Natural Gas Working Group

California Energy Commission

September 2, 2010

Electricity Analysis Office

Generation Fuels Unit

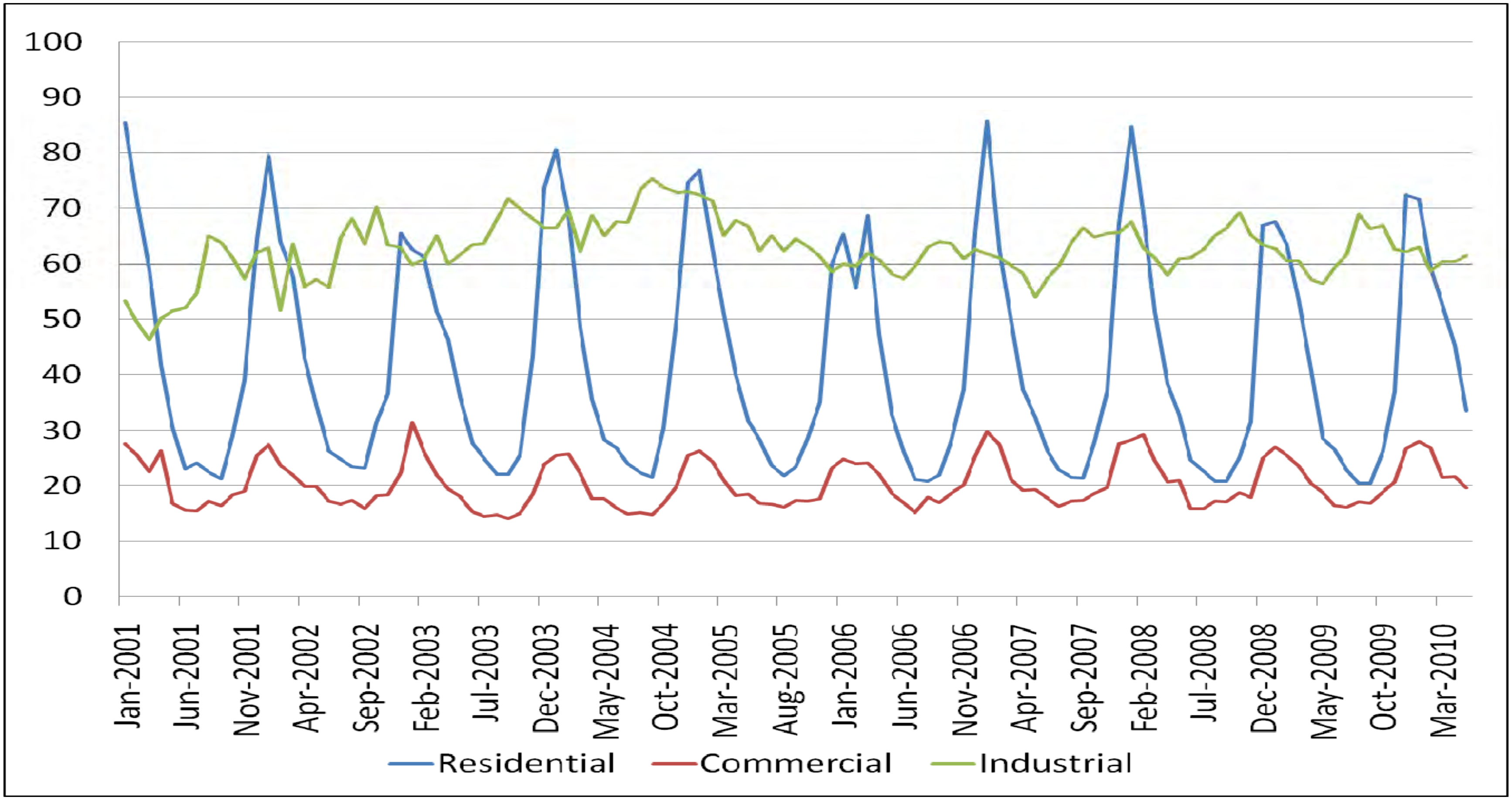
Natural Gas Market Assessment

Natural Gas Working Group

Industrial, Commercial, Residential and Electric Power Sector Demand

Natural Gas Deliveries to California Residential, Commercial and Industrial Consumers, January 2001 – May 2010 (Bcf/month)

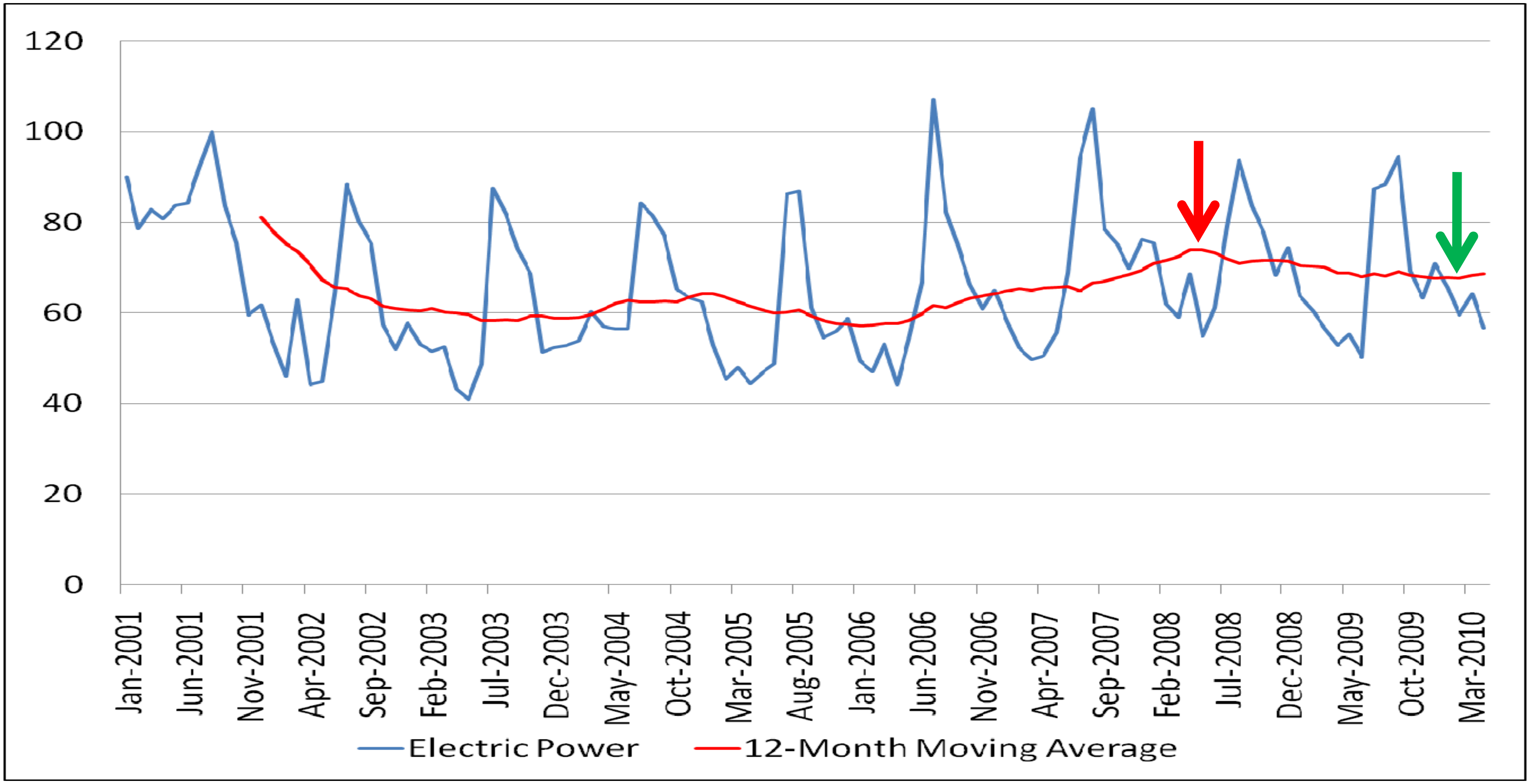
(Source: U.S. EIA August 2010 Natural Gas Monthly)



Note the winter-peaking pattern typical of California's residential and commercial sectors. This is a pattern typical of most states, because they rely heavily on natural gas-fired space heating in the winter months. Industrial consumption, on the other hand, varies with both seasonal demand for space heating, and macroeconomic and industry-specific factors.

Natural Gas Deliveries to the California Electric Power Generation Sector, January 2001 – April 2010 (Bcf/month)

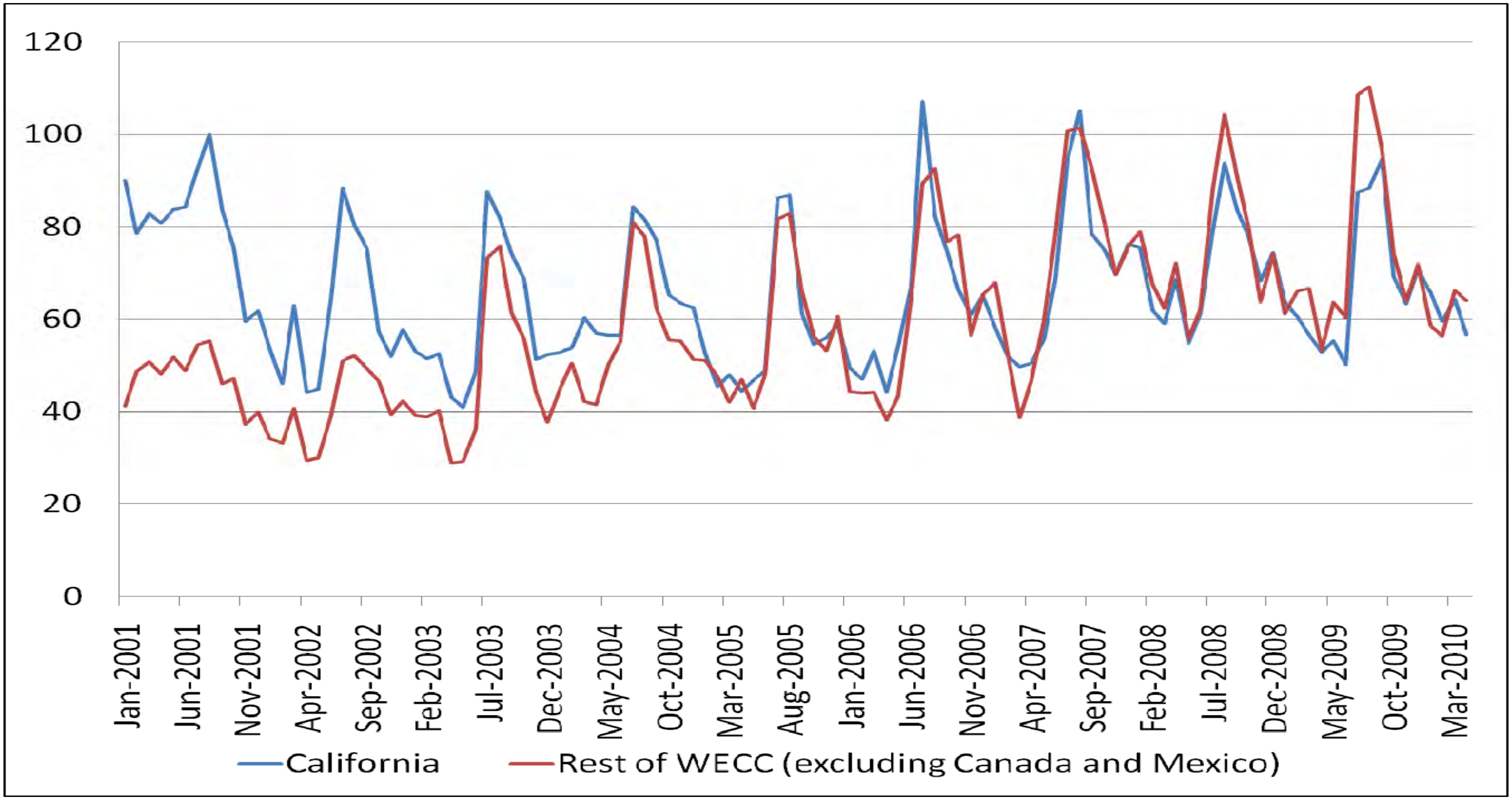
(Source: U.S. EIA August 2010 Natural Gas Monthly)



The key take-away here is this year's modest recovery of power plants' natural gas consumption, charted in red in the 12-month moving average. This trend peaked in April 2008 (red arrow) and bottomed out last February (green arrow). Current 2010 U.S. electricity generation is up 4.1% over the same period in 2009.

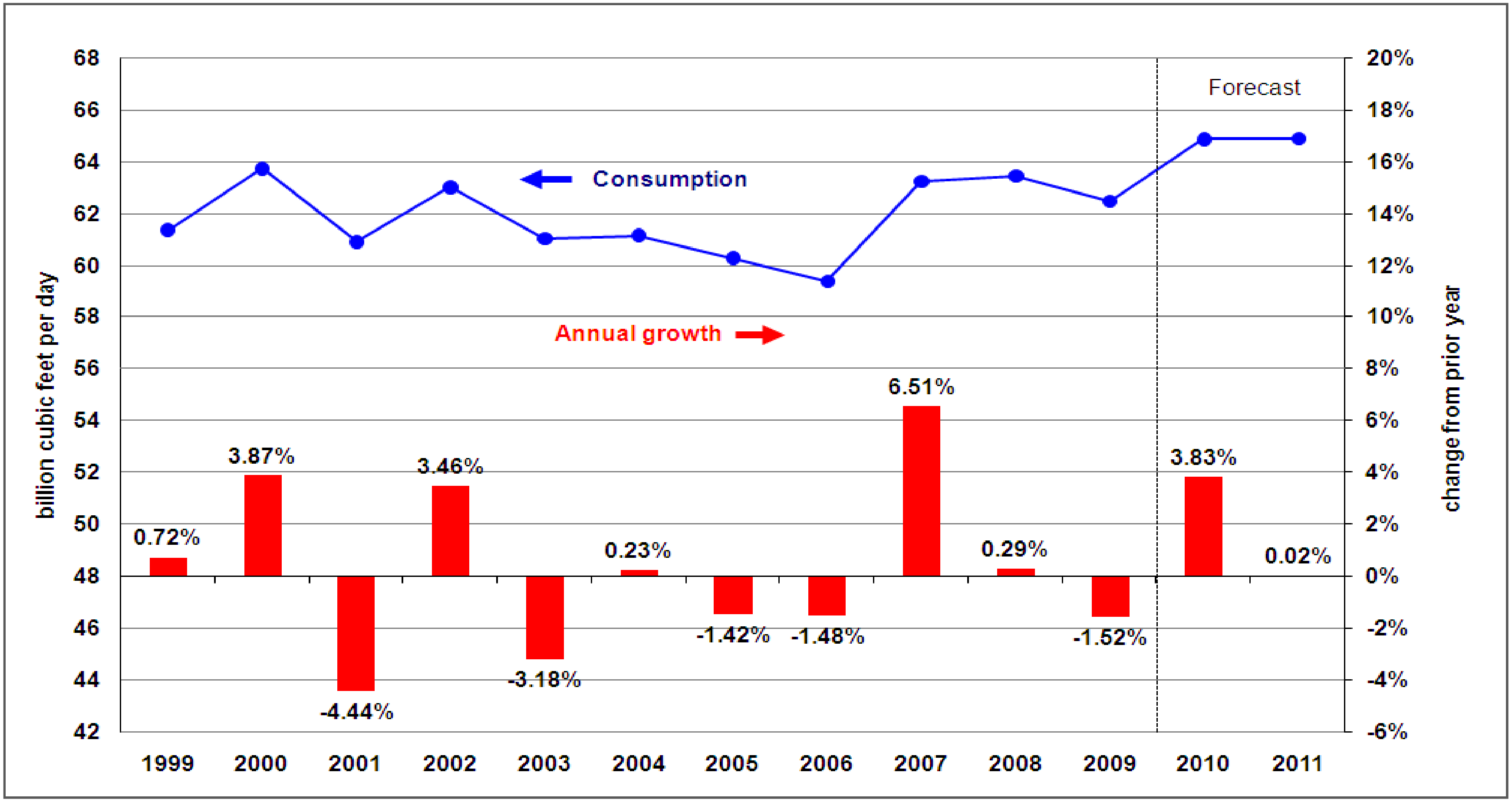
Natural Gas Deliveries to the U.S. Western Interconnect Electric Power Generation Sector January 2001 – April 2010 (Bcf/month)

(Source: U.S. EIA August 2010 Natural Gas Monthly)



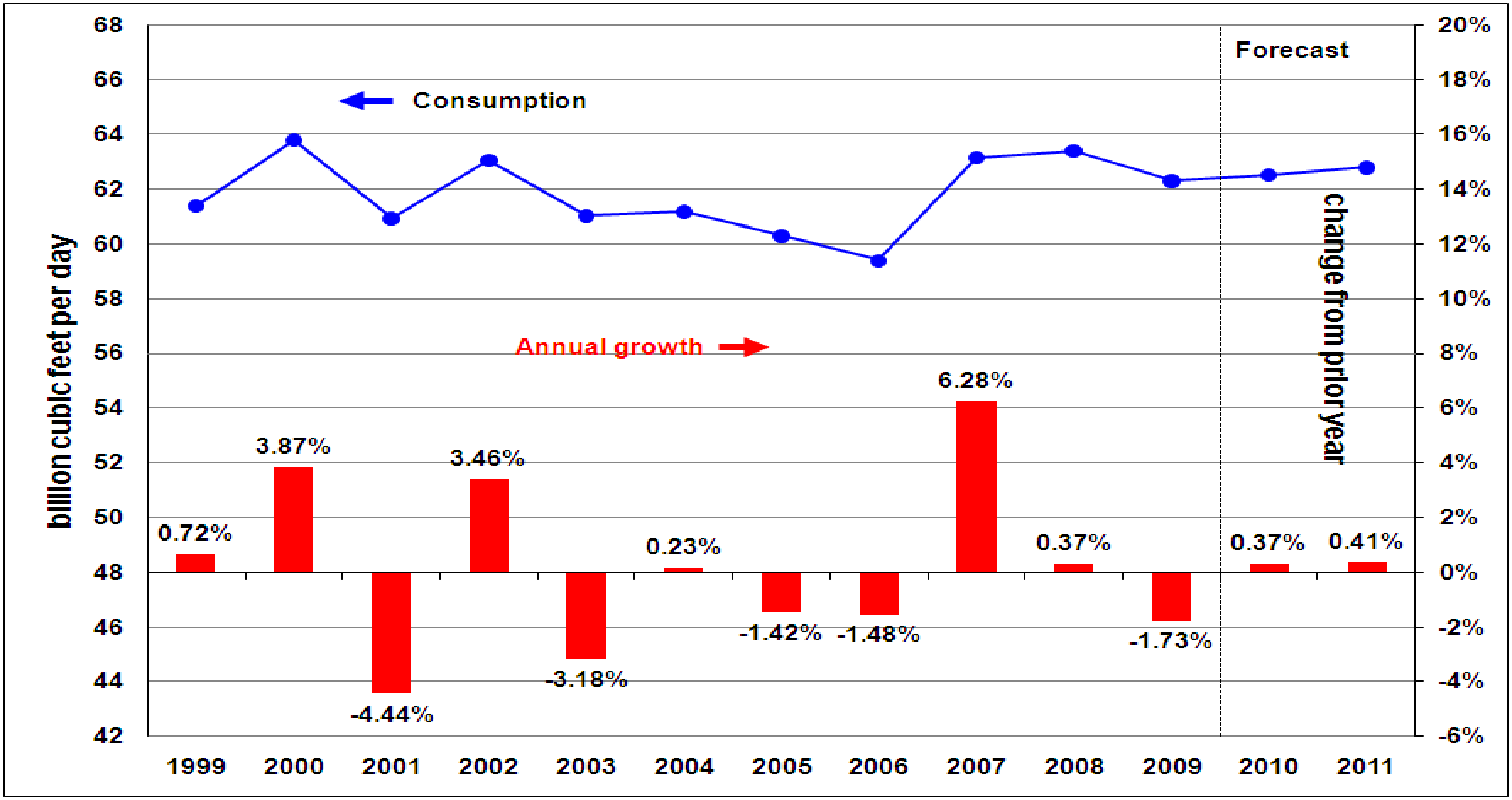
Power sector natural gas demand peaks in the summer months, as power plants increase generation to support air conditioning load. As the chart shows, California power plants consume about as much natural gas as the other ten Western states combined.

U.S. Total Natural Gas Consumption, 1999 – 2011
(Source: U.S. EIA August 2010 Short-Term Energy Outlook, Fig. 17)



Largely due to the recovering national economy, natural gas consumption is on track this year to exceed 2009 demand by 3.83% (red bars). This forecast has modestly improved from the May 2010 projections we showed you last June. 2010 and 2011 forecast demand is about 65 Bcf/day (blue curve).

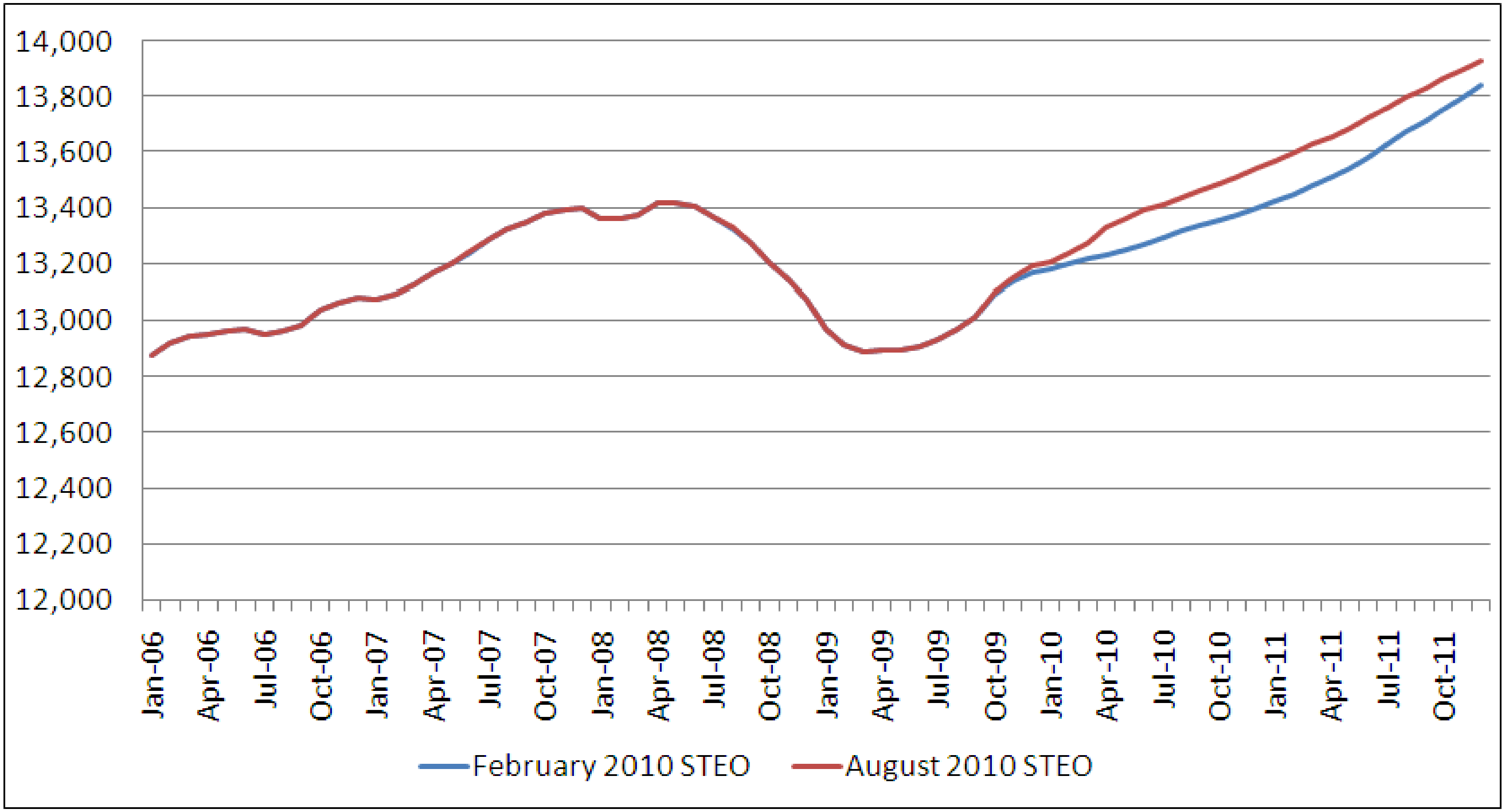
U.S. Total Natural Gas Consumption, 1999 – 2011
(Source: U.S. EIA February 2010 Short-Term Energy Outlook, Fig. 17)



For comparison, last February's EIA projections of natural gas demand reflect the gloomier economic assumptions of the day.

U.S. Real Gross Domestic Product

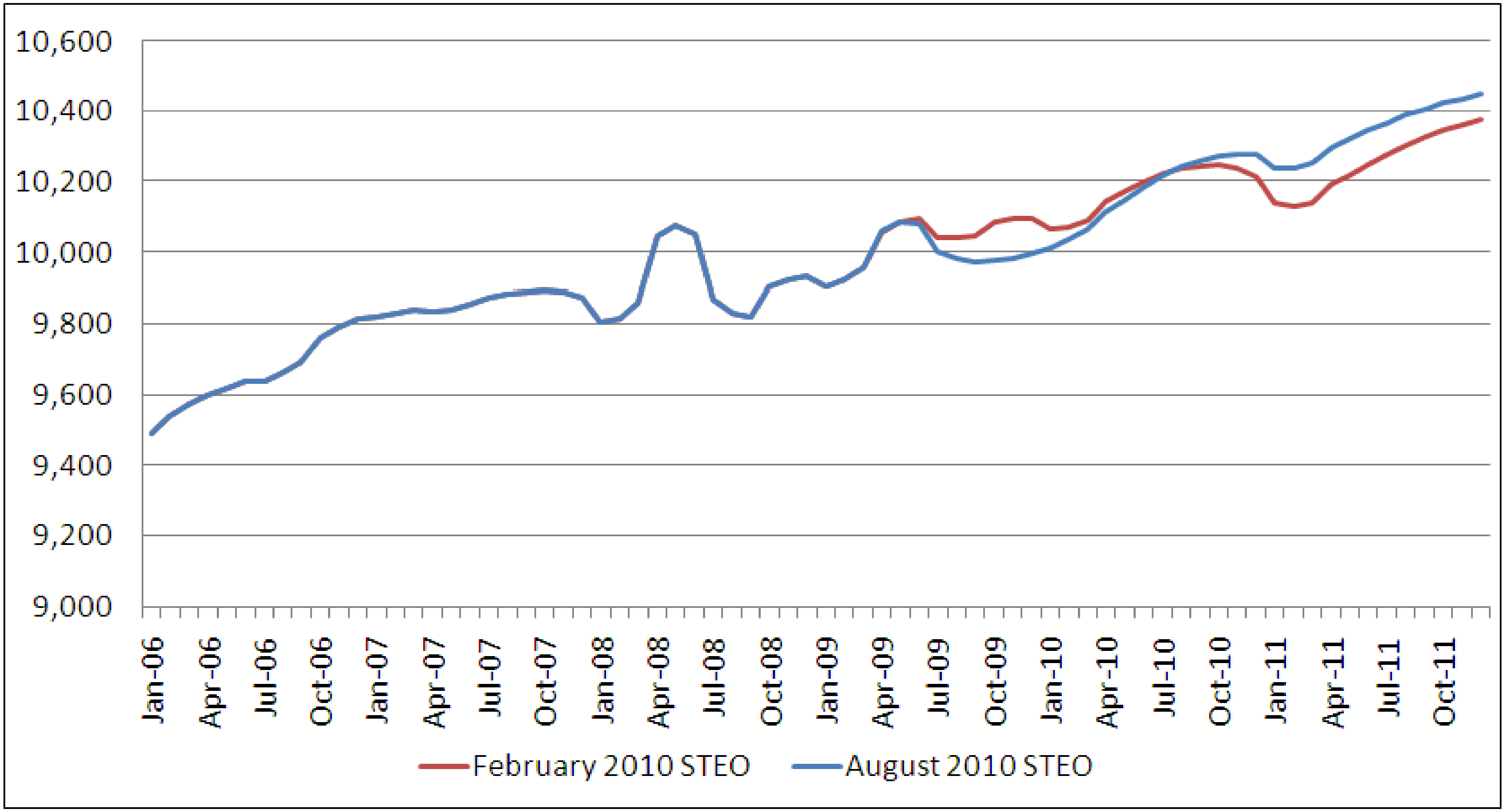
January 2006 – December 2011 (Billions chained 2005 $, SAAR)
(Source: U.S. EIA February and August 2010 Short-Term Energy Outlook, Table 9a)



The forecasts for natural gas demand increased over the February Outlook because major drivers like GDP improved over prior expectations.

U.S. Real Disposable Personal Income

January 2006 – December 2011 (Billions chained 2005 $, SAAR)
(Source: U.S. EIA February and August 2010 Short-Term Energy Outlook, Table 9a)

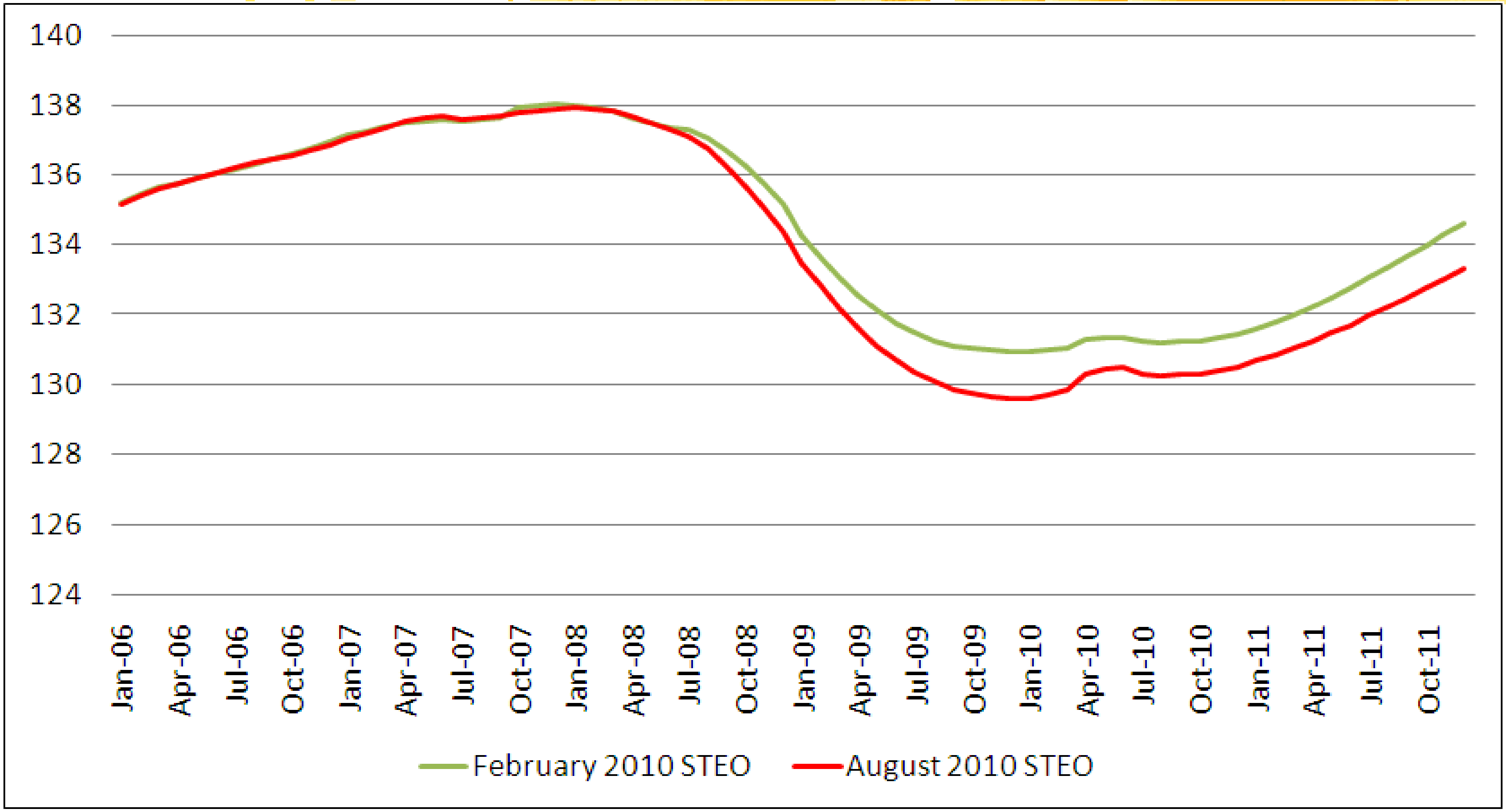


Another key driver of natural gas demand, disposable personal income, also has improved more than expected.

U.S. Non-Farm Employment

January 2006 – October 2011 (Millions)

(Source: U.S. EIA February and August 2010 Short-Term Energy Outlook, Table 9a)



This is the one major driver of natural gas demand whose projections over last February have gotten worse, but like the other major drivers, have not changed significantly from last May's Outlook.

Need More Detail?

U.S. EIA Short-Term Energy Outlook:
http://www.eia.doe.gov/emeu/steo/pub/contents.html

U.S. EIA Natural Gas Monthly:
http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_monthly/ngm.html

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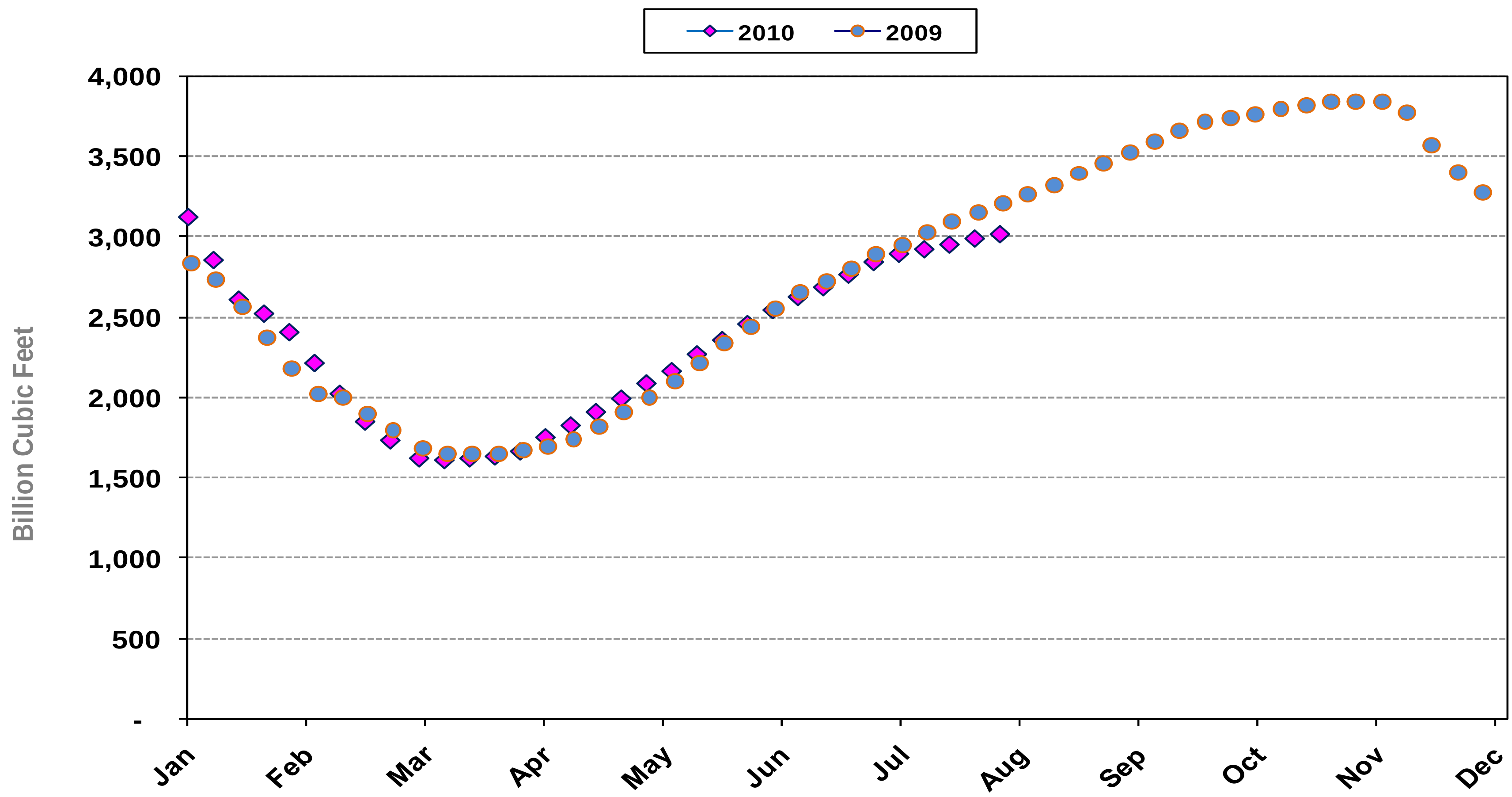
Storage: United States and California

U.S. Storage Monthly Inventory

(Current Year vs. Previous Year)

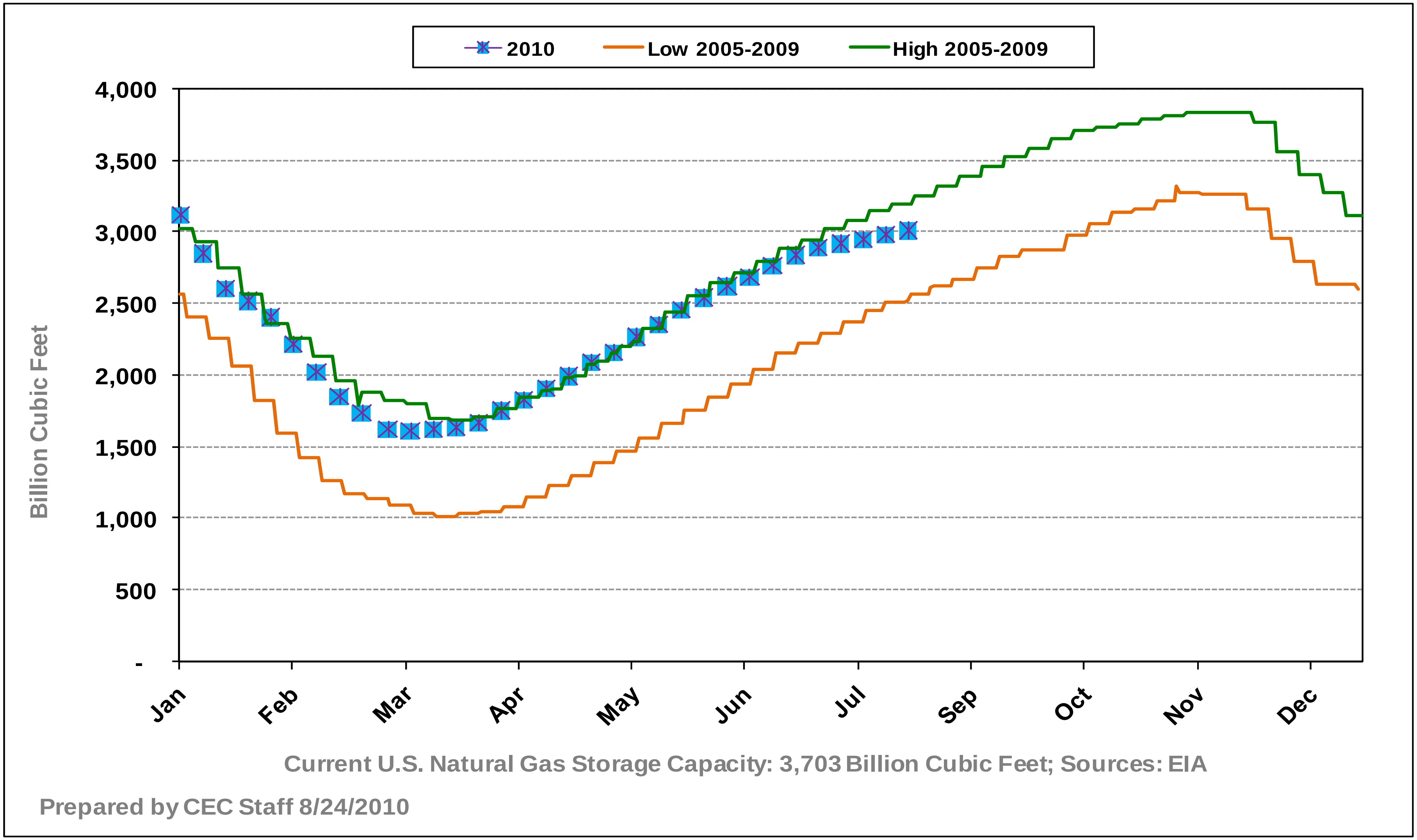


Current U.S. Natural Gas Storage Capacity: 3,703 Billion Cubic Feet; Sources: EIA

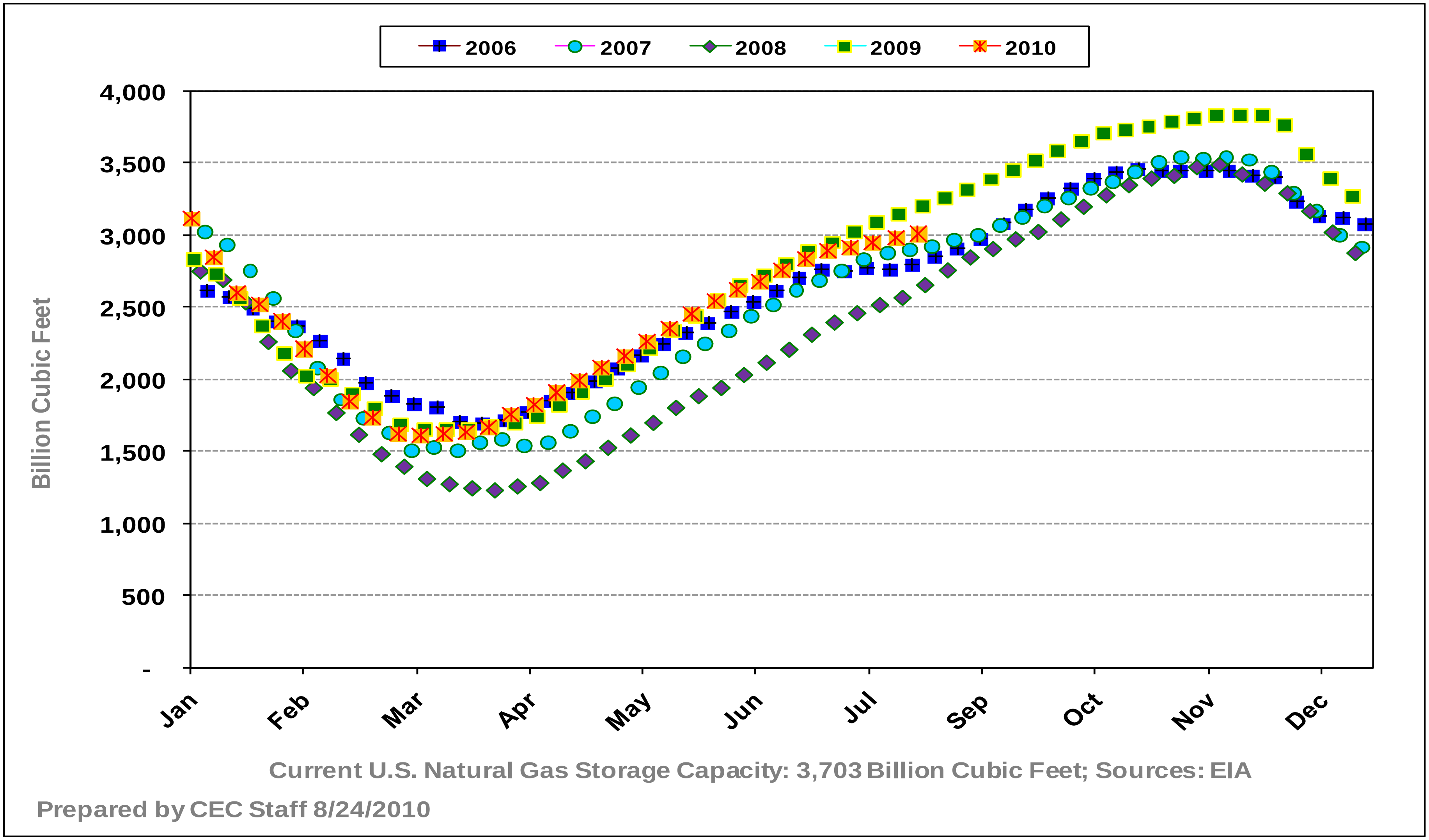
Prepared by CEC Staff 8/24/2010

U.S. Storage Monthly Inventory

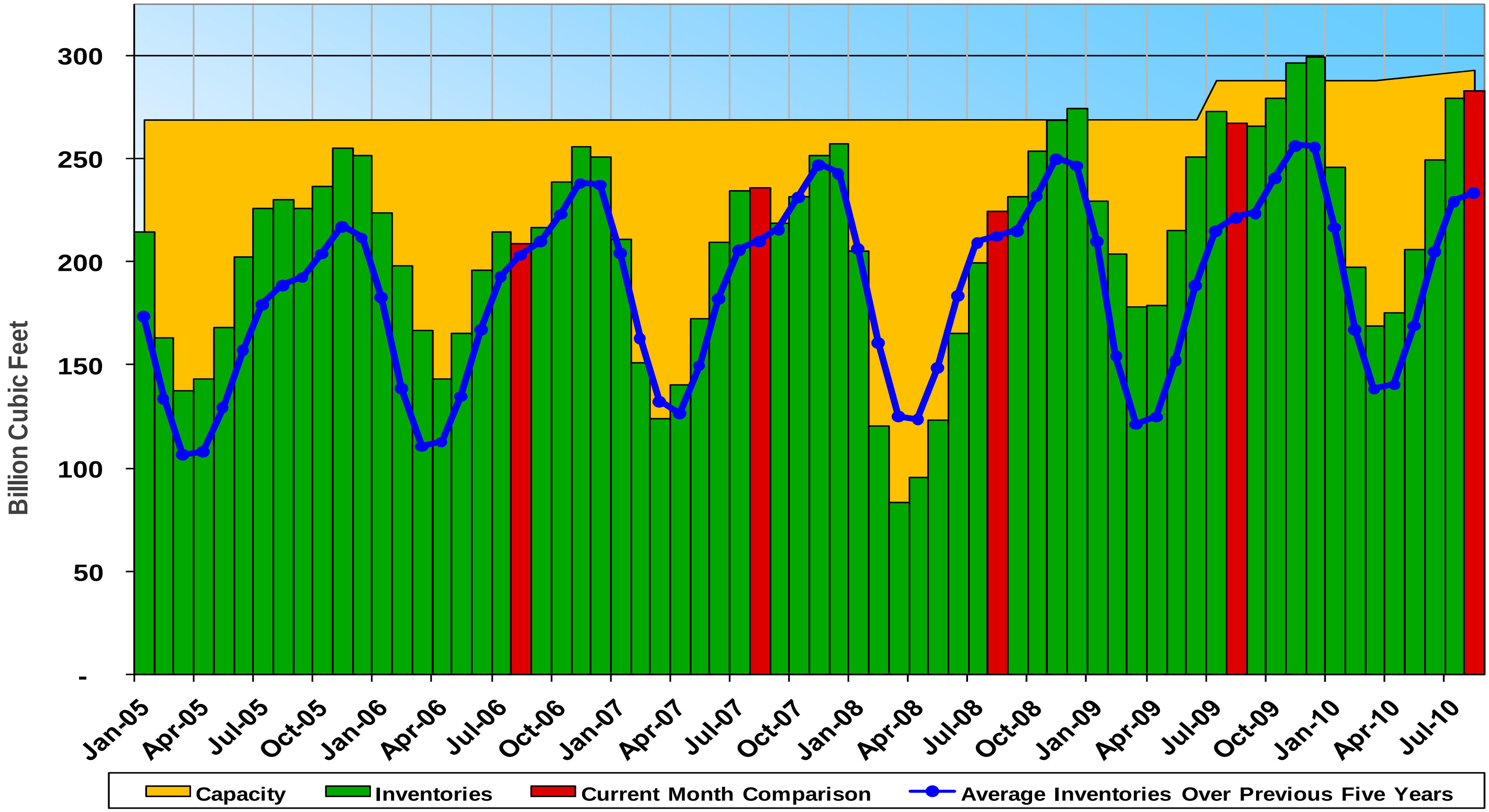
(Current Year vs. 5-Year Band)



U.S. Storage Monthly Inventory
(Current Year vs. Previous Year)



CA Storage Capacity* and Utilization



Prepared by CEC Staff 8/24/2010

*Beginning of the month levels, unless indicated. CEC staff's estimate

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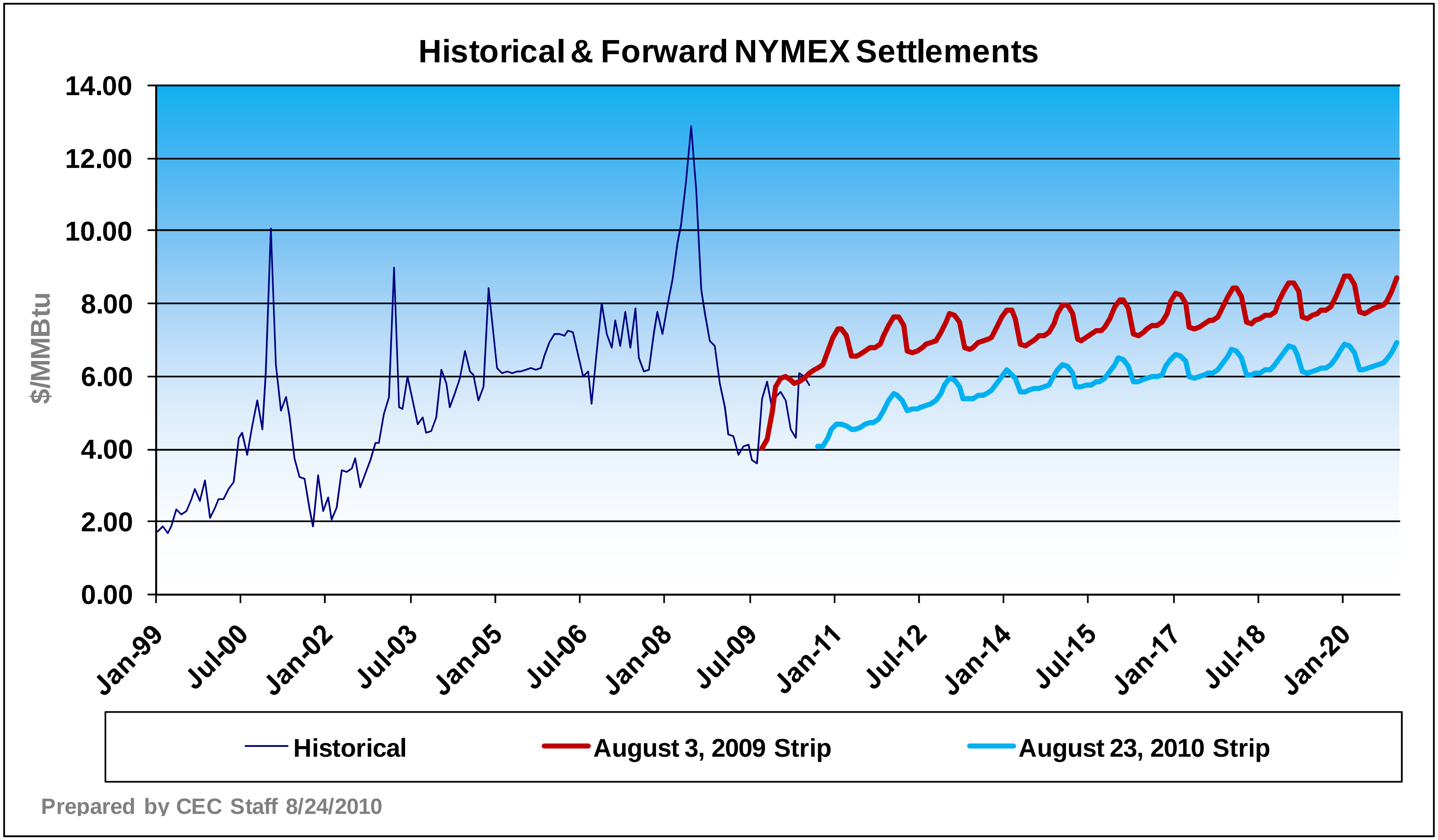
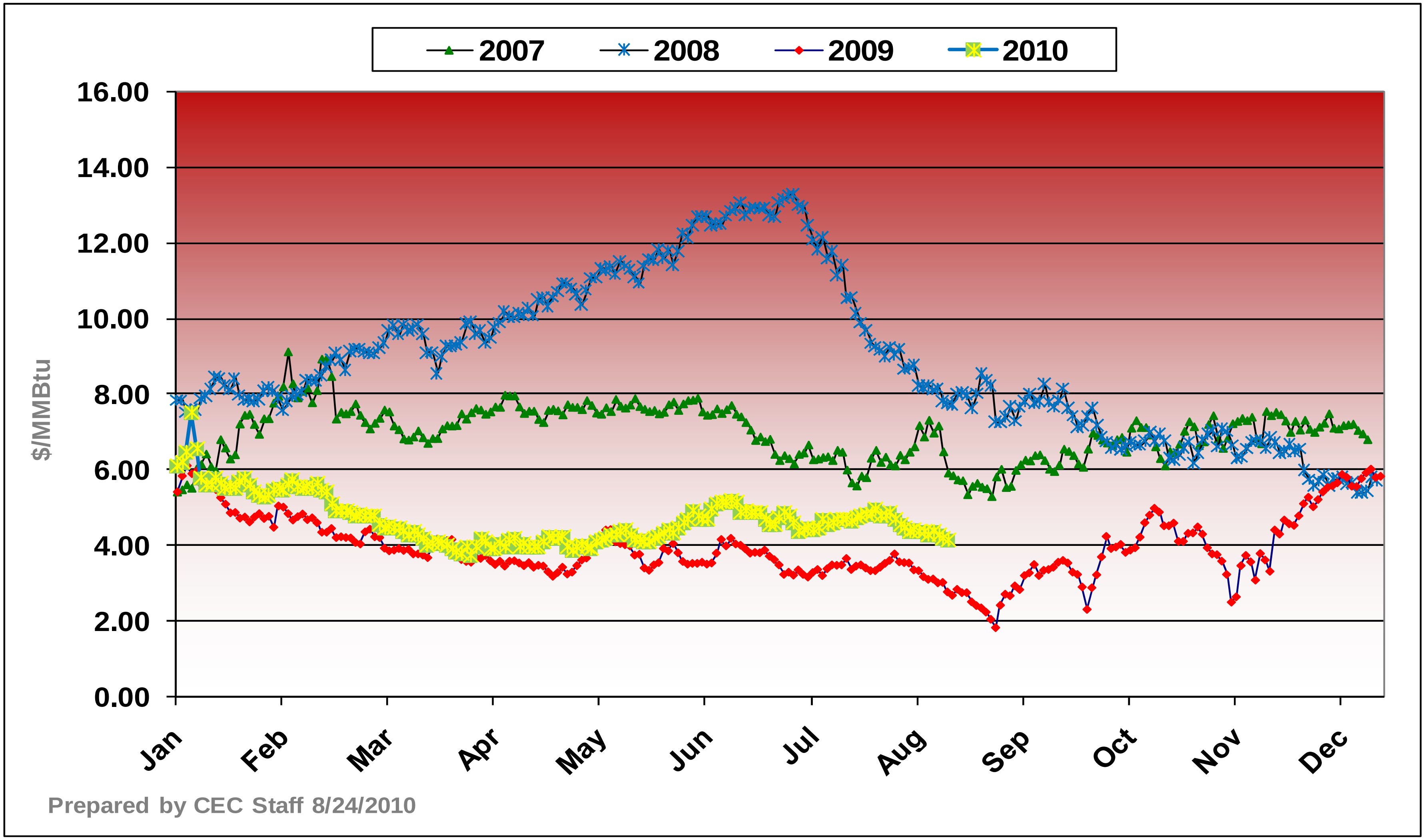
Prices: United States and California

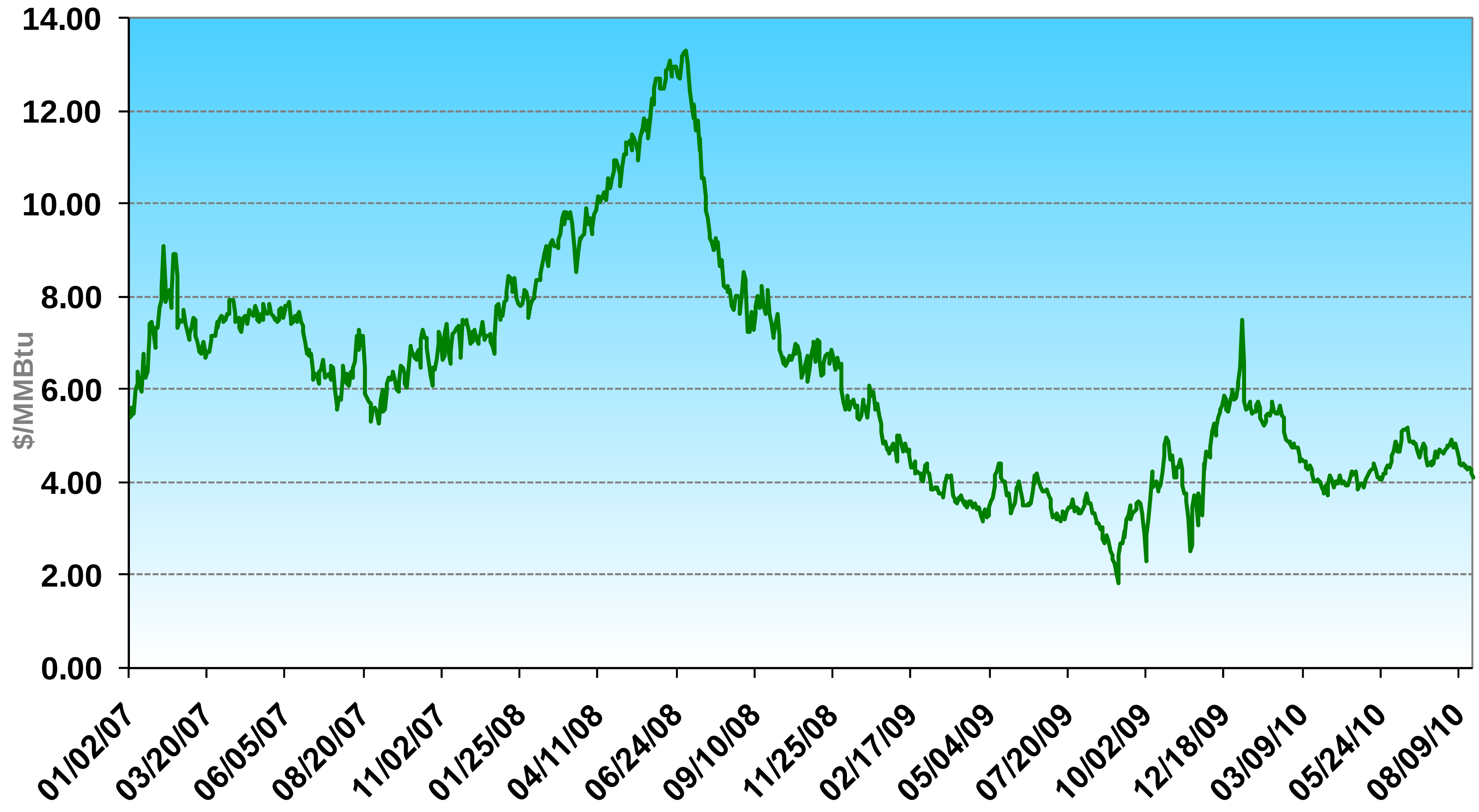
U.S. Natural Gas Futures Prices



Henry Hub Daily Spot Prices



Henry Hub Daily Spot Prices



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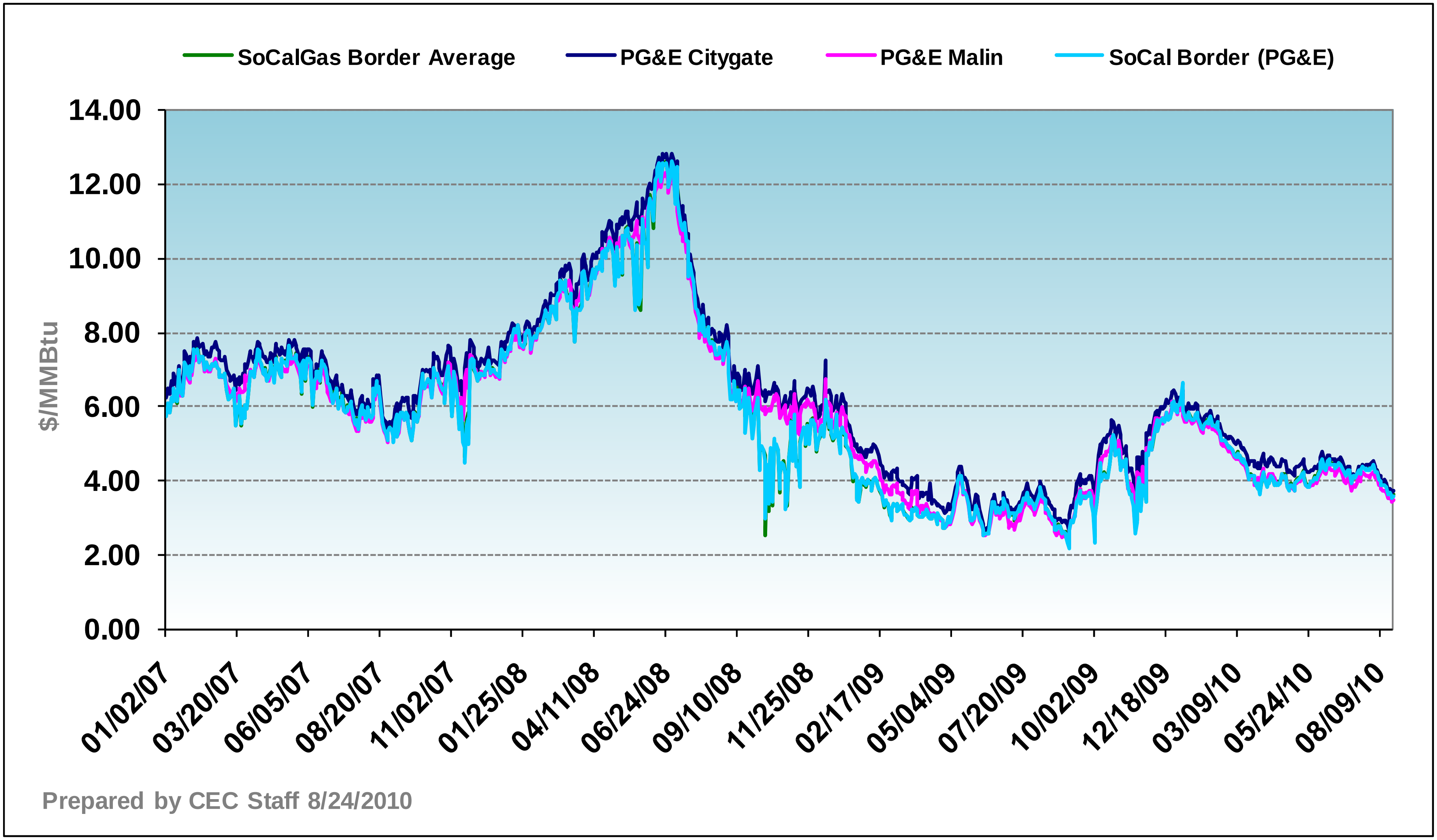
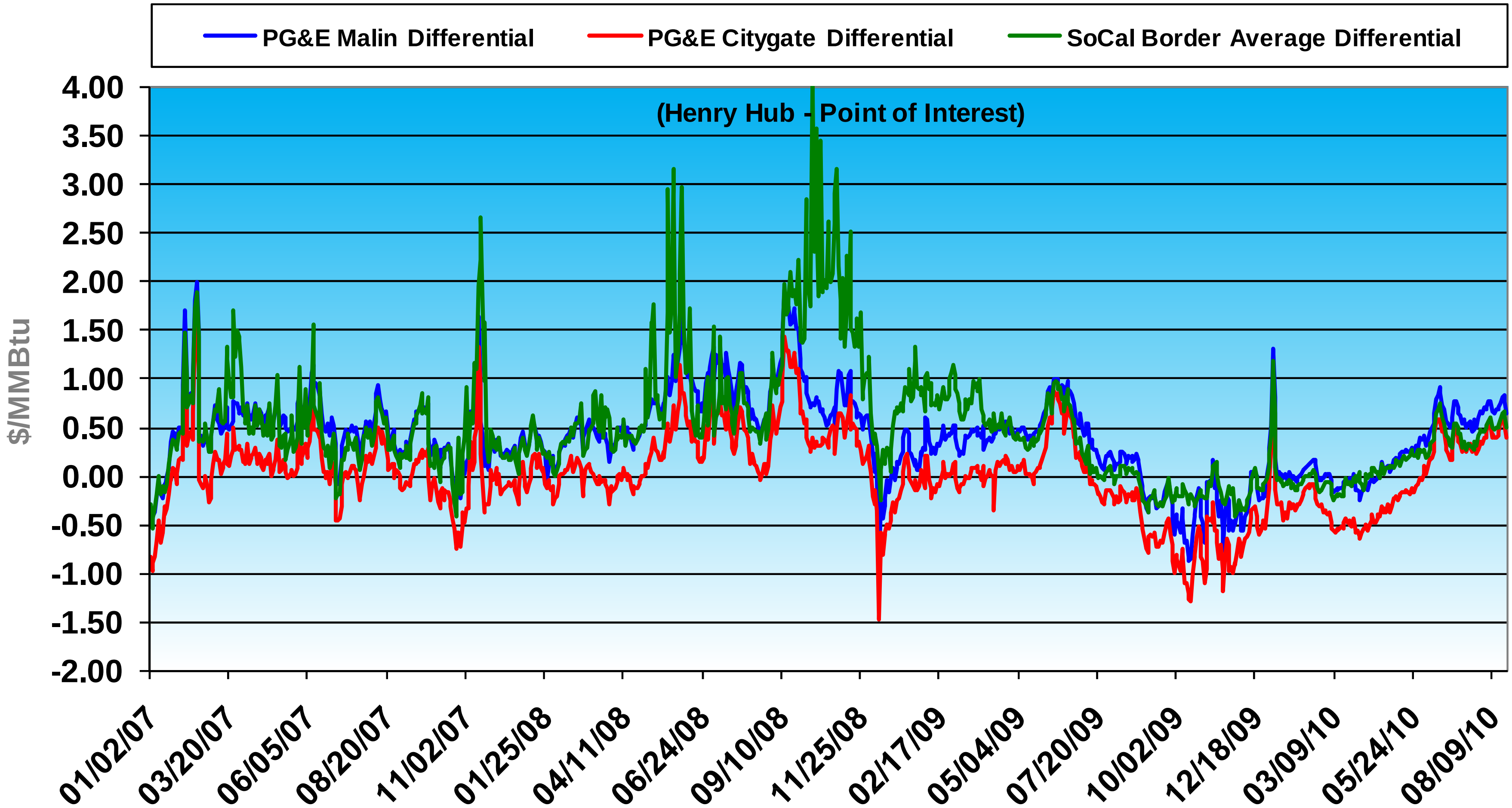
CA Natural Gas Spot Prices



Henry Hub Daily Spot Prices Differential



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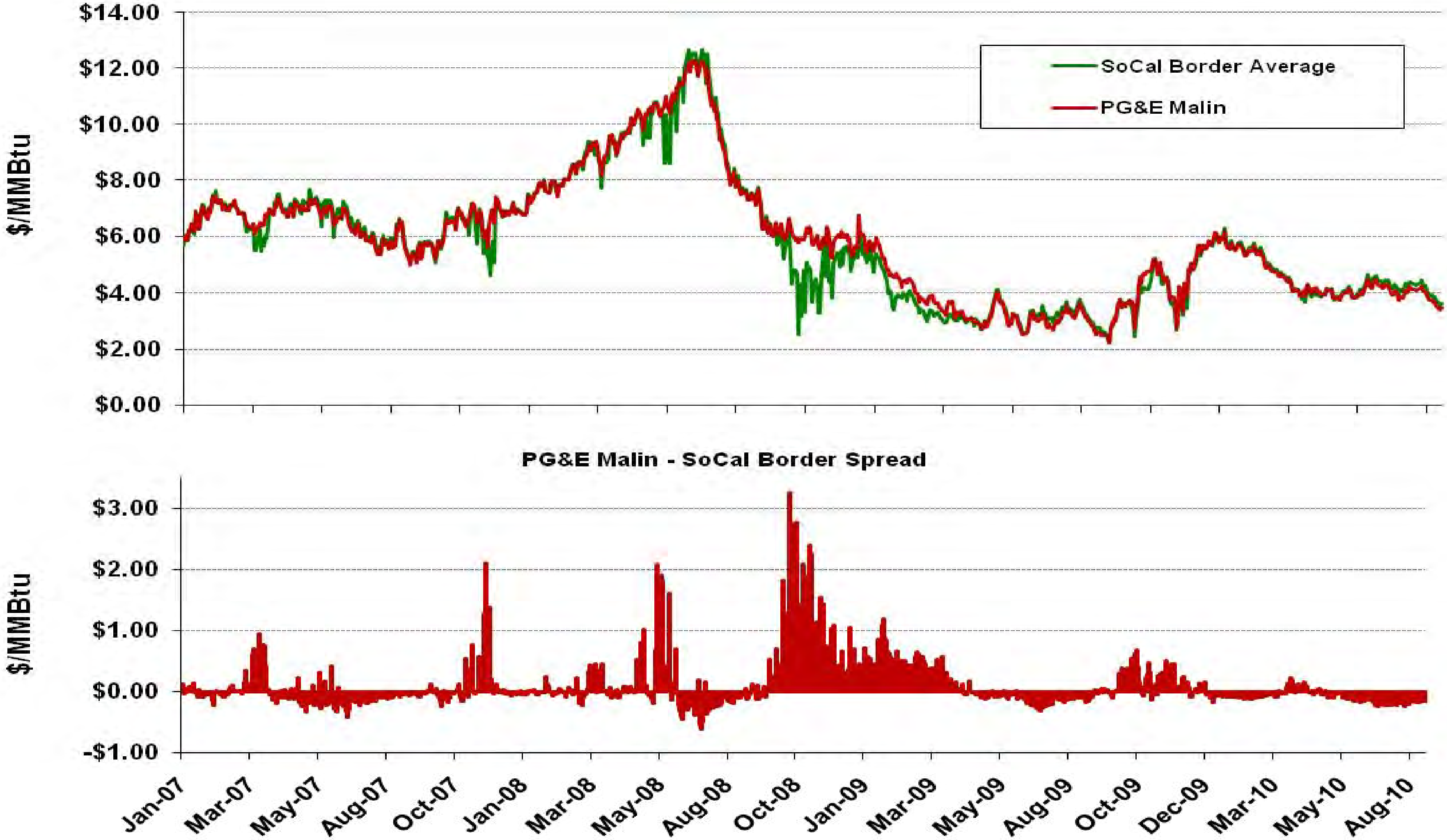
North-South CA Spot Price Differential



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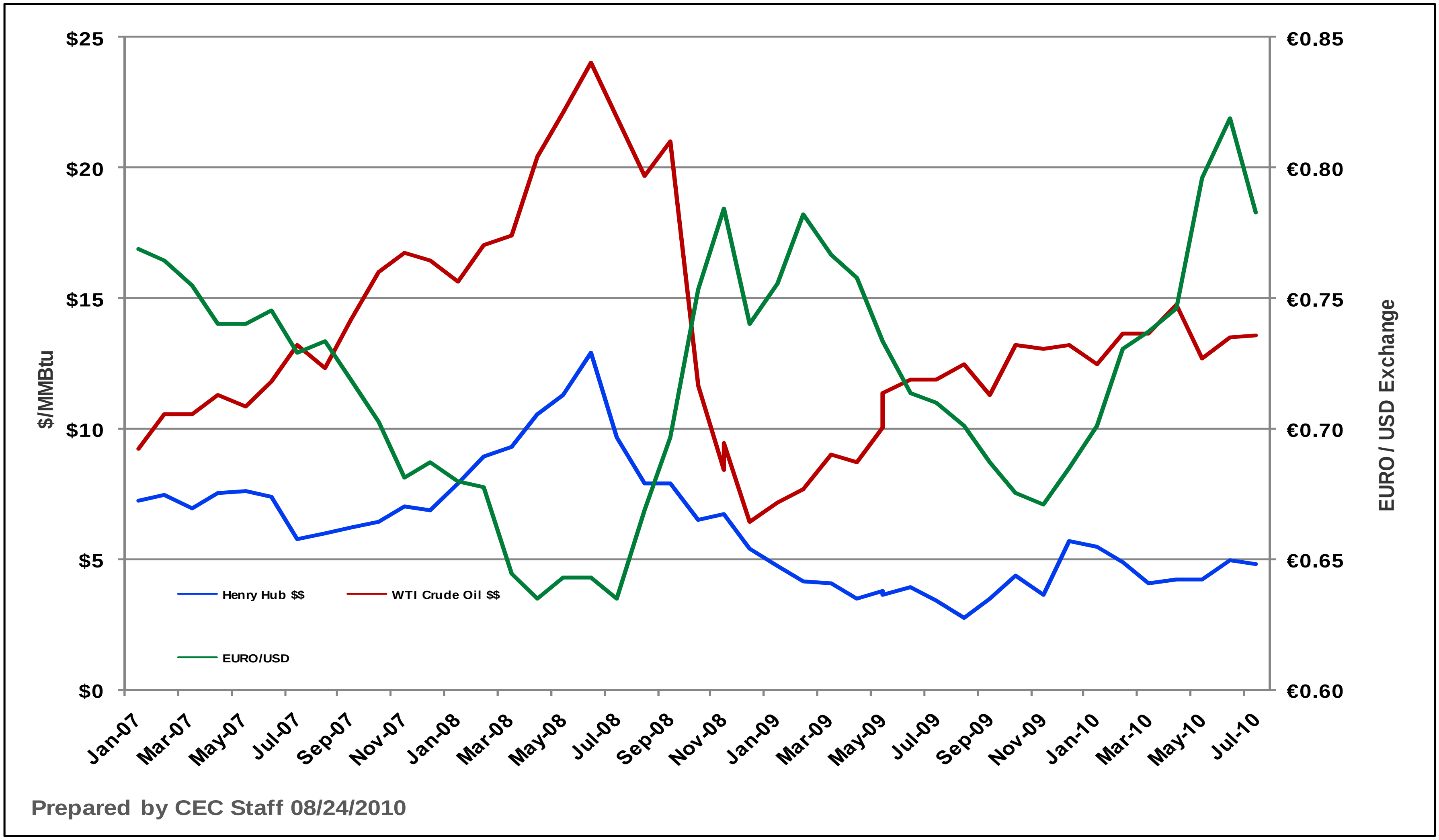
NG-Oil Spot Prices – Euro/USD



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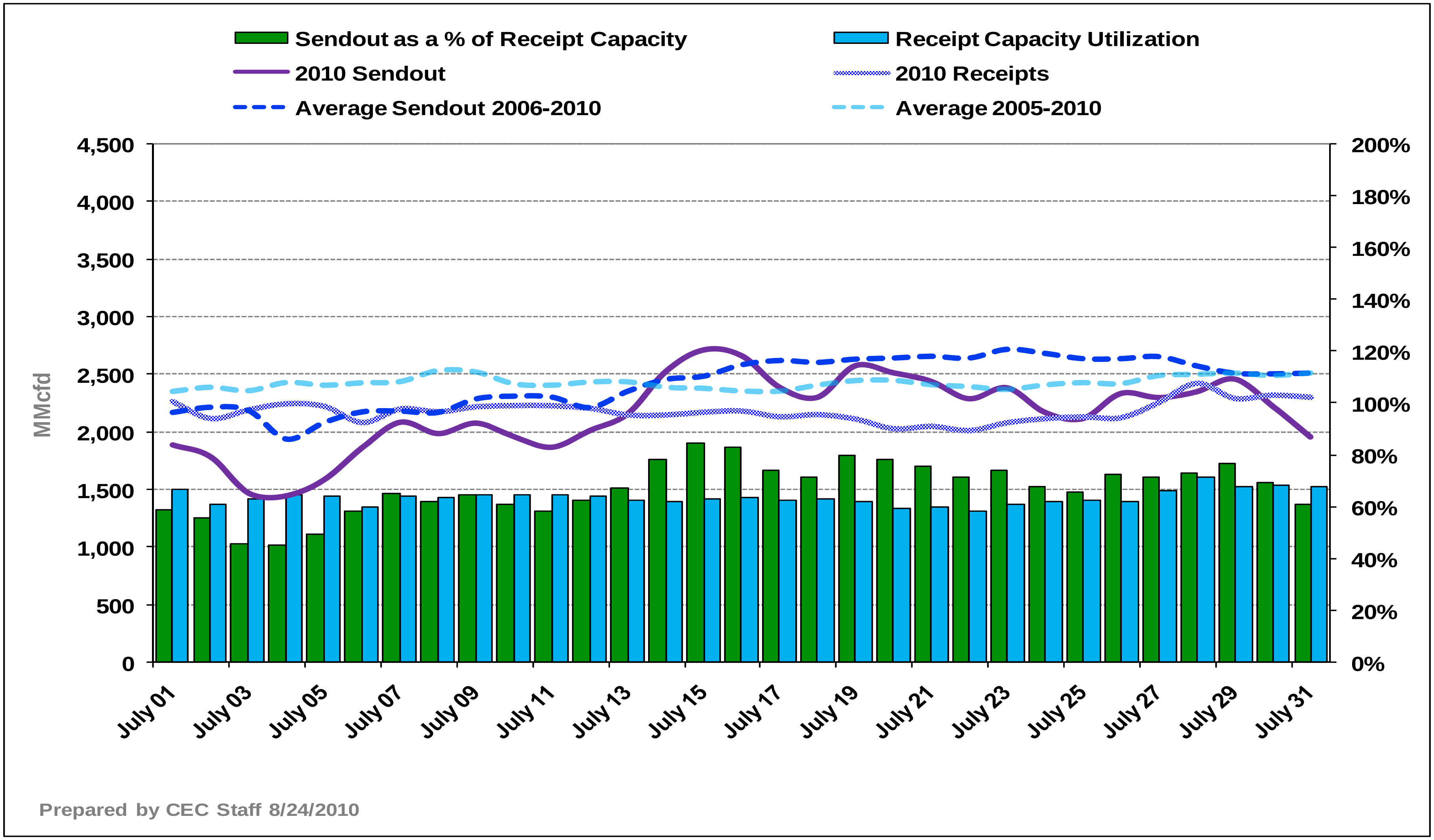
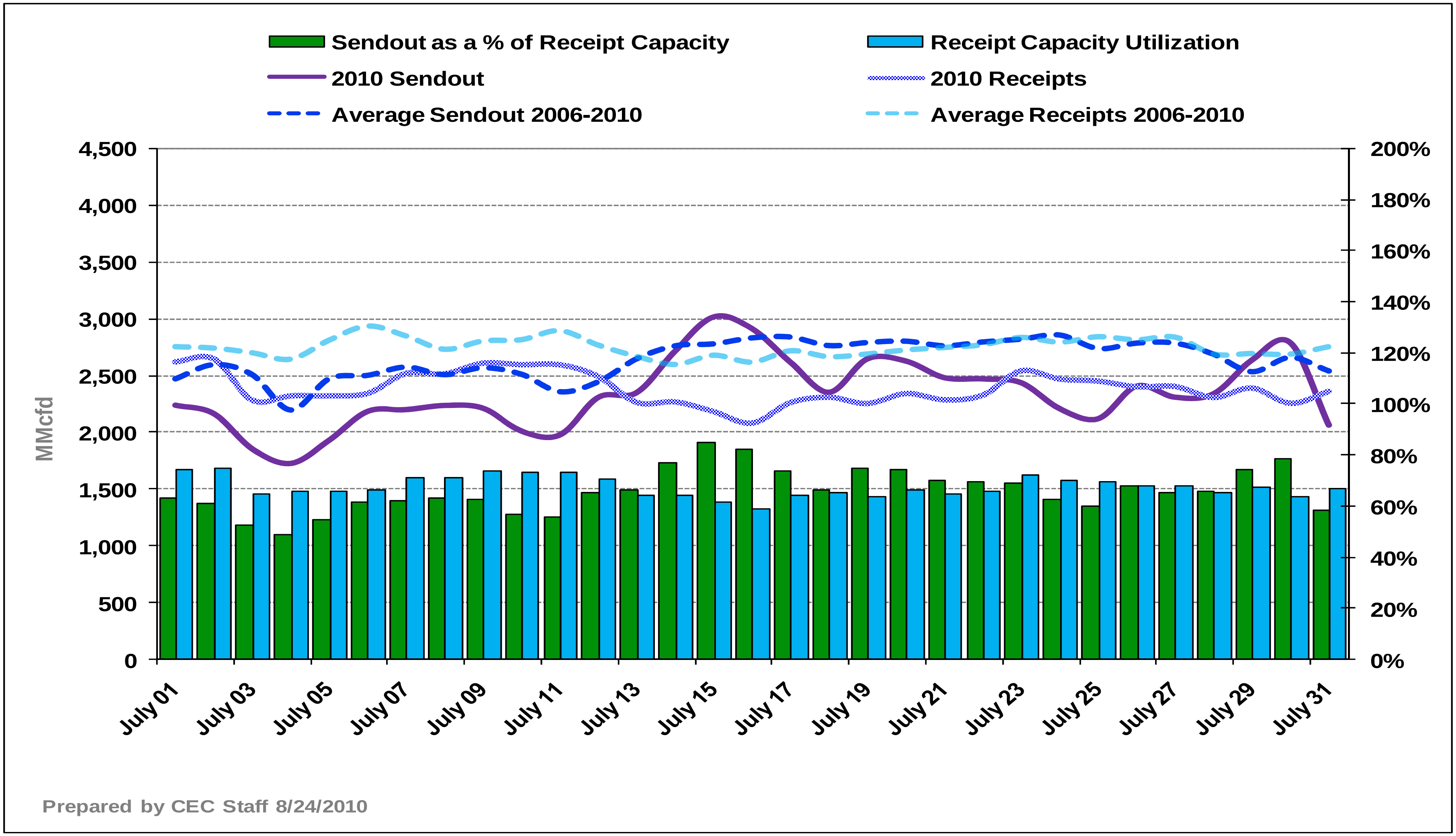
Infrastructure and Operations

PG&E System Operations



Source: PG&E Pipe Ranger

SCG System Operations



Source: SoCalGas Envoy

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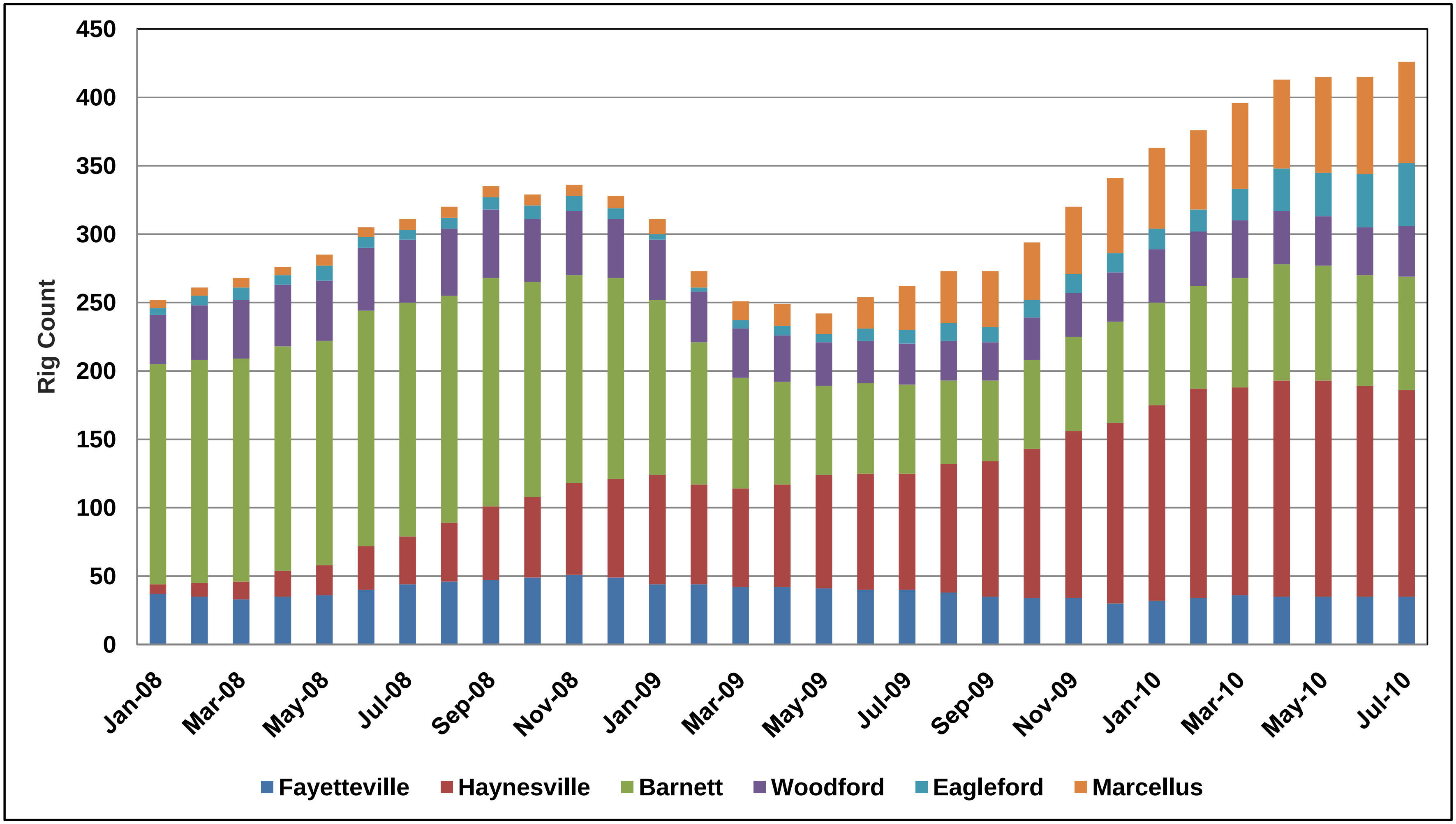
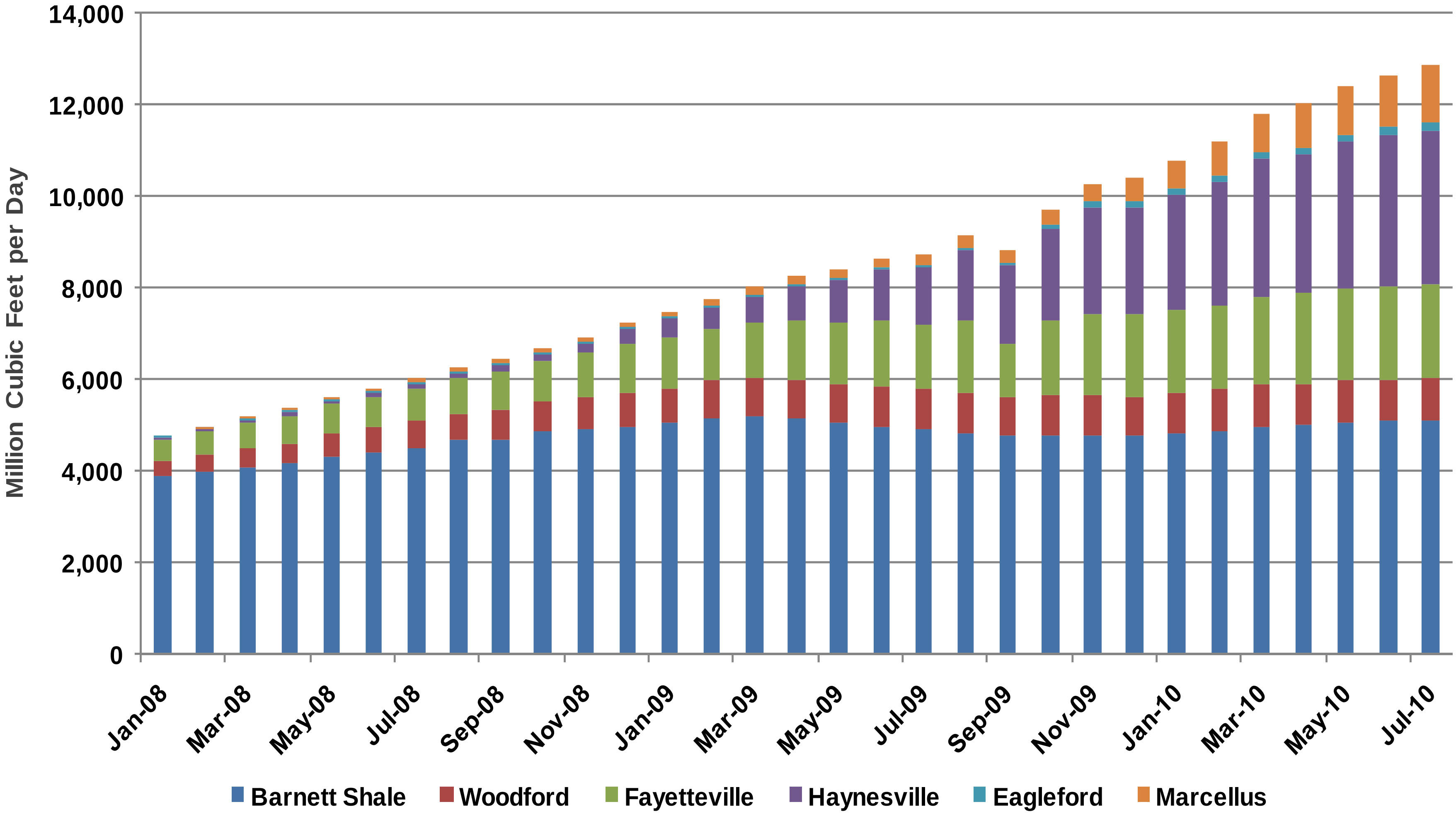
Drilling and Production Updates

Horizontal Rig Count:
Lower 48 Major Shale Plays



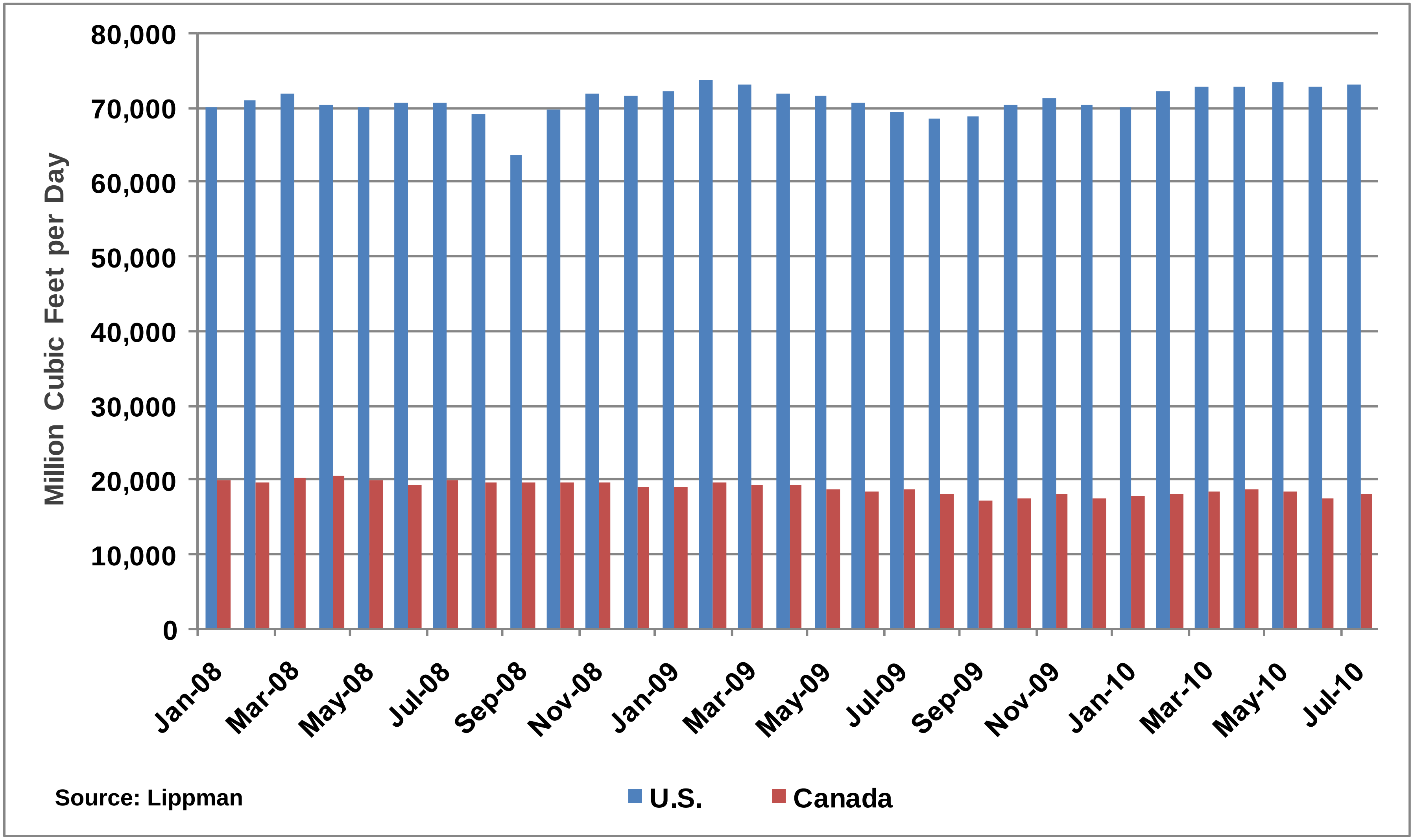
Source: Lippman

Lower 48 Shale Production



Source: Lippman

Wellhead Production: US & Canada



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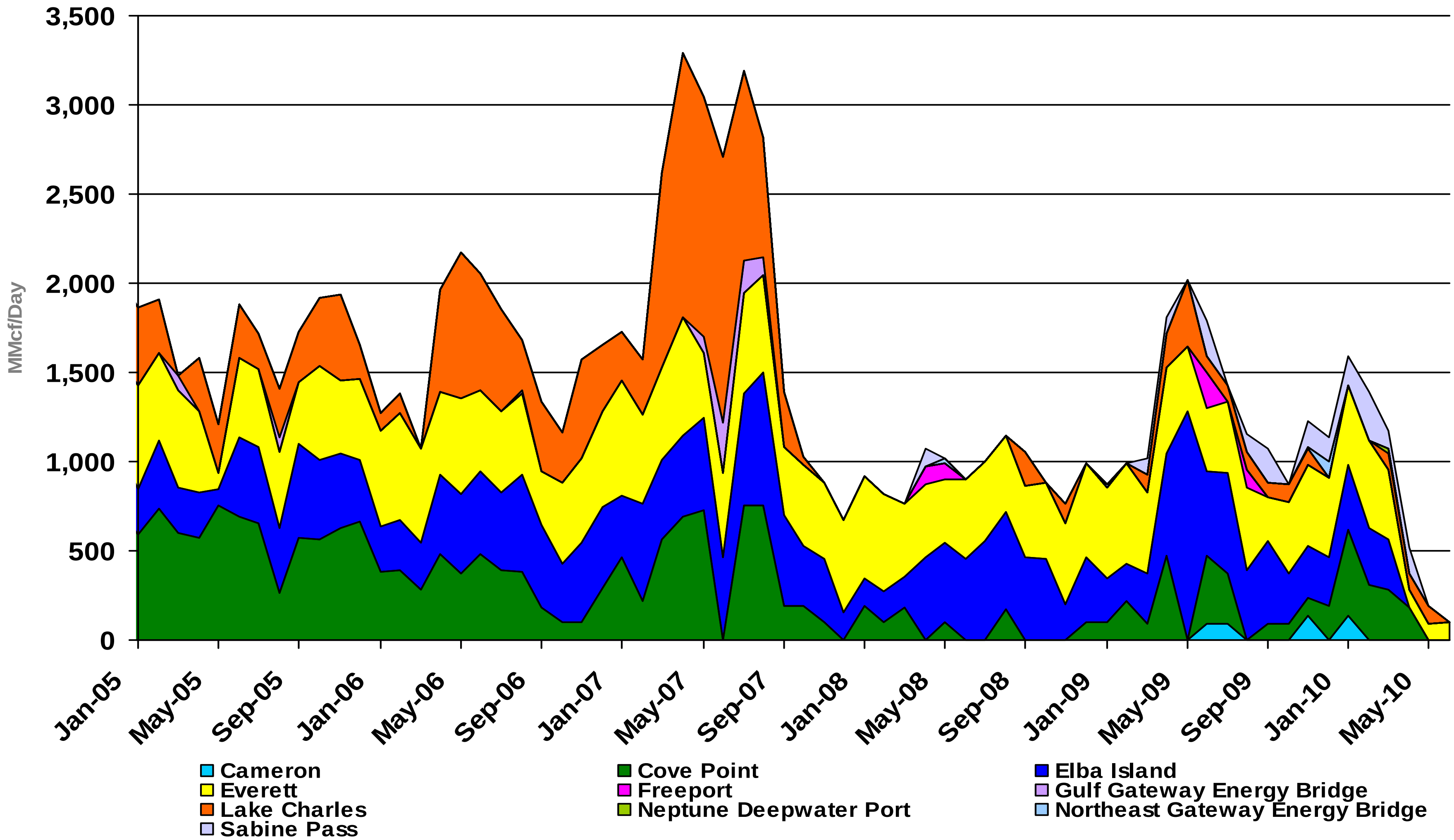
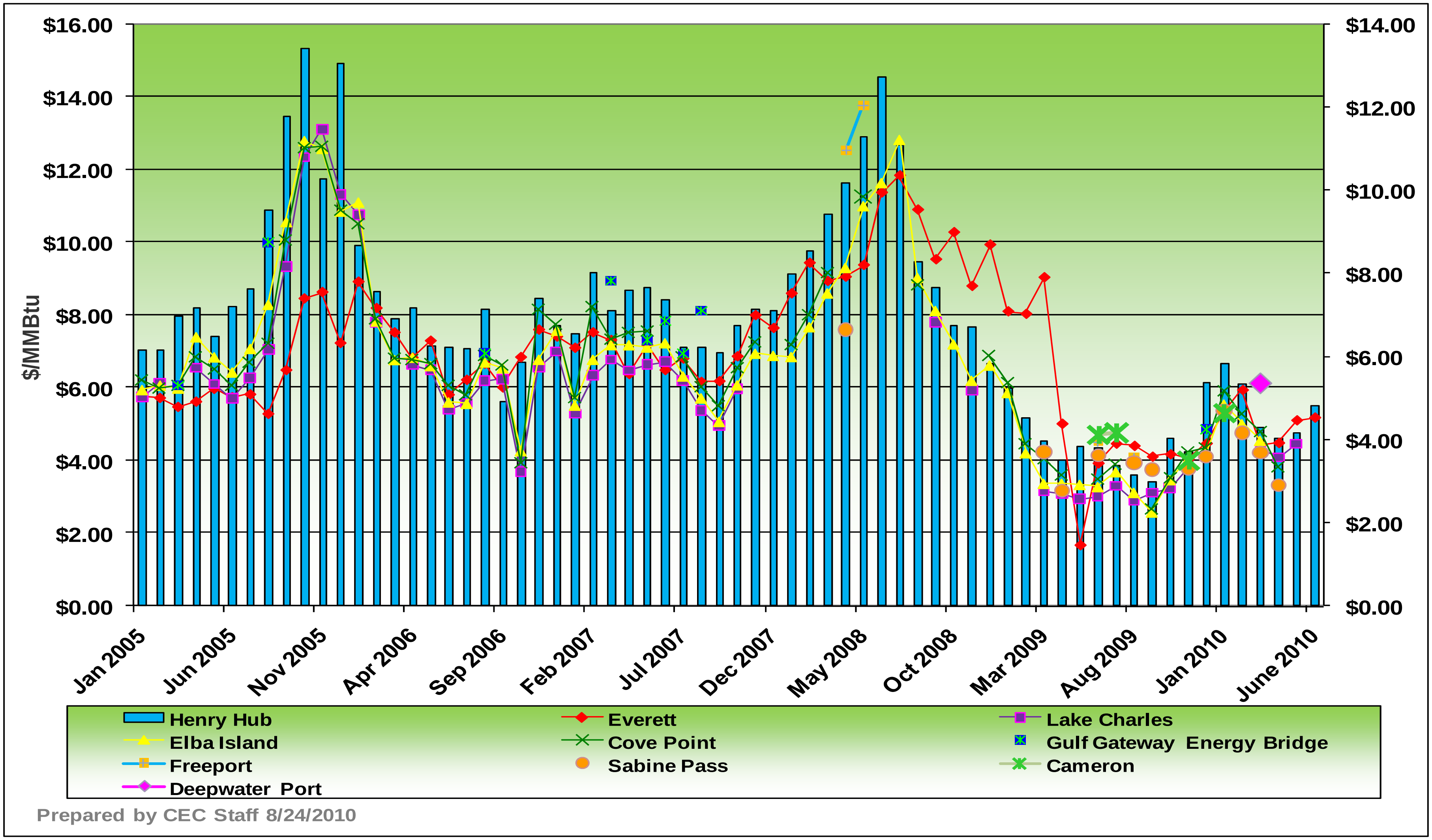
LNG Update

LNG Imports

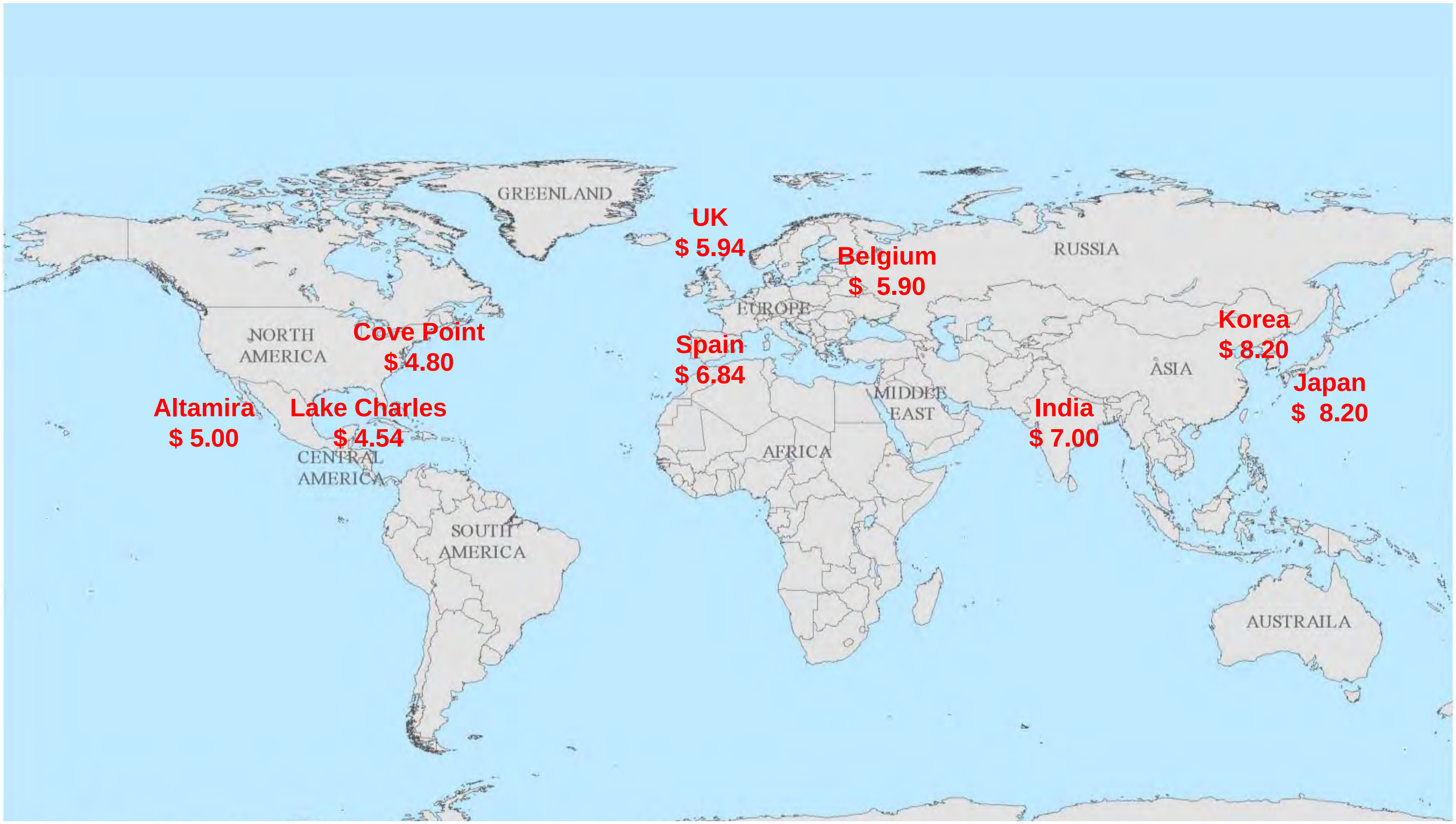


Prepared by CEC Staff 8/24/2010

Average Terminal LNG Import Price

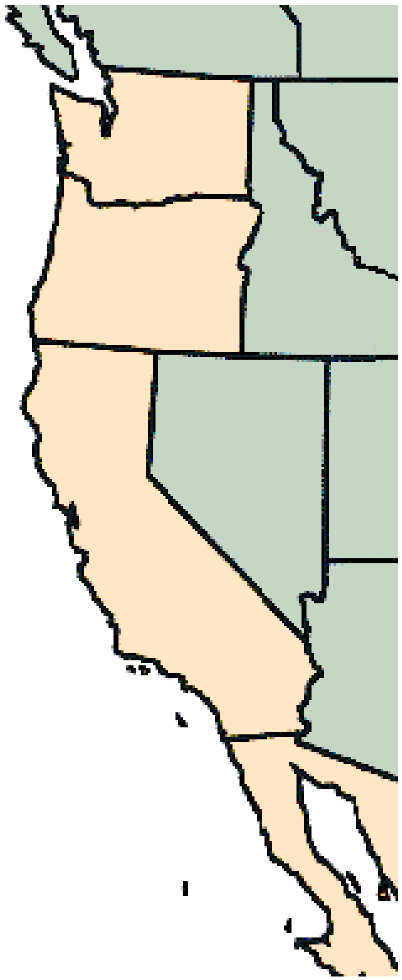


World LNG Estimated August 2010 Landed Prices



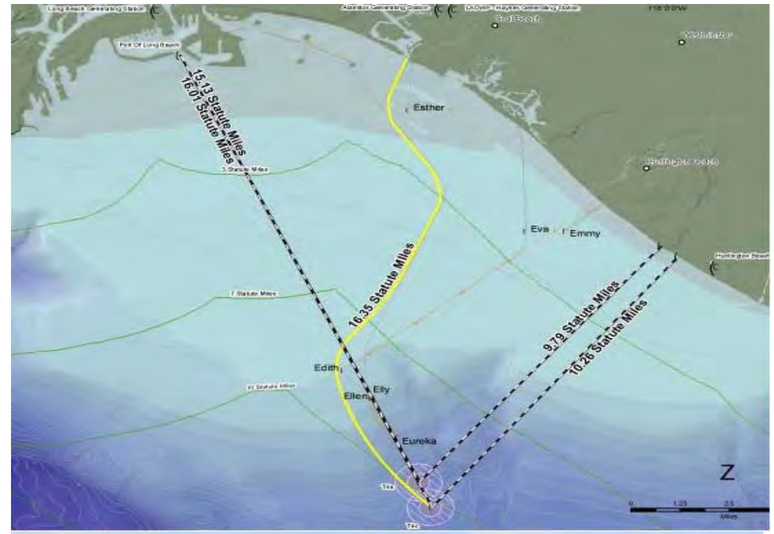
Prepared by CEC Staff 8/24/2010

LNG UPDATE SUMMARY



Port Esperanza

- California Location: 15 miles seaward of the Port of Long Beach
- Owner: Esperanza Energy
- Capacity: 1.2 Bcf/d
- Status: Project on hold



Oregon LNG Facility

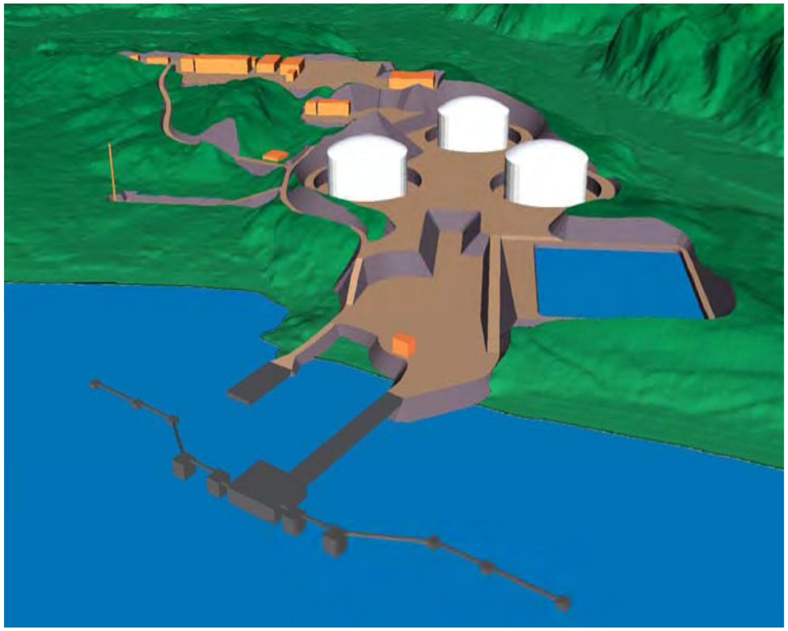
- Oregon Location: Astoria
- Owner: Funding Partners
- Capacity: 1.5 Bcf/d Peak
- Status: Port of Astoria commissioners voted to renew a land lease with Oregon LNG. DEIS expected soon

Jordan Cove Energy Project

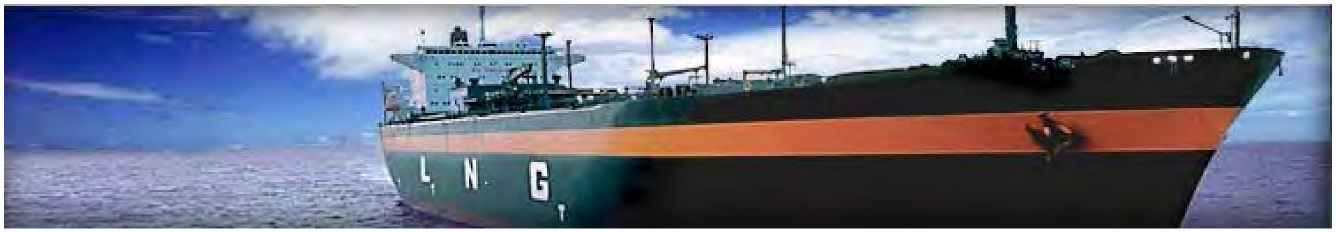
- Oregon Location: bay side of North Spit of Coos Bay
- Owner: Energy Projects Development, LLC
- Capacity: 1.0 Bcf/d
- Status: FERC approves Jordan Cove, Oregon State has petitioned FERC

Kitimat LNG Facility

- Canada Location: Bish Cove near Port of Kitimat
- Owner: Apache Corp (Apache)
- Capacity: 1.0 Bcf/d Peak
- Status: Apache acquires 51% controlling stake in Kitimat, EOG Canada acquires 49% from Galveston LNG Inc (May 2010)



Energia Costa Azul LNG Facility



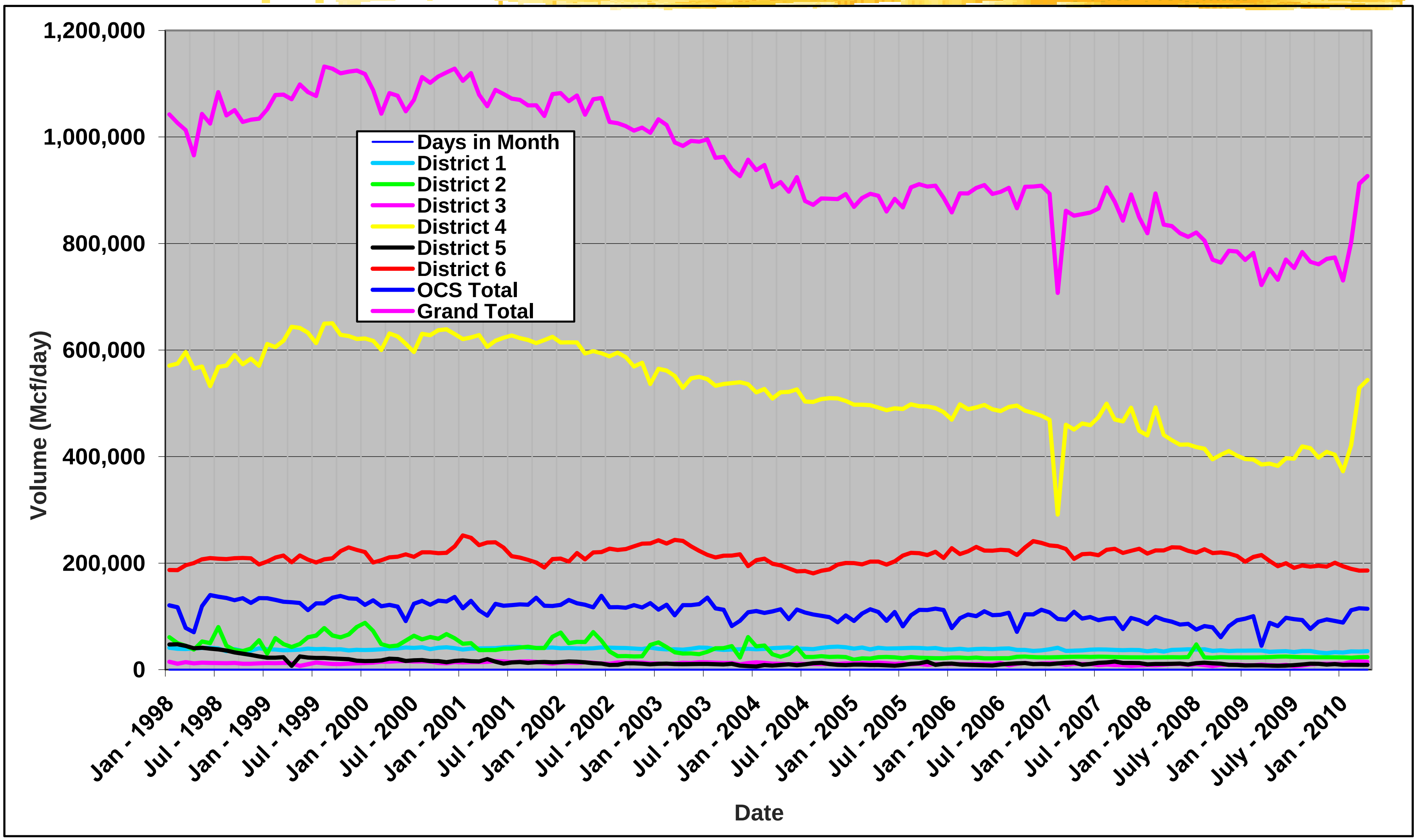
- Mexico Location: 14 miles north of Ensenada
- Owner: Sempra Energy LNG Corporation
- Capacity: 1.3 Bcf/d Peak
- Status: Natural Gas movement north on North Baja Pipeline reversed as of June 9, 2010 (natural gas is now flowing south).

Natural Gas Working Group

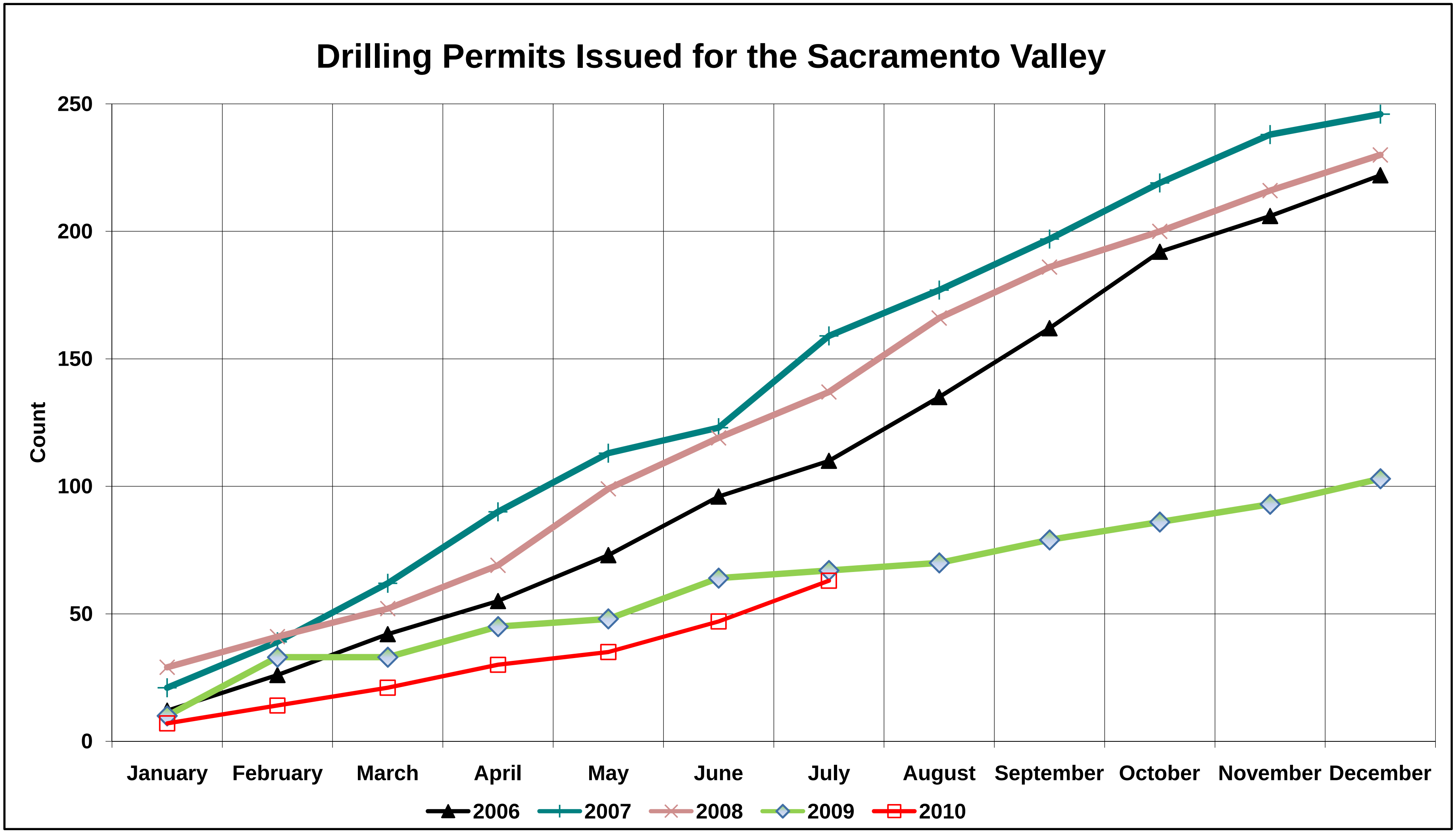
Tim Kustic

Department of Conservation

California Natural Gas Production



California Drilling Permits



Natural Gas Working Group

Richard Myers

California Public Utilities Commission

California Public Utilities Commission Cases

California Public Utilities Commission and FERC Cases

Proceeding Number & Title	Description	Status
A.04-08-018 SoCalGas, access for natural gas provided by California gas producers	Establish the terms and conditions under which natural gas produced by California gas producers will be granted access to the SoCalGas operating system	Proposed Decision (PD) issued 8/3/10, finds that 4 to 8 minute gas quality monitoring frequency is reasonable, orders an application in a year to hear whether gas quality specs should be revised. CPUC may issue final decision on 9-2-10.
A.07-04-013 Sacramento Natural Gas Storage application for CPCN	Sacramento NGS seeks CPCN to construct and operate natural gas storage facility in Sacramento	Final EIR issued June 2010, concludes that "No Project Alternative" is environmentally superior. Other sites also found to be superior to proposed site. Additional testimony submitted by applicant on economic feasibility of other sites. Waiting for PD.
A.08-06-006 SoCalGas and SDG&E request authority to make off-system deliveries, out of state	SoCalGas and SDG&E request authority to expand off-system deliveries to out-state points. (Only deliveries to PG&E are currently permitted.)	Phase 1 decision issued 6/4/09 finds that air quality issues were previously dealt with and CEQA is not required in this proceeding. Phase 2 briefs have been filed. Waiting for PD on remaining issues
A.09-04-021 Wild Goose Storage Expansion	Wild Goose requests approval of capacity expansion beyond the currently certificated capacity.	Draft supplemental EIR issued June 2010. Waiting for final EIR and proposed decision.
A.09-05-026 PG&E Biennial Cost Allocation Proceeding	PG&E requests approval of cost allocation and rate design for gas distribution rates	Decision issued June 2010, adopts partial settlement and NGV compression costs. Waiting for proposed decision on core brokerage fee.
A.09-06-011 Lodi Gas Storage Bond Requirement	Lodi Gas Storage requests elimination of bond requirement	Amended Application filed 3/2/10, seeks authorization for a parental guarantee rather than a bond to assure adequate financing in the event of facility decommissioning. Div of Ratepayer Advocates & California Farm Bureau protests 4/1/10.
A.09-08-008 Central Valley Storage CPCN	Application by Central Valley Storage for CPCN for 5-8 Bcf storage facility in Colusa County	Application filed 8/19/09. Briefs and reply briefs filed in April 2010. Only one party opposed. Waiting for proposed decision.
R.09-08-009: CPUC rulemaking on alternative-fueled vehicles	CPUC to consider tariffs, policies and infrastructure on alternative-fueled vehicles, including NGVs	Proceeding divided into three phases. Phase 1 decision issued 7-29-10, finds that facilities that sell electricity at reatil to public as motor fuel aren't public utilities. ALJ Ruling issued 8-9-10, sets Phase 2 schedule and issues. NGVs may be addressed mainly in Phase 3.
A.09-09-013 PG&E Gas Transmission and Storage Revenue Requirement and Rates	PG&E requests approval of changes in revenue requirement and rates for backbone transmission, local transmission and storage.	Application filed 9/13/09. ALJ Ruling issued 5/19/10 amends schedule to allow settlement talks to continue. Settlement submitted 8-20-10, doesn't include SoCalGas/SDG&E. ALJ Ruling issued 8-19-10 revises schedule to allow intervenor testimony on 10-5-10 on settlement.

California Public Utilities Commission Cases

California Public Utilities Commission and FERC Cases

Proceeding Number & Title	Description	Status
A.09-09-020 SoCalGas Requests approval of work at Aliso Canyon Storage Field	SoCalGas seeks approval to replace 3 gas turbine compressors with electric compressors	Application filed 9/28/09. ALJ Ruling issued 4/27/10 indicates that an EIR will be required, establishes schedule for CEQA review. Final EIR now due in June 2011.
A.09-12-020 PG&E 2011 General Rate Case	PG&E requests increase in electric and gas distribution system revenue requirement	Hearings completed, settlement talks occurring.
C.10-02-001 Gill Ranch/PG&E Complaint vs Property & Mineral Rights Owners	Gill Ranch & PG&E file complaint against property owners and holders of mineral rights	Decision.issued 7-8-10, approves condemnation
A.10-03-028: SoCalGas/SDG&E Firm Access Rights Review	SoCalGas and SDG&E file required application for review of first 18 months of FAR implementation, propose cost-based FAR chargeand other minor changes.	Scoping memo issued 8-19-10, establishes list of issues to be addressed and schedule. Revised utility testimony due 9-5-10, and intervenor testimony due 10-5-10
A.10-08-002: Joint Utility Application to Recover ARB AB 32 Fees	SoCalGas, SDG&E, SCE and PG&E request rate increase to recover ARB AB 32 Implementation Fees	Application submitted 8-2-10
A.10-08-010: Gill Ranch Storage Transfer of control	Gill Ranch Storage requests approval of transfer of control due to corporate restructuring	Application submitted 8/13/10
RP08-026 at FERC: El Paso 2009 General Rate Case	El Paso requests increase in revenue requirements and other authority	Broad partial settlement has been reached. Presiding ALJ certified settlement 4/13/10. Hearings completed on remaining issues.
CP09-054 Ruby Pipeline seeks construction permit at FERC	Ruby Pipeline seeks construction permit from FERC	FERC certificate issued 4/5/10, authorizes construction 7/30/10
CP09-432: at FERC: Tricor Ten Section Hub	Tricor seeks FERC certificate for storage field in southern California, not on utility system	Tricor files at FERC in June 2009. In October 2009, Tricor claims capacity oversubscribed in non-binding open season. Environmental Assessment had been expected May 2010, final decision August 2010
RP10-951: Texas Gas Co Complaint vs El Paso	Texas Gas Co asserts that fuel rates on El Paso should be revised to favor east-of-California customers at California expense	Complaint filed at FERC 7/7/10, CPUC files Notice of Intervention 7/27/10

Natural Gas Working Group

Questions/New Issues