

RICAPS

Regionally Integrated Climate Action Planning Suite

Multi-city Working Group Meeting
November 18, 2014

RICAPS technical assistance is available through the San Mateo County Energy Watch program, which is funded by California utility customers, administered by Pacific Gas and Electric Company (PG&E) under the auspices of the California Public Utilities Commission and with matching funds provided by C/CAG.

Agenda

- Introductions 2:30 – 2:35 PM
- Beacon Award data update 2:35 – 2:50 PM
- Countywide efficiency outreach 2:50 – 3:05 PM
- Zero Net Energy toolkit 3:05 – 3:20 PM
- Solar programs update 3:20 – 3:50 PM
 - Foster City Group Solar Purchase
 - U.S. DOE Solar Roadmap project
- Wrap-up 3:50 – 4:00 PM

Beacon Award Program

- Status update
- Next steps



Countywide Participation and Commitments to date



On Oct. 9th, C/CAG officially became a Beacon Award Champion



- Colma
- Daly City
- Portola Valley
- Redwood City (December)
- San Mateo (January)
- Brisbane (February)
- Millbrae (February)
- San Carlos
- Foster City

Participation tracked by Andrea Pappajohn

Beacon Award: In a Nutshell

		Beacon Award Levels			Source of Data	Status
		Silver	Gold	Platinum		
Government Operations	GHG savings in agency operations	5% reduction	10% reduction	20% reduction	RICAPS	As requested (DNV GL)
	Energy savings in agency facilities	5% savings	10% savings	20% savings	PG&E	Sapna Dixit
Community Level	GHG savings in community	5% reduction	10% reduction	20% reduction	RICAPS	DNV GL to finalize
	Energy efficiency in community	1 activity	2 activities	4 activities	PG&E	Sapna Dixit
Best Practices	10 Best Practice Areas	1 activity in each Best Practice Area	2 activities in each Best Practice Area	3 activities in each Best Practice Area	SSMC & Sierra Club (as available)	Andrea Pappajohn

Example of Initial Data Collection for Foster City

Energy Efficiency & Conservation	Water and Wastewater Systems	Green Building	Waste Reduction and Recycling	Climate-Friendly Purchasing	Renewable Energy and Low-Carbon Fuels	Efficient Transportation	Land Use and Community Design	Open Space and Offsetting Carbon Emissions	Community Individual Action
Implementing Sustainable Foster City Plan including energy efficiency for City and Community buildings	Rebates for measures, including lawn replacement, synthetic turf, washing machines, water audits, etc	Approximately 11,265 of Foster City's 12,458 housing units are within ½ mile of SamTrans stops.	Provides curbside refuse collection, including batteries and cell phones.	Participating in Regional Renewable Energy Procurement for purchase of solar	Solar voltaic planning underway for public library.	Funded/subsidized public transit passes. Currently \$15/month matching with City.	Resurfaced streets using cold-in-place recycling of asphalt		City Council approved a plan that encourages sustainability including environmental equity and economic.
Working on a community solar bulk purchase program	FEMA-certified levee and storm drain system	All of Foster City's approved affordable housing units are within ½ mile of SamTrans stops	Sponsors community electronics recycling, paper shredding		As stated under Energy Efficiency: Working on a community solar bulk purchase program	Facilitation of carpool/vanpool options. Emergency ride-home			Participates in Great Race for Clean Air.
Replaced all street lights & traffic signals with LED lights.	implemented Conservation-Based Water Rates, tiered so that higher water usage is billed at a higher rate.	LEED standards for indiv. projects Municipal code provides incentives to provide bike/motorcycle parking	Requires min 50% debris generated from certain construction and demolition projects be diverted		Eliminated permit fees for installation of solar panels.	9 Hybrid city vehicles (21% of fleet)			

Example of Actual Best Practice Activity Survey (City of San Carlos)



1. Energy Efficiency & Conservation Activity

- A. The City of San Carlos promotes Energy Upgrade California energy efficient incentive home improvement programs by including fliers in every permit packet dispensed by the Community Development Department. (See attachments: Home Upgrade Program Information Sheet and Advanced Home Upgrade Program Information Sheet)
- B. Park lights are on a timer and adjusted monthly to ensure they are off and not wasting electricity when not in use. (www.cityofsancarlos.org/ParksMasterPlan/ —See Master Plan for Parks, Open Space, and Buildings)
- C. On June 9, 2014, City Council adopted Resolution 2014-061 approving a Turnkey streetlight conversion project with PG&E, an application for the PG&E on-bill financing program, and appropriating \$135,000 from the General Fund to complete the project. According to analysis, the project would convert 1,465 street lights to LED, cut \$132,000 in current energy costs, save 489,506 KW hours of energy per year, and reduce annual CO₂ emissions by 256,601 pounds. (See attachment: Turnkey Resolution)

Next Steps with Data Collection

- Fill in gaps in best practice areas
 - Work with individual cities to gather information on programs in areas where needed
 - Work with SSMC to compose questions for their 2015 survey
- Verify categories with Beacon Award program
- Add details where necessary for program

San Mateo County Energy Watch Countywide Outreach Campaigns

Resource Conservation Associate

Eddie Ashley

Outreach campaigns

- **Goal:** Get businesses to sign up for a energy audit from SMCEW turnkey program
- Working closely with city staff, Economic Development Coordinators and Chambers of Commerce
- **Target customers 2014-2015**
 - Restaurants
 - Warehouses
 - Convenience stores
 - Gas stations
 - Small retail

SMCEW Turnkey Program

- Serves small businesses, school, non-profit organizations, farms, local governments
- Free energy audits (lighting and refrigeration), higher PG&E rebates, installations, rebate paperwork, quality check
- Opportunity to use PG&E 0% financing (\$5,000 to \$100,000 payable over 5 years)

Areas interested in campaigns

- Redwood City
- San Mateo
- San Carlos
- Colma
- Burlingame
- East Palo Alto
- North Fair Oaks
- Millbrae
- San Bruno

Outreach strategy

- Multiple layers:
 - Volunteers from Recycleworks Volunteer Academy will canvass business districts
 - Incorporating info into Chamber and city newsletters, city websites
 - Media – local TV and radio
 - Presentations at community meetings
 - Letter to local businesses

Outreach materials

- Reformatting our new flyer
- Developing videos for SMCEW website
 - Testimonials – other business customers
 - “How the program works” – animation
- Developing content for newsletters, websites

What we've learned so far

- Campaigns provide opportunity to help with business resilience during construction
- Need for bilingual marketing materials and auditors in some areas
- Different philosophies on in-person visits vs. meetings with business owners
- Not every city has an updated business directory list

Timeline

- Through end of 2014:
 - Continue strategizing with city staff/Chambers of Commerce
 - Create marketing materials
- Jan-Feb 2015:
 - Post video testimonials and energy audit animation on website
 - Begin individual local campaigns
- Spring 2015:
 - Expand campaigns based on lessons learned

Thank you!

Eddie Ashley

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SAN MATEO COUNTY



Zero Net Energy Toolkit

A roadmap guiding our county towards a future of Zero Net Energy
Buildings

RICAPS Multi-city Working Group Meeting
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What is Zero Net Energy?

A ZNE building is ***highly energy efficient*** and produces as much energy onsite through clean, ***renewable resources*** as it consumes over the course of a year



David and Lucille Packard Foundation
Los Altos, CA

Goals for ZNE in California: Adopted in 2007-08 by Energy, Utilities Commissions

- 1** All new commercial construction will be ZNE by 2030
- 2** 50% of existing buildings will be retrofit to ZNE by 2030
- 3** All new residential construction in California will be ZNE by 2020

Executive Order B-18-12 requires state buildings to significantly reduce over the next two decades.

- 50% of new facilities beginning design after 2020 to be Zero Net Energy.
- 100% of new State buildings & major renovations beginning design after 2025 to be ZNE

Why build Zero Net Energy?



IDeAsZ2 Office Building | San Jose, CA

- Optimized ***building performance***
- Lower ***net energy costs*** and ***higher resale value***
- Highest architectural, mechanical, and environmental leadership
- ***Comfortable and productive environment*** for working, learning and living
- Makes communities stronger, ***resilient and energy independent***

“I’ve chosen Zero Net Energy, **NOW WHAT?**”

The answer to this question varies depending on who you are:

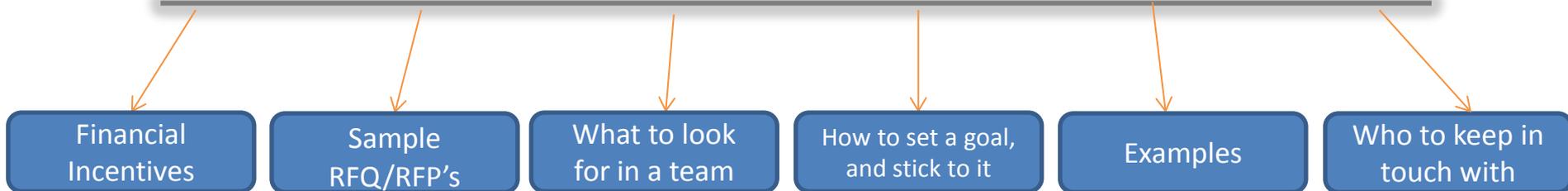
- Building Operators and Owners
- Builders and Contractors
- Architects and Developers
- Policymakers and Local Government Officials
- Real Estate Agents
- Decision Makers for Public Buildings
- Home Owners and Home Buyers

Zero Net Energy Toolkit

Home Owners



Decision Makers for Public Buildings



Additional Resources

- Retrofits vs. New Construction
- Commercial vs. Residential
- Various levels of Zero Net Energy
- Training Opportunities
- How is a Zero Net Energy Building different?
- Design Practices



**Leslie Shao-ming Sun Field Station
Stanford, CA**

What other local governments are doing

County of Santa Barbara

- Offer a green building program called “[Smart Build SB2](#)” including incentives for buildings that exceed title 24 energy requirements.
- Two tiers encourage builders to either be “Ultra Low Energy Verified” or “Zero Net Energy” .
- **Incentives:** (Tier 1) – 50% reduction in energy plan check fee, expedited Building & Safety Division plan check review process and use of Program logo and marketing. Zero Net Energy building projects (Tier2) are eligible for all Tier 1 incentives and recognition through **Resolution of Commendation** from the County Board of Supervisors.



What other local governments are doing

Pima County, Arizona

Standard for Zero Net Energy

- The purpose is to provide both prescriptive and performance paths for designing net-zero energy buildings and net-zero energy remodels within the Tucson/Pima County climate.
- The performance path is based on the use of energy modeling tools that are either free, or readily available.
- Project teams are encouraged to use the performance path in the design of the building.



<http://www.pima.gov/netzero/>

New Buildings Institute ZNE Workshop for Local Governments November 3, 2014



- Early Adopters Network
 1. Laying the Foundation
 2. Orchestrating Resources
 3. Developing a ZNE Plan
- Stakeholder & Communication Planning
- Message Platform and Communications Toolkit

<http://newbuildings.org/zne-communications-toolkit>

Possible future initiatives

ZNE Workshop in Bay Area, Spring 2015

Day 1: New Buildings Institute, ZNE for Local Governments

- Developing individual plans to implement ZNE Plans
- Early Adopters Network
- Tour of local ZNE building

Day 2: ZNE Residential Workshop

- ZNE Retrofits
- ZNE homes on the Market
- Step by Step Process of getting a ZNE home
- Tour

PG&E ZNE Classes - 1 day, multi-day, webinars

Networking Sessions — Homeowners, architects, contractors, realtors

If you need any assistance with a Zero Net Energy project or would like information materials feel free to contact me

Jacki Falconio

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Solar Programs

- Foster City Group Solar Purchase
- U.S. DOE Solar Roadmap Project



Peninsula SunShares

- **What It Is:** Non-profit administered bulk procurement program for single family solar PV installation. Vendor selected through RFP process for direct purchase, power purchase and lease pricing.
- **Eligibility:** Open to any City or County in the greater Peninsula area that submits required letter of commitment by November 28.
- **Cost:** No financial commitment, the commitment is staff time to facilitate direct contacts to eligible residents. Resulting contracts are between vendor and resident.
- **Benefits to Cities/Counties:** May help achieve Climate Action Plan goals.
- **Benefits to Residents:** Expected to reduce cost of solar PV installation.
- **Further Benefits to Residents:** Expected to make it easier for single family residents to select a vendor and install solar.

Foster City is Serving as Lead Agency

'Andra Lorenz, Management Analyst | 650.286.3215 | alorenz@fostercity.org

The Solar Roadmap



Stephen Wolcott
Project Manager, Optony Inc.



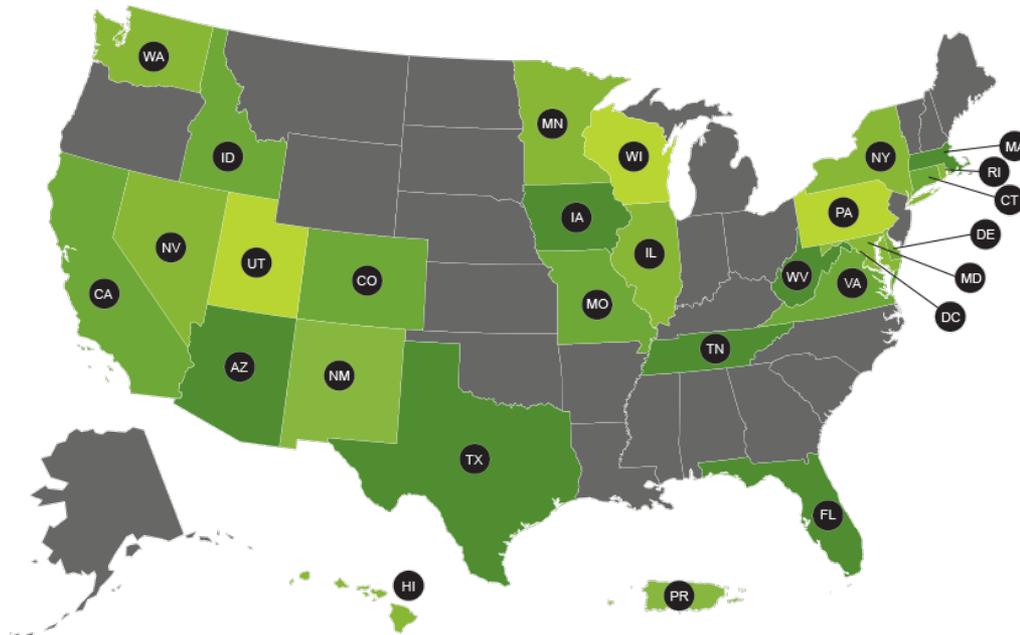
Eileen Hays
Project Manager, Optony Inc.



The Solar Roadmap



DOE-supported initiative to **reduce the total installed costs** of solar PV systems and **increase deployment** of solar across the US by lowering barriers to adoption in targeted focus areas



FOCUS AREAS

- AB 2188 Compliance
- Local Permitting Process
- Planning & Zoning Regulations
- Financing Tools and Resources
- Innovative Deployment Programs
- Education and Outreach
- Local Market Development



Solar Roadmap in California

(75+) Communities in California

SF Peninsula Participants:

- City and County of San Francisco
- Daly City
- San Mateo
- Redwood City
- Menlo Park
- Palo Alto
- Sunnyvale
- Cupertino
- San Jose
- Mountain View
- Santa Clara
- Palo Alto Utilities
- Silicon Valley Power



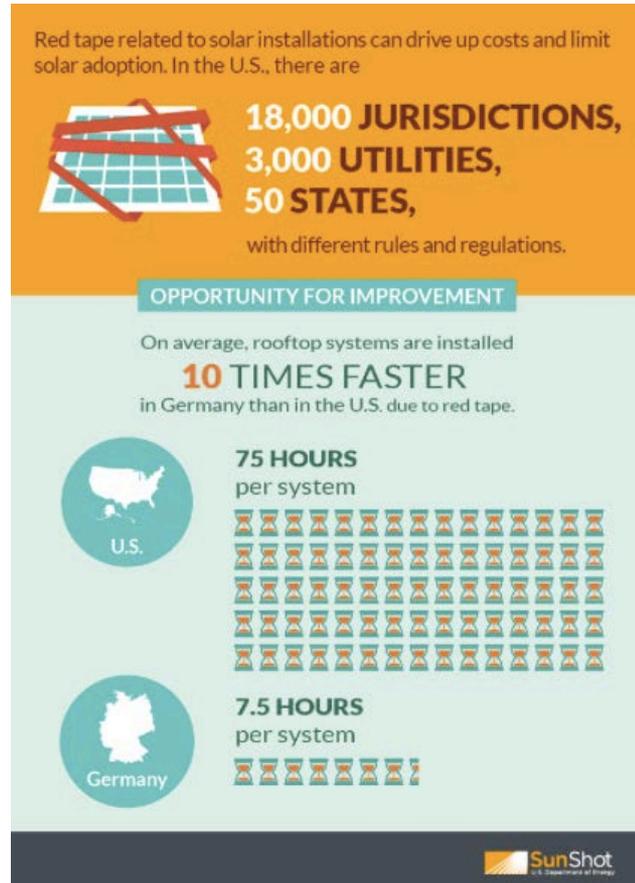
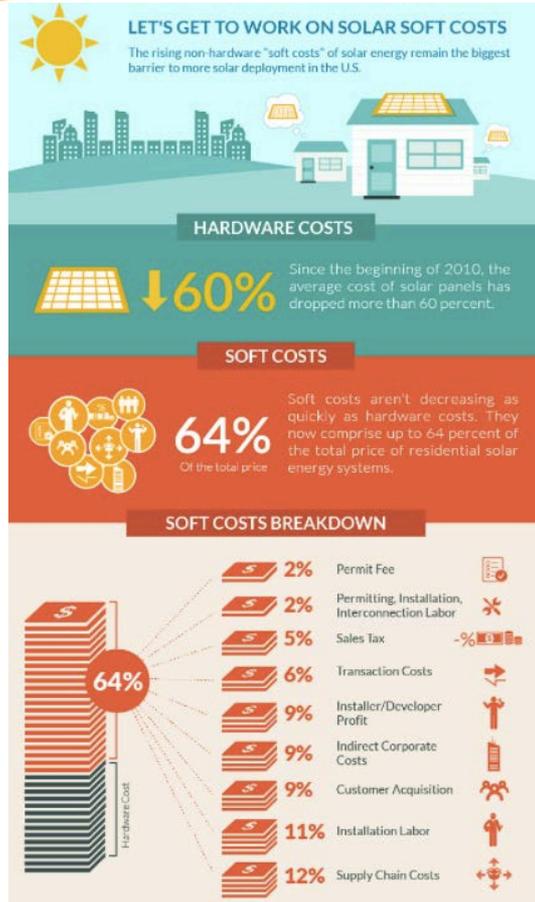
Other notable CA Participants:

- Fresno
- Inyo County
- San Diego
- Los Angeles
- Santa Rosa
- Marin Energy Authority
- Fremont
- Oakland
- Walnut Creek
- Santa Cruz
- Marin County
- Merced
- Redwood Coast Energy Authority

+ (180) Communities and (19) Utilities from (21) States nationwide



What Are Soft Costs?



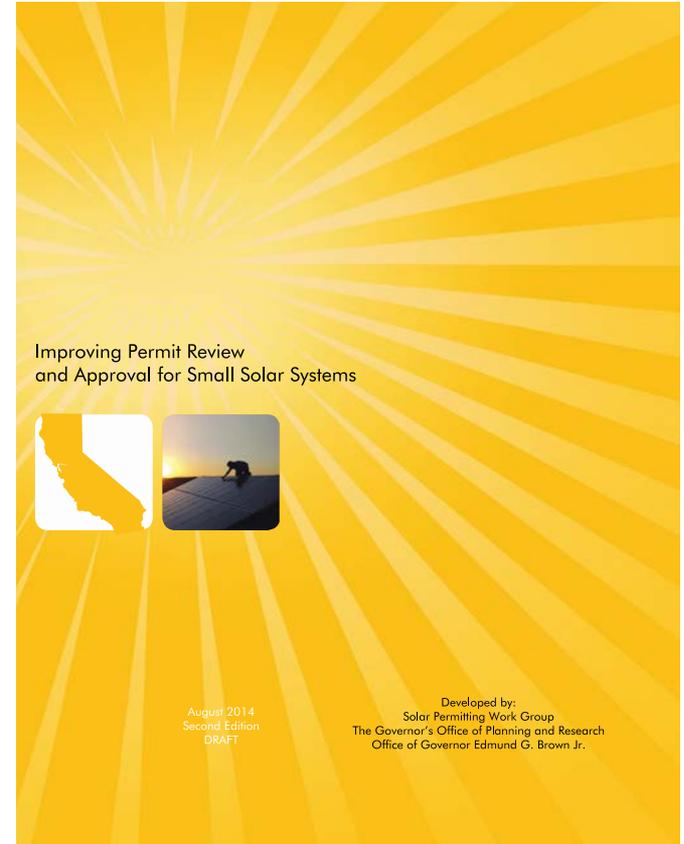
What is AB 2188?

- AB 2188 requires local governments to adopt a solar ordinance by September 30, 2015.
- Cities and Counties must create a streamlined permitting process that conforms to best practices for expeditious and efficient permitting of small residential rooftop solar systems.
- Cities and Counties must substantially conform to the recommendations of the California Permitting Guidebook v2 (Draft) with modifications allowable for unique conditions.



Compliance with Solar Roadmap

- **Eligibility:** Residential solar photovoltaic systems 10kW-ac or less; Residential solar thermal systems 30kW or less
- Optony's Solar Roadmap is composed of customizable goals that will allow your jurisdiction to conform and meet 9 of the California State requirements.
- Take Action resources for each goal: concrete guidance, document templates, and case studies
- Streamlined permitting process examples
 - » Standard permitting documents
 - » Over the counter processing or 5 days max
 - » Standardized inspection checklist and process



Individualized Landing Page

City of Fresno, CA

FRESNO'S SOLAR ENERGY INFORMATION HUB

Find the latest resources and information available for installing solar power and expanding the solar market in the City of Fresno, whether you're a resident, business, installer or local government agency. The City is situated in an excellent area for solar due its above average solar energy resource.

Transitioning to solar power not only provides environmental benefits like enhanced air quality, but it also delivers a host of economic benefits from green job creation to market development. Below, there is a direct link to the City's interactive policy roadmap designed to increase local solar installations by making it easier and more cost-effective to "go solar".

Fresno is a part of the [San Joaquin Valley region](#).



Key Market Information



Shown below is an estimation of the significant economic and environmental impact from providing just 5% of community-wide electricity use from solar energy. The residential section provides a quantification of the massive and still untapped opportunity for existing residential rooftops to contribute to a greener and more prosperous community. These numbers are generated using the latest available data and market-leading estimation tools. [Learn more here](#).

Local Impact of 5% Electricity from Solar Power



Residential Solar Potential



Roadmap



Resources



[Fresno Solar Permit Information](#) [National Solar Permitting Database](#) [Utility Solar Information](#)

Resources



[Fresno Solar Permit Information](#) [National Solar Permitting Database](#) [Utility Solar Information](#)

Clean Energy Planning

- [Fresno Green Program](#) – A program committed to building green; constructing buildings and communities that are sustainable and environmentally responsible.
- [Central Valley Energy Tune Up](#) – An education program that identifies energy savings opportunities in homes and businesses in Fresno and Kern Counties.

Local Financing Programs & Incentives

- [Property Accessed Clean Energy \(PACE\) Financing for Businesses \(Option 1\)](#) – Commercial project financing through Figtree
- [Property Accessed Clean Energy \(PACE\) Financing for Businesses \(Option 2\)](#) – Commercial project financing through CaliforniaFIRST
- [Residential Energy Loans](#) – Power Saver Loan Program, CRHMFA Homebuyers Fund (CHF) Residential Energy Retrofit Program, and Educational Employees Credit Union (EECU) Energy Efficiency Loan
- [California's Database of State Incentives For Renewables and Efficiency \(DSIRE\)](#) – Residential, Commercial and Local Governments
- [Third-party financing](#) – Residential, Commercial and Local Governments

Solar Energy Policy

- [Summary of the California's solar energy policies \(DSIRE\)](#)

Additional Information



Regional Partners



Customized Roadmap

Customized Roadmap Benefits:

- Accomplish renewable energy mandates with a **free** customized tool for benchmarking and planning
- Reduce time and resources needed to support local solar deployment
- Avoid steep learning curve associated with solar and reduce confusion among various government departments

City of Fremont, CA Solar Roadmap

Roadmap Goals and Progress



Overall City Roadmap Progress

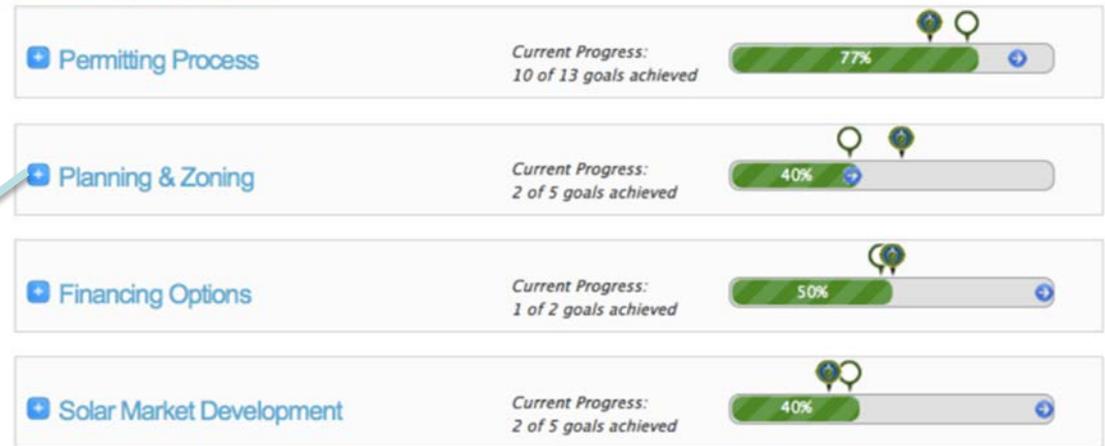


The ASTI team has worked in close coordination with the City to develop a customized, interactive solar roadmap containing guidance on how to transform the local solar market. Each recommendation in the roadmap is supported with relevant reports, case studies, examples, and templates to support local and regional implementation efforts.

These roadmap goals are derived from attributes of successful solar communities nationwide, along with input from industry experts. Each goal represents a step toward making solar easier and more cost effective for all residents within the community. Your specific roadmap has been customized using the attributes that are relevant at the city-level in the local solar market.

Expand each focus area below to show its related goals, and click the 'Take Action' button to access the relevant resources designed to help you achieve these goals.

[Show Active Objectives Only](#)



Planning & Zoning Current Progress: 40% (2 of 5 goals achieved)

[Z1] Pursue Protection for Solar Rights and Access
Initial Status: Local and state laws protect solar rights.
Guidance: City currently at market best creating a local ordinance to unobstructed access to direct sunlight.

[Z2] Promote Solar Ready Construction via Ordinances
Initial Status: State solar ready requirement.
Guidance: State currently at market best.

[Z4] Incorporate Solar Priorities into Comprehensive or Elementary School District Plans
Initial Status: Solar priority in General Plan.
Guidance: City currently at market best.
Goal Achieved!

[Z5] Update Zoning Standards and Review for Solar Installations
Initial Status: Solar friendly local ordinance.
Guidance: City currently at market best.
Goal Achieved!

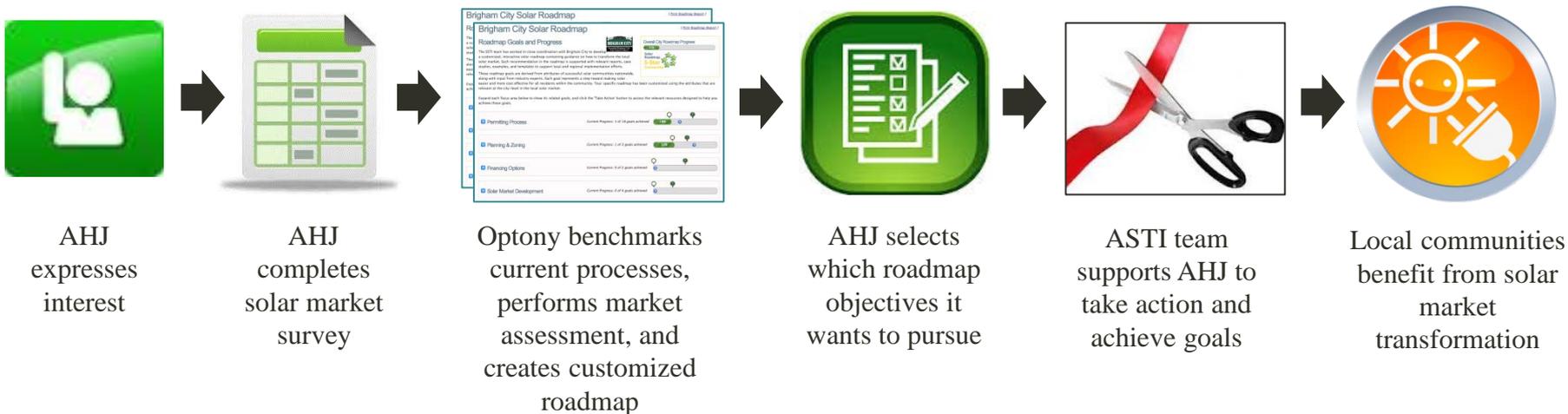
[Z6] Update Zoning Standards and Review for Solar Installations
Initial Status: No solar friendly zoning ordinance.
Guidance: Ensure the zoning codes and aesthetically sensitive areas do not impede the ability to install solar. Allow staff members to require committee or planning commission review.

Essential Resources

- 1. Benefits of Solar Rights and Access Laws**
Author: US Department of Energy
- 2. Solar Access Benefits for Cities and Counties**
Author: US Department of Energy
- 3. Model Municipal Solar Access Ordinance**
Author: City of Ashland
- 4. Model Solar Access Ordinance and Guide**
Author: City of Boulder
- 5. Model Solar Access Protection Process**
Author: Santa Cruz County
- 6. Model Solar Easement Statute**
Author: State of Utah
- 7. Sample Solar Easement Declaration Form**
Author: State of New Mexico
- 8. Model State Solar Rights Law**
Author: State of California

How do I sign up?

GET ON THE SOLAR ROADMAP



EXPECTATIONS

- Collaborate with city staff to complete solar market survey (data from current processes related to permitting, planning/zoning, and financing)
- Commit to setting goals and taking action in any of the focus areas with support from ASTI team, peers, and partners

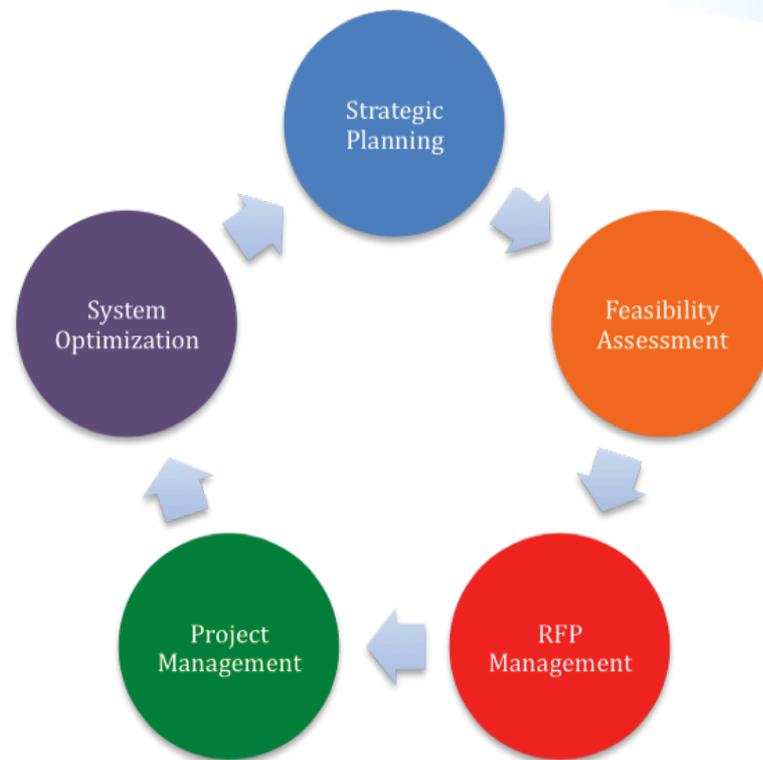


About Optony

Optony develops and deploys solar best practices across the entire solar project lifecycle for government agencies, schools and commercial organizations.

Working with clients across all phases of solar projects creates deep insight into true performance drivers which is used to reduce costs and improve performance at any stage in the process.

www.optony.com



“Optony’s consulting service is a must-have for any organization considering an investment in solar. Based on Optony’s comprehensive analysis and recommendations, we now have a low-risk, high-return solar strategy.”



Thank You!



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