

Powering Community.

Solar Programs for Underserved Communities

Lisa Castilone
IE Outreach/Tribal Mgr.



- Need and opportunities
- Overview of GRID Alternatives
- GRID's solar services
- Solar Affordable Housing Program for low-income homeowners
- How to partner with GRID
- Q&A

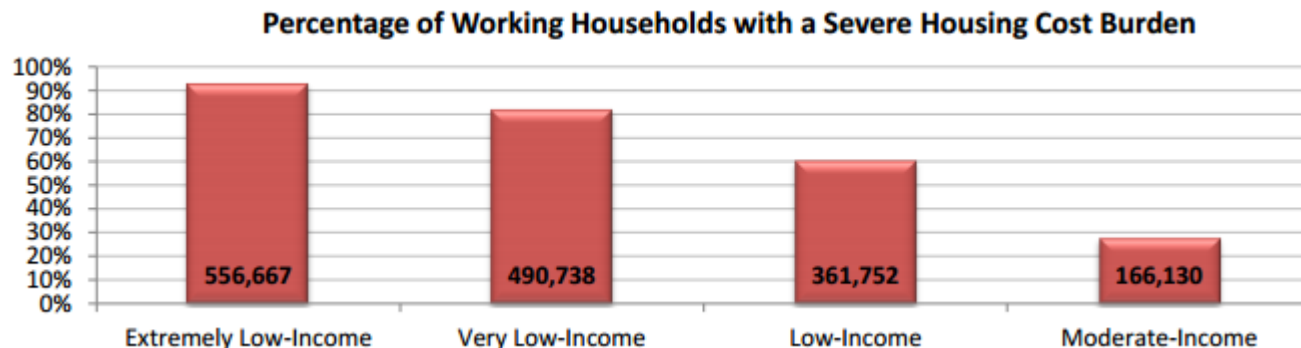


Housing burden

- Over 60% of low-income working households have severe housing cost burden (pay $\geq 50\%$ of their income on housing expenses, including energy bills)

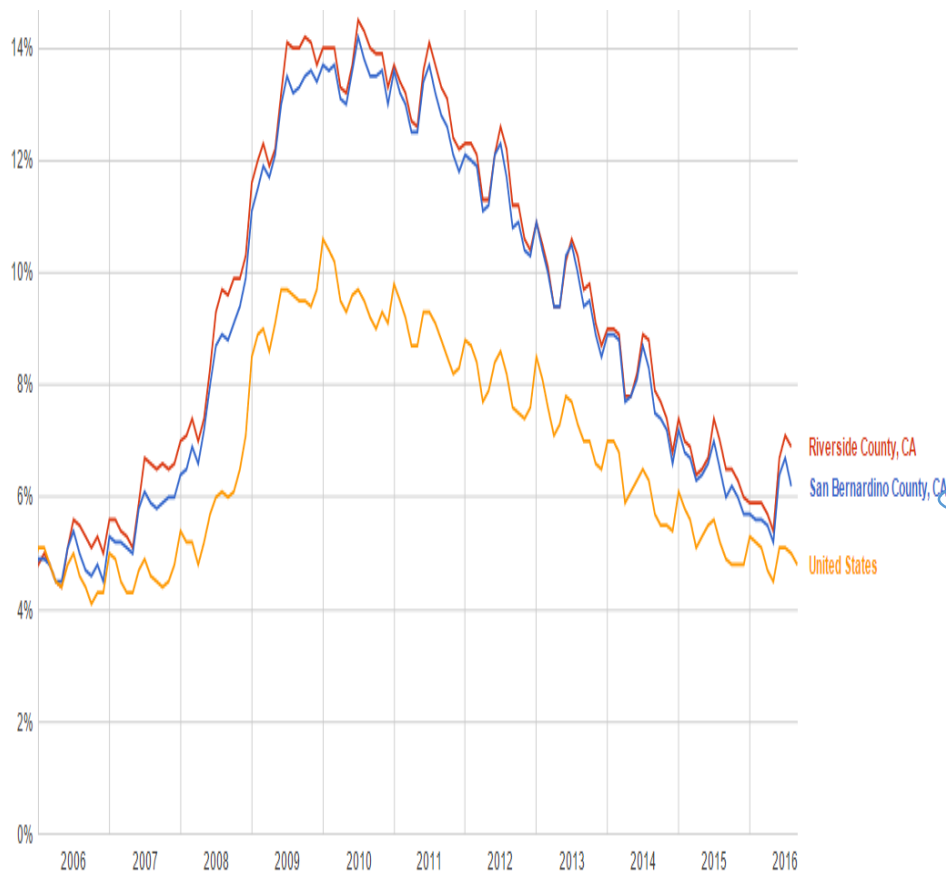
Energy burden

- Low-income families pay 2-3x more on energy costs as a proportion of their income

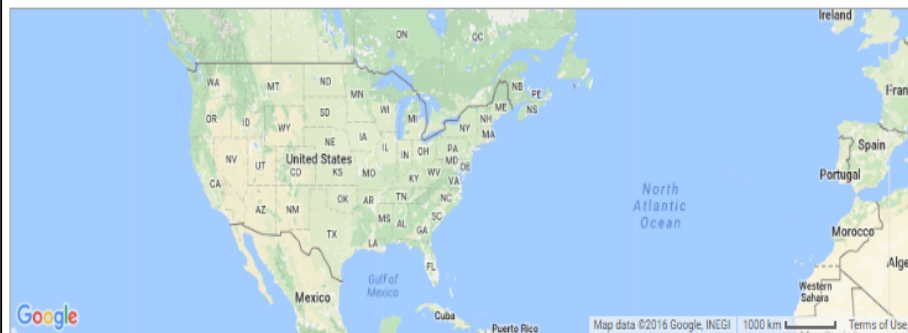


Local Issues: Unemployment & Air Pollution

Unemployment — Not Seasonally Adjusted

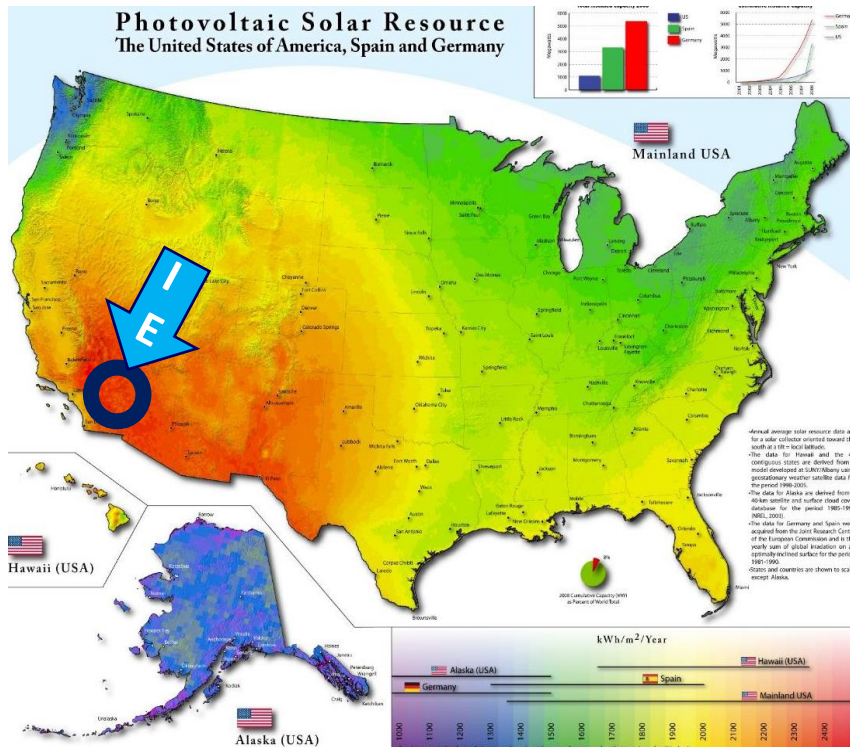


Most Polluted Cities



By Ozone	By Year Round Particle Pollution	By Short-Term Particle Pollution
#1: Los Angeles-Long Beach, CA	#1: Bakersfield, CA	#1: Bakersfield, CA
#2: Bakersfield, CA	#2: Visalia-Porterville-Hanford, CA	#2: Fresno-Madera, CA
#3: Visalia-Porterville-Hanford, CA	#3: Fresno-Madera, CA	#3: Visalia-Porterville-Hanford, CA
#4: Fresno-Madera, CA	#4: Los Angeles-Long Beach, CA	#4: Modesto-Merced, CA
#5: Phoenix-Mesa-Scottsdale, AZ	#5: El Centro, CA	#5: Fairbanks, AK
#6: Sacramento-Roseville, CA	#6: San Jose-San Francisco-Oakland, CA	#6: Salt Lake City-Provo-Orem, UT
#7: Modesto-Merced, CA	#6: Modesto-Merced, CA	#7: Logan, UT-ID
#8: Denver-Aurora, CO	#8: Pittsburgh-New Castle-Weirton, PA-OH-WV	#8: San Jose-San Francisco-Oakland, CA
#9: Las Vegas-Henderson, NV-AZ	#9: Harrisburg-York-Lebanon, PA	#9: Los Angeles-Long Beach, CA
#10: Fort Collins, CO		#10: Missoula, MT
#11: Dallas-Fort Worth, TX-OK		

Opportunities: Solar Resource & Solar Industry Job Growth





About GRID Alternatives

- **Nation's Largest Solar Non-Profit**
 - 13 Regional Offices Across the US (CA, CO, NY/Tri-State, DC/Mid-Atlantic) National Tribal Program, Women and Veteran initiatives, supporting youth and re-entry in workforce!
- **Provides Solar Solutions for Underserved Communities**
 - Over 8,700 solar projects installed for low-income residents throughout the country
- **Workforce Development and Volunteerism Model**
 - Over 32,000 individuals have been provided with hands-on training
- **Economic and Environmental Benefits**
 - Generate over \$258 million worth of clean, renewable power
 - Eliminate over 695,000 tons of greenhouse gas emissions



Our Vision



A successful transition to clean, renewable energy that includes everyone.



GRID's Solar Services

Type of Service	Single-family (Low-income homeowners)	Multifamily (Affordable multifamily housing owners)	Commercial (Mission-aligned nonprofits)
Technical Assistance		X	X
Design & Installation	X	X	X
Workforce Development	X	X	X
Resident Education & Engagement	X	X	X



GRID's Multifamily Services

Technical Assistance

- GRID can help multifamily owners go solar by providing them with technical assistance.
- Available at no cost to all owners of affordable multifamily housing nationwide.

Design & Installation Services

- GRID is a licensed solar contractor and can provide design and installation services.

Workforce Development and Resident Engagement

- GRID provides residents and local volunteers with workforce development opportunities. GRID can also provide energy efficiency and solar education opportunities for residents.

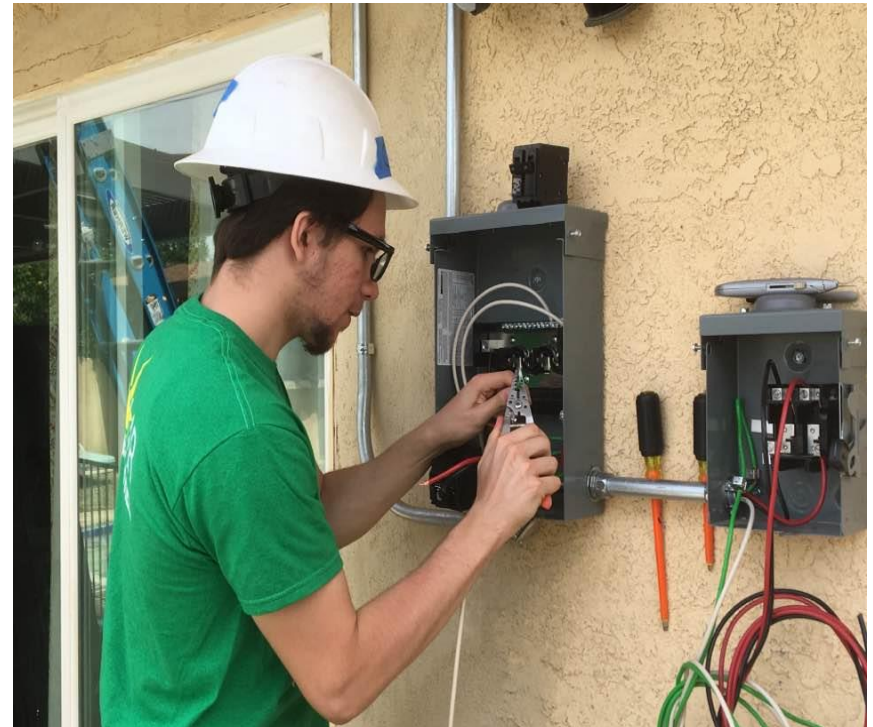
Technical Assistance

- Make it easy for owners of affordable multifamily housing to get solar by providing technical assistance at **no cost**
 - Assess the properties in your portfolio
 - Determine if PV is feasible for your buildings (system sizing, pricing, payback)
 - Help identify financing solutions for existing, new construction, and building rehab
 - Other services to promote solar implementation (e.g., owner representation, RFP development, bid analysis, design assistance)
 - Offer GRID installation and community engagement model
- Funded by The JPB Foundation



Design & Installation

- Provide **turnkey solar PV systems**: Design, permits, installation, inspections, interconnection, monitoring
- Workforce development / hands-on job training: Can also fulfill HUD Section 3 requirements for MF units





Workforce Development

- GRID provides a “classroom in the field” for job trainees, giving students hands-on experience in the rapidly growing field of solar installation
- Workforce Development Partnerships, such as C.E.T. and C.O.D.
- Volunteer, Installation Basics Training, and Team Leader Certified Programs





Leveraging Funding for Solar Projects

Funding Source	Single-family	Multifamily
CPUC:	SASH	MASH
State:	CSD (DAC)	LMF (DAC); <i>AB 693 (DAC)</i>
Regional:	Utility rebates	Utility rebates
3rd Party:	PPA/lease	PPA
Other:	Donors	Donors



Low-Income Homeowner Eligibility Criteria

1. Own and live in home
2. Income qualified: $\leq 80\%$ limits
3. Solar appropriate roof (free inspection)
4. If MSP needed – GRID pays
5. IID meter change - GRID pays
6. No SS#, No Credit Check
7. IID – System owned, no TPO

Household Size	Maximum Household Income
1	\$37,550
2	\$42,900
3	\$48,250
4	\$53,600
5	\$57,900
6	\$62,200
7	\$66,500
8	\$70,800
<i>(2016 San Bernardino County & Riverside County Income Guidelines)</i>	



Resident Education & Engagement

- Education on energy efficiency, utility process and solar
- Referral to ESA, CARE and other low income EE programs
- Warranty of 10 yr labor; 20 yr equipment manufacturer

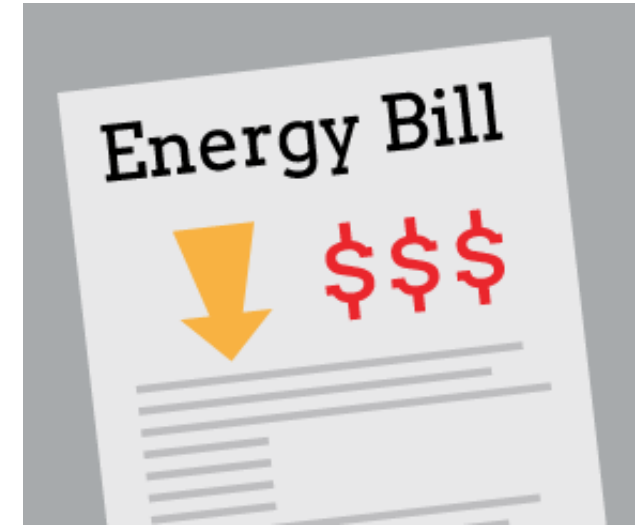




Solar Affordable Housing Program for Low-Income Homeowners

Homeowner Benefits:

- 50-75% reduction on IID bill
- Increase property value
- Doesn't raise property tax
- Community building and engagement



Local Worker Benefits:

- FREE Solar Job Training:
 - No experience needed
 - Hands-on with all equipment, materials, and lunch provided
 - Ages 16+ (18+ to be on roof)
 - Job placement support
 - Women encouraged to apply





SF Program HS Students & Youth


Solar Future Program

- In-class and on the job training taught by GRID staff. 16 and older, 18 to go on rooftop.
- Students gain **real-world job skills** while giving them exposure to solar career opportunities
- Participating 2017: Jurupa Valley, Palm Desert, John Muir Charter, Norte Vista, Desert Hot Springs, Learn 4 Life Charter, Riverside, Palm Desert, and NOLI Indian HS
- Indio 2017-2018?



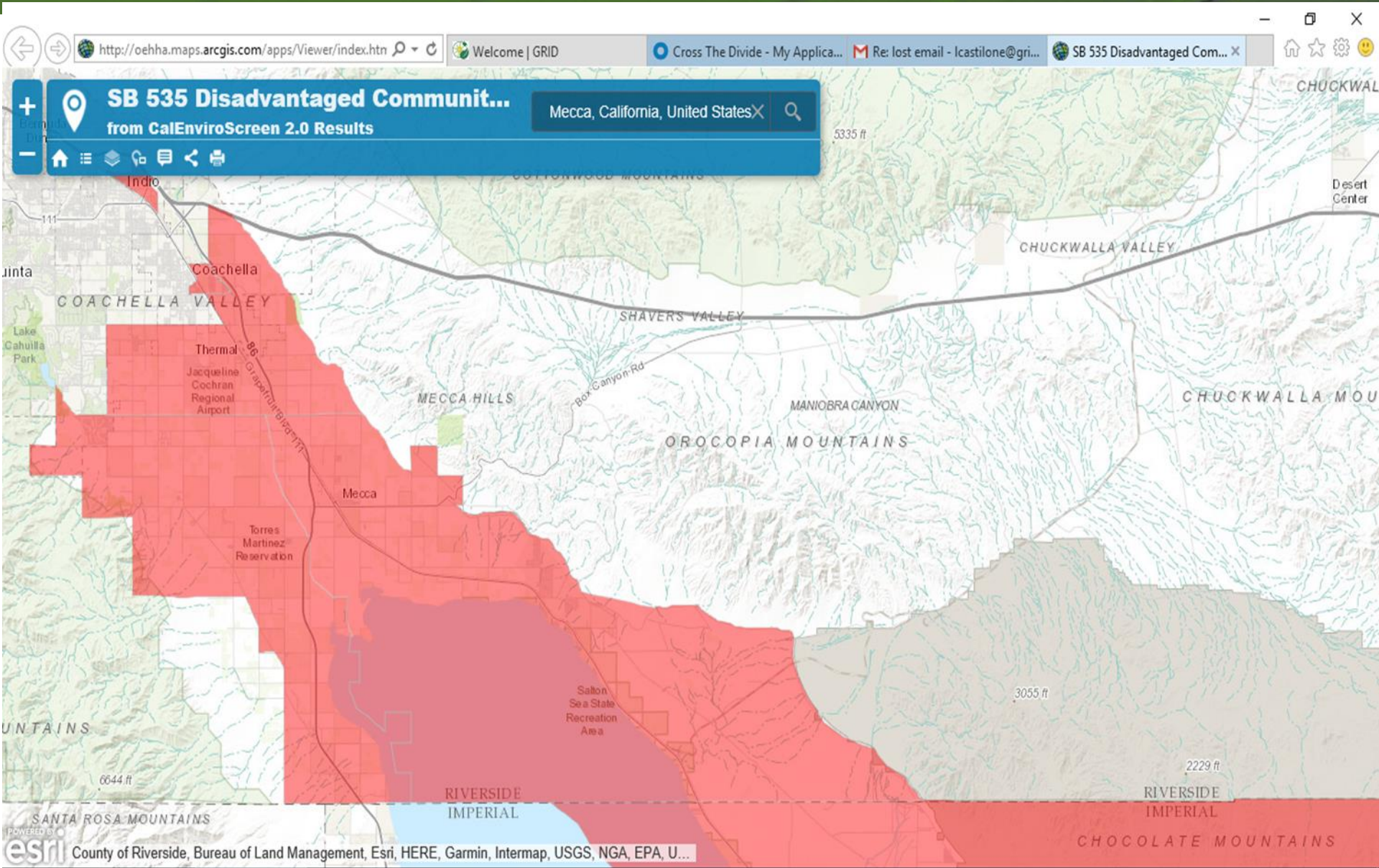


Low-Income Homeowner Costs

	SOLAR COMPANY	HERO/YGRENE/ PACE	GRID ALTERNATIVES
CREDIT SCORE	Required	Required	Not Required
LOAN TERM	15 years	15 years	None
INTEREST RATE	4%	6%	None
SUBTOTAL COST	\$21,303	\$24,303	\$0
FEDERAL TAX CREDIT (30%)	(-\$4,800)	(-\$4,800)	None
TOTAL COST	\$16,503	\$19,503	 \$0
YOU START SAVING	9.6 years	11.3 years	Immediately

Costs associated with a typical system size (4 kW-AC). Lifetime savings: \$43,000

Disadvantaged Communities (DAC)





GRID's Impact in the IE

Our Impact

REGION: California-Inland Empire



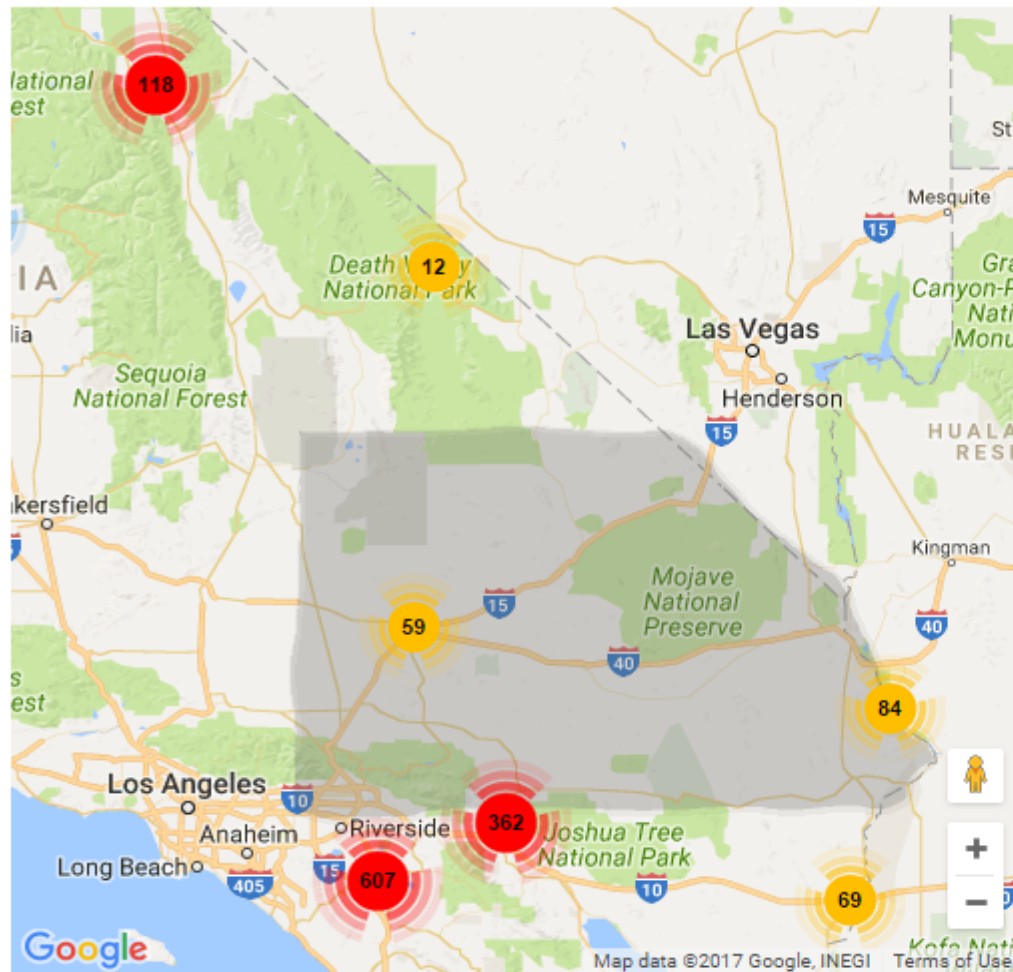
YEAR INSTALLED: - ALL -



PROJECT TYPE: - ALL -



GO



Systems Installed

1,313



kW Installed
5,402



Lifetime Savings
\$44,836,426



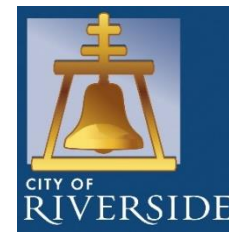
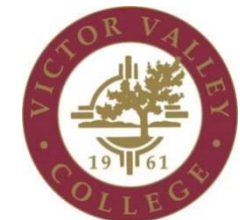
Tons of Greenhouse Gas
Emissions Prevented
114,249



Participants Trained
2,402



Some Representative Regional Supporters & Partners



How to Partner with GRID

1. Engage

- Set up interest call/meeting with GRID to discuss goals & set expectations
- Make decision to proceed with partnership
- Provide City Council Resolution of support

2. Promote

- GRID/City promote programs to residents, building owners, nonprofits

3. Implement

- Single-family: GRID provides homeowner education, designs, permits installations, inspections, interconnections, monitoring, job training
- Multifamily & Non-residential: Same as above plus technical assistance

4. Track & Celebrate

- GRID provides annual update on impact in City
- GRID/City celebrate successes in bringing solar, savings, and job training to community



Is your yearly income below the chart listed?

You may qualify for a state-funded **NoCost solar electric system!**

Easy Solar Program Application

- No social security number required
- No credit score or high electric bills needed
- No loan or lien on your home
- Cut your electricity bill up to 75%

Household Size	Maximum Income
1	\$37,550
2	\$42,900
3	\$48,250
4	\$53,600
5	\$57,900
6	\$62,200
7	\$66,500
8	\$70,800