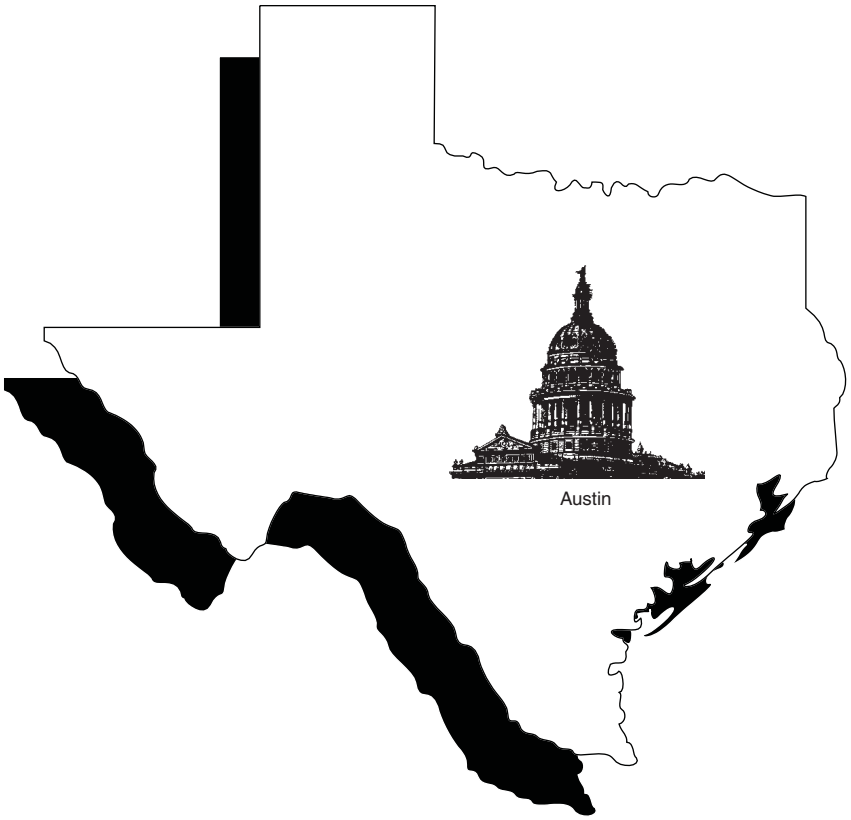
Sunset Advisory Commission



Texas Energy Coordination Council

Staff Report

2000

SUNSET ADVISORY COMMISSION

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In 1977, the Texas Legislature created the Sunset Advisory Commission to identify and eliminate waste, duplication, and inefficiency in government agencies. The 10-member Commission is a legislative body that reviews the policies and programs of more than 150 government agencies every 12 years. The Commission questions the need for each agency, looks for potential duplication of other public services or programs, and considers new and innovative changes to improve each agency's operations and activities. The Commission seeks public input through hearings on every agency under Sunset review and recommends actions on each agency to the full Legislature. In most cases, agencies under Sunset review are automatically abolished unless legislation is enacted to continue them. This report is the Commission staff's recommendations, which serves as the starting point for the Commission's deliberations.

TEXAS ENERGY COORDINATION COUNCIL

SUNSET STAFF REPORT

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SUMMARY

Summary

Overview

The Texas Energy Coordination Council has an important role to play in assisting the State in developing energy-related policies to improve Texas' approach to using cleaner energy sources and leading edge technologies. Sunset staff reviewed the Council in light of the state's concerns over clean air requirements, improved markets for renewable energies, and interest in new energy technologies and industrial processes. The Council has provided research to the Legislature, created an information clearinghouse, sought out research grants, and created two energy institutes. However, the review found that the Council has struggled in the past from a lack of executive leadership and excessive Council vacancies. In addition, due to overly broad statutory responsibilities, the Council does not have a clear mission and many of its functions are duplicated by other public and private entities.

The Sunset staff recommendation would assist the Council by narrowing its mission to a more focused set of duties and better position the Council to support the State's need to develop innovative energy-related policies. The Council would be continued for four years to allow another assesment of how well the Council has met its more focused mission. In addition, the Council's structure would be changed to better support its revised mission. A summary of the staff recommendation is outlined below.

Issue / Recommendation

Issue 1 The Council, Despite Limited Success, Should Have the Opportunity to Pursue a More Clearly Defined Mission.

Key Recommendations

- Continue the Texas Energy Coordination Council for four years.
- Redefine the Council's mission to focus on energy-related research and new technologies.
- Restructure the Council's composition to match its more focused mission.

Fiscal Implication Summary

These recommendations would have no additional fiscal impact to the State. The State could continue to fund the Council from available Oil Overcharge revenues

ISSUE / RECOMMENDATION

Issue 1

The Council, Despite Limited Success, Should Have the Opportunity to Pursue a More Clearly Defined Mission.

Summary

Key Recommendations

- Continue the Texas Energy Coordination Council for four years.
- Redefine the Council's mission to focus on conducting and supporting energy-related research and advancing new energy technologies.
- Restructure the Council's composition to best provide the expertise and guidance to match its more focused mission.

Key Findings

- The Council has several functions that continue to be of importance to the State.
- Many of the Council's duties duplicate those of other state agencies, offices, research institutes, and private entities, contributing to a lack of a clear mission.
- The Council has been unable to meet expectations on a wide range of energy-related mandates.
- The Council's composition may not best support those functions the Council should continue to perform.

Conclusion

The Texas Energy Coordination Council was established to provide high-level energy research and policy guidance. While these functions are increasingly important in a time of electric utility deregulation and concern for the state's air quality, the Council has had difficulty meeting its expectations. Significant overlap with other efforts also contributes to its low profile.

These recommendations would allow the Legislature to continue to have a location in state government for information and activities relating to renewable energy, energy efficiency, and new energy-related technologies. The Council would be better able to serve as a potential resource for the newly created Council on Environmental Technology. The State and the public would continue to have access to energy-related information through the web-based clearinghouse. The Texas Building Efficiency Institute would continue, but could be subject to further evaluation during the next Sunset review. Restructuring the Council would help ensure that its composition is more effective at guiding its redefined set of functions.

Support

Current Situation: The Council is responsible for research and policy guidance on energy issues.

The Council provides energy-related research and policy advice to the Legislature.

- The Council is a 12-member appointed body, staffed by three employees located in the University of Texas Center for Energy Studies at the J.J. Pickle Research Center. The Governor appoints seven members representing different sectors of the energy industry, and environmental and energy consumer interests; and five representatives of institutions of higher education serving as ex officio members. The Council members elect the Chair of the Council. The Council is funded by federal Oil Overcharge settlement dollars, which are administered by the State Energy Conservation Office (SECO) in the Comptroller's Office. Oil Overcharge funds are intended to pay for energy programs as indirect restitution to the public for alleged pricing violations by oil companies in the early 1970s.
- The Council provides energy-related research and policy guidance to the Legislature, on request, by producing specialized research reports, and regular biennial reports. The Council financially supports institutes such as the Texas Building Energy Institute, which promotes adoption of a statewide energy efficiency building code. The Council also provides a contact point for information on federal grant opportunities, university research activities, renewable energies, low pollution industrial processes, and cross-agency working groups on energy issues.
- The Council has overcome early problems with Executive Director and Council vacancies, and has several accomplishments relating to energy research and policy, which are listed in the textbox, *Texas Energy Coordination Council Accomplishments – FY 1994 - 2000*.

Texas Energy Coordination Council Accomplishments
FY 1994 – 2000

The Council accomplished the following tasks since it was created in 1994:

The Council reported to the Senate Natural Resources Committee on the future of the oil and natural gas industries in Texas; and to the Special Committee on Electric Utility Restructuring on market mechanisms to promote renewable energy.

The Council created the Energy Storage Technology Institute to develop uninterrupted power supply systems using flywheel technology. The Council's support of $100,000 resulted in securing $24 million in other research grants, yielding a spinoff company promoting these systems.

The Council secured a $176,000 Department of Energy "Industries of the Future" grant for research projects relating to low polluting fuels and industrial processes.

The Council established a Web site and clearinghouse for information relating to renewable energies and energy conservation.

Need for Agency Functions: Because of the importance of energy to the state's economy and environment, the State benefits from having a high-level focal point for considering energy issues.

The State has a continuing interest in promoting cleaner energy, renewables, and new energy technologies.

- The Council provides policy research to the Legislature on energy-related matters. This research has helped to guide state policies affecting the oil and gas industries in a time of declining production. It also informs policymakers about issues regarding the development of alternative energy sources to serve the state in the future.
- The Council promotes research and development of renewable energy and energy efficiency, by providing seed funds to foster commercialization in these areas. Through its funding of various institutes, its efforts have led to the successful spinoff of a company to develop uninterrupted power supply systems. The Council is currently trying to do the same with model energy building codes. The State has a growing interest in renewable energy, as expressed in the performance targets in the 1999 electric deregulation legislation.
- In its work with the U.S. Department of Energy, the Council helps develop information to shape decisions that affect the environment. Its "Industries of the Future" initiative is for research projects relating to clean-burning technologies and fuels to help the State comply with federal clean air requirements.
- The Council serves as a conduit for receiving federal funds for researching and promoting these new energy technologies.

Problem: The wide array of Council duties, and the Council's composition, contribute to a lack of a clear mission.

- Several agencies in Texas share responsibility for energy regulation and oversight, resulting in a fragmented and uncoordinated approach. A major area of overlap is between the Council and SECO, the entity within the Comptroller's Office that is responsible for administering the State's Oil Overcharge funds. The Council is the research and policy body, while SECO undertakes the actual energy conservation programs. However, both entities share significant responsibilities, including:
  - providing technical resources to institutionalize energy efficiency and sustainable building design and construction;
  - improving public awareness of the need for an energy conscious society and the public's role in making it happen; and
  - promoting the development and marketing of new energy technologies.
- Council activities are duplicated by other state agencies, universities, and private entities, especially in the area of refining existing energy

technologies. The specific areas of duplication in these and other areas are shown in the chart, *Texas Energy Coordination Council Functions, FYs 1994 to 2000*.

- The Council's broad statutory duties contribute to the Council's inability to develop a clear mission and set of core competencies. As recently as the summer of 1999, Council members expressed doubts about the Council's mission and its value to Texas citizens. Statements made by Council members during public meetings include "we need to dissolve....or fashion a role that is indeed useful to the state,"[1] and

Texas Energy Coordination Council Functions
FYs 1994 to 2000

Function	Work Product	Expenditures	Is the Function Provided Elsewhere?
Research and policy recommendations	Report: Oil and Gas, FY 2000	$50,000	Yes - Research Institutes Energy Industry Assn.
	Report: Renewable Energy, FY 1997	$19,179	
	Biennial Reports to legislature FYs 1999-2000	$20,063	
Private sector energy efficiency building code	Established institute, FY 1996	$422,000	No
Promote renewable energy	Helped fund Texas Renewables Roundup, FY 2000	$2,000	Yes - State Energy Conservation Office, State Agencies, Renewables Associations
Establish renewables clearinghouse	Established web site, FY 2000	n/a	Yes - State Energy Conservation Office, State Agencies, Renewables Associations
Seek grant funding	Industries of the Future Initiative FY 1999	$10,000	Yes - State Energy Conservation Office, State Agencies
	Solar and Wind Resource Assessment, FY 1995	$24,640	
Promote transfer of technologies	Established Energy Storage Technology Institute, FY 1994	$100,000	Yes - State Energy Conservation Office, Council on Environ. Technology, UT Texas Technology Incubator, Research Institutes
Coordinate energy Higher research	no work product	n/a	Yes - Research Institutes, Education Coordinating Board
Assess energy and environment	no work product	n/a	Yes - State Agencies, Research Institutes, Council on Environ. Technology
Establish working groups for energy use	no work product	n/a	Yes - State Energy Conservation Office, State Agencies
Conduct technical seminars	no work product	n/a	Yes - Industry Associations

"(The Council) has to find better ways to communicate what we're doing."[2]

- The Council's composition may not be best suited to accomplishing a more focused set of duties. The Council lacks sufficient representation of energy technology producers, which is currently limited to alternative fuels and renewable energy. In addition, the Council has only one seat for industrial energy consumer representation, yet this sector is the prime driver for the development of new lower polluting and more efficient energy technologies.

Council members have discussed the need to have a more focused mission.

<u>Problem:</u> The Council has been unable to meet expectations on a wide range of energy-related mandates.

- The Council has not spent all of the funds that it has been allocated. At the end of fiscal year 2000, the Council had unexpended balances of $229,000, more than one-third of its operating budget for the year. Despite having available funds, the Council has not produced a work product relating to its duty to assess the relationship between energy and the environment. The Council also had past unexpended balances that lapsed back to the Oil Overcharge fund, but Sunset staff was not able to determine the exact balances.

- The Council has not been able to coordinate energy research among universities, largely because its efforts are dwarfed by those of the Texas Higher Education Coordinating Board, which has considerably more resources to devote to this function. In fiscal year 1999, the Coordinating Board awarded $13 million to Texas universities for research in the areas of energy, environmental science, and manufacturing, compared with just $24,650 awarded by the Council.

The Council has been limited in its ability to coordinate energy research among universities.

- The Council has not been able to achieve the return it expected on its investment in the Texas Building Efficiency Institute. The Council created the Institute in 1996 in response to legislative direction to promote the adoption of a statewide energy efficiency building code. As of November 2000, only 30 of 600 municipalities with the authority to adopt building codes have adopted the Model Energy Code. The Council has spent more than $400,000 in seed money with the expectation that the Institute would become self sufficient. However, the Institute has secured just one federal grant of $74,000 in four years.

- The recent creation of a separate entity for energy-related efforts calls the Council's effectiveness into question. Despite a statutory responsibility to assess the interrelation between the environment and energy, the Council was recently overlooked in the creation of a new Council on Environmental Technology. This new Council was announced in August 2000 and is an initiative of the Lieutenant Governor to assemble university researchers to assess and develop

innovative technologies to help the State meet federal clean air requirements.

1.1 Continue the Texas Energy Coordination Council for four years.

Recommendation

Change in Statute

This recommendation would place the Council under Sunset review in four years, at which time, it should be reviewed based on its ability to meet its narrowed mission, as outlined in the recommendation below.

1.2 Redefine the Council's mission to focus on conducting energy-related research and advancing energy technologies.

This recommendation would require changing the Council's mission to focus on the following functions:

- providing research and policy guidance to the Legislature on renewable energy, energy efficiency, new energy technologies, and the relationship between energy and the environment;
- pursuing state, federal, and private sector research grants, and funding sources;
- coordinating collaborative efforts with other entities; and
- maintaining a renewables and energy efficiency Web site, and information clearinghouse.

In addition, the statutory directive to establish an institute for building energy efficiency throughout the state would remain. The Council's functions relating to coordinating energy research among state agencies and universities, establishing working groups for energy use, conducting technical seminars, and overseeing performance contracting for state agency energy conservation would be eliminated. These activities are currently being conducted by other state agencies, such as the Texas Higher Education Coordinating Board, and SECO, which will continue to have these responsibilities.

1.3 Restructure the Council's composition to provide expertise and guidance to match its refined mission.

This recommendation would require that the Council's membership be restructured to improve its ability to meet the requirements of the functions outlined in recommendation 1.2. The restructured Council would include three additional members including one for energy technology producers, such as fuel cells or bio-fuels, and two seats for industrial energy consumers. As a result, the Council would have 15 members.

Management Action

1.4 The Council should seek ways to support, and partner with, the recently created Council on Environmental Technology.

This recommendation could allow the Council to support continuing efforts to develop new lower polluting energy technologies by seeking to serve as administrative support for the new Council on Environmental Technology. The Texas Energy Coordination Council would be able to assist with setting research agendas, moving new technologies to the market, securing research grants, and providing other information to the new Council on Environmental Technology. Legislative leadership would be able to further define the potential interaction between the two councils.

Impact

These recommendations would allow the Legislature to continue to have a location in state government for information and activities relating to renewable energy, energy efficiency, and new energy-related technologies. The Council would be better able to serve as a potential resource for the newly created Council on Environmental Technology. The State and the public would continue to have access to energy-related information through the Web-based clearinghouse. The Texas Building Efficiency Institute would continue, but could be subject to further evaluation during the next Sunset review. The restructuring of the Council would help ensure that the Council's composition is more effective at guiding the Council's redefined set of functions.

Fiscal Implication

The recommendation to add three members to the Council would have a small cost relating to these member's travel and expenses for attending Council meetings. The other recommendations would have no additional fiscal impact to the State. The State could continue to fund the Council from available Oil Overcharge revenues. Sunset staff estimates that approximately $200,000 of these revenues could cover the costs of continuing a limited set of Council functions. While revenues for statewide funding of energy related programs are declining, the State will receive some limited amounts of Oil Overcharge revenues. For fiscal year 2001, Texas may receive only $1.5 million in Oil Overcharge revenues, down from $1.8 million in fiscal year 2000. Legislative appropriations are contingent upon receiving these funds. SECO estimates that, over the next five years, the State may receive only $3 million of the specific Oil Overcharge funds, which pay for many energy-related programs.

While Oil Overcharge funds are limited, Sunset staff identified several options for continuing the Council's revenues, including:

- Oil Overcharge LoanSTAR account annual interest, approximately $3.2 million per year;
- Oil Overcharge funding that would have been carried over by the Council;
- unobligated Oil Overcharge funds and unsigned contracts administered by SECO; and
- other federal grant opportunities.

The Council should continue to seek opportunities for outside funding sources, such as federal grants, and the Council's ability to become self-sustaining should be evaluated when the Council is under Sunset review again.

[1] Texas Energy Coordination Council, *Open Meeting Minutes* (Austin, Texas September 16, 1999), p. 9.
[2] Texas Energy Coordination Council, *Open Meeting Minutes* (Austin, Texas, July 7, 1999), p. 7.

Across-the-Board Recommendations

Texas Energy Coordination Council	
Recommendations	**Across-the-Board Provisions**
	A. GENERAL
Not Applicable	1. Require at least one-third public membership on state agency policymaking bodies.
Not Applicable	2. Require specific provisions relating to conflicts of interest.
Apply	3. Require that appointment to the policymaking body be made without regard to the appointee's race, color, disability, sex, religion, age, or national origin.
Apply	4. Provide for the Governor to designate the presiding officer of a state agency's policymaking body.
Apply	5. Specify grounds for removal of a member of the policymaking body.
Apply	6. Require that information on standards of conduct be provided to members of policymaking bodies and agency employees.
Apply	7. Require training for members of policymaking bodies.
Apply	8. Require the agency's policymaking body to develop and implement policies that clearly separate the functions of the policymaking body and the agency staff.
Apply	9. Provide for public testimony at meetings of the policymaking body.
Not Applicable	10. Require information to be maintained on complaints.
Apply	11. Require development of an equal employment opportunity policy.
Apply	12. Require information and training on the State Employee Incentive Program.

COUNCIL INFORMATION

Council Information

Council at a Glance

The Texas Energy Coordination Council (the Council) was established in 1997 to conduct research on the oil and gas industries, renewable and alternative energies, conservation of energy; and to help bring new energy technologies to the market. The Council's mission is to facilitate the transfer of technology and research findings between the public and private sectors with the goal of establishing a sustainable, efficient energy supply, and to position Texas as a leader in renewable energies.

Texas Energy Coordination Council on the Internet

Information about the Texas Energy Coordination Council is available at:

www.tecc.ces.utexas.edu

The Council's major responsibilities include:

- assisting legislative committees with specific charges by conducting research and issuing reports;
- providing start-up funding for public-private collaborations to develop and promote energy conservation, and to develop new technologies;
- pursuing grant funding for research projects on renewable energies, energy efficient technologies, and industrial practices; and
- participating in, and conducting meetings on energy issues involving the federal Department of Energy, state agencies, universities, and private industry.

Key Facts

- **Funding**. The Council is funded by federally administered Oil Overcharge settlement dollars, and spent approximately $340,000 in fiscal year 2000.
- **Staffing.** The Council is served by a staff of three including the Executive Director, a web developer, and one administrative staff.
- **Location**. Council staff are located at the University of Texas at Austin, J.J. Pickle Research Center.

Major Events in Agency History

In 1993, the Legislature created the Texas Committee on Energy Policy as a high-level body consisting of the Governor, Lieutenant Governor, and the Speaker of the House, to advise the State on energy policy. The Legislature also created the Texas Energy Coordination Council as a research arm of the Committee. In 1997, the Legislature discontinued the Committee and re-authorized the Council as a separate entity. Further changes to the Council's statutes included removing the duties to develop a statewide energy policy, and to review university contracts for energy efficiency improvements. The Council gained authority to coordinate energy research at state agencies, and provide policy guidance to the Legislature.

Organization

The Council was originally created to help develop a statewide energy policy.

Policy Body

The Council is composed of 12 members, with the Governor appointing seven members representing different sectors of the energy industry, and environmental and energy consumer interests; and five representatives of institutions of higher education serving as ex officio members. The chart, *Texas Energy Coordination Council Members*, identifies the members, which entity they represent, and their place of residence. Members serve at the pleasure of the Governor, or until termination of the member's employment with the represented entity. Council members annually elect a member to serve as presiding officer, and meet quarterly. In fiscal year 2000, the Council met four times.

Texas Energy Coordination Council Members

Name	Representation	Residence
Donald W. Niemiec, Chair	Oil Industry	Ft. Worth
Dr. Dan Turner, Vice-Chair, ex officio	Texas A&M University	College Station
Glenda Callaway	Environmental Consumer	Houston
Charles Patton	Electric Utility Industry	Austin
James A. Tramuto	Natural Gas Industry	Houston
Douglas P. Whipple	Industrial Energy Consumer	Freeport
Jo Ann Mudgett	Alternative Fuels	Pinehurst
Dr. David Allen, ex officio	University of Texas At Austin	Austin
Dr. Glenn Aumann, ex officio	University of Houston	Houston
Dr. Vaughn Nelson, ex officio	West Texas A&M University	Canyon
Dr. Walt Oler, ex officio	Texas Tech University	Lubbock
Vacant	Renewable Energy Industry	

Staff

The Council's administrative location, and structure, is unusual. The Council's staff is employed by the University of Texas at Austin, which also provides office space and other administrative support. Because the Council has only three employees, Sunset staff did not conduct trend analysis of the Council's workforce composition for equal employment opportunity purposes. The Council has the same Equal Employment Opportunity policy as the University of Texas at Austin.

FUNDING

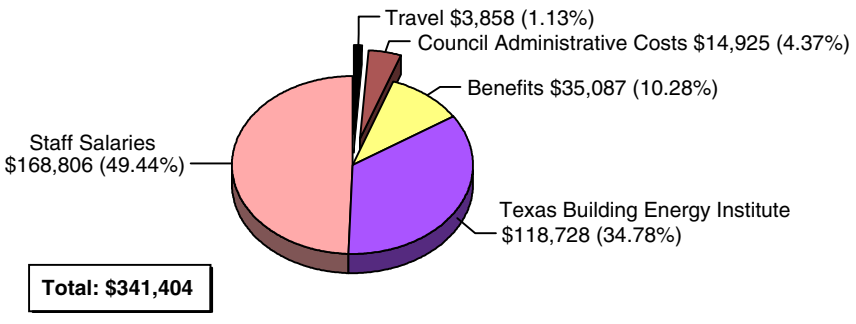
Revenues

In fiscal year 2000, the Council operated on revenues of $646,451 in Oil Overcharge funds passed through the State Energy Conservation Office (SECO). The Council receives its funding through a contract between SECO and the University of Texas at Austin. Oil Overcharge funds are administered by SECO, located in the Comptroller's office, which contracts with state agencies to administer qualifying energy-related programs. The contract with the University is amended as more Oil Overcharge funds become available.

Expenditures

The chart, *Texas Energy Coordination Council Expenditures - FY 2000*, shows Council spending for fiscal year 2000. The Council spent $341,404 with almost half of that amount paying for salaries, and one-third going to support the Texas Building Energy Institute. The unexpended balance of $305,047 and an additional $270,751 in fiscal year 2001 Oil Overcharge revenues gives the Council a budget of $575,798 for fiscal year 2001. The Council did not have significant purchases for Sunset staff to evaluate purchases from Historically Underutilized Businesses.

Texas Energy Coordination Council Expenditures FY 2000



COUNCIL OPERATIONS

The Council performs many activities, including:
- conducting research for the Legislature;
- providing seed funding for institutes; and,
- pursuing grants for research projects.

The Council's primary role is to conduct research on energy-related issues and report the results of that research to the Legislature. The Council also promotes energy efficiency in building requirements, renewable energies, and serves as a contact point with the federal Department of Energy. To meet these goals, the Council carries out the following activities.

Reports to the Legislature The Council assists legislative committees with energy-related charges by conducting research on energy topics. Council staff reported on market-based incentives to encourage the development of renewable sources of electric power, on the potential elimination of the oil and gas severance tax, and on other issues relating to the future of the oil and gas industries in Texas. To produce a report, Council staff hold public hearings and take testimony from academics, industry representatives, state agencies, and other interested groups. In addition, staff conducts independent research and receives guidance from the Council on the report's focus and final recommendations. In addition to special research reports, the Council also reports biennially to the Legislature on the Council's activities, and on a variety of energy-related topics.

Seed Funding for Institutes The Council provides start-up funding for public-private joint venture research institutes. The purposes of these institutes are to promote aspects of energy efficiency, renewables, or new energy technologies. Council funding is intended to support these institutes until other funding sources can be developed, or until the private sector can provide the activity.

In 1996, the Council created the Texas Building Energy Institute, at the direction of the Legislature, to promote adoption of a statewide residential energy efficiency code by individual cities. The Institute also holds conferences on building technologies and standards for hot climates, and provides public information on efficient building practices. The Council has provided approximately $400,000 in funding to the Institute since 1996.

In 1994, the Council provided $100,000 in seed funding to create the Energy Storage Technology Institute to support research on flywheel energy storage technologies, and other technologies such as fuel cells. For example, the Institute pursued research on storing energy from railway locomotives in a magnetic flywheel system, which releases the electrical energy when needed to supplement locomotive power. The Institute was successful in securing and additional $24 million in storage

technology research grants from the Department of Defense and the Federal Railroad Administration. The Institute became a self-supporting, private entitity in 1998, and no longer operates as an Institute.

Pursuing Federal Grants The Council pursues federal grants to fund special projects. For example, in fiscal year 2000, Council staff secured $176,000 from the Department of Energy for a "Texas Industries of the Future" research project. Under the grant, the Council will target the petroleum, chemical, agriculture, and forestry industries to propose technologies and long-term strategies that reduce pollution in industrial processes and maximize use of bioenergy resources. The Council will also form an advisory committee to develop a Texas-specific plan to get greater commercial sector involvement with lower polluting technologies and energy resources.

The Council provides a forum for presentations by industry, technology manufacturers, energy producers, and public entities.

Workgroup Participation and Outreach Council staff organizes and participates in several workgroups and special presentations relating to energy efficiency, renewable energy sources, and new technologies. For example, Council staff hosted a meeting on combined heating and power (co-generation), with participation by a national association, private industry, the Department of Energy, and other Texas state agencies. Council staff also attend working groups such as the State Agency Energy Advisory Group, and provide input on state agency energy efficiency. The Council also serves as point of contact, and maintains a Web site, for information on renewables, energy efficiency, and low polluting technology.

APPENDICES

Appendix A

Alternative Energy Sources and New Technologies

Alternative Energy Sources

Alternative and renewable energy sources are more feasible in energy markets due to improved technologies, increasingly competitive pricing, and pressures to reduce pollution levels. These types of energy sources include the following:

Bioenergy – uses organic matter (biomass) such as agricultural byproducts to produce chemicals and fuels, and methane gas from landfills to generate energy.

Ocean – uses wave and tidal power, or temperature differences with thermal energy conversion systems, to generate electricity.

Wind – uses wind energy systems such as turbines to generate electricity.

Solar – uses sunlight and photovoltaic cells, or solar thermal processes, to generate light, heat and electricity.

Geothermal – uses heat, such as steam, stored in the earth for heat pumps and electrical generation.

Hydro power – uses flowing water to generate electricity.

New Technologies

New technologies and materials are helping to create new energy sources, energy storage devices, and industrial processes, that have greater efficiencies and reduced pollution levels. Examples of these technologies are provided below.

Fuel Cells – uses electrolytic conversion to extract power from hydrogen, with almost no pollution and, produces water as a by-product.

Co-generation – also known as combined heating and power (CHP), captures waste heat from industrial processes to generate electric power. While CHP is not a new technology, there is growing interest to expand the use of CHP.

Micro turbines – uses high-speed natural gas fired turbines to generate electricity for on-site use.

Fly-wheel storage – uses high-speed flywheels to store and release energy, for example to power railway locomotives.

Appendix B

Staff Review Activities

The Sunset staff engaged in the following activities during the review of the Texas Energy Coordination Council.

- Worked extensively with Council's staff (executive management).
- Attended Council meetings where testimony was given on the Council's charge to report on the future of the oil and gas industries in Texas, and other issues.
- Attended public-private working group meetings relating to state agency energy efficiency, low polluting industrial processes, and new energy technologies.
- Attended the Texas Renewables Roundup, a demonstration fair to visit with attendees and discuss issues involving renewable energy and energy efficiency.
- Conducted interviews and solicited written comments from groups and individuals regarding their ideas and opinions about the Texas Energy Coordination Council and the State's role in addressing energy issues.
- Met with legislative staff regarding the Texas Energy Coordination Council.
- Researched how other states administer their Oil Overcharge funded energy offices.
- Met with staff of other state agencies including the Legislative Budget Board, State Energy Conservation Office, and the General Services Commission.
- Reviewed documents and reports, state statutes, legislative reports, previous legislation, and literature on energy issues.

Sunset Review of the Texas Energy Coordination Council

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