



Green Schools Program

Working Conference on Energy Literacy in Secondary Education
October 8, 2009




ALLIANCE TO SAVE ENERGY
Creating an Energy-Efficient World


What is the Alliance to Save Energy?




- Guided by a 37-Member, Elected Board of Directors;
- Environmental, consumer, and trade associations heads, state and local policy makers, corporate executives sponsorship and participation of more than 150 organizations;
- Involvement by businesses in all economic sectors.



Senator Mark Pryor (D-Ark.)




Jim Rogers, CEO
Duke Energy



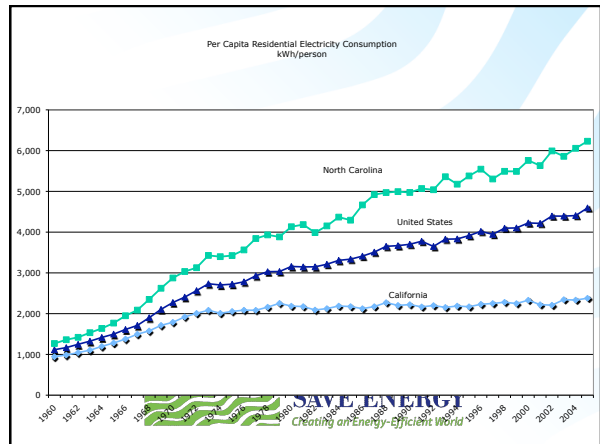
Bi-partisan, bi-cameral Honorary Vice Chairs

Why Energy Efficiency?



As an energy resource, efficiency is:

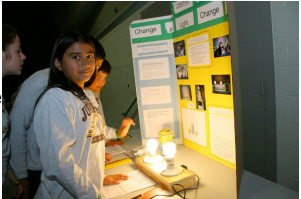
- **CHEAPER**
 - Less costly than new generation
- **QUICKER**
 - How long does it take to screw in more efficient light bulb?
- **CLEANER**
 - "Negawatts" produce NO ENVIRONMENTAL FOOTPRINT
- **MORE SECURE**
 - A "homegrown" resource!



Why Students?

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- **Energy Savings:** Students can make a difference in energy costs
- **Policy:** Students are the energy users, citizens of tomorrow (sometimes of today as well)
- **Families:** Students can help their parents, communities save on energy costs
- **Careers:** students are the energy professionals of tomorrow



Green Schools Program Goals

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- **Educate students** about energy and the link between energy efficiency and the environment, providing hands-on, real-world learning opportunities that empower them to make a real difference
- **Save energy** at school
- **Train the next generation** of energy professionals
- **Students take their knowledge home** and to the community



Each School Develops a Six Strand Plan for:

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1. Integrating energy into instruction
2. Researching ways to save energy
3. Involving the whole school
4. Taking the energy efficiency message to students' homes and communities
5. Developing policy recommendations
6. Introducing Clean Energy careers

Experiential Learning

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- **Green Schools is flexible and customizable**
 - Teams of facilities staff, teachers, administrators and students create the Energy Saving Plan that best suits their school


Instructional Materials



- Road Map, Quick-start Guide
- Resource Binders
 - Organized along 6-strands
- Full-day Student Energy Audit Training
- Tool Kit
 - Explore and experiment

SEAT: Student Energy Audit Training





- All-day workshop for middle school and high school students
- Students learn how to use the tools and audit their school building
- ASE provides instructors and resources for students
- Students receive a foundation in electricity and energy efficiency



Alliance to Save Energy Green Schools Program California Energy Savings 9/2008 - 6/2009

Savings Achieved by Green Schools Teams of Students, Teachers and Custodian Implementing No-Cost Behavioral and Operational Changes


School	KWH Savings	Percent Savings	\$ Savings
Abby Renke Elementary	87,827	19.2%	\$14,845
Alamos Elementary	17,895	4.2%	\$3,220
Bella Vista Middle	77,605	12.8%	\$11,925
Chaparral High*	18,549	9.0%	\$4,025
Crowne Hill Elementary	37,951	9.9%	\$6,726
French Valley Elementary	64,765	15.0%	\$11,702
Gardner Middle	84,270	13.8%	\$13,727
Great Oak High	230,743	10.1%	\$30,142
Jackson Elementary	32,720	9.4%	\$5,289
Jones-Davis Middle	33,962	8.2%	\$4,947
Juan Serrano Elementary	55,917	19.3%	\$10,072
La Vergna Elementary	47,470	11.6%	\$8,600
Margarita Middle	73,015	8.0%	\$11,110
Nicolas Valley Elementary	71,243	16.0%	\$14,750
Paloma Elementary	33,144	9.6%	\$6,112
Quaba Valley Elementary	82,004	21.7%	\$15,054
27 additional schools			
Vista Murrieta High	305,499	11.8%	\$43,061
Warm Springs Middle	61,886	6.7%	\$9,970
Cypress Academy	6,397	2.2%	\$1,731
Eucalyptus ES	60,068	18.7%	\$10,609
Hesperia High	123,868	7.9%	\$19,593
Hollyvale ES	59,717	17.6%	\$9,822
Joshua Circle ES	37,749	11.4%	\$6,795
Juniper ES	6,376	1.0%	\$6,226
Lime Street ES	1,656	3.6%	\$2,318
Mesa Grande ES	4,316	17.4%	\$1,896
Mesquite Trails ES	9,326	2.3%	\$1,157
Rancho Verde	132,242	10.1%	\$19,696
Total ALL 1st & 2nd Yr Schools	3,557,338	10.1%	\$601,490

Best Practice Activities




- Key is **student inquiry and leadership**
- Hands-on, real-world lessons and leadership opportunities engage students, the school, and the wider community.
- Green Schools can be and has been used among a wide range of youth: K-12, gifted and talented and remedial students, AP and tech-ed, in after-school and environmental clubs.

Creating Policy




- Vista Murrieta High School, Murrieta, CA
- Environmental Engineering students audit school
- Propose 10% savings plan for 08-09 school year
- Also invited to audit district buildings and make recommendations for District energy policy
- Now working with city council.


Mentoring Younger Students



- Alternative school for students with behavioral and learning difficulties
- Special Ed students created a presentation teaching elementary students about the tool kit and saving energy in their schools.
- Built confidence.
- Took pride in working together on a meaningful project.
- Bought materials for the whole school with returned energy savings



Homes Follow School's Lead



- Bemis Elementary School, Rialto, CA
- Students learned about the effects of colors on the absorption of energy.
- Students recommended to the Board of Education to change the color of the roof to conserve energy

• Bemis saved over \$25,000 on their electricity costs over the school year.
 • Homes followed suit

