

# 2021 ANNUAL REPORT



SaveCaliforniaSolar.org



CALIFORNIA SOLAR +  
STORAGE ASSOCIATION  
smart local energy



# REFLECTING ON 2021

In 2021, the solar and storage industry of California showed mettle. Faced with repeated attacks on multiple fronts, the nation's largest group of clean energy businesses rose to meet those threats head-on, all while installing more behind-the-meter solar as well as more behind-the-meter storage statewide than in any previous year. All this amidst a continuing global pandemic, supply chain crisis, and economy-wide worker shortages.

The “best of times, worst of times” story of 2021 is not surprising. Greater numbers of consumers demanded cleaner, more reliable energy in 2021 than ever before and the industry met that demand with ever-improved products and services. Meanwhile, having “been to this rodeo before”, the distributed solar and storage industry recognized the anti-competitive threats coming from the utilities, and quickly mobilized itself and its consumers to fight back.

What made 2021 unique was both the scope and scale of the attacks. Net metering, a foundational policy, was attacked in rapid-fire succession at the Public Utilities Commission (CPUC), in the legislature, and at the state's 5th largest utility, SMUD, in Sacramento. In addition, the utilities went after contractor licensing at the Contractor State Licensing Board (CSLB).

What's more, the utilities executed this multi-pronged attack not as themselves – unpopular messengers in the proverbial public square – but through a small group of surrogates: the union, the professor, the ratepayer watchdog, and the environmental group. The big three – Sempra, Edison, and PG&E – made a Machiavellian attempt to once and for all shove “the competition”, as they see it, over a cliff.

But the CALSSA community rose to the challenge and not only fought back directly but, for the first time, helped to mobilize our consumers to come down onto the battlefield and fight for themselves as well. The results were spectacular – defeating a seemingly invincible bill, getting Governor Newsom to disown the tarred and feathered solar tax, and winning a legal battle at the CSLB.

On the following pages, you'll read some of the highlights of this past year. There is much to be proud of. Yet, as we write this letter, the fight continues unabated. So far, 2022 is shaping up to be an even bigger year – both the good and the bad – than 2021. Amidst all this turmoil and hullabaloo stands the power of working together. Thank you for your support.

Onward and upward!



**Bernadette Del Chiaro**  
Executive Director



**Ed Murray**  
Board President

# OUR TEAM



**Bernadette Del Chiaro**  
Executive Director



**Brad Heavner**  
Policy Director



**Elise De Grande**  
Operations Director



**Josh Buswell-Charkow**  
Deputy Director



**Carter Lavin**  
Membership Director



**Meghan Vincent-Jones**  
Marketing Director



**Ben Davis**  
Policy Associate



**Kate Unger**  
Senior Policy Advisor



**Igor Tregub**  
Senior Policy Advisor



**Leo Wallach**  
Public Relations  
RALLY

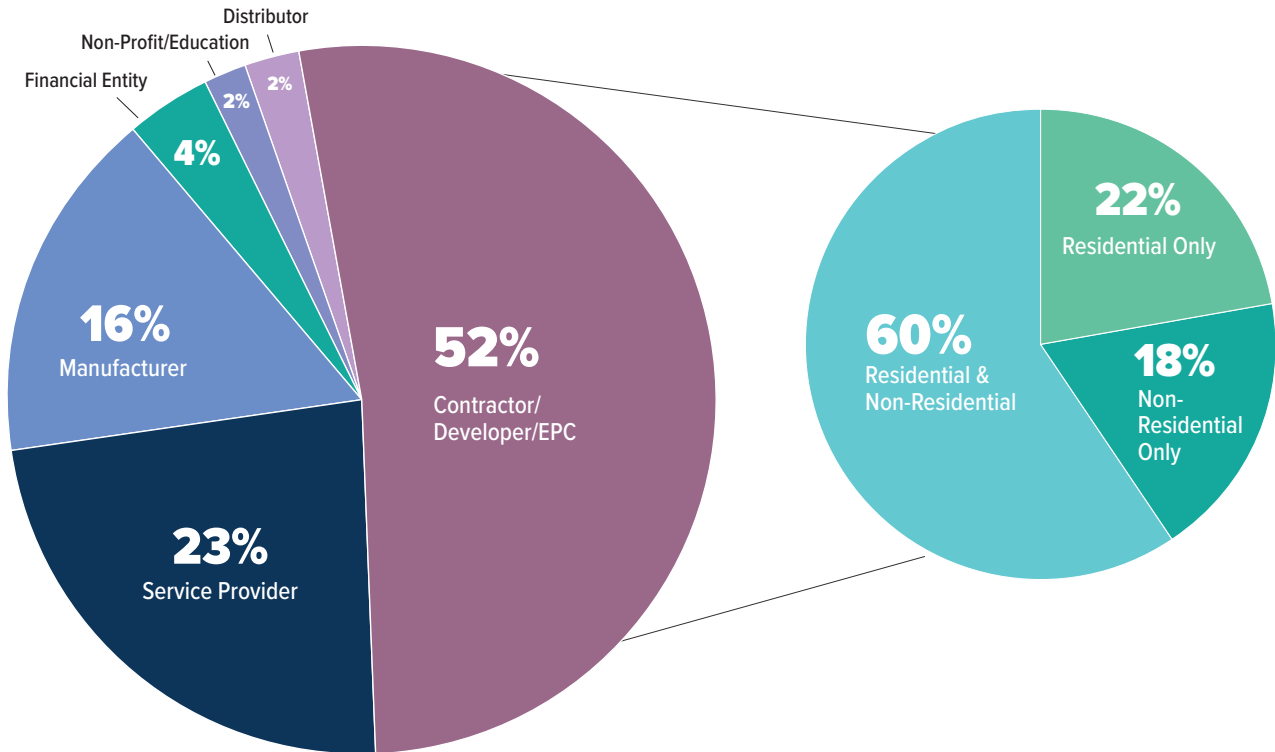


**Kim Stone**  
Lobbyist  
Stone Advocacy



**Donald Simon**  
Legal Counsel  
Wendel, Rosen, Black & Dean LLP

# OUR MEMBERS



127 Energy LLC  
 180 Solar Power  
 1SolarRite  
 A-1 Contractors  
 A-C Electric Company  
 A.M. Shine Electric Inc.  
 A.M. Sun Solar, Inc.  
 A1 Sun, Inc.  
 Aardema Electric & Construction Corp.  
 ACIP Energy  
 ACR Solar International Corp  
 Action Energy  
 Adams Solar Electrical And Electric  
 Addy Electric  
 Advanced Conservation Systems, Inc.  
 Aerocompact Inc.  
 Aerotek  
 Aeterna Energy, LLC  
 Aguilon Enterprises LLC  
 Alacrity Energy LLC  
 Albion Power Company, Inc.  
 ALIVE Solar & Roofing  
 All Save Energy  
 All Valley Solar Inc.  
 Allied Energy  
 Allterra Solar  
 Allume  
 Alpha Energy CA  
 Alpha Energy Management Inc.  
 AlsoEnergy  
 Alta Solar  
 Altadena Energy & Solar Inc  
 Altair Solar Inc  
 Alternate Energy Technologies, LLC  
 Alternative Energy Systems (AES Solar)  
 AltSys Solar Inc  
 Ambrose Solar

Ameco Solar Inc  
 Ameresco  
 American Solar Corporation  
 Amped Solutions, Inc.  
 AMPWRX  
 Antenna Group  
 Apex Natural Renewable Generation, LLC  
 Apex Solar  
 APG Solar  
 Applied Building Science  
 Applied Solar Energy  
 Aquatherm Industries, Inc.  
 ARAM SOLAR  
 Arcadia Solar  
 Arnold Solar Inc  
 Arrow Energy Solar Systems  
 Arvo Solar  
 Associated Community Solar Sciences Corporation  
 Atmos Financial  
 Auburn Solar  
 Aurora Solar Inc.  
 AutoGrid Systems, Inc.  
 Auxin Solar  
 AWS Electrical & Solar Inc.  
 Axis Solar Design  
 Aztec Solar  
 B & B Solar Inc  
 Baker Electric Home Energy  
 BARIL Engineering  
 Barrier Solar Inc.  
 Base Energy, LLC  
 Battery Solutions  
 BayWa r.e. Solar Systems LLC  
 BBL Solar Design  
 Bear Solar Inc.  
 Beeson Solar Electric

Berger Solar Electric, LLC  
 BidList  
 Bland Solar and Air  
 Blu Banyan  
 Blue Planet Energy  
 Blue Planet Water & Power Co Inc  
 Blue Sky Solar  
 Blue Sky Utility LLC  
 Bodhi  
 Booth Construction  
 BOS Developments  
 BPi  
 Brady Law  
 Brandon Carlson Electrical Consulting  
 Bright Power  
 BrightOak  
 Brighton Energy  
 Brooks Engineering  
 BSW Roofing, Solar and Air  
 BTA Solar  
 Building Energy and Power Solutions  
 Burnham Energy Inc.  
 BVI Solar  
 BYD Energy  
 Byers Solar  
 C.E. Solar - A Division of Connector Electric  
 CA Solar Group  
 Caiman Engineering Inc.  
 Cal Paso Solar Electric  
 Cal-Sun Construction, LLC  
 CalCom Energy  
 Cali One Services  
 California Clean Energy LLC  
 California Solar Electric Company  
 California Solar Electric Systems, Inc.  
 California Solar Innovators dba CalSolar  
 California Solar Installers



CalSolar, Inc.  
Canyon Construction Services  
Capital City Solar  
Capital One  
Castone Roofing and Construction, Inc.  
Catalyze  
CDF Labor Law LLP  
CED Greentech  
Cenergy Power  
Centrica Business Solutions  
Century Roof & Solar  
Cervus Inc  
Charged Up Energy  
CHERP Inc.  
Chico Electric  
Chico Solar Works  
Chint Power Systems  
Cinnamon Energy Systems, Inc.  
Citadel Roofing & Solar  
Clayco Electric, Inc  
Clean Energy Solar Direct  
Clean Energy Solutions of CA  
Clean Point Energy  
Clean Solar  
CleanSpark  
CleanTech Docs, Inc.  
CleanTech Energy Solutions Inc  
CleanView Capital  
ClearSpot Energy  
Climatec, LLC  
Coast Energy  
Cobalt Power Systems Inc  
CollectiveSun  
Communication Infrastructure Corporation  
Cool Earth Solar  
Corda Solar LLC  
Core Energy Group, Inc  
Cosmic Solar  
Cross Consulting Services  
Crown Road Energy, LLC  
CSA Group  
CSE (Center for Sustainable Energy)  
Current Home  
Current Renewables Engineering Inc.  
Custom Power Solar  
Darfon America Corp.  
Day One Solar  
DC Solar Electric  
dcbel LLC  
Demand IQ  
DG+Design  
Diablo Solar Services  
Digital Power Corporation  
Discover Battery  
Distributed Energy Innovation  
Dividend Finance, LLC  
DSD Renewables  
EagleView  
Earth Electric Incorporated  
East Penn Manufacturing / MK Battery  
Eastridge Workforce Solutions  
Eco Energy  
Eco Foundation Systems Inc.  
EcoDirect, Inc.  
EcoFasten an Esdec Company  
EcoMotion  
EDF Renewables  
EDPR NA Distributed Generation  
Effect Energy Inc  
EFI Electric  
Eguana Technologies  
Electrical Works Etc.  
Electriq Power  
Elevation Energy  
EliteSolar  
EMCOR Mesa Energy Systems  
Empire LE  
ENACT SYSTEMS INC

EnelX  
Energport, Inc  
Energy Construction Services  
Energy Loan Network  
Energy Toolbase  
EnergyBin  
EnergySage  
ENGIE North America  
Enphase Energy Inc.  
EPC Power Corp.  
EPX Group  
Ergosun  
Esquared Electric Inc  
Extensible Energy  
EZ Solar  
FAFCO  
FBC Solar  
Feather River Solar Electric  
Fimer  
Firebrand Safety Systems, Inc.  
Firefly Energy  
First Edison  
First Response Solar  
Folsom Labs  
ForeFront Power  
Fortress Power  
Fortune Energy  
Freedom Forever  
FreeVolt USA Inc  
Fresource Energies Inc. dba Santa Ynez Valley  
Solar  
Fronius USA  
Funds4Solar  
FUSION POWER DESIGN  
GAF Energy  
Genability, Inc.  
Generac Power Systems  
Generate Capital  
Geo-Engineering Solutions Inc.  
GetTheReferral.com  
GigaWatt, Inc.  
Ginlong Solis USA  
Go Electric Inc.  
Gold Electric, Inc.  
Gold Rush Energy Solutions  
Golden Energy  
Golden State Solar Inc  
Good Sun  
GoodLeap, LLC.  
GoodWe  
GoSolarPros  
Gr8 Energy  
Graybar  
Great Circle Solar Management Corp  
Green Convergence  
Green Power Pros  
GreenPACE Capital  
Greenskies Clean Energy (DBA CleanFocus)  
GreenStruxure  
Greenwork  
GRID Alternatives  
Growatt USA Inc.  
Halvorsen Solar Service  
Hammond Climate Solutions  
Harmony Air Inc  
Harness Power  
Harrison Electric & Solar  
Haven-Electric, Inc  
HDM Renewable Finance  
HeatSpring  
HES Solar  
Highline Builders  
Highpoint Solar  
HMH Energy Resources, Inc.  
Home Run Financing  
Hooked On Solar  
Hot Purple Energy  
Hot Watts Technology

Hoymiles  
HPM Solar Inc  
Hyperion Solar  
Hyperlight Energy  
I Love My Solar  
IAPMO  
IGS Energy  
IMO Automation  
Indaspec, LLC  
Independent Electric Supply  
Infinity Energy  
International Code Council (ICC)  
Intertek  
Invinity Energy Systems  
IronRidge  
Ivy Energy  
James G. Parker Insurance & Associates  
Javkin LLC  
JDS Power, Inc.  
JinkoSolar (U.S.) Inc.  
JKB Energy  
Johnson Controls  
Jonas Energy Solutions  
JTG/Muir  
Jua Capital  
Just Leaks  
K & D Electric, Inc.  
K2 Clean Energy Capital, LLC  
K2 Systems  
Kahn Solar  
Kenwood Energy  
Keyes & Fox LLP  
KG Solar Solutions  
King Energy  
Kitu Systems, Inc.  
Klein Power Electric  
Koben Systems Inc.  
Kohler Company  
Kramer PV Associates, Inc  
Kuubix Energy  
LA Sun Partners  
Laketricity  
LarSun Solar  
Layered Conceptz  
Legacy Risk and Insurance Services  
Lets Get Solar  
LG Electronics U.S.A. Inc.  
LG Energy Solutions Michigan, Inc.  
Lion Energy  
LONGi Solar  
Lumen Energy, Inc.  
Lumin  
Luminace  
Luminalt Energy Corporation  
Lyra Solar  
M Bar C Construction, Inc.  
Madison Energy Investments  
Magic Sun Solar Inc.  
Main Street Launch  
Malden Solar  
Marshall DC Lighting  
Martin Herzfeld  
Martin Webb Consulting  
Matadors Community Credit Union  
Maxout Renewables  
Mayfield Renewables  
MBC Renewables  
MBL Energy  
McCalmont Engineering  
McPherson Engineering  
MD Electric & Solar Inc  
Measure The Sun  
MEI Renewables  
Mel Bradley Electric  
Mendocino Solar Service  
Michael & Sun Solar Inc  
Mid-State Solar  
Milestone Risk Management

# 2021 MEMBERS (con't)

Mission Solar Electric  
Mission Solar Energy  
MMCSolar  
Modernize Power  
Mohr Power Solar  
Momentum Solar  
Morpho Energy  
Mosaic  
mPower Energy  
Mr. Roofing  
Mynt Systems  
naak Power Partners  
NABCEP  
Nabu Energy LLC  
Nationwide Sun  
Natron Resources Inc.  
NeoVolta  
New Day Solar  
New Gen Energy Corporation  
Newfront Insurance  
Newport Power  
Nexamp, Inc.  
Next Energy  
Next Phase Electric  
Next Solar Inc  
Nexus Solar  
Nor Cal Solar  
NorCal Home Systems  
North Bay Solar Services  
North Coast Solar (Energy Equity)  
Northern Electric and Power LLC  
Northern Pacific Power Systems  
Nova West Solar  
NovaSolix, Inc  
Noyo Electric and Solar  
npc Solar  
Nuance Energy Group, Inc.  
NuLife Power  
Nuvation Energy  
O'Connell Solar Consulting  
O&M Solar Services, LLC  
Occidental Power Solar & Cogen  
Ohm Analytics  
OMG Roofing Products  
Omni Energy Solutions, Inc.  
Omnidian  
Onswitch, Inc.  
OpenEGrid  
OpenSolar  
Option One Solar  
Orange County Photovoltaics  
Origami Solar Inc.  
OutBack Power  
Owen Dunn Insurance Services  
P.J. Erwin Electric  
Pacific Energy Company  
Pacific Power Solutions  
Pacifico Power LLC  
Packetized Energy  
Paladin Power Inc  
Palmetto Clean Tech  
Palomar Solar Ltd  
Panasonic Corporation of North America  
Pathion  
Pause Grid  
PCL Construction  
Peak Demand Inc  
Peak Power USA  
Pearl Certification  
Pegasus Solar, Inc.

People Power Solar Cooperative  
PermaCity Corp  
Perpetual Power  
Photon Brothers  
Photon Stellar  
Photosol US Renewable Energy  
Photovoltaics California  
Pick My Solar Corp.  
Pickett Solar  
Pioneer Solar  
Pivot Energy  
Planet Plan Sets  
Planet Solar Inc  
PlexiSun Ltd  
POCO Solar Energy Inc.  
Polar Solar  
POMCube Inc.  
Portable Solar Inc.  
Power-Structures LLC  
Powers Engineering  
Powersmiths  
PowerTree  
Powur  
Premo Roofing & Solar  
Prologis  
Promise Energy, Inc.  
ProSolar (Professional Solar Products)  
Pure Power Engineering  
Pure Power Solutions  
PV Designers  
PV-Cables, Inc.  
PVComplete Inc.  
PVH (PV Hardware)  
PYCEM, INC.  
Q CELLS  
Quality Home Services  
Quativa  
Quattro Solar, Inc.  
Quest GeoSystems Management, Inc.  
QuickBOLT  
R.T. Maher Construction  
Radiant Solar Technology, Inc.  
RaGen Energy Partners  
Raneri & Long  
RBI Solar, Inc.  
RCA Electric  
RE-volv  
Ready Home Energy  
Real Goods  
REC Americas LLC  
Redaptive  
Redwood Energy  
Rehab Solar Construction  
Reimagine Power  
Rem Electric  
Renew Financial  
Renewable America  
Renewable Construction Services Inc.  
Renewable Energy Partners, Inc  
Renewable Energy Test Center, RETC LLC  
Renewable Solar, LLC  
Renova Energy Corp.  
Renvu Solar Equipment Distribution  
Repower Yolo  
RePurpose Grid  
Revel Energy  
Rexel Gexpro  
RHC  
Rhem Manufacturing Company  
Rise Energy

Rivian  
Rod Bergen P.E.  
Ron Dorris Electric & Solar  
Roof Tech Inc.  
Rosendin Electric  
RowCheck  
RST Cleantech USA  
Run on Sun  
S-5!  
S-PACE  
Sage Energy Consulting  
San Diego County Solar  
San Diego Solar Inc.  
Sandbar Solar  
Santa Cruz Solar  
Sattler Solar Inc.  
Saveco Solar  
Sawmill Solar Electric  
SC-RISE, CE-CERT  
Scale Microgrid Solutions  
Scanify, Inc.  
Schneider Electric  
Scudder Solar Electrical Energy Systems  
Scurfield Solar & Heating  
Seal Bond  
Second life Lithium  
SEG Sustainable Energy Group  
Select Solar Professionals  
Semper Solaris  
SepiSolar, Inc.  
Service Finance Company LLC  
Sespe Power Solutions  
Shade Power LLC  
Shorebreak Energy Developers  
Sierra Pacific Home & Comfort  
Silfab Solar  
Silverline Home Remodeling Inc  
Simmitri  
SimpliPhi Power  
Simply Solar  
Sky Power Solar  
SLO Sun Energy  
SMA America, LLC.  
Smarter Grid Solutions  
Socomec  
Sol R US Electrical Engineering  
Sol Rebel  
Sol Systems  
Sol-Ark  
Sol-Tek Industries, Inc.  
SolAdvisor  
Solahart Industries Pty Ltd  
Solar Bill Review  
Solar Carports Direct  
Solar CFO  
Solar Deployed LLC  
Solar Design Studio  
Solar Energy International  
Solar FlexRack  
Solar Forward  
Solar Gain West  
Solar Harmonics  
Solar Insure, Inc.  
Solar Lead Profits  
Solar Motion  
Solar Optimum  
Solar Power Supply  
Solar Price Discovery Inc  
Solar Pro Energy Systems  
Solar Recombiner, Inc.



Solar Renewable Energy  
 Solar Richmond  
 Solar Savings Direct  
 Solar Self-Install  
 Solar Sense PV, Inc.  
 Solar Source Inc.  
 Solar Support Structures  
 Solar Symphony  
 Solar Technologies  
 Solar Tools USA  
 Solar Unlimited Inc  
 Solar Vast  
 Solar Wholesale Group  
 Solar Works  
 Solar-Log by Solar Data Systems  
 SolarCraft  
 Solare Energy, Inc.  
 Solare Power  
 SolarEdge Technologies  
 SolarGem Electrical  
 SolarGnosis  
 SolarHut, LLC  
 Solaria  
 Solaris Energy  
 SolarNexus, Inc.  
 SolarNorcal, LLC DBA Excite Energy  
 SolarOPS - Radiocap Corp  
 Solarponics, Inc  
 SolarReviews.com  
 SolarShoppers  
 SolarWakeup  
 Solid California  
 Soligent  
 SolMicroGrid  
 SolRx Energy  
 Soltection  
 Soltell Systems  
 Sonnen Inc.  
 SoundView Risk Advisors  
 Source Solar, Inc.  
 Span.IO  
 Spectrum Energy Development, Inc  
 Spreck Energy  
 Sprig Electric  
 Stable Solar, Inc.  
 Stada Energy  
 Standard Solar  
 Star GREC LLC  
 Station A, Inc.  
 Steiner's Solar  
 Stellar Solar  
 Stem, Inc.  
 Storz Power  
 Summit Technology Group, Inc.  
 Sun Light & Power  
 Sun Pacific Solar Electric, Inc  
 Sun Solar Electric  
 SUNAI Inc  
 Sunbank Solar, Inc.

Sunbrook Solar Power & Electrical Systems  
 Sundam Energy  
 SunEarth, Inc.  
 Sungage Financial, Inc.  
 Sungenia Solar Solutions  
 Sungenix Energy Solutions  
 SunGreen Systems Inc.  
 Sunlight Financial  
 Sunlight Solar Inc  
 SunMade Energy  
 Sunmizer Solar Roofing Systems  
 SunModo Corp.  
 Sunnera  
 Sunnova Energy Corporation  
 Sunny Solar Power  
 SunPower by esaSolar  
 SunPower By Sun Solar  
 Sunpower Corporation  
 Sunpro Solar  
 Sunpro Solar Inc  
 Sunrise 805  
 Sunrise Solar Company  
 Sunriver Solar  
 Sunrun  
 SunSolar U.S. Inc.  
 SunSpark Technology Inc  
 SunSpec Alliance  
 SunSystem Technology  
 Suntegrity Solar  
 Sunterra Solar Inc  
 Sunthurst Energy, LLC  
 Suntrek Industries, Inc.  
 SunVantage  
 Sunwealth Power Inc.  
 Sunworks, Inc.  
 Sustainable Technologies  
 Sutton Enterprises  
 Swell Energy  
 Swezey Energy Consulting  
 Symmetric Energy LLC  
 Synergy Home Improvement  
 Synergy Power  
 Synergy Solar & Electrical Systems Inc.  
 Synergy768  
 Syserco Energy Solutions, Inc  
 Tamarack Solar Products  
 Tangerine+  
 Taylor Energy Systems, Inc.  
 Tenco Solar, Inc.  
 TerraCurrent  
 TerraVerde Energy, LLC  
 Tesla  
 The Climate Center  
 The Energy Coalition  
 the r&d lab  
 The Solar Contractor  
 The Solar Energy Company  
 The Solar Quote  
 ThinkWire Energy Services  
 Tier1 Power  
 Tigo Energy, Inc.  
 Titanium Solar LLC  
 ToolBelt, Inc.  
 Transform Energy

Transform Power  
 TransUnion  
 Treeium  
 Treepublic  
 Triad Power Solutions LLC  
 True Power Solar  
 TruSource Energy  
 UL LLC  
 UMA Solar Inc.  
 Unico Solar Investors  
 Unified Solar and Roofing  
 Unique Solar  
 UNIRAC, Inc.  
 UnThink Solar  
 US Green Energy Technologies Inc.  
 US Solar Distributing Inc  
 UtilityAPI  
 V3 Electric  
 Vasco Solar Energy  
 Vector Green Power and Materials LLC  
 Vector Structural Engineering  
 Verdera Partners, Inc.  
 Veregy  
 Verse  
 Villara Building Systems  
 Vital Energy  
 Volt Modern  
 Voltaic Power  
 VSUN SOLAR USA INC  
 Walter Mortensen Insurance/INSURICA  
 WattMonk  
 Watts Battery Corp  
 Watts New Under the Sun, Inc.  
 We Recycle Solar  
 Weber Energy Group  
 Wendel Rosen LLP  
 Wenger Ventures  
 WESCO Distribution  
 West Coast Project Management  
 Westcoast Solar Energy  
 Westhaven Solar  
 WG Contracting  
 White Pine Renewables  
 William S Adelson Consulting  
 Wing Solar & Wood Energy, Inc.  
 Wired Into the Future Inc.  
 Wivity Inc.  
 Wunder Capital  
 XCG Solar LLC  
 Xero Solar  
 Yaskawa - Solectria Solar  
 Ygrene Energy Fund  
 Yotta Energy  
 Your Energy Solutions  
 Your SolarMate  
 YourSolarPlans, Inc.  
 Zenernet  
 Zero Down Solar Inc  
 Zilla Corporation

**713**  
MEMBERS

**227**  
NEW  
MEMBERS

**80%**  
OF CA PV PROJECTS  
INSTALLED BY A  
CALSSA MEMBER

**79%**  
OF CA STORAGE  
PROJECTS INSTALLED  
BY A CALSSA  
MEMBER

# NEM 3: THE BIGGEST FIGHT IN CALIFORNIA SOLAR HISTORY

The Net Metering “3” fight got underway in January and continued at an unprecedented pace through December. CALSSA, together with a coalition that grew in numbers and strength throughout the year, led the campaign to defend California’s solar and storage market from attacks by the investor-owned utilities and their political surrogates.

At the California Public Utilities Commission, there were 29 organizations and businesses participating in the proceeding, the biggest and most powerful of which were lined up against us. CALSSA submitted over 25 filings totaling more than 1,000 pages and participated in 2.5 weeks of oral arguments and cross examination of witnesses. Because our opponents were well-resourced, our work had to be even more carefully researched and written than usual.

Outside the CPUC, we helped organize the largest and most powerful clean energy coalition in California history that garnered national and statewide media attention throughout the year. Together, we defeated what was thought to be a seemingly invincible anti-solar bill in the legislature, and helped build a diverse and active coalition that included 26 members of congress, 22 state legislators, over 100 local elected officials and city councils, over 100 democratic party delegates, and more than 400 community, faith, equity, environmental, climate, and labor unions.

These photos and timeline capture just a fraction of the coalition-wide work and activity from 2021.

## January



Campaign Launched and website created: [SaveCaliforniaSolar.org](https://SaveCaliforniaSolar.org)

## February

Public Opinion Poll: 80% of voters support NEM

## March

Parties Submit NEM 3 Proposals: IOUs Push Solar Tax & 5 Cents Export Credit

The Fresno Bee: *“Solarpower is the future. So why might California regulators make it less appealing?”*

## April

Former CPUC Commissioner turned PG&E lobbyist, in LA Times: *“California has outgrown its solar rules. Utilities want a fairer system.”*

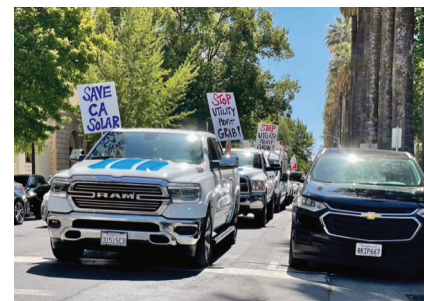
AB 1139 (Anti-NEM bill) introduced. First Committee Hearing Passes 12-0

## May

Sacramento Bee: *“Jonathan Scott: California must protect rooftop solar from utilities’ agenda.”*

No on AB 1139 Rally & Motorcade

AB 1139 Passes 2nd Committee 10-4





## June

Utility Profit Grab Protest at CPUC

AB 1139 is defeated on Assembly Floor! Vote of 27 yes - 27 no - 25 - abstain

Solar Power World: "CA assembly bill attempting to alter net-metering credits fails to move forward."



## November

Orange County Message in Sand "Gov: Solar, Not Oil"



## July

NYT: "More Power Lines or Rooftop Solar Panels: The Fight Over Energy's Future."

Testimony For and Against NEM 3 Proposals

## August

Clack Report Released Showing Rooftop Solar Will Save \$120 billion

Closing Arguments For and Against NEM 3 Proposals

## September

400+ Coalition Letter Supporting NEM Submitted to CPUC & Governor

Los Angeles Sentinel: "Policymakers should support policies that make it more affordable for everyone to access rooftop solar."

## October

TV, Radio Ad Campaign Begins



**It's up to the California Public Utilities Commission and Governor Newsom to stop the Utility Profit Grab and Save California Solar.**

## December

LAT Editorial: "Don't turn the lights out on California's solar rooftop revolution."



CPUC Issues Proposed Decision: \$700/ year Solar Tax+ 5.6 cent Export Credit

Human Billboard 100k Public Comments Delivery Event



# 2021

## PROGRAM HIGHLIGHTS

### **Net Metering**

The battle of NEM-3 dominated CALSSA's work in 2021, as described on the preceding pages. It is hard to overestimate the organizational strain this caused, but somehow we managed to engage in many other important policy debates.

### **Contractor Licensing**

The Contractors State Licensing Board voted to restrict C-46 solar contractors from installing energy storage in July, effective in 90 days. In response, CALSSA took the unprecedented action of suing CSLB alleging this decision was an illegal underground regulation. CSLB stayed their decision as a result of our lawsuit, and is overseeing a stakeholder negotiation that will continue to demand a lot of our time and attention in 2022.

### **Virtual Power Plants**

At the end of 2020, there were 760 MW of customer-sited energy storage installed in California. This is collectively the biggest battery in the world and enough to forestall a statewide energy shortage. CALSSA submitted a proposal for virtual power plants in a program that compensates customers for discharging batteries when the grid is nearing blackout conditions. Elements of the proposal were included in a new summer reliability pilot program, but much work continues to be needed to compensate customer systems as a grid resource.

In a series of 35 meetings throughout the year, CALSSA negotiated new real time pricing rates with PG&E, and also pressed for such rates for SCE and SDG&E. Hourly rates set the day before

will allow aggregators to provide additional savings to customers with energy storage.

### **New Construction Mandate**

We worked with the California Energy Commission to refine their proposal for a solar and storage mandate for new commercial buildings and to see it through to adoption despite strong opposition. The mandate takes effect for permits pulled after January 2023, and is projected to lead to 280 MW of additional solar and 400 MWh of additional energy storage. CEC also adopted our proposal for storage-ready homes.

### **Permitting**

SolarAPP officially launched in 2020, with Pleasant Hill as the first jurisdiction to go live in May and three others following by year's end. CALSSA has worked with the National Renewable Energy Laboratory for several years to create this automated permitting software for small solar and energy storage systems. In the Legislature, we won approval for a new \$20 million grant program to help cities and counties adopt SolarAPP.

### **Codes and Standards**

CALSSA sponsored and passed AB 1124 to change the definition of solar in several laws to include canopies and shade structures. These systems are now subject to the caps on permit fees, and jurisdictions cannot deny them for reasons outside of health and safety issues.

Our proposal for vehicle impact protection for batteries in garages was codified into the 2024 International Fire Code, and we then got it incorporated into California code beginning





Photo courtesy of Renova Energy

January 2023. The code was ambiguous previously and some jurisdictions were imposing unreasonable requirements in nearly all garages. The updated code exempts batteries on side walls and the top half of the back wall in most cases, and limits the bollard or curb size if they are required.

CALSSA also launched a proposal to decrease spacing requirements for battery placement that will come to a vote next year.

## Interconnection

The CPUC issued the last of four decisions adopting 82 changes to Rule 21 and related interconnection practices that have been negotiated in a process spanning four years. Implementation of those changes is ongoing, and includes documenting and improving timelines, using power control systems to ensure export limits, screening projects according to transparent hosting capacity values, and a simplified application process for solar on new construction. We also helped reduce new interconnection fees for LADWP.

## Solar Water Heating

We helped design a new residential solar water heating incentive program for SoCalGas that went live in December. After the end of the CSI-Thermal program in 2020 California did not have any solar thermal programs. We hope to expand the SoCalGas program beyond single-family residential and use it as a model for other utilities.

In the 2022 building standards update, we convinced the California Energy Commission to give more envelope compliance credit for buildings with solar water heating.

## Legislative

CALSSA monitored hundreds of bills in Sacramento, some helpful and some harmful for solar and storage. In addition to those mentioned above – the anti-NEM bill, the solar canopy bill, and \$20 million in the budget for SolarAPP – we worked on legislation that impacts the new construction mandate, storage funding, virtual power plants, main panel upgrades, PV recycling, electric system planning, PACE funding, microgrids, and much more.

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Our fact sheets and webinars are available on our website at [www.calssa.org/members-only](http://www.calssa.org/members-only). Be sure to use these resources to stay informed.

# BOARD OF DIRECTORS



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# REGIONAL CHAPTERS

CALSSA's six Chapters are where professionals from across the storage, PV, and thermal value chain get together, network, share best practices, and learn about the latest industry developments. We continued to keep these events virtual in 2021 as we had for most of 2020 with 18 total meetings. Among the topics discussed were the Net Metering 3.0 Proposal, SolarAPP+ and efforts to create virtual permitting, gas meter clearance rules, and new code requirements for installing energy storage systems on one and two family homes. Meetings are open to all employees at member companies so if you have not attended a meeting yet, make sure to join us in 2022! You can sign up for chapter updates on our website.



## Thank You to Our Regional Chapter Leaders

### Bay Area

Mary Shaffer Gill, *Stem*  
Tor Valenza, *UnThink Solar*  
Randy Zechman, *Clean Solar*

### Central Valley

Tom Cotter, *Ask Tom Cotter*  
Jack Ramsey, *Altsys Solar*  
Joseph Smick, *Service Finance Company*

### Los Angeles

Deep Patel, *GigaWatt*  
Eric Presley, *Ironridge*

### North Bay

Tyson Berg, *CED Greentech*  
Keith Kruetzfeldt, *Suntegrity Solar*

### Sacramento

Ed Ayala, *Eco Foundations Systems*  
Steve Geiger, *GRID Alternatives*

### San Diego

Cecilia Aguillon, *Aguillon Enterprises*  
Tara Hammond, *Hammond Climate Solutions*

## MEMBER EDUCATION

Member companies stayed ahead of the competition in 2021 with CALSSA's help by getting timely, detailed, and reliable information that they could use to navigate the tumultuous California market. In 2021, CALSSA members received:

51

WEEKLY  
NEWSLETTER  
UPDATES

43

BLOG  
POSTS

57

POLICY  
ALERTS

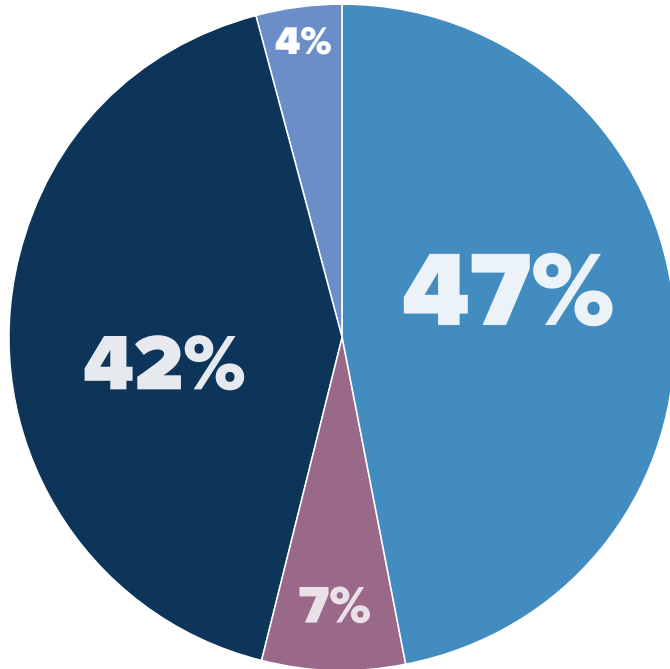
22

EDUCATIONAL  
WEBINARS

18

CHAPTER  
MEETINGS

# RESOURCES & EVENTS



## 2021 REVENUE SOURCES

- Membership Dues
- Fundraising Events
- Special Contributions
- Grants

## 2021 EVENTS

With uncertainty around COVID, CALSSA continued to focus on high quality virtual events in 2021. These included regular webinars, including our *Quarterly Policy Updates*, and individual webinars on topics such as CSLB proposed rules on licensing requirements of installing energy storage systems and various proposals considered by the CPUC for NEM. In March, we continued with our *Product Expo Series*, highlighting 40 different companies, from module makers to software companies, for a series of short virtual demonstrations packed into a single week. Three months later, it was time for our *Virtual Silent Auction* fundraiser, where we raised over \$50,000 to support CALSSA's advocacy on NEM! Finally, in September, we once again held our *All-Member Meeting* virtually. Thanks to this meeting, we raised a million dollars for our NEM advocacy in the month of September, an incredible accomplishment! While we miss doing our events in-person, virtual events have facilitated broader member participation.

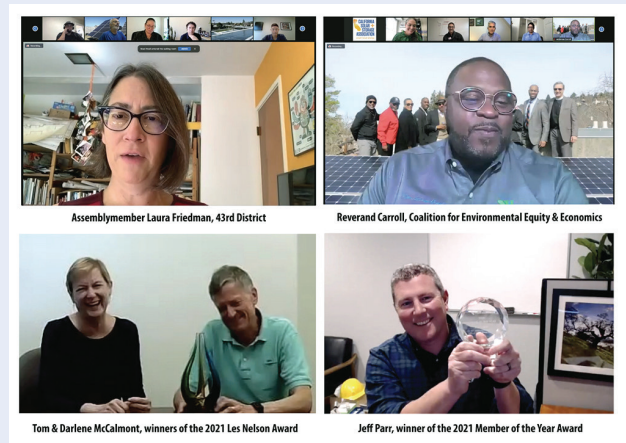


Photo montage from our 2021 All-Member Meeting & Fundraiser.

Thanks to this meeting, we raised a million dollars for our NEM advocacy in the month of September, an incredible accomplishment! While we miss doing our events in-person, virtual events have facilitated broader member participation.

# THANK YOU PRESIDENT'S CIRCLE







1107 9th Street, Suite 820  
Sacramento, CA 95814  
(916) 228-4567

[www.calssa.org](http://www.calssa.org)  
[info@calssa.org](mailto:info@calssa.org)