



April 28th, 2009

California **Solar** Initiative Public Forum Hosted by Pacific Gas & Electric



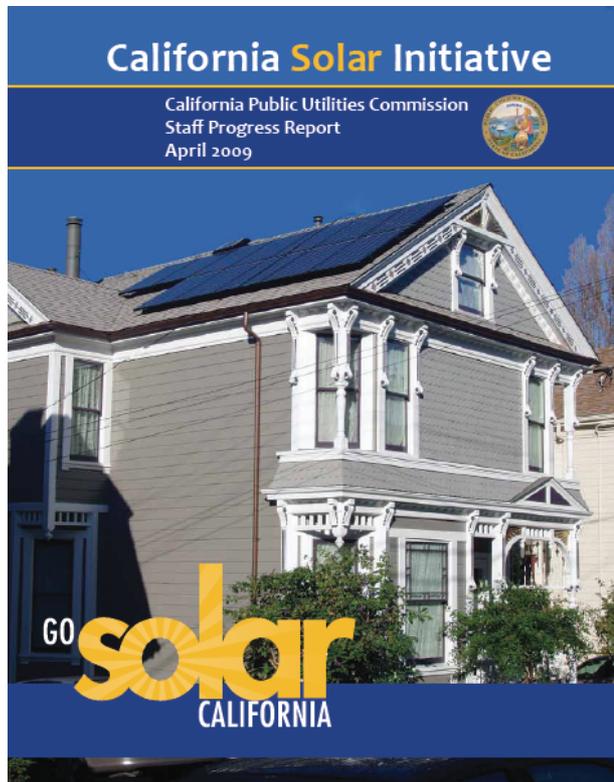
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CSI Program Statistics



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California Installed a Record 78 MW in Q1



- Total CSI installs in Q1 2009:
78 MW at 3,600 sites
- Total CSI installs since 2007:
211MW at 15,000 sites
- Combined total solar installs
statewide:
Over 500 MW
- New applications in Q1 2009:
52 MW (broke a record)

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Table 1. All CSI Projects, January 1, 2007 through April 1, 2009

All CSI Projects	
Installed Projects	
Applications	15,245
MW	211 MW
Incentive \$million	\$514
Pending Projects	
Applications	5,040
MW	145 MW
Incentive \$million	\$320
Total CSI Activity	
Applications	20,285
MW	356 MW
Incentive \$million	\$835



Source: www.CaliforniaSolarStatistics.ca.gov, April 1, 2009.

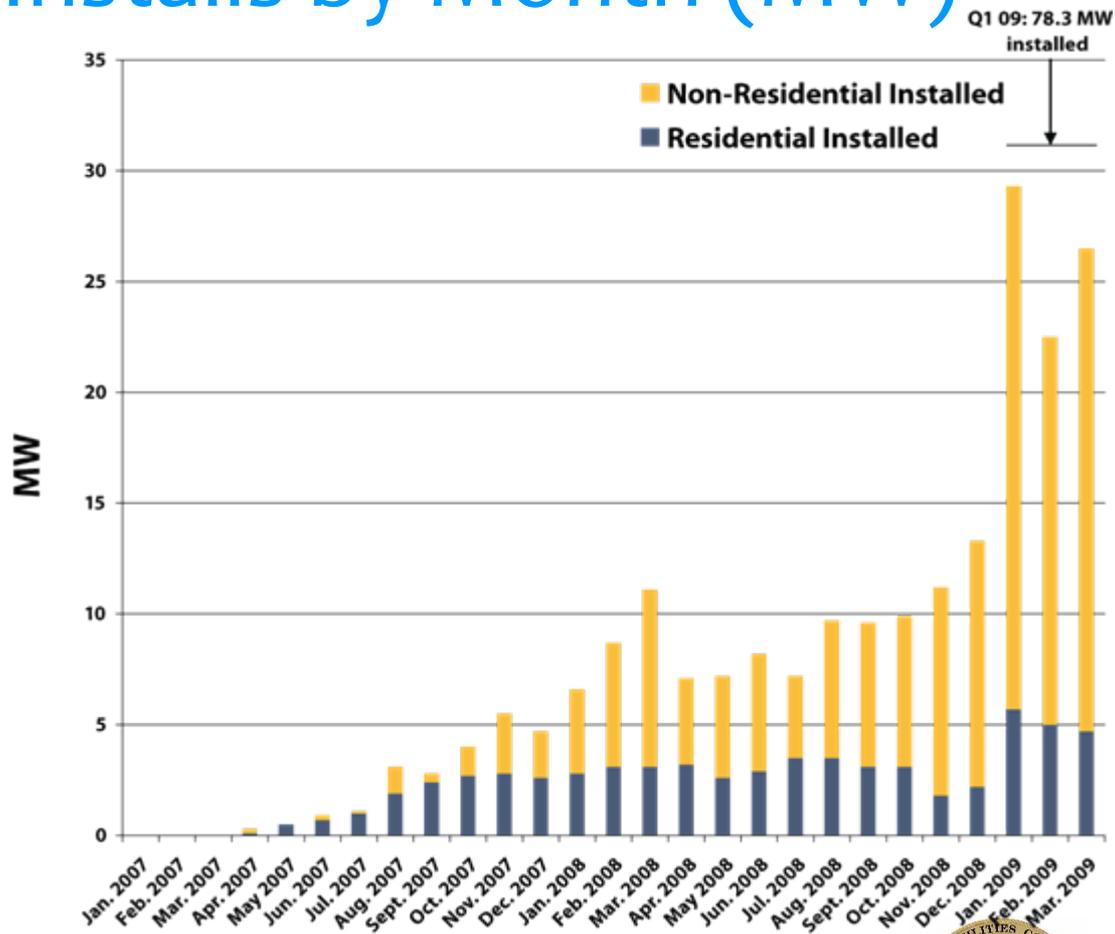


Center for Sustainable Energy
CALIFORNIA



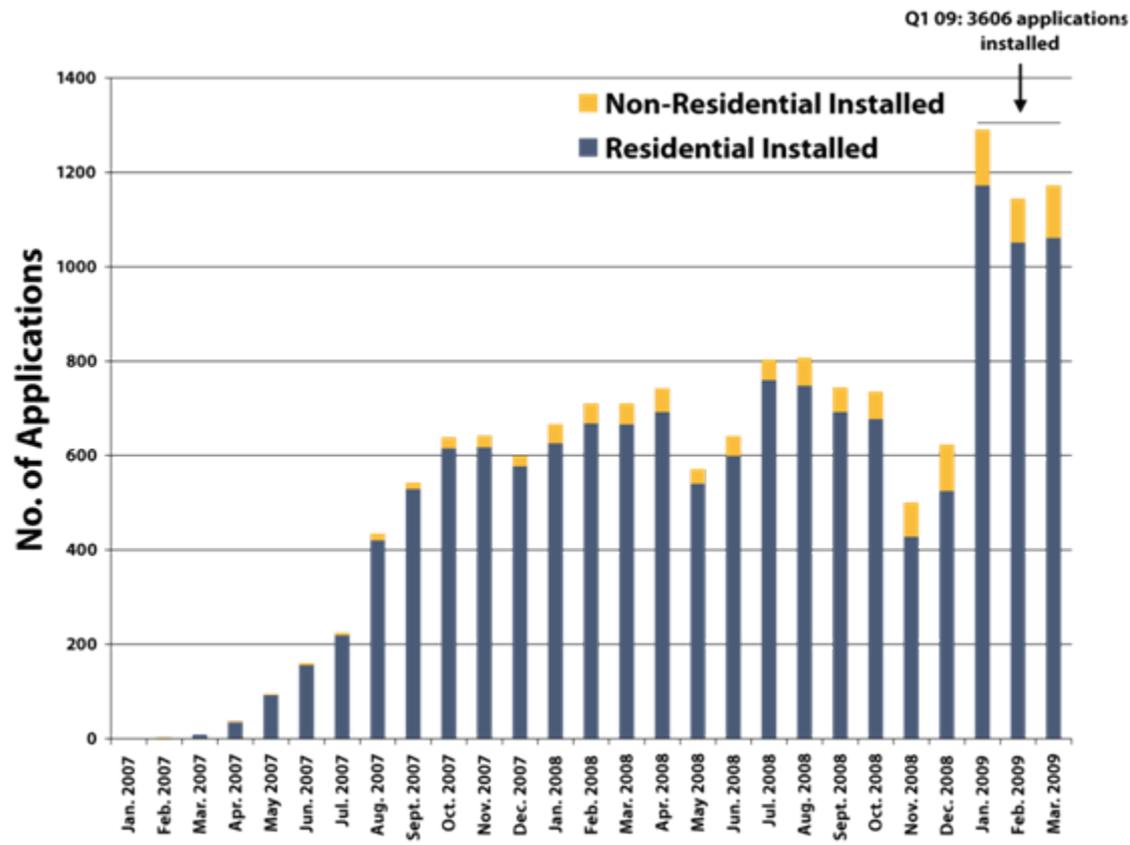
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CSI Installs by Month (MW)



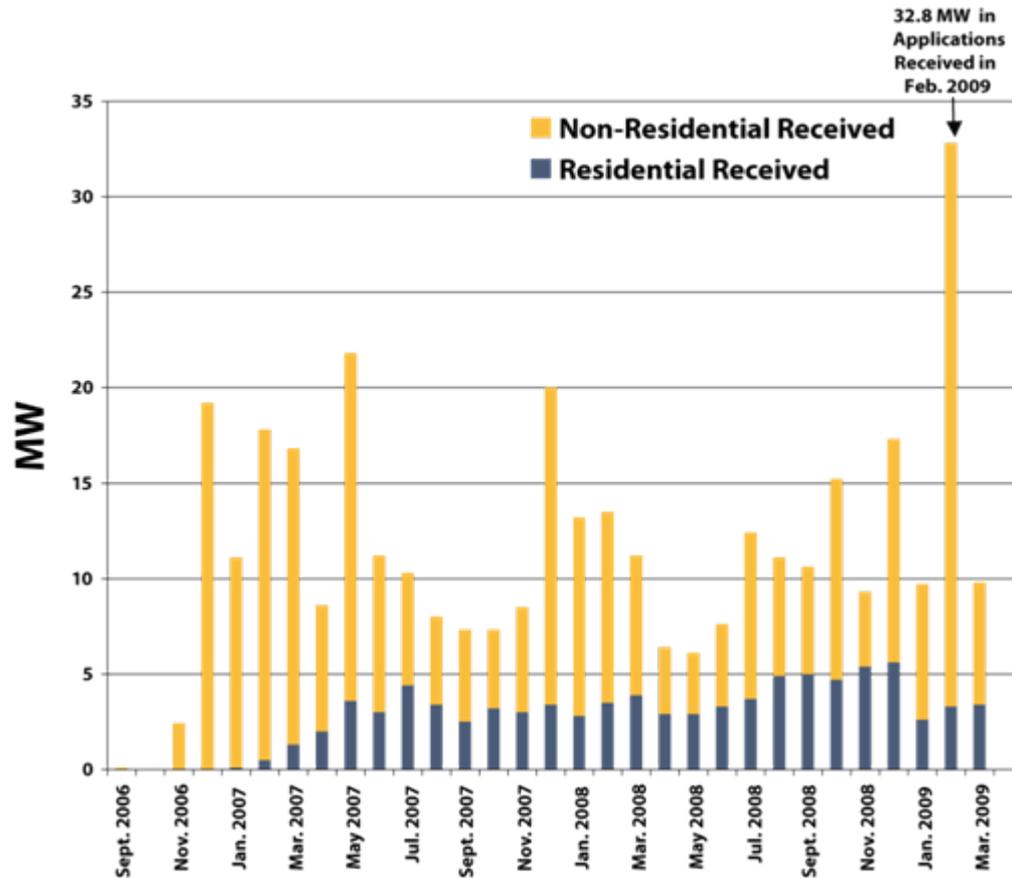
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CSI Installs by Month (# of Apps)



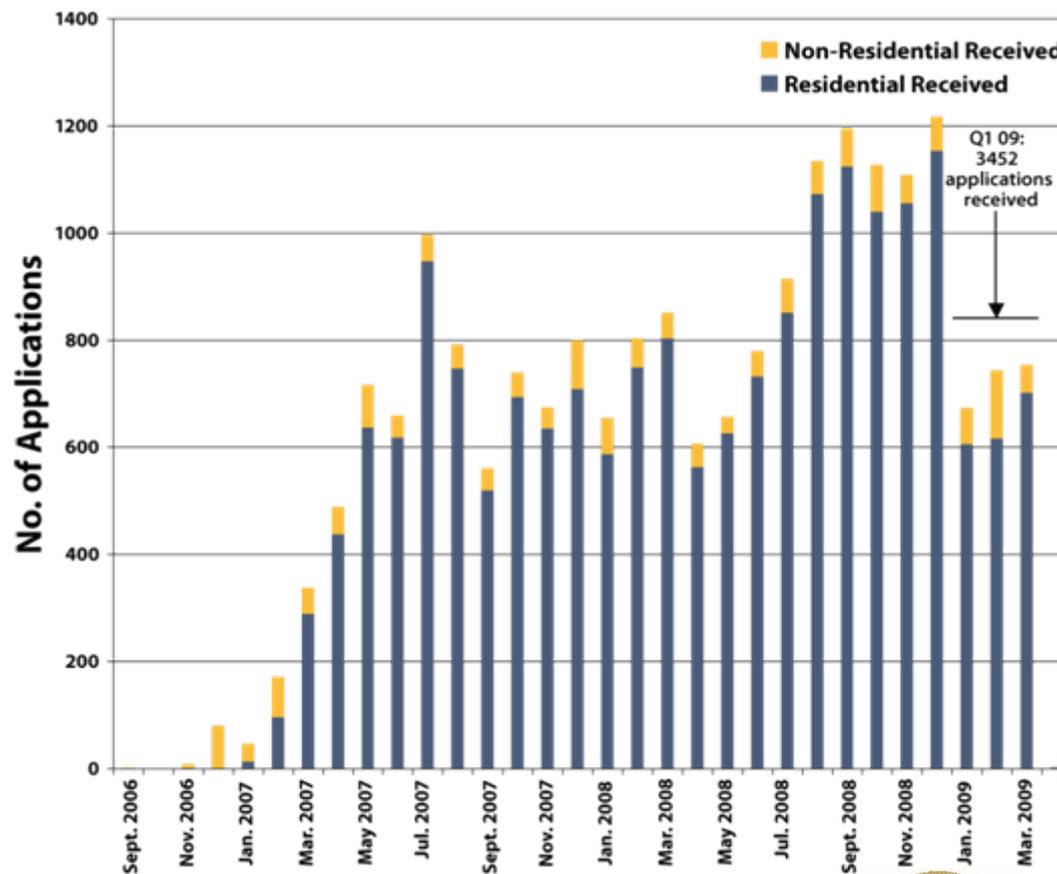
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CSI Applications by Month (MW)



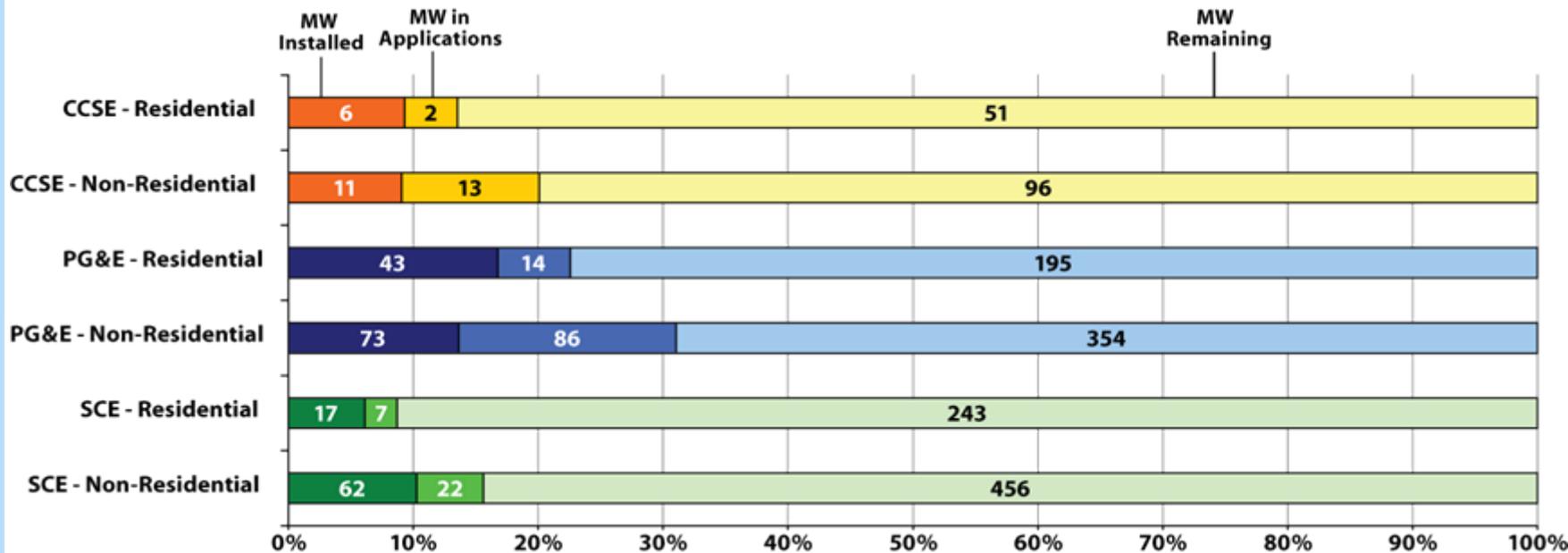
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CSI Applications by Months (# of apps)



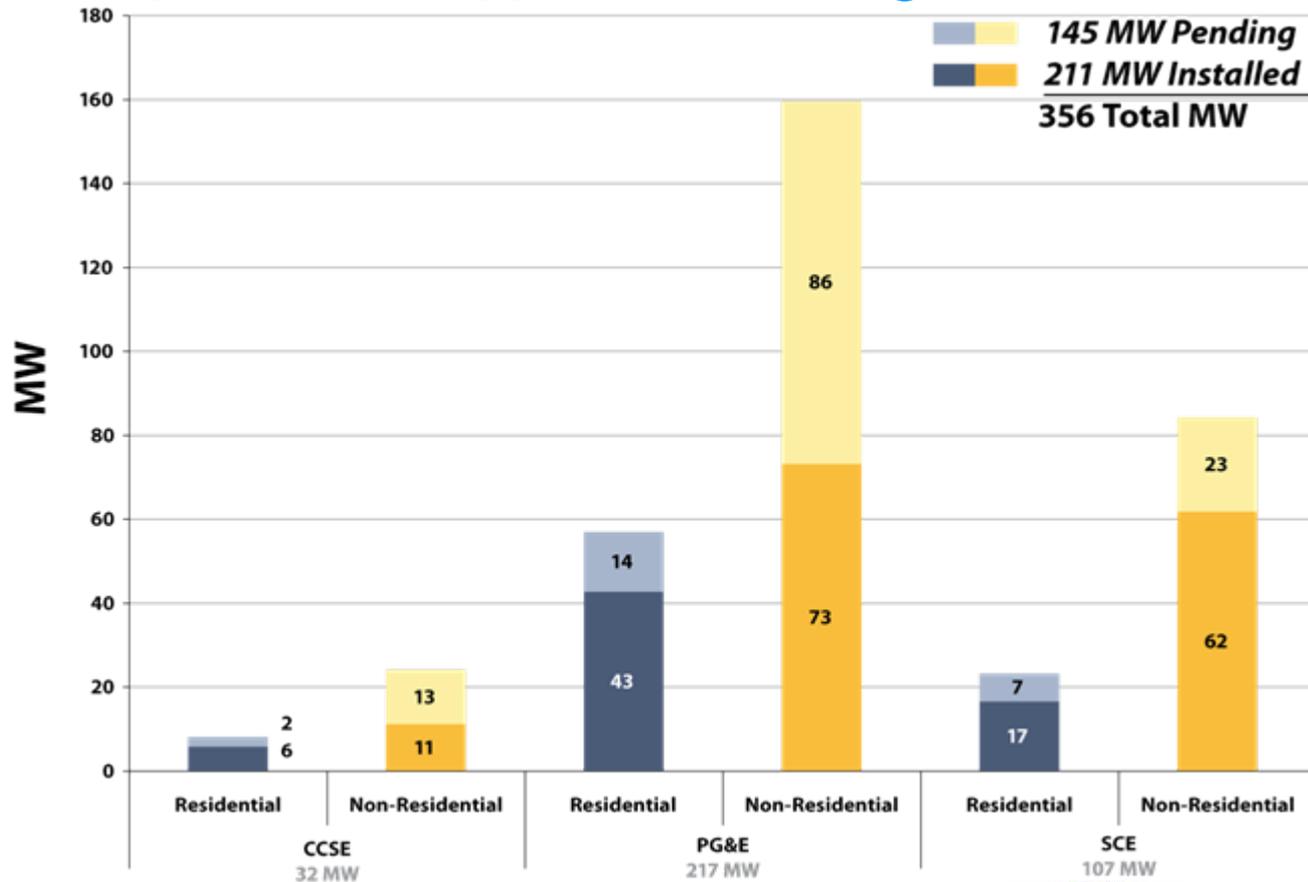
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CSI Progress Towards 1,750 MW Goal



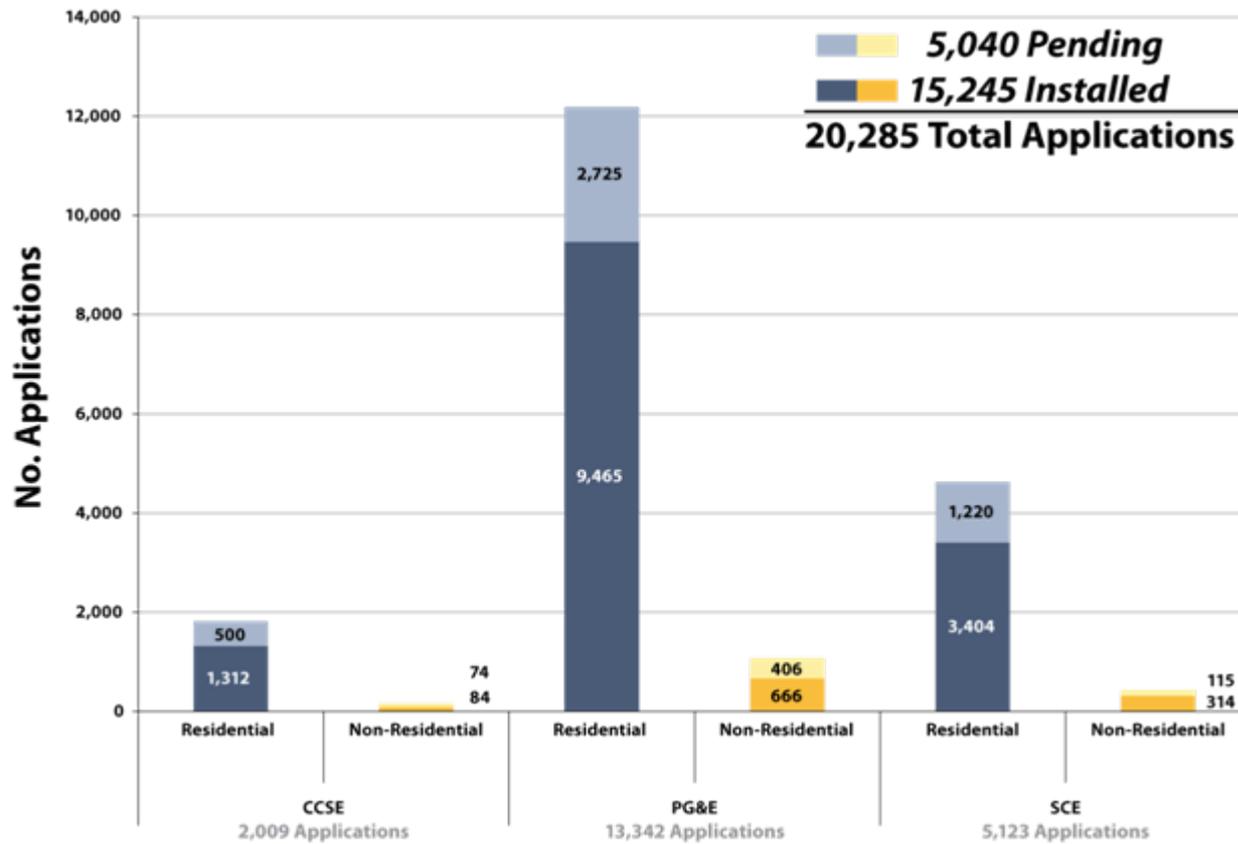
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Total Capacity of CSI Applications by Program Administrator



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Total Number of CSI Applications by Program Administrator



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CSI incentive payments and total solar project costs

Table 4. CSI Program Estimated Incentives and Total Project Costs (\$ millions), by Sector and Pending vs. Installed

	Residential		Non-Residential		Total CSI Applications	
	\$CSI Incentives	\$ Total Project Costs	\$CSI Incentives	\$ Total Project Costs	\$CSI Incentives	\$ Total Project Costs
Pending Projects						
PG&E	\$23.8	\$130.2	\$184.7	\$350.8	\$208.4	\$481.1
SCE	\$14.8	\$69.1	\$56.1	\$183.8	\$70.9	\$252.9
CCSE	\$4.4	\$21.0	\$36.7	\$105.5	\$41.1	\$126.5
Subtotal, Pending	\$43.0	\$220.3	\$277.5	\$640.1	\$320.5	\$860.4
Installed Projects						
PG&E	\$86.3	\$402.7	\$173.3	\$819.3	\$259.7	\$1,221.9
SCE	\$38.7	\$155.8	\$169.4	\$418.3	\$208.2	\$574.1
CCSE	\$13.0	\$53.5	\$33.2	\$69.7	\$46.3	\$123.1
Subtotal, Installed	\$138.1	\$611.9	\$376.0	\$1,307.2	\$514.1	\$1,919.2
Total, All Projects	\$181.1	\$832.2	\$653.5	\$1,947.4	\$834.6	\$2,779.6

Source: www.CaliforniaSolarStatistics.ca.gov, April 1, 2009.



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Questions and Feedback?



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CSI Program Improvements



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CEC Guideline Requirements

- What is it?
 - California Energy Commissions (CEC) guidelines for solar incentive programs in California
 - Known as Senate Bill 1 (SB1)
- Goals
 - High quality solar systems that promote highest energy production per ratepayer dollar
 - Optimal system performance during peak demand periods
 - Appropriate energy efficiency (EE) improvements where solar systems are installed
- Filed Advice Letter (AL) on March 2nd, Implement by July 1st



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Effect of CEC Guidelines on CSI

- Additional EE Measures
 - Disclosure agreement (Res and Non-res)
 - Commitment agreement (Non-Res over 100,00 sq/ft - EPBB)
 - Retrocommissioning for benchmark rating < 75
 - Over 15% of Title 24 Standards (New Construction Non-Res)
- Field Verification Measures
- Shading Measurements
 - Major corners not more than 40 ft apart
- New testing method for modules and inverters
 - Must be CEC listed
- Inverter integrated meters must be tested to $\pm 5\%$
 - Nationally Recognized Testing Laboratory (NREL)
- No Calculator Changes



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Status of CEC Guidelines on CSI

- Waiting for CPUC approval
- Program Administrators (PAs) working to finalize forms and agreements
- PA outreach to industry before implementation



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Future CSI Improvements

Goal:

- Create a paperless process and improve processing efficiency
- Incorporate further program improvements for ease of business
- Further clarify CSI program requirements

❖ **PAs looking to file AL for CSI Handbook changes by mid May**



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Removal Of...

- Original signature requirement
 - Copy, scan, or fax ok
- Utility bill
- System description worksheet
 - Questions to be added to Reservation Request Form
- AB1407
 - Incorporate language into CSI Handbook
- Project Cost Affidavit
 - Incorporate into Incentive Claim Form
- Project Cost Breakdown Worksheet
 - Incorporate into Incentive Claim Form
- Executed PMRS documentation



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Program Improvements...

- Allow for 1-Step application process
 - Interconnected customers only
- Lengthen Commercial expiration date to 18 months
- Remove Demand Response requirement
- Allow three 180 day extensions for schools
 - Legislative mandate
- Add CSLB suspension process
- Add Fraud Section
- Add hinge release language to meet code



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Clarify...

- CSI Handbook
 - Program Section and Technical Section
- “Solar Contractor” vs. “Installer”
- Incentive sector determined by customer tariff schedule



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PowerClerk Updates

Goal:

- Create a paperless process and improve processing efficiency
- Create further application transparency
- Improve data integrity

Future Additions...

- PMRS/PDP panel (4/30/09)
- NAICS code (4/30/09)
- MASH (June 2009)
- Attachment Upload (July 2009)
- Application Upload (August 2009)



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Upcoming PG&E Webinars

**To register –
www.pge.com/solarclasses**

- PowerClerk Update – April 29th
- CSI Handbook Improvements – April 30th
- CSI and Non-pv – May 5th
- Solar for the Entrepreneur – May 8th
- SGIP Overview – May 11th
- Solar and Energy Efficiency – May 12th
- New Solar Homes – May 19th
- Solar – System-life Maintenance – June 8th

****All webinars are free of charge*



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Simplified CSI Calculator



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Agenda

- Background on Calculator
- Review of proposed calculator
- Rationale on proposed change
- Next steps



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Background

- CSI calculator must pay incentives based on Expected Performance
 - Founded in SB1
 - Supported by CPUC Decision
 - Elaborated upon by CEC



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Background

- CEC issued “Guidelines” document for all Solar Programs
 - Calculator must be based on 15 performance metrics
 - Time Dependent Valuations (TDV)
 - Climate Zones
 - Others



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Background

- CEC Issued Report comparing EPBB calculator and NSHP (CEC PV) Calculator
 - Preferred greater specificity with CEC PV incentive results



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Background

- Final Guidelines provided Exemption for CSI calculator

“...(CEC) strongly encourages the CPUC’s CSI program to upgrade its current methods for estimating the expected performance of solar electric generating systems....”



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Proposed Calculator

- See v3.3



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Rationale

- Results are based on TDV weighted impacts
 - Proposed method provides results similar to CEC PV calculator for most applications
- Calculator built using several thousand CEC PV calculator runs
- Incorporates CEC Shading impact
 - Uses Weighed Shade Values as determined by the CSI Shading Subcommittee
- Empower solar stakeholders
 - All calculations are based on lookup tables.
 - Results can be calculated by hand if desired.
 - Impacts of design selections known before running the calculator.



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Next Steps

- Focus Groups
- Incremental Improvements
 - Handling Tilts greater than 43 degrees
 - kWh Estimation (if desired)
 - Usability
- Itemizing necessary changes for statewide database
- Filing Advice Letter and vetting through public process



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Single-Family Affordable Solar Housing (SASH)



- GRID Alternatives, a solar non-profit, is the Program Manager (Contract was finalized in December 2008)
- GRID submitted CSI Program Handbook changes in March 2009, approved by CPUC
- GRID now accepting applications

<http://www.gridalternatives.org/>



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Contractors' State Licensing Board



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General Updates



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New California Energy Commission Solar Contractor List

- **New Feature Update**
- **Looking for your feedback**

www.gosolarcalifornia.org/retailers/index.html



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Solar Water Heating Pilot Program (SWHPP)



- CCSE issued SWHPP Interim Evaluation Report in January 2009
- CCSE released Evaluation Report's "Cost-Effectiveness Appendix" on April 1, 2009
- The Evaluation Report will serve to inform the CPUC in the development of a program under Assembly Bill 1470 (AB 1470)



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Multifamily Affordable Solar Housing (MASH)

- February 2009: PG&E, SCE, and CCSE began accepting applications for the MASH program for Track 1 incentives.
 - Track 1 provides fixed, up-front capacity based incentives
- The PA's filed Advice Letters to include Track 2 incentives and Virtual Net Metering in MASH program
 - Track 2 provides higher incentives through a competitive bidding process
 - Virtual Net Metering allows participants to apply credits from a single solar system to multiple accounts.
- The Advice Letters are currently under review at the CPUC



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CPUC PV Cost Workshop

- March 13th, 2009
- >50 Attendees + phone participants
- Informal, staff driven workshop to address two questions:
 - How do CPUC and CSI Program Administrators collect and use PV system cost information?
 - How can the CSI Program bring down the installed cost of solar? Has there been an effect so far?



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PV Cost Workshop- Takeaways

- Panel/Inverter Market is global
 - Hard for CSI to drive down costs
- BOS/Installation/Admin is local
 - Application and Reporting process
 - Cycle time (permitting, interconnects, inspections)
 - Permitting costs
 - Financing



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PV Cost Workshop – Next Steps

- Consider Eliminating or Simplifying Cost Breakdown Worksheet
 - Ask for what we report.
 - Add relevant PowerClerk fields to Application?
- Reduce Cycle time through streamlining
 - Integration of CSI application with interconnection application
 - Integration of CSI Inspection with Interconnection inspection
 - Introduction of one-step application
- Address Permitting Costs
 - Statewide database of permitting requirements in local jurisdictions
 - Harmonization/Standardization of fees and requirements
 - Partner with CALSEIA/SolarTech
- Align M&E with data collection already done by solar installers



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