

## Daily System Generation Summary on Friday

Friday, November 23, 2018

### Availability at Daily Maximum Demand Hour

|                     |                  |
|---------------------|------------------|
| ST-Coal             | 0 MW             |
| ST-Gas              | 0 MW             |
| ST-Oil              | 0 MW             |
| Gas                 | 1,968 MW         |
| Hydro               | 2,454 MW         |
| Distillate          | 0 MW             |
| <b>Total TNB</b>    | <b>4,422 MW</b>  |
| <b>Total IPP</b>    | <b>17,337 MW</b> |
| <b>Total Co-Gen</b> | <b>63 MW</b>     |
| <b>Total System</b> | <b>22,394 MW</b> |

### Generation Mix

| Type                    | MWh            | Percentage      |
|-------------------------|----------------|-----------------|
| Gas                     | 21,087         | 5.86 %          |
| Hydro                   | 13,188         | 3.66 %          |
| <b>Total TNB</b>        | <b>34,275</b>  | <b>9.52 %</b>   |
| ST-Coal                 | 220,957        | 61.36 %         |
| Gas                     | 104,142        | 28.92 %         |
| <b>Total IPP</b>        | <b>325,099</b> | <b>90.28 %</b>  |
| Co-Gen                  | 1,454          | 0.40 %          |
| <b>Total Co-Gen</b>     | <b>1,454</b>   | <b>0.40 %</b>   |
| <b>Total Generation</b> | <b>360,828</b> | <b>100.20 %</b> |
| PLTG                    | 32             | 0.01 %          |
| HVDC                    | 684            | 0.19 %          |
| <b>Interconnection</b>  | <b>716</b>     | <b>0.20 %</b>   |
| <b>Net Energy</b>       | <b>360,112</b> | <b>100.00 %</b> |

### Maximum Demand Record

|                 |             |
|-----------------|-------------|
| Date: 8/15/2018 | 18,338 MW   |
| Date: 8/15/2018 | 388,524 MWH |

### Set On Bus, TNB, IPP And MD

|                               |               |
|-------------------------------|---------------|
| Daily Maximum Demand Hour at: | 16:30:00 Hour |
| Total Set On Bus              | 18,190 MW     |
| TNB Generation                | 2,270 MW      |
| IPP Generation                | 14,572 MW     |
| Spinning Reserve              | 1,290 MW      |
| Maximum Demand                | 16,928 MW     |
| Net Energy                    | 360,112 MWH   |
| Load Factor                   | 88.64 %       |

### Fuel Cost

|               |                  |
|---------------|------------------|
| Total Cost:   | 68,600,436.85 RM |
| Cost per Unit | 19.73 cents/kWH  |

### Average Spinning Reserve During Peak Hour

| Type         | MW           |
|--------------|--------------|
| GT           | 326          |
| Hydro        | 396          |
| Syncon       | 636          |
| Thermal      | 223          |
| <b>Total</b> | <b>1,581</b> |

### Time Weather Temperature

|           |       |    |
|-----------|-------|----|
| Afternoon | Hot   | 34 |
| Morning   | Sunny | 24 |

### Gas Usage

| Station          | (mmscfd)   |
|------------------|------------|
| GLGR             | 46         |
| TJGS             | 109        |
| <b>Total TNB</b> | <b>156</b> |
| CBPS             | 52         |
| KLPP             | 95         |
| MPSS             | 2          |
| NPRI             | 153        |
| PGLA             | 112        |
| PLPS             | 82         |
| PTEK             | 3          |
| SGRI             | 57         |
| SKSP             | 49         |
| YPKA             | 81         |
| <b>Total IPP</b> | <b>687</b> |
| <b>Total Gas</b> | <b>842</b> |

**Total Gas Required 842**

### Alternate Fuel Usage

| Station      | (mmscfd) |
|--------------|----------|
| <b>Total</b> | <b>0</b> |

### Hourly System MW Generation

|              | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:00 | 08:00 | 09:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| System Total | 14614 | 13953 | 13492 | 13117 | 12733 | 12684 | 12910 | 12828 | 13197 | 14847 | 15836 | 16275 | 16263 | 15702 | 16018 | 16669 | 16869 | 16595 | 15727 | 15968 | 16499 | 16288 | 15702 | 15372 |

Prepared By: -Select Name-

Checked By: -Select Name-

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### Daily MW Generation on Friday

[illegible]

## Daily MW Generation on Friday

| Station         | Unit | 0000  | 0100  | 0200  | 0300  | 0400  | 0500  | 0600  | 0700  | 0800  | 0900  | 1000  | 1100  | 1200  | 1300  | 1400  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2100  | 2200  | 2300  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |
|-----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| Total Gen       |      | 14634 | 14239 | 13968 | 13642 | 13521 | 13261 | 13119 | 12925 | 12786 | 12767 | 12715 | 12660 | 12936 | 13067 | 12897 | 12821 | 13219 | 14176 | 14841 | 15431 | 15809 | 16043 | 16267 | 16373 | 16256 | 15971 | 15698 | 15749 | 15975 | 16309 | 16608 | 16722 | 16845 | 16900 | 16669 | 16205 | 15771 | 15494 | 16005 | 16692 | 16513 | 16474 | 16315 | 16148 | 15759 | 15635 | 15391 | 15178 |    |
| TIE-EGAT        |      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0  |
| TIE-HVDC        |      | 29    | 31    | 31    | 31    | 31    | 31    | 31    | 31    | 31    | 31    | 30    | 32    | 31    | 29    | 31    | 29    | 30    | 30    | 30    | 30    | 30    | 30    | 30    | 30    | 30    | 31    | 30    | 29    | 30    | 31    | 31    | 31    | 31    | 30    | 30    | 0     | 0     | 0     | 31    | 30    | 30    | 31    | 31    | 30    | 30    | 30    | 30    | 30    | 30 |
| TIE-PLTG        |      | -10   | -30   | -15   | 23    | -1    | -12   | -29   | -19   | 22    | 15    | 0     | 12    | -5    | 0     | 40    | 36    | 0     | 30    | -18   | -2    | -23   | -18   | -19   | -9    | 20    | 23    | 39    | 4     | 5     | 17    | -39   | -26   | 3     | -25   | 58    | 9     | 54    | 32    | 6     | -6    | -16   | -28   | -4    | 20    | 27    | -29   | -11   | -40   |    |
| Interconnection |      | 20    | 1     | 15    | 54    | 29    | 19    | 2     | 12    | 53    | 46    | 31    | 42    | 26    | 31    | 69    | 67    | 30    | 60    | 13    | 28    | 7     | 13    | 12    | 22    | 50    | 53    | 71    | 34    | 34    | 47    | -7    | 4     | 34    | 6     | 88    | 9     | 54    | 32    | 37    | 24    | 14    | 3     | 27    | 51    | 57    | 1     | 19    | -10   |    |
| System Total    |      | 14614 | 14238 | 13953 | 13588 | 13492 | 13242 | 13117 | 12913 | 12733 | 12721 | 12684 | 12618 | 12910 | 13036 | 12828 | 12756 | 13197 | 14129 | 14847 | 15425 | 15836 | 16074 | 16275 | 16399 | 16263 | 15982 | 15702 | 15773 | 16018 | 16334 | 16669 | 16789 | 16869 | 16928 | 16595 | 16215 | 15727 | 15465 | 15968 | 16668 | 16499 | 16471 | 16288 | 16097 | 15702 | 15634 | 15372 | 15188 |    |
| SRev ST-Coal    |      | 280   | 320   | 408   | 409   | 410   | 402   | 405   | 424   | 413   | 426   | 405   | 404   | 411   | 407   | 410   | 412   | 409   | 408   | 405   | 381   | 219   | 205   | 190   | 197   | 210   | 200   | 203   | 198   | 196   | 187   | 197   | 192   | 211   | 206   | 217   | 214   | 257   | 373   | 254   | 208   | 199   | 209   | 209   | 216   | 207   | 221   | 201   | 204   |    |
| SRev OCGT-Gas   |      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 5     | 5     | 5     | 4     | 82    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |    |
| SRev CCGT-Gas   |      | 817   | 945   | 920   | 991   | 957   | 1230  | 1368  | 1540  | 1686  | 1696  | 1645  | 1687  | 1409  | 1299  | 1466  | 1513  | 1126  | 747   | 361   | 364   | 339   | 371   | 252   | 274   | 327   | 308   | 490   | 310   | 381   | 368   | 278   | 274   | 296   | 288   | 448   | 411   | 569   | 612   | 448   | 171   | 289   | 235   | 269   | 306   | 467   | 429   | 632   | 499   |    |
| SRev ST-Gas     |      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0  |
| SRev Gas        |      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0  |
| SRev Co-Gen     |      | 6     | -1    | 0     | -1    | 0     | -2    | 0     | -1    | -1    | -1    | -2    | -3    | -2    | -3    | -3    | -5    | -3    | -2    | 1     | 2     | 2     | 2     | 7     | 5     | 8     | 7     | 7     | 8     | 8     | 7     | 7     | 11    | 7     | 5     | 5     | 6     | 7     | 4     | 3     | 2     | 3     | 3     | 1     | 3     | 2     | 2     | 2     | 2     |    |
| Syncon          |      | 1013  | 862   | 1013  | 1013  | 1013  | 1013  | 1013  | 1013  | 1013  | 1013  | 1013  | 1200  | 1049  | 675   | 826   | 826   | 826   | 826   | 1200  | 777   | 489   | 489   | 489   | 489   | 862   | 1049  | 1049  | 948   | 489   | 403   | 403   | 403   | 403   | 403   | 639   | 928   | 777   | 777   | 403   | 403   | 590   | 777   | 1013  | 1099  | 1099  | 1099  | 1099  | 1099  |    |
| Hydro           |      | 147   | 277   | 134   | 148   | 145   | 145   | 146   | 147   | 150   | 149   | 133   | 150   | 143   | 271   | 276   | 149   | 145   | 133   | 135   | 136   | 443   | 529   | 509   | 401   | 449   | 391   | 292   | 325   | 331   | 579   | 446   | 441   | 423   | 383   | 456   | 337   | 253   | 525   | 398   | 493   | 562   | 458   | 398   | 183   | 251   | 199   | 160   | 158   |    |
| S.Reserve Total |      | 2263  | 2403  | 2475  | 2560  | 2525  | 2788  | 2932  | 3123  | 3261  | 3283  | 3194  | 3251  | 3161  | 3023  | 2824  | 2895  | 2503  | 2112  | 1728  | 2083  | 1780  | 1596  | 1447  | 1366  | 1483  | 1768  | 2041  | 1891  | 1864  | 1630  | 1331  | 1326  | 1345  | 1290  | 1533  | 1689  | 2014  | 2291  | 1880  | 1277  | 1456  | 1495  | 1654  | 1746  | 2026  | 1950  | 2094  | 1962  |    |