



Sustainable Energy for California Cities

March 20, 2014

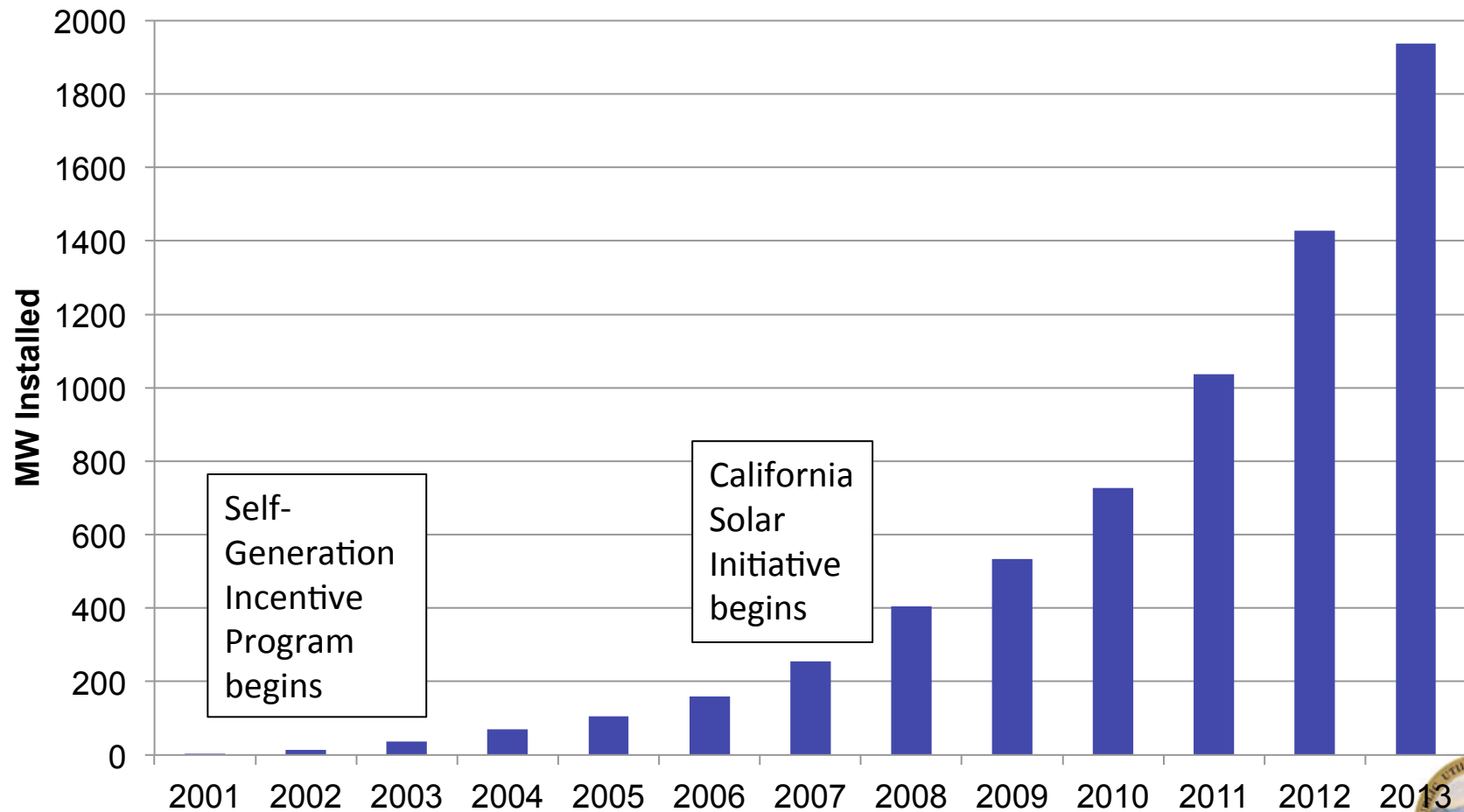
Scott Murtishaw

Energy Advisor to President Peevey
California Public Utilities Commission





Cumulative Installed Customer-Sited Solar Capacity





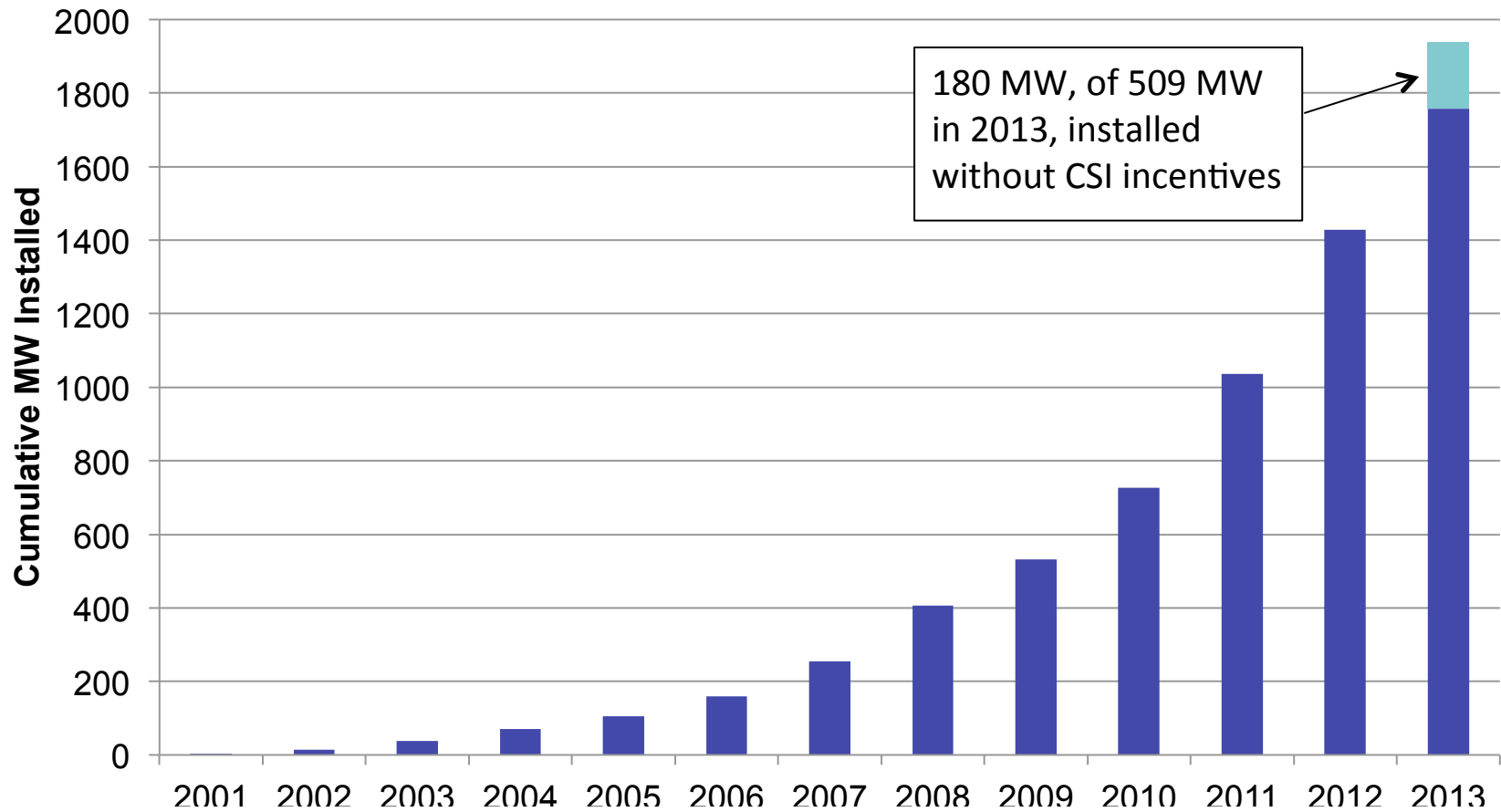
Trouble Ahead for Customer-Sited Solar?

- **The CSI program is winding down**
- **CSI was designed with 10 declining incentive levels, or steps**
 - PG&E: all incentives are depleted
 - SCE: residential incentives are depleted, non-residential in Step 9
 - SDG&E: residential in Step 10, non-residential in Step 9





Many Recent Installations Used no CSI





Trouble Ahead for Customer-Sited Solar? (Probably Not, but Some Looming Uncertainty)

- The CSI program is winding down
 - PG&E residential and non-residential, and SCE residential incentives are depleted
 - SDG&E programs and SCE commercial are in Step 9 or 10
- **30% Investment Tax Credit expires 2016**
 - Nearly half of public agency solar capacity is third-party owned
- **AB 327 directs the CPUC to create a successor to NEM for systems installed after June 30, 2017**
 - Decision establishing successor must be issued by end of 2015
 - A proposed decision issued Feb 20 would give systems installed by June 30, 2017 20 years on the existing NEM program





Managing Building Loads with Storage Self-Generation Incentive Program

- SGIP originally established 2002
- September 2011 revisions: Stand-alone storage or storage coupled with solar PV, fuel cells, wind, or CHP eligible for \$2/W.
- Incentives decline 10% per year beginning 1/2013. Current incentive is \$1.62/Watt.
- Storage may be sized up to the onsite load or the accompanying distributed generation.





Status of Energy Storage in SGIP

- Primarily lithium-ion batteries
- Intended use ranges from bill management/peak demand reduction, EV charging, and backup power supply

Energy Storage Applications in SGIP

Year	Applications	Capacity (kW)	Incentive (\$)
2009	1	1,000	\$2,000,000
2010	1	600	\$1,200,000
2011	125	5,207	\$9,495,600
2012	428	22,001	\$42,935,056
2013	167	11,275	\$20,567,756
2014	53	690	\$1,308,880
Total	775	40,772	\$77,507,292

Integrated Energy Storage and Solar PV Applications in SGIP

Year	Applications	Capacity (kW)	Incentive (\$)
2011	124	2,707	\$6,495,600
2012	221	3,902	\$8,413,623
2013	121	2,757	\$5,524,663
2014	40	200	\$388,800
Total	506	9,566	\$20,822,686





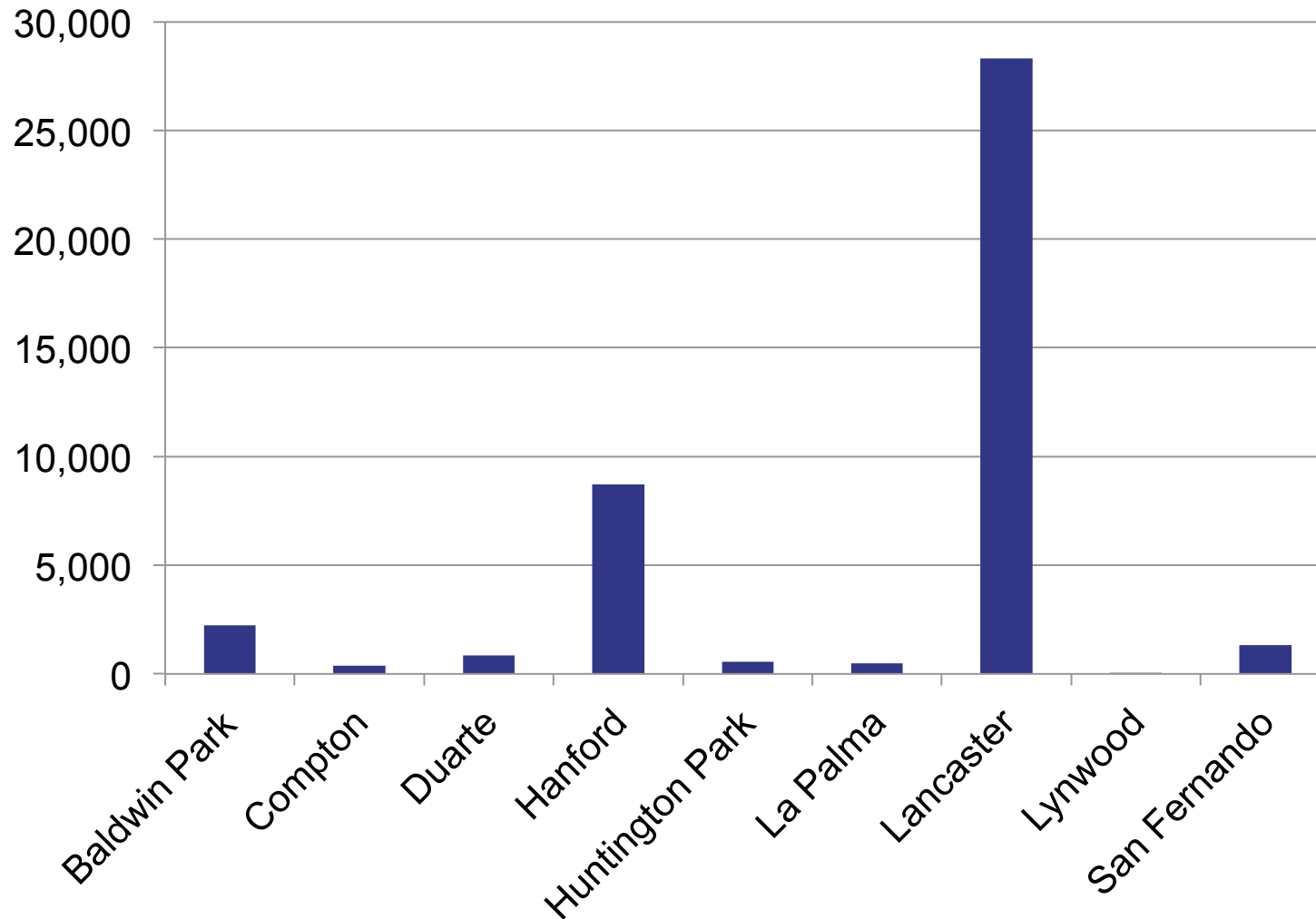
Alternative to On-Site Generation Green Tariff/Shared Renewables Program

- **Senate Bill 43 of 2013 established a community renewables program for investor-owned utilities**
- **GTSR participation capped at 600 MW**
- **Utilities must provide support for “enhanced community renewables programs” to facilitate projects located close to load**
 - Although not defined, parties to CPUC proceedings have generally interpreted this provision as allowing a customer, or group of customers, to subscribe to a particular project
- **CPUC must issue implementing decision by July 1**



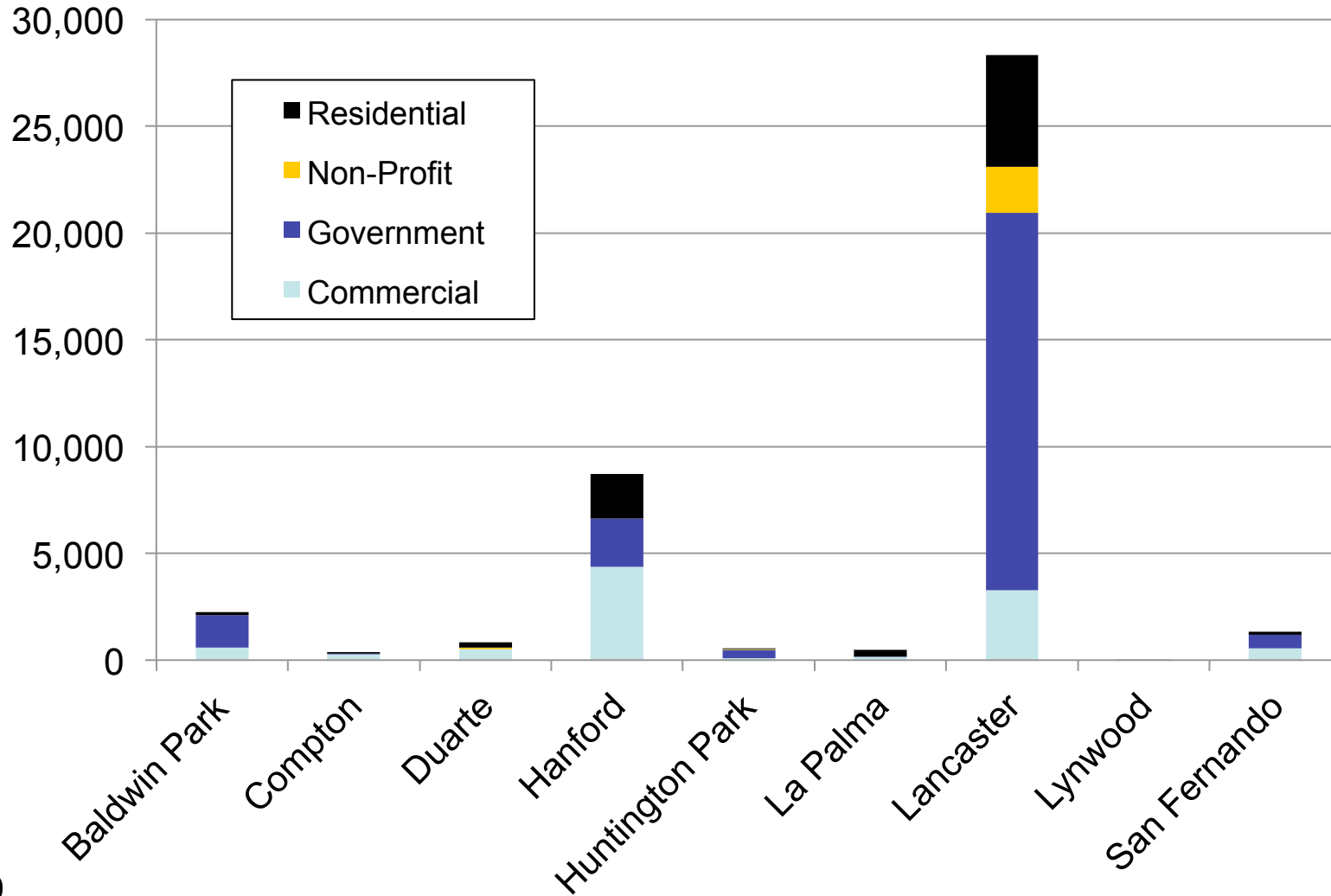


A Look at Solar in ICFA Cities: Total Customer-Sited Capacity (kW)



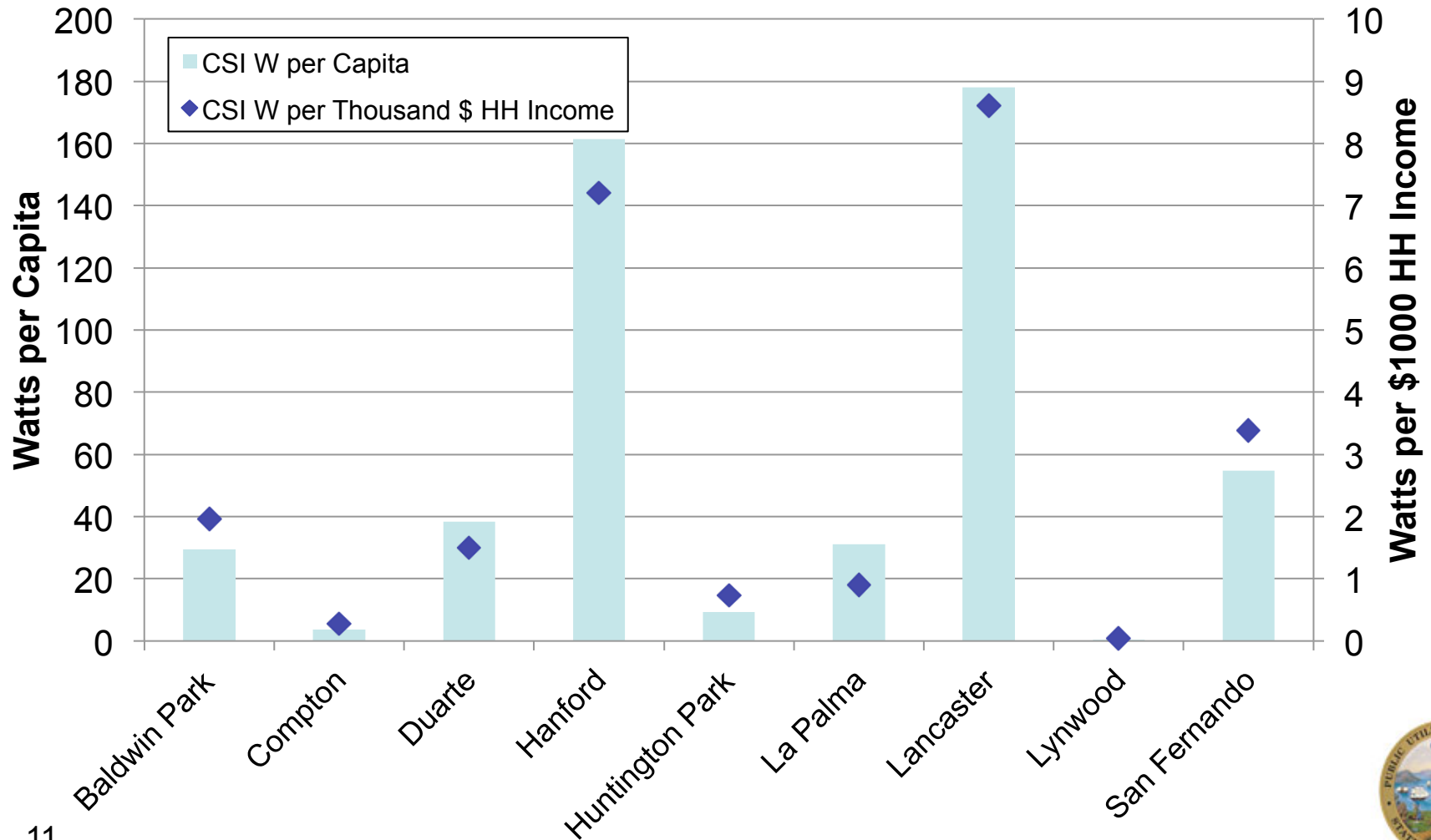


Customer-Sited Solar by Sector (kW)





Customer-Sited Solar Normalized by Population and Income





Thank You!

Scott Murtishaw
scott.murtishaw@cpuc.ca.gov
(415) 703-5863



www.cpuc.ca.gov

