

Wind and Solar Peak Hour Analysis

Planning Committee
November 26, 2018

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Monitoring Analytics

Resource Specific Capacity Factor Analysis

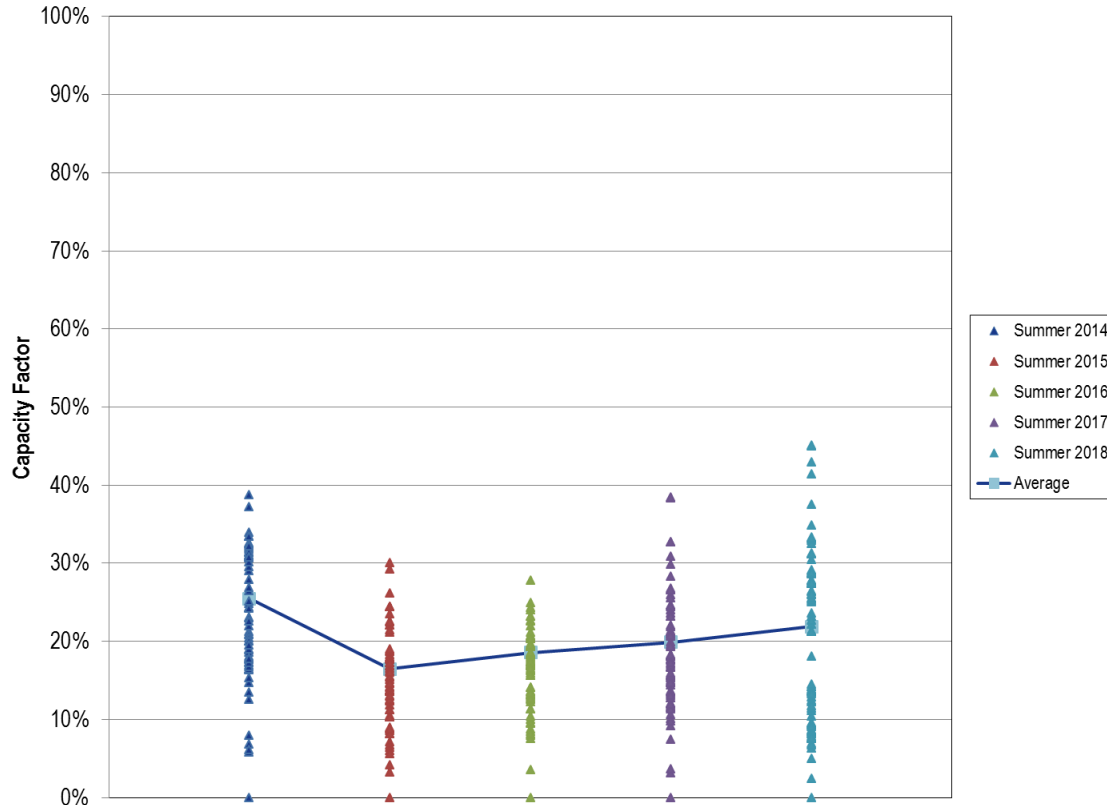
- **Data from January 2014 through September 2018**
 - **Summer Peak – June through September**
 - **Winter Peak – December through February**
- **The top 100 load hours for each delivery year**



Wind Capacity Factor Analysis

- **Each marker is calculated by taking the average hourly output of a resource during the top 100 load hours of each delivery year**
- **Each marker on the figures represents a resource specific performance**
- **The average of the individual resources is represented with the average line**

Average Wind Capacity Factor, Summer Peak, Top 100 Hours

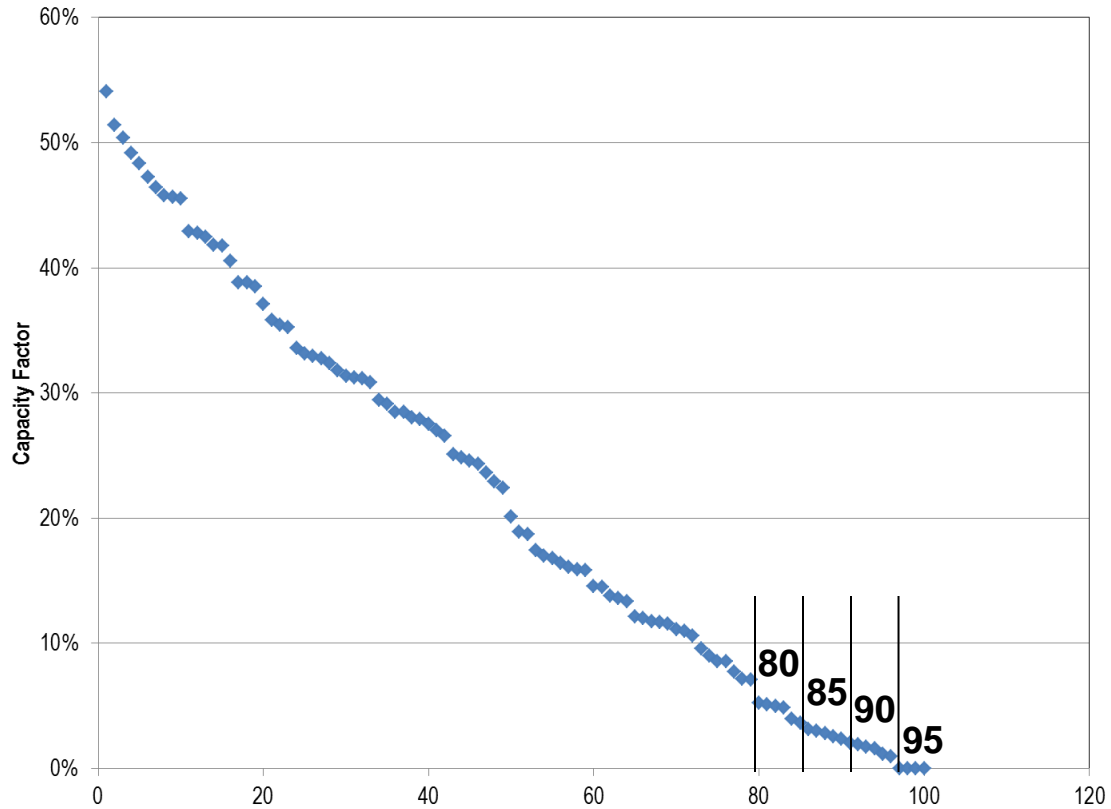


Wind Capacity Factor Example

- Rank capacity factor for top 100 load hours
- Top 95 represents the resource's highest capacity factors by hour within the top 100 load hours



Wind Unit Example

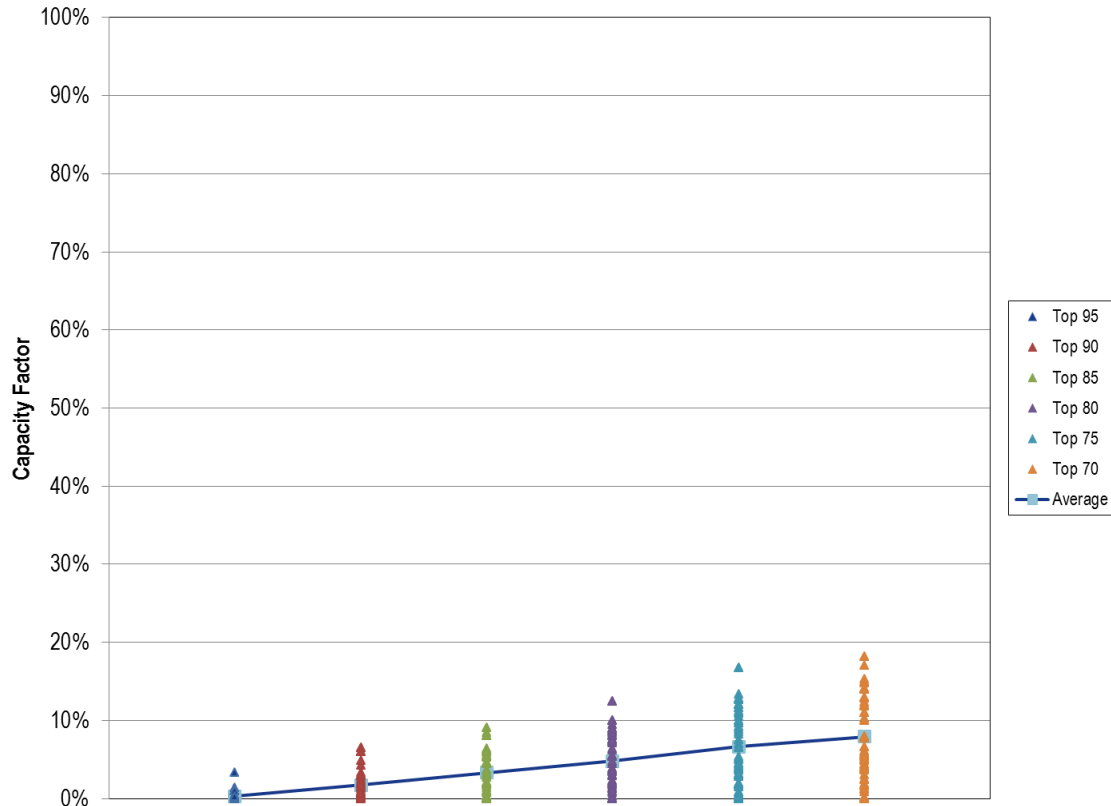


Wind Capacity Factor Analysis

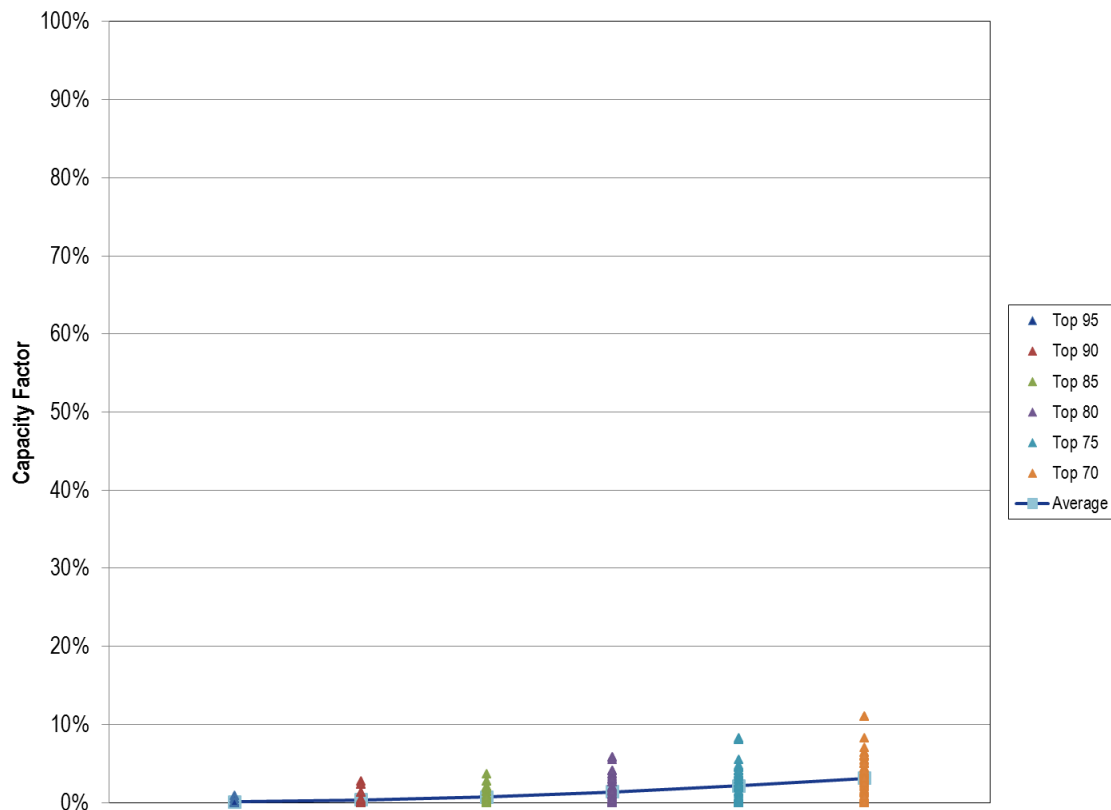
- Rank capacity factor for top 100 load hours for all wind resources
- Top 95 represents each resource's highest capacity factors by hour within the top 100 load hours
- The average line is the average of the individual resources



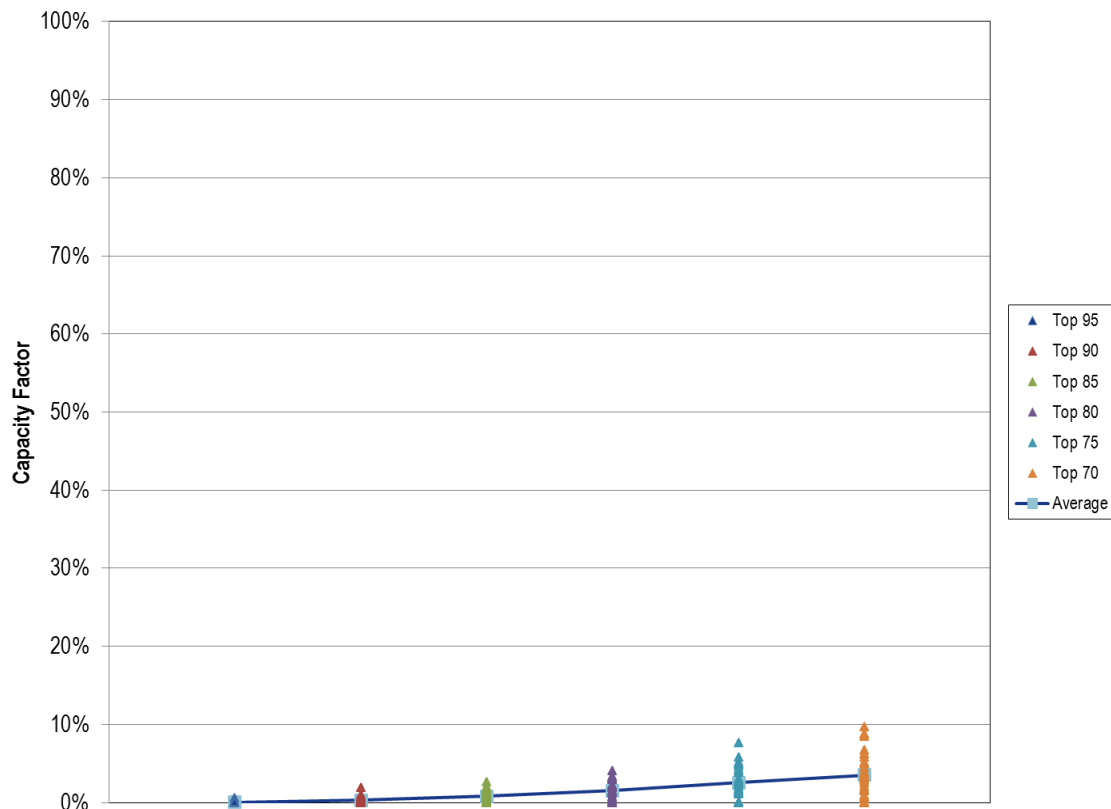
Wind Capacity Factor, Summer Peak 2014, Top 100 Hours



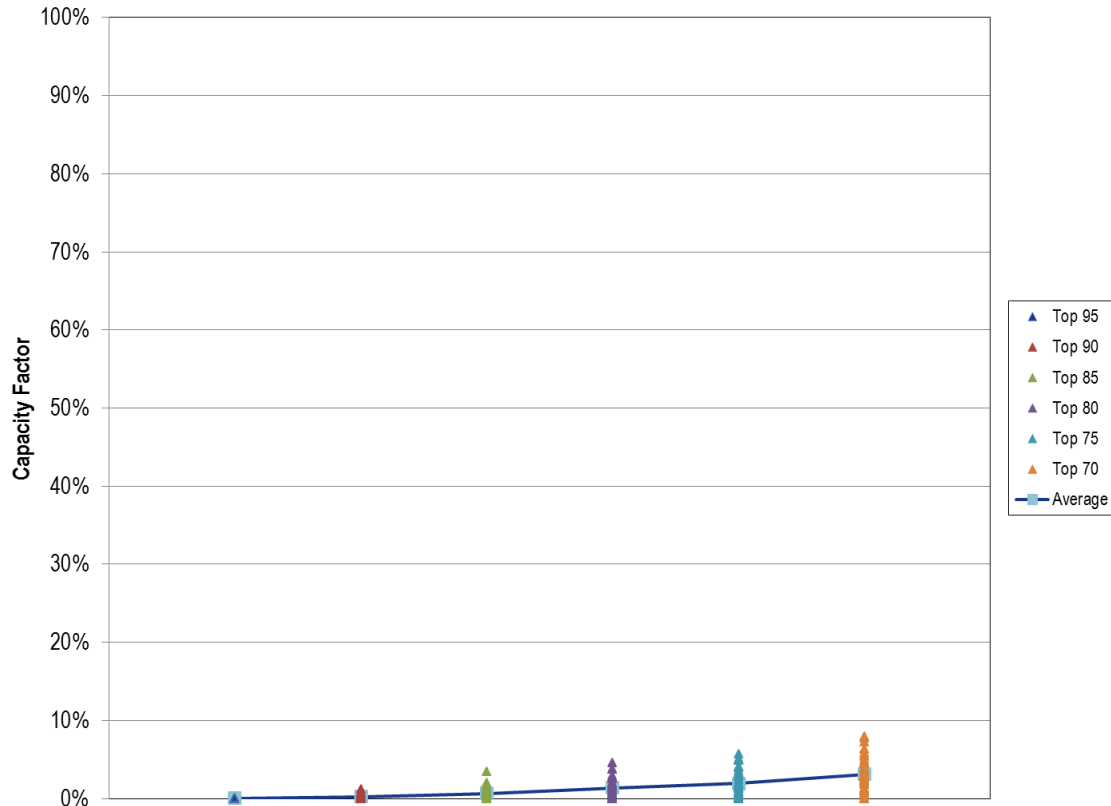
Wind Capacity Factor, Summer Peak 2015, Top 100 Hours



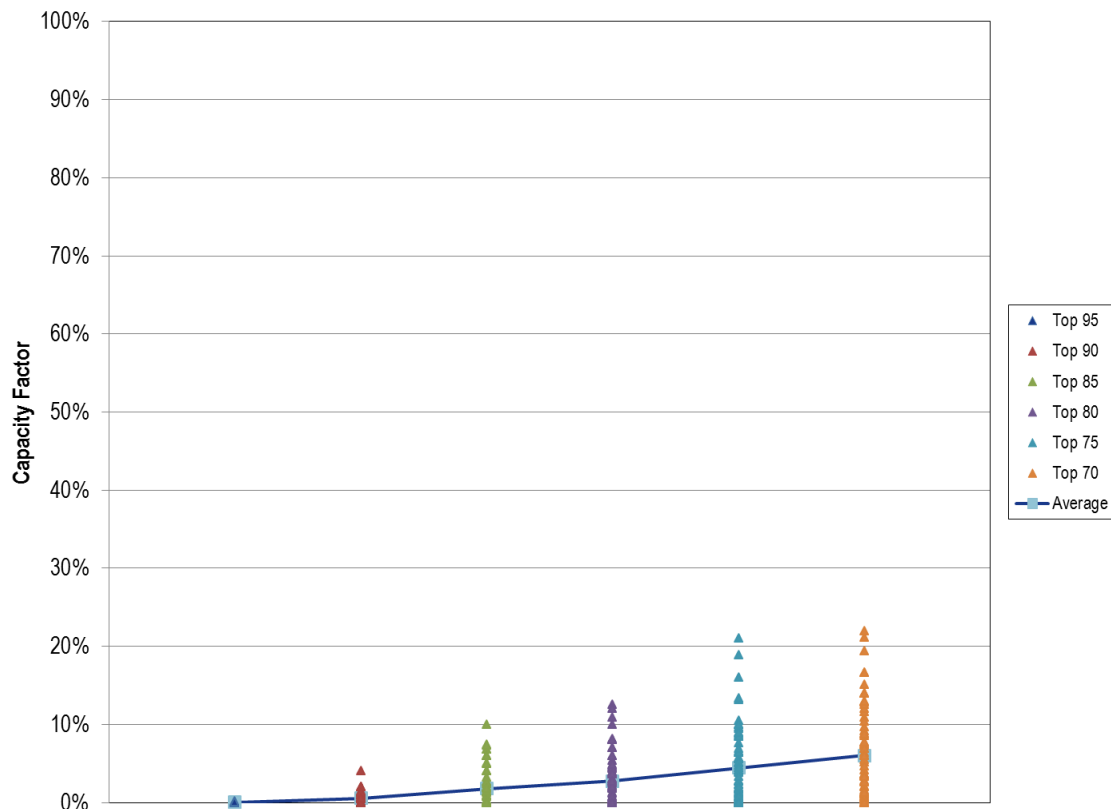
Wind Capacity Factor, Summer Peak 2016, Top 100 Hours



Wind Capacity Factor, Summer Peak 2017, Top 100 Hours



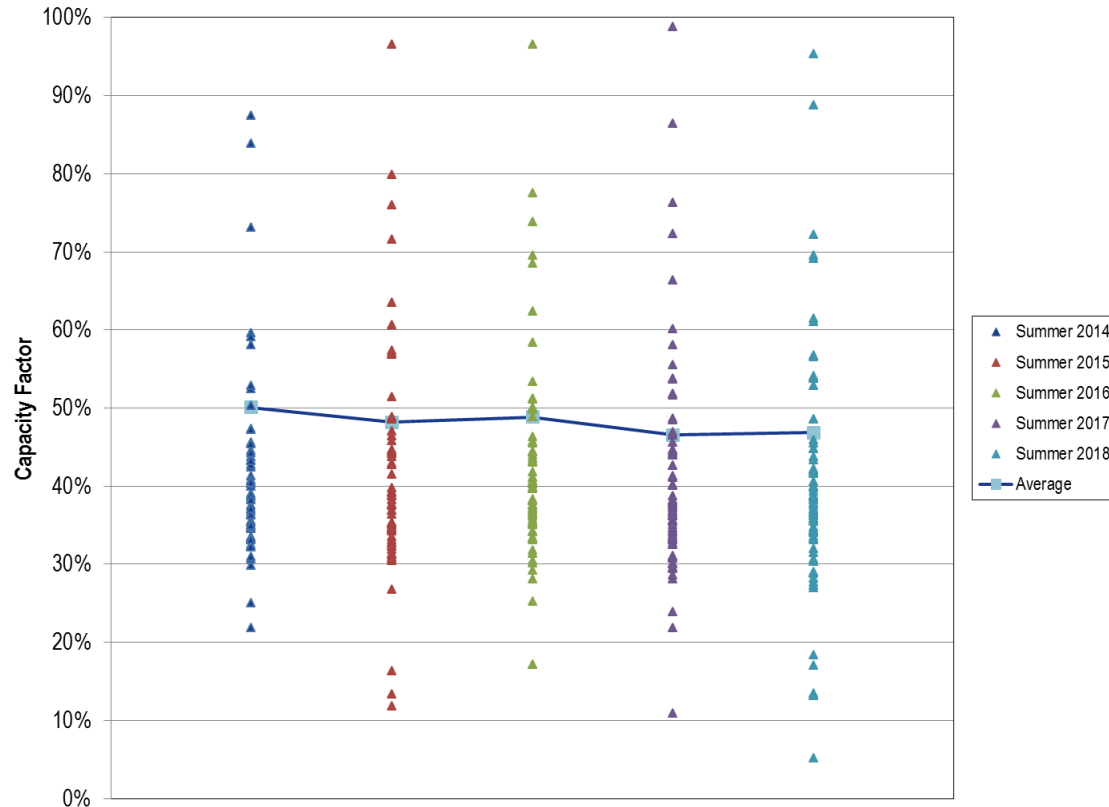
Wind Capacity Factor, Summer Peak 2018, Top 100 Hours



Solar Capacity Factor Analysis

- **Each mark is calculated by taking the average hourly output of a resource during the top 100 load hours of each delivery year**
- **Each marker on the figures represents a resource specific performance**
- **The average line is the average of the individual resources**

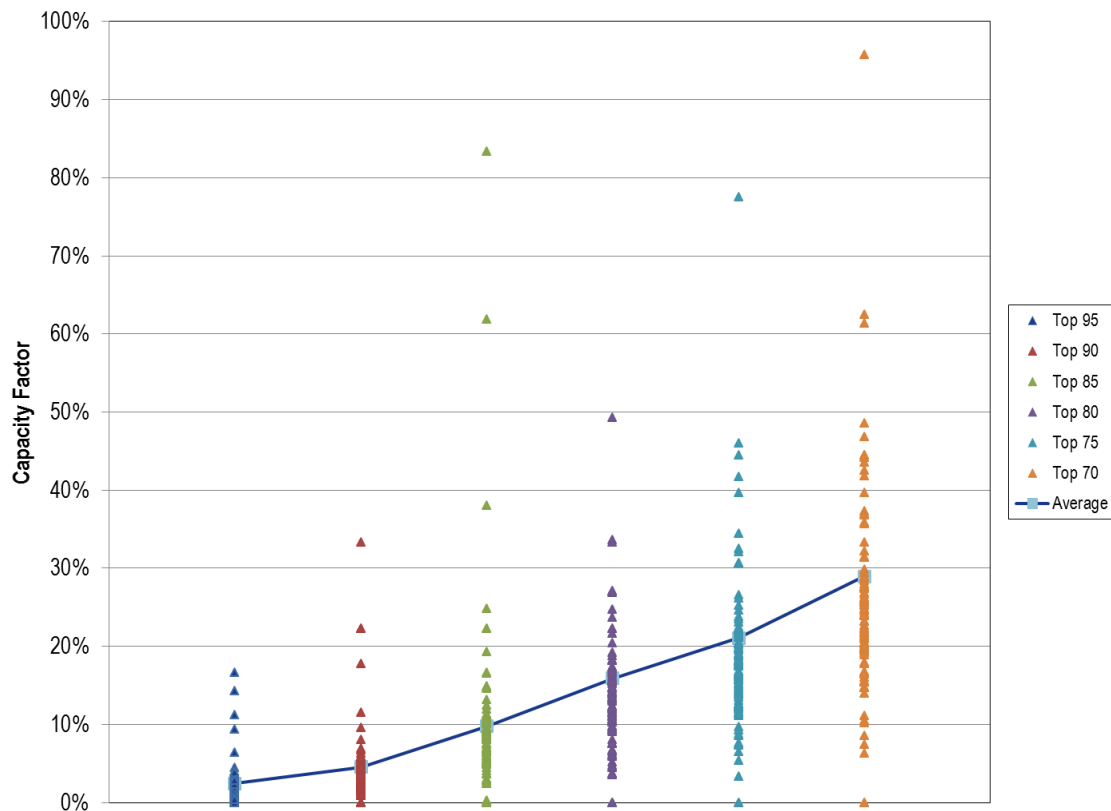
Average Solar Capacity Factor, Summer Peak, Top 100 Hours



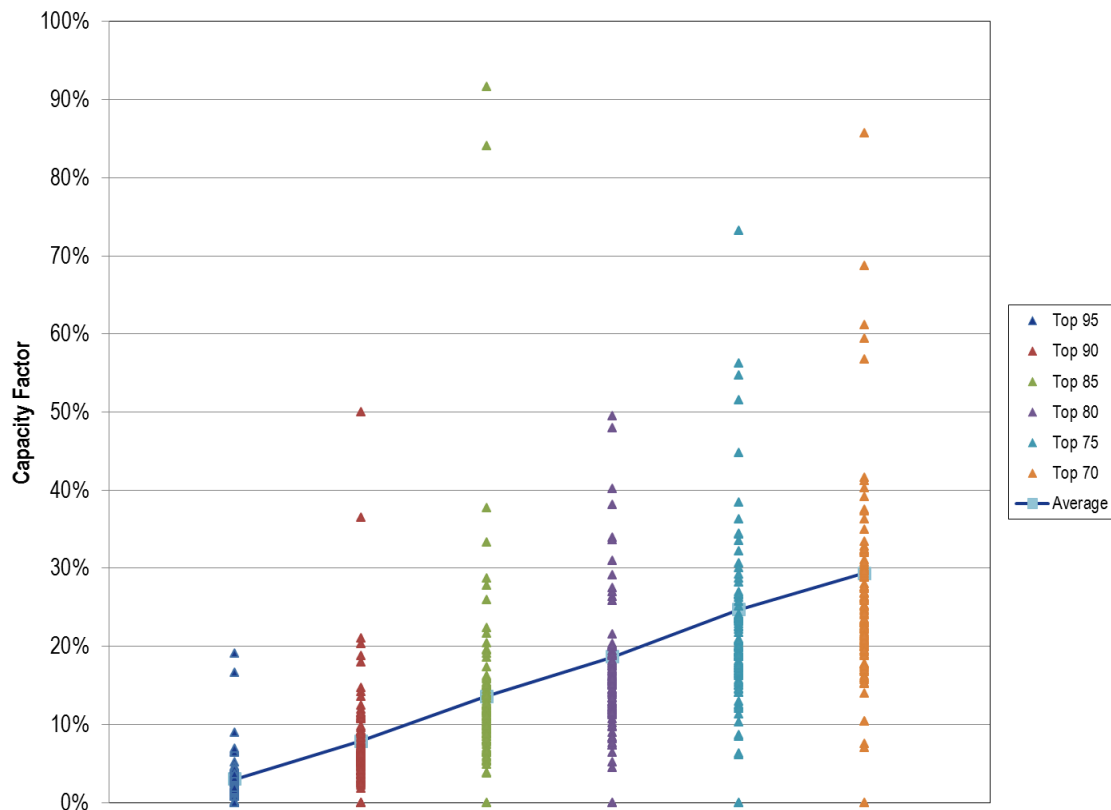
Solar Capacity Factor Analysis

- Rank capacity factor for top 100 load hours for all solar resources
- Top 95 represents each resource's highest capacity factors by hour within the top 100 load hours
- The average line is the average of the individual resources

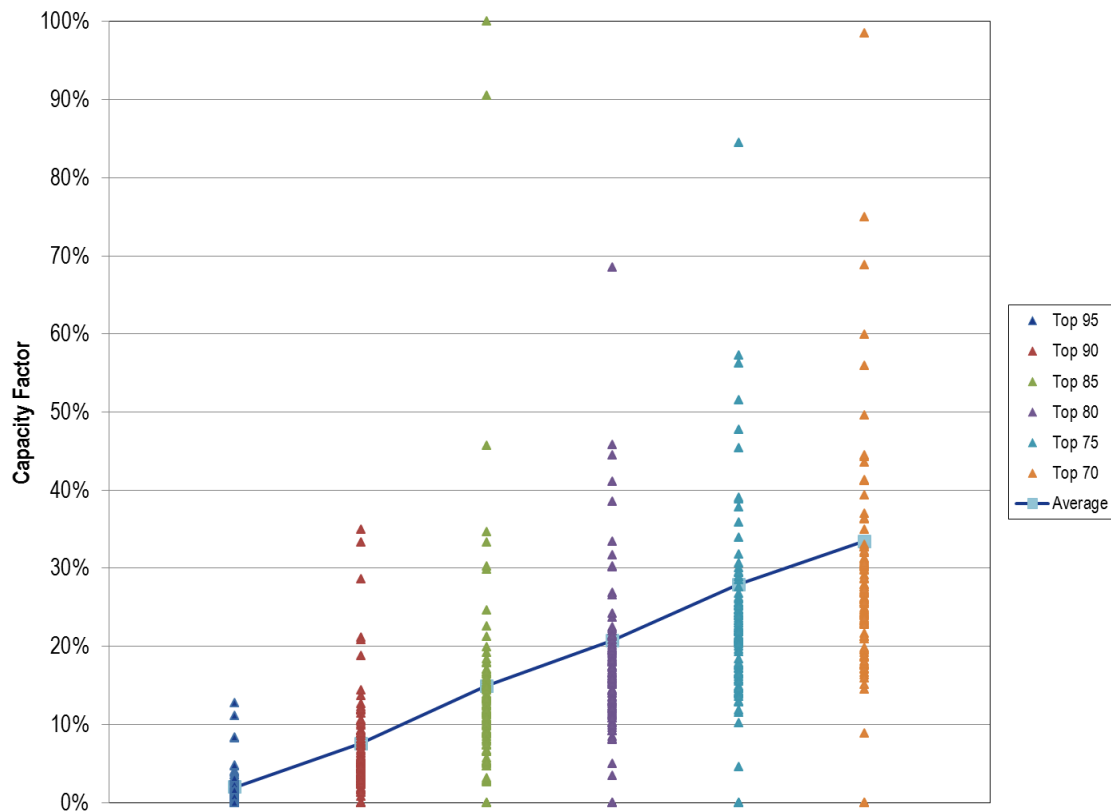
Solar Capacity Factor, Summer Peak 2014, Top 100 Hours



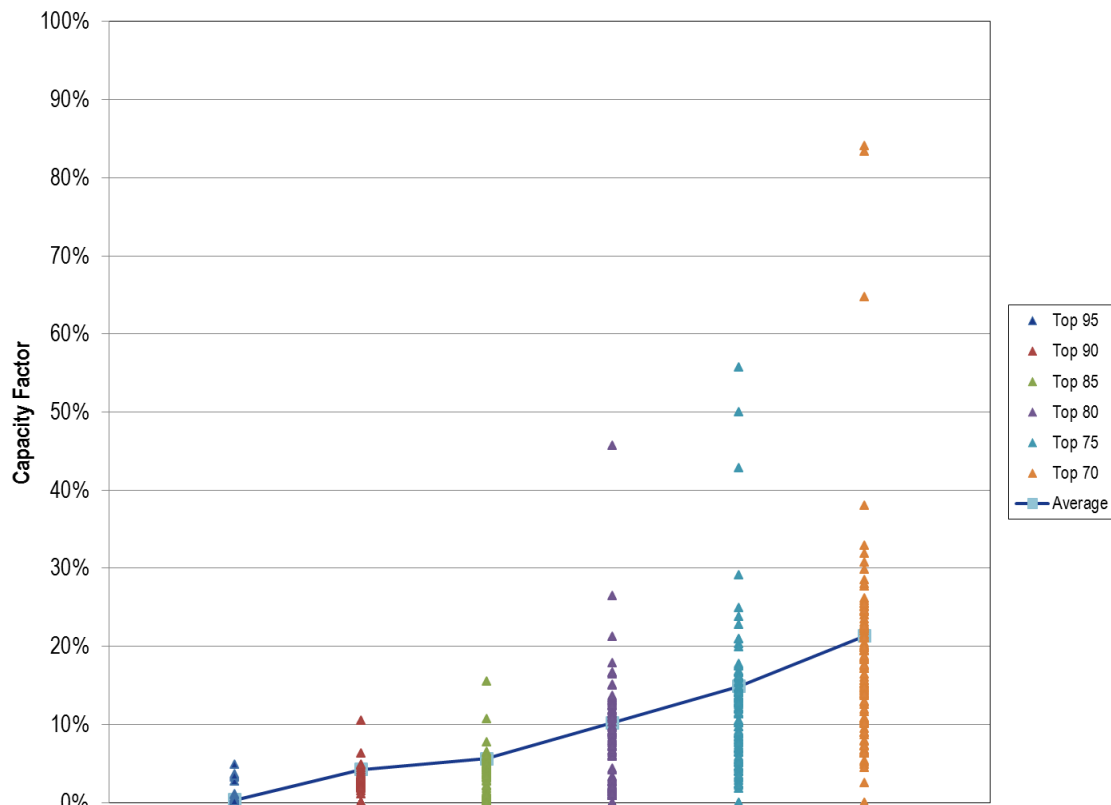
Solar Capacity Factor, Summer Peak 2015, Top 100 Hours



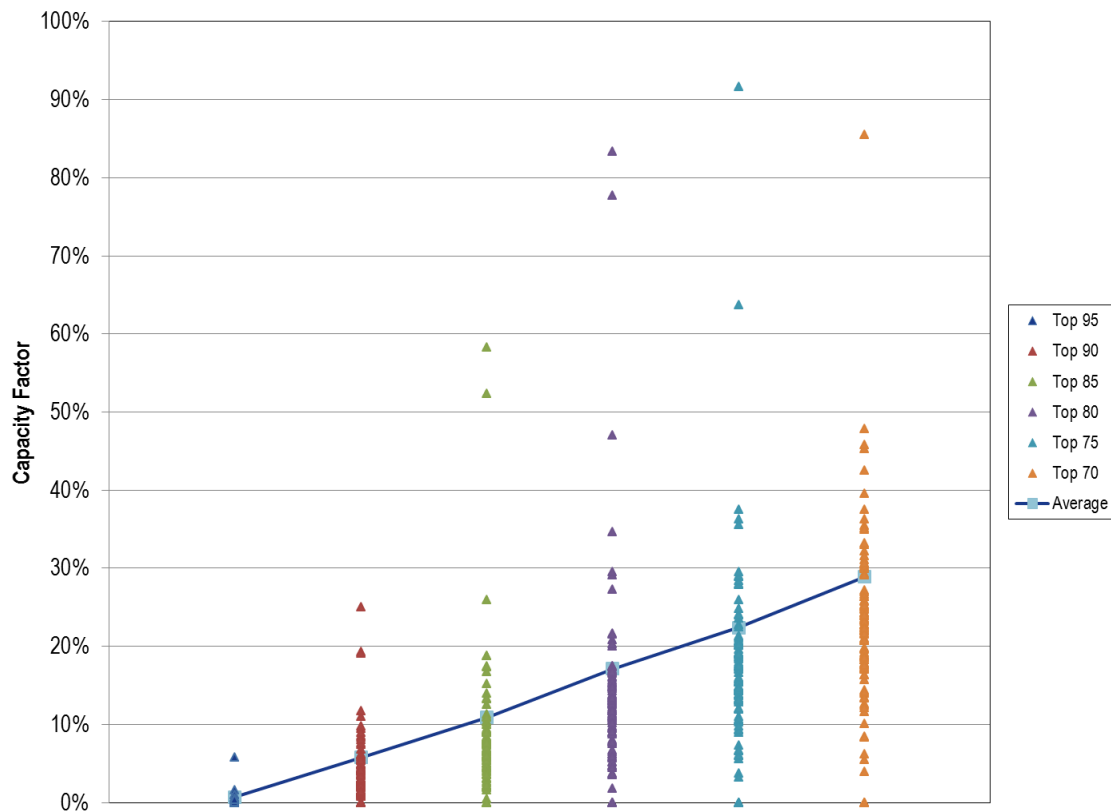
Solar Capacity Factor, Summer Peak 2016, Top 100 Hours



Solar Capacity Factor, Summer Peak 2017, Top 100 Hours



Solar Capacity Factor, Summer Peak 2018, Top 100 Hours



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