NYISO Wind Power
Plant Performance Tracking Report
For 2009 Through September

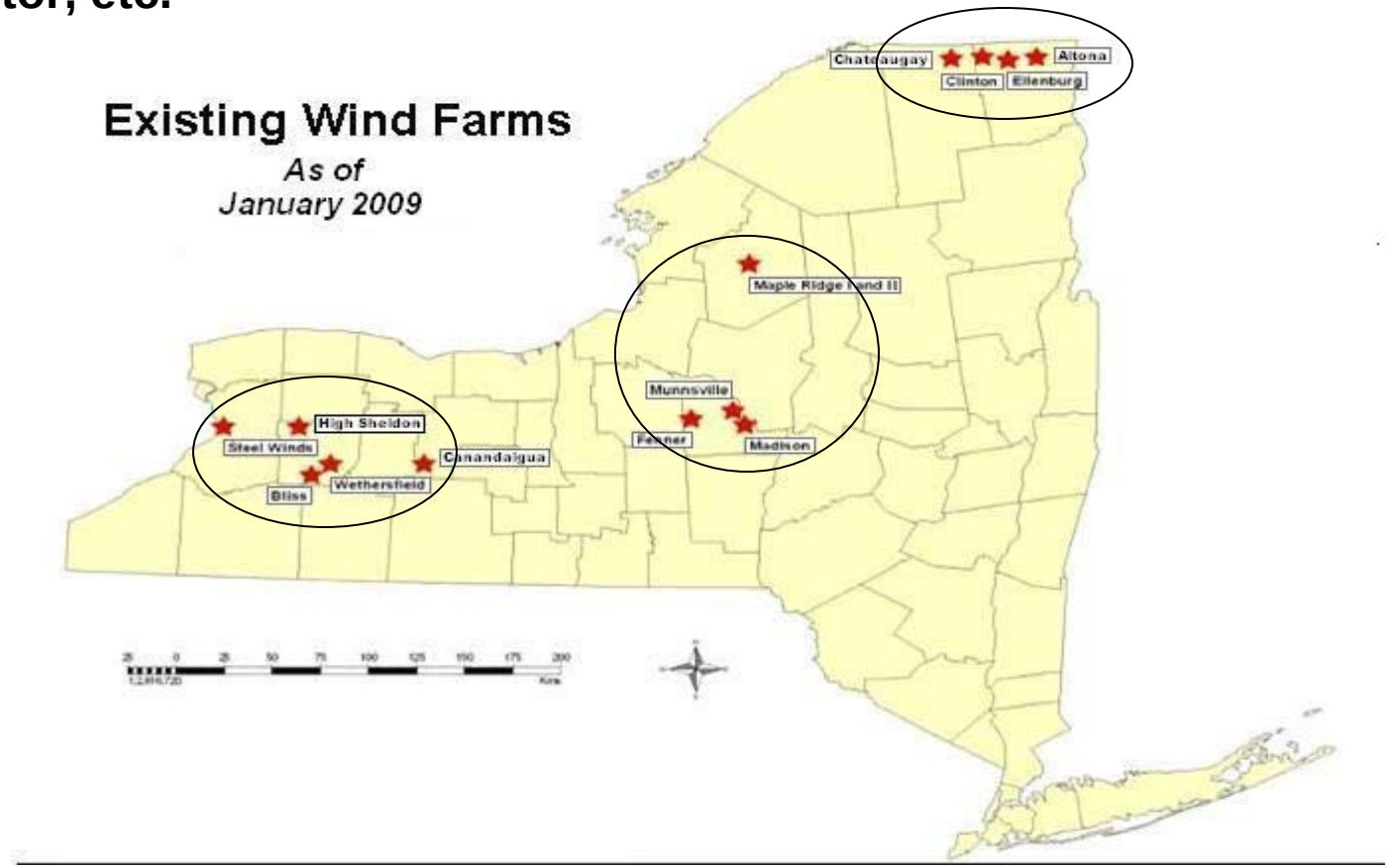
NYISO Wind Study Workshop

October 19, 2009

Provided for informational purposes only

Wind Plant Performance Report

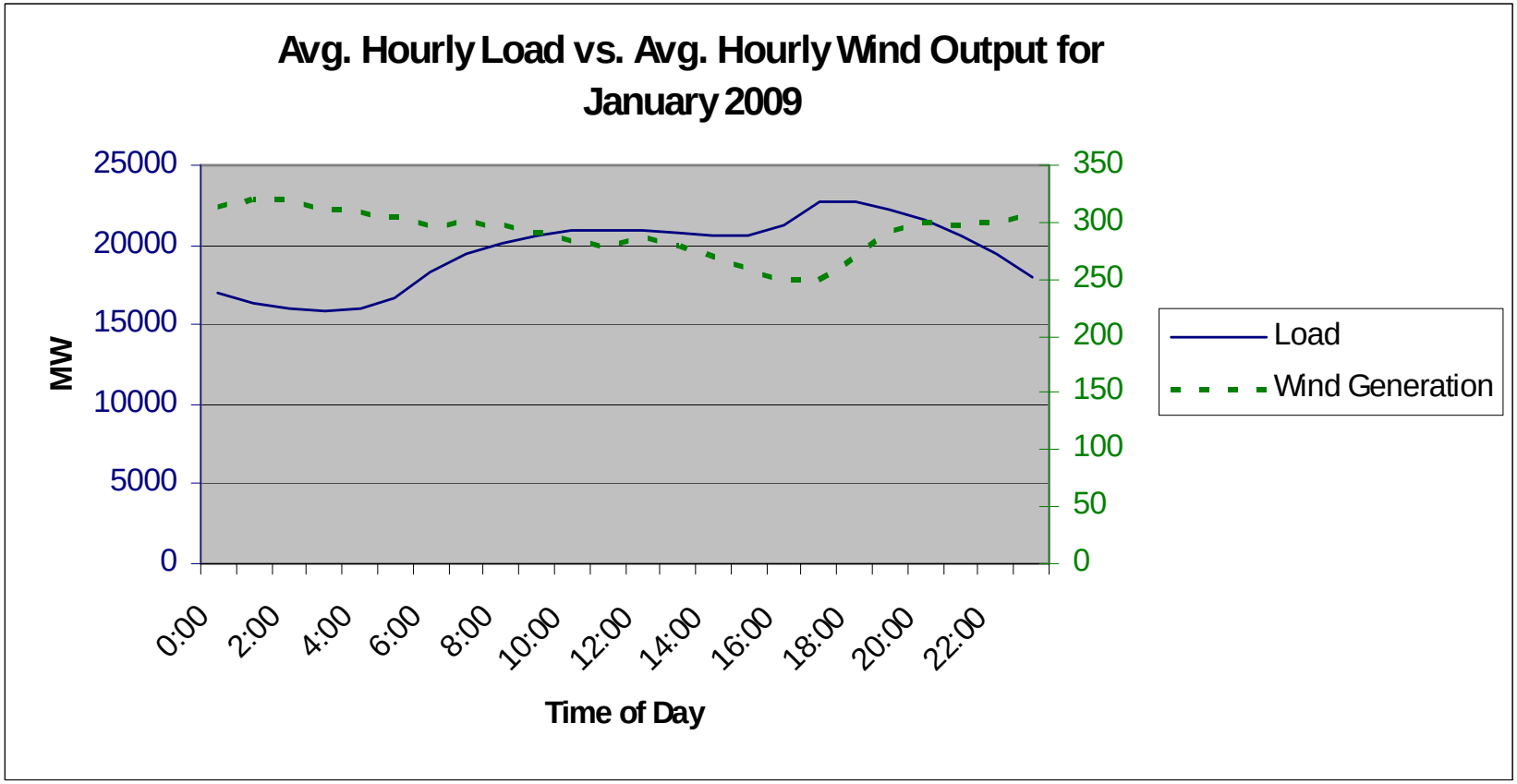
- **Tracks the performance of wind plants by months on a daily basis for key metrics such as maximum coincident wind plant output, total output at the time of the system peak, Mwh generated, capacity factor, etc.**



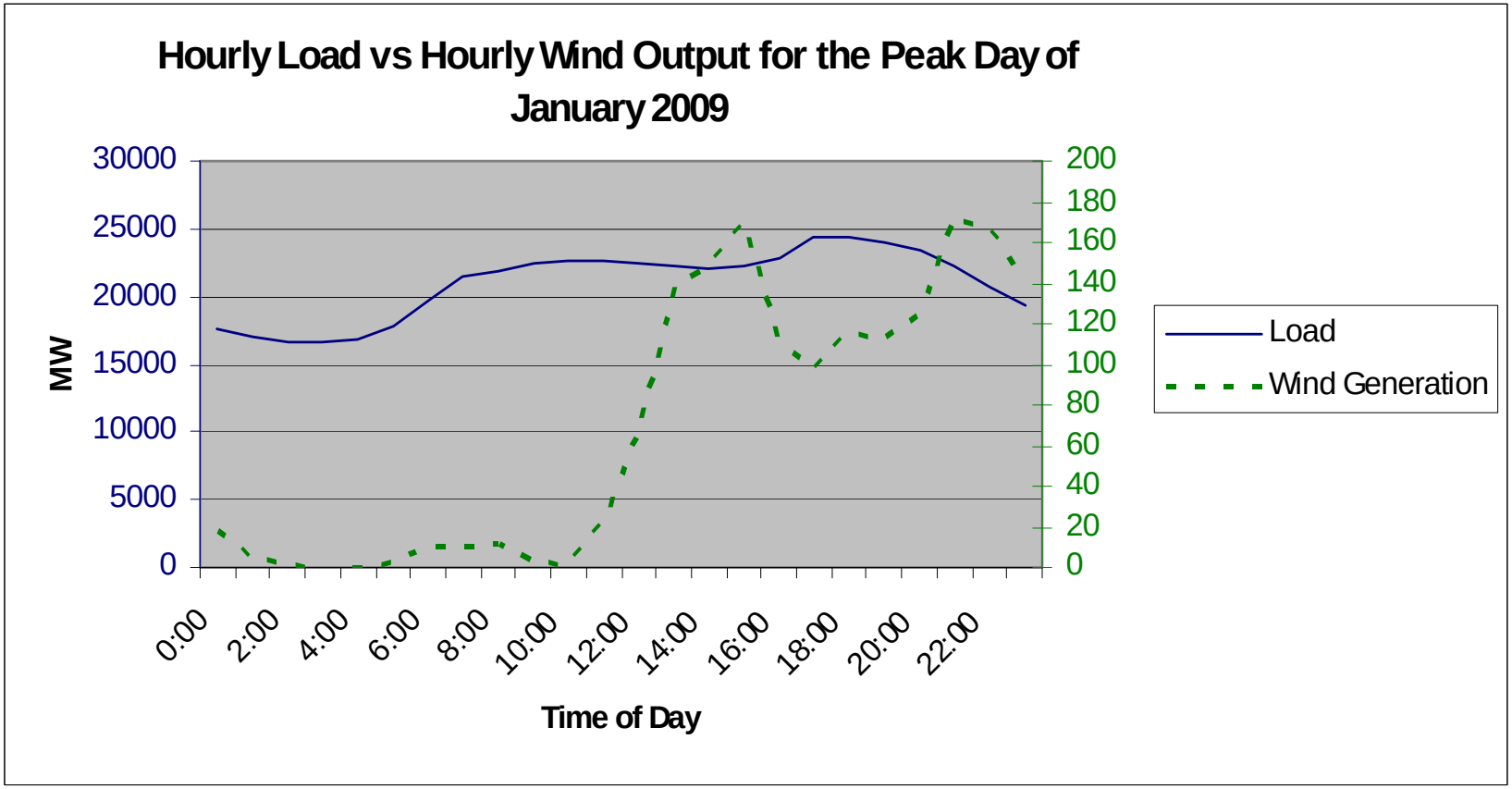
Plant Performance

January 2009

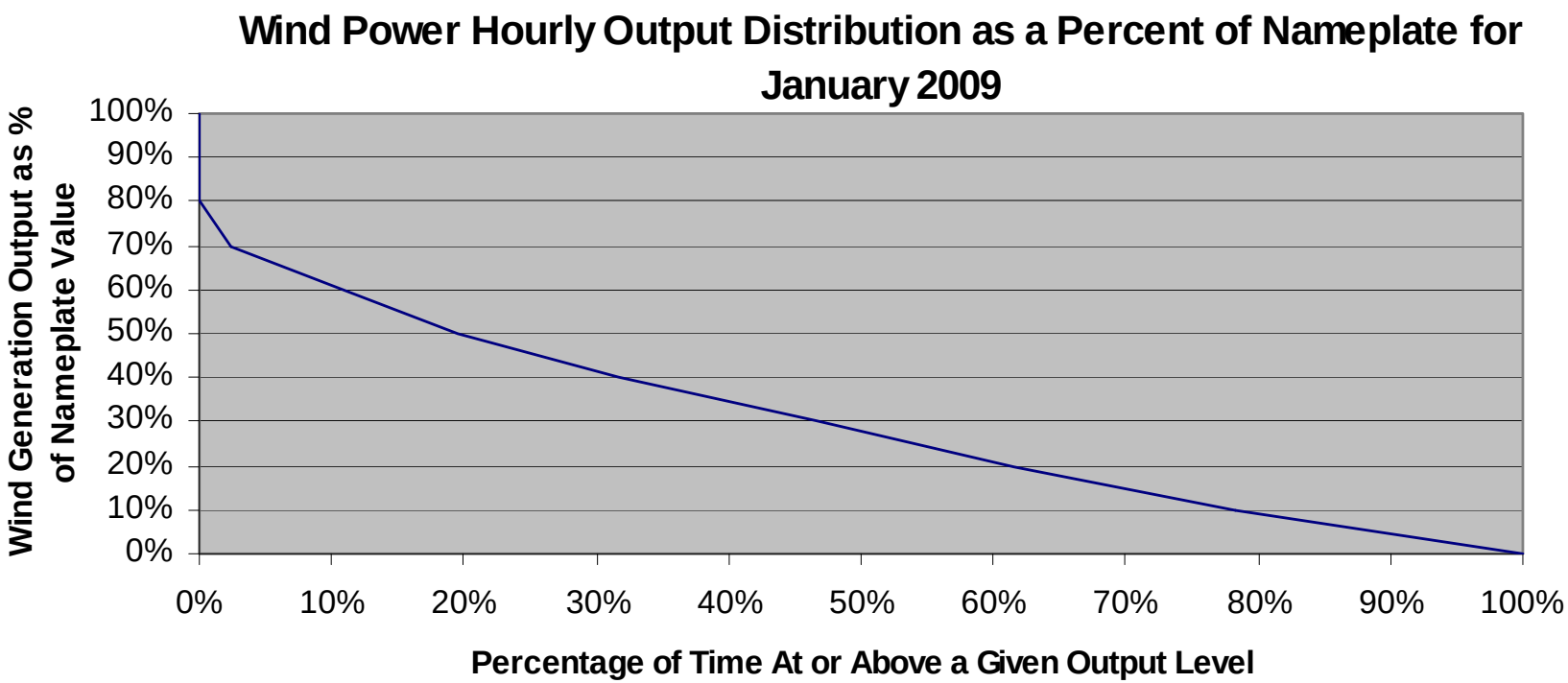
Average Day - January



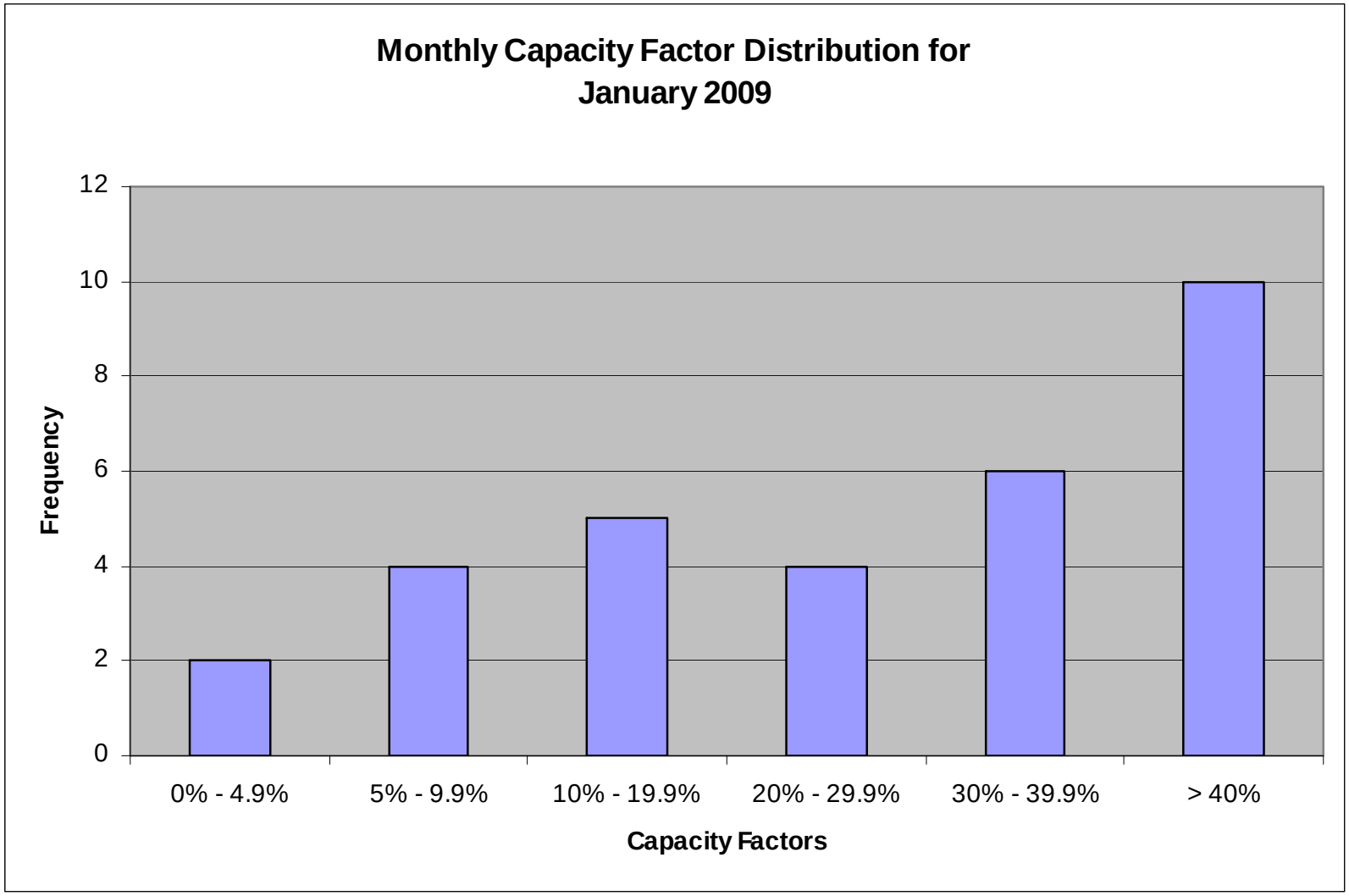
Peak Day - January



Hourly Output as a Percent of Nameplate - January



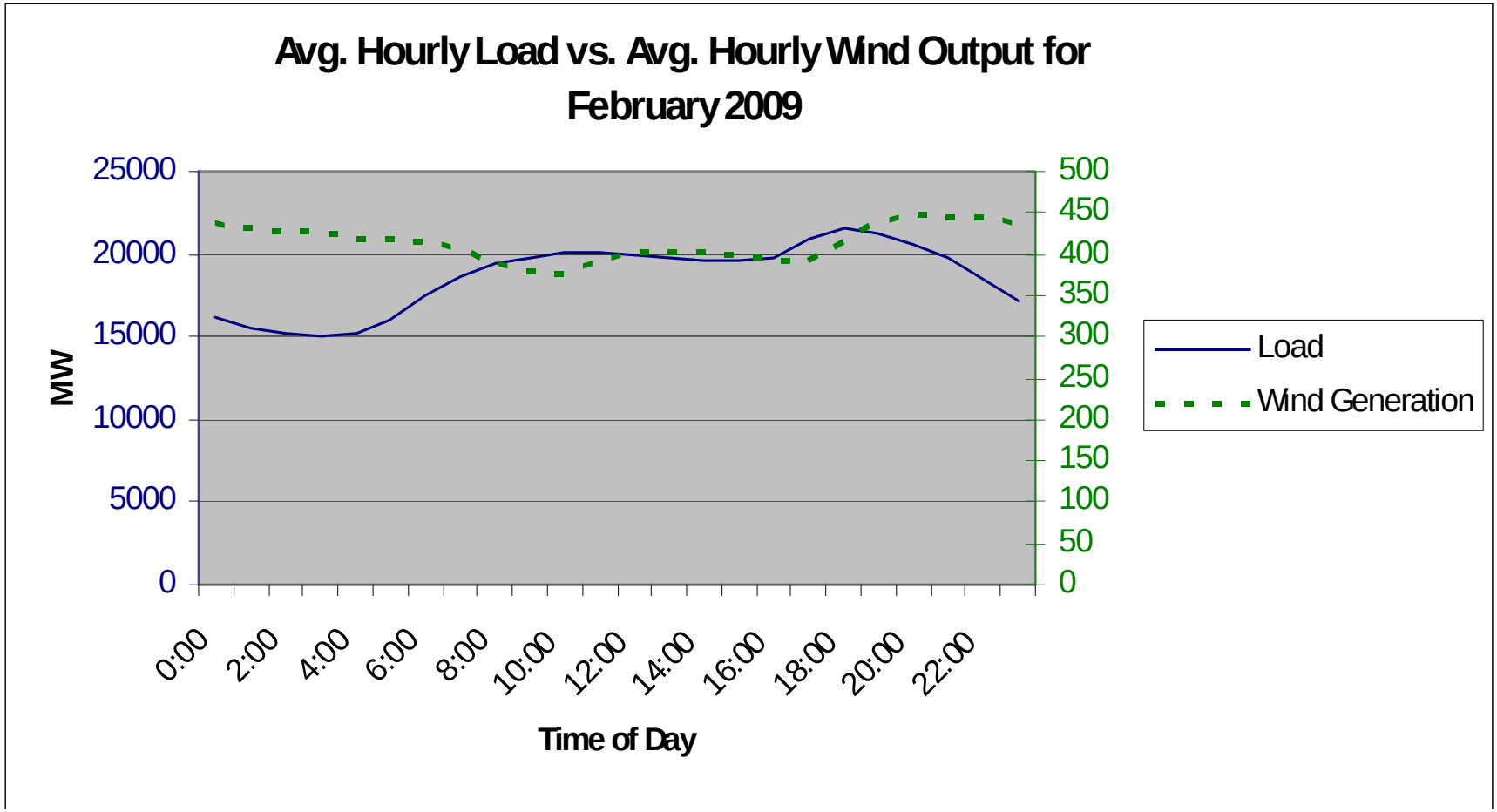
Distribution of Daily Capacity Factors - January



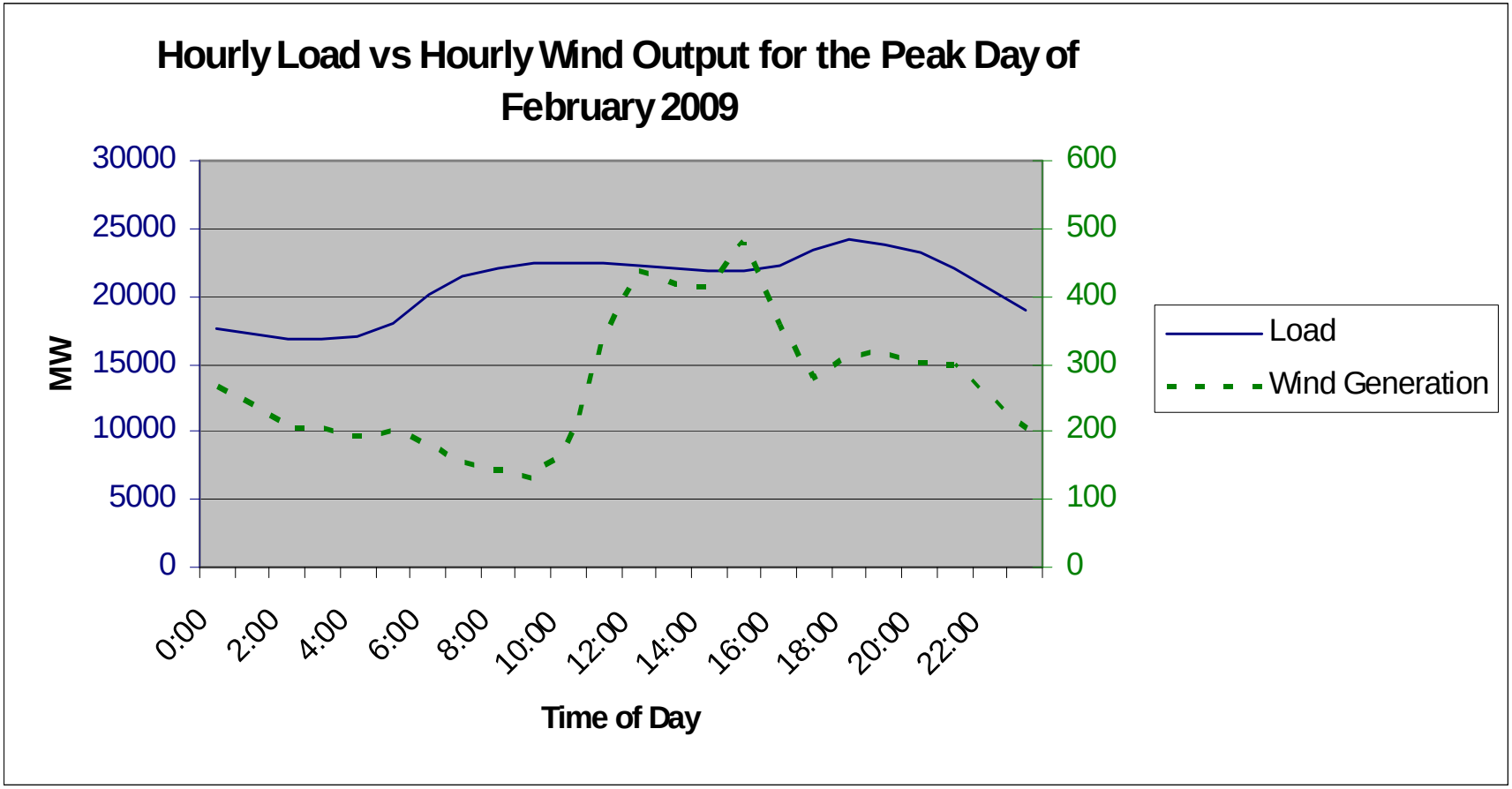
Plant Performance

February 2009

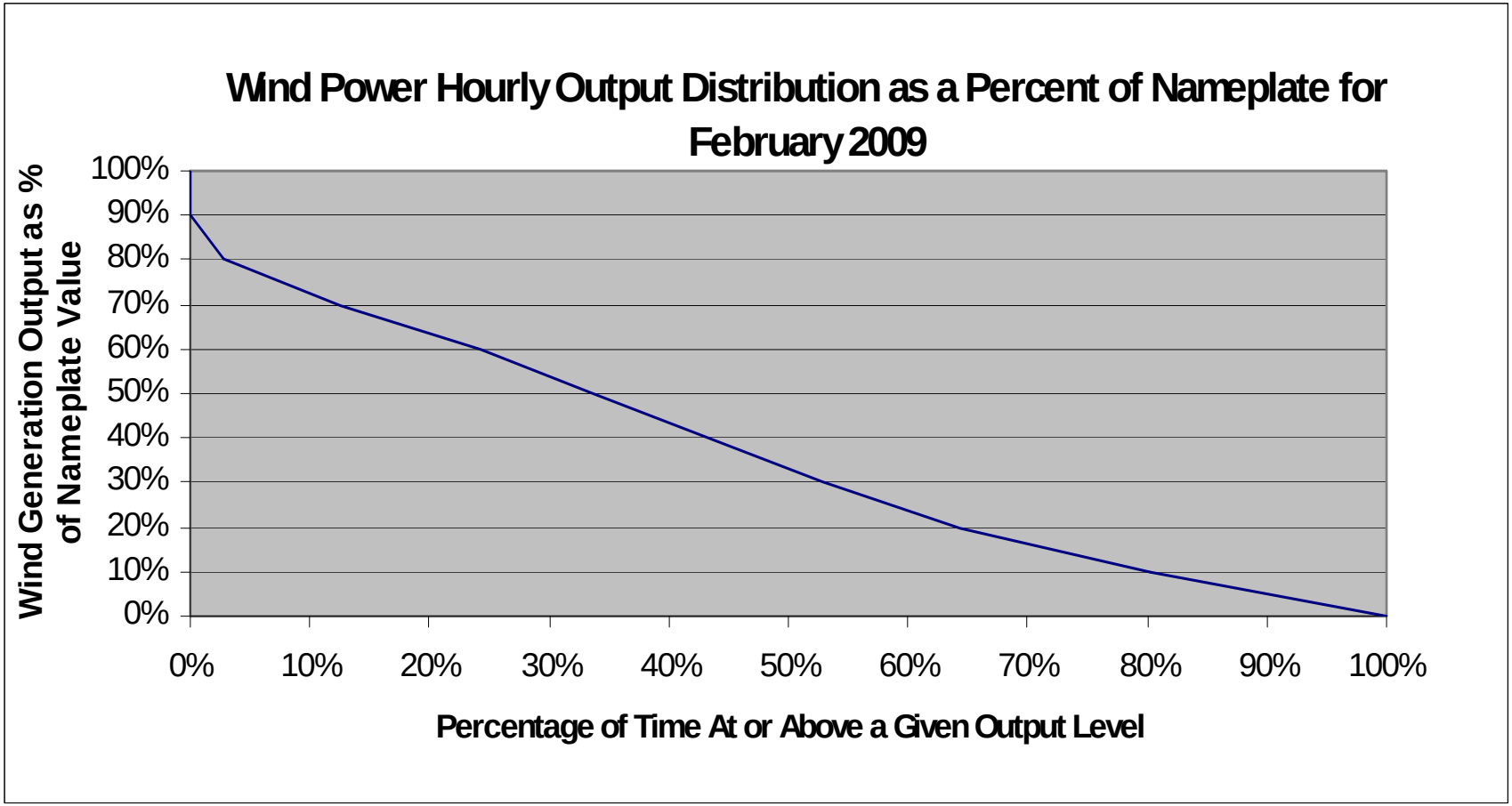
Average Day - February



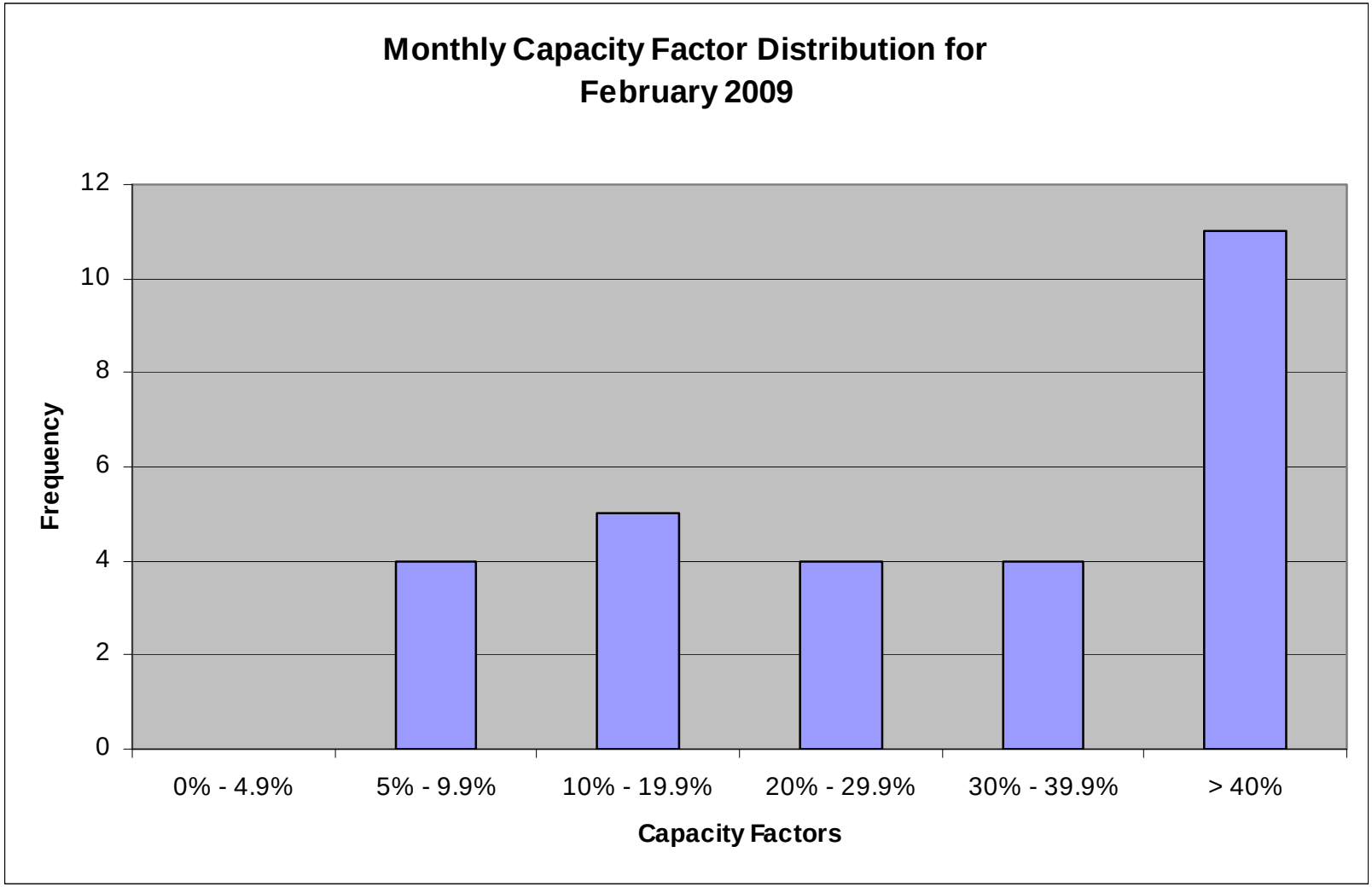
Peak Day - February



Hourly Output as a Percent of Nameplate - February



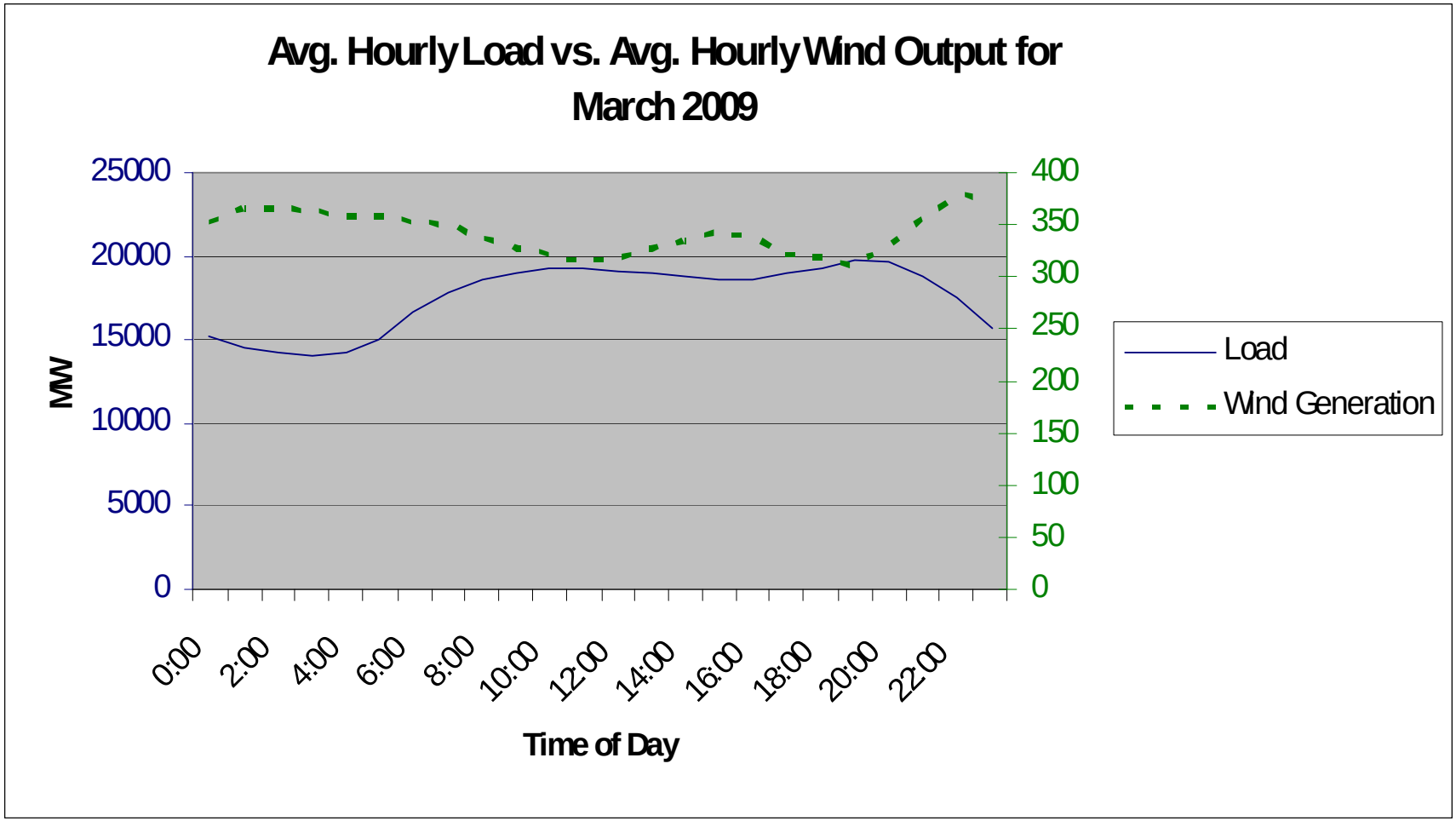
Distribution of Daily Capacity Factors - February



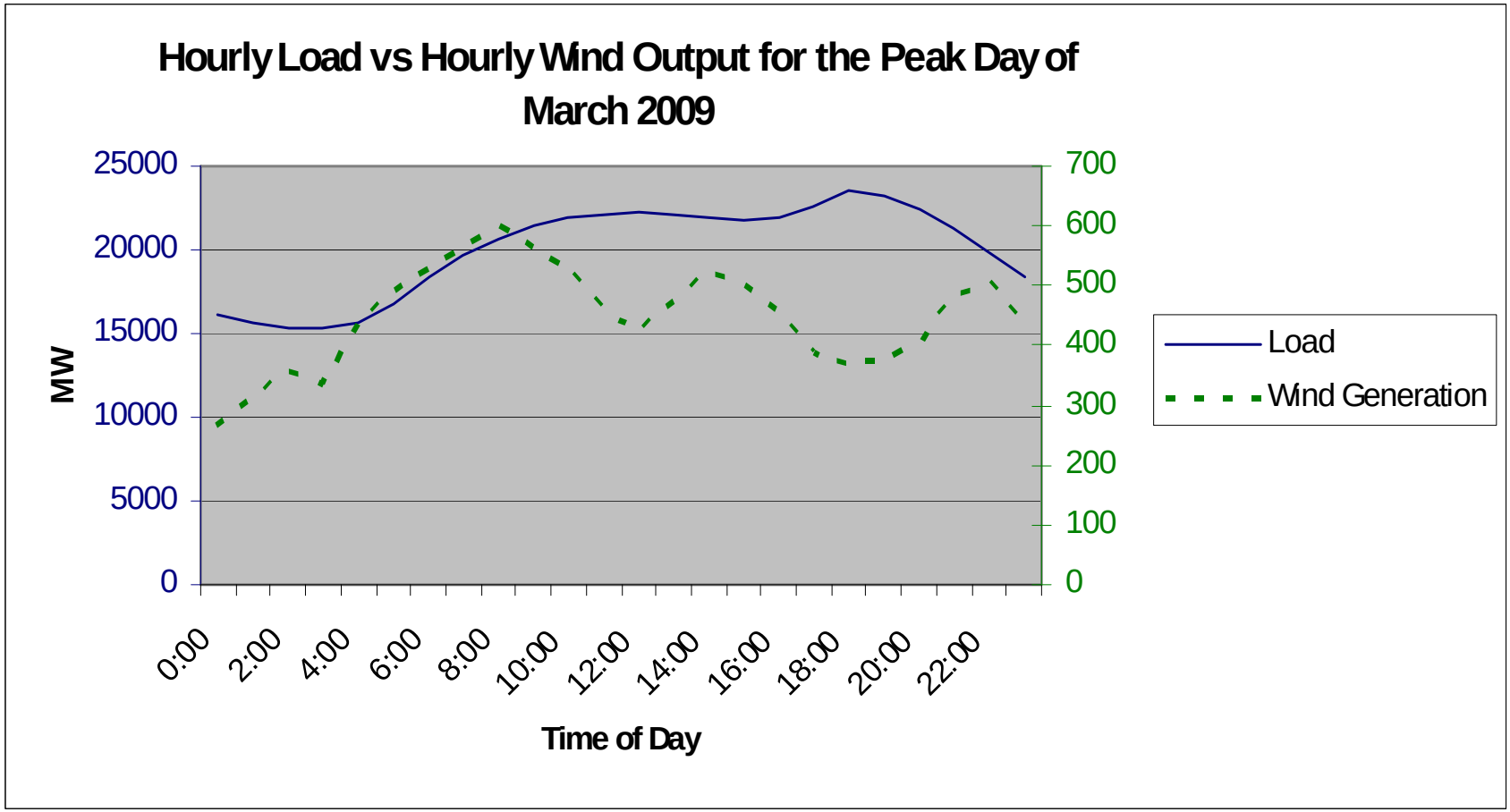
Plant Performance

March 2009

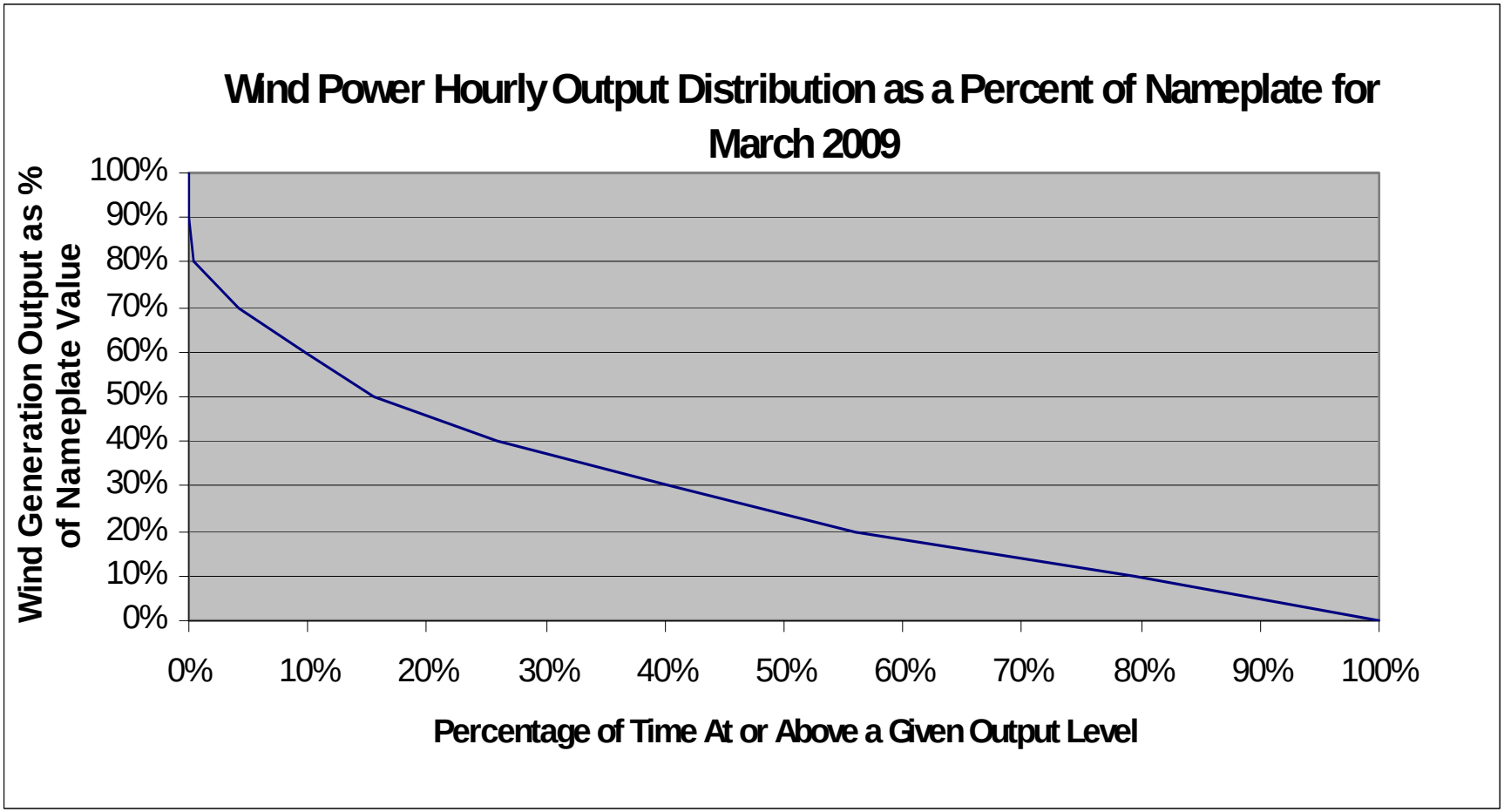
Average Day - March



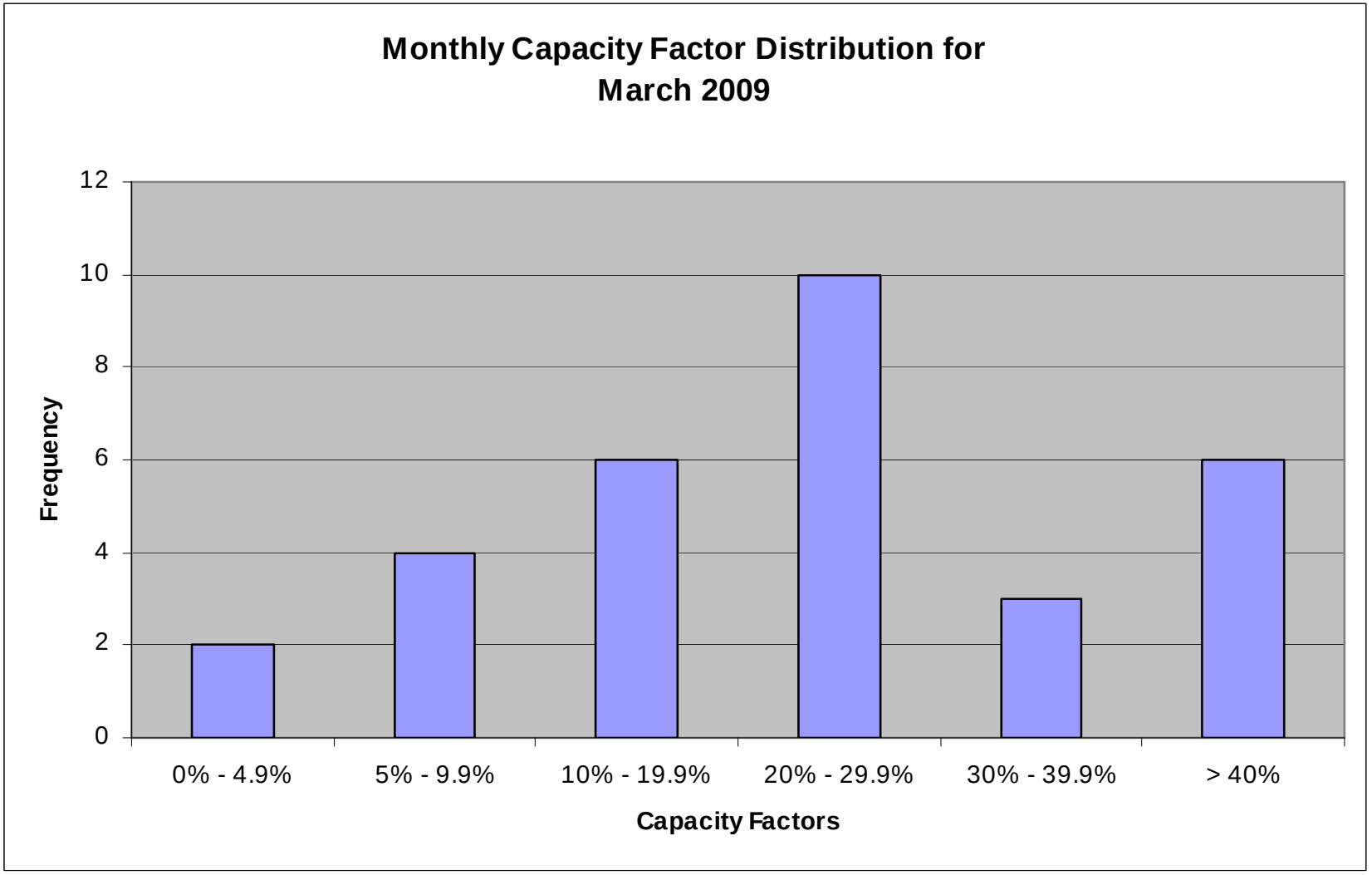
Peak Day - March



Hourly Output as a Percent of Nameplate - March



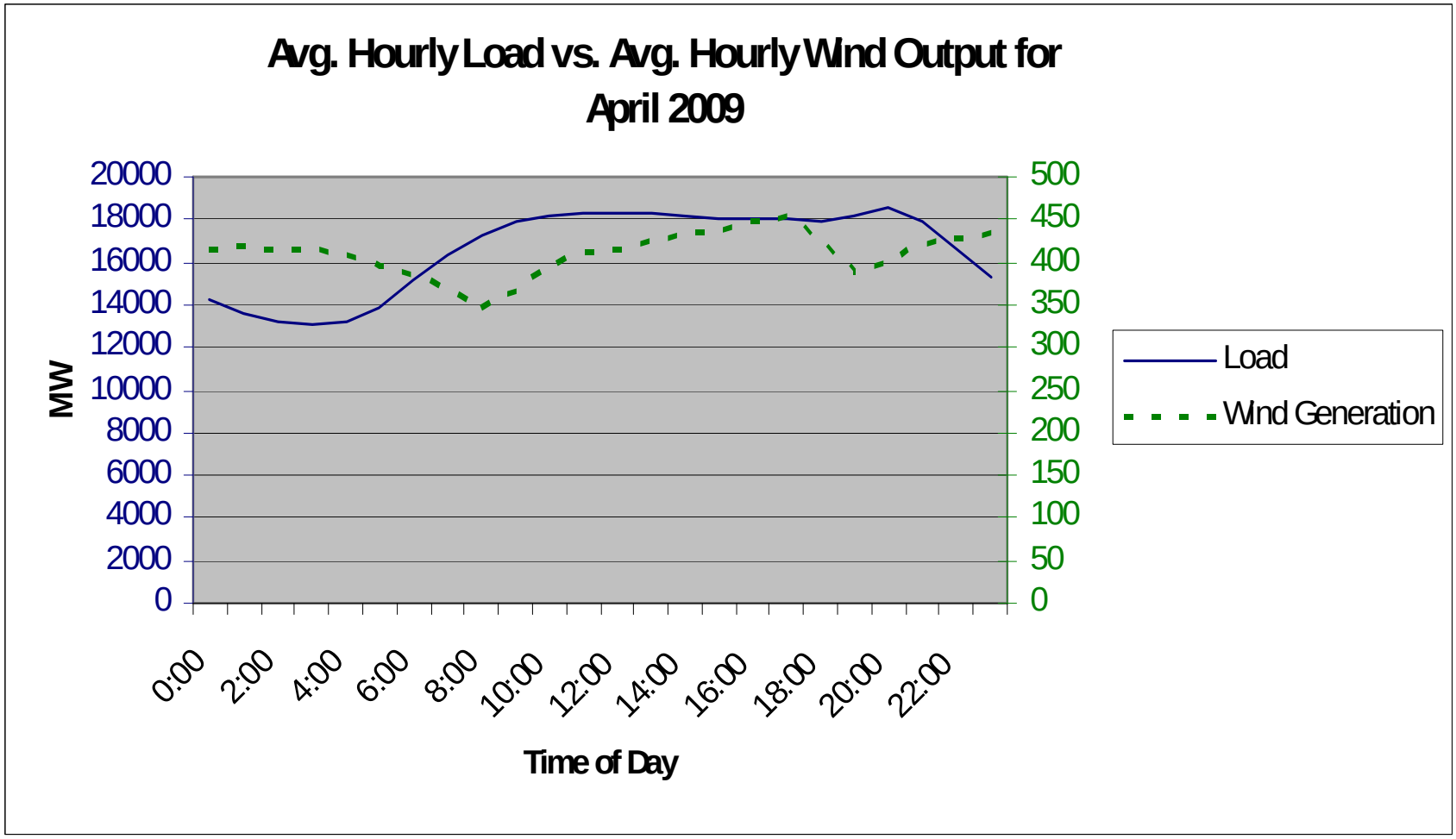
Distribution of Daily Capacity Factors - March



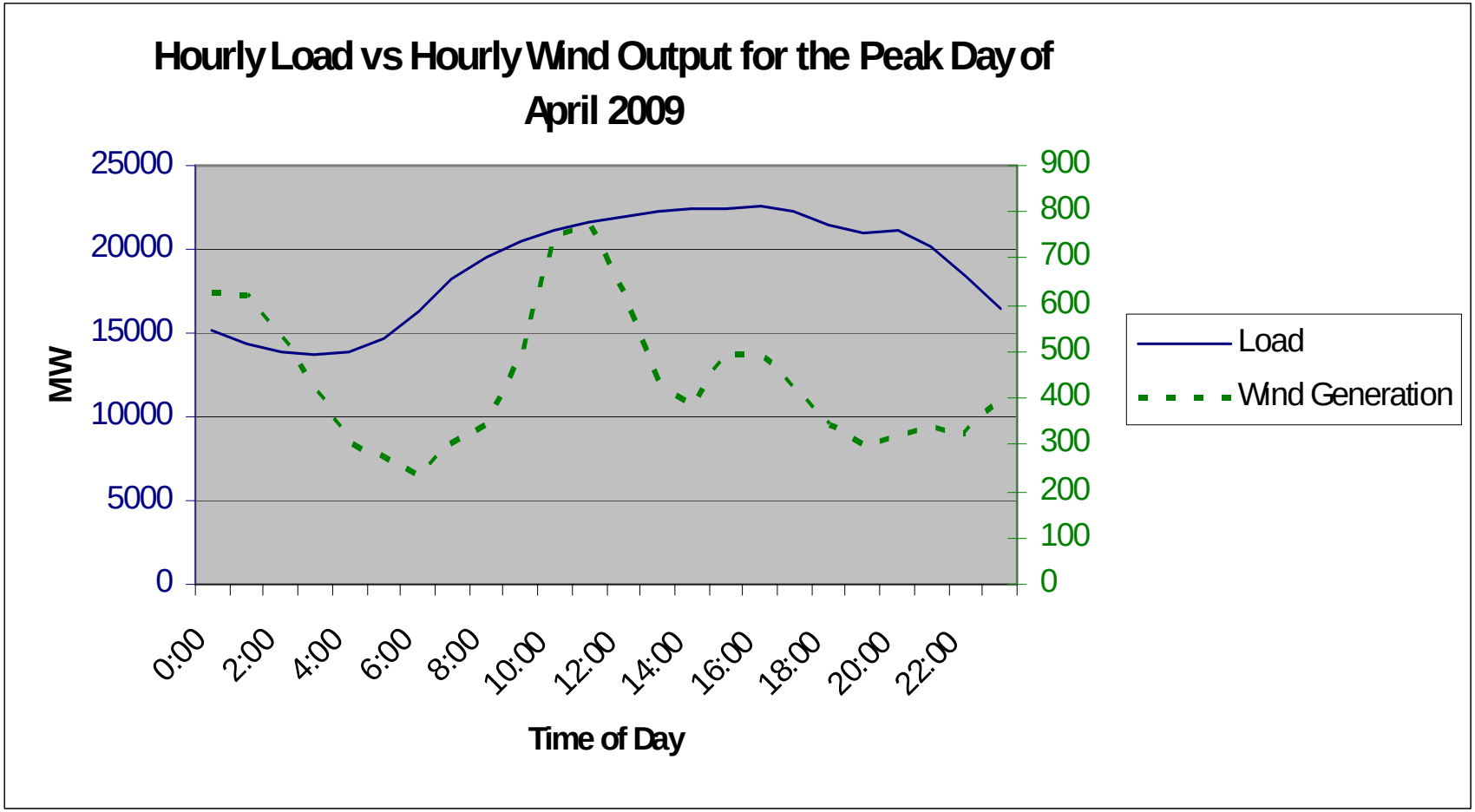
Plant Performance

April 2009

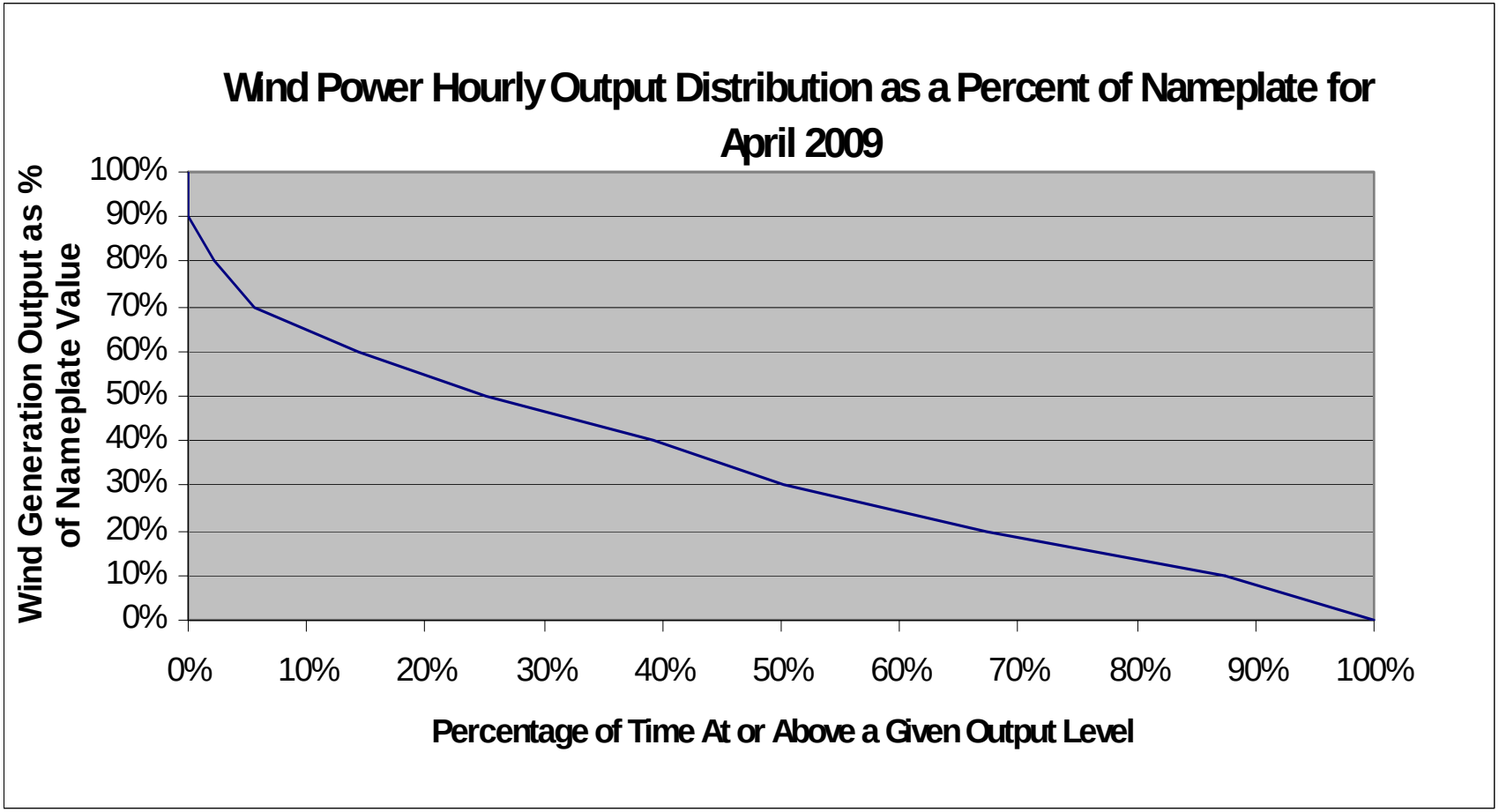
Average Day - April



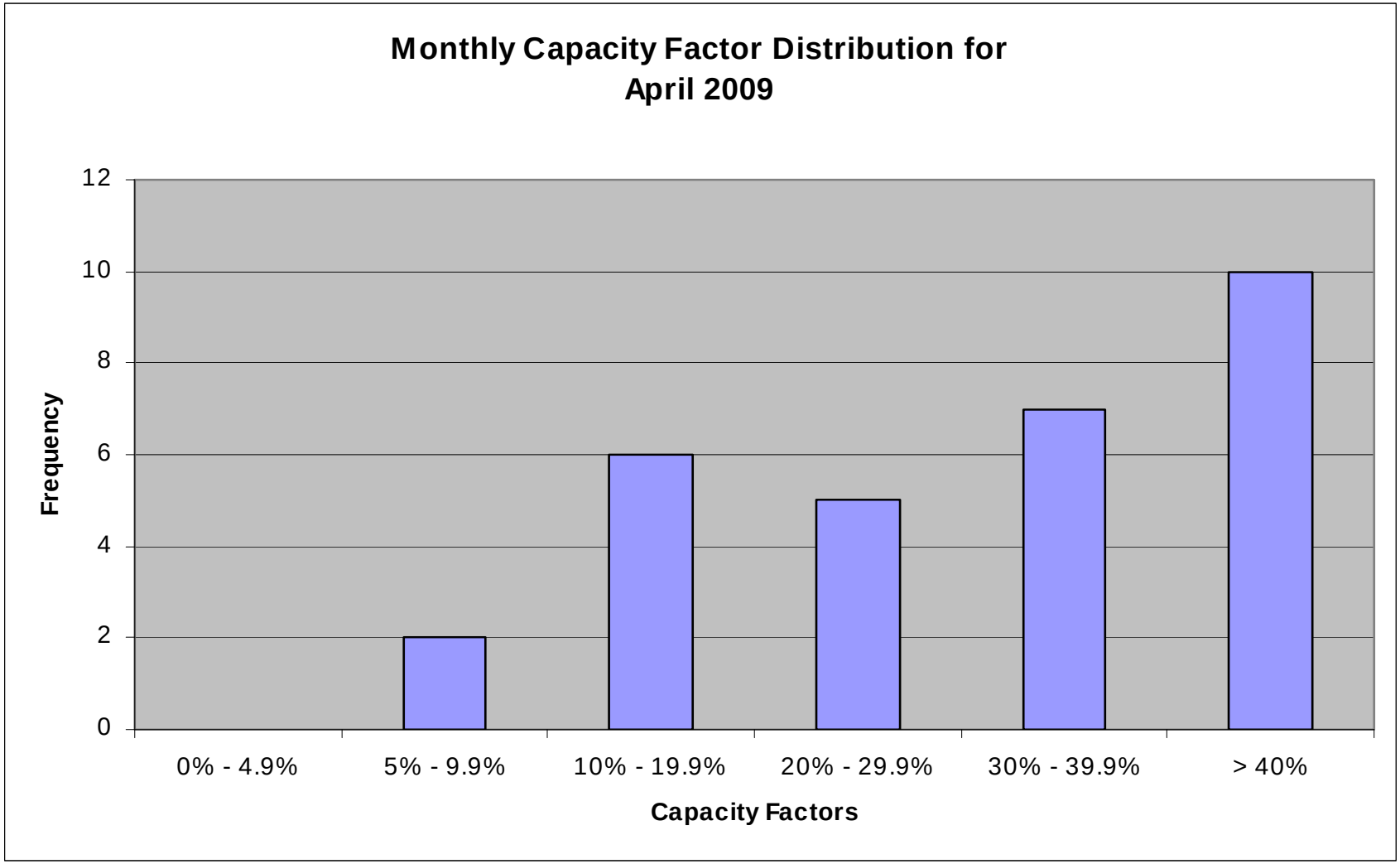
Peak Day - April



Hourly Output as a Percent of Nameplate - April



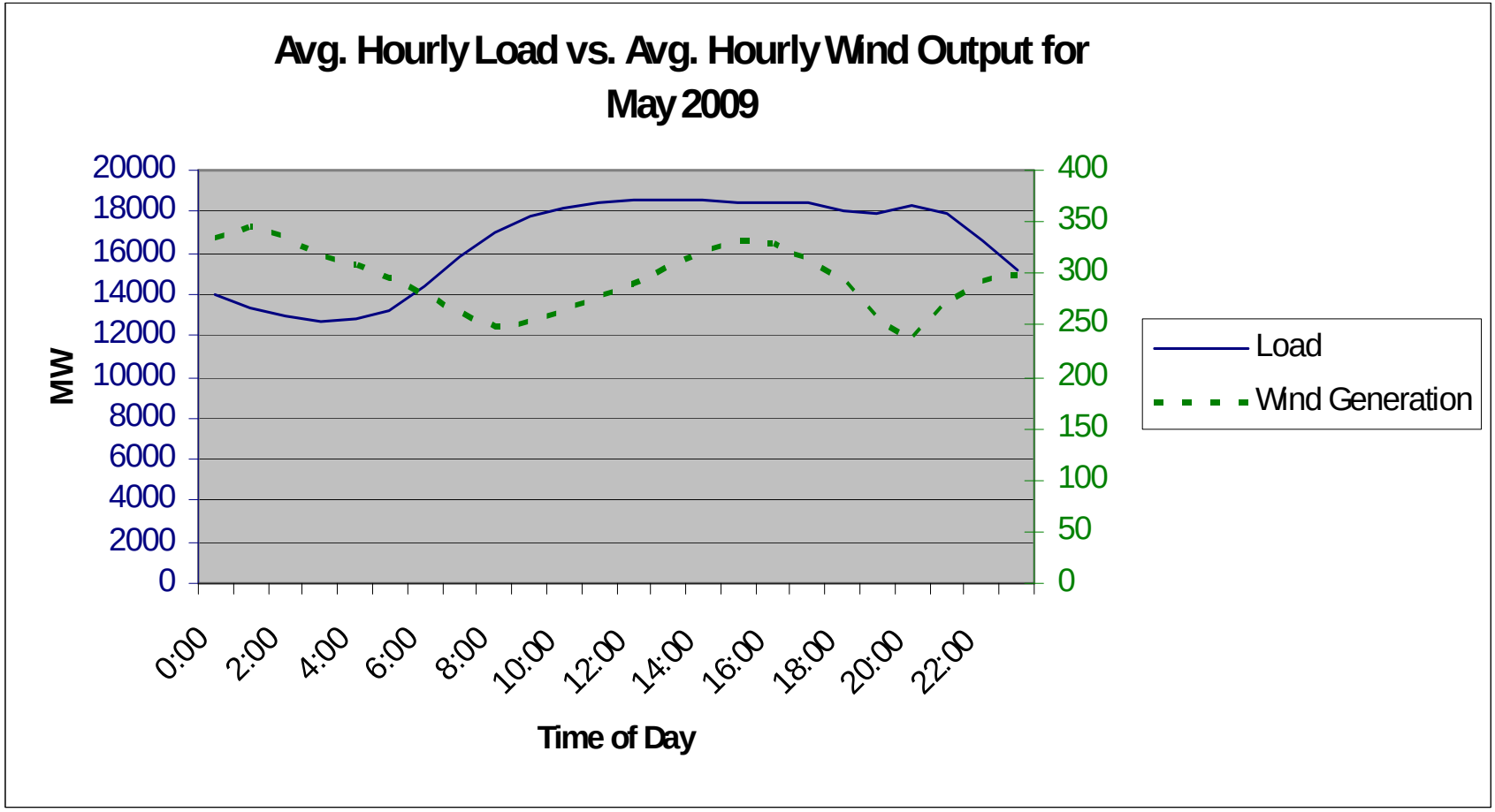
Distribution of Daily Capacity Factors - April



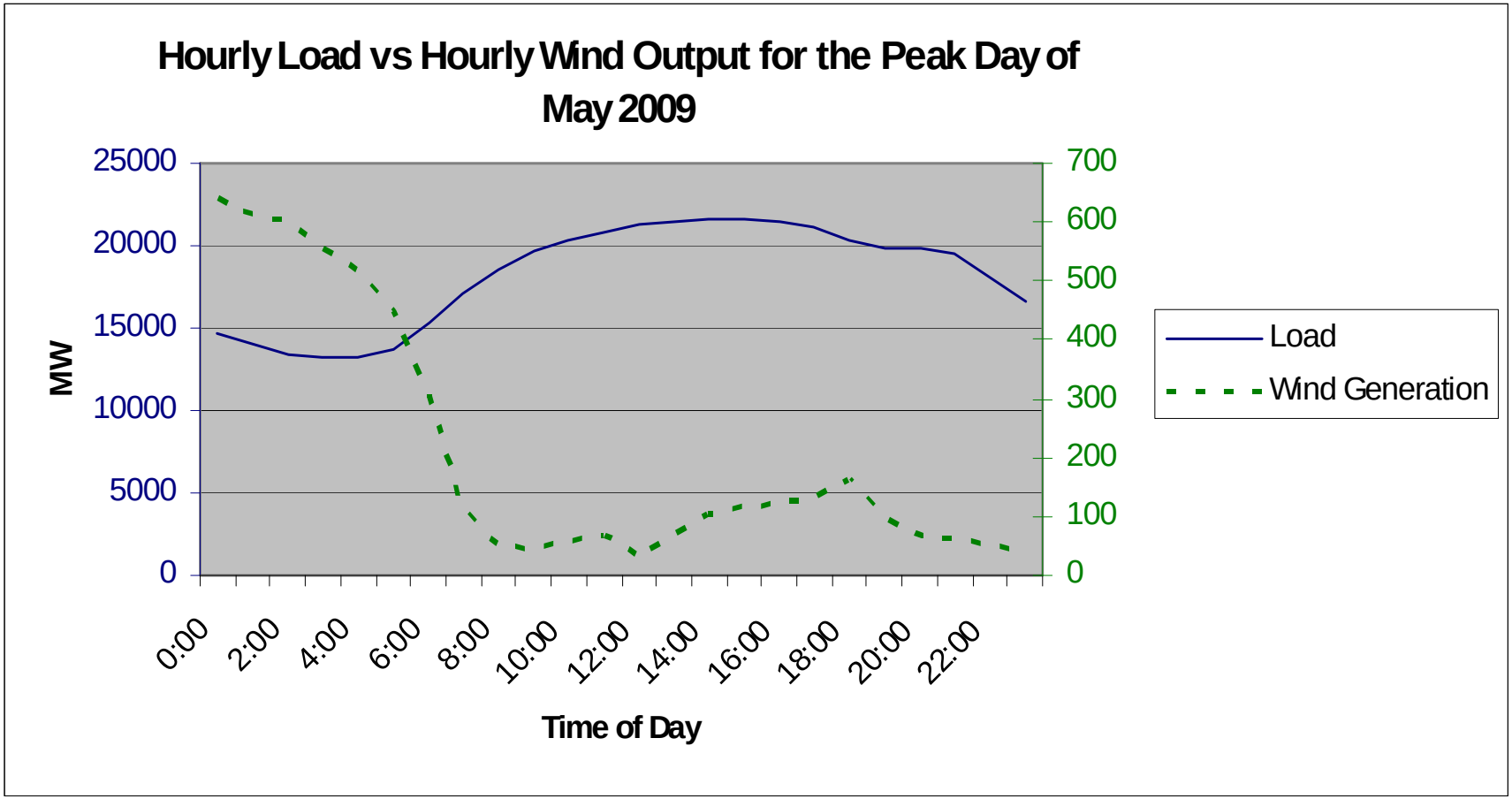
Plant Performance

May 2009

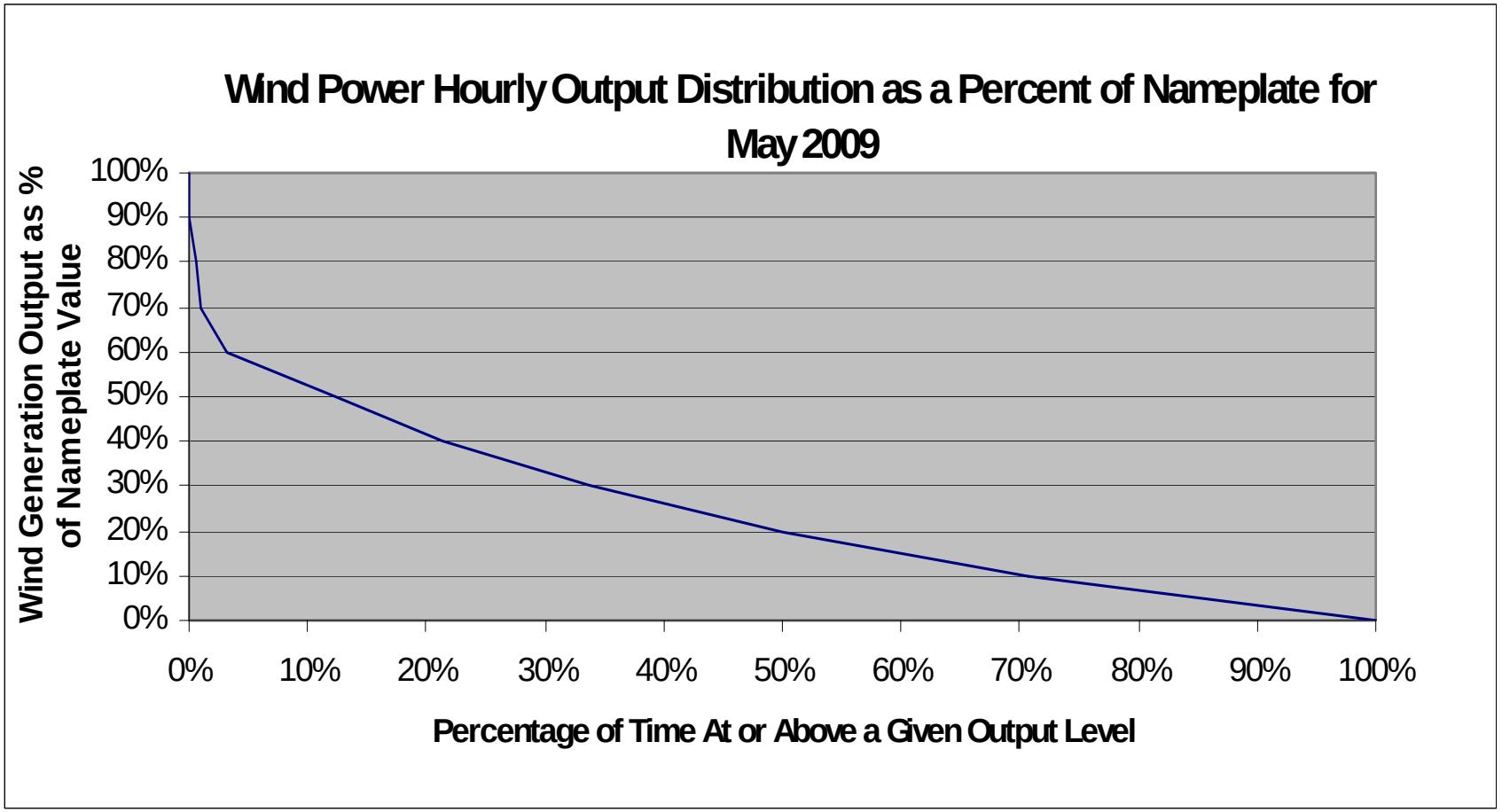
Average Day - May



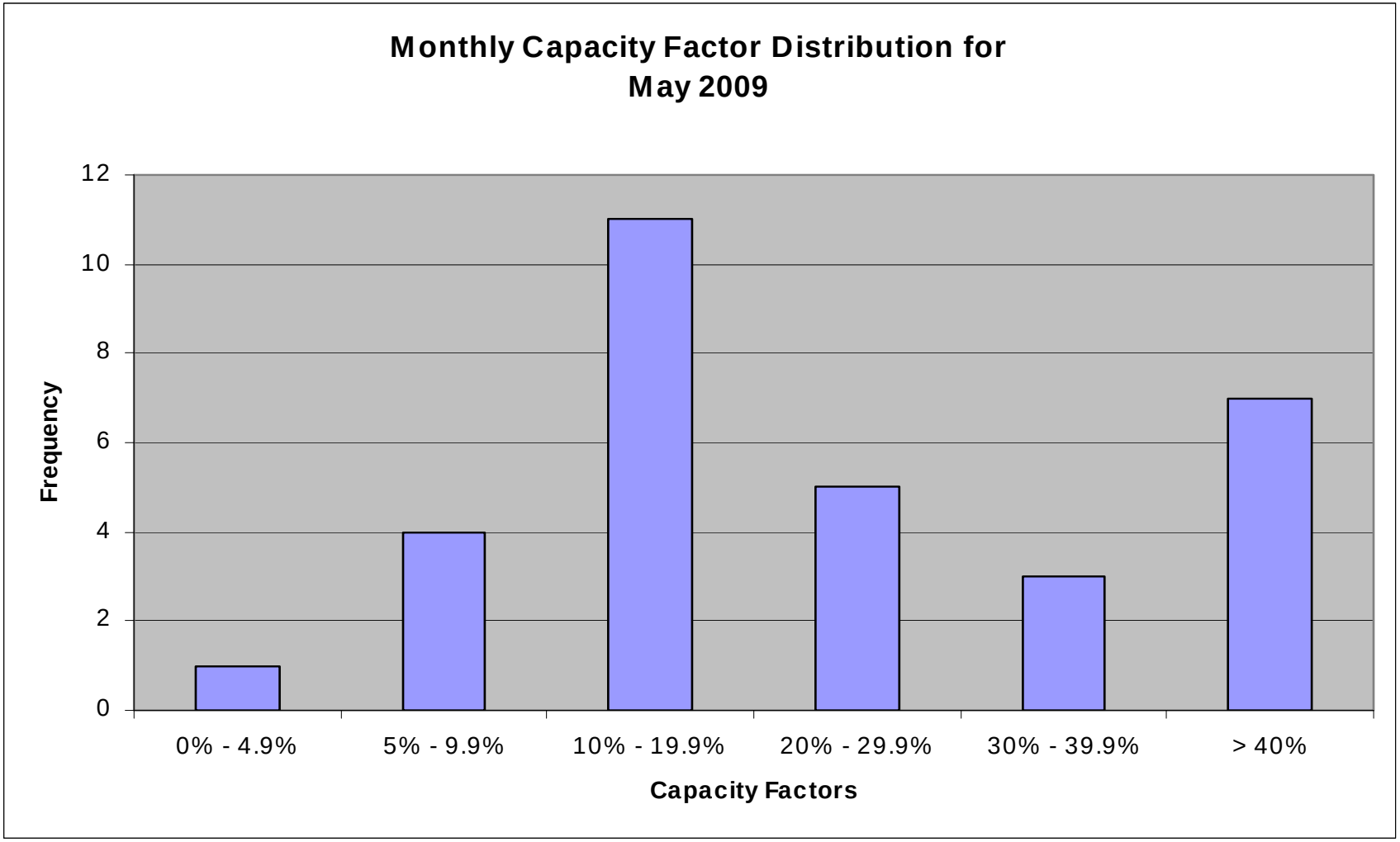
Peak Day - May


Hourly Load vs Hourly Wind Output for the Peak Day of May 2009
MW
25000
20000
15000
10000
5000
0
700
600
500
400
300
200
100
0
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Time of Day
Load
Wind Generation

Hourly Output as a Percent of Nameplate - May



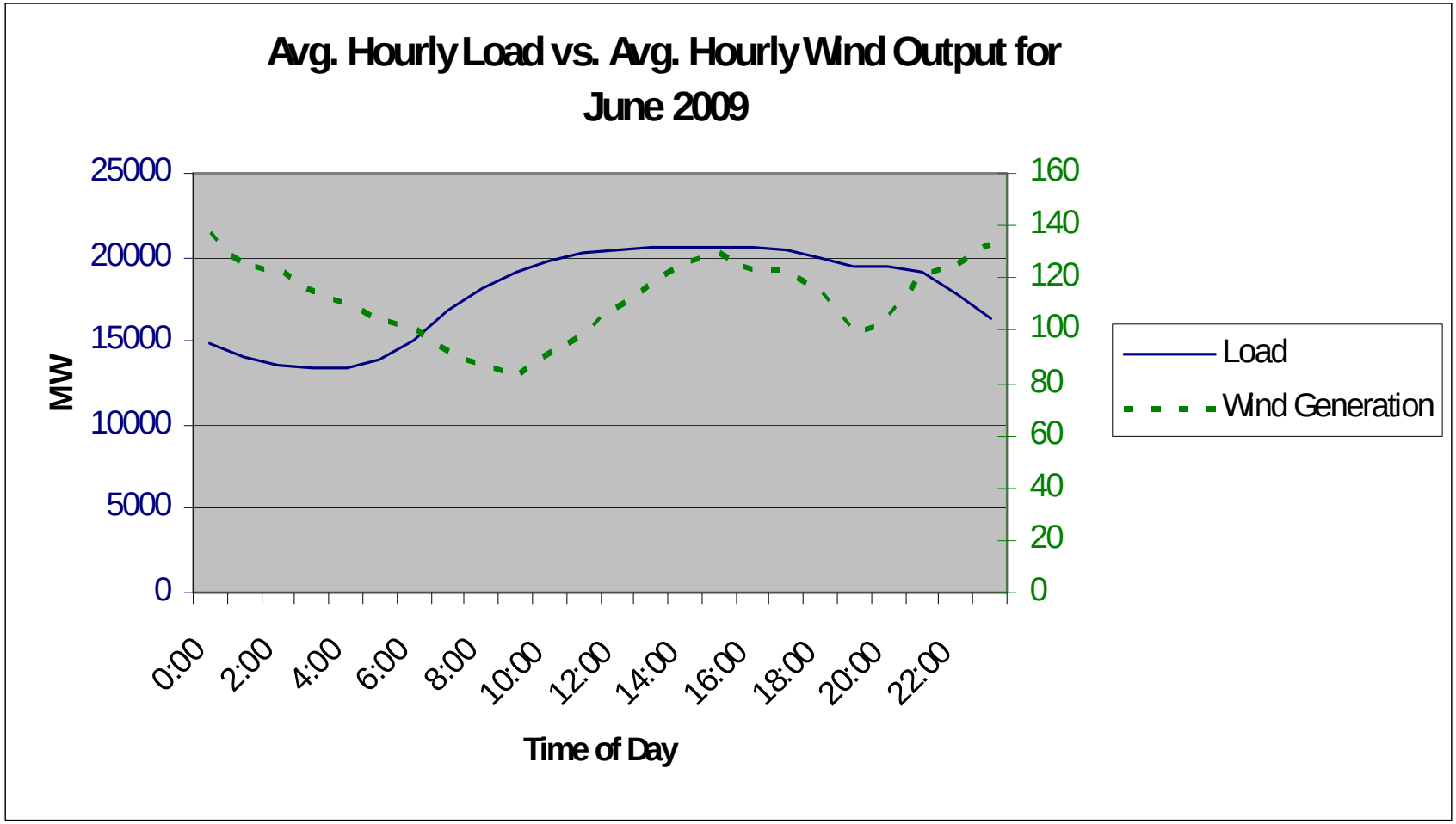
Distribution of Daily Capacity Factors - May



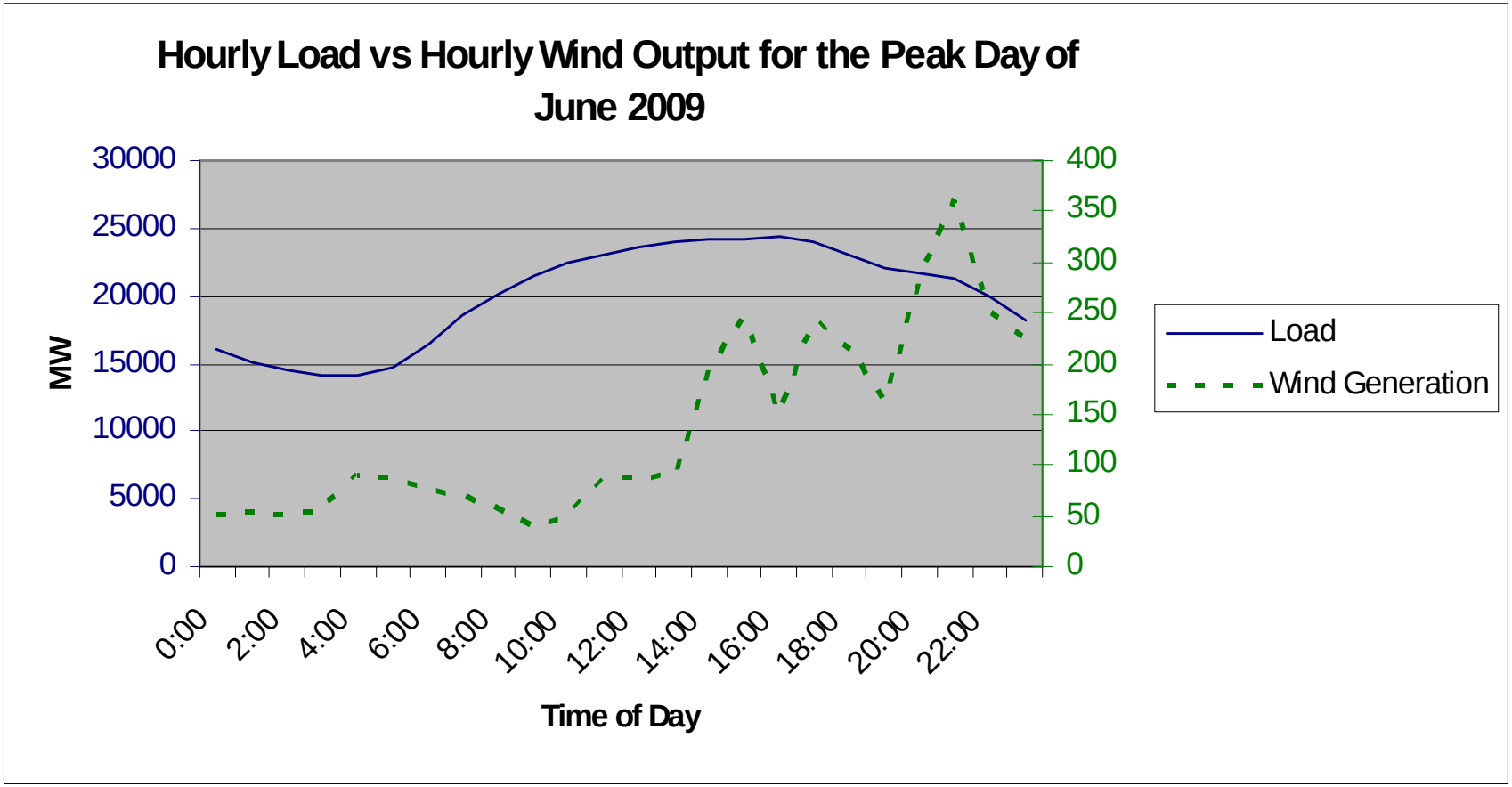
Plant Performance

June 2009

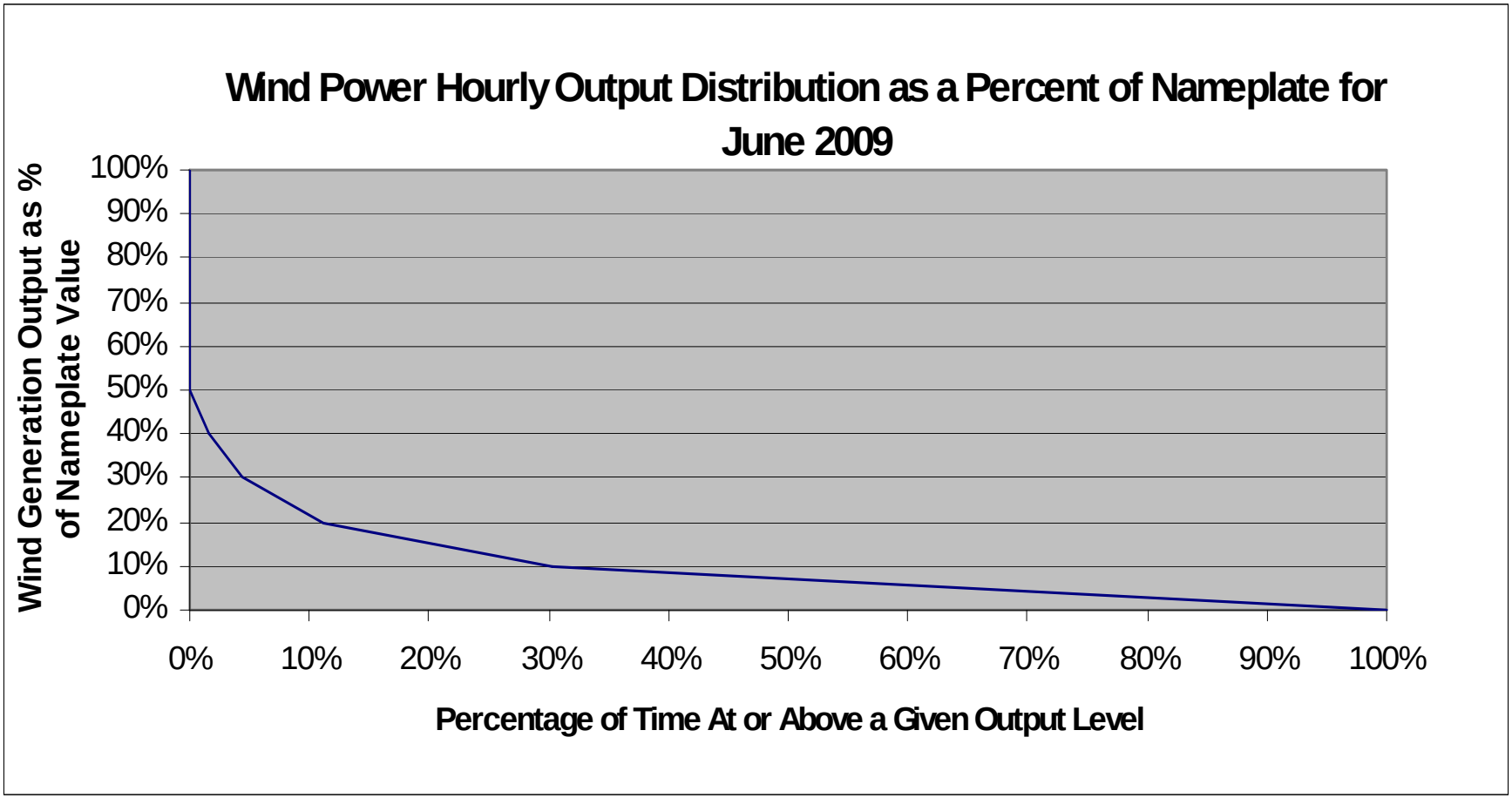
Average Day - June



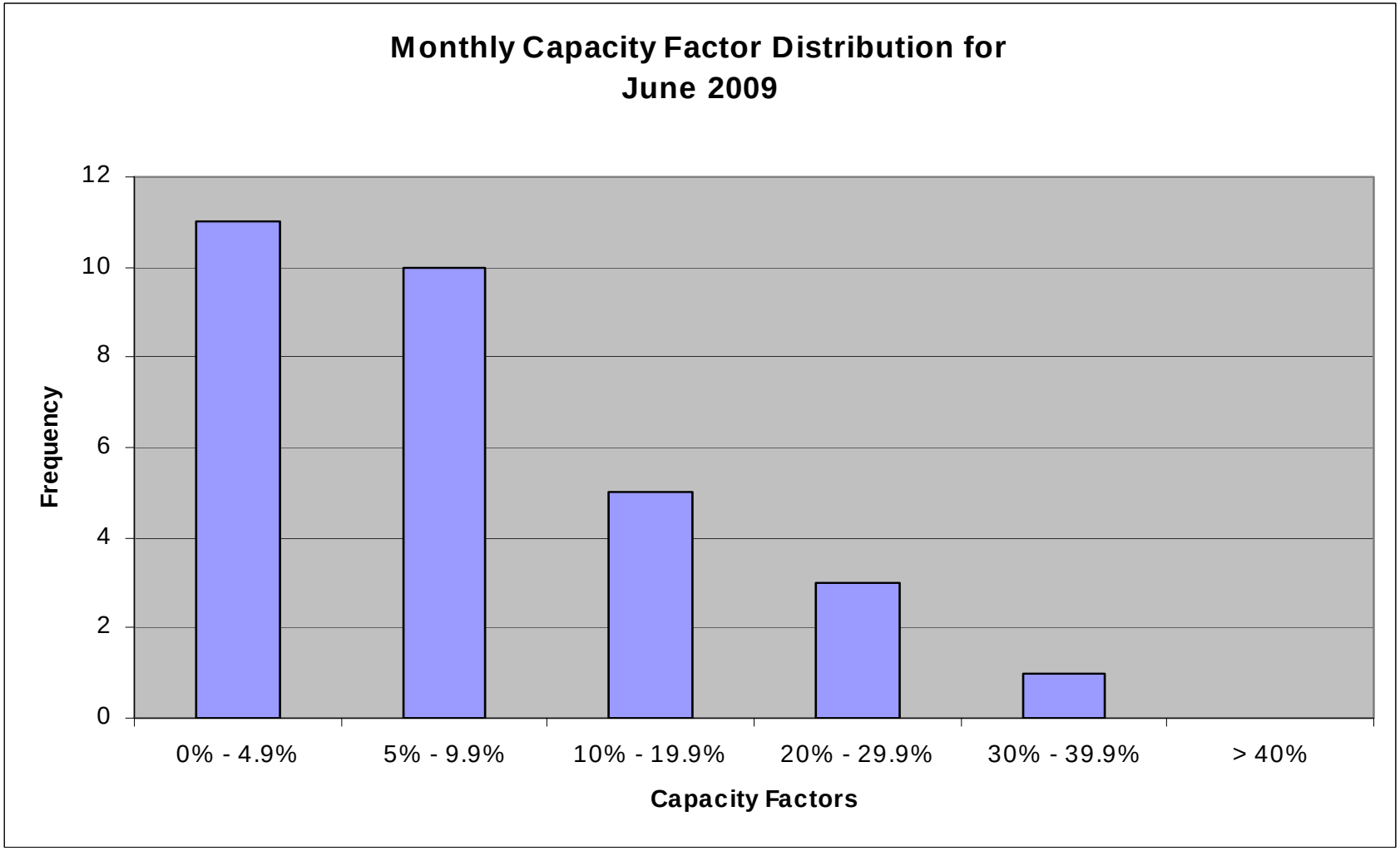
Peak Day - June



Hourly Output as a Percent of Nameplate - June



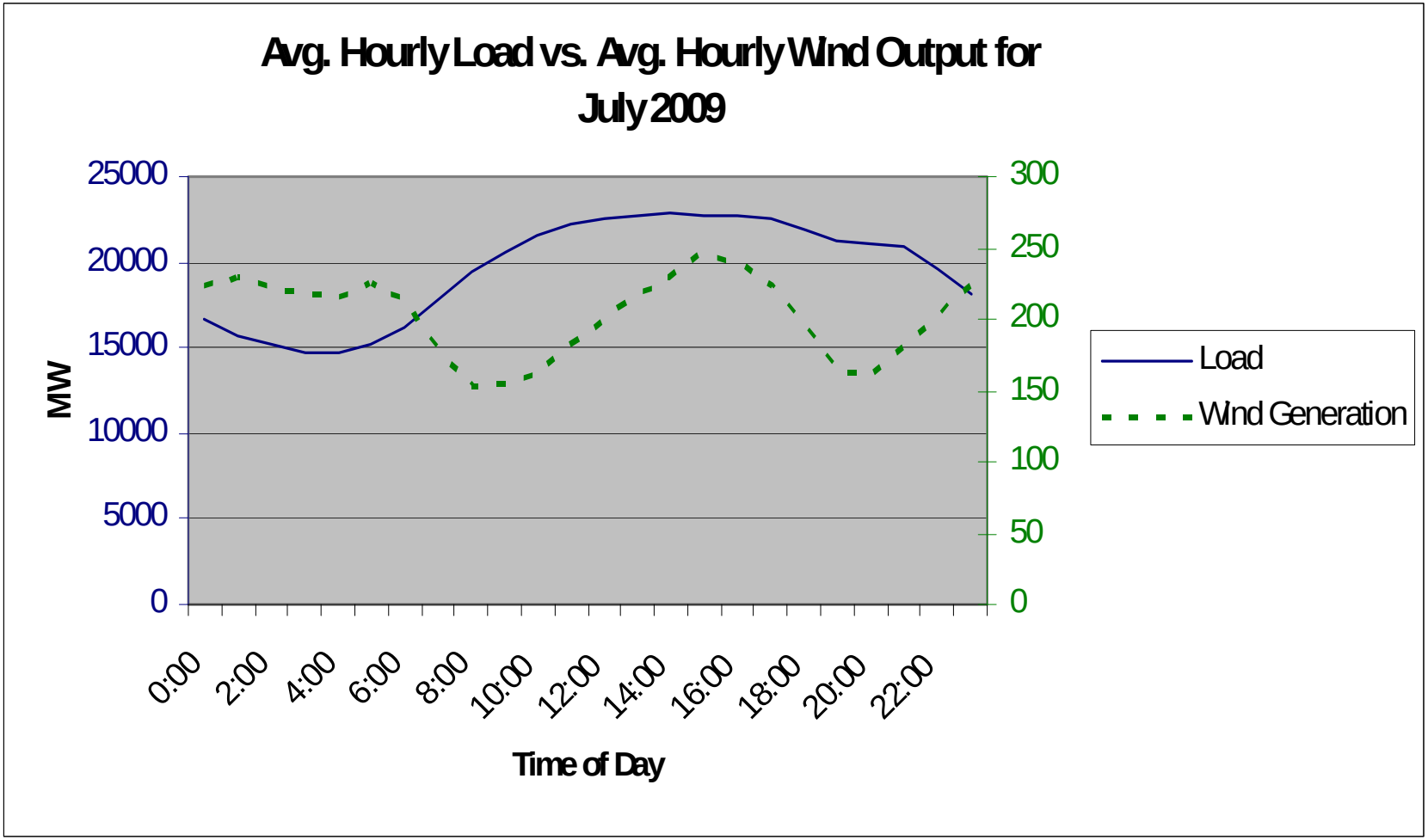
Distribution of Daily Capacity Factors - June



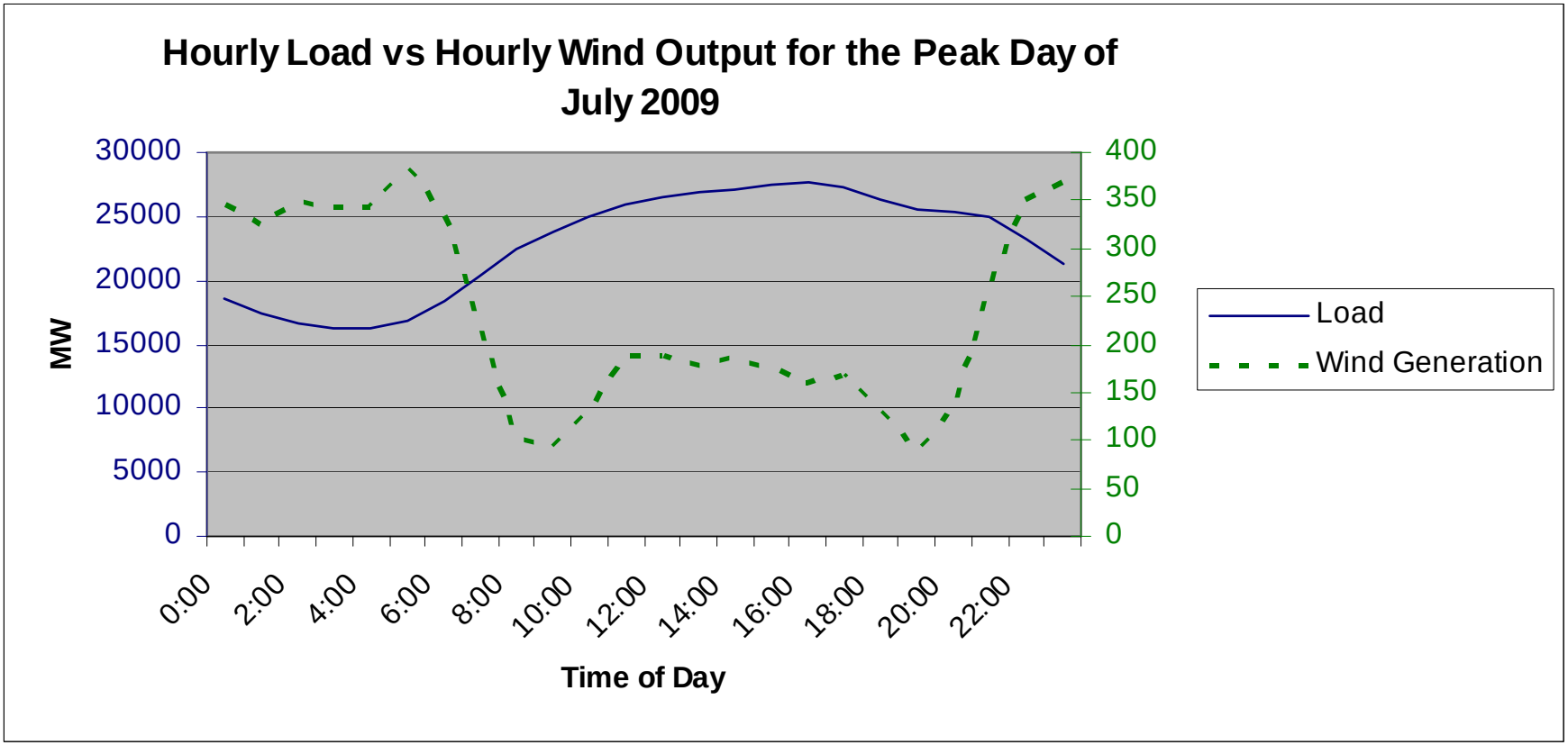
Plant Performance

July 2009

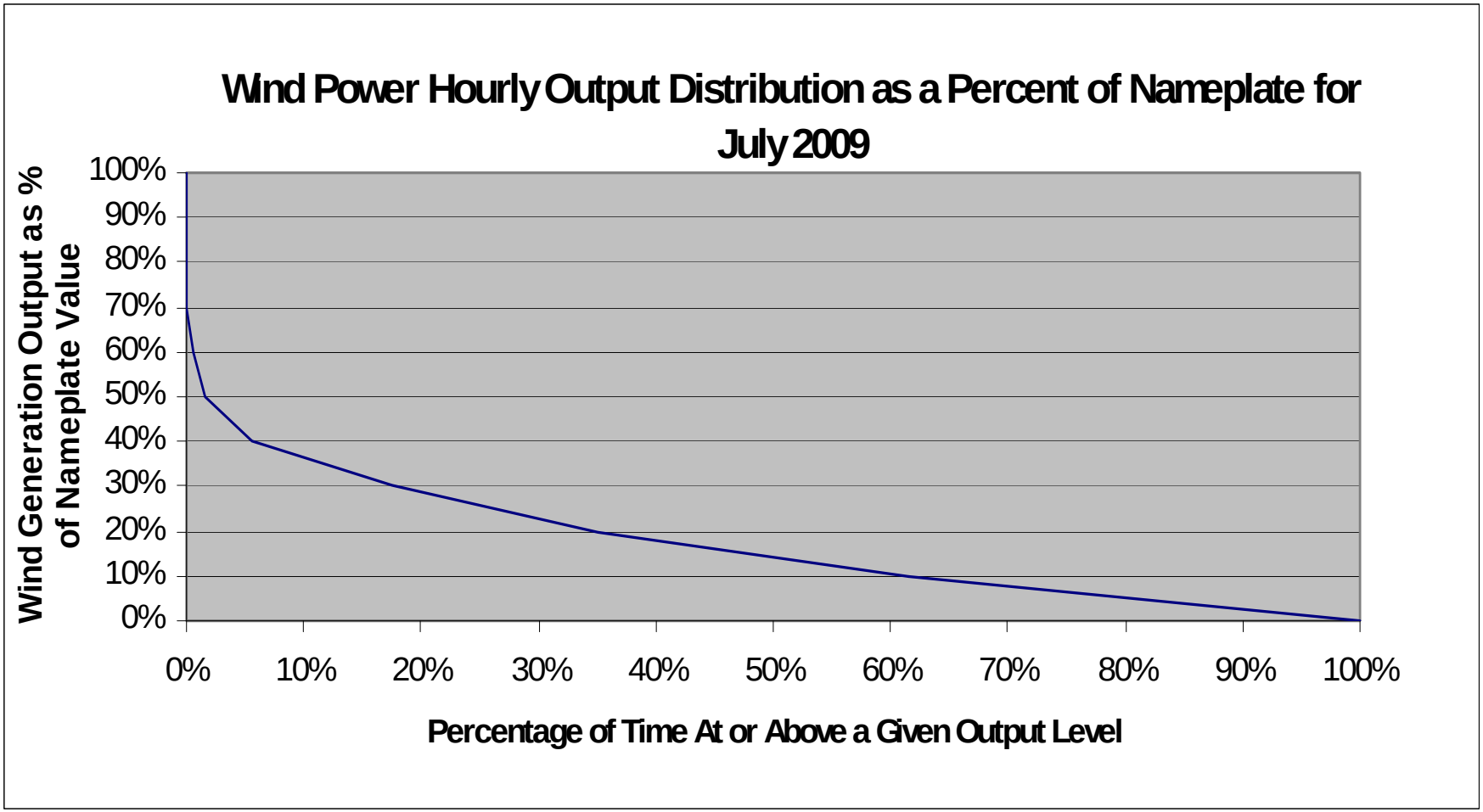
Average Day - July



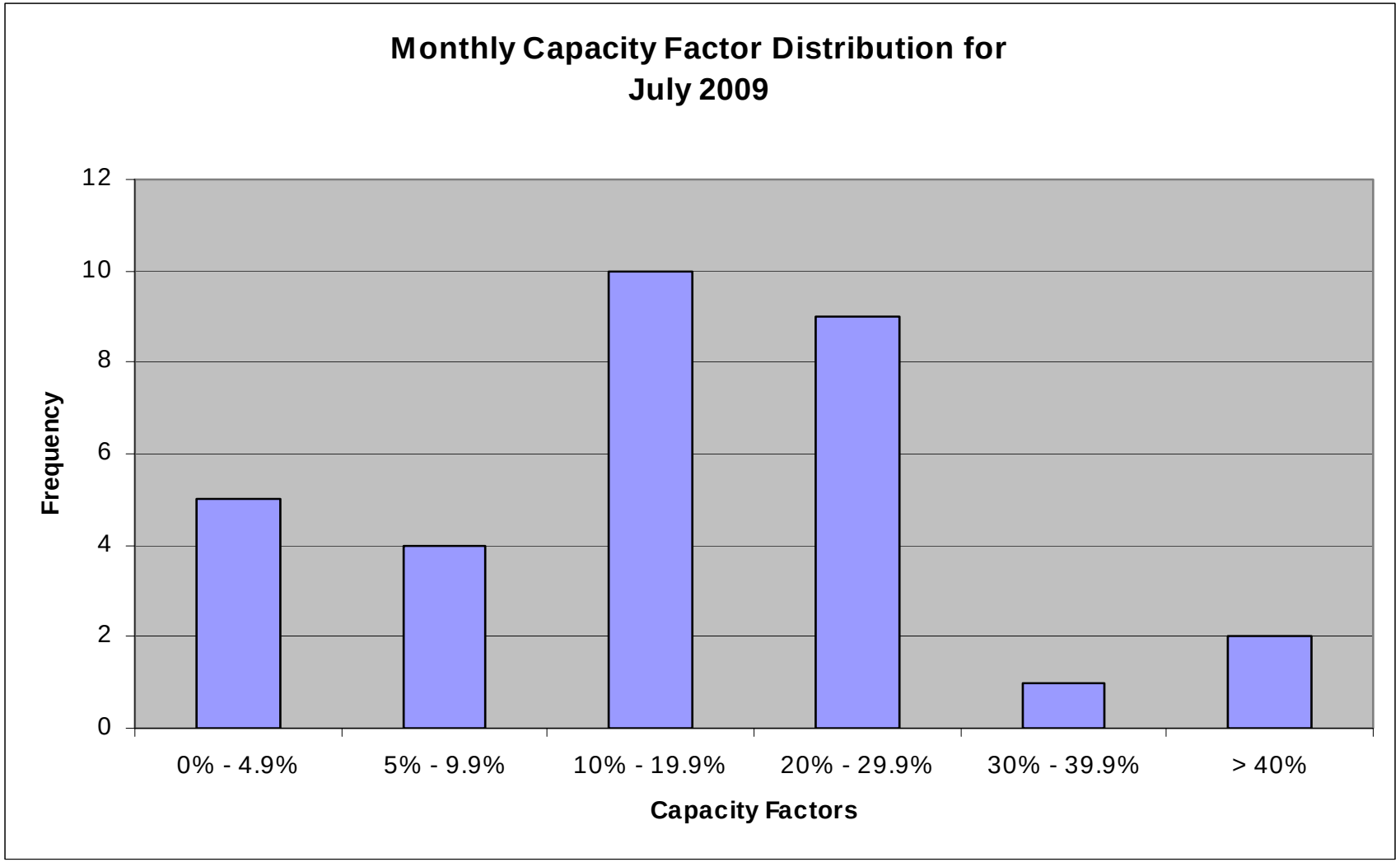
Peak Day - July



Hourly Output as a Percent of Nameplate - July



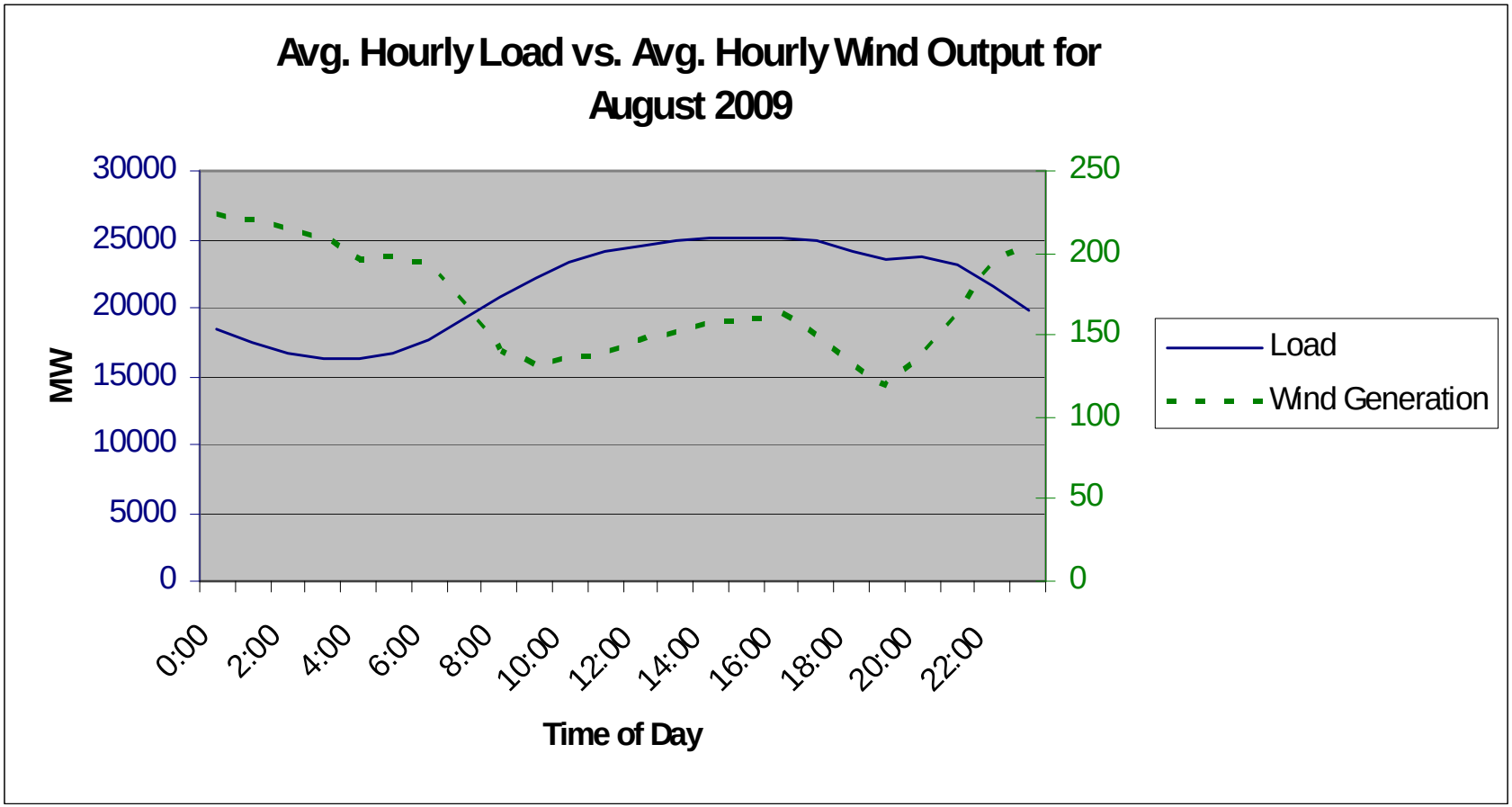
Distribution of Daily Capacity Factors - July



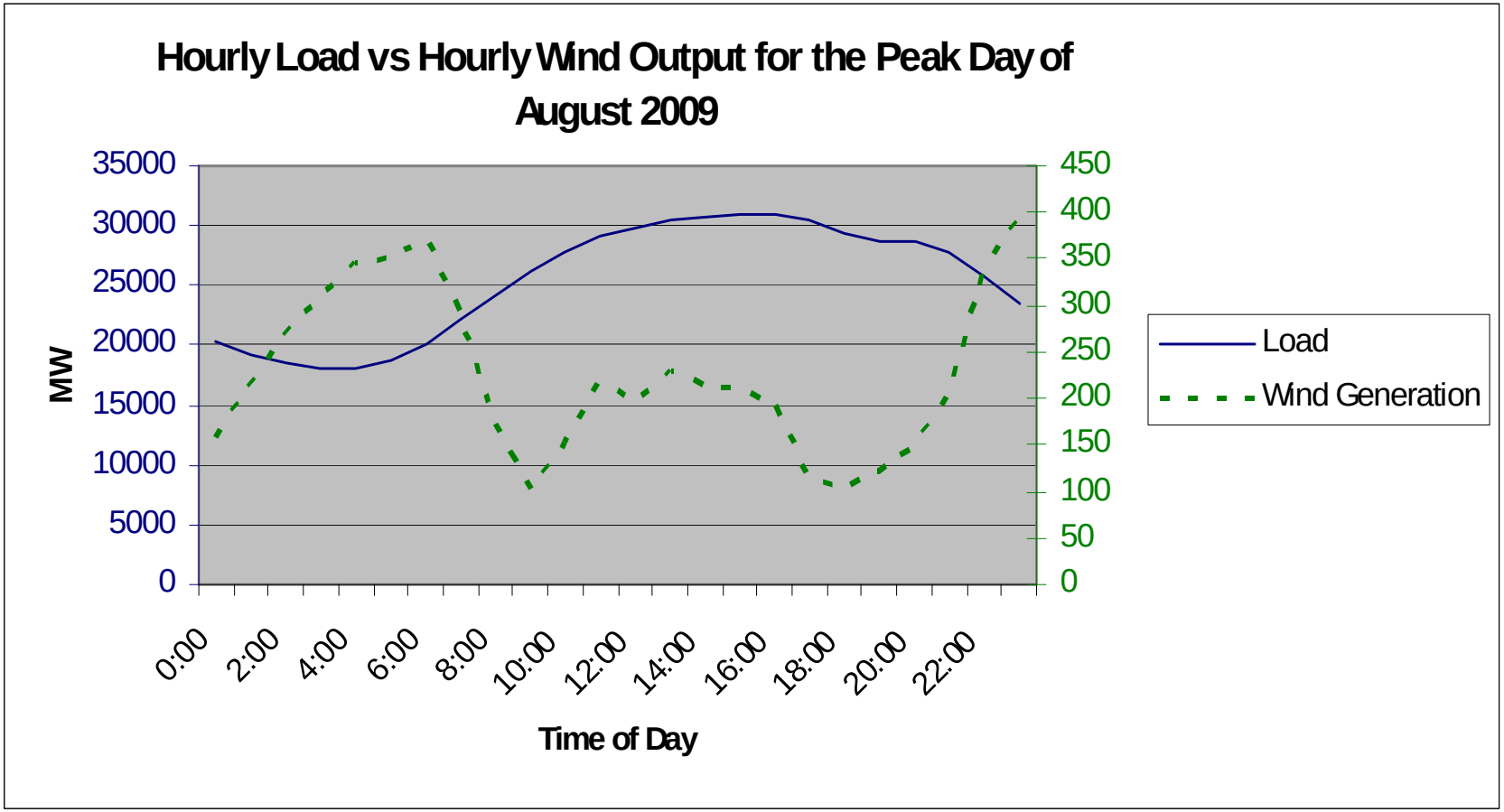
Plant Performance

August 2009

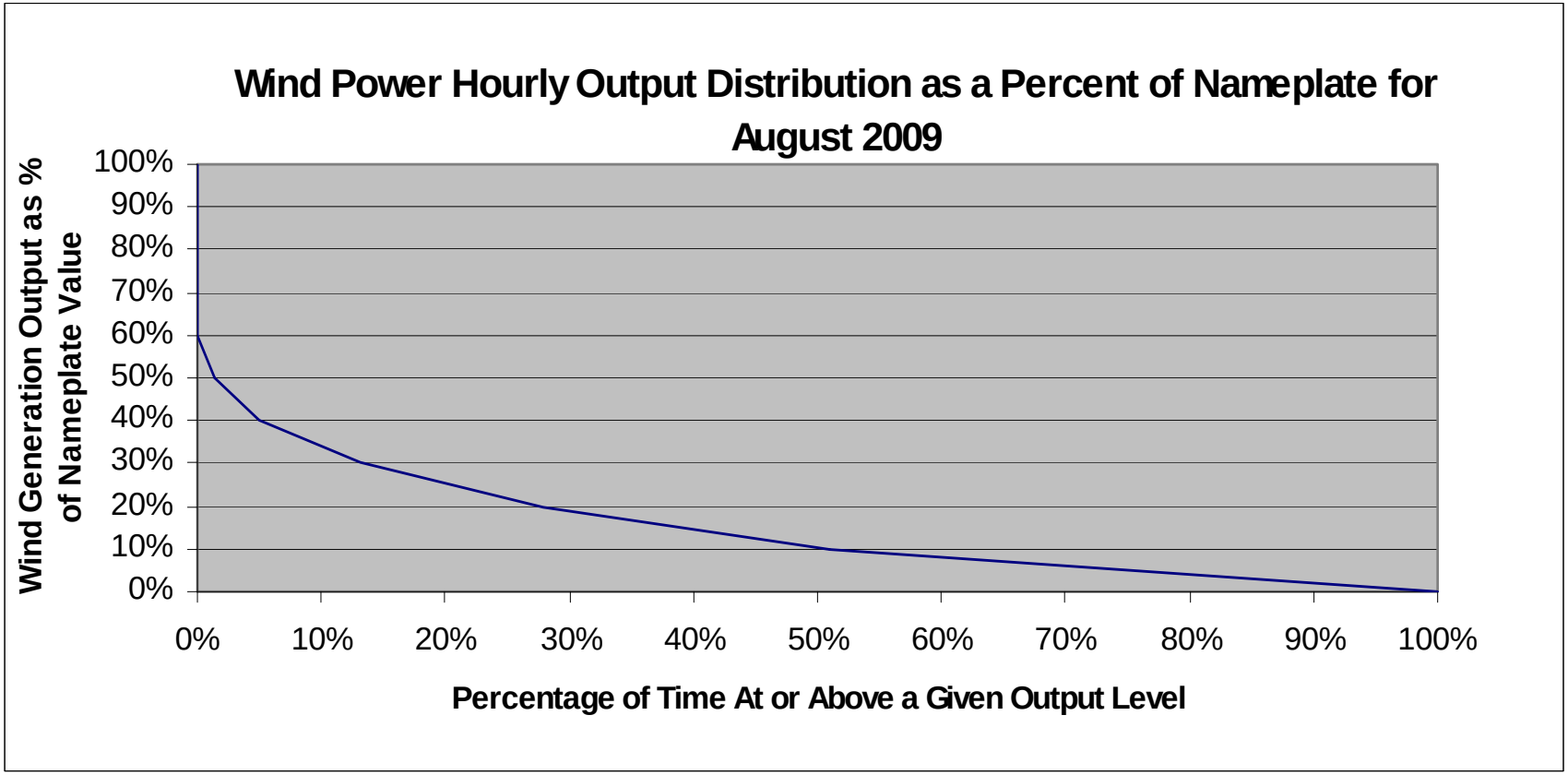
Average Day - August



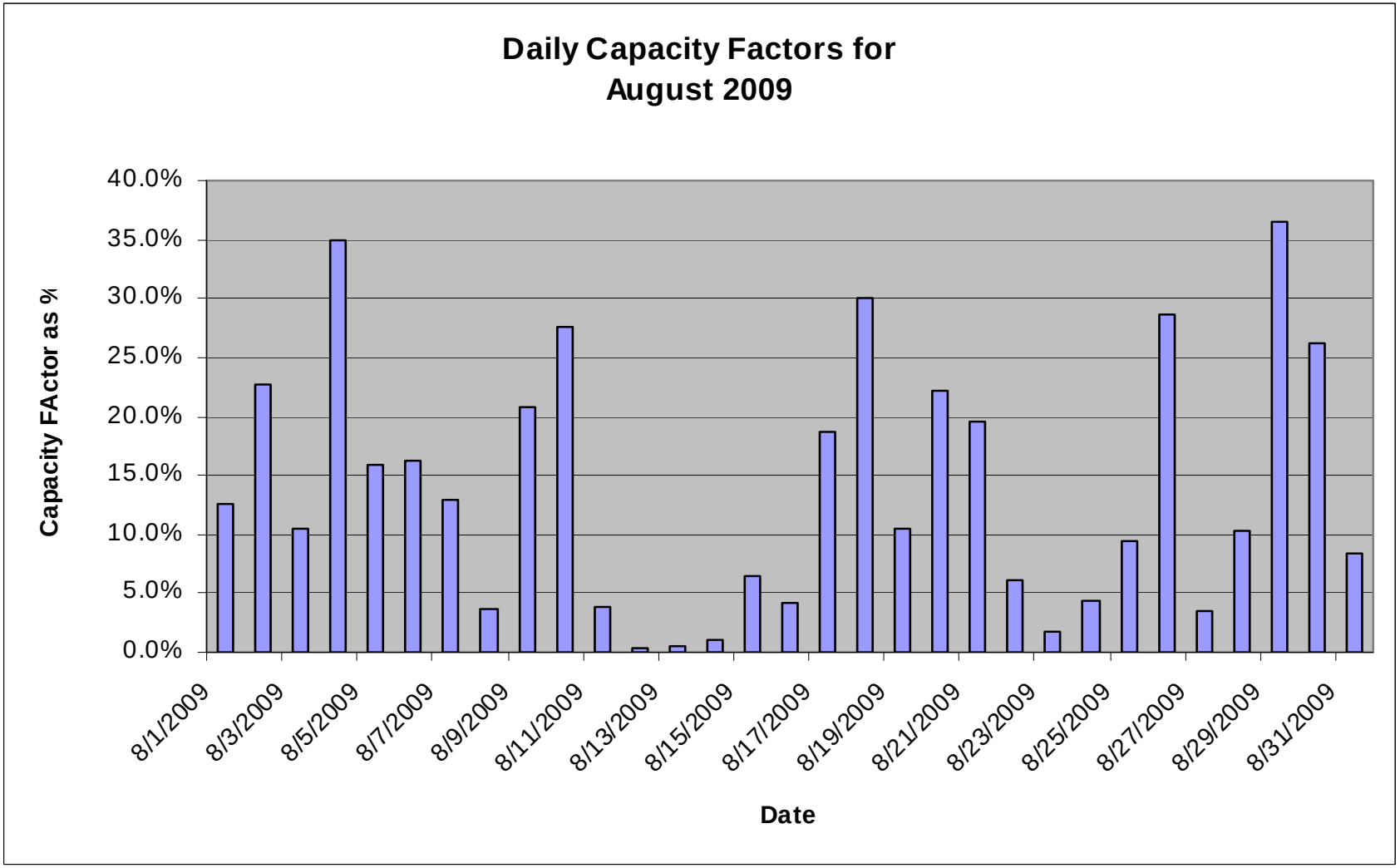
Peak Day - August



Hourly Output as a Percent of Nameplate - August



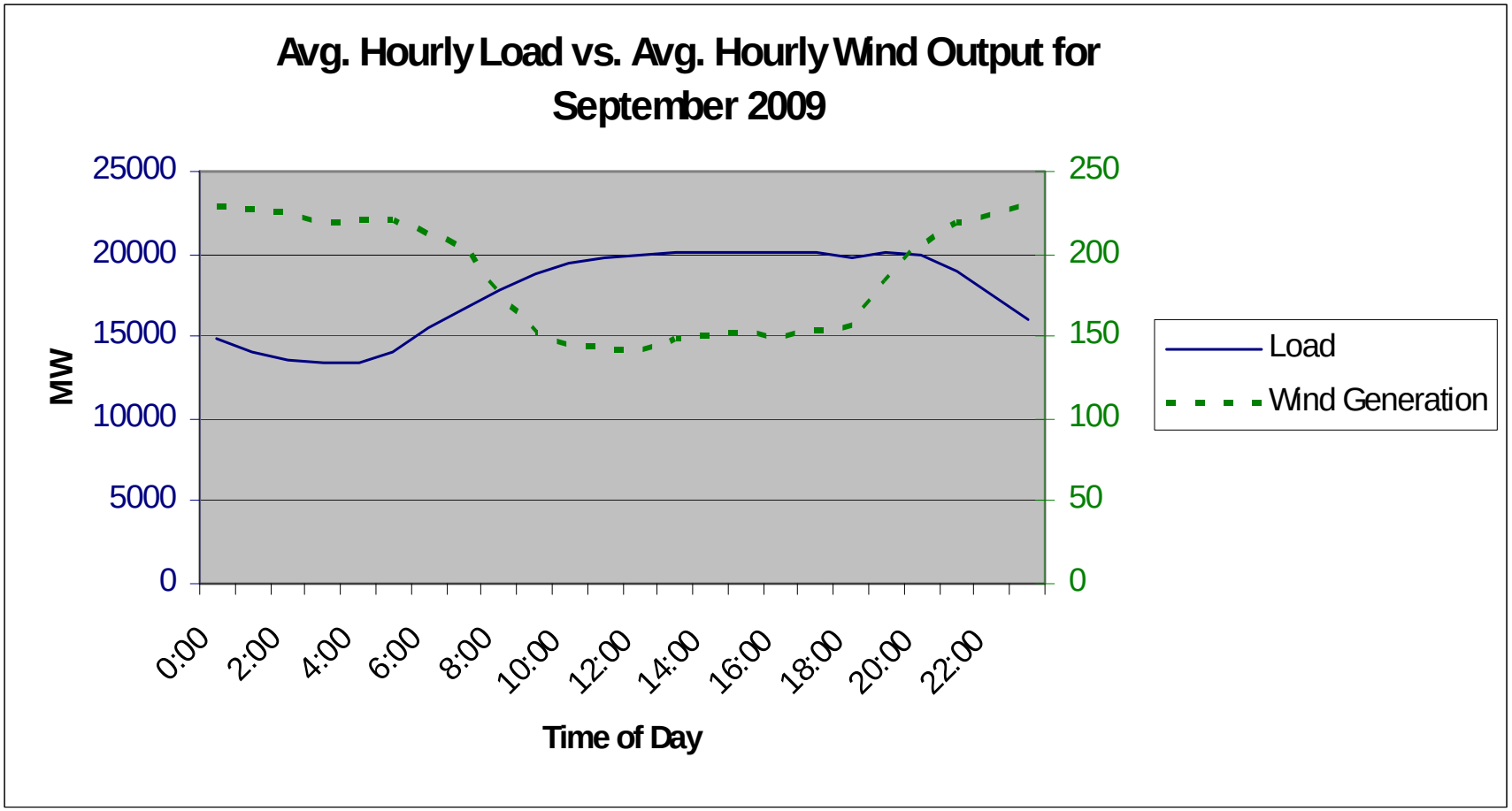
Distribution of Daily Capacity Factors - August



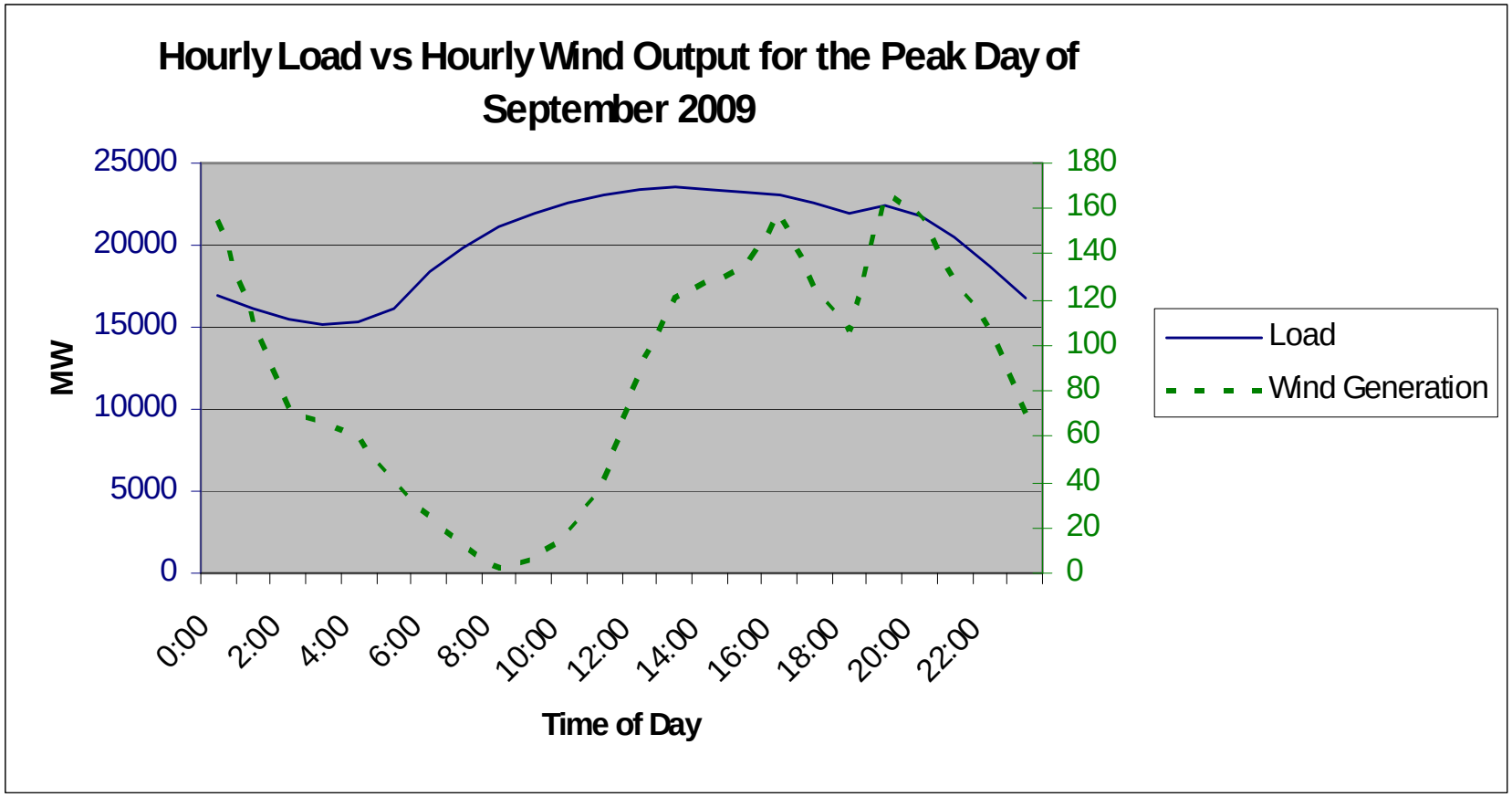
Plant Performance

September 2009

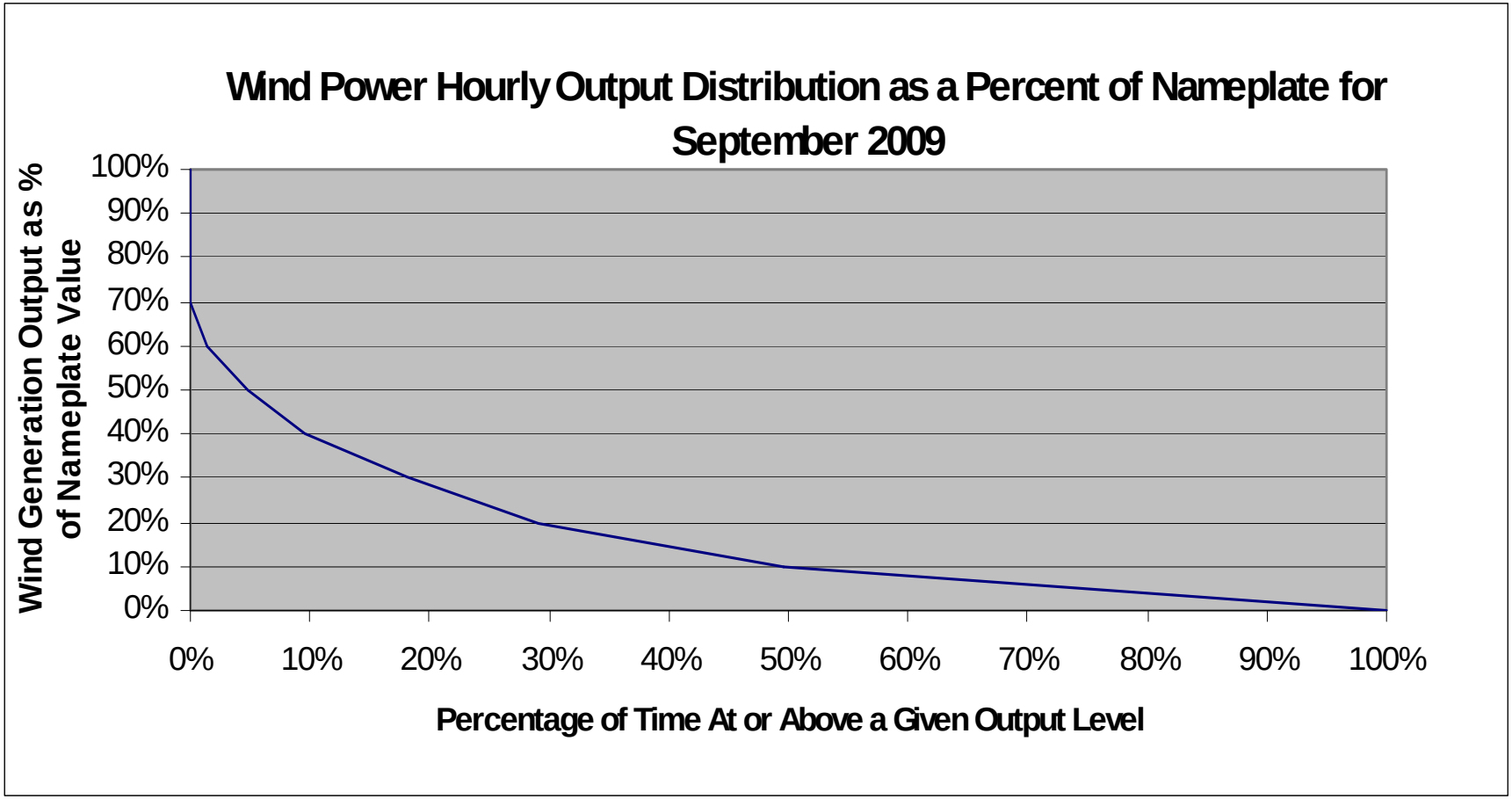
Average Day - September



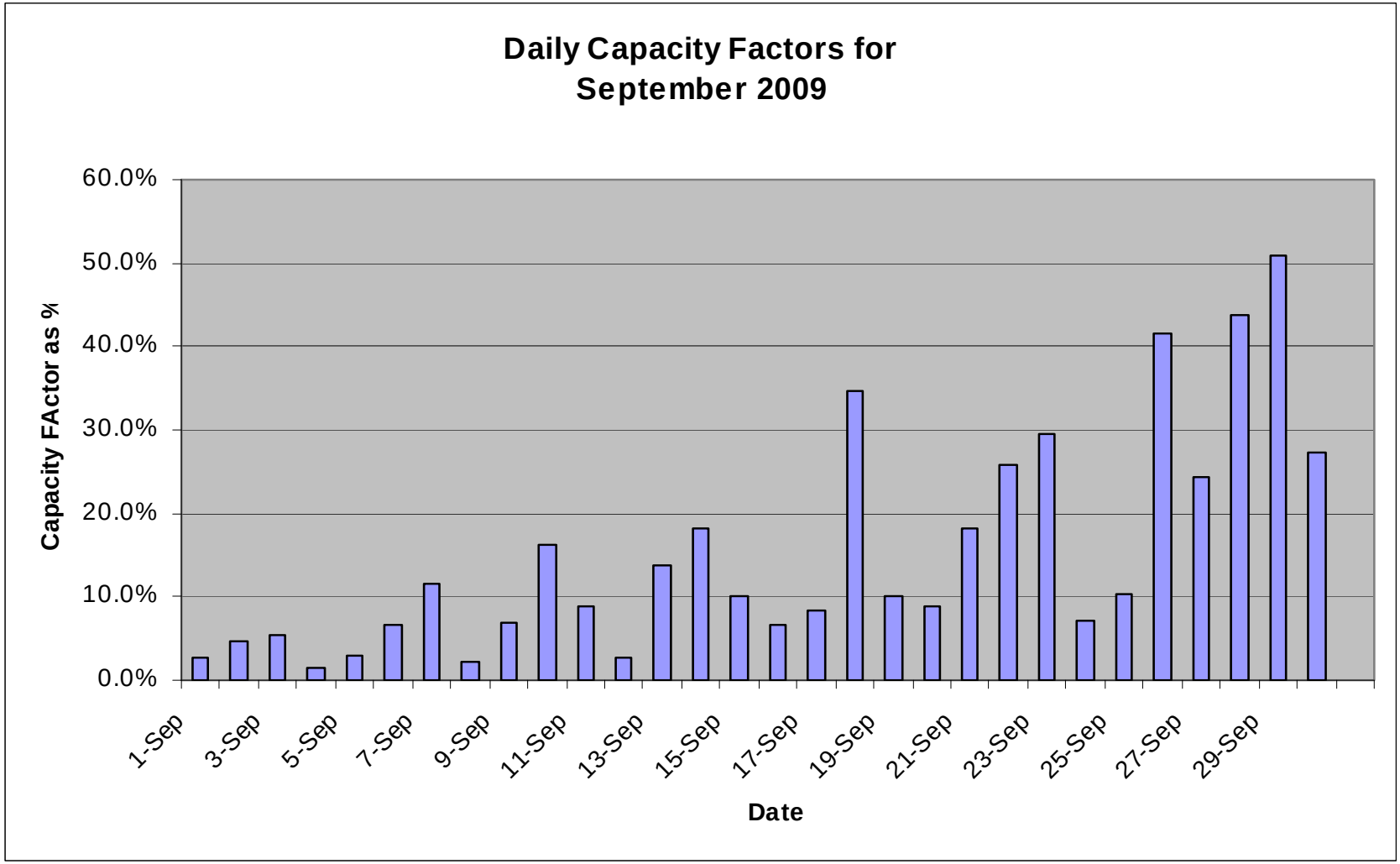
Peak Day - September



Hourly Output as a Percent of Nameplate - September



Distribution of Daily Capacity Factors - September



Summary Statistics

Month	Nameplate Total MW (avg. daily)	Average Capacity Factor	Peak Hour Coincidence Factor (CF)[1,2]	Max 1 HR Output MW	Number Of Days with Hrs < 0
January	975.4	29.8%	9.1%	838.4	2
February	1125.2	36.2%	28.5%	997.2	1
March	1214.9	25.2%	30.3%	1002.2	5
April	1214.9	33.8%	40.5%	1058.5	0
May	1214.9	24.2%	8.5%	1070.5	2
June	1214.9	9.2%	12.3%	749.5	5

1) CF is the ratio of wind plant output at the system peak hour to nameplate

2) Summer Capacity value for wind plant is defined as the capacity factor between the hours of 1400 and 1800 for the summer months of June, July and August. Summer 2008 value was 16.7% and Summer 2009 was 13.7%. Winter Capacity value for wind plant is defined as the capacity factor between the hours of 1600 and 2000 for the winter months of Dec., Jan. and Feb. Winter 08 - 09 value 33.8% and the 09-10 value was 24.8%.

Summary Statistics

Month	Nameplate Total MW (avg. daily)	Average Capacity Factor	Peak Hour Coincidence Factor (CF)[1,2]	Max 1 HR Output MW	Number Of Days with Hrs < 0
July	1214.9	16.6%	13.1%	769.7	4
August	1214.9	13.9%	17.3%	716.4	5
September	1214.9	15.4%	9.9%	1001.2	7
October					
November					
December					

1) CF is the ratio of wind plant output at the system peak hour to nameplate

2) Summer Capacity value for wind plant is defined as the capacity factor between the hours of 1400 and 1800 for the summer months of June, July and August. Summer 2008 value was 16.7% and summer 2009 was 13.7%. Winter Capacity value for wind plant is defined as the capacity factor between the hours of 1600 and 2000 for the winter months of Dec., Jan. and Feb. Winter 08 - 09 value 33.8% and the 09-10 value was 24.8%.

The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

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