

# Sustainable Energy Roadmap

## Advancing Resilient Valley Communities

01/28/16

Program Information

**FRESNOSTATE**  
Community and Economic Development



SJV Rural Development Center



[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Agenda

- Sustainable Energy Roadmap Overview
- Municipal Participant Benefits & Process
- SER Core Implementation Team
- Discussion of Relevance to Needs and Interests

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Sustainable Energy Roadmap (SER)

[www.SustainableEnergyRoadmap.com](http://www.SustainableEnergyRoadmap.com)

A process and set of tools to support public agencies to adopt and pursue clean energy and sustainable development goals.

- Baseline and benchmark policies, standards & programs
- Identify local, relevant goals related to
  - Energy & water efficiency/ conservation
  - Solar/ renewable energy
  - Transportation and land use.
- Design a roadmap for action that promotes long-term emissions reductions.
- Provide a voice for communities in planning and program adoption.



[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Municipal Partner Opportunity

- Jump-start the process to plan, adopt and launch critically needed policies and supportive programs.
- Leverage a proven approach and team of experts to design an action plan that can be addressed over time.
- Facilitate critical community dialog and active engagement.



[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# SER Key Elements

- Environmental & energy benchmarking
- Tailored roadmaps that serve as action plans
- Goal setting tied to local needs/interests
- Inventory of accessible best practices and customizable policy/program/project resources and tailored assistance
- EJ community engagement and services
- Partnerships with regional industry and workforce development organizations
- Online Roadmap platform and recognition
- Municipal partner \$5K program stipend  
*(available to first 18 sign-ups)*



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# SER Process



**Participant  
Agreement**



**Benchmarking  
Survey**



**Goal Setting**

**Technical Assistance & Support**

**Recognition**



## SER Process (Cont'd)

- 1. Baseline/ benchmark existing municipal planning, policies, codes, standards and market development.
- 2. Identify top 3 to 5 goals tied to best practices and informed by community input.
- 3. Finalize and publish jurisdiction's roadmap.
- 4. Track and publicize progress.

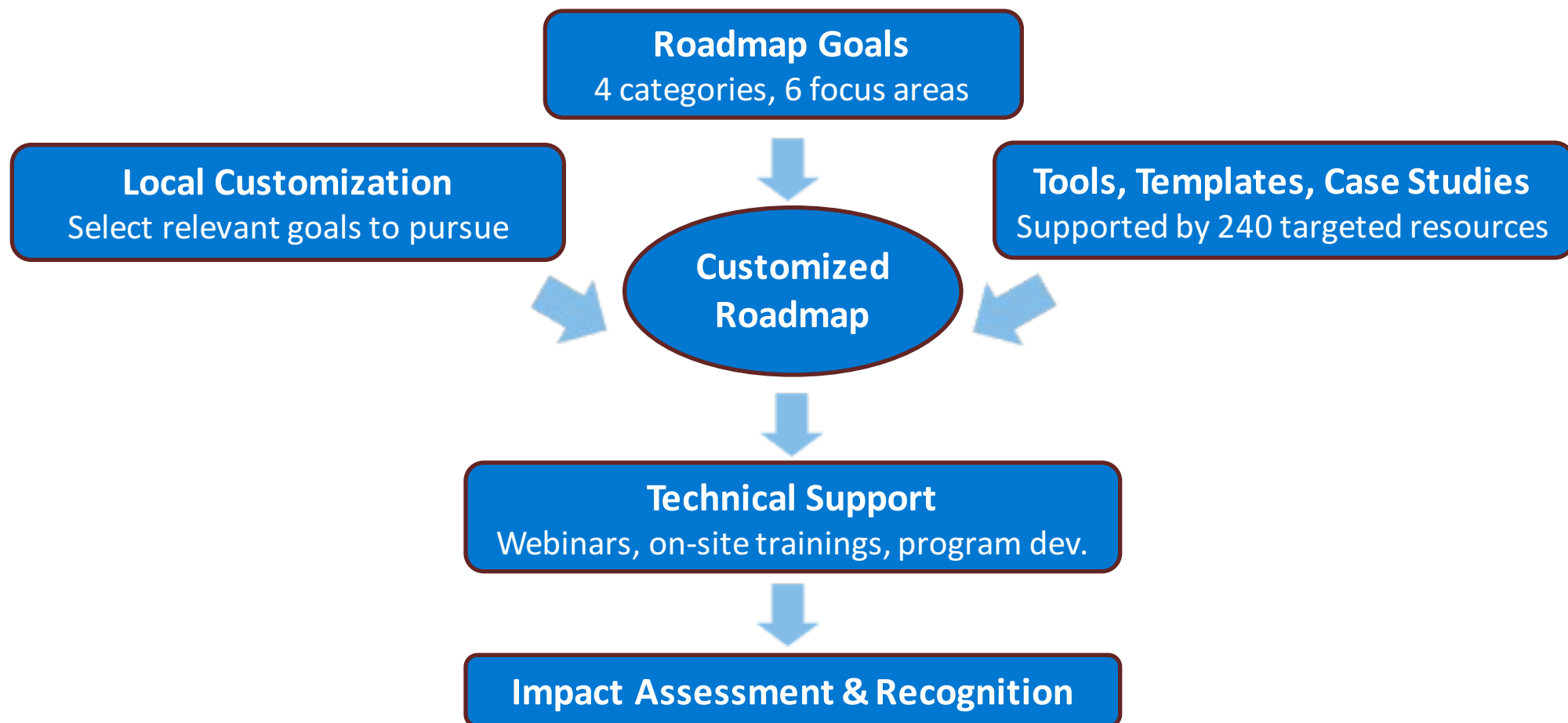
# Sustainable Energy Roadmap Timeline

## Ongoing:

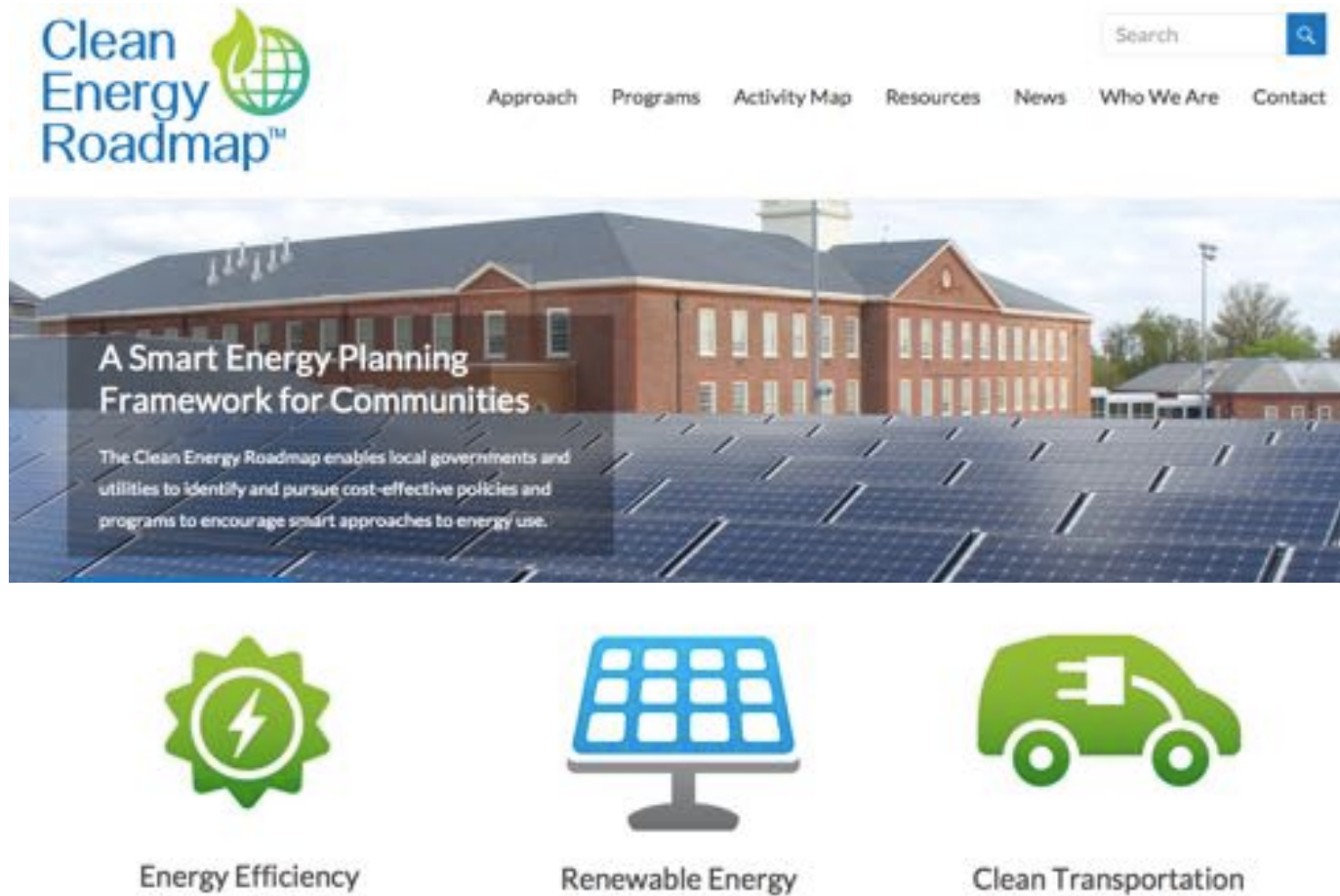
- Customized Technical Assistance
- EJ Community Engagement and Services
- Industry/Training Connections



# Roadmap Framework



# Building on a Tested Model

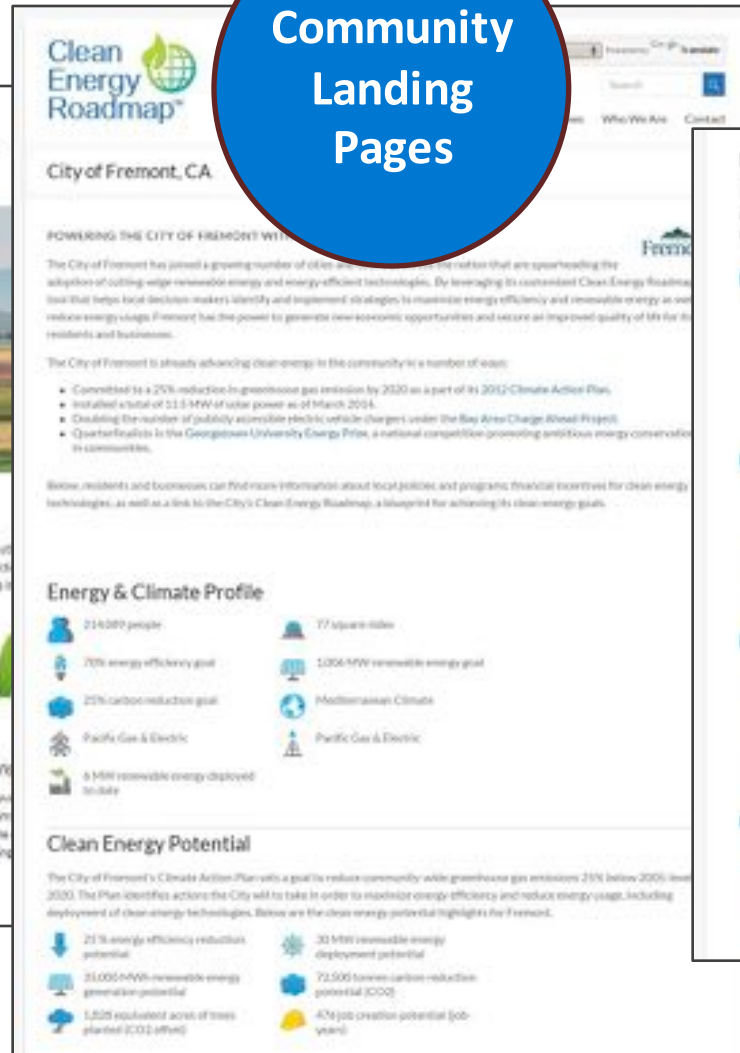


The screenshot shows the homepage of the Clean Energy Roadmap website. At the top left is the logo, which consists of the text "Clean Energy Roadmap" in blue and green, next to a green globe icon with a leaf. To the right of the logo is a search bar with the word "Search" and a magnifying glass icon. Below the search bar is a navigation menu with links: "Approach", "Programs", "Activity Map", "Resources", "News", "Who We Are", and "Contact". The main content area features a large photograph of a brick building with solar panels installed on its roof. Overlaid on the bottom left of this photograph is a text box with the heading "A Smart Energy Planning Framework for Communities" and a paragraph: "The Clean Energy Roadmap enables local governments and utilities to identify and pursue cost-effective policies and programs to encourage smart approaches to energy use." Below the photograph, there are three green icons: a gear with a lightning bolt, a solar panel on a stand, and a car with a charging plug. Each icon is centered above its respective label: "Energy Efficiency", "Renewable Energy", and "Clean Transportation".

**Community  
Landing  
Pages**



**Global  
Visibility**



**Customized  
Roadmaps**

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)


# Roadmap & Categories

## Roadmap Goals and Progress

[Back to summary](#)


The template roadmap displayed below contains an illustrative sample of objectives that San Joaquin Valley communities may elect to pursue. For up-to-date information about policies and programs in your community, please visit your city or town's customized landing page on the Sustainable Energy Roadmap.

### Energy Efficiency




Doing more with less energy means cost savings, increased comfort, and a more secure electricity grid. Energy efficiency is the most cost-effective strategy for commercial building owners to reduce energy usage and associated operating expenses, while also increasing occupant comfort and employee productivity. When combined with on-site renewable energy generation, demand side management, and energy storage, commercial buildings can achieve deep reductions in grid energy usage.

### Renewable Energy




Generating clean power from renewable energy sources comes with many economic and environmental benefits. Once building energy efficiency measures have been implemented, the remaining energy consumption needs can be satisfied using a portfolio of on-site renewable energy technologies, such as solar PV, solar water heating, small wind turbines, geothermal heat pumps, and bioenergy. The economic viability of renewable energy projects will depend on external factors, such as utility rate schedules and local market conditions.

### Transportation & Land Use



Transportation is critical to the movement of people and goods, as well as providing access to services. However, the transportation sector constitutes one of the primary end-uses of energy in communities across the country. Finding creative ways to reduce vehicle miles traveled (VMT) is proving to be a significant challenge, but also fosters an environment for new innovative solutions. By decreasing the environmental impact of their transportation systems, cities can improve regional air quality and reduce their carbon footprint.

### Social Equity



Social equity is a crucial component of sustainable development. The Sustainable Energy Roadmap aims to develop smart energy and sustainable development policies and programs at the local level that reflect the needs and priorities of target communities, reduce its businesses' and residents' energy prices and environmental impacts, improve the economy and generate new jobs.

- **Energy and Water Efficiency**
  - Building envelope, lighting, HVAC, demand side management, Water Efficiency
- **Renewable Energy**
  - Solar PV, solar water heating, wind, geothermal, bioenergy, energy storage
- **Transportation**
  - Public transit, active transportation, fleet mgmt., controls measures, smart growth strategies
- **Social Equity**
  - Directly engage environmental justice and workforce development stakeholders

# Roadmap Categories

13

## ENERGY & WATER EFFICIENCY



*Doing more with less energy means cost savings, increased comfort, and a more secure electricity grid. Energy efficiency is the most cost-effective strategy for commercial building owners to reduce energy usage and associated operating expenses, while also increasing occupant comfort and employee productivity. When combined with on-site renewable energy generation, demand side management, and energy storage, commercial buildings can achieve deep reductions in grid energy usage.*

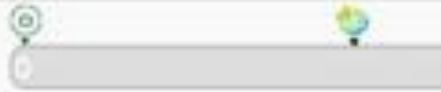
### Policy

Current Progress:  
0 of 7 goals achieved



### Permitting

Current Progress:  
0 of 2 goals achieved



### Planning & Zoning

Current Progress:  
0 of 7 goals achieved



### Financing

Current Progress:  
0 of 7 goals achieved



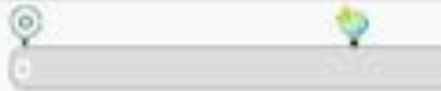
### Market Development

Current Progress:  
0 of 6 goals achieved



### Workforce Development

Current Progress:  
0 of 4 goals achieved



# Goal Setting, Guidance, & Resources

## Roadmap Goals and Progress

The template roadmap displayed below contains an illustrative sample of objectives that San Joaquin Valley communities may elect to pursue. For up-to-date information about goals and progress, visit the [Sustainable Energy Roadmap](#) page on the Sustainable Energy Roadmap.

[Back to summary](#)

### Energy Efficiency

Doing more with less energy is the most effective way to reduce greenhouse gas emissions. Combined with renewable energy, energy efficiency can significantly reduce a building's carbon footprint.

### Renewable Energy

Generating clean power from renewable energy sources comes with many economic benefits. Once building energy efficiency measures have been implemented, the remaining energy consumption needs can be satisfied using a portfolio of on-site renewable energy, PV solar water heating, small wind turbines, geothermal heat pumps, and bioenergy. Renewable energy projects will depend on external factors, such as utility rates and local conditions.

### Transportation & Land Use

Transportation is the largest source of greenhouse gas emissions. Finding creative ways to reduce transportation system energy use and emissions is a key goal of the Sustainable Energy Roadmap.

### Social Equity

Social equity is a crucial component of sustainable development. The Sustainable Energy Roadmap aims to develop smart energy and sustainable development policies and programs at the local level that reflect the needs and priorities of target communities, reduce its businesses' and residents' energy prices and environmental impacts, improve the economy and generate new jobs.

### Renewable Energy Progress

Category	Current Progress	Target
Policy	1 of 2 goals achieved	50%
Permitting	2 of 4 goals achieved	50%
Planning & Zoning	1 of 3 goals achieved	33%
Financing	2 of 3 goals achieved	67%
Market Development	1 of 4 goals achieved	25%
Workforce Development	0 of 1 goal achieved	0%

### Planning & Zoning

Current Progress: 1 of 3 goals achieved

**[Z1] Require new residential construction to be built "solar ready", with easy plumbing access for solar water heating and pre-wiring for solar photovoltaics.**

**Guidance:** Adopt a municipal ordinance which requires new residential construction to meet pre-plumbing and pre-wiring requirements for solar water heating systems and solar photovoltaic systems. Ordinance can update the building code, or expand permitting requirements to include solar-ready construction.

**Goal Achieved!**

[Take Action](#)

**[Z2] Update zoning code to establish and expand allowed use zones for renewable energy systems.**

**Guidance:** Update zoning code to specify where renewable energy systems are considered allowed use in order to eliminate special reviews and lengthy permitting processes. Establish design requirements (such as setbacks, height limits, noise limits, and lot use) to protect property owners' ability to install renewable energy systems. Consider widening scope of eligible technology.

**[Z3] Provide guidance for renewable energy upgrades in historic buildings.**

**Guidance:** Develop guidelines and special plan review processes for energy efficient renewable energy installations in historic buildings that protect property owners' ability to maintain their building's energy performance. Allow staff member to review and approve permit applications rather than requiring a committee or planning commission review.

### Essential Resources

- Zoning Ordinance for Wind Turbine Systems in San Diego County, CA**  
Author: San Diego County
- California State Standards for Wind Energy Systems**  
Author: California State Legislature
- Geothermal Zoning Ordinance in Warwick, RI**  
Author: Township of Warwick
- Renewable Energy Ordinance in Fremont, CA**  
Author: City of Fremont
- Solar Zoning Policy in Chicago, IL**
- Solar Zoning Ordinance and Height Exemption in Los Angeles, CA**  
Author: City of Los Angeles
- Bioenergy Facilities Special Use Standards in Sonoma County, CA**  
Author: Sonoma County

# Resource Library

The Clean Energy Roadmap offers the first comprehensive, publicly-accessible resource library that will help transform your local clean energy market. The library is composed of hundreds of resources and tools from a variety of respected public and private industry sources, which are organized by focus area and fully indexed to search by keyword. Residents, businesses, governments, utilities, and industry stakeholders can easily find information on relevant policies, programs, case studies and best practices.

Search for resources in our comprehensive [Resource Library](#).

Search for resources by energy type:



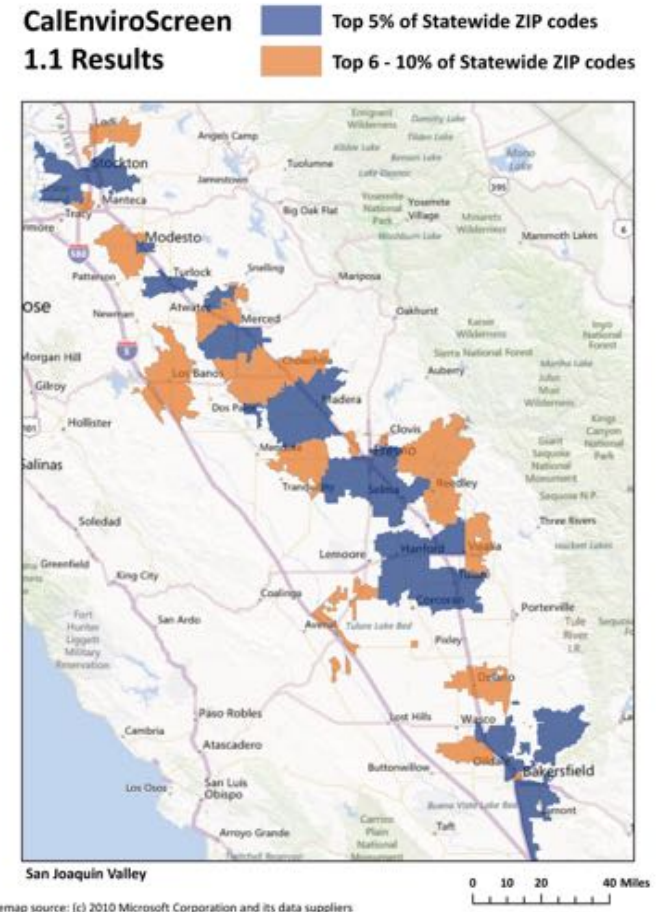
## Features & Contents

- Searchable by energy technology type and keyword
- Permitting and inspection checklists
- Renewable energy-friendly ordinances and zoning codes
- Solar-ready/green building guidelines
- Financing resources & incentives
- Consumer education & awareness
- Case studies and action toolkits



# SER Pilot Projects and EJ Connections

- Housing Upgrade Services to Disadvantaged Communities
- Solar Multi-Family Affordable Housing
- Municipal Solar Aggregation
- Solar on Ag Lands
- Exterior Water Efficiency Ordinance and Staff Training



## Next Steps

- Contact us for more information
  - Karly Zimmerman: (415) 507-1430; [Karly@seiinc.org](mailto:Karly@seiinc.org)
- Sign up
- Get started on benchmarking and setting goals
- Start leveraging your \$5,000 SER stipend
- Receive expert technical assistance to help you achieve goals

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Q&A DISCUSSION

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[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)



# SER Contacts

[www.SustainableEnergyRoadmap.com](http://www.SustainableEnergyRoadmap.com)

Karly Zimmerman

Strategic Energy

Innovations

(415) 507-1430

[Karly@seiinc.org](mailto:Karly@seiinc.org)

Michael Sigala

SJ Valley Regional Policy Council

(559) 266-6222

[Michael@sigalainc.com](mailto:Michael@sigalainc.com)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Extra

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)



# San Joaquin Valley Effort funded by Strategic Growth Council

- Proposition 84 state funding
- Supporting 20 local governments to select strategies to reduce greenhouse gas emissions
- Promote equity by bringing environmental justice communities into planning process



[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# SER CORE TEAM

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[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)



# Strategic Energy Innovations

SEI develops and delivers solutions customized to help communities accomplish their sustainability goals through green building, clean energy, resource efficiency and support of a local and qualified green workforce. We're a certified green business, community-based nonprofit organization committed to empowering under-served markets:

- Local governments;
- Small and rural communities;
- Affordable housing providers and residents;
- Small businesses;
- Schools, colleges, and universities



[www.seiinc.org](http://www.seiinc.org)

# SJV Regional Policy Council

- The San Joaquin Valley Regional Policy Council builds regional consensus on issues of Valley importance. The Council is positioned to have a unique and potentially pivotal position to further Valley collaborative efforts and to improve the quality of life for all Valley residents.
- The Policy Council provides guidance on common interregional policy issues and also represents the San Joaquin Valley at public forums such as the California Transportation Commission, with the Governor and his administration, as well as the State and Federal legislative bodies that require a common voice from the San Joaquin Valley.

[www.sjvcogs.org](http://www.sjvcogs.org)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# MCTC

- The Madera County Transportation Commission (MCTC) and each of its member agencies (Cities of Chowchilla and Madera and Madera County) are considering long-term County-wide housing, transportation, and land use alternatives; taking a big picture look at how Madera County can grow over time in a way that uses natural resources wisely, protects existing communities and the environment, conserves farmland and open space, and supports the Madera County economy.

[www.maderactc.org](http://www.maderactc.org)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# Optony, Inc.

Optony develops and deploys clean energy best practices across the entire project lifecycle for government agencies, schools, banks and commercial organizations. Optony has been involved in over 3GW of project activity globally from strategy to project commissioning.

Optony creates and manages national-scale projects for clean energy market transformation including a variety of projects for the Department of Energy under the SunShot Initiative.



*Award Winning  
Pubic Sector Project*



*Award Winning  
Pubic Sector Project*



*Multiple Grant-Winner for  
Solar Market  
Transformation*



*Best of Silicon Valley  
Recognition for Energy  
Services*

*"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."*

# NARC

- The National Association of Regional Councils (NARC) serves as the national voice for regionalism by advocating for regional cooperation as the most effective way to address a variety of community planning and development opportunities and issues.
- NARC's member organizations are composed of multiple local governments that work together to serve American communities – large and small, urban and rural. NARC's agenda includes, but is not limited to, transportation, economic and community development, environment, homeland security and regional preparedness, and a variety of community issues undertaken by its member organizations.

[www.narc.org](http://www.narc.org)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# CEG

- The Colorado Energy Group, Inc. (CEG) facilitates solutions to complicated energy-related sustainability issues via best practice integration, exhaustive stakeholder analysis, human asset mapping and strategy development. CEG is known for community-focused clean energy technology market analyses, especially in the Western United States. CEG's President George Burmeister has provided clean energy policy advice to private and public sector leaders for more than two decades, concentrating his efforts on the optimum combinations of energy efficiency and renewable energy technologies, practices and policies. CEG is headquartered in Boulder, Colorado and also has offices in Dallas, Texas and San Francisco and Stockton, California and Washington, D.C. CEG was founded in 1997.

[www.coloradoenergygroup.com](http://www.coloradoenergygroup.com)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)

# The City of Visalia

- The City of Visalia is the oldest San Joaquin Valley town between Los Angeles and San Francisco. Visalia staff and elected officials have demonstrated significant leadership in the areas of energy and resource conservation. Serving as a key member of the Valley Energy Watch Partnership with SCE, Visalia staff continue to set an example for the region through municipal actions to support solar energy, resource efficiency and smart land use. The City has adopted a climate action plan that incorporates a host of measures and strategies designed to meet ambitious greenhouse gas emissions reduction targets.

[www.ci.visalia.ca.us](http://www.ci.visalia.ca.us)

[www.sustainableenergyroadmap.com](http://www.sustainableenergyroadmap.com)