SCHOOLS/LOCAL GOVERNMENT ENERGY MANAGEMENT PROGRAM

For

BURNET
CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
Burnet, 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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May 28, 2009

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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 April 2009, **SECO** received a request for technical assistance from *Preston Ingram*, Business Manager for Burnet C.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 **Burnet CISD,** (hereafter known as BCISD) 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. Kent Wachtel, Energy Manager for the district, 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 **$25,625** may be saved annually if all recommended projects are implemented. The estimated installed cost of these projects should total approximately **$410,000**, yielding an average simple payback of **18** years.

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 **BCISD**. 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.

3.0 CAMPUS DESCRIPTIONS:

Burnet CISD consists of seven campuses:

1. Bertram Elementary School (K-5th Grade, Bertram, Texas)
2. Burnet Elementary (Pre K-1st Grade)
3. Shady Grove Elementary (2nd-3rd Grade)
4. Richey Elementary (4th-5th Grade)
5. Burnet Middle School / 6th Grade Campus (6th-8th Grade)
6. Burnet High School (9th-12th Grade)
7. HLAC / Quest High School

In addition, the district has an Administration Office, Professional Development Center, Maintenance and Transportation Buildings and Food Service Department.

The district performed a district-wide lighting renovation from T12 to T8 lamp and electronic ballast linear fluorescent fixtures.

General District Notes:

During the survey, it was noted that many water heaters do not have insulation installed on the hot water lines immediately connected to the unit. As can be seen in the picture to the right, this is the insulation that was removed in order to replace the unit and it was never re-installed. The majority of the energy losses in a water heating system occur in this section of the water piping. *We recommend that the district install insulation on this piping at all water heaters in the district where it is missing.*

It was also noted in the survey, that many of the Kitchen hoods in the district's Kitchens do not have make-up air at the exhaust hoods. Without make-up air, the exhaust hoods take conditioned air from the Kitchen and exhaust it outside which keeps the Kitchen HVAC equipment operating for more hours than necessary. *We recommend that the district renovate or replace the hoods to incorporate make-up air at the exhaust hoods in the Kitchen.*

The existing energy policy is documented with signs posted at many locations around the campuses (see picture to the right). The Energy Manager at the district actually works between the

hours of 0100 and 0800 and tours the schools to monitor for equipment that is operating outside of the energy policy guidelines. The policy states that lights should be left off, but the HVAC units should be left on with a cooling setpoint of 76°F and a heating setpoint of 68°F. Computers are left on during overnight hours on Tuesdays and Thursdays. Energy reports are given to the Energy Manager daily and custodial reports delivered weekly. *We recommend that the energy policy be amended to turn off all HVAC systems and equipment when the building is not occupied by staff or students.* The most efficient state for any piece of equipment afterhours is off. In periods of extreme weather, night setbacks may be used to prevent the temperature of the interior of the building from getting below 50°F or above 90°F, but otherwise the units should be off when the building is not occupied.

Shady Grove Elementary School

This 59,589 square foot facility serves 2nd and 3rd grade. The school was renovated to meet the required standard of outside air for dilution in the HVAC system about 9 years ago. The school utilizes 45 each heat pump split systems that are now about 12 years old. The air handlers are located above the ACT ceiling in the classrooms. No emergency electric heat strips were incorporated into the design and the energy manager reports that the units do not adequately heat the building on colder days and cannot maintain occupant comfort at those times. The classrooms have carpeted floors and many have CMU walls.

Given that the HVAC units are nearing the end of their useful life expectancy of 15-20 years and the fact that they do not maintain comfort during the colder periods of the winter, *we recommend that the district consider replacing the 45 heat pump split systems through a series of projects called planned obsolescence. In this plan, an acceptable budget amount of units are replaced each year until all of the units have eventually been replaced.* Should the district desire to select a more energy efficient system for the HVAC than just replacing the heat pump split systems on a one-to-one basis, an option exists called variable flow refrigerant split systems. In these systems, multiple compressor units adjust the DX cooling and heating to the exact needs of each space much like a variable speed drive can adjust hot and chilled water flows to classroom terminal boxes in a centralized HVAC system. The air handlers are often wall-mounted in smaller classrooms and offices and placed in the middle of the room as a cassette in larger areas. The units are significantly more energy efficient given that the units are matched to the conditioning requirements of each space and not just left to an on/off sequence.

Under normal circumstances, we would recommend an energy management control system be installed at the time the HVAC system is replaced to limit operation of the HVAC equipment to the occupancy schedule of the building. At BCISD, they have the energy manager working evening and night shifts which allows him to turn off any equipment that might be left running afterhours. Therefore, the payback for this type of project would be extraordinarily long for as long as Mr. Wachtel retains this schedule in his current position. If at some point in time, the schedule changes, then the BEMS would likely be a more appealing energy conservation measure for the district to consider.

Burnet Middle School

Originally built in 1975, the facility has had several renovations and served as the High School for many years. The HVAC system consists of multiple 7-1/2 ton split systems that serve two classrooms each. The units are controlled with conventional thermostats whose setpoints are set according to the energy policy standard of 68° and 76°F.

Nineteen of the approximately 70 heat pump split system units have been replaced within the last two years. The remaining 51 units should be planned for replacement in the near future to avoid emergency replacement costs associated with units that fail while in service. We recommend the district replace them through a process of planned obsolescence where a budgeted amount of units are replaced each year, starting with the oldest, most maintenance intensive units, until all units have finally been replaced.

With light meter measurements of 50 footcandles taken in the corridors of the Middle School during the survey, it is apparent that there is an excess of light fixtures in the corridors. This occurs in facilities where lighting retrofits from T12 to T8 are done on a strictly one to one basis. The T8 system produces about 20% more light output than its T12 predecessor and when combined with fixtures that were dirty and had a high loss factor as T12s, the end result can be spaces that are actually overlit. Such is the case in the Middle School corridors. We recommend that the district try de-lamping each corridor fixture to one lamp (saves 29 watts per fixture), or de-lamping every other fixture completely (saves 58 watts per de-lamped fixture) in order to conserve energy. Similarly, Classroom 142 and the adjacent small computer classroom both tested at 90 footcandles in the space. Computer classrooms only require 30fc to meet standard and therefore the school could likely remove two of the three rows of fixtures in each room. The light levels should stabilize at about 30 fc and the energy from the other fixtures would be saved.

The front of the Sixth Grade Center had two each exterior wall pack fixtures that were on in the middle of the morning. We recommend that the district identify the faulty photocell or timeclock that controls these lights and keep them from operating during daytime hours.

Two identical water heaters, one of which is pictured to the right, currently serve just the Kitchen area. Originally, the units served dressing room shower areas as well, but these are no longer used. The units are 91 gallon, 199MBH input natural gas heaters. We recommend that with the reduced consumption today as compared to the original design, one of these units can be turned off and the Kitchen demand met with just one unit.

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 :

BURNET CISD

CAMPUS	ENERGY UTILIZATION INDEX (EUI) (Btu/sf-year)	ENERGY COST INDEX (ECI) ($/sf-year)
2009 Shady Grove ES Campus	**32,554**	**$1.11**
Region 13 2006 Average ES:	65,555	$1.05
2009 Burnet ES Campus	**18,002**	**$0.56**
Region 13 2006 Average ES:	65,555	$1.05
2009 Burnet MS Campus	**29,425**	**$0.85**
Region 13 2006 Average MS:	54,112	$0.91

Comparison: Burnet CISD to Regional Averages: The EUIs and ECIs for the Burnet facilities are below regional averages at all three campuses except for Shady Grove whose ECI is 5.7% higher than the regional average.
This is typical for schools that rely on electric heat. The energy consumption is relatively low but the cost is equal to or higher than regional averages.

5.0 RATE SCHEDULE ANALYSIS:

ELECTRIC PROVIDER: City of Burnet
Electric Rate: ***Large Commercial Service***

I. CUSTOMER CHARGE:		
Customer Charge	=	$12.62 per meter
II. ENERGY CHARGE:		
Purchased Power Cost Adjustment	=	Varies per Month
City Distribution Charge	=	$0.0385 per kWh
III. DEMAND CHARGE:		
Demand Charge	=	$2.00/kW

Note: Demand is highest measured demand in any 15-minute averaged period during the billing cycle, or 75% of the highest billed demand in the last 11 months, whichever is higher. In no case, may the billed demand be less than 50kW.

Average Savings for consumption = $0.0854/kWh + $0.000655/kWh = **$0.086055/kWh**

Average Savings for demand = $1.19 + $3.55 + $0.171 + $0.266 + $0.044 + $0.338338
= $5.56/kW

NATURAL GAS PROVIDER: Atmos

Rate Schedule Unavailable: Average cost per MCF determined from utility billings.

Total Cost of Natural Gas purchased for Burnet ES, MS and Shady Grove ES: $17,666
Total Quantity of Natural Gas purchased for Burnet ES, MS and Shady Grove ES: 2,041 MCF

Cost / Quantity = Average Unit Cost
$ 17,666 / 2,041 mcf = **$8.66 per mcf of natural gas**

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. Turn off gas valve for second water heater at Middle School serving Kitchen.

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.
4. De-lamp corridor fixtures at Middle School to ½ of the lamps that are currently operating.
   Fixtures could be de-lamped to one lamp operation in each fixture, or every other fixture could be removed from service.
   Light levels are currently more than twice the level required by standard.
5. Remove 2 rows of fixtures from computer classrooms (CR142 and adjacent).
   Light levels are currently more than three times the level required by standard.

B. CAPITAL EXPENSE PROJECTS

I. HVAC Renovation

Shady Grove, Option #1:
Replace 45 existing heat pump split systems with new heat pump split systems in a one-to-one renovation. Given that the existing units do not have emergency electric heat strips, the new units with the emergency heat strips necessary to keep students comfortable in colder weather will necessitate a long payback for a one to one replacement.

Estimated Installed Cost	=	$291,375
Estimated Energy Cost Savings	=	$ 12,140
Simple Payback Period	=	24 Years

Shady Grove, Option #2:
Replace 45 existing heat pump split systems with new variable refrigerant flow split systems. These units are significantly more energy efficient than the heat pump split systems that they are replacing, but they are also more expensive to install.

Estimated Installed Cost	=	$410,000
Estimated Energy Cost Savings	=	$ 25,625
Simple Payback Period	=	18 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	=	$ 410,000	
10 year commercial loan principal	=	$ 410,000	
10 year commercial loan interest (5%) paid	=	$ 111,842	
10 year commercial loan TOTAL	=	$ 521,842	
Commercial Loan Annual Payment	=	$ 4,349/month	= $ 52,188/yr
Total Annual Payment Minus Annual Energy Cost Savings = $52,188 – 25,625			= $ 26,563
Annual Cost to CISD (without considering Maintenance Cost Reduction)			**= $ 26,563**

More information regarding financial programs available to BCCISD 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.

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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

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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.

4

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.

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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

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APPENDIX II

ELECTRIC UTILITY RATE SCHEDULE

(b) AVAILABILITY:

The Residential Service rate may be available, as approved by the City of Burnet under the rules, regulations, and policies as provided for in this article, at the rates set forth in this section.

(c) APPLICABILITY:

The Residential Service rate is applicable for electric service for non-commercial, residential customers and subject to the special conditions as outlined in subsection (e) of this section.

(d) MONTHLY BILL:

1. The minimum monthly bill shall be the Customer Charge plus the sum of all applicable rate adjustments.

2. The monthly bill shall be the sum of the Customer Charge, the Purchased Power Cost Adjustment, the City Distribution Charge and applicable adjustments.

(e) SPECIAL CONDITIONS:

1. A residential unit, which is used primarily for business purposes, will be served under the appropriate business service rate schedule and not under this rate schedule. For the purpose of this section, a residential unit must be in compliance with all applicable zoning codes to qualify for the residential service rate.

ARTICLE IV. SECTION 110-137 SMALL COMMERCIAL SERVICE:

(a) RATE SCHEDULE SCS-MONTHLY RATE:

CUSTOMER CHARGE: $8.00
PURCHASED POWER COST ADJUSTMENT: (See Article IV. Section 110-142)
CITY DISTRIBUTION CHARGE: $0.0492 Per kWh

(b) AVAILABILITY:

The Small Commercial Service rate may be available, as approved by the City of Burnet under the rules, regulations, and policies as provided for in this article, at the rates set forth in this section.

(c) APPLICABILITY:

The Small Commercial Service rate is applicable for electric service for business and/or commercial customers whose demand is not equal to or greater than 50 kilowatts during any 15-minute demand interval during two billing periods over a rolling 12-month period.

(d) MONTHLY BILL:

1. The minimum monthly bill shall be the Customer Charge plus the sum of all applicable rate adjustments.

2. The monthly bill shall be the sum of the Customer Charge, the Purchased Power Cost Adjustment, the City Distribution Charge and applicable adjustments.

ARTICLE IV. SECTION 110-138 LARGE COMMERCIAL SERVICE:

(a) RATE SCHEDULE LCS-MONTHLY RATE:

CUSTOMER CHARGE: $12.62
PURCHASED POWER COST ADJUSTMENT (See Article IV. Section 110-142)
DEMAND CHARGE: (See Chart 1) per kW
CITY DISTRIBUTION CHARGE: (See Chart 1) per kWh

CHART 1	Through September 30, 2007	October 1, 2007	October 1, 2008
Demand Charge	$ 5.65 per kW	$3.82 per kW	$2.00 per kW
City Distribution Charge	$ 0.0271 per kWh	$ 0.0328 per kWh	$ 0.0385 per kWh

A Demand Charge of $5.65 per kW and a City Distribution Charge of $0.0271 per kWh will be in effect until the billing cycle that includes October 1, 2007, at which time a Demand Charge of $3.82 per kW and a City Distribution Charge of $0.0328 per kWh shall become effective and remain in effect until the billing cycle that includes October 1, 2008. At that time a Demand Charge of $2.00 per kW and a City Distribution Charge of $0.0385 per kWh shall become effective and remain in effect until such time as amended by ordinance. The rates established under this section may be amended by ordinance from time to time.

(b) AVAILABILITY:

The Large Commercial Service rate may be available, as approved by the City of Burnet under the rules, regulations, and policies as provided for in this article, at the rates set forth in this section.

(c) APPLICABILITY:

The Large Commercial Service rate is applicable for electric service for business and/or commercial customers whose demand is greater than or equal to 50 kilowatts, but less than 1,000 kilowatts, during any 15-minute demand interval during two billing periods over a rolling 12-month period.

(d) MONTHLY BILL:

1. The minimum monthly bill shall be the Customer Charge plus the minimum Demand Charge as stated in (e)(6) of this section and the sum of all applicable rate adjustments.

2. The monthly bill shall be the sum of the Customer Charge, the Purchased Power Cost Adjustment, the Demand Charge, the City Distribution Charge and applicable adjustments.

(e) SPECIAL CONDITIONS:

1. The kW billing demand shall be the highest measured kW demand established in any average 15-minute period during the current month or 75 percent of the highest average 15-minute kW demand in any of the preceding 11 months, but not less than 50 kW.

ARTICLE IV. SECTION 110-138 INDUSTRIAL SERVICE:

(a) RATE SCHEDULE IS-MONTHLY RATE SUMMARY:

CUSTOMER CHARGE: $12.62
PURCHASED POWER COST ADJUSTMENT (See Article IV. Section 110-142)
DEMAND CHARGE: $07.47 per kW
CITY DISTRIBUTION CHARGE: $0.0214 per kWh

d) AVAILABILITY:

The Industrial Service rate may be available, as approved by the City of Burnet under the rules, regulations, and policies as provided for in this article, at the rates set forth in this section.

(c) APPLICABILITY:

The Industrial Service rate is applicable for electric service for industrial customers whose demand is equal to or greater than 1,000 kilowatts during any 15-minute demand interval during two billing periods over a rolling 12-month period.

(d) MONTHLY BILL:

1. The minimum monthly bill shall be the Customer Charge of $12.62 per month plus the minimum Demand Charge as stated in (e)(6) of this section and the sum of all applicable rate adjustments.

2. The monthly bill shall be the sum of the Customer Charge, the Purchased Power Cost Adjustment, the Demand Charge, the City Distribution Charge and applicable adjustments.

(e) SPECIAL CONDITIONS:

1. The kW billing demand shall be the highest measured kW demand established in any average 15-minute

APPENDIX III

UTILITIES CONSUMPTION HISTORY

OWNER:	Burnet ISD				BUILDING:	Burnet Middle School		
MONTH / YEAR		ELECTRIC					NAT'L GAS / FUEL	
			DEMAND					
		CONSUMPTION	METERED	CHARGED	COST OF	TOTAL ALL ELECTRICAL	CONSUMPTION	$
MONTH	YEAR	KWH	KW/KVA	KW/KVA	DEMAND	COSTS $	MCF	COSTS
JANUARY	2009	99,893	40,800	40,800		13,296	275	$2,915
FEBRUARY	2009	99,934	40,250	40,250		12,822	359	$2,889
MARCH	2009	99,975	40,800	40,800		12,348	277	$1,818
APRIL	2009	106,200	40,200	40,200		12,269	184	$990
MAY	2009	35,473	17,680	17,680		4,504	108	$532
JUNE	2008	138,600	49,800	49,800		16,502	62	$691
JULY	2008	102,600	25,200	25,200		11,995	28	$410
AUGUST	2008	104,046	30,000	30,000		12,387	13	$254
SEPTEMBER	2008	177,000	61,800	61,800		22,126	17	$323
OCTOBER	2008	156,816	54,000	54,000		17,333	32	$433
NOVEMBER	2008	123,249	40,800	40,800		16,011	87	$999
DECEMBER	2008	111,571	41,126	41,126		14,654	79	$901
TOTAL		1,355,357	482,456	482,456	0	$166,247	1,521	$13,155
					Energy Use Index:			
Annual Total Energy Cost =		$179,402	Per Year		Total Site BTU's/yr		29,425	BTU/s.f.yr
					Total Area (sq.ft.)			
Total KWH x 0.003413 =		4,625.83	x 106					
Total MCF x 1.03 =		1,566.63	x 106		Energy Cost Index:			
Total Other x ____			x 106		Total Energy Cost/yr		$0.85	$/s.f. yr
Total Site BTU's/yr		6,192.46	x 106		Total Area (sq.ft.)			
Floor area:		210,448	s.f.					
Electric Utility		Account #	Meter#		Gas Utility	Account #		
City Of Burnet		Multiple			Atmos	Multiple		

OWNER:	Burnet ISD				BUILDING:	Shady Grove Elementary School		
MONTH / YEAR		ELECTRIC					NAT'L GAS / FUEL	
			DEMAND					
		CONSUMPTION	METERED	CHARGED	COST OF	TOTAL ALL ELECTRICAL	CONSUMPTION	$
MONTH	YEAR	KWH	KW/KVA	KW/KVA	DEMAND	COSTS $	MCF	COSTS
JANUARY	2009	39,000	18,600	18,600		4,331	15	$169
FEBRUARY	2009	35,700	16,800	16,800		4,458	15	$90
MARCH	2009	38,700	17,100	17,100		4,547	10	$57
APRIL	2009	48,000	21,300	21,300		5,693	17	$151
MAY	2009	55,800	23,100	23,100		6,587	9	$113
JUNE	2008	38,400	12,000	12,000		4,595	7	$94
JULY	2008	48,600	12,900	12,900		5,744	5	$81
AUGUST	2008	60,000	23,700	23,700		7,549	2	$43
SEPTEMBER	2008	56,100	22,200	22,200		6,263	0	$21
OCTOBER	2008	43,500	18,600	18,600		5,739	5	$32
NOVEMBER	2008	36,600	17,700	17,700		4,865	7	$96
DECEMBER	2008	37,800	18,150	18,150		4,598	8	$101
TOTAL		538,200	222,150	222,150	0	$64,969	100	$1,048
					Energy Use Index:			
Annual Total Energy Cost =		$66,017	Per Year		Total Site BTU's/yr		32,554	BTU/s.f.yr
					Total Area (sq.ft.)			
Total KWH x 0.003413 =		1,836.88	x 106					
Total MCF x 1.03 =		103.00	x 106		Energy Cost Index:			
Total Other x ____			x 106		Total Energy Cost/yr		$1.11	$/s.f. yr
Total Site BTU's/yr		1,939.88	x 106		Total Area (sq.ft.)			
Floor area:		59,589	s.f.					
Electric Utility		Account #	Meter#		Gas Utility	Account #		
City Of Burnet		Multiple			Atmos	Multiple		

OWNER:	Burnet ISD				BUILDING:	Burnet Elementary School		
MONTH / YEAR		ELECTRIC					NAT'L GAS / FUEL	
			DEMAND					
		CONSUMPTION	METERED	CHARGED	COST OF	TOTAL ALL ELECTRICAL	CONSUMPTION	$
MONTH	YEAR	KWH	KW/KVA	KW/KVA	DEMAND	COSTS $	MCF	COSTS
JANUARY	2009	31,822	15,440	15,440		3,673	58	$623
FEBRUARY	2009	23,728	13,800	13,800		3,058	71	$395
MARCH	2009	26,228	44,400	44,400		4,447	59	$275
APRIL	2009	35,473	17,680	17,680		4,504	103	$842
MAY	2009	33,892	20,800	20,800		4,385	75	$783
JUNE	2008	18,040	10,960	10,960		2,434	12	$145
JULY	2008	29,640	14,800	14,800		3,854	5	$82
AUGUST	2008	53,222	23,960	23,960		6,881	0	$23
SEPTEMBER	2008	46,290	21,440	21,440		5,353	0	$25
OCTOBER	2008	44,888	15,840	15,840		5,961	3	$59
NOVEMBER	2008	28,850	13,760	13,760		3,948	6	$89
DECEMBER	2008	30,336	14,600	14,600		3,811	10	$122
TOTAL		402,409	227,480	227,480	0	$52,309	402	$3,463

					Energy Use Index:			
Annual Total Energy Cost =		$55,772	Per Year		Total Site BTU's/yr		18,002	BTU/s.f.yr
					Total Area (sq.ft.)			
Total KWH x 0.003413 =		1,373.42	x 106					
Total MCF x 1.03 =		414.06	x 106		Energy Cost Index:			
Total Other x ____			x 106		Total Energy Cost/yr		$0.56	$/s.f. yr
Total Site BTU's/yr		1,787.48	x 106		Total Area (sq.ft.)			
Floor area:		99,292	s.f.					
Electric Utility		Account #	Meter#		Gas Utility	Account #		
City Of Burnet		Multiple			Atmos	Multiple		

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

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 BURNET CISD , 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: J Preston Ingram — Date: 5/28/09
Name (Mr./Ms./Dr.) Preston Ingram — Title: Bus. Mgr.
Organization: Burnet CISD — Phone: 512 756-2124
Street Address: 208 E Brier Ln. — Fax: 512-756-7498
Mailing Address: 208 E Brier Ln — EMail: pingram@burnet.txed.net
Burnet, TX 78611 — County Burnet

CONTACT INFORMATION:

Name (Mr./Ms./Dr.): Kent Wachtel — Title: Energy Manager
Phone: 512 756 2972 — Fax: 512 756 4472
E-Mail: KWachtel@burnet.txed.net — County Burnet

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 Huneycutt **FAX: 512-388-3312** Phone: 512-258-0547 x124

APPENDIX VI

AMORTIZATION SCHEDULE

Loan Amortization Schedule

	Enter values
Loan amount	$ 410,000.00
Annual interest rate	5.00 %
Loan period in years	10
Number of payments per year	12
Start date of loan	7/1/2009
Optional extra payments	$ -

	Loan summary
Scheduled payment	$ 4,348.69
Scheduled number of payments	120
Actual number of payments	120
Total early payments	$ -
Total interest	$ 111,842.33

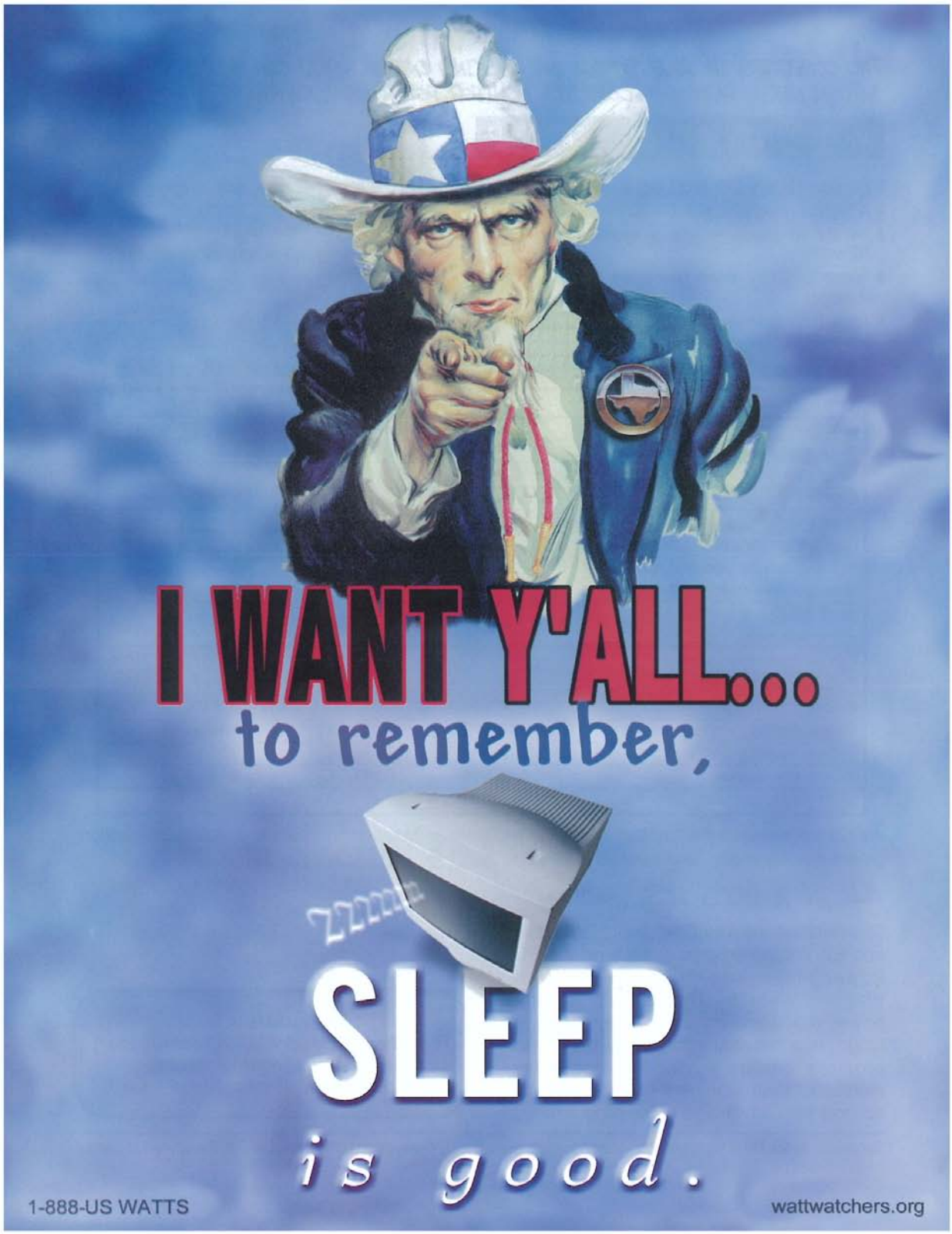
Lender name:

Pmt No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	8/1/2009	$ 410,000.00	$ 4,348.69	$ -	$ 4,348.69	$ 2,640.35	$ 1,708.33	$ 407,359.65	$ 1,708.33
2	9/1/2009	407,359.65	4,348.69	-	4,348.69	2,651.35	1,697.33	404,708.29	3,405.67
3	10/1/2009	404,708.29	4,348.69	-	4,348.69	2,662.40	1,686.28	402,045.89	5,091.95
4	11/1/2009	402,045.89	4,348.69	-	4,348.69	2,673.49	1,675.19	399,372.40	6,767.14
5	12/1/2009	399,372.40	4,348.69	-	4,348.69	2,684.63	1,664.05	396,687.76	8,431.19
6	1/1/2010	396,687.76	4,348.69	-	4,348.69	2,695.82	1,652.87	393,991.94	10,084.06
7	2/1/2010	393,991.94	4,348.69	-	4,348.69	2,707.05	1,641.63	391,284.89	11,725.69
8	3/1/2010	391,284.89	4,348.69	-	4,348.69	2,718.33	1,630.35	388,566.56	13,356.05
9	4/1/2010	388,566.56	4,348.69	-	4,348.69	2,729.66	1,619.03	385,836.90	14,975.07
10	5/1/2010	385,836.90	4,348.69	-	4,348.69	2,741.03	1,607.65	383,095.86	16,582.73
11	6/1/2010	383,095.86	4,348.69	-	4,348.69	2,752.45	1,596.23	380,343.41	18,178.96
12	7/1/2010	380,343.41	4,348.69	-	4,348.69	2,763.92	1,584.76	377,579.49	19,763.72
13	8/1/2010	377,579.49	4,348.69	-	4,348.69	2,775.44	1,573.25	374,804.05	21,336.97
14	9/1/2010	374,804.05	4,348.69	-	4,348.69	2,787.00	1,561.68	372,017.05	22,898.65
15	10/1/2010	372,017.05	4,348.69	-	4,348.69	2,798.62	1,550.07	369,218.43	24,448.73
16	11/1/2010	369,218.43	4,348.69	-	4,348.69	2,810.28	1,538.41	366,408.16	25,987.14
17	12/1/2010	366,408.16	4,348.69	-	4,348.69	2,821.99	1,526.70	363,586.17	27,513.84
18	1/1/2011	363,586.17	4,348.69	-	4,348.69	2,833.74	1,514.94	360,752.43	29,028.78
19	2/1/2011	360,752.43	4,348.69	-	4,348.69	2,845.55	1,503.14	357,906.88	30,531.91
20	3/1/2011	357,906.88	4,348.69	-	4,348.69	2,857.41	1,491.28	355,049.47	32,023.19
21	4/1/2011	355,049.47	4,348.69	-	4,348.69	2,869.31	1,479.37	352,180.16	33,502.57
22	5/1/2011	352,180.16	4,348.69	-	4,348.69	2,881.27	1,467.42	349,298.89	34,969.98
23	6/1/2011	349,298.89	4,348.69	-	4,348.69	2,893.27	1,455.41	346,405.61	36,425.39
24	7/1/2011	346,405.61	4,348.69	-	4,348.69	2,905.33	1,443.36	343,500.28	37,868.75
25	8/1/2011	343,500.28	4,348.69	-	4,348.69	2,917.43	1,431.25	340,582.85	39,300.00
26	9/1/2011	340,582.85	4,348.69	-	4,348.69	2,929.59	1,419.10	337,653.26	40,719.10
27	10/1/2011	337,653.26	4,348.69	-	4,348.69	2,941.80	1,406.89	334,711.46	42,125.99
28	11/1/2011	334,711.46	4,348.69	-	4,348.69	2,954.06	1,394.63	331,757.41	43,520.62
29	12/1/2011	331,757.41	4,348.69	-	4,348.69	2,966.36	1,382.32	328,791.04	44,902.94
30	1/1/2012	328,791.04	4,348.69	-	4,348.69	2,978.72	1,369.96	325,812.32	46,272.90
31	2/1/2012	325,812.32	4,348.69	-	4,348.69	2,991.13	1,357.55	322,821.18	47,630.45
32	3/1/2012	322,821.18	4,348.69	-	4,348.69	3,003.60	1,345.09	319,817.59	48,975.54
33	4/1/2012	319,817.59	4,348.69	-	4,348.69	3,016.11	1,332.57	316,801.47	50,308.12
34	5/1/2012	316,801.47	4,348.69	-	4,348.69	3,028.68	1,320.01	313,772.79	51,628.12
35	6/1/2012	313,772.79	4,348.69	-	4,348.69	3,041.30	1,307.39	310,731.49	52,935.51
36	7/1/2012	310,731.49	4,348.69	-	4,348.69	3,053.97	1,294.71	307,677.52	54,230.22
37	8/1/2012	307,677.52	4,348.69	-	4,348.69	3,066.70	1,281.99	304,610.83	55,512.21
38	9/1/2012	304,610.83	4,348.69	-	4,348.69	3,079.47	1,269.21	301,531.35	56,781.42
39	10/1/2012	301,531.35	4,348.69	-	4,348.69	3,092.31	1,256.38	298,439.05	58,037.80
40	11/1/2012	298,439.05	4,348.69	-	4,348.69	3,105.19	1,243.50	295,333.86	59,281.30
41	12/1/2012	295,333.86	4,348.69	-	4,348.69	3,118.13	1,230.56	292,215.73	60,511.86
42	1/1/2013	292,215.73	4,348.69	-	4,348.69	3,131.12	1,217.57	289,084.61	61,729.42
43	2/1/2013	289,084.61	4,348.69	-	4,348.69	3,144.17	1,204.52	285,940.44	62,933.94
44	3/1/2013	285,940.44	4,348.69	-	4,348.69	3,157.27	1,191.42	282,783.17	64,125.36
45	4/1/2013	282,783.17	4,348.69	-	4,348.69	3,170.42	1,178.26	279,612.75	65,303.63
46	5/1/2013	279,612.75	4,348.69	-	4,348.69	3,183.63	1,165.05	276,429.12	66,468.68
47	6/1/2013	276,429.12	4,348.69	-	4,348.69	3,196.90	1,151.79	273,232.22	67,620.47
48	7/1/2013	273,232.22	4,348.69	-	4,348.69	3,210.22	1,138.47	270,022.00	68,758.93
49	8/1/2013	270,022.00	4,348.69	-	4,348.69	3,223.59	1,125.09	266,798.41	69,884.03
50	9/1/2013	266,798.41	4,348.69	-	4,348.69	3,237.03	1,111.66	263,561.38	70,995.69
51	10/1/2013	263,561.38	4,348.69	-	4,348.69	3,250.51	1,098.17	260,310.87	72,093.86
52	11/1/2013	260,310.87	4,348.69	-	4,348.69	3,264.06	1,084.63	257,046.81	73,178.49
53	12/1/2013	257,046.81	4,348.69	-	4,348.69	3,277.66	1,071.03	253,769.15	74,249.51
54	1/1/2014	253,769.15	4,348.69	-	4,348.69	3,291.31	1,057.37	250,477.84	75,306.89
55	2/1/2014	250,477.84	4,348.69	-	4,348.69	3,305.03	1,043.66	247,172.81	76,350.54
56	3/1/2014	247,172.81	4,348.69	-	4,348.69	3,318.80	1,029.89	243,854.01	77,380.43
57	4/1/2014	243,854.01	4,348.69	-	4,348.69	3,332.63	1,016.06	240,521.38	78,396.49
58	5/1/2014	240,521.38	4,348.69	-	4,348.69	3,346.51	1,002.17	237,174.87	79,398.66
59	6/1/2014	237,174.87	4,348.69	-	4,348.69	3,360.46	988.23	233,814.41	80,386.89
60	7/1/2014	233,814.41	4,348.69	-	4,348.69	3,374.46	974.23	230,439.95	81,361.12
61	8/1/2014	230,439.95	4,348.69	-	4,348.69	3,388.52	960.17	227,051.43	82,321.28
62	9/1/2014	227,051.43	4,348.69	-	4,348.69	3,402.64	946.05	223,648.79	83,267.33
63	10/1/2014	223,648.79	4,348.69	-	4,348.69	3,416.82	931.87	220,231.98	84,199.20
64	11/1/2014	220,231.98	4,348.69	-	4,348.69	3,431.05	917.63	216,800.92	85,116.83
65	12/1/2014	216,800.92	4,348.69	-	4,348.69	3,445.35	903.34	213,355.57	86,020.17

Pmt No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
66	1/1/2015	213,355.57	4,348.69	-	4,348.69	3,459.70	888.98	209,895.87	86,909.15
67	2/1/2015	209,895.87	4,348.69	-	4,348.69	3,474.12	874.57	206,421.75	87,783.72
68	3/1/2015	206,421.75	4,348.69	-	4,348.69	3,488.60	860.09	202,933.15	88,643.81
69	4/1/2015	202,933.15	4,348.69	-	4,348.69	3,503.13	845.55	199,430.02	89,489.36
70	5/1/2015	199,430.02	4,348.69	-	4,348.69	3,517.73	830.96	195,912.29	90,320.32
71	6/1/2015	195,912.29	4,348.69	-	4,348.69	3,532.38	816.30	192,379.91	91,136.62
72	7/1/2015	192,379.91	4,348.69	-	4,348.69	3,547.10	801.58	188,832.81	91,938.21
73	8/1/2015	188,832.81	4,348.69	-	4,348.69	3,561.88	786.80	185,270.92	92,725.01
74	9/1/2015	185,270.92	4,348.69	-	4,348.69	3,576.72	771.96	181,694.20	93,496.97
75	10/1/2015	181,694.20	4,348.69	-	4,348.69	3,591.63	757.06	178,102.57	94,254.03
76	11/1/2015	178,102.57	4,348.69	-	4,348.69	3,606.59	742.09	174,495.98	94,996.13
77	12/1/2015	174,495.98	4,348.69	-	4,348.69	3,621.62	727.07	170,874.36	95,723.19
78	1/1/2016	170,874.36	4,348.69	-	4,348.69	3,636.71	711.98	167,237.65	96,435.17
79	2/1/2016	167,237.65	4,348.69	-	4,348.69	3,651.86	696.82	163,585.79	97,131.99
80	3/1/2016	163,585.79	4,348.69	-	4,348.69	3,667.08	681.61	159,918.71	97,813.60
81	4/1/2016	159,918.71	4,348.69	-	4,348.69	3,682.36	666.33	156,236.35	98,479.93
82	5/1/2016	156,236.35	4,348.69	-	4,348.69	3,697.70	650.98	152,538.65	99,130.91
83	6/1/2016	152,538.65	4,348.69	-	4,348.69	3,713.11	635.58	148,825.54	99,766.49
84	7/1/2016	148,825.54	4,348.69	-	4,348.69	3,728.58	620.11	145,096.96	100,386.60
85	8/1/2016	145,096.96	4,348.69	-	4,348.69	3,744.12	604.57	141,352.85	100,991.17
86	9/1/2016	141,352.85	4,348.69	-	4,348.69	3,759.72	588.97	137,593.13	101,580.14
87	10/1/2016	137,593.13	4,348.69	-	4,348.69	3,775.38	573.30	133,817.75	102,153.44
88	11/1/2016	133,817.75	4,348.69	-	4,348.69	3,791.11	557.57	130,026.64	102,711.02
89	12/1/2016	130,026.64	4,348.69	-	4,348.69	3,806.91	541.78	126,219.73	103,252.79
90	1/1/2017	126,219.73	4,348.69	-	4,348.69	3,822.77	525.92	122,396.96	103,778.71
91	2/1/2017	122,396.96	4,348.69	-	4,348.69	3,838.70	509.99	118,558.26	104,288.70
92	3/1/2017	118,558.26	4,348.69	-	4,348.69	3,854.69	493.99	114,703.57	104,782.69
93	4/1/2017	114,703.57	4,348.69	-	4,348.69	3,870.75	477.93	110,832.81	105,260.62
94	5/1/2017	110,832.81	4,348.69	-	4,348.69	3,886.88	461.80	106,945.93	105,722.42
95	6/1/2017	106,945.93	4,348.69	-	4,348.69	3,903.08	445.61	103,042.85	106,168.03
96	7/1/2017	103,042.85	4,348.69	-	4,348.69	3,919.34	429.35	99,123.51	106,597.38
97	8/1/2017	99,123.51	4,348.69	-	4,348.69	3,935.67	413.01	95,187.84	107,010.39
98	9/1/2017	95,187.84	4,348.69	-	4,348.69	3,952.07	396.62	91,235.77	107,407.01
99	10/1/2017	91,235.77	4,348.69	-	4,348.69	3,968.54	380.15	87,267.23	107,787.16
100	11/1/2017	87,267.23	4,348.69	-	4,348.69	3,985.07	363.61	83,282.16	108,150.77
101	12/1/2017	83,282.16	4,348.69	-	4,348.69	4,001.68	347.01	79,280.48	108,497.78
102	1/1/2018	79,280.48	4,348.69	-	4,348.69	4,018.35	330.34	75,262.13	108,828.12
103	2/1/2018	75,262.13	4,348.69	-	4,348.69	4,035.09	313.59	71,227.04	109,141.71
104	3/1/2018	71,227.04	4,348.69	-	4,348.69	4,051.91	296.78	67,175.13	109,438.49
105	4/1/2018	67,175.13	4,348.69	-	4,348.69	4,068.79	279.90	63,106.34	109,718.38
106	5/1/2018	63,106.34	4,348.69	-	4,348.69	4,085.74	262.94	59,020.60	109,981.33
107	6/1/2018	59,020.60	4,348.69	-	4,348.69	4,102.77	245.92	54,917.83	110,227.25
108	7/1/2018	54,917.83	4,348.69	-	4,348.69	4,119.86	228.82	50,797.97	110,456.07
109	8/1/2018	50,797.97	4,348.69	-	4,348.69	4,137.03	211.66	46,660.94	110,667.73
110	9/1/2018	46,660.94	4,348.69	-	4,348.69	4,154.27	194.42	42,506.67	110,862.15
111	10/1/2018	42,506.67	4,348.69	-	4,348.69	4,171.57	177.11	38,335.10	111,039.26
112	11/1/2018	38,335.10	4,348.69	-	4,348.69	4,188.96	159.73	34,146.14	111,198.99
113	12/1/2018	34,146.14	4,348.69	-	4,348.69	4,206.41	142.28	29,939.73	111,341.26
114	1/1/2019	29,939.73	4,348.69	-	4,348.69	4,223.94	124.75	25,715.80	111,466.01
115	2/1/2019	25,715.80	4,348.69	-	4,348.69	4,241.54	107.15	21,474.26	111,573.16
116	3/1/2019	21,474.26	4,348.69	-	4,348.69	4,259.21	89.48	17,215.05	111,662.64
117	4/1/2019	17,215.05	4,348.69	-	4,348.69	4,276.96	71.73	12,938.09	111,734.37
118	5/1/2019	12,938.09	4,348.69	-	4,348.69	4,294.78	53.91	8,643.31	111,788.28
119	6/1/2019	8,643.31	4,348.69	-	4,348.69	4,312.67	36.01	4,330.64	111,824.29
120	7/1/2019	4,330.64	4,348.69	-	4,330.64	4,312.60	18.04	0.00	111,842.33

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.


I WANT Y'ALL
FOR WATT WATCHERS
1-888 US WATTS
wattwatchers.org
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. 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

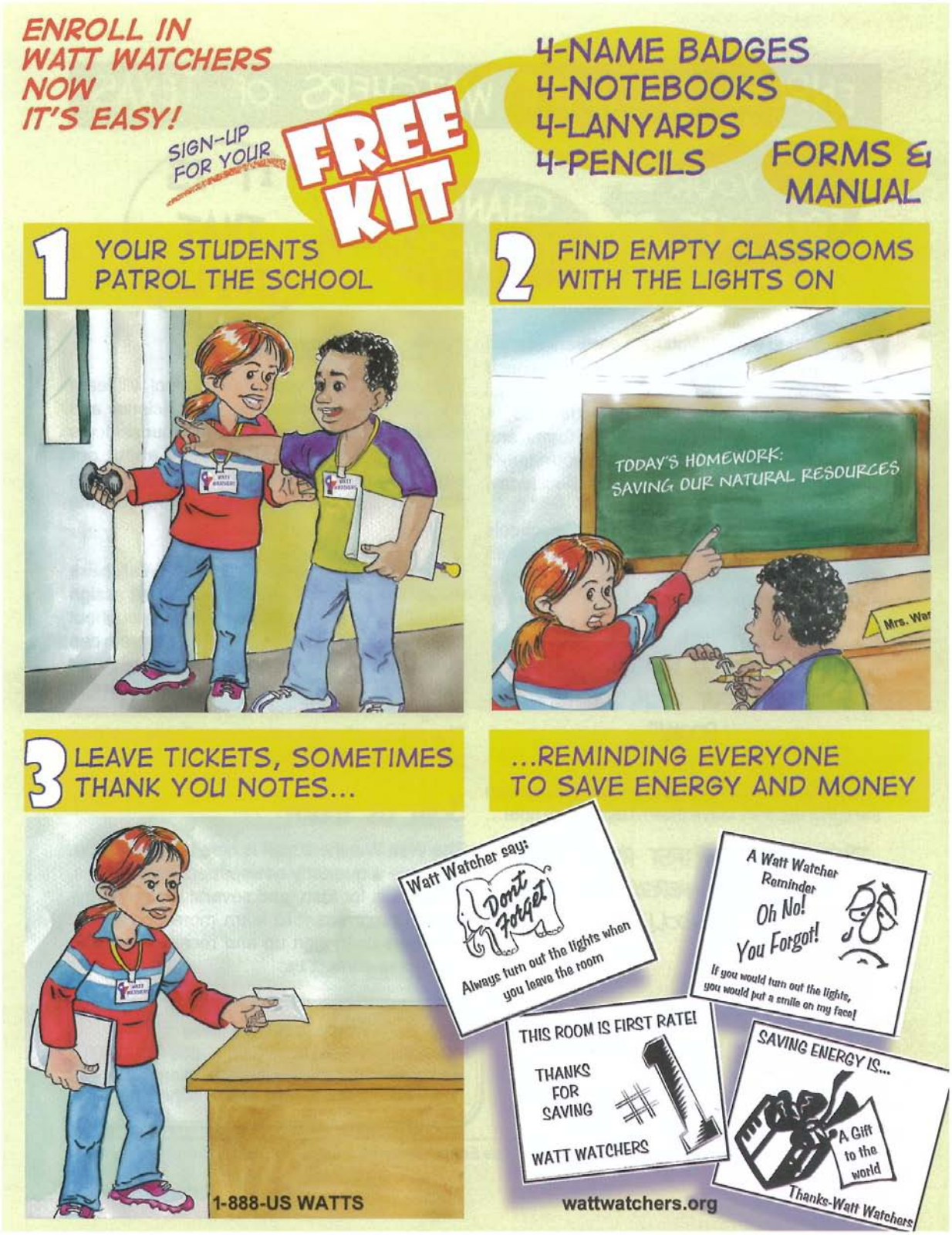
BUT THAT'S NOT ALL, Y'ALL!

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
TODAY'S HOMEWORK: SAVING OUR NATURAL RESOURCES
3 LEAVE TICKETS, SOMETIMES THANK YOU NOTES...
...REMINDING EVERYONE TO SAVE ENERGY AND MONEY
Watt Watcher say:
Don't Forget
Always turn out the lights when you leave the room
A Watt Watcher Reminder
Oh No! You Forgot!
If you would turn out the lights, you would put a smile on my face!
THIS ROOM IS FIRST RATE!
THANKS FOR SAVING
WATT WATCHERS
SAVING ENERGY IS...
A Gift to the world
Thanks-Watt Watchers
1-888-US WATTS
wattwatchers.org

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:

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

APPENDIX VIII

TEXAS ENERGY MANAGERS ASSOCIATION (TEMA)

ANNOUNCING!

TEMA

TEXAS ENERGY MANAGERS ASSOCIATION

A PROFESSIONAL ASSOCIATION FOR THOSE RESPONSIBLE FOR ENERGY MANAGEMENT IN TEXAS PUBLIC FACILITIES

- Networking
- Sharing Knowledge and Resources
- Training Workshops
- Regional Meetings
- Annual Conference
- Certification
- Legislative Updates
- Money-Saving Opportunities

WWW.TEXASEMA.ORG

Check the website for Membership and Association information.

SECO
State Energy Conservation Office

APPENDIX IX

UTILITY CHARTS ON DISKETTE