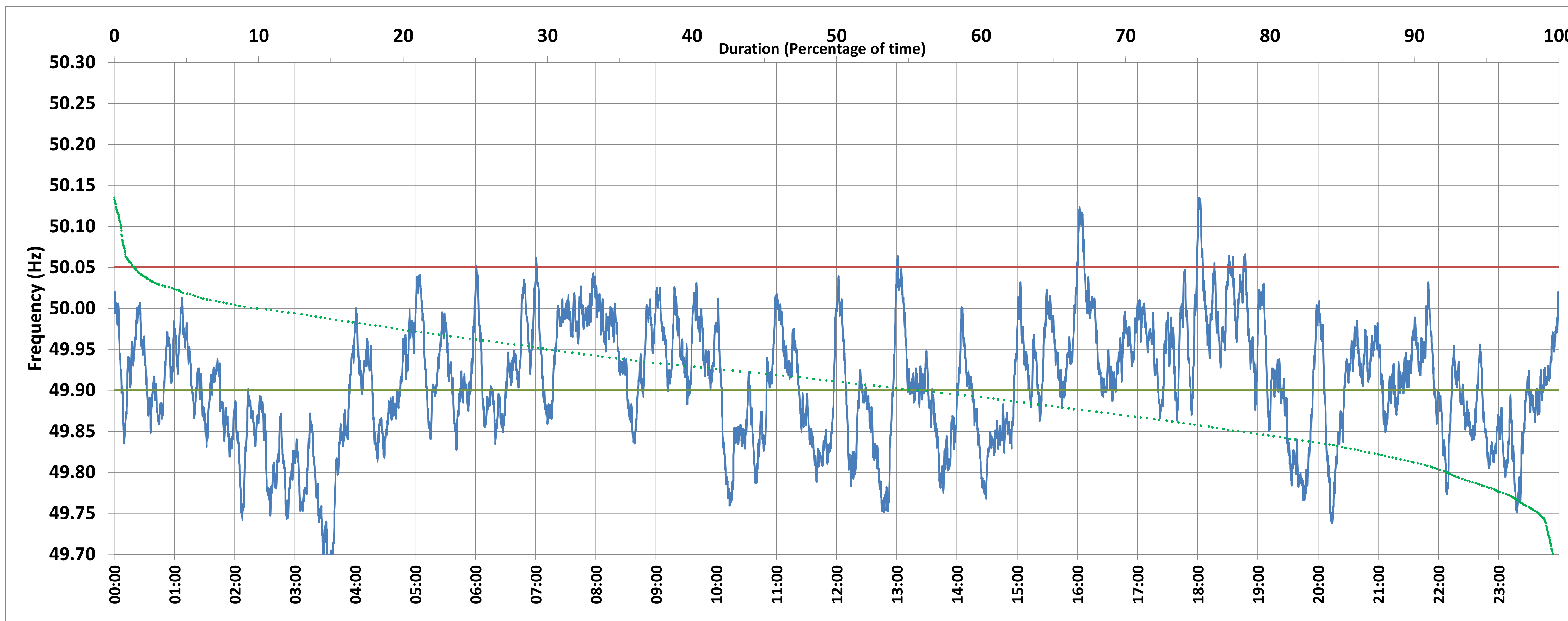


POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI



Frequency profile for 19-May-2018 (Saturday)



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2	<49.95	49.95-50.05	49.90-49.95
0.4	43.8	78.0	7.2	36.1	45.8	10.0	0.5	54.9	99.6	19.1	0.9	9.9	3.0	1.4	0.0	69.7	28.9	25.9

Average Frequency : 49.909	Frequency Variation Index : 0.137	Standard Deviation : 0.073	Mileage: 44.5	FDI: 45.1
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Instantaneous Frequency		
Max	50.135	18:01:30
Min	49.682	3:37:30

15 minute Average Frequency		
Max	50.051	16:15:00
Min	49.743	3:45:00

No. of excursions	
above 50.03 Hz	32
below 49.97 Hz	82
above 50.00 Hz	69
below 50.00 Hz	66

Average time freq per excursion remains	
below 49.97	0:13:41
above 50.03	0:01:20

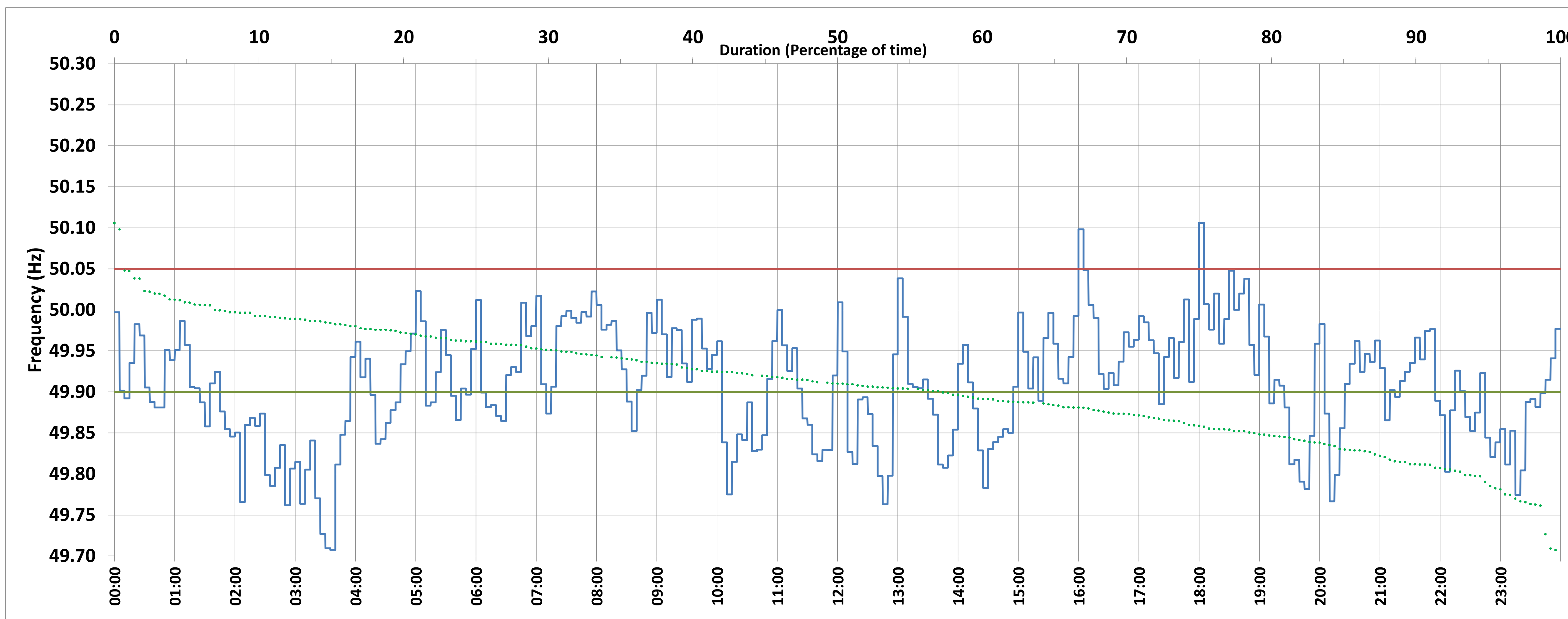
No. of hours freq outside 49.9-50.05 Hz	10:50:00
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Source : BALLIA:Frequency 10 Sec. (8640 samples)

POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI

5 Min. Average Frequency profile for 19-May-2018 (Saturday)



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2	<49.95	49.95-50.05	49.90-49.95
0.00	42.71	78.82	6.60	36.11	50.00	6.94	0.35	56.60	100.00	19.10	0.35	7.29	2.08	0.69	0.00	69.1	30.2	26.4

Average Frequency : 49.909	Frequency Variation Index : 0.132	Standard Deviation : 0.070	Mileage: 10.9	FDI: 43.4
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Instantaneous Frequency		
Max	50.135	18:01:30
Min	49.682	3:37:30

5 minute Average Frequency		
Max	50.106	18:05:00
Min	49.707	3:45:00

No. of excursions	
above 50.03 Hz	5
below 49.97 Hz	26
above 50.00 Hz	14
below 50.00 Hz	15

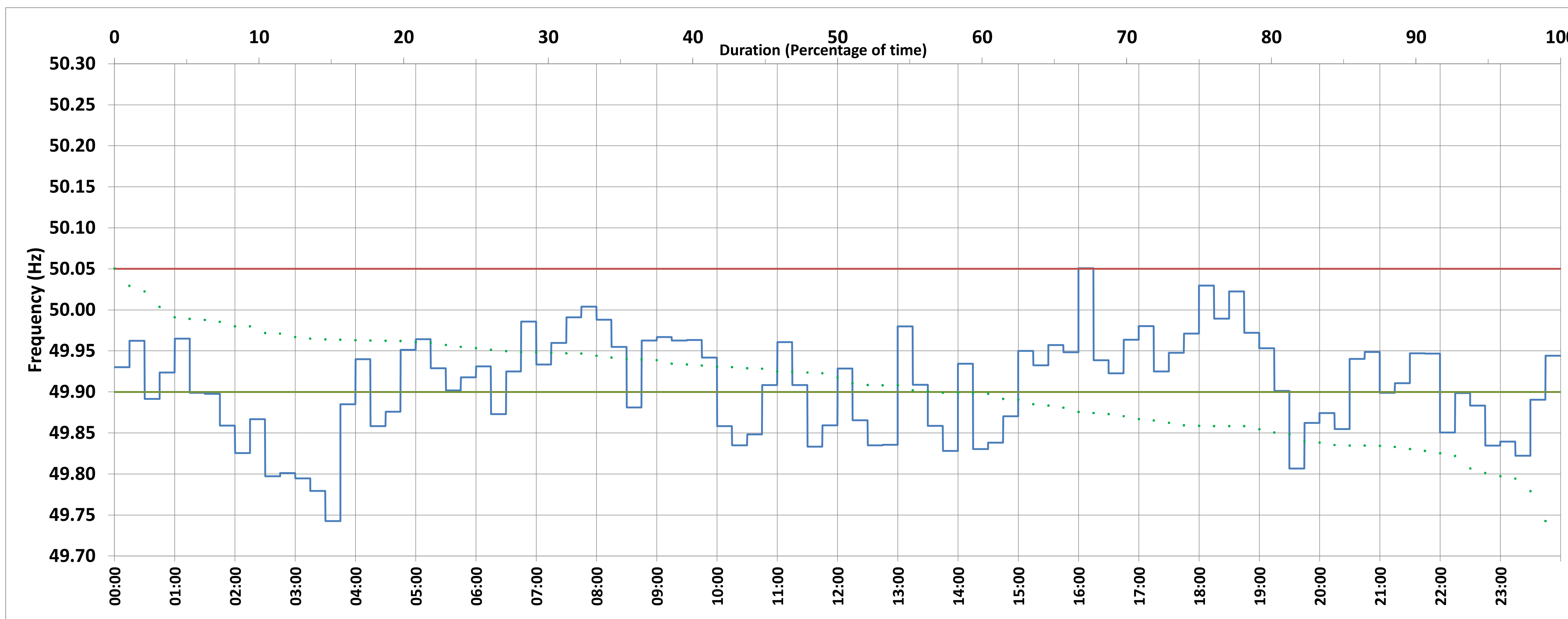
Average time freq per excursion remains	
below 49.97	0:43:39
above 50.03	0:06:00

Source : BALLIA:Frequency 5 Min. (288 samples)

POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI

15 Min. Average Frequency profile for 19-May-2018 (Saturday)



<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	>50.2	<49.95	49.95-50.05	49.90-49.95
0.00	42.71	87.50	4.17	38.54	53.13	4.17	0.00	56.25	100.00	11.46	1.04	4.17	1.04	1.04	0.00	72.9	26.0	30.2

Average Frequency : 49.909	Frequency Variation Index : 0.120	Standard Deviation : 0.061	Mileage: 4.1	FDI: 43.8
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Instantaneous Frequency		
Max	50.135	18:01:30
Min	49.682	3:37:30

15 minute Average Frequency		
Max	50.051	16:15:00
Min	49.743	3:45:00

No. of excursions	
above 50.03 Hz	1
below 49.97 Hz	7
above 50.00 Hz	4
below 50.00 Hz	5

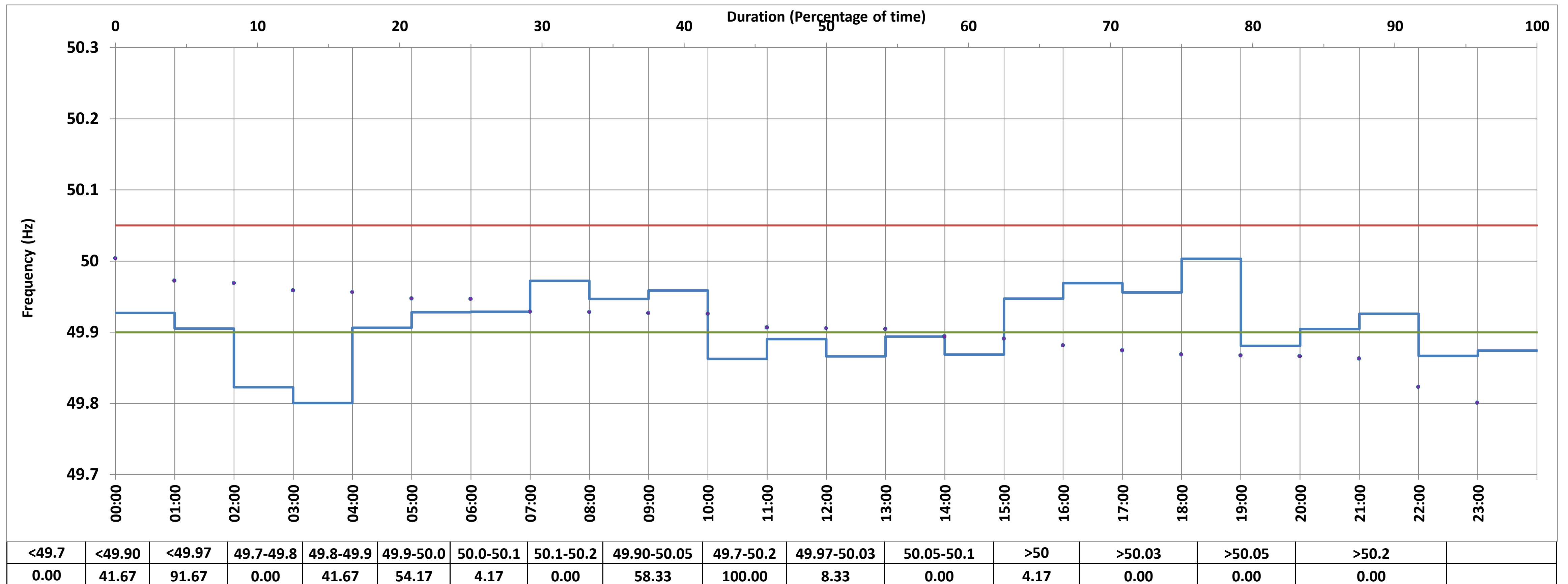
Average time freq per excursion remains	
below 49.97	3:00:00
above 50.03	0:15:00

Source : BALLIA:Frequency 15 Min. (96 samples)



BALLIA:Frequency

Hourly Average Frequency Profile for 19-May-2018



Average Frequency : 49.909

Mileage 0.9319

Instantaneous Frequency		
Max	50.135	18:01:30
Min	49.682	3:37:30

Based on an hour Average Frequency			
Max	50.003	19:00:00	
Min	49.800	4:00:00	

No. of excursions above 50.03 Hz	0
No. of excursions below 49.97 Hz	3
No. of excursions above 50.00 Hz	1
No. of excursions below 50.00 Hz	2

% time <49.95	79.17
% time between 49.95 to 50.05	20.83

NOTE: All calculations except Instantaneous Max/Min based on an hour average frequency