

Energy Policy Recommendations Alamo Group of the Sierra Club

The Alamo Group of the Sierra Club commends the City of San Antonio and CPS Energy for starting to take progressively bolder steps to reduce energy demand and increasingly meeting the energy needs of all citizens from clean, renewable sources.

As stated in the national Sierra Club's 2006 Energy Policy,¹ we believe that...

The path to a sustainable energy future starts by promoting energy conservation, tapping the enormous resource of energy efficiency, directly reducing dependence on non-renewable fuels and maximizing the benefits of renewable energy. At the same time, energy efficiency and renewable energy will be the engine of new economic growth, saving money and creating jobs. The result will be lasting improvements for our economy and our environment, more livable communities, more productive manufacturing, less wasteful use of materials, and less pressure on the natural systems of the Earth that sustain us.

In establishing its energy policy, the national Sierra Club analyzed available and potential energy options and ranked them according to the pollution they cause, their global warming emissions, their effect on the land, the energy used to produce them and the waste they create. The Sierra Club also assessed the ability of these options to reduce the use of fossil fuels, speed the transition toward a more affordable and renewable energy economy and minimize damage to human health and natural systems.

The Sierra Club generally prefers wind energy, on-site solar, central station solar, combined heat and power, and low temperature geothermal as the best means to generate electricity with minimal environmental consequences.

The Sierra Club opposes new combustion coal plants, coal to liquids, new large-scale hydroelectric dams, and nuclear power for reasons explained in detail in the national Sierra Club 2006 Energy Policy.

These Alamo Group of the Sierra Club Energy Policy Recommendations include lists of significant but not all-inclusive best practices for a local energy strategy. Our goal is for San Antonio and South Texas to greatly reduce overall energy use while remaining economically strong and providing sufficient affordable power to all. Not only is such an approach entirely possible and being implemented in other cities, but in our opinion it is essential if our region and our planet are to avoid future economic disruptions caused by energy supply issues. In fact, studies have shown that investments in energy efficiency strengthen the local economy. Rather than importing fuel from outside the state, energy efficiency relies on local companies and retailers to provide energy management services and energy saving products. A study done in 2007 by researchers at Optimal Energy determined that each dollar spent in energy savings initiatives generates \$4.40 in savings.¹¹

This policy's recommendations consist of two parts; those directed toward CPS Energy and those appropriate for the City of San Antonio.

RECOMMENDATIONS TO CPS ENERGY

1. Set a goal that 30% of CPS Energy's electrical demand will be met by renewable energy sources in the year 2025.

Austin, with a population of 656,000 in 2000, has committed to achieving 700 mw of savings through efficiency and conservation by the year 2020 and to meeting 30% of demand by renewables, including 100 mw of solar.ⁱⁱⁱ

San Antonio, population 1,144,000, intends to save 115 mw by 2011^{iv} but predicts that only 15% of demand will be met by renewables in 2020.^v

2. Establish an ongoing source of clean energy funding.

CPS Energy should permanently dedicate 2% to 3% of retail revenues to programs that fund energy efficiency and increase market reliance on new renewable energy.

The Sacramento Municipal Utility District (SMUD) has approved energy efficiency goals that would reduce overall consumption by 1.5 % annually for the next 10 years.^{vi} SMUD will spend about 2.5% of current annual revenue next year and 3.3% by 2010 to pursue this goal. A 1.5% annual energy reduction through efficiency measures by CPS Energy would provide a substantial portion of its estimated growth demand and could delay or eliminate the need for a new base load power plant.

3. Continue to strengthen the CPS commitment to energy conservation.

a) Lead community conservation efforts by example.

Install an in-house Energy Manager at CPS, responsible for reducing energy consumption and greenhouse gas emissions throughout CPS internal operations, including its vehicle fleet. Such a position would quickly pay for itself in energy savings.

Bexar County has an energy manager who has helped reduced energy consumption in county facilities such as the County jail.

b) Establish a citizens' committee dedicated exclusively to energy conservation. This committee would be separate from the current Citizens Advisory Committee.

SAWS, because of its Community Conservation Committee and many community-based water conservation initiatives, was a finalist for the prestigious 2007 Innovations in

conservation has helped the SAWS Conservation Department reach its annual goal of a 1% reduction in per capita water usage. CPS Energy can pattern its own conservation committee after this highly successful model.

c) Make public education and outreach a permanent part of the CPS conservation strategy.

Develop and present a consistent conservation message, frequently explaining the need and opportunities to reduce energy use through Energy Star appliances, weatherization, radiant barriers, improved insulation, tankless water heaters, low energy lighting options, and similar means. Use advertising, bill inserts, and existing civic and educational organizations such as churches, schools, and neighborhood groups for outreach. Television ads and other advertising should focus on the need to conserve energy rather than being self-congratulatory.

CPS Energy is to be commended for volunteer efforts of its employees to weatherize low income homes. CPS Energy should encourage other businesses, churches and volunteer organizations to participate in this type of outreach effort.

In its annual Conservation Awards ceremony, CPS Energy should promote and reward low tech, simple conservation measures as well as high tech measures that reduce fossil fuel consumption.

d) Maintain and expand successful rebate programs for energy efficiency and renewables.

Rebate programs should be adequately funded for the whole year so that customer requests for their use can be met on a timely basis. Contingency funds should be available for large scale rebate projects that are time sensitive.

e) Coordinate energy efficiency efforts with SAWS water conservation efforts.

In many situations energy efficiency and water conservation are interrelated. When there are tradeoffs between them, CPS Energy should partner with SAWS to see that a good compromise is adopted. As an example, if cooling towers are promoted as an energy efficiency measure, the use of condensate water for landscape watering and other uses should be mandated.

f) Establish innovative funding methods for residential and commercial investments in energy efficiency.

Consider identifying energy efficiency measures that would be funded upfront by CPS Energy and paid back by monthly charges on customer bills.

g) Define energy waste in conjunction with the City of San Antonio and provide an energy-wasters hotline for citizens.

Citizens should be able to report blatant air conditioning or heating excesses and other energy abuse to CPS for follow-up similar to the SAWS' water wasters program.

h) Provide a large rebate program (\$1 million to \$2 million) to customers who purchase plug-in hybrids when they become available.

The City of San Antonio, Bexar County, and the Alamo Area Council of Governments are partners in the Plug-In Partners National Campaign which seeks to build a market for gas-optional, flexible fuel plug-in hybrid vehicles.

4. Track the effectiveness of CPS internal and CPS supported external energy conservation projects and measure for verifiable impact.

Tracking allows successful programs to continue and unsuccessful programs to be improved or discontinued. The documented achievements can be publicized and used to incubate new projects. The past use of the consulting firm KEMA, Inc. to monitor energy savings and suggest new energy saving strategies should be continued.

SAWS has used this approach to analyze its landscape rebate program which has led to modifications aimed at improving its performance.

5. Provide ratepayers with additional conservation and comparison information on monthly CPS Energy bills and give them access on line to view their consumption data.

a) Provide comparisons within the city:

San Antonio Water System (SAWS) bills currently provide neighborhood and citywide average water use, so customers can directly compare their water usage against others.^{viii} Such information improves conservation efforts. CPS bills provide monthly use comparisons only within the same account. The customer has no ability to compare energy usage against other ratepayers.

b) Provide meaningful comparisons between cities:

CPS Energy billing inserts should occasionally compare average residential rates between our city and others in Texas. CPS inserts often compare the cost of an equivalent amount of electricity in San Antonio and elsewhere. However, such comparison does nothing to promote conservation, and may actually hinder it. As the City of Austin pointed out in 2005, "The average residential electric bill is lower in Austin than in any other major city in Texas including San Antonio,

which has slightly lower rates than Austin. The upshot is that energy efficiency improvements pay off through lower electric use.”^{ix}

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c) Publicize recommended temperature settings:

CPS Energy should use monthly bills as well as TV ads and the CPS Energy website to publicize recommended temperature settings of 78 degrees F in summer and 68-70 degrees F in winter.

6. Examine the use of a time-based tiered rate structure for residential and commercial electricity as a mechanism to reduce peak energy demand.

A tiered electric usage structure encourages conservation. SAWS uses this approach locally with great success to decrease water consumption. Experience elsewhere has indicated that higher costs for high users will diminish electric demand as well.

Portland, Oregon offers a time of use option, with residential charges of 10.686¢/kWh at peak load time, 6.204¢ at mid-peak, and 3.562¢ at off-peak.^x

All Seattle, Washington residential customers are currently charged 3.76¢/kWh for the first 16kWh per day, (or 10 kWh/day, depending on season), and 7.93¢/kWh for each additional kWh per day.^{xi} The average 2007/2008 rate in Seattle is 5.63¢.^{xii} A reduced low income rate is offered.

CPS Energy charges residential customers 6.275¢/kWh, regardless of time of day or extent of usage.^{xiii}

7. Further diversify San Antonio’s energy sources to include solar, geothermal, combined heat and power and expanded wind power.

Provide leadership in a regional collaborative with Austin Energy and other partners to explore investment in a large-scale solar plant of 400 to 500 MW. The California Energy Commission has identified six plants that could produce 2400 megawatts of power using mirrors to concentrate solar power to create steam to run a turbine for power generation.^{xiv} A Mojave Desert plant is set to start generating 550 megawatts of power by 2011.

Pursue geothermal energy as a part of the CPS renewable energy mix. Texas’ numerous spent oil wells are uniquely suitable for geothermal use and San Antonio is well sited for known and potential hydrothermal and geopressure sources. Texas has a potential of 400 MW to over 2,000 MW of electric power generation.^{xv} For on site production, geothermal heat pump systems are energy efficient and environmentally clean. Their use in homes and businesses should be promoted by a rebate system similar to that being implemented for solar systems. As an example, President Bush’s ranch in Crawford uses a geothermal

heating and cooling system that consumes 25% of the electricity required by a traditional system.

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Explore the possibility of additional energy efficiency that be gained by the greater utilization of combined heat and power systems. Determine whether incentives should be used to promote this form of waste energy utilization.

Expand CPS Energy purchase of wind power from generation sites that are appropriate environmentally and expand energy productions from biomass as it becomes available.

8. Support a greatly expanded reforestation of San Antonio.

CPS Energy in conjunction with the city of San Antonio and other area cities, should engage in the planting and early maintenance of trees in city-owned areas in addition to its tree-giveaway program. CPS Energy's goal should be to plant up to 2 million trees in the San Antonio metropolitan area by 2015. CPS Energy should promote the energy saving, air cleaning/cooling benefits of trees in its advertising and examine its own policies about removing trees.

The Sacramento Municipal Utility District has planted over 400,000 trees since the inception of its tree giveaway program in 1990.^{xvi}

RECOMMENDATIONS TO THE CITY OF SAN ANTONIO

1. Make energy conservation a policy priority within city operations. This reduces operating costs while setting a good public example.

a) Establish specific energy reduction goals for each city department.

Provide economic incentives for employees and their department heads to identify and implement energy efficiency measures. Foster a conservation ethic that will lead to changes in personnel behavior such as turning off non-essential lights and electronic equipment at night. The city of Sydney, Australia has found that such an ethic can result in an up to 5% decrease in energy use.

b) Install a City Energy Manager, with staff and managerial support.

Hire a staff which will provide additional energy expertise across city departments as needed.

c) Assign to the newly created Office of Environmental Policy the authority to research and develop energy policy recommendations.

The Office of Environmental Policy should be adequately staffed with all due haste. It should have the responsibility to search for the best and most innovative energy policies and ordinances implemented by other cities and recommend those most appropriate to San Antonio.

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2. Recognize that energy efficiency measures can help the region's economy and ensure that they are not marginalized because CPS Energy is a major source of City of San Antonio revenue.

San Antonio should perform an economic study to determine the benefits of the implementing of energy efficiency measures in this community versus sending billions of dollars outside of the region to construct nuclear power plants. The jobs created and the materials purchased will have a multiplier effect that will increase the tax base of the city.

San Antonio currently receives a high percentage of its operating budget from CPS energy sales. This financial relationship could serve as a strong disincentive to promoting energy conservation.^{xvii} The City should adopt a policy that receipt of revenue from CPS Energy will not deter the vigorous implementation of energy conservation policy.

3. Support energy efficiency measures that lead to substantial reductions in energy demand by CPS Energy customers.

The City of San Antonio should be a partner with CPS Energy in establishing and achieving at least a 1.5% annual increase in energy efficiency. This would match the goal set by the Sacramento Municipal Utility District.

4. Encourage energy efficiency gains through city building codes, land use rules, zoning, and point-of-sale energy efficiency requirements. .

- a) Revise building codes to require additional energy efficiency features in new construction. Features such as programmable thermostats, timers, efficient lights and daylighting, high efficiency air conditioning, cool roofs, and passive solar features such as overhangs and double-glazed windows conserve energy and pay for themselves in reduced utility bills.
- b) Require an energy audit or a disclosure of energy bills and some level of energy efficiency measures to be in place before an existing home is sold.
- c) Provide incentives such as tax rebates for urban infill development projects that comply with LEED standards.
- d) Trees reduce air conditioning needs by shading buildings and streets. Establish rules that will increase the city's tree canopy to 35% from its current 27%. Empower and instruct the Urban Forester to coordinate the efforts of all the groups involved in tree planting citywide.

- e) Limit the ability of the homeowners associations to restrict residential efficiency and conservation measures, including solar panels.
- f) Require periodic energy audits and follow-up remediation on all major commercial buildings.

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- g) Synchronize traffic signals to the greatest extent possible with the latest software.
- h) Pass and enforce an anti-idling ordinance which would make it unlawful to idle an engine for more than 5 minutes barring extenuating circumstances.

5. Use tax rebates for energy efficiency as an incentive when recruiting new businesses to San Antonio.

The city should take energy consumption impacts into account when negotiating incentives for new business development. It needs to continually evaluate tax rebates for energy efficiency that are currently granted and determine whether they can be made more effective.

6. Enhance San Antonio's economic development through leadership in energy technology and expertise.

Energy technology is one of the growth sectors of the world economy for the foreseeable future. Cities such as Austin have already committed to providing incentives and financing for research and business development in energy technologies.

7. Increase transportation options by creating an integrated system that would link streetcars or light rail, bus, bus rapid transit, and bike and walking paths. This system will strengthen development in the core, improve air quality, increase exercise, reducing health impacts from sedentary lifestyles, and lower transportation costs.

Portland's streetcar system cost approximately \$57 million to start up in 2001, but by 2007, the system had helped produce almost \$3 billion in new development within two blocks of the line.^{xviii}

In the Dallas area alone, the State of Texas will enjoy more than \$8.1 billion in economic activity, increased tax revenue, and labor income from the region's \$4.86 billion investment in the 45 mile light rail system, DART, and its planned 48 mile extensions.

Walking and cycling improvements, according to the Victoria, BC Transport Policy Institute's "Win-Win Emission Reduction Strategies" program, "can promote walking and cycling as a means of travel, reducing reliance on fueled vehicles."

8. Promote plug-in hybrid vehicles.

As a partner in the Plug-In Partners National Campaign, the city should publicly endorse and promote plug-in hybrids, give advance orders for future fleet needs, and support a \$1 million to \$2 million rebate program from CPS Energy for customers who purchase them when available.

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9. Explore the possibility of green or eco-roofs on flat-topped buildings

Roofs topped with a light soil mix, either in raised beds or on the roofs themselves, and planted with plants appropriate to our area can save building energy and decrease the urban heat island effect.

The City of Chicago mandates eco-roofs on its downtown buildings. Some of the roofs even have honey production with sales profiting the city.

CONCLUSION:

The Sierra Club believes that it is cheaper and more environmentally friendly to conserve energy than to produce energy. Therefore the highest priority of CPS Energy and the City of San Antonio needs to be an aggressive energy efficiency and conservation program. However, if enough energy is not available through conservation then the Sierra Club recommends employing the least hazardous means of energy production in order to preserve our environment and our resources.

CPS Energy is considering nuclear energy but the Sierra Club strongly opposes this choice. Nuclear power produces radioactive wastes that remain deadly for a thousand generations. Until the nuclear waste problem is solved, CPS Energy should avoid this option.

Meanwhile the potential for solar energy is increasing dramatically. Solar energy is safe, clean and becoming increasingly cheaper. There are no dangerous by-products. This means of producing energy is on the cutting edge of science and will be ultimately less costly than nuclear energy because it is renewable.

The City of San Antonio has a population that is beginning to understand the serious nature of global warming, thanks in part, to Al Gore and environmental organizations like the Sierra Club. This City must give its citizens the tools necessary to make changes now for the future of this planet. There is only a small window of opportunity and San Antonio cannot wait for decisions to be made on a national or worldwide stage.

The City of San Antonio is encouraged to support clean energy and conservation. Such measures, if correctly implemented, will promote business endeavors and provide clean air for the city's citizens. By adopting all, or at least most of these measures, San Antonio will become a positive example to the rest of the nation and to the world.

ⁱ Sierra Club National 2006 National Energy Policy,

<http://www.sierraclub.org/policy/conservation/energy.pdf>

ⁱⁱ CERES investment firm, <http://www.ceres.org/pub/publication.php?pid=232>

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ⁱⁱⁱ Austin Climate Plan Talking Points

^{iv} CPS Energy press release, June 25, 2007

^v CPS Energy website:

http://www.cpsenergy.com/content_listInternet.asp?sect_id=2596&elmt_id=12

^{vi} Sacramento Municipal Utility District website,

http://www.smud.org/news/releases/07archive/05_17energyefficiencygoals.pdf

^{vii} SAWS website, http://www.saws.org/latest_news/NewsDrill.cfm?news_id=436

^{viii} SAWS residential water bill, June, 2007

^{ix} City of Austin website: <http://www.ci.austin.tx.us/doorstep/2005/downloads/acnfeb05.pdf>

^x Portland General Electric website:

http://www.portlandgeneral.com/home/products/power_options/time_of_use/pricing.asp

^{xi} Seattle Light website: <http://www.seattle.gov/light/accounts/rates/docs/2007rsc.pdf>

^{xii} Seattle Light website: <http://www.seattle.gov/light/aboutus/customerguide/>

^{xiii} CPS Energy residential bill, June, 2007

^{xiv} San Jose Mercury News website:

http://www.mercurynews.com/breakingnews/ci_6996484?nclick_check=1

^{xv} Center for Energy and Economic Diversification of the University of Texas of the Permian Basin, <http://www.geo-energy.org/information/developing/Texas/Texas.asp>

^{xvi} Sacramento Municipal Utility District website: <http://smud.org/residential/trees/>

^{xvii} U.S. Dep't of Energy: http://www.eere.energy.gov/news/news_detail.cfm/news_id=11122

^{xviii} Austin Chronicle, July 20, 2007:

<http://www.austinchronicle.com/gryrobase/Issue/story?oid=505120>