

# 2010 Grid Neutral Awards Program

Inaugural Year  
K-12 Schools

Green California  
Schools Summit 2010



## Categories

Distinguished Campus  
District-wide Excellence  
Exemplary Teaching Tool

DIVISION OF THE  
STATE ARCHITECT  
DEPARTMENT OF GENERAL SERVICES

**David Thorman, AIA**  
**Former State Architect**  
**&**  
**Howard "Chip" Smith**  
**Acting State Architect**

# Grid Neutral

A site that produces as much electricity as it uses in a year.



# Grid Neutral Guidebook & Video

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## Grid Neutral Guidebook and Video:

<http://www.dgs.ca.gov/dsa/Programs/progSustainability.aspx>

- 1 New School: Set Energy Performance Goal  
Existing School: Measure current Use, Set Goal
- 2 Implement & maintain appropriate energy efficiency & conservation measures to lower electricity use.
- 3 Install solar or wind systems to create electricity to meet remaining needs.
- 4 Maintain energy systems.  
Monitor electricity consumption & production.



# Grid Neutral in the Code: Voluntary Measure

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$$\text{GRID NEUTRAL PERCENTAGE} = \frac{\text{PRODUCTION}}{\text{CONSUMPTION}}$$

*The more consumption goes down with **energy conservation**, the less electricity needs to be produced to attain grid neutral.*



# On with the Awards!

**GRID** Neutral Schools



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# Distinguished Campus

## Yuba City Unified School District

Steve Plaxco, Director  
Maintenance

[www.ycusd.k12.ca.us](http://www.ycusd.k12.ca.us)



# Yuba City USD: Riverbend Elementary School (K-8)



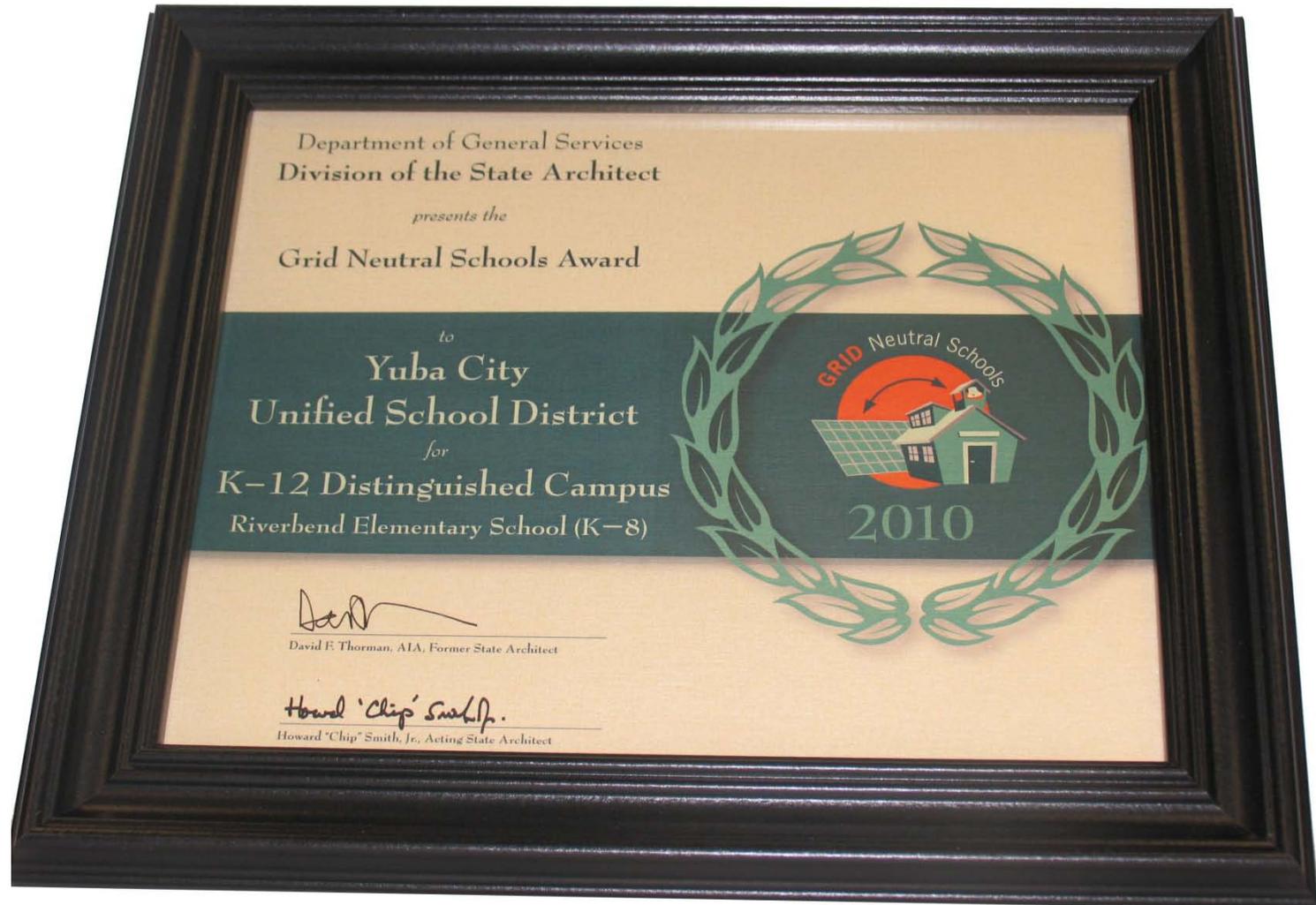
40% Grid Neutral  
93 Energy Star rating

## Innovative Funding

- Local Bonds for new construction
- School Facility Program through DGS/OPSC
- PG&E Utility Rebates of \$750,000



"The project is exemplary for its comprehensive integration of energy demand reduction; peak saving strategies; energy efficient systems; and renewable generation. Most notable is that the final project design elegantly incorporates these design considerations. Nicely done!" ~ Jack Paddon, Juror, DSA Green Committee



# District-wide Excellence

## Milpitas Unified School District

John Cimino  
Director MOT  
Milpitas Unified School District

[www.musd.org](http://www.musd.org)



# Milpitas Unified School District: Program Overview

- 3.4 Megawatt PVs mounted on stand alone structures
- 80% Grid Neutral
- 75 Energy Star Rating
- Energy Management Software installed
- Power Purchase Agreement at 14 sites



# Photovoltaics at Carports



# Photovoltaics at Playfields



**GRID Neutral Schools**

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“Milpitas has done a wonderful job approaching grid neutrality. 80% is a great achievement. What a great example for all school districts.”  
~John Maloney, Juror, DSA Green Committee



# Exemplary Teaching Tool

## Milpitas Unified School District

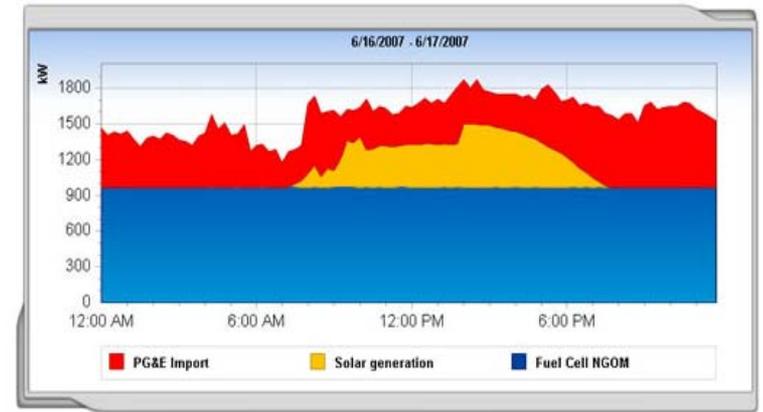
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# Solar Curriculum

- Educational Opportunities – On-site laboratory for alternative energy, energy science curriculum and professional development opportunities for teachers
- Curriculum integration with 5<sup>th</sup> and 6<sup>th</sup> grades



The chart shows composition of hourly fuel cell generation, solar generation, and import from the PG&E grid.



- Environmental Stewardship – Provides clean energy resulting in the reduction of 26,000 tons of carbon, equivalent to planting 270 acres of trees



“Milpitas has done a good job of getting the word out to their community as well. With the big and visible arrays in the parking lots, everyone in Milpitas will surely get the word on the potential of solar energy.” ~Lisa Gelfand, Juror, DSA Green Committee



# Grid Neutral Recognitions

**Irvine USD**  
**San Jose USD**  
**Sonoma USD**  
**Bishop USD**  
**Napa Valley USD**  
**Hollister School District**  
**Natomas School District**  
**Red Bluff Union HS District**  
**San Ramon Valley USD**  
**Santa Monica USD**  
**Poway USD**  
**Los Angeles USD**  
**Lodi USD**  
**San Diego USD**  
**Mt. Diablo USD**  
**Antelope Valley HS District**  
**William Hart USD**



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