

# Daily PJM Load, NOx Emissions, CASTNET Met and AQI Ozone Season 2005

NOTES: Daily Max Temperature (F) is at CASTNET site in Washington Crossing, NJ WSP144.

AQI is ozone value only for MSA indicated.

PJM-East Load is aggregated daily total from telemetry data.

Daily NOx Emissions in tons. Analysis considers all electrical generating and large industrial sources in select counties<sup>4</sup> from the New York City and Philadelphia metropolitan areas which report data to EPA under 40 CFR Part 75.

Peak units defined at <= 1,100 hours of operation in 2005 ozone season. Includes only unit type CT (Combustion Turbines).

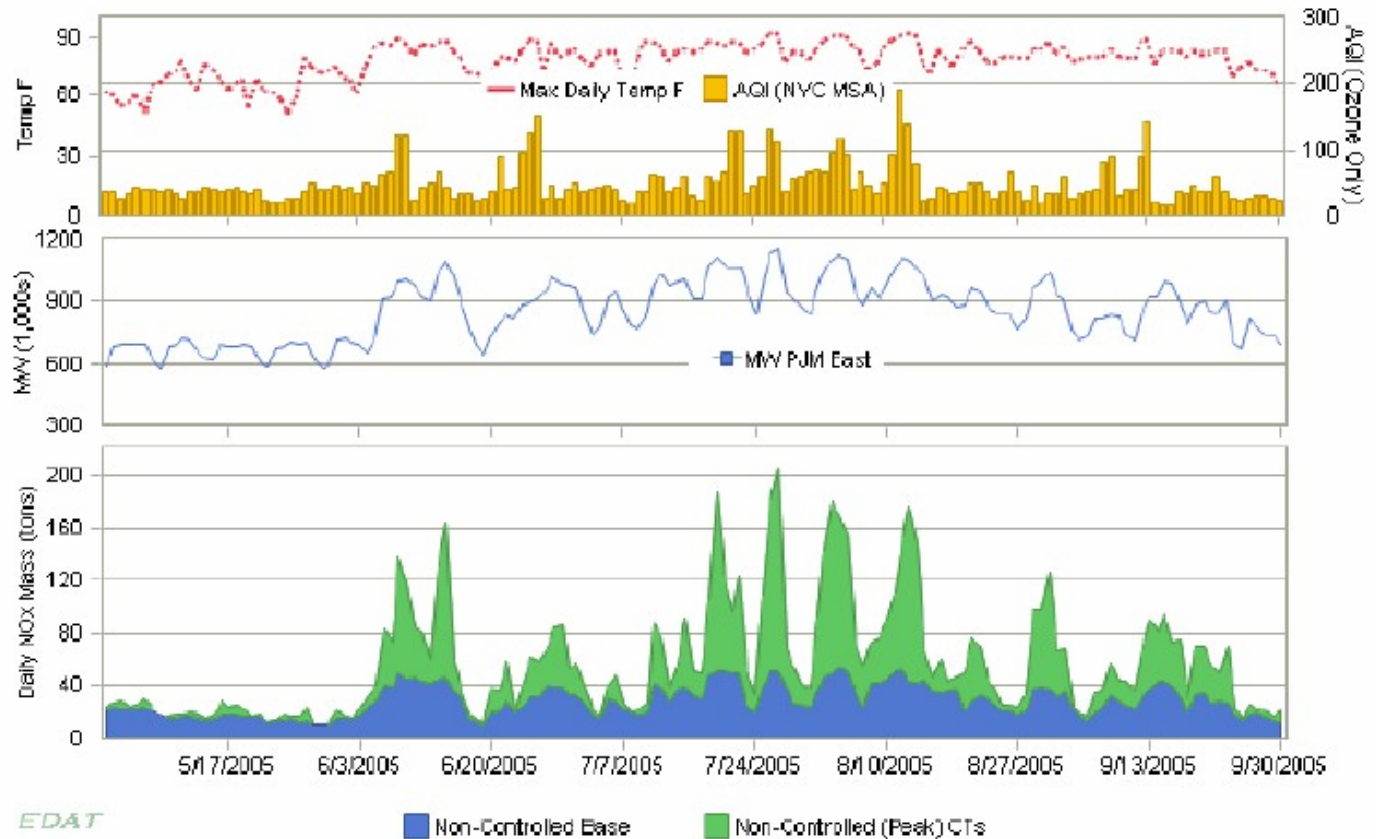
Base units defined at > 1,100 hours during the 2005 ozone season. Includes all unit types.

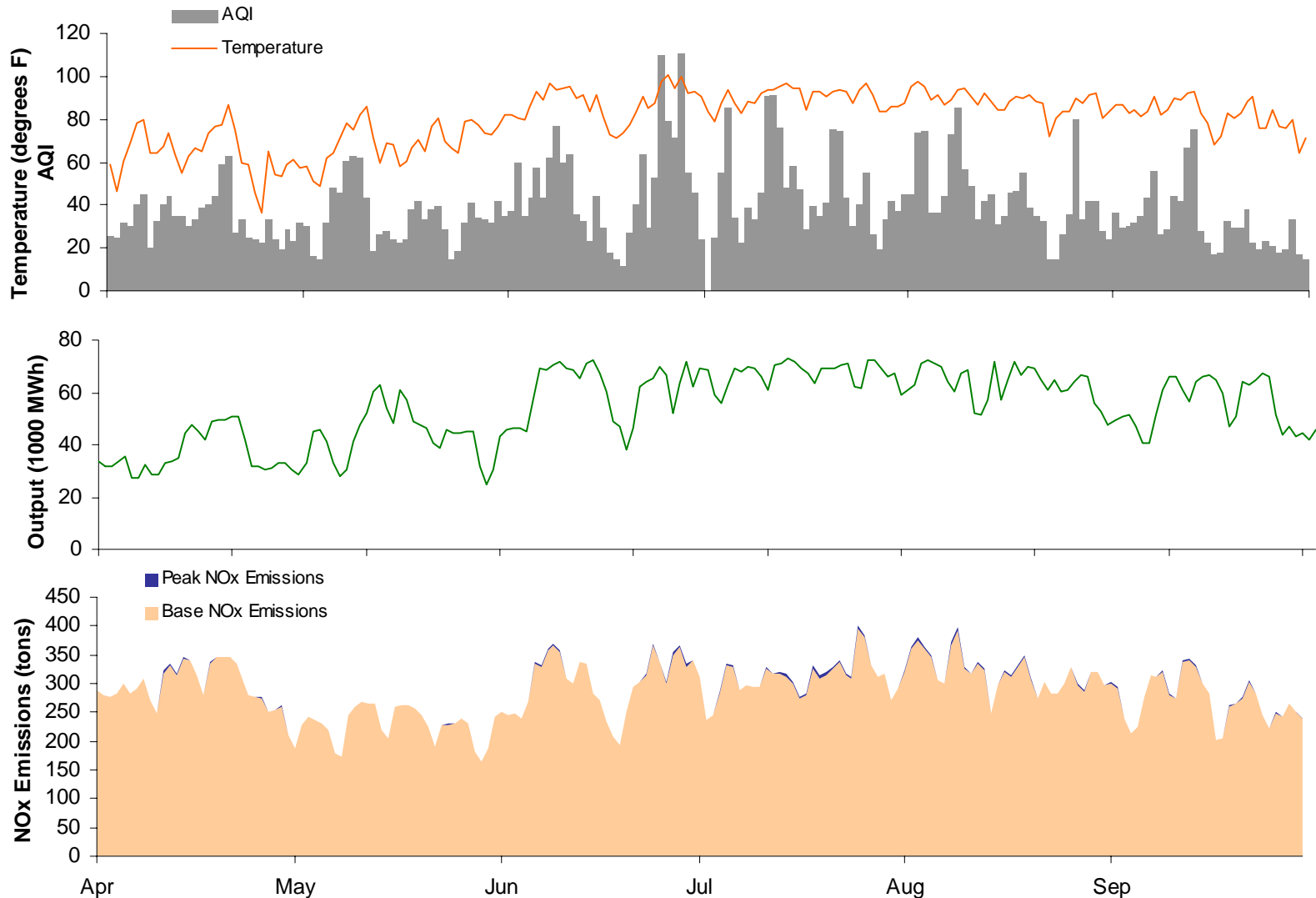
## Metro NYC, NY

MSA 5600

Non-Controlled Units

- Selecting 2005 ozone season days with a maximum daily temp of approximately 90 F will capture most AQI ozone days >100 (orange or higher) in MSA 5600.
- There appears to be a close correlation between PJM East load and the dispatch of non-controlled units in metro NYC area. Note that PJM only called the peaking units during periods of warm temperatures. PJM maximum load for 2005 was on July 26.





Daily temperature is daily max temperature for the Detroit MSA (source: AQS)

AQI is based on daily max 8-hour O3 value for Detroit MSA (source: AirNow Tech)

Output is total daily output for the Monroe Power Plant (source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

Emissions are from all facilities in Michigan

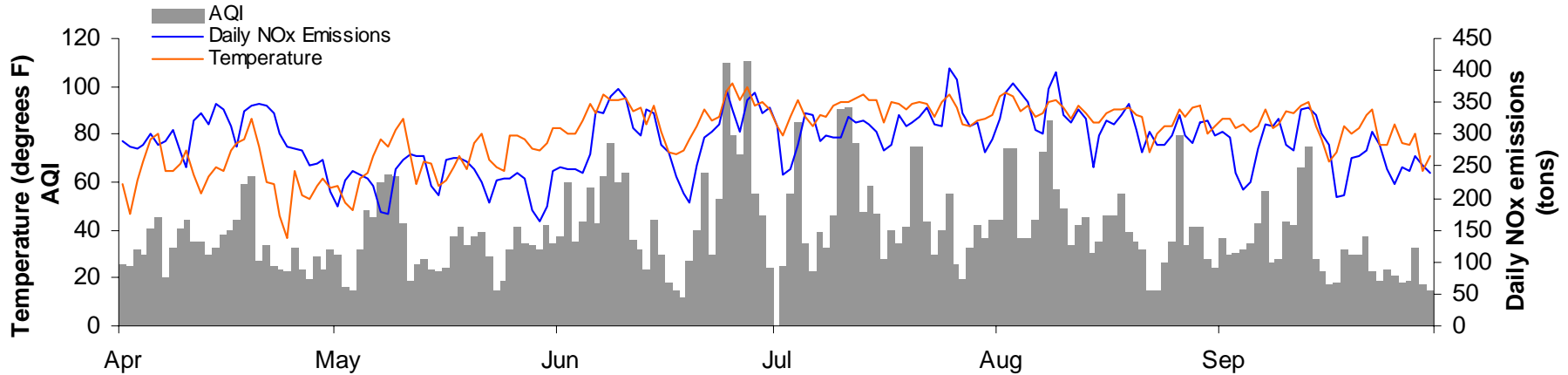
Peak NOx emissions are from facilities that operated for <1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

Base NOx emissions are from facilities that operated for >1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

To simplify, this graph contains all of the relevant information on the previous slide. Because the base emissions >> than peak emissions, only base emissions are shown. The output correlates with the NOx emissions and is therefore not included.



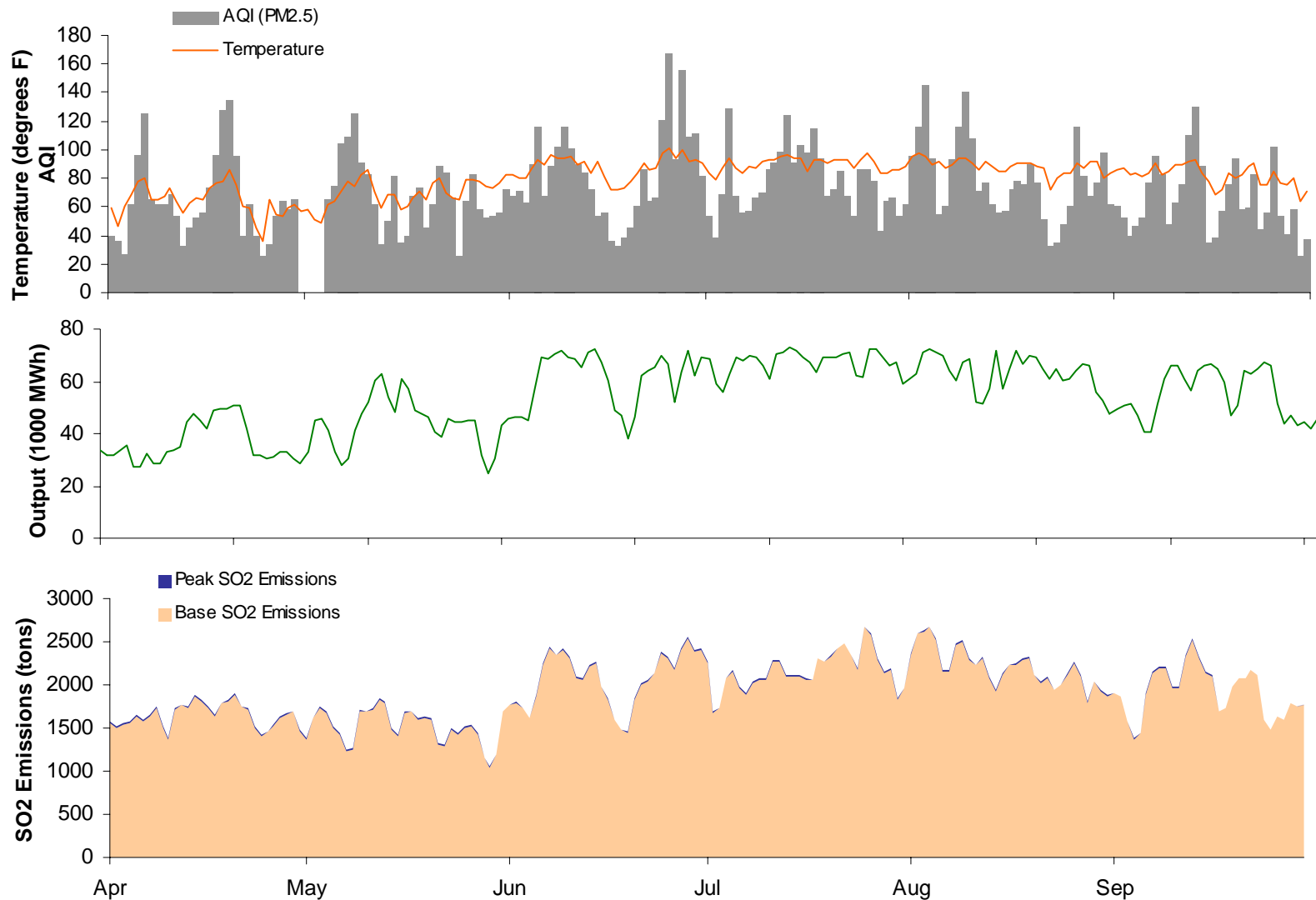
Daily temperature is daily max temperature for the Detroit MSA (source: AQS)

AQI is based on daily max 8-hour O3 value for Detroit MSA (source: AirNow Tech)

NOx emissions during the 2005 O3 season from

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

# Warm Season, 2005



Daily temperature is daily max temperature for the Detroit MSA (source: AQS)

AQI is based on 24-hr PM2.5 value for Detroit MSA (source: AirNow Tech)

Output is total daily output for the Monroe Power Plant (source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

Emissions are from all facilities in Michigan

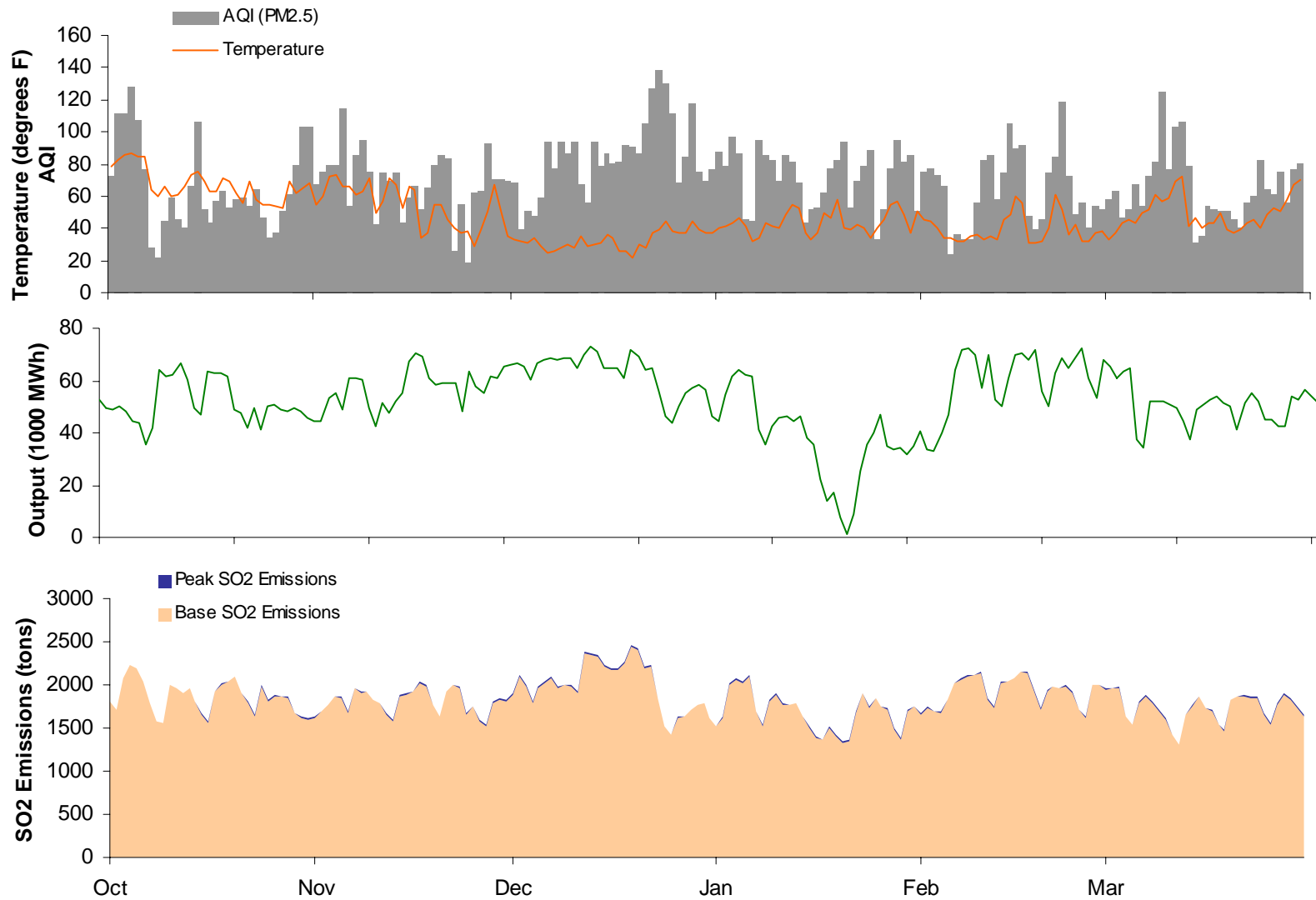
Peak SO2 emissions are from facilities that operated for <1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

Base SO2 emissions are from facilities that operated for >1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

# Cool Season, 2005-2006



Daily temperature is daily max temperature for the Detroit MSA (source: AQS)

AQI is based on 24-hr PM2.5 value for Detroit MSA (source: AirNow Tech)

Output is total daily output for the Monroe Power Plant (source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

Emissions are from all facilities in Michigan

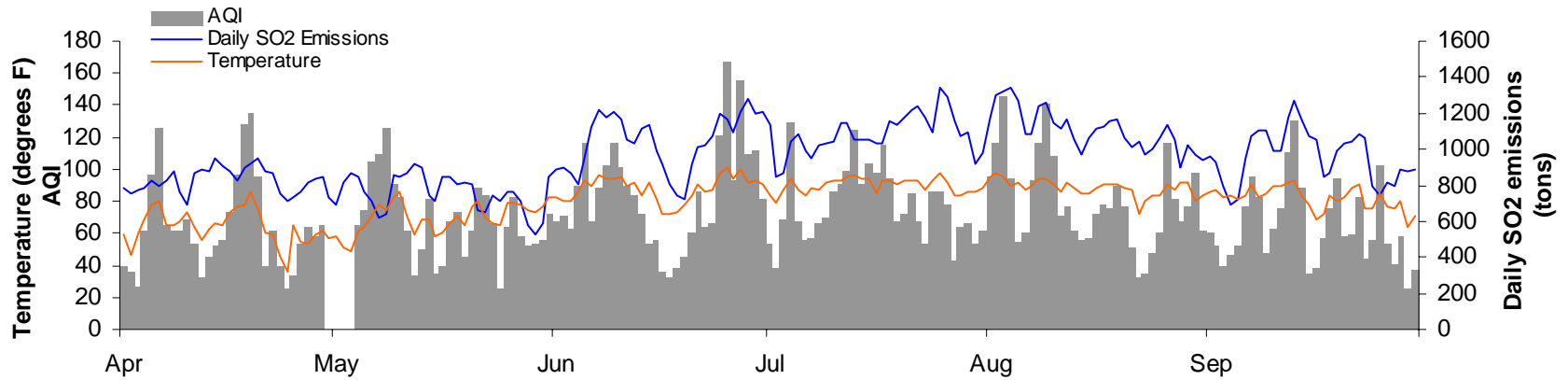
Peak SO2 emissions are from facilities that operated for <1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

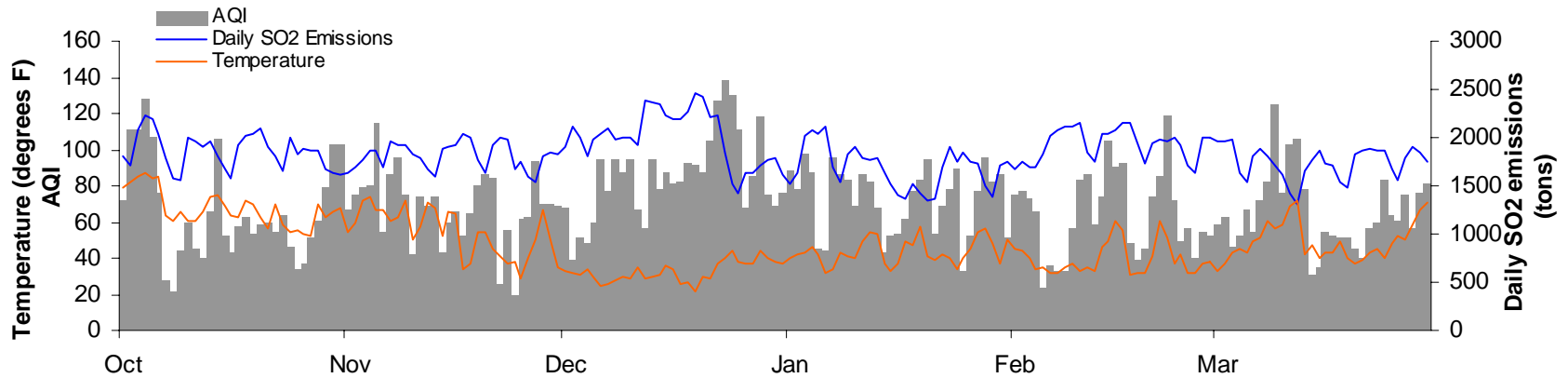
Base SO2 emissions are from facilities that operated for >1000 hours during the 2005 O3 season

(source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)

## Warm Season, 2005



## Cool Season, 2005-2006



Daily temperature is daily max temperature for the Detroit MSA (source: AQS)

AQI is based on 24-hour OM2.5 value for Detroit MSA (source: AirNow Tech)

SO2 emissions from (source: EPA Clean Air Markets; <http://cfpub.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>)