

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)
B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016
बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 20th Feb 2020

To,

- 1. कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033 Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 2. कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi – 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. कार्यकारी निदेशक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 19.02.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 19-फरवरी-2020 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रा॰भा॰प्रे॰के॰ की वेबसाइट पर उप्लब्ध है ।

As per article 5.5.1 of the Indian Electricity Grid Code, the daily report pertaining power supply position of All India Power System for the date 19th Feb 2020, is available at the NLDC website.

धन्यवाद,

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day Date of Reporting 20-Feb-20

A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	45229	51366	44640	18160	2434	161829
Peak Shortage (MW)	556	0	0	0	32	588
Energy Met (MU)	985	1261	1106	364	41	3757
Hydro Gen (MU)	143	42	89	35	5	314
Wind Gen (MU)	21	19	46			86
Solar Gen (MU)*	35.44	25.50	102.83	1.55	0.03	165
Energy Shortage (MU)	12.4	0.0	0.0	0.0	0.9	13.3
Maximum Demand Met during the day (MW) & time	51218	58699	50932	18833	2498	176054
(from NLDC SCADA)	07:49	11:03	08:15	19:01	18:06	07:46

B. Frequency Profile (%)

Region	FVI	<49.7	49.7-49.8	49.8-49.9	<49.9	49.9-50.05	> 50.05
All India	0.042	0.00	0.80	5.28	6.08	73.74	20.19

C. Power Supply Position in States

Region	States	Max. Demand Met during the day (MW)	Shortage during maximum Demand (MW)	Energy Met (MU)	Drawal Schedule (MU)	OD(+)/UD(-) (MU)	Max OD (MW)	Energy Shortage (MU
	Punjab	6173	0	120.4	79.8	-2.3	66	0.0
	Haryana	6987	0	138.8	89.3	-0.6	236	0.0
	Rajasthan	13629	0	250.6	76.5	-4.2	339	0.0
	Delhi	3827	0	65.1	48.9	-0.7	223	0.0
NR	UP	14940	0	291.2	127.4	0.2	847	0.3
	Uttarakhand	1989	0	35.7	18.2	-1.1	78	0.0
	HP	1245	0	28.0	20.0	0.7	126	0.0
	J&K(UT) and Ladakh(UT)	2296	574	51.6	40.3	-0.8	229	12.1
	Chandigarh	233	0	3.7	3.5	0.2	24	0.0
	Chhattisgarh	3937	0	86.5	38.4	-0.9	186	0.0
	Gujarat	16063	0	356.3	96.6	0.0	995	0.0
	MP	14263	0	272.3	136.4	-2.6	597	0.0
WR	Maharashtra	24550	0	497.9	146.8	-0.6	524	0.0
WK	Goa	516	0	10.7	10.3	-0.1	43	0.0
	DD	345	0	7.6	7.0	0.6	56	0.0
	DNH	801	0	18.7	18.8	-0.1	34	0.0
	Essar steel	782	0	10.7	11.2	-0.5	224	0.0
	Andhra Pradesh	9817	0	198.1	66.6	-0.2	436	0.0
	Telangana	12976	0	254.3	137.4	1.9	387	0.0
SR	Karnataka	12797	0	247.8	94.1	-0.1	833	0.0
JI.	Kerala	3732	0	76.5	62.1	1.5	183	0.0
	Tamil Nadu	14819	0	321.5	170.4	0.2	472	0.0
	Pondy	375	0	7.5	7.7	-0.1	31	0.0
	Bihar	4179	0	76.1	73.0	1.0	93	0.0
	DVC	3112	0	65.1	-38.3	0.1	282	0.0
ER	Jharkhand	1276	0	23.6	18.6	-0.4	221	0.0
LIN	Odisha	3840	0	73.3	-2.6	0.0	384	0.0
	West Bengal	6644	0	124.2	28.9	-0.7	187	0.0
	Sikkim	130	0	1.9	1.8	0.1	38	0.0
	Arunachal Pradesh	122	2	2.2	2.1	0.0	32	0.0
	Assam	1368	18	22.4	19.0	0.6	178	0.6
	Manipur	208	3	2.7	2.8	-0.1	34	0.0
NER	Meghalaya	375	0	6.3	4.8	0.0	21	0.2
	Mizoram	98	1	1.6	1.6	0.0	28	0.0
	Nagaland	128	2	2,2	1.9	0.2	57	0.0
	Tripura	218	2	3.5	1.2	1.0	124	0.0

D. Transnational Exchanges (MU) - Import(+ve)/Export(-ve)

	,		
	Bhutan	Nepal	Bangladesh
Actual(MU)	1.1	-10.9	-13.3
Day peak (MW)	468.2	-534.4	-889.0

E. Import/export By Regions(in MU) - Import(+ve)/Export(-ve); OD(+)/UD(-)

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	231.6	-260.1	139.4	-119.4	9.0	0.6
Actual(MU)	216.3	-258.3	152.1	-122.7	14.0	1.5
O/D/U/D(MU)	-15.3	1.8	12.7	-3.3	5.0	0.8

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5893	13553	5112	1355	1146	27059
State Sector	13075	13141	8315	4740	11	39282
Total	18968	26693	13427	6095	1157	66340

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	477	1329	570	481	12	2869
Lignite	25	17	50	0	0	92
Hydro	143	42	89	35	5	314
Nuclear	21	37	41	0	0	99
Gas, Naptha & Diesel	37	63	16	0	14	129
RES (Wind, Solar, Biomass & Others)	84	54	186	2	0	326
Total	786	1541	953	518	32	3829
	•	•		•		

Share of RES in total generation (%)	10.66	3.50	19.55	0.31	0.09	8.50
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	31.47	8.58	33.26	7.11	15.70	19.28

H. All India Demand Diversity Factor

11 111 India Demand Diversity Luctor		
Based on Regional Max Demands	1.035	
Based on State Max Demands	1.072	

Diversity factor = Sum of regional or state-wise maximum demands / All India maximum demand

 $[\]textbf{*Source} : \textbf{RLDCs for solar connected to ISTS; SLDCs for embedded solar. Limited visibility of embedded solar data.}$

		<u>IN'</u>	TER-REGI	ONAL EXCH	ANGES	Date of 1	Reporting :	20-Feb-20
								Import=(+ve) /Export =(-ve)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	for NET (MU) NET (MU)
Import/E		ER (With NR)						
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	0 379	0.0	7.9	-7.9
1		GAYA-VARANASI	D/C	0	1027	0.0	12.8	-12.8
2	765kV	SASARAM-FATEHPUR	S/C	32	255	0.0	2.7	-2.7
3		GAYA-BALIA	S/C	0	475	0.0	4.2	-4.2
6 7	-	PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	259 162	0.0	5.1 2.5	-5.1 -2.5
8		MUZAFFARPUR-GORAKHPUR	D/C	162	401	0.0	2.7	-2.7
9	400 kV	PATNA-BALIA	Q/C	0	821	0.0	11.6	-11.6
10		BIHARSHARIFF-BALIA	D/C	0	395	0.0	5.5	-5.5
11	4	MOTIHARI-GORAKHPUR	D/C	0	508	0.0	9.2	-9.2
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	111 0	215 169	0.0	1.0 3.1	-1.0 -3.1
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	12217	GARWAH-RIHAND	S/C	30	0	0.6	0.0	0.6
16	132 kV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/F	vnout -	ED (With WP)			ER-NR	0.6	68.3	-67.7
-	export of	ER (With WR)	0.7	4 - 0 -			0.5	***
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1609	0	24.5	0.0	24.5
19 20	1	NEW RANCHI-DHARAMJAIGARH	D/C D/C	1046 152	12 122	10.4 0.0	0.0	10.4 -0.3
21	400:	JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	Q/C	22	405	0.0	5.0	-0.5
22	400 kV	RANCHI-SIPAT	D/C	331	26	2.3	0.0	2.3
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	0	0.0	0.0	0.0
24		BUDHIPADAR-KORBA	D/C	94	0 ER-WR	1.2	0.0	1.2
Import/E	Export of	ER (With SR)			ER-WK	38.4	5.3	33.1
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	670.0	0.0	16.3	-16.3
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2450.0	0.0	47.8	-47.8
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2864.0	0.0	52.3	-52.3
28	400 kV	TALCHER-I/C	D/C	0.0	645.0	0.0	3.4	-3.4
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 116.4	0.0 -116.4
Import/E	Export of	ER (With NER)			EK-5K	0.0	110.4	-110.4
30	Ĺ	BINAGURI-BONGAIGAON	D/C	0	580	0.0	8.8	-9
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	0	841	0.0	13.4	-13
32				0				
	220 kV	ALIPURDUAR-SALAKATI	D/C		161	0.0	2.3	-2
			D/C	0	161 ER-NER	0.0	2.3 24.5	-2 -24.5
Import/E	Export of	NER (With NR)	D/C		ER-NER	0.0	24.5	-24.5
			D/C	0		0.0		
Import/E	Export of HVDC	NER (With NR)	D/C -		ER-NER 502	0.0	24.5 9.6	-24.5 -9.6
Import/E 33 Import/E 34	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA	- D/C	0	502 NER-NR	0.0 0.0 0.0	9.6 9.6 9.0	-24.5 -9.6 -9.6
Import/E 33 Import/E 34 35	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	- D/C D/C	0 0 448	502 NER-NR 0 487	0.0 0.0 0.0 0.0 3.7	9.6 9.6 0.0 2.6	-24.5 -9.6 -9.6 0.0
Import/E 33 Import/E 34 35 36	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C D/C	0 0 448 0	502 NER-NR 0 487 1918	0.0 0.0 0.0 0.0 3.7 0.0	9.6 9.6 0.0 2.6 33.5	-24.5 -9.6 -9.6 0.0 1.1 -33.5
Import/E 33 Import/E 34 35 36 37	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA	D/C D/C D/C D/C	0 0 448 0	502 NER-NR 0 487 1918 2685	0.0 0.0 0.0 3.7 0.0 0.0	9.6 9.6 9.6 0.0 2.6 33.5 46.6	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6
Import/E 33 Import/E 34 35 36	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C D/C	0 0 448 0	502 NER-NR 0 487 1918	0.0 0.0 0.0 0.0 3.7 0.0	9.6 9.6 0.0 2.6 33.5	-24.5 -9.6 -9.6 0.0 1.1 -33.5
Import/E 33 Import/E 34 35 36 37 38	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C D/C D/C	0 448 0 0	502 NER-NR 0 487 1918 2685 1753	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0	9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI	D/C D/C D/C D/C D/C D/C S/C S/C	0 448 0 0 0 0 0 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 11.6 0.0	9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C D/C S/C S/C D/C	0 448 0 0 0 0 0 699 0 196	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986	0.0 0.0 0.0 3.7 0.0 0.0 0.0 11.6 0.0 0.0	9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2	-24.5 -9.6 -9.6 -9.6 -0.0 -1.1 -33.5 -46.6 -26.4 -35.8 -29.7 -6.2
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C	0 448 0 0 0 0 0 699 0 196 137	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 11.6 0.0 0.0	24.5 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2	-24.5 -9.6 -9.6 -9.6 -9.6 -0.0 -1.1 -33.5 -46.6 -26.4 -35.8 -11.6 -29.7 -6.2 -0.2
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C D/C S/C S/C D/C	0 448 0 0 0 0 0 699 0 196	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986	0.0 0.0 0.0 3.7 0.0 0.0 0.0 11.6 0.0 0.0	9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2	-24.5 -9.6 -9.6 -9.6 -0.0 -1.1 -33.5 -46.6 -26.4 -35.8 -29.7 -6.2
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C	0 448 0 0 0 0 0 699 0 196 137 222	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 11.6 0.0 0.0 0.0	24.5 9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C	0 448 0 0 0 0 0 699 0 196 137 222 984	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 11.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 1411 239 0 452 102 150	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 11.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 20.6 10.0 10.	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.2 -0.6 22.8 -2 -0.5 -1.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 0.0 1.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.6 22.8 -2 -0.5 -1.5 1.4
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 25	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 2 0.0 0.0 0.0 0.0 0.0 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0	0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 0.0 1.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.6 22.8 -2 -0.5 -1.5 1.4
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 25	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 0.0 0.0 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52	Export of HVDC Export of HVDC 765 kV 400 kV 132kV Export of	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 25	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 0.0 0.0 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 WR-NR	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.6 0.0 2 0.9 1.6 0.0 0.0 186.0	-24.5 -9.6 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.2 -0.6 22.8 -2 -0.5 -1.5 1.4 0.5 0.0 -145.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	Export of HVDC Export of HVDC 765 kV 400 kV 132kV Export of	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAI GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 448 0 0 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 25 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	24.5 9.6 9.6 9.6 0.0 2.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 2 0.9 1.6 0.0 0.0 186.0	-24.5 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	Export of HVDC Export of HVDC 765 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 WR-NR	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 1.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.2 -0.6 22.8 -2 -0.5 -1.5 1.4 0.5 0.0 -145.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	Export of HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B'B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJAL-PUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 0 0 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 WR-NR	0.0 0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6 0.0	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.2 -0.6 22.8 -2 -0.5 -1.5 1.4 0.5 0.0 -145.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 0 699 0 196 137 222 984 94 13 37 92 48 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 WR-NR	0.0 0.0 0.0 0.0 3.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 1.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6	-24.5 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.2 -0.6 22.8 -2 -0.5 -1.5 1.4 0.5 0.0 -145.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANDUR MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 0 0 0 196 137 222 984 94 13 37 92 48 0 0 0 0 0 999	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 25 0 WR-NR 995 0 2486 3370 0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.2 0.6 0.0 1.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6 0.0 0.0 0.0	-24.5 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7 -9.6 -9.7
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WALIANIANA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANDRAWATI B/B BARSUR-L SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 448 0 0 0 0 0 0 196 137 222 984 94 13 37 92 48 0 0 0 0 0 9999 0 0 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 141 239 0 452 102 150 0 255 0 WR-NR 995 0 2486 3370 0 68	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.6 0.0 0.0 1.6 0.0 186.0 23.8 0.0 25.7 46.6 0.0 1.3	-24.5 -9.6 -9.6 -9.6 0.0 1.1 -33.5 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.6 22.8 -2 -0.5 -1.5 -1.4 0.5 0.0 -145.5 -23.8 0.0 -25.2 -46.6 14.2 0.0 -1.3
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 448 0 0 0 0 0 0 196 137 222 984 94 13 37 92 48 0 0 0 0 0 9999 0 0 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 1441 239 0 452 102 150 0 255 0 WR-NR 995 0 2486 3370 0 0 68 98 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.6 0.0 2 0.9 1.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6 0.0 0.0 1.3 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.7 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.6 -22.8 -2 -0.5 -1.5 -1.5 -1.4 0.5 0.0 -145.5 -23.8 0.0 -25.2 -46.6 14.2 0.0 -1.3 1.9
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 448 0 0 0 0 0 0 0 0 0 196 137 222 984 94 13 37 92 48 0 0 0 0 395 0 0 0 0 0 0	502 NER-NR 0 487 1918 2685 1753 1040 0 1429 986 1441 239 0 452 102 150 0 255 0 WR-NR 995 0 2486 3370 0 0 68 98 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	24.5 9.6 9.6 9.6 33.5 46.6 26.4 35.8 0.0 29.7 6.2 0.6 0.0 2 0.9 1.6 0.0 0.0 186.0 23.8 0.0 25.7 46.6 0.0 0.0 1.3 0.0	-24.5 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.6 -9.7 -46.6 -26.4 -35.8 11.6 -29.7 -6.2 -0.6 -22.8 -2 -0.5 -1.5 -1.5 -1.4 0.5 0.0 -145.5 -23.8 0.0 -25.2 -46.6 14.2 0.0 -1.3 1.9