SCHOOLS/LOCAL GOVERNMENT ENERGY MANAGEMENT PROGRAM

For

DIMMITT
INDEPENDENT SCHOOL DISTRICT
Dimmitt, Texas

An Energy Efficient Partnership Service
of
COMPTROLLER of the STATE of TEXAS
STATE ENERGY CONSERVATION OFFICE
111 E. 17th Street
Austin, Texas 78774

Professional Engineering Services By:

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1.0 EXECUTIVE SUMMARY:

This **Energy Efficient Partnership Service** is provided to public school districts and hospitals as a portion of the state's ***Schools/ Local Government Energy Management Program***; a program sponsored by the **State Energy Conservation Office (SECO)**, a division of the **State of Texas Comptroller of Public Accounts**.

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Austin, Texas 78774

The service assists these public, non-profit institutions to take basic steps towards energy efficient facility operation. Active involvement in the partnership from the entire administration and staff within the agencies and institutions is critical in developing a customized blueprint for energy efficiency for their facilities.

In March 2009, **SECO** received a request for technical assistance from *Les Miller*, Superintendent for Dimmitt I.S.D. **SECO** responded by sending **ESA Energy Systems Associates, Inc.**, a registered professional engineering firm, to prepare this preliminary report for the school district. This report is intended to provide support for the district as it determines the most appropriate path for facility renovation, especially as it pertains to the heating and cooling systems around the facility. It is our opinion that significant decreases in annual energy costs, as well as major maintenance cost reductions, can be achieved through the efficiency recommendations provided herein.

This study has focused on energy efficiency and systems operations. To that end, an analysis of the utility usage and costs for **Dimmitt ISD,** (hereafter known as DISD) was completed by **ESA Energy Systems Associates, Inc**., (hereafter known as *Engineer*) to determine the annual energy cost index (ECI) and energy use index (EUI) for each campus or facility. A complete listing of the Base Year Utility Costs and Consumption is provided in Appendix IV of this report.

Following the utility analysis and a preliminary consultation with Mr. Miller, a walk-through energy analysis was conducted throughout the campus. Specific findings of this survey and the resulting recommendations for both operation and maintenance procedures and cost-effective energy retrofit installations are identified in Section 6.0 of this report.

We estimate that as much as **$34,500** may be saved annually if all recommended projects are implemented. The estimated installed cost of these projects should total approximately **$284,100**, yielding an average simple payback of **8-1/4** years.

SUMMARY TABLE:

Recommended Project	Estimated Annual Energy Cost Avoidance	Estimated Installation Cost	Predicted Simple Payback Period (Years)
HVAC Renovation	*$19,100*	*$191,100*	*10 Years*
Lighting	*$15,400*	*$ 93,000*	*6 Years*
Total:	**$34,500**	**$284,100**	**8-1/4**

(See Section 6.0 for a detailed description of each recommended project.)

Although additional savings from reduced maintenance expenses are anticipated, these savings projections are not included in the estimates provided above. As a result, the actual Return of Investment (ROI), for this retrofit program should be even faster than noted within these calculations.

Our final "summary" comment is that **SECO** views the completion and presentation of this report as a beginning, rather than an end, of our relationship with **DISD**. We hope to be ongoing partners in assisting you to implement the recommendations listed in this report. Please call us if you have further questions or comments regarding your Energy Management Issues.

*ESA Energy Systems Associates, Inc. James W. Brown (512) 258-0547

2.0 ENERGY ASSESSMENT PROCEDURE:

Involvement in this on-site analysis program was initiated through completion of a Preliminary Energy Assessment Service Agreement. This PEASA serves as the agreement to form a "partnership" between the client and the State Energy Conservation Office (SECO) for the purposes of energy costs and consumption reduction within owned and operated facilities. After receipt of the PEASA, an on-site visit was conducted by the professional engineering firm contracted by SECO to provide service within that area of the state. A summary of the *Partner's* most recent twelve months of utility bills was provided to the engineer for the preliminary assessment of the Energy Performance Indicators. ESA then toured the facilities to evaluate changes in maintenance, operations and/or equipment which would produce potential savings in energy consumption and cost.

SECO assisted Dimmitt ISD by providing an Energy Partnership Survey in 1997. At the time, all of Dimmitt's facilities were below regional averages for both energy consumption and energy cost per square foot. Recommendations included a lighting renovation from T12 to T8 fluorescent lamps and electronic ballasts and the installation of an energy management control system.

3.0 CAMPUS DESCRIPTIONS:

Dimmitt ISD consists of three separate main buildings located on one K-12 campus. The district began construction on a new High School in June 2008 that will open for the 2009-2010 school year. The new building will house approximately 22 classrooms, two gymnasiums, a cafetorium and a Library/Office Area.

The current High School is being renovated to become the Middle School and the existing 1929 Middle School will be demolished. The elementary school will remain with only minor renovations at the present time.

Elementary School

Originally constructed in 1956, this single story brick clad structure has single pane windows and a flat built-up roof. The HVAC equipment is almost exclusively gas-fired heating rooftop units (RTUs) that were all replaced within the last 10 years. The units are controlled with a combination of programmable and conventional thermostats. Some of the locations of the thermostats are not beneficial to accurate air temperature sampling and these units or their replacement room sensors should be relocated to improve unit control and occupant comfort. . As pictured to the right, the Kitchen area thermostat is located behind a door and adjacent to a refrigerator. *We recommend the district consider installing a direct digital control (DDC) energy management system to provide increased control over these units as well as the units both at the existing and new high schools.*

The roof of this area is a combination of flat built-up roof that supports RTUs to cool the spaces below and a sloped roof that has limited the options to through-the-wall (TTW) packaged units for the classroom spaces on that side of the building. As can be seen in the picture to the right, the eight TTW units are designed with an inherent inefficiency in regards to the location of the outside air intake. It is positioned immediately above the coil fins that reject heat from the space, therefore taking in higher-than-ambient temperature outside air that must be further conditioned to maintain comfort in the space. *These units have natural gas fired heating sections and therefore could be easily retrofit to more efficient split systems if an area just inside the exterior wall could be converted to a furnace closet.*

There is currently one wing of the Elementary campus that serves the existing Junior High population as a cafeteria and classroom section. After the Junior High building is demolished, plans for this area are not clearly defined; if it is retained for use by the district, the lighting and HVAC should be considered for renovation.

The Elementary population Cafeteria and Kitchen exhaust hood at the Kitchen does not have make-up air supplied to prevent the unit from exhausting conditioned air to the exterior of the building. *We recommend modifying or replacing the existing unit to supply makeup air.*

The lighting system consists of a combination of T12 and T8 linear fluorescent fixtures. The district has begun a process to retrofit the T12 fixtures with T8 lamps and electronic ballasts; the Maintenance Department estimates that they are about 50% complete with the retrofit in the facility. The corridor renovation has already been completed; the work has now progressed into the classroom and teaching areas. *We recommend the district complete this renovation as the lamps and ballasts for a T12 lighting system are soon to be phased out of production.* The retrofit will also help DISD comply with the lighting renovation directives of House Bill HB3693 passed in June 2007.

There are several storage and lobby areas that have incandescent lamps, such as the Elementary Cafeteria Lobby which has 10 each 200-watt incandescent flood lamps in operation. Incandescent lamps are the least efficient lamp types to operate in a lighting system. *These should be replaced with compact fluorescent lamps (CFLs) or with new linear fluorescent fixtures. In addition, we recommend that the district retrofit the existing incandescent exit fixtures with LED lamps or replace the exit fixtures with LED units altogether.* These new fixtures consume 10% of the power requirements of the incandescent units and last for up to 100,000 hours.

Exterior lighting is designed to be controlled with photocell(s), but as was observed during the survey, not all of the lights were effectively turned off by those devices. *We recommend that the district explore the nature of the failure for the current photocell to maintain control over the exterior lights and repair or replace any equipment necessary to correct the condition.*

Weatherstripping has not held up well where most of the doors have expanded and now rub together upon operation. Maintenance is working on the problem, but in the meantime there is little weatherstripping protecting against air and dirt infiltration into the building.

Filter maintenance is currently performed on all units every three months using rolled filter media. This procedure is adequate to protect the units and can be continued.

High School
Originally constructed in 1962, this building is to become the Middle School after the new High School is completed.

The Auditorium is conditioned with a combination of 1960s chillers and a relatively new BAC cooling tower. The chillers, Trane 2F5A88s (440V 63 RLA) pictured to the right, are difficult to service and do not operate with any degree of efficiency whatsoever. The Auditorium and Technical Shops (Ag, Wood and Metal) are heated with terminal units provided steam from two each 1960s Pacific Steel Boiler. The units require 2,870 MBH natural gas input to operate. Between the chillers and boilers in this area, the district estimates they spend $1200 per month in water treatment to keep the systems running.

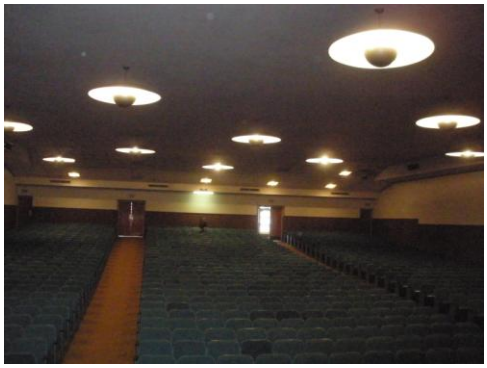
The 1980s addition to the building is conditioned with rooftop units that were installed with the addition. These units are nearing the end of their 15-20 year estimated lifespan and should be considered for replacement in the near future.

The building requires the completion of the T12 to T8 lighting retrofit that the staff has already begun to implement. Light levels at the offices and some classrooms were measured at 33-40 footcandles. Standards developed by the Illumination Engineering Society of North America (IESNA) require 50 footcandles in classroom and office spaces. This renovation will produce approximately 18% more light from the existing fixtures while requiring 20% less energy to do the work. This increase will bring the office and classroom spaces up to the standard without requiring additional fixtures be installed in the space.

Due to a need to comply with ADA access to areas around the Band Hall, the floor level will beraised approximately 48” and brought level with other floors on this level. This will effectively lower the ceiling from the current 14’ to about 10’ above finished floor. The space is illuminated with twenty each 4-lamp fixtures that may be excessively bright when the fixtures

are retrofit to T8 lamps with electronic ballasts. The district may wish to consider replacing the lighting system at the Band Hall with 3-lamp T8 fixtures or renovating the existing fixtures to 2 each 3150 lumen output lamps with a high ballast factor ballast (1.0 to 1.15) in order to not produce glare for the students.

In addition to the fluorescent fixture renovation, a large energy savings opportunity exists in the Auditorium. As pictured to the right, the area is illuminated with thirteen each 750-watt incandescent lamps and twelve each 200-watt incandescent fixtures on the stage. This system contributes 12 kW towards the measured peak demand every time these fixtures are turned on. *We recommend the district consider new fixtures for the auditorium and stage.*



There would normally be a daylighting strategy applied at the cafeteria to not use artificial lighting when sufficient ambient light enters through the windows. However, at some periods of the day, too much light comes through the windows requiring that the blinds be closed. The blinds are reported to have a tendency to fall down when the mechanisms are operated so the district chooses to leave the blinds closed all of the time. *We recommend the district replace the blinds with vertical units that will allow the daylighting strategies to be implemented again.*

At the gymnasium, the district has replaced 10 each metal halide fixtures over the court with new T5 linear fluorescent fixtures. These fixtures off significant energy savings over the metal halide fixtures in that they can be turned off during unoccupied periods and instantly turned back on when needed. Metal Halide fixtures require up to 5-10 minutes to re-strike and school districts tend to leave them on for 10-12 hours per day to avoid the slow startup period. DISD has not realized the energy savings from this opportunity yet as there remain 8 each metal halide fixtures in the gym that have not yet been replaced. *We recommend that the district complete this renovation and initiate a policy to turn off the gym lights whenever the gym is not occupied.*

At the Technical Shop areas, the district has a combination of radiant gas heaters and open flame unit heaters. The open flame unit heaters are located in the Wood Shop, where the airborne sawdust can be a combustion hazard and the radiant heaters in the other areas. We recommend that the unit heaters be replaced with radiant type heaters in the wood shop area for safety reasons and improved overall occupant comfort.

4.0 ENERGY PERFORMANCE INDICATORS:

In order to easily assess the *Partner's* energy utilization and current level of efficiency, there are two key "Energy Performance Indicators" calculated within this report.

1. **Energy Utilization Index**

The Energy Utilization Index (EUI) depicts the total annual energy consumption per square foot of building space, and is expressed in "British Thermal Units" (BTU's).

To calculate the EUI, the consumption of electricity and gas are first converted to equivalent BTU consumption via the following formulas:

ELECTRICITY Usage
[Total KWH /yr] x [3413 BTUs/KWH] = _____ BTUs / yr

NATURAL GAS Usage
[Total MCF/yr] x [1,030,000 BTUs/MCF] = _____ BTUs / yr

After adding the BTU consumption of each fuel, the total BTU's are then divided by the building area.

EUI = [Electricity BTU's + Gas BTU's] divided by [Total square feet]

2. **Energy Cost Index**

The Energy Cost Index (ECI) depicts the total annual energy cost per square foot of building space.

To calculate the ECI, the annual costs of electricity and gas are totaled and divided by the total square footage of the facility:

ECI = [Electricity Cost + Gas Cost] divided by [Total square feet]

These indicators may be used to compare the facility's current cost and usage to past years, or to other similar facilities in the area. Although the comparisons will not provide specific reasons for unusual operation, they serve as indicators that problems may exist within the energy consuming systems.

THE CURRENT ENERGY PERFORMANCE INDICATORS FOR :

DIMMITT ISD

CAMPUS	ENERGY UTILIZATION INDEX (EUI) (Btu/sf-year)	ENERGY COST INDEX (ECI) ($/sf-year)
2008 K-12 Campus	**39,319**	**$0.83**
Region 16 2006 Average K-12:	65,259	$0.80

Comparison to Average: From the **EUI** and **ECI** comparisons with other school facilities *within the region*, several energy related issues are apparent:

These numbers are a result of dividing the overall energy consumption and overall ELECTRICAL utility expense by the square footage of conditioned area served. In this case, the natural gas consumption and cost were not available at the time of the survey and has therefore been left out of the EUI / ECI calculation. We recommend these numbers be adjusted with the natural gas consumption of conditioned space as this parameter becomes available.

Without natural gas being considered in the equations, the EUI for the entire campus is 40% below average for energy consumption and yet still 4% above average for energy cost as compared to the 2006 regional averages. Part of the difference in cost is represented by the fact that the data for the regional average is 2006 data and does not account for energy price increases over the past two years, but an obvious fact remains clear; the ECI is above the regional average for DISD.

The Base Year Utilities Consumption History is included in Appendix III of this report.

5.0 RATE SCHEDULE ANALYSIS:

ELECTRIC UTILITY: **Xcel Energy**

ELECTRIC RATE: Large School Service

CUSTOMER CHARGE	=	$15.00 per meter
DEMAND CHARGE:		
Summer Consumption Charge (June through September)	=	$7.69 per kW
Winter Consumption Charge (October through May)	=	$6.33 per kW
ENERGY CHARGE:	=	$0.00417 per kWh
FUEL COST FACTORS (Vary per Month)	=	$0.046532 per kWh Average

Average Savings for consumption: = $0.0507/kWh
Average Savings for demand: = $7.69 in summer; $6.33 in winter

6.0 RECOMMENDATIONS:

A. MAINTENANCE AND OPERATIONS PROCEDURES

1. Weather-strip around movable portions of exterior door and operable window frames.
   Stationary sections of window and door frames should be recaulked as needed.

2. Comb condensing unit fins to restore operating efficiency.
   Crushing just 10% of the fins can result in efficiency losses of 30%.

3. Implement SECO's Watt Watcher program to turn lights off in unoccupied areas.
   The Watt Watcher program gets the students involved with helping to have lights turned off when not in use. Refer to Appendix VII for more information on the Watt Watcher Program.9

B. CAPITAL EXPENSE PROJECTS

I. Replace old heat pump split systems

Heat/Cool Units: There are fourteen (14) each 1988 heat pump split systems totaling 41 tons of cooling capacity that need to be replaced soon at the High School. The central system at the Auditorium should be replaced with rooftop units. The through-the-wall units at the Elementary should be replaced with new split systems.

Estimated Installed Cost	=	$ 191,100
Estimated Energy Cost Savings	=	$ 19,100
Simple Payback Period	=	10 Years

II. Lighting Renovation

Complete the T12 fluorescent renovation to T8 lamps and electronic ballasts. Finish the retrofit to T5 fluorescent fixtures at the gymnasium and renovate the existing lighting system at the High School Auditorium.

Estimated Installed Cost	=	$ 93,000
Estimated Energy Cost Savings	=	$ 15,400
Simple Payback Period	=	6 Years

SUMMARY:	***IMPLEMENTATION COST***	***ESTIMATED SAVINGS***	***SIMPLE PAYBACK***
HVAC Renovation	*$191,100*	*$ 19,100*	*10 Years*
Lighting	*$ 93,000*	*$ 15,400*	*6 Years*
TOTAL PROJECTS	*$ 284,100*	*$ 34,500*	*8-1/4 Years*

Financing of these projects may be provided using a variety of methods as Bond Programs, municipal leases, or state financing programs like the SECO LoanSTAR Program.

In-House Funding	=	$ 284,100	
10 year commercial loan principal	=	$ 284,100	
10 year commercial loan interest (5%) paid	=	$ 77,499	
10 year commercial loan TOTAL	=	$ 361,599	
Commercial Loan Annual Payment	=	$ 3,013/month	= $ 36,156/yr
Total Annual Payment Minus Annual Energy Cost Savings = $36,156 – 34,500			= $ 1,656
Annual Cost to ISD (without considering Maintenance Cost Reduction)			**= $ 1,656**

More information regarding financial programs available to DISD can be found in:

APPENDIX I: *SUMMARY OF FUNDING AND PROCUREMENT OPTIONS FOR CAPITAL EXPENDITURE PROJECTS*

APPENDIX I

SUMMARY OF FUNDING AND PROCUREMENT OPTIONS FOR CAPITAL EXPENDITURE PROJECTS

SUMMARY OF FUNDING OPTIONS FOR CAPITAL EXPENDITURE PROJECTS
Several options are available for funding retrofit measures which require capital expenditures.

LoanSTAR Program:
The Texas LoanSTAR program is administered by the State Energy Conservation Office (SECO). It is a revolving loan program available to all public school districts in the state as well as other institutional facilities. SECO loans money at 3% interest for the implementation of energy conservation measures which have a combined payback of eight years or less. The amount of money available varies, depending upon repayment schedules of other facilities with outstanding loans, and legislative actions. Check with Theresa Sifuentes of SECO (512-463-1896) for an up-to-date evaluation of prospects for obtaining a loan in the amounts desired.

TASB (Texas Association Of School Boards) Capital Acquisition Program:
TASB makes loans to school districts for acquiring personal property for "maintenance purposes". Energy conservation measures are eligible for these loans. The smallest loan TASB will make is $100,000. Financing is at 4.4% to 5.3%, depending upon length of the loan and the school district's bond rating. Loans are made over a three year, four year, seven year, or ten year period. The application process involves filling out a one page application form, and submitting the school district's most recent budget and audit. Contact Cheryl Kepp at TASB (512-467-0222) for further information.

Loans On Commercial Market:
Local lending institutions are another source for the funding of desired energy conservation measures. Interest rates obtainable may not be as attractive as that offered by the LoanSTAR or TASB programs, but advantages include "unlimited" funds available for loan, and local administration of the loan.

Leasing Corporations:
Leasing corporations have become increasingly interested in the energy efficiency market. The financing vehicle frequently used is the municipal lease. Structured like a simple loan, a municipal leasing agreement is usually a lease-purchase agreement. Ownership of the financed equipment passes to the district at the beginning of the lease, and the lessor retains a security interest in the purchase until the loan is paid off. A typical lease covers the total cost of the equipment and may include installation costs. At the end of the contract period a nominal amount, usually a dollar, is paid by the lessee for title to the equipment.

Bond Issue:
The may choose to have a bond election to provide funds for capital improvements. Because of its political nature, this funding method is entirely dependent upon the mood of the voters, and may require more time and effort to acquire the funds than the other alternatives.

SUMMARY OF PROCUREMENT OPTIONS FOR CAPITAL EXPENDITURE PROJECTS

State Purchasing:
The General Services Commission has competitively bid contracts for numerous items which are available for direct purchase by school districts. Contracts for this GSC service may be obtained from Sue Jager at (512) 475-2351.

Design/Bid/Build (Competitive Bidding):
Plans and specifications are prepared for specific projects and competitive bids are received from installation contractors. This traditional approach provides the district with more control over each aspect of the project, and task items required by the contractors are presented in detail.

Design/Build:
These contracts are usually structured with the engineer and contractor combined under the same contract to the owner. This type team approach was developed for fast-track projects, and to allow the contractor a position in the decision making process. The disadvantage to the district is that the engineer is not totally independent and cannot be completely focused upon the interest of the district. The district has less control over selection of equipment and quality control.

Purchasing Standardization Method:
This method will result in significant dollar savings if integrated into planned facility improvements. For larger purchases which extend over a period of time, standardized purchasing can produce lower cost per item expense, and can reduce immediate up-front expenditures. This approach includes traditional competitive bidding with pricing structured for present and future phased purchases.

Performance Contracting:
Through this arrangement, an energy service company (ESCO) using in-house or third party financing to implement comprehensive packages of energy saving retrofit projects. Usually a turnkey service, this method includes an initial assessment of energy savings potential, design of the identified projects, purchase and installation of the equipment, and overall project management. The ESCO guarantees that the cost savings generated will, at a minimum, cover the annual payment due over the term of the contract. The laws governing Performance Contracting for school districts are detailed in the Texas Education Code, Subchapter Z, Section 44.901. Senate Bill SB 3035, passed by the seventy-fifth Texas Legislature, amends some of these conditions. Performance Contracting is a highly competitive field, and interested districts may wish to contact Theresa Sifuentes of State Energy Conservation Office, (SECO), at 512-463-1896 for assistance in preparing requests for proposals or requests for qualifications.

Solution Center

How to Finance Your Energy Program

Cost and financing issues are pivotal factors in determining which energy-efficiency measures will be included in your final energy management plan. Before examining financing options, you need to have a reasonably good idea of the measures that may be implemented. For this purpose, you will want to perform cost/benefit analyses on each candidate measure to identify those with the best investment potential. This document presents a brief introduction to cost/benefit methods and then suggests a variety of options for financing your program.

Selecting a Cost/Benefit Analysis Method

Cost/benefit analysis can determine if and when an improvement will pay for itself through energy savings and to help you set priorities among alternative improvement projects. Cost/benefit analysis may be either a simple payback analysis or the more sophisticated life cycle cost analysis. Since most electric utility rate schedules are based on both consumption and peak demand, your analyst should be skilled at assessing the effects of changes in both electricity use and demand on total cost savings, regardless of which type of analysis is used. Before beginning any cost/benefit analyses, you must first determine acceptable design alternatives that meet the heating, cooling, lighting, and control requirements of the building being evaluated. The criteria for determining whether a design alternative is "acceptable" includes reliability, safety, conformance with building codes, occupant comfort, noise levels, and space limitations. Since there will usually be a number of acceptable alternatives for any project, cost/benefit analysis allows you to select those that have the best savings potential.

Simple Payback Analysis

A highly simplified form of cost/benefit analysis is called simple payback. In this method, the total first cost of the improvement is divided by the first-year energy cost savings produced by the improvement. This method yields the number of years required for the improvement to pay for itself.

This kind of analysis assumes that the service life of the energy-efficiency measure will equal or exceed the simple payback time. Simple payback analysis provides a relatively easy way to examine the overall costs and savings potentials for a variety of project alternatives. However, it does not consider a number of factors that are difficult to predict, yet can have a significant impact on cost savings. These factors may be considered by performing a life-cycle cost (LCC) analysis.

Simple Payback

As an example of simple payback, consider the lighting retrofit of a 10,000-square-foot commercial office building. Relamping with T-8 lamps and electronic, high-efficiency ballasts may cost around $13,300 ($50 each for 266 fixtures) and produce annual savings of around $4,800 per year (80,000 kWh at $0.06/kWh). This simple payback for this improvement would be

$$\frac{\$13{,}300}{\$4{,}800/\text{year}} = 2.8 \text{ years}$$

That is, the improvement would pay for itself in 2.8 years, a 36% simple return on the investment (1/2.8 = 0.36).

Life-Cycle Cost Analysis

Life-cycle cost analysis (LCC) considers the total cost of a system, device, building, or other capital equipment or facility over its anticipated useful life. LCC analysis allows a comprehensive assessment of all anticipated costs associated with a design alternative. Factors commonly considered in LCC analyses include initial capital cost, operating costs, maintenance costs, financing costs, the expected useful life of equipment, and its future salvage values. The result of the LCC analysis is generally expressed as the value of initial and future costs in today's dollars, as reflected by an appropriate discount rate.

The first step in this type of analysis is to establish the general study parameters for the

continued

How to Finance Your Energy Program *continued*

project, including the base date (the date to which all future costs are discounted), the service date (the date when the new system will be put into service), the study period (the life of the project or the number of years over which the investor has a financial interest in the project), and the discount rate. When two or more design alternatives are compared (or even when a single alternative is compared with an existing design), these variables must be the same for each to assure that the comparison is valid. It is meaningless to compare the LCC of two or more alternatives if they are computed using different study periods or different discount rates.

Decision makers in both the public and private sectors have long used LCC analysis to obtain an objective assessment of the total cost of owning, operating, and maintaining a building or building system improvement over its useful life. Nevertheless, an LCC analysis does require a good understanding of acceptable alternatives, useful life, equipment efficiencies, and discount rates.

Selecting the "Best" Alternatives

Generally, all project alternatives should be screened using simple payback analyses. A more detailed and costly LCC analysis should be reserved for large projects or those improvements that entail a large investment, since a detailed cost analysis would then be a small part of the overall cost. Both simple payback and LCC analyses will allow you to set priorities based on measures that represent the greatest return on investment. In addition, these analyses can help you select appropriate financing options:

- Energy-efficiency measures with short payback periods, such as one to two years, are economically very attractive and should be implemented using operating reserves or other readily available internal funds, if possible.
- Energy-efficiency measures with payback periods from three to five years may be considered for funding from available internal capital investment monies, or may be attractive candidates for third-party financing through energy service companies or equipment leasing arrangements.
- Frequently, short payback measures can be combined with longer payback measures (10 years or more) in order to increase the number of measures that can be cost-effectively included in a project. Projects that combine short- and long-term paybacks are recommended to avoid "cream-skimming" (implementing only those measures that are highly cost effective and have quick paybacks) at the expense of other worthwhile measures. A selected set of measures with a combination of payback periods can be financed either from available internal funds or through third party alternatives.

If simple payback time is long, 10 or more years, economic factors can be very significant and LCC analysis is recommended. In contrast, if simple payback occurs within three to five years, more detailed LCC analysis may not be necessary, particularly if price and inflation changes are assumed to be moderate.

Weighing Non-Cost Impacts

Some factors related to building heating, air conditioning, and lighting system design are not considered in either simple payback or LCC analyses. Examples include the thermal comfort of occupants in a building and the adequacy of task lighting, both of which affect productivity. A small loss in productivity due to reduced comfort or poor lighting can quickly offset any energy cost savings.

Conventional cost/benefit analyses also normally do not consider the ancillary societal benefits that can result from reduced energy use (e.g., reduced carbon emissions, improved indoor air quality). In some cases, these ancillary benefits can be assigned an agreed upon monetary value, but the values to be used are strongly dependent on local factors. In general, if societal benefits have been assigned appropriate monetary values by a local utility, they can be easily considered in your savings calculations. However, your team should discuss this issue with your local utility or with consultants working on such values in your area.

Finally, in any cost analysis, it can be very important to include avoided cost as part of the benefit of the retrofit. When upgrading or replacing building equipment, the avoided cost of maintaining existing equipment should be considered a cost savings provided by the improvement.

2

How to Finance Your Energy Program *continued*

Financing Mechanisms

Capital for energy-efficiency improvements is available from a variety of public and private sources, and can be accessed through a wide and flexible range of financing instruments. While variations may occur, there are five general financing mechanisms available today for investing in energy-efficiency:

- **Internal Funds.** Energy-efficiency improvements are financed by direct allocations from an organization's own internal capital or operating budget.
- **Debt Financing.** Energy-efficiency improvements are financed with capital borrowed directly by an organization from private lenders.
- **Lease or Lease-Purchase Agreements.** Energy-efficient equipment is acquired through an operating or financing lease with no up-front costs, and payments are made over five to ten years.
- **Energy Performance Contracts.** Energy-efficiency measures are financed, installed, and maintained by a third party, which guarantees savings and payments based on those savings.
- **Utility Incentives.** Rebates, grants, or other financial assistance are offered by an energy utility for the design and purchase of certain energy-efficient systems and equipment.

These financing mechanisms are not mutually exclusive (i.e., an organization may use several of them in various combinations). The most appropriate set of options will depend on the size and complexity of a project, internal capital constraints, in-house expertise, and other factors. Each of these mechanisms is discussed briefly below, followed by some additional funding sources and considerations.

Internal Funds

The most direct way for the owner of a building or facility to pay for energy-efficiency improvements is to allocate funds from the internal capital or operating budget. Financing internally has two clear advantages over the other options discussed below – it retains internally all savings from increased energy-efficiency, and it is usually the simplest option administratively. The resulting savings may be used to decrease overall operating expenses in future years or retained within a revolving fund used to support additional efficiency investments. Many public and private organizations regularly finance some or all of their energy-efficiency improvements from internal funds.

In some instances, competition from alternative capital investment projects and the requirement for relatively high rates of return may limit the use of internal funds for major, standalone investments in energy-efficiency. In most organizations, for example, the highest priorities for internal funds are business or service expansion, critical health and safety needs, or productivity enhancements. In both the public and private sectors, capital that remains available after these priorities have been met will usually be invested in those areas that offer the highest rates of return. The criteria for such investments commonly include an annual return of 20 percent to 30 percent or a simple payback of three years or less.

Since comprehensive energy-efficiency improvements commonly have simple paybacks of five to six years, or about a 12 percent annual rate of return, internal funds often cannot serve as the sole source of financing for such improvements. Alternatively, however, internal funding can be used well and profitably to achieve more competitive rates of return when combined with one or more of the other options discussed below.

Debt Financing

Direct borrowing of capital from private lenders can be an attractive alternative to using internal funds for energy-efficiency investments. Financing costs can be repaid by the savings that accrue from increased energy-efficiency. Additionally, municipal governments can often issue bonds or other long-term debt instruments at substantially lower interest rates than can private corporate entities. As in the case of internal funding, all savings from efficiency improvements (less only the cost of financing) are retained internally.

Debt financing is administratively more complex than internal funding, and financing costs will vary according to the credit rating of the borrower. This approach may also be restricted by formal debt ceilings imposed by municipal

3

How to Finance Your Energy Program *continued*

policy, accounting standards, and/or Federal or state legislation.

In general, debt financing should be considered for larger retrofit projects that involve multiple buildings or facilities. When considering debt financing, organizations should weigh the cost and complexity of this type of financing against the size and risk of the proposed projects.

Lease and Lease-Purchase Agreements

Leasing and lease-purchase agreements provide a means to reduce or avoid the high, up-front capital costs of new, energy-efficient equipment. These agreements may be offered by commercial leasing corporations, management and financing companies, banks, investment brokers, or equipment manufacturers. As with direct borrowing, the lease should be designed so that the energy savings are sufficient to pay for the financing charges. While the time period of a lease can vary significantly, leases in which the lessee assumes ownership of the equipment generally range from five to ten years. There are several different types of leasing agreements, as shown in the sidebar. Specific lease agreements will vary according to lessor policies, the complexity of the project, whether or not engineering and design services are included, and other factors.

Energy Performance Contracts

Energy performance contracts are generally financing or operating leases provided by an Energy Service Company (ESCo) or equipment manufacturer. The distinguishing features of these contracts are that they provide a guarantee on energy savings from the installed retrofit measures, and they provide payments to the ESCo from the savings, freeing the customer from any need of up-front payments to the ESCo. The contract period can range from five to 15 years, and the customer is required to have a certain minimum level of capital investment (generally $200,000 or more) before a contract will be considered.

Under an energy performance contract, the ESCo provides a service package that typically includes the design and engineering, financing, installation, and maintenance of retrofit measures to improve energy-efficiency. The scope of these improvements can range from measures that affect a single part of a building's energy-using

Types of Leasing Agreements

Operating Leases are usually for a short term, occasionally for periods of less than one year. At the end of the lease period, the lessee may either renegotiate the lease, buy the equipment for its fair market value, or acquire other equipment. The lessor is considered the owner of the leased equipment and can claim tax benefits for its depreciation.

Financing Leases are agreements in which the lessee essentially pays for the equipment in monthly installments. Although payments are generally higher than for an operating lease, the lessee may purchase the equipment at the end of the lease for a nominal amount (commonly $1). The lessee is considered the owner of the equipment and may claim certain tax benefits for its depreciation.

Municipal Leases are available only to tax-exempt entities such as school districts or municipalities. Under this type of lease, the lessor does not have to pay taxes on the interest portion of the lessee's payments, and can therefore offer an interest rate that is lower than the rate for usual financing leases. Because of restrictions against multi-year liabilities, the municipality specifies in the contract that the lease will be renewed year by year. This places a higher risk on the lessor, who must be prepared for the possibility that funding for the lease may not be appropriated. The lessor may therefore charge an interest rate that is as much as 2 percent above the tax-exempt bond rate, but still lower than rates for regular financing leases. Municipal leases nonetheless are generally faster and more flexible financing tools than tax-exempt bonds.

Guaranteed Savings Leases are the same as financing or operating leases but with the addition of a guaranteed savings clause. Under this type of lease, the lessee is guaranteed that the annual payments for leasing the energy-efficiency improvements will not exceed the energy savings generated by them. The owner pays the contractor a fixed payment per month. If actual energy savings are less than the fixed payment, however, the owner pays only the small amount saved and receives a credit for the difference.

How to Finance Your Energy Program *continued*

infrastructure (such as lighting) to a complete package of measures for multiple buildings and facilities. Generally, the service provider will guarantee savings as a result of improvements in both energy and maintenance efficiencies. Flat-fee payments tend to be structured to maintain a positive cash flow to the customer with whom the agreement is made. With the increasing deregulation of conventional energy utilities, several larger utilities have formed unregulated subsidiaries that offer a full range of energy-efficiency services under performance agreements.

An energy performance contract must define the methodology for establishing the baseline costs and cost savings and for the distribution of those savings among the parties. The contract must also specify how those savings will be determined, and must address contingencies such as utility rate changes and variations in the use and occupancy of a building. While several excellent guidance documents exist for selecting and negotiating energy performance contracts, large or complicated contracts should be negotiated with the assistance of experienced legal counsel.

Utility Incentives

Some utilities still offer financial incentives for the installation of energy-efficient systems and equipment, although the number and extent of such programs appears to be decreasing as utility deregulation proceeds. These incentives are available for a variety of energy-efficient products including lighting, HVAC systems, energy management controls, and others. The most common incentives are equipment rebates, design assistance, and low-interest loans.

In general, the primary purpose of utility incentives is to lower peak demand; overall energy-efficiency is an important, but secondary consideration. Incentives are much more commonly offered by electric utilities than by natural gas utilities.

Additional Financing Sources and Considerations

State and Federal Assistance. Matching grants, loans, or other forms of financial assistance (in addition to those listed above) may be available from the Federal government or state governments. If your community is considering energy-efficiency improvements for public or assisted multifamily housing, your program could be eligible to receive assistance through various programs of the U.S. Department of Housing and Urban Development. A variety of state-administered programs for building efficiency improvements may also be available, some of which are funded through Federal block grants and programs. Federal assistance available through states include Federal block grants and State Energy Conservation Program funds. An example of individual state programs is the Texas LoanSTAR program, which provides low-interest loans for state agencies and schools.

Utility Assistance

Equipment Rebates. Some utilities offer rebates on the initial purchase price of selected energy-efficient equipment. The amount of the rebate varies substantially depending on the type of equipment. For example, a rebate of $.50 to $1 may be offered for the replacement of an incandescent bulb with a more efficient fluorescent lamp, while the installation of an adjustable speed drive may qualify for a rebate of $10,000 or more.

Design Assistance. A smaller number of utilities provide direct grants or financial assistance to architects and engineers for incorporating energy-efficiency improvements in their designs. This subsidy can be based on the square footage of a building, and/or the type of energy-efficiency measures being considered. Generally, a partial payment is made when the design process is begun, with the balance paid once the design has been completed and installation has commenced.

Low-Interest Loans. Loans with below-market rates are provided by other utilities for the purchase of energy-efficient equipment and systems. Typically, these low-interest loans will have an upper limit in the $10,000 to $20,000 range, with monthly payments scheduled over a two- to five-year period.

How to Finance Your Energy Program *continued*

Bulk Purchasing. Large organizations generally have purchasing or materials procurement departments that often buy standard materials in bulk or receive purchasing discounts because of the volume of their purchases. Such organizations can help reduce the costs of energy-efficiency renovations if their bulk purchasing capabilities can be used to obtain discounts on the price of materials (e.g., lamps and ballasts). While some locales may have restrictions that limit the use of this option, some type of bulk purchasing can usually be negotiated to satisfy all parties involved.

Project Transaction Costs. Certain fixed costs are associated with analyzing and installing energy measures in each building included in a retrofit program. Each additional building, for example, could represent additional negotiations and transactions with building owners, building analysts, energy auditors, equipment installers, commissioning agents, and other contractors. Similarly, each additional building will add to the effort involved in initial data analysis as well as in tracking energy performance after the retrofit. For these reasons, it is often possible to achieve target energy savings at lower cost by focusing only on those buildings that are the largest energy users. One disadvantage with larger buildings is that the energy systems in the building can be more difficult to understand, but overall, focusing on the largest energy users is often the most efficient use of your financial resources.

Direct Value-Added Benefits. The primary value of retrofits to buildings and facilities lies in the reduction of operating costs through improved energy-efficiency and maintenance savings. Nevertheless, the retrofit may also directly help address a variety of related concerns, and these benefits (and avoided costs) should be considered in assessing the true value of an investment. A few examples of these benefits include the improvement of indoor air quality in office buildings and schools; easier disposal of toxic or hazardous materials found in energy-using equipment; and assistance in meeting increasingly stringent state or Federal mandates for water conservation. Effective energy management controls for buildings can also provide a strong electronic infrastructure for improving security systems and telecommunications.

Economic Development Benefits. In addition to direct savings on operating costs and the added-value benefits mentioned above, investments in energy-efficiency can also support a community's economic development and employment opportunities. Labor will typically constitute about 60 percent of a total energy investment, and about 50 percent of equipment can be expected to be purchased from local equipment suppliers; as a result, about 85 percent of the investment is retained within the local economy. Additionally, funds retained in urban areas will generally be re-spent in the local economy. The Department of Commerce estimates that each dollar retained in an urban area will be re-spent three times. This multiplier effect results in a three-fold increase in the economic benefits of funds invested in energy-efficiency, without even considering the savings from lower overall fuel costs.

For more information contact the Rebuild America Clearinghouse at 252-459-4664 or visit www.rebuild.gov

Rebuild America
U.S. Dept. of Energy

6

APPENDIX II

ELECTRIC UTILITY RATE SCHEDULE

Xcel Energy™
SOUTHWESTERN PUBLIC SERVICE

Section No. IV
Sheet No. IV-182
Revision No. 1 T

Page 1 of 2

ELECTRIC TARIFF

LARGE SCHOOL SERVICE

APPLICABLE: To all public and private schools supplied electric service at secondary voltage and at one point of delivery, and measured through one meter, where facilities of adequate capacity and suitable voltage are adjacent to the premises to be served, in excess of 10 kW of demand in any month.

Not applicable to temporary, breakdown, standby, supplementary, resale or shared service, or to service for which a specific rate schedule is provided.

TERRITORY: Texas service territory.

RATE: Service Availability Charge: $15.00 per month

Energy Charge: 0.417¢ per kWh for all kWh used during the month

Demand Charge:
$7.69 per kW of demand used per month during each summer month
$6.33 per kW of demand used per month during each winter month

PUBLIC UTILITY COMMISSION OF TEXAS
INTERIM APPROVAL GRANTED
APR -2 '08 DOCKET 35407
TF #_____ BY_____
TARIFF CLERK

WINTER MONTHS: The billing months of October through May.

SUMMER MONTHS: The billing months of June through September.

DEMAND: The Company will furnish at its expense the necessary metering equipment to measure the customer's kW demand for the 30-minute period of greatest use during the month. In the absence of a demand meter the Company will bill the customer's demand using the monthly kilowatt-hours and an average load factor of 41.30 percent. In no month, shall the billing demand be greater than the kW value determined by dividing the kWh sales for the billing period by 80 hours. T T

POWER FACTOR: Applicable to customers on this rate schedule with a peak demand of 200 kW or greater. Customer, at all times, will maintain at Company's point of delivery a power factor of not less than 90% lagging.

In the event a low voltage condition due to lagging power factor exists in a degree sufficient to impair the Company's service, customer will install suitable capacitor or other equipment necessary to raise the overall power factor at the point of delivery to a satisfactory value. Where such power factor correction equipment is used, customer will install and maintain a relay, switch, or other regulating equipment for purpose of disconnecting or controlling the power factor correction equipment in order to prevent excessive voltage variations on Company's lines.

FUEL COST RECOVERY AND ADJUSTMENTS: The charge per kilowatt hour of the above rate shall be increased by the applicable fuel cost recovery factor per kilowatt hour as provided in PUCT Sheet IV-69. This rate schedule is subject to other applicable rate adjustments as in effect from time to time in this tariff.

PUBLIC UTILITY COMMISSION OF TEXAS

PRESIDENT & CEO,
SOUTHWESTERN PUBLIC SERVICE COMPANY

Xcel Energy™
SOUTHWESTERN PUBLIC SERVICE

Section No. IV
Sheet No. IV-182
Revision No. 1 T

Page 2 of 2

ELECTRIC TARIFF

LARGE SCHOOL SERVICE

CHARACTER OF SERVICE: A-C; 60 hertz; single or three phase, at one available standard voltage.

LINE EXTENSIONS: The Company will make line extensions in accordance with its standard line extension policy.

TERMS OF PAYMENT: Net in 16 days after mailing date; 5 percent added to bill after 16 days. If the sixteenth day falls on a holiday or weekend, the due date will be the next work day.

FRANCHISE FEE: All current and future franchise fees not included in base rates shall be separately assessed in the municipality where the excess franchise fee is authorized. Bills computed under the above rate will be increased by the additional franchise fees imposed by the appropriate municipality or taxing authority in which jurisdiction the customer's consuming facility resides, when applicable. The franchise fee will appear on the bill as a separate item.

RULES, REGULATIONS AND CONDITIONS OF SERVICE: Service supplied under this schedule is subject to the terms and conditions set forth in the Company's Rules, Regulations and Conditions of Service on file with The Public Utility Commission of Texas and the following conditions:

For those customers receiving secondary service distribution voltage who desire to elect primary distribution voltage, they may do so subject to the terms and conditions of Primary/Secondary Conversion. T

PUBLIC UTILITY COMMISSION OF TEXAS
INTERIM APPROVAL GRANTED
APR -2 '08 DOCKET 35407
TF #_____ BY_____
TARIFF CLERK

PUBLIC UTILITY COMMISSION OF TEXAS

PRESIDENT & CEO,
SOUTHWESTERN PUBLIC SERVICE COMPANY

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FCASUM08.xls Summary 1/8/2009 9:36 AM

SOUTHWESTERN PUBLIC SERVICE COMPANY
CALCULATED AS OF NOVEMBER 2008

FUEL COST FACTORS BY $/KWH

	Jan-08	Feb-08	06-Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	14-Sep-08	16-Sep-08	Oct-08	Nov-08	Dec-08
#01															
#02															
#03	0.040398	0.040398	0.041422	0.041422	0.041422	0.053034	0.053034	0.053034	0.053034	0.053034	0.053034	0.053034	0.053034	0.044076	0.044076
#04															
#05	0.039847	0.039847	0.040892	0.040892	0.040892	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.043512	0.043512
#06	(0.001098)	0.000173	0.000173	0.000317	0.000245	(0.000164)	(0.000053)	0.000298	0.000749	0.001417	0.001417	0.001417	0.000221	0.000787	0.000802
#07	0.038140	0.038140	0.038323	0.038323	0.038323	0.049066	0.049066	0.049066	0.049066	0.049066	0.049066	0.049066	0.049066	0.040778	0.040778
#08															
#09	0.037924	0.037924	0.038049	0.038049	0.038049	0.048715	0.048715	0.048715	0.048715	0.048715	0.048715	0.048715	0.048715	0.040487	0.040487
#10															
#11															
#12												(0.006916)	(0.013046)	(0.011120)	(0.010709)
#12 True-Up												(0.004076)	(0.002641)		
#13	0.036031	0.040013	0.040013	0.051973	0.055066	0.051590	0.060490	0.058013	0.049863	0.035513	0.035513				
#13 True-Up	0.002720	0.001448	0.001448	0.000908	0.000844	0.005893	0.001636	0.007537	(0.001171)	(0.004466)	(0.004466)				
#14	(0.006058)	(0.001740)	(0.001740)	0.010292	0.017487	0.014149	0.023000	0.017854	0.009957	(0.004215)	(0.004215)	(0.004215)	(0.010345)	(0.008419)	(0.008008)
#14 True-Up	0.003375	0.001486	0.001486	0.001593	0.001332	0.005856	0.001850	0.007417	(0.001120)	(0.004076)	(0.004076)	(0.004076)	(0.002641)		
#15	(0.001415)	0.002773	0.002773	0.014442	0.017487	0.014149	0.023000	0.020633	0.012736	(0.001436)	(0.001436)				
#15 True-Up	0.003311	0.001478	0.001478	0.001577	0.001398	0.005940	0.001791	0.007371	(0.001130)	(0.004201)	(0.004201)				
#16	(0.005745)	(0.001557)	(0.001557)	0.010112	0.013157	0.009819	0.018670	0.016303	0.008406	(0.001436)	(0.001436)	(0.001436)	(0.007566)	(0.005640)	(0.005229)
# 16 True-Up	0.003311	0.001478	0.001478	0.001577	0.001398	0.005940	0.001791	0.007371	(0.001130)	(0.004201)	(0.004201)	(0.004201)	(0.002672)		
#17	0.036309	0.040322	0.040322	0.052374	0.055490	0.051987	0.060956	0.058460	0.050247	0.035787	0.035787	0.035787	0.029589	0.031467	0.031748
#17 True-Up	0.002307	(0.000284)	(0.000284)	0.000675	0.000357	0.005917	0.000347	0.005539	0.000198	(0.002039)	(0.002039)	(0.002039)	(0.000567)	(0.005885)	
#18	0.039847	0.039847	0.040892	0.040892	0.040892	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.052355	0.043512	0.043512
#19	0.015242	0.015242	0.016287	0.016287	0.016287	0.027750	0.027750	0.027750	0.027750	0.027750	0.027750	0.027750	0.027750	0.018907	0.018907
#20	0.021808	0.027101	0.027101	0.015024	0.011262	0.029354	0.035856	0.031906	0.033482	0.058688	0.058688	0.058688	0.046759	0.022508	0.024104
#21	0.029092	0.026841	0.026841	0.009601	0.015915	0.025548	0.039085	0.038494	0.060620	0.055198	0.033701	0.033701	0.000392	(0.029058)	(0.019458)
#22															
#23															
#24															
#25															
#26															
#29	0.035005	0.031512	0.031512	0.030508	0.031091	0.043370	0.045288	0.047438	0.049971	0.053538	0.053538	0.053538	0.042958	0.030307	0.024040
#30	0.038566	0.035834	0.035834	0.049810	0.056599	0.054293	0.052173	0.072703	0.062940	0.042284	0.042284	0.042284	0.034750	0.030878	0.024040

#01	---	#10	---	#19	JM Huber (Engineered Carbons) Credit Factor	
#02	---	#11	---	#20	JM Huber (Engineered Carbons) Excess Power Credit Factor	
#03	Texas Retail Secondary	#12	WTMPA, Tri-County, Full Requirements	#21	New Mexico Retail #1957	
#04	---	#13	WTMPA, Tri-County - ended 9-15-08	#22	---	
#05	Texas Retail Primary	#14	Golden Spread	#23	---	
#06	Celanese - CZ #2	#15	Full Requirements - ended 9-15-08	#24	---	
#07	Texas Retail Sub-Transmission	#16	PNM Interruptible	#25	---	
#08	---	#17	EPE	#26	---	
#09	Texas Retail Backbone Transmission	#18	JM Huber (Engineered Carbons) Fuel Factor - Rate 733	#29	USDA Experiment Credit	
				#30	Wind Power Generation Credit	

APPENDIX III

UTILITIES CONSUMPTION HISTORY

OWNER: Dimmitt ISD **BUILDING:** Dimmitt K-12

MONTH / YEAR		ELECTRIC					NAT'L GAS / FUEL	
			DEMAND					
MONTH	YEAR	CONSUMPTION KWH	METERED KW/KVA	CHARGED KW/KVA	COST OF DEMAND	TOTAL ALL ELECTRICAL COSTS $	CONSUMPTION MCF	$ COSTS
JANUARY	2009	111,958	0	0	0	7,753	0	$0
FEBRUARY	2008	132,260	0	0	0	9,261	0	$0
MARCH	2008	198,411	0	0	0	13,248	0	$0
APRIL	2008	171,661	0	0	0	13,748	0	$0
MAY	2008	216,697	0	0	0	18,901	0	$0
JUNE	2008	149,242	0	0	0	10,789	0	$0
JULY	2008	156,989	0	0	0	11,825	0	$0
AUGUST	2008	95,018	0	0	0	6,547	0	$0
SEPTEMBER	2008	413,543	0	0	0	28,937	0	$0
OCTOBER	2008	179,855	0	0	0	13,671	0	$0
NOVEMBER	2008	254,112	0	0	0	15,616	0	$0
DECEMBER	2008	92,071	0	0	0	6,541	0	$0
TOTAL		**2,171,817**	**0**	**0**	**0**	**$156,837**	**0**	**$0**

Annual Total Energy Cost = $156,837 Per Year

Total KWH x 0.003413 = 7,412.41 x 106
Total MCF x 1.03 = 0.00 x 106
Total Other x ____ x 106
Total Site BTU's/yr 7,412.41 x 106

Floor area: 188,518 s.f.

Energy Use Index:
Total Site BTU's/yr / Total Area (sq.ft.) = 39,319 BTU/s.f.yr

Energy Cost Index:
Total Energy Cost/yr / Total Area (sq.ft.) = $0.83 $/s.f. yr

Electric Utility	Account #	Meter#	Gas Utility	Account #
Xcel	Multiple		not available	

APPENDIX IV

ENERGY POLICY

ENERGY POLICY

[Name of Institution]

Recognizing our responsibility as Trustees of _____,
we believe that every effort should be made to conserve energy and natural resources. As a result, we are establishing this Energy Management Policy which shall be implemented within each of our facilities. We believe that this policy will be beneficial for taxpayers and community residents in the prudent management of our financial and energy resources.

The fulfillment of this policy shall be the joint responsibility of the trustees, administrators, staff and support personnel. The success of the policy is dependent upon total cooperation from all levels within the system.

The board will designate an Energy Manager to coordinate and implement the overall Energy Policy. The Energy Manager will also maintain accurate records of energy consumption and cost on a monthly and annual basis. Energy audits will be conducted annually at each facility and recommendations will be made for updating and improving the energy program. Energy efficiency guidelines and procedures will be reviewed and accepted or rejected by the board. In addition, the procedures required for implementation of the program, and the results achieved from its administration, will be published for administrative and staff information.

Adopted this_____day of _____, 200 .

_____
President, Board of Trustees

Attest: _____
Secretary, Board of Trustees

APPENDIX V

Preliminary Energy Assessment Service Agreement

Fax sent by : 8066475433 DIMMITT ISD 03/06/09 11:51 Pg: 2/2
MAR-06-2009 10:24 ESA P.002

Preliminary Energy Assessment Service Agreement

Investing in our communities through improved energy efficiency in public buildings is a win-win opportunity for our communities and the State. Energy-efficient buildings reduce energy costs, increase available capital, spur economic growth, and improve working and living environments. The Preliminary Energy Assessment Service provides a viable strategy to achieve these goals.

Description of the Service

The State Energy Conservation Office (SECO) will analyze electric, gas and other utility data and work with DIMMITT ISD, hereinafter referred to as Partner, to identify energy cost-savings potential. To achieve this potential, SECO and Partner have agreed to work together to complete an energy assessment of mutually selected facilities.

SECO agrees to provide this service at no cost to the Partner with the understanding that the Partner is ready and willing to consider implementing the energy savings recommendations.

Principles of the Agreement

Specific responsibilities of the Partner and SECO in this agreement are listed below.

- Partner will select a contact person to work with SECO and its contractor to establish an Energy Policy and set realistic energy efficiency goals.
- SECO's contractor will go on site to provide walk through assessments of selected facilities. SECO will provide a report which identifies no cost/low cost recommendations, Capital Retrofit Projects, and potential sources of funding. Portions of this report may be posted on the SECO Website.
- Partner will schedule a time for SECO's contractor to make a presentation of the assessment findings and recommendations to key decision makers.

Acceptance of Agreement

This agreement should be signed by your organization's chief executive officer or other upper management staff.

Signature: [signature] Date: 4-06-09
Name (Mr./Ms./Dr.) Les Miller Title: Superintendent
Organization: Dimmitt ISD Phone: (806) 647-3101
Street Address: 608 W. Halsell Fax: (806) 647-5433
Mailing Address: 608 W. Halsell EMail: lmiller@dimmittisd.net
Dimmitt Tx. 79027 County Castro

CONTACT INFORMATION:

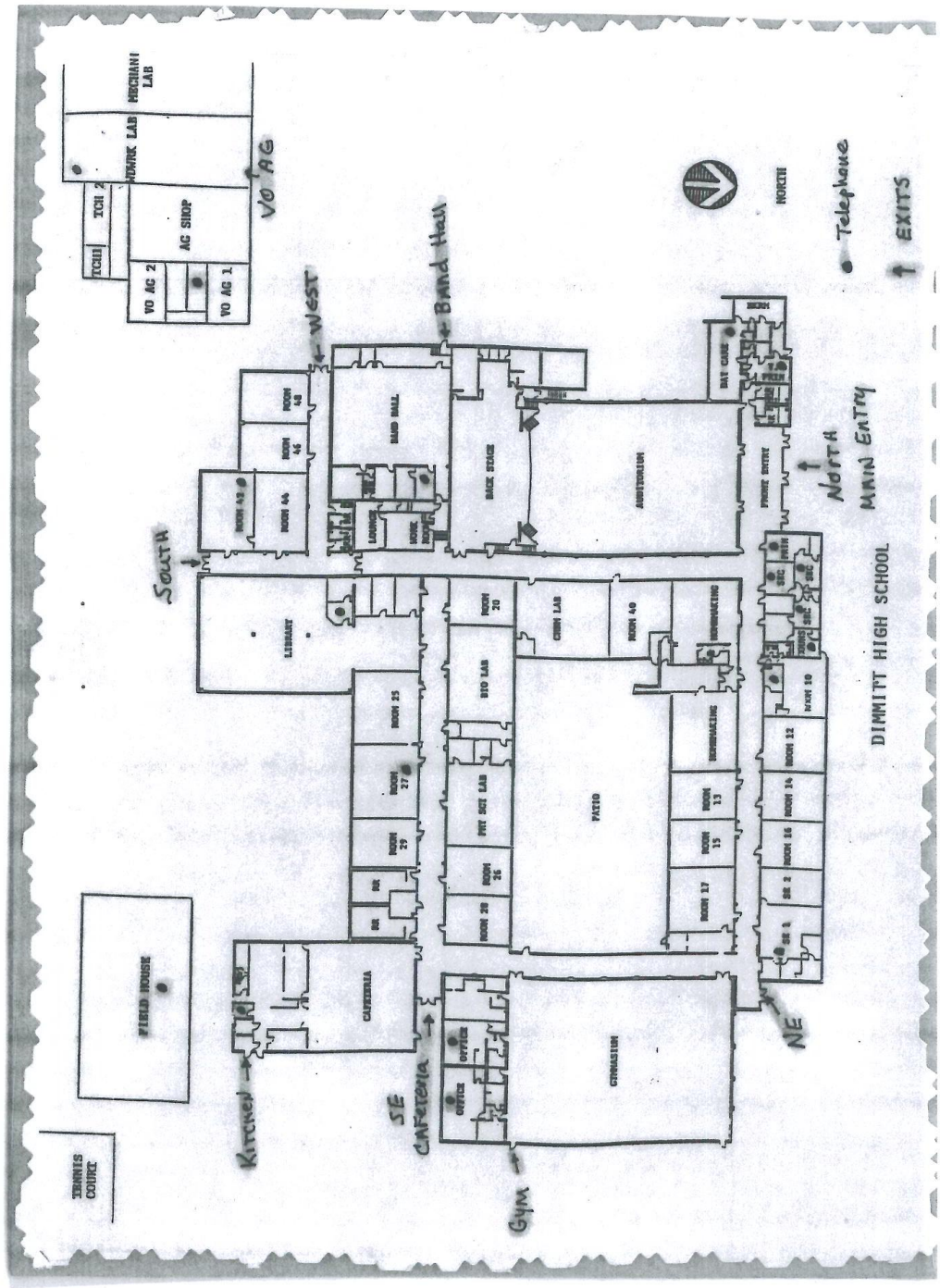
Name (Mr./Ms./Dr.): Gary Leivas Title: Maintenance Director
Phone: (806) 250-1503 Fax: (806) 647-5433
E-Mail: N/A County Castro

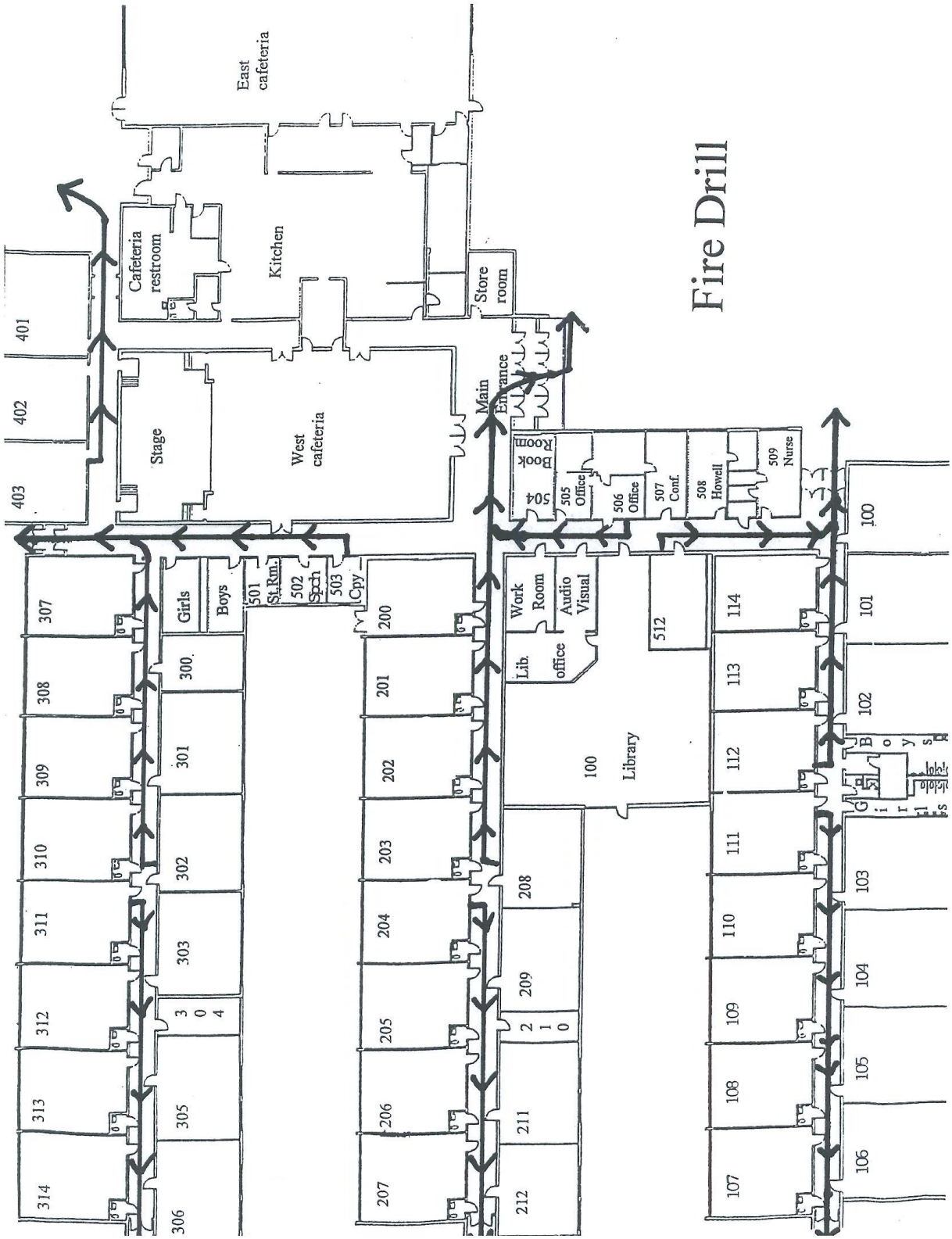
Please sign & FAX or mail to Glenda Baldwin at State Energy Conservation Office. **FAX: 512-475-2569**
Address: LBJ State Office Building, 111 E. 17th Street, Austin, Texas 78774. Phone: 512-463-1731
AND also, please fax a copy to your SECO Contractor: ESA Energy Systems Associates, Inc.; Attn: Yvonne Huncycutt **FAX: 512-388-3312** Phone: 512-258-0547 x124

Total P.002
Fax from : 03/06/09 11:05 Pg: 2

APPENDIX VI

Building Schematic Drawings


DIMMITT HIGH SCHOOL
MAIN ENTRY
NORTH
SOUTH
WEST
Band Hall
VO AG
AG SHOP
HOWARD LAB
HINCHMAN LAB
LIBRARY
CAFETERIA
KITCHEN
SE CAFETERIA
GYM
NE
FIELD HOUSE
TENNIS COURT
PATIO
AUDITORIUM
Telephone
EXITS


Fire Drill
East cafeteria
Cafeteria restroom
Kitchen
Store room
Stage
West cafeteria
Main Entrance
Book Room
504
505 Office
506 Office
507 Conf.
508 Howell
509 Nurse
Girls
Boys
501 St. Rm.
502 Sptch
503 Cpy
Work Room
Audio Visual
Lib. office
Library
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APPENDIX VII

AMORTIZATION SCHEDULE

Loan Amortization Schedule

	Enter values
Loan amount	$ 284,100.00
Annual interest rate	5.00 %
Loan period in years	10
Number of payments per year	12
Start date of loan	4/1/2008
Optional extra payments	$ -

	Loan summary
Scheduled payment	$ 3,013.32
Scheduled number of payments	120
Actual number of payments	120
Total early payments	$ -
Total interest	$ 77,498.55

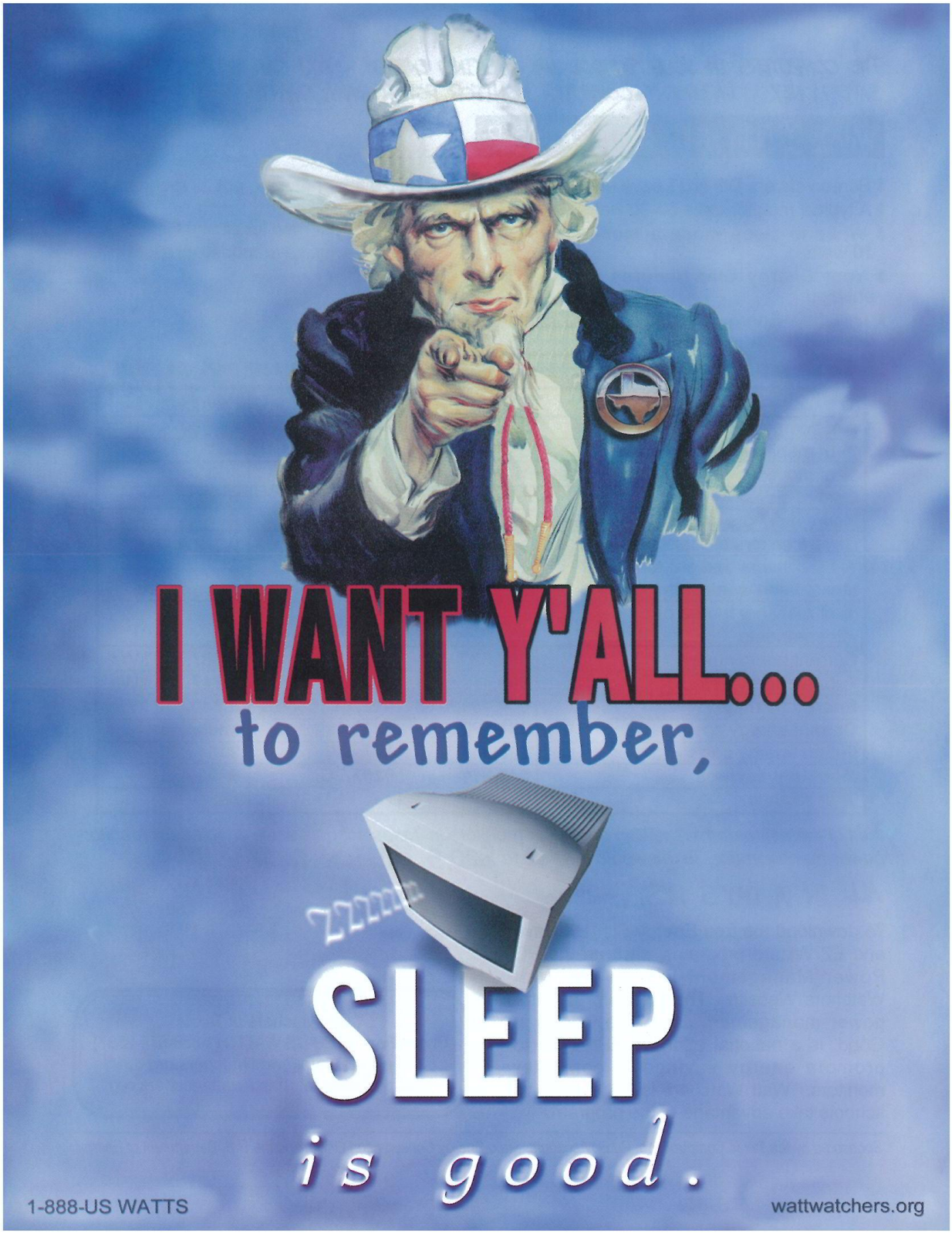
Lender name:

Pmt No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	5/1/2008	$ 284,100.00	$ 3,013.32	$ -	$ 3,013.32	$ 1,829.57	$ 1,183.75	$ 282,270.43	$ 1,183.75
2	6/1/2008	282,270.43	3,013.32	-	3,013.32	1,837.19	1,176.13	280,433.23	2,359.88
3	7/1/2008	280,433.23	3,013.32	-	3,013.32	1,844.85	1,168.47	278,588.38	3,528.35
4	8/1/2008	278,588.38	3,013.32	-	3,013.32	1,852.54	1,160.78	276,735.85	4,689.13
5	9/1/2008	276,735.85	3,013.32	-	3,013.32	1,860.26	1,153.07	274,875.59	5,842.20
6	10/1/2008	274,875.59	3,013.32	-	3,013.32	1,868.01	1,145.31	273,007.59	6,987.51
7	11/1/2008	273,007.59	3,013.32	-	3,013.32	1,875.79	1,137.53	271,131.80	8,125.05
8	12/1/2008	271,131.80	3,013.32	-	3,013.32	1,883.61	1,129.72	269,248.19	9,254.76
9	1/1/2009	269,248.19	3,013.32	-	3,013.32	1,891.45	1,121.87	267,356.74	10,376.63
10	2/1/2009	267,356.74	3,013.32	-	3,013.32	1,899.33	1,113.99	265,457.40	11,490.62
11	3/1/2009	265,457.40	3,013.32	-	3,013.32	1,907.25	1,106.07	263,550.15	12,596.69
12	4/1/2009	263,550.15	3,013.32	-	3,013.32	1,915.20	1,098.13	261,634.96	13,694.81
13	5/1/2009	261,634.96	3,013.32	-	3,013.32	1,923.18	1,090.15	259,711.78	14,784.96
14	6/1/2009	259,711.78	3,013.32	-	3,013.32	1,931.19	1,082.13	257,780.59	15,867.09
15	7/1/2009	257,780.59	3,013.32	-	3,013.32	1,939.24	1,074.09	255,841.36	16,941.18
16	8/1/2009	255,841.36	3,013.32	-	3,013.32	1,947.32	1,066.01	253,894.04	18,007.18
17	9/1/2009	253,894.04	3,013.32	-	3,013.32	1,955.43	1,057.89	251,938.61	19,065.08
18	10/1/2009	251,938.61	3,013.32	-	3,013.32	1,963.58	1,049.74	249,975.04	20,114.82
19	11/1/2009	249,975.04	3,013.32	-	3,013.32	1,971.76	1,041.56	248,003.28	21,156.38
20	12/1/2009	248,003.28	3,013.32	-	3,013.32	1,979.97	1,033.35	246,023.30	22,189.73
21	1/1/2010	246,023.30	3,013.32	-	3,013.32	1,988.22	1,025.10	244,035.08	23,214.83
22	2/1/2010	244,035.08	3,013.32	-	3,013.32	1,996.51	1,016.81	242,038.57	24,231.64
23	3/1/2010	242,038.57	3,013.32	-	3,013.32	2,004.83	1,008.49	240,033.74	25,240.13
24	4/1/2010	240,033.74	3,013.32	-	3,013.32	2,013.18	1,000.14	238,020.56	26,240.27
25	5/1/2010	238,020.56	3,013.32	-	3,013.32	2,021.57	991.75	235,998.99	27,232.03
26	6/1/2010	235,998.99	3,013.32	-	3,013.32	2,029.99	983.33	233,969.00	28,215.36
27	7/1/2010	233,969.00	3,013.32	-	3,013.32	2,038.45	974.87	231,930.55	29,190.23
28	8/1/2010	231,930.55	3,013.32	-	3,013.32	2,046.94	966.38	229,883.61	30,156.60
29	9/1/2010	229,883.61	3,013.32	-	3,013.32	2,055.47	957.85	227,828.13	31,114.45
30	10/1/2010	227,828.13	3,013.32	-	3,013.32	2,064.04	949.28	225,764.10	32,063.74
31	11/1/2010	225,764.10	3,013.32	-	3,013.32	2,072.64	940.68	223,691.46	33,004.42
32	12/1/2010	223,691.46	3,013.32	-	3,013.32	2,081.27	932.05	221,610.19	33,936.47
33	1/1/2011	221,610.19	3,013.32	-	3,013.32	2,089.95	923.38	219,520.24	34,859.84
34	2/1/2011	219,520.24	3,013.32	-	3,013.32	2,098.65	914.67	217,421.59	35,774.51
35	3/1/2011	217,421.59	3,013.32	-	3,013.32	2,107.40	905.92	215,314.19	36,680.43
36	4/1/2011	215,314.19	3,013.32	-	3,013.32	2,116.18	897.14	213,198.01	37,577.58
37	5/1/2011	213,198.01	3,013.32	-	3,013.32	2,125.00	888.33	211,073.01	38,465.90
38	6/1/2011	211,073.01	3,013.32	-	3,013.32	2,133.85	879.47	208,939.16	39,345.37
39	7/1/2011	208,939.16	3,013.32	-	3,013.32	2,142.74	870.58	206,796.42	40,215.95
40	8/1/2011	206,796.42	3,013.32	-	3,013.32	2,151.67	861.65	204,644.75	41,077.60
41	9/1/2011	204,644.75	3,013.32	-	3,013.32	2,160.63	852.69	202,484.12	41,930.29
42	10/1/2011	202,484.12	3,013.32	-	3,013.32	2,169.64	843.68	200,314.48	42,773.97
43	11/1/2011	200,314.48	3,013.32	-	3,013.32	2,178.68	834.64	198,135.80	43,608.62
44	12/1/2011	198,135.80	3,013.32	-	3,013.32	2,187.76	825.57	195,948.05	44,434.18
45	1/1/2012	195,948.05	3,013.32	-	3,013.32	2,196.87	816.45	193,751.18	45,250.63
46	2/1/2012	193,751.18	3,013.32	-	3,013.32	2,206.02	807.30	191,545.15	46,057.93
47	3/1/2012	191,545.15	3,013.32	-	3,013.32	2,215.22	798.10	189,329.93	46,856.04
48	4/1/2012	189,329.93	3,013.32	-	3,013.32	2,224.45	788.87	187,105.49	47,644.91
49	5/1/2012	187,105.49	3,013.32	-	3,013.32	2,233.72	779.61	184,871.77	48,424.52
50	6/1/2012	184,871.77	3,013.32	-	3,013.32	2,243.02	770.30	182,628.75	49,194.82
51	7/1/2012	182,628.75	3,013.32	-	3,013.32	2,252.37	760.95	180,376.38	49,955.77
52	8/1/2012	180,376.38	3,013.32	-	3,013.32	2,261.75	751.57	178,114.63	50,707.34
53	9/1/2012	178,114.63	3,013.32	-	3,013.32	2,271.18	742.14	175,843.45	51,449.48
54	10/1/2012	175,843.45	3,013.32	-	3,013.32	2,280.64	732.68	173,562.81	52,182.16
55	11/1/2012	173,562.81	3,013.32	-	3,013.32	2,290.14	723.18	171,272.67	52,905.34
56	12/1/2012	171,272.67	3,013.32	-	3,013.32	2,299.69	713.64	168,972.98	53,618.98
57	1/1/2013	168,972.98	3,013.32	-	3,013.32	2,309.27	704.05	166,663.72	54,323.03
58	2/1/2013	166,663.72	3,013.32	-	3,013.32	2,318.89	694.43	164,344.83	55,017.46
59	3/1/2013	164,344.83	3,013.32	-	3,013.32	2,328.55	684.77	162,016.28	55,702.23
60	4/1/2013	162,016.28	3,013.32	-	3,013.32	2,338.25	675.07	159,678.02	56,377.30
61	5/1/2013	159,678.02	3,013.32	-	3,013.32	2,348.00	665.33	157,330.03	57,042.63
62	6/1/2013	157,330.03	3,013.32	-	3,013.32	2,357.78	655.54	154,972.25	57,698.17
63	7/1/2013	154,972.25	3,013.32	-	3,013.32	2,367.60	645.72	152,604.64	58,343.89
64	8/1/2013	152,604.64	3,013.32	-	3,013.32	2,377.47	635.85	150,227.18	58,979.74
65	9/1/2013	150,227.18	3,013.32	-	3,013.32	2,387.37	625.95	147,839.80	59,605.68

Pmt No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
66	10/1/2013	147,839.80	3,013.32	-	3,013.32	2,397.32	616.00	145,442.48	60,221.68
67	11/1/2013	145,442.48	3,013.32	-	3,013.32	2,407.31	606.01	143,035.17	60,827.69
68	12/1/2013	143,035.17	3,013.32	-	3,013.32	2,417.34	595.98	140,617.83	61,423.67
69	1/1/2014	140,617.83	3,013.32	-	3,013.32	2,427.41	585.91	138,190.41	62,009.58
70	2/1/2014	138,190.41	3,013.32	-	3,013.32	2,437.53	575.79	135,752.88	62,585.37
71	3/1/2014	135,752.88	3,013.32	-	3,013.32	2,447.68	565.64	133,305.20	63,151.01
72	4/1/2014	133,305.20	3,013.32	-	3,013.32	2,457.88	555.44	130,847.32	63,706.45
73	5/1/2014	130,847.32	3,013.32	-	3,013.32	2,468.12	545.20	128,379.19	64,251.65
74	6/1/2014	128,379.19	3,013.32	-	3,013.32	2,478.41	534.91	125,900.79	64,786.56
75	7/1/2014	125,900.79	3,013.32	-	3,013.32	2,488.73	524.59	123,412.05	65,311.15
76	8/1/2014	123,412.05	3,013.32	-	3,013.32	2,499.10	514.22	120,912.95	65,825.36
77	9/1/2014	120,912.95	3,013.32	-	3,013.32	2,509.52	503.80	118,403.43	66,329.17
78	10/1/2014	118,403.43	3,013.32	-	3,013.32	2,519.97	493.35	115,883.46	66,822.52
79	11/1/2014	115,883.46	3,013.32	-	3,013.32	2,530.47	482.85	113,352.98	67,305.36
80	12/1/2014	113,352.98	3,013.32	-	3,013.32	2,541.02	472.30	110,811.96	67,777.67
81	1/1/2015	110,811.96	3,013.32	-	3,013.32	2,551.60	461.72	108,260.36	68,239.38
82	2/1/2015	108,260.36	3,013.32	-	3,013.32	2,562.24	451.08	105,698.12	68,690.47
83	3/1/2015	105,698.12	3,013.32	-	3,013.32	2,572.91	440.41	103,125.21	69,130.88
84	4/1/2015	103,125.21	3,013.32	-	3,013.32	2,583.63	429.69	100,541.58	69,560.57
85	5/1/2015	100,541.58	3,013.32	-	3,013.32	2,594.40	418.92	97,947.18	69,979.49
86	6/1/2015	97,947.18	3,013.32	-	3,013.32	2,605.21	408.11	95,341.97	70,387.60
87	7/1/2015	95,341.97	3,013.32	-	3,013.32	2,616.06	397.26	92,725.91	70,784.86
88	8/1/2015	92,725.91	3,013.32	-	3,013.32	2,626.96	386.36	90,098.95	71,171.22
89	9/1/2015	90,098.95	3,013.32	-	3,013.32	2,637.91	375.41	87,461.04	71,546.63
90	10/1/2015	87,461.04	3,013.32	-	3,013.32	2,648.90	364.42	84,812.14	71,911.05
91	11/1/2015	84,812.14	3,013.32	-	3,013.32	2,659.94	353.38	82,152.20	72,264.44
92	12/1/2015	82,152.20	3,013.32	-	3,013.32	2,671.02	342.30	79,481.18	72,606.74
93	1/1/2016	79,481.18	3,013.32	-	3,013.32	2,682.15	331.17	76,799.03	72,937.91
94	2/1/2016	76,799.03	3,013.32	-	3,013.32	2,693.33	320.00	74,105.70	73,257.90
95	3/1/2016	74,105.70	3,013.32	-	3,013.32	2,704.55	308.77	71,401.16	73,566.68
96	4/1/2016	71,401.16	3,013.32	-	3,013.32	2,715.82	297.50	68,685.34	73,864.18
97	5/1/2016	68,685.34	3,013.32	-	3,013.32	2,727.13	286.19	65,958.21	74,150.37
98	6/1/2016	65,958.21	3,013.32	-	3,013.32	2,738.50	274.83	63,219.71	74,425.20
99	7/1/2016	63,219.71	3,013.32	-	3,013.32	2,749.91	263.42	60,469.81	74,688.61
100	8/1/2016	60,469.81	3,013.32	-	3,013.32	2,761.36	251.96	57,708.44	74,940.57
101	9/1/2016	57,708.44	3,013.32	-	3,013.32	2,772.87	240.45	54,935.57	75,181.02
102	10/1/2016	54,935.57	3,013.32	-	3,013.32	2,784.42	228.90	52,151.15	75,409.92
103	11/1/2016	52,151.15	3,013.32	-	3,013.32	2,796.02	217.30	49,355.12	75,627.22
104	12/1/2016	49,355.12	3,013.32	-	3,013.32	2,807.67	205.65	46,547.45	75,832.86
105	1/1/2017	46,547.45	3,013.32	-	3,013.32	2,819.37	193.95	43,728.08	76,026.81
106	2/1/2017	43,728.08	3,013.32	-	3,013.32	2,831.12	182.20	40,896.96	76,209.01
107	3/1/2017	40,896.96	3,013.32	-	3,013.32	2,842.92	170.40	38,054.04	76,379.42
108	4/1/2017	38,054.04	3,013.32	-	3,013.32	2,854.76	158.56	35,199.27	76,537.97
109	5/1/2017	35,199.27	3,013.32	-	3,013.32	2,866.66	146.66	32,332.62	76,684.64
110	6/1/2017	32,332.62	3,013.32	-	3,013.32	2,878.60	134.72	29,454.02	76,819.36
111	7/1/2017	29,454.02	3,013.32	-	3,013.32	2,890.60	122.73	26,563.42	76,942.08
112	8/1/2017	26,563.42	3,013.32	-	3,013.32	2,902.64	110.68	23,660.78	77,052.76
113	9/1/2017	23,660.78	3,013.32	-	3,013.32	2,914.73	98.59	20,746.04	77,151.35
114	10/1/2017	20,746.04	3,013.32	-	3,013.32	2,926.88	86.44	17,819.16	77,237.79
115	11/1/2017	17,819.16	3,013.32	-	3,013.32	2,939.07	74.25	14,880.09	77,312.04
116	12/1/2017	14,880.09	3,013.32	-	3,013.32	2,951.32	62.00	11,928.77	77,374.04
117	1/1/2018	11,928.77	3,013.32	-	3,013.32	2,963.62	49.70	8,965.15	77,423.74
118	2/1/2018	8,965.15	3,013.32	-	3,013.32	2,975.97	37.35	5,989.18	77,461.10
119	3/1/2018	5,989.18	3,013.32	-	3,013.32	2,988.37	24.95	3,000.82	77,486.05
120	4/1/2018	3,000.82	3,013.32	-	3,000.82	2,988.31	12.50	0.00	77,498.55

APPENDIX VII

SECO PROGRAM CONTACTS
WATT WATCHERS OF TEXAS


I WANT Y'ALL...
to remember,
Zzzzz
SLEEP
is good.
1-888-US WATTS
wattwatchers.org

THE COMPUTERS IN YOUR SCHOOL ARE WASTING ENERGY. YOU CAN HELP YOUR SCHOOL SAVE MONEY. IMPLEMENT COMPUTER MONITOR POWER MANAGEMENT.

WHAT Y'ALL NEED TO REMEMBER:

- Screen savers **DO NOT** save energy!
- A typical monitor uses 60-90 watts
- While in sleep mode a monitor uses 2-10 watts
- Your Energy Star features may not be enabled
- Use free Energy Star software to capture savings
- Utilize your network, put all monitors to sleep at once
- Turn off your monitor at night
- Save energy, save money, prevent pollution

SOME ACTUAL EXAMPLES FROM DISTRICTS THAT ALREADY SET THEIR MONITORS TO SLEEP:

	District A	District B	District C
# of computers	3,000	10,000	15,000
% of monitors enabled	55	0	50
% of monitors enabled after mandate	100	100	100
Cost of electricity	7.5¢	5.8¢	6.0¢
Hours monitors are used per week	9	9	9
Days monitors are used per week	5	5	5
% of monitors that are turned off at night and weekends	35	35	35
% of monitors turned off after mandate	65	65	65
Current energy use	953,620 kWh	5,522,790 kWh	5,087,745 kWh
Future energy use	349,479 kWh	1,164,930 kWh	1,747,395 kWh
Energy savings	**604,141 kWh**	**4,357,860 kWh**	**3,340,350 kWh**
Current energy costs	$71,522	$320,322	$305,265
Future energy costs	$26,211	$67,566	$104,844
Monetary savings	**$45,311**	**$252,756**	**$200,421**
% of savings	63	79	65

If all of the estimated 1.2 million computer monitors in Texas schools were enabled for monitor power management, Texas would save up to **$20.5 MILLION EACH YEAR!**

ALL IN A DAY'S REST...

To download the free Energy Star EZ Save and EZ Wizard programs, click on the PC Power Management link on the Watt Watchers Website. The computer monitor power management campaign, Sleep is Good, is a national effort by EPA/DOE to promote energy savings in computer monitors. Watt Watchers is helping Texas schools take advantage of the program.

Watt Watchers of Texas
Phone/Fax 1-888-US WATTS (1-888-879-2887)
e-mail info@wattwatchers.org
Visit our website http://wattwatchers.org

Sponsored by the Texas Comptroller of Public Accounts, State Energy Conservation Office, and the U.S. Department of Energy.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1-888 US WATTS
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SPONSORED BY THE TEXAS STATE ENERGY CONSERVATION OFFICE

-IT'S FREE!-IT'S SIMPLE!-IT WORKS!-

START YOUR PROGRAM TODAY!

Watt Watchers of Texas is a FREE energy efficiency program for Texas schools sponsored by the Texas Comptroller of Public Accounts, State Energy Conservation Office, and the U.S. Department of Energy. The program is designed to help school districts save energy and money by getting students involved. It is simple and effective! Students patrol the halls of the schools reducing energy waste by turning off lights and leaving "tickets" for empty classrooms with the lights on. Turning out the lights in a classroom during two unoccupied hours per day (lunch & after school) can save $50 over a school year.

GET STARTED

Call 1-888-USWATTS or

Sign up for a free kit. Call 1-888-USWATTS or go on-line at http://wattwatchers.org to enroll. You will receive a free kit which includes a set of 4 Watt Watchers binders, 4 name badges and 4 name tags with 4 lanyards, 4 pencils, a complete instruction manual on CD-ROM, plus a supply of forms, sample tickets and thank you notes. Everything you need — open your kit and get started today! Not only will your school be provided with all of the materials listed above (approximately a $25 value), Watt Watchers will provide free support for the program, including:

- *WATTS NEWS* — Quarterly 20 page Newspaper
- Toll Free Phone & Toll Free Fax support line
- Website and e-mail support
- E-Mail Update – Monthly news for Watt Watchers
- Workshops – Watt Watchers sponsors regional workshops
- Conferences – Watt Watchers attends educational conferences – see you there.
- CD-ROM with all the materials – 0ver 450MB!
- Five Year Lapel Pins for dedicated Watt Watchers sponsors
- Watt Watchers Certificates for participation and Zero Hero Awards

BUT THAT'S NOT ALL, Y'ALL!

In addition to student energy patrols that find waste and raise awareness, Watt Watchers also has additional programs for your school:

- Traveling Energy Exploration Stations – free loans of hands-on kits for classes
- Knowledge is Power – an energy efficiency curriculum supplement
- Sleep Is Good – a computer monitor power management program
- Junior Solar Sprint – a model solar race car project
- Energy Encounter – a one day workshop for high school students
- District Energy Council – students assisting energy managers
- The Weatherization Project – a residential community energy project
- Benchmarking – compare your school district energy use nationally

Watt Watchers of Texas
Phone/Fax 1-888-US WATTS (1-888-879-2887)
e-mail info@wattwatchers.org
Visit our website http://wattwatchers.org

Sponsored by the Texas Comptroller of Public Accounts, State Energy Conservation Office, and the U.S. Department of Energy.

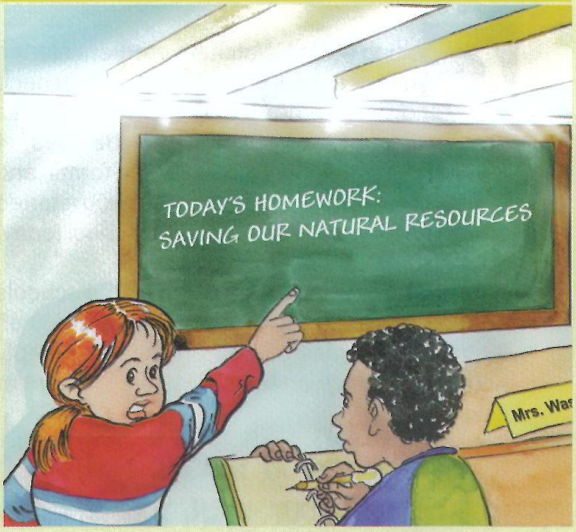
ENROLL IN WATT WATCHERS NOW IT'S EASY!

SIGN-UP FOR YOUR FREE KIT

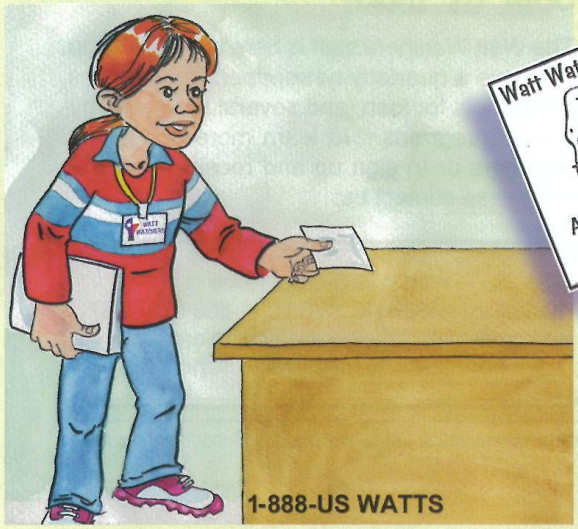
4-NAME BADGES
4-NOTEBOOKS
4-LANYARDS
4-PENCILS
FORMS & MANUAL

1 YOUR STUDENTS PATROL THE SCHOOL

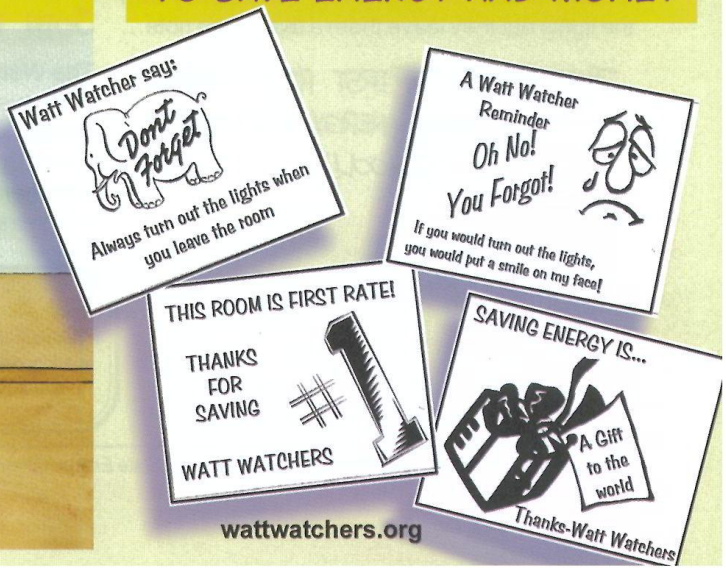
2 FIND EMPTY CLASSROOMS WITH THE LIGHTS ON



3 LEAVE TICKETS, SOMETIMES THANK YOU NOTES...



...REMINDING EVERYONE TO SAVE ENERGY AND MONEY



ENROLL IN WATT WATCHERS OF TEXAS

Getting a Watt Watchers program started in your school is so simple. All you need to do is order the FREE kit! Your kit comes complete with 4 name badges, 4 lanyards, 4 notebooks, 4 pencils, the forms, and a CD-ROM with a manual to get you started saving energy and money for your school today!

Your students will patrol the halls of the schools to see where energy is being wasted. When they locate a classroom or office that is empty and the lights are on they will leave a reminder ticket …

"OH, NO -YOU FORGOT TO TURN YOUR LIGHTS OUT WHEN YOU LEFT THE ROOM!"

If they notice classrooms that consistently turn the lights out they leave them a thank-you note…

"THIS ROOM IS FIRST RATE -THANKS FOR SAVING ENERGY FOR OUR SCHOOL!"

IT IS THAT SIMPLE.

Your students and your entire school will learn a valuable lesson about energy efficiency and its benefits that will last a lifetime. Your students will change habits and attitudes about our environment while saving money and preventing pollution. You will change the world for the better.

Teachers, just place the Watt Watchers materials in a bin at your front door and assign your students a time to go on patrols throughout the day and the work is done. The program can be adapted to fit your teaching needs and demands. The Watt Watchers program is designed not to interrupt daily school activities. Thousands of programs across Texas are now patrolling quickly and quietly.

JOIN US TODAY!

The Watt Watchers staff is here to support you. We have a quarterly newspaper, lesson plans, energy kits for loan, and several more energy-related programs. To learn more about Watt Watchers or to sign up and receive your free kit, please contact us:

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Phone/Fax 1-888-US WATTS (1-888-879-2887)
e-mail info@wattwatchers.org
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APPENDIX IX

UTILITY CHARTS ON DISKETTE