



# GUJARAT INDUSTRIES POWER COMPANY LTD.

P.O. Ranoli – 391 350, Dist. Vadodara, Gujarat – INDIA

Ref: GIPCL/CERC/DSM Regulation/24-25/426

Dtd. 01/06/2024.

To,  
The Secretary,  
Central Electricity Regulatory Commission,  
7<sup>th</sup> Floor, Tower B, World Trade Centre,  
Nauroji Nagar,  
New Delhi 110 029.

**Sub: GIPCL's suggestions on the Draft CERC (Deviation Settlement Mechanism & Related Matters) Regulation, 2024 in response to the Public Notice dated 30/04/2024 and 24/05/2024.**

**Ref: Draft CERC DSM Regulation, 2024 published on 30/04/2024**

Dear Sir,

Gujarat Industries Power Company Limited (GIPCL) is a Public Limited Company functioning under the auspices of Government of Gujarat engaged in generation and sale of Electricity to the Gujarat Discoms and State PSUs. GIPCL's installed Capacity is 1184.4 MW comprising 810 MW Thermal Assets, 112.4 MW Wind & 274.4 MW Solar Projects. GIPCL's 100 MW Solar Power Plant located in the Raghnesda Solar Park, Dist. Banaskantha, State – Gujarat comes under the purview of CERC's DSM Regulation.

GIPCL acknowledges that grid security & stability are paramount and therefore the prime concern of CERC's DSM Regulation is to ensure that it is not perceived as a means to earn additional profit by the generators.

GIPCL has carried out block wise analysis of DSM data for (a) Period before 05/12/2022 (b) Current DSM Regulation Period (FY 23-24) and (c) Impact of the Draft DSM Regulation, 2024 considering the data for FY 23-24. Accordingly, please find attached 3 tables (Annexure-A) indicating monthly DSM Penalty with break-up of penalty for each deviation band. Our observations are summarized hereunder:

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<b>TABLE -1</b>	Monthly DSM Penalty with break up for each deviation band for the period Dec.2021 to Nov 2022 (period before the current DSM regulation became effective from 05/12/2022)	<b>Total DSM Penalty for the year was Rs. 16.39 Lacs only</b>
<b>TABLE -2</b>	Monthly DSM Penalty with break up for each deviation band for Fin. Year 2023-24 as per the current DSM regulation	<b>Total DSM Penalty for the year was Rs. 85.87 Lacs. An increase in penalty by more than 400 %.</b>
<b>TABLE -3</b>	Monthly DSM Penalty with break up for each deviation band with data of Fin. Year 2023-24, calculated as per the proposed draft CERC DSM Regulation, 2024.	<b>Total DSM Penalty for the year works out Rs. 154.58 Lacs. An increase in penalty by more than 80% against the amount as per current regulation.</b>

<b>COMPARISION OF DSM IMPLICATION AS PER CURRENT REGULATION VIS-À-VIS THE DRAFT DSM REGULATION,2024</b>	
<b>Observations are based on Fin. Year 2023-24 data of 100 MW Raghanesda Solar Project</b>	
<b>As per Current Regulation (TABLE - 2)</b>	<b>As per Draft Regulation 2024 (TABLE - 3)</b>
• <b>Total DSM Penalty is Rs. 85.87 Lacs</b>	• <b>Total DSM Penalty shall be Rs. 154.58 Lacs (increase of more than 80 %)</b>
• Total no. of blocks liable for Penalty is 2988	• Total no. of blocks liable for Penalty becomes 7416 (Increase of 148 %)
• Total Penalty on account of Injection more than + 15 % and Injection less than – 15 %) is Rs. 78.30 Lacs	• Total Penalty on account of Injection more than + 20 % and Injection less than – 20 % becomes Rs. 78.90 Lacs
• <b>Rs. 7.45 (85.75 - 78.30) lacs is Penalty in other time blocks</b>	• <b>Rs. 75.68 (154.55 - 78.90) Lacs is the Penalty in other time blocks.</b>

**Some of the problems faced by GIPCL & RE Generators in general are listed below: -**

- Non-availability of accurate forecast and difficulty in further increasing the accuracy of Scheduling & Forecasting.
- RE Generators do not have control over the input – Sunlight/Radiation.
- There is no mechanism to control Over Injection and it is not advisable to curtail Renewable Generation.
- Difficult to predict the speed of high level/low level cloud movement.
- Revision in Schedule Generation is made effective after 8-time blocks – by that time weather would have changed.
- Air mass Index also affects Radiation – Air Mass Index for cloudy atmosphere with moisture is different than dusty atmosphere.



- Gujarat witnessed Cyclones Taukte in May, 2021 & Biporjoy in June, 2023.
- Frequent unseasonal rain/cloud movement due to Climate Change. The uncertainty in accurate weather prediction on account of climate change needs to be factored.
- Solar Power Plant is spread over a vast area – Radiation is not the same at all location.

Based on GIPCL's operational experience, following changes are proposed in the Draft DSM Regulation, 2024.

**SUGGESTIONS: -**

As per Draft DSM Regulation, 2024	GIPCL's Suggestion	Remarks
<ul style="list-style-type: none"> <li>• No Penalty zone of -5 % to + 5 %</li> <li>• Penalty of 10 % of contract value for deviation above -5/+5 % to -10/+10%</li> </ul>	<ul style="list-style-type: none"> <li>• No Penalty Zone should be - 10 % to + 10 %</li> </ul>	<ul style="list-style-type: none"> <li>• 5 % is a very narrow band</li> </ul>
<ul style="list-style-type: none"> <li>• Penalty of 50 % of contract value for deviation above -10/+10 % to -20/+20 %</li> </ul>	<ul style="list-style-type: none"> <li>• Penalty of 10 % of contract value for deviation of --10/+10 % to --20/+20 %</li> </ul>	<ul style="list-style-type: none"> <li>• Due to very high penalty rate proposed, penalty works out to Rs. 59 Lacs – sum of Column L &amp; S – of Table-3)</li> </ul>
<ul style="list-style-type: none"> <li>• Penalty of 100 % of contract value for deviation beyond -20/+20 %</li> </ul>	<ul style="list-style-type: none"> <li>• Variable Penalty rate (from 10 % to 100 % of contract rate) based on slope for deviation between -20/+20 % to -50/+50 %</li> </ul>	<ul style="list-style-type: none"> <li>• A balance is suggested between the MUST RUN status of Solar Power Plant &amp; Grid security</li> </ul>

GIPCL has set up this Solar Project in a challenging terrain at a tariff of Rs.2.68/kWh, which is quite competitive considering the challenging terrain. Further increase in DSM Penalty would dent the returns from this Power Plant and make this Project financially unviable in the long run. GIPCL, therefore requests the Hon'ble Commission to consider GIPCL's submission and keep the DSM Penalty in the new Regulation at a reasonable level. If desired, GIPCL can make a detailed submission on the subject as per the convenience of Hon'ble Commission.

Thanking you,

Yours faithfully,

For Gujarat Industries Power Company Ltd.,

  
(S. Mani)

Addl.General Manager (Commercial & Legal)

**Encl.: Annexure-A**

# Annexure - A

**TABLE - 1**

**GIPCL 100 MW Solar Project at Raghanesda Solar Park, Gujarat.  
DSM Calculation as per CERC regulation effective before 05/12/2022**

Month	Schedule Generation	Actual Injection	DSM Penalty	No. of blocks	No. of blocks in Penalty Zone	Over Injection										Under Injection						Total of Over & Under Injection	Over & Under Injection as %age of DSM Penalty
						b/w 15 to 25% Penalty	b/w 25 to 35% Penalty	b/w > 35% Penalty	b/w > 35% Penalty	b/w 15 to 25% Penalty	b/w 25 to 35% Penalty	b/w > 35% Penalty	b/w 15 to 25% Penalty	b/w 25 to 35% Penalty	b/w > 35% Penalty	b/w 15 to 25% Penalty	b/w 25 to 35% Penalty	b/w > 35% Penalty					
(A)	(B)	(C)	(D)	(E)	(F)	(G)=(F)*250	(H)	(I)=(H)*25	(J)	(K)=(I)*250*0.804	(L)	(M)=(L)*250*0.268	(N)	(P)=(N)*250	(O)	(R)=(O)*250*0.804	(S)=(I)+(K)+(P)-(R)	(T)=(S)/(C)*100					
Dec-21	18487	13976	90696	1184	165	360	24138	98	13066	26	5294	345	23136	147	19732	27	5460	43551	48.02				
Jan-22	20031	21111	140358	1217	112	357	23891	178	23907	131	26356	400	26770	170	22747	83	16688	89698	63.91				
Feb-22	20387	20993	6705	1291	43	29	1910	0	0	0	0	63	4205	4	590	0	590	590	8.81				
Mar-22	22896	23838	11304	1505	46	125	8397	0	0	0	0	38	2545	3	362	0	0	362	3.20				
Apr-22	23066	23720	20941	1520	28	12	811	0	0	0	0	142	9500	62	8337	11	2294	10631	50.76				
May-22	23731	24095	28470	1615	37	65	4330	5	697	0	0	148	9911	66	8899	23	4632	14229	49.98				
Jun-22	21450	21850	108756	1544	112	253	16943	130	17442	41	8215	455	30472	139	18664	85	17020	14229	56.40				
Jul-22	17369	17309	508397	1578	499	1890	126613	633	84771	304	61073	1452	97556	582	78043	302	60642	284528	55.97				
Aug-22	17116	16826	519464	1595	418	1327	88903	701	93964	578	116187	1411	94534	519	69482	281	56394	336027	64.69				
Sep-22	21379	21529	142580	1524	211	513	34377	96	12882	2	460	635	42528	223	29824	112	22508	65674	46.06				
Oct-22	22225	22510	54942	1526	88	37	2509	0	0	0	0	420	28117	147	19669	23	4648	24317	44.26				
Nov-22	19218	20085	6840	1380	17	0	0	0	0	0	0	84	5622	9	1219	0	0	1219	17.82				
<b>Total</b>	<b>247355</b>	<b>253841</b>	<b>1639453</b>	<b>17479</b>	<b>1776</b>	<b>4967</b>	<b>332822</b>	<b>1841</b>	<b>246728</b>	<b>1083</b>	<b>217584</b>	<b>5591</b>	<b>374596</b>	<b>2071</b>	<b>277568</b>	<b>947</b>	<b>190286</b>	<b>932166</b>	<b>56.86</b>				

Under Inj	Over Inj	Remark (Penalty)
-0.15	+15%	No Penalty
-15 to -25	+15 to +25	10% of PPA rate
-25 to -35	+25 to +35	20% of PPA rate
< -35	> +35	30% of PPA rate



**TABLE - 2**

**GIPCL 100 MW Solar Project at Raghnesda Solar Park, Gujarat.  
DSM Calculation as per current CERC regulation effective from 08/02/2023**

Month	Schedule Generation	Actual Injection	DSM Penalty	No. of blocks	No. of blocks in Penalty Zone	Over Injection				Under Injection				Total of Over & Under Injection Penalty	Over & Under Injection Penalty as %age of DSM Penalty		
						b/w 10 to 15%	b/w 10 to 15% Penalty	blocks in Over inj (Dump) > 15%	Injection in MW	Injection (Dump) Penalty	Injection b/w -10 to -15%	Injection b/w -10 to -15% Penalty	blocks in Under inj < -15%			Injection in MW	Injection Penalty
	(A)	(B)	(C)	(D)	(E)	(F)	(G)=(F)*250*0.	(H)	(I)	(J)=(I)*250*2.	(K)	(L)=(K)*250*0.	(M)	(N)	(P)=(N)*250*	(Q)=(J)+(P)	(R)=(Q)/(C)*100
Apr-23	24375	23695	544280	1523	150	88	5901	11	127	84954	510	34203	86	1251	419222	504176	92.63
May-23	24182	24365	611353	1635	210	306	20528	35	362	242678	459	30726	77	948	317422	560099	91.62
Jun-23	20311	19877	884981	1596	353	405	27115	52	342	229214	910	60998	150	1694	567654	796868	90.04
Jul-23	19864	19296	2130416	1639	605	1012	67792	138	1418	950318	1343	89989	217	3052	1022317	1972635	92.59
Aug-23	17983	17243	1708598	1576	583	966	64696	148	1044	699160	1395	93454	227	2541	851288	1550448	90.74
Sep-23	20612	21267	762217	1454	277	494	33102	58	578	387283	468	31366	79	927	310466	697749	91.54
Oct-23	22464	23396	34342	1436	59	44	2968	5	6	3799	103	6878	12	62	20697	24496	71.33
Nov-23	18765	18894	682965	1319	193	317	21215	35	349	233784	366	24517	63	1204	403449	637233	93.30
Dec-23	19948	20540	359901	1321	171	226	15109	25	208	139662	293	19607	49	554	185522	325184	90.35
Jan-24	19391	19367	149680	1345	79	64	4264	4	98	65549	182	12188	24	202	67679	133227	89.01
Feb-24	18235	18125	451540	1316	182	299	20015	37	339	227249	411	27569	63	527	176707	403956	89.46
Mar-24	23974	24213	267357	1485	126	114	7605	14	53	35236	349	23368	54	564	188932	224168	83.85
Total	250104	250278	8587629	17645	2988	4333	290311	562	4924	3298885	6789	454863	1101	13526	4531354	7830239	91.18

Under inj	Over inj	Remark (Penalty)
-10%	10%	No Penalty
10% to -15	+10% to +15%	10% of contract rate
< -15%	> +15%	50% of contract rate Dump

**TABLE - 3**

**GIPCL 100 MW Solar Project at Raighaneda Solar Park, Gujarat.  
DSM Calculation as per Proposed New Framework by CERC**

Month	Schedule Generation	Actual Injection	DSM Penalty	No. of blocks	No. of blocks in Penalty Zone	Over Injection										Total of Over & Under Injection Penalty		Over & Under Injection Penalty as %age of DSM Penalty			
						Injection b/w 5 to 10%	Injection b/w 10 to 20%	Injection b/w 20 to 25%	Injection b/w 25 to 30%	Injection b/w 30 to 35%	Injection b/w 35 to 40%	Injection b/w 40 to 45%	Injection b/w 45 to 50%	Injection b/w 50 to 55%	Injection b/w 55 to 60%	Injection b/w 60 to 65%	Injection b/w 65 to 70%		Injection b/w 70 to 75%	Injection b/w 75 to 80%	Injection b/w 80 to 85%
(A)	(B)	(C)	(D)	(E)	(F)	(G)=(F)*250*	(H)	(I)=(H)*250*1.3	(J)	(K)	(L)=(K)*250*2	(M)	(N)=(M)*250*0.1	(O)	(P)	(Q)=(P)*250*1.1	(R)	(S)	(T)=(S)*250*2	(U)=(T)+(I)	(V)=(U)/(C)*100
Apr-23	24375	23695	1068723	1523	394	285	19117	128	42960	6	87	58046	874	58553	867	290430	5	895	599617	657663	61.54
May-23	24182	24365	1095792	1635	536	936	62700	432	144737	19	237	158485	738	49476	781	261706	52	625	418688	577173	52.67
Jun-23	20311	19877	1734820	1596	792	1232	82551	582	159029	24	165	110308	1564	104793	1502	503152	93	1103	738987	849295	48.96
Jul-23	19864	19296	3561272	1639	987	1917	128412	1519	508708	83	912	610827	2020	135308	2288	766508	138	2107	1411509	2022336	56.29
Aug-23	17983	17243	2947336	1576	957	1753	117445	1523	510115	83	486	325887	2035	136339	2327	779563	154	1609	1077987	1403874	47.63
Sep-23	20612	21267	1315380	1454	806	1770	118604	717	240220	30	355	237859	720	48364	789	264162	52	606	406271	644130	48.97
Oct-23	22464	23396	177437	1436	621	1248	83602	50	16741	0	0	0	222	14843	143	47922	5	21	14329	14329	8.08
Nov-23	18765	18894	1250640	1319	576	1204	80675	454	151954	18	212	142030	570	38222	640	214310	49	931	623450	765480	61.21
Dec-23	19948	20540	714158	1321	623	1466	98239	314	105146	14	120	80459	459	30752	500	167556	33	346	232005	312464	43.75
Jan-24	19391	19367	295247	1345	244	337	22590	84	28022	4	78	52149	373	24965	268	89714	12	116	77808	129956	44.02
Feb-24	18235	18125	749915	1316	417	730	48914	435	145851	20	203	135695	656	43977	666	223199	32	227	152279	287974	38.40
Mar-24	23974	24213	547633	1485	463	621	41607	162	54157	2	4	2973	521	34920	581	194507	37	332	222529	225502	41.18
Total	250104	250278	15458336	17645	7416	13499	904456	6399	2143640	303	2858	1914718	10752	720412	11351	3802730	733	8919	5975458	7890176	51.04
<b>Proposed New Framework</b>																					
Under Inj	Over Inj.	Remark (Penalty)																			
-5%	5%	No																			
-5% to -10%	+5% to +10%	10% of contract rate																			
<-10 to -20%	> +10 to 20%	50% of contract																			
<-20%	> +20%	100% of Dump																			