

दिनांक : 30th January 2023

सेवा मे,

All SLDCs/RLDCs/RPCs

विषय: Publishing of Quantum of Reserves in line with Detailed Procedure For Estimation of the Requirement of Secondary Reserve Ancillary Service (SRAS) and Tertiary Reserve Ancillary Service (TRAS) at regional level

- संदर्भ:** 1. Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2022
2. Detailed Procedure for Estimation of the Requirement of Secondary Reserve Ancillary Service (SRAS) and Tertiary Reserve Ancillary Service (TRAS) at Regional Level, as approved by CERC vide letter no. No.RA-14026(11)/3/2019-CERC dated 02nd Dec 2022

महोदय,

CERC (Ancillary Services) Regulations, 2022 was notified on 31st January, 2022. As per the gazette notification of Hon'ble Commission dated 31st October, 2022, the provisions of the estimation of Secondary Reserve Ancillary Service (SRAS) and Tertiary Reserve Ancillary Service (TRAS) of these regulations have come into force with effect from 05th December 2022. In line with above regulations, Grid India submitted interim detailed procedure to CERC and same was approved by CERC vide letter dated 2nd Dec 2022 (available at <https://posoco.in/download/detailed-procedure-for-estimation-of-the-requirement-of-secondary-reserve-ancillary-service-sras-and-tertiary-reserve-ancillary-service-tras-at-regional-level/?wpdmdl=49385>).

Accordingly, the reserve requirement is assessed in accordance with approved procedures and declared as follows:

- The reference contingency for the All India has been considered as 4500 MW.
- Data has been received from Assam, Chhattisgarh, UT Daman Diu, UT Dadra Nagar Haveli, Gujarat, Goa and Madhya Pradesh.
- The secondary reserve requirement is estimated to be 11,052 MW and the tertiary reserve requirement is estimated to be 16,681 MW for the Quarter 1 of FY 2023-24 (April-Jun). This needs to be validated with the data provided by the States.
- As per Section 8.5 of the approved procedure for estimation of Secondary Reserve “*The all-India total of positive (and negative) secondary reserves capacity requirement on regional basis shall be equal to the reference contingency or secondary reserve capacity*”

requirement as computed above, whichever is higher.” In this regard, CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022 have come into force from 5th Dec 2022. The behavior of control areas is expected to be different post implementation of these regulations in addition to the other factors. Under these circumstances, a conservative scaling of estimated quantum of secondary reserve has been carried out. Accordingly, lower value of Reference Contingency has been considered for calculations. However, the same is an estimate which is subject to revision as need arises.

- (e) Consequentially, the secondary and tertiary reserve requirement is estimated as 4500 MW and 10130 MW respectively for Quarter 1 of FY 2023-24 (April-Jun). The details are enclosed as per Formats RAS3, RAS5 and RAS7.

सधन्यवाद,

भवदीय



कार्यपालक निदेशक

प्रतिलिपि : Secretary, CERC



GRID CONTROLLER OF INDIA LIMITED
(Formerly known as Power System Operation Corporation Limited)

Format – RAS3

Reference contingency for Indian Power System

Date of Issue: 25 January 2023	Revision No.	0
Applicable for Financial Year 2023-24		
Reference Contingency for generation loss (MW)	4500	
Reference Contingency for load loss (MW)	4500	

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Format RAS5

Quarter-Ahead SRAS and TRAS Reserve requirement for Quarter 1 (April - June) of Year 2023-24 (Scaled for reference contingency of 4500 MW)																	
State/UT	Actual 99 Percentile Negative ACE (MW)	Actual 99 Percentile Positive ACE (MW)	Scaled 99 Percentile Negative ACE (MW) (a)	Scaled 99 Percentile Positive ACE (MW) (b)	Max. Demand met (c)	Internal Gen. at the time of max demand (d)	Drawl from ISTS (e=c-d)	State Internal Generation/ State Maximum Demand (f=d/c)	State drawl from ISTS/ State Maximum Demand (g=e/c)	Secondary Reserves in ISGS (h=a*g)	Secondary Reserves at Regional Level (sum of reserves in all states of the region as given in "h")	Secondary Reserves within state (i=a*f)	Tertiary Reserves in ISGS (j = h)	Tertiary Reserves within state (k = i)	Largest Unit Size of internal generation (l)	Total Tertiary Reserves within state (m=k + 0.5*l)	
UT of Chandigarh	54	70	14	17	409	0	409	0.00	1.00	14	576	0	14	0	0	0	
Delhi	297	450	78	112	7800	952	6848	0.12	0.88	68		9	68	9	216	117	
Haryana	624	706	163	177	12642	3178	9464	0.25	0.75	122		41	122	41	660	371	
Himachal Pradesh	248	200	65	50	1749	972	777	0.56	0.44	29		36	29	36	100	86	
UT of Jammu and Kashmir and UT of Ladakh*	406	447	106	112	3683	1757	1926	0.48	0.52	56		51	56	51	150	126	
Punjab	411	564	108	141	14286	5424	8862	0.38	0.62	67		41	67	41	700	391	
Rajasthan	720	911	188	228	16131	11077	5054	0.69	0.31	59		129	59	129	660	459	
Uttar Pradesh	821	889	215	222	26338	11435	14902	0.43	0.57	122		93	122	93	660	423	
Uttarakhand	248	355	65	89	2439	951	1488	0.39	0.61	40		25	40	25	76	63	
NR state Sum	3829	4592	1001	1148													2037
Northern Region (NR)	2459	3157	1001	1148													
Chhattisgarh	281	323	114	96	5403	2203	3200	0.41	0.59	67	559	46	67	46	500	296	
UT Daman and Diu#	45	46	18	14	366	0	366	0.00	1.00	18		0	18	0	0	0	
UT Dadra and Nagar Haveli#	95	69	39	21	958	0	958	0.00	1.00	39		0	39	0	0	0	
Gujarat	834	806	337	239	21558	12835	8723	0.60	0.40	136		201	136	201	800	601	
Goa	63	61	26	18	607	0	607	0.00	1.00	26		0	26	0	0	0	
Madhya Pradesh	673	763	272	226	12644	6266	6378	0.50	0.50	137		135	137	135	660	465	
Maharashtra	1276	935	516	278	31929	23586	8343	0.74	0.26	135		381	135	381	660	711	
WR States Sum	3268	3002	1322	891													2073
Western Region (WR)	3247	2451	1322	891													
Andhra Pradesh	826	747	307	403	12294	6549	5745	0.53	0.47	143		616	164	143	164	800	564
Karnataka	696	721	259	389	14793	9388	5405	0.63	0.37	94	164		94	164	800	564	
Kerala	181	168	67	90	4522	1630	2892	0.36	0.64	43	24		43	24	130	89	
UT of Puducherry	49	69	18	37	492	0	492	0.00	1.00	18	0		18	0	0	0	
Tamil Nadu	862	1048	320	565	17636	5676	11960	0.32	0.68	217	103		217	103	600	403	
Telangana	570	517	212	278	13503	7165	6338	0.53	0.47	99	112		99	112	800	512	
SR State Sum	3184	3269	1183	1762													2132
Southern Region (SR)	2906	4845	1183	1762													
Bihar	349	507	136	133	6388	471	5917	0.07	0.93	126	398		10	126	10	250	135
Damodar Valley Corporation	530	336	207	88	4052	5111	-1058	1.26	-0.26	0			207	0	207	600	507
Jharkhand	192	264	75	69	1812	332	1480	0.18	0.82	61		14	61	14	210	119	
Odisha	503	452	196	119	6444	3029	3415	0.47	0.53	104		92	104	92	600	392	
Sikkim	44	37	17	10	111	0	111	0.00	1.00	17		0	17	0	0	0	
West Bengal	501	439	195	115	9735	5270	4464	0.54	0.46	90		106	90	106	500	356	
ER state Sum	2119	2035	827	535													1508
Eastern Region (ER)	2030	1472	827	535													
Arunachal Pradesh	40	61	17	19	152	0	152	0.00	1.00	17		145	0	17	0	0	0
Assam	150	239	64	73	2059	224	1835	0.11	0.89	57			7	57	7	50	32
Manipur	28	38	12	12	203	0	203	0.00	1.00	12	0		12	0	0	0	
Meghalaya	63	53	27	16	370	0	370	0.00	1.00	27	0		27	0	42	21	
Mizoram	20	30	9	9	122	0	122	0.00	1.00	9	0		9	0	6	3	
Nagaland	23	43	10	13	161	0	161	0.00	1.00	10	0		10	0	8	4	
Tripura	66	72	28	22	309	161	148	0.52	0.48	14	15		14	15	21	25	
NER State Sum	391	536	167	163													85
North-Eastern Region (NER)	410	448	167	163													
All India	11052	12374	4500	4500							2293		2207	2293	2207		7836
Total Tertiary Reserves Requirement in India											10130						

Note: * UT of Jammu and Kashmir and UT of Ladakh have been considered as single entity inline with data availability at NLDC.

UT Daman and Diu & UT Dadra and Nagar Haveli have been considered as separate entities inline with data shared with NLDC.

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Format RAS7

State/ Union Territory UT	Quarter-Ahead (Apr 2023 - Jun 2023)					
	Secondary Reserves			Tertiary Reserves		
	Within in ISGS	Within state	Total	Within in ISGS	Within state	Total
UT of Chandigarh	14	0	14	14	0	14
Delhi	68	9	78	68	117	186
Haryana	122	41	163	122	371	493
Himachal Pradesh	29	36	65	29	86	115
UT of Jammu and Kashmir and UT of Ladakh*	56	51	106	56	126	181
Punjab	67	41	108	67	391	458
Rajasthan	59	129	188	59	459	518
Uttar Pradesh	122	93	215	122	423	545
Uttarakhand	40	25	65	40	63	103
Chhattisgarh	67	46	114	67	296	364
UT Daman and Diu#	18	0	18	18	0	18
UT Dadra and Nagar Haveli#	39	0	39	39	0	39
Gujarat	136	201	337	136	601	737
Goa	26	0	26	26	0	26
Madhya Pradesh	137	135	272	137	465	602
Maharashtra	135	381	516	135	711	846
Andhra Pradesh	143	164	307	143	564	707
Karnataka	94	164	259	94	564	659
Kerala	43	24	67	43	89	132
UT of Puducherry	18	0	18	18	0	18
Tamil Nadu	217	103	320	217	403	620
Telangana	99	112	212	99	512	612
Bihar	126	10	136	126	135	261
Damodar Valley Corporation	0	207	207	0	507	507
Jharkhand	61	14	75	61	119	180
Odisha	104	92	196	104	392	496
Sikkim	17	0	17	17	0	17
West Bengal	90	106	195	90	356	445
Arunachal Pradesh	17	0	17	17	0	17
Assam	57	7	64	57	32	89
Manipur	12	0	12	12	0	12
Meghalaya	27	0	27	27	21	48
Mizoram	9	0	9	9	3	12
Nagaland	10	0	10	10	4	14
Tripura	14	15	28	14	25	39
Region-wise and All-India						
Northern Region	576	426	1001	576	2037	2612
Western Region	559	763	1322	559	2073	2632
Southern Region	616	567	1183	616	2132	2748
Eastern Region	398	428	827	398	1508	1907
North-Eastern Region	145	22	167	145	85	230
All India	2293	2207	4500	2293	7836	10130

Note:

* UT of Jammu and Kashmir and UT of Ladakh have been considered as single entity inline with data availability at NLDC.

UT Daman and Diu & UT Dadra and Nagar Haveli have been considered as separate entities inline with data shared with NLDC.