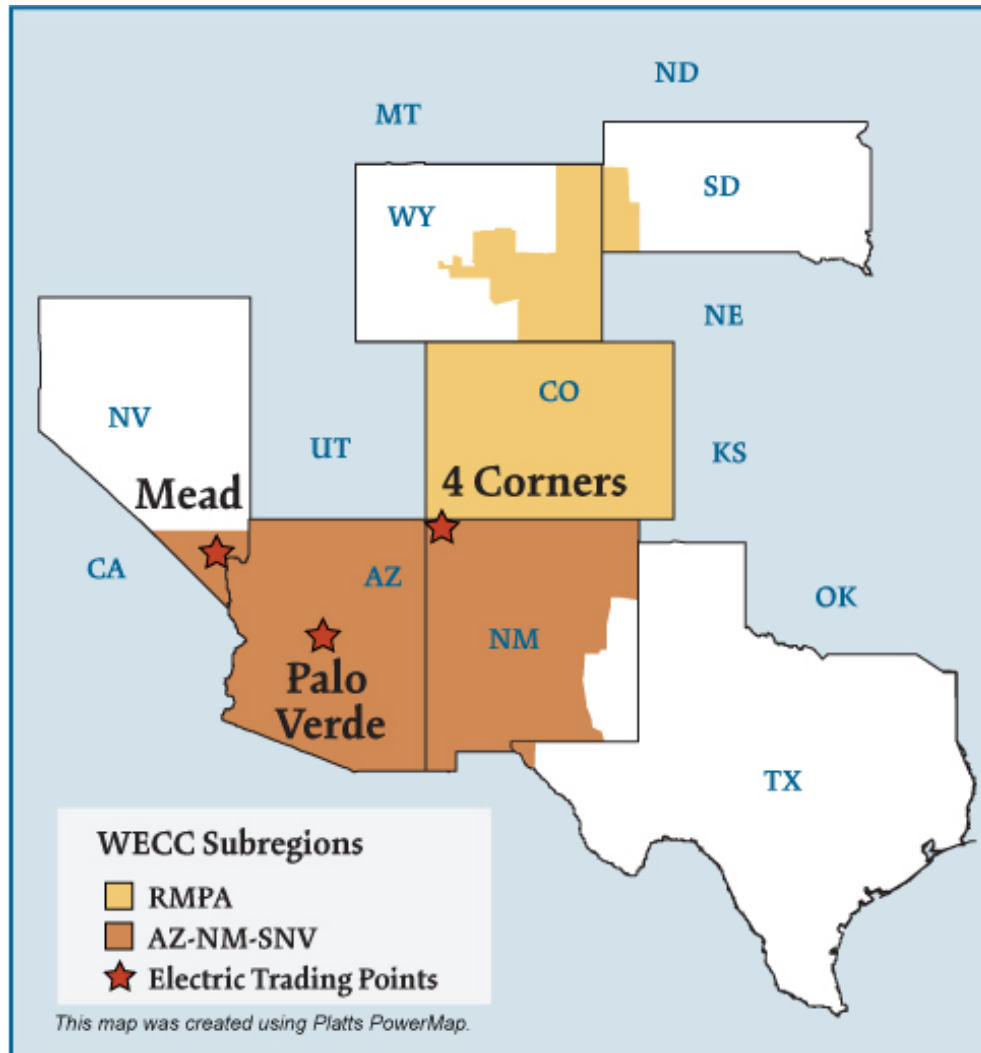


# Southwest Electric Regions



**Federal Energy Regulatory Commission • Market Oversight @ FERC.gov****Overview****Geography**

States covered: All or most of Arizona, New Mexico, Colorado and parts of Nevada, Wyoming and South Dakota.

Reliability region: Rocky Mountain Power Area (RMPA) and Arizona/New Mexico/Southern Nevada Power Area (AZNMSNV) sub-regions of the Western Electric Coordinating Council (WECC)

Balancing authorities: See list on page 5.

Hubs: Four Corners, Mead, Palo Verde

**RTO/ISO**

None

**Generation/Supply**

Marginal fuel type: Natural gas

Generating capacity: 45,459 MW (2005)

Capacity reserve: 8,940 MW (2005)

Reserve margin: 24% (2005)

The region has a surplus of generating capacity, with much of the generation in Arizona and the Four Corners area. Transmission capacity to the California market is often fully utilized in the high load periods of the summer. In 2005, the regional reserve margin decreased from 2004 as demand growth outpaced supply additions.

## Demand

Peak demand: 36,519 MW (2005)

Peak demand growth: 3.5% (2004–2005)

## Prices

Annual Average of Daily Bilateral Day Ahead On-Peak Prices

Platts "Palo Verde" Index

2004: \$50.09/MWh

2005: \$67.62/MWh

2006: \$57.79/MWh

Prices increased in 2005 as a result of disturbances to the natural gas market. Prices declined in 2006 as natural gas storage levels remained above historical ranges throughout the injection season (April through October).

Physical and financial electricity products are actively traded through brokers with the Palo Verde, Four Corners, and Mead hubs as pricing points.

## Interconnections/Seams

Generation suppliers export excess power to the rest of the West and particularly to California.

## Focal Points

**Severe Heat Wave:** In late July 2006, a severe heat wave resulted in 100+ degree temperatures over much of the West - and up to 113 degrees in Las Vegas and 118 degrees in Phoenix. Between July 12 and July 26, peak load records were set by customers of utilities (e.g., Nevada Power, Arizona Public Service, and Tucson Electric Power). While the regional wholesale market tightened because of concurrent high demand in California and the Northwest, Southwest suppliers were able to meet regional loads and still export to California. Some merchant generating stations such as Harquahala saw increased production compared to the previous summer. Power prices in the Southwest bilateral markets spiked to over \$350/MWh on July 24, the date that CAISO declared a Stage 2 Emergency - CAISO's call for critical conservation due to very tight power supplies in its control area.

**New Energy Company:** According to a company press release, PNM Resources, Inc., a holding company for utility and energy service companies in New Mexico and Texas, and Cascade Investment, L.L.C., a private investment firm for Microsoft founder Bill Gates, agreed to create an unregulated energy company to serve energy markets in the West and in Texas. PNM Resources and a Cascade Investment subsidiary planned to have a 50 percent ownership interest in the new company. Representatives stated that the new company would form business lines to serve competitive retail electricity sales, operation and ownership of generation, and wholesale marketing and trading. At the time of the November 2006 announcement, Cascade Investment owned approximately 6.5 million, or 9.4 percent, of PNM Resources' common stock shares.

## Balancing Authorities in the Southwest Electric Market

### WECC Subregion and Balancing Authority

### NERC Acronym

#### AZNMSNV

Arizona Public Service Company  
 DECA, LLC - Arlington Valley  
 El Paso Electric Company  
 Gila River Maricopa Arizona  
 Harquahala L.L.C.  
 Imperial Irrigation District  
 Nevada Power Company  
 Public Service Company of New Mexico  
 Salt River Project  
 Tucson Electric Power Company  
 Western Area Power Administration - Lower Colorado

AZPS  
 DEAA  
 EPE  
 GRMA  
 HGMA  
 IID  
 NEVP  
 PNM  
 SRP  
 TEPC  
 WALC

#### RMPA

Public Service Company of Colorado  
 Western Area Power Administration - Colorado-Missouri

PSCO  
 WACM

## Supply and Demand Statistics for the Southwest

<b>Supply Demand Statistics</b>			
	2003	2004	2005
Summer Generating Capacity MW	41,646	45,588	45,459
Summer Peak Demand MW	35,815	35,280	36,519
Summer Reserves MW	5,831	10,308	8,940
Summer Reserve Margin:	16%	29%	24%
Annual Load (GWh):	177,401	180,154	185,730
Annual Net Generation GWh	NA	NA	NA

Source: Derived from WECC data.

Updated February 2, 2007

1064

## Yearly Average of Bilateral DA Prices – On-Peak

<b>Annual Average Day Ahead Prices (\$/MWh)</b>			
	<b>2005</b>	<b>2006</b>	<b>5 Years</b>
Palo Verde	\$67.62	\$57.79	\$51.44
Four Corners	\$69.45	\$58.60	\$51.97
Mead	\$70.21	\$59.95	\$53.84

Source: Derived from *Platts* and *ICE* data.

Updated February 2, 2007

1065

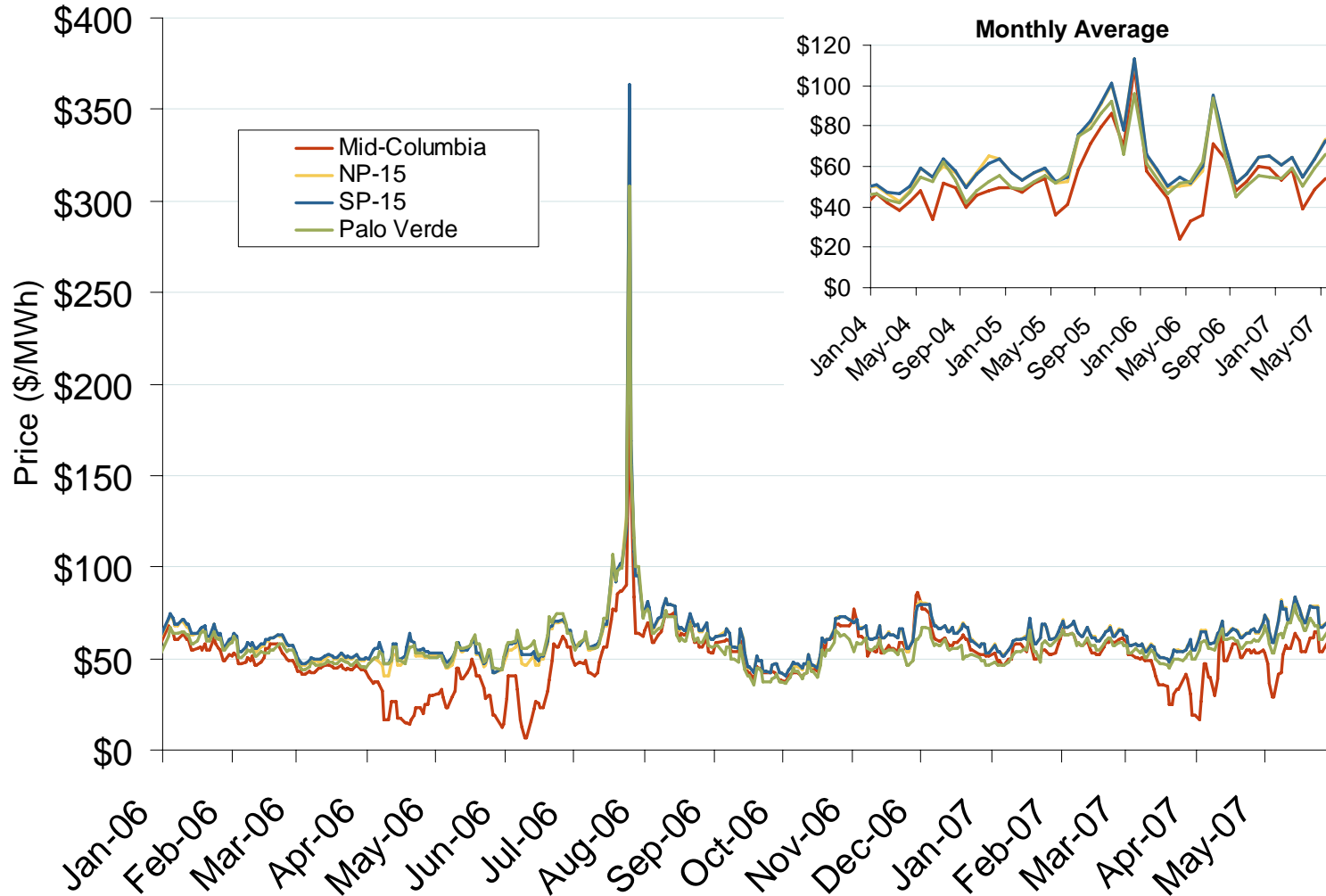
# Southwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.



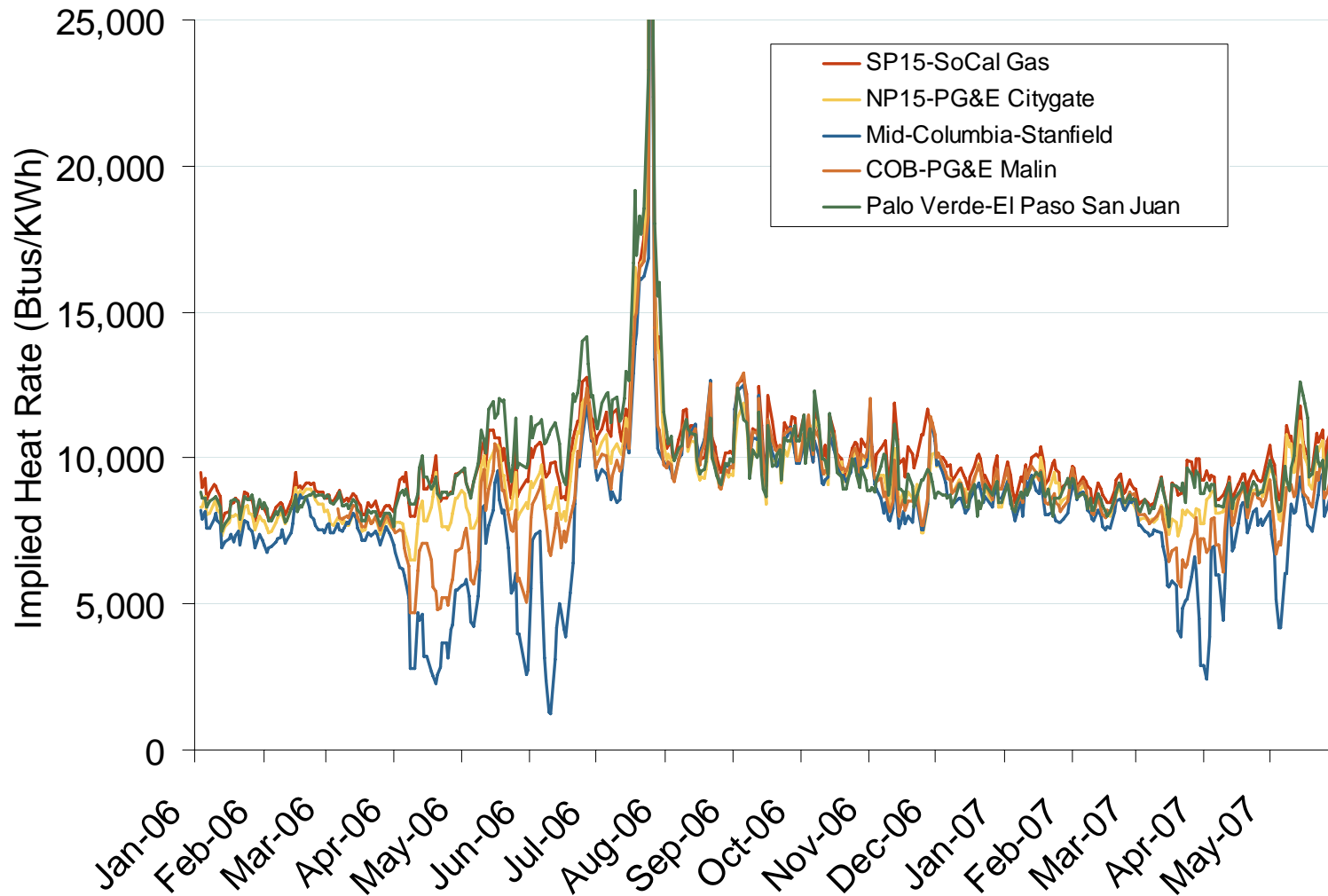
# Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

Updated June 7, 2007

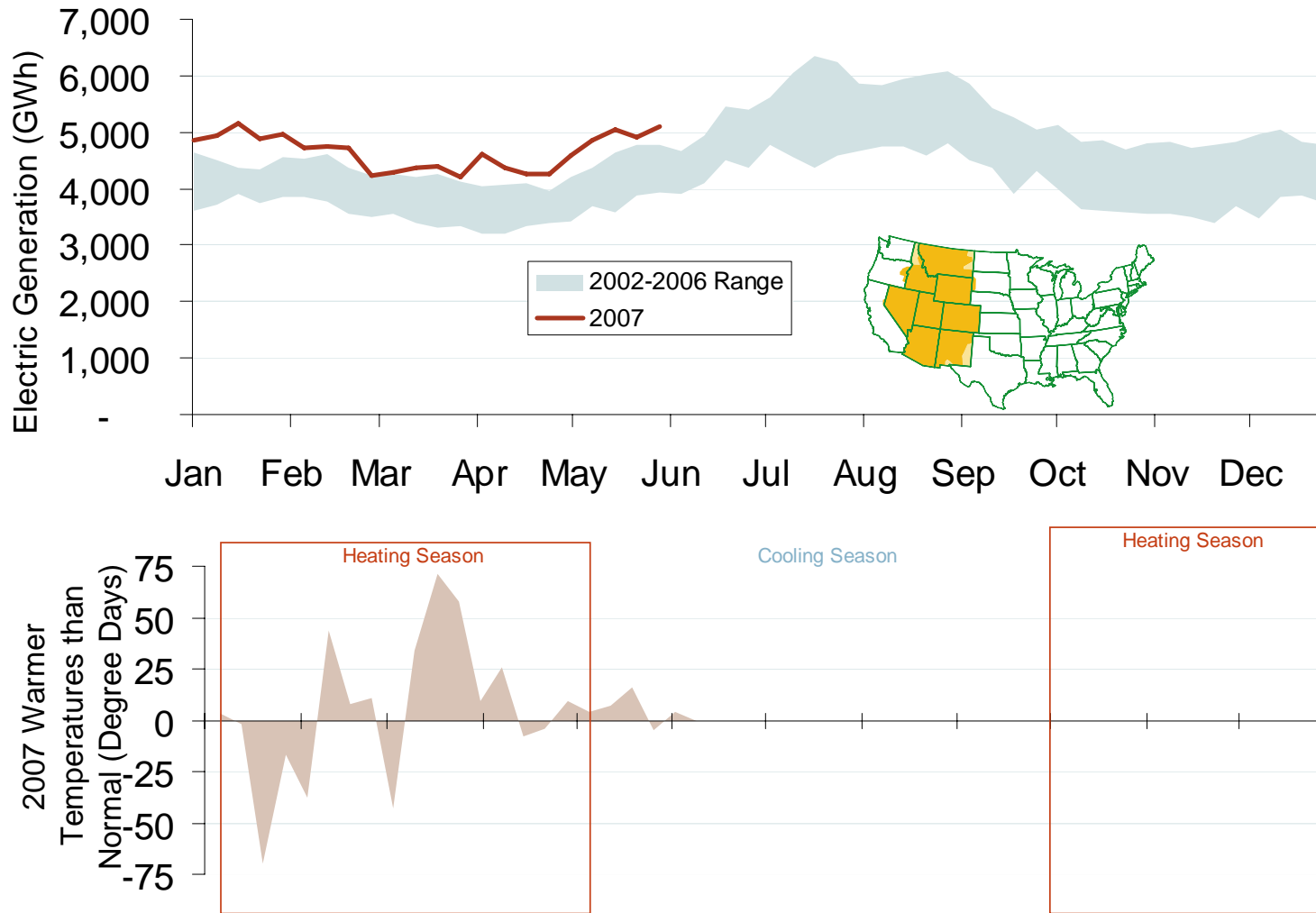
## Implied Heat Rates at Western Trading Points



Source: Derived from Platts data

Updated June 7, 2007

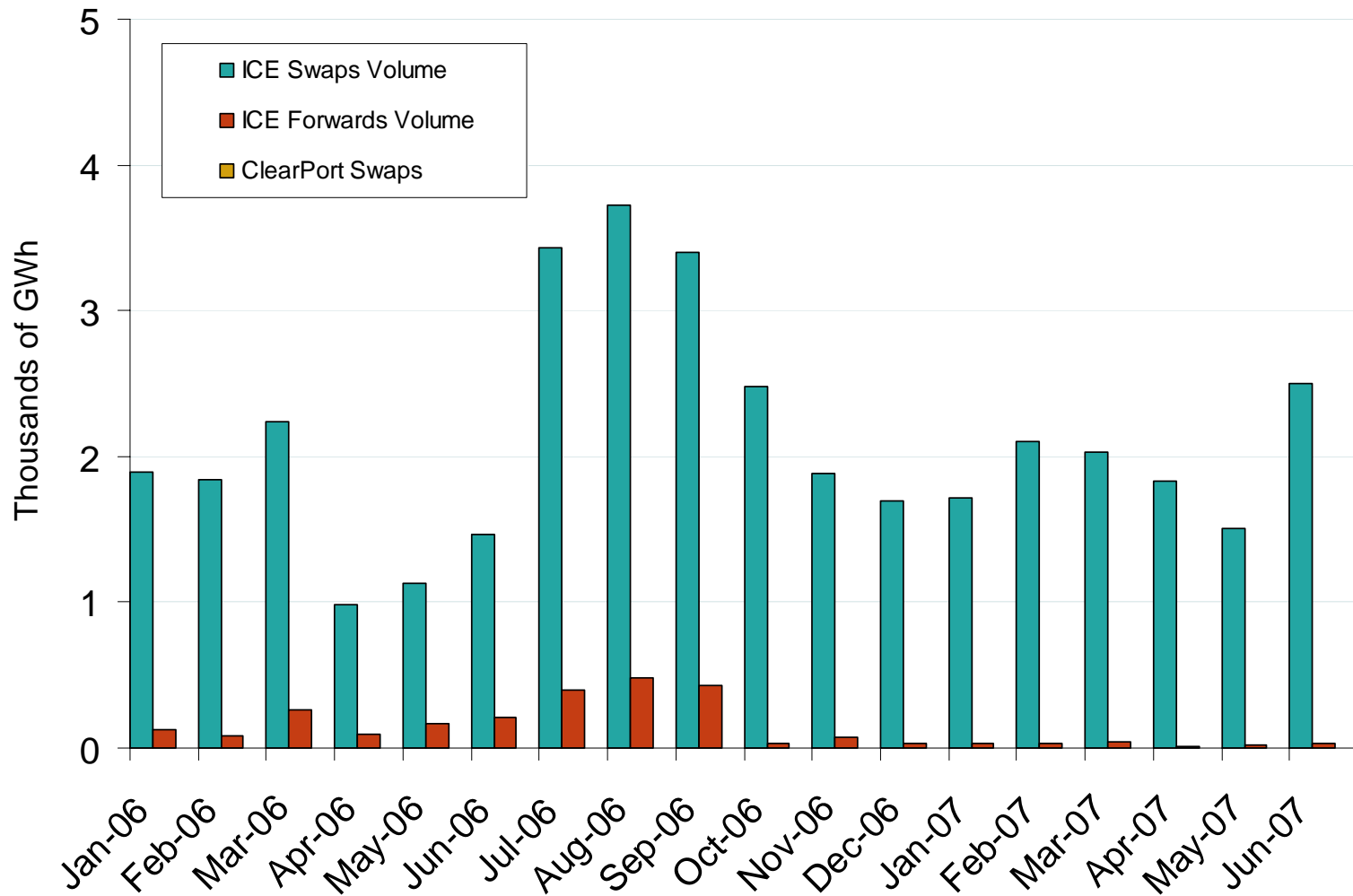
# Weekly Electric Generation Output and Temperatures Rocky Mountains Region



Source: Derived from EEI and NOAA data.

Updated June 7, 2007

## Palo Verde Forward and Swap Volumes



Source: Derived from ICE and Nymex ClearPort data. ICE on-peak forward and swap volumes are for Palo Verde and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month. Nymex ClearPort on-peak swaps volumes are for Palo Verde and are traded by month.

Updated June 7, 2007