



RICAPS

Regionally Integrated Climate Action Planning Suite

Multi-city Working Group
February 23, 2021

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.

Introduce Yourself in Chat!

- Your name and affiliation
- Did you watch any of the Joint Venture State of the Valley presentations this morning?

Agenda

- Coordinated Municipal Support
- How Cities Can Host Clean Tech Pilots
- Update from PCE
- Discussions/Feedback
- Small Group Breakouts
- Final Announcements

Coordinated Municipal Offerings

February 23, 2021



**SAN MATEO COUNTY
ENERGY WATCH**



**OFFICE OF
SUSTAINABILITY**

COUNTY OF SAN MATEO

Presentation Agenda

Introduction: Program Partners

- Coordinated Municipal Program Offerings
 - Benchmarking and Energy Audits
 - Technical Assistance
 - Project Financing and Implementation

Next Steps: Call for Projects Evaluation & Benchmarking

Questions

Program Components

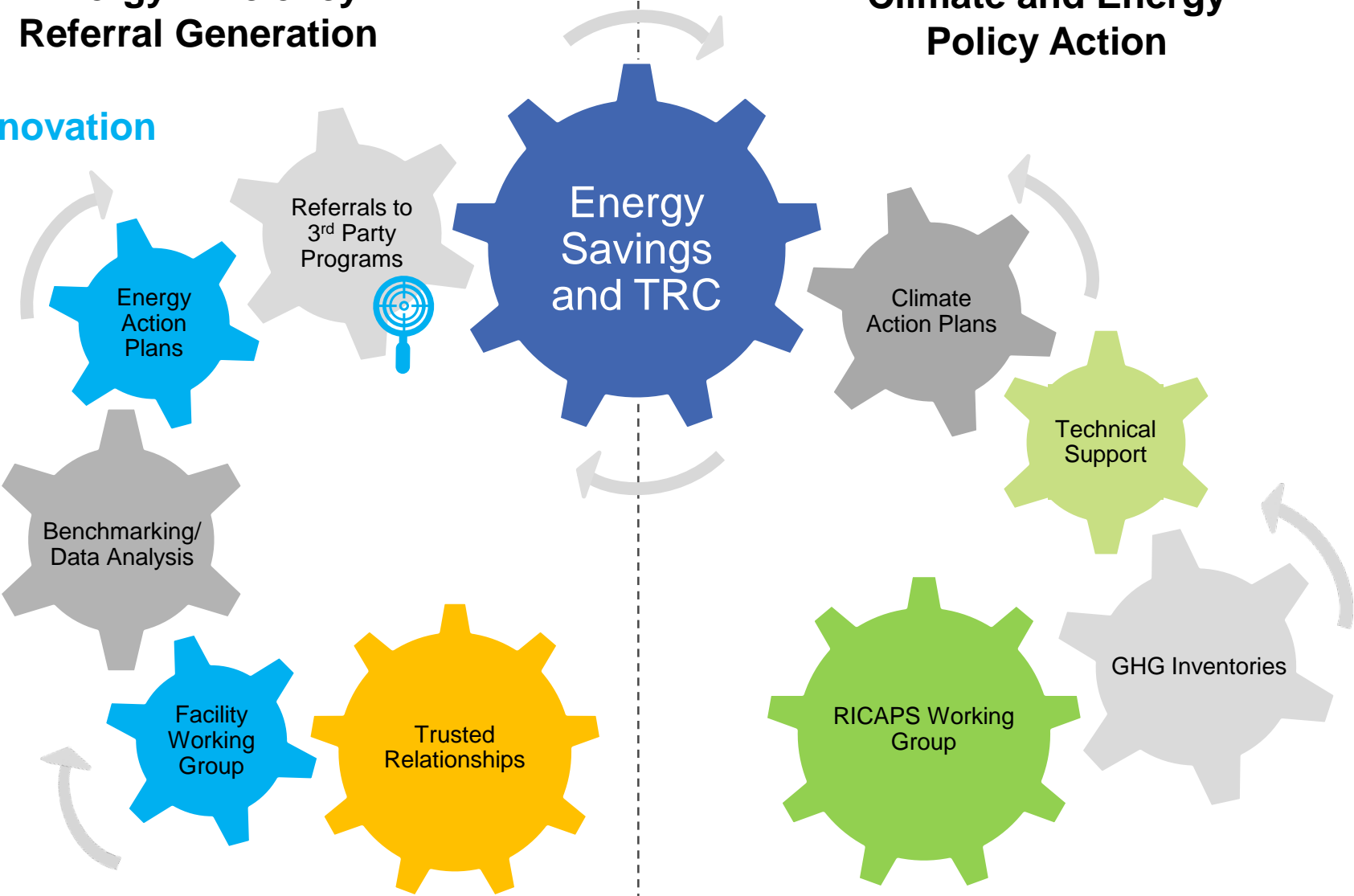


SAN MATEO COUNTY
ENERGY WATCH

**Energy Efficiency
Referral Generation**

**Climate and Energy
Policy Action**

Innovation



Program Partners



+ Resource
Program
Implementers



20 cities
+ County



SAN MATEO COUNTY
ENERGY WATCH



Local Governments Empowering Our Communities



PENINSULA
CLEAN ENERGY

Community-Based
Organizations



+ local
chambers



SAN MATEO
COUNTY
OFFICE OF
EDUCATION

FREE Support Services

Available to All

- Template Decarbonization Policy
 - Coming Soon!
- Benchmarking Reports & Energy Bill Rate Analyses
- CIP List Review & Project Suggestions
- Participation in the SMCEW Public Facilities Working Group



FREE Support Services

Available for Projects

- Portfolio Review
- ZNE Assessment & Retrofit Strategies
- Building Electrification Support
- Financing Application Support & Submission
- Contractor/Implementor Referrals



PENINSULA
CLEAN ENERGY



WILLDAN

SMC Energy Watch

- Benchmarking services
- Bill Rate Analysis
- Project Opportunity Identification
- Project Implementation and Financing Referrals



BayREN ZNE Assistance

- Municipal ZNE Roadmap Development
- Portfolio Review
- Scope of Work Development
- Project Cost Estimation
- Procurement Strategy Recommendations



*Energy
Efficiency*



*Renewable
Energy*



*Building
Electrification*



Local Governments Empowering Our Communities

Peninsula Clean Energy

- Support for a spectrum of Project Sizes
 - Virtual and in-person assessments available
- Building Electrification Strategy Discussions
- Fund Maintenance of New Electrical Equipment
- Potential for increased incentives with demonstrated need



Willdan Solutions

- Preliminary Energy Audit
- Project Recommendations & Cost Analysis
- Financing Application Assistance
- Connect Customer with Project Implementor
- Project Management



RAPIDS Wastewater Treatment Optimization

1. Risk Assessment 2. Process Improvement 3. Decision Support



**Project Chartering &
Team Formation**



**O&M Workshop &
Energy Scan**



**Energy Action Plan
Development**



**Facility Audit, RFI &
EEM Analysis**



Risk Analysis



**Incentive & Financing
Support**



**Preliminary
Design & Design
Documentation**



**Cloud-based Real-
time Submetering**

Example Project Timeline

1

Meet with SMCEW for Benchmarking Report + CIP List Review

2

Obtain Referral for Technical Assistance (ZNE Assessment, Energy Use Audit, etc.)

3

Determine Cost, Scope, and Predicted Savings for Program and Financing Referral

4

Project Implementation and Management

5

Equipment and Savings Monitoring for 12-24 months





CALL FOR ENERGY PROJECT EVALUATIONS

Call for Interest Energy Evaluation

We are looking for project commitments!

- Free technical assistance
- Potential for additional incentives to match customer need

To Start...

1. Individual meetings to review benchmarking report and CIP List
2. Evaluation by different technical teams



DO YOU HAVE A PROJECT?

We are ready to begin evaluations!

Projects with commitments to implementation in the next year will be prioritized, but all are welcome.

Contact

Alexandria Gallizioli at agallizioli@smcgov.org | (650)599-1402 to receive your updated energy benchmarking report, and to begin project discussions.

Thank you!



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Alexandria Gallizioli
Resource Conservation
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SMC Energy Watch Team

HOW CITIES CAN HOST CLEANTECH PILOTS

PRESENTED TO

SAN MATEO COUNTY,
RESOURCE MANAGEMENT &
CLIMATE PROTECTION
COMMITTEE

BY

BRETT GENTRY

02/23/2021

WHAT TO EXPECT FROM STARTUPS

UNDERSTANDING THEIR WORLD AND HOW YOU CAN HELP

MONEY & PROOF

- CUSTOMERS
- VENTURE INVESTORS
- CLEANTECH'S ADDITIONAL CHALLENGE

LEVELS OF STARTUP PROGRESS & VALIDATION

- COLLEGE RESEARCH OR IDEA
- PERSONAL, FRIENDS AND FAMILY INVESTMENT
- PROGRESS TECHNOLOGY READINESS LEVEL (TRL ~1-4)
- GRANTS
- PARTNERSHIPS
- ANGEL AND IMPACT INVESTMENT
- PILOTS (TRL ~5-9)
- CUSTOMERS
- REVENUE
- VENTURE INVESTMENT

WAYS YOU CAN HELP ACCELERATE SOLUTIONS

- UNDERSTANDING
- NETWORKING
- RFP'S
- PARTNERSHIPS
- PILOTS

CLEANTECH STARTUP EXAMPLES

YOU CAN HELP

AMAZING CLEANTECH IN THE PIPELINE

- ENERGY STORAGE & PRODUCTION
- ENERGY OPTIMIZATION
- CARBON SEQUESTRATION

ENERGY STORAGE: REPURPOSE ENERGY

USED EV BATTERIES TO POWER INDUSTRY AND HOMES

- 70% OF EV BATTERY CAPACITY STILL AVAILABLE
- LOWER COST THAN NEW BATTERIES
- LESS POLLUTION THAN NEW BATTERIES
- [HTTPS://WWW.REPURPOSE.ENERGY/](https://www.repurpose.energy/)



ENERGY STORAGE: ENZINC

ZINC MAKES BETTER, CLEANER, SAFER BATTERIES

- LOWER COST
- AS POWERFUL AS LITHIUM-ION
- 100% RECYCLABLE
- [HTTP://WWW.ENZINC.COM/](http://www.enzinc.com/)



ENERGY PRODUCTION: **ATARGIS ENERGY**

CALIFORNIA COAST COULD PRODUCE 34 GW'S OF ELECTRICITY

- COST OF ENERGY 10X LESS THAN OTHER WAVE TECH
- WAVES ARE MUCH MORE PERSISTENT THAN WIND OR SOLAR
- GENERATORS MOVE SLOWER THAN MARINE LIFE
- [HTTPS://ATARGIS.COM/](https://atargis.com/)



ENERGY PRODUCTION: ODIN

SMALL FOOTPRINT, LOW WIND POWER SOURCE FOR MUNICIPAL MICROGRIDS

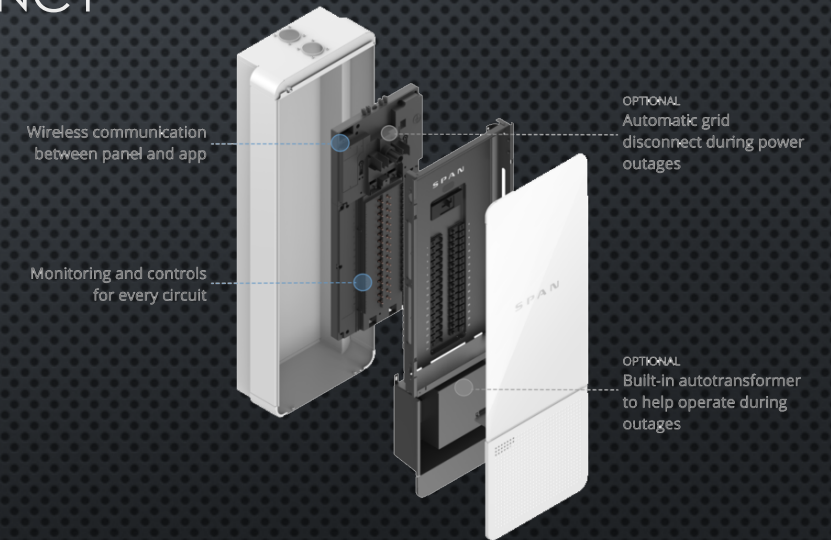
- VERTICALLY STACKED TURBINES = MUCH LESS LAND, MORE POWER
- BERNOULLI DESIGN GENERATES POWER EVEN IN LOW WIND
- LOWER LCOE THAN OTHER MICROGRID POWER SOLUTIONS
- [HTTPS://WWW.ODINENERGY.NET/](https://www.odinenergy.net/)



ENERGY OPTIMIZATION: SPAN.IO

SMART ELECTRICAL PANELS TO OPTIMIZE ENERGY EFFICIENCY

- REAL-TIME ENERGY MONITORING AND CONTROL
- OPTIMIZED HOME BACKUP PROTECTION
- STREAMLINED CLEAN ENERGY UPGRADES
- [HTTPS://WWW.SPAN.IO/](https://www.span.io/)



CARBON SEQUESTRATION: NPS

CARBON NEGATIVE COLD BIOCHAR ASPHALT MIX

- SEQUESTERS 200-250 TONS OF BIOCHAR IN 1KM ROADWAY (10,000 SQ M)
- ANY FEEDSTOCK AND QUALITY
- LOWER LCA AND COST THAN EXISTING
- [HTTPS://NPS.WORLD/](https://nps.world/)



CARBON SEQUESTRATION: BLUE PLANET LLC

CONVERTING CO₂ INTO CARBON NEGATIVE CONCRETE

- WRAPS AGGREGATE IN SYNTHETIC CO₂ DERIVED LIMESTONE
- PERMANENTLY SEQUESTERS CARBON
- PILOT PROJECT AT SFO
- [HTTPS://WWW.BLUEPLANET-LTD.COM/](https://www.blueplanet-ltd.com/)



THANK YOU

LET'S ACCELERATE CLEAN SOLUTIONS TOGETHER!

CONTACT: BRETT GENTRY

[HTTPS://WWW.LINKEDIN.COM/IN/BRETTGENTRY/](https://www.linkedin.com/in/brettgentry/)



PENINSULA CLEAN ENERGY UPDATES

Kirsten Andrews-Schwind, PCE

Power On Peninsula

- ❑ Any homeowner in San Mateo County
- ❑ Partnership with Sunrun, vetted through extensive RFP process
- ❑ \$1,250 incentive on solar + battery storage systems when leased
- ❑ Lease agreements designed to save residents money on electricity bills
- ❑ As Sunrun owns batteries, works with PCE to use them to power homes during evening hours
- ❑ “Islandable” during power outages



Sunrun offers Tesla Powerwall and LG Chem batteries

YOUR FEEDBACK

- Low Carbon Fuel Standard (LCFS) Carbon Credits from EV Charging Stations
- Carbon neutrality
- Policy template advisory committee
- CEQA 101 presentation
- CAP measures to implement in 2021
- Earth Day 2021

Go to
Menti.com

Use this code:
81 94 46



FINAL INFORMATION



Upcoming BayREN Regional Forum – March 18

Topic:

**Responding to Climate Challenges:
Energy Efficient Homes in a Wildfire-prone Region**

RSVP: bayrencodes.org/events



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Regionally Integrated Climate Action Planning Suite

Next Webinar – Tuesday, March 23 1:30-3pm

Topics:

Adrienne Etherton - Brisbane Building Efficiency Program

John Baker – CPUC Insights and Updates



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Coming soon...

- Addressing issues with RICAPS Microsoft Teams channel
- Posting updated CAP template
- Individual conversations with each city –
watch for a link to schedule the date

Thank you! Let's stay in touch...

John Allan, jallan@smcgov.org (inventories, stormwater)

Alexandria Gallizioli, agallizioli@smcgov.org (municipal, special district, and school facilities; small businesses)

Denise Lin, dlin@smcgov.org (residential, reach codes, trainings, EVs)

Susan Wright, swright@smcgov.org (climate action planning, collaboration on CAP implementation, electrification strategy)

Kim Springer, kspringer@smcgov.org (all of these things and everything else!)

