

## Daily System Generation Summary on Friday

Friday, May 31, 2019

### Availability at Daily Maximum Demand Hour

|              |           |
|--------------|-----------|
| ST-Coal      | 0 MW      |
| ST-Gas       | 0 MW      |
| ST-Oil       | 0 MW      |
| Hydro        | 2,417 MW  |
| Distillate   | 0 MW      |
| Total TNB    | 2,417 MW  |
| Total IPP    | 16,665 MW |
| Total Co-Gen | 0 MW      |
| Total System | 21,888 MW |

### Generation Mix

| Type                    | MWh            | Percentage      |
|-------------------------|----------------|-----------------|
| Hydro                   | 8,461          | 2.29 %          |
| Gas                     | 35,570         | 9.63 %          |
| <b>Total TNB</b>        | <b>44,031</b>  | <b>11.92 %</b>  |
| ST-Coal                 | 219,812        | 59.51 %         |
| LSS                     | 1,894          | 0.51 %          |
| Gas                     | 102,932        | 27.87 %         |
| <b>Total IPP</b>        | <b>324,638</b> | <b>87.89 %</b>  |
| Co-Gen                  | 1,542          | 0.42 %          |
| <b>Total Co-Gen</b>     | <b>1,542</b>   | <b>0.42 %</b>   |
| <b>Total Generation</b> | <b>370,211</b> | <b>100.23 %</b> |
| PLTG                    | 111            | 0.03 %          |
| HVDC                    | 731            | 0.20 %          |
| <b>Interconnection</b>  | <b>842</b>     | <b>0.23 %</b>   |
| <b>Net Energy</b>       | <b>369,369</b> | <b>100.00 %</b> |

### Maximum Demand Record

|                 |             |
|-----------------|-------------|
| Date: 4/18/2019 | 18,566 MW   |
| Date: 4/18/2019 | 391,845 MWH |

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

|                               |               |
|-------------------------------|---------------|
| Daily Maximum Demand Hour at: | 15:30:00 Hour |
| Total Set On Bus              | 19,230 MW     |
| TNB Generation                | 2,373 MW      |
| IPP Generation                | 14,890 MW     |
| Spinning Reserve              | 1,909 MW      |
| Maximum Demand                | 17,281 MW     |
| Net Energy                    | 369,369 MWH   |
| Load Factor                   | 89.06 %       |

### Fuel Cost

|               |                  |
|---------------|------------------|
| Total Cost:   | 67,070,709.63 RM |
| Cost per Unit | 18.11 cents/kWH  |

### Average Spinning Reserve During Peak Hour

| Type         | MW           |
|--------------|--------------|
| GT           | 724          |
| Hydro        | 268          |
| Syncon       | 987          |
| Thermal      | 145          |
| <b>Total</b> | <b>2,124</b> |

| Time      | Weather | Temperature |
|-----------|---------|-------------|
| Afternoon | Hot     | 32          |
| Morning   | Sunny   | 28          |

### Gas Usage

| Station          | (mmscfd)   |
|------------------|------------|
| GLGR             | 46         |
| PGPS             | 5          |
| TJGS             | 204        |
| <b>Total TNB</b> | <b>256</b> |
| CBPS             | 55         |
| KLPP             | 94         |
| MPSS             | 2          |
| NPRI             | 155        |
| PGLA             | 90         |
| PLPS             | 81         |
| SGRI             | 62         |
| SKSP             | 47         |
| YPKA             | 58         |
| <b>Total IPP</b> | <b>644</b> |
| <b>Total Gas</b> | <b>900</b> |

**Total Gas Required 900**

### 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 | 15429 | 14770 | 14142 | 13840 | 13608 | 13464 | 13318 | 13235 | 13517 | 15098 | 16134 | 16668 | 16629 | 16248 | 16490 | 17266 | 17252 | 16792 | 16000 | 15690 | 16077 | 16093 | 15844 | 15633 |

Prepared By: -Select Name-

Checked By: -Select Name-

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(Ir. Shanmugam Thoppalan)  
Pengurus Besar Kanan  
Jabatan Sistem Operasi

# 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 |      |      |      |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| JMAH          | U001 | 693  | 693  | 691  | 697  | 691  | 692  | 693  | 691  | 692  | 693  | 692  | 692  | 692  | 693  | 693  | 691  | 692  | 692  | 693  | 691  | 693  | 691  | 691  | 694  | 692  | 692  |      |
| JMAH          | U002 | 693  | 693  | 695  | 693  | 693  | 693  | 694  | 695  | 697  | 694  | 693  | 692  | 695  | 693  | 694  | 691  | 697  | 694  | 695  | 694  | 695  | 694  | 694  | 695  | 697  | 695  |      |
| JMHE          | U001 | 750  | 751  | 750  | 752  | 750  | 752  | 750  | 751  | 748  | 751  | 751  | 748  | 751  | 750  | 751  | 746  | 749  | 750  | 751  | 753  | 754  | 751  | 968  | 997  | 996  | 1003 |      |
| JMJG          | U001 | 669  | 627  | 601  | 599  | 598  | 612  | 625  | 643  | 645  | 663  | 688  | 672  | 672  | 671  | 672  | 674  | 671  | 672  | 671  | 679  | 673  | 672  | 674  | 672  | 669  | 672  |      |
| JMJG          | U002 | 666  | 667  | 677  | 671  | 666  | 666  | 668  | 665  | 668  | 667  | 668  | 664  | 664  | 667  | 668  | 662  | 670  | 668  | 662  | 673  | 667  | 670  | 663  | 667  | 666  | 668  |      |
| JMJG          | U003 | 662  | 661  | 666  | 666  | 665  | 660  | 666  | 667  | 660  | 662  | 660  | 666  | 665  | 666  | 667  | 660  | 663  | 668  | 673  | 657  | 662  | 663  | 659  | 664  | 663  | 662  |      |
| JMJG          | U004 | 977  | 978  | 975  | 975  | 938  | 849  | 804  | 804  | 804  | 805  | 806  | 801  | 804  | 804  | 804  | 804  | 864  | 949  | 977  | 977  | 978  | 977  | 977  | 977  | 977  | 977  |      |
| JMJG          | U005 | 979  | 980  | 977  | 981  | 915  | 801  | 797  | 801  | 799  | 799  | 800  | 801  | 798  | 799  | 803  | 797  | 799  | 882  | 980  | 978  | 977  | 976  | 975  | 975  | 976  | 978  |      |
| PKLG          | U003 | 283  | 283  | 281  | 282  | 284  | 281  | 281  | 282  | 281  | 283  | 283  | 282  | 281  | 281  | 280  | 282  | 281  | 280  | 282  | 283  | 277  | 279  | 280  | 281  | 279  | 282  |      |
| PKLG          | U004 | 282  | 281  | 280  | 279  | 280  | 284  | 283  | 282  | 183  | 202  | 204  | 203  | 203  | 204  | 204  | 203  | 204  | 204  | 204  | 204  | 201  | 203  | 212  | 204  | 206  | 268  |      |
| PKLG          | U005 | 470  | 470  | 471  | 471  | 470  | 468  | 473  | 472  | 470  | 470  | 470  | 471  | 471  | 468  | 475  | 468  | 473  | 470  | 471  | 470  | 470  | 469  | 470  | 470  | 468  | 470  |      |
| TBIN          | U001 | 690  | 693  | 687  | 686  | 694  | 685  | 692  | 693  | 690  | 691  | 690  | 690  | 692  | 691  | 690  | 691  | 690  | 688  | 692  | 691  | 692  | 691  | 690  | 689  | 689  | 687  |      |
| TBIN          | U002 | 693  | 695  | 694  | 694  | 693  | 695  | 694  | 695  | 695  | 694  | 696  | 695  | 695  | 693  | 693  | 694  | 694  | 692  | 696  | 694  | 694  | 696  | 694  | 692  | 692  | 694  |      |
| TBIN          | U003 | 691  | 691  | 687  | 691  | 690  | 693  | 695  | 692  | 692  | 692  | 694  | 690  | 693  | 691  | 691  | 692  | 692  | 692  | 693  | 692  | 688  | 691  | 690  | 693  | 691  | 692  |      |
| Total ST-Coal |      | 9198 | 9163 | 9132 | 9137 | 9027 | 8831 | 8815 | 8833 | 8724 | 8766 | 8796 | 8758 | 8779 | 8768 | 8786 | 8765 | 8776 | 8906 | 9123 | 9123 | 9134 | 9131 | 9333 | 9370 | 9363 | 9363 | 9377 |
| Total ST-Oil  |      | 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    |      |
| Total 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    |      |
| CBPS          | BLK2 | 358  | 358  | 358  | 361  | 360  | 362  | 357  | 358  | 368  | 361  | 360  | 365  | 363  | 364  | 321  | 224  | 360  | 360  | 360  | 353  | 359  | 363  | 361  | 362  | 361  | 352  |      |
| GLGR          | GT01 | 84   | 74   | 68   | 68   | 67   | 68   | 69   | 68   | 69   | 69   | 67   | 67   | 68   | 68   | 68   | 69   | 67   | 66   | 85   | 85   | 84   | 85   | 80   | 66   | 67   | 67   |      |
| GLGR          | GT02 | 86   | 75   | 70   | 69   | 70   | 70   | 70   | 69   | 69   | 69   | 68   | 70   | 69   | 68   | 68   | 69   | 70   | 69   | 87   | 87   | 85   | 86   | 82   | 69   | 68   | 86   |      |
| GLGR          | ST1C | 82   | 79   | 70   | 71   | 70   | 70   | 70   | 70   | 70   | 71   | 70   | 70   | 71   | 70   | 70   | 70   | 70   | 70   | 82   | 81   | 82   | 81   | 81   | 71   | 70   | 81   |      |
| KLPP          | GT13 | 138  | 91   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 43   | 115  | 113  | 115  | 130  | 118  | 121  | 133  | 127  | 131  | 120  | 137  | 134  |      |      |
| KLPP          | GT14 | 153  | 143  | 143  | 147  | 143  | 143  | 141  | 82   | 83   | 81   | 77   | 78   | 78   | 77   | 78   | 77   | 79   | 109  | 124  | 125  | 139  | 127  | 130  | 140  | 136  | 141  |      |
| KLPP          | GT15 | 150  | 141  | 135  | 141  | 136  | 137  | 136  | 76   | 83   | 82   | 78   | 78   | 76   | 79   | 78   | 79   | 83   | 112  | 123  | 122  | 137  | 123  | 126  | 138  | 135  | 140  |      |
| KLPP          | ST17 | 201  | 187  | 131  | 126  | 126  | 127  | 127  | 93   | 89   | 90   | 90   | 88   | 93   | 89   | 84   | 93   | 89   | 175  | 187  | 184  | 200  | 187  | 187  | 196  | 196  | 200  |      |
| MPSS          | GT01 | 110  | 88   | 89   | 15   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| MPSS          | ST01 | 50   | 40   | 37   | 9    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| NPRI          | BLK1 | 527  | 530  | 525  | 528  | 511  | 528  | 441  | 454  | 533  | 530  | 527  | 488  | 434  | 452  | 454  | 449  | 511  | 509  | 509  | 511  | 511  | 509  | 505  | 511  | 507  | 509  |      |
| NPRI          | BLK2 | 505  | 506  | 475  | 531  | 512  | 527  | 443  | 463  | 536  | 533  | 530  | 493  | 433  | 454  | 452  | 452  | 515  | 510  | 512  | 504  | 511  | 511  | 506  | 512  | 508  | 511  |      |
| PCGP          | PGRG | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  | 599  |      |
| PGLA          | GT11 | 166  | 168  | 175  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 10   | 133  | 165  | 228  | 209  | 195  | 215  | 202  | 204  | 168  | 211  |      |
| PGLA          | GT12 | 172  | 172  | 180  | 207  | 232  | 232  | 232  | 233  | 161  | 161  | 158  | 159  | 159  | 160  | 159  | 159  | 159  | 167  | 167  | 171  | 233  | 212  | 199  | 221  | 205  | 207  |      |
| PGLA          | ST10 | 206  | 204  | 144  | 97   | 116  | 115  | 115  | 116  | 91   | 91   | 91   | 90   | 90   | 90   | 91   | 91   | 91   | 86   | 199  | 251  | 251  | 233  | 235  | 242  | 234  | 216  |      |
| PGPS          | GT3B | 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    |      |
| PGPS          | ST3C | 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    |      |
| PLPS          | GT11 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 60   | 117  | 110  | 123  | 129  | 112  | 131  | 123  | 115  | 84   | 65   |      |
| PLPS          | GT12 | 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    |      |
| PLPS          | GT13 | 128  | 124  | 125  | 124  | 125  | 125  | 125  | 125  | 124  | 125  | 125  | 124  | 124  | 125  | 125  | 124  | 120  | 123  | 113  | 107  | 119  | 125  | 110  | 127  | 119  | 112  |      |
| PLPS          | ST18 | 92   | 58   | 59   | 58   | 59   | 58   | 58   | 58   | 58   | 58   | 58   | 58   | 58   | 58   | 58   | 58   | 137  | 134  | 209  | 207  | 199  | 207  | 208  | 199  | 193  | 180  |      |
| SGRI          | GT11 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 50   | 137  | 133  | 132  | 112  | 115  | 107  | 111  | 86   | 68   |      |
| SGRI          | GT12 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 58   | 115  | 112  | 112  | 112  | 114  |      |
| SGRI          | GT13 | 102  | 99   | 102  | 106  | 103  | 107  | 103  | 103  | 107  | 107  | 104  | 103  | 103  | 103  | 103  | 108  | 107  | 104  | 107  | 106  | 110  | 114  | 116  | 116  | 112  | 117  |      |
| SGRI          | ST14 | 65   | 71   | 67   | 68   | 65   | 63   | 66   | 65   | 66   | 64   | 63   | 64   | 64   | 64   | 64   | 64   | 66   | 138  | 142  | 144  | 142  | 204  | 203  | 201  | 205  | 188  |      |
| SKSP          | BLK1 | 251  | 251  | 234  | 262  | 215  | 239  | 222  | 218  | 263  | 250  | 230  | 220  | 221  | 224  | 224  | 223  | 227  | 232  | 217  | 218  | 240  | 265  | 217  | 225  | 313  | 218  |      |
| TJGS          | GT1A | 185  | 143  | 170  | 196  | 160  | 164  | 158  | 158  | 191  | 174  | 159  | 155  | 166  | 161  | 148  | 148  | 161  | 228  | 227  | 227  | 213  | 225  | 225  | 225  | 222  | 224  |      |
| TJGS          | GT1B | 173  | 137  | 160  | 183  | 149  | 157  | 148  | 147  | 181  | 164  | 150  | 145  | 155  | 154  | 139  | 136  | 151  | 217  | 215  | 214  | 204  | 217  | 216  | 217  | 217  | 212  |      |
| TJGS          | ST1C | 191  | 177  | 201  | 207  | 192  | 199  | 189  | 189  | 202  | 205  | 196  | 189  | 189  | 189  | 181  | 181  | 184  | 230  | 244  | 241  | 241  | 248  | 248  | 248  | 244  | 247  |      |



