~ 0.982821752

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (183 * ~~0.982686605~~ 0.982821752) + 0 } / (180 + 0)] * 100

= ~~98.27 %~~ 98.28 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 348426.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 346245.88

iii. AV_O = 346245.88 / 348426.05

= 0.993742807

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (196 * 0. 993742807) + 0 } / (196 + 0)] * 100

= 99.37 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 247335.15

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 243052.94

iii. AV_O = 243052.94 / 247335.15

= 0.982686605

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 348426.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 346245.88

iii. AV_O = 346245.88 / 348426.05

= 0.993742807

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (183 * 0. 982686605) + 0 + (196 * 0. 993742807) + 0 } / (183 + 0 + 196 + 0)] * 100

= 98.92 %

166

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = ~~188724.17~~ 188885.44

iii. AV_O = 188724.17 / 189202.9

= 0.~~997469732~~ 0.998322143

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{(43 * 0.~~997469732~~ 0.998322143) + 0 } / (43 + 0)] * 100

= ~~99.75%~~ 99.83%.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = ~~405294.83~~ 420683.93

iii. AV_O = 405294.83 / 426936.64

= ~~0.949309081~~ 0.985354484

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{(49 * ~~0.949309081~~ 0.985354484) + 0 } / (49 + 0)] * 100

= ~~94.93 %~~ 98.53 %.

1164

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188724.17

iii. AV_O = 188724.17 / 189202.9

= 0.997469732

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 405294.83

iii. AV_O = 405294.83 / 426936.64

= 0.949309081

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (43 * 0.997469732) + 0 + (49 * 0.949309081) + 0 } / (43 + 0 + 49 + 0)] * 100

= 96.41 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8715.69

iii. AV_q = 8715.69 / 8720

= 0.999505422

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 999505422) + 0 } / (199 + 0)] * 100

= 99.95 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7057.79

iii. AV_q = 7057.79 / 7060

= 0.999687015

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0. 999687015) + 0 } / (191 + 0)] * 100

= 99.97 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8715.69

iii. AV_q = 8715.69 / 8720

= 0.999505422

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7057.79

iii. AV_q = 7057.79 / 7060

= 0.999687015

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 999505422) + 0 + (191 * 0. 999687015) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.96 %

160

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5285.46

iii. AV_q = 5285.46 / 5340

= 0.989786866

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 989786866) + 0 } / (35 + 0)] * 100

= 98.98 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 4197.66

iii. AV_q = 4197.66 / 4200

= 0.999442204

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 999442204) + 0 } / (30 + 0)] * 100

= 99.94 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF AUGUST 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5340

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5285.46

iii. AV_q = 5285.46 / 5340

= 0.989786866

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4197.66

iii. AV_q = 4197.66 / 4200

= 0.999442204

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 989786866) + 0 + (30 * 0. 999442204) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.40 %

1210

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of September-2022

Ref: CE Trans. (O&M) U.O.I No. 368 dated 21.10.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of September-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month September-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.42%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 617 **Dated.....** 03-11-22

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

03/11/22

(A K Chaudhary)
Chief Engineer (System Operation)

1205

Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – cetransom1.bsptcl@gmail.com, Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

U.O.I. No...368.....

Dated.....21.10.2022

ESE/SLDC(Sunil/G)
21/x/22

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of SEPTEMBER 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **SEPTEMBER 2022** is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

Received on 30/10/22
Ms. Renu, AEE

Ms. Renu, AEE
31/10/22
30/10/22

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

Received on 01.11.2022
01/11/22
AEE/SLDC

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247335.15

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245176.00

iii. AV_O = 245176.00 / 247335.15

= 0.991270351

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (183 * 0. 991270351) + 0 } / (180 + 0)] * 100

= 99.13 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 348426.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 343950.39

iii. AV_O = 343950.39 / 348426.05

= 0.98715464

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (196 * 0. 98715464) + 0 } / (196 + 0)] * 100

= 98.72 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247335.15

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245176.00

iii. AV_O = 245176.00 / 247335.15

= 0.991270351

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 348426.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 343950.39

iii. AV_O = 343950.39 / 348426.05

= 0.98715464

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (183 * 0.991270351) + 0 + (196 * 0.98715464) + 0 } / (183 + 0 + 196 + 0)] * 100

= 98.89 %

20

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188361.22

iii. AV_O = 188361.22 / 189202.9

= 0.995551434

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (43 * 0. 995551434) + 0 } / (43 + 0)] * 100

= 99.56 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 413337.96

iii. AV_O = 413337.96 / 426936.64

= 0.968148255

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (49 * 0. 968148255) + 0 } / (49 + 0)] * 100

= 96.81 %

(19)

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188361.22

iii. AV_O = 188361.22 / 189202.9

= 0.995551434

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 413337.96

iii. AV_O = 413337.96 / 426936.64

= 0.968148255

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (43 * 0.995551434) + 0 + (49 * 0.968148255) + 0 } / (43 + 0 + 49 + 0)] * 100

= 97.66 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8708.90

iii. AV_q = 8708.90 / 8720

= 0.998726639

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 998726639) + 0 } / (199 + 0)] * 100

= 99.87 %

(19)

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 7053.83

iii. AV_q = 7053.83 / 7060

= 0.999126534

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0. 999126534) + 0 } / (191 + 0)] * 100

= 99.91 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8708.90

iii. AV_q = 8708.90 / 8720

= 0.998726639

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7053.83

iii. AV_q = 7053.83 / 7060

= 0.999126534

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 998726639) + 0 + (191 * 0. 999126534) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.89 %

(195

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5391.90

iii. AV_q = 5391.90 / 5400

= 0.998500661

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 998500661) + 0 } / (35 + 0)] * 100

= 98.85 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 4190.68

iii. AV_q = 4190.68 / 4200

= 0.997781636

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 997781636) + 0 } / (30 + 0)] * 100

= 99.78 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF SEPTEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5391.90

iii. AV_q = 5391.90 / 5400

= 0.998500661

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4190.68

iii. AV_q = 4190.68 / 4200

= 0.997781636

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 998500661) + 0 + (30 * 0. 997781636) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.82 %

(292)

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of October-2022

Ref: CE Trans. (O&M) U.O.I No. 397 dated 15.11.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of October-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month October-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.46%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 672 **Dated.....** 23-11-22

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

23/11/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – cetransom1.bsptcl@gmail.com, Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

U.O.I. No...397.....

Dated.....15.11.2022

ESE/SLDC(Sunil G)
15/11/22
(CE(System Operation))

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of OCTOBER 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **OCTOBER 2022** is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

14/11/22

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i]$ = 245627.43

iii. AV_O = 245627.43 / 247446.2

= 0.992649836

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0. 992649836) + 0 } / (184 + 0)] * 100

= 99.26 %

(256

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 350331.47

iii. AV_O = 350331.47 / 352716.05

= 0.993239377

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0. 993239377) + 0 } / (198 + 0)] * 100

= 99.32 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245627.43

iii. AV_O = 245627.43 / 247446.2

= 0.992649836

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 350331.47

iii. AV_O = 350331.47 / 352716.05

= 0.993239377

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (184 * 0.992649836) + 0 + (198 * 0.993239377) + 0 } / (184 + 0 + 198 + 0)] * 100

= 99.30 %

(823)

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188338.64

iii. AV_O = 188338.64 / 189202.9

= 0.995432096

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (43 * 0. 995432096) + 0 } / (43 + 0)] * 100

= 99.54 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 425331.51

iii. AV_O = 425331.51 / 426936.64

= 0.996240346

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (49 * 0. 996240346) + 0 } / (49 + 0)] * 100

= 99.62 %

2.52

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188338.64

iii. AV_O = 188338.64 / 189202.9

= 0.995432096

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 425331.51

iii. AV_O = 425331.51 / 426936.64

= 0.996240346

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (43 * 0. 995432096) + 0 + (49 * 0. 996240346) + 0 } / (43 + 0 + 49 + 0)] * 100

= 99.60 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8696.92

iii. AV_q = 8696.92 / 8720

= 0.997353086

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 997353086) + 0 } / (199 + 0)] * 100

= 99.74 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. $AV_q\ (Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 7042.46

iii. AV_q = 7042.46 / 7060

= 0.997515123

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0. 997515123) + 0 } / (191 + 0)] * 100

= 99.75 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8696.92

iii. AV_q = 8696.92 / 8720

= 0.997353086

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7042.46

iii. AV_q = 7042.46 / 7060

= 0.997515123

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 997353086) + 0 + (191 * 0. 997515123) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.74 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5397.86

iii. AV_q = 5397.86 / 5400

= 0.999603175

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 999603175) + 0 } / (35 + 0)] * 100

= 99.96 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 4110.03

iii. AV_q = 4110.03 / 4200

= 0.978578256

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 978578256) + 0 } / (30 + 0)] * 100

= 97.86 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF OCTOBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5397.86

iii. AV_q = 5397.86 / 5400

= 0.999603175

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4110.03

iii. AV_q = 4110.03 / 4200

= 0.978578256

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 999603175) + 0 + (30 * 0. 978578256) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.04 %

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of November-2022

Ref: CE Trans. (O&M) U.O.I No. 441 dated 21.12.2022

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of November-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month November-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.58%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 761 **Dated.....** 30-12-22

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

30/12/22

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

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Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
|SAVE ENERGY FOR BENEFIT OF SELF AND NATION|
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – cetransom1.bsptcl@gmail.com, Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

U.O.I. No.....441.....

Dated.....21.12.22.....

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of NOVEMBER 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **NOVEMBER 2022** is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245979.58

iii. AV_O = 245979.58 / 247446.2

= 0.994072974

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0. 994072974) + 0 } / (184 + 0)] * 100

= 99.41 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 350038.40

iii. AV_O = 350038.40 / 352716.05

= 0.992408478

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0. 992408478) + 0 } / (198 + 0)] * 100

= 99.24 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245979.58

iii. AV_O = 245979.58 / 247446.2

= 0.994072974

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 350038.40

iii. AV_O = 350038.40 / 352716.05

= 0.992408478

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (184 * 0.994072974) + 0 + (198 * 0.992408478) + 0 } / (184 + 0 + 198 + 0)] * 100

= 99.31 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188453.96

iii. AV_O = 188453.96 / 189202.9

= 0.996041616

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (43 * 0. 996041616) + 0 } / (43 + 0)] * 100

= 99.60 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 424574.60

iii. AV_O = 424574.60 / 426936.64

= 0.994467468

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (49 * 0. 994467468) + 0 } / (49 + 0)] * 100

= 99.45 %

266

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 189202.9

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 188453.96

iii. AV_O = 188453.96 / 189202.9

= 0.996041616

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 424574.60

iii. AV_O = 424574.60 / 426936.64

= 0.994467468

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (43 * 0.996041616) + 0 + (49 * 0.994467468) + 0 } / (43 + 0 + 49 + 0)] * 100

= 99.50 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8696.90

iii. AV_q = 8696.90 / 8720

= 0.997351236

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (199 * 0. 997351236) + 0) / (199 + 0)] * 100

= 99.74 %

264

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 7049.34

iii. AV_q = 7049.34 / 7060

= 0.998490124

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (191 * 0.998490124) + 0 } / (191 + 0)] * 100

= 99.85 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 8720

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8696.90

iii. AV_q = 8696.90 / 8720

= 0.997351236

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 7060

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7049.34

iii. AV_q = 7049.34 / 7060

= 0.998490124

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (199 * 0. 997351236) + 0 + (191 * 0. 998490124) + 0 } / (199 + 0 + 191 + 0)] * 100

= 99.79 %

1262

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5379.24

iii. AV_q = 5379.24 / 5400

= 0.996154634

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 996154634) + 0 } / (35 + 0)] * 100

= 99.62 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4196.85

iii. AV_q = 4196.85 / 4200

= 0.999251045

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 999251045) + 0 } / (30 + 0)] * 100

= 97.93 %

1280

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF NOVEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5379.24

iii. AV_q = 5379.24 / 5400

= 0.996154634

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4196.85

iii. AV_q = 4196.85 / 4200

= 0.999251045

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 996154634) + 0 + (30 * 0. 999251045) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.75 %

DFA - I

1308

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of December-2022
Ref: CE Trans. (O&M) U.O.I No. 20 dated 31.01.2023

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of December-2022, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month December-2022, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.30%**.

Yours faithfully
23/01/2023
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... **Dated.....**

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

23/01/2023
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

1306

Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – operation.maint@bsptcl.bihar.gov.in Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

U.O.I. No...20.....

Dated.....13.1.23.....

BUFF-SHEET

ESE/SLDC
16/01/2023

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of DECEMBER 2022.

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **DECEMBER 2022** is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

Mr. Ram, AEE

47/C.E(SO)
16-01-23.

13/01/23

16/01/23

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245711.31

iii. AV_O = 245711.31 / 247446.2

= 0.992988832

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0. 992988832) + 0 } / (184 + 0)] * 100

= 99.30 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 349097.08

iii. AV_O = 349097.08 / 352716.05

= 0.989739714

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0. 989739714) + 0 } / (198 + 0)] * 100

= 98.97 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 245711.31

iii. AV_O = 245711.31 / 247446.2

= 0.992988832

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 349097.08

iii. AV_O = 349097.08 / 352716.05

= 0.989739714

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC systems:-

= [{ (184 * 0. 992988832) + 0 + (198 * 0. 989739714) + 0 } / (184 + 0 + 198 + 0)] * 100

= 99.11 %

130

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 187659.81

iii. AV_O = 187659.81 / 188690.08

= 0.994539883

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{ (44 * 0. 994539883) + 0 } / (43 + 0)] * 100

= 99.45 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 420562.71

iii. AV_O = 420562.71 / 426936.64

= 0.985070537

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (49 * 0.985070537) + 0 } / (49 + 0)] * 100

= 98.51 %

300

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 187659.81

iii. AV_O = 187659.81 / 188690.08

= 0.994539883

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i]$ = 420562.71

iii. AV_O = 420562.71 / 426936.64

= 0.985070537

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 220 KV AC systems:-

= [{ (44 * 0.994539883) + 0 + (49 * 0.985070537) + 0 } / (43 + 0 + 49 + 0)] * 100

= 98.80 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 8650.21

iii. AV_q = 8650.21 / 8700

= 0.994276511

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR:-

= [{ (198 * 0. 994276511) + 0 } / (199 + 0)] * 100

= 99.43 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 7062.22

iii. AV_q = 7062.22 / 7080

= 0.99748816

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR:-

= [{ (192 * 0. 99748816) + 0 } / (191 + 0)] * 100

= 99.75 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

A. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8650.21

iii. AV_q = 8650.21 / 8700

= 0.994276511

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7062.22

iii. AV_q = 7062.22 / 7080

= 0.99748816

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC systems:-

= [{ (198 * 0. 994276511) + 0 + (192 * 0. 99748816) + 0 } / (198 + 0 + 192 + 0)] * 100

= 99.57 %

1496

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k]$ = 5390.82

iii. AV_q = 5390.82 / 5400

= 0.998300691

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR:-

= [{ (35 * 0. 998300691) + 0 } / (35 + 0)] * 100

= 99.83 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4190.31

iii. AV_q = 4190.31 / 4200

= 0.997691906

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR:-

= [{ (30 * 0. 997691906) + 0 } / (30 + 0)] * 100

= 99.77 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF DECEMBER 2022

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

SOUTH BIHAR

$$A.\ AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5390.82

iii. AV_q = 5390.82 / 5400

= 0.998300691

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

C. $AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q} \{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4190.31

iii. AV_q = 4190.31 / 4200

= 0.997691906

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC systems:-

= [{ (35 * 0. 998300691) + 0 + (30 * 0. 997691906) + 0 } / (35 + 0 + 30 + 0)] * 100

= 99.80 %

DPA – I

1343

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of January-2023
Ref: CE Trans. (O&M) U.O.I No. 20 dated 31.01.2023

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of January-2023, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month January-2023, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.52%**.

Yours faithfully

28/02/2023

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Dated.....

Memo No.....
Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

28/02/2023

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

1341

Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna

CIN – U74110BR2012SGC018889

|SAVE ENERGY FOR BENEFIT OF SELF AND NATION|

Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,

E-mail address – operation.maint@bsptcl.bihar.gov.in Website –www.bsptcl.in

C.E./Trans.(O&M)/Misc-32/2022

U.O.I. No......66........

Dated.......16.02.2023

ESE/SLDC (Jun) 191

16/02/2023

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of JANUARY 2023.

Ms. Renu, AEE

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **JANUARY 2023** is being enclosed for its cross checking & certification as per above referred office order.

16/02/23

Encl.: As above

140/C-E(SO)
16-02-23

16/02/23

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245939.76

iii. AV_O = 245939.76 / 247446.2

= 0.993912054

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0.993912054) + 0 } / (184 + 0)] * 100

= 99.39

13.9

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 350262.76

iii. AV_O = 350262.76 / 352716.05

= 0.993044587

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0.993044587) + 0 } / (198 + 0)] * 100

= 99.30

(5.38

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE

FOR THE MONTH OF JANUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245939.76

iii. AV_O = 245939.76 / 247446.2

= 0.993912054

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 350262.76

iii. AV_O = 350262.76 / 352716.05

= 0.993044587

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.993912054 * 184) + 0 +(0.993044587 * 198) + 0 }/(184 + 0 + 198 + 0)] * 100

= 99.34

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 187122.70

iii. AV_O = 187122.70 / 188690.08

= 0.991693369

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{(44 * 0.991693369) + 0} / (44 + 0)] * 100

= 99.17

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

~~132~~ 220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = ~~422882.37~~ 4228784.1187

iii. AV_O = ~~422882.37~~ 4228784.1187 / 426936.64

= ~~0.990503817~~ 0.9902738682

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{(49 * ~~0.990503817~~ 0.9902738682) + 0 } / (49 + 0)] * 100

= ~~99.05~~ 99.03 %

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF JANUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 187122.70

iii. AV_O = 187122.70 / 188690.08

= 0.991693369

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 422882.37

iii. AV_O = 422882.37 / 426936.64

= 0.990503817

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.991693369 * 44) + 0 +(0.990503817 * 49) + 0 }/(44 + 0 + 49 + 0)] * 100

= 99.09

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_K)/T_k\right]$ = 8680.14

iii. AV_q = 8680.14 / 8700

= 0.997717577

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (198 * 0.997717577) + 0 } / (198 + 0)] * 100

= 99.77

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7066.39

iii. AV_q = 7066.39 / 7080

= 0.998077843

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_{r=0}$

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (192 * 0.998077843) + 0 } / (192 + 0)] * 100

= 99.81

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER

FOR THE MONTH OF JANUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8680.14

iii. AV_q = 8680.14 / 8700

= 0.997717577

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7066.39

iii. AV_q = 7066.39 / 7080

= 0.998077843

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r=0

% TAFM of 132 KV AC system:-

= { { (0.997717577 * 198) + 0 +(0.998077843 * 192) + 0 }/(198 + 0 + 192 + 0)] * 100

= 99.79

(30)

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5389.25

iii. AV_q = 5389.25 / 5400

= 0.998010113

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{(35 * 0.998010113) + 0 } / (35 + 0)] * 100

= 99.80

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF JANUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_p + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4194.82

iii. AV_q = 4194.82 / 4200

= 0.998767174

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (30 * 0.998767174) + 0 } / (30 + 0)] * 100

= 99.88

329

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER FOR THE MONTH OF JANUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5389.25

iii. AV_q = 5389.25 / 5400

= 0.998010113

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.\ AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 4200

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4194.82

iii. AV_q = 4194.82 / 4200

= 0.998767174

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system:-

= [{ (0.998010113 * 35) + 0 + (0.998767174 * 30) + 0 }/(35 + 0 + 30 + 0)] * 100

= 99.83

-DFA I-

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

BTS

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. 241 **Date** 05-04-23.

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of February-2023

Ref: CE Trans. (O&M) U.O.I No. 87 dated 16.03.2023

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of February-2023, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month February-2023, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.10%**.

Yours faithfully

04/04/2023

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 241 **Dated.....** 05-04-23.

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

04/04/2023

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

375

Bihar State Power Transmission Company Ltd., Patna

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021,
E-mail address – operation.maint@bsptcl.bihar.gov.in Website –www.bsptcl.in

C.E./Trans (O&M)/Misc-32/2022

246 C.E(S.O) 16-03-23.

U.O.I. No.....87.....

Dated.....16.3.23

ESE/SLDC/Arrived 20/3/2023

BUFF-SHEET

C.E.(System operation), BSPTCL/ESE(SLDC), BSPTCL

Sub:- Transmission system availability factor (TAFM) for the month of FEBRUARY 2023.

ESE, SLDC, Patna 20.3.2023

Ref:- Office order no-273 dated-19-12-2013.

As per directive in weekly review O&M meeting held on 06.10.17, the Transmission system availability factor (TAFM) for the jurisdiction of NBPDCL and SBPDCL for billing purpose of Transmission charges to DISCOM's and taking incentives has been duly prepared by this office for 132KV system & 220KV transmission system for North Bihar, South Bihar, and overall transmission system for the month of **FEBRUARY 2023** is being enclosed for its cross checking & certification as per above referred office order.

Encl.: As above

Mr. Pawan, AEE
Mr. Vidyanand, AEE
16/03/23
20/03/23

(Satya Narayan Kumar)
C.E., Trans.(O&M)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER

FOR THE MONTH OF FEBRUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5240.13

iii. AV_q = 5240.13 / 5400

= 0.9703947

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r**=0**

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 4250

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4199.31

iii. AV_q = 4199.31 / 4250

= 0.988072917

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r**=0**

% TAFM of 220 KV AC system:-

= [{(0.9703947 * 35) + 0 +(0.988072917 * 30) + 0)/(35 + 0 + 30 + 0)] * 100

= 97.82

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 4250

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4199.31

iii. AV_q = 4199.31 / 4250

= 0.988072917

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{(30 * 0.988072917) + 0 } / (30 + 0)] * 100

= 98.81

137P

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5240.13

iii. AV_q = 5240.13 / 5400

= 0.9703947

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{(35 * 0.9703947) + 0 } / (35 + 0)] * 100

= 97.04

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER

FOR THE MONTH OF FEBRUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8677.16

iii. AV_q = 8677.16 / 8700

= 0.997374823

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7066.65

iii. AV_q = 7066.65 / 7080

= 0.998114554

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r=0

% TAFM of 132 KV AC system:-

= [{(0.997374823 * 198) + 0 +(0.998114554 * 192) + 0 }/(198 + 0 + 192 + 0)] * 100

= 99.77

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7066.65

iii. AV_q = 7066.65 / 7080

= 0.998114554

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (192 * 0.998114554) + 0 } / (192 + 0)] * 100

= 99.81

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8677.16

iii. AV_q = 8677.16 / 8700

= 0.997374823

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (198 * 0.997374823) + 0 } / (198 + 0)] * 100

= 99.74

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF FEBRUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i\right]$ = 187874.26

iii. AV_O = 187874.26 / 188690.08

= 0.995676376

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\,(T_i - TNA_i)/T_i\right]$ = 422557.78

iii. AV_O = 422557.78 / 426936.64

= 0.989743541

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.995676376 * 44) + 0 +(0.989743541 * 49) + 0 }/(44 + 0 + 49 + 0)] * 100

= 99.16

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 422557.78

iii. AV_O = 422557.78 / 426936.64

= 0.989743541

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (49 * 0.989743541) + 0 } / (49 + 0)] * 100

= 98.97

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 187874.26

iii. AV_O = 187874.26 / 188690.08

= 0.995676376

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (44 * 0.995676376) + 0 } / (44 + 0)] * 100

= 99.57

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE FOR THE MONTH OF FEBRUARY 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245983.25

iii. AV_O = 245983.25 / 247446.2

= 0.994087821

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 349249.99

iii. AV_O = 349249.99 / 352716.05

= 0.990173224

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.994087821 * 184) + 0 +(0.990173224 * 198) + 0 }/(184 + 0 + 198 + 0)] * 100

= 99.18

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 349249.99

iii. AV_O = 349249.99 / 352716.05

= 0.990173224

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0.990173224) + 0 } / (198 + 0)] * 100

= 99.02

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF FEBRUARY 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245983.25

iii. AV_O = 245983.25 / 247446.2

= 0.994087821

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0.994087821) + 0 } / (184 + 0)] * 100

= 99.41

Annexure - III

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - **U74110BR2012SGC018889**
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, VidyutBhawan, Bailey Road, Patna – 800021

File No. SO CELL/SLDC/TAFM BSPTCL/09/2022(Part-7)

Letter No. **Date**

From

Sri. A K Chaudhay
Chief Engineer (System Operation)
BSPTCL, Patna

To,

1. Chief Engineer (Commercial)
NBPDCL
2. Chief Engineer (Commercial)
SBPDCL

Sub: Transmission System Availability Certificate for BSPTCL for the month of March-2023
Ref: CE Trans. (O&M) U.O.I No. 20 dated 31.01.2023

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month of March-2023, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2018.

The overall Transmission System Availability of the Transmission network for the month March-2023, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2018, and after considering the provisions of BERC (MYT) Regulations, 2018, is **99.69%**.

Yours faithfully

Sd/-
(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

Memo No..... 308 **Dated.....** 04-05-23

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F &A), BSPTCL for kind information and necessary action.
3. CE (PMC), BSPHCL
4. OSD to MD, BSPTCL

for kind information and necessary action.

04/05/2023

(A K Chaudhary)
Chief Engineer (System Operation)
BSPTCL, Patna

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245764.06

iii. AV_O = 245764.06 / 247446.2

= 0.993202

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (184 * 0.993202) + 0 } / (184 + 0)] * 100

= 99.32

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 351425.16

iii. AV_O = 351425.16 / 352716.05

= 0.996340153

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (198 * 0.996340153) + 0 } / (198 + 0)] * 100

= 99.63

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE

FOR THE MONTH OF MARCH 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\,AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 247446.2

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 245764.06

iii. AV_O = 245764.06 / 247446.2

= 0.993202

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

C. $AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$

i. $\sum_{i=1}^{o} W_i$ = 352716.05

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 351425.16

iii. AV_O = 351425.16 / 352716.05

= 0.996340153

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.993202 * 184) + 0 +(0.996340153 * 198) + 0)/(184 + 0 + 198 + 0)] * 100

= 99.50

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF SOUTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 188281.92

iii. AV_O = 188281.92 / 188690.08

= 0.997836861

B.$AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= { { (44 * 0.997836861) + 0 } / (44 + 0) } * 100

= 99.78

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE OF NORTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_O(Availability\ of\ O\ no.of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 423798.19

iii. AV_C = 423798.19 / 426936.64

= 0.992648912

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{(49 * 0.992648912) + 0 } / (49 + 0)] * 100

= 99.26

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSMISSION LINE

FOR THE MONTH OF MARCH 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = \left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 188690.08

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 188281.92

iii. AV_O = 188281.92 / 188690.08

= 0.997836861

B. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

NORTH BIHAR

$$C.\ AV_O(Availability\ of\ O\ no.\ of\ A.C\ lines) = [\textstyle\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i] / \sum_{i=1}^{o} W_i$$

i. $\sum_{i=1}^{o} W_i$ = 426936.64

ii. $\left[\sum_{i=1}^{o} W_i\ (T_i - TNA_i)/T_i\right]$ = 423798.19

iii. AV_O = 423798.19 / 426936.64

= 0.992648912

D. $AV_P = 0$, where AV_P is availability of p numbers of switched bus reactors

% TAFM of 132 KV AC system:-

= [{(0.997836861 * 44)+0+(0.992648912 * 49)+0}/(44 +0+ 49 +0)] * 100

= 99.42

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 8695.78

iii. AV_q = 8695.78 / 8700

= 0.999514764

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 132 KV AC system of SOUTH BIHAR :-

= [{ (198 * 0.999514764) + 0 } / (198 + 0)] * 100

= 99.95

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 7075.81

iii. AV_q = 7075.81 / 7080

= 0.999407817

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

% TAFM of 132 KV AC system of NORTH BIHAR :-

= [{ (192 * 0.999407817) + 0 } / (192 + 0)] * 100

= 99.94

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER

FOR THE MONTH OF MARCH 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 8700

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_K)/T_k\right]$ = 8695.78

iii. AV_q = 8695.78 / 8700

= 0.999514764

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 7080

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_K)/T_k\right]$ = 7075.81

iii. AV_q = 7075.81 / 7080

= 0.999407817

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r=0

% TAFM of 132 KV AC system:-

= [{(0.999514764 * 198) + 0 +(0.999407817 * 192) + 0 }/(198 + 0 + 192 + 0)] * 100

= 99.95

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF SOUTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

A. AV_q $(Availability\ of\ q\ no.\ of\ ICT) = [\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k]/\sum_{k=1}^{q} W_k$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5397.74

iii. AV_q = 5397.74 / 5400

= 0.999581413

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AVr=0

% TAFM of 220 KV AC system of SOUTH BIHAR :-

= [{(35 * 0.999581413) + 0 } / (35 + 0)] * 100

= 99.96

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER OF NORTH BIHAR FOR THE MONTH OF MARCH 2023

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 4250

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4244.23

iii. AV_q = 4244.23 / 4250

= 0.99864322

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

% TAFM of 220 KV AC system of NORTH BIHAR :-

= [{ (30 * 0.99864322) + 0 } / (30 + 0)] * 100

= 99.86

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

As per CERC(Terms & Conditions of Tariff) Regulation 2014

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR TRANSFORMER

FOR THE MONTH OF MARCH 2023

SOUTH BIHAR

Transmission Availability Factor (% TAFM) for AC system =

$$\{(o \times AV_O + p \times AV_P + q \times AV_q + r \times AV_r)/(o + p + q + r)\} \times 100$$

$$A.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 5400

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 5397.74

iii. AV_q = 5397.74 / 5400

= 0.999581413

B. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) AV_r=0

NORTH BIHAR

$$C.AV_q\ (Availability\ of\ q\ no.\ of\ ICT) = \left[\sum_{k=1}^{q}\{W_k\ (T_k - TNA_K)\}/T_k\right] / \sum_{k=1}^{q} W_k$$

i. $\sum_{k=1}^{q} W_k$ = 4250

ii. $\left[\sum_{k=1}^{q} W_k\ (T_k - TNA_k)/T_k\right]$ = 4244.23

iii. AV_q = 4244.23 / 4250

= 0.99864322

D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR)AV_r=0

% TAFM of 220 KV AC system:-

= [{(0.999581413 * 35) + 0 +(0.99864322 * 30) + 0 }/(35 + 0 + 30 + 0)] * 100

= 99.92