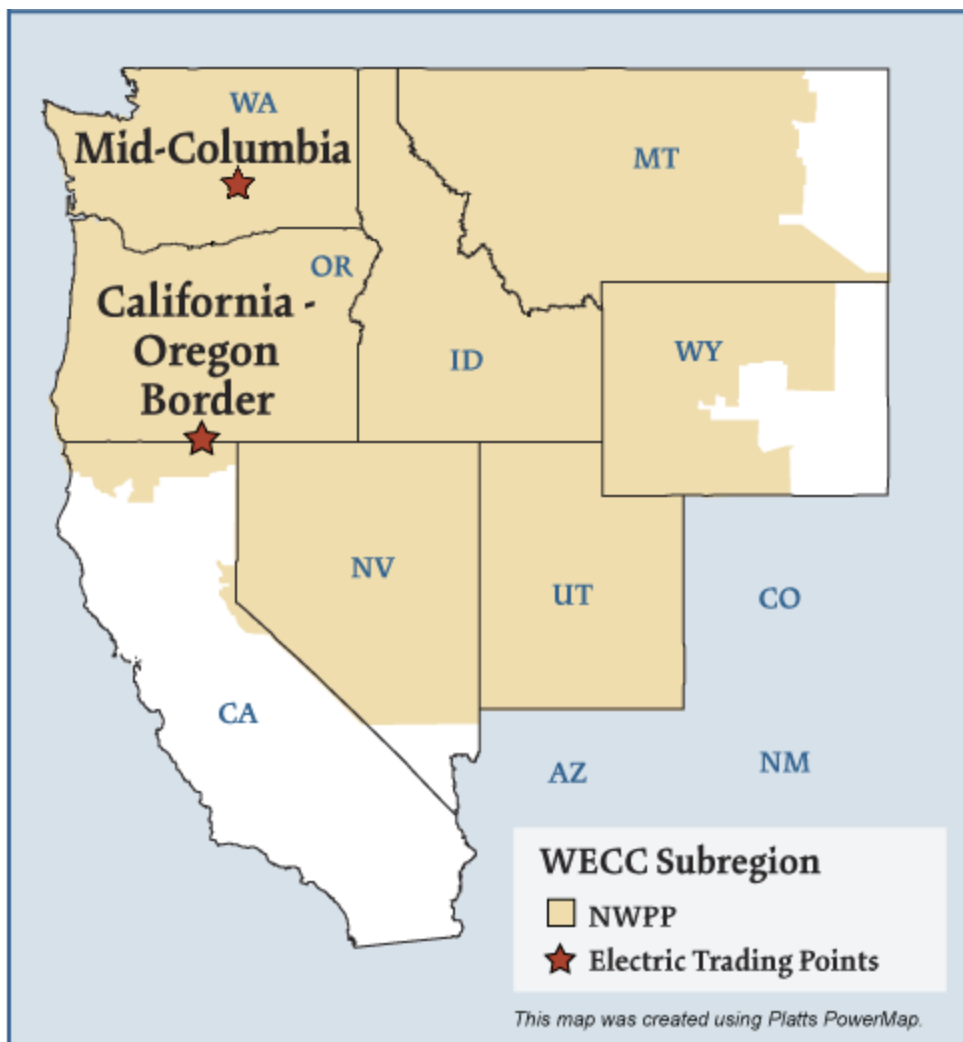


# Northwest Electric Market



## Overview

### Geography

States covered: All or most of Washington, Oregon, Idaho, Utah, Nevada, Montana, Wyoming and part of California.

Reliability region: Northwest Power Pool Area (NWPP) sub-region of the Western Electric Coordinating Council (WECC).

Balancing authorities: See page 5.

Hubs: California-Oregon Border (COB), Mid-Columbia (Mid-C)

### RTO/ISO

None

### Generation/Supply

Marginal fuel type: Hydro and natural gas

Generating capacity (winter 2005): 57,120 MW

Capacity reserve (winter 2005): 16,822 MW

Reserve margin (winter 2005): 42%

When taken together, hydro, fossil fuels, nuclear energy, and renewable resources, were adequate to provide electricity in excess of in-region needs.

## Demand

All time peak demand (2005): 40,298 MW

Peak demand growth: 1.5% (2004–2005)

## Prices

Index Annual Average of Daily Bilateral Day Ahead On-Peak Prices:

Platts California-Oregon Border (COB) Hub:

2004: \$49.02/MWh 2005: \$66.95/MWh 2006: \$55.58/MWh 2007: \$62.14/MWh

Platts Mid-Columbia (Mid-C) Hub:

2004: \$44.50/MWh 2005: \$62.95/MWh 2006: \$50.18/MWh 2007: \$56.57/MWh

Physical and financial electricity products are traded through brokers using the Mid-Columbia (Mid-C) and California-Oregon Border (COB) hubs as pricing points.

## Interconnections/Seams

The region relies on hydroelectric production for approximately two thirds of its electricity needs. In most years, Northwest sells surplus power into California and the Southwest.

## Balancing Authorities in the Northwest Electric Market

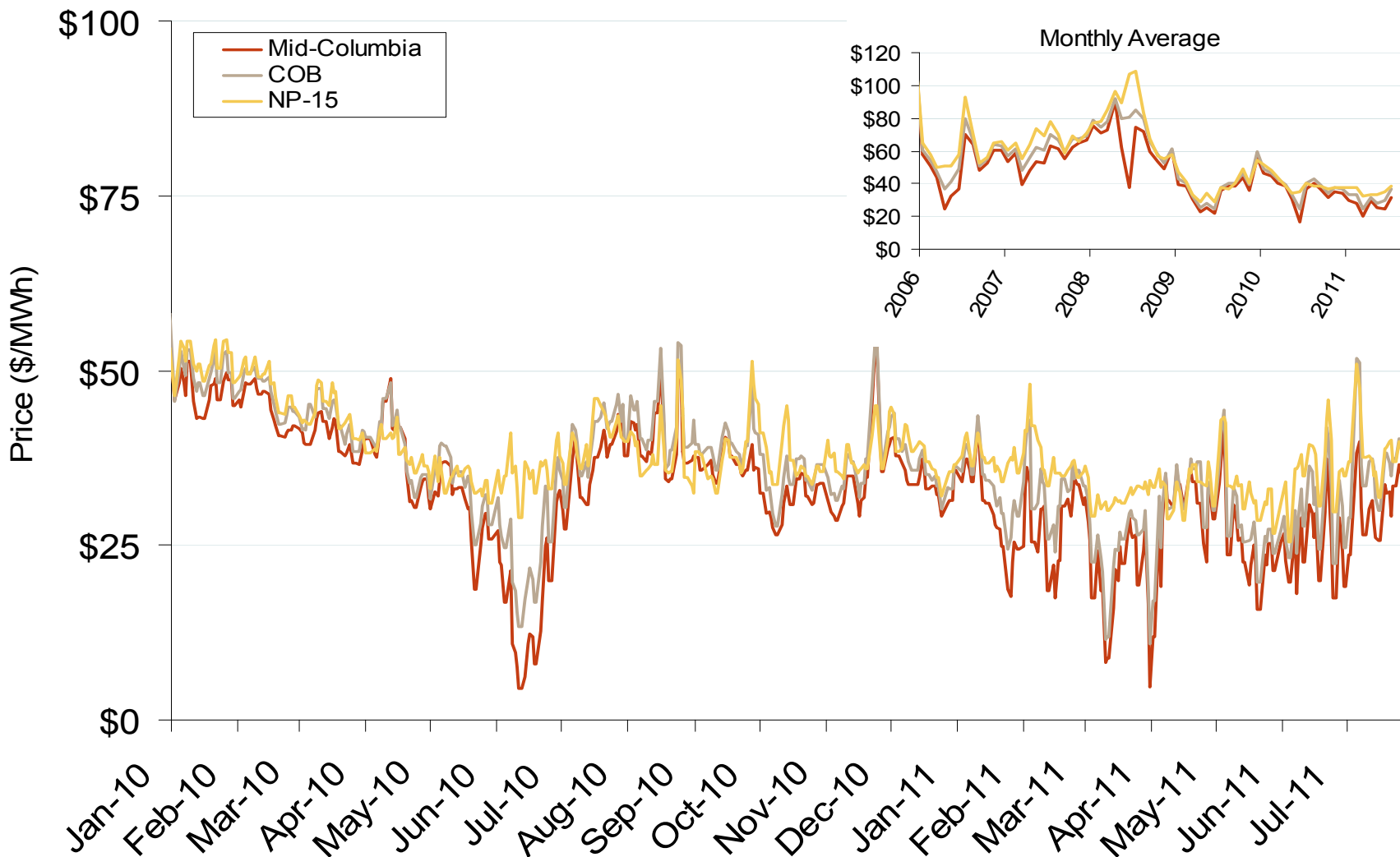
### Balancing Authority

Alberta Electric System Operator  
 Avista Corp.  
 Bonneville Power Administration  
 British Columbia Transmission Corporation  
 Idaho Power Company  
 NorthWestern Energy  
 PacifiCorp-East  
 PacifiCorp-West  
 Portland General Electric Company  
 PUD No. 1 of Chelan County  
 PUD No. 1 of Douglas County  
 PUD No. 2 of Grant County  
 Puget Sound Energy  
 Seattle Department of Lighting  
 Sierra Pacific Power Company  
 Tacoma Power  
 Western Area Power Administration - Upper Great Plains West

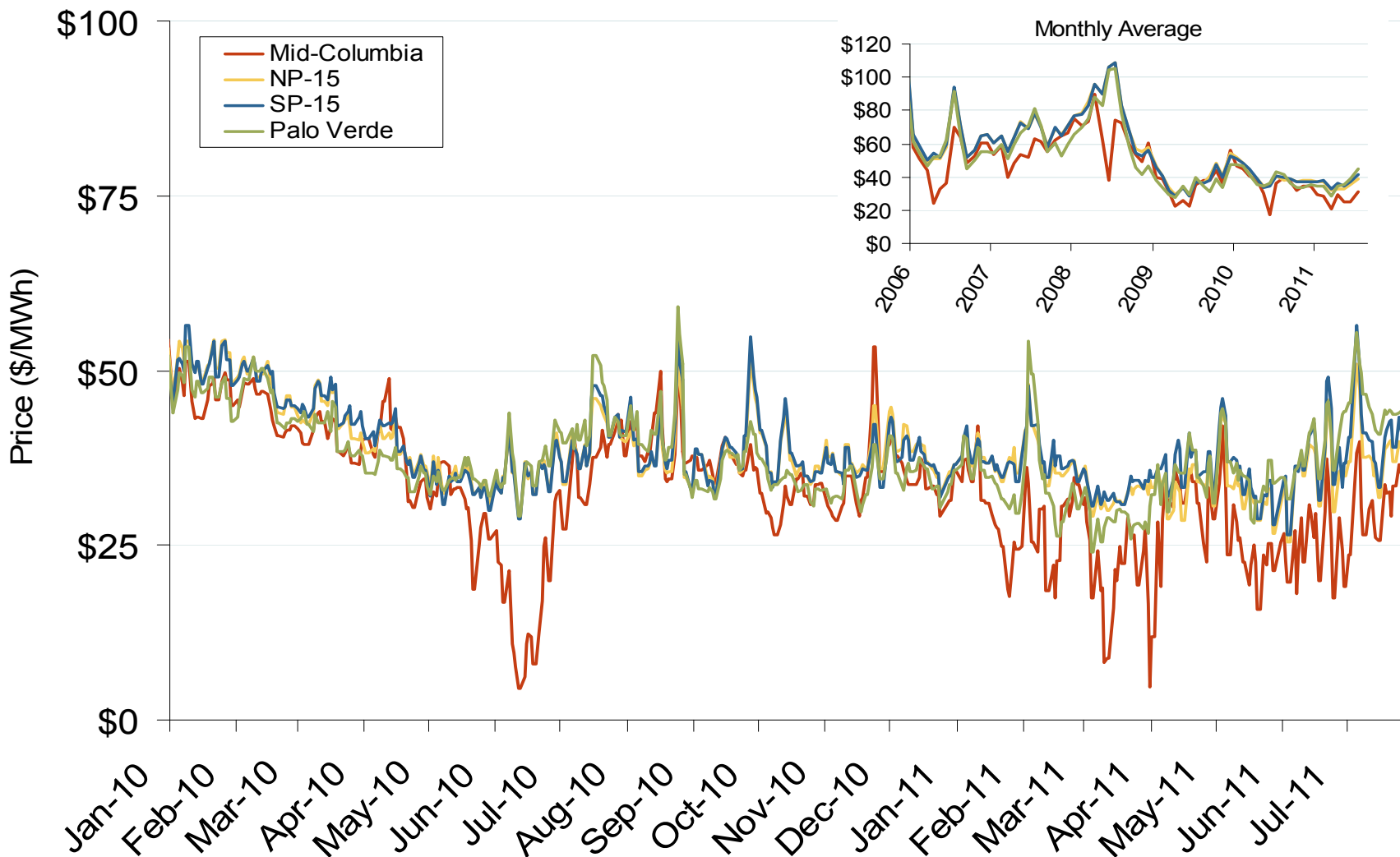
### NERC Acronym

AESO  
 AVA  
 BPAT  
 BCHA  
 IPCO  
 NWMT  
 PACE  
 PACW  
 PGE  
 CHPD  
 DOPD  
 GCPD  
 PSEI  
 SCL  
 SPPC  
 TPWR  
 WAUW

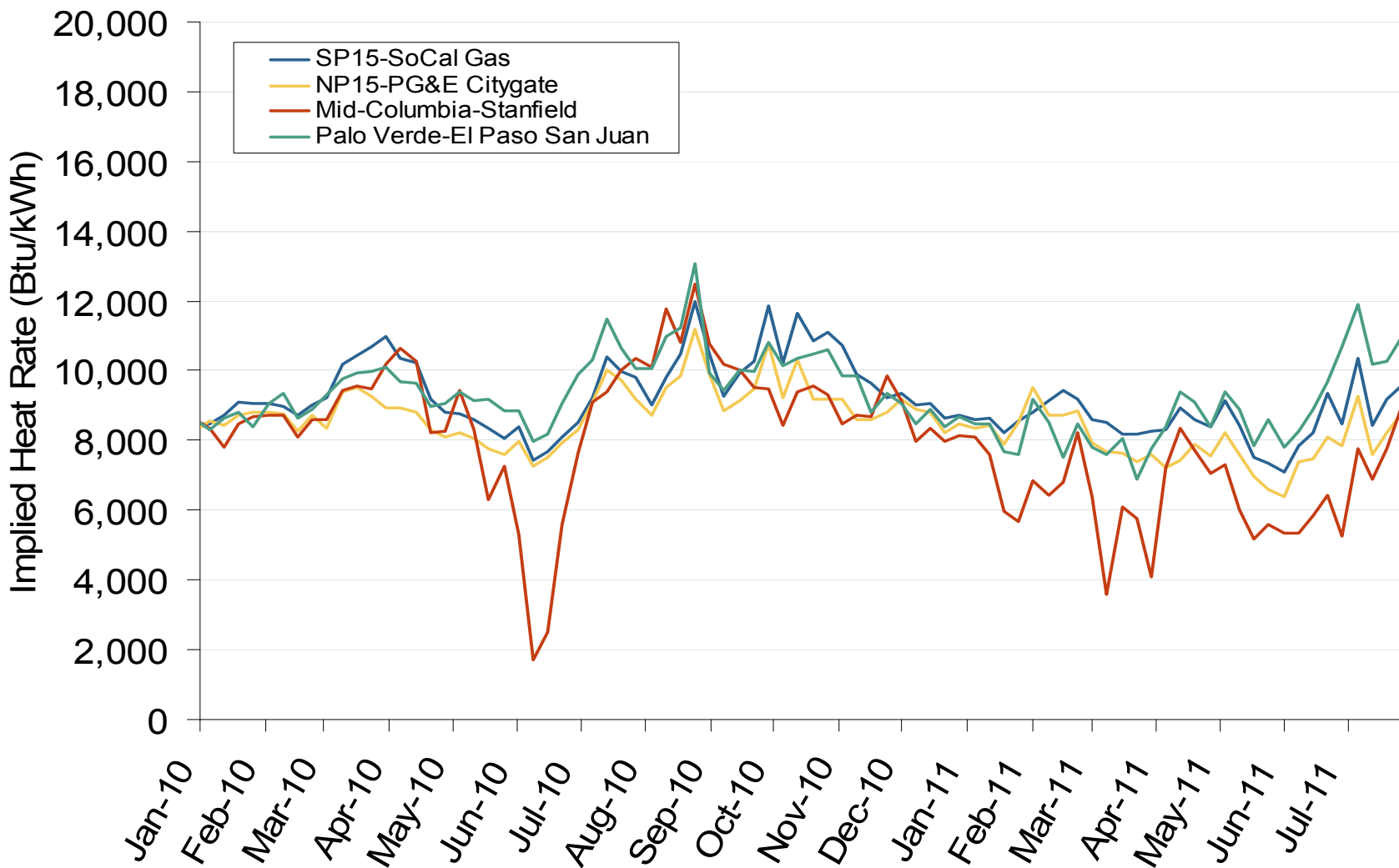
## Northwestern Daily Bilateral Day-Ahead On-Peak Prices



## Western Daily Bilateral Day-Ahead On-Peak Prices



## Implied Heat Rates at Western Trading Points Weekly Averages



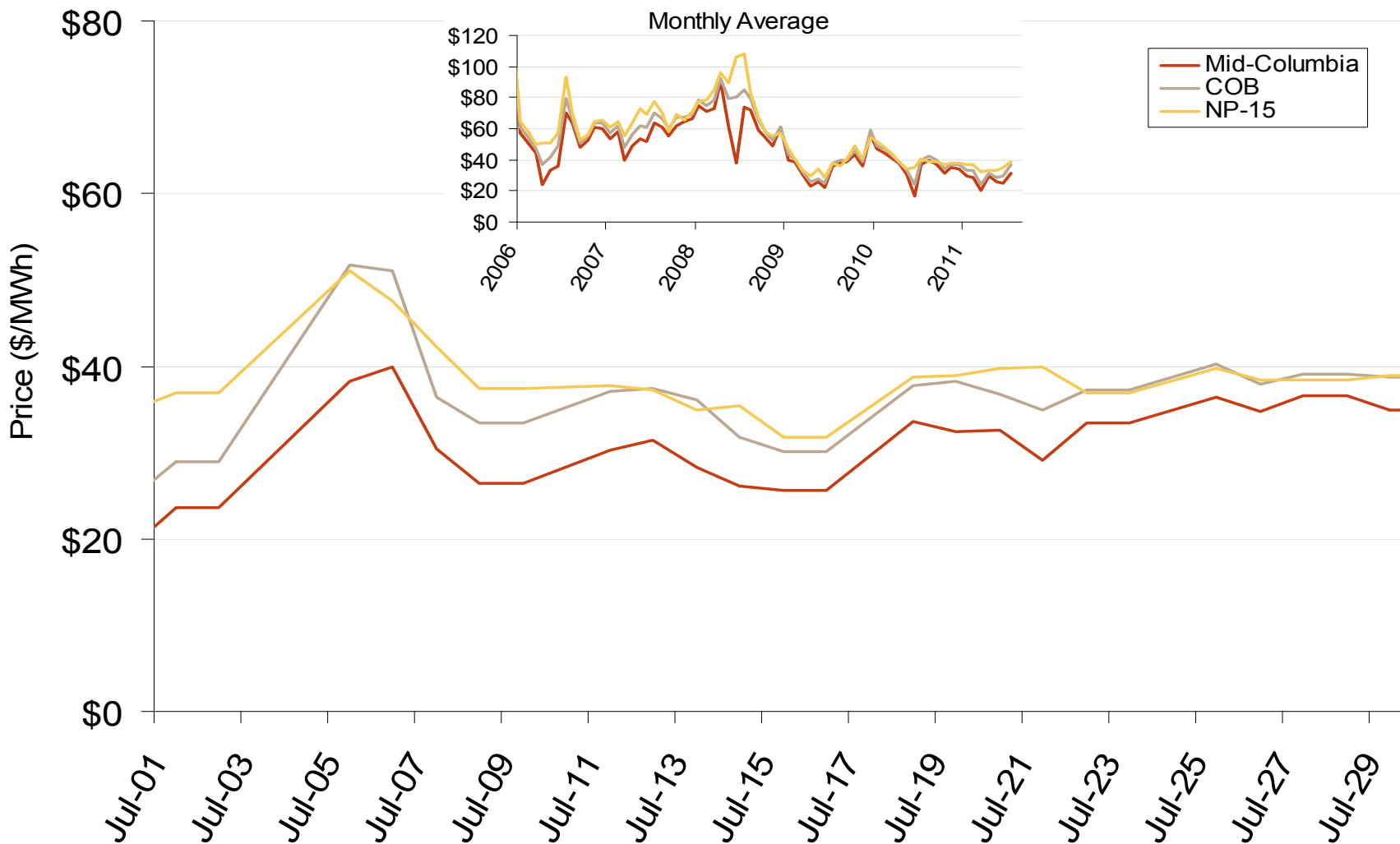
Source: Derived from *Platts* on-peak electric and natural gas price data  
August 2011

Updated: August 03, 2011

Northwest Electric Market: Last Month's Northwestern Bilateral Prices

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

## Northwestern Daily Bilateral Day-Ahead On-Peak Prices

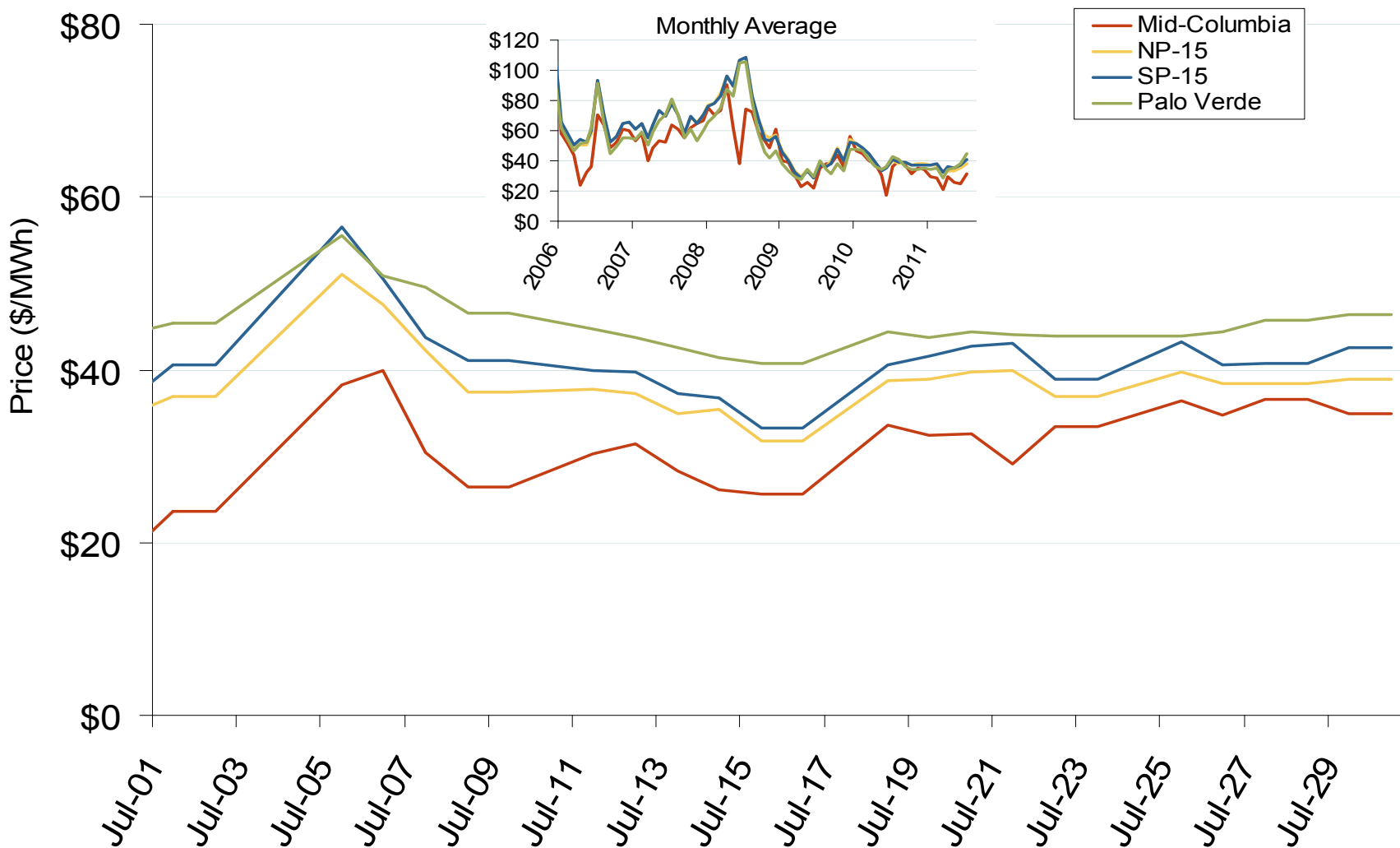




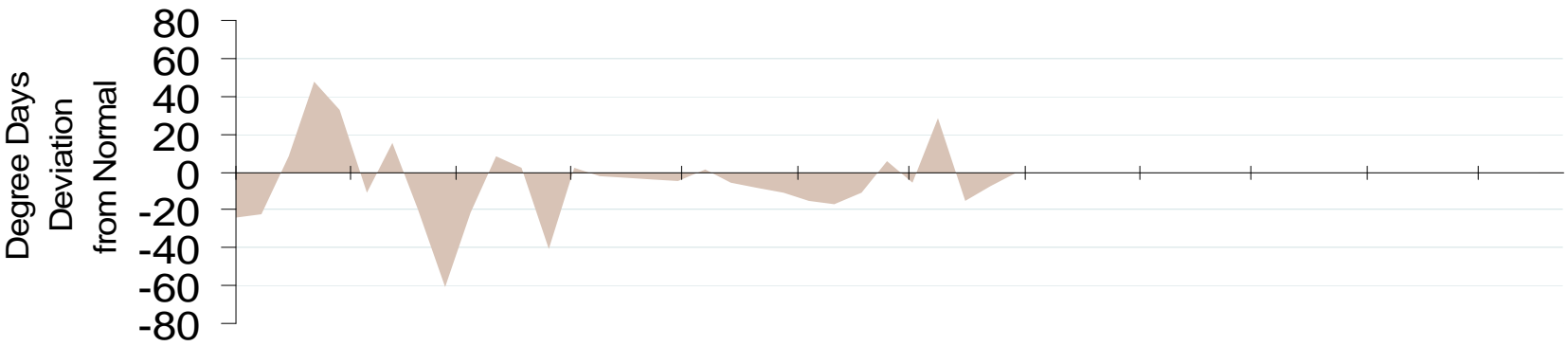
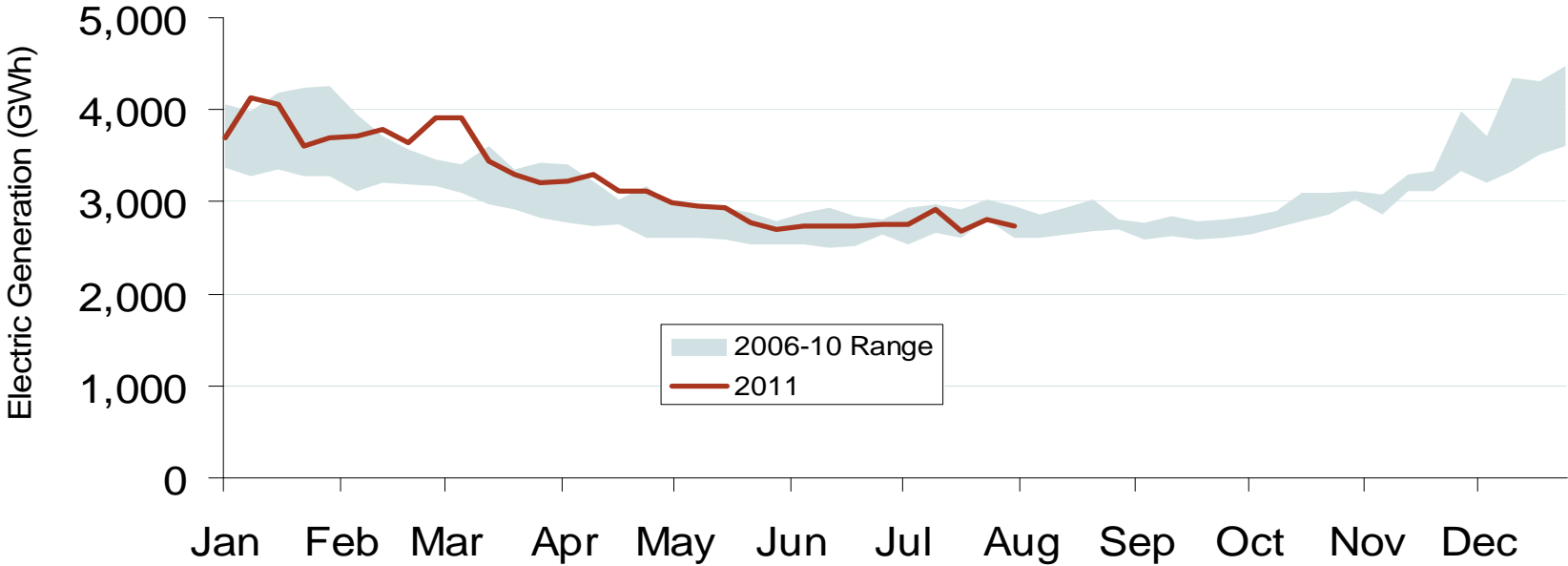
Northwest Electric Market: Last Month's Western Bilateral Prices

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

## Western Daily Bilateral Day-Ahead On-Peak Prices

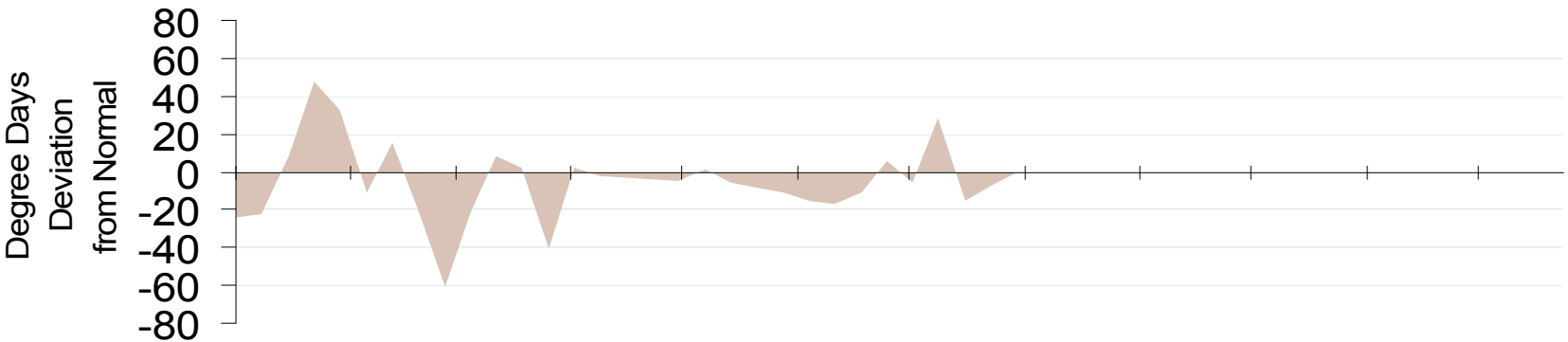
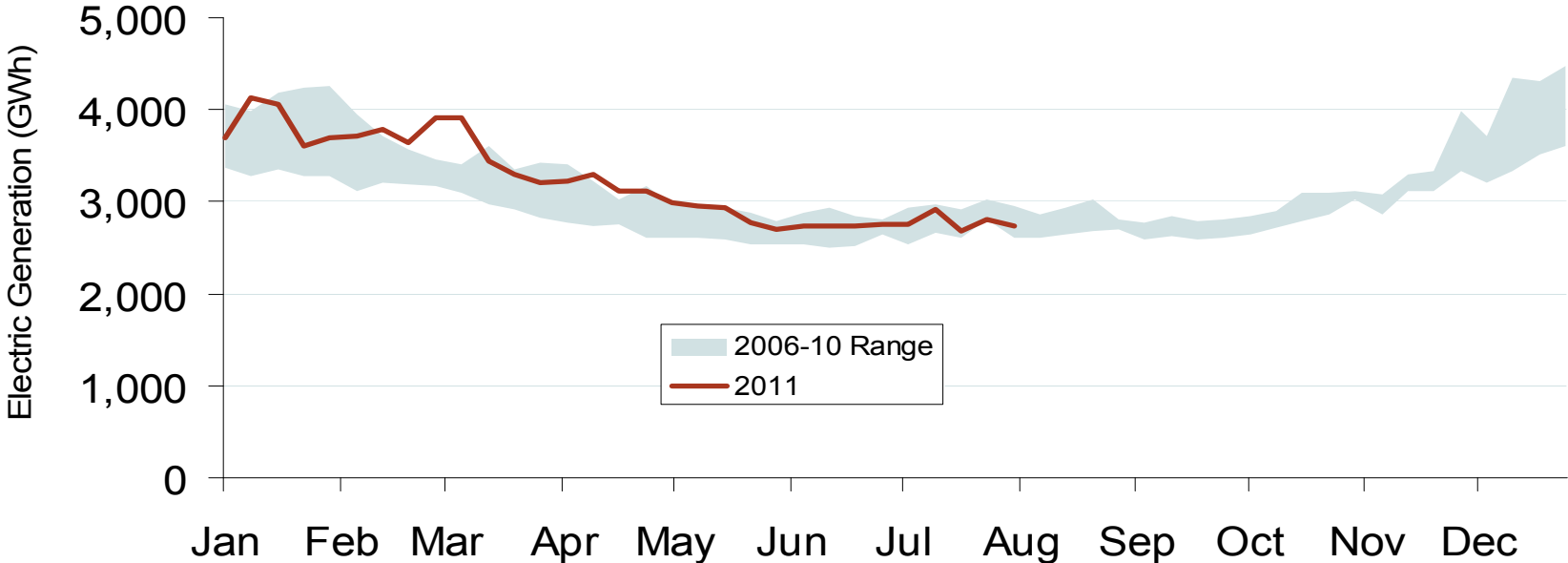


# Weekly Power Generation & Temps. - Rocky Mountains



Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

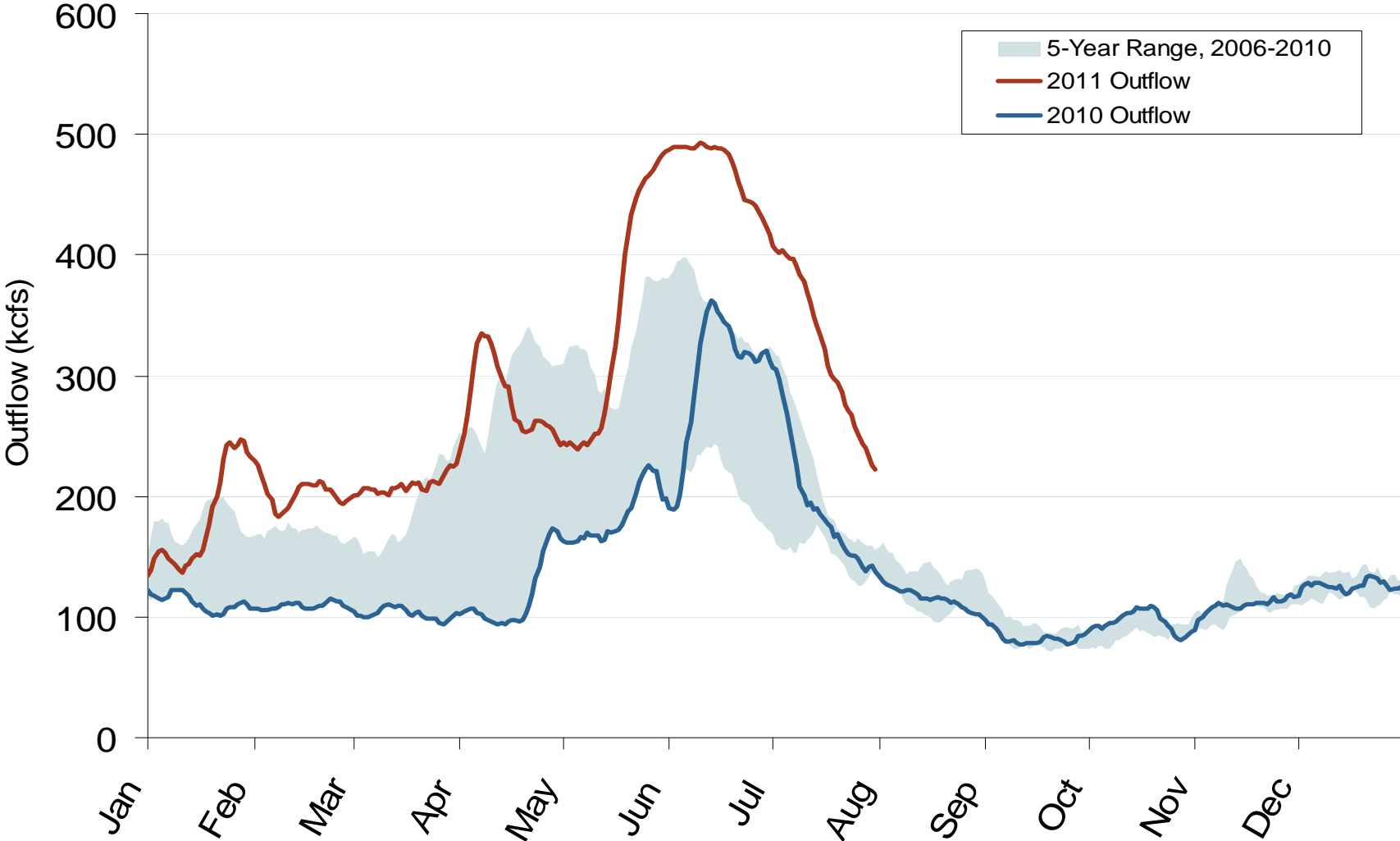
### Weekly Power Generation & Temps. - Pacific Northwest



Source: Derived from *EEI* and *NOAA* data  
August 2011

Updated: August 09, 2011

### Stream Flows at the Dalles Dam



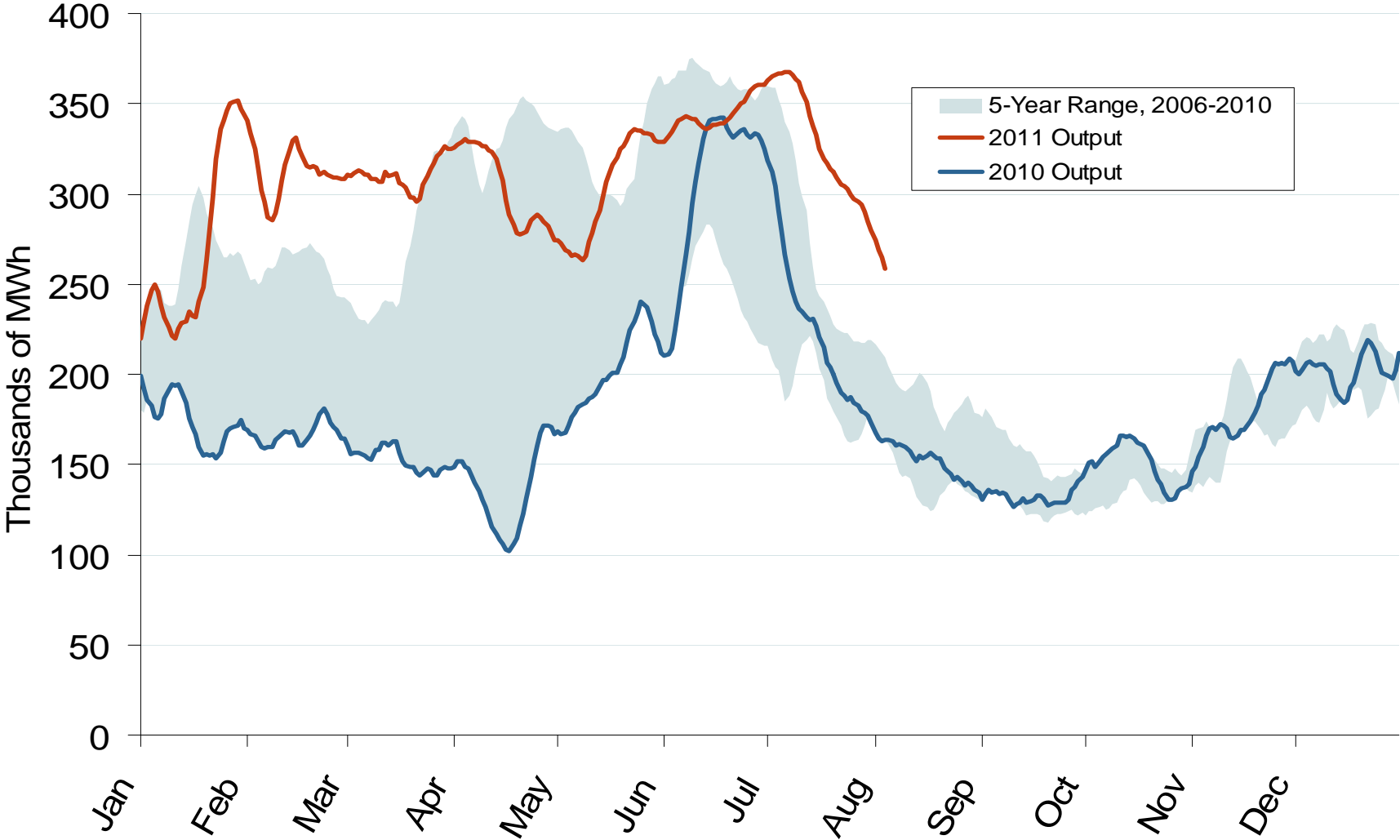
Note: Trend lines are 7-day moving averages

Source: Derived from USACE data

August 2011

Updated: August 03, 2011

# Pacific Northwest Hydroelectric Production



Notes: Trend lines are 7-day moving averages

Source: Derived from USACE data reflecting the output of the 24 largest facilities

August 2011

Updated: August 09, 2011