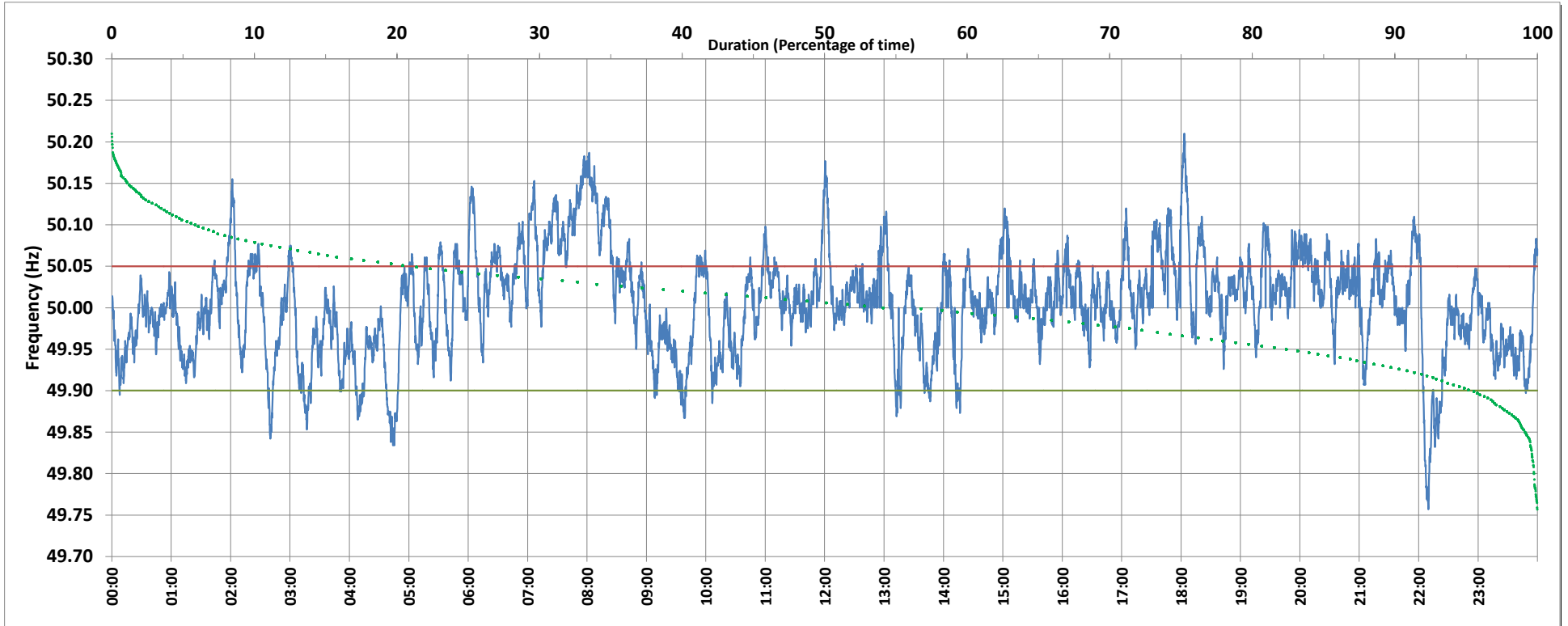


POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI



Frequency profile for 19-Mar-2019 (Tuesday)



| | | | | | | | | | | | | | | | | | | |
|-------|--------|--------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|------------|-------|--------|--------|-------|--------|-------------|-------------|
| <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 | 4.47 | 25.76 | 0.22 | 4.25 | 38.78 | 50.68 | 6.03 | 74.16 | 99.97 | 40.22 | 15.53 | 54.09 | 34.02 | 21.38 | 0.03 | 16.82 | 61.81 | 12.35 |

| | | | | |
|----------------------------|------------------------------------|-----------------------------|---------------|-----------|
| Average Frequency : 50.006 | Frequency Variation Index : 0.0376 | Standard Deviation : 0.0610 | Mileage: 52.5 | FDI: 25.8 |
|----------------------------|------------------------------------|-----------------------------|---------------|-----------|

| Instantaneous Frequency | | |
|-------------------------|--------|----------|
| Max | 50.210 | 18:03:10 |
| Min | 49.757 | 22:09:50 |

| 15 minute Average Frequency | | |
|-----------------------------|--------|----------|
| Max | 50.138 | 8:00:00 |
| Min | 49.884 | 22:15:00 |

| No. of excursions | |
|-------------------|-----|
| above 50.03 Hz | 183 |
| below 49.97 Hz | 82 |
| above 50.00 Hz | 103 |
| below 50.00 Hz | 104 |

| Average time freq per excursion remains | |
|---|---------|
| below 49.97 | 0:04:31 |
| above 50.03 | 0:02:41 |

| | |
|---|---------|
| No. of hours freq outside 49.9-50.05 Hz | 6:12:10 |
|---|---------|

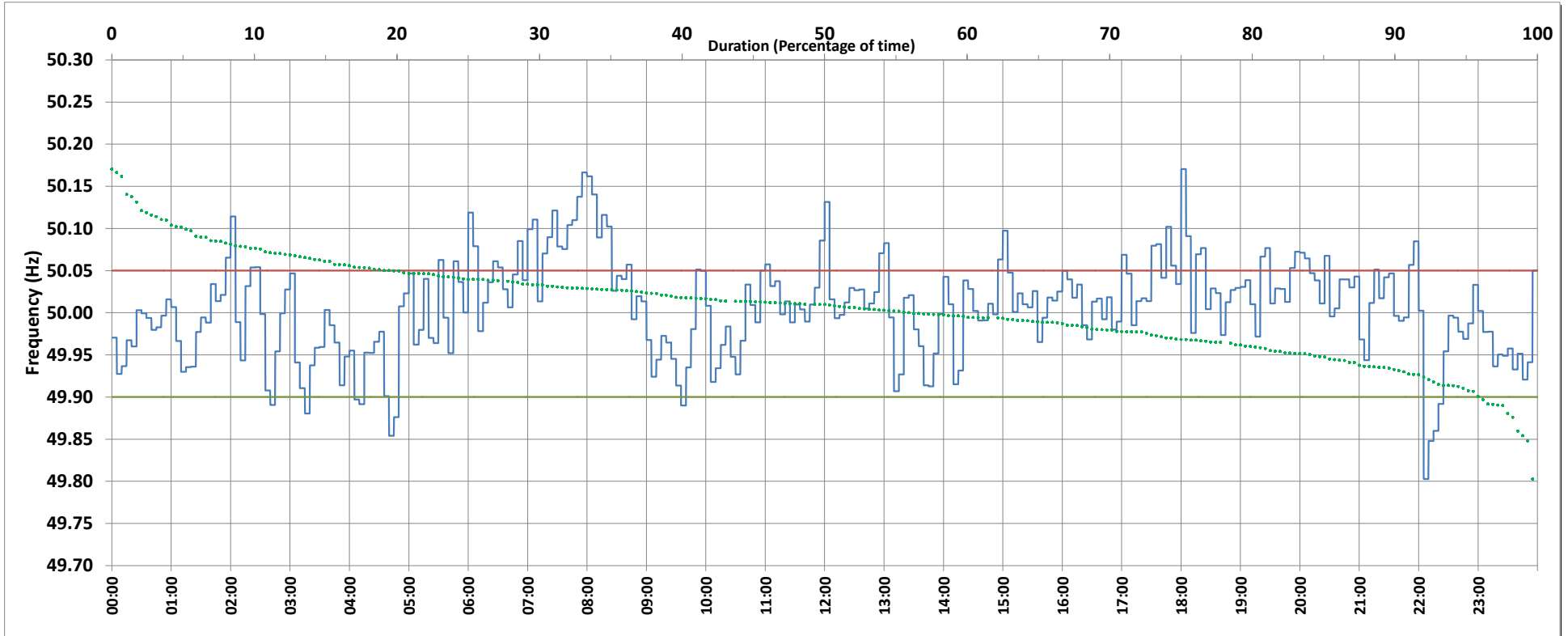
Source : MEERUT:Frequency 10 Sec. (8640 samples)

POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI



5 Min. Average Frequency profile for 19-Mar-2019 (Tuesday)



| | | | | | | | | | | | | | | | | | | |
|-------|--------|--------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|------------|-------|--------|--------|-------|--------|-------------|-------------|
| <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 | 3.82 | 25.35 | 0.00 | 3.82 | 39.93 | 51.04 | 5.21 | 76.39 | 100.00 | 42.71 | 14.58 | 56.25 | 31.94 | 19.79 | 0.00 | 15.6 | 64.6 | 11.8 |

| | | | | |
|----------------------------|-----------------------------------|----------------------------|--------------|-----------|
| Average Frequency : 50.006 | Frequency Variation Index : 0.034 | Standard Deviation : 0.058 | Mileage: 9.8 | FDI: 23.6 |
|----------------------------|-----------------------------------|----------------------------|--------------|-----------|

| Instantaneous Frequency | | |
|-------------------------|--------|----------|
| Max | 50.210 | 18:03:10 |
| Min | 49.757 | 22:09:50 |

| 5 minute Average Frequency | | |
|----------------------------|--------|----------|
| Max | 50.171 | 18:05:00 |
| Min | 49.803 | 22:15:00 |

| No. of excursions | |
|-------------------|----|
| above 50.03 Hz | 36 |
| below 49.97 Hz | 23 |
| above 50.00 Hz | 37 |
| below 50.00 Hz | 37 |

| Average time freq per excursion remains | |
|---|---------|
| below 49.97 | 0:15:52 |
| above 50.03 | 0:12:47 |

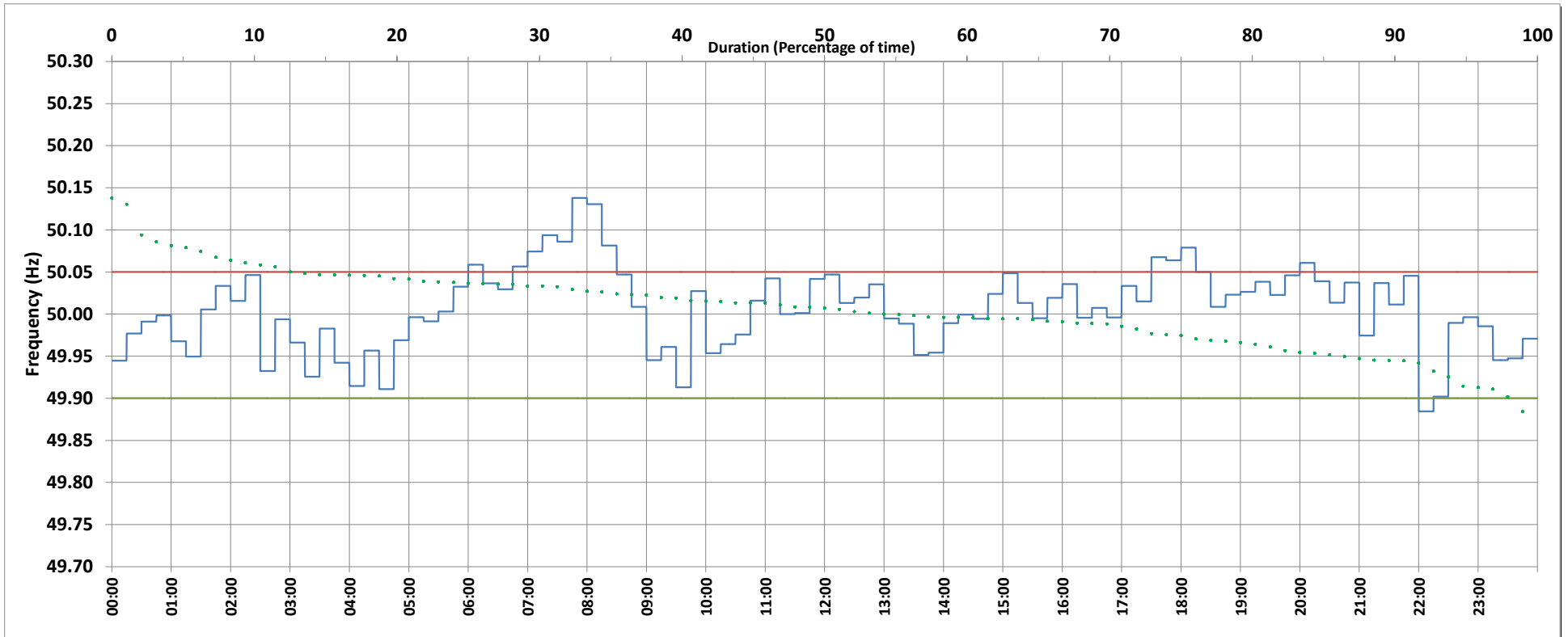
Source : MEERUT:Frequency 5 Min. (288 samples)

POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI



15 Min. Average Frequency profile for 19-Mar-2019 (Tuesday)



| | | | | | | | | | | | | | | | | | | |
|-------|--------|--------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|------------|-------|--------|--------|-------|--------|-------------|-------------|
| <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 | 1.04 | 22.92 | 0.00 | 1.04 | 43.75 | 53.13 | 2.08 | 85.42 | 100.00 | 44.79 | 11.46 | 54.17 | 32.29 | 13.54 | 0.00 | 13.5 | 72.9 | 12.5 |

| | | | | |
|----------------------------|-----------------------------------|----------------------------|--------------|-----------|
| Average Frequency : 50.006 | Frequency Variation Index : 0.023 | Standard Deviation : 0.048 | Mileage: 2.9 | FDI: 14.6 |
|----------------------------|-----------------------------------|----------------------------|--------------|-----------|

| Instantaneous Frequency | | |
|-------------------------|--------|----------|
| Max | 50.210 | 18:03:10 |
| Min | 49.757 | 22:09:50 |

| 15 minute Average Frequency | | |
|-----------------------------|--------|----------|
| Max | 50.138 | 8:00:00 |
| Min | 49.884 | 22:15:00 |

| No. of excursions | |
|-------------------|----|
| above 50.03 Hz | 16 |
| below 49.97 Hz | 10 |
| above 50.00 Hz | 9 |
| below 50.00 Hz | 10 |

| Average time freq per excursion remains | |
|---|---------|
| below 49.97 | 0:33:00 |
| above 50.03 | 0:29:04 |

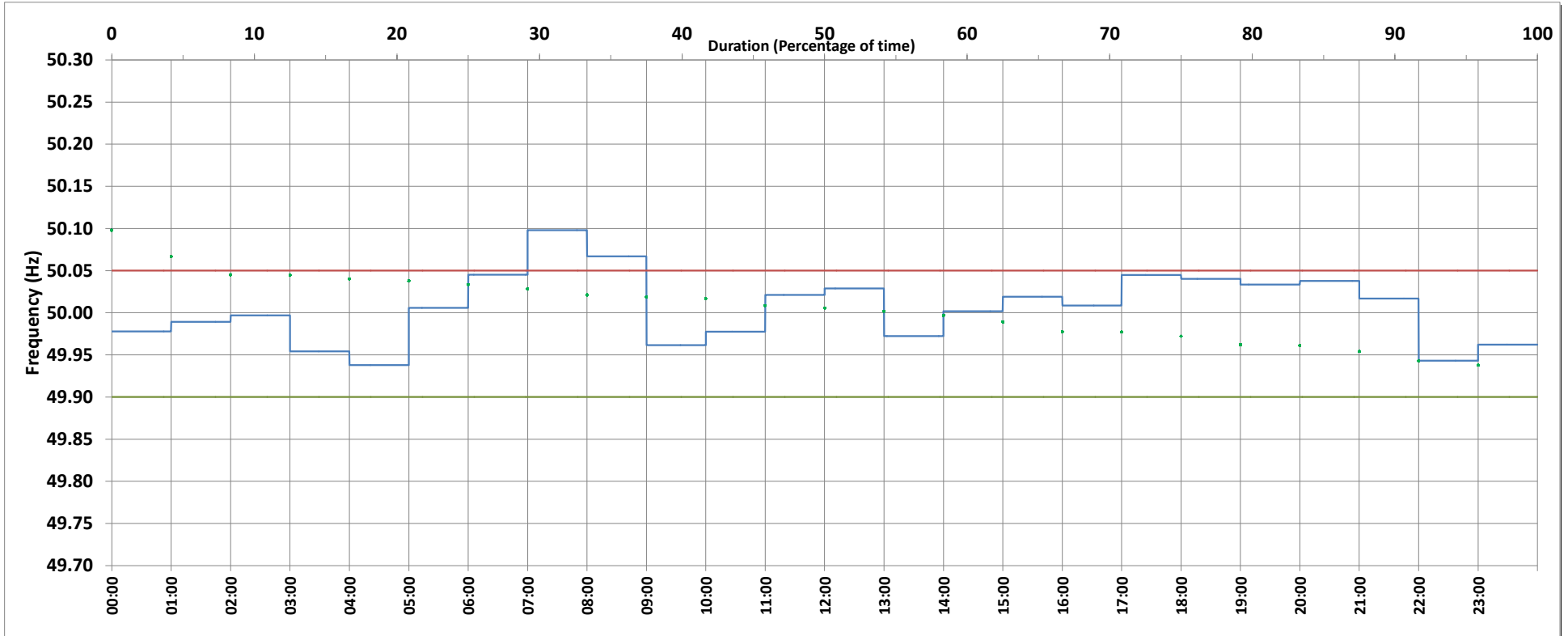
Source : MEERUT:Frequency 15 Min. (96 samples)

POWER SYSTEM OPERATION CORPORATION LIMITED

NATIONAL LOAD DESPATCH CENTRE, NEW DELHI



Hourly Average Frequency profile for 19-Mar-2019 (Tuesday)



| | | | | | | | | | | | | | | | | | | |
|-------|--------|--------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|------------|-------|--------|--------|-------|--------|-------------|-------------|
| <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 | 0.00 | 20.83 | 0.00 | 0.00 | 41.67 | 58.33 | 0.00 | 91.67 | 100.00 | 50.00 | 8.33 | 58.33 | 29.17 | 8.33 | 0.00 | 8.3 | 83.3 | 8.3 |

| | | | | |
|----------------------------|-----------------------------------|----------------------------|--------------|----------|
| Average Frequency : 50.006 | Frequency Variation Index : 0.016 | Standard Deviation : 0.040 | Mileage: 0.7 | FDI: 8.3 |
|----------------------------|-----------------------------------|----------------------------|--------------|----------|

| Instantaneous Frequency | | |
|-------------------------|--------|----------|
| Max | 50.210 | 18:03:10 |
| Min | 49.757 | 22:09:50 |

| An Hour Average Frequency | | |
|---------------------------|--------|---------|
| Max | 50.098 | 8:00:00 |
| Min | 49.938 | 5:00:00 |

| No. of excursions | |
|-------------------|---|
| above 50.03 Hz | 2 |
| below 49.97 Hz | 3 |
| above 50.00 Hz | 3 |
| below 50.00 Hz | 4 |

| Average time freq per excursion remains | |
|---|---------|
| below 49.97 | 1:40:00 |
| above 50.03 | 3:30:00 |

Source : MEERUT:Frequency 60 Min. (24 samples)