



THE BOTTOM LINE

Solar power provides County Office of Education one third of electricity

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On-line energy conservation tools and calculators for businesses

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Reacting to rolling blackouts and soaring energy prices, many businesses are looking into renewable energy projects as a cost-effective way of doing business. But businesses are not alone in this endeavor.

The Sonoma County Office of Education (SCOE) in Santa Rosa is currently being supplied nearly a third of its electric power by a rooftop solar electric system.

The *SunRoof FS* free-standing rooftop solar electric system is manufactured by RWE SCHOTT Solar, Inc. (RSS), a leading manufacturer and distributor of high-quality solar modules and systems specifically designed for flat-roofed commercial and public buildings.

It contains a simple and effective mounting system that sits directly on the building's flat roof, raising the panels above the roof and spreading the weight out to less than four pounds per square foot.

"The genesis of the project was to cut down on our utility needs during the energy crisis. Presently we are a model for other school districts to do the same," said Jerry Johnson, Deputy Superintendent of Business.

"We implemented an entire energy sav-

ings program, including our heating and air conditioning systems, lighting and insulation. Given the size of our roof it would have been a shame not to add a photovoltaic (PV) system into the equation," said Johnson.

The Sonoma County Office of Education *SunRoof FS* installation is a 60kW system capable of powering 20-40 average homes. Covering an estimated 5,000 square feet, the array of 432 PV panels at times has been known to produce more than expected.

Installed by Cal-air of Santa Rosa, the estimated cost of the project is \$600,000. Under a California Energy Commission program, Pacific Gas & Electric Co. gave SCOE a \$300,000 rebate. Johnson also estimated an annual energy cost savings projected at \$47,000 a year.

"Not only do we produce power to cover about one-third of our needs, but our meter runs backwards on weekends when the building is closed! As an added bonus, the system goes right over any obstruction and actually protects that section of the roof," added Johnson.

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Energy Self-Generation Incentive Program

The PG&E Self-Generation Incentive Program provides financial incentives to customers who install certain kinds of "clean" on-site distributed generation. These facilities must be certified to operate in parallel with the electric system grid (not back-up generation) and meet other criteria established by the California Public Utilities Commission.

While residential customers are not barred from the program, it is designed primarily with business and large institutional customers in mind. The California Energy Commission offers a similar program that is available to customers who install renewable gen-

eration sources, such as photovoltaics and wind turbines less than 30 kW in size.

For more information about the Self-Generation Incentive Program, please call 1-800-468-4743.

Workshop Alert

There will be a FREE Self-Generation Incentive Program workshop to be held at San Ramon Valley Conference Center on October 17, 2003. For more information, call (415) 972-5292.

PROFITABILITY THROUGH SOUND ENVIRONMENTAL PRACTICES

www.sonomabea.org

“Zero perc”: A trendy perk in the dry cleaning industry

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Warren Smith
OCLI

A project developed by the
Sonoma County Economic
Development Board

For years, “environmentally friendly” was a phrase unlikely to be connected with the dry cleaning industry. Drycleaners are currently finding less polluting methods to remove spots and stains from clothing.

Professional cleaners are an essential part of our communities. Their services save us time and keep our clothes in top-notch condition. But growing concern that the primary solvent used to dry clean clothes—perchloroethylene (or “perc”)—can cause health and environmental problems has spurred research on new ways to safely clean our clothes.

Perc, a chemical solvent used by most drycleaners, is a suspected human carcinogen and groundwater contaminant.

While the workers at dry-cleaning establishments and their neighbors, are at highest risk from exposure to perc, customers may also be affected.

Furthermore, perc can contaminate the water supply when run-off from dry-

cleaning facilities flows into sewers or leaks into the groundwater.

Since 1992, The Environmental Protection Agency (EPA) has worked in partnership with the dry cleaning industry as part of the EPA’s Design for the Environment Program. With approximately 34,000 commercial shops in neighborhoods and malls across the country, drycleaners are one of the largest groups of chemical users that come into direct contact with the public.

The Center for Neighborhood Technology (CNT) joined the EPA’s Design for the Environment Dry Cleaning project which aimed to find and test alternatives to dry cleaning with toxic chemicals.

The dry cleaning industry has made great strides in environmental improvements in recent years. Since the 1992 inception of the Garment and Textile

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Sonoma County Business Electronics Recycling & Reuse Directory

Computer Recycling Center

3249 Santa Rosa Ave., Santa Rosa
707-570-1600
Repairable copy machines, fax machines, AV, plastic castings and small electronics

Creative Re-Use

707-546-3340
PO Box 1802, Santa Rosa
Repairable and non-repairable copy machines, fax machines and furniture

California Computer Exchange

707-778-7911
318 Western Ave., Petaluma
Repairable copy machines, fax machines, AV and small electronics

St. Vincent de Paul Society

707-584-1579
Call for nearest County facility
Repairable copy machines, fax machines, AV, small electronics and furniture

Healdsburg Recycles

707-433-0321
166 Alexander Valley Rd., Healdsburg
Working order AV, small electronics and furniture

Recycletown

707-795-3660
500 Mechem Rd., Petaluma
M-Su 8-4
Working order AV, small electronics and furniture

Rodney Strong invests in solar power

As one of Sonoma County's most progressive wineries, Rodney Strong Vineyard signed an agreement with Powerlight Solar Electric Systems of Berkeley California to install one of the largest winery solar electric system to date in the world.

The winery, located in Healdsburg, California will commence in October of 2003 and the project is scheduled to be complete before the end of the year.

Once installed on the winery's 75,000 square foot barrelhouse, the solar system will generate 766 kilowatts of power. It will serve as the main electrical distribution system for the entire winery.

The panels, made by Sanyo, are said to be the most efficient commer-

cial panels available. The cost of the system is estimated at approximately \$4 million. The state's incentive program will rebate 50% of the total cost.

Over the 25-year life of the system, the solar generated electricity will reduce emissions of carbon dioxide by 8,700 tons.

The emissions reductions are equivalent to planting almost 2,500 acres of trees, removing 1,700 cars from the road or not driving nearly 22 million miles on California's roadways. This distance is equivalent to 45 trips to the moon and back!

The solar system will generate enough electricity during the daytime to power almost 800 homes. In addition, Rodney Strong expects \$140,000 a year in electricity savings.

Upgrading lighting to the high efficiency linear fluorescent lighting is also expected to save \$70,000 annually.

Tom Klein, winery CEO explains, "I've always felt that solar offered obvious renewable benefits. Now that solar technology has improved in its efficiency, it makes renewable energy more commercially viable."

The Kleins, a century-old California farming family, have made a significant investment to build a Sonoma County franchise: They produce wine only from Sonoma County, invest in over 1,000 acres of vineyard land and are now taking a major step to protect the quality of life in the region.

source: <http://www.rodneystrong.com>

Business resources for reducing waste

Business Assistance

Eco-Desk Hotline
707-565-3375

The Eco-Desk answers questions about recycling and disposal of small quantities of hazardous waste from businesses in Sonoma County.

Business Reuse Programs

Creative Re-Use / North Bay
707-546-3340

Creative Re-Use / North Bay collects and warehouses manufacturing scraps, seconds and surplus materials as well as excess/obsolete supplies, equipment, some building materials, and furniture and makes these discards available to schools, nonprofits and other organizations. The warehouse is open on scheduled days and by appointment. Please call to arrange for pick-up of donations.

SONOMAX
Sonoma County's Materials Exchange
707-565-3375

The goal of SonoMax is to find reuse and recycling opportunities for non-hazardous materials local businesses typically discard. An "Available and Wanted" listing flyer is distributed quarterly to those on the mailing list. The listings are also available at <http://www.recyclenow.org/sonomax/>.

Business Recycling Program For Agriculture

Agricultural Plastic Pesticide/Chemical Containers
707-565-2371

Twice annually, spring and fall, agricultural materials are accepted for free recycling. These special recycling days are open to growers, nurseries, pest control businesses, golf courses, parks and government agencies.

Materials accepted:

- Plastic containers (all sizes ranging from 1 pint to 55 gallons)
- Metal containers (1, 2.5, 5 gallons)
- Trellis wire (it must be coiled and the wood must be removed)
- A disposal fee will be charged for any items that are not listed above!

Special Instructions:

Containers must be triple rinsed, punctured and dry. The plastic lid must be removed. If possible, please remove the labels. Please no PVC pipe or plastic containers that have held motor oil.

For additional information contact the Agricultural Commissioners Office at 707-565-2371. This program is sponsored by the Sonoma County Agricultural Commissioner's Office, Sonoma County Integrated Waste Division, and Ag Plastic Recycle.

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Water Conservation Related Programs for Businesses

For information on the BEA's water conservation resources, visit the "Business Water Project" section of www.sonomabea.org.

Best Available Technologies (BAT) Programs

City of Petaluma

The city's BAT program provides a reduction in sewer demand fees of 50% to qualifying new restaurants and laundromats. To qualify, the new business must sign an agreement to install specific water-conserving devices and agree to allow the city to verify that devices are installed. For further information, please call 778-4507.

City of Santa Rosa

The city provides a reduction in sewer demand fees of 50% to qualifying new restaurants and laundromats. To qualify, the new business must sign an agreement to install specific water-conserving devices on their premises. After they are built, the city will inspect for compliance.

For Santa Rosa restaurants, the requirements are:

- self-closing, automatic shut-off sink faucets (0.5 gallons per minute(gpm) and 0.25 gallons per-cycle) in the bathrooms
- all other sink faucets are 2.2 gpm
- low-temperature dishwashers that recycle the final rinse into the next wash
- connectionless steamers, approximately 2 gallons per hour water use
- 1.8 gpm automatic shut-off triggers on all pre-rinse hoses
- all toilets are 1.6 gallons per flush or less

For Santa Rosa laundromats: all machines must be horizontal-axis machines — no top loaders. For more information, visit http://ci.santa-rosa.ca.us/wc/rebate_incentive.asp#BAT

Large Landscape Conservation Programs

ET Controller Distribution Program

Cities of Sonoma & Petaluma: This program is anticipated to start in late 2003. Funds are available to replace standard irrigation controllers with Evapotranspiration-based irrigation controllers. For further information on this program for both cities, please call 547-1918.

Irrigation Incentive & Rebate Programs

City of Petaluma: The Irrigation Incentive & Rebate Program is designed to encourage non-residential customers with a cash incentive to upgrade selected irrigation equipment with new irrigation equipment, such as rain shut-off sensors, pressure regulation devices, drip retrofits, controllers, etc. Depending on the type of equipment, non-residential customers can receive a rebate of 50% to 100% of their expenses up to \$10,000 per project per year (over a 12-month period). For further information, please call 778-4507.

City of Santa Rosa: The City of Santa Rosa Water Conservation Program is announcing a new rebate program for efficient landscape water management. Eligible customers can earn \$500 for each acre-foot (325,851 gallons) of water savings below their Efficient Irrigation Goal each year (approximately \$1.53 per 1,000 gallons of water saved). Using landscape and weather data, city staff can calculate the landscape water requirements of each site (the Efficient Irrigation Goal). The city's water utility customers irrigating with city water through a dedicated irrigation meter can apply each year. Applications are due by February 1 for the previous calendar year. To earn a rebate, actual irrigation water use must fall below the Efficient Irrigation Goal for that year.

To be considered for a rebate, an application must be submitted! Please call Diane Lesko at 543-3986 to request an application, get more information, and/or arrange for technical assistance.

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Non-Residential Landscape Water Audit

City of Sonoma: The city is offering free water audits to non-residential water customers, who can qualify based on their water usage. An irrigation audit involves measuring and collecting data, such as site maps, irrigation plans, and water use records. A report will be compiled to assess current water uses; target system

improvements where conservation efforts are most needed; provide data needed to reduce water and revenue losses; and to estimate and reduce unaccounted water usage such as leaks, inoperative systems controls, etc. For more information on this program, please call 933-2247.

Commercial/Industrial Sustained Reduction Rebate Program

City of Santa Rosa: In April, 1996, the city passed a resolution which authorizes rebates for commercial/industrial/institutional efficiency upgrades. The city now offers rebates of \$100 for every 1,000 gallons per month of sustainable reduction in water use and wastewater flow achieved through measures other

than toilet/faucet/showerhead replacement. This program is for commercial, industrial and institutional customers only. Please contact Diane Lesko, Water Conservation Representative at 543-3986 for further information on how to participate in this program.

Water Conservation Awards

Dozens of environmental awards recognize water conservation and efficiency efforts, sometimes explicitly and sometimes within a general environmental category. From international to local programs, as well as trade associations and environmental organizations, awards are given out to companies for their water efficiency policies and accomplishments. Below is a sample of water efficiency awards from the Business for Social Responsibility website:

American Water Works Assoc. (AWWA) Award of Merit

One of the many annual awards given by the American Water Works Association, the AWWA Award of Merit recognizes the achievements of those outside the water industry who have demonstrated outstanding service in support of the principles of AWWA. (<http://www.awwa.org>)

Wastewater Management Excellence Awards

The U.S. Environmental Protection Agency (EPA) honors municipal wastewater treatment facilities and a small number of companies that have demonstrated outstanding technological achievements or innovative processes in their waste treatment and pollution abatement programs. Award categories include: achievements in beneficial biosolids use; innovative and outstanding operations and maintenance techniques; exemplary local pretreatment programs; and outstanding, innovative and cost-effective stormwater and combined sewer overflow control programs. (<http://www.epa.gov/owm>)

National Awards for Sustainability

Presented by Renew America, these awards recognize "exemplary programs that show how we can make our communities more livable by integrating environmental protection, social equity, and economic progress." Honors outstanding programs, organizations or businesses in various categories, including Freshwater and Watersheds, Oceans and Coasts, and Pollution Prevention. (http://solstice.crest.org/environment/renew_america)

Water Conservation Awards

The U.S. Bureau of Reclamation, which manages water in the American West and is the second largest wholesaler of water in the country, annually recognizes water conservation accomplishments in areas including water conservation demonstration and conservation education. (<http://www.usbr.gov>)

Soil and Water Conservation Society Awards

Presented at the Annual Soil and Water Conservation Society Conference, a number of water conservation awards are given that recognize outstanding activities, products, or services by a group, business, corporation, or organization that promote the conservation of soil, water, and related natural resources. (<http://www.swcs.org>)

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Care Partnership, the use of perc has declined significantly.

Innovation is exactly what the project uncovered. Across the United States, small business owners are finding unique solutions to dry cleaning pollution. And many of them are discovering ways to transform that problem into profit.

"You really have to think outside the box," says Roger King, proprietor of Comet Cleaners, a "model cleaner" from Colorado. In addition to replacing perc with the more benign petroleum solvent Exxon D-2000, King has used creative tactics like initiating a "Happy Bag" club that offers customers incentives to reuse garment bags and providing patrons with boxes to promote hanger reuse. The \$100 per week King saves from these programs helps him stay competitive while minimizing his waste stream.

Noam Frankel was a businessman seeking green technology when he founded The Greener Cleaner in 1995. "I had been looking for a way to invest in environmental technology," he says. "I saw that there was clearly a need for innovation in this industry when I learned that dry clean-

ers are the second-largest user of toxic chlorinated solvents in the world. And they're usually located in residential neighborhoods or heavily populated urban areas."

Frankel was only the second cleaner in the nation to employ "wet cleaning," a non-toxic, non-polluting alternative to perc. Using biodegradable soap, water and computer technology, Frankel is able to safely and effectively clean 99.9% of the garments that read "dry clean only."

Wet cleaning processes include computer-controlled washing and dry machines and professional, labor-intensive techniques that control factors, such as mechanical action and temperature, that can cause shrinkage.

In Southern California, dry cleaners are discontinuing the use of perc in response to a decision by the South Coast Air Quality Management District to phase out the use of perc by 2020.

To help promote wet cleaning, Southern California Edison (SCE), the South Coast Air Quality Management District and local dry-cleaning trade associations recently debuted the Wet Cleaning Demonstration Center at SCE's Customer Technology Application Center in Irwindale.

The Center for Neighborhood

Technology's interim report shows that the wet-cleaning process does appear to be comparable in cost and performance to dry cleaning. This may not be news to The Greener Cleaner, or to much of the dry cleaning industry.

Over the last year there has been a tremendous jump in the number of dry cleaners now using wet cleaning techniques.

The trend toward safer cleaning chemicals and methods has sprung across the country. GreenEarth Cleaning, a non-hazardous and garment-friendly system, is one of the newest trends in dry cleaning.

Unlike traditional dry-cleaning machines, GreenEarth uses a liquefied silicone base and detergent to clean clothes. The solution is biodegradable and breaks down to sand and carbon dioxide after 28 days.

Dry cleaner operators believe that sooner or later all dry cleaners are going to start using more efficient methods of dry cleaning. Dry cleaners have changed to the new system in part because it's good for the environment but also to follow a new trend in the industry.

source: <http://www.emagazine.com>

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Business resources for reducing waste

Business Recognition Programs

Sonoma Green Business Program
707-565-2481

The Sonoma Green Business certificate is awarded to auto repair, body shops, winery and graphic arts industries recognized for environmental compliance, pollution prevention and resource conservation.

W.R.A.P. Waste Reduction Awards Program
916-255-2497

Sponsored by the Integrated Waste Management Board, annual W.R.A.P. awards are given to California businesses recognized for their outstanding waste diversion efforts.

Business Loan Program

R.M.D.Z. Recycling Market Development Zone
707-262-1090

Low-interest loans from the California Integrated Waste Management Board to businesses in Sonoma, Mendocino and Lake Counties which manufacture secondary materials.

Business Waste Consultants

Waste Reduction Technology
415-482-0388

<http://www.wastereduction.org>

Waste Reduction Technology helps businesses in Sonoma and Marin Counties reduce waste and save money at no net cost to the clients as they earn their fees as a percentage of the client's savings.

*On-line energy conservation tools and calculators for businesses***PG&E's On-line Business Energy Audit**

PG&E is pleased to present its energy analysis tool, designed specifically for its small and medium-sized business customers. PG&E's analysis can help businesses lower its energy bill, improve productivity, and enhance profits! Using this effective tool is easy and only takes a few minutes to get an energy analysis.

The Business Energy Audit toolkit provides a set of initiatives designed to give businesses an edge in energy conservation. If you would like more information about the On-line Business Energy Audit, please visit PG&E at <http://www.pge.com> or call 1-800-468-4743.

PG&E's Business Analyzer Mail Energy Survey

Business Analyzer Mail is a new energy survey service offered by Pacific Gas and Electric Company to businesses. It includes a compilation of reports and information on energy strategies that are specific to your industry. This unique service can help cut costs and increase profit

Efficiency FastTrack

- Identify energy-saving opportunities. Get started on them - Fast!

Detailed Analysis

- Make an in-depth energy assessment. Get detailed recommendations and project assistance, specifically for your business.

My Benchmark

- Compare your energy use. See how you stack up against the competition.

My Case Study

- View quick tips and examples of how similar businesses save energy.

PG&E's Growing Business Success Audit Tool

Pacific Gas and Electric Company's energy audit tool - Growing Business Success - is a CD-ROM that provides businesses convenient access to utility billing data and uses that information to identify specific actions to take to reduce your business' energy costs. The Growing Business Success CD-ROM is customized to assist businesses with the bottom line.

margins. Additionally, reports highlight energy efficiency financial incentives you might not have realized were available. In short, Business Analyzer Mail helps build a strategic advantage for businesses, all at no cost to the owner. If you would like more information please call 1-800-413-2795.

- Allows you to conveniently access 12 months of your billing information.
- Estimates cost, savings, and cost-effectiveness of energy saving measures based on your actual energy costs.
- Compares your businesses to similar businesses
- Links to a wide variety of resources on relevant topics.

For your FREE Growing Business Success CD-ROM, please call 1-800-468-4743.

*Business Financing***SAFE-BIDCO Energy Efficiency Improvements Program**

- Available to California small businesses and non-profit organizations for equipment that conserves, produces or controls energy use, in new or existing facilities. <http://www.safe-bidco.com>

EPA's Environmental Finance Program (EFP)

- EFP seeks to lower costs, increase investment, and build capacity by creating partnerships with state and local governments and the private sector to fund environmental needs. <http://www.epa.gov/efinpage/>

State Financial Assistance Programs

- state financial assistance programs. <http://www.smallbiz-enviroweb.org/funding/fundstat.html>

Energy Star Small Business - Financial Resources Directory

- A directory of financial services by state or service type ie loans, consulting, credit etc. <http://www.energystar.gov/>

Small Business Administration: Financing Your Business

- a comprehensive source for business financing including Small Business Loans and procurement assistance. <http://www.sbaonline.sba.gov/financing/>

Environmental Accounting- resources to help business understand the full spectrum of their environmental costs, and integrate these costs into decision-making.

<http://www.epa.gov/opptintr/acctg/>

EPA Small Business Innovation Research (SBIR)

- Through the SBIR Program, EPA makes awards to small, high-tech firms for research and development of cutting-edge technologies. <http://es.epa.gov/ncer/sbir/>

source: EPA Business Opportunities

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RWE Schott Solar, Inc. (RSS), is now the exclusive supplier of solar electric systems and engineering services for Cal-Air's first three comprehensive energy conservation projects that include PV. These projects, which are part of the company's effort to support an energy-independent California, include the Sonoma County Office of Education, the City of Cotati Police Station and the Norman Glick Middle School in Modesto.

source: <http://www.solaraccess.com>

Did you know?

10,000

computers and televisions become obsolete in California every day.

75%

of old electronics are in storage, in part because of uncertainty regarding how to manage the materials.

20%

of computers and televisions are currently recovered for recycling.

7

pounds of lead are contained in each computer and their improper disposal could contaminate water supplies.

source: Association of Bay Area Governments

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