

GRID
ALTERNATIVES

**Powering
Community**



The solar industry is **booming.**

www.gridalternatives.org



As of 2013:

142,698

total solar industry jobs in the U.S.

23,682

jobs were added in last 12 months

source: The Solar Foundation

www.gridalternatives.org



That's a year over growth rate of

22%

compared to a

about 2%

national employment growth rate across all industries

source: The Solar Foundation

www.gridalternatives.org



But we have so much **further to go...**

www.gridalternatives.org



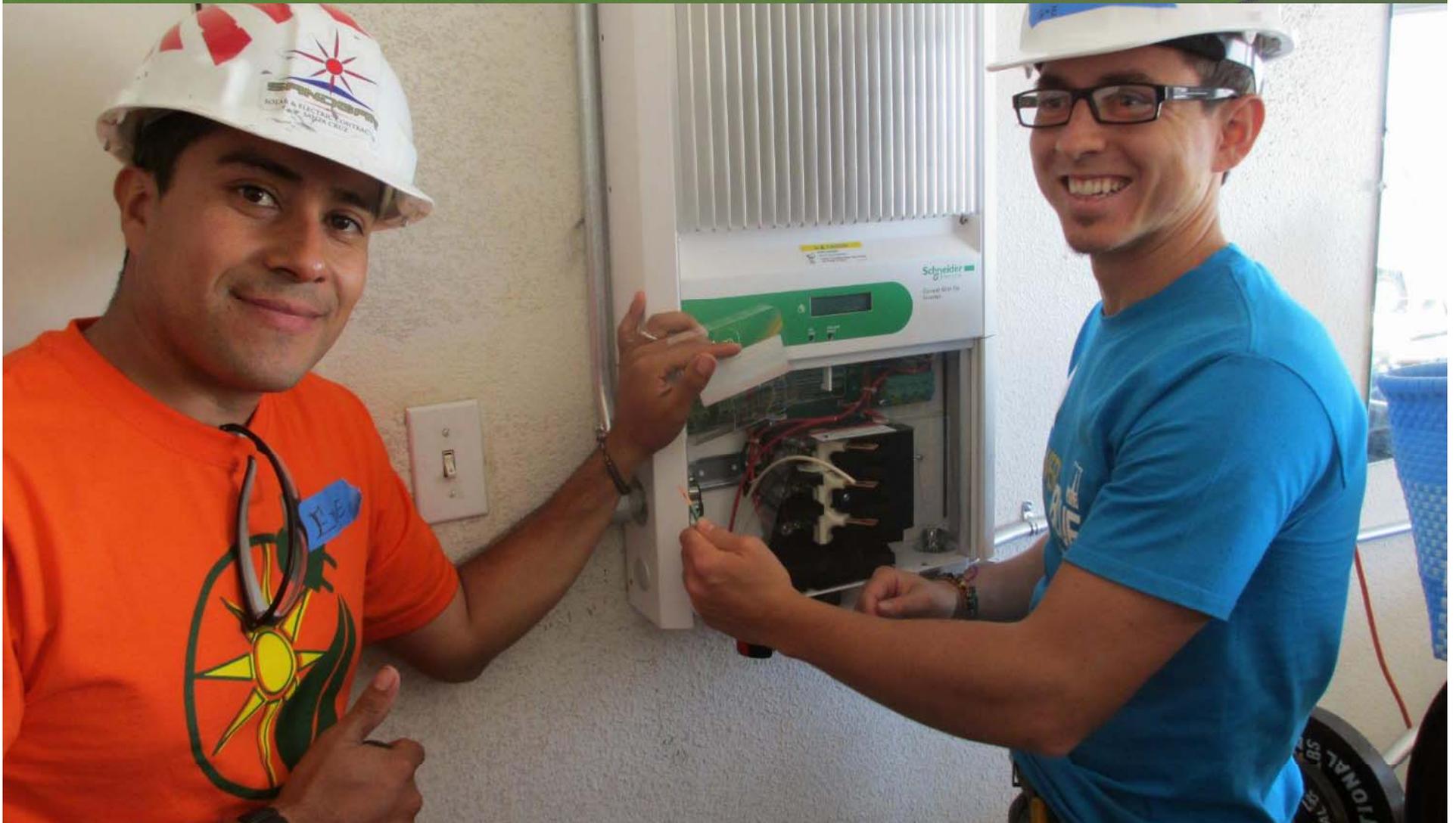
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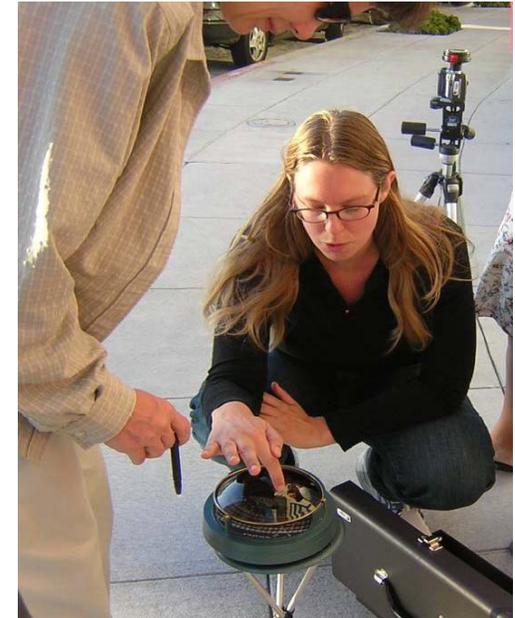


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History

- Founded by Erica Mackie, PE and Tim Sears, PE
- Piloted Solar Affordable Housing Program in 2004
- Offices in the Bay Area (Oakland), Greater Los Angeles, San Diego, Central Valley, Central Coast, Inland Empire, North Valley, Colorado (Denver) and New York Tri-State (Brooklyn).
- DC Metro Area (coming soon)





What we're all about

People.



Planet.



Employment.





Solar 101

Solar Hot Water/Thermal Systems

- Works off of the sun's thermal energy (HEAT)
- Heats water or air to offset gas production



Source: Sun Light & Power, GO Solar



Photovoltaic (PV) Systems

Solar **Electric** Systems

- Use the sun's light, not heat ("Photo" + "Volts")



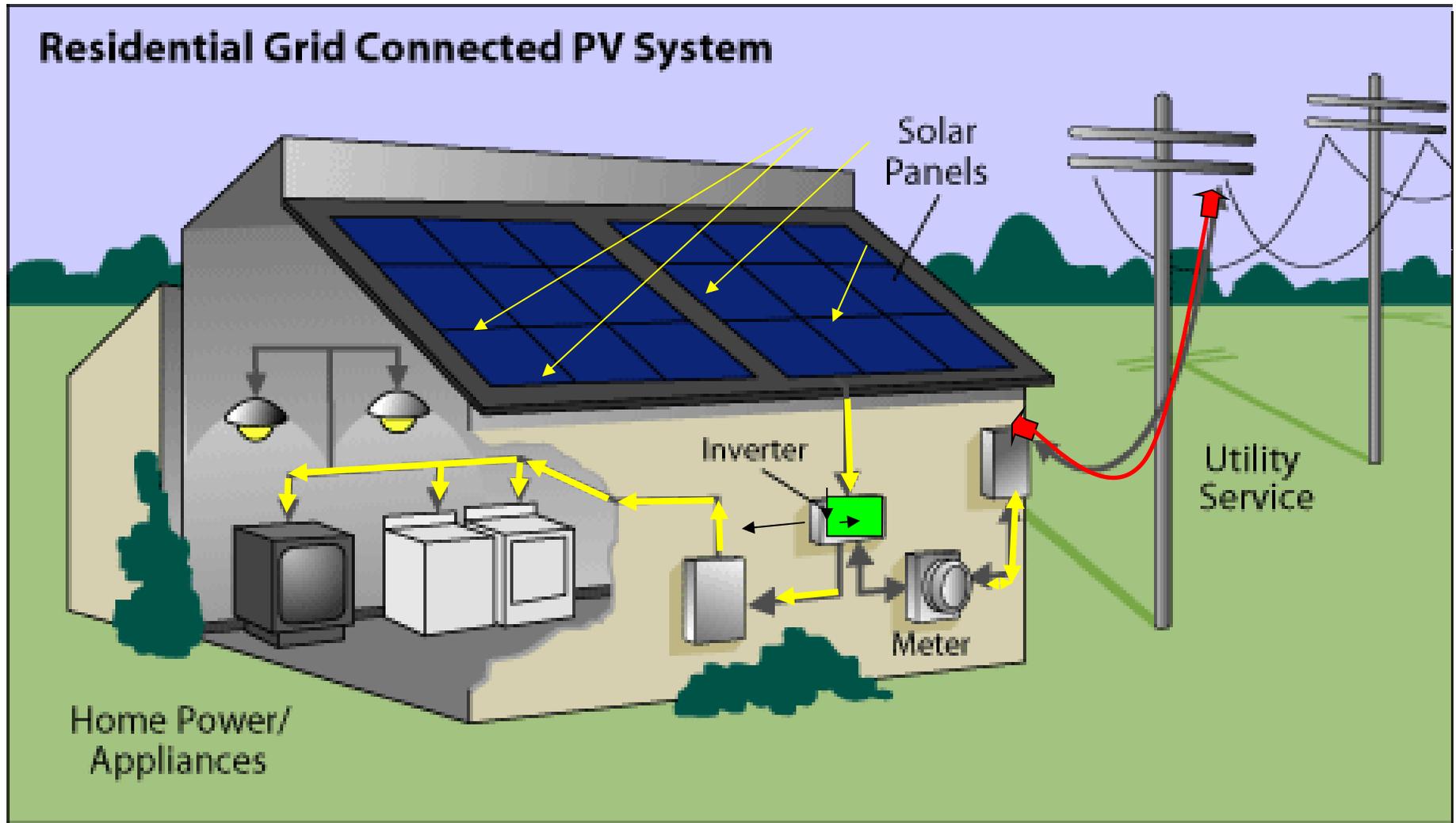


Photovoltaic (PV) Systems

- Types of PV Systems
 - Stand-alone/Off-grid - requires batteries (Expensive)
 - Grid-tied with battery back-up (Expensive)
 - **Grid-tied (Net Metering)**
- Grid-tied (Net Metering)
 - Homeowner will have black-out if utility goes down.
 - Provides finite amount of electricity per month.
 - Homeowner continues to get a utility bill.
 - No batteries, minimal maintenance.

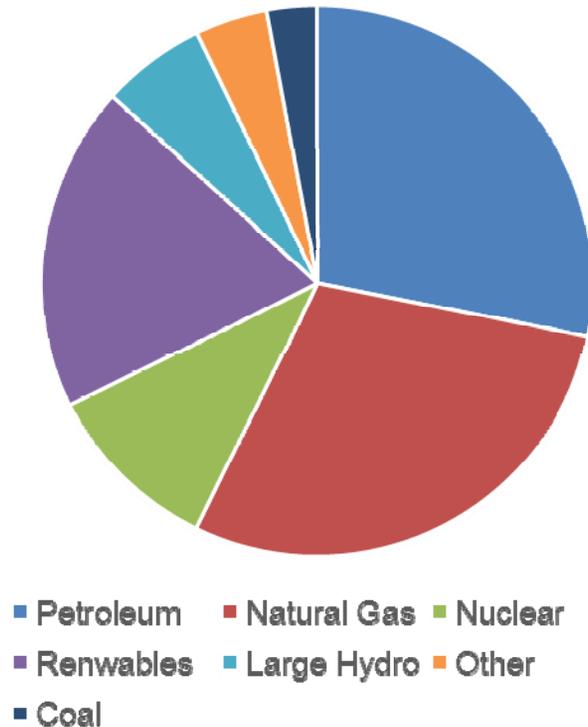


Grid-tied System



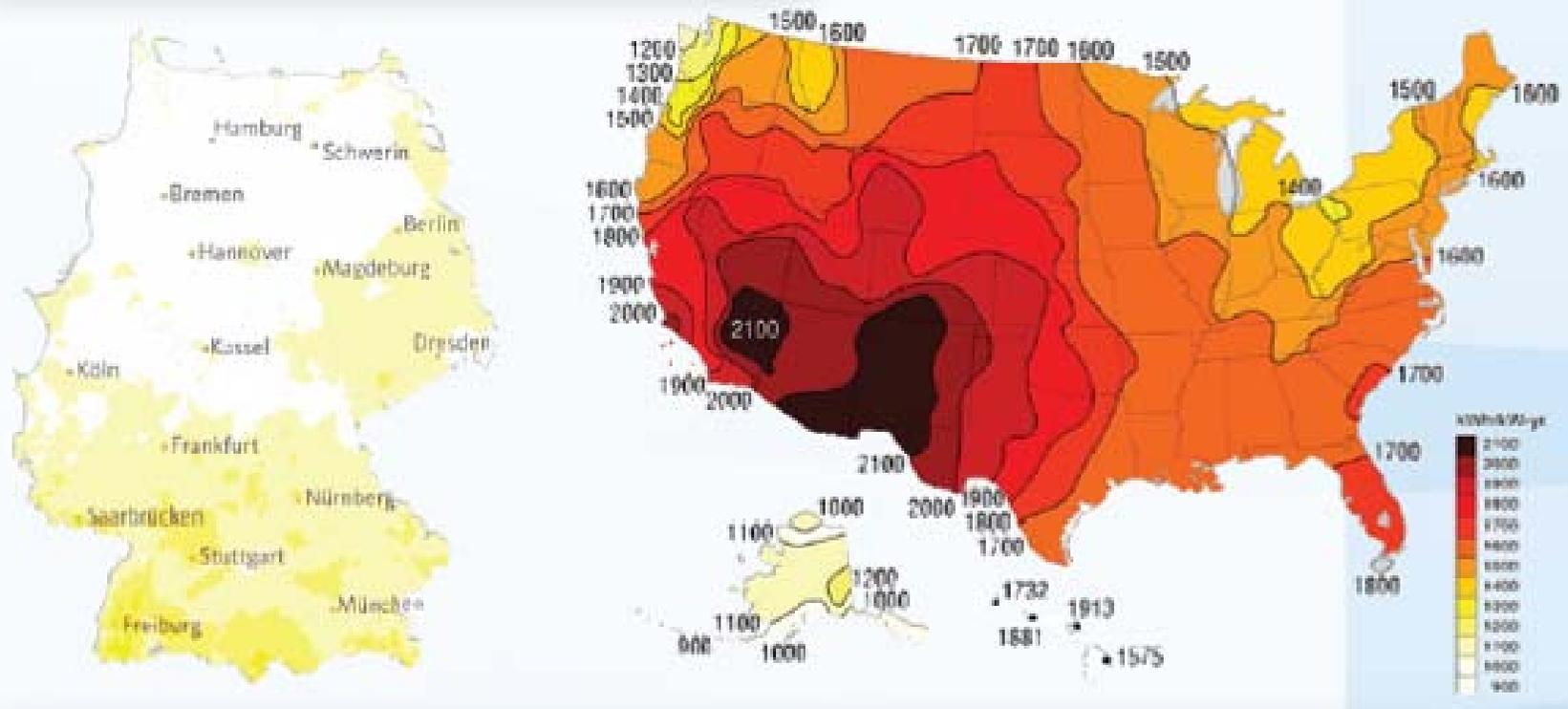


New York's Power Consumption



- **Petroleum: 32.5%**
- **Natural Gas: 33.7%**
- **Nuclear: 12.1%**
- **Renewables: 22%**
- **30% by 2015**
 - Small Hydro: 18.6%
 - Geothermal: 4.5%
 - Wind: 1.9%
 - Landfill Gas: 1.2%
- **Large Hydro: 7.1%**
- **Other 4.9%**
- **Coal: 3.4%**

Solar Resources – Germany vs. US



“The Sun is ABUNDANT”

Source: SEIA



Solar in New York

- **Federal Tax Incentives:**

- 30% Residential Solar Investment Tax Credit through December 31, 2016

- **New York State Incentives:**

- 25% Residential Tax Credit on net costs for a solar electric system
- No sales tax on PV equipment purchases in New York State



Solar in New York

- New York State Energy Research and Development Authority



- NYSEERDA provides cash incentives for PV installations by Eligible Installers
- Additional funding for workforce development to train our growing green workforce
- GRID Alternatives to help make solar affordable to low-income families throughout New York State through Program Opportunity Notice (PON) 2672.

More information can be found @www.nyserda.ny.gov/



Why solar for low-income families

Economic Justice

- High energy costs
- Proportionally greater economic benefit

Environmental Justice

- Power plants often sited in low-income communities
- High rates of asthma

Widespread Adoption

- Moves solar beyond the “early adopter” phase; Solar is a viable energy solution for all our communities.





Solar Affordable Housing Program

- Key components:
 - Assistance in obtaining:
 - State and utility rebates
 - Permits
 - Utility interconnection agreement
 - Energy efficiency audit and referrals
 - Client education and follow-up
 - 10y labor warranty, 10-25y equipment warranty
 - Workforce development

Solar is RELIABLE



Program Eligibility

- Own and live in your home
- Total household income below 80% AMI of county
- Solar appropriate roof

Household Size	Maximum Household Income
1	\$48,100
2	\$55,000
3	\$61,850
4	\$68,700
5	\$74,200
6	\$79,700
7	\$85,200
8	\$90,700
<i>(2013 Queens County Income Guidelines)</i>	



Financing our Model

- **State and local solar rebates**
 - California Solar Initiative (CSI)
 - Single-family Solar Affordable Home (SASH) rebate
 - PON2112
- **In-Kind Donations**
 - Equipment Donations (Panels, Racking, etc.)
- **Corporate Contributions**
- **Grants from Foundations and Municipalities**
- **Donations from Individuals**
- **Solarthon Block Party and Fundraiser**
- **Volunteers like YOU?**



Growing Impact

- Total Capacity: >12.4 MW
- Number of low-income solar electric systems installed to date: >4251
- Value of power generated over the systems' lifetimes for low-income families: \$116.8 M
- Volunteers trained: >16,276
- Tons of greenhouse gas emissions prevented over the systems' lifetimes: 365,000

** Impacts as of September 2013*



GRID provides a **classroom in the field.**

www.gridalternatives.org



www.gridalternatives.org



Installations allow volunteers to apply their academic knowledge to get a
real-world job done.

www.gridalternatives.org



Job Training Partners

- 60+ local job training partners including Green City Force
- Community colleges, nonprofit job training groups, veterans organizations, local government agencies, etc.
- Supplement classroom knowledge with hands-on experience





How to Volunteer

www.gridalternatives.org/volunteer



Learn

Partner

Volunteer

NEWSLETTER SIGN-UP

DONATE NOW

Like

Get on the roof!

Volunteers get to have fun, learn new skills, help a family, and contribute to a cleaner environment.

[Sign up today >](#)



Volunteering with GRID Alternatives is a great way to learn solar installation skills, engage your corporate or organizational team, give back to the community, and help clean our air. Our licensed installers lead groups and individual volunteers through all aspects of the installation process, start to finish. No experience is required.





Corporate & Group Sponsored Workdays

- **Sponsor a private volunteer installation for your team.**
 - group team building
 - Give back to the community
 - Help the environment
 - Learn about solar power.



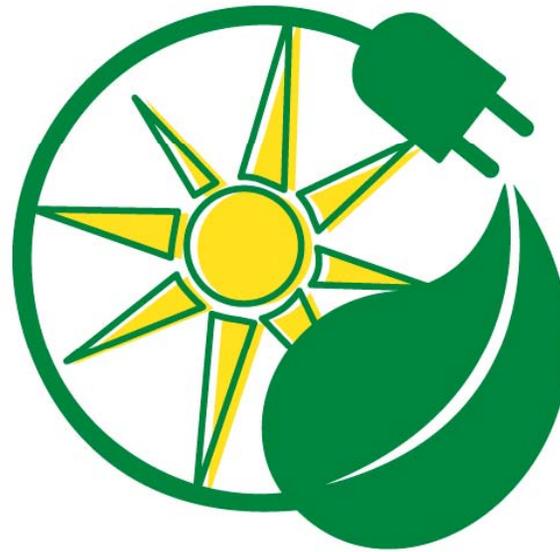


How else can YOU contribute?

- **Give the gift of Solar!**
 - Go to our website to donate a solar panel.
 - Become a “solar sustainer” monthly donor.
 - Donate in honor of someone else – holiday gift, weddings, etc.
- **Double the impact of your gift**
 - Ask your company if they offer an employee matching program.
 - Some companies will also match your volunteer hours with financial donations to GRID!
- **Spread the word!**
 - Invite GRID to come speak to your employee Green Team, Sustainability Group, or networking event.
 - Follow us on Facebook, Twitter and Instagram.



Thank the Sun!



Find us online!

Facebook: GRID Alternatives

Twitter: @GRIDAlternative

YouTube, Picasa, Linked In: GRID Alternatives

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