

## **PJM NERC Data Requests**

March 11, 2024 Reliability & Standards Compliance Subcommittee





# EOP-011 R1.2.5 and R2.2.8 and PRC-006 Data Request R6 and R8

<u>Applicable to Entities listed in:</u>

- <u>Manual 13</u> Emergency Operations: Attachment E Manual Load Dump Allocation Tables, Revision 92
- <u>Manual 13</u> Emergency Operations: Attachment F Manual Load Dump Capability, Revision 92
- <u>Manual 36</u> System Restoration: Attachment H Underfrequency Load Shed (UFLS) Tables, Revision 33
- Email to follow for RSCS email subscribers



## Manual 13 Table to be Updated

#### Attachment E: Manual Load Dump Allocation Tables

|      | Winter/Summer<br>Required Manual Load Dump              |        |        |       |        |         |       |       |       |          |       |       |       |       |        |          |
|------|---------------------------------------------------------|--------|--------|-------|--------|---------|-------|-------|-------|----------|-------|-------|-------|-------|--------|----------|
|      | PJM Mid-Atlantic Region PPL Zone PEPCO ZONE AE DPL Zone |        |        |       |        |         |       |       |       |          |       |       |       |       |        |          |
| MW   | PS                                                      | PE     | PPL    | UGI   | BC     | FE-East | PEPCO | SMECO | AECO  | Vineland | DPL   | ODEC  | DEMEC | Dover | Easton | Rockland |
| %    | 17.26%                                                  | 14.89% | 12.61% | 0.35% | 11.41% | 20.90%  | 9.11% | 1.38% | 4.16% | 0.27%    | 4.70% | 1.43% | 0.46% | 0.27% | 0.09%  | 0.70%    |
| 500  | 86                                                      | 74     | 63     | 2     | 57     | 104     | 46    | 7     | 21    | 1        | 24    | 7     | 2     | 1     | 0      | 3        |
| 1000 | 173                                                     | 149    | 126    | 3     | 114    | 209     | 91    | 14    | 42    | 3        | 47    | 14    | 5     | 3     | 1      | 7        |
| 1500 | 259                                                     | 223    | 189    | 5     | 171    | 313     | 137   | 21    | 62    | 4        | 71    | 21    | 7     | 4     | 1      | 10       |
| 2000 | 345                                                     | 298    | 252    | 7     | 228    | 418     | 182   | 28    | 83    | 5        | 94    | 29    | 9     | 5     | 2      | 14       |
| 3000 | 518                                                     | 447    | 378    | 10    | 342    | 627     | 273   | 42    | 125   | 8        | 141   | 43    | 14    | 8     | 3      | 21       |
| 4000 | 690                                                     | 595    | 504    | 14    | 457    | 836     | 364   | 55    | 166   | 11       | 188   | 57    | 19    | 11    | 4      | 28       |
| 5000 | 863                                                     | 744    | 631    | 17    | 571    | 1045    | 455   | 69    | 208   | 13       | 235   | 72    | 23    | 14    | 5      | 35       |

Manual Load Dump Allocation - PJM Mid-Atlantic Region

When issuing a manual Load Dump via All Call, the PJM Dispatcher will include the following information in the message:

- (1) Area (PJM Mid-Atlantic Region, Eastern Portion of PJM Mid-Atlantic Region, or a zone / company)
- (2) Total megawatts (refer to appropriate tables for allocation)
- (3) Allocation table to be used
- (4) Transmission Zone allocations will be handled separately based on PJM EMS capacity calculations

Allocation percentages are based on 2023 summer but applicable to both 2023 summer and 2023/2024 Winter Load conditions



## Manual 13 Table to be Updated

#### Attachment F: PJM Manual Load Dump Capability

| PJM Manual Load Dump Capability |                                                    |                                                                                                         |                                    |                                                                           |                                                                                                 |                                                                                                       |                                                                                                           |  |  |  |  |  |  |
|---------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
|                                 | 1                                                  | 2                                                                                                       | 3                                  | 4                                                                         | 5                                                                                               | 6                                                                                                     | 7                                                                                                         |  |  |  |  |  |  |
| Transmission Owner              | 2023<br>Summer<br>System<br>Peak Load<br>Est. (MW) | Maximum<br>Manual Load<br>Shedding<br>Capability<br>based on<br>System Peak<br>Load<br>Estimate<br>(MW) | Load Shed<br>Cap (%)<br>(Percent = | Overlap of<br>Load<br>Shedding<br>and Under<br>frequency<br>Loads<br>(MW) | Overlap of<br>Load<br>Shedding<br>and Under<br>frequency<br>Loads (%)<br>(Percent = #4<br>÷ #2) | Manual Load<br>Shedding if<br>Under<br>frequency<br>relays have<br>operated<br>(MW) (MW =<br>#2 - #4) | Manual Load<br>Shedding if<br>Under<br>frequency<br>relays have<br>operated (%)<br>(Percent =<br>#6 ÷ #1) |  |  |  |  |  |  |
| DPL                             | 2,630                                              | 880                                                                                                     | 33.44%                             | 267                                                                       | 30.36%                                                                                          | 613                                                                                                   | 23.29%                                                                                                    |  |  |  |  |  |  |
| DPL - Dover                     | 148                                                | 66                                                                                                      | 44.30%                             | 39                                                                        | 59.60%                                                                                          | 27                                                                                                    | 17.90%                                                                                                    |  |  |  |  |  |  |
| DPL - DEMEC                     | 252                                                | 0                                                                                                       | 0.00%                              | 0                                                                         | -                                                                                               | 0                                                                                                     | 0.00%                                                                                                     |  |  |  |  |  |  |
| DPL - Easton                    | 51                                                 | 19                                                                                                      | 37.04%                             | 4                                                                         | 21.05%                                                                                          | 15                                                                                                    | 29.24%                                                                                                    |  |  |  |  |  |  |
| DPL - ODEC                      | 779                                                | 31                                                                                                      | 3.98%                              | 14                                                                        | 45.16%                                                                                          | 17                                                                                                    | 2.18%                                                                                                     |  |  |  |  |  |  |
| AE                              | 2,403                                              | 751                                                                                                     | 31.26%                             | 133                                                                       | 17.71%                                                                                          | 618                                                                                                   | 25.72%                                                                                                    |  |  |  |  |  |  |
| AE - Vineland                   | 146                                                | 85                                                                                                      | 58.27%                             | 40                                                                        | 46.78%                                                                                          | 45                                                                                                    | 31.01%                                                                                                    |  |  |  |  |  |  |
| PS                              | 9,904                                              | 1632                                                                                                    | 16.48%                             | 280                                                                       | 17.16%                                                                                          | 1352                                                                                                  | 13.65%                                                                                                    |  |  |  |  |  |  |
| RECO                            | 414                                                | 414                                                                                                     | 100.00%                            | 142                                                                       | 34.35%                                                                                          | 272                                                                                                   | 65.65%                                                                                                    |  |  |  |  |  |  |
| PE                              | 8,527                                              | 1218                                                                                                    | 14.28%                             | 333                                                                       | 27.34%                                                                                          | 885                                                                                                   | 10.38%                                                                                                    |  |  |  |  |  |  |
| EE East IC                      | 6.072                                              | 15/0                                                                                                    | 25 400/                            | А                                                                         | 0.250/                                                                                          | 1544                                                                                                  | 25 420/                                                                                                   |  |  |  |  |  |  |



## Manual 36 Table to be Updated

#### Attachment H: Under Frequency Load Shed (UFLS) Tables

| PJM Under Frequency Load Shedding (Hz) |         |         |         |         |             |         |         |       |                    |         |         |         |         |         |         |         |        |          |
|----------------------------------------|---------|---------|---------|---------|-------------|---------|---------|-------|--------------------|---------|---------|---------|---------|---------|---------|---------|--------|----------|
| UFLS Entity                            | 59.5 Hz | 59.3 Hz | 59.1 Hz | 59.0 Hz | 58.9 Hz     | 58.7 Hz | 58.5 Hz | Total | 2023 Peak Forecast | 59.5 Hz | 59.3 Hz | 59.1 Hz | 59.0 Hz | 58.9 Hz | 58.7 Hz | 58.5 Hz | Total  | Comments |
| AE *                                   |         | 242     |         |         | 287         |         | 256     | 785   | 2,403              |         | 10.07%  |         |         | 11.96%  |         | 10.64%  | 32.68% |          |
| Vineland *                             | 1       | 24      | 1       |         | 19          |         | 18      | 61    | 146                | 1       | 16.12%  |         |         | 12.84%  | 1       | 12.50%  | 41.46% |          |
| BGE *                                  | ]       | 665     | 1       |         | 656         |         | 657     | 1978  | 6,474              | 1       | 10.27%  |         |         | 10.13%  |         | 10.15%  | 30.55% |          |
| DPL *                                  | 1       | 295     | 1       |         | 294         |         | 288     | 877   | 2,630              | 1       | 11.22%  |         |         | 11.18%  |         | 10.95%  | 33.34% |          |
| ODEC - DPL *                           | 1       | 91      | ]       |         | 79          |         | 88      | 257   | 779                | ]       | 11.62%  |         |         | 10.13%  |         | 11.25%  | 33.01% |          |
| DEMEC *                                | ]       | 35      |         |         | 27          |         | 29      | 91    | 252                |         | 14.01%  |         |         | 10.62%  |         | 11.33%  | 35.96% |          |
| Easton *                               | ]       | 7       |         |         | 6           |         | 6       | 19    | 51                 | ]       | 13.65%  |         |         | 11.70%  |         | 11.70%  | 37.04% |          |
| Dover *                                | ]       | 18      | ]       |         | 20          |         | 24      | 62    | 148                | ]       | 12.10%  |         |         | 13.48%  |         | 16.43%  | 42.01% |          |
| FE East - JC *                         | ]       | 684     |         |         | 692         |         | 688     | 2065  | 6,072              |         | 11.27%  |         |         | 11.39%  |         | 11.34%  | 34.00% |          |
| FE East - ME *                         | ] [     | 334     |         |         | 344         |         | 322     | 1000  | 3,040              | ]       | 10.97%  |         |         | 11.33%  |         | 10.59%  | 32.89% |          |
| FE East - PN *                         | ] [     | 374     |         |         | 290         |         | 382     | 1046  | 2,871              |         | 13.04%  |         |         | 10.09%  |         | 13.30%  | 36.43% |          |
| PECO *                                 | ] [     | 928     |         |         | 932         |         | 917     | 2777  | 8,527              |         | 10.88%  |         |         | 10.93%  |         | 10.75%  | 32.57% |          |
| PEPCO *                                |         | 547     |         |         | 549         |         | 543     | 1638  | 5,413              |         | 10.10%  |         |         | 10.14%  |         | 10.03%  | 30.27% |          |
| SMECO *                                |         | 85      |         |         | 87          |         | 91      | 262   | 753                |         | 11.27%  |         |         | 11.49%  |         | 12.05%  | 34.81% |          |
| PPL *                                  |         | 844     |         |         | 836         |         | 820     | 2500  | 7,175              |         | 11.76%  |         |         | 11.65%  |         | 11.43%  | 34.84% |          |
| UGI *                                  |         | 25      |         |         | 24          |         | 23      | 72    | 195                |         | 13.03%  |         |         | 12.31%  |         | 11.64%  | 36.97% |          |
| Public Service *                       |         | 991     |         |         | 991         |         | 991     | 2973  | 9,904              |         | 10.01%  |         |         | 10.01%  |         | 10.01%  | 30.02% |          |
| RECO *                                 |         | 47      |         |         | 48          |         | 47      | 142   | 414                |         | 11.34%  |         |         | 11.58%  |         | 11.44%  | 34.35% |          |
| Neptune*                               |         | 66      |         |         | 66          |         | 66      | 198   | 660                |         | 10.00%  |         |         | 10.00%  |         | 10.00%  | 30.00% |          |
| HTP*                                   |         | 66      |         |         | 66          |         | 66      | 198   | 660                |         | 10.00%  |         |         | 10.00%  |         | 10.00%  | 30.00% |          |
| Com Ed *                               |         | 2282    |         | 2279    |             | 2339    |         | 6900  | 20,382             |         | 11.20%  |         | 11.18%  |         | 11.48%  |         | 33.85% |          |
| Dominion *                             |         | 1900    |         | 1827    |             |         | 2037    | 5764  | 18,910             |         | 10.05%  |         | 9.66%   |         |         | 10.77%  | 30.48% |          |
| NOVEC *                                |         | 167     |         | 167     |             |         | 166     | 499   | 1,489              |         | 11.23%  |         | 11.19%  |         |         | 11.11%  | 33.53% |          |
| ODEC - DVP *                           |         | 126     |         | 110     |             |         | 132     | 369   | 1,036              |         | 12.19%  |         | 10.66%  |         |         | 12.78%  | 35.64% |          |
| NCEMC - DVP *                          |         | 28      |         | 32      |             |         | 29      | 89    | 273                |         | 10.40%  |         | 11.64%  |         |         | 10.69%  | 32.73% |          |
| FE South **                            | 470     | 452     | 487     |         | <b>49</b> 1 | 463     |         | 2363  | 8,097              | 5.80%   | 5.58%   | 6.01%   |         | 6.06%   | 5.72%   |         | 29.18% |          |
| ODEC - AP **                           | 38      | 51      | 41      |         | 43          | 48      |         | 221   | 627                | 6.02%   | 8.17%   | 6.61%   |         | 6.86%   | 7.68%   |         | 35.33% |          |
| AEP **                                 | 1790    | 1952    | 1802    |         | 1860        | 1920    | [       | 9324  | 22,453             | 7.97%   | 8.69%   | 8.03%   |         | 8.29%   | 8.55%   |         | 41.53% |          |
| Dayton **                              | 200     | 203     | 220     |         | 182         | 219     |         | 1024  | 3,295              | 6.08%   | 6.16%   | 6.66%   |         | 5.53%   | 6.63%   |         | 31.07% |          |
| Duquesne **                            | 154     | 141     | 142     |         | 163         | 140     |         | 740   | 2,712              | 5.68%   | 5.19%   | 5.24%   |         | 6.01%   | 5.15%   |         | 27.28% |          |
| FE West **                             | 640     | 647     | 614     |         | 607         | 618     |         | 3126  | 11,010             | 5.81%   | 5.87%   | 5.57%   |         | 5.51%   | 5.62%   |         | 28.39% |          |
| DEOK **                                | 360     | 435     | 320     |         | 374         | 456     | 392     | 2337  | 5,249              | 6.86%   | 8.29%   | 6.10%   |         | 7.13%   | 8.69%   | 7.47%   | 44.52% |          |
| CPP **                                 | 15      | 16      | 15      |         | 17          | 15      |         | 78    | 285                | 5.27%   | 5.62%   | 5.27%   |         | 5.97%   | 5.27%   |         | 27.40% |          |
| EKPC**                                 | 108     | 112     | 112     |         | 112         | 129     | 122     | 695   | 2,027              | 5.31%   | 5.53%   | 5.51%   |         | 5.53%   | 6.36%   | 6.04%   | 34.28% |          |



Request to be completed by April 15, 2024

PJM, as the Planning Coordinator is required to maintain its UFLS (Under Frequency Load Shed) and manual load shed databases <u>at least</u> once each calendar year, with no more than 15 months between maintenance activities.

Also per PRC-006-SERC, PJM expects Transmission Owners and Distribution Providers within the SERC region that are identified in *Manual 36 Attachment H* to maintain a time delay (from frequency reaching the set point to the trip signal) of <u>at least 6 cycles</u>. SERC requires Transmission Owners and Distribution Providers to maintain 30%.

The data request is based on the 2024 Summer Peak LAS Normal Load Forecasts.



PJM provides this standing update to the Reliability & Standards Compliance Subcommittee to provide guidance to Registered Entities regarding PJM-related data requests applicable to certain NERC Reliability Standards, and to provide a forum through which such Registered Entities can ask questions of PJM staff. This standing update is not intended to serve as complete or definitive guidance regarding how to comply with a PJM-related data request, how to otherwise comply with specific NERC Reliability Standards, or how to otherwise carry out the obligations of Registered Entities.





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