



MEGHALAYA POWER TRANSMISSION CORPORATION LTD  
OFFICE OF THE SUPERINTENDING ENGINEER  
STATE LOAD DESPATCH CENTRE

132KV NEHU SUB STATION COMPLEX, Umjerain, Shillong - 793022

Email: sldc.shg@gmail.com

Fax No. 0364-2551967/2550020

No. SE/SLDC/MSERC/2017-18/116

Dated, Shillong, the 7<sup>th</sup> July 2017

To

The Superintending Engineer (P & M)  
O/O The Director (Generation)  
MePGCL, Shillong

Sub: Infirm Power from New Umtra HEP (2X20MW) – Regarding.

Ref:- Your Letter No. MePGCL/D/GEN/Misc-43/2008/Pt-IX/29 Dt. 04.07.17

Sir,

With reference to the subject cited above, I am to inform you that there are inadequate metering infrastructures for calculation of infirm power of NUHEP. For arriving at the correct cost of infirm power, metering shall be in line with the specifications laid down by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006. The following metering infrastructure needs to be in place:-

1. The Meter type shall be in line with Section 4 of the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 which states:-  
“(1) All interface meters, consumer meters and energy accounting and audit meters shall be of static type.  
(2) The meters not complying with these regulations shall be replaced by the licensee on his own or on request of the consumer.....”
2. Accuracy class of the meter shall be as per Section 8 of Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.
3. Standard of the interface meter shall be in line with part II of Schedule of the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.
4. In view of the recent developments in the context of fast development in the Indian Electricity market, in addition to the above, it is felt that all meters shall have scope for 5 minutes time block storage of data.
5. Scheduling and Despatch: Through both practice and theory, it has become evident that grids are operated in a manner where scheduling and despatch are implemented over short time durations (e.g., as low as five minutes) have significantly lower overall costs to consumers as the need for ancillary resources decreases. Currently, in India, scheduling occurs on a day-ahead basis while despatch occurs on a 15-minute basis which will be upgrade in the next few years to a 5-minute basis.
6. Forum of Load Despatchers (FOLD) in its 19th meeting discussed power Markets (i) 5-minute OTC (bilateral) markets; (ii) Power Exchanges – 5 minute price discovery.
7. As per Scheduling, Accounting, Metering and Settlement of Transaction in electricity (SAMAST) Report, Technical Committee of the Forum of Regulators, 2016 stipulates “.....The States who are about to implement the intrastate accounting and settlement system could leapfrog and go for scheduling and settlement at 5-minutes interval. The scheduling software and the energy meters specifications could be in line with the above. All the other States and the Regional Pools shall also endeavour to have systems and logistics for 5-minutes scheduling and settlement system in the next five years”.





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8. In the 133<sup>rd</sup> Operation Co-ordination Committee (OCC) meeting held at Guwahati, it was proposed for the implementation of SAMAST across all NER states.

The present meters at New Umtru HEP are not in line with the metering regulation of the country as it record data for 30 - minutes time block, whereas as per the CERC's "DSM Regulations", 2014, the meter should record data for 15 minutes time block.

On account of non availability of metering infrastructures as stipulated in various regulations of CEA, CERC and MSERC, it is *not possible to arrive at the actual cost of INFIRM POWER of New Umtru HEP*. Thus the calculations could only arrive at the approximate cost where various assumptions were made.

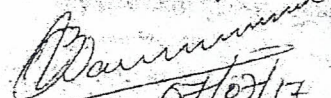
The following assumptions were based for calculations of infirm power:-

- (i) Average frequency calculated for two time blocks.
- (ii) Energy generated was calculated for two time blocks.
- (iii) Station service calculated for the entire month instead of block-wise.
- (iv) Average frequency calculated for the entire month to arrive at the cost of station service

In view of the above, it is felt that the metering system in the State inclusive of all type of meters viz. (i) interface meters, (ii) consumer meters and (iii) energy accounting and audit meters shall have scope for future expansion and convertible to 5 - minutes time block.

Encl.: Infirm power calculations.

Yours faithfully

  
(B. Wankhar)

Superintending Engineer  
State Load Despatch Centre  
MePTCL, Shillong

Memo No. SE/SLDC/MSERC/2017-18/116(a)

Dated, Shillong, the 7<sup>th</sup> July 2017

Copy to:

1. The Director (Transmission), MePTCL, Shillong.
2. The Chief Engineer, Generation, MePGCL, Shillong.
3. The Superintending Engineer (Generation Circle - I), MePGCL, Umiam.
4. The Executive Engineer (SP), MePTCL, Umiam.
5. The Executive Engineer, Generation Division - III, Byrnihat.
6. The Executive Engineer, SLDC, MeECL, Shillong. This has a reference to letter No. EE/SLDC/T-14/2017018/65 dt 07.07.17.

  
SUPERINTENDING ENGINEER

o/l



# COST OF INFIRM POWER DURING APRIL 2017

| Date      | Schedule (KWh) | Actual Infirm Power Injected (KWh) | Total DSM Units (KWh) | DSM Average Rate (Rs) | Amount (Rs.) | Net Amount (Rs.) |
|-----------|----------------|------------------------------------|-----------------------|-----------------------|--------------|------------------|
| 1-Apr-17  | 0.00           | 0.00                               | 0.00                  | 226.61                | 0.00         | 0.00             |
| 2-Apr-17  | 0.00           | 0.00                               | 0.00                  | 205.70                | 0.00         | 0.00             |
| 3-Apr-17  | 0.00           | 0.00                               | 0.00                  | 182.62                | 0.00         | 0.00             |
| 4-Apr-17  | 0.00           | 0.00                               | 0.00                  | 198.26                | 0.00         | 0.00             |
| 5-Apr-17  | 0.00           | 0.00                               | 0.00                  | 187.68                | 0.00         | 0.00             |
| 6-Apr-17  | 0.00           | 0.00                               | 0.00                  | 197.23                | 0.00         | 0.00             |
| 7-Apr-17  | 0.00           | 0.00                               | 0.00                  | 202.86                | 0.00         | 0.00             |
| 8-Apr-17  | 0.00           | 0.00                               | 0.00                  | 234.32                | 0.00         | 0.00             |
| 9-Apr-17  | 0.00           | 0.00                               | 0.00                  | 175.24                | 0.00         | 0.00             |
| 10-Apr-17 | 0.00           | 0.00                               | 0.00                  | 121.36                | 0.00         | 0.00             |
| 11-Apr-17 | 0.00           | 0.00                               | 0.00                  | 159.02                | 0.00         | 0.00             |
| 12-Apr-17 | 0.00           | 0.00                               | 0.00                  | 142.03                | 0.00         | 0.00             |
| 13-Apr-17 | 0.00           | 0.00                               | 0.00                  | 103.77                | 0.00         | 0.00             |
| 14-Apr-17 | 0.00           | 0.00                               | 0.00                  | 164.56                | 0.00         | 0.00             |
| 15-Apr-17 | 0.00           | 0.00                               | 0.00                  | 238.23                | 0.00         | 0.00             |
| 16-Apr-17 | 0.00           | 0.00                               | 0.00                  | 257.32                | 0.00         | 0.00             |
| 17-Apr-17 | 0.00           | 0.00                               | 0.00                  | 257.33                | 0.00         | 0.00             |
| 18-Apr-17 | 0.00           | 0.00                               | 0.00                  | 188.34                | 0.00         | 0.00             |
| 19-Apr-17 | 0.00           | 0.00                               | 0.00                  | 234.38                | 0.00         | 0.00             |
| 20-Apr-17 | 0.00           | 0.00                               | 0.00                  | 248.35                | 0.00         | 0.00             |
| 21-Apr-17 | 0.00           | 1913.30                            | 1913.30               | 266.81                | 5844.30      | 5844.30          |
| 22-Apr-17 | 0.00           | 27502.60                           | 27502.60              | 271.60                | 84311.08     | 84311.08         |
| 23-Apr-17 | 0.00           | 0.00                               | 0.00                  | 266.70                | 0.00         | 0.00             |
| 24-Apr-17 | 0.00           | 75693.70                           | 75693.70              | 273.54                | 234811.48    | 234811.48        |
| 25-Apr-17 | 0.00           | 39273.00                           | 39273.00              | 207.86                | 91575.16     | 91575.16         |
| 26-Apr-17 | 0.00           | 197640.00                          | 197640.00             | 215.83                | 389291.89    | 389291.89        |
| 27-Apr-17 | 0.00           | 76939.60                           | 76939.60              | 264.07                | 212755.88    | 212755.88        |
| 28-Apr-17 | 0.00           | 59517.00                           | 59517.00              | 267.62                | 135154.17    | 135154.17        |
| 29-Apr-17 | 0.00           | 181711.20                          | 181711.20             | 233.11                | 365338.34    | 365338.34        |
| 30-Apr-17 | 0.00           | 162928.10                          | 162928.10             | 181.81                | 282763.08    | 282763.08        |
| 1-May-17  | 0.00           | 0.00                               | 0.00                  | 183.36                | 0.00         | 0.00             |
| Total     | 0.00           | 823118.50                          | 823118.50             | 211.53                | 1801845.38   | 1801845.38       |

|   |            |
|---|------------|
| Station service consumed by NUHEP (New Umtru HEP) during April 2017 (KWH)                     | 8231.19    |
| Cost of Station service consumed by NUHEP (New Umtru HEP) during April 2017 (Rs.)             | 35827.21   |
| Transformation loss (0.5%) NUHEP (New Umtru HEP) during April 2016 (KWH)                      | 4115.59    |
| Cost of Transformation loss (0.5%) NUHEP (New Umtru HEP) during April 2017 (Rs.)              | 8705.81    |
| Cost of Infirm Power less Station service consumed by NUHEP (New Umtru HEP) during April 2017 | 1757312.00 |

List of Some Assumptions made:-

1. Average frequency calculated for two time blocks.
2. Energy generated was calculated for two time blocks.
3. Station service calculated for the entire month instead of block-wise.
4. Average frequency calculated for the entire month arrived at the cost of station service.

Executive Engineer  
State Load Despatch Centre  
MePTCL, Shillong.

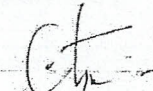


**COST OF INFIRM POWER DURING MAY 2017**

| Date  | Schedule (KWh) | Actual Infirm Power injected (KWh) | Total DSM Units (KWh) | DSM Average Rate (Rs) | Amount (Rs.) | Net Amount (Rs.) |
|---|----------------|------------------------------------|-----------------------|-----------------------|--------------|------------------|
| 1-May-17  | 0.00           | 194629.60                          | 194629.60             | 175.26                | 372140.53    | 372140.53        |
| 2-May-17  | 0.00           | 227837.80                          | 227837.80             | 322.99                | 735450.26    | 735450.26        |
| 3-May-17  | 0.00           | 236414.10                          | 236414.10             | 397.80                | 891706.04    | 891706.04        |
| 4-May-17  | 0.00           | 190121.00                          | 190121.00             | 258.20                | 547395.46    | 547395.46        |
| 5-May-17  | 0.00           | 164561.10                          | 164561.10             | 259.98                | 404936.49    | 404936.49        |
| 6-May-17  | 0.00           | 163612.60                          | 163612.60             | 255.83                | 500163.66    | 500163.66        |
| 7-May-17  | 0.00           | 51.40                              | 51.40                 | 198.92                | 118.64       | 118.64           |
| 8-May-17  | 0.00           | 0.00                               | 0.00                  | 194.90                | 0.00         | 0.00             |
| 9-May-17  | 0.00           | 0.00                               | 0.00                  | 173.85                | 0.00         | 0.00             |
| 10-May-17   | 0.00           | 0.00                               | 0.00                  | 194.57                | 0.00         | 0.00             |
| 11-May-17   | 0.00           | 0.00                               | 0.00                  | 270.92                | 0.00         | 0.00             |
| 12-May-17   | 0.00           | 0.00                               | 0.00                  | 303.73                | 0.00         | 0.00             |
| 13-May-17   | 0.00           | 0.00                               | 0.00                  | 232.77                | 0.00         | 0.00             |
| 14-May-17   | 0.00           | 0.00                               | 0.00                  | 168.48                | 0.00         | 0.00             |
| 15-May-17   | 0.00           | 0.00                               | 0.00                  | 137.29                | 0.00         | 0.00             |
| 16-May-17   | 0.00           | 0.00                               | 0.00                  | 151.89                | 0.00         | 0.00             |
| 17-May-17   | 0.00           | 0.00                               | 0.00                  | 201.29                | 0.00         | 0.00             |
| 18-May-17   | 0.00           | 0.00                               | 0.00                  | 212.07                | 0.00         | 0.00             |
| 19-May-17   | 0.00           | 72.30                              | 72.30                 | 166.70                | 46.74        | 46.74            |
| 20-May-17   | 0.00           | 32352.80                           | 32352.80              | 204.80                | 82372.61     | 82372.61         |
| 21-May-17   | 0.00           | 0.00                               | 0.00                  | 123.43                | 0.00         | 0.00             |
| 22-May-17   | 0.00           | 0.00                               | 0.00                  | 204.46                | 0.00         | 0.00             |
| 23-May-17   | 0.00           | 0.00                               | 0.00                  | 264.06                | 0.00         | 0.00             |
| 24-May-17   | 0.00           | 0.00                               | 0.00                  | 223.01                | 0.00         | 0.00             |
| 25-May-17   | 0.00           | 0.00                               | 0.00                  | 178.07                | 0.00         | 0.00             |
| 26-May-17   | 0.00           | 0.00                               | 0.00                  | 122.56                | 0.00         | 0.00             |
| 27-May-17   | 0.00           | 0.00                               | 0.00                  | 117.45                | 0.00         | 0.00             |
| 28-May-17   | 0.00           | 0.00                               | 0.00                  | 132.12                | 0.00         | 0.00             |
| 29-May-17   | 0.00           | 0.00                               | 0.00                  | 179.33                | 0.00         | 0.00             |
| 30-May-17   | 0.00           | 0.00                               | 0.00                  | 179.72                | 0.00         | 0.00             |
| 31-May-17   | 0.00           | 0.00                               | 0.00                  | 156.85                | 0.00         | 0.00             |
| Total   | 0.00           | 1209652.70                         | 1209652.70            | 205.27                | 3534330.43   | 3534330.43       |
| Station service consumed by NUHEP (New Umtru HEP) during May 2017 (KWH)                           |                |                                    |                       |                       |              | 6379.00          |
| Cost of Station service consumed by NUHEP (New Umtru HEP) during May 2017 (Rs.)                   |                |                                    |                       |                       |              | 13094.00         |
| Transformation loss (0.5%) NUHEP (New Umtru HEP) during May 2017 (KWH)                            |                |                                    |                       |                       |              | 6048.26          |
| Cost of Transformation loss (0.5%) NUHEP (New Umtru HEP) during May 2017 (Rs.)                    |                |                                    |                       |                       |              | 12415.00         |
| Cost of Infirm Power less Station service consumed by NUHEP (New Umtru HEP) during May 2017 (Rs.) |                |                                    |                       |                       |              | 3508821.00       |

**List of Some Assumptions made:-**

1. Average frequency calculated for two time blocks.
2. Energy generated was calculated for two time blocks.
3. Station service calculated for the entire month instead of block-wise.
4. Average frequency calculated for the entire month arrived at the cost of station service.

  
**Executive Engineer**  
**State Load Despatch Centre.**  
**MePTCL, Shillong.**

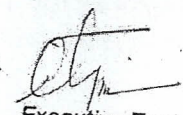


**COST OF INFIRM POWER DURING JUNE 2017**

| e   | Schedule<br>(KWh) | Actual Infirm<br>Power Injected<br>(KWh) | Total DSM Units<br>(KWh) | DSM Average<br>Rate<br>(Rs) | Amount (Rs.)      | Net Amount (Rs.)  |
|---|-------------------|--|--------------------------|-----------------------------|-------------------|-------------------|
| Jun-17  | 0.00              | 0.00                                     | 0.00                     | 262.05                      | 0.00              | 0.00              |
| Jun-17  | 0.00              | 0.00                                     | 0.00                     | 262.71                      | 0.00              | 0.00              |
| 3-Jun-17  | 0.00              | 0.00                                     | 0.00                     | 265.63                      | 0.00              | 0.00              |
| 4-Jun-17  | 0.00              | 0.00                                     | 0.00                     | 257.65                      | 0.00              | 0.00              |
| 5-Jun-17  | 0.00              | 0.00                                     | 0.00                     | 239.61                      | 0.00              | 0.00              |
| 6-Jun-17  | 0.00              | 80408.60                                 | 80408.60                 | 217.33                      | 164928.03         | 164928.03         |
| 7-Jun-17  | 0.00              | 201387.60                                | 201387.60                | 132.74                      | 374037.78         | 374037.78         |
| 8-Jun-17  | 0.00              | 201387.60                                | 201387.60                | 136.98                      | 294823.76         | 294823.76         |
| 9-Jun-17  | 0.00              | 183936.70                                | 183936.70                | 153.21                      | 276096.15         | 276096.15         |
| 10-Jun-17   | 0.00              | 105248.60                                | 105248.60                | 175.05                      | 208994.24         | 208994.24         |
| 11-Jun-17   | 0.00              | 0.00                                     | 0.00                     | 158.02                      | 0.00              | 0.00              |
| 12-Jun-17   | 0.00              | 112331.60                                | 112331.60                | 187.60                      | 225196.08         | 225196.08         |
| 13-Jun-17   | 0.00              | 107826.70                                | 107826.70                | 203.52                      | 189577.83         | 189577.83         |
| 14-Jun-17   | 0.00              | 133457.20                                | 133457.20                | 206.86                      | 198520.95         | 198520.95         |
| 15-Jun-17   | 0.00              | 128136.70                                | 128136.70                | 209.40                      | 286550.76         | 286550.76         |
| 16-Jun-17   | 0.00              | 160974.50                                | 160974.50                | 178.57                      | 276790.88         | 276790.88         |
| 17-Jun-17   | 0.00              | 166539.20                                | 166539.20                | 170.06                      | 235428.58         | 235428.58         |
| 18-Jun-17   | 0.00              | 0.00                                     | 0.00                     | 209.83                      | 0.00              | 0.00              |
| 19-Jun-17   | 0.00              | 239524.90                                | 239524.90                | 109.11                      | 254418.74         | 254418.74         |
| 20-Jun-17   | 0.00              | 203164.20                                | 203164.20                | 125.10                      | 373194.45         | 373194.45         |
| 21-Jun-17   | 0.00              | 205876.60                                | 205876.60                | 165.08                      | 344737.66         | 344737.66         |
| 22-Jun-17   | 0.00              | 210339.80                                | 210339.80                | 179.41                      | 360120.02         | 360120.02         |
| 23-Jun-17   | 0.00              | 226773.60                                | 226773.60                | 218.13                      | 496235.96         | 496235.96         |
| 24-Jun-17   | 0.00              | 0.00                                     | 0.00                     | 178.30                      | 0.00              | 0.00              |
| 25-Jun-17   | 0.00              | 0.00                                     | 0.00                     | 210.17                      | 0.00              | 0.00              |
| 26-Jun-17   | 0.00              | 41760.00                                 | 41760.00                 | 234.28                      | 93732.78          | 93732.78          |
| 27-Jun-17   | 0.00              | 217414.30                                | 217414.30                | 183.80                      | 442155.24         | 442155.24         |
| 28-Jun-17   | 0.00              | 322211.60                                | 322211.60                | 138.51                      | 504438.90         | 504438.90         |
| 29-Jun-17   | 0.00              | 430118.60                                | 430118.60                | 196.98                      | 773893.91         | 773893.91         |
| 30-Jun-17   | 0.00              | 377111.60                                | 377111.60                | 206.26                      | 764370.15         | 764370.15         |
| 1-May-17  | 0.00              | 0.00                                     | 0.00                     | 824.04                      | 0.00              | 0.00              |
| <b>Total</b>  | <b>0.00</b>       | <b>4055930.20</b>                        | <b>4055930.20</b>        | <b>212.77</b>               | <b>7138242.86</b> | <b>7138242.86</b> |
| Station service consumed by NUHEP (New Umtru HEP) during June 2017 (KWH)                              |                   |  |                          |                             |                   | 40559.30          |
| Cost of Station service consumed by NUHEP (New Umtru HEP) during June 2017 (Rs.)                      |                   |  |                          |                             |                   | 178110.38         |
| Transformation loss (0.5%) NUHEP (New Umtru HEP) during June 2016 (KWH)                               |                   |  |                          |                             |                   | 20279.65          |
| Cost of Transformation loss (0.5%) NUHEP (New Umtru HEP) during June 2017 (Rs.)                       |                   |  |                          |                             |                   | 43149.68          |
| Cost of Infirm Power less Station service consumed by NUHEP (New Umtru HEP) during June 2017          |                   |  |                          |                             |                   | 6916983.00        |
| <b>E &amp; OE** Say (Rupees Sixty Nine Lakhs Sixteen Thousand Nine Hundred and Eighty Three) Only</b> |                   |  |                          |                             |                   |                   |

List of Some Assumptions made:-

1. Average frequency calculated for two time blocks.
2. Energy generated was calculated for two time blocks.
3. Station service calculated for the entire month instead of block-wise.
4. Average frequency calculated for the entire month arrived at the cost of station service.

  
 Executive Engineer  
 State Load Dept  
 MePTCL, Shimla