



LOCAL GOVERNMENT  
**SUSTAINABLE**  
ENERGY COALITION

# Welcome!

LGSEC.org



## Explore a New Funding/Partner-Finding Platform from the California Energy Commission *Empower Innovation Platform Demonstration*

Tuesday, May 5 | 11AM - 12PM

LGSEC Board Chair:  
Garrett Wong ([gwong@co.santa-barbara.ca.us](mailto:gwong@co.santa-barbara.ca.us))

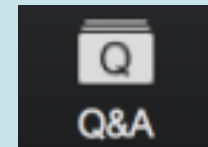
Project Coordinator:  
Sarina Soor ([SSoor@lgc.org](mailto:SSoor@lgc.org))



Keep yourself muted  
so that we can hear  
our speakers clearly



Use Q&A function to  
send questions  
throughout webinar





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# Our Network of Leaders

LGSEC.org



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Project Coordinator:

Sarina Soor ([SSoor@lgc.org](mailto:SSoor@lgc.org))

# Presenters

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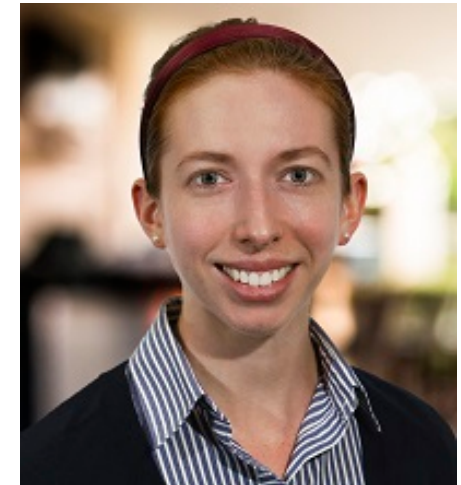
- **Hannah Schanzer**, Civic Spark Fellow, California Energy Commission



- **Katrina Leni-Koenig**, Supervisor, Energy Research & Development Division, California Energy Commission



- **Laura Vogel**, Associate Director, Guidehouse







# Empower Innovation: Clean Energy Technology Scale-up and the Role of Local Governments

Katrina Leni-Konig

May 5, 2020

# Times are changing...fast!



LOCAL NEWS

## L.A. has longest recorded stretch of clean air as COVID-19 lockdowns result in major reductions in air pollution across globe



The downtown L.A. skyline is seen in a file photo. (iStock / Getty Images)

**The  
Guardian**

## Oil prices dip below zero as producers forced to pay to dispose of excess

US crude fell to negative value for first time in history as stockpiles overwhelmed storage facilities, before rebounding to just over \$1 on Tuesday



▲ A record 160m barrels of oil are currently being stored in oil tankers outside the world's shipping ports.  
Photograph: US Department of Energy/EPA





# Times are changing...fast!

## The Mercury News

Business > Economy • News

### Coronavirus: California, U.S. workers lose jobs in record numbers

Jobless claims rocket higher as coronavirus fallout batters economy

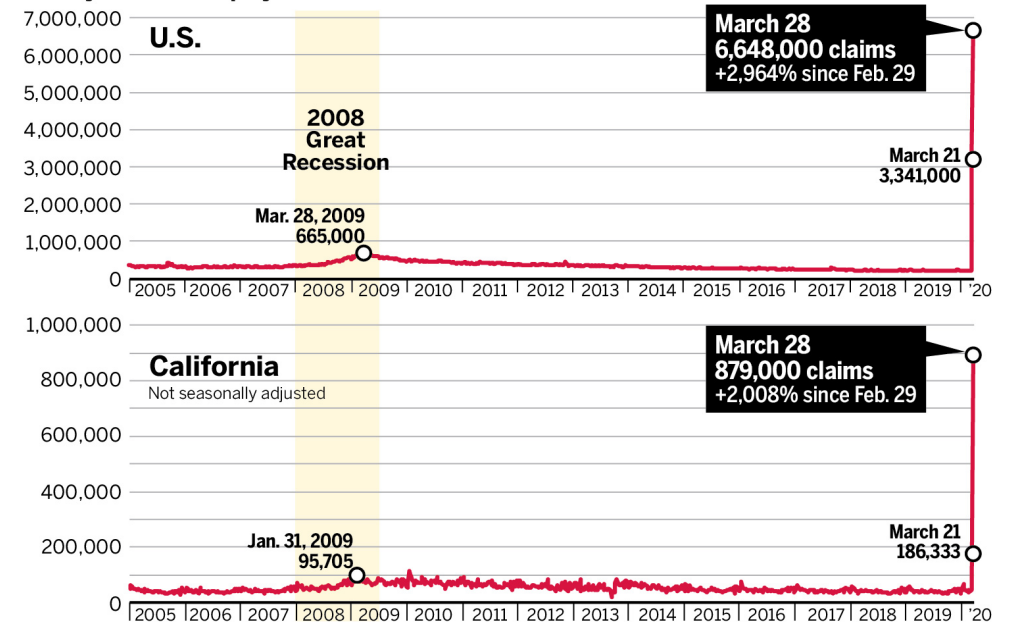


Unionized hospitality workers wait in line in a basement garage to apply for unemployment benefits at the Hospitality Training Academy in Los Angeles.  
(AP Photo/Marcio Jose Sanchez)

### JOBLESS CLAIMS BREAK RECORDS

The Department of Labor reported the highest number of initial claims filed in history in the U.S. and California. Claims have jumped more than 2,000% since last month.

#### Weekly initial unemployment claims



Source: U.S. Dept. of Labor

BAY AREA NEWS GROUP



# Conflicting Economic Arguments for Clean Energy

FOX NEWS FLASH • Published February 28

**Heritage Foundation researcher:  
Green New Deal 'would devastate the  
economy,' hit working families hardest**

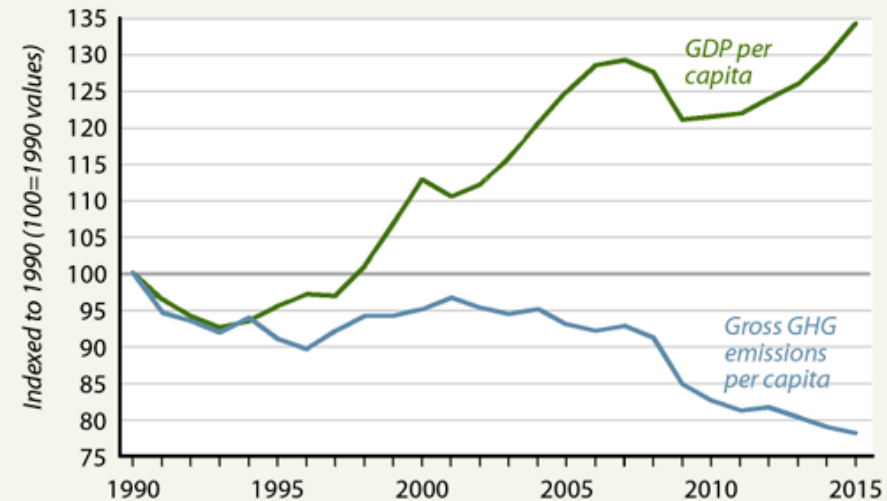


Green New Deal could cost swing state households \$75K in the first year

## Decoupling: California's Economy Grows as Emissions Fall

Since the state passed climate legislation establishing a cap-and-trade system in 2006, California's gross domestic product per capita has grown more quickly than that of the nation as a whole, even as greenhouse gas emissions have fallen.

### GREENHOUSE GAS EMISSIONS AND GDP California relative trends, 1990-2015



SOURCE: NEXT 10 (via data from Calif. Air Resources Board; Calif. Greenhouse Gas Inventory; Bureau of Economic Analysis, U.S. Dept. of Commerce; U.S. Census Bureau)

PAUL HORN / InsideClimate News



# Clean Energy Jobs in California

## CLEAN JOBS CALIFORNIA

512,934 CLEAN ENERGY JOBS ACROSS CALIFORNIA<sup>1</sup>

2019

### CLEAN ENERGY JOBS IN PERSPECTIVE

**1 OUT OF 7** clean energy jobs in America are located in California

**9,678** The average congressional district in California is home to 9,678 clean energy jobs, with every single district supporting at least 2,600 jobs

**5X MORE** Clean energy employs 5X more workers in California than all fossil fuel industries combined (89K)

**9.7% VETERANS** of California's clean energy workers are military veterans, higher than the nation's overall workforce average (6%)

**60%** of California's clean energy employment is in construction and manufacturing



<https://e2.org/reports/clean-jobs-california-2019/>

## CLEAN JOBS AMERICA

NEARLY 3.3 MILLION CLEAN ENERGY JOBS<sup>1</sup>

### CLEAN JOBS AMERICA

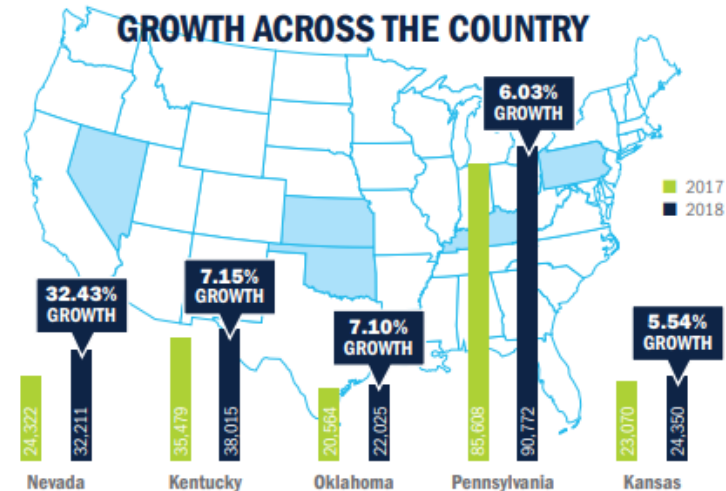
**3.26 MILLION**  
CLEAN ENERGY JOBS:  
HOW DO THEY STACK UP?

**3.04 M**  
That's the number of teachers in elementary, middle & secondary schools<sup>6</sup>

**2.25 M**  
That's how many waiters & waitresses work in America's bars and restaurants<sup>7</sup>

**211,000**  
The number of jobs in coal mines, gas fields and oil patches combined<sup>8</sup>

**1.15 M**  
The number of jobs in the entire U.S. fossil fuel industry



<https://www.e2.org/wp-content/uploads/2019/04/E2-2019-Clean-Jobs-America.pdf>





# Air Pollution, Inequality, and COVID 19

## The deadly mix of Covid-19, air pollution, and inequality, explained

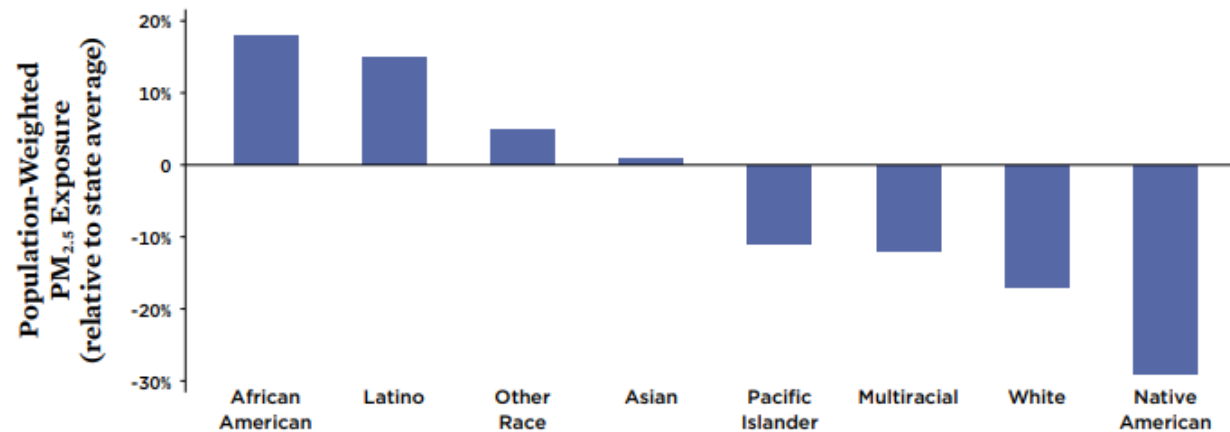
Covid-19 is disproportionately affecting black and brown communities in New York and elsewhere. Air pollution seems to be one reason why.

By Lois Parsley | Apr 11, 2020, 8:50am EDT



Covid-19 patients arrive at the Wakefield Campus of the Montefiore Medical Center on April 6 in the Bronx borough of New York City after being transferred from the center's Einstein Campus. The Bronx has 21 times more asthma hospitalizations than other New York boroughs, and over five times the national average. | John Moore/Getty Images

FIGURE 1. Disproportionately High Exposure for African Americans and Latinos in California



African American and Latino Californians have 19 and 15 percent higher exposure to PM<sub>2.5</sub>, respectively, than the state average, while white Californians are exposed to 17 percent lower concentrations.

Note: The following US Census Bureau-defined racial groups were used in the analysis: White; Black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; Hispanic; Latino; and Some Other Race. In the chart above, Latino includes census respondents who select Hispanic, Latino, or both; Other Race includes census respondents who select Some Other Race as their only race.

SOURCES: US CENSUS BUREAU 2018; EPA 2014.



# Do we return to business as usual?



Photo by Patrick Hendry on [Unsplash](#)



Photo by Tan Kaninthanond on [Unsplash](#)



Photo by Dominik Vanyi on [Unsplash](#)





# Or can we lead a sustainable path forward?



[Unsplash](#)



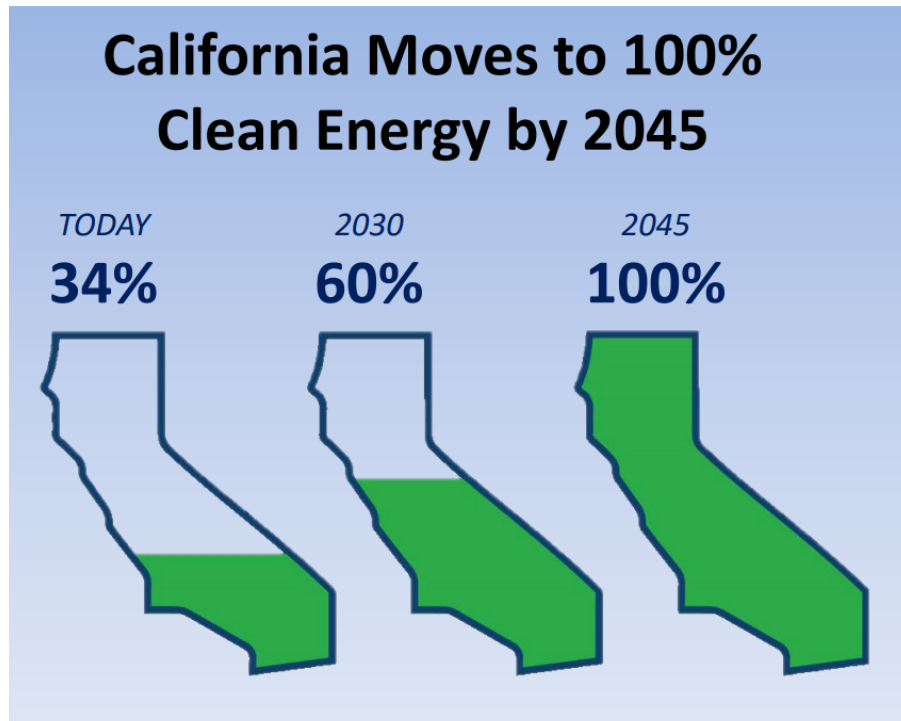
# Climate Change Requires Rapid Decarbonization





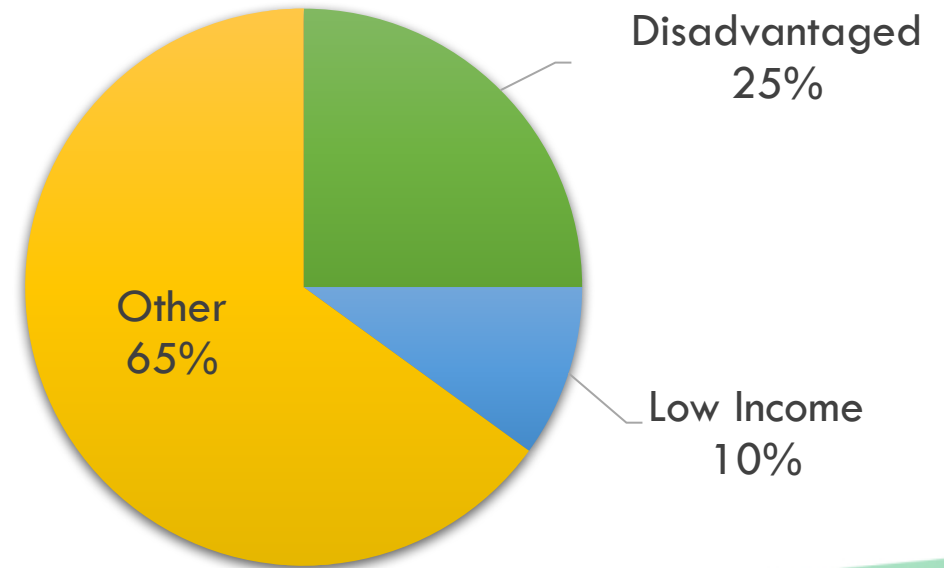
# California's Commitment to Clean Energy For All

## SB 100:



## AB 523 – EPIC Investments:

### Technology Demonstration and Deployment Sites





# CEC Research and Development: Fostering Innovation Across the Energy Sector

## Mission:

Strategically invest funds to catalyze change and accelerate achievement of policy goals

## Funding:

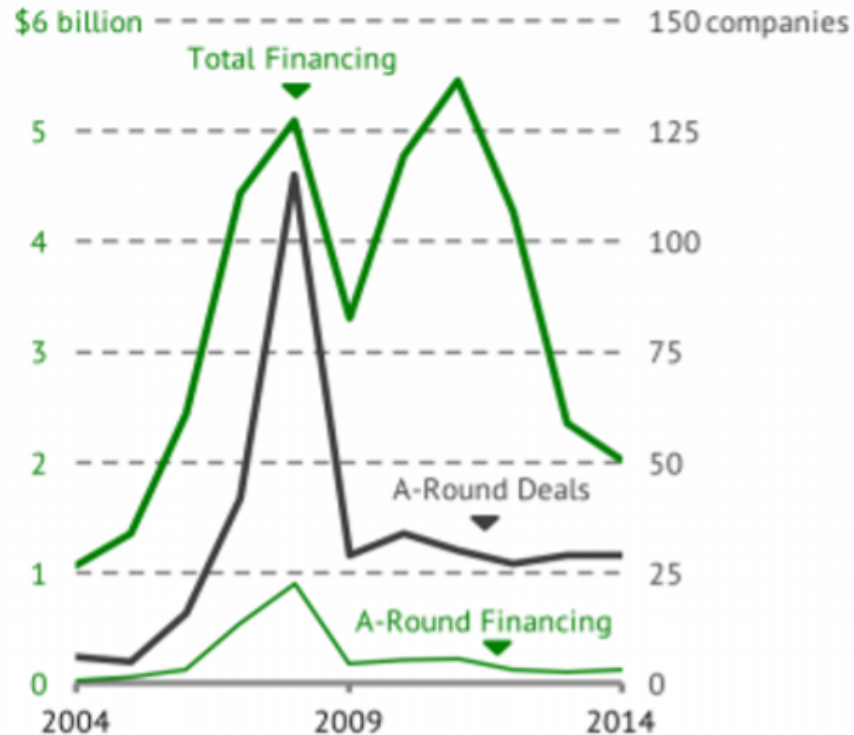
- Electric Program Investment Charge (EPIC); \$133 million annually
- Natural Gas Research, Development and Demonstration Program; \$24 million annually
- Food Production Investment Program; \$124 million biennially
- Low Carbon Fuels R&D Program; \$18 million, one-time general fund expenditure authority



# Venture Capital, Cleantech & the Role of Public Funding

**Figure 1. Boom and bust in cleantech venture capital**

VC investment in early-stage companies declined after the 2008 peak, financing shifted towards late stage rounds, and the number of A-round investments has remained relatively constant at

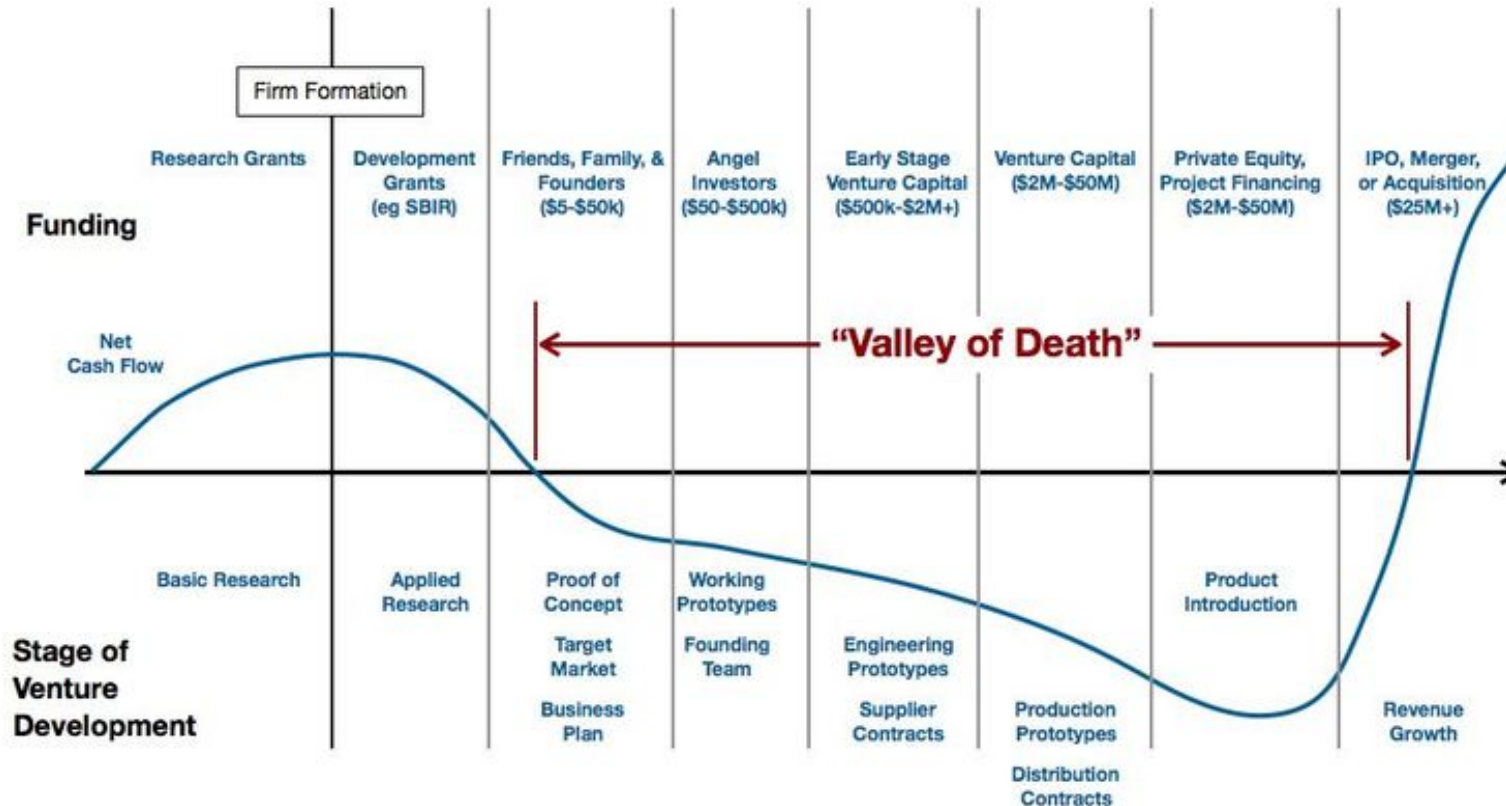


*“The conventional technology-to-market pathway from invention to market entry has proven to be challenging for disruptive non-software clean energy technologies”*

Source: Venture Capital and Cleantech: The Wrong Model for Clean Energy Innovation, MIT Energy Initiative



# Lifecycle of a Venture and the Valley of Death



# CEC's Entrepreneurial Ecosystem

Technology Pipeline



Funding Opportunities



Entrepreneurial Support



# The Role of Local Governments: Pilot/Demonstration and Beyond

Technology Pipeline



Funding Opportunities



Entrepreneurial Support





# Innovation: Breaking Free from the Old

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OUTDATED CODES AND STANDARDS, EXISTING INFRASTRUCTURE, OLD HABITS



# Local Governments as Partners:

## City of Fremont Microgrid



### Fremont, California, Fire Station Is First In US With Solar Microgrid

<https://cleantechnica.com/2019/04/05/fremont-ca-fire-station-is-first-in-us-with-solar-microgrid/>

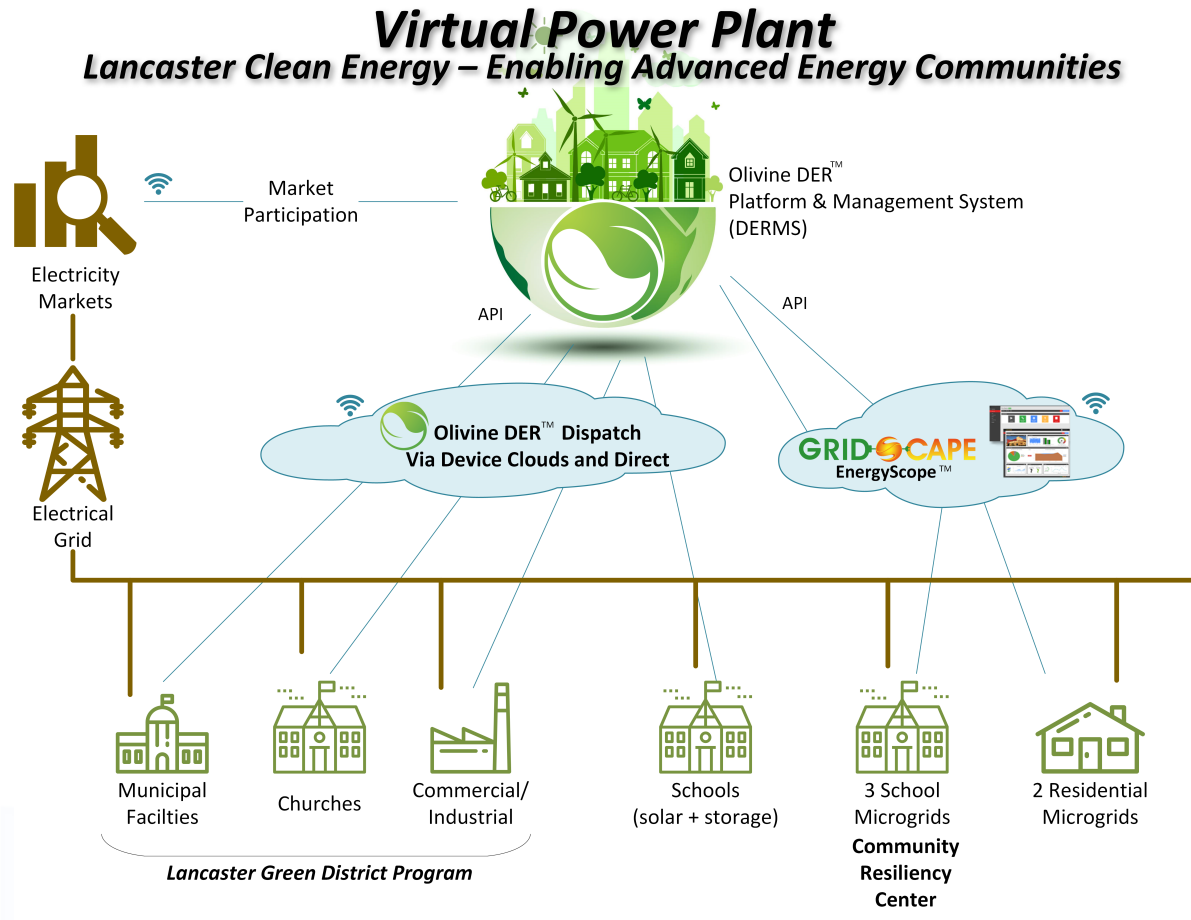


<https://www.fremont.gov/2293/Solar-and-Microgrid-Projects>

- Early adopters
- Demonstrating community resilience
- Supporting technology scale-up



# Local Governments as Partners: City of Lancaster Advanced Energy Community



- Early adopters
- Demonstrating a new vision for the future electricity system
- Cultivating local energy resources

# Upcoming Grant Funding Opportunity

## Housing Affordability

Los Angeles Times

SUB  
\$1 for

BUSINESS

The days of fast growth are ending for L.A. and California, report says



## Climate Adaptation





# The Next EPIC Challenge:

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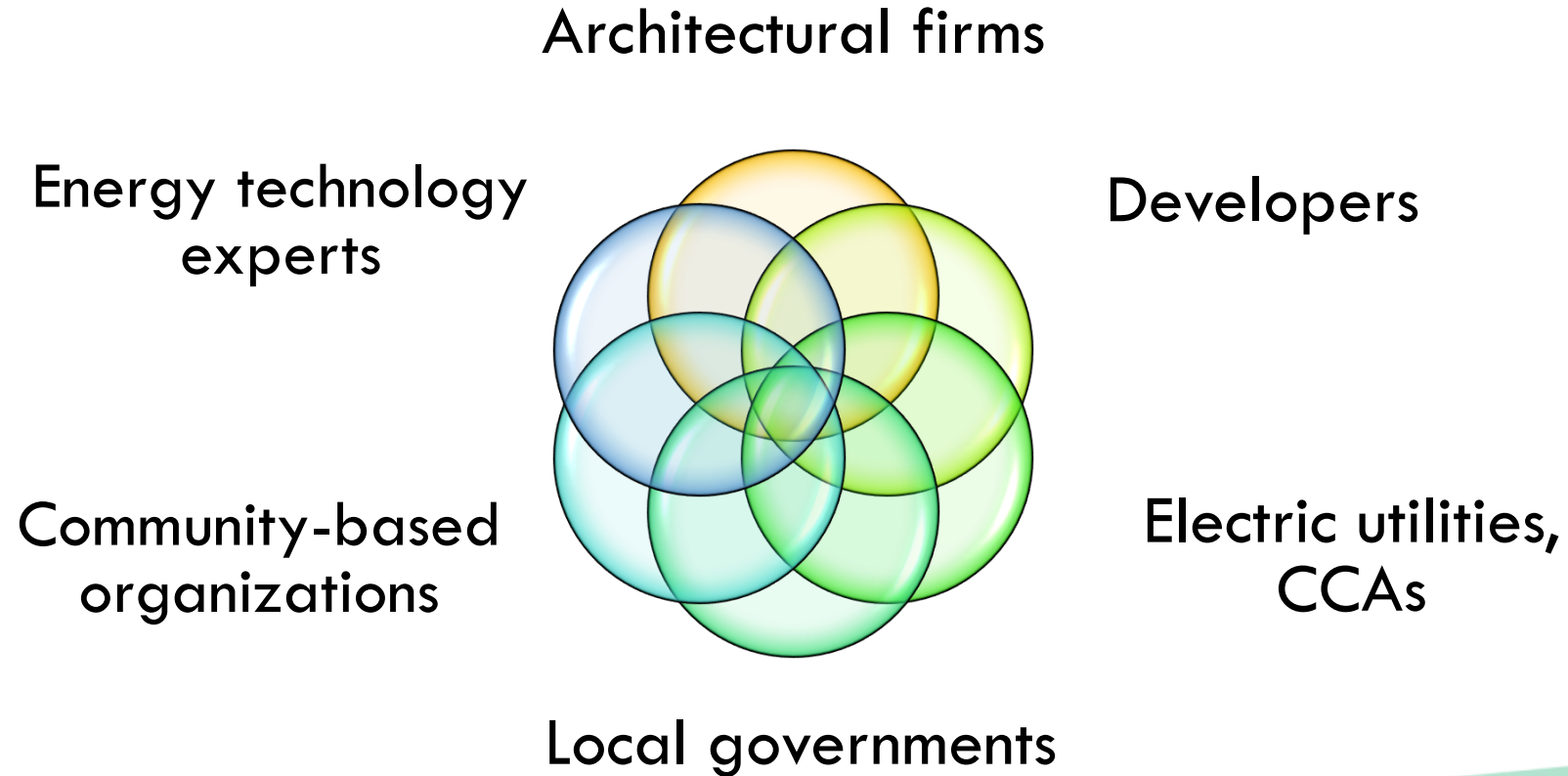
Can we design and build mid-rise, mixed-use development that is affordable, equitable, climate-resilient, cost-competitive and emissions-free?





# Next EPIC Challenge Strategic Partnerships

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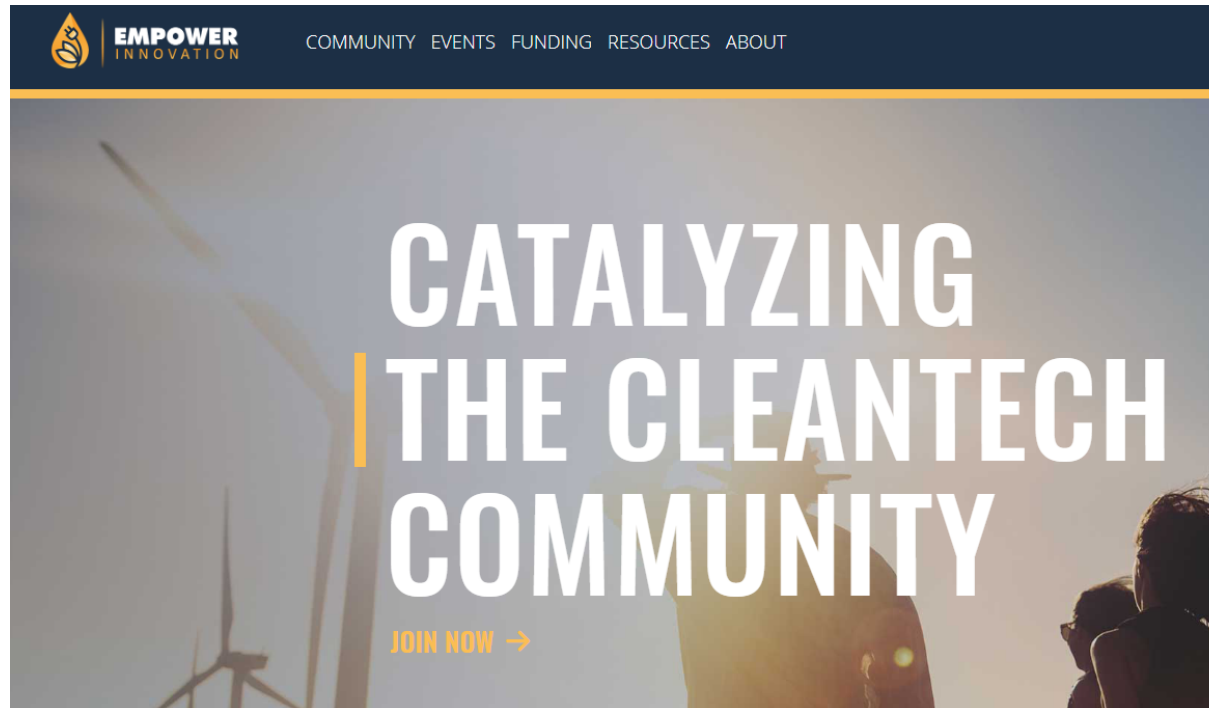
# Importance of Networking and Relationship Building



- Engaging communities: Trust Takes Time
- Holistic vision requires diverse perspectives
- Matching needs to available resources
- Stronger together: Coherent network with a common goal



# Find a Partner on EmpowerInnovation.net



Empower Innovation Online Networking Platform

[EmpowerInnovation.net](https://EmpowerInnovation.net)



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# Questions?







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# Thank you!

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