CALIFORNIA ENERGY COMMISSION

STAFF ASSESSMENT OF POU RESOURCE ADEQUACY AND ELECTRICITY RESOURCE PLANS

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Staff Workshop on Resource Adequacy and Electricity Resource Plans of Publicly Owned Utilities

August 6, 2009

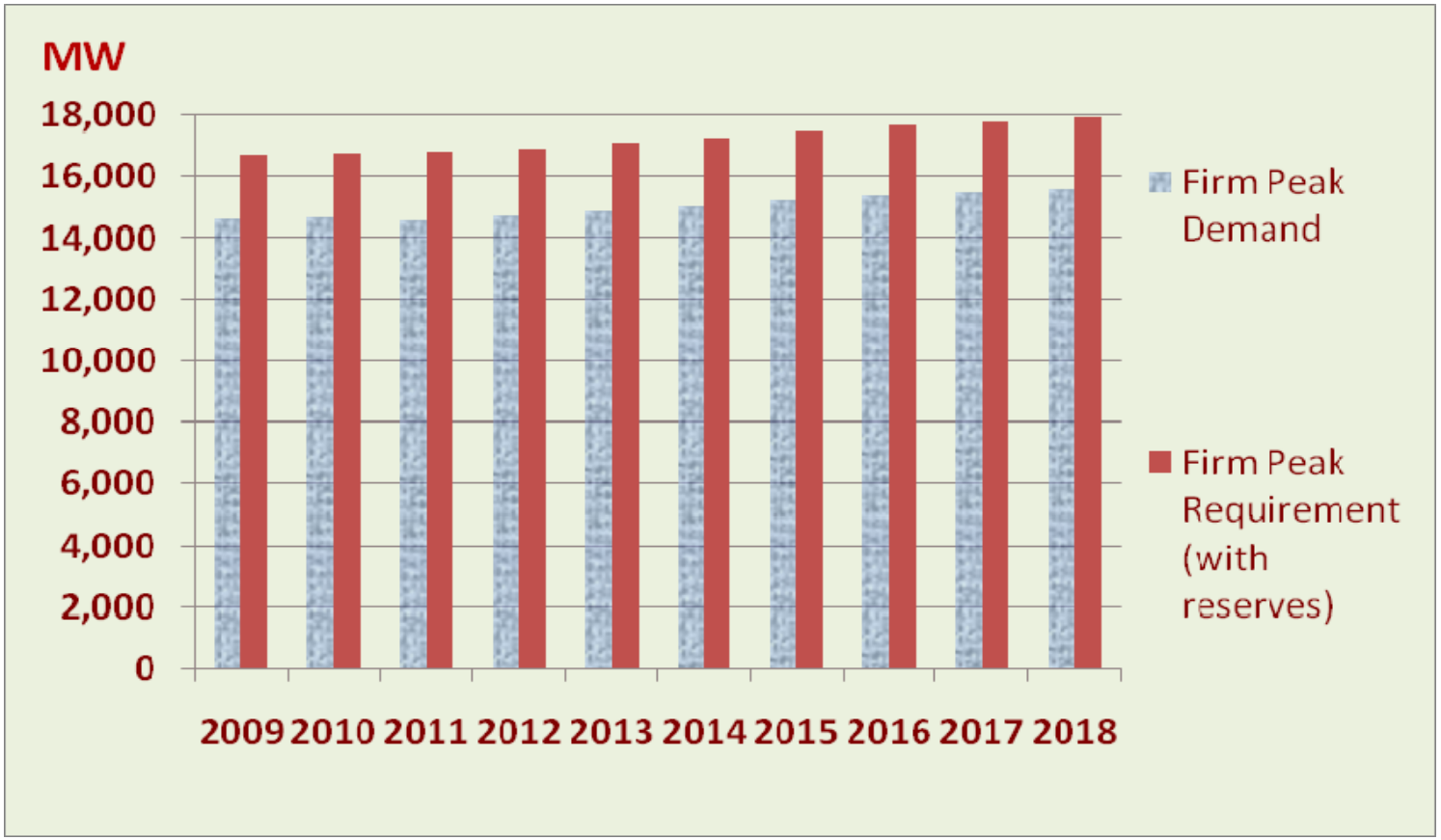
Publicly Owned Utilities (POUs)

- Are resource adequate —year ahead & long term
- Are showing real progress in renewable energy procurement: 11.6% in 2008, and 16% in 2009
- Will be reducing carbon dioxide emissions from coal as long-term supply contracts expire

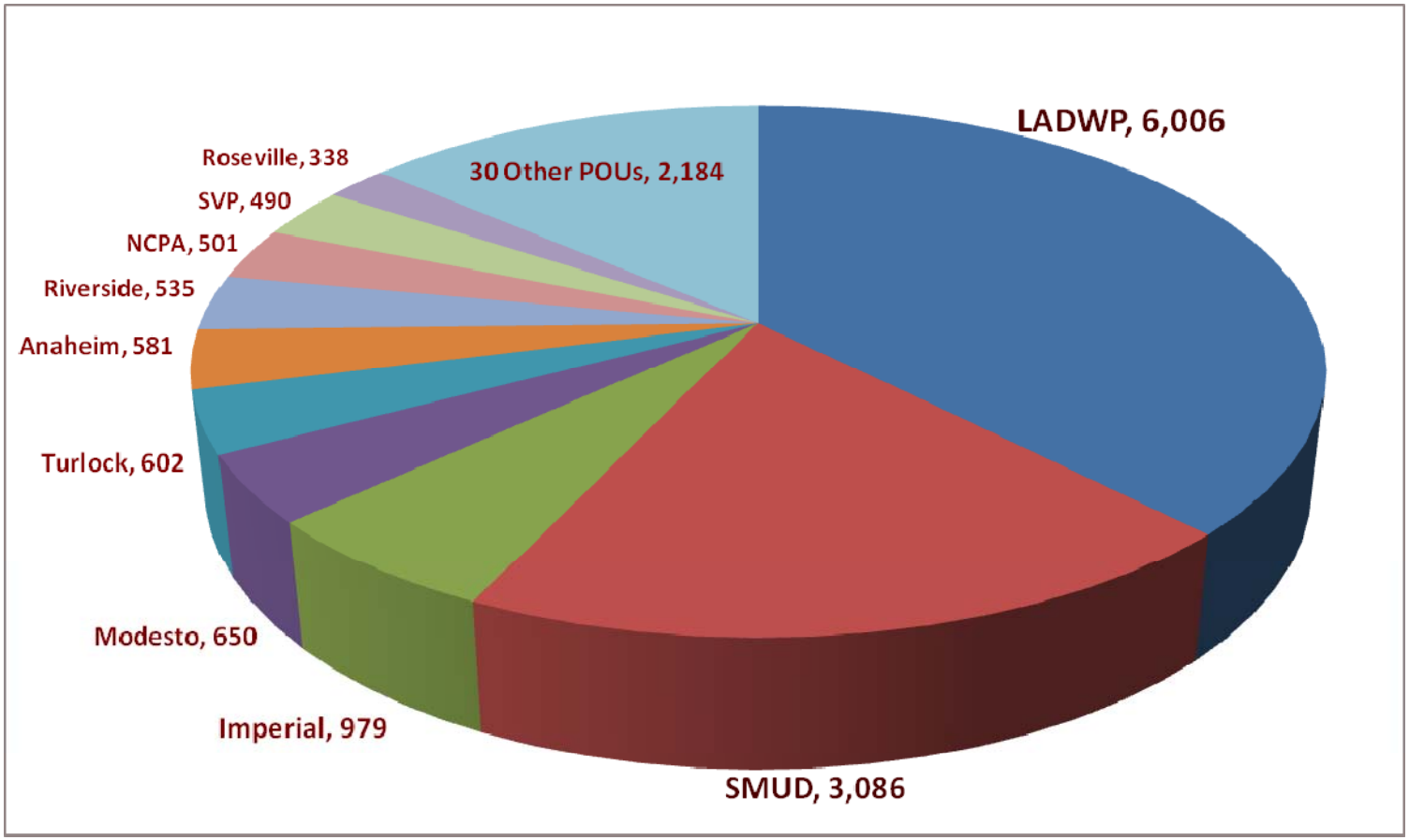
POU Annual Peak-Hour Loads

- 22.6% of all California LSE peak loads in 2008: 15,952 MW (not including CDWR) of 70,473 MW
- Largest 15 POUs (including NCPA) account for 95% of POU loads; 10-year forecast data used in subsequent slides
- Utility-controlled gas-fired generation totaled 7,538 MW in 2008 = 41% of all supply resources; this will continue at 41% to 46% through 2018

Aggregate Forecast Peak-Hour Needs for 2009 – 2018



2008 Peak Load Totaled 15,952 MW



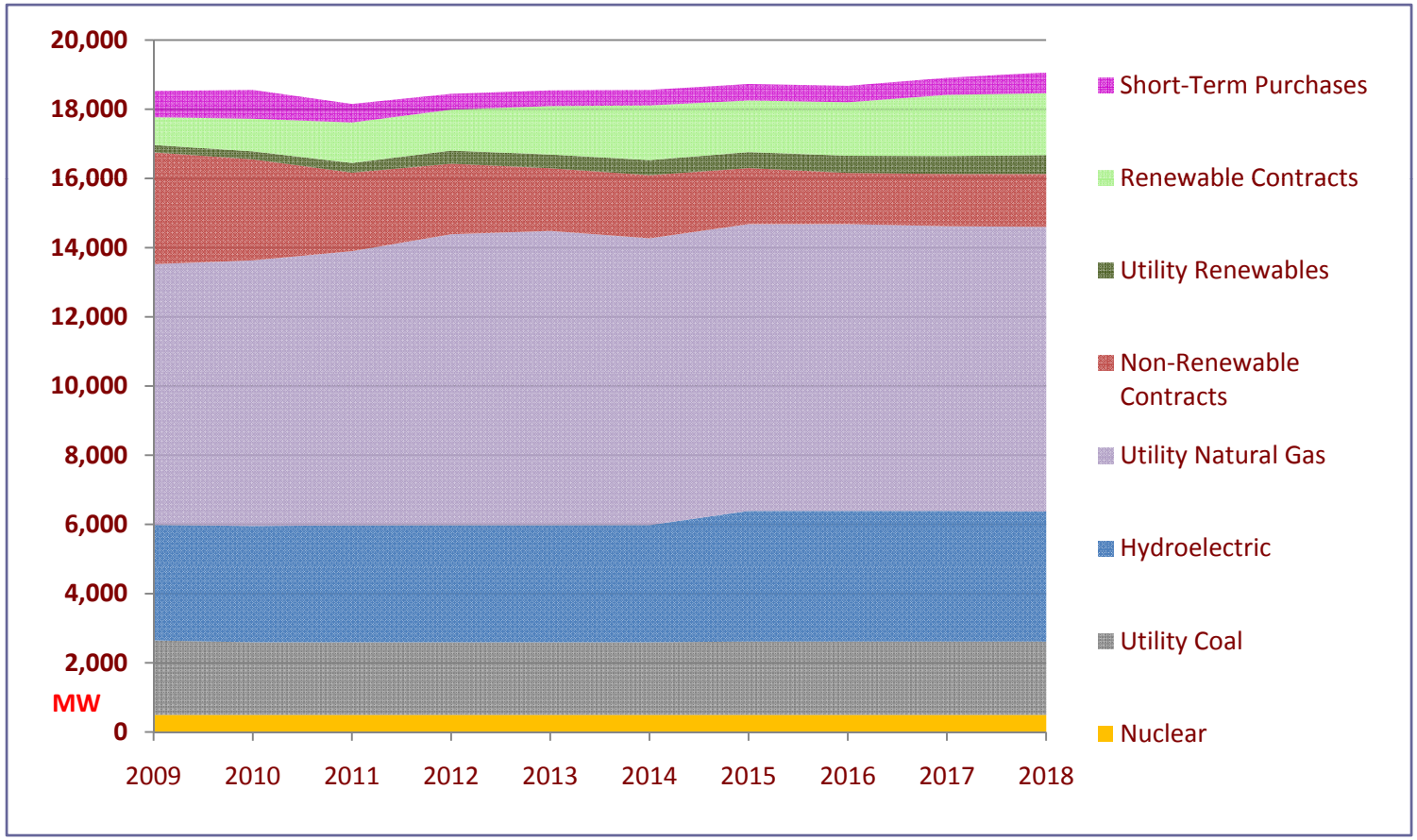
POU Capacity Additions Since 2004 Averaged 500 MW per Year, Mostly Fossil

POU	Plant	MW	Online
LADWP	Haynes 8-9-10 (net)	49	Jan 2005
Corona	Clearwater Cogen	30	Feb 2005
SVP	Von Raesfeld	147	Mar 2005
Burbank	Magnolia	328	Sep 2005
Vernon	Malburg	134	Oct 2005
SMUD	Cosumnes	500	Mar 2006
Modesto	Ripon	95	Jun 2006
Riverside	Riverside E. Center	98	Jun 2006
SMUD	Solano (wind)	101	Jun 2006
Roseville	Roseville E. Park	160	Oct 2007
Turlock	Walnut	250	Feb 2008
Imperial	Niland	100	Jun 2008
	Total Dependable	***1,992***	

Planned POU Capacity Additions, Mostly Renewable

POU	Project	MW	Technology	Online
Glendale	Pebble Springs	18	Wind	2009
LADWP	Pebble Springs	70	Wind	2009
LADWP	Willow Creek	70	Wind	2009
LADWP	Pine Tree	120	Wind	2009
LADWP	Milford	188	Wind	2009
NCPA	Iberdrola contract	27	Wind	2009
Riverside	Salton Sea additons	26	Geothermal	2009
Turlock	Tuoloumne	125	Wind	2010
Imperial	Biomass unit	15	Biomass	2010
Pasadena	Chiquita Canyon	7	Landfill Gas	2010
Redding	Redding Power	44	CT	2010
Redding	Roseburg	8	Biomass	2010
Riverside	E. Center addition	98	CC	2010
	Total Nameplate	***816***		

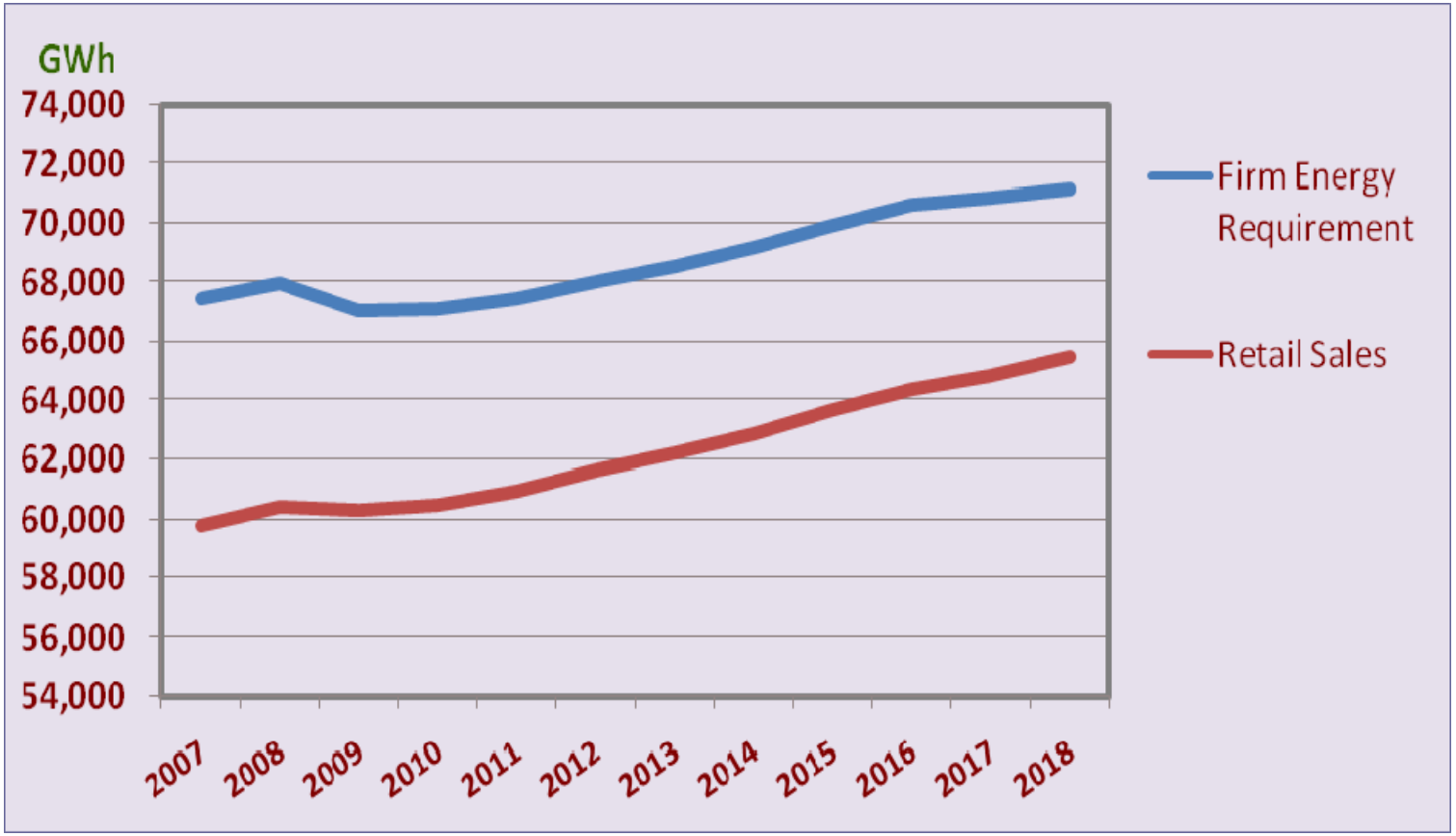
POU Capacity Resources to Meet Peak Loads Show Stability and Continuity



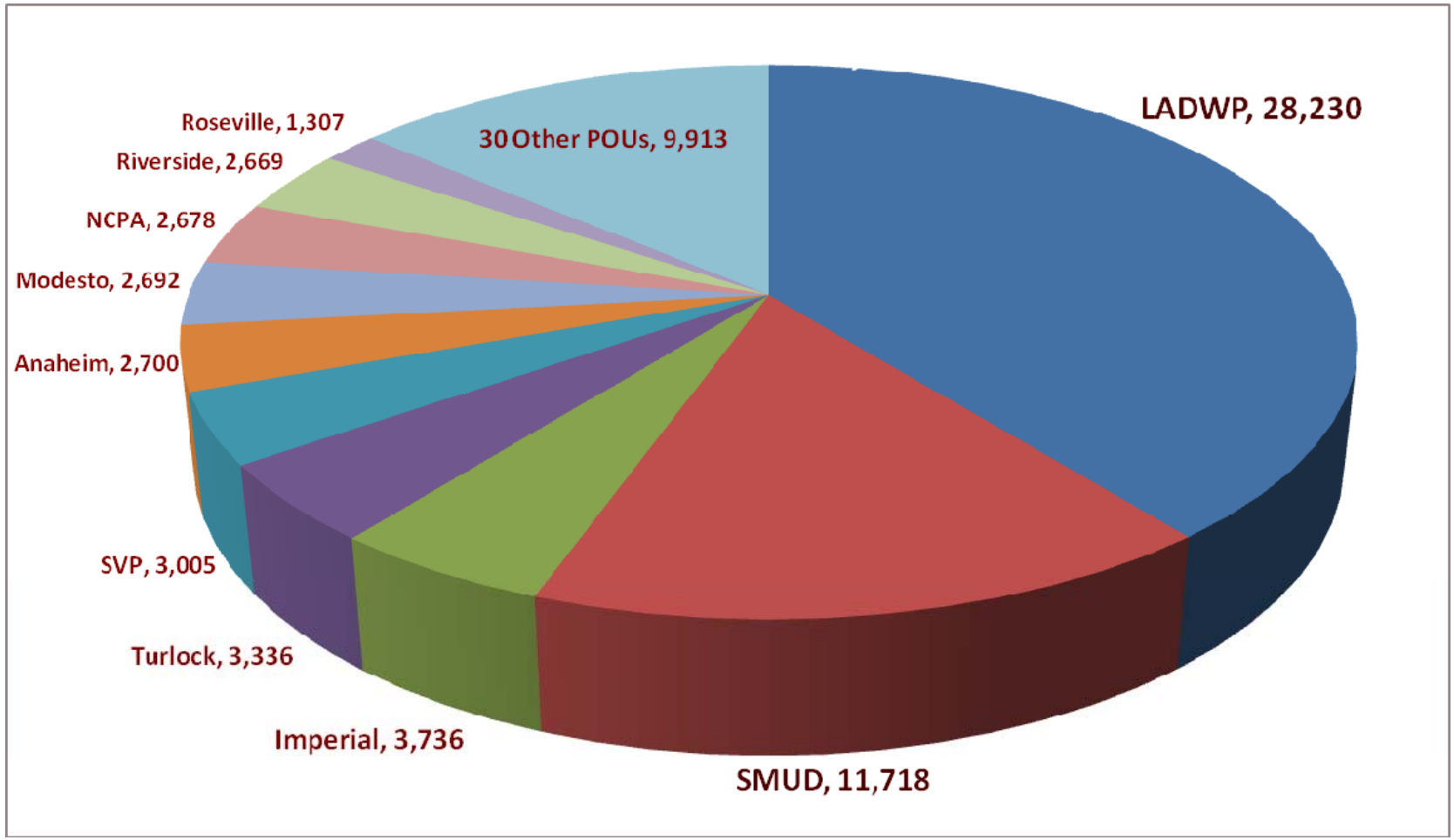
POU Energy Supplies 2007 – 2018

- 23.7% of all California 2008 LSE energy needs
- 71,983 GWh in 2008 (not including CDWR), of 303,492 GWh for all LSEs statewide
- Largest 15 POUs (including NCPA) account for 94% of all POU energy requirements; 10-year forecast data used subsequently
- Forecast retail sales stay below 61,000 GWh through 2011, then rise slowly thru 2018

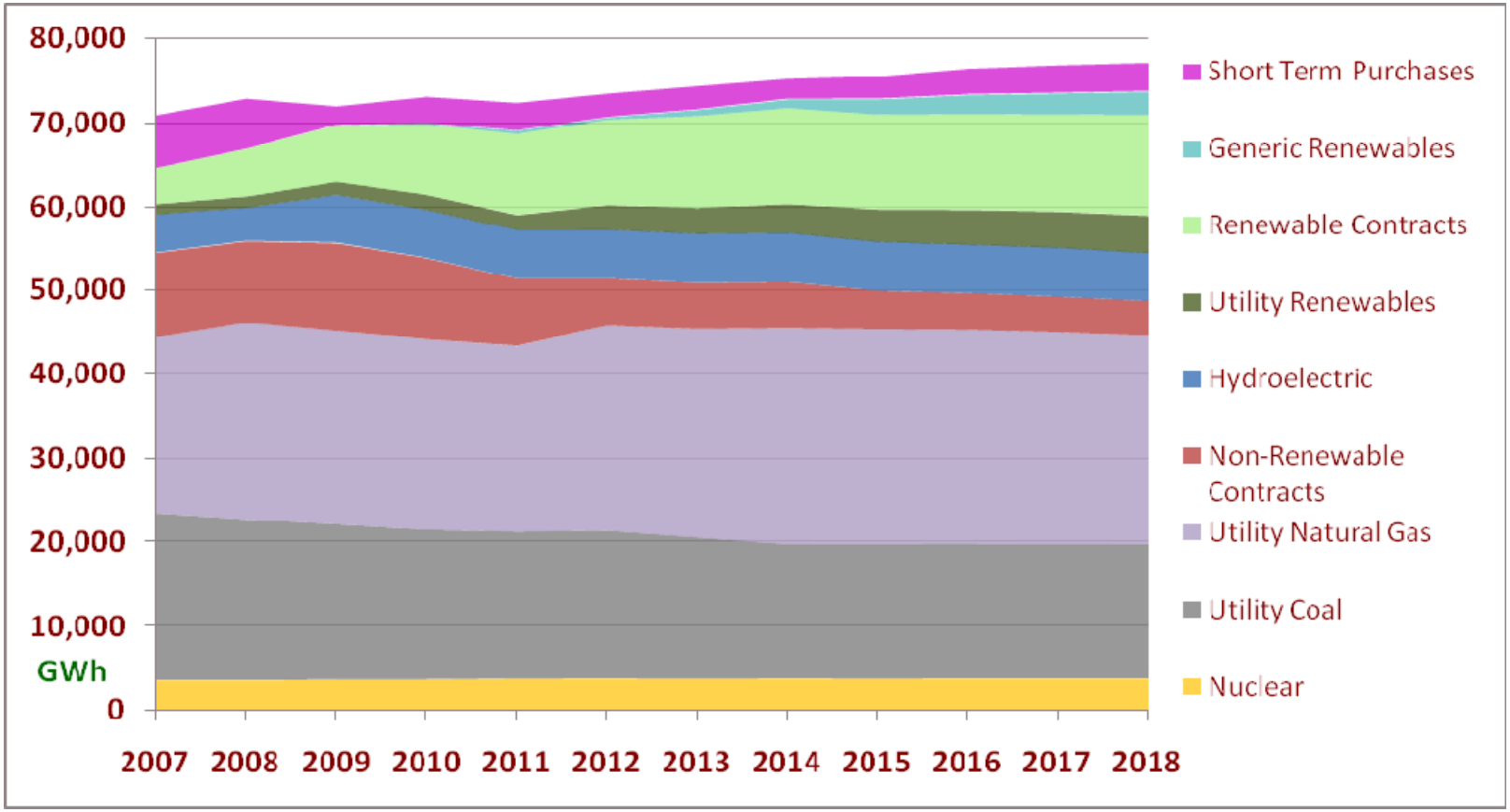
Actual and Forecast Energy Needs and Retail Sales



2008 POU Energy Needs: 71,983 GWh



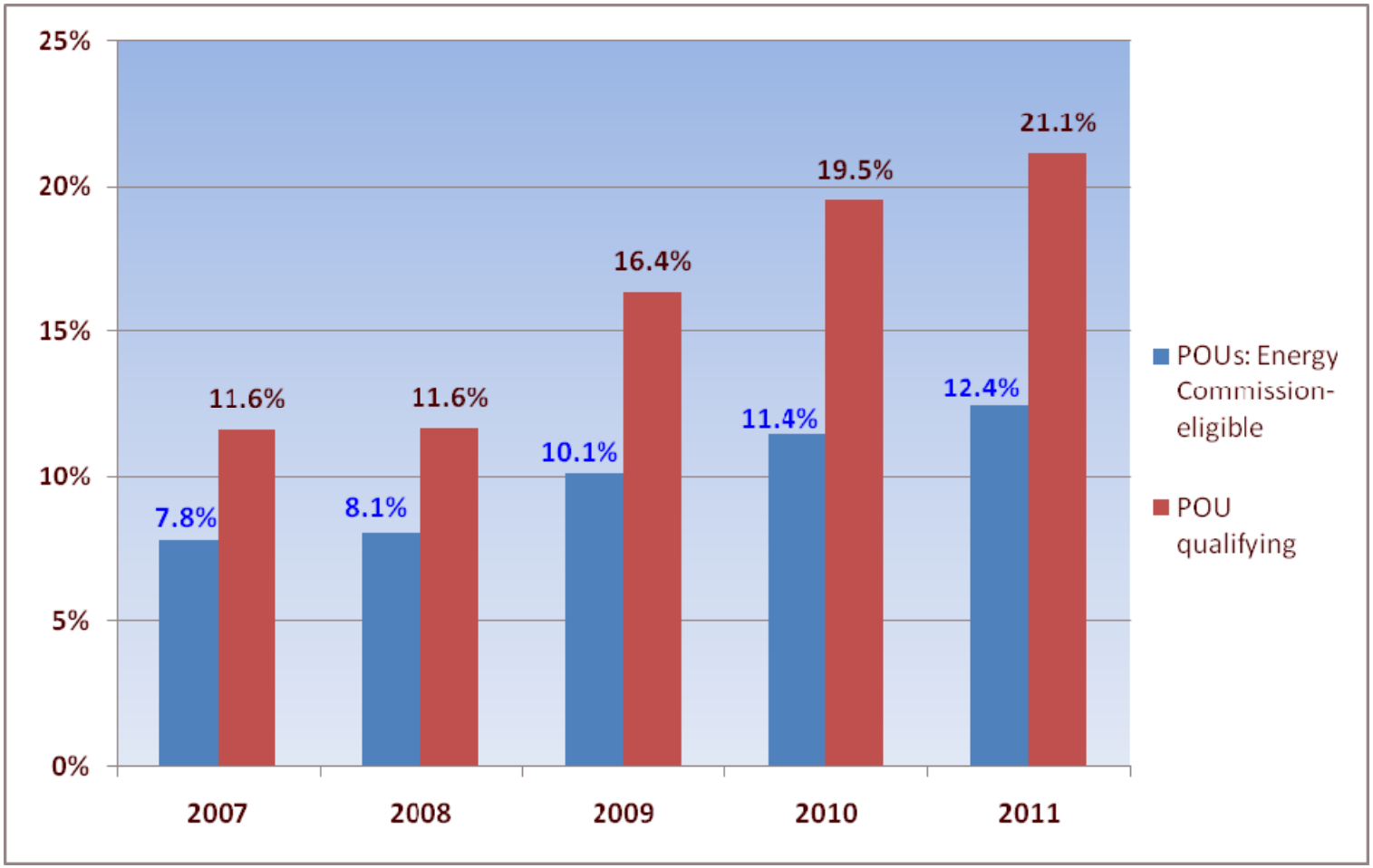
Actual and Forecast POU Energy Supplies, 2007 – 2018



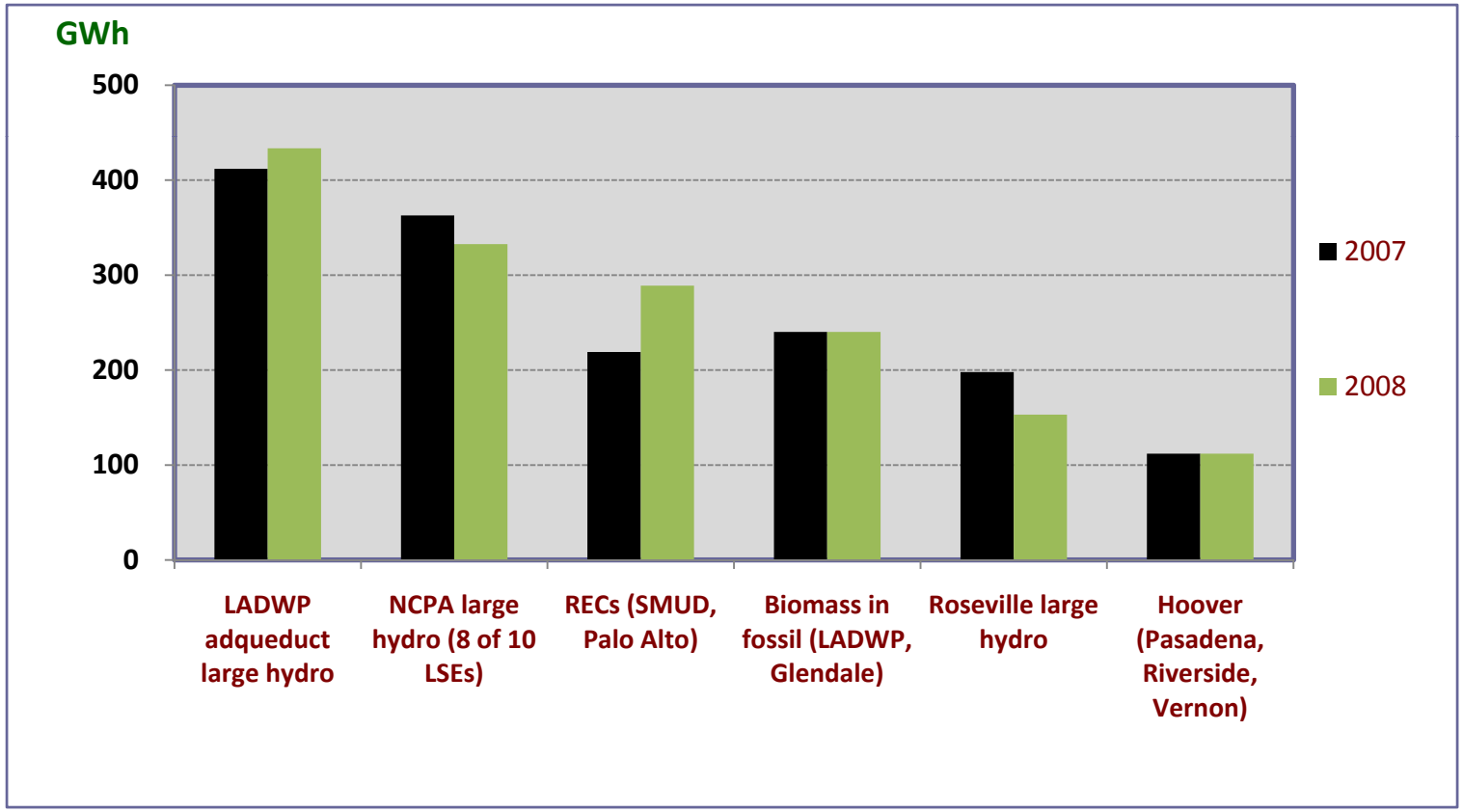
Renewable Portfolio Standard Targets & 2008 Procurement

	2008	*Target*			2008	*Target*	
Anaheim	6.3%	20%	2015	Redding	27.7%	20%	2017
Burbank	1.3%	33%	2020	Riverside	9.3%	33%	2020
Glendale	13.9%	20%	2017	Roseville	18.3%	20%	2017
Imperial	7.9%	30%	2020	SMUD	19.7%	20%	2011
LADWP	7.2%	35%	2020	SVP	27.8%	20%	ongoing
Modesto	11.5%	20%	2017	Turlock	4.4%	20%	2017
NCPA	38.0%	various		Vernon	1.7%	20%	2017
Pasadena	13.2%	20%	2017				

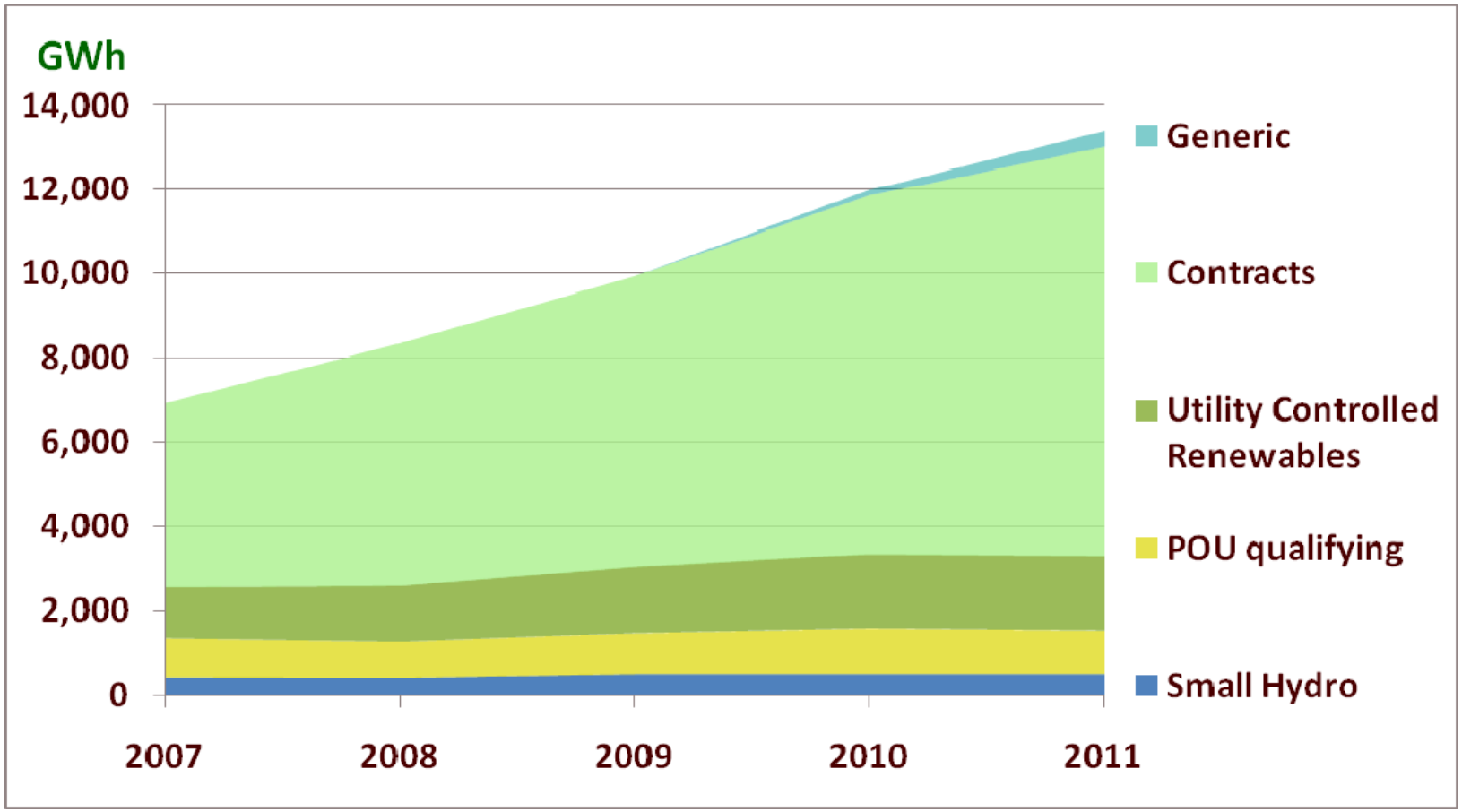
POU Renewable Energy Is Growing as a Percent of Retail Sales (15 Largest POUs)



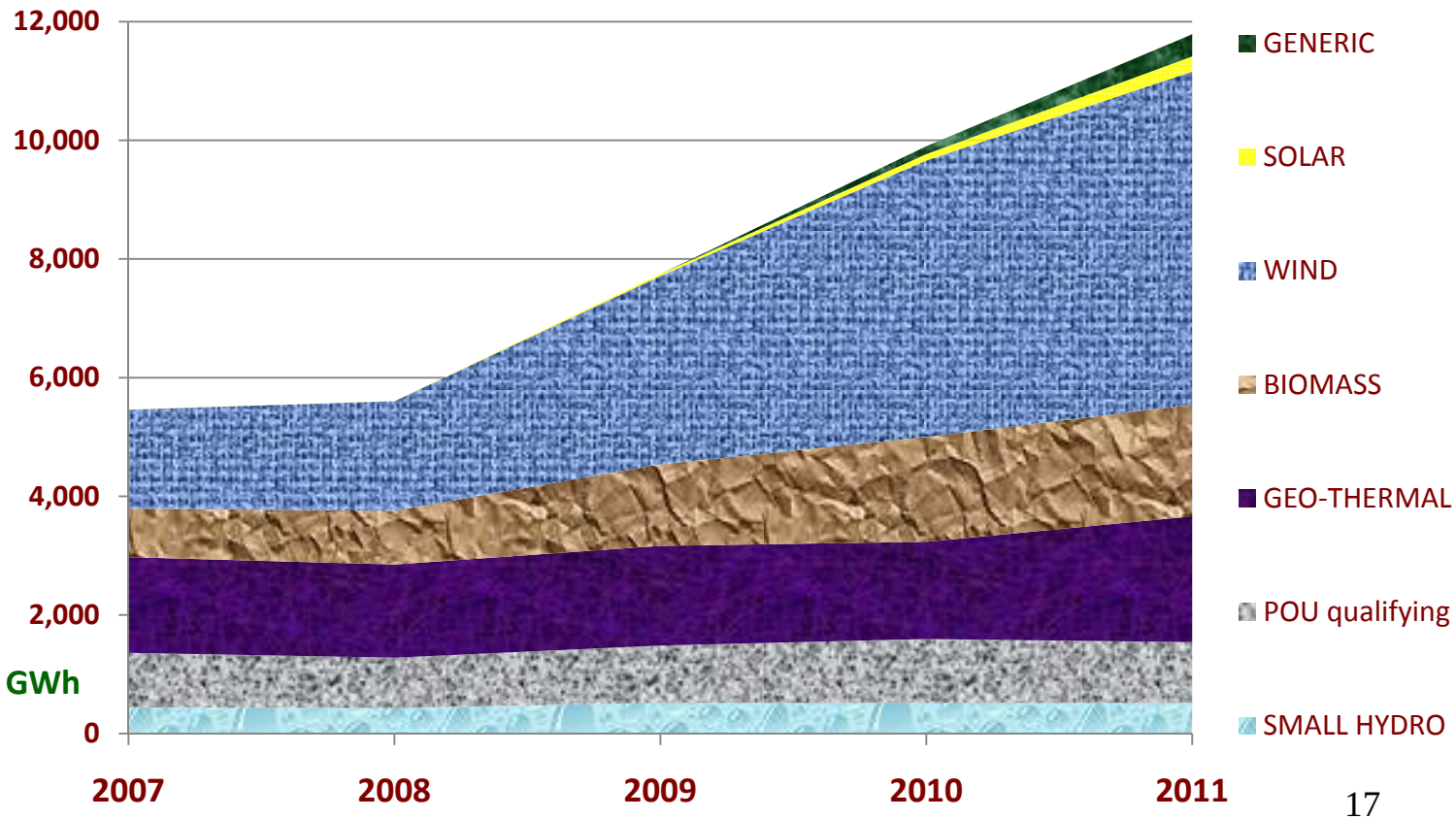
POU Qualifying Renewable Energy includes Large Hydro, Biomass & RECs



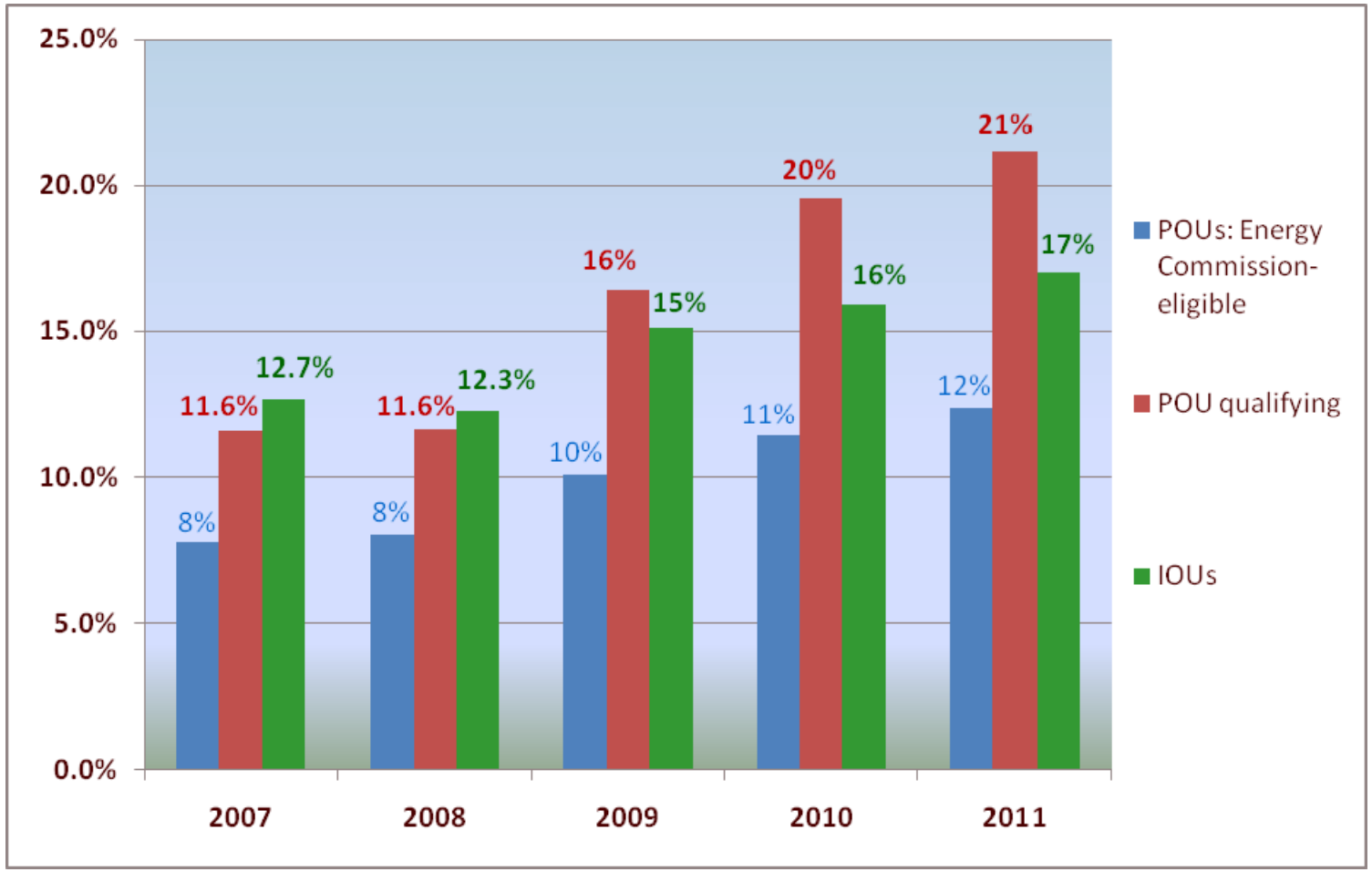
Renewable Energy Contractual Deliveries Are Increasing



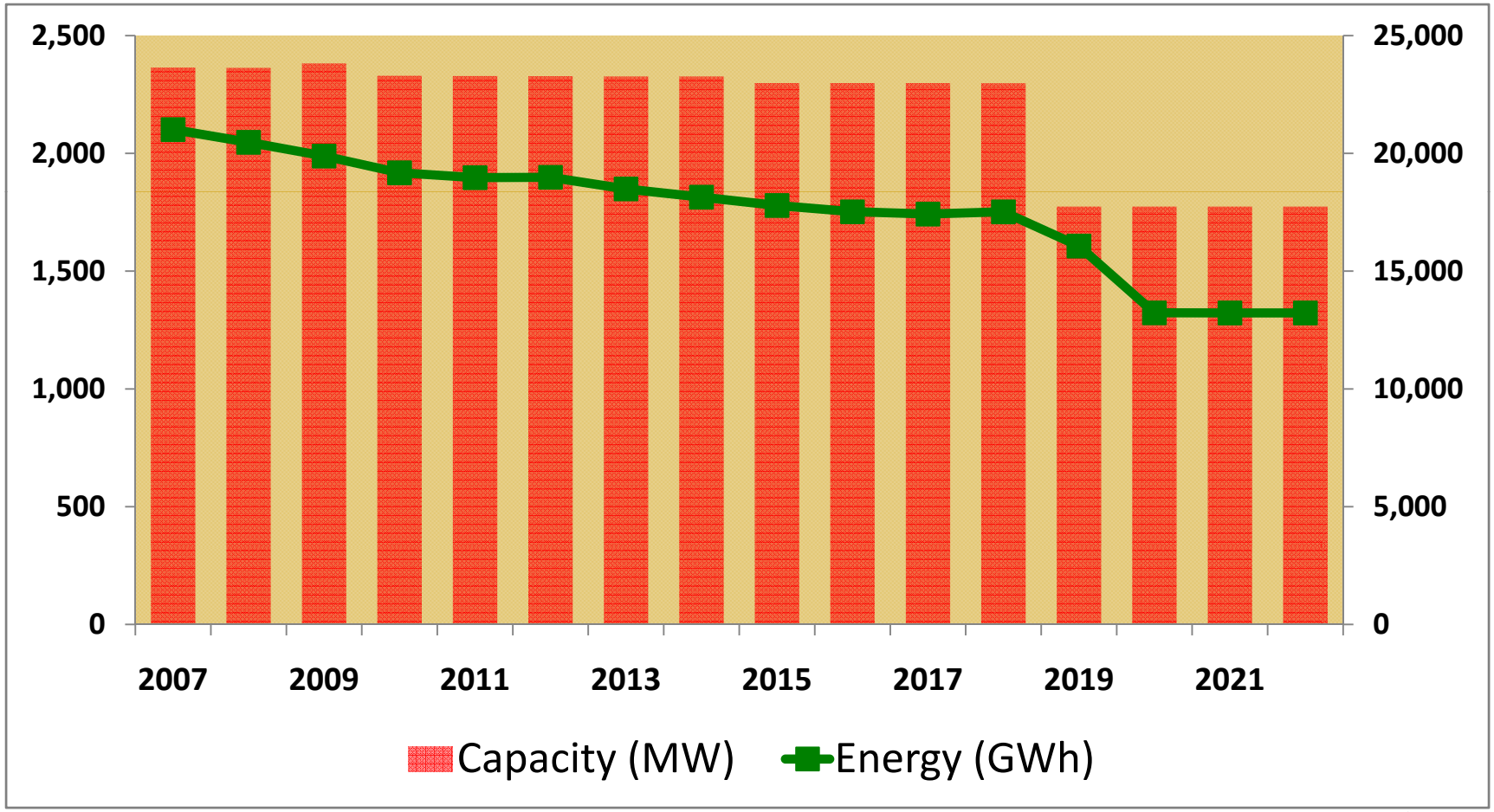
Wind Energy Deliveries Increase Significantly Starting in 2009



POU and IOU Renewable Energy Procurement Are On Par



Coal-fired POU Resources Decline as Contracts Expire (15 largest POUs)



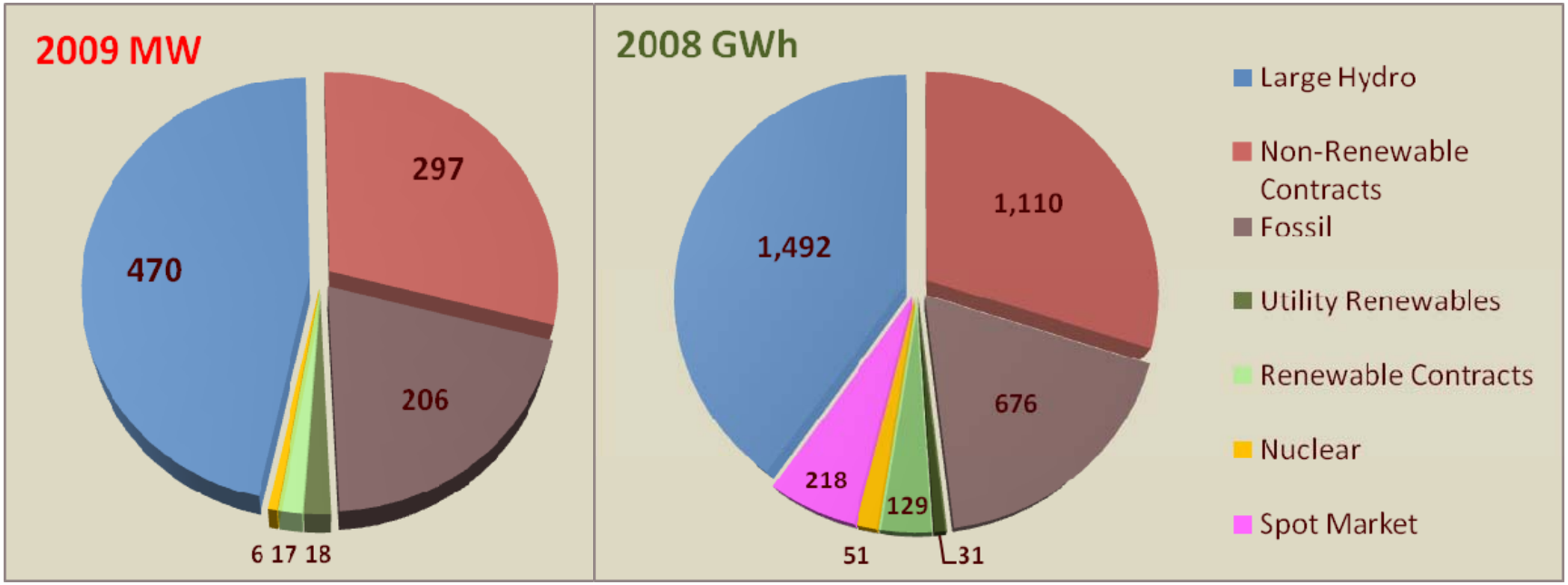
POU Coal-Fired Generation Under Long-Term Contract

POU	Plant	MW	GWh	Expires After
Turlock	Boardman	56	420	Dec 2018~~3~~
LADWP	Navajo	477	3,760	Dec 2019
Anaheim	Intermountain	236	1,831	Dec 2024
LADWP	Intermountain	875	5,945	Dec 2027
LADWP	Intermountain	0	1,153	2012/2016
Glendale	Intermountain	35	280	Jun 2027
Pasadena	Intermountain	108	759	Jun 2027
Modesto	San Juan	68	527	Oct 2030
Glendale	San Juan	20	160	Oct 2030
	Total Dependable	***1,875***	***14,835***	
CDWR	Reid Gardner	154	1,345	Jul 2013

POUs with Annual Peak Loads 30 MW – 200 MW

- 8 POUs provided year-ahead resource adequacy filings: CCSF, PWRPA, Merced ID, Colton, Azusa, Banning, Truckee Donner, & Shasta Lake
- 612 MW in aggregate 2008 peak loads equals 3.7% of all POU peak loads statewide
- For 2009, these 8 POUs have 1,014 MW in dependable capacity = 36% planning reserve margin, skewed by SF's Hetch Hetchy large hydro
- Except for CCSF, bilateral contracts and utility-owned fossil resources are the largest supply categories

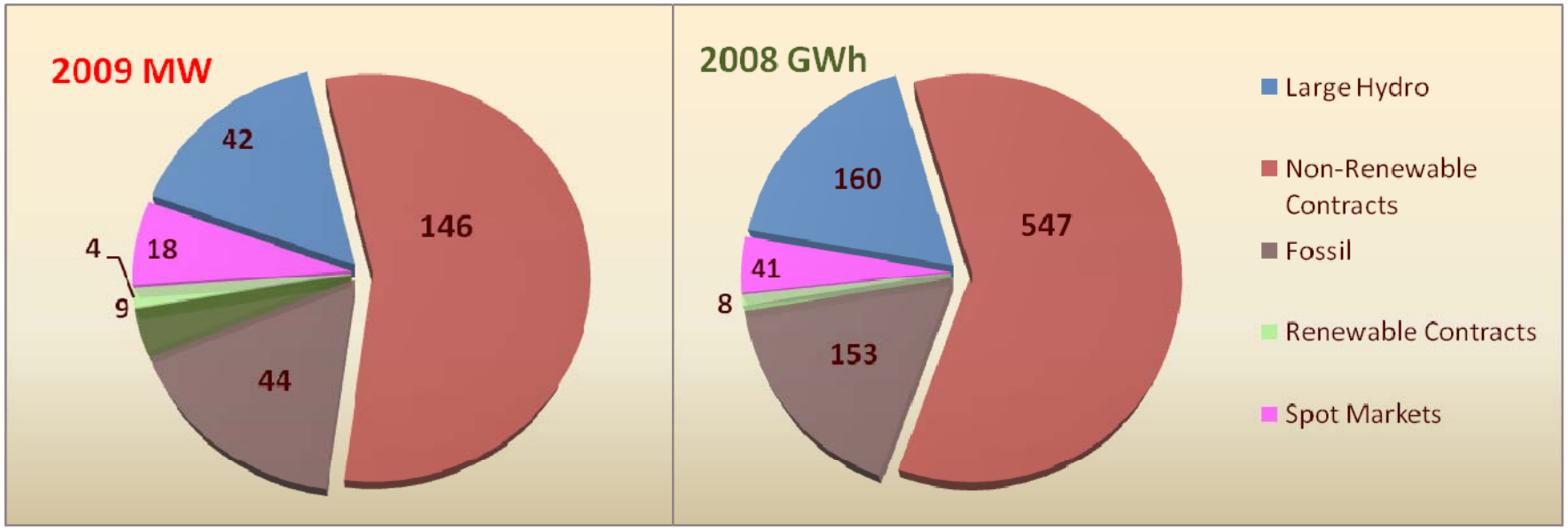
POUs with Peak Loads Between 30 MW–200 MW Rely on Large Hydro, Contracts & Fossil Plants



POUs with Annual Peak Loads less than 30 MW

- 17 very small POUs have 211 MW in combined 2009 forecast peak loads, 1.2% of all California POU loads
- Most (but not all) these POUs use a 15% planning reserve margin
- In early 2009, these POUs had procured 244 MW, equal to a planning reserve margin of 15%.
- Most renewable energy is from large hydro including Western & BPA contracts

POUs with Peak Loads Less Than 30 MW Rely on Contracts, Large Hydro & Fossil Plants



Conclusions & Next Steps

- 50 POUs provided resource adequacy or resource plan filings to CEC
- POU procurement is adequate and effective
- Public comments requested by August 20
- Final report posted in mid-September
- Future reporting should better distinguish between committed & planned resources, CSI & REC counting conventions

QUESTIONS & COMMENTS

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2008 PROGRESS REPORT ON POU RESOURCE ADEQUACY AT
HTTP://WWW.ENERGY.CA.GOV/2007PUBLICATIONS/CEC-200-2007-016/CEC-200-2007-016-SF.PDF