

CERC (Deviation settlement Mechanism and related matters) 4th Amendment Regulations,2018:

Highlights with necessary changes required in ABT software for monitoring of DSM.

Notification date:20.11.2018

Effective from: 01.01.2019

Comparison of DSM 4th amendment Regulation with existing DSM Regulation

S. No	HEADS	4th Amendment Regulation	Existing REGULATIONS
1	Effective from	01.01.19	17.02.14 onwards
2	Operating Frequency range	50.05 to 49.85 Hz	50.10 to 49.7 Hz.
DSM CHARGE RATES			
3	Maximum DSM rate	800 Paisa per unit below 49.85 Hz	824.04 paisa per unit below 49.70 Hz
4	Minimum DSM rate	0 at 50.05 Hz & above	0 at 50.05 Hz & above
5	DSM Price Vector	DSM rate vector will have a dynamic slope determined by joining the identified price points at 50 Hz (daily simple average ACP), frequency of 49.85 Hz (Rs. 8 per unit) and 50.05 Hz (zero) on a daily basis . Max ACP capped at Rs 8	Fixed slope with joining the identified points at 50Hz (178p), 49.7Hz(824.04p) and 50.05Hz(zero p).
		<p>After review within one year , CERC may substituted daily average ACP, by the time-block-wise ACP in the DAM or hourly ACP when the real time market is introduced.</p> <ul style="list-style-type: none"> <i>In case of no-trade on a given day, daily simple average ACP of the last available day shall be considered for determining the DSM charge</i> 	
DSM CAP RATE			
6	Cap Rate for Generating station using coal/lignite/APM gas as the fuel	Linked to variable charge of previous month billed of the station. No Capping for GAS /Hydro stations/Buyers	303.04 paisa per unit (Linked to UI rate at freq 49.95 Hz.) No Capping for GAS /Hydro stations/Buyers

Comparison of DSM 4th Amendment Regulations with existing DSM Regulations

S. No	HEADS	4 th Amendment Regulations	Existing REGULATIONS
	VOLUME LIMITS		
11	For under/over drawal /injection by buyer/seller in a time block	Not to exceed 12% of its drawl schedule or 150 MW whichever is lower in a time block	Not to exceed 12% of its drawl schedule or 150 MW whichever is lower in a time block
	Limits on day Deviation *To be implemented after one (01) year.	Total deviation from schedule in either direction, in energy terms during a day shall not be in excess of 3% of the total schedule for the drawee entities and 1% for the generators*	No provision
	*Additional charge for Violating Day Deviation Limits: *To be implemented after one (01) year.	20% of the daily base DSM payable / receivable	No provision

Comparison of DSM 4th Amendment Regulations with existing DSM Regulations

S. No	HEADS	4th Amendment Regulations	Existing REGULATIONS
		ADDITIONAL DSM charge	
13	Additional DSM charge	Applicable for over drawl or under injection for each time block when freq. >49.85 Hz & < 50.05 Hz	Applicable for over drawl or under injection for each time block when fr. >49.7 Hz & < 50.05 Hz
		same	20 % of Block DSM rates for 12-15% deviation, 40% for 15-20% Deviation and 100% beyond 20% deviation from Schedule.
14	Additional DSM beyond operating range	100% of DSM cap rate i.e station variable charge for under injection below 49.85 Hz	100% of DSM cap rate(303.04p/kWh) for under injection below 49.7Hz
		Over injection beyond 50.05 Hz will attract Add Dev charge for each unit @ DSM rate of 50Hz(ACP) or Cap rate of station whichever is lower.	Over injection beyond 50.10Hz will attract Add Dev Charge for each unit @ DSM rate of 50Hz(178p/kWh)
	Sign Change		
		In the event of sustained deviation from SG in one direction (positive or negative) by any regional entity (buyer or seller), such regional entity shall have to change sign of their deviation from schedule, at least once, after every 6 time blocks.	In the event of sustained deviation from SG in one direction (positive or negative) by any regional entity (buyer or seller), such regional entity shall have to change sign of their deviation from schedule, at least once, after every 12 time blocks.
	Add Charge for violating the regulation:	Violation of the requirement under this clause shall attract an additional charge of 20% on the daily base DSM payable / receivable. The additional charge for violation of sign change stipulation shall be levied for each such violation during a day.	No such Add charge were imposed.

DSM Price Vector Specified in table with Equation:

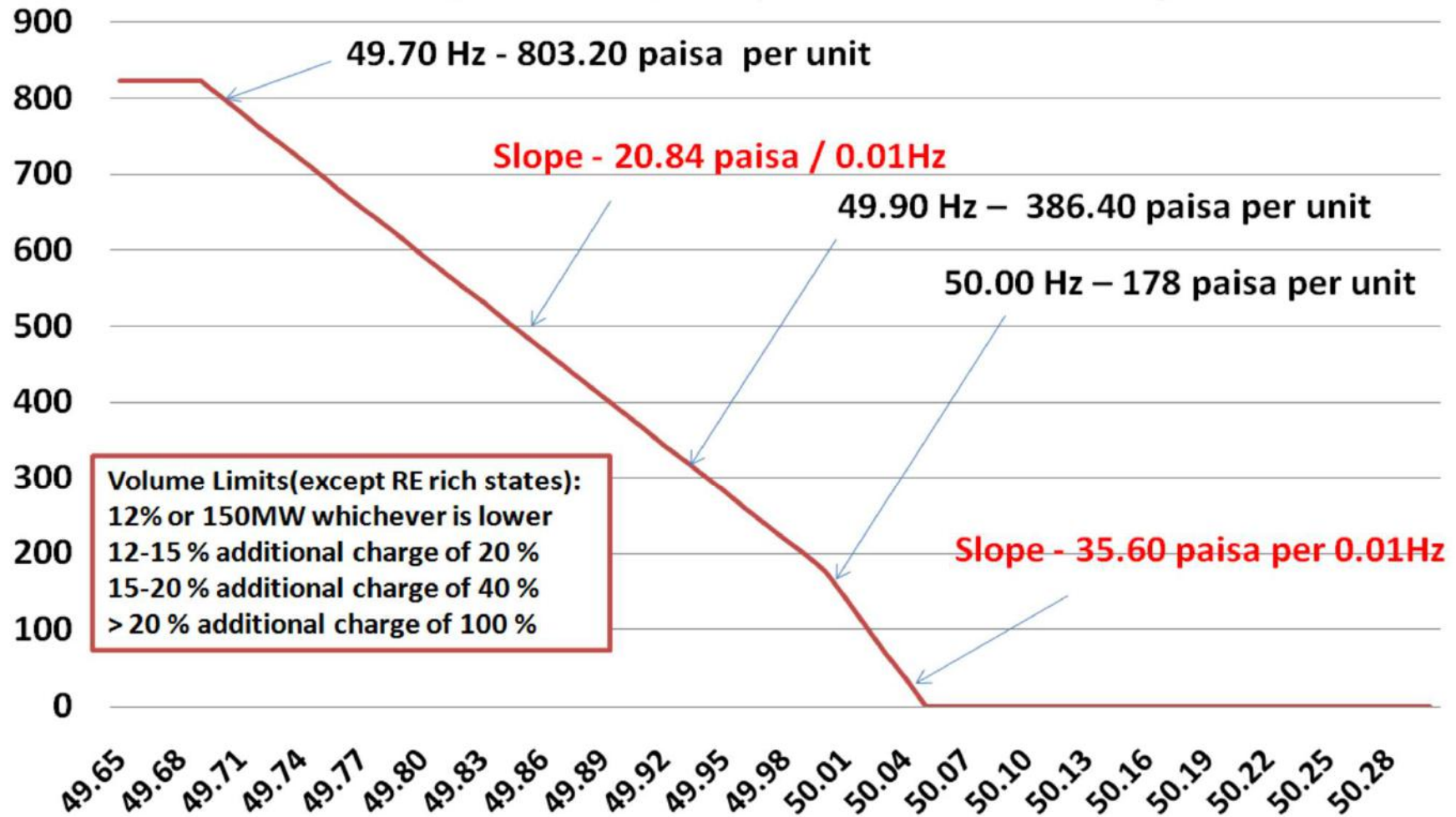
Average Frequency of the time block (Hz)		Charges for Deviation (Paise/kWh)
Below	Not Below	
	50.05	0.00
50.05	50.04	1xP/5
50.04	50.03	2xP/5
50.03	50.02	3xP/5
50.02	50.01	4xP/5
50.01	50.00	P
50.00	49.99	50.00+15xP/16
49.99	49.98	100.00+14xP/16
49.98	49.97	150.00+13xP/16
49.97	49.96	200.00+12xP/16
49.96	49.95	250.00+11xP/16
49.95	49.94	300.00+10xP/16
49.94	49.93	350.00+9xP/16
49.93	49.92	400.00+8xP/16
49.92	49.91	450.00+7xP/16
49.91	49.90	500.00+6xP/16
49.90	49.89	550.00+5xP/16
49.89	49.88	600.00+4xP/16
49.88	49.87	650.00+3xP/16
49.87	49.86	700.00+2xP/16
49.86	49.85	750.00+1xP/16
49.85		800.00

Where P is the Daily average Area Clearing Price in paise/kwh discovered in the DAM

Deviation Rate Vector w.e.f 17th February, 2014

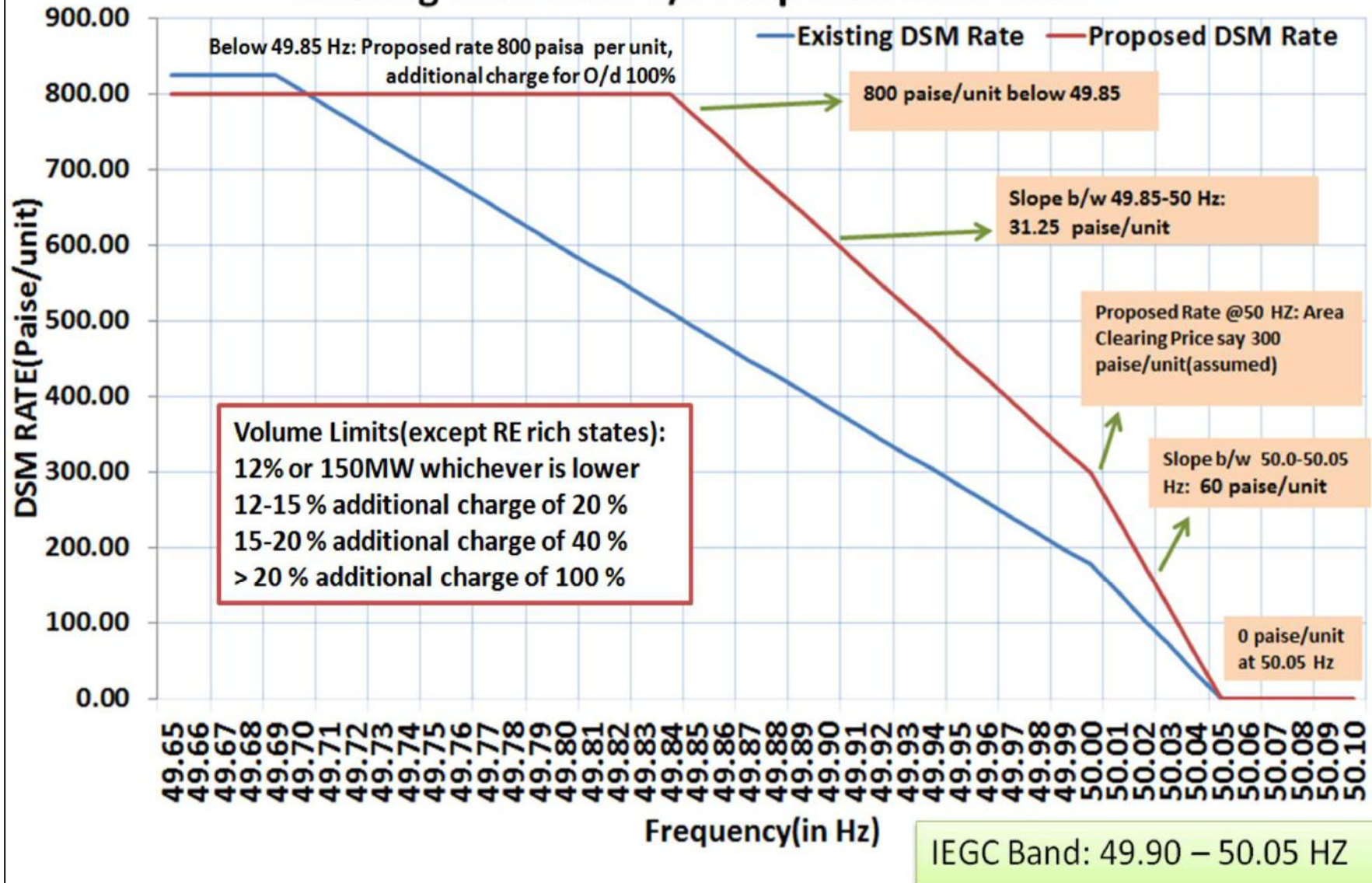
IEGC Band: 49.90 – 50.05 HZ

Below 49.7 Hz: Charge is 824.04 paisa per unit, additional charge for O/d is 100%



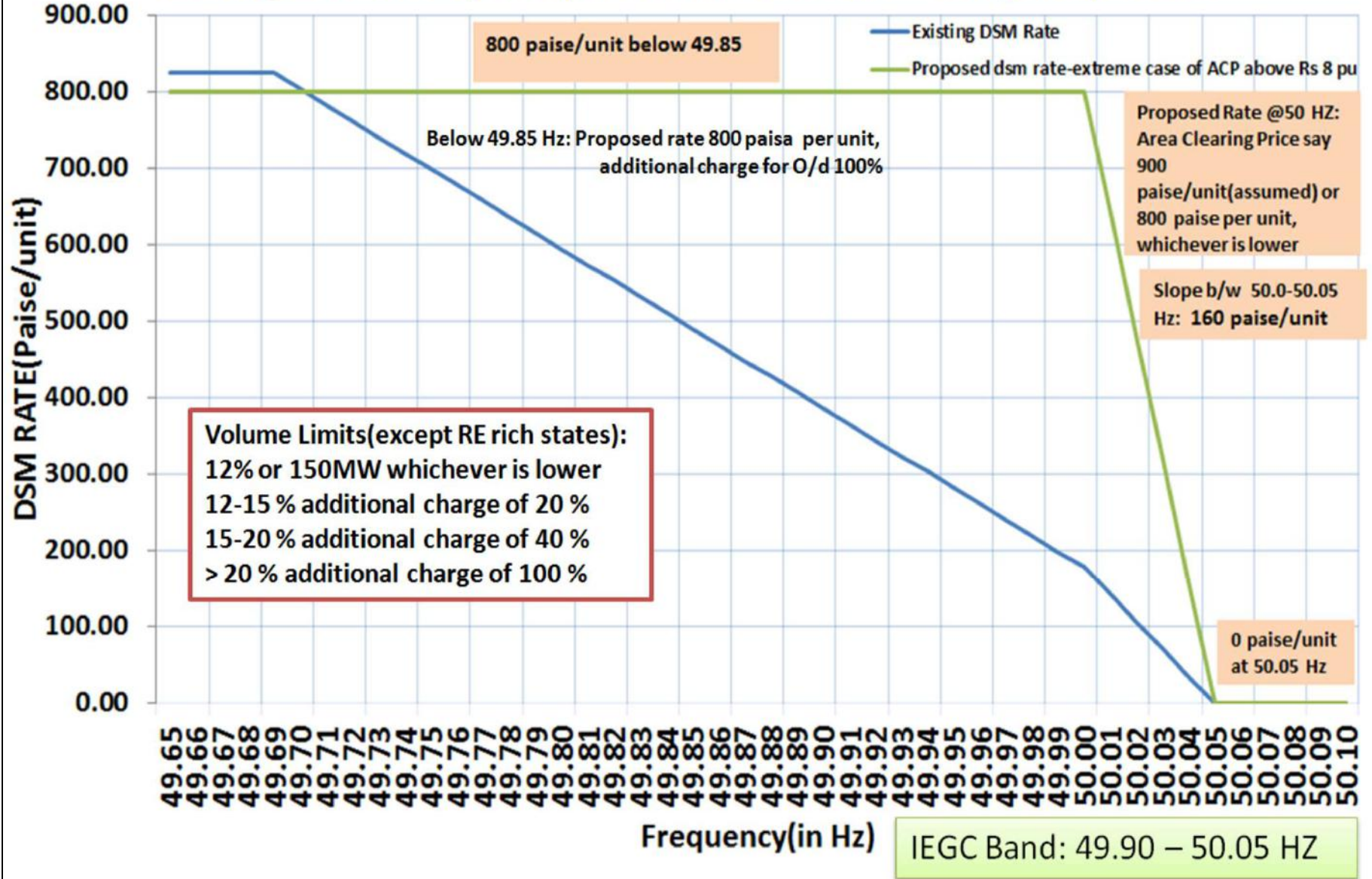
Existing Deviation Settlement Price Vector (effective since 17.2.2014)

Existing DSM Rate V/s Proposed DSM Rate



Comparison of the existing Deviation Settlement Price Vector (effective since 17.2.2014) and the Proposed Deviation Settlement Price Vector

Existing DSM Rate V/s Proposed DSM Rate: ACP > 800 paise per unit



Comparison of the existing Deviation Settlement Price Vector (effective since 17.2.2014) and the Proposed Deviation Settlement Price Vector (assuming Area Clearing Price @ greater than 800 ps. Per unit)

CERC (Deviation Settlement Mechanism and related matters) (Fourth Amendment) Regulations, 2018

□ **Critical Issues emerging from the Amendment Regulation:**

- Strictly adhere to the given Schedule as **over injection will result in no gain** due to capping with variable charge of the station.
- Under injection above break even frequency is the only scenario of gain upto 12% in a block but with compliance of “Sign Change of deviation”.
- Strictly follow the sign change of deviations **after every 6 blocks** ,there should be an early alert from 5th time block in case of sustained deviation in one direction.
- There should be a asking rate to run the station for rest of the blocks for a day to avoid add deviation charge due to violation of +/-1% volume limit of deviation clause.—**applicable after one year.**
- Block wise deviation Volume Limits and add deviation for violating them will remain same.
- **DSM price vector will change daily based on ACP of DAM in IEX so ABT software at each station has to be modified accordingly. Preferably software should crawl ACP data from NLDC website and automatically create DSM price vector for the next day.**