



GOVERNMENT OF INDIA  
MINISTRY OF POWER

# PRAAPTI

Payment Ratification And Analysis In Power Procurement For Bringing  
Transparency In Invoicing Of Generators

.....Measuring and Facilitating ease of making Payments by  
DISCOMs

25<sup>th</sup> Mar 2021

# At the onset....

1. Purpose: To demonstrate the logic employed behind “Ease of Making Payments” scale used for ranking states on the PRAAPTI Portal.
2. The logic compares ‘actual’ payment schedule of a state against an ‘ideal’ schedule in line with FCFS (First Come First Served) logic.
3. For a given month, the color coding simply denotes the magnitude of deviation that the actual payment schedule of a state had from its ‘ideal’ schedule. Green shows least deviation while Red denotes maximum.
4. Any time in future, the ministry reserves the rights to modify the basis of calculation of the deviation or the color coding there of.

# A representative example....

1. Each DISCOM-Genco pair is considered an entity and every transaction (Raising of an invoice by Genco and Making of a payment by DISCOM) is identified against exactly one such entity.
2. Complete lifecycle of an invoice is captured, and all logics are based on pendency of invoices in terms of 'amount' and 'period'.
3. Here is a sample illustration to understand this. The figures and data represented further are dummy and only for demonstration purpose.



# Step 1: Entity wise Default Index

- Default Index is an invoice wise estimation of deviation between actual payment schedule against that invoice by a Discom and an 'ideal' payment schedule
- The ideal payment schedule for an invoice shall take into account its relative pendency (against other invoices) in terms of 'Amount' and 'Period'

#	Invoice Id	Entity	L=Pending (Amount)	M=Overdue Since	N=Entity wise Default Index LxM
1	A	GENCO 1	3.25	54	176
2	B	GENCO 2	33.56	141	4,591
3	C	GENCO 1	0	233	47
4	D	GENCO 3	0.01	50	1
5	E	GENCO 2	265.33	242	64,209
6	F	GENCO 3	4,593	18	82,676
7	G	GENCO 2	13	175	2,198
8	H	GENCO 4	98	264	25,872
9	I	GENCO 1	44	88	176
10	J	GENCO 3	658	251	165158
11	K	GENCO 5	1.95	171	333
12	L	GENCO 2	55	113	6215
13	M	GENCO 3	1	254	254
14	N	GENCO 1	0.25	90	23
15	O	GENCO 1	0	84	0
16	P	GENCO 2	554	159	88086

Entity	Average Default Index
GENCO 1	823
GENCO 2	33,060
GENCO 3	62,022
GENCO 4	25,872
GENCO 5	333

# Step 2: Discom and State wise Deviation

- The maximum Default Index corresponding to any Genco in a given month is considered the Discom's Deviation Index
- The maximum Deviation Index corresponding to any Discom in a given month is considered the State's Deviation Index

Month X		Default Index	P=Weight (Default Index)	Payment Received (R)	S=Normative Payment P*SUM(R)	Deviation	Deviation ABS
Discom 1	GENCO 3	62,022	0.508	35	129.5	73%	73%
	GENCO 4	25,872	0.212	65	54.0	-20%	20%
	GENCO 1	823	0.007	60	1.7	-3391%	3391%
	GENCO 2	33,060	0.271	40	69.0	42%	42%
	GENCO 5	333	0.003	55	0.7	-7809%	7809%
	<b>Total</b>	<b>122,110</b>		<b>255</b>	<b>ABS Max. of Deviation</b>		<b>7809%</b>
Discom 2	GENCO 1	55	0.688	0	1.5	100%	100%
	GENCO 4	25	0.313	2.21	0.7	-220%	220%
	<b>Total</b>	<b>80</b>		<b>2.21</b>	<b>ABS Max. of Deviation</b>		<b>220%</b>

Discom 1 &  
State Deviation  
Index

Discom 2  
Deviation  
Index

# Step 3: Ease of Making Payment Scale (Color

## Code)

- The Deviation indexes in a given month for each state is selected to identify a dynamic range that changes every month
- Color band is allocated based on identifying the average deviation.

State	Sample Deviation Index
1	13%
2	150%
3	180%
4	2000%
5	5100%
6	84000%
7	22500%
8	2420%
'''	...
Avg for 36 values	$x = \frac{\text{Sum}(\text{deviation})}{36}$

Color Band Selection Logic		
Colour	LL	UL
Green	0	x
Blue	x	2x
Yellow	2x	3x
Orange	3x	4x
Red	4x	and above

State	Colour Band
1	Green
2	Green
3	Green
4	Yellow
5	Orange
6	Red
7	Orange
8	Yellow
'''	

# Thank You

For any further queries/information, feel free to drop us an email on  
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