

CALSEIA ANNUAL REPORT

2014

CAL  **SEIA**
CALIFORNIA SOLAR ENERGY
INDUSTRIES ASSOCIATION

KEEPING CALIFORNIA STRONG

Dear Members,

For forty years, CALSEIA has represented the best in the solar industry: those companies and individuals who understand not only the importance of public policy but also the strength of speaking with a unified voice.

Today, CALSEIA is the place where solar comes together -- big and small, old and new, local and international, thermal and PV -- to keep California North America's largest and strongest solar market.

As you can see in this Annual Report, we've been busy. From defending net metering and solar friendly rate structures, to turning the lights on for storage, passing the nation's first statewide permitting law, and seeking less disruptive fire code implementation, CALSEIA has successfully worked with all levels of government to keep the path ahead smooth for continued growth.

We've managed this workload thanks to a 78% increase in our membership and several successful fundraising efforts, including our Capitol Campaign and Summerfest at Intersolar, that have allowed us to double our staff and budget – all this in just twelve months!

Looking ahead, 2015 will be another blockbuster year with NEM 2.0, rate change proposals, AB 2188 implementation, ongoing fire code issues, and, of course, fighting for the extension of the ITC.

On behalf of the CALSEIA Board of Directors and staff, we thank you for your ongoing support.

Sincerely,



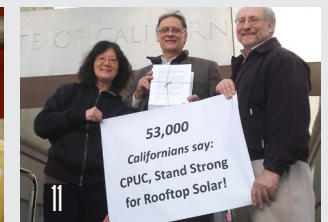
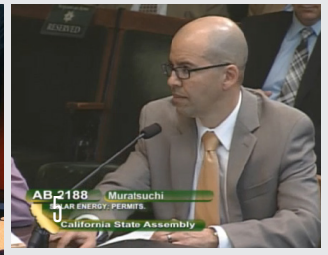
Richard "Rick" Reed
Board President



Bernadette Del Chiaro
Executive Director

Opposite Page: (1) Michael Peevey receives "Champion of Change" award at Intersolar North America in July. (2) Gov. Brown delivers opening address to Intersolar North America. (3) Bernadette Del Chiaro shares the stage with Gov. Brown at Opening Ceremony of Intersolar. (4) Kelsea Jones congratulates San Jose for ranking 4th nationally in solar energy with Vice Mayor Nguyen. (5) CALSEIA Lobbyist, Will Gonzalez, testifies before the State Assembly on AB 2188 permit streamlining bill. (6) Big crowds gather for opening day at Intersolar North America in San Francisco in July. (7) Solar folks enjoy networking at CALSEIA's Annual Solar Summerfest event in July. (Photo: Justin Vandebroek) (8) Brad Heavner leads panel session on the future of solar in California. (9) Bernadette Del Chiaro and President Rick Reed honor AB 2188 Author, Al Muratsuchi, with CALSEIA's "Solar Person of the Year" award. (photo: Thomas Hardman). (10) CALSEIA members enjoy the 2014 Holiday Party at Sungevity's offices in Oakland (photo: Thomas Hardman). (11) 53,000 solar customers sign NEM grandfathering petition to CPUC.

A Look Back at 2014



Net Metering on the Line



People have a fundamental right to generate their own power. CALSEIA is fighting to maintain true net metering.

As the solar market has grown, utilities have increasingly complained about how much revenue they lose from customers going solar. In 2013 they passed AB 327, which puts the future of net metering in question.

NEM 2.0

The legislation directed the CPUC to create a new “tariff or contract” – known as NEM 2.0. Utilities are pushing to scrap NEM in favor of a feed-in tariff based on a narrow definition of their avoided costs.

A key provision of AB 327 says the new tariff must ensure that distributed generation continues to grow sustainably. CALSEIA is presenting hard data on the market impacts of proposals to change net metering.

Protecting Existing Customers

Utilities proposed that existing solar customers be transferred from the current net metering rules after only 7-11 years. This would have prevented many customers from recouping their investments according to their original expectations.

CALSEIA filed pleadings at the CPUC and mobilized solar supporters. Working with allies, we collected 50,000 signatures on a petition. We organized letters from key customers and from solar companies. We worked with reporters to gain positive media coverage. We met repeatedly with decision makers. The CPUC decided that existing customers and those who install before NEM 2.0 begins can keep the original net metering rules for 20 years.

GETTING THE MATH RIGHT

California regulators have never fully incorporated the carbon reduction benefits or the job creation benefits into value calculations of clean energy. Utilities also understate the value of solar in reducing their distribution system costs.

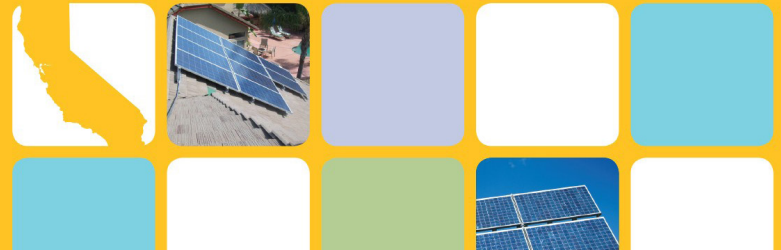
CALSEIA is pushing for specific changes to the CPUC’s cost-benefit model to include benefits that have been unfairly excluded in the past.

Streamlined Permitting



California Solar Permitting Guidebook

Improving Permit Review and Approval for Small Solar Photovoltaic (PV) Systems



Stuck in the 19th Century

It takes less than a day to install a typical home solar system. Yet it can take up to six weeks to get a permit. The overly bureaucratic and sometimes byzantine process for securing what should be a simple permit is becoming a bigger problem as permit applications flood building departments.

With a few exceptions, most cities and counties process permits the old fashioned way: in person. They treat all installations alike; simple systems go through as much rigor as complex ones. This creates inefficiencies and added costs. However, change is on the way!

AB 2188

It is now California law that every jurisdiction adopt a streamlined permitting practice for residential solar PV and thermal. The practice must be adopted, by ordinance, by Sept. 30, 2015. Cities must accept electronic submissions, post applications online, limit inspections to just one, and provide standardized documents to help speed review.

CALSEIA worked with the author, Assemblymember Al Muratsuchi, to craft the bill and then generated hundreds of support letters, organized district meetings and expert testimony, and directly lobbied. The ultimate result was bi-partisan support for one of the strongest permitting laws in the country.

The Guidebook

The Office of Planning and Research published a 2014 California Solar Permitting Guidebook, including checklists and standard plans as well as recommendations for streamlined permitting that include timelines for review and inspections. These documents and recommendations are mandated by AB 2188. CALSEIA sat on the steering committee for the Guidebook.

Permitting is being brought into the 21st Century. CALSEIA is cutting soft costs by streamlining permitting for all solar technologies.

Boosting Solar Water Heating

Solar thermal created the solar industry. We need to rebuild the water heating market.

Heating water in homes and businesses accounts for 3.5%-4% of California's total statewide greenhouse gas emissions. Given the state target of reducing emissions to near zero by mid-century, solar water heating must be a fundamental part of the state's climate action plan.

Incentive Levels

The California Solar Initiative includes the CSI-Thermal program to boost the solar water heating market, but rebates have not been high enough to move the market to the levels needed to meet the goals of the program. If incentives are increased, better project flow will drive down costs and transform the market.

CALSEIA submitted a petition at the California Public Utilities Commission to increase incentives by 39% for multifamily buildings and by 61% for single-family homes. The petition took months to research, draft, and win the support of the utilities. In July, it was co-filed by the utilities and supported by the Office of Ratepayer Advocates. It has been well received by Commission staff, with action anticipated in early 2015.

Pool Heating

The CSI-Thermal program was expanded in 2014 to include incentives for commercial pool heating systems. Commission staff needed much education on how pool systems are different from domestic water heating systems, and the program rules went through many revisions before reaching their final form.

State Carbon Plan

We have begun laying the groundwork for continued incentives beyond the CSI-Thermal program through the state carbon cap-and-trade program. Funds will be available for programs that offset natural gas consumption, and we have been working to ensure that solar water heating is included as a fundamental component of the state roadmap for reducing carbon emissions.



Fire Drill

California recently adopted a new code requirement that will go into effect January 1, 2015 wherein all PV systems are required to be given the same class rating (A, B, or C) as the roof upon which they are to be installed. This change in state building code is dependent on an updated UL 1703 testing procedure.

Putting the Fire Out

In early 2014, the new UL 1703 code took effect before UL, or any other lab, had a chance to test and certify many PV systems under the new standard - including testing of modules and roofing as a system. CALSEIA was quick to negotiate, winning a 1-year extension on implementation of UL 1703 with the State Fire Marshal.

Preparing the Industry

Code changes such as these can drastically affect the industry's ability to conduct business as usual, instead halting projects while new, code-compliant equipment is getting certified. CALSEIA held two webinars with leading code experts from UL, Solar ABC's, and others to educate the industry on these important changes. We sent out numerous informational emails to the industry at-large and held multiple meetings with fire officials, building departments, and industry leaders in order to pave the way for as smooth a transition as possible.

1703 CODE CHANGES

CBC 1505.9

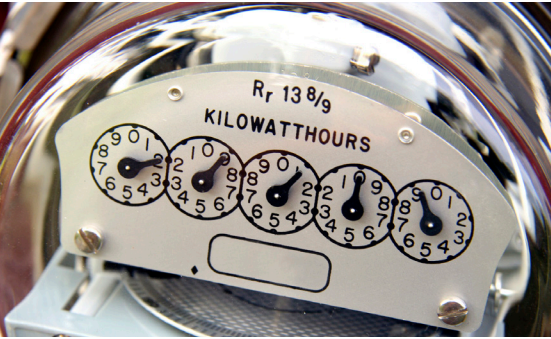
"Effective January 1, 2015, rooftop mounted photovoltaic systems shall be tested, listed and identified with a fire classification in accordance with UL 1703."

CRC R902.4

"Effective January 1, 2015, rooftop mounted photovoltaic panels and modules shall be tested, listed and identified with a fire classification in accordance with UL 1703."



Defending Solar Friendly Rates



Solar customers relieve strain on the grid and should receive favorable rate treatment as a result. Utilities tend not to see things that way and have proposed to roll back solar friendly rate structures or block them from being expanded. Fortunately, the solar industry won some key battles this year.

Commercial Rate Updates

PG&E

CALSEIA is opposing PG&E's proposal to limit eligibility in Schedule A-6 to small commercial customers. Our protest, testimony, briefs, cross-examination transcript, and letters from customers are now on the desk of the administrative law judge, and we await a decision.

The CPUC voted in December to create an Option R for E-19 and E-20 customers without any cap on participation. Large commercial PG&E customers now have a rate option with reduced demand charges.

SCE

Southern California Edison was obligated to make a proposal in this year's rate case regarding the solar-friendly Option R tariff, which had been closed to new customers since October 2013. Their proposal was to keep the tariff closed. CALSEIA submitted expert testimony and helped negotiate a settlement that allows 250 MW worth of new customers to take service under Option R, which has reduced demand charges. The settlement also reverses SCE's proposal to close the solar-friendly TOU-D-T rate. The Commission approved the settlement in December.

SDG&E

CALSEIA submitted testimony in November in the SDG&E rate case in which the utility is proposing to move the time-of-use peak period later in the day and to move a lot of off-peak hours into semi-peak. This may need to happen in the future, but the proposal is premature and fails to protect the investments of customers who expected their rate structure to change more gradually. We will continue to push for a menu of TOU rate options that includes at least one solar-friendly rate structure.

Rates with reduced demand charges were extended and broadened in 2014

Defending Solar Friendly Rates

Residential Rates

AB 327 of 2013 paved the way for flattening the rate tiers and increasing fixed charges. CALSEIA submitted expert testimony on the impacts on solar customers, and cross-examined witnesses from each of the investor-owned utilities during hearings in November. We proposed a compromise rate structure that reduces the tier differential while maintaining value for solar customers. Significant change is inevitable, but we are working to make sure the glide path toward a different rate structure is gradual. We will continue advocating for fair treatment for solar customers in this proceeding until the decision is final.

NEM Aggregation

Meter aggregation got off the ground in 2014, allowing customers with multiple meters on adjacent properties to install one solar system to offset electricity usage on multiple accounts. The initial utility proposals included meter fees that would have made aggregation prohibitively expensive, but our advocacy was successful in getting those fees reduced.



Intervention is needed when utilities propose rate changes that would hurt solar customers and the market

Modernizing the Grid



ENERGY STORAGE

In 2013 utilities stopped interconnecting storage systems paired with net metered generation, and it took more than a year to get the CPUC to force them to resume interconnections. After CALSEIA-driven media and lobbying, in May 2014, the Commission clarified that paired systems are eligible for the standard NEM tariff in most situations.

CALSEIA also lobbied successfully for extension of the Self-Generation Incentive Program, which the legislature reauthorized through 2020. SGIP rebates offset a substantial portion of battery installation costs.

SMART INVERTERS

As the number of systems has risen, it has been increasingly important that they not all trip off or restart at the same time in the event of grid abnormalities. Also, having small inverters dispersed throughout the energy system will be a tremendous asset when they are able to provide functions that maintain power quality.

CALSEIA is an active participant in the Smart Inverter Working Group and the CPUC's Rule 21 interconnection proceeding. Details were finalized this year on an initial set of advanced inverter functions that will be required beginning in 2016, and work began to develop another set of functions to be required later.

DISTRIBUTION PLANNING

Utilities will soon be required to submit distribution resources plans that detail what will be needed to integrate more distributed resources on the grid and how any new expenses will be covered. Formal negotiations at the CPUC have been accompanied by an informal working group, where we have been able to work with utility engineers free of the usual legal and political filters.

Mobilizing Solar Supporters



Lobby Days

CALSEIA held two lobby days in 2014. The first one, in March, was attended by industry executives who met with 50 members of the Assembly and Senate. The second lobby day we partnered with TASC to hold “Solar Installer Day” at the Capitol. Over 100 solar installers from across the state wore hard hats and bright yellow shirts and called on policy makers to create jobs by cutting red tape through streamlined and standardized permitting.

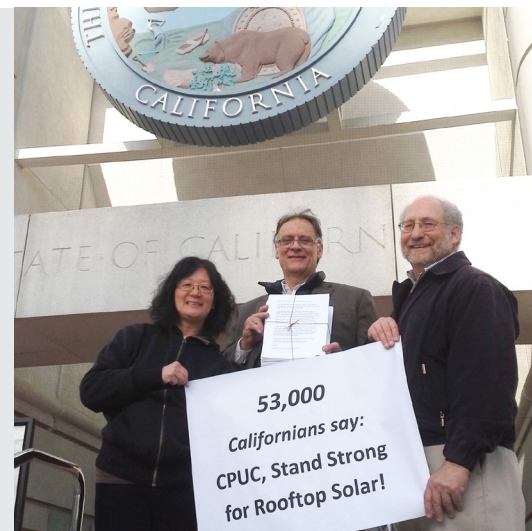
SOLAR JOBS

47,000

people are employed in California's Solar Industry - that's **more than the 3 IOU's combined!**

NEM Grandfathering Petition

CALSEIA flexed its grassroots organizing muscle by generating over 3,000 signatures from solar customers statewide on a petition urging the CPUC to honor their net metering contracts. While the utilities were pushing for 7-11 years of grandfathering, with the help of CALSEIA's coalition partners, over 50,000 signatures total were delivered to the CPUC. It made an impact because in March, the CPUC ruled that these existing customers would be grandfathered for 20 years - nearly the life of their system.



CALSEIA

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Rachel Van Wert, Leadership for a Clean Economy

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Eddie Price, GRID Alternatives
Martin Learn, Home Energy Systems
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15
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6
WEBINARS
IN 2014

Mid-State Solar
 Milholland Solar & Electric
 Mission Solar Electric
 Mitsubishi Electric, US
 IncMohrPower Solar Mounting Systems, Inc.
 Murley Consulting Group
 NABCEP
 Natron Resources Inc.
 NetZero Energy LLC
 New Day Solar
 Nextility
 NEXTracker, Inc.
 North Coast Solar
 Nova West Solar

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 Santa Cruz Solar
 Scatec Solar North America, Inc
 Scudder Solar Energy Systems
 Sea Bright Solar Inc.
 Shorebreak Energy Developers
 SIC USA LLC
 Sierra Pacific Home & Comfort
 Silevo, Inc.
 Sky Power Systems
 Sol Systems
 Sol-Tek Industries, Inc.
 Solar Census
 Solar Center
 Solar FlexRack
 Solar Forward
 Solar Hydronics Corporation
 Solar Revolution
 Solar Roof Dynamics
 Solar Universe

142
MEETINGS
 WITH POLICYMAKERS

A Special Thanks to...



**401
PAGES
OF CPUC
FILINGS**

**24
CHAPTER
MEETINGS
IN 2014**

**78%
MEMBERSHIP
GROWTH**

- Solar Unlimited Inc
- Solar Vast
- Solar Works
- Solar-Oversight
- SolarCity
- SolarCraft
- Solare Energy, Inc.
- SolarEdge Technologies
- Solarponics
- SolarPV International
- Solartronics
- SolarWorld Americas
- Solectria Renewables
- SolEd Benefit Corp
- Sollega Inc.
- Solmetric Corporation
- Solopoly Inc.
- Southwestern Solar Systems

- Spectrum Energy Development, Inc
- Spice Solar, Inc.
- Stanford Transportation Group
- Staten Solar Corporation
- Stellar Solar
- Sullivan Solar Power
- Sun Light & Power
- Sun X Solar Inc
- Sunchiller, Inc.
- Suncrest Solar
- SunEarth, Inc.
- Sungevity
- SunGreen Systems Inc.
- Sunlight Energy Systemst
- SunModo Corporation
- SunPower Corporation
- Sunrun
- SunStreet Energy Group LLC
- Suntrek Industries, Inc.
- SunUp Systems
- SunWater Solar
- Sutton Enterprises
- Synergy Solar & Electrical Systems Inc.
- TerraVerde Renewable Partners
- The Solar Company
- UC Solar/UC Merced
- UMA SOLAR
- UNIRAC, Inc.
- Unlimited Solutions, LLC
- Vasco Solar Energy
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