2016 IRM Study
Summer Maintenance Assumption
2015 Summer Maintenance Analysis

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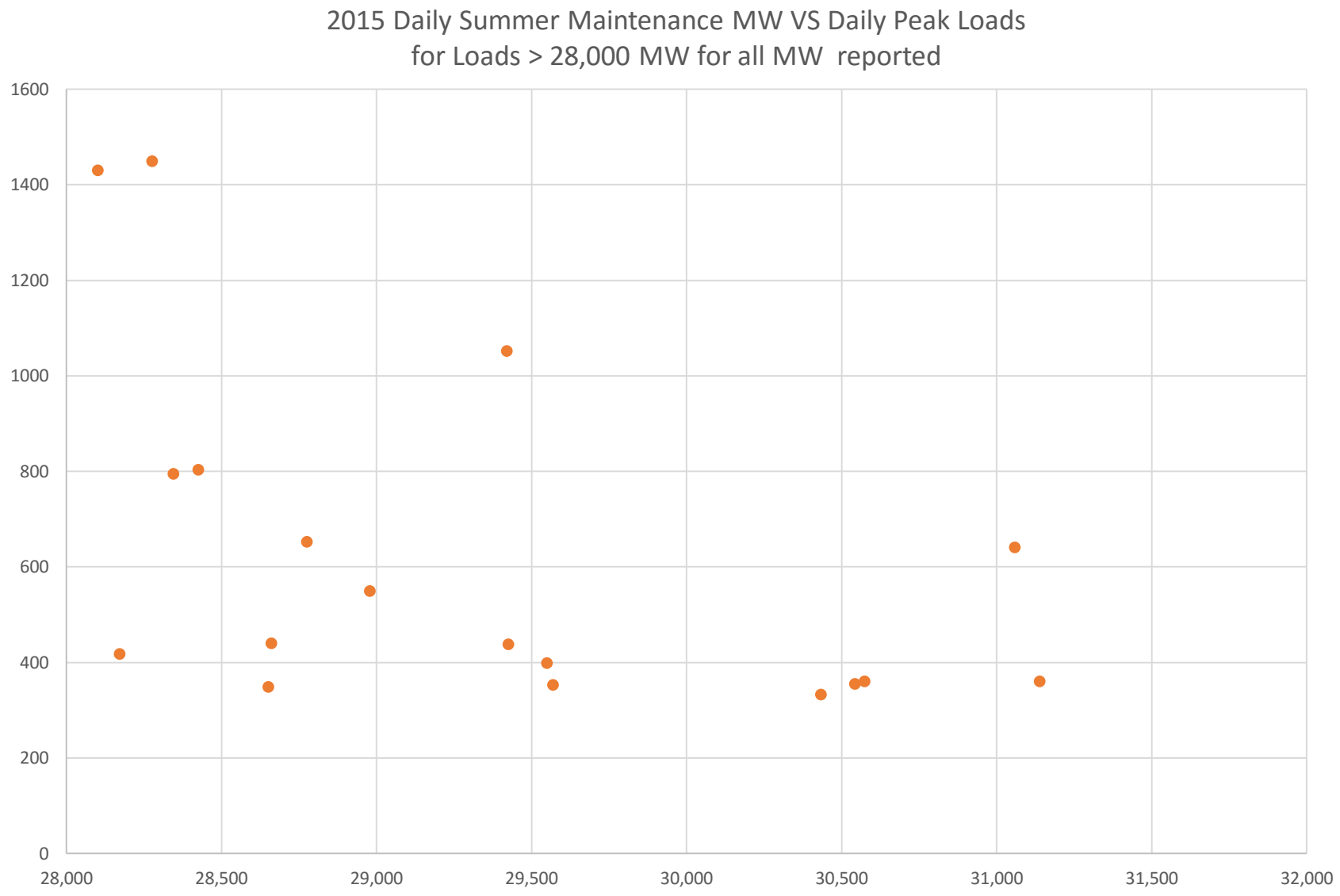
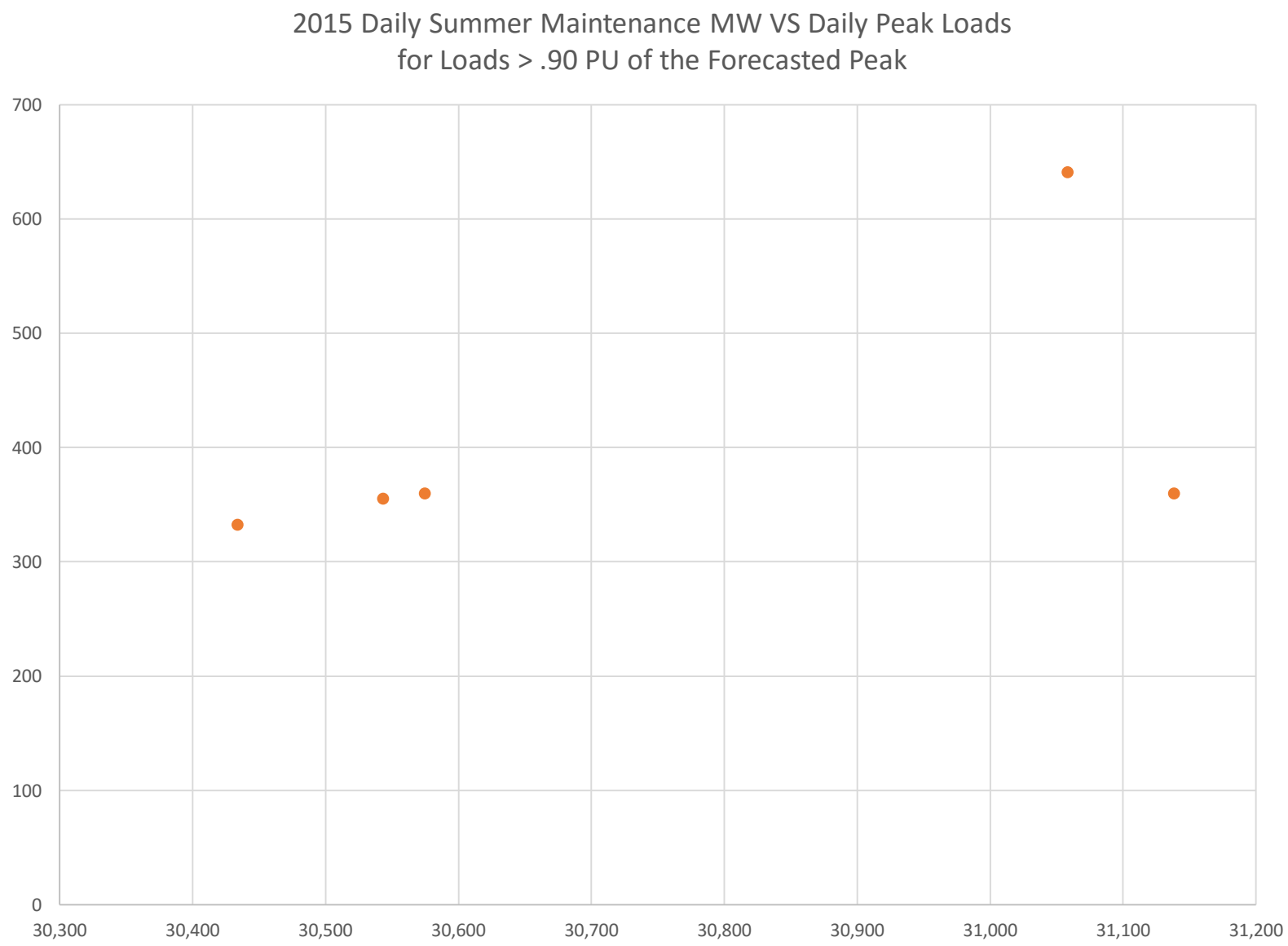
2015 Summer Maintenance Analysis

- Daily MW on maintenance for daily summer peak loads greater than 28,000 MW was developed from data provided by the NYISO.
- The data included 2015 hourly loads and unit planned and maintenance outage events including derates.
- There were 18 daily peak loads which were 28,000 MW or higher.
- The summer peak load was .93 per unit of the forecasted summer peak (PUFSP).
- 14 of the observations were at least .85 PUFSP or higher while 5 were at least .90 PUFSP or higher.
- The summer peak for 2014 was 29,782 or .885 PUFSP.

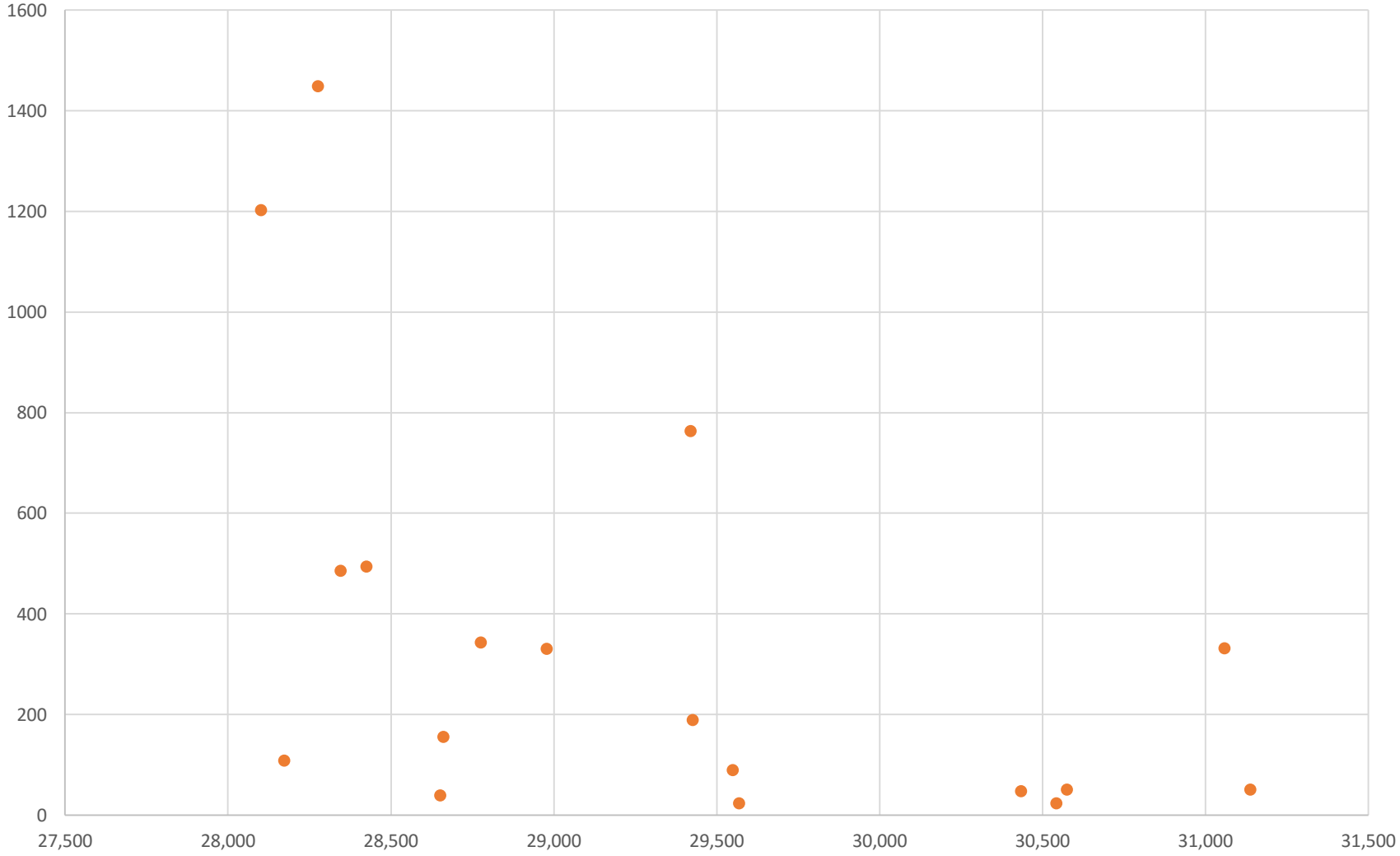
2015 Summer Maintenance Analysis Continued

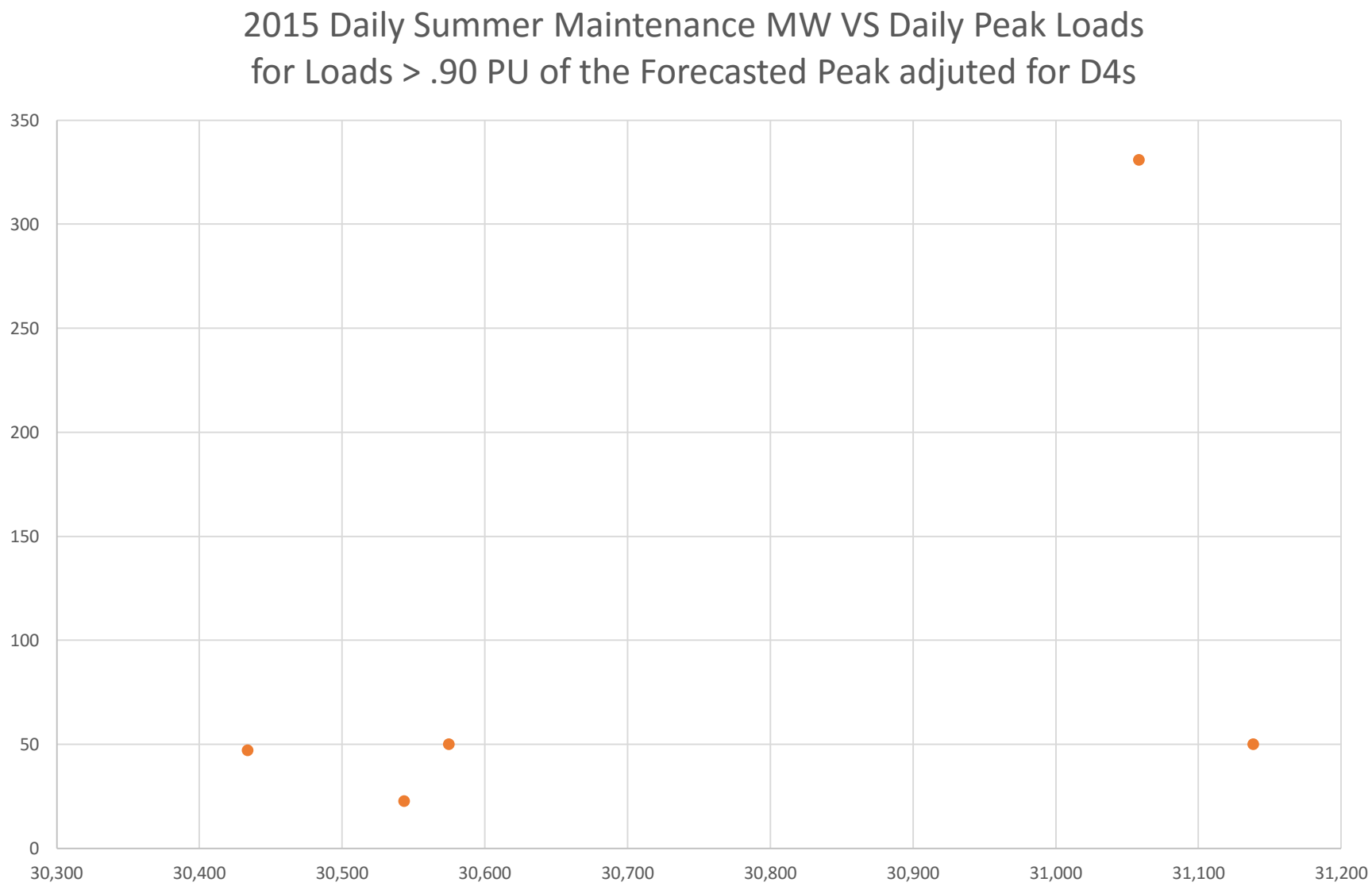
- The summer maintenance calculation recommended for last year maintained the value at 50 MW.
- Significantly more maintenance outages were observed than in prior years.
- Many were D4 which is a maintenance derating.
- However, many of the D4s were for the overnight hours but repeated day after day for the same units.
- After review by the NYISO it was decided to remove these D4s from the reported maintenance totals.
- Plots of MW on maintenance VS daily peak loads was prepared for all daily peaks of 28,000 MW or more and all peaks .90 PUSPF or greater for all reported maintenance and maintenance minus the reported nighttime D4s.


2015 Daily Summer Maintenance MW VS Daily Peak Loads
for Loads > 28,000 MW for all MW reported
1600
1400
1200
1000
800
600
400
200
0
28,000
28,500
29,000
29,500
30,000
30,500
31,000
31,500
32,000


2015 Daily Summer Maintenance MW VS Daily Peak Loads
for Loads > .90 PU of the Forecasted Peak
700
600
500
400
300
200
100
0
30,300
30,400
30,500
30,600
30,700
30,800
30,900
31,000
31,100
31,200

2015 Daily Summer Maintenance MW VS Daily Peak Loads
for Loads > 28,000 MW adjusted for overnight D4s



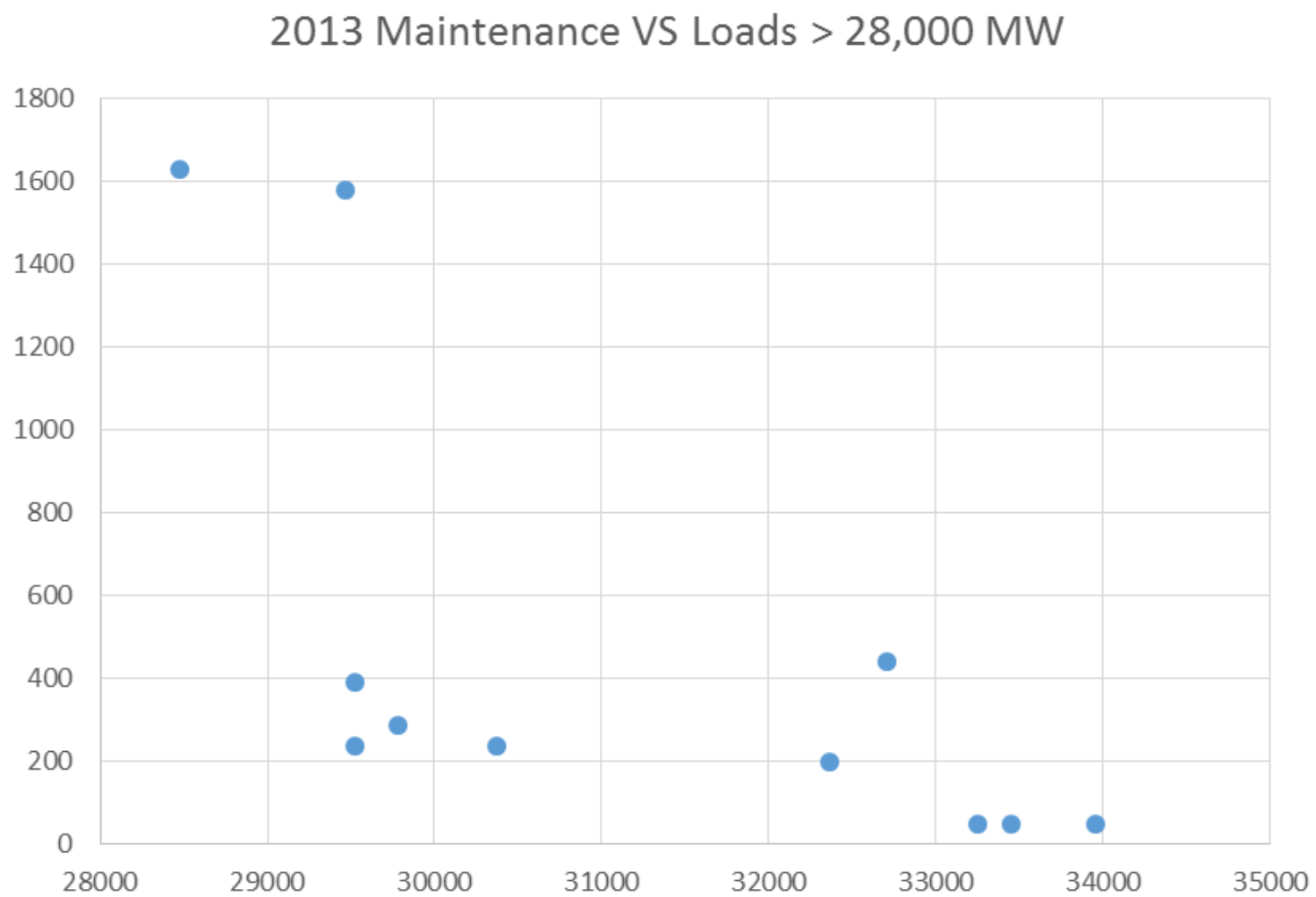

2015 Daily Summer Maintenance MW VS Daily Peak Loads
for Loads > .90 PU of the Forecasted Peak adjuted for D4s
350
300
250
200
150
100
50
0
30,300
30,400
30,500
30,600
30,700
30,800
30,900
31,000
31,100
31,200

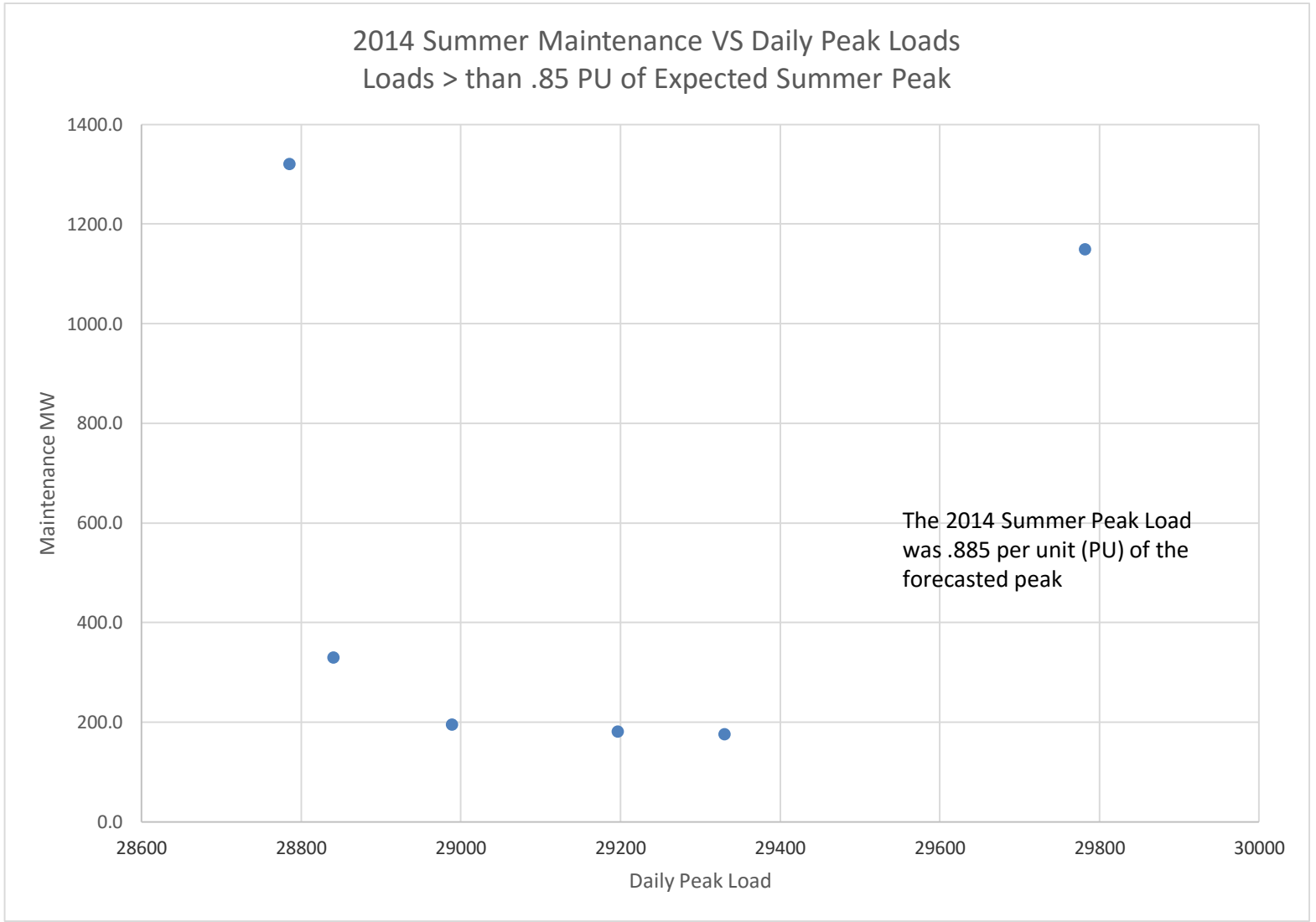
Findings and Recommendations

- After adjusting for overnight D4s, the plot of MW on maintenance is consistent with prior years observations except for September 8.
- The average of MW on maintenance for loads greater than .90 PUFSP including 2 planned outages scheduled for early September was 100 MW.
- If not for the 2 planned outages, one starting on 9/1 and the other that started on 9/8 at 0700, the average would have been approx. 47 MW.
- Recommend maintaining the summer maintenance at 50 MW.
- However, based on what has been observed in the data, I recommend that all of it should be in Zones J&K – 25 MW in each Zone.

Appendix

Maintenance MW VS. Daily Peak Load
For 2013 and 2014


2013 Maintenance VS Loads > 28,000 MW
1800
1600
1400
1200
1000
800
600
400
200
0
28000
29000
30000
31000
32000
33000
34000
35000


2014 Summer Maintenance VS Daily Peak Loads
Loads > than .85 PU of Expected Summer Peak
Maintenance MW
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
28600
28800
29000
29200
29400
29600
29800
30000
Daily Peak Load
The 2014 Summer Peak Load was .885 per unit (PU) of the forecasted peak