

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF MARCH'19

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 266855.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 265925.65$$

$$iii. AV_o = [265925.65]/266855.3$$

$$= 0.99651628$$

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

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

$$v. \sum_{k=1}^q W_k = 5620$$

$$vi. \left[\sum_{k=1}^q W_k (T_k - TNA_k)/T_k \right] = 5619.32$$

$$viii. AV_q = [5619.32]/5620$$

$$= 0.999878347$$

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

% TAFM of 132 KV AC system of NB :-

$$= [(142 * 0.99651628) + 0 + (167 * 0.999878347) + 0] / (142 + 0 + 167 + 0) \times 100$$

$$= [(141.50531 + 166.9796839)/309] * 100 = 99.83\%$$

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BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF MARCH'19

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 237340.25$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 236710.08$$

$$iii. AV_o = [236710.08] / 237340.25$$

$$= 0.997344872$$

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

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

$$v. \sum_{k=1}^q W_k = 6610$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\} / T_k \right] = 6607.58$$

$$viii. AV_q = [6607.58] / 6610$$

$$= 0.99963402$$

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

% TAFM of 132 KV AC system of SB (Patna zone):-

$$= \{[(147 * 0.997344872) + 0 + (170 * 0.99963402) + 0] / (147 + 0 + 170 + 0)\} * 100$$

$$= \{[(146.6096962 + 169.9377834) / 317] * 100\} = 99.86\%$$

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BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF MARCH'19

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 504195.55$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 502635.73$$

$$iii. AV_o = [502635.73]/504195.55$$

$$= 0.996906324$$

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

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

$$v. \sum_{k=1}^q W_k = 12230$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 12226.90$$

$$viii. AV_q = [12226.90]/12230$$

$$= 0.999746294$$

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

% TAFM of 132 KV AC systems:-

$$= [(289 * 0.996906324) + 0 + (337 * 0.999746294) + 0] / (289 + 0 + 337 + 0) * 100$$

$$= [(288.1059 + 336.9145011)/626] * 100 = 99.84\%$$

Rv

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF MARCH'19

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 355499.23$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 35102.41$$

$$iii. AV_o = [35102.41]/355499.23$$

$$= 0.99888375$$

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

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

$$v. \sum_{k=1}^q W_k = 3320$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 3315.97$$

$$viii. AV_q = \frac{[3315.97]}{3320} = 0.998786679$$

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

% TAFM of 220 KV AC system of NB (NBPDC):-

$$= \{[(39 \times 0.99888375) + 0 + (26 \times 0.998786679 + 0)] / (39 + 0 + 26 + 0)\} \times 100$$

$$= \{[(38.956466 + 25.96845365) / 65] \times 100\} = 99.88\%$$

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BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF JAN'18

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 204621.46$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 203819.43$$

$$iii. AV_o = [203819.43] / 204621.46$$

$$= 0.996080399$$

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

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

$$v. \sum_{k=1}^q W_k = 3590$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\} / T_k \right] = 3580.53$$

$$viii. AV_q = [3580.53] / 3590$$

$$= 0.99736337$$

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

% TAFM of 220 KV AC system of SB (Patna zone):-

$$= \{[(31 \times 0.996080399) + 0 + (28 \times 0.99736337 + 0)] / (31 + 0 + 28 + 0)\} \times 100$$

$$= \{[(30.87849237 + 27.92617436) / 59] \times 100\} = 99.67\%$$

R. H

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF MARCH'19

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 0 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. $\sum_{i=1}^o W_i = 560120.70$

ii. $\left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 558921.84$

iii. $AV_o = [558921.84]/560120.70$

$= 0.997859642$

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

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

v. $\sum_{k=1}^q W_k = 6910$

vi. $\left[\sum_{k=1}^q W_k (T_k - TNA_K)/T_k \right] = 6896.51$

viii. $AV_q = [6896.51]/6910$

$= 0.998047217$

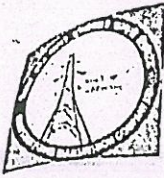
D. (AVAILABILITY OF r NOS OF STATIC VAR COMPENSATOR) $AV_r = 0$

% TAFM of 220 KV AC systems:-

$$= [(70 \times 0.997859642) + 0 + (54 \times 0.998047217) + 0] / (70 + 0 + 54 + 0) \times 100$$

$$= [(69.8501594 + 53.89454972)/124] \times 100 = 99.80\%$$

R.W
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Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna - 800021,
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(27)

File No. slide/2016/part-I/TAFM

Letter No.

Date

From,

G.K.Choubey
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
NBPDC

Sub: BSPTCL Transmission system availability Certification for the month March-2019 for
FY-2019-20

Sir,

With reference to above, Transmission system availability certification of BSPTCL
System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the
month March-2019 as detailed below :-

Month	% Availability of BSPTCL Transmission system under NBPDC			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
March-2019	99.88	99.83	99.84	99.79	99.84	99.80

Yours faithfully

Sd/-

(G.K.Choubey)
Chief Engineer (System Operation)

Dated...11/04/19

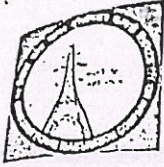
Memo No. 164.

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
for kind information and necessary action.

G.K.Choubey
11/4/2019

(G.K.Choubey)
Chief Engineer (System Operation)



Bihar State Power Transmission Company Ltd., Patna
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Fax No. 0612-2504655 Website - www.bsptcl.in

File No. slde/2016/part-4/TAFM

Letter No.

Date

From,

G.K.Choubey
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
SBPDCL

Sub: - BSPTCL Transmission system availability Certification for the month March-2019 for FY-2019-20.

Sir,

With reference to above, Transmission system availability certification of BSPTCL System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the month March-2019 as detailed below :-

Month	% Availability of BSPTCL Transmission system under SBPDCL			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
March-19	99.67	99.86	99.78	99.79	99.84	99.80

Yours faithfully

Sd/-

(G.K.Choubey)

Chief Engineer (System Operations)

Dated..11/04/19

Memo No..165.

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 for kind information and necessary action.

(G.K.Choubey)

Chief Engineer (System Operation)

Rw

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BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDCI) FOR THE MONTH OF DEC'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 266845.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 266606.68$$

$$iii. AV_o = [266606.68]/266845.3$$

$$= 0.999105763$$

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

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

$$v. \sum_{k=1}^q W_k = 5620$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 5566.25$$

$$viii. AV_q = [5566.25]/5620$$

$$= 0.990435704$$

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

% TAFM of 132 KV AC system of NB :-

$$= \{[(142 * 0.999105763) + 0 + (167 * 0.990435704) + 0]/(142 + 0 + 167 + 0)\} * 100$$

$$= \{[(141.8730183 + 165.4027626)/309]*100\} = 99.44\%$$

f.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF DEC'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 229590.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 229377.41$$

$$iii. AV_o = [229377.41] / 229590.3$$

$$= 0.999072977$$

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

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

$$v. \sum_{k=1}^q W_k = 6610$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_k)\} / T_k \right] = 6607.20$$

$$viii. AV_q = [6607.20] / 6610$$

$$= 0.999576982$$

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

% TAFM of 132 KV AC system of SB (Patna zone):-

$$= \{[(147 * 0.999072977) + 0 + (170 * 0.999576982) + 0] / (147 + 0 + 170 + 0)\} * 100$$

$$= \{[(146.8637276 + 169.9280869) / 317] * 100\} = 99.93\%$$

R.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF DEC'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 496435.55$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 495984.09$$

$$iii. AV_o = [495984.09] / 496435.55$$

$$= 0.9990906$$

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

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

$$v. \sum_{k=1}^q W_k = 12230$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_k)\} / T_k \right] = 12173.45$$

$$viii. AV_q = [12173.45] / 12230$$

$$= 0.995376329$$

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

% TAFM of 132 KV AC systems:-

$$= [(289 * 0.9990906) + 0 + (337 * 0.995376329) + 0] / (289 + 0 + 337 + 0) * 100$$

$$= [(288.7371834 + 335.4418229) / 626] * 100 = 99.71\%$$

R.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDCCL) FOR THE MONTH OF DEC'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 354313.34$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 350103.07$$

$$iii. AV_o = [350103.07]/354313.34$$

$$= 0.988117092$$

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

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

$$v. \sum_{k=1}^q W_k = 3320$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 3258.68$$

$$viii. AV_q = \frac{[3258.68]}{3320} = 0.981530018$$

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

% TAFM of 220 KV AC system of NB (NBPDCCL):-

$$= \{[(37 \times 0.988117092) + 0 + (26 \times 0.981530018 + 0)] / (37 + 0 + 26 + 0)\} \times 100$$

$$= \{[(36.5603324 + 25.51978047)/63] \times 100\} = 98.54\%$$

R. u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF DEC'2018

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 0 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. $\sum_{i=1}^o W_i = 193739.38$

ii. $\left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 193548.97$

iii. $AV_o = [193548.97]/193739.38$

$$= 0.999017188$$

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

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

v. $\sum_{k=1}^q W_k = 3590$

vi. $\left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 3446.51$

viii. $AV_q = [3446.51]/3590$

$$= 0.96003153$$

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

% TAFM of 220 KV AC system of SB (Patna zone):-

$$= \{[(29 * 0.999017188) + 0 + (28 * 0.96003153 + 0)] / (29 + 0 + 28 + 0)\} * 100$$

$$= [(28.97149845 + 26.88088304)/57] * 100 = 97.99\%$$

R. u.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF DEC'2018

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 0 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. $\sum_{i=1}^o W_i = 548052.73$

ii. $[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i] = 543652.05$

iii. $AV_o = [543652.05]/548052.73$

$$= 0.991970331$$

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

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

v. $\sum_{k=1}^q W_k = 6910$

vi. $[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k] = 6705.19$

viii. $AV_q = [6705.19]/6910$

$$= 0.970360764$$

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

% TAFM of 220 KV AC systems:-

$$= [(66 * 0.991970331) + 0 + (54 * 0.970360764) + 0] / (66 + 0 + 54 + 0) * 100$$

$$= [(65.47004185 + 52.39948126) * 120] * 100 = 98.22\%$$

R.V

- D F A T -

Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna -800021,
Telephone No. 0612-2504655, Email address - ce.trans.bstcl@gmail.com
Fax No. 0612-2504655 Website - www.bsptcl.in

File No. sldc 2016 part-4 FAEM

Letter No.

36

Date 21/01/19

From,

G.K.Choubey
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
NBPDCI

Sub: BSPTCL Transmission system availability Certification for the month December-2018 for FY-2018-19

Sir,

With reference to above. Transmission system availability certification of BSPTCL System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the month December-2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under NBPDCI			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
December-2018	98.54	99.44	98.99	98.22	99.71	99.06

Yours faithfully

G.K.Choubey
19/1/2019

(G.K.Choubey)

Chief Engineer (System Operation)

Dated...21/01/19

Memo No...36

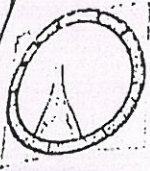
Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F & A), BSPTCL for kind information and necessary action.
3. ESE (PMIC), BSPHCL for kind information and necessary action.

G.K.Choubey
19/1/2019

(G.K.Choubey)

Chief Engineer (System Operation)



- D F A - I -

Bihar State Power Transmission Company Ltd., Patna
 A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
 CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
 Head Office, Vidyut Bhawan, Bailey Road, Patna - 800021,
 Telephone No. 0612-2504655, Email address - ce.trans@bsptcl.com
 Fax No. 0612-2504655 Website www.bsptcl.in

File No. sdc 2016 part-I TAFM

Letter No.

Date

From,

G.K.Choubey
 Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
 SBPDCL

Sub: - BSPTCL Transmission system availability Certification for the month December-2018 for FY-2018-19.

Sir,

With reference to above, Transmission system availability certification of BSPTCL System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the month December-2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under SBPDCL			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
December-18	97.99	99.93	99.20	98.22	99.71	99.06

Yours faithfully

G.K.Choubey
 T9/11/2019
 (G.K.Choubey)

Chief Engineer (System Operations)

Dated..21/01/19

Memo No....37

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F & A), BSPTCL for kind information and necessary action.
3. ESE (PMC), BSPTCL for kind information and necessary action.

G.K.Choubey
 T9/11/2019

(G.K.Choubey)

Chief Engineer (System Operation)

+

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNAAs per CERC(Terms & Conditions of Tariff) Regulation 2014132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF SEP'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 265870.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 264475.51$$

$$iii. AV_o = [264475.51] / 265870.3$$

$$= 0.994753854$$

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

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

$$v. \sum_{k=1}^q W_k = 5620$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_k)\} / T_k \right] = 5584.71$$

$$viii. AV_q = [5584.71] / 5620$$

$$= 0.993721168$$

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

% TAFM of 132 KV AC system of NB :-

$$= \{[(141 * 0.994753854) + 0 + (167 * 0.993721168) + 0] / (141 + 0 + 167 + 0)\} * 100$$

$$= [(140.2602934 + 165.9514351) / 308] * 100 = 99.42\%$$

Rm

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF SEP'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 228150.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 225790.04$$

$$iii. AV_o = [225790.04]/228150.3$$

$$= 0.989655019$$

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

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

$$v. \sum_{k=1}^q W_k = 6400$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 6370.22$$

$$viii. AV_q = [6370.22]/6400$$

$$= 0.995347186$$

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

% TAFM of 132 KV AC system of SB (Patna zone):-

$$= \{[(145 * 0.989655019) + 0 + (167 * 0.995347186) + 0]/(145 + 0 + 167 + 0)\} * 100$$

$$= [(143.4999778 + 166.2229801)/312] * 100 = 99.27\%$$

R-u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF SEP'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 494020.55$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 490265.55$$

$$iii. AV_o = [490265.55]/494020.55$$

$$= 0.992399093$$

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

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

$$v. \sum_{k=1}^q W_k = 12020$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 11954.93$$

$$viii. AV_q = [11954.93]/12020$$

$$= 0.994586935$$

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

% TAFM of 132 KV AC system:-

$$= \{[(286 * 0.992399093) + 0 + (334 * 0.994586935) + 0]/(286 + 0 + 334 + 0)\} * 100$$

$$= [(283.8261406 + 332.1920363)/620] * 100 = 99.36\%$$

R.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF SEP'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 329365.34$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 327446.82$$

$$iii. AV_o = [327446.82]/329365.34$$

$$= 0.994175103$$

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

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

$$v. \sum_{k=1}^q W_k = 3160$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 2897.69$$

$$viii. AV_q = \frac{[2897.69]}{3160} = 0.916991034$$

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

% TAFM of 220 KV AC system of NB (NBPDC):-

$$= [((36 \times 0.994175103) + 0 + (25 \times 0.916991034) + 0)/(36 + 0 + 25 + 0)] \times 100$$

$$= [(35.79030371 + 22.92477585)/61] \times 100 = 96.25\%$$

R.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

**220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH
OF SEP'2018**

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 193739.38$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 193389.26$$

$$iii. AV_o = [193389.26]/193739.38$$

$$= 0.998192829$$

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

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

$$v. \sum_{k=1}^q W_k = 3590$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 3477.71$$

$$viii. AV_q = [3477.71]/3590$$

$$= 0.968721307$$

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

% TAFM of 220 KV AC system of SB (Patna zone):-

$$= \{[(29 \times 0.998192829) + 0 + (28 \times 0.968721307 + 0)] / (29 + 0 + 28 + 0)\} \times 100$$

$$= \{[(28.94759204 + 27.1241966)/57] \times 100\} = 98.37\%$$

P. n

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF SEP'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 523104.73$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 520836.09$$

$$iii. AV_o = [520836.09/523104.73]$$

$$= 0.995663126$$

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

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

$$v. \sum_{k=1}^q W_k = 6750$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 6375.40$$

$$viii. AV_q = [6375.40/6750]$$

$$= 0.944503875$$

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

% TAFM of 220 KV AC system :-

$$= \{[(65 * 0.995663126) + 0 + (53 * 0.944503875) + 0]/(65 + 0 + 53 + 0)\} * 100$$

$$= \{[(64.71810319 + 50.05870538)*118]*100\} = 97.27\%$$

R.u



- DPA - II -

Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna - 800021,
Telephone No. 0612-2504655, Email address - ee.trans664@gmail.com
Fax No. 0612-2504655 Website - www.bsptcl.in

File No. slde/2016/part-4/TAFM

Letter No.

Date

From,

G.K.Choubey
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
SBPDCL

Sub: - BSPTCL Transmission system availability Certification for the month September-2018
for FY-2018-19.

Ref: - SBPDCL letter no.217 dated 21.03.2018

Sir,

With reference to above, Transmission system availability certification of BSPTCL System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the month September-2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under SBPDCL			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
September-18	98.37	99.27	98.95	97.27	99.36	98.49

Yours faithfully

G.K.Choubey
15/10/2018

(G.K.Choubey)

Chief Engineer (System Operations)

Dated..16/10/18

Memo No. 208

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F & A), BSPTCL for kind information and necessary action.
3. CSE (PMC), BSPTCL for kind information and necessary action.

G.K.Choubey
15/10/2018

(G.K.Choubey)

Chief Engineer (System Operation)

fu



BPTCL
Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna - 800021,
Telephone No. 0612-2504655, Email address - cs.trans664@gmail.com
Fax No. 0612-2504655 Website - www.bsptcl.in

File No. slde/2016/part-4/TAFM

Letter No.

Date

From,

G.K.Choubey
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
NBPCL

Sub: BSPTCL Transmission system availability Certification for the month September-2018
for FY-2018-19

Ref: - NBPCL letter no.218 dated 20.03.2018

Sir,

With reference to above, Transmission system availability certification of BSPTCL System for 220 KV and 132 KV system computed as per CERC regulation 2014 for the month September-2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under NBPCL			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
September-2018	96.25	99.42	97.97	97.27	99.36	98.49

Yours faithfully

G.K.Choubey
15/10/2018

(G.K.Choubey)

Chief Engineer (System Operation)

Dated..16/10/18

Memo No. 207

Copy forwarded to

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

G.K.Choubey
15/10/2018

(G.K.Choubey)

Chief Engineer (System Operation)

42

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNAAs per CERC(Terms & Conditions of Tariff) Regulation 2014132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF JUNE'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 265870.3$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 264994.36$$

$$iii. AV_o = [264994.36] / 265870.3$$

$$= 0.996705374$$

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

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

$$v. \sum_{k=1}^q W_k = 5590$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\} / T_k \right] = 5579.37$$

$$viii. AV_q = [5579.37] / 5590$$

$$= 0.997882255$$

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

% TAFM of 132 KV AC system of NB :-

$$= \{[(141 * 0.996705374) + 0 + (165 * 0.997882255) + 0] / (141 + 0 + 165 + 0)\} * 100$$

$$= \{[(140.5354577 + 164.6505721) / 306] * 100\} = 99.73\%$$

P.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH OF JUNE'2018

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. $\sum_{i=1}^o W_i = 222530.3$

ii. $[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i] = 222153.10$

iii. $AV_o = [222153.10] / 222530.3$

$= 0.998305195$

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

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

v. $\sum_{k=1}^q W_k = 6230$

vi. $[\sum_{k=1}^q \{W_k (T_k - TNA_k)\} / T_k] = 6208.82$

viii. $AV_q = [6208.82] / 6230$

$= 0.996600158$

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

% TAFM of 132 KV AC system of SB (Patna zone):-

$$= \{[(141 * 0.998305195) + 0 + (166 * 0.996600158) + 0] / (141 + 0 + 166 + 0)\} * 100$$

$$= \{[(140.7610325 + 165.4356262) / 307] * 100\} = 99.74\%$$

R.Y.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

132 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF JUNE'2018

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 0 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. $\sum_{i=1}^o W_i = 488400.55$

ii. $\left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 487147.46$

iii. $AV_o = [487147.46] / 488400.55$

$$= 0.997434302$$

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

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

v. $\sum_{k=1}^q W_k = 11820$

vi. $\left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\} / T_k \right] = 11788.18$

viii. $AV_q = [11788.18] / 11820$

$$= 0.997206496$$

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

% TAFM of 132 KV AC system:-

$$= \{[(282 * 0.997434302) + 0 + (331 * 0.997206496) + 0] / (282 + 0 + 331 + 0)\} * 100$$

$$= \{[(281.2764732 + 330.0753502) / 613] * 100\} = 99.73\%$$

f.u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF NORTH BIHAR (NBPDC) FOR THE MONTH OF JUNE'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 252947.9$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 251806.64$$

$$iii. AV_o = [251806.64]/252947.9$$

$$= 0.995488141$$

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

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

$$v. \sum_{k=1}^q W_k = 3000$$

$$vi. \left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\}/T_k \right] = 2998.38$$

$$viii. AV_q = \frac{[2998.38]}{3000} = 0.999459722$$

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

% TAFM of 220 KV AC system of NB (NBPDC):-

$$= \{[(31 \times 0.995488141) + 0 + (24 \times 0.999459722) + 0]/(31 + 0 + 24 + 0)\} \times 100$$

$$= \{[(30.86013237 + 23.98703333)/55] \times 100\} = 99.72\%$$

R u

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA
220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) OF SOUTH BIHAR (SBPDCL) FOR THE MONTH
OF JUNE'2018

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 0 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. $\sum_{i=1}^o W_i = 193739.38$

ii. $\left[\sum_{i=1}^o W_i (T_i - TNA_i) / T_i \right] = 193416.49$

iii. $AV_o = [193416.49] / 193739.38 = 0.998333343$

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

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

v. $\sum_{k=1}^q W_k = 3590$

vi. $\left[\sum_{k=1}^q \{W_k (T_k - TNA_K)\} / T_k \right] = 3485.01$

viii. $AV_q = [3485.01] / 3590$

$$= 0.970755636$$

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

% TAFM of 220 KV AC system of SB (Patna zone):-

$$= \{[(29 \times 0.998333343) + 0 + (28 \times 0.970755636) + 0] / (29 + 0 + 28 + 0)\} \times 100$$

$$= [(28.95166695 + 27.18115781) / 57] \times 100 = 98.48\%$$

R. U

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED, PATNA

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

220 KV TRANSMISSION AVAILABILITY FACTOR (TAFM) FOR THE MONTH OF JUNE'2018

Transmission Availability Factor (% TAFM) for AC system =

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

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

$$i. \sum_{i=1}^o W_i = 446687.29$$

$$ii. \left[\sum_{i=1}^o W_i (T_i - TNA_i)/T_i \right] = 445223.13$$

$$iii. AV_o = [445223.13]/446687.29$$

$$= 0.996722176$$

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

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

$$v. \sum_{k=1}^q W_k = 6590$$

$$vi. \left[\sum_{k=1}^q W_k (T_k - TNA_K)/T_k \right] = 6482.23$$

$$viii. AV_q = [6482.23]/6590$$

$$= 0.983822746$$

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

% TAFM of 220 KV AC system :-

$$= [(60 \times 0.996722176) + 0 + (52 \times 0.983822746) + 0] / (60 + 0 + 52 + 0) \times 100$$

$$= [(59.80333056 + 51.15878279) \times 100] = 99.07\%$$

P. 4



- DPA - I -

Bihar State Power Transmission Company Ltd., Patna
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]
Head Office, Vidyut Bhawan, Bailey Road, Patna - 800021,
Telephone No. 0612-2504655, Email address - ce.trans664@gmail.com
Fax No. 0612-2504655 Website - www.bsptcl.in

Letter No. 89

From,

J. P. Singh
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
SBPDCL

Date 6-7-2018

Sub: - BSPTCL Transmission system availability Certification for the month June-2018 for
FY-2018-19.

Ref: - SBPDCL letter no.217 dated 21.03.2018

Sir,

With reference to above, Transmission system availability certification of BSPTCL
System for 220 KV and 132 KV system computed as per CERC regulation 2014 for June-
2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under SBPDCL			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
June-18	98.48	99.74	99.24	99.07	99.73	99.46

Yours faithfully

6-7-18
(J.P. Singh)

Chief Engineer (System Operations)

Memo No. 89/...../

Dated 6-7-2018/

Copy forwarded to

1. Secretary, BERCL, Patna for kind information
2. GM (F & A), BSPTCL for kind information and necessary action.
3. ESE (IS), BSPTCL for kind information and necessary action.

6-7-18
(J.P. Singh)

Chief Engineer (System Operations)

For



Bihar State Power Transmission Company Ltd., Patna.
A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN - U40102BR2012SGC018889
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Telephone No. 0612-2504655, Email address - ce.trans664@gmail.com
Fax No. 0612-2504655 Website - www.bsptcl.in

File No. stdc/2016/part-4/TAFM

Letter No.

Date

From,

J.P. Singh
Chief Engineer (System Operation)

To,

Chief Engineer (Commercial)
NBPDC

Sub: BSPTCL Transmission system availability Certification for the month June-2018 for
FY-2018-19

Ref: - NBPDC letter no.218 dated 20.03.2018

Sir,

With reference to above, Transmission system availability certification of BSPTCL
System for 220 KV and 132 KV system computed as per CERC regulation 2014 for June-
2018 as detailed below :-

Month	% Availability of BSPTCL Transmission system under NBPDC			% Availability of BSPTCL Transmission system		
	220 KV	132 KV	Overall	220 KV	132 KV	Overall
June-18	99.72	99.73	99.73	99.07	99.73	99.46

Yours faithfully

Sd/-

J.P. Singh
Chief Engineer (System Operation)

Memo No.....88

Dated.....6/7/2018

Copy forwarded to

1. Secretary, BERC, Patna for kind information.
2. GM (F & A), BSPTCL for kind information and necessary action.
3. ESE (PMC), BSPTCL for kind information and necessary action.

J.P. Singh
Chief Engineer (System Operation)