

**PROGRAMS OF THE GOVERNOR'S ENERGY MANAGEMENT CENTER**  
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**ABSTRACT**

The 70th Texas Legislature transferred the Energy Efficiency Division of the Public Utility Commission to the Governor's Office in September 1987 and directed the Governor's Energy Management Center (GEMC) to perform energy management services for state agencies and universities. The major new tasks include revision of the State Building Standards for Energy Efficient Construction, the possible establishment of a revolving loan financing mechanism using oil overcharge funds for energy retrofits in state buildings, and direct engineering and technical assistance to agencies on topics ranging from cogeneration to utility billing analysis. This paper describes those services and outlines how agency energy managers and consulting engineering firms are helping reduce the state's \$200 million annual utility bill.

**INTRODUCTION**

The mission of the Governor's Energy Management Center is to encourage, instruct, and assist Texans in the management and control of energy costs as part of an overall energy management strategy of cost containment through energy efficient practices and technologies. The State Energy Conservation Plan (SECP), funded with federal funds and oil overcharge refunds, provides a comprehensive program of training and engineering technical assistance for a wide target audience.

The objectives of the SECP are to minimize utility related costs and preserve Texas' depletable energy resources. Added benefits are the reduction in the nation's growing dependence on foreign oil and a reduction in the need for tax supported utility expenditures in public buildings.

**BACKGROUND**

Since 1978, programs and staff, now located in the Governor's Energy Management Center, have provided energy management services to Texans. The 70th Legislature, Second Called Session (1), transferred the Energy Efficiency Division of the Public Utility Commission to the Governor's Office and assigned several new energy management functions to its staff. The new functions include: administering over \$250 million in oil overcharge funds returned to the state on behalf of consumers of petroleum products that were aggrieved by pricing violations, and energy management and assistance for state agencies and institutions. Many of the new activities assigned to the Governor's Energy Management Center were previously carried out on a voluntary basis under the auspices of the federally funded State Energy Conservation Plan (SECP).

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Article Two of the Oil Overcharge Restitutionary Act (1), passed by the 70th Texas Legislature, created several new energy management duties directed at state agencies and institutions of higher education. To provide for a cohesive program of engineering, education, information, and data collection, the State Agencies Department was formed in the GEMC.

The major GEMC functions assigned to the State Agencies Department include:

- Develop state building energy conservation standards,
- Provide energy management services,
- Track energy consumption,
- Management plan review,
- Provide technical assistance in cogeneration,
- Conduct energy management education, and
- Finance energy efficiency projects.

These functions are performed by professional staff engineers and supplemented through consulting engineering contracts. Emphasis is placed on institutionalizing activities and programs that can be implemented by individual agencies and their professional energy management staffs. The department's role is similar to that of a corporate energy management department which provides resources, policy direction, and needs assessment for an organization with over 11,000 buildings and \$200 million annually in gas, electric, and thermal energy bills.

**State Building Energy Design Standards**

In 1977, the state adopted Building Energy Conservation Design Standards for all new state construction based on the ASHRAE Technical Standard 90-75. The Oil Overcharge Restitutionary Act directs the Energy Management Center to adopt and publish energy design standards for all new state buildings (2). These standards must be based upon performance and procedural standards and must be updated biennially. The Center for Energy Studies at the University of Texas at Austin will complete the first major draft of the new standards for external review during the summer of 1988. The proposed building standards will be based upon the new ASHRAE 90.1P technical standard and should be in place for use by state design professionals by January 1989.

## Energy Management Services

The GEMC provides a wide range of energy management and auditing services. The major services are:

- Energy audits of state facilities,
- Training of state agency personnel in energy management practices and techniques,
- Agency utility bill analyses,
- Technical assistance to the state auditor's office regarding utility bills and energy management practices,
- Technical assistance to state agencies regarding third-party financing, and
- Assistance to state agencies relating to the purchase of natural gas, water, and electricity.

## Energy Consumption and Management Plan Review

All state agencies and institutions that are appropriated funds for utilities are required to submit comprehensive energy management plans to the GEMC for review. This requirement includes agencies that occupy lease space. The department is also required to collect semi-annual data on the cost to heat and cool state structures. Twenty-five agencies with the greatest utility costs are asked to report utility data to the Governor on a quarterly basis.

## Technical Assistance Regarding Cogeneration

Preliminary engineering feasibility analysis for cogeneration at state agencies, schools, hospitals, and universities is conducted by the Texas Energy Systems Laboratory under contract to the GEMC. Both central plant and packaged system options for single buildings are analyzed. Staff provides administrative and technical assistance to the newly formed State Cogeneration Council (3), which must approve or disapprove all state owned cogeneration installations. This six member group also provides technical assistance and information on cogeneration to state agencies and universities.

## Energy Management Education

Training for state personnel is provided through a series of energy management workshops. The workshops cover a variety of topics, from "Lighting Systems" to "Selection of Energy Management Systems." Special workshops on energy performance audits in state agencies are provided to the State Auditor's Office. Training for budget examiners and agency financial personnel also is provided.

## Energy Efficiency Projects and Financial Programs

The GEMC also may fund demonstration projects of commercially available energy management techniques. The first project selected for funding is a one megawatt, central plant cogeneration system

for the Austin State Hospital.

Subject to final approval by the U.S. Department of Energy, the GEMC will establish a \$48 million revolving loan fund for energy efficient projects in state agencies and institutions. Projects must be recommended through an engineering audit by the GEMC and must have a payback of four years or less. More than \$42 million in retrofits already identified through audits conducted by the Energy Efficiency Division of the Public Utility Commission will be the first efficiency measures considered for funding.

## FUTURE PROGRAMS

The GEMC will continue to expand existing programs to meet the needs of state institutions. Programs under consideration for future implementation are: a boiler tune-up program, a workshop for developing effective energy management programs, and an energy accounting and management software. State institutions must follow the lead of industry and commercial building operators in utilizing their facilities efficiently, with assistance provided by the new GEMC.

## REFERENCES

1. Oil Overcharge Restitutionary Act, Article 4413, 56, Vernon's Civil Statutes, Effective September 1, 1987.
2. Government Code, Title 4, Section 447.001, Vernon's Civil Statutes, Effective September 1, 1987.
3. State Cogeneration Council Act, Article 4413, Sec. 55, Vernon's Civil Statutes, Effective September 1, 1987.