

# 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: 22<sup>nd</sup> August 2018

Τо

- 1. कार्यकारी निदेशक, पू.क्षे.भा .प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता ७०००३३ Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
- 2. महाप्रबंधक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 General Manager, 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 ७९३००६ Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. महाप्रबंधक , द .क्षे .भा .प्रे .के., २९ , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 General Manager, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 21.08.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-२०१० की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक २१-अगस्त-२०१८ की अखिल भारतीय प्रणाली की दैनिक ग्रिंड 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 21<sup>st</sup> August 2018, 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** 22-Aug-18

#### A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 2000 hrs; from RLDCs)	57304	42795	40172	21577	2704	164552
Peak Shortage (MW)	652	0	0	100	153	905
Energy Met (MU)	1283	967	874	453	52	3629
Hydro Gen (MU)	358	22	169	109	21	679
Wind Gen (MU)	20	102	226			348
Solar Gen (MU)*	16.22	7.72	48.73	0.62	0.01	73
Energy Shortage (MU)	10.4	0.0	0.0	0.3	1.0	11.7
Maximum Demand Met during the day	59256	44317	39856	21975	2662	166331
(MW) & time (from NLDC SCADA)	22:31	19:22	19:34	21:17	19:53	19:45

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	0.032	0.00	0.41	6.82	7.22	81.52	11.26

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	10512	0	237.1	142.6	-0.2	121	0.0
	Haryana	9280	0	194.1	150.8	0.8	161	0.0
	Rajasthan	9745	0	221.4	78.6	0.9	518	0.0
	Delhi	5852	21	119.4	98.0	-1.4	226	0.1
NR	UP	18821	0	389.3	192.0	0.8	338	0.0
	Uttarakhand	2096	0	43.1	22.9	0.0	105	0.0
	HP	1338	0	28.6	-1.8	2.9	245	0.0
	J&K	2246	562	43.6	19.3	-0.9	138	10.3
	Chandigarh	293	0	5.9	6.8	-0.9	-7	0.0
	Chhattisgarh	3574	0	81.8	16.7	-1.2	357	0.0
	Gujarat	13312	0	300.5	76.4	3.5	602	0.0
	MP	7282	0	160.2	74.4	-2.0	432	0.0
14/0	Maharashtra	17455	0	379.8	104.0	-2.3	597	0.0
WR	Goa	441	0	9.0	8.8	-0.4	60	0.0
	DD	339	0	7.6	6.7	1.0	88	0.0
	DNH	779	0	18.2	17.1	1.1	86	0.0
	Essar steel	515	0	10.2	9.6	0.6	286	0.0
	Andhra Pradesh	7162	0	164.8	6.0	1.1	720	0.0
	Telangana	7570	0	150.0	41.6	-1.7	353	0.0
SR	Karnataka	8807	0	176.5	37.8	-2.0	600	0.0
SK	Kerala	3099	0	57.8	26.1	-0.5	231	0.0
	Tamil Nadu	14984	0	317.0	92.9	-1.0	399	0.0
	Pondy	381	0	8.1	8.0	0.1	85	0.0
	Bihar	4899	0	93.9	94.7	-1.9	200	0.0
	DVC	2958	0	65.9	-30.0	3.8	225	0.3
ER	Jharkhand	1183	0	23.8	18.4	-0.8	80	0.0
EK	Odisha	5122	0	100.6	51.0	3.0	225	0.0
	West Bengal	8245	0	167.6	50.2	1.9	220	0.0
	Sikkim	93	0	1.2	1.4	-0.2	12	0.0
	Arunachal Pradesh	123	1	2.2	2.5	-0.3	25	0.0
	Assam	1719	123	33.7	28.8	1.2	188	0.9
	Manipur	150	2	2.1	2.3	-0.2	25	0.0
NER	Meghalaya	294	0	5.1	1.0	-0.1	53	0.0
	Mizoram	78	0	1.5	1.0	0.1	17	0.0
	Nagaland	115	1	2.2	1.8	0.0	35	0.0
	Tripura	264	7	4.8	4.3	-0.5	103	0.1

 $\textbf{D. Transnational Exchanges} \ \ (\textbf{MU}) \textbf{-} \textbf{Import} (+\textbf{ve}) / \textbf{Export} (-\textbf{ve})$ 

	Bhutan	Nepal	Bangladesh
Actual(MU)	32.8	-7.5	-14.9
Day peak (MW)	1597.2	-302.0	-658.6

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	284.1	-238.4	2.9	-48.9	2.0	1.7
Actual(MU)	278.1	-236.4	-6.4	-35.6	0.9	0.7
O/D/U/D(MU)	-6.0	2.0	-9.3	13.3	-1.1	-1.1

#### F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	3751	15595	10262	1470	116	31194
State Sector	8220	17198	12703	5375	50	43546
Total	11971	32793	22965	6845	166	74740

#### G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	582	1030	361	405	8	2386
Hydro	358	22	169	109	21	679
Nuclear	27	27	24	0	0	79
Gas, Naptha & Diesel	20	39	23	0	25	108
RES (Wind, Solar, Biomass & Others)	50	110	311	1	0	472
Total	1038	1229	888	514	54	3724

Share of RES in total generation (%)	4.81	8.92	35.07	0.12	0.04	12.67
Share of Non-fossil fuel (Hydro, Nuclear and	41.94	12.96	56.79	21.20	38.64	33.02
RES) in total generation (%)	41.94	12.90	30.79	21.20	36.04	33.02

H. Diversity Factor
All India Demand Diversity Factor
1.010
Diversity factor = Sum of regional maximum demands / All India maximum demand

 $<sup>\</sup>textbf{*Source:} \ RLDCs \ for \ solar \ connected \ to \ ISTS; \ SLDCs \ for \ embedded \ solar. \ Limited \ visibility \ of \ embedded \ solar \ data.$ 

		INIE	K-KEGI	JNAL EA	<u>CHANGES</u>	Date of 1	Reporting :	22-Aug-1
								Import=(+ve) /Export =(-ve) for NET (MU)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
lmport/E	Export of	ER (With NR)	D/C	0	363	0.0	5.8	-5.8
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	S/C	346	0	5.1	0.0	5.1
3		GAYA-BALIA	S/C	0	377	0.0	6.2	-6.2
4	HVDC	ALIPURDUAR-AGRA	-	0	823	0.0	20.8	-20.8
5	n.be	PUSAULI B/B	S/C	0	398	0.0	9.7	-9.7
6		PUSAULI-VARANASI	S/C	0	297	0.0	0.0	0.0
7 8		PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	0	163 632	0.0	0.0 10.3	0.0 -10.3
9	400 kV	PATNA-BALIA	O/C	0	1082	0.0	19.9	-10.3
10		BIHARSHARIFF-BALIA	D/C	0	189	0.0	3.3	-3.3
11		MOTIHARI-GORAKHPUR	D/C	119	0	6.2	0.0	6.2
12		BIHARSHARIFF-VARANASI	D/C	25	0	0.6	0.0	0.6
13	220 kV	PUSAULI-SAHUPURI	S/C	0	176	0.0	3.7	-3.7
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	35	0	0.6	0.0	0.6
16		KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17	]	KARMANASA-CHANDAULI	S/C	0	0 ED ND	0.0	0.0	0.0
Import/F	export of	ER (With WR)			ER-NR	12.4	79.7	-67.3
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1020	2	16.5	0.0	16.5
19	/05 KV	NEW RANCHI-DHARAMJAIGARH	D/C	782	0	13.6	0.0	13.6
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	1140	0	20.0	0.0	20.0
21	-30 K V	RANCHI-SIPAT	D/C	417	0	7.5	0.0	7.5
22	220 kV	BUDHIPADAR-RAIGARH	S/C	191	0	2.0	0.0	2.0
23		BUDHIPADAR-KORBA	D/C	210	0 ER-WR	3.6 <b>63.1</b>	0.0	3.6 <b>63.1</b>
Import/E		ER (With SR) ANGUL-SRIKAKULAM	D/C	17.0	855.9	0.0	8.1	-8.1
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C D/C	0.0	427.7	0.0	8.7	-8.7
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	992.6	0.0	19.3	-19.3
27	400 kV	TALCHER-I/C	D/C	947.9	0.6	0.0	18.2	-18.2
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	0.0	0.0	0.0	0.0	0.0
Import/F	Export of	ER (With NER)			ER-SR	0.0	36.0	-36.0
29	r e	BINAGURI-BONGAIGAON	D/C	0	545	0.0	10.8	-11
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	63	218	0.0	2.7	-3
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	124	0.0	2.3	-2
Import/F	Export of	NER (With NR)			ER-NER	0.0	15.8	-15.8
32		BISWANATH CHARIALI-AGRA	-	0	701	0.0	17.1	-17.1
			1		NER-NR	0.0	17.1	-17.1
Import/E	Export of	WR (With NR)						
33		CHAMPA-KURUKSHETRA	D/C	0	2004	0.0	47.8	-47.8
34	HVDC	V'CHAL B/B	D/C	240	0	6.0	0.0	6.0
35		APL -MHG	D/C	0	1455	0.0	36.3	-36.3
36		GWALIOR-AGRA	D/C	0	1320	0.0	47.4	-47.4
37	765 1-37	PHAGI-GWALIOR	D/C	0	1414	0.0	23.6	-23.6
38	765 kV	JABALPUR-ORAI GWALIOR-ORAI	D/C S/C	379	705	0.0 7.8	23.7	-23.7 7.8
40	1	SATNA-ORAI	S/C	0	1778	0.0	41.8	-41.8
41		ZERDA-KANKROLI	S/C	191	139	0.9	0.0	0.9
42	400 2 37	ZERDA -BHINMAL	S/C	98	199	0.0	1.3	-1.3
43	400 kV	V'CHAL -RIHAND	S/C	963	0	21.5	0.0	21.5
44		RAPP-SHUJALPUR	D/C	0	399	0	3	-3
45		BADOD-KOTA	S/C	24	56	0.2	0.4	-0.2
46	220 kV	BADOD-MORAK	S/C	3	70	0.0	0.8	-0.8
47	1	MEHGAON-AURAIYA	S/C	44	17	0.3	0.0	0.3
48	120177	MALANPUR-AURAIYA	S/C	18	34	0.0	0.4	-0.3
49	132kV	GWALIOR-SAWAI MADHOPUR	S/C	0	0 WR-NR	0.0 <b>36.6</b>	0.0 226.2	0.0 -189.5
		WR (With SR)		-	200			
50	HVDC LINK	BHADRAWATI B/B	-	0	309	0.0	7.2	-7.2
51	LINK	BARSUR-L.SILERU	- D/C	1129	320	0.0 14.4	0.0	0.0 14.4
52	765 kV	SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C D/C	342	329 843	0.0	2.4	-2.4
54	400 kV	KOLHAPUR-KUDGI	D/C D/C	804	0	13.8	0.0	13.8
55	.50 A V	KOLHAPUR-CHIKODI	D/C	0	0	0.0	0.0	0.0
56	220 kV	PONDA-AMBEWADI	S/C	1	0	0.0	0.0	0.0
50	1	XELDEM-AMBEWADI	S/C	0	105	0.0	1.9	-1.9
57								
					WR-SR	28.2	11.5	16.7
57	I		ANSNATI	ONAL EX		28.2	11.5	I.
		TR/ BHUTAN NEPAL	ANSNATI	ONAL EX		28.2	11.5	32. -7.

# POWER SYSTEM OPERATION CORPORATION LIMITED

## **Grid Monitoring Report for Kerala**

22-Aug-2018 06:00 Hrs

## 1. Power Supply Position -

Description	Normal Value	12:00 Hrs (19 <sup>th</sup> Aug)	18:00 Hrs (19 <sup>th</sup> Aug)	24:00 Hrs (19th Aug)	06:00 Hrs (20th Aug)	12:00 Hrs (20th Aug)	18:00 Hrs (20th Aug)	24:00 Hrs (20th Aug)
SR Grid Demand Met	37000-40000	34750	32932	30799	32253	34979	35429	32166
Kerala Demand Met	2500-2900	1823	1943	1793	1796	2264	2292	2039
Grid Frequency (Hz)	50.00	50.05	50.06	50.10	50.06	50.07	50.03	50.09
Kerala Hydro	1100-1300	1095	1098	1266	1256	1258	1295	1270
Drawl from Grid	1400-1600	682	808	545	523	951	1010	761

Description	Normal Value	06:00 Hrs (21st Aug)	12:00 Hrs (21st Aug)	18:00 Hrs (21st Aug)	24:00 Hrs (21st Aug)	06:00 Hrs (22 <sup>end</sup> Aug
SR Grid Demand Met	37000-40000	32937	37304	36341	35237	35389
Kerala Demand Met	2500-2900	1972	2403	2482	2322	2229
Grid Frequency (Hz)	50.00	50.07	49.99	50.12	50.03	50.02
Kerala Hydro	1100-1300	1238	1157	1279	1335	1297
Drawl from Grid	1400-1600	669	1238	1211	941	903

### 2. Generation / Demand particulars for Kerala

Parameter	Normal value	18th Aug'18	19th Aug'18	20th Aug 18	21st Aug 18
Kerala Peak Demand (MW)	3600	2505	2595	3002	3126
Kerala Energy Met (MUs)	62	44.5	45.1	53.8	57.76

#### 3. Inter-State Lines Status

Name of Transmission Line	Status
400 KV Udumalpet - Palakkad D/C	In Service
400 kV Mysore - Kozhikode D/C	In Service
400 kV Tirunelveli - Trivandrum D/C	In Service
220 kV Idukki - Udumalpet	In Service
220 kV Edamon - Tirunalveli D/C	In Service
220 kV Kadakola - Kaniyampettai S/C	In Service
220 kV Theni - Sabarigiri	In Service

## 4. Generating Stations affected: (Details as per Annex-1)

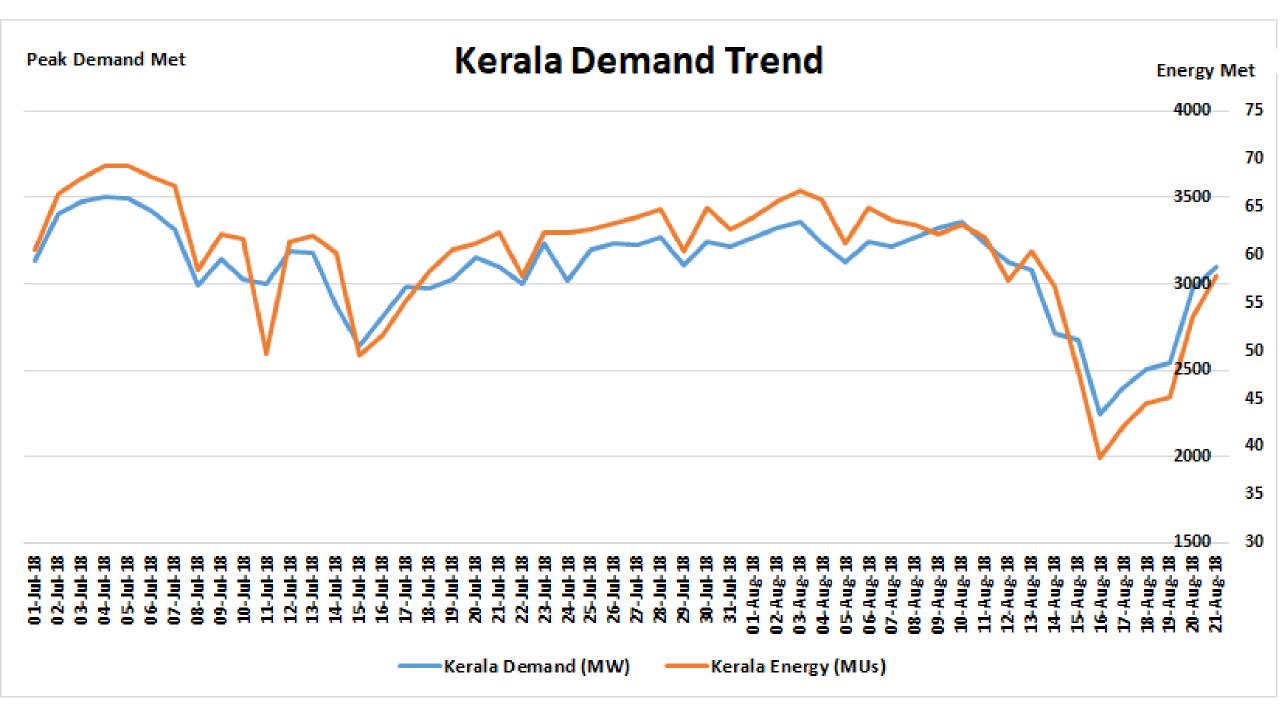
Total Number of Generating stations affected due to flood (capacity in MW)	Total number of Generating stations Revived till Now (capacity in MW)	Generating units revived in last 06 hours (capacity in MW)	Remarks
17 (680MW)	5 (318 MW)	NIL	Total Number of Generating stations affected due to flood was updated as per latest report received from SLDC, Kerala

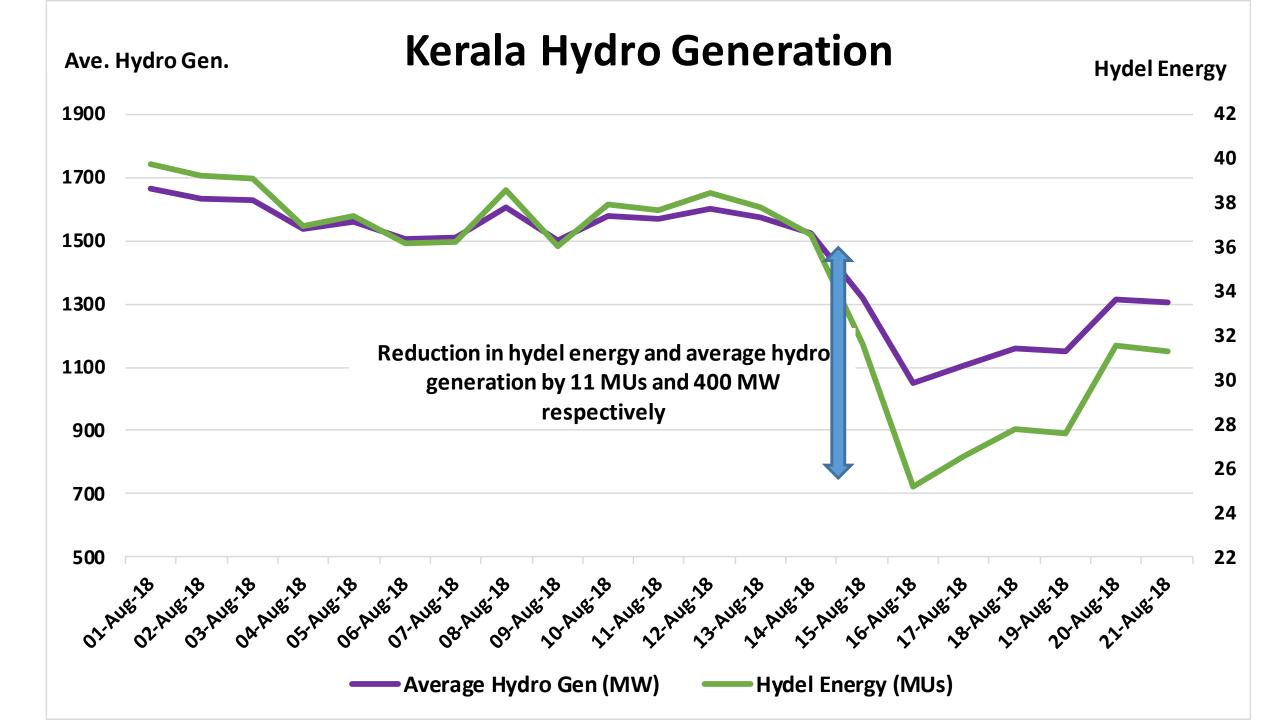
# 5. Substations Affected due to floods (Details as per Annex-1)

Voltage Level	Total Number of Substation affected due to flood	Total number of Substations Revived till Now	Substations revived in last 6 hours	Remarks
110 kV	06	04	Nil	110 KV Parappanangad Substation restored by 16:41
66 kV	05	03	Nil	hrs of 20.08.18. 66kV Vaiga Threads restored at 19:46Hrs on 19.08.2018. 33 kV Vellikulangara S/s restored at 16:39 Hrs on 20.08.2018.
33 kV	06	04	Nil	

# 6. Transmission Lines Affected due to floods (Details as per Annex-1)

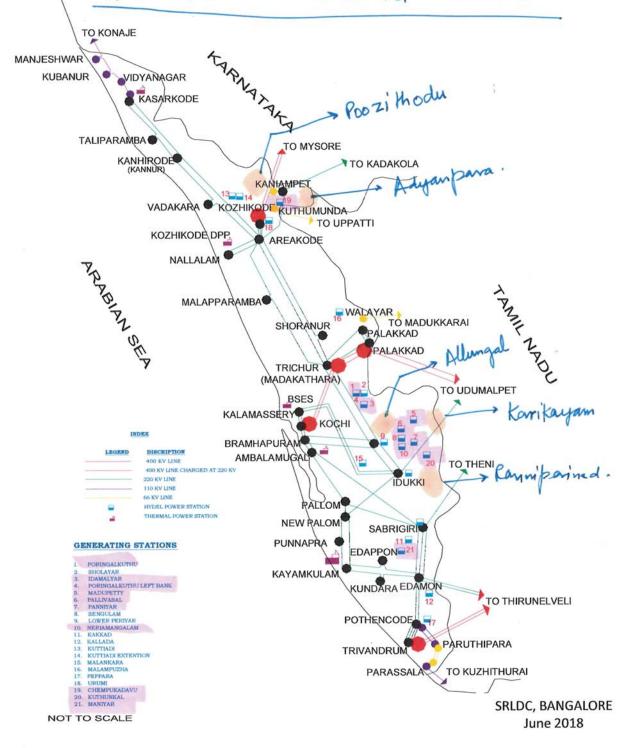
Voltage Level	Total Number of Transmission Lines affected due to flood	Total number of Transmission lines revived till now	Transmission lines revived in last 6 hours	Remarks
220 kV	03	03	Nil	
110 kV	14	09	Nil	01 no. 110 kV line restored at 11:42 Hrs on 21.08.18
66 kV	03	02	01	01 no. 66kV line restored at 12:36 Hrs on 21.08.18

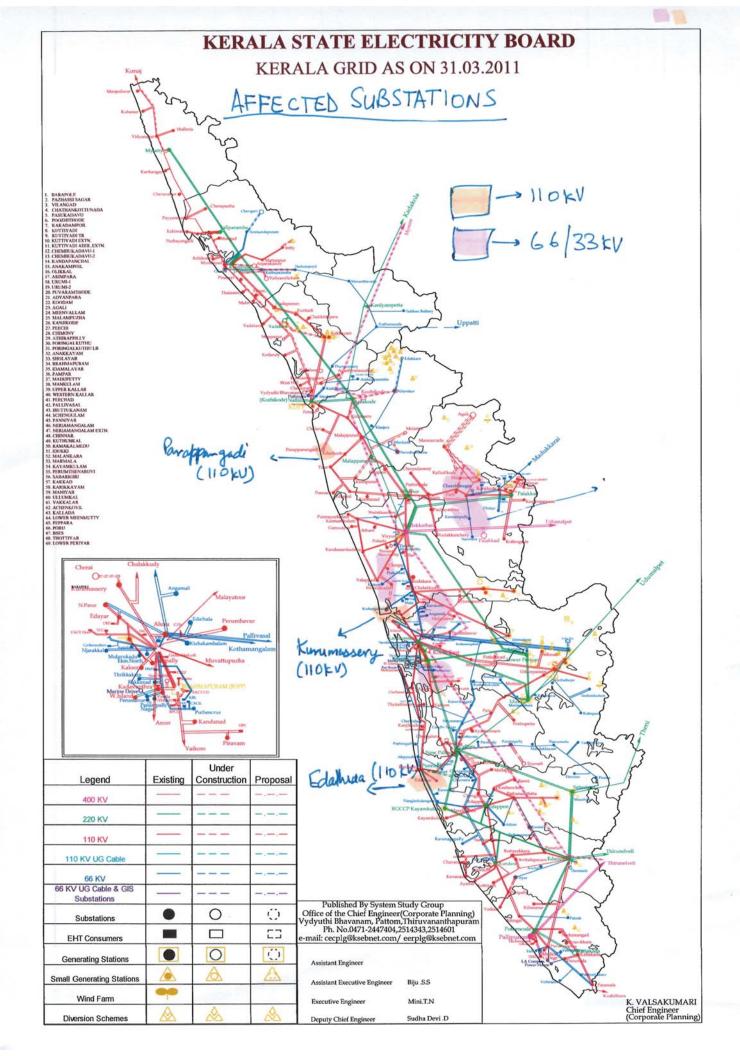




# POWER MAP OF KERALA

AFFECTED GENERATING STATIONS





Annex-1

Genera				TURAL CALA				
Genera	Ala:: ***							Date: 22/08/2018 06:0
	SI.No.	Generating Station	Installed Capacity (MW)	Capacity affected due to inundation (MW)	Capacity revived till now (MW)	Present affected capacity (MW)	Reason for outage	Remarks
	Due to tra	insmission constraints			1			
	1	Idamalayar (2x37.5)	75	75	75	0	Line Constraints	Unit#1 revived at 23.50hrs on 19.08.18, Unit#2 ro at 00.39hrs on 20.08.18.
а	2	Kuthungal (3x7)	21	21	0	21	Line constraints, Flooding of PH	outage since 15:03 hrs, 15.08.2018. Communicat not yet restored.
		Sub-Total	96	96	75	21		
	Due to po	wer house inundation/tail			,,,		I	
	1	Panniyar (2x16)	32	32	0	32	Land Sliding & water entered to control room.	outage since 23:49 hrs, 15.08.2018
	2	Neriamangalam (3x17.5 +25)	77.5	76	59	17	Partialy affected (2X17.5)	Unit#1 switched off at 02:17 hrs 16.08.2018 ,duc coooling water outlet temperature high and rev 15:52Hrs on 20.08.2018. Unit #2 mechanical lock 00:27 hrs 16.08.2018. Unit#3 - Outage from 16:1 on 16.08.2018 and restored at 13:01Hrs on 17.08.2018. Neriyamangalam Extension Scheme synchronized back at 13.38 hrs 18.08.2018
	3	Lower Periyar (3x60)	180	170	0	170	Due to flooding	Outage since 14:19 hrs ,14.08.2017, EHT Feeder charged through backfeeding, machines not run yet.
	4	Poringal (4x9 +16)	54	54	0	54	Due to flooding	Outage since 05:49 hrs, 16.08.2018
b	5	Sabarigiri (2x60 +4x55)	340	170	170	0	Partially affected ( 2X55 + 60)	five machines in service from 19.30hrs. 55 MW machine is out due to other reasons prior to floc continued to be kept under outage.
	6	Maniyar (3x4)	12	12	0	12	due to flooding	No generation & communication
	7	Allungal (2x3.5)	7	7	0	7	due to flooding	Outage since 22:45 hrs, 14-8-2018
	8	Karikayam (3x5)	15	10	10	0	due to flooding.	No2& No3 were under outage due to block in pe path due to mud. Both units are revived by 16:0 on 20.08.18
	9	Urumi 1 & 2 (3x1.25 + 3x0.8)	6.15	6.15	3.75	2.4	Canal Blocked due to land slide	Urumi-2 under Shutdown. Urumi-1 normalized a Hrs on 20.08.2018
	10 11	Poozhithodu (3x1.6) Ranni-perinad (2x2)	4.8	4.8	0	4.8	due to flooding due to flooding	Outage since 22:05hrs, 8-8-2018 Outage since 22:05hrs, 14-8-2018
	12	Chempukadavu (2.70+3.75)	6.45	6.45	0	6.45	due to flooding	Outage since 17:17hrs, 15-8-2018
	13	MATTUPETTY (2)	2	2	0	2	due to flooding	Outage since 15.00hrs, 11-8-2018
	14	ADYANPARA (2x1.5 +0.5) Sub-Total	3.5 <b>744.4</b>	3.5 <b>557.9</b>	0 <b>242.75</b>	3.5 <b>315.15</b>	due to flooding	Outage since 14-08-2018
	Due to ot	her reasons/Flood control	744.4	337.3	242.73	313.13	L	
		ner reasons/Flood control					For flood control in	Outage since 12:23 hrs,14.08.2018
c.	1	Pallivasal (3x7.5+3x5)	37.5	26	0	26	Munnar Town	Outage since 12.25 ms,14.06.2018
c.		Pallivasal (3x7.5+3x5)  Sub-Total	37.5	26	0	26	Munnar Town	Outage since 12.25 in 3,14.00.2010
	Gra	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total					Munnar Town	Outage since 12.23 iii3,14.00.2010
	Gra ission Sy	Pallivasal (3x7.5+3x5)  Sub-Total	37.5 878	26	0	26	Munnar Town	Outage since 12.23 in 3/14.00.2010
	Gra ission Sy	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected  n switched off due to inunc  Substation Name	37.5 878	26	0 318 Reason for	26 362 Outage	Munnar Town	Remarks
	Graission Sy Substatio Sl.No.	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected  n switched off due to inunc  Substation Name  110KV KURUMASSERY	37.5 878	26	0 318 Reason for WATER ENTER	26 362 Outage	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018-
	Graission Sy Substatio Sl.No.	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR	37.5 878	26	0 318 Reason for	26 362 Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018-
	Gra ission Sy: Substatio SI.No. 1 2 3	Pallivasal (3x7.5+3x5)  Sub-Total  Ind Total  stem Affected In switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV BOATHUA	37.5 878	26	0 318 Reason for WATER ENTEI WATER ENTEI	26 362 Outage RED TO CR RED TO CR RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.19 switched off at 21:35 hrs 16.08.2018
	Graission Sy Substatio Sl.No.	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA	37.5 878	26	0 318 Reason for WATER ENTEI WATER ENTEI	26 362  Outage RED TO CR RED TO CR RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.14 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c
	Graission Sy: Substatio SI.No. 1 2 3 4	Pallivasal (3x7.5+3x5)  Sub-Total  Ind Total  stem Affected In switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD	37.5 878	26	Reason for WATER ENTEL WATER ENTEL WATER ENTEL WATER ENTEL	26 362  Outage RED TO CR RED TO CR RED TO CR RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.1: switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18
	Graission Sy: Substatio Sl.No. 1 2 3 4	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD	37.5 878	26	0 318  Reason for WATER ENTE! WATER ENTE! WATER ENTE! WATER ENTE! WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18
	Graission Sy: Substatio SI.No. 1 2 3 4 5	Pallivasal (3x7.5+3x5)  Sub-Total  Ind Total  stem Affected In switched off due to inunce  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR  66 KV KCPL	37.5 878	26	Reason for WATER ENTEL WATER ENTEL WATER ENTEL WATER ENTEL WATER ENTEL WATER ENTEL	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18 switched off at 8:55 hrs, 16-8-2018
Transm	Graission Sy: Substatio Sl.No. 1 2 3 4	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD	37.5 878	26 680	0 318  Reason for WATER ENTE! WATER ENTE! WATER ENTE! WATER ENTE! WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18 switched off at 8:55 hrs, 16-8-2018 switched off at 10.35 Hrs, 17-8-2018
Transm	Graission Sy: Substatio SI.No. 1 2 3 4 5 6 7 8	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR  66 KV KCPL  66 KV KUTTANAD	37.5 878	26 680	Reason for WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transform#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18 switched off at 10.35 Hrs, 17-8-2018 switched off at 10.35 Hrs, 17-8-2018 switched off at 10.35 Hrs, 17-8-2018. Restored at 19:46Hrs on 19.08.2018 switched off at 12.01 Hrs, 18-8-2018 & Restored 12.50Hrs on 19.08.101
Transm	Graission Sy: Substatio SI.No. 1 2 3 4 5 6 7 8 9	Pallivasal (3x7.5+3x5)  Sub-Total  nd Total  stem Affected  n switched off due to inunc  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR  66 KV KCPL  66 KV KUTTANAD  66 KV VAIGA THREADS	37.5 878	26 680	Reason for WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks  switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.1  switched off at 21:35 hrs 16.08.2018  Restored by 9.45Hrs, 18-8-2018  switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18  switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18  switched off at 10.35 Hrs, 16-8-2018  switched off at 10.35 Hrs, 17-8-2018  switched off at 12.01 Hrs, 18-8-2018. Restored 19:46Hrs on 19.08.2018  switched off at 12.01Hrs, 18-8-2018 & Restored 12.50Hrs on 19.08.18  Trfr #1 charged at 17.09Hrs, trfr #2 charged at 1 on 19.08.18
Transm	Graission Sy: Substatio SI.No.  1 2 3 4 5 6 7 8 9 10 11	Pallivasal (3x7.5+3x5)  Sub-Total  Ind Total  stem Affected In switched off due to inunce  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR  66 KV KCPL  66 KV KCPL  66 KV KUTTANAD  66 KV VAIGA THREADS  66KV KORATTY  66KV MULAVUKAD  33 KV VELLIKULANGARA	37.5 878	26 680	Reason for WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv fee restored at 11:02hr on 20.8.18;Transformer#2-c 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored b 16.15hrs on 19.08.18 switched off at 8:55 hrs, 16-8-2018 switched off at 10.35 Hrs, 17-8-2018 switched off at 12:01 Hrs, 18-8-2018. Restored at 19:46Hrs on 19.08.2018 switched off at 12.01Hrs, 18-8-2018 & Restored 12.50Hrs on 19.08.18 Trif #1 charged at 17.09Hrs, trif #2 charged at 1: on 19.08.18 switched off at 12.01Hrs, 15-8-2018. Restored at 1: on 19.08.18
Transm	Graission Sy: Substatio SI.No. 1 2 3 4 5 6 7 8 9 10 11 12 12 13	Pallivasal (3x7.5+3x5)  Sub-Total nd Total stem Affected n switched off due to inunc Substation Name 110KV KURUMASSERY 110KV MALAYATTOOR 110KV EDATHUA 110 KV KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR 66 KV KCPL 66 KV KCPL 66 KV KUTTANAD 66 KV VAIGA THREADS 66KV KORATTY 66KV MULAVUKAD 33 KV VELLIKULANGARA 33 KV KALLETUMKARA	37.5 878	26 680	Reason for WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15:08:2018- All EHT feeders restored by 23:00hrs on 19:08:18 switched off at 21:35 hrs 16:08:2018 Restored by 9:45Hrs, 18-8-2018 switched off at 04:32 hrs, 18:08:2018: 110kv feer restored at 11:02hr on 20:8:18;Transformer#2-cl 31:39Hrs on 20:8:18;Transformr#1 charged at 16:00 n 20:8:18 switched off at 12:43 hrs,16-8-2018: restored b 16:15hrs on 19:08:18 switched off at 10:35 Hrs, 17-8-2018 switched off at 10:35 Hrs, 17-8-2018 switched off at 12:01 Hrs, 18-8-2018 Restored a 19:46Hrs on 19:08:2018 switched off at 12:01Hrs, 18-8-2018 & Restored a 12:50Hrs on 19:08:18 Trfr #1 charged at 17:09Hrs, trfr #2 charged at 17:09 n 19:08:18 switched off at 12:01Hrs, 15-8-2018. Restored a 16:39Hrs on 20:08:2018 Restored at 18:15 hrs on 19:08:18
Transm	Graission Sy: Substatio SI.No.  1 2 3 4 5 6 7 8 9 10 11	Pallivasal (3x7.5+3x5)  Sub-Total  Ind Total  stem Affected In switched off due to inunce  Substation Name  110KV KURUMASSERY  110KV MALAYATTOOR  110KV EDATHUA  110 KV  KANDASANKADAV  110KV PARAPPANANGAD  110 KV EDAYAR  66 KV KCPL  66 KV KCPL  66 KV KUTTANAD  66 KV VAIGA THREADS  66KV KORATTY  66KV MULAVUKAD  33 KV VELLIKULANGARA	37.5 878	26 680	Reason for WATER ENTE!	26 362  Outage RED TO CR	Munnar Town	Remarks switched off at 17:26 hrs 15.08.2018- All EHT feeders restored by 23.00hrs on 19.08.18 switched off at 21:35 hrs 16.08.2018 Restored by 9.45Hrs, 18-8-2018 switched off at 04:32 hrs, 18.08.2018. 110kv feet restored at 11:02hr on 20.8.18;Transformer#2-ct 13:39Hrs on 20.8.18;Transfrmr#1 charged at 16: on 20.8.18 switched off at 12:43 hrs,16-8-2018. restored by 16.15hrs on 19.08.18 switched off at 8:55 hrs, 16-8-2018 switched off at 10.35 Hrs, 17-8-2018. Restored at 19:46Hrs on 19.08.2018 switched off at 12:01Hrs, 18-8-2018. Restored at 12:50Hrs on 19.08.2018 switched off at 17.09Hrs, trfr #2 charged at 17: on 19.08.18 switched off at 12.01Hrs, 15-8-2018. Restored 12:50Hrs on 19.08.218 switched off at 12.01Hrs, 15-8-2018. Restored 12:50Hrs on 19.08.18 switched off at 12.01Hrs, 15-8-2018. Restored at 16:39Hrs on 20.08.2018

		EHT lines(66kV and above ) s/off due to flood related issues						
		Sl.No.	Name of Transmission Line	Reason for Outage	Remarks			
2		1	220 KV Madakathra-Lower Periyar I&II	Lines switched off due to	Restored at 14.28Hrs, 16-8-2018			
		2	220 KV Brahmapuram-Lower Periyar I&II	Periyar Substation	Restored at 10:58hrs, 19-8-2018			
		3	220 kv IDUKKI-LOWER PERIYAR I&II	Periyar Substation	Restored at 14.28hrs, 16-8-2018			
		4	110KV PUNNAPRA - CHENGALA	FOR SAFETY CLEARENCE	switched off at 19:06 hrs 17.08.2018			
		5	110KV PUNNAPRA - KODIMATHA	FOR SAFETY CLEARENCE	Switched off at 19:06 hrs 17.08.2018			
		7	110KV CHENGANNUR-TRIKODITHANAM	FOR SAFETY CLEARENCE	Switched off at 13:04 hrs 16.08.2018 and restored at 15:10Hrs on 20.08.2018			
		8	110KV CHENGANNUR- MALLAPPILLY	FOR SAFETY CLEARENCE	Switched off at 13:20 hrs 16.08.2018 and restored at 16:11Hrs on 20.8.2018			
		9	110kV PUNNAPRA-EDATHUA #1,#2	FOR SAFETY CLEARENCE	Switched off at 21:35 hrs 16.08.2018			
		10	110KV KALAMASSERY- EDAYAR#1,#2	DUE TO FLOODING	110KV Kalamassery Edayar #2 charged at IAC at 11:23 hrs 17.08.2018,Ckt#1 charged at 10.51Hrs on 19-8- 2018			
		11	110 KV KALAMASSERY-METRO #1,2	FOR SAFETY CLEARENCE	switched off at 7:12 hrs 16.08.2018. alternate supply availed at 33kv level			
	b	12	110KV CHELARI-PARAPPANANGADI	FOR SAFETY CLEARENCE	Switched off at 04:32 hrs 18.08.2018 and restored on 20.08.18 at 11.02 hrs.			
		13	110 KV ALUVA-CARBORANDAM-KALAMASSERY	DUE TO ACCESS FAILURE	TRIPPED DUE TO TREE FALL at 21:31Hrs on 15-8-2018. Restored at 20.08.2018 at 18:31 Hrs			
		14	110KVPORINGAL-CHALAKUDY1	DUE TO FLOODING	Switched off at 22:19hrs, 15-8-2018			
		15	110KV PORINGAL-CHALAKUDY2	DUE TO FLOODING	Switched off at 5:50hrs, 16-8-2018 and restored at 12:49 Hrs on 20.8.18			
		16	110 KV CHALAKUDY-TRACTION	DUE TO FLOODING	Tripped at 15:07 hrs, 16-8-2018. Revived at 11:24 hrs on 21.8.18			
		17	110 KV KALAMASSERY-EDAPLLY	DUE TO FLOODING	Switched off at 17:14hrs, 16-8-2018 and restored on 20.08.18 at 08.36 hrs			
		18	110 KV EDAYAR-NORTH PARAVUR 1&2	DUE TO FLOODING	Switched off at 12:43hrs ,Ckt#1 & 2 restored at 11.30Hrs &11.52Hrs respectively on 19-8-2018			
		19	66 KV ALUVA-PALLIVASAL-1	DUE TO ACCESS FAILURE	TRIPPED DUE TO TREE FALL 15-8-2018, 16:53hrs. Restored at 12:36 hrs on 21.08.18			
		20	66KV PALLOM - KUTTANAD	FOR SAFETY CLEARENCE	switched off at 11:08 hrs 17.08.2018			
		21	66KV ALUVA - ANGAMALLY	DUE TO ACCESS FAILURE	switched off at 12:01 hrs, 18-8-2018. charged at 17.46 hrs on 19.08.18			
3		Failure of transmission Lines						
3		1	Neriamangalam-Kuthungal Line	Tower Slanting	switched off on 14.08.2018			