

Alameda Unified School District

In Recognition Of Earth Week 2009

A Report on AUSD's Electrical,
Natural Gas and Water
Consumption data Plus
Conservation and Recycling Efforts

Objectives

- Identify current consumption patterns
- Share our new and existing partnerships
- Spotlight efforts being made in Conservation and Recycling
- Establish Goals to reduce our Footprint
- Create momentum

District Wide Natural Gas Consumption

Alameda Unified School District
Partner - School Project for Utility
Rate Reduction (SPURR) and PG&E

Date	Natural Gas (Therms)	% Chg
Annual Total from July 06 to June 07	367,690	-13.0
Annual Total from July 07 to June 08	460,213	+25.2
9 month Total July 08 to March 09	279,270	-13.8

What can cause an increase or decrease?

- Efficiency - increase or decreased
 - Windows open - operational
 - New high efficient boilers - engineering
- Long periods of hot or cold weather
 - Extended cold periods will increase Gas and Electrical consumption
- Added equipment
 - New Computers use less power than old adding new equipment is still adding a load
- Facility Use
 - Our sites are used almost 7 days a week by the community as this use increases so does the consumption of energy

12 Month Natural Gas Use Pattern

Monthly Natural Gas Use (Therms) For Alameda USD



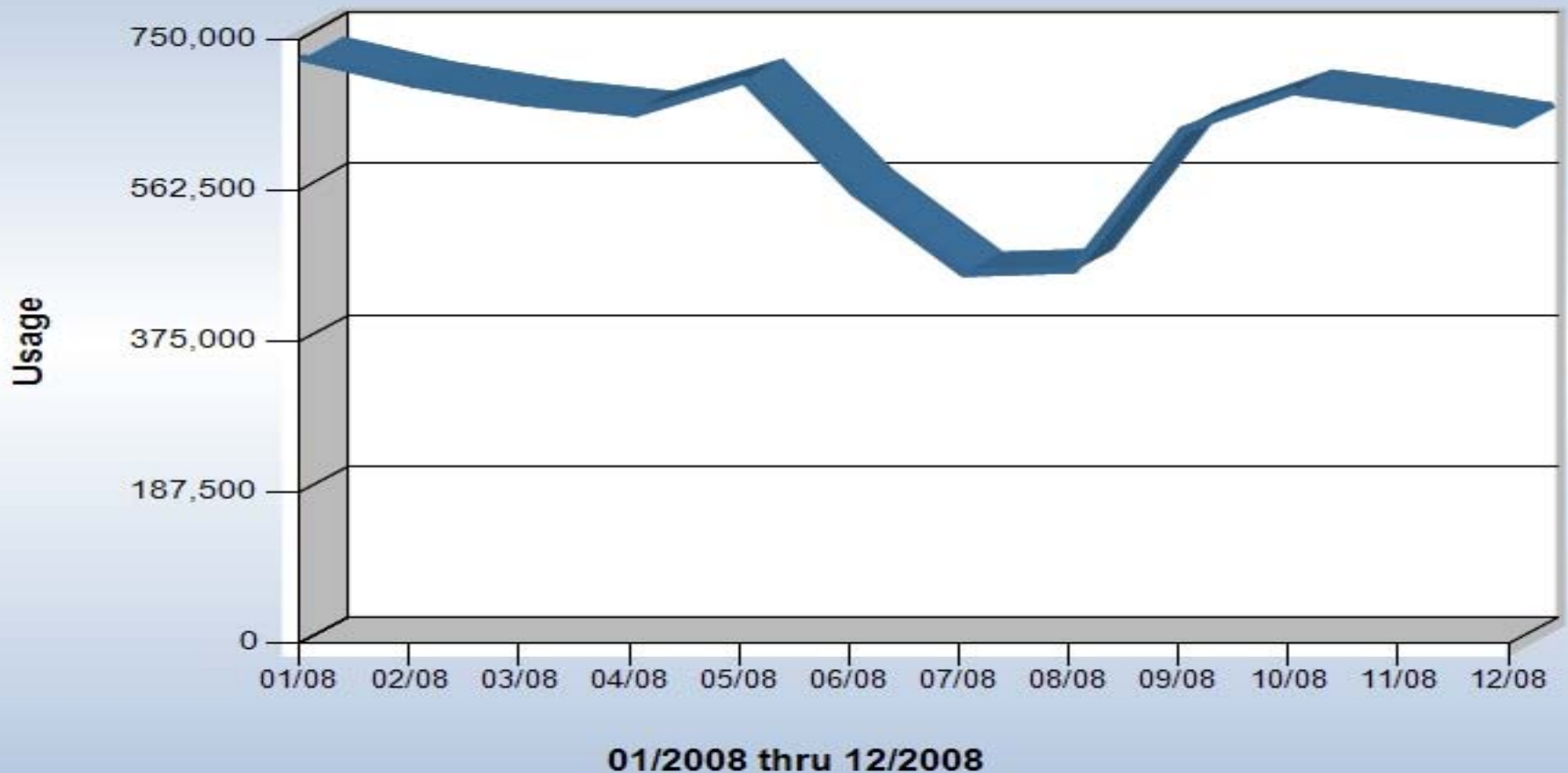
District Wide Electrical Consumption

Alameda Unified School District
Partner - Alameda Municipal Power

Date	Electricity (kWh)	% Change
Annual Total from July 06 to June 07	7,495,328	+3.6
Annual Total from July 07 to June 08	7,759,999	+3.5
9 month Total July 08 to March 09	4,694,907	-19.0

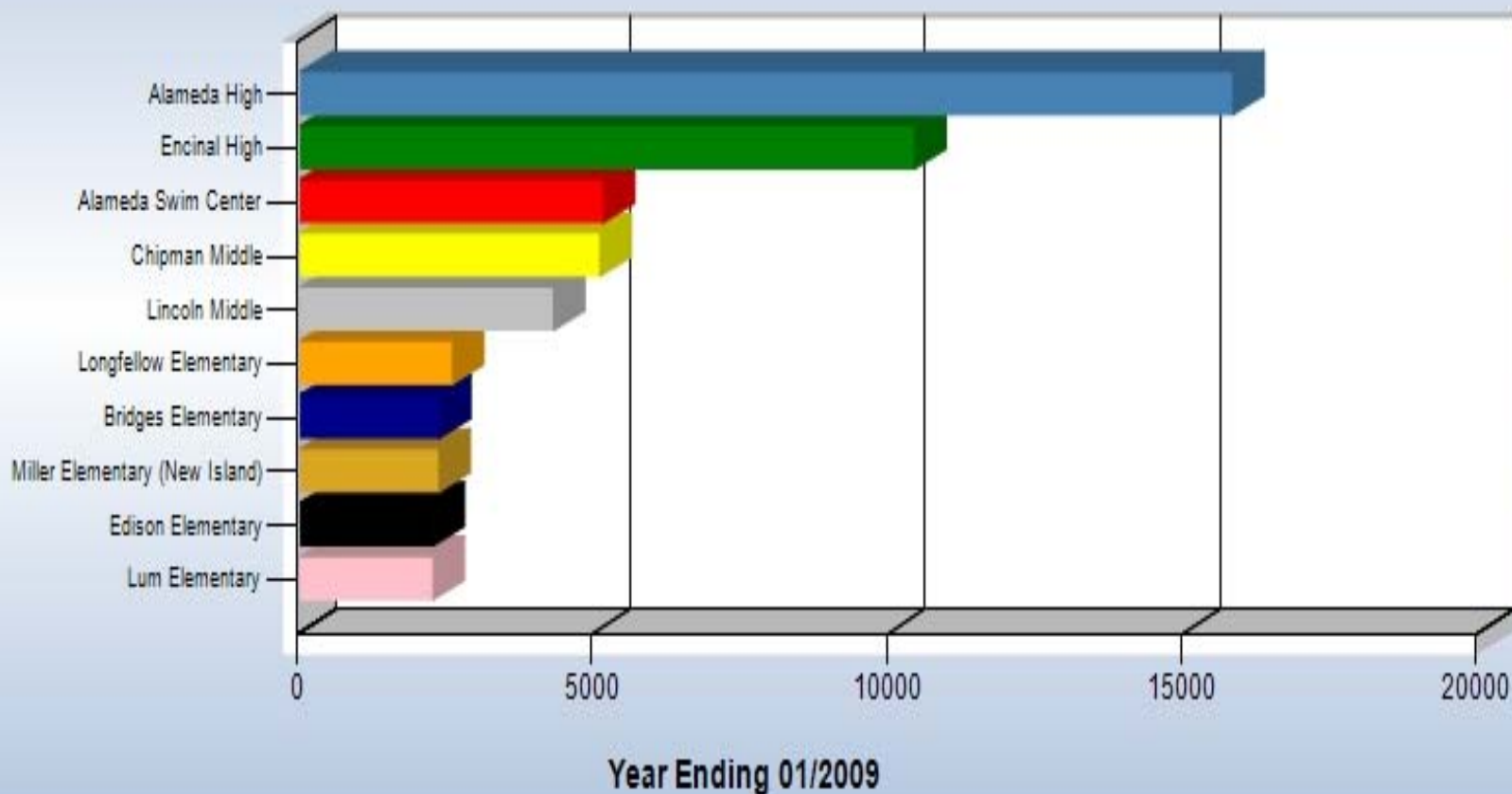
12 Month Electrical Use Pattern

Monthly Electricity Use (kWh) For Alameda USD



Ten Biggest Energy Consumers

Highest Total Energy Use (MBtu)
Alameda USD



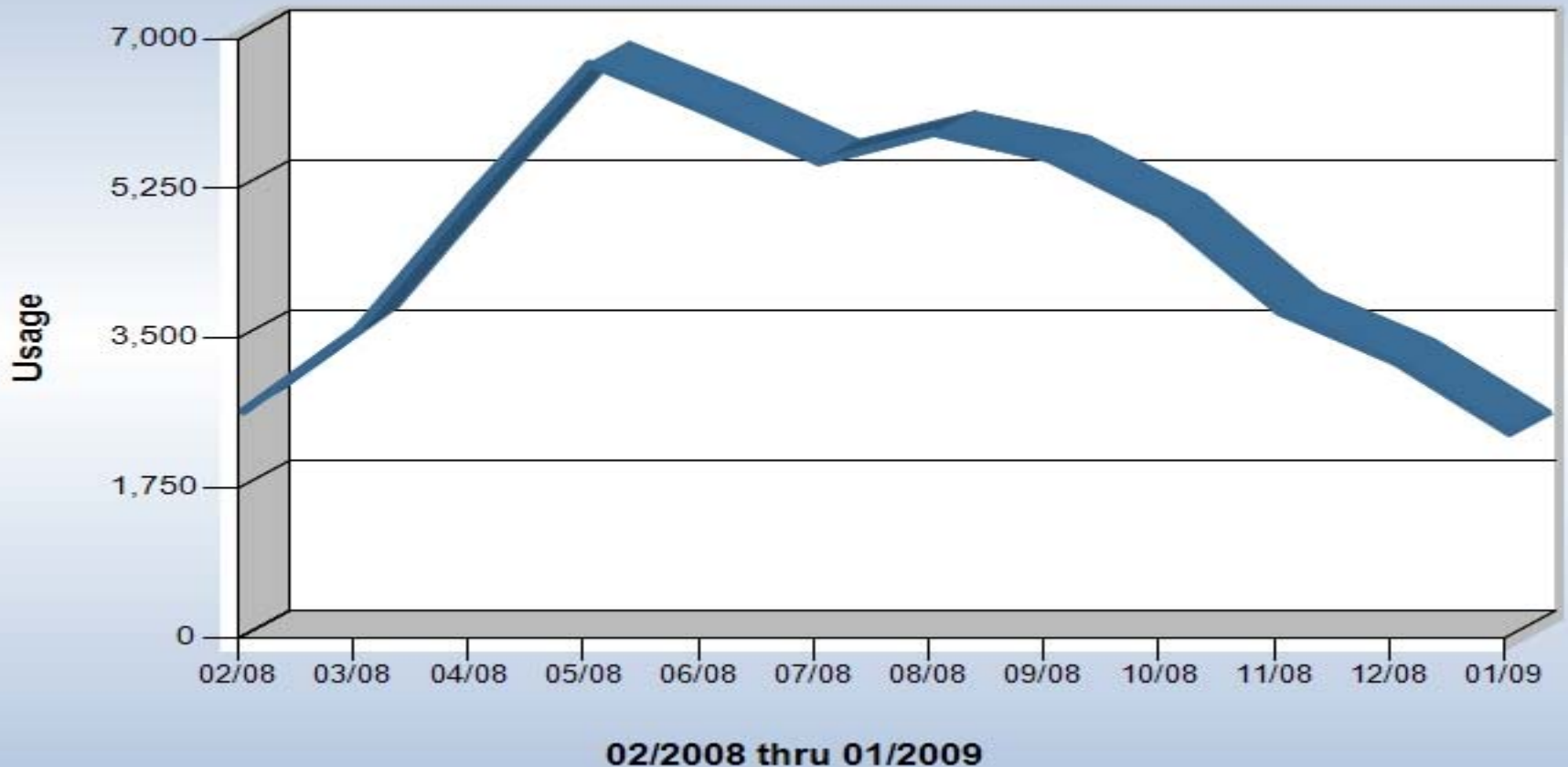
District Wide Water Consumption

Alameda Unified School District
Partner- East Bay Municipal District

	Water	%
	100 cubic foot	Chg
Total water used July 07 to June 08	59,328	
7 month total July 08 to Feb. 09	37,315	-17.45%

12 Month Water Use Pattern

Monthly Water Use (CCF) For Alameda USD



Alameda

Municipal Power

Presented to the Alameda Unified
School District

April 23, 2009

Meredith Owens

Alameda Municipal Power

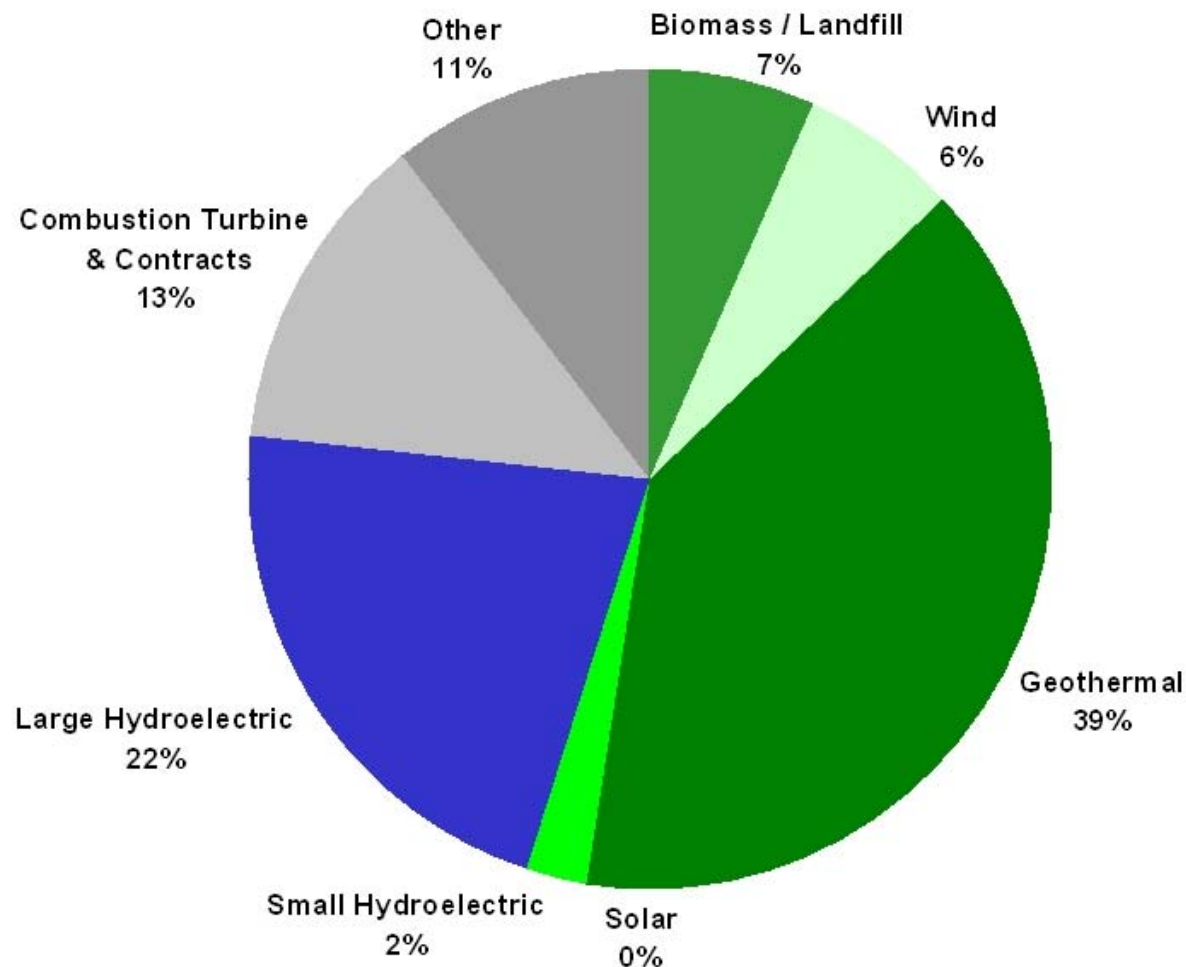


- Established in 1887, oldest municipal utility in the West
- Owned by citizens
- City Department and Enterprise fund
- Governed by the Public Utilities Board

AMP Sources of Energy 2009

87% of
AMP's Power
is Renewable

34% of
California's
Power is
Renewable



Historical Energy Efficiency Project Benefits

- Annual Electric Energy Cost Savings - **\$290,000**
- Cumulative electric energy cost savings - **\$3 million**
- Rebates - **\$162,000**
- Energy Star Label for Bay Farm and Franklin Schools
- AMP provided a 5-day class on energy facilities maintenance
- Energy Education Programs
 - *Renewable Energy Curriculum*
 - *Make A Circus*
 - *1 Kilowatt solar PV system @ Lincoln Middle School*



Current & Future Energy Efficiency Projects



- ***Keep Your Cool*** – Free gasketing, door closures, and plastic strip curtains
- ***Energy Efficient Lighting Retrofit*** – WCDC, District Office, ACLC, Maintenance & Operations
- ***Energy Audits at ALL Schools***



Our Water Partners

- East Bay Municipal Utilities District
- Diversion permit
 - Should result in annual savings of \$13,000.00.
- AUSD Water conservation Projects
 - Irrigation automation for our large fields.

Recycling

High School	Cubic Yards			% Recycled
	Garbage	Recycle	Total	
Alameda	1232	352	1584	22.22%
Encinal	1232	1320	2552	51.72%
Island	308	396	704	56.25%
Middle School				
Chipman	616	528	1144	46.15%
Lincoln	616	528	1144	46.15%
Wood	616	1320	1936	68.18%

Recycling

Elementary Schools	Cubic Yards			% Recycled
	Garbage	Recycle	Total	
Bay Farm	308	176	484	36.36%
Earhart	352	660	1012	65.22%
Edison	264	132	396	33.33%
Franklin	264	132	396	33.33%
Haight	616	528	1144	46.15%
Longfellow	176	176	352	50.00%
Lum	352	264	616	42.86%
Otis	352	264	616	42.86%
Paden	352	220	572	38.46%
Ruby Bridges	704	352	1056	33.33%
Washington	264	528	792	66.67%

The Tree Musketeers from Bay Farm are helping with an audit



Three bags pulled from the garbage dumpsters at different Schools 1 HS - 1 MS and - 1 ES



Audit Results

- Three 30 Gallon Bags
- Reduced to two 2 gallon bags
- There were two aluminum cans
- Two postage stamps
- And the remainder was green waste
- We all agreed it was almost a 95% reduction
- Mostly paper was in the wrong container

District wide paper facts

- Big paper use :
 - 1300 cases of paper food trays
 - 929 cases of paper towels
 - 3300 cases of copy paper that's over 16 million pages

Alameda Schools Go Green

• Creating Connections

- “Alameda Schools Go Green” Google Group created in October 2008 includes students, teachers, staff, parents, members from Alameda County Industries (ACI), City of Alameda, Alameda Municipal Power, and Community Action for a Sustainable Alameda (CASA).
- Creating PTA positions and committees

Education

- Presentations on waste reduction with ACI and City of Alameda
- Student-led groups such as Bay Farm School's “Tree Musketeers”
- Distribution of Global Warming Checklist
- Sharing of information about grants



5th graders teach lower grades about waste-free lunches

• Reducing Waste

- Encouraging waste-free lunches
- Encouraging waste-free parties
- Partnering with AEF to reduce junk mail
- Reducing gas usage by walking to school
- Reducing energy usage with solar filtering on windows

• Recycling Items

- Athletic shoes (ACI)
- Classroom paper recycling
- Batteries
- Glue sticks (www.elmersgluecrew.com)
- Plastic bags (Walmart's Kids Recycle Challenge)
- Inkjet cartridges and cellphones
- Reducing water usage with low water landscaping



Student at Otis weighing their recycling



Edison's Recycling Cart

- **Reuse of items**

- Juice pouches
(www.terracycle.com)

- **Rot**

- Worm and compost bins at sites
- Garden programs



Haight School's Low Water Landscaping

- **Celebrating Earth Day** (or Week)

- Junk Mail Murals
- Planting trees for Arbor Day
- Encouraging walking to school
- Conserving water
- Education: assemblies, flyers and letters



Students create Junk Mail Murals for Earth Day

Thank you for helping Alameda Schools Go Green!

Altamont Grant Application

“Alameda Green Schools Challenge”

- Applying for 3 year grant for \$142K for:
- Universal Access to Recycling
- Phase-in Food Scrap Diversion
- Education to Promote Cultural Change
- Communication and Sharing Best Practices



Bay Farm's "Tree Musketeers" helped with the AUSD trash audit

Grant Partners

- Alameda Unified School District administration and Facilities, Operations, and Maintenance Department personnel
- School principals at each school site that sign on to the Alameda Green Schools Challenge
- Alameda Schools Go Green
- Community Action for a Sustainable Alameda
- Stopwaste.org
- City of Alameda Department of Public Works recycling program staff
- Alameda County Industries, the City's recycling and solid waste collection contractor
- Alameda Municipal Power
- Alameda County Office of Education



Grant Goals

- Increase diversion from 41% to 75% in 3 years
- Uniform recycling and composting programs at all schools and district facilities
- Reduce greenhouse gas emissions
- Create zero waste cultural change



Food scrap diversion at SFUSD

Our Environmental Stewardship Goals

- Reduce consumption of
 - Energy by 5% annually for three years
 - Reduce water consumption by 10%
- Increase Recycling up past 70%
 - RFP May 2009 for all services Waste, Recycling (paper, metal, wood, glass, plastic, rubber, etc..) and Organics
 - Begin our pilot program September 2009
- Investigate and develop renewable energy options and energy conservation strategies

Federal Stimulus \$'s may be our one time opportunity to strike while the "Sun Shines"!

- AUSD has to strike while Federal Stimulus \$'s are available!- Projects must be submitted as soon as possible (target next 60 days)
- The Funds,- have just been allocated down to States-and-cities for disbursement with direction to complete projects exactly like AUSD is requesting.
- The Recovery Act "will give preference to activities that can be started and completed expeditiously", including a goal of using at least 50 percent of the funds made available for **activities that can be initiated not later than June 17, 2009 to focus on:**
 - “Energy Efficiency and sustainability programs for housing, public schools and public buildings.”
 - “Preserve jobs and create economic recovery”
 - “Use Grant funds in a manner that maximizes job creation and economic benefit”
- “Local school districts may use funds for any authorized by ESEA, IDEA or Perkins Act, and for school Modernization Renovation and repair, including those consistent with green building rating system”, i.e. LEED.

How Energy Efficiency measures and Solar Could work for AUSD

- AUSD Energy Efficiency measures (windows, HVAC, lighting improvements) and Solar generation could be funded through the Stimulus bill.
- “Solar Teaching” opportunity could be created (where feasible) in all AUSD schools around Green school activities, EE measures for action at home for all school levels.
- Potential Savings in Electric costs will depend on our ability to extract federal stimulus grants.

Where do we go from here?

- We are working on:
 - Grant request application on behalf of AUSD
 - EE audits of all AUSD facilities in partnership AP&T to generate estimates for corrective measures.
 - Developing AUSD Solar demand estimate and installation plan for rooftops based on AUSD system demand up to allowable Federal stimulus guidelines(1 Megawatt cap)
 - Develop educational program curriculums for all schools levels.

Thanks to

- Go Green Committee Members
 - Chantal Currid & Ruth Abbe
- Energy Options and Federal Stimulus
 - Brian Miller
- Alameda Municipal Power
- East Bay Municipal Utilities District
- SPURR

- And...

The Tree Musketeers

