



## Strategic Plan – Public Document

### Austin Energy's General Manager's Message



#### *Shaping the Future – Improving the Present*

Today the electric utility industry is being rocked by change, the magnitude and swiftness of which the industry has not witnessed since its birth. This change will completely redefine the electric industry over the course of the next two decades. I believe that utilities that prepare for this change will be part of a new and dynamic energy future. I also believe that those utilities that cling solely to the past, will find themselves rendered obsolete and irrelevant by this change. It is my intention for Austin Energy to be a part of the new energy future and to play an important and significant role in defining it.

This strategic plan represents Austin Energy's re-commitment to strategic thinking and planning and it signifies our commitment to the future. With it, we are preparing to meet the significant challenges facing the industry: continued deregulation pressures, energy resource availability, distributed generation technologies, and concerns about system reliability.

While these challenges are significant and the solutions complex, I believe that Austin Energy is well positioned for the future. We are financially strong; we serve a vibrant city; we have talented and dedicated employees; we have cost effective traditional generation resources; and we possess significant experience in the development of non-traditional energy resources such as conservation, renewable energy and distributed generation. These attributes will not only allow us to address the many challenges we face but I firmly believe they will also allow us to explore and pursue the many opportunities that will surface as our industry evolves.

For over one hundred years, Austin Energy has provided valuable energy services to the City of Austin and the surrounding community. While building upon that history of success, our focus on service to our city and community should not change. It is at the core of what we are and the essence of what we do. I believe that our dedication to community and public service is captured in our vision and mission statements:

## Vision

“We want Austin to be the *most livable* community in the country.”

## Mission

“To deliver clean, affordable, reliable energy and excellent customer service.”

The attached strategic plan establishes ambitious objectives that will help position Austin Energy for future success. Achieving these objectives will require dedication, cooperation and commitment. I believe that as we position ourselves to meet those objectives we must hold on to the essential principles that define our relationship with our community. I am proposing the following principles to guide us as we move into the implementation of Austin Energy’s Strategic Plan:

- A commitment to fully support and implement the energy directives embodied in the City Council resolutions of August 28 & September 25, 2003.
- A commitment to prudently explore solar and other emerging energy technologies that are in keeping with the City Council’s energy directives.
- A commitment to annually review the veracity of our planning assumptions and objectives in light of the rapidly changing utility environment.
- A commitment to support economic development that creates new opportunities to contract with existing local vendors, supports efforts to attract new businesses to Austin, and advances the development of a local clean energy industry.
- A commitment to reliable electric service and affordable rates.
- A commitment to always conduct our business with the highest ethics and in a way that exhibits the utmost respect for our customers, community, employees, and the environment.

I am also committed to encouraging community involvement in our future. Austin Energy is a national leader in progressive and innovative energy programs. This, in large measure, is due to the kind of community that is Austin. We are a community that values and protects our environment. We are also a community that possesses a considerable sustainable energy expertise. I intend to utilize that base of expertise by inviting local experts into an ongoing conversation aimed at exploring and uncovering energy solutions that are in keeping with this community’s environmental values and electric service needs.

As we pursue our future together, I believe it is important to strike a balance. As we explore and deploy non-traditional energy resources, we must maintain current energy services at levels that meet or exceed our customers’ expectations. The balance that we must achieve is to neither sacrifice our future for the sake of the present nor sacrifice the present and lose the means to achieve the future.

Juan Garza  
General Manager  
December 4, 2003

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## EXECUTIVE SUMMARY

### BACKGROUND

Austin Energy (AE) is the electric utility owned by the City of Austin. It serves a 420 square mile area that covers the City of Austin and much of the greater Austin community. Austin Energy has a total generation capacity of 2668 MW with a diverse fuel mix including nuclear, coal, natural gas, and renewables. It has renewable energy resources of approximately 100 MW and is widely respected as a leading environmental utility. Austin Energy provides service to approximately 315,000 residential and 40,000 commercial customers. Annual revenues are in excess of \$800 million. Austin Energy is led by a seasoned group of executives, officers and directors (the Leadership Team) with extensive business and utility industry experience.

The current strategic planning effort was launched in October 2002, by General Manager Juan Garza and is led by the Chief Strategy Officer John Baker, to assist Austin Energy's Leadership team in developing a new strategic plan. The current planning effort is the first comprehensive strategic plan since 1999. This strategic effort differs from previous efforts in two major ways. First, the *1999 Strategic Plan* was developed principally in response to Texas electric restructuring (deregulation) efforts at that time. The focus of this strategic plan is broader in scope, embracing far more than deregulation issues. Secondly, the *1999 Strategic Plan* was an ad hoc effort. This strategic planning effort is the beginning of a comprehensive and ongoing long-range planning process that will continually monitor industry developments and determine needed course adjustments.

### STRATEGIC PLANNING PROCESS

The strategic planning process involved three principal phases. First, was the research and analysis phase. During this phase, industry trends were examined, Austin Energy's position was analyzed and stakeholder input was obtained. Stakeholder interviews and surveys included City Council members, members of the Electric Utility and the Resource Management Commissions, community energy and environmental leaders, and almost 600 Austin Energy employees.

The second phase of the strategic planning process was a review of Austin Energy's vision, mission and values (our vision and mission are stated below). The review process was supported with extensive research involving over 80 successful companies in multiple industries. Austin Energy employee input was also obtained with over 500 employees participating.

The last phase of the strategic planning process involved a review of Austin Energy's position within its environment relative to our vision and mission statements. Austin Energy's strategies were identified and objectives were set.

The strategies and objectives combined are the essence of Austin Energy's strategic direction. The strategies are the definition of our future position and the objectives are the measures we will use to determine if we have been successful in our repositioning efforts.

## OUR VISION

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

## OUR MISSION

To deliver clean, affordable, reliable energy and excellent customer service.

## CHANGING UTILITY ENVIRONMENT

The electric utility industry is in a period of significant change. Major forces are in play that may dramatically reshape the industry over the next 20 years. Continuing efforts toward deregulation, challenges to traditional energy resources, the development of distributed generation technologies, and system reliability concerns are the major drivers of this change. Deregulation is not the threat it was four years ago but it has not entirely gone away. Each change driver presents challenges but each also holds opportunities. Utilities that ignore these forces and do not prepare for a new future will be left behind or made obsolete.

## STRATEGIES

It is clear that Austin Energy, like other utilities will need to adapt to future changes. The real challenge for Austin Energy is to move to that new future without undermining its current success. Austin Energy's strategies are designed to build upon a one hundred year tradition of providing reliable and affordable electric service to the Austin community while preparing for a new future.

Austin Energy has identified three principal strategies to position itself for future success. The first is an overarching or "umbrella" strategy that addresses **Risk Management**. Austin Energy recognizes that there is often much about the future that cannot be known with certainty. This strategy addresses Austin Energy's approach to that uncertainty. Under this strategy, Austin Energy will carefully manage its exposure when considering future courses of action. It's an approach that prepares Austin Energy for future options without prematurely investing and allows for more information to become known before major commitments are made.

**Excellent Customer Service** is our second strategy. This strategy is in line with our risk management strategy. We want to take action that positions Austin Energy for possible competition without undermining our current success. Our strategy is to build employee and customer satisfaction so that we are positioned for competition or regulation whichever occurs in the future.

The third is our **Energy Resource** strategy. Under this strategy Austin Energy will first seek renewable energy and conservation solutions to meet our customers' new energy needs before resorting to traditional fossil fuel sources. In keeping with our risk management approach, Austin Energy will not prematurely commit to unproven technologies, however, we will pursue a leading edge position that will allow Austin Energy to readily identify, evaluate and deploy emerging renewable technologies.

## OBJECTIVES

Austin Energy's strategies are statements of how we intend to reposition for the future. We have identified five strategic objectives that provide targets for that repositioning effort and serve as a measure of our success.

The first objective, **Customer Service**, supports our excellent customer service strategy. Austin Energy recognizes that an organization cannot have satisfied and loyal customers without its workforce. As part of our excellent customer service strategy, we have decided to pursue an Employee Satisfaction target. We have identified the *Listening to the Workforce Survey* as the tool for measuring this objective. The target is an employee satisfaction index showing a 10% improvement in positive responses on the *Listening to the Workforce Survey* by 2010.

Also, to support our excellent customer service strategy, we intend to achieve a Customer Satisfaction score of 83/100 by 2010 on an aggregated index that combines key account (large commercial and industrial customers that generate approximately \$250 million in annual revenues), commercial, and residential customer satisfaction scores. Achievement of this objective will place Austin Energy at the top of the electric utility industry in terms of customer satisfaction. It will also position Austin Energy for customer retention in case deregulation occurs.

In Austin Energy's second objective, which supports our excellent customer service and energy resource strategy, we recognize that a community cannot be economically healthy without the existence of successful businesses. Therefore, as a part of our efforts towards contributing to the success of local businesses, we are committed to create and sustain **Economic Development**. Building partnerships with the Chambers and the business community, along with collaborating with City Council will be instrumental in assisting Austin Energy with identifying businesses to participate in developing a clean energy industry

To assist us with evaluating our success we will be measured through our commitment of exceeding the City of Austin's Minority and Woman Business Enterprise goals in all categories by 2008, and increasing the dollar value of contracts awarded to local businesses by 2010.

The third objective, **Exceptional System Reliability**, supports our excellent customer service strategy. Our customers consistently rate reliability as a critical component when responding to surveys. Austin Energy has set its reliability objective on achieving a SAIDI (system average interruption duration index) score of 60 minutes and a SAIFI (system average interruption frequency index) score of 0.8 interruptions per year by 2005. Both measures are industry standards but the targets Austin Energy has set exceed industry norms and will make us among the best in the electric industry.

Our fourth objective is our **Financial Integrity** objective and it supports our risk management strategy. Our measure of this objective is to achieve an "AA" (S&P) by 2010. Austin Energy feels that attainment of this objective will be an indication of an experienced management team supported by the governing City Council, competitive retail rates, consistently strong financial performance, well-defined and achievable business strategy, sound financial and operating policies, favorable cost structure, sound risk management practices, and financial flexibility.

These attributes are all reflective of a utility that has effectively managed its exposure to industry risks.

As part of our energy resource strategy Austin Energy has developed a fifth objective which is a strong commitment to a **Renewable Portfolio Standard**. We have two measures for our energy resource objective. Our first measure is to achieve a renewable portfolio standard of 20% by 2020. For our second measure, we intend to achieve an energy efficiency target of 15% also by 2020. This is one of the more ambitious renewable energy commitments in the country and will help Austin Energy maintain its environmental leadership position.

Another key component of our energy resource strategy is our commitment to solar energy. To that end, Austin Energy will develop and implement the following:

1. A photovoltaic (PV) rebate program that will feature rebate levels of \$5.00 per watt for PV made outside of Austin and \$6.25 per watt for PV made locally (pending legal review) that will be highest PV rebate level in the country.
2. A highly visible public awareness program that will involve the installation of PV education projects at middle schools, branch libraries and community centers.
3. A highly visible community PV demonstration project that will create the first zero-energy affordable home subdivision.

Austin Energy further commits to supporting its solar rebate program for a minimum of ten years and will conduct a study that will determine the comprehensive value solar energy. As a tangible indication of our solar commitment, we have set a goal of 100MW by 2020. Additionally, Austin Energy will actively support mandatory carbon controls at the national level.

## IMPLEMENTATION AND REVIEW

With our vision, mission, strategies, and objectives we have defined a future. Our next steps will be determining the actions needed to get there. To that end Austin Energy will be refining our Five-Year planning process. This process will serve as the essential bridge between our future goals and our annual budget process.

Part of the new planning process will also include an ongoing review process that will occur at least annually. In keeping with our risk management approach the review will examine changing industry trends and recommend course corrections where necessary. It will also examine the effectiveness of current initiatives and recommend adjustments to better meet our strategies and objectives.



## 2003 STRATEGIC PLAN

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### LEADERSHIP TEAM

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Juan Garza	General Manager
John H. Baker Jr., P.E.	Chief Strategy Officer
Clarence Bibby, PhD	Director, Corporate Consulting Services
Andres Carvallo	Chief Information Officer
Ed Clark	Director, Corporate Communications
Roger Duncan	Vice President, Governmental Relations & Environmental Policy
Elaine Hart, CPA	Senior Vice President, Finance & Corporate Services
Bob Kahn	Vice President, Legal Services
Michael McCluskey	Senior Vice President, Wholesale & Retail Markets
Cheryl Mele, P.E.	Acting Senior Vice President, Regulated Operations
Kerry Overton	Vice President, Customer Care
Andy Ramirez, P.E.	Senior Vice President, Power Production
Harvey Winkelmann, CPA	Director, Financial Support Regulated Operations

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## STRATEGIC PLAN

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### AUSTIN ENERGY'S VISION

The role of a vision within an organization is to be meaningful and inspirational. The City has designated the following statement as the City of Austin's vision:

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

Austin Energy has designated this vision statement as its vision as well. After reviewing much research and stakeholder input, it was decided that as a City department, it is crucial for Austin Energy to share the responsibility of making Austin the *most livable* community in the country.

### AUSTIN ENERGY'S MISSION

A mission statement defines the purpose of an organization, emphasizes its priorities, and ultimately communicates how the vision is to be achieved. The phrases chosen for Austin Energy's mission incorporate input from customers, City Council, and employees, among many others.

**To deliver clean, affordable, reliable energy and excellent customer service.**

This mission statement clearly communicates Austin Energy's contribution to making Austin the *most livable* community in the country. The mission statement will be used to guide operational decisions, prioritize projects, and establish budgeting criteria. The mission is intended to be motivating, communicate Austin Energy's business priorities, as well as be functional.

### AUSTIN ENERGY'S VALUES

Organizational values are shared beliefs among employees expressing acceptable behaviors and ways of conducting business. The values adopted by the Austin Energy Leadership Team are a combination of City of Austin values and values that are essential to Austin Energy. The adopted values and an explanation of each follow:

**Care and concern:** We demonstrate dedication, care and concern for our customers, the community, the environment, and each other.

**Safety:** We are dedicated to providing both a safe work environment and safe delivery of energy services.

**Innovation:** We seek innovative ways to improve service delivery, exceed customer expectations and expand the value our energy services provide.

**Integrity:** We conduct ourselves truthfully and honesty in a manner that strengthens the relationship we have with internal and external customers.

**Diversity:** We embrace and value the differences and commonalities of our workforce that enable us to accomplish common goals.

**Teamwork:** We will work cooperatively to accomplish the city's goals and to provide internal and external customers with quality service.

**Open, honest communication:** We share information, thoughts and ideas with another to achieve organizational learning and growth.

## THE CHANGING UTILITY ENVIRONMENT

A key part of any strategic plan is an analysis of trends and possible future conditions that an organization will likely face. A study of the many trends and influences affecting the electric utility industry was part of our strategic planning process. A list of the major factors, which may influence Austin Energy in the near future, are:

- Economic challenges
- Regulatory trends
- Energy resource pressures
- New energy technologies
- System reliability

### Economic Challenges

Austin underwent numerous economic changes in the past few years, a period of high growth followed by little or no growth. While the local economy appears to be slowly recovering, new jobs being created are not high-tech and do not pay as much. This appears to have affected local demographics slightly. The percentage of homeowners relative to renters appears to be falling, so does the number of highly educated citizens. News sources and journals report on software jobs moving to India, call center jobs to the Philippines, and semiconductor fabs to Asia. The departure of these jobs to off shore locations is leaving highly skilled people unemployed or underemployed. Locally jobs were lost at Motorola, IBM, AMD, BAE, Intel, and others. This happened nationally as well.

It appears that the local economy has stabilized somewhat, but until new jobs that pay well are created, economic growth will remain slow. If Austin's economy is slow to recover, electric revenue growth may also be slow to rebound. Static electric revenue may force Austin Energy to limit or postpone infrastructure improvements and/or other investments. The challenge for Austin Energy will be to keep the price of electricity low and reliability high, as an economic development incentive for businesses to locate or remain here, while carefully moving towards more non-traditional generation sources (such as wind and solar). The City Council set a goal of 20% renewable energy by 2020. Austin Energy hopes to meet this goal as aggressively as possible, while maintaining a competitive rate structure and diverse generation base to reduce the fuel price and geopolitical risks that may be associated with any one source.

### Regulatory and Market Trends

The environment in which Austin Energy operates has undergone dramatic regulatory and market changes since the mid 1990s. That environment continues to evolve, and its ultimate shape remains uncertain. Perhaps the greatest change affecting Texas' electric utility industry is the integration of the wholesale electricity market. Prior to these changes, AE could serve its customers with only a limited eye to activities outside its territory. Today, AE is no longer

capable of operating fully independently, without recognizing that the actions of other participants in the market have real financial and operating impacts on AE. These changes pose new challenges to Austin Energy, but also offer the utility new opportunities.

Electric restructuring—commonly called “deregulation”—initially kicked off in 1995 with the passage by the Texas Legislature of Senate Bill 373, which for the first time recognized that the transmission grid is a public good for the benefit of all citizens. S.B. 373 allowed any developer of a new power plant—not just traditional electric utilities—to interconnect a plant to the electric grid, and established comparable pricing for transmission over the grid. These first steps in regulatory restructuring greatly increased opportunities for electricity trading in the state. Austin Energy responded in part by increasing its off-system sales of wholesale electricity. Today, an overcapacity, or excess supply condition exists in the Texas wholesale market. This condition is the result of the rapid construction of natural gas-fired power plants that accompanied electric restructuring in Texas. The initial restructuring steps coupled with robust economic conditions and a previous under capacity condition, or supply shortage, were largely responsible for this sizeable investment in new power plants. The current overcapacity condition has helped moderate wholesale power prices and, at the present time, may make buying power on the wholesale market a viable alternative to building new generating plants locally.

Centralization of the wholesale power market proceeded several giant steps forward following the passage of Senate Bill 7 in 1999. Senate Bill 7 accelerated restructuring of the wholesale market and introduced retail competition to the parts of Texas served by investor-owned utilities. Beginning with operation of the further restructured wholesale market in the summer of 2001, operational control of the electric grid was centralized with the Electricity Reliability Council of Texas (ERCOT). Like all transmission-owning utilities in Texas, Austin Energy turned over control of certain system reliability operations to ERCOT. But centralization at ERCOT went much further than system operations. ERCOT also began operating a daily market for system reserves (called “ancillary services”) and an hourly spot market for electricity. Austin Energy developed new capabilities to participate in these markets, for example, establishing a Qualified Scheduling Entity (QSE) to manage generation scheduling and bidding into the ERCOT market and developing a detailed risk management program. These new capabilities complemented AE’s efforts to make off-system sales in the new wholesale market. The new market also imposed new costs of doing business. Since the summer of 2001, ERCOT has imposed on electricity retailers, Austin Energy included, hundreds of millions of dollars in new charges for managing the wholesale market and transmission congestion. Thus, while AE has taken advantage of the new rules where opportunities developed, participation in the more centralized market created significant new costs.

Today, the wholesale electric market is undergoing yet another stage in its development. Responding to the rising costs of managing congestion in the ERCOT market, the Public Utility Commission (PUC) has ordered a redesign of the wholesale market. The objective of the redesign is to assign congestion costs to those parties responsible for creating transmission congestion—and thus ultimately to lower the costs of electric service by introducing a new pricing method based on locationally varying prices (called “locational marginal cost pricing” or “LMP”). This new pricing approach is consistent with proposals made by the Federal Regulatory Commission (FERC) aimed at standardizing electric markets across the country. While ERCOT

is not subject to FERC regulation, electric restructuring has attracted many new energy companies to Texas that operate in markets across the country. Those companies have been strong advocates for adopting policies, including LMP that will make ERCOT operations consistent with operations in other markets in the U.S.

As this strategic plan is being written, the outcome of the wholesale market redesign is unclear. The PUC ordered that the initial design be completed by late 2004 and that the new market begin operations by the end of 2006. What is clear is that the market redesign will continue further along the path of integrating the wholesale electric market. This will result in more centralization of control in ERCOT and less direct control for Austin Energy even over assets that it built and owns. The new market will also bring greater complexity that will require an even greater level of sophistication—and cost—to participate.

This ever-evolving integration of the electric industry poses a great challenge for Austin Energy to maintain its unique character in this industry and to pursue its vision of making Austin the most livable community in the country. For example, as Austin Energy pursues the goal to achieve a 20% share of renewable energy in the utility's generation portfolio by 2020, Austin Energy will be dependent upon other companies to construct transmission lines to import the renewable power and may incur congestion costs because of others' market behaviors. Market integration also poses challenges for smaller, independent participants in the electric market. And while Austin Energy is one of the larger retailers in the State, with the entry of energy companies that are national in scope, AE is now counted among the smaller wholesale market participants, albeit larger than most in that category. Market participants may fall under extreme pressure to conform, to consolidate, and/or to form strategic alliances (like the alliance between City Public Service of San Antonio and Center point Energy of Houston). These pressures include drivers such as economies of scale that affect wholesale market viability and the need to form common purpose alliances to protect Austin's interests in market redesign or other regulatory efforts. Maintaining Austin Energy's ability to act independently may be among its greatest future challenges.

In Austin Energy's prior strategic plan, developed following the passage of Senate Bill 7, retail deregulation appeared to be the greatest threat. While that prospect has not completely disappeared, retail deregulation is not the concern it appeared to be then. To some extent, retail competition has been very positive for Austin Energy. The utility has witnessed the consequences of retail competition outside AE's territory and responded. Retail competition reemphasizes for Austin Energy the importance of reliability, customer service, and cost management as a means of maintaining low rates. Looking back over the past four years, being outside of retail competition inoculated AE from much of the price instability that characterized the national energy market. In part as a response to that instability, but also in response to the efforts of AE aimed at reliability, customer service, and costs, there appears to be only limited interest from our customers in the prospect of AE entering retail competition. The threat of retail competition has not disappeared; indeed, the Legislature could at some future date mandate that municipal utilities enter competition. As long as Austin Energy maintains its focus on meeting customers' needs for products, services, reliability, and low costs, AE can continue to contribute to making this the most livable community in the country.

## Energy Resources

Within the next 25 years, Austin Energy must make expensive and complex investment decisions concerning its energy resources. At some point, Holly, Decker, Fayette, and the South Texas Nuclear plants must be closed as they age beyond economic usefulness. As the local population grows, demand will increase, too. The big question looming is what kind of energy resources will be used to replace existing generation and cover additional demand for electricity? Sand Hill, the newest plant, uses very efficient and clean-burning natural gas. However, natural gas has become very popular as a fuel due to its low emissions, high efficiencies and the relatively low construction costs associated with natural gas-fired generation plants. Nearly all new generation built in the United States in the past few years has been gas fueled. The increased demand for natural gas has caused prices to be extremely volatile as domestic drilling struggles to keep up with demand. How will increasing demand for natural gas be met?

**Liquefied natural gas (LNG)** may be one method to meet U.S. demand. Offshore gas fields in Indonesia or West Africa or in Russia are building plants to compress the gas and load it onto specialized tanker ships where it will be ferried to U.S. offshore terminals. There, the LNG will go through valves to decompress and enter pipelines carrying it onshore to the natural gas piping networks. This will change natural gas from a domestic source to a global commodity, much like other petroleum products. However, the future price of gas must be higher than the low prices experienced in the 1990's to support the LNG transportation costs. Some say \$4 to \$5 per Mcf and higher are the minimum price needed to make LNG terminals economically viable. As with oil, this would make natural gas subject to geopolitical risks.

**Nuclear generation** has seen some technical advancements that may make it a viable option. Pebble bed generators are a new and safer design that can be built in smaller, modular, pre-fabricated units. However, plants safely (particularly in light of global terrorism) and nuclear waste storage remain serious concerns. Further, local opposition to nuclear power plants has been strong and very high investment costs for these facilities mean that Austin Energy may not be able to consider nuclear generation.

**Coal** will remain a domestically controlled and low cost fuel for the future. Research into “clean coal” may yield an economic means to cut the ash and emissions from coal plants. If found, this may make coal an even more attractive option. Absent environmental costs, prices for coal are predicted to remain fairly stable over the next 20 years. Still, coal is a fossil fuel with high carbon content and air pollution. As the link between greenhouse gases and global warming becomes even clearer and more widely supported, coal will be subjected to more restrictions and limitations. Fully acceptable clean coal technology will need to satisfactorily address all greenhouse gas concerns. This technology does not currently exist and may prove expensive to develop and deploy.

**Oil** generating power plants have fallen out of favor since the Oil Embargo of 1973. Oil prices are subject to great variations, from \$14 a barrel to \$36 a barrel in one year. Oil is subject to geopolitical risk, with up to 60% of U.S. needs being met with imported oil. Lastly, oil generation involves undesirable emissions. Oil will not be used in future power plants, except as a limited use back up fuel for natural gas.

**Demand Side Management (DSM)** Austin Energy has long recognized the significant long-term economic and environmental benefits of energy efficiency, energy conservation, electric peak load management, and market transformation programs (that shift consumer demand to more efficient appliances and products). Since 1982, “demand-side” management (DSM) programs have served Austin residential and commercial customers by reducing their electrical energy consumption. Throughout the country DSM has become more comprehensive and widespread among energy services providers. These programs offer customers increased options for managing their energy needs, while lowering electric generation demands. DSM programs can reduce overall demand for electricity as well as allow utilities to curtail loads during peak hours. Austin Energy is at the forefront of this effort providing incentives such as rebates for high-efficiency appliances and lighting. In addition, the nationally recognized Green Building™ program provides environmentally friendly building techniques that reduce energy consumption for the homeowner or professional builder.

**Wholesale supply contracts** offer another option for acquiring a reliable, long-term source of supply without the need to construct new power plants locally. At present, ERCOT projects an excess supply of electricity capacity above peak needs in the ERCOT region at over 30 percent through 2008. That excess supply puts downward pressure on wholesale power prices. Over the long term, the oversupply conditions that exist presently cannot be expected to continue. Growth in demand, decommissioning of existing plants (such as Austin Energy’s Holly Power Plant), new patterns of congestion that limit the export capacity of existing facilities could all offset excess supply. Nevertheless, as Austin Energy pursues new supply options in the future, long-term wholesale supply contracts may be an attractive alternative to meet the community’s energy needs.

**Renewable Energy** is one of the fastest growing sectors in the U.S. economy. Currently much of this growth is driven by regulations and tax incentives. However, some technologies, such as wind are rapidly moving toward stand-alone economic viability. This trend would be accelerated, by increased natural gas prices and/or more stringent emission restrictions on fossil fuel. As electricity generation from renewable sources has become more viable, utilities likewise have begun incorporating renewable energy technologies into their generation portfolios. Austin Energy is at the forefront of this trend. Its commitment to remain a leader in the renewable energy industry is reflected in its long-term renewable portfolios standard. Renewable energy can be produced by several generation technologies, namely solar, biogas, hydropower, wind, and geothermal.

Austin Energy already has small **solar generation** units, but at this time, solar is unable to compete with other sources on a purely economical basis. This may change in the future as the price of solar photovoltaic units decrease and new materials are developed that convert more sunlight into electricity. Research may yield solar materials with efficiencies over 45% within five to ten years. One key to making solar and certain other renewable sources work is a means by which to store energy. Solar power only generates during sunlight hours and electric service is needed 24 hours a day. Thus, finding some means to store extra energy generated is necessary for the deployment of increasing levels of solar sources at non-peak times in the future

**Wind** has proven to be the best and least expensive source of renewable energy for Texas. However, the most reliable sources are in west Texas and congested transmission limits power back to this service area. Additional transmission lines are in planning and under construction so this may be relieved within the next few years. Though wind generation is the least expensive, because it is a variable source, some of it (the exact percentage is under debate) must be backed up by other generation that is “dispatchable” (generation that can be called upon to meet demand at any time), such as gas, unless some method to store energy is found. This makes wind power less attractive and adds cost. Changes to the way transmission costs are allocated by ERCOT and charged may have serious effects on the price of wind power in the future. Also, the effects of large amounts of wind power on the grid are not fully known at this time. Wind varies and maintaining grid regulation (voltage, frequency, and stability) may prove a challenge as significant quantities wind generated electricity come online.

**Biogas** is developing into a viable source when large landfills are used. However, even with the largest landfills, the amount of power generated is small compared to overall electric demand. Landfills aside, the immediate Austin area holds little promise for significant **biomass** development. Thus, large biogas plants, if built, would have to be located outside the service area.

**Hydropower** and **tidal generation** are not available to Austin Energy near its service area in large quantities. Texas has some hydro plants on dams, but not enough to fully cover demand growth. Tidal generation is being developed in the United Kingdom and other places near ocean basins where tides of 10 foot or higher are common. The Gulf of Mexico has much smaller tidal influences, less than 6-foot tides, not enough to make tidal generation currently economic.

Finally, **geothermal** energy may develop into a viable source in Texas within the next ten years. There are known “hot spot” formations from 4,000 to 14,000 feet deep in Texas in which the temperature is 350 to 400 degrees F. Inventors at the U.T.’s Clean Energy Incubator and elsewhere are working on developing electrical generation that uses low temperatures. While no geothermal sources are within Austin Energy’s service area, the utility may tap these sources in the future in nearby counties such as near Victoria and LaGrange, once the low temperature technologies begin to emerge.

## New Energy Technologies

**Distributed generation** is a technology that shows great promise. Small generation units are built helping balance the grid and aid in providing peaking power. By being dispersed, the grid may prove more secure and less susceptible to sabotage. The generation may be from fuel cells, combined heat/power systems, waste heat recovery generation, wind, small gas-fired generators, solar, or other sources, adding to the diversity of the generation fleet and reducing fuel cost risks. Combined heat and power applications look very promising for commercial application in the very near term. These applications are highly efficient and can meet the electric and thermal requirements of customers. Combined heat and power applications can also provide back-up power when grid service is interrupted. However, no one has much experience with an electric distribution system that has significant distributed generation. Pushing electrons both ways on the distribution system will require upgraded control capabilities and safety features to be successful in order to handle harmonics, regulation, system stability and safety issues.

**New control systems** are being tested in various places across the U.S. that allow more efficient transmission of power. By installing line monitoring sensors and automated software controls, the developers claim that more power can be pushed through the same transmission lines.

The actual transmission capacity increase and any increases in reliability from such upgrades have not yet been ascertained. The magnitude of these increases will determine the economic value of such system investments. But by using sensors and automated monitoring, problems detected on transmission lines may be handled faster; automatically re-routing power to other lines should a disruption occur. This “self-healing” ability is a concept that Electric Power Research Institute (EPRI) and others say is required for the nation’s transmission system. Their studies show that as the grid expands from local to regional, the system becomes highly complex and current controls operated by humans are not fast enough to respond. Also, should distributed generation sources become common, an automated and intelligent “smart” grid may be required.

**Solar films** are under development in laboratories in the U.S. and Japan that are at least twice as efficient as those available today. Once commercial, this technology will change the economics of solar generation and make it more competitive. Also, firms in Europe are working on solar films that are not very efficient, but, as a trade off, would be very inexpensive to produce. Both research areas may change the solar market in the next ten years.

High-temperature **superconducting (HTSC) devices** and wires are becoming available. Coils using HTSC are used as energy storage devices along high voltage transmission lines to smooth out spikes and surges, and as backup power for short periods of time. Chicago is experimenting with HTSC cables in dense downtown areas where new transmission lines are needed but no space exists. These cables can carry up to eight times the power of standard lines, but require special connectors and liquid nitrogen to cool the cables. A prototype HTSC generator has been developed at GE for testing, with expectations that such generators will be available commercially within five years. If so, they will make generation even more efficient. Currently, these materials are very expensive, but as HTSC develops, the price of materials and support systems may fall.

Finally, **energy storage systems** are being tested. These consist of large, HTSC inductive coils, compressed air energy storage (**CAES**), and flow batteries. Hydro-storage systems have been used for years in some areas such as Los Angeles (its water reservoirs) and Europe, but are not available to this area or Texas on a large scale. Storage devices will be necessary to smooth the power flow throughout the grid when more wind and solar power and other variable sources become significant. CAES shows promise as a means to store wind energy and make it “dispatchable”, as well as store solar energy for use at night. **Thermal storage** systems like ice-making and storage are being used more frequently to shift demand from afternoon to middle of the night.

## Information Technology

Information Technology and Telecommunications (IT&T) at Austin Energy is leading a set of initiatives designed to increase efficiencies and reduce costs across the utility. At the core of the effort is a new enterprise-wide systems architecture designed to integrate all operational and corporate systems and improve management's access to timely and accurate business data.

The new enterprise-wide system architecture is already powering **Data One** (the world's first integrated power delivery management system), an updated **website** ([\(<<www.austinenergy.com>>\)](http://www.austinenergy.com)), and a new customer **portal** ([\(<<https://my.austinenergy.com>>\)](https://my.austinenergy.com)). By Spring 2004, it will also power an **Online Customer Care and Electronic Bill Payment and Presentment** solution that will significantly improve customer satisfaction. In addition, IT&T plans to deploy a new risk management system for futures trading, a new data warehouse, and a new customer information system and assist in deploying a new financial system. These systems will improve the collection, analysis, distribution, reporting, utilization, optimization, and management of business information across the utility.

Together, these will significantly increase efficiency and accountability throughout the utility and will save money by eliminating duplication of effort, manual entry, and paperwork. These advances will also increase Austin Energy's ability to adapt quickly and effectively to PUC and ERCOT regulatory changes and other shifts in energy market operations.

The effort to explore an enterprise-wide platform was initiated in March 2003. IT&T is currently researching solutions and identifying all the business applications used by the utility. Along with the current initiatives, a long-term technology strategic plan is being developed.

## System Reliability

An outdated and overloaded U.S. power grid is the main electricity infrastructure problem. The situation will likely be exacerbated by the growing gap between electrical demand and transmission capacity. The North American Electric Reliability Council (NERC) estimates that demand for electricity will increase more than three times faster than transmission capacity in the U.S. between 2001 and 2010.

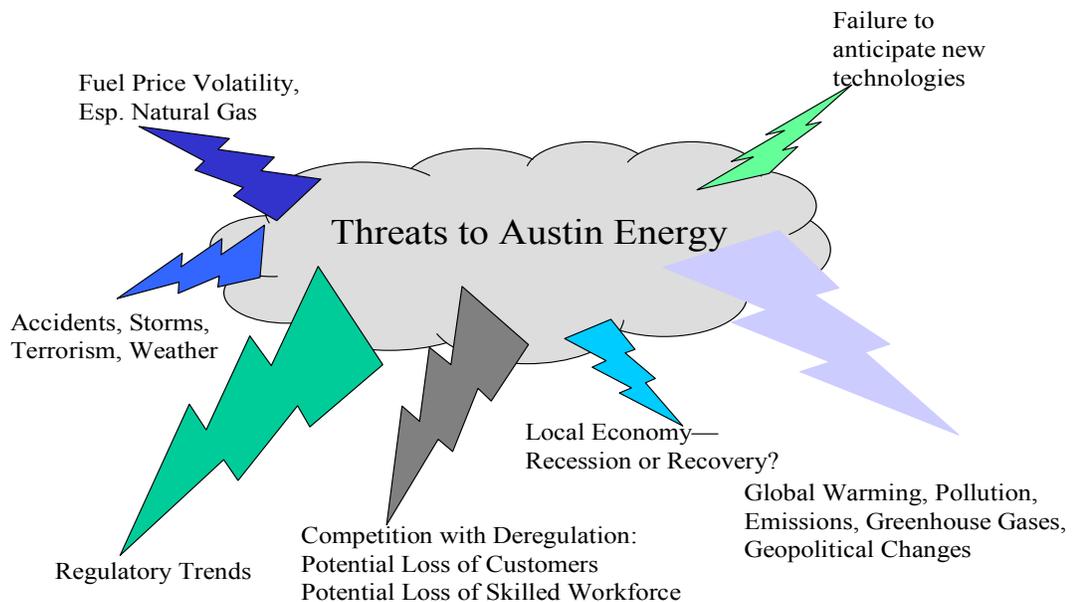
Implementing advanced transmission technologies, among other approaches, will be central to eliminating transmission constraints and will be essential to ensuring reliable and affordable electricity now and in the future.

Technology already exists to prevent or mitigate the kind of power outage that crippled a large segment of Northeastern America in August of 2003. The technologies are in various stages of development; but used in combination they should lead to a much more reliable power grid.

As the national electricity grid is antiquated and demand growth is outpacing expansion in capacity, timely development and implementation of these technologies is paramount to reinforcing the grid. A significant challenge is that some of the technologies are not perceived as profitable enough to attract the interest of commercial developers. According to the Edison Electric Institute (EEI), to maintain the current level of transmission capacity on the grid in North America, an investment of \$56 billion is required over the next decade. This means that government may have to take on a collaborative role in the development and deployment of these technologies for the public good.

## Summary

We have looked at the changing utility environment and developed the graphic below to show the major known threats facing Austin Energy in the near future. The threat are varied and have grown in number, so a strategic plan to address complex issues facing Austin Energy and retains flexibility for the future has been developed.



## AUSTIN ENERGY'S STRATEGIES

A flexible strategic plan that includes three strategies to address the major threats to Austin Energy (shown in the graphic) has been developed. The first is a **Risk Management Strategy** that is an umbrella strategy to position Austin Energy to respond to continued pressures to deregulate the industry but at the same time not be left behind by the innovations in generation and delivery of energy services. A risk management approach builds on existing operations and successes while also providing thoughtful consideration of new available information and options. It recognizes the inherent uncertainty associated with the future and will seek to delay commitment (without losing opportunity) until information about future alternatives become better known.

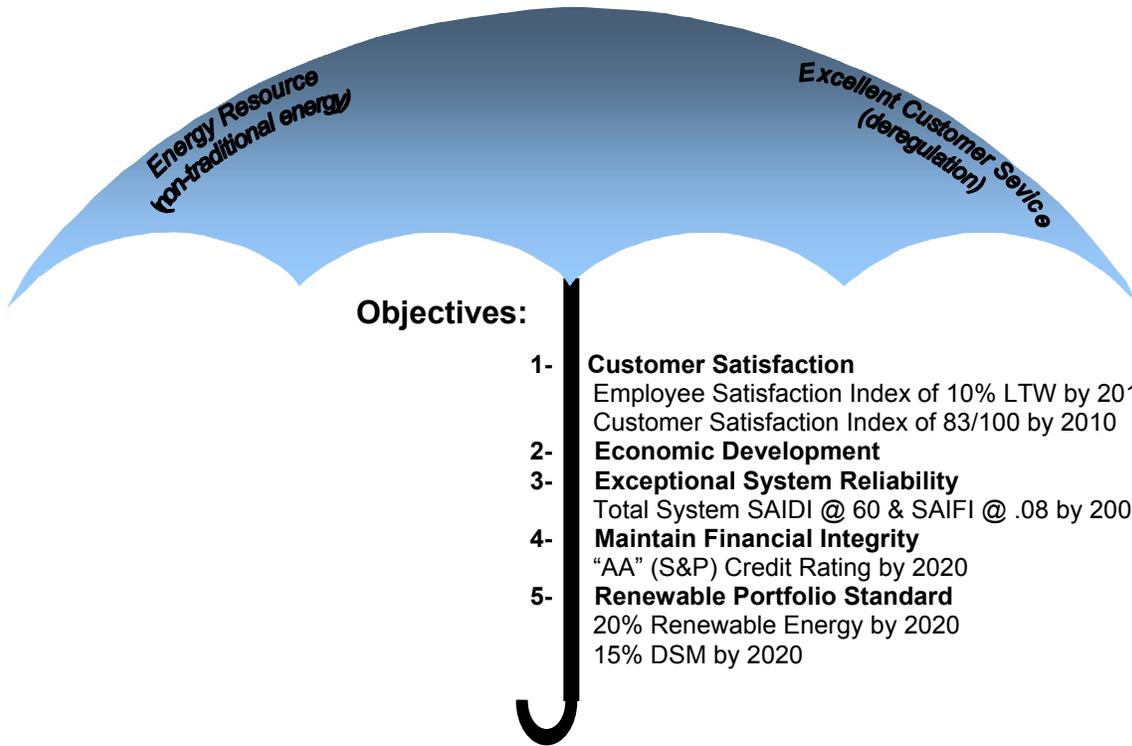
**Excellent Customer Service** is our second strategy. This strategy is in line with our risk management strategy. We want to take action that positions Austin Energy for possible competition without undermining our current success. Our strategy is to build employee and customer satisfaction so that we are positioned for competition or regulation whichever occurs in the future.

The third is our **Energy Resource** strategy. Under this strategy Austin Energy will first seek renewable energy and conservation solutions to meet our customers' new energy needs before resorting to traditional fossil fuel sources. In keeping with our risk management approach, Austin Energy will not prematurely commit to unproven technologies, however, we will pursue a leading edge position that will allow Austin Energy to readily identify, evaluate and deploy emerging renewable technologies.

Five objectives that cross business unit and functional lines were developed to support the Risk Management umbrella strategy that Austin Energy believes will provide the best method to manage the risks associated with those threats. The graphic following illustrates the basic concept:

# STRATEGIES

## Risk Management



## AUSTIN ENERGY'S OBJECTIVES

The first objective is **Customer Satisfaction**. This is a broad objective and encompasses many elements including pricing, billing, meter reading, reliability and quality of service, responsiveness and the customer's perception of the overall value that Austin Energy provides.

Austin Energy recognizes that an organization cannot have satisfied and loyal customers without its workforce. As part of our excellent customer service strategy, we have decided to pursue an employee satisfaction target. We have identified the *Listening to the Workforce Survey* as the tool for measuring this objective. The target is an employee satisfaction index showing a 10% improvement in positive responses on the *Listening to the Workforce Survey* by 2010.

A significant percentage of the workforce at Austin Energy will retire in the next ten years. Planning is necessary to insure that the next generation is trained to handle utility work in generation, transmission, meters/revenues, customer care, and support. The goal is to retain and improve the knowledge and special skills required by the utility, increase employee satisfaction, and improve customer satisfaction by providing better-trained employees.

A cross-functional team within Austin Energy is being set up to examine this problem and come up with a detailed action plan. The four primary areas to be addressed under this objective will be (1) employee satisfaction, (2) workforce alignment, (3) workforce development and (4) workforce safety.

Also, to support our customer service strategy a compound metric to measure success has been devised, called the Austin Energy Customer Satisfaction Index which will measure how satisfied the three major customer segments are with Austin Energy's service: key accounts (large commercial customers), small/mid-sized businesses, and residential customers. The target set is to achieve a customer satisfaction score of 83/100 by 2010. Achievement of this target will place Austin Energy at the top of the electric utility in terms of customer satisfaction.

Multiple customer surveys done by Marketing Research recently have pointed to several specific items that may be accomplished to enhance service. These will be listed, prioritized and evaluated as to cost effectiveness by a cross-functional team within Austin Energy. The team will develop a set of specific actions for implementation, then use the index and surveys to provide feedback as to effectiveness. Meeting these targets will involve process improvements, a customer care system, and process enhancements that cross many areas.

The second objective is to create and sustain **Economic Development**. The economic challenges discussed earlier in the strategic plan makes this objective an important factor that may influence the future of Austin Energy. This objective supports the excellent customer service and energy resource strategies, and will be achieved through the following actions while conducting business with the highest ethics:

- Providing contract opportunities for local businesses
- Supporting initiatives to attract new businesses to Austin
- Building partnerships with Chambers and other business organizations
- Providing support to the development of a clean energy industry

Providing contract opportunities for local businesses and attracting new businesses will have a valuable impact on the Austin economy and community. Further, expanding effective relationships with local businesses will be instrumental towards improving the quality of service provided to our customers.

Building partnerships with the Chambers and the business community, along with collaborating with City Council will be instrumental in assisting Austin Energy with identifying businesses to participate in developing a clean energy industry. Developing such an industry goes beyond reducing pollution, it also creates economic development opportunities and jobs. Austin Energy will continue to be creative towards developing energy efficient incentives, similar to the solar rebate program, which will encourage businesses to share with investing in preserving our environment and growing our economy.

To assist us with evaluating our success we will be measured through our commitment of exceeding the City of Austin's Minority and Woman Business Enterprise goals in all categories by 2008, and increasing the dollar value of contracts awarded to local businesses 2010. A defined percentage of increase will be determined through an established cross-functional Action Team.

A cross-functional Action Team consisting of Business Stakeholders and Senior Managers within Austin Energy has developed an action plan to assist with exceeding the City of Austin's MWBE goals. While this team will continue its commitment to creating economic development success stories, similar cross-functional Action Team(s) will be established to develop action plans to support this objective and each referenced action.

The third objective is **Exceptional System Reliability**. This involves improving some specific metrics to reduce the frequency and duration of power outages, which are:

- **SAIDI** (system average interruption duration index)= 60 minutes
- **SAIFI** (system average interruption frequency index)=0.8 interruptions per year

It is hoped that both goals may be met by 2005.

The most cost effective investments will be made in the distribution system, such as increased use of feeder ties, new switchgear, tree trimming, electronic reclosers, and other design improvements in the system. Improving reliability of the system adds to customer satisfaction, and is becoming essential to certain businesses such as Internet-based sales and some biotechnology firms. Reliability improvements will put Austin Energy in a better position should it be forced into a competitive market and will aid in economic development efforts to attract new businesses to the area.

The fourth objective is to maintain financial integrity by achieving an **"AA" (S&P) Credit Rating by 2010** on Austin Energy's separate lien revenue bonds. Such a rating must be from a nationally recognized statistical rating agency (NRSROs) such as Fitch Inc., Moody's Investors Service or Standard & Poor's. Based upon credit rating criteria, attainment of this objective will be moving from a medium grade to a high-grade investment rating.

Attributes of a high grade investment rating for public power include an experienced management team supported by the governing body, competitive retail rates, consistently strong financial performance, well-defined and achievable business strategy, sound financial and operating policies, favorable cost structure, willingness and flexibility to respond to fuel price increases, sound risk management practices and financial flexibility. These attributes are all reflective of a utility that has effectively managed its exposure to industry risks - - a successful risk management approach.

In order to achieve this higher credit rating, Austin Energy will have to evaluate the following broad credit rating criteria categories established by rating agencies to determine what improvements are needed to strengthen its credit rating. These credit rating criteria are very broad and cover the entire spectrum of business activity from regulation to strategy to operations to financial performance. These criteria are used to evaluate the creditworthiness of an entity:

- Management
- Business and Financial Strategy
- Operations
- Competitive Position and Rates
- Markets
- Regulation
- Service Area Economy and Demographics
- Financial Performance
- Legal Provisions

Austin Energy’s current credit ratings, which are medium-grade investment ratings follow:

<b>Combined Utility System Ratings</b>		
	<i>Senior</i>	<i>Subordinate</i>
Moody’s	A2	A2
S & P	A	A-
Fitch	A+	A+

<b>Separate Lien Ratings</b>		
	<i>Electric</i>	<i>Water</i>
Moody’s	A3	A2
S & P	A-	A-
Fitch	A	A+

With respect to financial performance, there are several key financial ratios considered by rating agencies. For example, the following table compares public power key financial ratios used by Fitch, Inc. with AE’s Financial Policies. As you can see, Austin Energy has already made progress in this area establishing policies to meet specific rating criteria. Compliance with these financial policies are reviewed and reported to the City Council annually. Additional policies and recommended changes are recommended for City Council approval annually.

Public Power Ratio/Performance Measure	Austin Energy Financial Policy
Debt Service Coverage (DSC) (x)	Debt service coverage at least 1.50x
Days Cash on Hand	Policy 45 days operating cash. Policy Strategic Reserve with 60 days operating needs for Emergency Cash Reserve plus an additional 60 days for Contingency Cash Reserve.
Operating Margin (%)	Policy under consideration
Net Margin (%)	Policy under consideration
General Fund Transfer (GFT) as % of Revenue	General Fund Transfer within range of 6.6% to 9.1% of three year average revenue
Variable Rate Debt/Total Capitalization (%)	Variable debt policy limits max to 20%
Net Plant/Net Debt (x)	Policy under consideration
Equity/Total Capitalization (%)	Debt to equity ratio of 62% or less

While the objective to achieve an “AA” (S&P) Credit Rating by 2010 on Austin Energy’s separate lien revenue bonds is a stretch goal, Austin Energy believes it is the best overall measure of the success of our risk management approach.

The **fifth and final objective** is the **Renewable Portfolio Standard** that is addressed by *Austin Energy’s Ten-Year Energy Resource Plan*. Under this objective Austin Energy will achieve a Renewable Portfolio Standard of 20% by 2020.

The purpose of *Austin Energy’s Ten-Year Energy Resource Plan* is to provide a framework for future actions to ensure that Austin Energy provides reliable electric service at affordable prices to its customers. The Austin City Council established strategic energy policies that position Austin to remain a national leader in the development and use of clean energy. Looking forward, Austin Energy expects its obligations to provide electricity to its customers will continue to grow, while some of its existing resources will diminish significantly. This will cause the gap between demand and supply to grow over time. Measures need to be taken to close the gap and a number of diverse strategies are proposed.

Austin Energy’s most recent *Ten-Year Energy Resource Plan* features a number of significant changes from all previous plans. These changes are:

1. The Holly Power Plant will close in December 31, 2007 rather than 2009.
2. Investment in renewable energy resources will be much more aggressive, in order to meet the target of achieving 20% of Austin Energy’s energy supply from renewable resources by 2020.
3. Investment in energy efficiency and peak load management to meet the target of achieving 15% of Austin Energy’s energy supply from energy efficiency efforts by 2020.
4. No specific thermal generation projects are in the current plan, as there is no expected need for additional capacity until 2008.

The proposed *Energy Resource Plan* provides flexibility in the early years because long-term commitments can be deferred since adequate resources are available. The primary objectives are minimizing cost while also maintaining as much flexibility as possible in order to respond to changes in customer demand, energy markets and technology. Technological advances, fuel and power price volatility, and potentially dramatic restructuring of the Texas electricity wholesale market make flexibility essential. In addition to these overarching objectives, a number of specific targets have been adopted with conservation, renewables and early closure of Holly Power Plant becoming key components of the plan. Existing capacity of 2,668 MW will continue to be supplied by the South Texas Project, Fayette Power Plant, Sand Hill Energy Center (including the new combined cycle) and Decker Power Plant. Excluded from this capacity is Holly Power Plant (a total of 588 MW). Holly Units 1 and 2 are planning closure by December 2004 and Holly Units 3 and 4 are targeted for December 2007.

New growth will first be met by increasing participation and adding new programs that encourage peak load management and energy efficiency. This increased emphasis on demand side management will reduce forecasted load requirements by an estimated 12% by the end of the ten-year study period. The majority of the remaining energy requirements will be met with cost effective renewable resources. Renewables will be increased by approximately 1% of total energy requirements per year to achieve a 20% target by 2020. We believe that it has an obligation to provide affordable electricity to its customers. We also understand that its customers believe that a clean and safe environment is important. Renewable resources are also a good fit for Austin Energy within the context of a diversified portfolio.

Investments with a life in excess of 20 years carry risk due to uncertainties in the market, development of more efficient/economical technologies or from a variety of other uncontrollable circumstances. Due to these risks, strategic investment decisions should be made "just in time," as further information is gained. This is the essence of AE's long-term risk management strategy. By staging investments, AE would be using the passage of time to acquire deep familiarity and the option to expand, while still limiting its downside risk until the value becomes clearer. Staying abreast of changing technology and market trends will be highly valuable.

It is the opportunity to capture this effect that makes this approach so appealing today. We must scan the range of new opportunities and choose to compete only where we have significant familiarity and advantages. Our goal is to balance increased renewables and DSM with system reliability, customer expectations, ERCOT requirements, affordable pricing, and others.

We have incorporated into our *Energy Resource Plan* several items in response to City Council direction related to clean energy and the environment. Austin Energy will actively support mandatory carbon controls at the national level.

In addition, we have recently amended our *Energy Resource Plan* to ensure a strong commitment to solar energy. To that end, Austin Energy will develop and implement the following:

1. A photovoltaic (PV) rebate program that will feature rebate levels of \$5.00 per watt for PV made outside of Austin and \$6.25 per watt for PV made locally (pending legal review) that will be highest PV rebate level in the country.
2. A highly visible public awareness program that will involve the installation of PV education projects at middle schools, branch libraries and community centers.
3. A highly visible community PV demonstration project that will create the first zero-energy affordable home subdivision.
4. A commitment to support a solar rebate program for a minimum of ten years.
5. Conduct a study that will determine the comprehensive value solar energy.

As further commitment to solar energy, Austin Energy is setting the following solar goals:

Year	Solar Goal (Cumulative MW)
2007	15
2010	30
2014	50
2020	100

As mentioned above and requested by the Resource Management Commission, the Utility will sponsor a study to determine the comprehensive value of solar energy. This study will factor in avoided costs related to transmission and distribution, generation, peak demand requirements and the value of local economic development, among other factors. That composite value, coupled with the declining cost of solar cells, will serve as the guide for the price that Austin Energy will pay for any additional solar energy above and beyond that secured from the rebate program. In addition, Austin Energy will establish a cap per recipient of solar rebates similar to those in its Commercial Rebate Program. This will ensure that Austin Energy will pursue its solar goals in a cost effective manner.

## IMPLEMENTATION

An important point of departure from the traditional approach to planning at Austin Energy was the adoption of the General Decision Framework, a six-phase systematic decision-making framework designed to help make better decisions by improving the overall decision-making process. The more complex (or important) the decision is, the greater the value of such a systematic decision process.

The General Decision Framework was successfully utilized in the *Ten-Year Energy Resource Plan* planning process, which was highlighted by a highly deliberative, collaborative, rigorous, process in evaluating and ultimately selecting the best available options that could be easily defended.

The expectation is that this systematic approach to decision making will become a distinguishing feature of Austin Energy’s planning processes. Towards that end the Leadership Team has begun using the General Decision Framework as a basis to develop the Five-Year Plan, which itself will serve as the essential bridge from the strategic plan to the annual budget process.

The Leadership Team used the decision-planning phase of the framework to reach the following key decisions regarding how it intends to approach the Five-Year Plan:

- Utilize cross-functional project teams to conduct various elements of the decision process. Each cross-functional team will have a representative from each of the business units.
- Establish a decision framing cross-functional team to be responsible for developing a decision framework pertaining specifically to the Five-Year Plan process.
- Establish other cross-functional teams as needed to be responsible for conducting the planning process from the standpoint of the various strategic objectives.
- Establish a team charter for each cross-functional team, specifying purpose, deliverable, deadlines, etc.

This approach toward the Five-Year Plan planning process starts a fundamental change from the traditional approach. The expectation is that the planning and budgeting processes are an integrated part of the overall strategic process. Austin Energy is moving toward a comprehensive planning process characterized by a systemic decision process that reflect a risk management approach, shared objectives and initiatives, and long-rang view.



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## APPENDIX

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### AUSTIN ENERGY'S COMPLIANCE WITH CITY COUNCIL STRATEGIC PLANNING POLICY

Austin Energy produced the 2003 Strategic Plan to position itself in a rapidly changing electric utility environment. The most important element of the change facing Austin Energy will be the challenge to traditional energy sources. Supply availability and environmental impact issues surrounding traditional fossil fuel resources pose major questions. The answers to these questions will fundamentally change the utility industry over the next twenty years.

In recognition of the significant change that is underway in the energy sector worldwide and in keeping with Austin's long-standing commitment to environmental stewardship, the Austin City Council has established strategic energy policy for Austin Energy in its adoption of resolutions 030828-38 and 030925-02 ("the Energy Policy Resolutions").

Resolution 030838-38 calls on Austin Energy "to develop and incorporate strategies in its Strategic Plan that will ensure Austin remains a national and international leader in the development and use of clean energy." Specifically, Council has directed Austin Energy to develop strategies that at a minimum (1) produce a strategic planning process that includes progressive and ambitious renewable energy and energy conservation programs and, the nation's leading Renewable Portfolio Standard; (2) place emphasis on economic development for successful development, recruitment and retention of clean energy business enterprises; (3) pursue a risk management approach, which positions Austin Energy for a transition to a clean energy future through the successful identification and incorporation of promising energy technologies; and (4) include mitigation of carbon emissions from current and future fossil fuel facilities to reduce the negative effects of global warming.

Resolution 030925-02 directs Austin Energy to negotiate and execute a Memorandum of Understanding (MOU) with the World Wildlife Fund (WWF), to partner with them and other utilities in taking a responsible approach to global warming by supporting essential CO<sub>2</sub> emission reduction policies, including a "switch" from fossil fuel to more renewables within the electric generation portfolio. As part of the MOU, Council has charged Austin Energy to (1) establish a goal to achieve a minimum of 20% of the energy in its portfolio mix from renewable sources by January 1, 2020; (2) set an energy efficiency goal of 15% by 2020; and (3) support binding limits on national power sector CO<sub>2</sub> emissions.

Austin Energy believes that the 2003 Strategic Plan is in full compliance with the Energy Policy Resolutions. It accomplishes the majority of what Council has called for immediately and creates the framework to achieve the remainder. More specifically, the 2003 Strategic Plan addresses 030838-38 in that it embraces ambitious strategies and objectives that will ensure Austin's clean energy leadership role in the future. The plan sets out robust conservation objectives and adopts the nation's leading Renewable Portfolio Standard. It also incorporates a risk management strategy aimed at moving Austin Energy successfully toward a clean energy future. The Renewable Portfolio Standard and energy efficiency objectives will mean that Austin will meet 35% of its energy needs from renewable sources (20%) or energy efficiency measures (15%) by the year 2020. Achievement of these objectives will help mitigate carbon

emissions and their impact on global warming. The 2003 Strategic Plan also sets the stage for Austin Energy to participate in the advancement of a Clean Energy Industry in Austin.

Resolution 030925-02 is also addressed by the 2003 Strategic Plan. The resolution calls for Austin Energy to pursue a responsible approach to “switch” from fossil fuels to more renewable energy sources. For Austin Energy, the 2003 Strategic Plan represents a starting point for the transition from a traditional electric utility to a clean energy future. Additionally, the renewable energy and energy efficiency goals set forth in 030925-02 are key strategic objectives within the plan’s energy resource strategy. Further, the strategies and commitments in the 2003 Strategic Plan will serve as a framework for the development of a MOU with the WWF.

**RESOLUTION NO. 030828-38**

**WHEREAS**, Austin's environmental stewardship is a community priority and is a major reason for our renowned quality of life; and,

**WHEREAS**, Austin's community-owned electric utility, Austin Energy, is a national leader in promoting and using environmentally-friendly renewable energy and energy efficiency programs; and,

**WHEREAS**, Austin Energy can play a strategic economic development role by helping create new jobs in Austin; and

**WHEREAS**, Austin Energy's GreenChoice program ranks number one in the nation in green power sales according to the U.S. Department of Energy, with 2002's sales double the amount sold by second place Sacramento and third place Denver combined; and,

**WHEREAS**, Austin Energy has sold more than half a billion kWh of green power to customers since the GreenChoice program's inception in 2000; and,

**WHEREAS**, to meet the community's demand for clean energy, Austin Energy has purchased approximately 100 MW of renewables, about three percent of its overall energy resources, well on the way to meeting the 1999 Council-established goal of five percent renewables by 2005; and,

**WHEREAS**, Austin's commitment to clean energy and the environment is renowned nationally and internationally, which among other benefits, has helped to attract major successful clean energy events, such as the International Green Building Conference, the American Wind Energy Association Conference, and the American Solar Energy Society Conference; and,

**WHEREAS**, Austin's and its neighboring communities' visible and tangible support of clean energy has been instrumental in Central Texas becoming home to 80 clean energy business enterprises that generate more than \$250 million in annual revenues and employ approximately 2,600 people; and,

**WHEREAS**, Austin is extremely well positioned to become the future Clean Energy Capital of the World; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

That the City Council directs the City Manager to have Austin Energy develop and incorporate strategies in its Strategic Plan that will ensure Austin remains a national and international leader in the development and use of clean energy; and,

**BE IT FURTHER RESOLVED:**

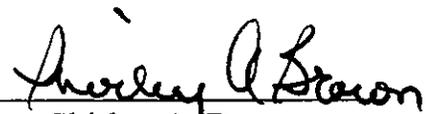
That Austin Energy's clean energy strategies shall feature at a minimum:

1. A strategic planning process that includes progressive and ambitious renewable energy and energy conservation programs and, the nation's leading Renewable Portfolio Standard.

2. An emphasis on economic development for successful development, recruitment and retention of clean energy business enterprises.
3. A risk management approach, which positions Austin Energy for a transition to a clean energy future through the successful identification and incorporation of promising energy technologies.
4. Mitigation of carbon emissions from current and future fossil fuel facilities to reduce the negative effects of global warming.

ADOPTED: August 28, 2003

ATTEST:



Shirley A. Brown  
City Clerk

**RESOLUTION NO. 030925-02**

**WHEREAS**, Austin's environmental stewardship is a community priority and is a major reason for our renowned quality of life; and,

**WHEREAS**, Austin's community-owned electric utility, Austin Energy, is a national leader in promoting and using environmentally-friendly renewable energy and energy efficiency programs; and,

**WHEREAS**, Austin Energy's GreenChoice program ranks number one in the nation in "green power" sales, with clean energy sales of more than half a billion kWh to customers since the program's inception in 2000; and,

**WHEREAS**, to meet the community's demand for clean energy, Austin Energy has purchased approximately 100 MW of renewables, about three percent of its overall energy resources, well on the way to meeting the 1999 Council-established goal of five percent renewables by December 31, 2004; and,

**WHEREAS**, deriving a large portion of Austin's electric power needs from sources such as natural gas, coal, and nuclear fission—which produce large amounts of either carbon dioxide or other environmental pollutants—may be considered inconsistent with Austin's environmental values and with the City's goal to become the Clean Energy Capital of the World; and,

**WHEREAS**, burning fossil fuels—coal, natural gas and oil—emits carbon dioxide (CO<sub>2</sub>) into the atmosphere where it builds up, blankets the earth and traps in heat, causing global warming; and,

**WHEREAS**, global warming is arguably the most pervasive environmental problem, with the potential for widespread damage to habitats, biodiversity, and life on earth; and,

**WHEREAS**, on August 28, 2003, Council directed the City Manager to have Austin Energy develop and incorporate strategies in its Strategic Plan that will ensure Austin remains a national and international leader in the development and use of clean energy; and,

**WHEREAS**, Council directed that those clean energy strategies would feature the nation's leading Renewable Portfolio Standard and mitigation of carbon emissions from current and future fossil fuel facilities to reduce the negative effects of global warming; **NOW, THEREFORE,**

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

That Austin Energy shall negotiate and execute a Memorandum of Understanding (MOU) with the World Wildlife Fund (WWF), to partner with them and other utilities in taking a responsible approach to global warming by supporting essential CO<sub>2</sub> emission reduction policies, including a “switch” from fossil fuels to more renewables within the electric generation portfolio; and,

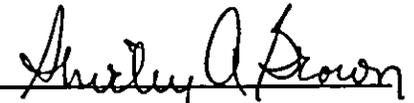
**BE IT FURTHER RESOLVED:**

That as part of the MOU, Austin Energy will:

1. Establish a goal to achieve a minimum of 20 percent of the energy in its portfolio mix from renewable sources by January 1, 2020; and,
2. Set a goal of increasing energy efficiency by 15 percent by 2020; and,
3. Support binding limits on national power sector CO<sub>2</sub> emissions.

ADOPTED: September 25, 2003

ATTEST:



Shirley A. Brown  
City Clerk



**Resource Management Commission**  
Amendments to Austin Energy's Proposed Energy Resource Plan  
November 12, 2003  
Vote: 7-0-0-0-2

**Motion by:** J. Hoffner

**Second by:** M. Kuhn

**For:** C. Barron, G. Hsieh, A. Martinez, K. Houser, J. Beckage

**Against:** 0

**Abstain:** 0

**Absent:** 0

**Vacant:** 2

**Motion:** Passed

**WHEREAS,** The Resource Management Commission has reviewed Austin Energy's Proposed Energy Resource Plan; and

**WHEREAS,** The Resource Management Commission has developed recommended amendments to Austin Energy's Proposed Resource Plan; and

**WHEREAS,** The Resource Management Commission supports the City's Commercial Energy Efficiency Programs and desires that these amendments be incorporated into Austin Energy's Proposed Resource Plan; and

**WHEREAS,** The Resource Management Commission reserves the right to introduce additional amendments to Austin Energy's Proposed Resource Plan, if necessary.

**THEREFORE, BE IT RESOLVED** that the Resource Management Commission recommends that the City Council approve Austin Energy's Proposed Resource Plan with the following recommended amendments, and include additional amendments after agreed upon by Austin Energy Management and the Resource Management Commission.

***A. Amendments with Long Term Implications. Those that should be carried out in a parallel path, but should not delay the implementation of any rebate programs.***

1. Austin Energy should work with the Commission to carry out a detailed study to determine the comprehensive value of peak, distributed generation with solar electricity. A study was carried out in 1994 that indicates that solar electricity is worth up to \$2/watt. The new study should include a comprehensive accounting for the values associated with the following but not necessarily limited to:
  - All environmental savings
  - Fuel savings
  - Economic development
  - Renewable Energy Credits
  - Transmission and Distribution savings
  - Price predictability and hedge against fuel price increases
  - Security and reliability
  - Time of use value
2. Austin Energy should adopt a formal interconnect guideline (or principle) that reduces barriers to allowing customers to connect. The features should include; only reasonable insurance requirements, a streamlined permitting process, and an interconnect contract that is easy to understand and execute.
3. Austin Energy should adopt clear, fair and simple interconnect standards and specifications for ensuring that solar electric installations are safe and reliable. The specifications should note UL, IEEE and NEC standards.
4. Austin Energy should commit to working with the Resource Management Commission for setting realistic short term and long-term goals for solar electric installations that contribute to effective economic development within the City of Austin.
5. Austin Energy should commit to a 10-year solar program.
6. Any rebates that are implemented should be retroactively available to qualified participants starting with the date of City Council approval of the Strategic Plan.

***B. Amendments, which should be included that affect the short-term requirements of the plan.***

1. Any rebate program should be streamlined and not involve a complicated process.

2. Austin Energy should study rebate programs being implemented by other utilities and states and design the Austin program using the best attributes of those programs while adding further innovations.
3. Rebates should be available for any type of solar electric generating technology such as concentrator, thermal, or PV, as long as it meets the AUSTIN ENERGY interconnection requirements including UL and IEEE standards.
4. The rebate program should start as soon as possible with design consideration taken to ensure that the program is meaningful and without flaws or loopholes.



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Approved, Adán Martínez, Chair

November 12, 2003