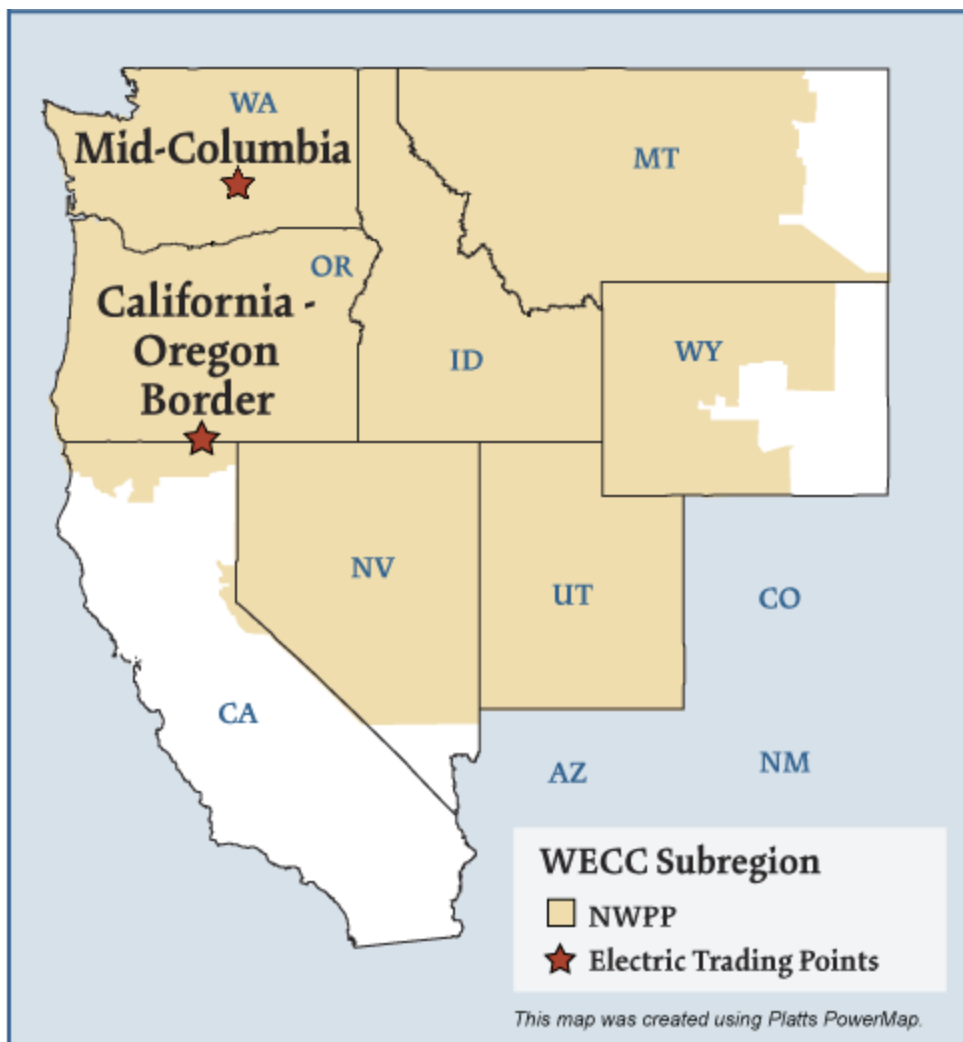


Northwest Electric Market



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

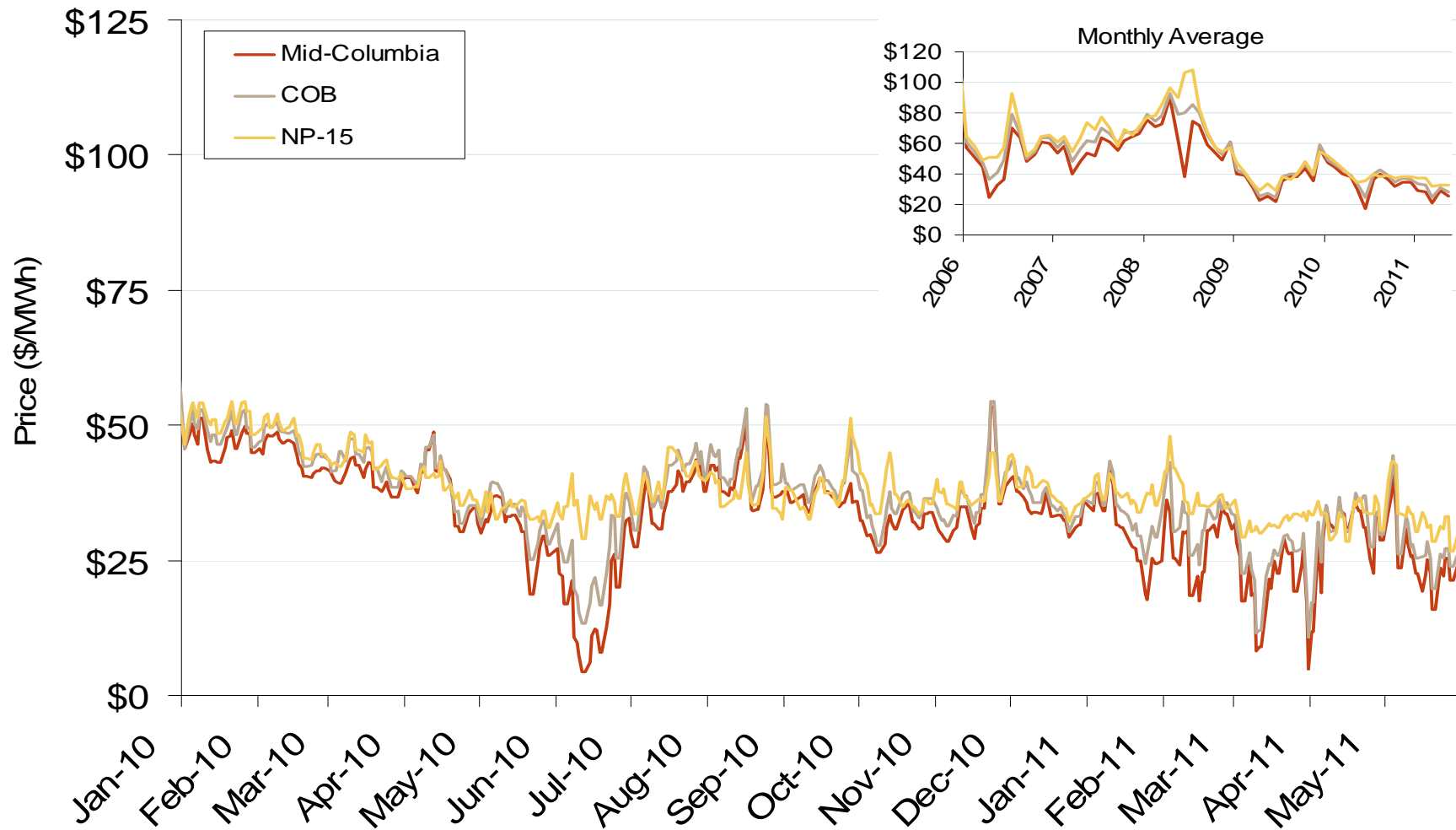
Balancing Authority

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

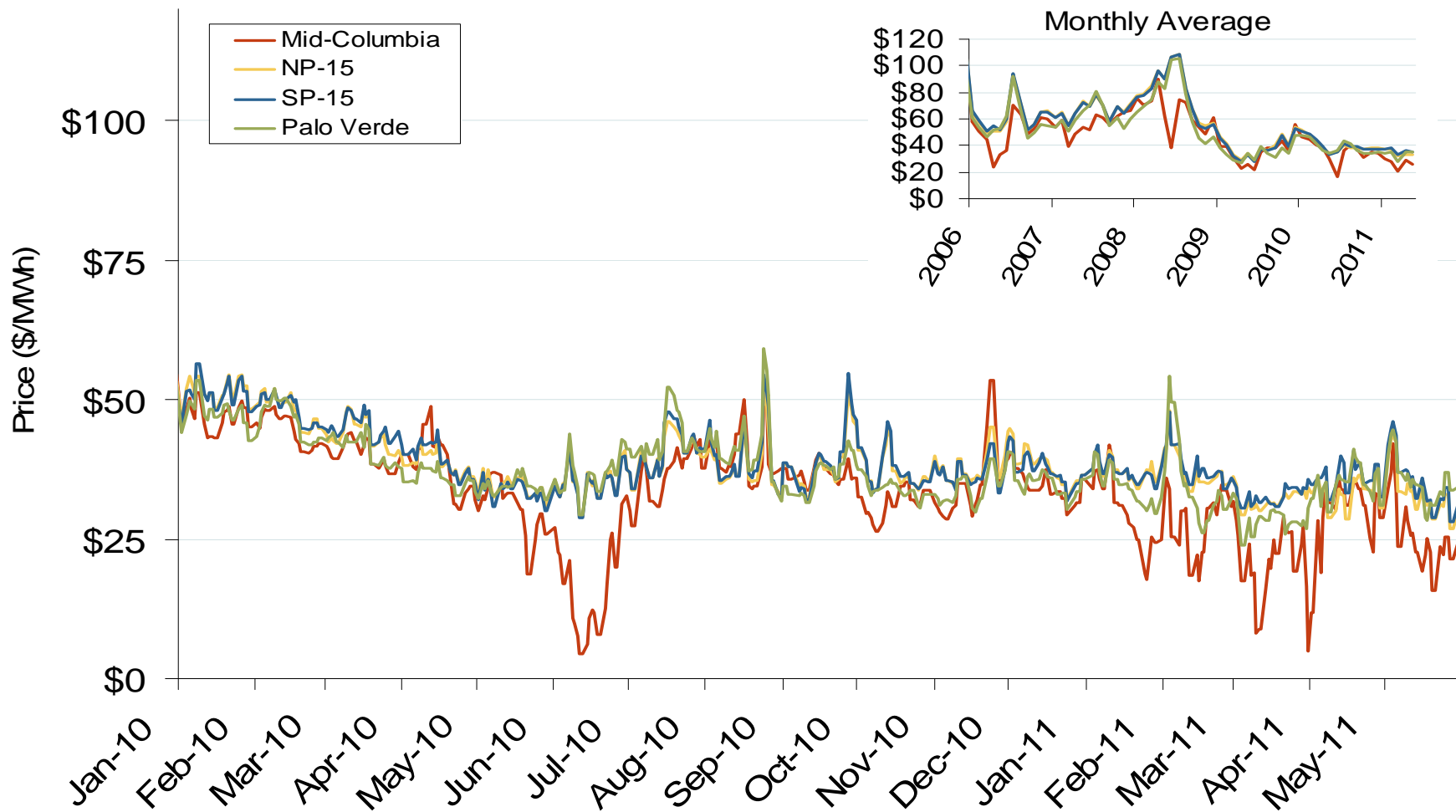
Northwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

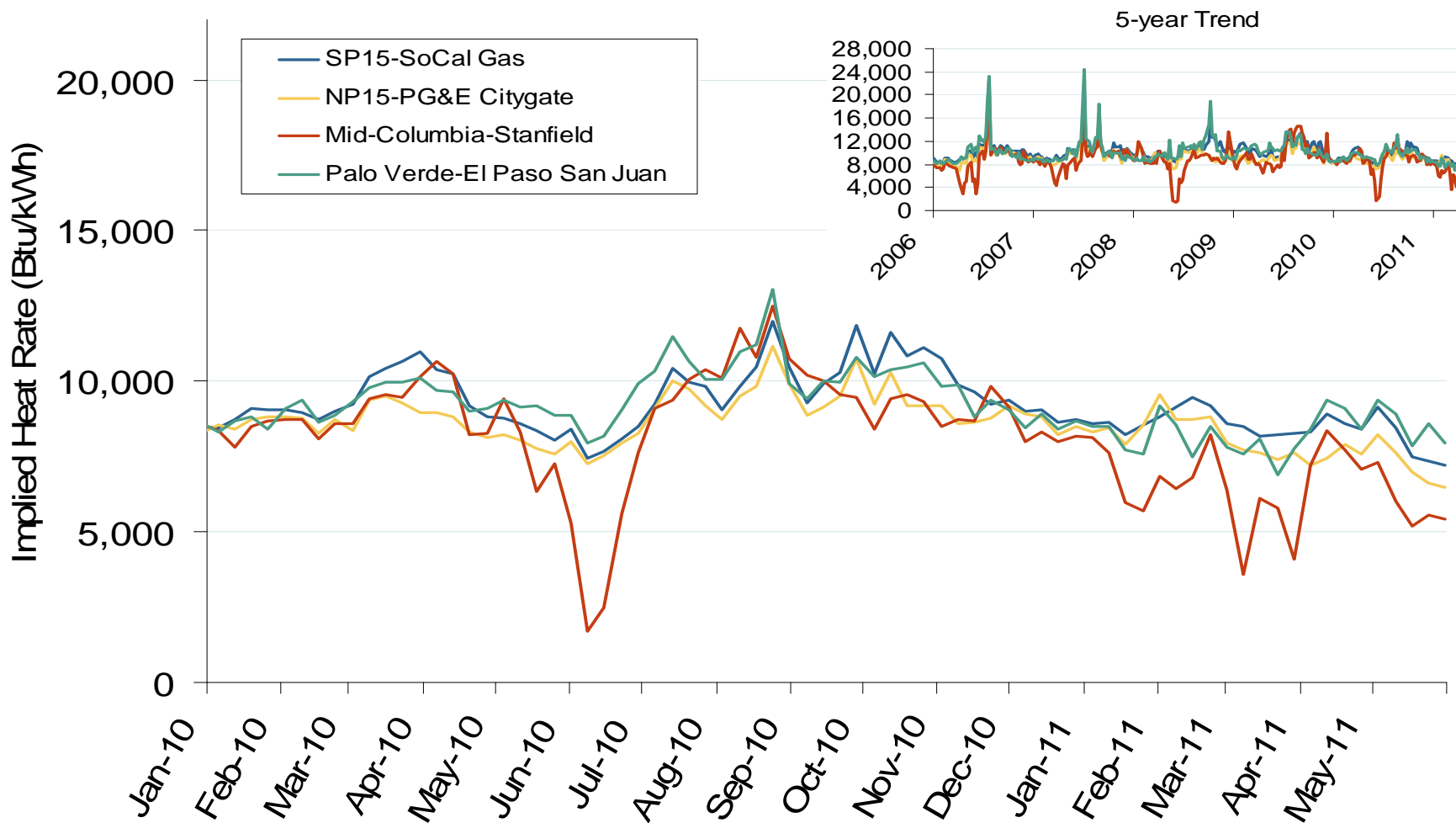
Updated June 3, 2011

Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

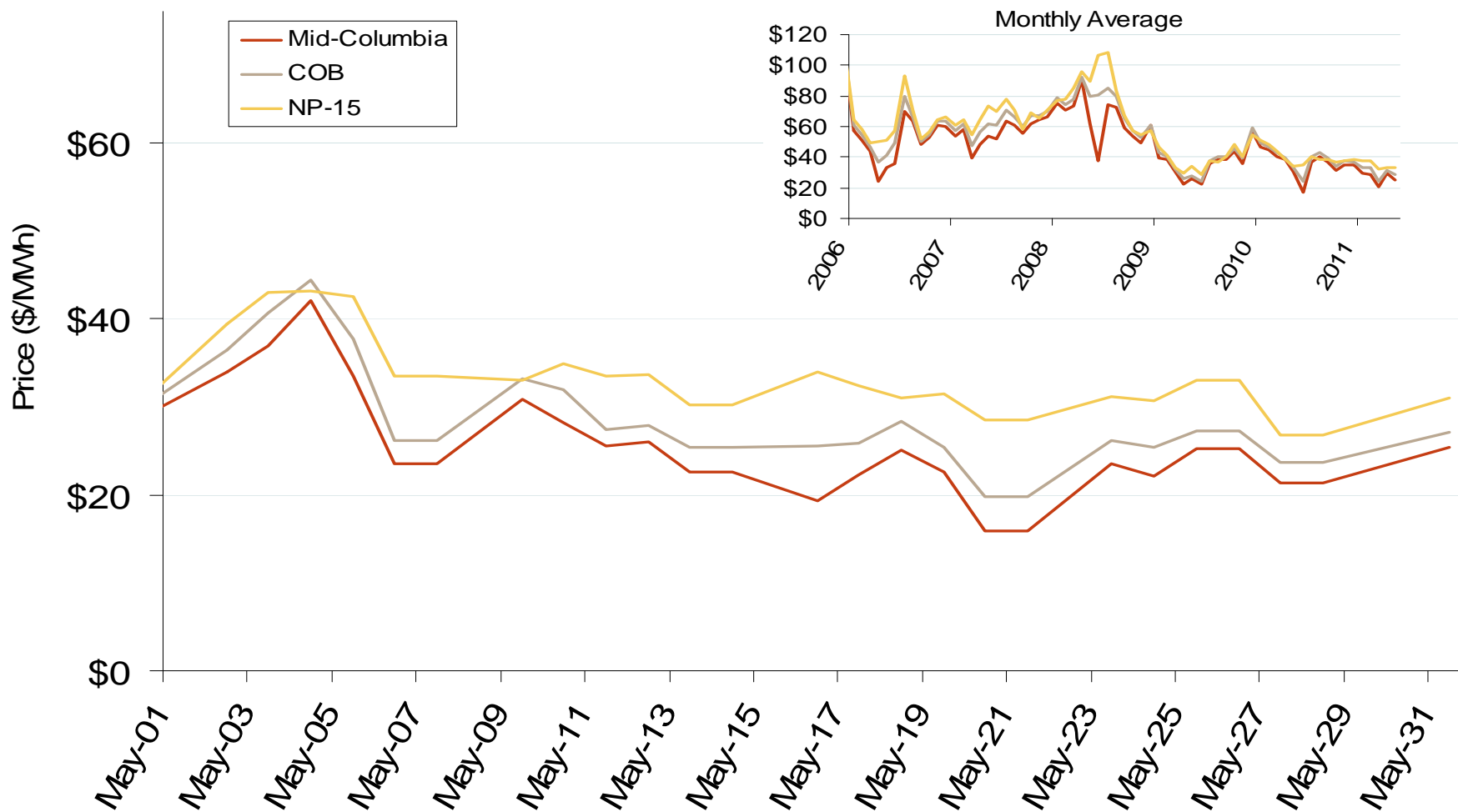
Implied Heat Rates at Western Trading Points Weekly Averages



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

Updated June 3, 2011

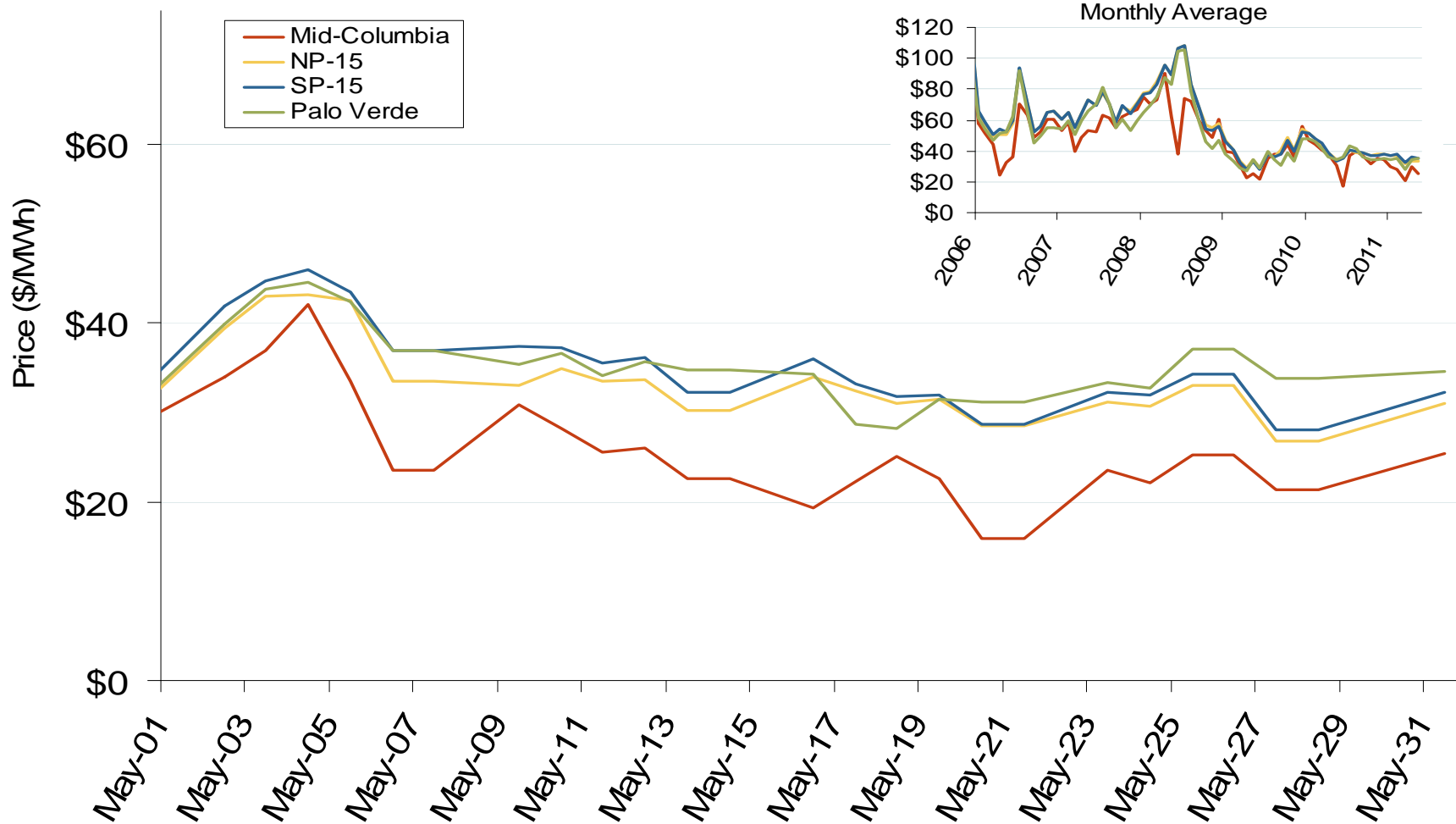
Northwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.

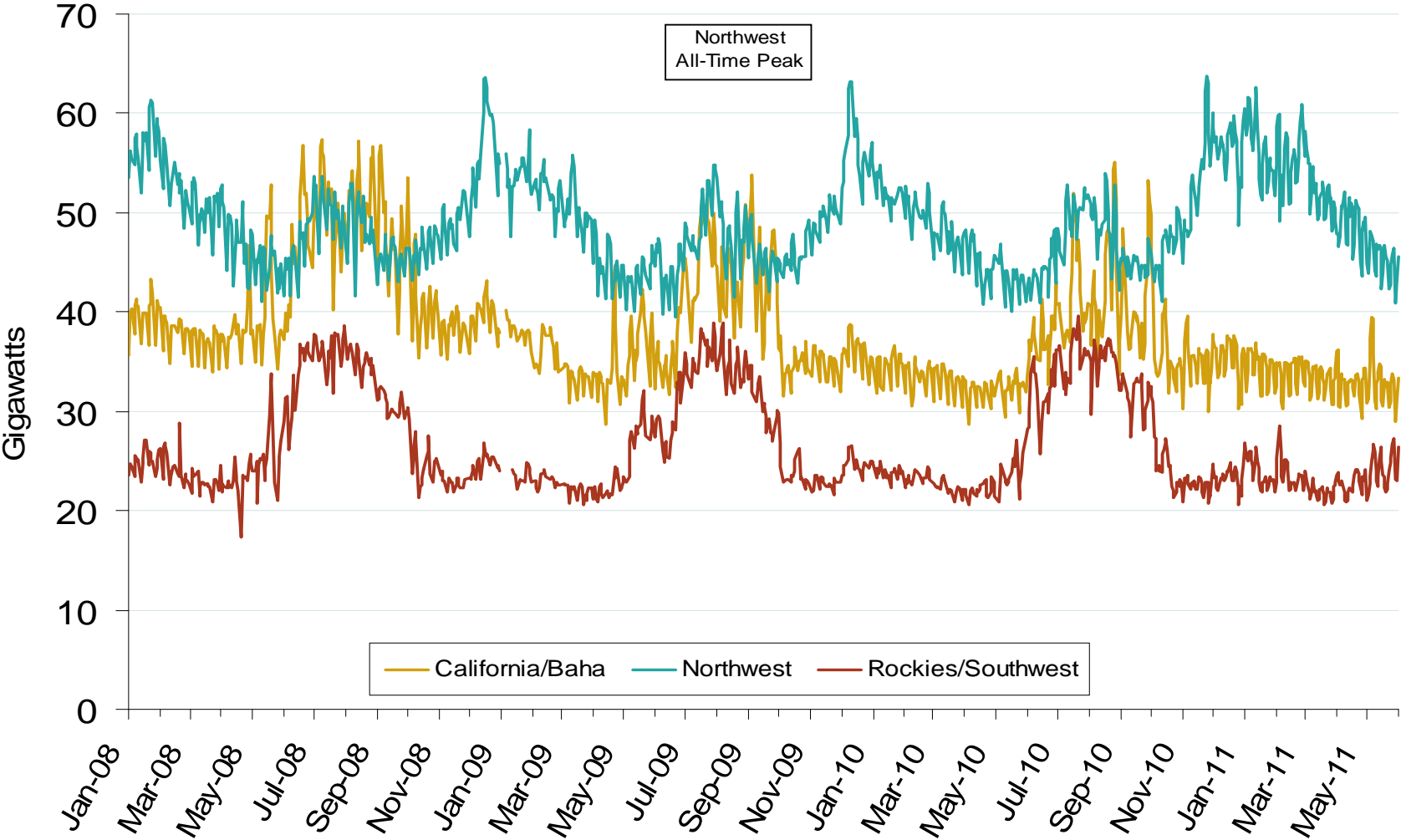
Updated April 8, 2011

Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.

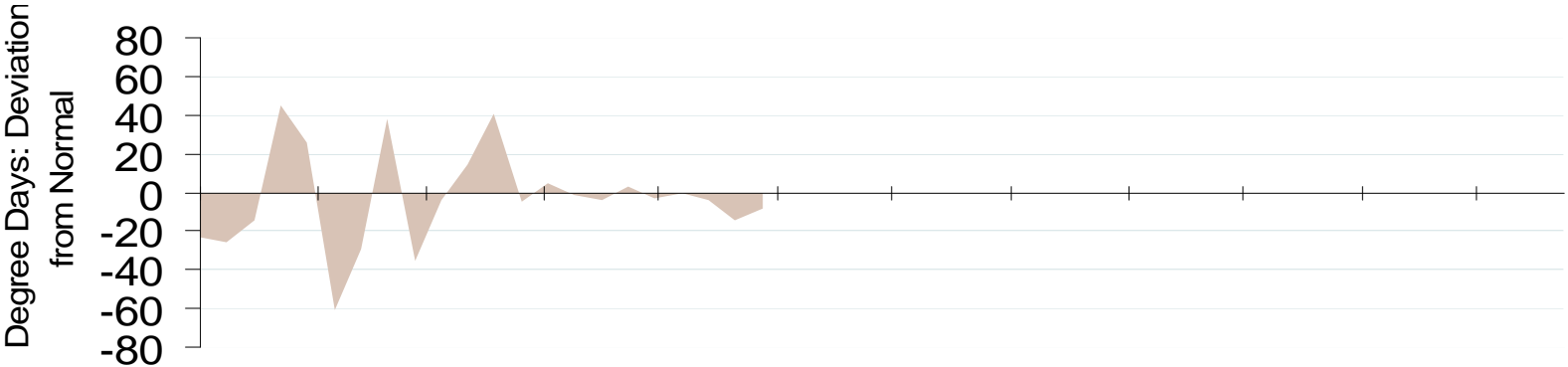
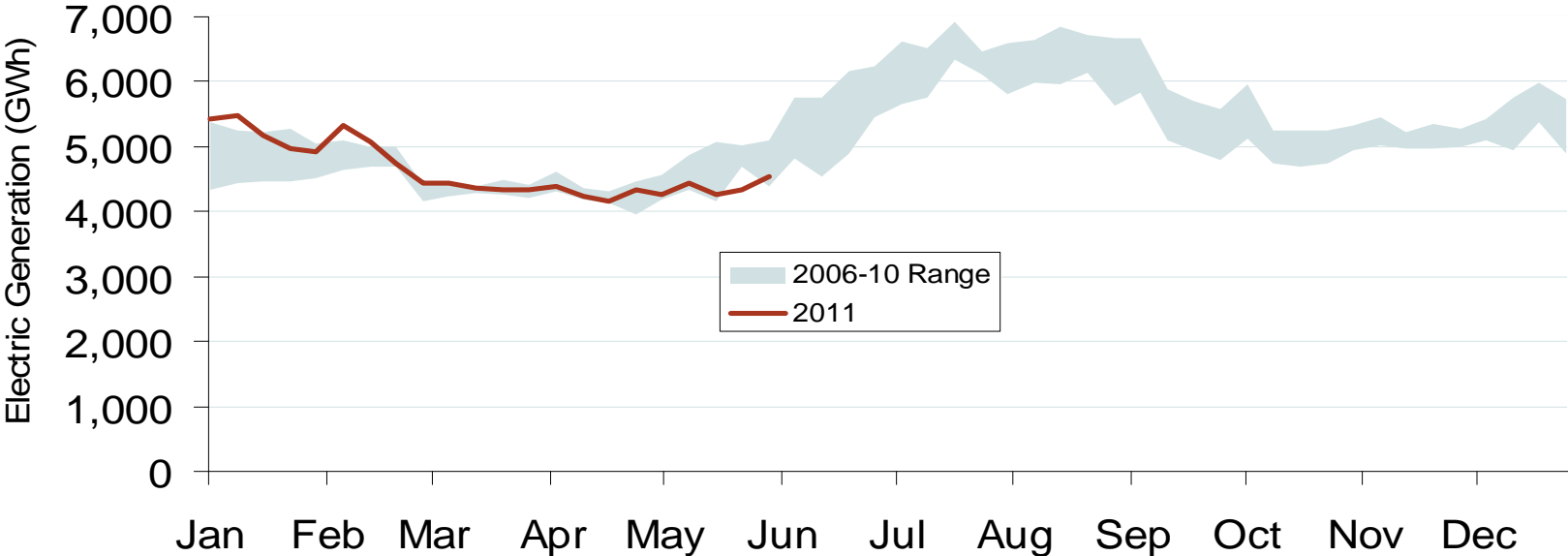
Western Daily Actual Peak Demand



Source: Derived from WECC Daily Report data available at <http://wecc.biz>. Data does not include weekends and holidays. Some data for 12/31/2008 – 1/9/2009 are not available from WECC.

Updated June 3, 2011

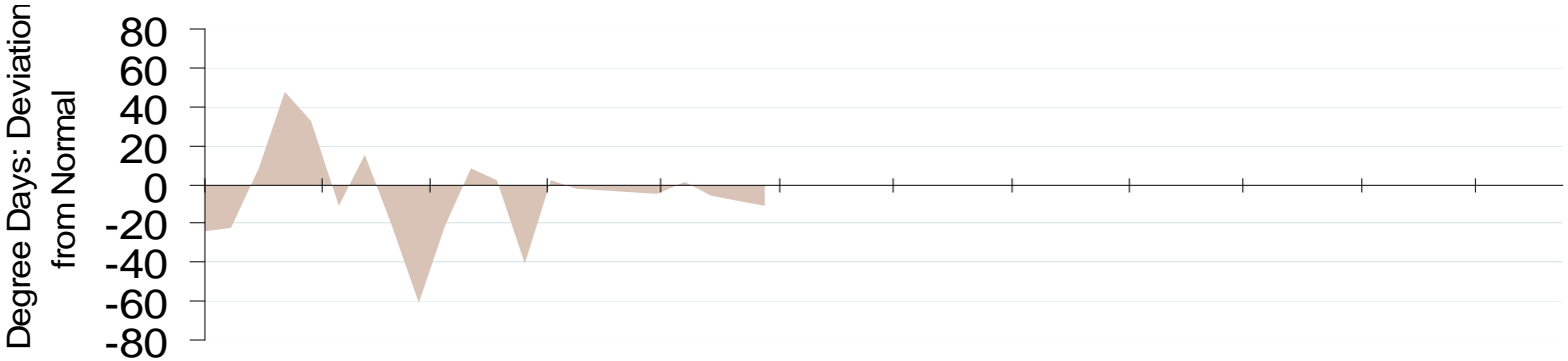
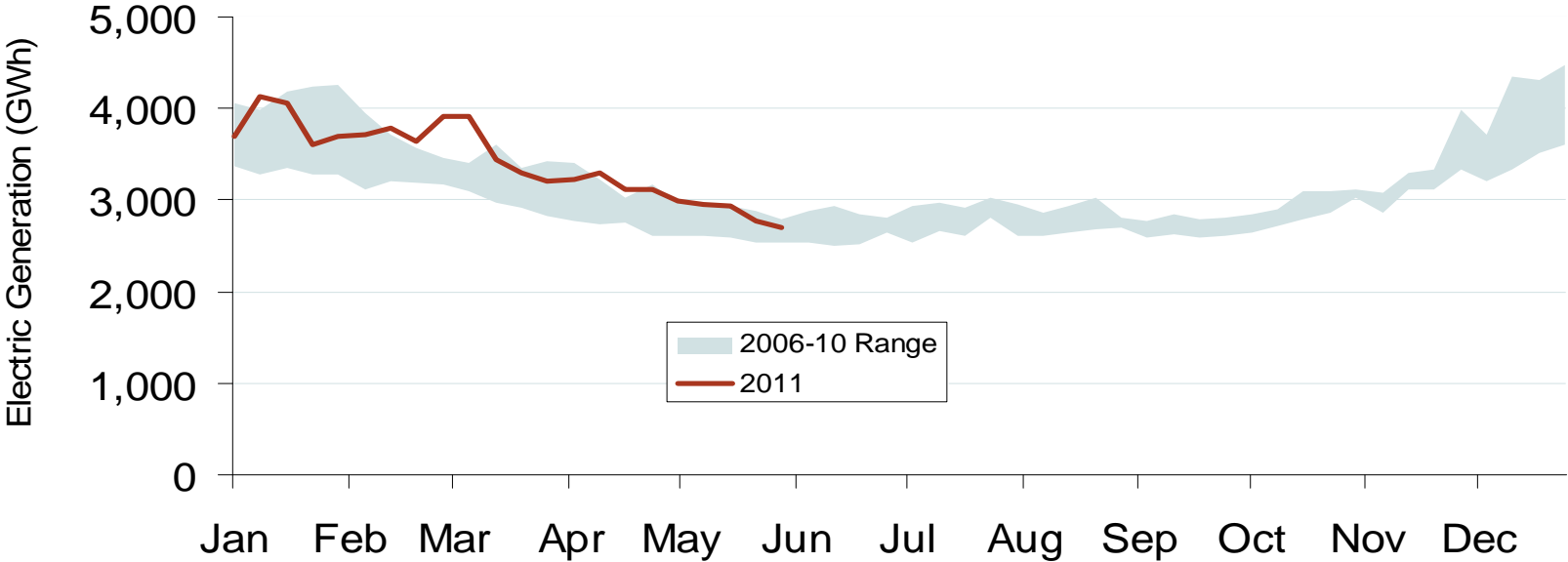
Weekly Electric Generation Output and Temperatures Rocky Mountains Region



Source: Derived from *EI* and *NOAA* data.
June 2011

Updated June 3, 2011

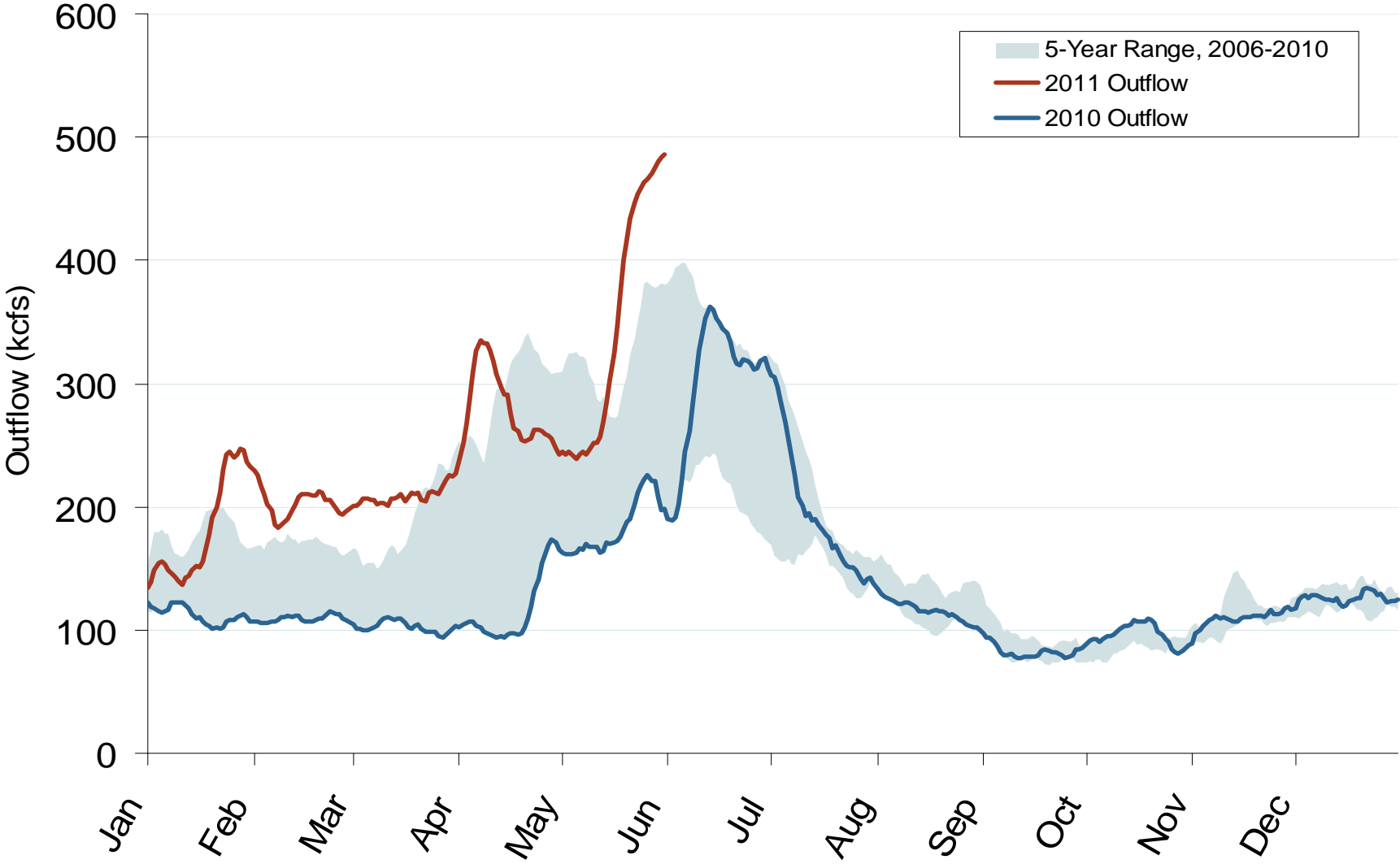
Weekly Electric Generation Output and Temperatures Pacific Northwest Region



Source: Derived from *EI* and *NOAA* data.
June 2011

Updated: March 08, 2011

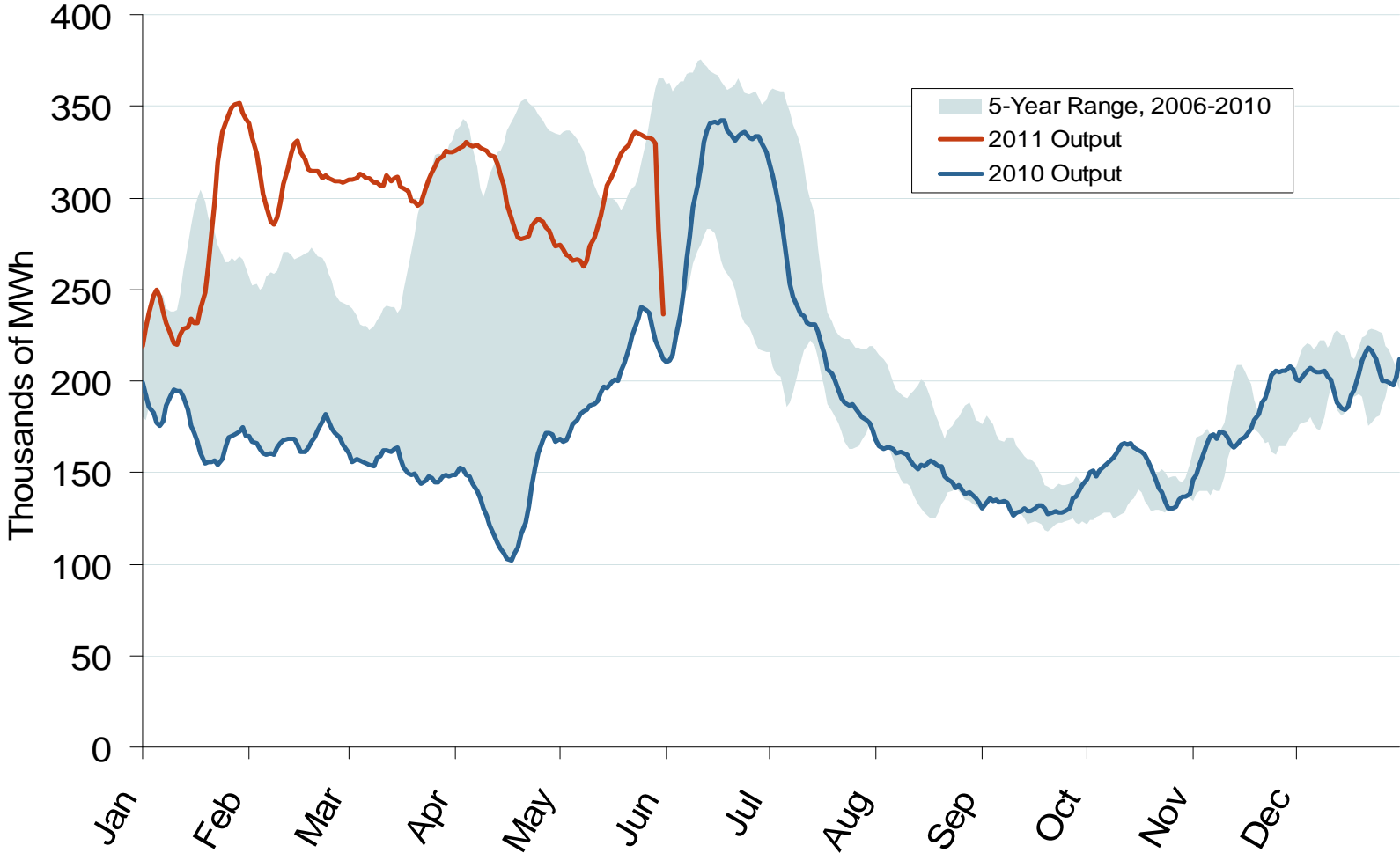
Stream Flow at The Dalles Dam



Source: Derived from USACE data.
Data series are 7-day moving averages.
June 2011

Updated June 3, 2011

Pacific Northwest Hydroelectric Production



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

Note: Trend lines are 7-day moving averages.

June 2011

Updated June 3, 2011