## पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(भारत सरकार का उपक्रम)



#### POWER SYSTEM OPERATION CORPORATION LIMITED

(A Government of India Enterprise)

राष्ट्रीय भार प्रेषण केन्द्र

**National Load Despatch Centre** 

## Notification of Transmission charges payable by DICs for Billing Month of February 2021

No: TC/12/2020 Date: 25.01.2021

- 1. Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses), Regulations 2020 came into force with effect from 1.11.2020. National Load Despatch centre (NLDC) as the Implementing Agency under Sharing Regulations 2020 has been entrusted with the responsibility of computation of ISTS transmission charges and losses. As per Regulation (14)(5)(b), Transmission charges payable by DICs shall be notified by the Implementing Agency by 25th day of the month following billing period. The computation of transmission charges shall be done on the basis of inputs received from ISTS Licensees, DICs/ States, CTU as per the Regulations.
- 2. As per Regulation 24(1), all entities whose transmission elements have declared COD during the billing period shall submit to the Implementing Agency, network data, date(s) of commercial operation of the new transmission element and Yearly Transmission Charge (YTC) of such transmission element in the format stipulated by the Implementing Agency, on or before the end of the billing period.
- 3. As per Regulation 24(2), Implementing Agency shall publish the peak block of the billing period on the first day of the month following the billing period. Accordingly, NLDC had identified 38<sup>th</sup> time block on 28<sup>th</sup> Dec 2020 as a peak block for the billing period of Dec'20 and published the information of peak block on POSOCO website. Details of the entities from inputs have been received as per the stipulated time lines is enclosed as **Annexure-I**.
- 4. NLDC/RLDCs have examined the data and information submitted by ISTS licensees/ Deemed ISTS licensees, DICs/ States and CTU. Based on the inputs furnished by ISTS licensees, Monthly Transmission Charges (MTC) to be considered in the computations have been shared with all ISTS licensees/ deemed ISTS licensees for review and comments on 14.01.2021 with last date of submission of comments as 16.01.2021. Comments have been received from Teesta Power Transmission Limited (TPTL) and Kerala.
- 5. Based on inputs furnished by DICs/ States, all India basic network has been prepared along with node wise generation and demand as per the peak block and made it available on POSOCO website on 15.01.2021 for review and comments of DICs/ States in line with the notified procedures with the last date for submission of comments as 18.01.2021. However, no comments were received from any of the DICs/ States.
- 6. The methodology involved in the computation exercise along with the assumptions followed in the computations are enclosed at **Annexure-II**.

- 7. Accordingly, the transmission charges are hereby notified for the billing month of Feb'21 mentioned as follows:
  - a) Various components of the transmission charges determined have been added for each DIC in order to compute total transmission charges payable by the DIC
  - b) The transmission charges are computed separately for both LTA/MTOA and STOA:
    - For LTA/MTOA billing in INR: These charges are calculated only for withdrawal entities (withdrawal rates) and for generators having LTA to target region without identified beneficiaries.
    - For STOA billing in paise/kWh: These rates are calculated for all the states
  - c) The notified transmission charges payable by DICs for the billing month of Feb'21 shall be used by RPCs for preparation of Regional Transmission Account (RTA) for the billing month of Feb'21 considering regional DIC wise break up of LTA/MTOA enclosed along with this notification.
  - d) Transmission charges for STOA shall be payable by the generators and embedded entities located in the state as per the notified STOA rate of the state in which they are located.
  - e) The notified transmission charges for STOA bilateral transactions shall be applicable for the applications received on or after 00:00 Hrs of the next day (D+1) following the date of this notification (D). In the case of STOA collective transactions, both DAM and RTM, the notified transmission charges shall be applicable from the delivery day D+2 following the date of this notification.
  - f) The transmission charges payable by DICs for LTA/MTOA are given at Annexure-III.
  - g) The transmission rates applicable for STOA transactions are given at Annexure-IV.
  - h) Regional DIC wise break up of LTA/MTOA is given at Annexure-V.
  - i) ISTS licensee wise break up of Monthly Transmission Charges (MTC) is given at Annexure-VI.
  - Entity-wise details of bilateral billing are given separately at Annexure-VII.

मुख्य महाप्रबंधक / रा. भा. प्रे. के

## Input Data furnished by DICs/ ISTS Licensees/ CTU

1. As per Regulation 24(1) of Sharing Regulations 2020, some of the ISTS Licensees have submitted YTC data by 31.12.2020. PowerGrid has submitted the YTC of its SPVs on 06.01.2021 and YTC of POWERGRID on 07.01.2021. The list of ISTS licensees that have submitted YTC data is mentioned as below.

<u>List of ISTS Licensees submitted the YTC data for the billing period Dec'20</u>

Sl. No.	Name of ISTS Licensee
1	Powergrid Corporation of India Limited
2	Powergrid Vizag Transmission Limited
3	Western Transco Power Limited
4	Western Transmission Gujarat Limited
5	Torrent Power Limited
6	Aravali Power Company Private Limited
7	Adani Power Limited
8	Bhopal Dhule Transmission Company Limited
9	Jindal Power Limited
10	Essar Power Transmission Company Ltd.
11	Damodar Valley Corporation
12	Warora-Kurnool Transmission Limited
13	Jabalpur Transmission Company Ltd
14	Purulia Kharagpur Transmission company Ltd.
15	NRSS-XXIX Transmission Ltd.
16	NRSS-XXXI (B) Transmission Limited
17	Patran Transmission Company Limited
18	Kudgi Transmission Limited
19	Darbhanga Motihari Transmission Company Limited
20	Teestavalley Power Transmission Ltd
21	Maheshwaram Transmission Ltd
22	Powergrid Unchahar Transmission Ltd
23	Powergrid Parli Transmission Limited
24	Khargone Transmission Limited
25	POWERGRID Southern Interconnector Transmission System Limited
26	Gurgaon Palwal Transmission Limited
27	Odisha Generation Phase-II Transmission Ltd
28	Chhattisgarh WR Transmission Limited
29	Sipat Transmission Limited
30	Raipur Rajnandgaon Transmission Limited
31	POWERGRID Kala Amb Transmission Ltd
32	POWERGRID Warora Transmission Limited
33	POWERGRID Jabalpur Transmission Limited
34	Powergrid NM Transmission Limited
35	Alipurduar Transmission Limited
36	Delhi Transco
37	Andhra Pradesh APTRANSCO
38	Madhya Pradesh MPPTCL

Sl. No.	Name of ISTS Licensee
39	Chhattisgarh CSPTCL
40	Himachal Pradesh Power Transmission Corporation Ltd
41	North Eastern Transmission Company Limited NETCL
42	Parbati Koldam Transmission Company Limited
43	Powerlinks Transmission Limited
44	Raichur Sholapur Transmission company Private Limited

- 2. As per Sharing Regulations 2020 and NLDC notified Procedure for collection of data and information, CTU shall submit all required data and information as stipulated in Formats II(A) to II(G) within 7 days after the end of the billing period i.e by 07.01.2021. However, CTU has submitted the data in format II-C on 19.01.2021 and remaining formats II-A, II-B, II-D, II-F and II-G(1) to II-G(5) on 22.01.2021.
- 3. As per Regulation 24(4) and NLDC notified Procedure for collection of data and information, DICs shall submit the required information to the Implementing Agency as stipulated in Formats III and IV for the billing period within 7 days after end of the billing period. The list of the DICs that have submitted the data by 07.01.2021 is as mentioned below:

SI.No	NR	WR	SR	ER	NER	Super DIC
1	Azure Power Thirty Four	ACBIL	NTPC Tamilnadu Energy Company Ltd, Chennai	Bihar	Assam	NTPC
2	Azure Power Fourty Three	ACME Jaipur Solar	NLC TPS II Expansion	JITPL	Manipur	NHPC
3	AREPRL_Bhadla	Alfanar_WR	NLC Tamilnadu Power Limited, Tuticorin	DVC	Meghalaya	
4	ВВМВ	Daman & Diu	Sembcorp Energy India Ltd. P-1		ОТРС	
5	Delhi	Dayapar_Inox_WR	Sembcorp Energy India Ltd. P-2		Tripura	
6	Haryana	DB Power	IL & FS Tamilnadu Power Company Ltd., Cuddalore.			
7	Himachal Pradesh	Dhariwal	Transmission Corporation of Andhra Pradesh			
8	Punjab	DNH	Karnataka Power Transmission Corp. Ltd (KPTCL)			
9	Renew Power_NR	ESIL Hazira	Kerala Electricity Board (KSEB)			
10	Rajasthan	Essar Mahan	Tamil Nadu Transmission Corporation Ltd, Chennai			
11	Uttar Pradesh	GMR Warora	Transmission Corporation of Telangana Limited			
12		Goa WR	ReNew Wind Energy (TN2) Private Limited (Pavagada Solar Park)			

Sl.No	NR	WR	SR	ER	NER	Super DIC
13		GreenInfra_wind_WR	Fortum Finnsurya Energy Private Ltd. (Pavagada Solar Park)			
14		Gujarat	Parampujya Solar Energy Private Ltd. (Pavagada Solar Park)			
15		Jaypee Nigrie	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
16		Jhabua Power	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
17		Jindal Power	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
18		Mahindra Renewables_WR	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
19		MB Power	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
20		Ratadiya_WR	Adyah Solar Energy Pvt, Ltd. (Pavagada Solar Park)			
21		REL and REGL	Azure Power Earth Private Ltd. (Pavagada Solar Park)			
22		Renew Power_WR				
23		RKM Power				
24		Sasan				
25		SKS Power				
26		Sprn Energy_WR				
27		TAPS 1&2				
28		TAPS 3&4				
29		Torrent Power				
30		TRN Energy				
31		CGPL				
32		RGPPL				
33		SSP				
34		Lanco Amarkantak				
35		KSK Mahanadi				
36		Madhya Pradesh				
37		Maharashtra				
38		Chhattisgarh				
39		NSPCL				
40		Kakrapar				
41		BALCO				
	1		1			

## Methodology of the computations and assumptions followed in the basic network

#### a) Modeling of the Basic Network

- A. The All India network was modeled with the help of network data and node wise generation and demand data furnished by DICs. Wherever network data has not been provided by DICs, network data already available at RLDCs/NLDC has been considered. Wherever technical parameters were not furnished, standard parameters as per CEA Manual on Transmission Planning Criteria have been used.
- B. Certain Transmission Lines included in the basic network were partly owned by ISTS Licensee and partly by STUs. There were cases where the existing lines originally owned by one utility have been made LILO by other utility. In cases where the line originally owned by ISTS Licensee has been made LILO by STU, the Monthly Transmission Charge for the entire line has been considered (including the section owned by STU). In cases where the line originally owned by STU has been made LILO by ISTS Licensee, the Monthly Transmission Charge for the entire line has not been considered.
- C. All India basic network up to 66/ 33 kV level and at some nodes even till 0.4 kV level has been prepared. As per the Sharing Regulations 2020, basic network means power system at voltage levels of 110 kV and above, containing all power system elements including generating station and transmission systems.
- D. In line with Sharing Regulations 2020, the all India basic network has been truncated to 110 kV level. Power flow into lower voltage system has been considered as load at the substation at truncated point. Power flow from a lower voltage system has been considered as generation at the substation at truncated point.
- E. To account for the transmission losses of the truncated lower voltage network and to ensure state drawal as per SEM data corresponding to peak block, minor adjustments in states generation has been done.
- F. Interstate generating Stations (ISGS) connected at 220kV and below voltage level are created as separate control areas.
- G. 400 kV Singrauli considered as slack bus.

#### b) Load Generation balance for the basic network

- A. Node wise generation and demand data for the peak block as submitted by DICs has been considered to prepare Load Generation balance.
- B. Wherever aggregate generation and demand data submitted by DICs, the generation and demand data has been distributed across the nodes of the DICs as per the node wise distribution of the TTC/ATC base case applicable for December'20.
- C. wherever node wise generation and demand data has not been provided by DICs, SEM data/ SCADA data available with NLDC/RLDCs has been considered. In the absence of SEM/ SCADA data, the node wise generation and demand data as available from TTC/ ATC base case / recently submitted base case of states has been considered.

#### c) Commercial Data considered in the computations

- A. The data as submitted by the ISTS Licensees has been examined by NLDC and suitably considered for computation of transmission charges for DICs for the billing period Dec'20. For the ISTS licensees who have not submitted YTC data for Dec'20, the YTC data recently available with reference to the previous computations have been considered.
- B. While checking the YTC of the licensees who have not submitted data, the recently available CERC orders are referred to consider the recently available approved YTC for FY 2018-19 in case for 2019-20 or 2020-21 is not available.
- C. All ISTS transmission assets commissioned by the end of Dec'20 as furnished by ISTS licensees have been considered in the computations.
- D. Yearly Transmission Charges (YTC) based on approved/ adopted tariff by CERC has only been considered in line with Sharing Regulations 2020. RPC certified non-ISTS lines as ISTS lines have not been considered in the computations.
- E. The assets of State Utilities whose approved Tariff by the Commission is not available as on 31.03.2019 are not being considered in the computations since 2019-20 Q3 in line with Terms & Conditions of Tariff Regulations. The same is continued in this computations.
- F. As per minutes of Validation Committee meeting held for 2020-21 Q2 PoC computations, for the assets of Essar Power transmission limited, combined tariff of LILO of 400kV Vindhyachal-Korba at Mahan, GIS S/s at Hazira and 400kV Hazira-Gandhar line) was being excluded from PoC computations in the absence of exclusive tariff of LILO of 400kV Vindhyachal-Korba at Mahan since 2020-21 Q2. The same is continued in the computations as the matter is sub-judice.
- G. In case of YTC of assets claimed by Kohima Mariyani transmission limited, YTC claimed by licensee falls under Regulation 13(12)(c ). As there is no information on bilateral sharing arrangement as approved by CERC, YTC of the assets claimed has been excluded from the computations.
- H. As per Regulation (13) clauses (3), (6), (9), the YTC of assets claimed by licensees have been examined to find out whether the YTC to be completely or partly billed to generators. Accordingly, computed transmission charges for DICs in line with the Regulations.
- I. All ISTS assets corresponding to the bilateral payments on the basis of information furnished by ISTS licensees and the worked out bilateral payments in line with Regulation (13) have been considered while preparing final transmission charges for DICs.
- J. The components of Yearly Transmission Charges such as National Component for RE (NC-RE), National Component for HVDC (NC-HVDC), Regional Component (RC) and Transformers Component (TC) have been worked out on the basis of the inputs furnished by CTU.
- K. Indicative cost level of different conductor configuration was provided by CTU and is as follows:

SI. No.	Voltage level (kV)	Type of conductor configuration	Indicative cost (Rs.Lakh/km)
1	± 800	HVDC	246

SI. No.	Voltage level (kV)	Type of conductor configuration	Indicative cost (Rs.Lakh/km)
2	± 500	HVDC	121
3	765	D/C	349
4	765	S/C	156
5	400	S/C	65
6	400	M/C TWIN	307
7	400	D/C Quad Moose	197
8	400	D/C Twin HTLS	133
9	400	D/C Twin Moose	115
10	400	M/C QUAD	576
11	400	D/C TRIPLE	159
12	400	S/C QUAD	108
13	220	D/C	49
14	220	S/C	37
15	220	M/C TWIN	219
16	132	D/C	33
17	132	S/C	18
18	132	M/C TWIN	156

- L. The indicative cost levels provided by CTU are for only selected configurations and voltage level. Hence, for the conductor configurations which are not mentioned in the above list, following assumptions have been made:
  - a. The indicative cost level of 765 kV lines (Quad Bersimis) charged at 400 kV has been considered to be same as cost of one circuit of 400 kV Quad Moose D/C.
  - b. The indicative cost level of 400 kV Quad Bersimis D/C has been considered to be same as 400 kV Quad Moose D/C.
  - c. The indicative cost level of 765 kV Hexa zebra has been considered to be same as 765 kV Quad Bersimis.
  - d. The indicative cost levels of 400 kV ACKC, ACAR, AAAC, Moose, Zebra and Lapwing have been considered to be same as 400 kV Twin Moose depending on the no. of circuits.
  - e. 400 kV lines (Twin Moose) charged at 220 kV are charged as per the rate of 220 kV D/C lines.
- M. Circuit Kms of RE lines considered as National component has been considered as zero.
- N. Circuit Kms of the assets covered under Regulation (13) clauses (3), (6), (9), have been pro-rata adjusted with respect to YTC considered for bilateral payment wherever YTC are to be partly included in the computations.

#### d) Computation of Usage part of AC system charges

A	t. The usage part of AC system charges has been computed by running AC load flow and determining the utilization of the lines with respect to SIL of the lines. For SIL of lines at various voltage levels, annexure-II to Regulations has been followed.
E	3. AC Usage Base Charges (AC-UBC) thus determined has been used for apportionment through hybrid method and computed total aggregated nodal charges in Rs. for each drawee DIC and injecting DICs having untied LTA.
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#### Annexure-III

# <u>Transmission Charges for Designated ISTS Customers (DICs) for the billing month of February'21</u>

S.No.	. Zone Region		LTA Demand / Injection	Usage based AC system charges (Rs.)	Balance AC system charges (Rs.)		Component Rs.)	Regional Component (Rs.)	Transformers component (Rs.)	Bilateral Charges	Total Transmission charges
			(in MW)	AC-UBC	AC-BC	NC-RE	NC-HVDC	RC	тс	(Rs.)	payable in Rs.
1	Delhi	NR	5238	305784942	928795235	24163661	111889574	220771563	52074926		1643479901
2	UP	NR	9933	884119878	1761321321	45822772	212181850	418660268	138642928	5537449	3466286467
3	Punjab	NR	4298	356334959	762213152	19829840	91821858	181175552	121819112	1368429	1534562902
4	Haryana	NR	3651	447697561	647443498	16843977	77995853	153895184	207573971		1551450044
5	Chandigarh	NR	220	10325268	38974807	1013974	4695195	9264183	2970061		67243488
6	Rajasthan	NR	4242	676253129	752176428	19568723	90612760	178789856	101601563	4731195	1823733653
7	НР	NR	1750	52998468	310306448	8072974	37381820	73758819	30636080	54289727	567444336
8	J&K	NR	2766	265575643	490408438	12758532	59078243	116568468	54547516		998936840
9	Uttarakhand	NR	1228	156117201	217783314	5665880	26235796	51766375	37476961	31352975	526398502
10	ADHPL	NR	168.96	343406	29961269	779476	3609357	7121695			41815203
11	GMR Kamalanga	NR	75	6760683	13299569	346003	1602165	3161264			25169684
12	WBSEDCL_Inj	NR	600	7318955.635	106396551	2768027	12817319	25290109			154590962
13	MB Power	NR	175	29373254	31032327	807341	3738385	7376282			72327589
14	Chuzachen	NR	99	7832857	17555431	456724	2114858	4172868			32132738
15	Jorthang	NR	43.20	3328281.394	7660552	199298	922847	1820888			13931866
16	Tashiding	NR	43.65	2930130.131	7740349	201374	932460	1839855			13644169
17	NR Railways	NR							4312873		4312873
18	MUNPL Meja	NR								4583159	4583159
19	RAPP 7&8, NPCIL	NR								35288333	35288333
20	Gujarat	WR	6259	467182446	1109938453	28876308	133711431	90397428	55090422	1487830	1886684319
21	Madhya Pradesh	WR	8092	909286468	1434926075	37331229	172861854	116865603	125735608	4242248	2801249086
22	Maharastra	WR	7019	982624586	1244700130	32382285	149945824	101372910	77006064		2588031798
23	Chattisgarh	WR	2715	74594612	481449557	12525456	57998990	39211005	24588359		690367979

S.No.	Zone	LTA Demand / Injection  LTA Demand / Injection  LTA Demand / Injection  LTA Demand / Injection  Usage based AC system system charges (Rs.)  Charges (Rs.)  Region  National Component (Rs.)		•	Regional Component (Rs.)	Transformers component (Rs.)	Bilateral Charges	Total Transmission charges			
			(in MW)	AC-UBC	AC-BC	NC-RE	NC-HVDC	RC	тс	(Rs.)	payable in Rs.
24	Goa	WR	505	44557791	89529002	2329199	10785329	7291568	12005278	1453413	167951580
25	Daman Diu	WR	427	26314442	75672193	1968698	9116035	6163019	17930171		137164558
26	Dadra Nagar Haveli	WR	1016	114071522	180192139	4687903	21707284	14675504	22146743		357481095
27	Jindal Power Limited	WR	114	13739581	20286276	527770	2443835	1652188			38649651
28	Spectrum Coal & Power	WR	28	4287649	4876509	126868	587460	397161			10275647
29	ACB Ltd	WR	23	4427232	4078534	106108	491331	332171			9435375
30	Torrent Power	WR	200	1339153	35465517	922676	4272440	2888441			44888227
31	Sembcorp Energy India Ltd Project-I	WR	115	5126164	20392672	530538	2456653	1660853			30166882
32	DB Power	WR	186	40003648	32982931	858088	3973369	2686250			80504286
33	TRN Energy Pvt. Ltd.	WR	3	174081	531983	13840	64087	43327			827317
34	CSPTCL	WR	261	3175946	46282500	1204092	5575534	3769415			60007487
35	WBSEDCL_Inj	WR	400	4879303.756	70931034	1845351	8544879	5776882			91977450
36	KSK Mahanadi	WR	400	56909883	70931034	1845351	8544879	5776882			144008030
37	GMR Warora Energy Ltd, Maharashtra	WR	200	4262189	35465517	922676	4272440	2888441			47811262
38	Jorthang	WR	43.20	3328281.394	7660552	199298	922847	623903			12734881
39	Tashiding	WR	43.65	2930130.131	7740349	201374	932460	630402			12434715
40	NTPC Gadarwada	WR								151523966	151523966
41	MB Power	WR								12763640	12763640
42	Adani Power Limited	WR								344873892	344873892
43	Andhra Pradesh	SR	1876	268516069	332615618	8653372	40069348	27244441	31217633		708316481
44	Telangana	SR	4190	265837597	743066465	19331717	89515306	60864340	32034612		1210650038
45	Tamil Nadu	SR	8538	404194755	1513952286	39387186	182381939	124007355	87033397		2350956919
46	Kerala	SR	2770	144131061	491131910	12777354	59165398	40228460	51500596		798934778
47	Karnataka	SR	5653	516217957	1002348272	26077227	120750319	82102031	99018212	4033567	1850547585

S.No.	No I Zone I Region I		LTA Demand / Injection	Usage based AC system charges (Rs.)	Balance AC system charges (Rs.)		Component Rs.)	Regional Component (Rs.)	Transformers component (Rs.)	Bilateral Charges	Total Transmission charges
			(in MW)	AC-UBC	AC-BC	NC-RE	NC-HVDC	NC-HVDC RC		(Rs.)	payable in Rs.
48	Pondicherry	SR	513	7211745	91055884	2368922	10969268	7458359	12572208		131636386
49	Goa-SR	SR	92	4011416	16246576	422673	1957183	1330752			23968601
50	Sembcorp Energy India Ltd Project-I	SR	55	2451643.864	9753017	253736	1174921	798867		801624	15233809
51	Sembcorp Energy India Ltd Project-II	SR	490	26956982	86890517	2260555	10467477	7117175			133692707
52	BHAVINI	SR								12590841	12590841
53	Betam	SR								1170343	1170343
54	West Bengal	ER	2641	56810786	468236163	12181695	56407207	63345718	38694446		695676014
55	Odisha	ER	1671	53830781	296354014	7709986	35701006	40092499	67460544		501148830
56	Bihar	ER	4439	247607772	787230299	20480689	94835610	106501104	117130382		1373785856
57	Jharkhand	ER	842	33856997	149245082	3882780	17979171	20190745	50928749	4063363	280146887
58	Sikkim	ER	178	1619702	31607742	822311	3807703	4276080	3638309		45771847
59	DVC	ER	622	47199966	110331726	2870405	13291379	14926319	6298659		194918453
60	Bangladesh	ER	783	7164713	138778363	3610476	16718273	18774746			185046572
61	BRBCL Nabinagar	ER								7160087	7160087
62	NPGC Nabinagar	ER								21607255	21607255
63	NTPC Darlipalli	ER								4085673	4085673
64	Arunachal Pradesh	NER	247	10169552	43741762	1137992	5269458	5770984	15053104		81142851
65	Assam	NER	1592	38380510	282294734	7344218	34007321	37244002	23381174		422651959
66	Manipur	NER	237	12027773	42082647	1094828	5069588	5552091	4494522		70321450
67	Meghalaya	NER	328	14604504	58153772	1512936	7005635	7672404	706369		89655621
68	Mizoram	NER	136	4987669	24188148	629282	2913884	3191216	1532249	3970562	41413009
69	Nagaland	NER	166	6027347	29363563	763926	3537353	3874024	8690313		52256527
70	Tripura	NER	353	3683505	62644735	1629774	7546650	8264910	1366570		85136144
	TOTAL		100991	8153810529	17908414944	465907724	2157380697	2551365202	1738910687	712979571	33688769353

## Transmission Charges to be paid by DICs under Regulation 13(7)

Where Long Term Access is granted to a generating station on existing margins and COD of the generating station or unit(s) thereof is delayed

SI.No.	Name of Generating Station	State	Capacity	LTA granted	Commissioned capacity	Date of Commercial Operation	Delayed Capacity	Transmission Charges (Rs)
1	Sprng Renewable Energy Pvt Limited	Tamil Nadu	300	300	0	NA	300	8260951
2	NTPC Auraiya Solar	Uttar Pradesh	20	20	15	8MW: 10.11.20 7MW: 04.12.20	5.68	198131

# **Transmission Charges for Short Term Open Access (STOA)**

S.No.	State	Region	STOA rate (paise/kWh)
1	Delhi	NR	43.58
2	UP	NR	48.39
3	Punjab	NR	49.54
4	Haryana	NR	59.02
5	Chandigarh	NR	42.49
6	Rajasthan	NR	59.56
7	HP	NR	40.73
8	J&K	NR	50.17
9	Uttarakhand	NR	55.98
10	Gujarat	WR	41.83
11	Madhya Pradesh	WR	48.01
12	Maharastra	WR	51.21
13	Chattisgarh	WR	35.32
14	Goa	WR	45.80
15	Daman Diu	WR	44.64
16	Dadra Nagar Haveli	WR	48.86
17	Andhra Pradesh	SR	52.45
18	Telangana	SR	40.13
19	Tamil Nadu	SR	38.25
20	Kerala	SR	40.06
21	Karnataka	SR	45.37
22	Pondicherry	SR	35.61
23	Goa-SR	SR	36.33
24	West Bengal	ER	36.59
25	Odisha	ER	41.65
26	Bihar	ER	42.98
27	Jharkhand	ER	45.56
28	Sikkim	ER	35.67
29	DVC	ER	43.51
30	Bangladesh	ER	32.84
31	Arunachal Pradesh	NER	45.69
32	Assam	NER	36.87
33	Manipur	NER	41.16
34	Meghalaya	NER	37.97
35	Mizoram	NER	38.12
36	Nagaland	NER	43.83
37	Tripura	NER	33.47

## Annexure-V

# Regional DIC wise break up of LTA/MTOA considered in the computations

SI.No.	Name of the DIC	Region	LTA/MTOA considered in the computations	Name of the state control area in which LTA/MTOA of specific DICs is included in the computations*
1	UP	NR	9569.02	
2	Delhi	NR	5233.99	
3	Haryana	NR	3634.73	
4	Uttarakhand	NR	1228.14	
5	Punjab	NR	4298.33	
6	Rajasthan	NR	4181.54	
7	Himachal Pradesh	NR	1749.91	
8	Jammu & Kashmir	NR	2765.55	
9	Chandigarh	NR	219.79	
10	Noida Power Company Ltd, UP	NR	170.00	Uttar Pradesh
11	AD Hydro	NR	168.96	
12	Railways_UP	NR	188.75	Uttar Pradesh
13	Railways_Haryana	NR	11.25	Haryana
14	Railways_Delhi	NR	3.75	Delhi
15	Railways_Rajasthan	NR	59.24	Rajasthan
16	PG-Rihand	NR	0.74	Uttar Pradesh
17	PG-Dadri	NR	0.78	Uttar Pradesh
18	PG-Agra	NR	2.36	Uttar Pradesh
19	PG-Balia	NR	0.95	Uttar Pradesh
20	PG-Bhiwadi	NR	0.95	Rajasthan
21	PG-Kurukshetra	NR	5.14	Haryana
22	MB Power	NR	175.00	·
23	WBSEDCL	NR	600.00	
24	GMR Kamalanga Energy Pvt. Ltd	NR	75.00	
25	Chuzachen	NR	99.00	
26	Jorthang	NR	43.20	
27	Tashiding	NR	43.65	
28	Gujarat	WR	6145.12	
29	Madhya Pradesh	WR	7747.99	
30	Chhattisgarh	WR	2698.47	
31	Maharashtra	WR	6907.22	
32	GOA	WR	504.88	
33	Daman Diu	WR	426.74	
34	Dadra Nagar Haveli	WR	1016.15	
35	HVDC Bhadrawathi	WR	2.30	Maharashtra
36	HVDC Vindhyachal	WR	0.69	Madhya Pradesh
37	BARC Facility	WR	9.10	Maharashtra
38	Heavy Water Plant of DAE	WR	12.88	Gujarat
39	Mind Space Business parks Pvt Ltd	WR	10.60	Maharashtra
40	HVDC Champa	WR	4.37	Chhattisgarh
41	HVDC Raigarh	WR	0.94	Chhattisgarh
42	Railways_Gujarat	WR	101.25	Gujarat

SI.No.	Name of the DIC	Region	LTA/MTOA considered in the computations	Name of the state control area in which LTA/MTOA of specific DICs is included in the computations*
43	Railways_MP	WR	343.27	Madhya Pradesh
44	Railways_Maharashtra	WR	90.00	Maharashtra
45	Railways_Chhattisgarh	WR	11.25	Chhattisgarh
46	ACB Ltd.	WR	23.00	
47	JINDAL	WR	114.40	
48	Spectrum Coal and Power	WR	27.50	
49	Torrent Power	WR	200.00	
50	DB Power	WR	186.00	
51	KSK Mahanadi	WR	400.00	
52	GMR Warora Energy Ltd, Maharashtra	WR	200.00	
53	CSPTCL	WR	261.00	
54	TRN Energy Pvt. Ltd.	WR	3.00	
55	Sembcorp Energy India Ltd	WR	115.00	
56	WBSEDCL	WR	400.00	
57	Jorthang	WR	43.20	
58	Tashiding	WR	43.65	
59	BIHAR	ER	4363.27	
60	JHARKHAND	ER	771.63	
61	DVC	ER	339.69	
62	ORISSA	ER	1671.22	
63	WEST BENGAL	ER	2604.42	
64	SIKKIM	ER	178.24	
65	Bangladesh	ER	782.61	
66	TATA Steel Ltd.	ER	200.00	DVC
67	Railways_Jharkhand	ER	70.00	Jharkhand
68	Railways Bihar	ER	75.00	Bihar
69	Railways_DVC	ER	82.50	DVC
70	Railways_Odisha	ER	0.00	Odisha
71	Railways_West Bengal	ER	33.75	West Bengal
72	HVDC Alipurduar	ER	2.34	West Bengal
73	POWERGRID PUSAULI	ER	1.15	Bihar
74	Andhra Pradesh	SR	1871.69	
75	Karnataka	SR	5608.15	
76	KSEB	SR	2768.69	
77	Tamil Nadu	SR	8522.50	
78	Telangana	SR	4190.36	
79	Puducherry	SR	513.49	
80	Goa	SR	91.62	
81	SAIL, Salem	SR	13.65	Tamil Nadu
82	Railways_Karnataka	SR	42.50	Karnataka
83	PG-HVDC Gazuwaka	SR	2.15	Andhra Pradesh
84	PG-HVDC Talcher	SR	1.88	Andhra Pradesh
85	PG-HVDC Kolar	SR	1.88	Karnataka
86	PG-HVDC Pugalur	SR	1.45	Tamil Nadu
87	PG-HVDC Thrissur	SR	0.94	Kerala

SI.No.	Name of the DIC	Region	LTA/MTOA considered in the computations	Name of the state control area in which LTA/MTOA of specific DICs is included in the computations*
88	Sembcorp Energy India Ltd Project-I	SR	55.00	
	Sembcorp Energy India Ltd Project-			
89	II	SR	490.00	
90	Arunachal Pradesh	NER	246.67	
91	Assam	NER	1589.66	
92	Manipur	NER	237.32	
93	Meghalaya	NER	327.95	
94	Mizoram	NER	136.40	
95	Nagaland	NER	165.59	
96	Tripura	NER	353.27	
97	PG-HVDC BNC	NER	2.28	Assam

TOTAL 100990.58

\*Note: Transmission charges of the state are to be shared on pro-rata basis on the basis of LTA/MTOA of the DICs included in the state's control area as mentioned in the table

### **Annexure-VI**

# <u>Transmission Charges claimed by ISTS licensees for the billing period Dec'20</u>

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
1	POWERGRID	32179.98	32179.98	2733.09	As per data furnished by ISTS Licensee for Dec'20. MTC of the assets listed under Regulation 13(3) shall be partly settled through the bilateral payments from respective entities as detailed in the transmission charges bill. PowerGrid assets for bilateral payments as mentioned in format I-C are also included in this total YTC claimed.
2	Adani Transmission (India) Limited	772.64	772.64	65.62	As per data furnished by ISTS Licensee for Dec'20
3	CHHATTISGARH-WR TRANSMISSION LIMITED.	165.00	165.00	14.01	As per data furnished by ISTS Licensee for Dec'20
4	RAIPUR RAJNANDGAON-WR TRANSMISSION LIMITED.	219.74	219.74	18.66	As per data furnished by ISTS Licensee for Dec'20
5	SIPAT TRANSMISSION LIMITED.	95.86	95.86	8.14	As per data furnished by ISTS Licensee for Dec'20
6	Western Transmission Gujarat Limited	58.35	58.35	4.96	As per data furnished by ISTS Licensee for Dec'20
7	Western Transco Power Limited	107.37	107.37	9.12	As per data furnished by ISTS Licensee for Dec'20
8	ALIPURDUAR TRANSMISSION LIMITED	159.40	159.40	13.54	As per data furnished by ISTS Licensee for Dec'20
9	ARAVALI POWER COMPANY PRIVATE LIMITED	12.77	12.77	1.08	As per data furnished by ISTS Licensee for Dec'20
10	Essar Power Transmission Company Limited	412.98	333.05	28.29	As per minutes of Validation Committee meeting held for 2020- 21 Q2 PoC computations, combined tariff of LILO of 400kV Vindhyachal-Korba at Mahan, GIS S/s at Hazira and 400kV Hazira- Gandhar line) is being excluded from computations in the absence of exclusive tariff of LILO of 400kV Vindhyachal-Korba at Mahan since 2020-21 Q2. This matter is already sub-judice. Considered same as for previous periods.

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
11	Essar Power Transmission Company Limited (NTPC portion)	3.46	3.46	0.29	As per data furnished by ISTS Licensee for Dec'20
12	Jindal Power Limited	19.12	19.12	1.62	As per data furnished by ISTS Licensee for Dec'20
13	Kudgi Transmission Limited	196.29	196.29	16.67	As per data furnished by ISTS Licensee for Dec'20
14	Parbati Koldam Transmission Company Limited (JV of Rinfra and PowerGrid Corporation of India Limited)	173.04	173.04	14.70	As per data furnished by ISTS Licensee for Dec'20
15	BHOPAL DHULE TRANSMISSION COMPANY LTD.	260.00	260.00	22.08	As per data furnished by ISTS Licensee for Dec'20
16	EAST NORTH INTERCONNECTION COMPANY LIMITED	143.32	143.32	12.17	As per data furnished by ISTS Licensee for Dec'20
17	GURGAON PALWAL TRANSMISSION LIMITED	147.49	147.49	12.53	As per data furnished by ISTS Licensee for Dec'20
18	JABALPUR TRANSMISSION COMPANY LIMITED	146.98	146.98	12.48	As per data furnished by ISTS Licensee for Dec'20
19	MAHESHWARAM TRANSMISSION LIMITED	55.89	55.89	4.75	As per data furnished by ISTS Licensee for Dec'20
20	KHARGONE TRANSMISSION COMPANY LTD.	105.98	105.98	9.00	As per data furnished by ISTS Licensee for Dec'20
21	NRSS-XXIX TRANSMISSION LIMITED	502.08	502.08	42.64	As per data furnished by ISTS Licensee for Dec'20
22	ODISHA GENERATION PHASE-II TRANSMISSION LIMITED	161.42	161.42	13.71	As per data furnished by ISTS Licensee for Dec'20
23	Patran Transmission Company Limited	30.66	30.66	2.60	As per data furnished by ISTS Licensee for Dec'20
24	PURULIA & KHARAGPUR TRANSMISSION COMPANY LIMITED	72.43	72.43	6.15	As per data furnished by ISTS Licensee for Dec'20
25	RAPP TRANSMISSION COMPANY LIMITED	44.03	44.03	3.74	As per data furnished by ISTS Licensee for Dec'20
26	Teestavalley Power Transmission Limited	289.56	289.56	24.59	As per data furnished by ISTS Licensee for Dec'20
27	Torrent Power Grid Limited	46.68	46.68	3.96	YTC as per CERC Order has been considered. Incentives shall be claimed through second bill as per Sharing Regulations 2020
28	Darbhanga-Motihari Transmission Company Limited	119.03	119.03	10.11	As per data furnished by ISTS Licensee for Dec'20
29	NRSS XXXI (B) Transmission Limited	90.76	90.76	7.71	As per data furnished by ISTS Licensee for Dec'20

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
30	Jaypee Powergrid Limited	161.36	161.36	13.70	Data not furnished by ISTS Licensee for Dec'20. Data as furnished in the previous quarters has been considered
31	KOHIMA MARIANI TRANSMISSION LIMITED	167.40	0.00	0.00	As per data furnished by ISTS Licensee for Nov'20. Data not furnished by ISTS Licensee for Dec'20. YTC claimed by licensee falls under Regulation 13(12)(c). As there is no information on bilateral sharing arrangement as approved by CERC, YTC claimed is excluded from sharing mechanism.
32	RAICHUR SHOLAPUR TRANSMISSION COMPANY PRIVATE LIMITED	35.20	35.20	2.99	As per data furnished by ISTS Licensee for Dec'20
33	DAMODAR VALLEY CORPORATION	144.40	137.08	11.64	As per data furnished by ISTS Licensee for Dec'20, YTC claimed by licensee includes availability incentive and carrying cost. These are excluded and only CERC approved tariff same as in Nov'20 has been considered. As per Regulation, licensee may claim incentives and carrying cost in second bill.
34	Powerlinks Transmission Limited	224.30	224.30	19.05	As per data furnished by ISTS Licensee for Dec'20
35	NRSS XXXVI Transmission Limited	1.28	1.28	0.11	Data not furnished by ISTS Licensee for Dec'20. Data as furnished by ISTS Licensee for Nov'20 has been considered
36	Warora-Kurnool Transmission Limited	5.46	5.46	0.46	Cost of 240 MVAR reactor with bays at Warora end is considered under the sharing mechanism
37	POWERGRID VIZAG TRANSMISSION LIMITED	294.53	294.53	25.02	As per data furnished by ISTS Licensee for Dec'20
38	POWERGRID NM TRANSMISSION LIMITED	116.54	116.54	9.90	As per data furnished by ISTS Licensee for Dec'20
39	POWERGRID UNCHAHAR TRANSMISSION LIMITED	20.79	20.79	1.77	As per data furnished by ISTS Licensee for Dec'20
40	POWERGRID PARLI TRANSMISSION LIMITED	317.38	317.38	26.96	As per data furnished by ISTS Licensee for Dec'20
41	POWERGRID KALA AMB TRANSMISSION LIMITED	72.515	72.52	6.16	As per data furnished by ISTS Licensee for Dec'20. Bilateral payment of HPSEB is also included in the claimed YTC

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
42	POWERGRID Southern Interconnector Transmission System Limited	449.68	449.68	38.19	As per data furnished by ISTS Licensee for Dec'20
43	POWERGRID JABALPUR TRANSMISSION LIMITED	243.68	243.68	20.70	As per data furnished by ISTS Licensee for Dec'20
44	POWERGRID WARORA TRANSMISSION LIMITED	352.07	352.07	29.90	As per data furnished by ISTS Licensee for Dec'20. MTC of the assets listed under Regulation 13(3) shall be partly settled through the bilateral payments from respective entities as detailed in the transmission charges bill.
45	NORTH EAST TRANSMISSION COMPANY LIMITED	351.53	351.53	29.86	As per data furnished by ISTS Licensee for Dec'20
46	Transmission Corporation of Andhra Pradesh (APTRANSCO)	283.72	57.74	4.90	As per data furnished by ISTS Licensee for Dec'20. CERC approved ISTS lines are only considered as per Sharing Regulations 2020
47	Madhya Pradesh Power Transmision Co. Ltd.	12.54	12.54	1.06	As per data furnished by ISTS Licensee for Dec'20
48	KARNATAKA POWER TRANSMISSION CORPORATION LIMITED	1.42	1.42	0.12	Data not furnished by ISTS Licensee for Dec'20. CERC Tariff Order dated 12.06.2019 has been considered
49	DELHI TRANSCO LIMITED	3.12	3.12	0.26	As per data furnished by ISTS Licensee for Dec'20
50	Power Transmission Corporation of Uttarakhand Ltd	44.88	44.88	3.81	Data not furnished by ISTS Licensee for Dec'20. CERC Tariff Order dated 20.04.2018 and 22.06.2018 have been considered
51	Rajasthan Rajya Vidhyut Prasaran Nigam Ltd.	36.96	36.96	3.14	Data not furnished by ISTS Licensee for Dec'20. Data as furnished in the previous quarters has been considered
52	TAMILNADU TRANSMISSION CORPORATION LIMITED	0.59	0.59	0.05	Data not furnished by ISTS Licensee for Dec'20. CERC Tariff Order dated 16.11.2018 has been considered
53	CHHATTISGARH STATE POWER TRANSMISSION COMPANY LTD	0.75	0.75	0.06	As per data furnished by ISTS Licensee for Dec'20
54	HIMACHAL PRADESH POWER TRANSMISSION CORPORATION LTD	2.61	2.61	0.22	As per data furnished by ISTS Licensee for Dec'20

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
55	ODISHA POWER TRANSMISSION CORPORATION LIMITED	9.44	9.44	0.80	Data not furnished by ISTS Licensee for Dec'20. CERC Tariff Order dated 26.06.2018 has been considered
56	Uttarpradesh Power Transmission Corporation Limited (UPPTCL)	27.23	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not available
57	Power Development Department, Jammu & Kashmir	10.11	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not available
58	Gujarat Energy Transmission Corporation Limited(GETCO)	5.71	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not available
59	Maharashtra State Electricity Transmission Company Ltd (MAHATRANSCO)	97.68	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not available
60	West Bengal State Electricity Transmission Company Ltd (WBSETCL)	32.05	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not avaialble
61	Haryana Vidyut Prasaran Nigam Limited (HVPNL)	8.09	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not avaialble
62	Assam Electricity Grid Corporation Limited(AEGCL)	10.78	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not available

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (Rs. Cr)	Total YTC allowed for Dec'20	Equivalent MTC considered for Dec'20	Remarks
63	Meghalaya Power Transmission Corporation Limited (MePTCL)	3.61	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not avaialble
64	Kerala State Electricity Board (KSEB)	10.06	0.00	0.00	Data not furnished by ISTS Licensee for Dec'20. YTC has been considered as zero in line with CERC terms & conditions for Traiff Regulations 2019 as tariff as on 31.03.2019 is not avaialble

TOTAL MTC considered for the billing period Dec'20 from the claimed assets of ISTS licensees (Rs. Crores) **3368.88** 

Total MTC considered for the billing period of Dec'20 in Rs. 33688769353

# **Details of Entity-wise bilateral billing**

Name of the beneficiary	Region	MTC in Rs.	State Control Area in which the Bilateral charges are included
BRBCL Nabinagar	ER	7160087	
Jharkhand Urja Sancharan Nigam Limited (JUSNL)	ER	4063363	Jharkhand
NPGC Nabinagar	ER	21607255	
NTPC Darlipalli	ER	4085673	
P & E Department, Govt. of Mizoram	NER	3970562	Mizoram
Himachal Pradesh Power Transmission Corporation Limited (HPPTCL)	NR	1674000	Himachal Pradesh
Himachal Pradesh State Electricity Board (HPSEB)	NR	52615727	Himachal Pradesh
MUNPL Meja	NR	4583159	
Punjab State Transmission Corporation Limited (PSTCL)	NR	1368429	Punjab
Rajasthan DISCOMs	NR	1513479	Rajasthan
Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPNL)	NR	3217715	Rajasthan
RAPP 7&8, NPCIL	NR	35288333	
Uttar Pradesh Power Transmission Corporation Limited (UPPTCL)	NR	5537449	Uttar Pradesh
Uttarakhand	NR	31352975	Uttarakhand
Betam	SR	1170343	
Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)	SR	12590841	
Karnataka DISCOMs	SR	1323148	Karnataka
Karnataka Power Transmission Corporation Limited (KPTCL)	SR	2710419	Karnataka
Sembcorp Energy India Ltd Project-I	SR	801624	
Adani Power Limited	WR	344873892	

Name of the beneficiary	Region	MTC in Rs.	State Control Area in which the Bilateral charges are included
Goa Electricity Department (GED), Goa	WR	1453413	Goa
Gujarat Urja Vikas Nigam Limited (GUVNL)	WR	1487830	Gujarat
MB Power	WR	12763640	
Madhya Pradesh Power Transmission Corporation Limited (MPPTCL)	WR	4242248	Madhya Pradesh
NTPC Gadarwada	WR	151523966	

TOTAL 712979571

<u>Note:</u> The details of bilateral billing mentioned are prepared on the basis of Format-I(c) received from ISTS Licensees.