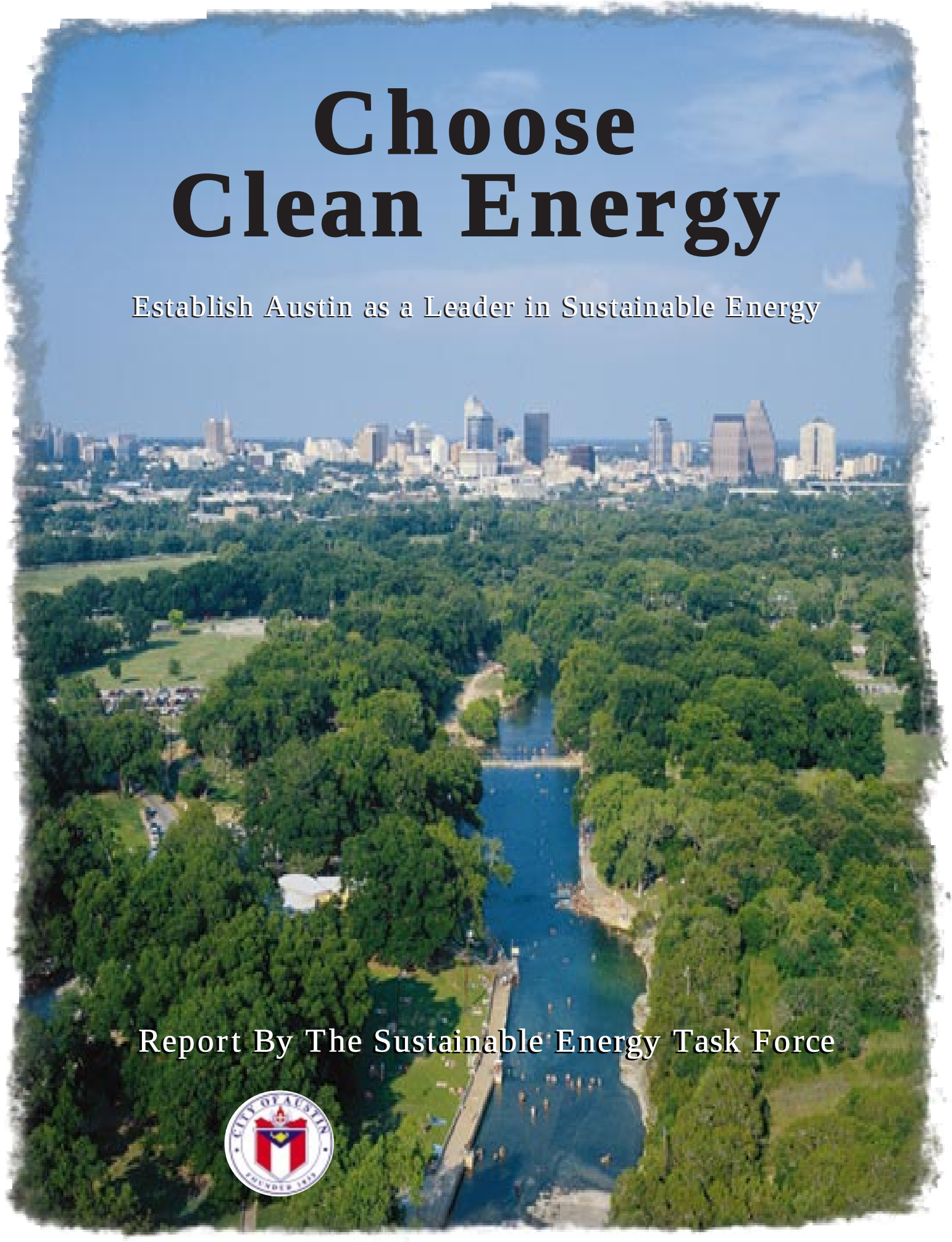
Choose Clean Energy

Establish Austin as a Leader in Sustainable Energy



Report By The Sustainable Energy Task Force

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Establish Austin as a Leader in Sustainable Energy

". . . Ensure that Austin is a Sustainable City."

— Austin Energy's Vision Statement

Report By The Sustainable Energy Task Force

Sustainable Energy Task Force

Purpose: To develop a plan to meet Austin's sustainable energy goals while maintaining or enhancing the City's future financial condition.

Task Force Members:

Roger Duncan—Convener; Director, City of Austin Planning, Environmental and Conservation Services Department (PECSD); Sustainable Communities Officer

Mike Sloan—Chairman; President, Virtus Energy Research Associates; Chairman, Texas Solar Energy Society

Oscar Backus—Manager, Technical Support Services, Austin Energy

Gaines Bagby—Tenant Advisory Services, CB Richard Ellis; Real Estate Council of Austin

Larry Barrett—Consultant, Metzler & Associates

Steve Bartley—Vice President, Finance & Business Services, Austin Energy

George Blue—Energy Coordinator, Austin Independent School District

Laurence Doxsey—Planner, Sustainable Communities Initiative

Beth Garza—Manager, System Planning, Austin Energy

John Hoffner—Director, Advanced Technologies, Planergy, Inc.; President, Texas Renewable Energy Industries Association

Bob King-—Vice President, Resource Management International, Inc.

Leslie Libby—Manager, Alternative Energy Program, Austin Energy

Jim Marston—Director, Environmental Defense Fund

Adan Martinez—Resource Management Commission

Scott McCollough—Attorney at Law

Michael Osborne—Texas Energy Coordinating Council; President, Texas Solar Energy Industries Association

Jane Pulaski—Manager, State Energy Conservation Office

Karl Rabago—Vice President, New Energy Markets, Planergy, Inc.

Hasan Rammaha—Manager, Energy Conservation Forecasting & Evaluation, PECSD

Andy Ramirez—Vice President, Power Production, Austin Energy

Bob Russell—Editor, CoA Infrastructure Support Services, Community Information Division

Doug Seiter—Consultant, What's Working

Tom "Smitty" Smith—Executive Director, Public Citizen Texas

Jim Turner—President, Ventana Energy Services, Inc.

Paul Williams—Resource Management Commission

Fred Yebra—Manager, Austin Energy Services, PECSD

Mark Zion—Executive Director, Texas Public Power Association

Questions or comments can be directed to:
Laurence Doxsey—phone: 512-499-3504—Email: doxsey_L@earth.ci.austin.tx.us

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EXECUTIVE SUMMARY

Major changes in the electric utility industry appear certain. These changes suggest serious, potentially dramatic consequences for the City's historical funding mechanisms and its ability to manage accumulated debt. Despite considerable uncertainty associated with looming utility restructuring, Austin can benefit from early action. Acting decisively prior to the advent of the competitive utility era may afford significant financial benefits for the present and future citizens of our community.

Given this context, the City's leaders face a challenging dilemma—to meet sustainability goals while maintaining or enhancing the City's future financial condition. Sustainability is central to Austin's vision of being the most livable community in the country. Yet this goal must be balanced against the economic realities currently facing the City and Austin Energy (formerly the Electric Utility Department).

Clean energy from renewable energy resources offers Austin a special opportunity to build a thriving enterprise that will return economic as well as environmental benefits long into the future. "Green Power" can become an important tool in near-term efforts to enhance the competitiveness of the electric utility. Green Power is a sustainable business endeavor that is a natural complement to investments in energy efficiency services and offers a non-polluting approach to the City's commitment to reducing debt on its conventional fossil fuel and nuclear power resources.

Green Power is viable today. Action should be taken immediately. Empowering customers to choose clean energy by establishing and promoting the Green Power option will diversify Austin Energy's portfolio of services, give customers greater choice, and contribute significantly to the Utility's vision to "ensure that Austin is a sustainable city."

For the transformation of the utility to commence, the City must first acknowledge that its current generation mix is non-sustainable. Then the local consumers should be educated to differentiate between sustainable and non-sustainable energy services. At that point, persistent efforts to steer Austin ratepayers into Green Power will result in tangible steps down the pathway to sustainability.

It is recommended that the Austin City Council pursue the following steps to begin the transition to sustainable energy for the long-term benefit of our community, our state, and our nation.

I. RECOMMENDATIONS

1. Adopt a Policy of Energy Sustainability

The Austin City Council should clearly articulate Austin's preference for Green Power, or "Clean Energy," over conventional energy and decree that it is the official policy of the City to transition the electric utility to sustainability while maintaining or enhancing the City's future financial condition.

2. Vigorously Seek Public Input

The transition to Green Power must take place within an educated community, challenged to assist with the vision of a sustainable utility and to provide market data needed to initiate customer-responsive electric utility services.

3. Enhance Sustainability Oversight

The City's Electric Utility Commission and the Resource Management Commission should create a permanent Joint Subcommittee on Sustainable Energy that will work with the City's Sustainability Officer and Austin Energy to establish and monitor, on an ongoing basis, sustainability goals and the actions required for compliance with these goals.

4. Ensure High-Level Executive Oversight in Austin Energy and Commit to Sufficient Staff Support to Work Effectively on Green Power.

5. Develop a "Green Power" Business

Significantly expand Austin Energy's business presence in renewable energy (Green Power) to demonstrate its commitment to sustainability and customer choice. A competitively-priced, voluntary "green power rate," based on low-cost renewable energy resources, should be offered and should be the default service for new utility customers, unless they specify a different choice.

6. Acquire New Renewable Energy Supplies

Issue a 100 MW Request for Proposals for new renewable energy resources, structured so that Austin incurs no new debt (purchased power only).

7. Craft a Business Plan to Maximize Success

The Green Power Business Plan should consider issues such as strategic partnerships, business structures, range of services offered, conventional power generation divestment, and capitalization. This plan should also draw on the experiences of the utility as it accomplishes 2 and 5 above.

II. INTRODUCTION

Sustaining the Vision of a Livable Community

Austin is a special community renowned for its quality of life. People choose to live in Austin because of the local environment—the natural beauty of the Hill Country, the Highland Lakes, and the special character of Barton Springs and other natural resources. These things give Austin its endearing character. Citizens recognize and embrace the City's stated goal of being "the most livable community in the country."

City of Austin Vision Statement:

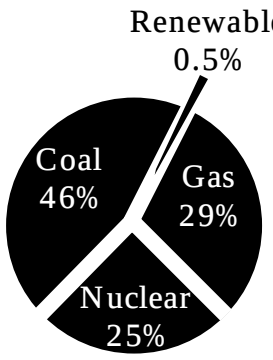
We want to be the most livable community in the country.

Austin Energy Vision Statement:

The citizen-owners of the Austin Electric Utility view us as a competitive, full-service provider of comfort, convenience, safety products and services, and the cornerstone of all of Austin's utilities. We add outstanding value to our community and ensure that Austin is a sustainable city.

Energy use affects both livability and sustainability. Austin's electric supply system is 99.5% non-sustainable, causes air pollution, and is the region's major source of greenhouse gases. When the impact of the transportation system is combined with electric operations, we see already some deterioration of Austin's environmental quality. The city is rapidly approaching non-attainment in the area of ground-level ozone, for example. When we see that our lifestyle results in per capita carbon emissions that are roughly twenty times higher than those in developing countries such as India and Indonesia, the issue of international social justice arises. We don't wish to deprive those in undeveloped countries of the opportunity to work for a better life.

Austin Energy's Fuel Mix

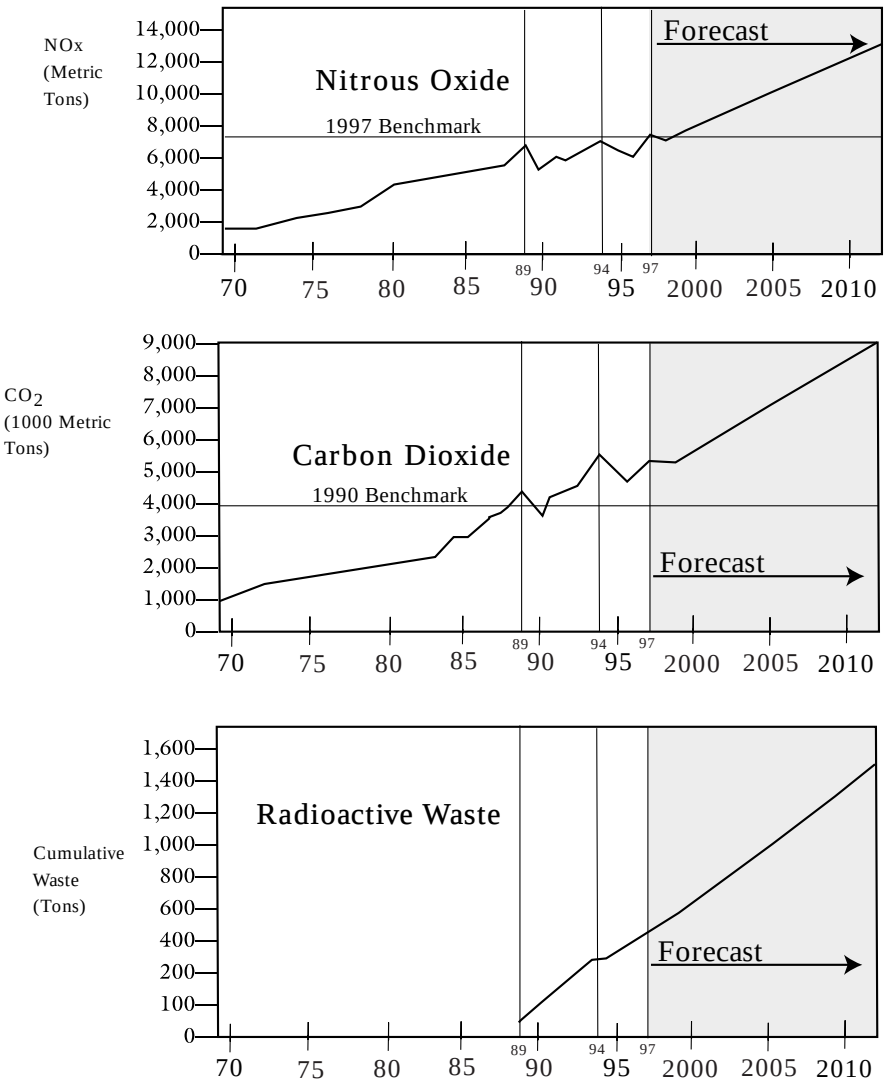


Currently, 99.5% of Austin's electricity comes from non-sustainable sources.

The stakes for action on climate change have been raised by the recent development of the *Kyoto Protocol*. This international treaty, the product of deliberation by 160 nations, makes certain the world's commitment to deal with this international issue. Specifics of the tentative agreement call for the U.S. to reduce its emissions of greenhouse gases to seven percent below 1990 levels during the period of 2008-2012. This commitment, which suggests a 30 percent emissions reduction from the path America is currently on, portends significant changes in the way Americans produce and / or consume energy. Also implied are potentially negative economic repercussions for those who continue along the path of increasing carbon emissions.

Thanks to its leadership role at the cutting edge of public policy on Climate Change, Austin is better prepared than most cities to deal with the ramifications of greenhouse gas reduction. Austin has a long history of commitment to the environment and now to the matter of long–term sustainability.

Historical and Future Emissions from Austin's Electric Operations



NITROUS OXIDE

Nitrous Oxide is a precursor gas to the formation of ground-level ozone (commonly known as smog). NOx has contributed to Austin's ambient ozone level, which is approaching non-attainment levels.

CARBON DIOXIDE

This forecast suggests that by 2010, Austin Energy's carbon dioxide emissions will be 130% higher than the 1990 benchmark level. The City of Austin's Carbon Dioxide Reduction Strategy recognizes that non-polluting renewable energy resources need to be adopted aggressively to stabilize AE's carbon emissions and reduce our community's contribution to global warming.

RADIOACTIVE WASTES

The South Texas Nuclear Project, which began commercial operation in 1989, displaces carbon-emitting fuels but produces dangerous nuclear wastes. These wastes are accumulating on-site, but will eventually need to be disposed of at a permanent waste disposal site, such as the one being considered at Sierra Blanca, Texas.

Emissions stemming from the generation of electricity from non-sustainable resources have grown along with Austin's population. The projections in these graphs assume that all future electric growth is met with natural gas, the cleanest-burning fossil fuel. Yet even under this scenario, Austin's emissions will rise non-sustainably. Note that STNP came on–line in 1989, thereby reducing NOx & CO_2 emissions, but increasing nuclear waste.

This report sets forth a plan for how Austin can transition away from its non-sustainable energy supply system toward a cleaner, more sustainable future. Ultimately, this transition must be made if the City is to sustain its vision of being the most livable community in America.

Creating a Sustainable Utility

Sustainability was defined by the United Nations Brundtland Commission in 1987 as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." A "Sustainable Utility" would move away from irreplaceable and polluting fuel sources to renewable fuel sources or other methods of generating power that can be continued from generation to generation without irreversibly polluting the environment or finally depleting the supply of power generating resources. (See Sustainable Communities Initiative, City of Austin, for more elaboration.) By definition then, sustainability requires consideration of multi-generational time scales.

Accordingly, for Austin's energy supply to become sustainable, the City must begin taking significant steps toward developing Renewable Energy, or "Green" Energy.

Based on its early leadership in renewable demonstrations, its long term commitment to end-use efficiency, and in environmental and green building initiatives, Austin's revamping of the electric utility is not only timely and necessary, it reflects the depth of commitment and sensitivity this community has constantly demonstrated.

Additionally, a Green Power-based utility bolsters a competitive position in a restructured utility market.

AUSTIN'S COMMITMENT TO SUSTAINABILITY

Different Sectors: Different Levels of Commitment

	Transportation	Conservation & Efficiency	Renewable Electricity
Net Annual Investment	$130,000,000	$20,000,000	$ 0
Carbon Dioxide Reduction Strategy (contribution toward goal)	32%	21%	41%

*requires that 97% of all new electric generation additions be from renewable sources

sources: based on PECS, EUD, & Cap Metro data

Renewable energy provides the greatest opportunity for CO_2 reduction in Austin (41% of the total potential). In recent years however, Austin has made virtually no investment in renewable energy; whereas, energy efficiency ($20 million a year) and Capital Metro ($130 million yearly) have seen major net investments.

III. BACKGROUND

A Changing Utility Environment

Electric industry reform is sweeping the nation. Restructuring has already been approved in California, Rhode Island, and Massachusetts, with open competition starting in 1998. Within the coming few years, action by the Texas Legislature and the U.S. Congress will likely extend electric industry reform to Austin.

Its Importance to Austin

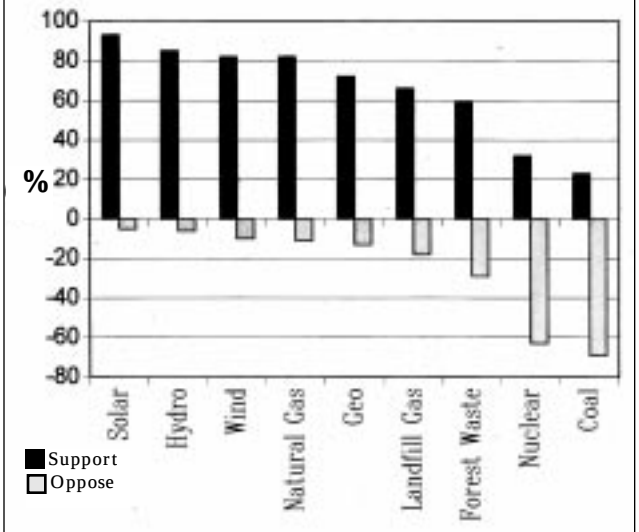
Austin Energy is a municipally-owned electric utility. The looming prospect of outside competitors threatens Austin Electric's current level of profits, which in turn will influence three important local issues:

1. Austin's operating revenue—"Profits" from the electric utility historically have led to a transfer of about $55 million to the City's General Fund every year (between $54 and $73 million annually since 1985), accounting for about 10 to 15% of the City's annual operating revenue.

2. Ability to retire utility debt—Austin Energy's revenue is the current financing mechanism to retire the utility's debt ($1.7 billion). Each year debt service is approximately $180 million. Loss of revenue owing to competition may jeopardize the City's ability to pay this debt. Wall Street has recognized this scenario, leading to the City's Utility Competitiveness Resolution to reduce debt aggressively.

3. Accountability to the Community—A locally controlled utility is the best vehicle to ensure attentiveness to community values and to promote the broader objectives of the community, such as environmental quality and local economic development. Competition might threaten Austin's ownership of its electric utility, thereby diminishing accountability to the local community.

Resource Preferences in Sacramento



Most customers prefer clean energy resources such as wind and solar power. Most customers oppose coal and nuclear power, which are the two most common electric generating resources in the United States.

What Electric Customers Want

Sacramento, California is similar to Austin in many ways: a capital city with half-a- million residents, an environmental attitude, and a municipally-owned electric utility. During the 1980s, a grassroots effort influenced the City of Sacramento to scrutinize its electric company and make the financially difficult decision to stop taking energy from its existing nuclear plant. Instead, the City focused on power sources that citizens preferred—renewable sources, efficiency improvements, and clean natural gas as generating fuel.

Now, half of the Sacramento Municipal Utility District's (SMUD) supply comes from new renewable and large

hydropower, yet its electric rates are lower than neighboring utilities' rates. Furthermore, by following their customers' desires, SMUD has developed innovative green service products that can be marketed throughout California.

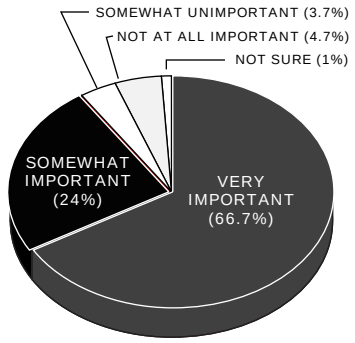
Closer to home, several utilities in Texas have used the Deliberative Polling™process to ascertain what their customers want. Deliberative Polling™ gauges the opinion of informed customers—those who have seriously pondered the issues during an intense, controlled process--rather than using a snapshot of random opinion.

Polling results from the three operating companies of Central and South West Services Corporation (CSW), El Paso Electric Company, Houston Lighting & Power, Entergy Texas, and Southwestern Public Service Company represent a diverse cross section of Texans, yet these polls produce consistent trends.

The basic results in all seven cases are that electric utility customers:

- prefer end-use efficiency and renewable sources over conventional power,
- want a mix of resources, and want the mix to include renewables,
- overwhelmingly prefer long-term price stability and predictability,
- are seriously concerned about global warming and air pollution, and
- are willing to pay more to receive clean electricity from renewables.

Renewable are Important to the People of Austin



The PV Friendly Pricing Report found that 91% of Austinites surveyed thought it was important for the electric utility to continue development of renewable energy resources.

Collectively, these informed customer preferences provide a consistent and powerful public endorsement for clean energy generated from renewable resources. Specific information on what Austin customers want from their electric utility is limited, although pro-environment sentiment is suspected to be at least as strong among Austin customers as that expressed by customers elsewhere in Texas. Among the limited polling information available for Austin is the *PV Friendly Pricing Report*. This poll found that local support for renewables is extremely high, with 91% of the Austinites surveyed responding that it was important for the electric utility to continue development of renewable energy resources.

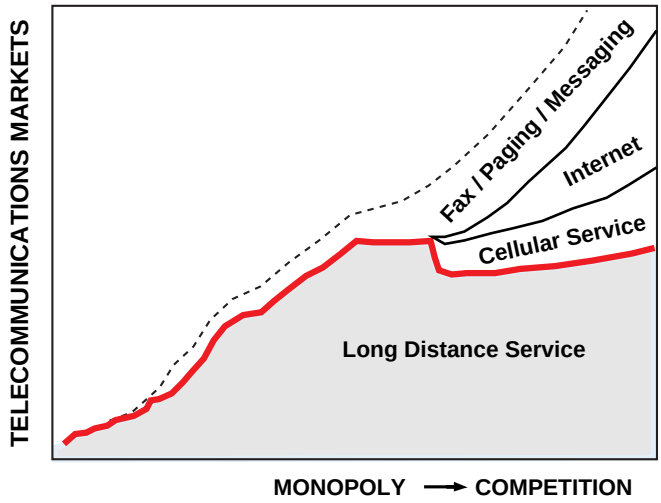
Probable Market Segmentation Following Restructuring

Experience elsewhere suggests that the electric industry is likely to fragment into at least the following four markets:

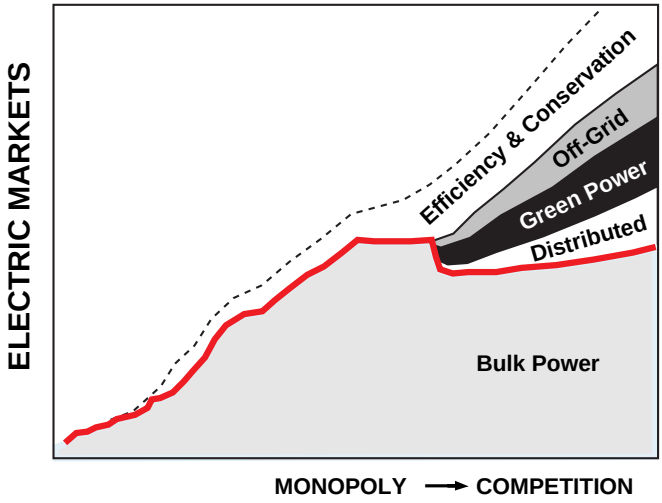
Bulk Electricity—Throughout the monopoly era, utilities have attempted to produce electricity at the lowest cost possible (although these efforts have not been altogether successful). In Texas, generation fuels are almost exclusively non-sustainable: coal 48%, natural gas 40%, nuclear 11%. On the other hand, hydroelectricity and other sustainable renewable resources comprise only 0.7% of Texas' fuel mix. The wholesale market for bulk electricity is typically undifferentiated by source, and the electricity is treated as a commodity, essentially a generic product. At least initially, it is anticipated that low-cost "generic" electricity will be the dominant form of electricity traded in the restructured utility environment. This market segment will be the most price-competitive sector and may have the greatest cost impacts stemming from future environmental requirements.

Competition Leads to Increased Market Segmentation

TELECOMMUNICATIONS MARKETS



ELECTRIC MARKETS



The recently deregulated telecommunications industry offers a case study relevant to the $230 billion-per-year U. S. electric industry. Since the AT&T monopoly was dismantled in 1984, the total telecommunications market has expanded considerably, offering new competitors such as MCI and Sprint in the long distance service market and a proliferation of telecommunications technologies—faxes, pagers, cellular phones, and internet services. The industry is marked by increased customer choice, market segmentation, and overall market growth.

(Note: These figures are illustrative and different markets are not shown to scale.)

Retail gasoline sales prove that premium products can succeed in energy commodity markets. For instance, heavily marketed premium grade (high octane) gasoline priced at a 15–20% premium relative to regular grade fuel accounts for 20% of gasoline sales, even though only 2% of the vehicles on the road require high octane fuel for performance purposes. Organic produce and recycled materials verify that consumers are willing to pay a premium for environmental reasons.

Green Power—The pollution inherent in "generic electricity," coupled with the public's interest in a clean environment, makes product differentiation on the basis of pollution obvious. Electricity generated from non-polluting renewable energy sources is commonly labeled Green Power. Based on initial experience in competitive markets and market research, some experts believe that demand for Green Power will be significant: 15% of the residential market can be captured with a 10% premium on Green Power, and 4 to 5% of the commercial market can be captured with the 10% price premium.

Distributed Generation—Emerging modular electric technologies such as fuel cells, micro-turbines, and photovoltaic systems offer an opportunity for widely distributed power systems and empower practically every customer with the prospect of generating their own power. Such potential technologies could develop rapidly. Importantly, these technologies, if situated on the customer's side of the meter, compete against retail electric rates (5-13 ¢/kWh) rather than wholesale rates (1.5 to 3 ¢/kWh).

Off-Grid Services —While it can be considered a subset of Distributed Generation, off-grid applications typically have a different threshold for economic viability compared to grid connected applications. Off-grid installations compete against the cost of extending the grid, nominally $30,000 per mile, in addition to the retail cost of energy from the grid. Innovative electric services such as electric transportation technology and building design may also be included in this category.

If Austin can establish itself successfully as a leader in sustainability, it may well develop into a manufacturing center for emerging clean energy technologies. This would be a natural complement to Austin's existing high-tech industry base. In particular, with Austin's current expertise in semiconductor design, fabrication, and end-use products, the City may wish to attract the photovoltaic industry to the area to spawn growth in solar cell design and manufacturing.

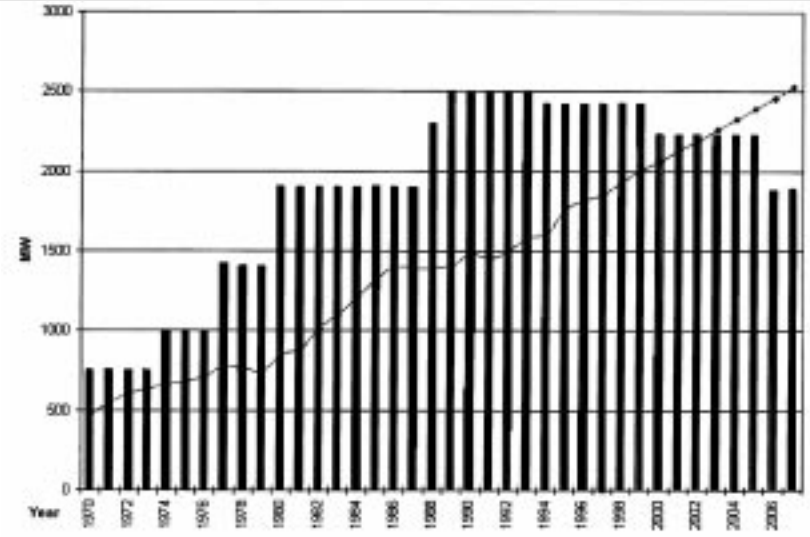
How is Austin Positioned to Compete in these Future Markets?

Local experts expect utility competition to arrive in Texas around the year 2002. Continued load growth of about 4% per year will make Austin's peak load 2,200 MW and annual consumption 10.5 TWh by 2002. With the retirement of the Holly units, Austin's generating capacity will drop to 1884 MW. Future competitors are expected to capture some segment of Austin's load, perhaps as much as 20 to 30%. It is obviously desirable to take steps now to lessen the impact of lost market share.

Bulk Electricity – Austin currently has only the ninth lowest average rate of the 12 major electric utilities in Texas, and potential future non-utility competitors such as Enron and Destec are not reflected in this ranking. Currently, Austin is aggressively preparing its utility for this deregulated market by dedicating all excess revenue to debt reduction, which should lead to lower rates in the future.

Green Power – Five years ago, Austin was the indisputable Texas leader in renewable energy. More recently, Austin's status has been slipping relative to more aggressive utilities such as CSW (in October 1997, CSW delivered the first "Green kWhs" to customers in the state of Texas and in 1998 announced a 75 MW rate–based wind power plant). Yet Austin still ranks among the state's leaders and continues to have superior "brand name" appeal in green markets. Because of the popularity of clean energy, Austin Energy's efforts in Green Power should improve the utility's overall image and help retain customers in the bulk electricity market.

Austin Energy's Capacity & Peak Electric Demand



Future electric growth in Austin likely will be met with generating assets not owned by Austin Energy.

Distributed Generation – Austin Energy and the new Austin Energy Services group will market appropriate distributed generation technologies and services in this future market area.

Off-Grid Services – Providing design services and power systems for applications that are not connected to existing power lines (i.e. "off-grid" systems) appears to be an excellent fit for Austin, with synergy between the existing Solar Explorer and Green Building Programs. Additional efforts could be launched with electric vehicles and other non-conventional energy service programs. Austin can compete in the off-grid services market now, as deregulation is not an issue for this largely unserved market.

Evaluating Future Electric Options Today

The methods historically used to select new resources for electric utilities have focused on minimizing future direct costs. However, as the competitive market emerges, new resources should be acquired based on their relative market appeal. Some higher cost resources may be acquired if their relative market appeal justifies higher prices in the marketplace.

As the competitive era draws nearer, acquisition of resources by Austin Energy is currently based 100% on minimizing estimated direct costs (capital, fuel, and maintenance costs). As the "least-cost" South Texas Nuclear Project attests, there is much uncertainty in guessing how much a new generating resource ultimately will cost. Moreover, items such as environment, public health, future regulations, and other "non price" items are omitted from the evaluation process. Once a resource option is acquired, all financial risks such as fuel price increases or compliance with new air quality regulations are passed on to the customer.

Austin's desire to transition to sustainability requires that we adopt a new evaluation process. Decision-making for the competitive future should be based on those items expected to be captured in the future local market: all future direct costs, customer sentiment, and the broader goals of the local community.

Even today, if these factors are taken into account fully, renewables emerge as a clear-cut winner.

IV. RECOMMENDATIONS

Transitioning to clean energy is simply a matter of choice. Many structures can effectively facilitate Austin's transition to sustainable energy; yet, in all cases, the empowered decision-makers must demonstrate the resolve to choose clean energy over conventional energy.

The recommendations within this report are consistent with standing resolutions of the Austin City Council, and the Task Force has made every effort to follow its initial directives in producing this report.

Directives to the Sustainable Energy Task Force

- Develop a plan to transition the utility to sustainable resources.
- Do not undermine the City's ability to pay off debt (i.e. all excess utility revenue goes to debt reduction).
- No new net investment for renewable energy (i.e. self-funding programs only).

These guidelines preclude pursuit of otherwise viable options and have shaped the course of action articulated in this report. A more complete range of methods is outlined below.

Options for Transitioning to Sustainable Utility Service

1. Alter utility resource mix over time; add sustainable purchased power resources; phase out non-sustainable resources.
2. Introduce a business entity specializing in sustainable energy into the local market.
3. Develop new sustainable energy products and then let customers choose.

The quickest route to sustainability is aggressive pursuit of option 1. Rapid additions of renewable energy resources could be combined with divestiture from non-sustainable resources, starting with the least sustainable assets (Fayette Coal Project). Flexible, low cost gas-fired generation would remain in the resource mix to ensure system reliability until a robust portfolio of sustainable energy resources is achieved. This option may be in direct conflict with current Council resolution; therefore, consideration of this option requires that public input be carefully examined.

Under option 2, a new municipal business entity would be formed that could focus exclusively on successfully acquiring and marketing sustainable energy resources. While this business structure would almost certainly lead to aggressive implementation of sustainable resources in Austin, it would require start-up investment. As funding is not available, this option is not currently recommended.

Alternatively, Austin could partner with a well-capitalized, aggressive private company to develop the local Green Power market and split profits with the City. This latter alternative may prove viable but would require careful consideration prior to action. Because of the current limitations imposed by Council resolutions, the efforts of the SETF have focused on constructing a capable green pricing strategy (option 1).

This strategy essentially defers decision-making regarding resource mix to individual customers. The drawback is that costs of this desirable program are borne entirely by the voluntary participants in green pricing; whereas, the benefits of clean, sustainable energy (i.e. cleaner air and water, diversity of electric supply, local economic benefits) accrue to all citizens of Austin. In contrast, the cost of conventional projects is borne by all customers, thus minimizing their cost impact and making them seemingly more cost effective to consumers than power offered through the green pricing program.

Fortunately, because of the deep concern for environmental issues among local residents, green pricing has an excellent opportunity to succeed in Austin. Of course, it is imperative that the utility develop well-conceived, low cost renewable energy services and vigorously market these to its customers. The City of Austin could play a leadership role by opting for Green Power for its own facilities.

Austin should choose clean energy because it is best for our environment and for our long-term economic vitality. The following is a course of action to direct Austin along the sustainable energy path. Each step is individually described below.

STEPS TO SUCCESS IN SUSTAINABLE ENERGY: SEVEN RECOMMENDATIONS

1. Adopt a Policy of Energy Sustainability

Choosing clean energy as a means of achieving sustainability will require action by the Mayor, Council Members, City Manager, department executives and staff, citizen commissioners, and individual electric consumers. The City must articulate clearly a commitment to sustainability and craft a strategic plan to make tangible progress in this arena without jeopardizing the City's future financial position. Leadership by the City Council will set the tone for decision-makers throughout the City, including those individual consumers asked to shoulder the financial costs of Austin Energy's green pricing program for the good of the entire community.

2. Vigorously Seek Public Input

A public education and public input effort should be undertaken to identify what customers want from their utility, refine the City's vision of sustainability, and produce useful marketing data. The will of the people, as expressed through a suitable information-gathering process (Deliberative Poll™ or Town Meeting on Sustainable Energy Issues coupled with extensive market research), will determine how aggressively Austin should act, and it will undergird the authority of actions taken by the current City Council regarding sustainable energy.

3. Enhance Sustainability Oversight

Energy production and consumption are among the factors which intrinsically define the sustainability of any community. Accordingly, the City should bolster its capacity to articulate and execute a strategy for cost-effectively managing electric operations to ensure that Austin is a sustainable city. The SETF recommends that the Electric Utility Commission and the Resource Management Commission form a Joint Subcommittee on Sustainable Energy and that this committee work with the City's Sustainability Officer and Austin Energy to establish and monitor, on an ongoing basis, sustainability goals and the actions required for compliance with these goals.

4. Ensure High-Level Executive Oversight in Austin Energy for Sustainability

The success of Austin Energy's clean energy efforts hinges on the commitment of its leadership. To ensure that the green pricing program and other utility sustainability efforts receive the focus and attention needed to thrive in a competitive market place, Austin Energy should ensure high level executive oversight and commit to sufficient staff support to work effectively on Sustainable Power. Austin Energy's progress in meeting sustainability goals should be reported as a standard feature of the Utility's monthly Management Report.

5. Develop a "Green Power" Service Option

The centerpiece of the SETF sustainable energy strategy is for Austin Energy to establish a low-cost Green Power rate and empower individual customers to chose clean energy on a voluntary basis. Because of the abundant long-term environmental and economic benefits which will accrue to all Austinites, it is appropriate for Austin Energy aggressively to promote the Green Power Rate as a premium service to its customers.

Implementing a successful Green Power Program in Austin produces a true win-win-win situation for all parties involved:

Utility Customers get electric choices which they don't now have.

Electric Utility diversifies its revenue streams without undermining its ability to pay off debt.

Leaders and Citizens of Austin are credited with innovation by demonstrating environmental leadership to the rest of the nation.

Environment and Livability of Austin—A cleaner environment leading to enhanced livability is clearly a winner.

The Green Power Program will offer tangible features that capture the true benefits of customers' purchasing decisions and provide protection from future costs associated with non-sustainable power. Examples include providing amnesty to Green Power enrollees from possible carbon taxes, future environmental regulation compliance costs, nuclear plant decommissioning costs, and radioactive waste disposal costs. Inclusion of benefits that are intrinsically "Austin," for instance dedicating some additional portion of profit to local parks and libraries, will make it difficult for future competitors to pry away green customers from the City. Consistent with Austin's commitment to meet the basic needs of its citizens, the Lifeline Rate on the first 500 kWh of monthly consumption would still apply for customers signed up on the Green Rate.

The new Green Power initiative should be integrated fully with other energy service functions of the utility, such as Distributed Generation, Public Relations, Marketing, and Sustainability efforts. "Clean Energy," "Sustainability," and "Customer Choice" should become central themes in future electric utility marketing efforts, which should communicate convincingly the advantages of premium Green Power service. Austin Energy should secure expert assistance in developing and marketing its Green Power Program.

6. Acquire New Renewable Energy Supplies

To develop a thorough understanding of renewable energy costs and availability, Austin Energy should issue a 100MW request for proposals for new renewable energy supplies. This RFP should consider a wide range of technologies (wind, biogas, PV, etc.), installation sizes (1 to 100MW), and in-service dates (immediate to five years). From the spectrum of responses, Austin Energy can build a portfolio of renewable energy contracts which satisfies its needs. Austin Energy should secure expert assistance in developing consistent evaluation criteria to be used in this RFP and all future resource solicitations.

The goal of all future resource solicitations for purchasing power, whether limited to renewable, fossil resources, or all sources, should be to provide utility customers with the products and services that they want. The resource acquisition process should strive to maintain flexibility while shifting risks from Austin customers to future suppliers of power.

7. Craft a Business Plan to Maximize Success

A Green Power Business Plan should be developed to maximize the success of Austin's sustainable energy initiative. While Austin Energy's initial Green Power Program may prove effective, it almost certainly will not be optimal to weather the coming storm of competition. Therefore the City should, with the assistance of an experienced consultant, examine a wide range of business planning issues, such as alternative business structures, strategic partnerships, range of services offered, and capitalization. The goal of this business plan should be to create a robust sustainable energy enterprise capable of delivering on Austin's sustainability goals and producing sustained revenue for the City.

Features of Proposed Austin Energy Electric Service Options

Conventional Power
REGULAR

- Low cost now
- Adjustable rate for fuel
- Future environmental compliance costs

Green Power
PREMIUM

- Sustainable
- No fuel cost
- Exemption from future pollution taxes
- Possible clean, non-polluting
- Local economic development
- Dedicated revenue for parks & libraries
- Contribution to debt retirement

Lifeline Rate applies to both Green and Conventional Customers.

Premium Green Power rate will be aggressively promoted as the preferred service option for new customers.

Recommendations for Future Solicitations for Electric Generation Resources

1. Consistent evaluation criteria will be used, with a focus on evaluating offers based upon anticipated future market conditions.

2. Require option in which bidder contractually assumes financial risks associated with compliance with any future regulations (i.e., clean air, carbon limits, etc.).

3. Require option in which bidder absorbs all fuel price risks.

4. Require Bidder to estimate emissions produced during the lifetime of the contract.

5. Require bidder to provide annual contract buy-out options.

6. Renewables should be added into Austin Energy's conventional resource mix in a fashion consistent with customers' desire for cleaner resources and willingness to pay.

Conclusion

If Austin delays in initiating a Green Business venture, it runs a serious risk of realizing no financial return on its historical investment in clean energy. If we wait until the advent of open competition, it is more likely that national competitors with green marketing skills honed in California and elsewhere will steal away a sizable portion, if not all, of the Green Power market in Austin.

V. TIMELINE AND BUDGET RECOMMENDATIONS

What will the transition to clean energy cost? Thanks to dramatic improvements in the cost and reliability of renewable energy technologies, several options for clean power are now available that are competitive with conventional power.

While Austin citizen/customers ultimately will pay for all new expenditures for renewables through current and future electric rates, securing the initial funds to begin the City's transition to sustainable energy may require resourcefulness. Potential sources of capital to finance the City's Green Power initiatives include:

- Premium rates charged individuals volunteering for "Green Pricing" programs.
- Austin Energy's renewable energy funds on hand (capital projects only): $1,838,321.
- Unissued renewable energy capital bonds: $28,380,000.
- Redirect some portion of Austin Energy's profit.
- Form partnership with a private entity willing to absorb all financial risk.

Cost of Electric Generation for City of Austin (cents/kWh)

RESOURCE	VARIABLE	TOTAL
Nuclear (STNP)	2.5	6.6
Natural Gas (Decker, Holly)	3.8	4.7
Coal (Fayette)	1.8	2.3
Average of existing plants		4.3
New Coal		4.3
New Wind		3.6
New Biogas		3.0
New Natural Gas		3.0

Source: Public Utility Commission of Texas

As shown in data provided by the Public Utility Commission of Texas, renewable sources are more expensive than fueling and operating the City's existing coal and nuclear plants, but cost about the same as a new fossil power plant.

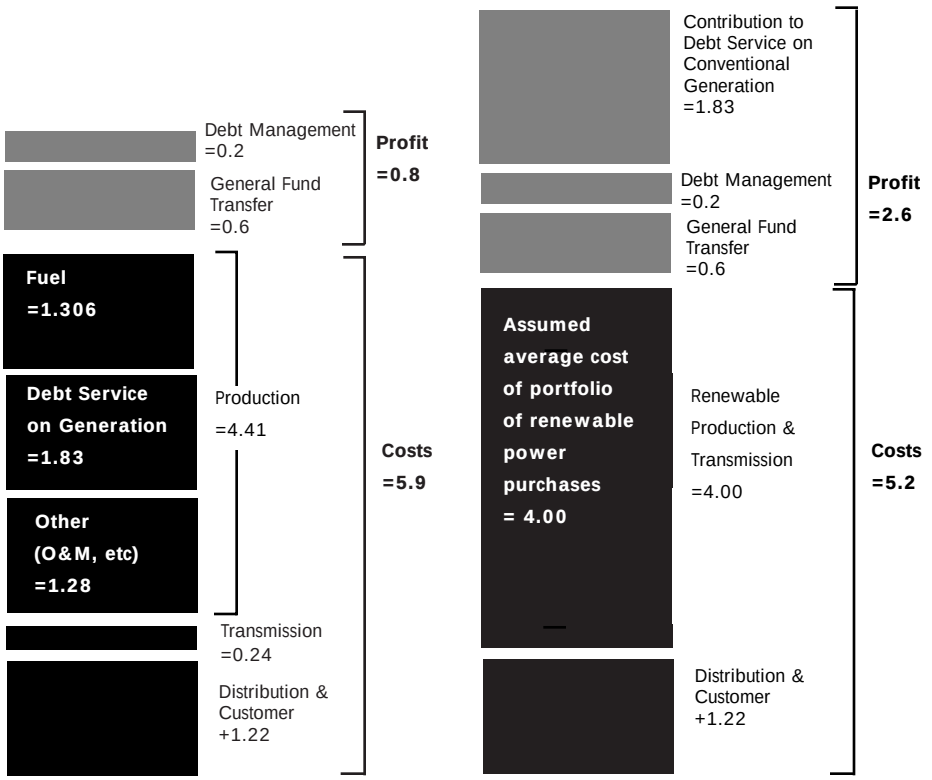
With a Green Pricing approach, a program rooted in low cost renewable resources can be implemented successfully for only a modest premium over the cost of conventional electric service and still fully contribute to debt reduction on bonds issued for the City's nuclear and fossil fuel generation. Implementing the recommendations articulated below, however, will require start-up funds from other sources.

Austin voters approved authorization of $39,000,000 of alternative energy project capital bonds in 1983. While most of this total has never been issued, $1 million is now readily available for new renewable projects, and another $800,000 is earmarked for the Solar Explorer project. These funds are restricted to capital expenditures. Therefore, initial funds for marketing and consulting tasks may need to be identified within existing Austin Energy budgets.

An aggressive move toward sustainability will require that additional sources of money be tapped. The Green Power Business Plan activity should consider a wide variety of sources of capital. A successful venture in Green Power will yield a return on investment that is much higher than the City's bond rate. Accordingly, it may be prudent to consider reallocating some portion of funds now designated for debt retirement by investing them in Green Power. If unwilling to accept these financial risks, Austin could seek a business partner willing to absorb these initial costs for a share of future profits.

Cost Structure for Proposed "Premium" Green Rate

* Based on date supplied by AEU 6/97



AE Average Rate*
= 6.7 ¢/kWh

"Premium" Green Rate*
= 7.8 ¢/kWh

This figure represents the structure for how the green rate will be developed. Actual costs for each component, as well as the overall green pricing rate, probably will differ from the values shown here.

Sustainable Energy Task Force
Recommended Budget and Timeline

Budget—if no dollar figure is listed, it's assumed to come from re-focusing existing budget.

	TASK	START	MONTHS	BUDGET
1.0	City Council Adopts a Policy of Sustainability	MAY 98	2	
2.0	Public Input & Education			$200k
2.1	Hire coordinator to assist with sustainability education	JUN 98	6	
2.2	Town Meeting on Sustainable Utility Issues	SEP 98	4	
2.3	Emissions disclosure (bill stuffer, AE web site, etc.)	JUL 98	2	
3. 0	Establish Joint Committee on Sustainable Energy	MAY 98	1	
4.0	Ensure High Level Executive Oversight for Sustainability	MAY 98	2	
4.1.	Sustainability progress in AE Monthly Mgmt Report	JUL 98		
4.2	Coordinate the new Green Power initiative with other energy service functions such as Distributed Generation, Public Relations, Marketing, and Sustainability			
4.3	Incorporate "Clean Energy," "Sustainability," and "Customer Choice" as central themes in future Austin Energy marketing efforts			
5.0	Develop a "Green Power" Service Option			
5.1.	Acquire Green kWh from BFI (Phase 1 = approx 1 MW)	FEB 98	2	
5.2	Marketing assistance contract for Green Power (Phase 1)	MAR 98	2	$35k
5.3.	Market & deliver initial Green Pricing option (Phase 1)	JUN 98	6	
5.4.	Establish Green Power as Austin Energy's default service	JUN 98	1	
5.5	Evaluate range of City "Green" opportunities (landfill, etc.)	FEB 98	6	
5.6	Dedicate first Solar Explorer PV system	JUN 98	1	
5.7	Develop residential PV option for Million Solar Roofs initiative	MAY 98		
5.8	Market residential PV option	MAY 98		
5.9	Coordinated Green Power Marketing strategy (RFP for consultant to work with City?)	MAY 98	4	$200k
5.10	Dedicate second PV system--and 3rd, 4th, etc.	Ongoing		
6.0	Acquire New Renewable Energy Supplies			
6.1	Hire consultant to assist with RFP	MAR 98	2	$35k
6.2	Issue 100 MW RFP for New Renewable Supply	MAY 98	1	
6.3	Evaluate bids; negotiate with short list	JUL 98	4	
6.4	Award renewable energy contracts	OCT 98	ongoing	
7.0	Craft a Business Plan to Maximize Success			
7.1	Issue RFP for business plan development	JUN 98	1	
7.2	Hire Contractor	JUL 98	1	$100k
7.3	Develop Business Plan for Sustainable Energy success (business structures, strategic partnership, capitalization, etc.)	AUG 98	1	
7.4	Begin execution of business plan (possible RFPs, form partnerships, etc.).			

NOTES: • Consulting services for several tasks could be consolidated into a single RFP. • Cost-effective renewable opportunities should be contracted as available.

Notes