



Santa Clara County  Office of Education

Marjorie Paeste

LET'S TALK SOLAR!
Solar Savings for the COE

Champions for Leadership
June 11, 2013

Goals

- **Professional development goals**
 - To learn management techniques from experienced leaders
 - Increase professionalism and efficiency
 - Broaden my personal contacts within SCCOE
 - Further develop my project management skills
- **Project goals**
 - To help explore alternative cost-saving avenues
 - To strengthen the COE's "green" initiative





October 1, 2007

Mr. Joe Beretta
Santa Clara County Office of Education
1290 Ridder Park Drive, MC 254-C
San Jose, CA 95131

Dear Joe:

Sorry for the delay in getting this to you. Here are the results of the audit that I performed for your building on September 13, 2007.

Overall, your building is the most energy efficient that I have seen!

- You have an EMS system already set up with VAV boxes to be set up in 2 buildings to control the lighting and HVAC.
- There are T5's and CFL's throughout all 3 buildings.
- You have a new energy efficient boiler in the South building.
- You have changed out all the VFD's and changed 6 or 7 motors.
- You have a new package unit for the lobby.
- You have reduced the outside lights from 26 to 12 fixtures.
- You have reflective window film on all 3 buildings.

Now for the measures you are working on implementing:

- You are working on a server virtualization project with your Account Executive, Sonya Casares.
- You are changing out 3 package units for the data center.
- You are installing programmable thermostats in the North building this year and in the South building next year.
- You are installing new blinds to reduce the sunlight and heat gain in the South building on the 3rd floor. The 2nd floor has already been done.
- Last but not least, you are looking into installing a 1 MW solar system.

I must say that you have a great understanding of energy efficiency and how it benefits you and California. If I can be of further assistance, please contact me at (408) 282-7165.

Sincerely,

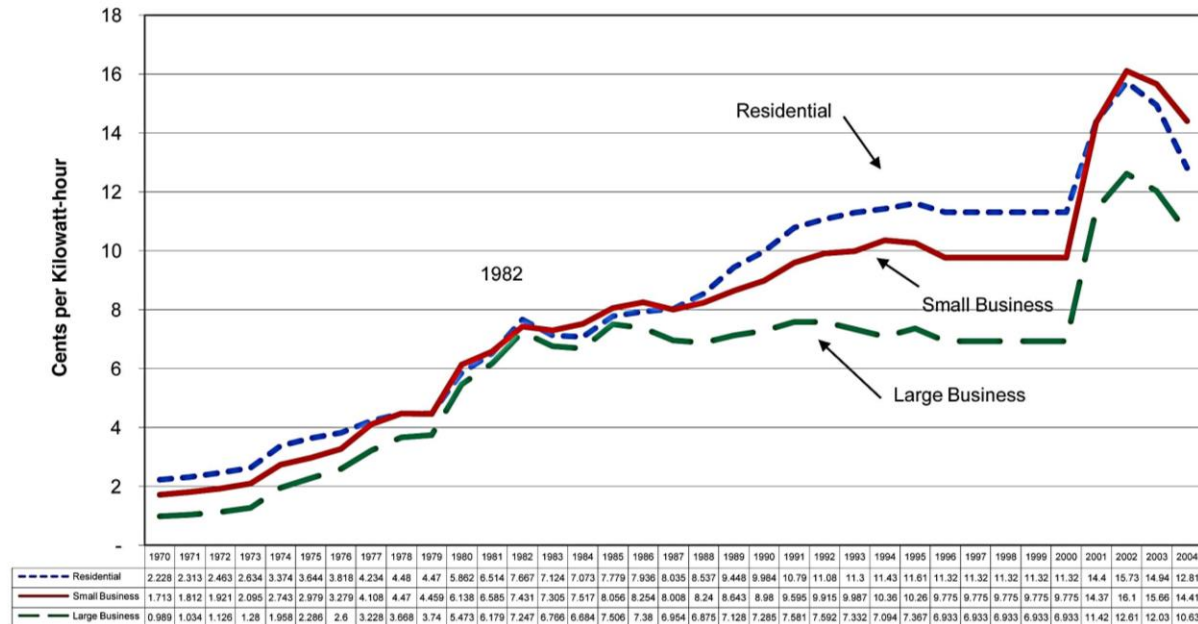
Serina Ponce
Customer & Community Relations Manager



Why Solar Energy?

Historical PG&E Rate trends

Trends in California Electricity Rates 1970 - 2004



Source: Prepared by the CPUC Energy Division to show general trends in rates. **This data has not been adopted by the CPUC, and does not reflect actual rates charged to any specific customers.** Dataset from Energy Information Administration (EIA), DOE/EIA-0376(95), State Energy Price and Expenditure Report, 1995, Tables 36-38. Data for 1996 -2000 reflects AB 1890 frozen rates. Rates from 2001-2004 reflect changes implemented by the following rate-setting Commission Decisions: D.01-01-018, D.01-05-064, D.03-07-029, D.04-02-062, and D.04-07-022; rates from 2001-2004 reflect SCE and PG&E only.

Why Solar Energy?

Table 2: Retail Price Comparisons: California and Other Western States

| Average Retail Prices in 2005 (cents per kilowatt-hour) | | | | |
|---|-------------|------------|------------|-------------|
| | Residential | Commercial | Industrial | All Sectors |
| Arizona | 8.86 | 7.40 | 5.85 | 7.79 |
| California | 12.51 | 11.92 | 9.55 | 11.63 |
| Colorado | 9.06 | 7.62 | 5.74 | 7.64 |
| Idaho | 6.29 | 5.42 | 3.91 | 5.12 |
| Montana | 8.10 | 7.43 | 4.83 | 6.72 |
| Nevada | 10.20 | 9.48 | 7.71 | 9.02 |
| New Mexico | 9.13 | 7.81 | 5.61 | 7.51 |
| Oregon | 7.25 | 6.51 | 4.83 | 6.34 |
| Utah | 7.52 | 6.07 | 4.24 | 5.92 |
| Washington | 6.54 | 6.33 | 4.27 | 5.87 |
| Wyoming | 7.48 | 6.17 | 3.99 | 5.16 |
| US Average | 9.45 | 8.67 | 5.73 | 8.14 |
| March 2013 | | | | |
| California | 15.34 | 12.25 | 9.91 | 12.86 |

Source: U.S. Energy Information Administration

School Districts going Solar!



San Jose Unified School District



Orchard School District



School Districts going Solar!



East Side Union High School District



Milpitas Unified School District



School Districts going Solar!



Santa Clara Unified School District

When it Comes to Solar, Campbell's High School District Does it Their Way

Campbell Union High School celebrated a ribbon cutting at Prospect High School Wednesday morning.

By Mayra Flores de Marcotte | [Email the author](#) | October 18, 2012



Campbell Union High School District



SCCOE sites going Solar!



Brownell Academy Middle School



Solar Energy International sponsored a workshop at Walden West Outdoor School.. A group of 23 women, including (from left) Michelle Large, Nicole Clock, Angie Stuart and Kate Lathan, installed solar panels at the school.

Walden West



Potential Benefits

- Solar rebates
- Tax incentives
- Reduction in electric power purchases
- Fund savings
- Educational opportunities

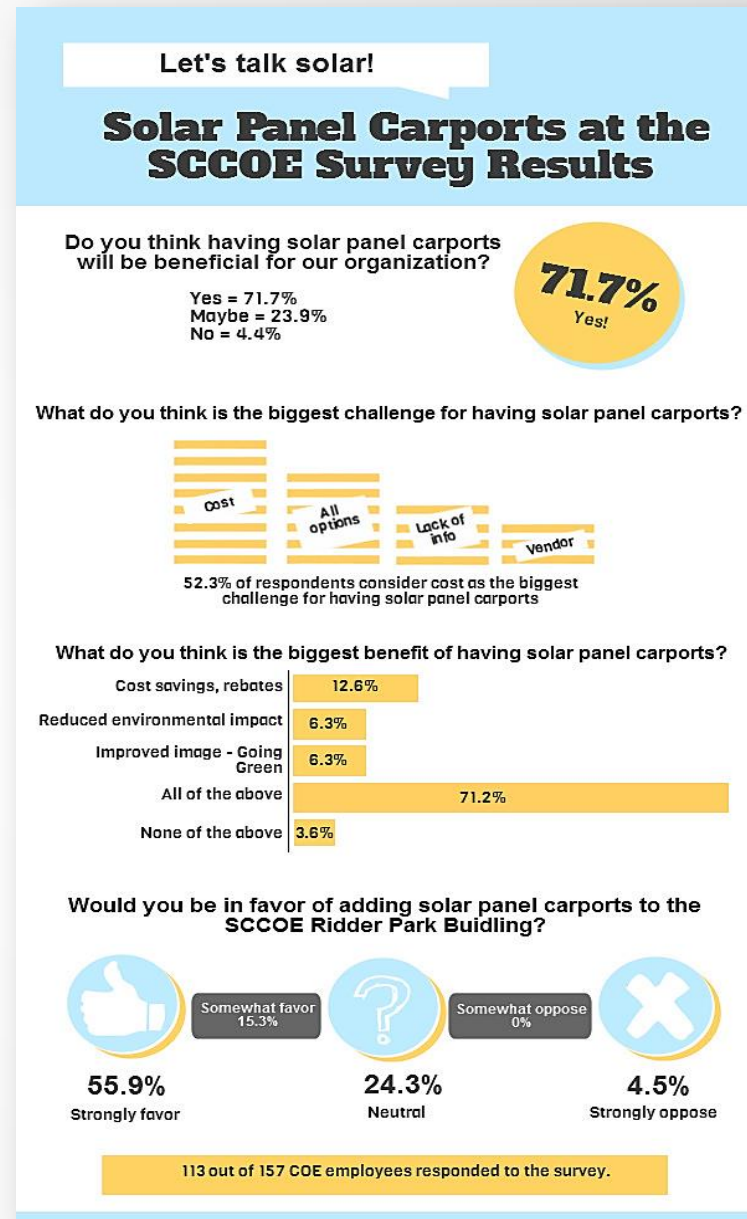


Potential Challenges

- Cost or financing of material/panels
- Vendor selection
- Installation, maintenance
- Layout - tree removal consideration



Survey Results



Sample Feasibility Study

Santa Clara Office of Education

Scenario 2: Carport – Pre-Pay PPA

- **507 kW DC**
 - 725,913 kWh Year 1
 - Offset ~38% of usage
 - Year 1 savings- \$93,865
- **Pre-Pay PPA**
 - \$1,490,213
 - Cost/kWh - \$0.108
 - Payback (years): 13
 - \$2,960,773 savings over 30 years with Buyout



SolarCity Confidential

Slide 3

Accomplishments/Successes

- Established a network of new contacts and friends within the COE
- Stretched out of my comfort zone
- Received a high percentage of responses for survey



Key Learnings

- Learned how to be committed to a task
- Discovered areas for personal growth and development
- Re-discovered the importance of being resourceful



Acknowledgements

- CFL Coordinators
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- Linda Wedding
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- Matthew Tinsley
- Craig Wilde
- Nimrat Johal
- Michael Carpol (Solar City)

