

# SANTA BARBARA COUNTY CALLE REAL SOLAR ARRAY UPDATE





# Background

- Financing secured for the construction of a one Megawatt power solar array authorized by Board of Supervisors in September 2011.
- Contract to design, construct and maintain project awarded to Endelos Energy, a local vendor in Buellton, CA.
- Construction began in December of 2011 on the hillside on Calle Real Campus.
- Project produced one Megawatt of power on April 16, 2012.



# Financing and Rebate

- Financed by \$5.5 million Qualified Energy Conservation Bonds, 15-year term and an effective rate of 1.2%
- \$1.7 million rebate from Southern California Edison Electric (SCE) was also secured at the onset of the project.



# Local Vendors Used for the Solar Array

## Santa Barbara County Local Vendors

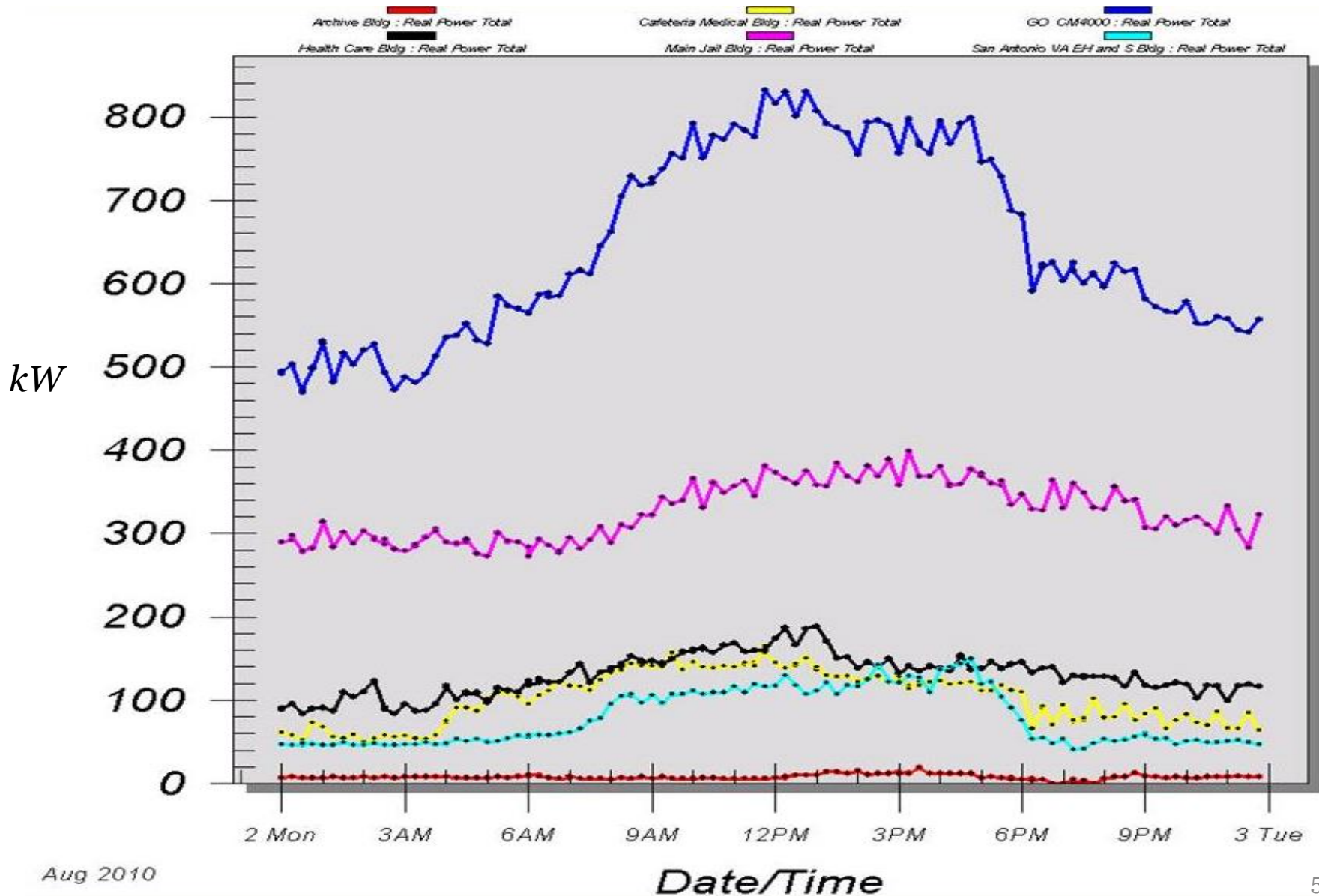
California Electrical Supply	Home Depot (Goleta)	Smith Engineering Associates
Coast Valley Testing	Jon Keller Survey	Specialty Crane
Dudek	MarBorg	S&S Seeds
Endelos Energy	Orchard Supply	United Rental
Eucario Guzman Landscaping	Penfield & Smith	Valley Oaks Printers
Enviroscaping	Ray's Welding	White Cap Supply
Garcia's Mobile Grill	Rivera & Sons Excavation	
Growing Solutions	Smith Electric	

## Ventura County Vendors

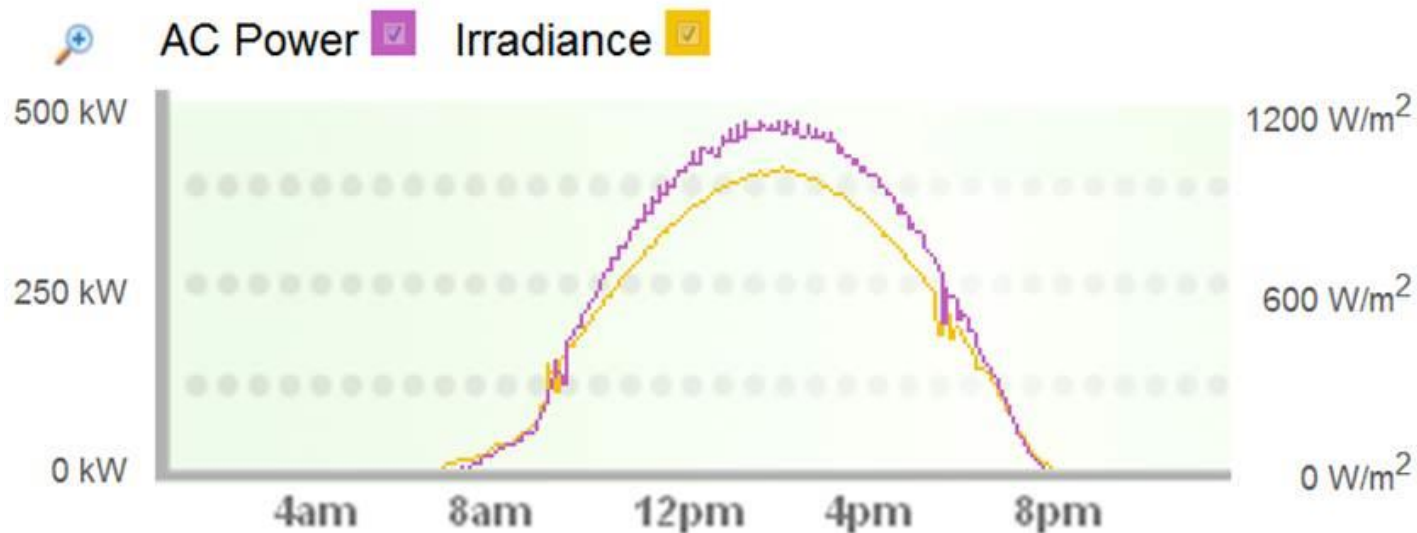
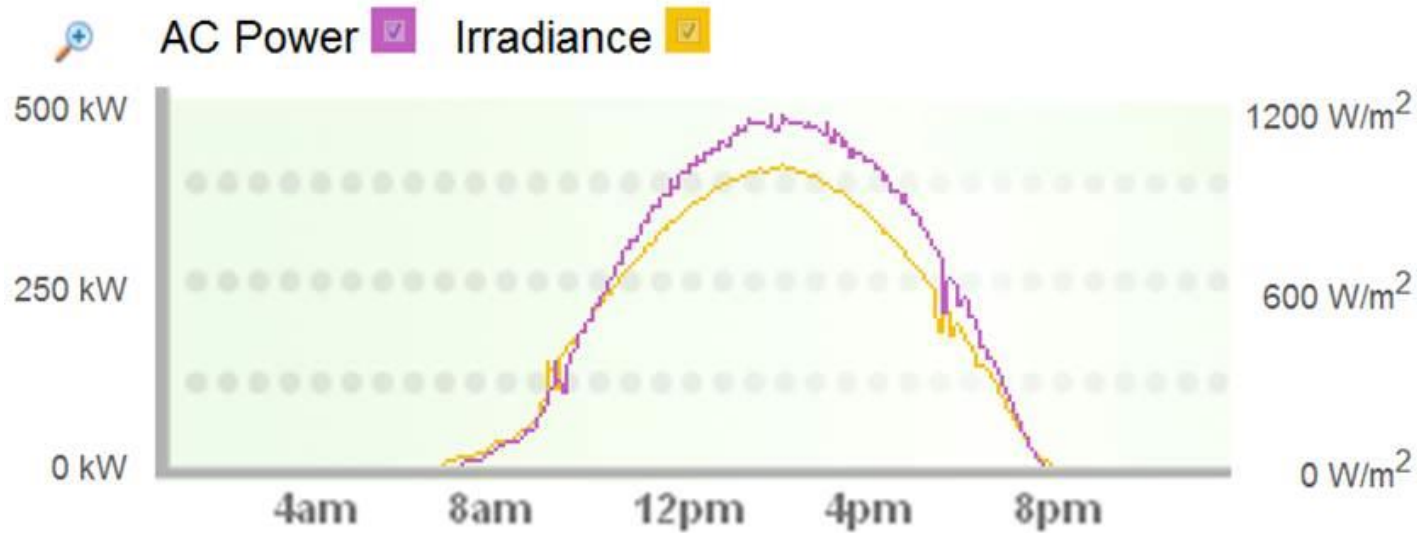
Medina Camera Systems

SolarWorld

# Power Used by the Calle Real Campus Before Solar

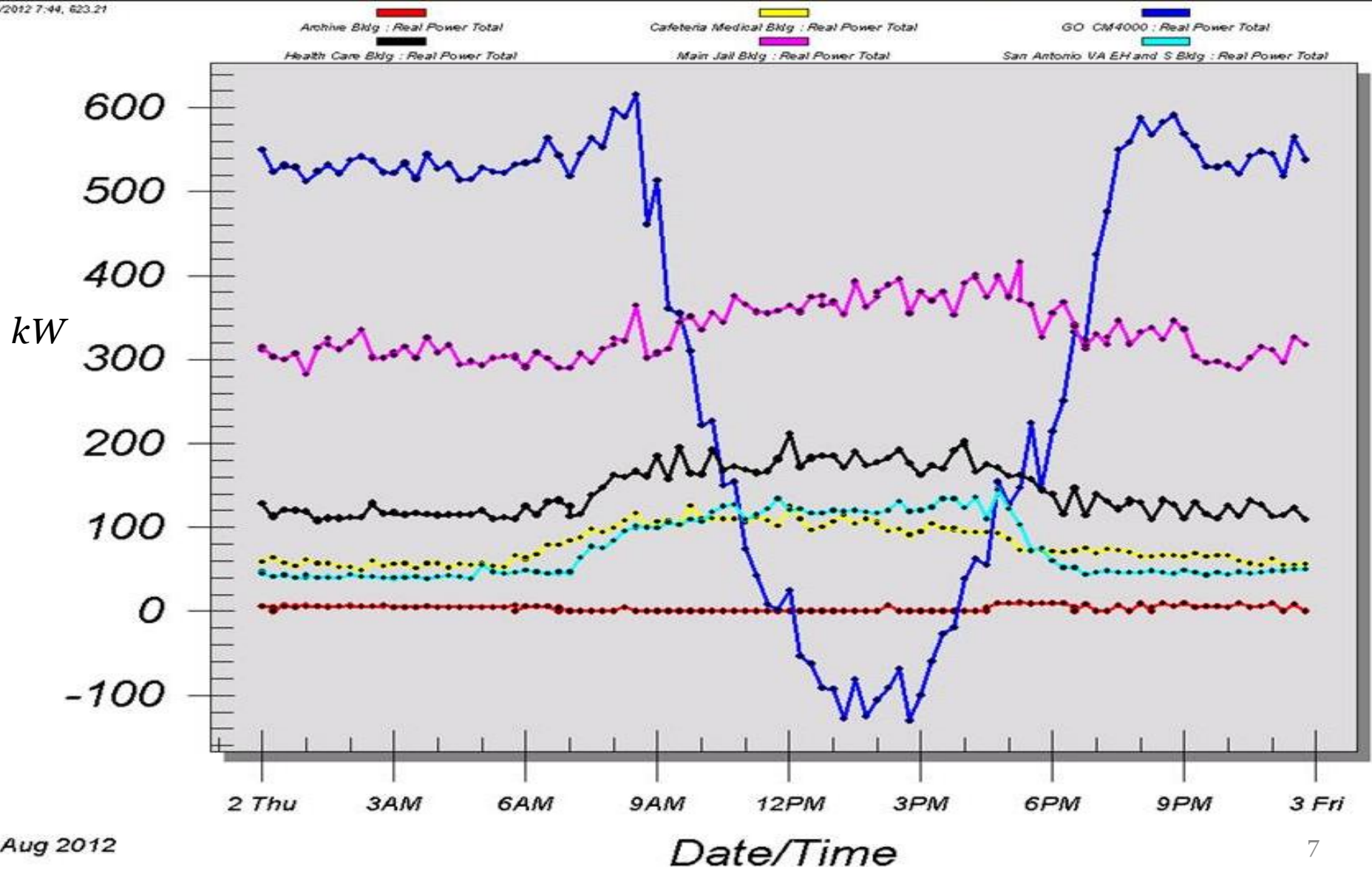


# Solar Output from the Inverters



# Power Used by the Calle Real Campus **After** Solar

9/2/2012 7:44, 623.21



Aug 2012



# Production and Savings

- Better than expected performance
  - Expected to produce 8.9 million kWh for the first 5 years.
  - 10% higher than expected, producing 9.7 million kWh.
- \$1.2 million in utility savings in the first 5 years.
- Received rebate of \$1.7 million earlier than expected because of the excessive power the system produced.





# Positive Environmental Impact

- Solar array offsets up to one-third of the required energy at the Calle Real Campus.
- Avoids emitting almost 1.6 million pounds of CO<sub>2</sub> per year.
- Equivalent to taking over 150 cars off the road, or planting over 20,000 trees each year.
- Generates enough electricity to power over 100 homes.

# Status of Facility



- Endelos Energy continues to maintain the array. (Cleaning panels, erosion control, vegetation clearing, checking and maintaining the electrical system.)
- The 4480 Panels were made by Solar World (Camarillo, California)
  - 25 Year Module Warranty. No failures, spares parts in stock.
  - SW255-Mono Solar Panels. All running in perfect shape.

# Solar Array Website



[http://solrenview.com/cgi-bin/cgihandler.cgi?&sort=pvi\\_IDS&cond=site\\_ID=1368&min](http://solrenview.com/cgi-bin/cgihandler.cgi?&sort=pvi_IDS&cond=site_ID=1368&min)

## Santa Barbara County Calle Real

### System Info



**Location** 439 N San Antonio Rd. Santa Barbara, CA 93110

**Monitoring Started** Thurs Apr 5, 2012

**Installer**



**Weather** [2012-10-22 09:54:53 PDT]

**Irradiance:** 187 W/m<sup>2</sup>

**Ambient Temperature:** 62° F / 16° C

**Module Temperature:** 72° F / 22° C

**Wind (W):** 2.5 mph



[Refresh in 14:47]

System Status Now [Mon Oct 22, 2012 9:55 am PDT]

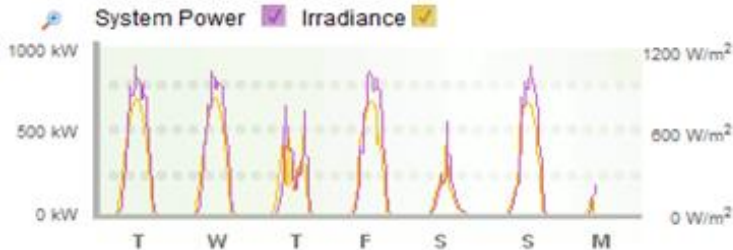
Inverter Models	Inverter WAC	Qty.	Total Capacity (WAC)
Solectria SGI 500KW-480VAC	500000	2	1000000

Solar Modules	Module WDC	Qty.	Total Capacity (WDC)
SolarWorld 255	255	4466	1138830

Online [last update: Mon Oct 22, 2012 9:54 am PDT]

System Status, <b>Revenue-Grade</b> :	<b>Active</b>
Energy Generated Today:	200 kWh
Lifetime Energy Generated:	1151438 kWh
Lifetime CO <sub>2</sub> Emission Offset:	720 tons
System AC Power Now (Est.):	175 kW



[View Revenue-Grade](#) [View Inverter-Direct](#)

# Summary



- Excellent investment by the county
- Energy savings
- Cost savings
- Environmental
- Local vendors used to construct and maintain
- Will be doing more solar in the future

# Questions or Comments

