Susan Combs
Texas Comptroller of Public Accounts

Facility Preliminary Energy Assessments and Recommendations

Lockhart ISD

105 S. Colorado
Lockhart, Texas 78644

Prepared by:

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1301 S. Capital of Texas Highway
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TBPE# F-3502

October 2010

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Texas Registration #98125

SECO
State Energy Conservation Office

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APPENDICES

Schools & Hospitals Energy Management Program
Lockhart ISD
105 S. Colorado
Lockhart, TX 78644
Contact Person: Mr. Cliff Gardner, Assistant Superintendent
Phone: 512-398-0042

1.0 EXECUTIVE SUMMARY

Lockhart Independent School District, now referred to as the District, requested that Texas Energy Engineering Services, Inc. (TEESI) perform a Preliminary Energy Assessment (PEA) of their facilities. This report documents that analysis.

This service is provided at no cost to the District through the Schools Energy Management and Technical Assistance Program as administered by the Texas Comptroller of Public Accounts, State Energy Conservation Office (SECO). This program promotes and encourages an active partnership between SECO and Texas schools for the purpose of planning, funding, and implementing energy saving measures, which will ultimately reduce the District's annual energy costs.

The annual cost savings, implementation cost estimate and simple payback for all Utility Cost Reduction Measures (UCRMs) identified in this preliminary analysis are summarized below. Individual UCRMs are summarized in Section 9.0 of this report.

Implementation Cost Estimate:	$753,300
Annual Energy Cost Savings:	$84,700
Simple Payback:	8.9

This report includes a summary of the facilities surveyed along energy consumption and costs, opportunities for energy savings, and information regarding energy management and options for funding retrofit projects. A follow-up visit to the District will be scheduled to address any questions pertaining to this report, or any other aspect of this program.

SECO is committed to providing whatever assistance the District may require in planning, funding and implementing the recommendations of this report. The District is encouraged to direct any questions or concerns to either of the following contact persons:

SECO / Ms. Juline Ferris	TEESI / Saleem Khan
(512) 936-9283	(512) 328-2533

2.0 FACILITY DESCRIPTIONS

This section provides a brief description of the facilities surveyed. The purpose of the onsite survey was to evaluate the major energy consuming equipment in each facility (i.e. Lighting, HVAC, and Controls Equipment). A description of each facility is provided below. Please reference **Appendix C-1** for building grouping.

Group 1: High School Campus

Buildings:	Lockhart High School Campus
Stories:	Single Story
Area (estimated):	139,432 SF
Bldg. Components:	Brick Building, built up and pitched metal roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gyms
HVAC:	Rooftop Packaged and Split-DX units
Controls:	Energy Management System (EMS) – Manufacturer Trane and conventional thermostats

Buildings:	Special Ed./ Cub House, Field House, Football Field
Stories:	Single Story
Area (estimated):	23,492 SF
Bldg. Components:	Metal Building, pitched metal and composition shingle roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with magnetic ballasts and T8 fluorescent fixtures with electronic ballasts
HVAC:	Wall Package Units and Split-DX units
Controls:	Conventional thermostats

Group 2: Lockhart Junior High

Building:	Lockhart Junior High
Stories:	Single Story
Area (estimated):	135,835 SF
Bldg. Components:	Brick building, built up roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gyms
HVAC:	Air-cooled Chilled Water Systems
Controls:	Energy Management System (EMS) – Manufacturer Trane

Group 3: Bois D'Arc Campus

Buildings:	Bois D'Arc Campus
Stories:	Two Story and Single Story
Area (estimated):	71,149 SF
Bldg. Components:	Brick building, built up and pitched metal roof, slab on grade
Typical Lighting Fixtures:	Primarily T8 fluorescent fixtures with electronic ballasts, T12 fluorescent fixtures with magnetic ballasts in portable buildings, and High Intensity Discharge (HID) fixtures in gyms
HVAC:	Air-cooled Chilled Water Systems and Split-DX units
Controls:	Conventional thermostats with digital time clocks

Group 4: Bluebonnet Elementary

Building:	Bluebonnet Elementary School
Stories:	Single Story
Area (estimated):	80,778 SF
Bldg. Components:	Brick building, pitched metal roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gym
HVAC:	Air-cooled Chilled Water Systems
Controls:	Energy Management System (EMS) – Manufacturer Alerton

Group 5: Navarro Elementary

Building:	Navarro Elementary
Stories:	Single Story
Area (estimated):	50,044 SF
Bldg. Components:	Brick building, built-up roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gym
HVAC:	Air-cooled Chilled Water Systems
Controls:	Conventional thermostats with digital time clocks

Group 6: Plum Creek Elementary

Building:	Plum Creek Elementary
Stories:	Single Story
Area (estimated):	67,922 SF
Bldg. Components:	Brick building, metal roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gym
HVAC:	Split-DX Units
Controls:	Energy Management System (EMS) – Manufacturer ALC

Group 7: Clearfork Elementary School

Building:	Clearfork Elementary School
Stories:	Single Story
Area (estimated):	58,670 SF
Bldg. Components:	Brick building, built up roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gym
HVAC:	Packaged and Split-DX Units
Controls:	Energy Management System (EMS) – Manufacturer Trane

Group 8: Carver Kindergarten

Building:	Carver Kindergarten School
Stories:	Single Story
Area (estimated):	31,394 SF
Bldg. Components:	Brick building, pitched metal roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts and High Intensity Discharge (HID) fixtures in gym
HVAC:	Packaged and Split-DX Units
Controls:	Energy Management System (EMS) – Manufacturer Delta

Group 9: Pride High School

Building:	Pride High School
Stories:	Single Story
Area (estimated):	11,001 SF
Bldg. Components:	Brick building, built up roof, slab on grade
Typical Lighting Fixtures:	T8 fluorescent fixtures with electronic ballasts
HVAC:	Split–DX Units
Controls:	Conventional thermostats

Group 10: Miscellaneous Buildings

Building:	Maintenance Department
Stories:	Single Story
Area (estimated):	7,200 SF
Bldg. Components:	Metal building, Metal roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with magnetic ballasts and High Intensity Discharge (HID) fixtures
HVAC:	Split-DX Units
Controls:	Conventional thermostats

Buildings:	Community Education Building /Adult Learning Center
Stories:	Single Story
Area (estimated):	3,036 SF
Bldg. Components:	Wood frame building, composition shingle roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with magnetic ballasts
HVAC:	Split – DX Units and window units
Controls:	Conventional thermostats

Buildings:	Admin Office Building
Stories:	Two Story
Area (estimated):	6,338 SF
Bldg. Components:	Brick building, built up roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with magnetic ballasts
HVAC:	Split – DX Units
Controls:	Conventional thermostats

Buildings:	LDMC
Stories:	Single Story
Area (estimated):	6,908 SF
Bldg. Components:	Portable buildings, pitched metal roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with magnetic ballasts
HVAC:	Wall packaged and Split-DX units
Controls:	Conventional thermostats

Buildings:	Special Education
Stories:	One Story
Area (estimated):	8,288 SF
Bldg. Components:	Brick and metal buildings, built up and pitched metal roof, slab on grade
Typical Lighting Fixtures:	T12 fluorescent fixtures with electronic ballasts
HVAC:	Split-DX and Wall Package units
Controls:	Conventional thermostats

3.0 ENERGY CONSUMPTION AND PERFORMANCE

A site survey was conducted at several of the District's facilities. The facilities surveyed comprised a total gross area of approximately 700,857 square feet.

Annual electric and natural gas invoices for the buildings surveyed were $725,165 for the 12-month period ending May 2010. A summary of annual utility costs is provided in **Appendix C**, Base Year Consumption History.

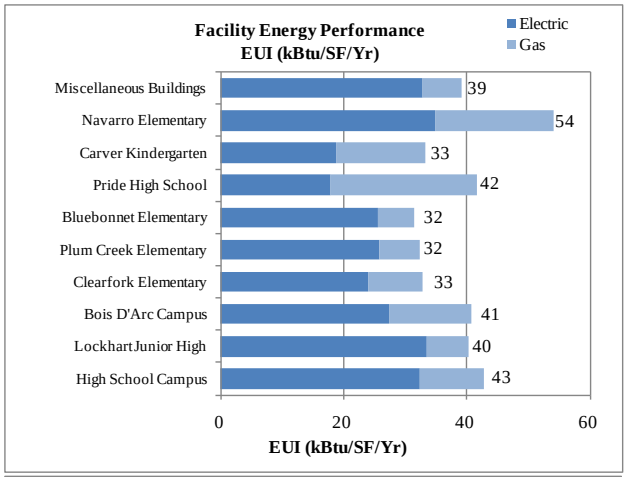
To help the District evaluate the overall energy performance of its facilities TEESI has calculated their Energy Utilization Index (EUI) and Energy Cost Index (ECI). The EUI represents a facility's annual energy usage per square foot; it is measured as thousand BTU's per square foot per year (kBTU/SF/Year). Similarly, ECI is measured as cost per square foot per year ($/SF/Year). The EUI and ECI performance for selected facilities are listed below:

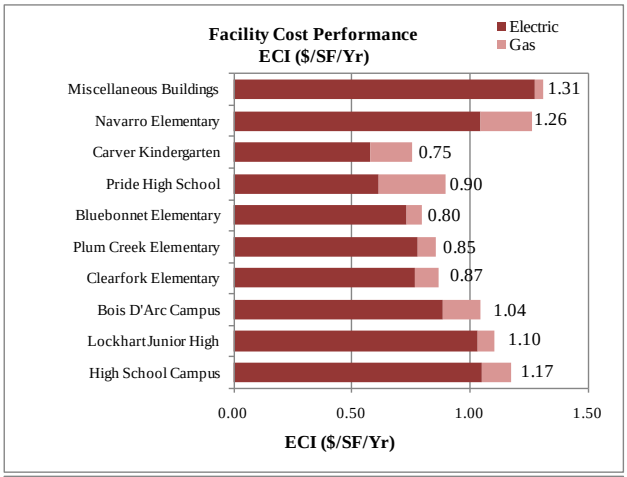
Energy Cost and Consumption Benchmarks

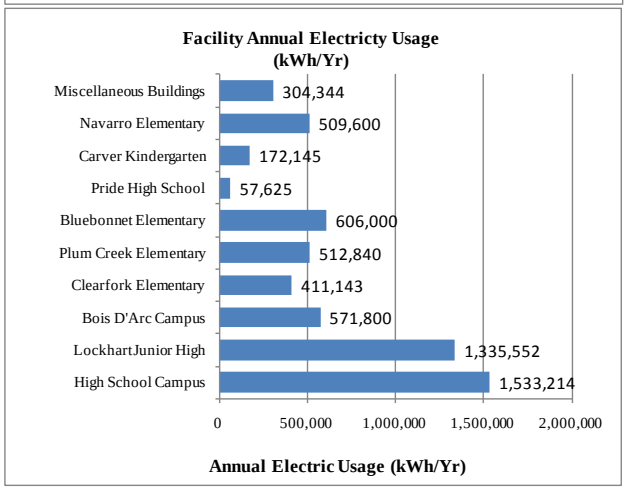
		Electric			Natural Gas			Total	Total	EUI	ECI	
	Building	KWH/Yr	MMBTU/Yr	$Cost/Yr	MCF/Yr	MMBTU/Yr	$Cost/Yr	$Cost/Yr	MMBTU/Yr	kBTU/SF/Yr	$/SF/Yr	SF
1	High School Campus	1,533,214	5,233	170,502	1,665	1,715	19,512	190,015	6,948	43	1.17	162,294
2	Lockhart Junior High	1,335,552	4,558	139,763	871	897	9,875	149,639	5,455	40	1.10	135,835
3	Bois D'Arc Campus	571,800	1,952	62,737	919	947	11,558	74,295	2,898	41	1.04	71,149
4	Clearfork Elementary	411,143	1,403	44,883	512	527	6,009	50,892	1,930	33	0.87	58,670
5	Pride High School	57,625	197	6,732	253	261	3,150	9,881	458	42	0.90	11,001
6	Plum Creek Elementary	512,840	1,750	52,936	434	447	5,012	57,948	2,197	32	0.85	67,922
7	Carver Kindergarten	172,145	588	18,130	444	457	5,517	23,646	1,045	33	0.75	31,394
8	Bluebonnet Elementary	606,000	2,068	59,069	465	479	5,286	64,355	2,547	32	0.80	80,778
9	Navarro Elementary	509,600	1,739	52,136	934	962	10,827	62,963	2,702	54	1.26	50,044
10	Miscellaneous Buildings	304,344	1,039	40,427	200	206	1,104	41,531	1,245	39	1.31	31,770
		KWH/Yr	MMBTU/Yr	$Cost/Yr	MCF/Yr	MMBTU/Yr	$Cost/Yr	$Cost/Yr	MMBTU/Yr	kBTU/SF/Yr	$/SF/Yr	SF
		6,014,263	20,527	647,316	6,697	6,898	77,849	725,165	27,425	29	1.03	700,857

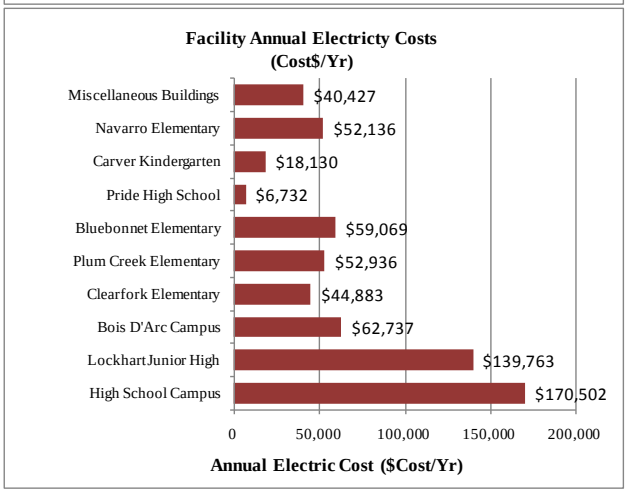
Knowing the EUI and ECI of each facility is useful to help determine the District's overall energy performance. In addition, the District's EUI was compared to TEESI's database of Texas schools. See **Appendix D** to determine how these facilities' EUI compared to other schools in Texas.

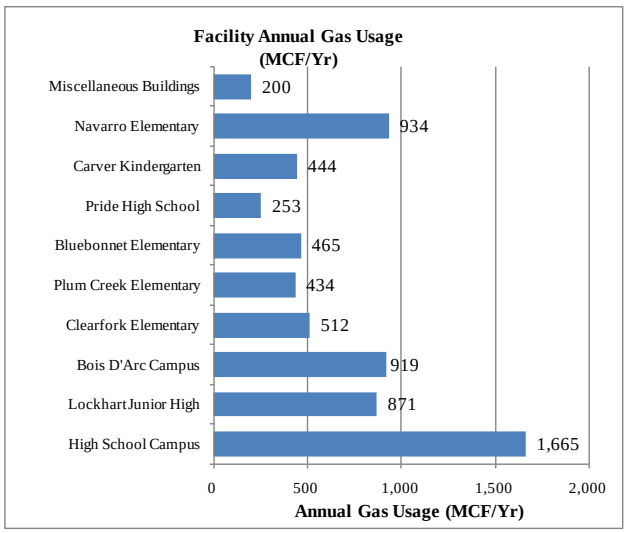
The following charts summarize the data presented in the previous table. See **Appendix C** for further detail.

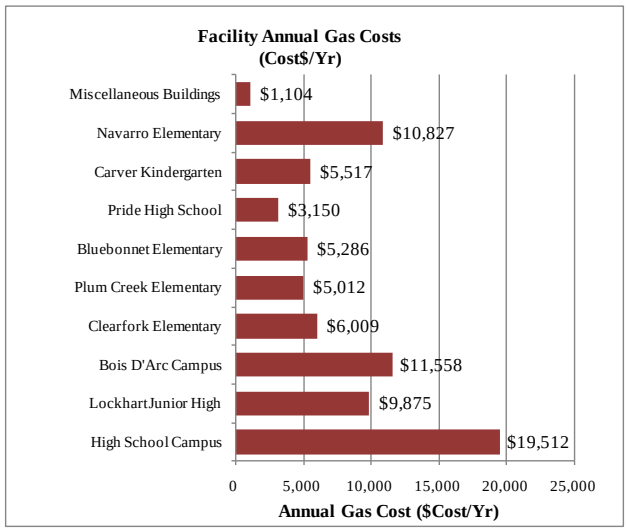




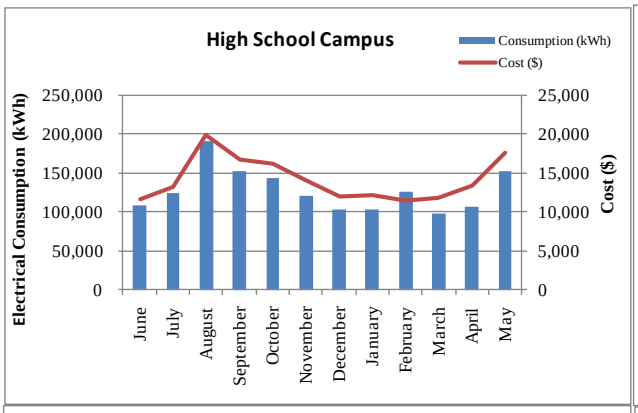


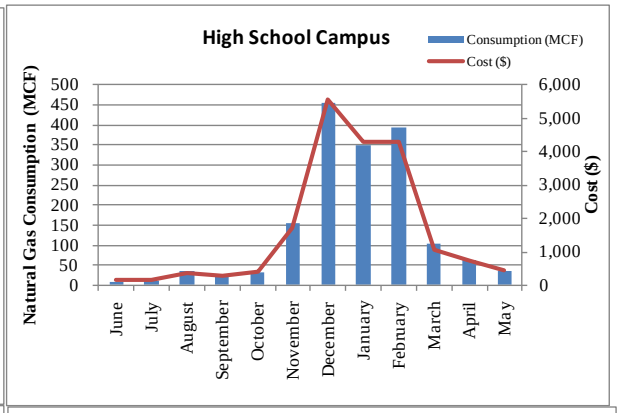


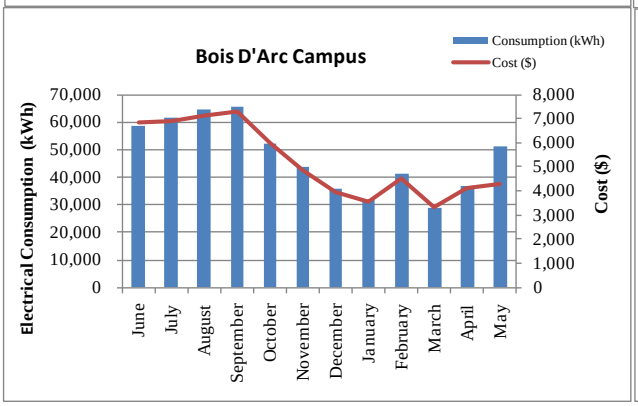


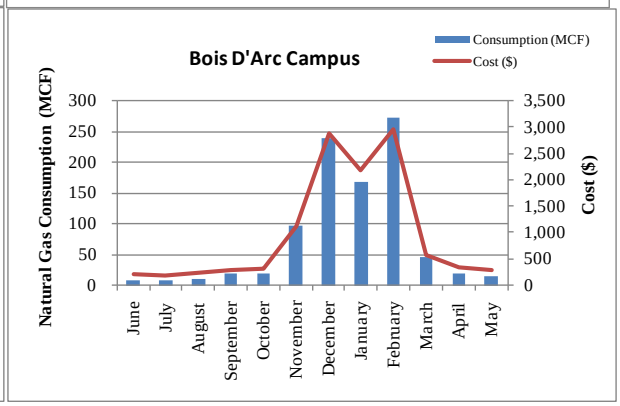


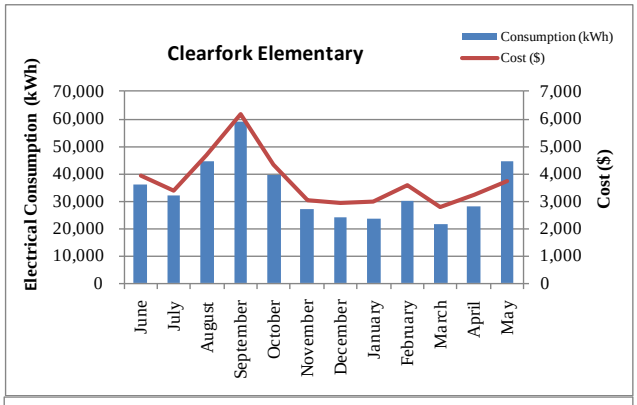
The following charts summarize each campus monthly utility data. See **Appendix C** for further detail.

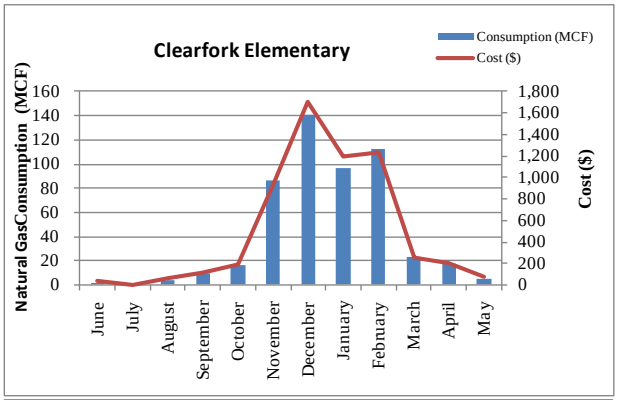


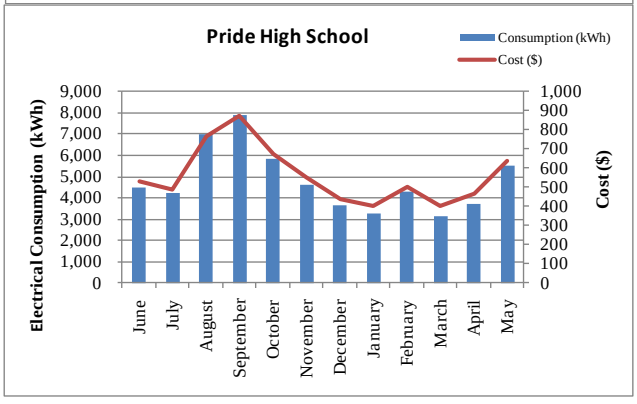


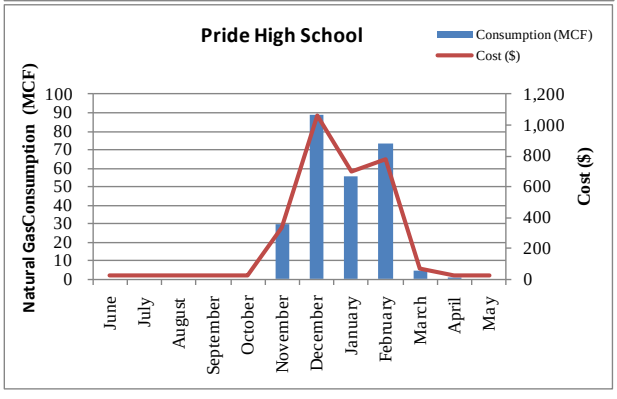


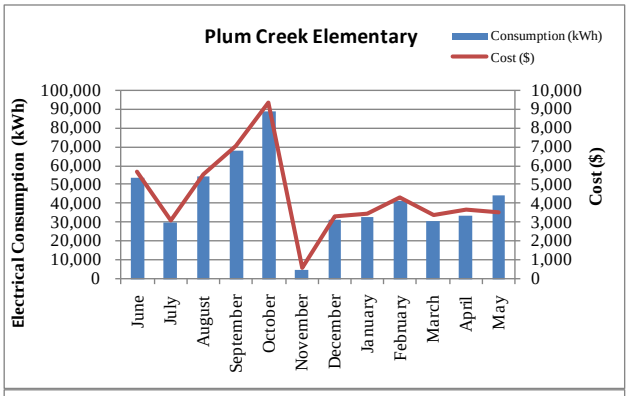


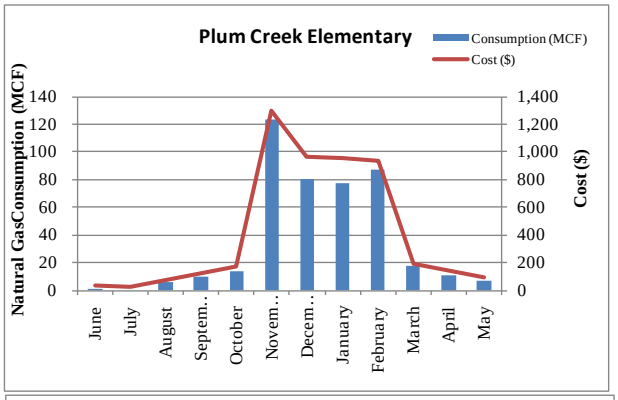


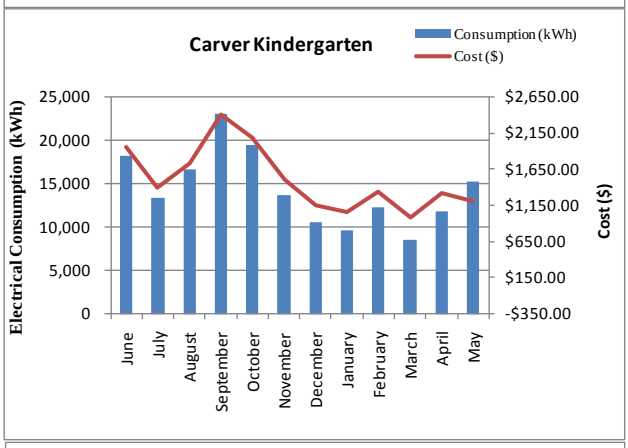


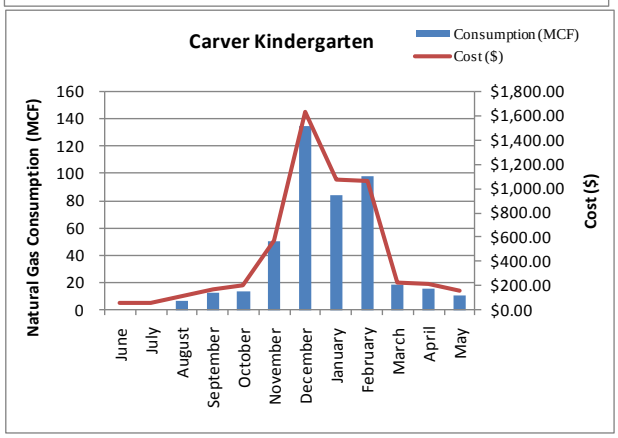


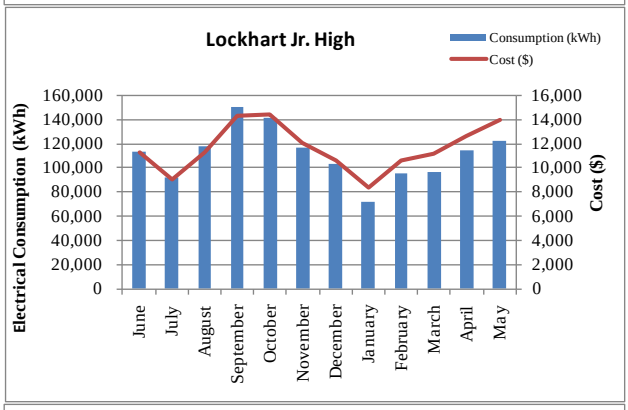


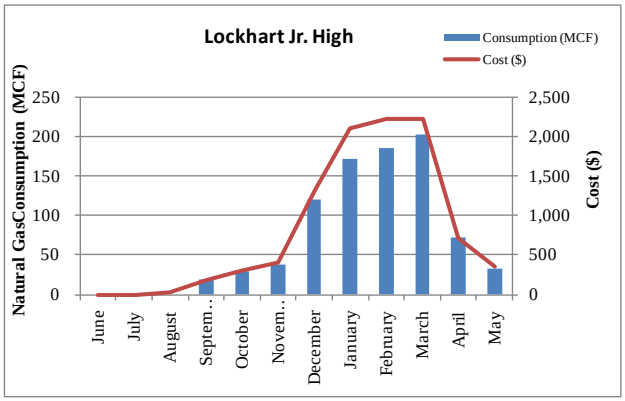

Plum Creek Elementary
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
June July August September October November December January February March April May

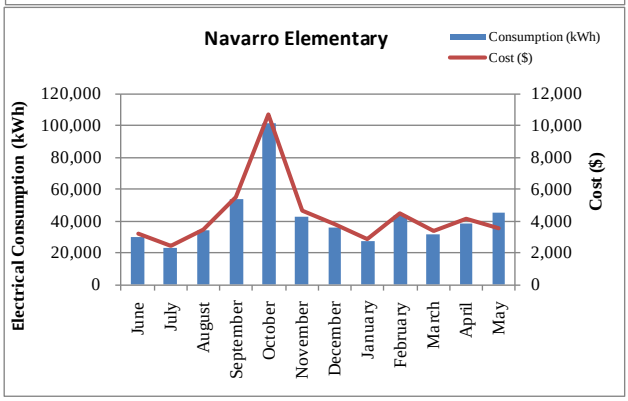

Plum Creek Elementary
Consumption (MCF)
Cost ($)
Natural GasConsumption (MCF)
Cost ($)
June July August Septem.. October Novem.. Decem.. January February March April May

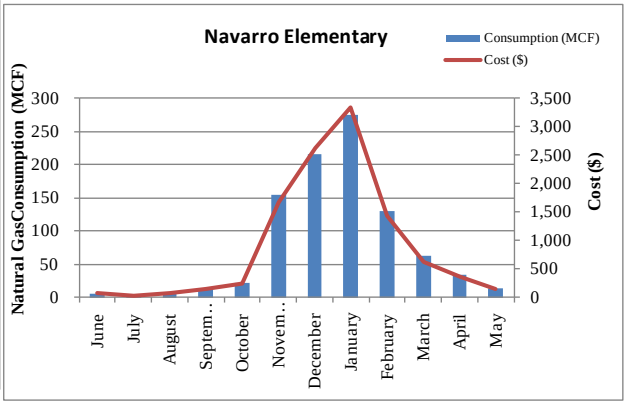

Carver Kindergarten
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
June July August September October November December January February March April May

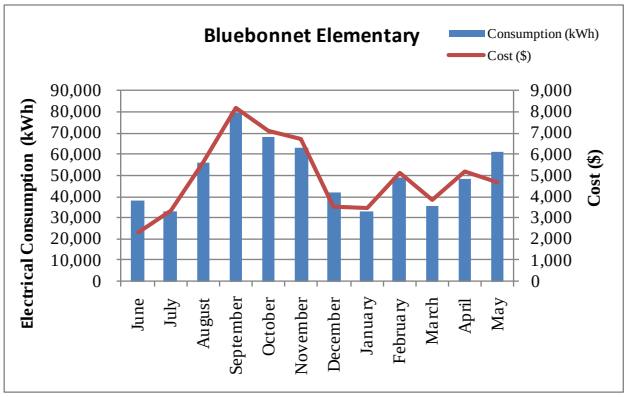

Carver Kindergarten
Consumption (MCF)
Cost ($)
Natural Gas Consumption (MCF)
Cost ($)
June July August September October November December January February March April May

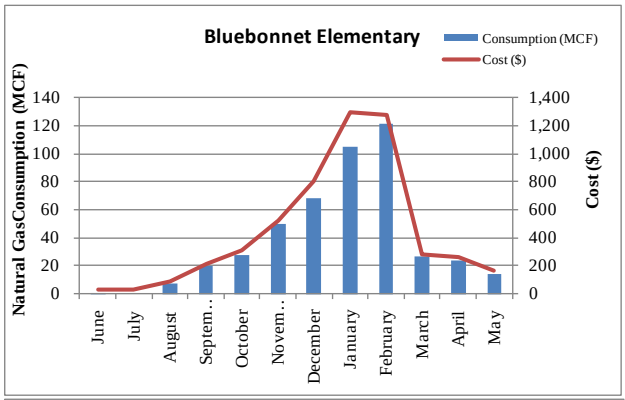

Lockhart Jr. High
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
June July August September October November December January February March April May

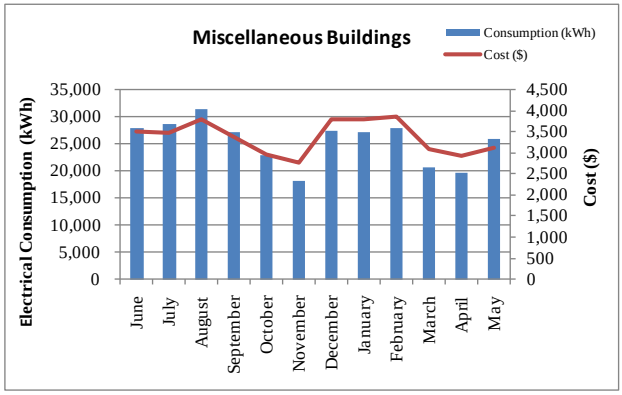

Lockhart Jr. High
Consumption (MCF)
Cost ($)
Natural GasConsumption (MCF)
Cost ($)
June July August Septem.. October Novem.. December January February March April May


Navarro Elementary
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
June July August September October November December January February March April May


Navarro Elementary
Consumption (MCF)
Cost ($)
Natural GasConsumption (MCF)
Cost ($)
June July August Septem.. October Novem.. December January February March April May


Bluebonnet Elementary
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
June
July
August
September
October
November
December
January
February
March
April
May


Bluebonnet Elementary
Consumption (MCF)
Cost ($)
Natural GasConsumption (MCF)
Cost ($)
140
120
100
80
60
40
20
0
1,400
1,200
1,000
800
600
400
200
0
June
July
August
Septem...
October
Novem...
December
January
February
March
April
May


Miscellaneous Buildings
Consumption (kWh)
Cost ($)
Electrical Consumption (kWh)
Cost ($)
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
4,500
4,000
3,500
3,000
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July
August
September
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November
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January
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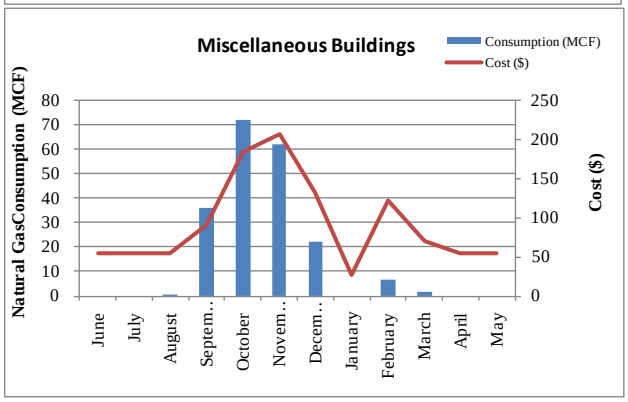
March
April
May


Miscellaneous Buildings
Consumption (MCF)
Cost ($)
Natural GasConsumption (MCF)
Cost ($)
80
70
60
50
40
30
20
10
0
250
200
150
100
50
0
June
July
August
Septem...
October
Novem...
Decem...
January
February
March
April
May

4.0 ENERGY STAR PORTFOLIO MANAGER

The District's energy baseline can be developed in Energy STAR's Portfolio Manager. One of the key reasons for using Energy STAR Portfolio Manager is its ability to normalize the District's baseline according to several key factors (i.e. Weather, Square Feet, Hours of Operation, Number of Computers, etc.). It is also a free online resource available to all registered users, and is a user-friendly web-based tool.

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). ENERGY STAR has developed Portfolio Manager, an innovative online energy management tool, designed to help organizations track and assess energy and water consumption of their facilities. Portfolio Manager helps organizations set investment priorities, identify under-performing buildings, verify efficiency improvements, and receive EPA recognition for superior energy performance.

Portfolio Manger is an energy performance benchmarking tool. Portfolio Manager rates a building's energy performance on a scale of 1–100 relative to similar buildings nationwide. The rating system is based on a statistically representative model utilizing a national survey conducted by the Department of Energy's Energy Information Administration. This national survey, known as the Commercial Building Energy Consumption Survey (CBECS), is conducted every four years, and gathers data on building characteristics and energy use from thousands of buildings across the United States. A rating of 50 indicates that the building, from an energy consumption standpoint, performs better than 50% of all similar-use buildings nationwide, while a rating of 75 indicates that the building performs better than 75% of all similar buildings.

In addition, Portfolio Manager is used to generate a Statement of Energy Performance (SEP) for each building, summarizing key energy information such as site and source energy intensity, greenhouse gas emission, energy reduction targets and energy cost. The Statement of Energy Performance can help in applying for an ENERGY STAR Building label or satisfying LEED for Existing Buildings (LEED-EB) requirements. For example, one of the requirements to receive an ENERGY STAR Building Label is to achieve a minimum CBECS rating of **75**.

To develop the District's baseline, 12 months of utility consumption, cost data, and Building Space Use information will be required. The table below is a sample of the Building Space Use data required by Portfolio Manager to generate the Energy Performance Rating. These inputs are critical and can significantly influence how Portfolio Manager computes the ENERGY STAR Rating. If an ENERGY STAR Label is pursued, these key inputs will need to be verified and certified by a Professional Engineer. Verification of this information is required when submitting the Statement of Energy Performance for ENERGY STAR's review. For more information regarding Portfolio Manager , please visit www.energystar.gov.

Energy STAR Portfolio Manager Example Space Use Data

Facility Type: K-12 School	
• 12 Months of Electric	• Presence of cooking facilities
• Gross Floor Area	• Percent Cooled
• Open Weekends (Y/N)	• Percent Heated
• # of PCs	• Months Open per Year
• # of Walk in refrigerators/freezers units	• High School (Y/N)

5.0 ENERGY ACCOUNTING

UTILITY PROVIDERS

City of Lockhart, Bluebonnet Electric Coop provides electric service to the District. Texas Gas Service provides natural gas service to the District.

MONITORING AND TRACKING

An effective energy tracking system is an essential tool by which an energy management program's activities are monitored. The system should be centralized and available for all engaged staff members to use in verifying progress toward established targets and milestones.

The District currently tracks and records utility accounts. The District can use this data to track utility consumption patterns and budget utility expenses. **Having this historical data improves the District's awareness of their energy performance and will help in tracking their energy reduction goals.**

The steps below are essential for an effective energy management tracking system:

1. Perform regular updates. An effective system requires current and comprehensive data. Monthly updates should be strongly encouraged.

2. Conduct periodic reviews. Such reviews should focus on progress made, problems encountered, and potential rewards.

3. Identify necessary corrective actions. This step is essential for identifying if a specific activity is not meeting its expected performance and is in need of review.

In addition, having this historical utility data would facilitate **House** and **Senate Bill(s)** reporting requirements. Please see Section 6.0 for additional information regarding these requirements.

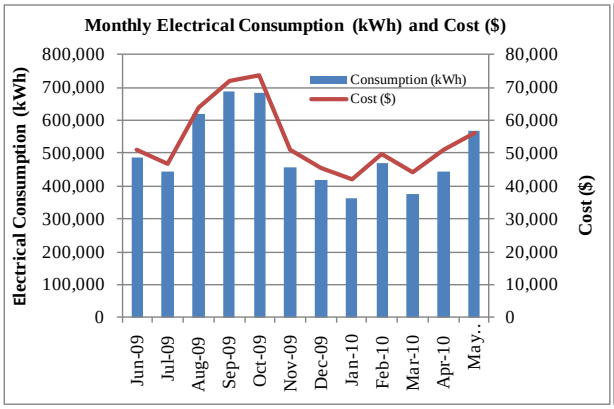
Furthermore, below is a sample format the District can customize to help summarize their overall utility usage and costs.

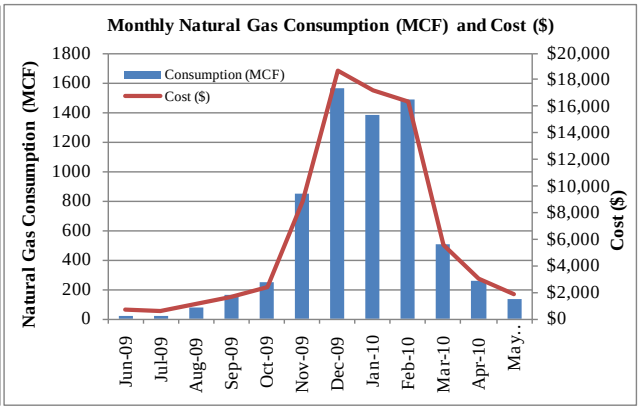
The data presented below is a summation of the data provided by the District. This data below includes only selected utility accounts and is for reference purposes only and does not represent the District's total utility data. See **Appendix C** for further detail regarding each utility account represented in the table below.

Lockhart ISD - Sample Utility Input Form

MONTH	ELECTRICITY			NATURAL GAS		
	KWH	COST $	Avg. Rate $/KWH	MCF	COST $	Avg. Rate $/MCF
Jun-09	488,361	50,984	$0.1044	23.9298	$686	$28.6
Jul-09	443,010	46,901	$0.1059	18.7594	$578	$30.8
Aug-09	618,346	63,873	$0.1033	76.9541	$1,130	$14.7
Sep-09	687,109	71,981	$0.1048	159.4444	$1,646	$10.3
Oct-09	681,853	73,783	$0.1082	243.3521	$2,376	$9.8
Nov-09	456,499	50,874	$0.1114	846.0578	$8,793	$10.4
Dec-09	417,035	45,580	$0.1093	1565.866	$18,666	$11.9
Jan-10	364,953	41,977	$0.1150	1384.798	$17,188	$12.4
Feb-10	471,852	49,804	$0.1056	1481.521	$16,326	$11.0
Mar-10	374,924	44,183	$0.1178	505.9511	$5,601	$11.1
Apr-10	442,693	51,120	$0.1155	257.4789	$3,049	$11.8
May-10	567,628	56,256	$0.0991	133.1061	$1,812	$13.6
Total	6,014,263	$647,316	$0.1076	6,697	$77,849	$11.6

Gross Building Area:	700,857	SF





6.0 ENERGY LEGISLATION OVERVIEW

In 2007, the 80th Texas Legislature passed Senate Bill 12 (**SB12**) which among other things extended the timeline set by Senate Bill 5 (**SB5**). SB5, commonly referred to as the Texas Emissions Reduction Plan, was adopted in 2001 by the 77th Texas Legislature to comply with the federal Clean Air Act standards. Also in 2007, the 80th Texas Legislature passed House Bill 3693 (**HB3693**) which amended provisions of several codes relating primarily to energy efficiency.

In 2009, the 81st Texas Legislature passed Senate Bill 300 (**SB300**). This bill specifically addressed the requirement for Texas Schools. This bill repealed the requirement in HB3693 that school districts must establish a goal of reducing electric consumption by 5% each year for six years starting Fiscal Year (FY) 2007. SB300 instead requires that school districts establish a long-range energy plan to reduce the overall electricity use by 5% beginning FY 2008. Besides this change, other requirements set forth in SB12 and HB3693 applicable to schools still apply.

Following are key requirements established by the above energy legislation:

- Establish a Long-Range Energy Plan (SB300) to reduce the District's electric consumption by five percent (5%) beginning with the 2008 state fiscal year and to consume electricity in subsequent fiscal years in accordance with the plan. The Long-Range Energy Plan should include strategies in the plan for achieving energy efficiency that result in net savings or that can be achieved without financial cost to the district. The Plan should account for the initial, short-term capital costs and lifetime costs and savings that may occur from implementation of the strategy. Each strategy should be evaluated based on the total net costs and savings that may occur over a seven-year period following implementation of the strategy.

- Record electric, water, and natural gas utility services (consumption and cost) in an electronic repository. The recorded information shall be on a publicly accessible Internet Web site with an interface designed for ease of navigation if available, or at another publicly accessible location. To help with the utility reporting process, a sample input form can be found in **Appendix B** of this report.

- Purchase commercially available light bulbs using the lowest wattages for the required illumination levels.

- Install energy saving devices in Vending Machines with non-perishable food products. **Not required of School Districts, but highly recommended.**

Summary descriptions of SB12, HB3693, and SB300 are available in **Appendix A.**

7.0 RECOMMENDED MAINTENANCE & OPERATION PROCEDURES

Sound Maintenance and Operation procedures significantly improve annual utility costs, equipment life, and occupant comfort. Generally, maintenance and operation procedural improvements can be made with existing staff and budgetary levels. Below are typical maintenance and operations procedures that have energy savings benefits. The District may already be following some of the recommendations noted below. The following maintenance and operation procedures should be encouraged and continued to ensure sustainable energy savings.

PUBLICIZE ENERGY CONSERVATION

Promote energy awareness at regular staff meetings, on bulletin boards, and through organizational publications. Publicize energy cost reports showing uptrends and downtrends.

MANAGE SMALL ELECTRICAL EQUIPMENT LOADS

Small electrical equipment loads consists of small appliances/devices such as portable heaters, microwaves, small refrigerators, coffee makers, stereos, cell phone chargers, desk lamps, etc. The District should establish a goal to reduce the number of small appliances and to limit their usage. For example, the use small space heaters should be discouraged; hence, all space heating should be accomplished by the District's main heating system. In addition, many small devices such as radios, printers, and phone chargers can consume energy while not in use. To limit this "stand-by" power usage these devices should be unplugged or plugged into a power strip that can act as a central "turn off" point while not in use. With an effective energy awareness campaign to encourage participation, managing small electrical loads can achieve considerable energy savings.

ESTABLISH HVAC UNIT SERVICE SCHEDULES

Document schedules and review requirements for replacing filters, cleaning condensers, and cleaning evaporators. Include particulars such as filter sizes, crew scheduling, contract availability if needed, etc. Replace filters with standard efficiency pleated units. Generally, appropriate service frequencies are as follows -- filters: monthly; condensers: annually; evaporators: 5 years.

PRE-IDENTIFY PREMIUM EFFICIENCY MOTOR (PEM) REPLACEMENTS

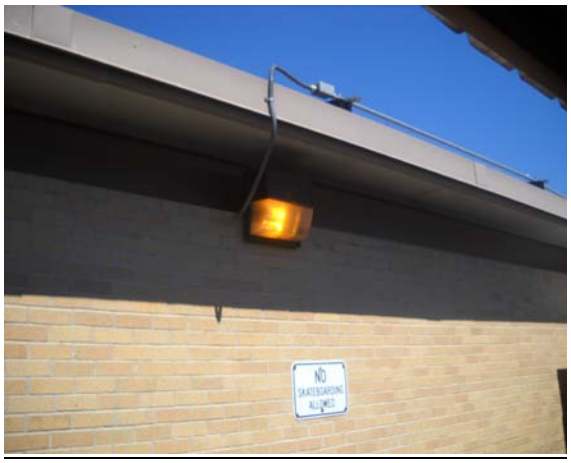
Pre-identify supply sources and PEM stock numbers for all HVAC fan and pump motors so that as failures occur, replacement with PEM units can take place on a routine basis. As funding allows, pre-stock PEM replacements according to anticipated demand, i.e., motors in service more than 10 years, motors in stressful service, and particular motor types that are in service at several locations.

IMPROVE CONTROL OF INTERIOR & EXTERIOR LIGHTING

Establish procedures to monitor use of lighting at times and places of possible/probable unnecessary use: Offices and classes at lunchtime, maintenance shops, closets, exterior, and parking lots during daylight hours, etc. Encouraging staff (i.e. Teacher, Custodial, maintenance, and students) to participate in the District's efforts to limit unnecessary lighting use would help improve this effort.

The pictures below are of exterior lights on during daylight hours. Exterior lighting is typically controlled using light sensing photocells, timeclocks or manual switching. The first two control methods should be calibrated regularly (monthly) and scheduled appropriately (monthly to account changing dawn/dusk hours). If a manual switch controls the exterior lighting it is recommended the previous two control options be considered since manual switching requires persistent monitoring which is prone to control fatigue.

Exterior lights on at Freshman Campus



Exterior lights on at High School Campus

TYPICAL EQUIPMENT MAINTENANCE CHECKLISTS

Effective operation and maintenance of equipment is one of the most cost effective ways to achieve reliability, safety, and efficiency. Failing to maintain equipment can cause significant energy waste and severely decrease the life of equipment. Substantial savings can result from good operation and maintenance procedures. In addition, such procedures require little time and cost to implement. Examples of typical maintenance checklists for common equipment including are provided in **Appendix E**. These checklists from the Federal Energy Management Program (FEMP), a branch of the Department of Energy (DOE), are based on industry standards and should supplement, not replace those provided by the manufacturer.

REPLACE INCANDESCENT LAMPS WITH COMPACT FLUORESCENTS

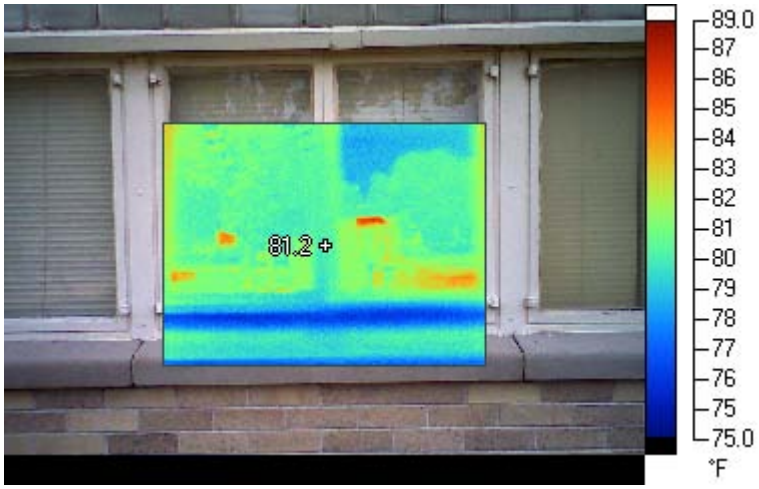
Replace existing incandescent lamps with compact fluorescent lamps as they burn out. Compact fluorescents use 50 to 75 percent less wattage for the same light output, with ten times the operating life of incandescents.

INSTALL ENERGY SAVING DEVICES ON VENDING MACHINE

Install energy saving devices on vending machines with non-perishable food items to reduce the equipment power usage. These devices shut the vending machines down during unoccupied periods. There are several commercially available devices that can be easily installed on existing vending machines. These devices typical have a motion sensor which powers down the equipment after periods of inactivity. For example if the motion sensor does not sense activity within 15 minutes the device will shutdown the vending machine and turn on once motion is sensed. These devices range in price from $100 to $250 and have a typical annual savings of $20 to $150 per vending machine.

CONTROL OUTSIDE AIR INFILTRATION

Conduct periodic inspections of door and window weather-stripping, and schedule repairs when needed. Additionally, make sure doors and windows are closed during operation of HVAC systems (heating or cooling). Unintended outside air contributes to higher energy consumption and increases occupant discomfort. The picture below shows conditioned air escaping through the base of a window at Clearfork Elementary.



Thermal image of window at Clearfork Elementary

HAIL GUARDS ON CONDENSING AND PACKAGED ROOFTOP UNITS

When an HVAC unit is replaced the District should ensure the new unit be specified with hail guards. The hail guards protect the condensing unit's heat exchanger coils from hail damage. Damage to the condensing unit heat exchangers reduces the efficiency of the units. It is recommended if any existing unit(s) have damaged condensing coil fins the condensing fins should be straightened using a fin comb.

SAMPLE SCREENSHOTS OF ENERGY MANAGEMENT SYSTEM (EMS)

During the preliminary walk-through, several screenshots of the facility's Energy Management System (EMS) frontend were taken. The EMS screenshots help provide a snapshot of the HVAC equipment settings (Temperature Setpoints, Equipment On/Off Status, etc.). The following are examples of the information obtained using the EMS screenshots. Please note the following images were obtained during the month of October 2010. EMS screenshots were obtained for Lockhart HS, Lockhart Jr. HS, Clearfork Elem., Bluebonnet Elem., and Plum Creek Elem., however, Carver Kindergarten Delta control system was inaccessible at the time of the walk-through.

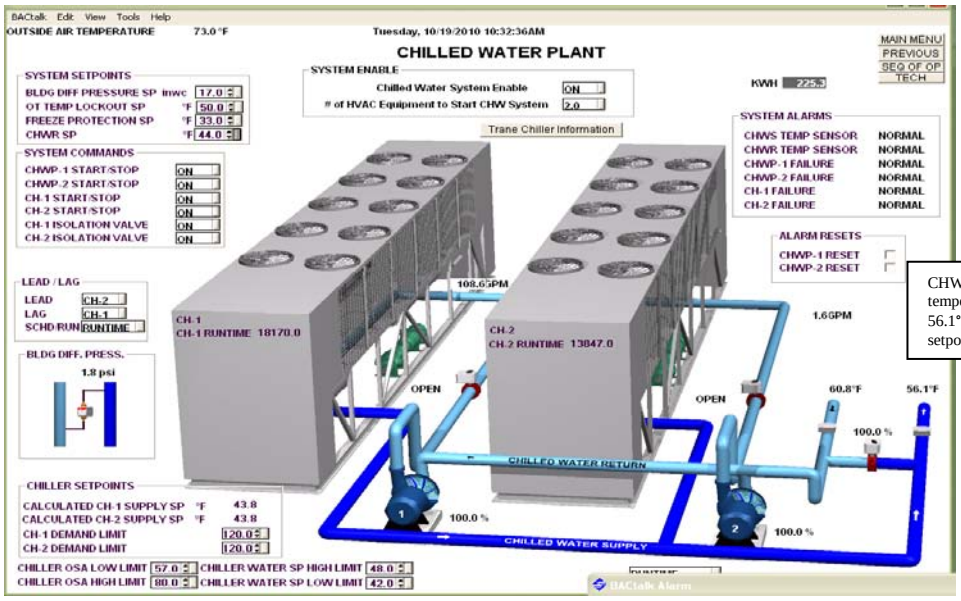


Figure 1. EMS screenshot of Bluebonnet ES chilled water system. The EMS operator currently controls the chilled water supply temperature setpoint. This chilled water temperature control can be optimized by implementing a **chilled water supply temperature reset** to reduce chiller electricity consumption during the winter period. The screenshot also indicates that the chilled water supply temperature was 56.1°F when the setpoint was 44°F. It is recommended that the sensor accuracy be verified and calibrated.

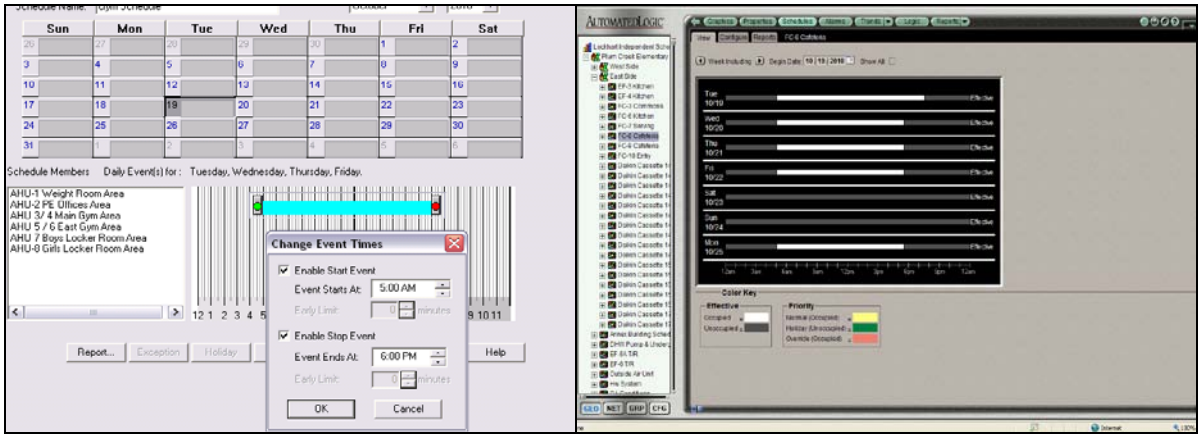


Figure 2. Screenshot of Lockhart HS, Lockhart Jr. HS, and Plum Creek Elem. air conditioning operating schedules. Most air conditioning units are scheduled to turn on at 5:00AM. Turning on equipment simultaneously could result in high electric demand charges. The demand charge can be minimized by rescheduling unit start times/staging to avoid equipment turning on simultaneously.

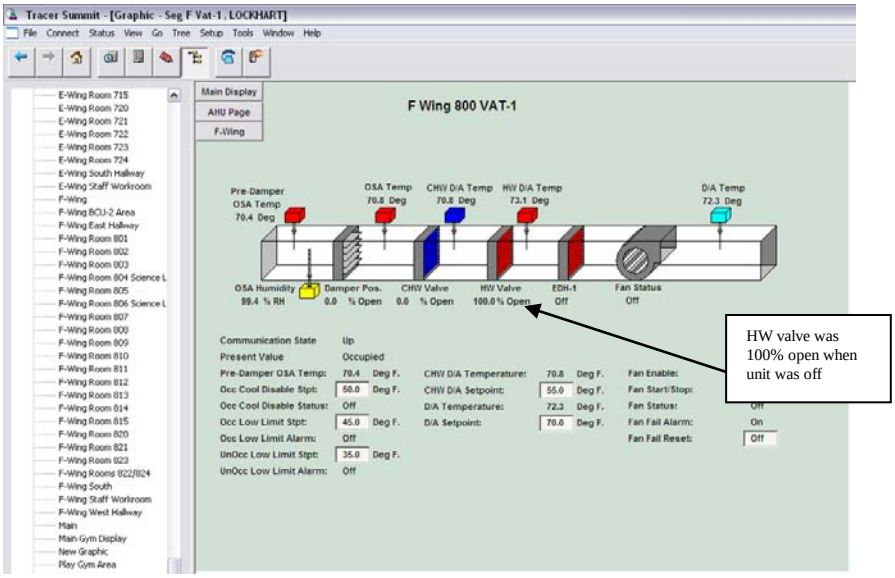


Figure 3. Screenshot of Lockhart Jr. HS outside air unit shows that the hot water valve was 100% open when the unit's fan was turned off. It is recommended that the maintenance staff should verify the hot water valve operation of the outside air unit.

It was also discovered through investigation of the EMS that each facility utilizes one outside air temperature and relative humidity sensor to measure the outdoor conditions. These readings are notoriously unreliable and the District should consider installing two or three outdoor air temperature and humidity sensors in a location ideal for good sensing and maintainability to make a reliable reference. In this way, the control system can compare the readings and alert the operator if any sensor is out of calibration relative to the others. This could make HVAC control based on outdoor air conditions more practical and reliable. Efficient control of HVAC operation along with proper up keeping of maintenance issues will result in reduced energy consumption and costs.

8.0 UTILITY COST REDUCTION MEASURES

Energy retrofit projects identified during the preliminary analysis are detailed below. Project cost estimates include complete design and construction management services.

T12 TO T8 FLUORESCENT LIGHTING RETROFIT

The District has a combination of T8 and T12 Fluorescent fixtures. It is recommended the District replace the existing T12 fluorescent lamps and magnetic ballasts with high efficiency T8 fluorescent lamps and electronic ballasts. Typical four-foot, two-lamp magnetic ballast fixtures require 80 watts, while electronic ballasts and T8 lamps in the same fixture configuration require only 50 watts. The table below indicates the facilities where T12 fluorescent lamps were observed during the preliminary walkthrough. The cost and savings noted below are based on preliminary observations of the facilities. Exact cost, quantities, and lamp types can be identified through a detailed energy audit. In addition, a detailed lighting design calculation will help ensure the appropriate lighting replacement is selected. For example, a detailed design calculation may identify areas that could operate with fewer lamps per fixtures or with low-wattage T8 lamps while still maintaining adequate lighting levels.

T12 TO T8 FLUORESCENT LIGHTING RETROFIT			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus	$7,800	$1,600	4.9
Bois D'Arc Campus	$2,100	$400	5.3
Miscellaneous Buildings	$17,200	$3,100	5.5
TOTAL	**$27,100**	**$5,100**	**5.3**

REPLACE EXISTING T8 FLUORESCENT LAMPS WITH LOWER WATTAGE LAMPS

Low-wattage T8 fluorescent lamps are available in 30, 28 and 25-watt versions. Replacing existing 32-watt T8 Fluorescent lamps with lower wattage lamps (where applicable) is recommended. Changing to a lower wattage T8 Lamp is a relatively straightforward process; however, lower wattage T8 lamps do have limitations and are only suitable for certain applications. Lower wattage T8 lamps have reduced lighting levels; therefore, it is important to ensure recommended lighting levels are maintained. Lighting levels should be verified prior to and after lamp replacement. In addition, compatibility with existing ballasts, local codes and other requirements must be verified prior to retrofitting. Nevertheless, if suitable for the application, switching to lower wattage T8 lamps will have sustainable energy savings with minimal impact. For example, replacing a 32-watt T8 lamp with a 28-watt T8 lamp will approximately have a 12% lighting energy reduction with only a lighting level drop near 4%.

The estimated costs and savings noted below are based on replacement of existing 32-watt T8 lamps and does not account for ballast replacements (if existing are incompatible) or reduced lamps (if existing lighting levels are above recommended levels). Estimates are based on a preliminary walkthrough of the facilities. A detailed lighting analysis will be required to determine exact cost, quantities and configuration to maximize the energy savings and lighting performance.

LOW WATTAGE T8 FLUORESCENT LIGHTING RETROFIT			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus	$23,400	$7,800	3.0
Bois D'Arc Campus	$11,500	$2,900	4.0
Clearfork Elementary	$10,000	$2,200	4.5
Pride High School	$2,000	$600	3.3
Plum Creek Elementary	$11,600	$2,600	4.5
Carver Kindergarten	$4,800	$1,100	4.4
Bluebonnet Elementary	$11,600	$2,900	4.0
Navarro Elementary	$8,600	$2,500	3.4
Lockhart Junior High	$22,000	$6,300	3.5
Miscellaneous Buildings	$600	$300	2.0
TOTAL	**$106,100**	**$29,200**	**3.6**

GYMNASIUM HID TO FLUORESCENT FIXTURE LIGHTING RETROFIT

The District utilizes High Intensity Discharge (HID) fixtures to light the gymnasiums. It is recommended that the District replace the existing HID fixtures with fluorescent fixtures suitable for gym applications. Fluorescent fixtures offer improved control, reduce energy consumption and improve lighting levels. In addition, due to the long re-strike times associated with HID fixtures, they cannot be effectively switched on/off during unoccupied periods. This causes the HID lamps to operate longer, which both consumes more energy and affects lamp life. The cost and savings estimates below are based on preliminary observations and analysis.

GYM LIGHTING RETROFIT - HID TO FLUORESCENT			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus	$15,100	$2,500	6.0
Bois D'Arc Campus	$9,800	$1,400	7.0
Clearfork Elementary	$3,900	$500	7.8
Plum Creek Elementary	$4,900	$600	8.2
Carver Kindergarten	$3,900	$500	7.8
Bluebonnet Elementary	$3,900	$500	7.8
Navarro Elementary	$3,900	$600	6.5
Lockhart Junior High	$13,300	$2,200	6.0
TOTAL	**$58,700**	**$8,800**	**6.7**

INSTALLATION OF OCCUPANCY SENSORS FOR INDOOR LIGHTING CONTROL

The District should consider installing occupancy sensors to improve control of interior lighting. Occupancy sensors will help ensure lights are only on when the space is occupied. The following table below provides an estimated cost and energy savings for the installation of these types of sensors. Please note this estimation is based on a preliminary assessment exact sensor location, technology (Infrared, Ultrasonic, and Dual Technology) and quantity can be determined during a detailed energy assessment or design phase. In general, enclosed areas with intermittent use, are typically good candidates for occupancy sensors (i.e. hallways, specific classrooms, administration office, break rooms, etc.).

MOTION SENSOR INSTALLATION			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus	$24,200	$3,500	6.9
Bois D'Arc Campus	$12,500	$1,800	6.9
Clearfork Elementary	$9,900	$1,300	7.6
Pride High School	$2,200	$300	7.3
Plum Creek Elementary	$12,800	$1,500	8.5
Carver Kindergarten	$7,000	$900	7.8
Bluebonnet Elementary	$11,400	$1,400	8.1
Navarro Elementary	$10,600	$1,400	7.6
Lockhart Junior High	$21,600	$3,300	6.5
Miscellaneous Buildings	$9,900	$1,400	7.1
TOTAL	**$122,100**	**$16,800**	**7.3**

REPLACE HVAC SYSTEMS

Replace existing HVAC units with new high efficiency units at the facilities indicated in the table below. The existing systems are inefficient and are beyond their useful life. Units to be replaced at the High School Campus consist of 4 Split-DX units, 8 Packaged Rooftop Units, and 4 Packaged Wall-mounted units totaling approximately 80 tons (average age is 17 years). Units to be replaced at Bois D'Arc Freshman Campus consist of 11 Split-DX units and 3 Packaged units totaling approximately 62 tons (average age is 18 years). Units to be replaced at Clearfork Elementary consist of 2 Split-DX units and 3 Packaged units totaling approximately 22 tons. Units to be replaced at Plum Creek Elementary consist of 6 Split-DX units manufactured in 1992 totaling approximately 18 tons.

The table below summarizes the estimated cost and savings for replacing the units indentified in each school.

HVAC REPLACEMENT			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus	$144,000	$7,800	18.5
Bois D'Arc Campus	$112,500	$5,100	22.1
Clearfork Elementary	$39,600	$2,100	18.9
Plum Creek Elementary	$32,400	$1,800	18.0
TOTAL	**$328,500**	**$16,800**	**19.6**

INSTALL ENERGY MANAGEMENT SYSTEM (EMS)

Install Direct Digital Control (DDC) Energy Management System (EMS) to provide optimum scheduling and precise temperature supervision for the HVAC systems throughout each facility listed in the table below. The EMS will minimize the run time of the units while maintaining comfort throughout the facility. Additionally, EMS can remotely diagnose and document HVAC maintenance problems. Presently the District's HVAC systems are controlled using conventional thermostats. Installing an EMS will improve maintenance, management and performance. The EMS systems priced below will have basic functions such as remote access capabilities, multiple scheduling, space temperature reset, and optimum start/stop features. The table below summarizes the estimated cost and saving for each proposed EMS project.

EMS INSTALLATION			
Building	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
High School Campus (700 wing, New Gym, Band Hall)	$24,000	$1,800	13.3
Navarro Elementary	$86,800	$6,200	14.0
TOTAL	**$110,800**	**$8,000**	**13.9**

The following table summarizes the implementation costs, annual savings and simple payback for the above projects:

SUMMARY OF UTILITY COST REDUCTION MEASURES			
Project Description	**Estimated Implementation Cost**	**Estimated Annual Savings ($/yr)**	**Simple Payback (years)**
LOW WATTAGE T8 FLUORESCENT LIGHTING RETROFIT	$106,100	$29,200	3.6
MOTION SENSOR INSTALLATION	$122,100	$16,800	7.3
HVAC REPLACEMENT	$328,500	$16,800	19.6
T12 TO T8 FLUORESCENT LIGHTING RETROFIT	$27,100	$5,100	5.3
EMS INSTALLATION	$110,800	$8,000	13.9
GYM LIGHTING RETROFIT - HID TO FLUORESCENT	$58,700	$8,800	6.7
TOTAL:	**$753,300**	**$84,700**	**8.9**

The above projects implementation costs and annual savings are estimated based on a preliminary examination of the facilities. Furthermore, maintenance cost savings are not included in this preliminary energy assessment. Final costs will be determined from detailed building assessments, engineering calculations, and contractor estimates

Project design (drawings and specifications), if authorized, would normally be accomplished by professional engineers. Project acquisition would be in accordance with District requirements, and construction management would be provided by the engineering group who prepared the drawings and specifications.

9.0 FACILITY IMPROVEMENT MEASURES

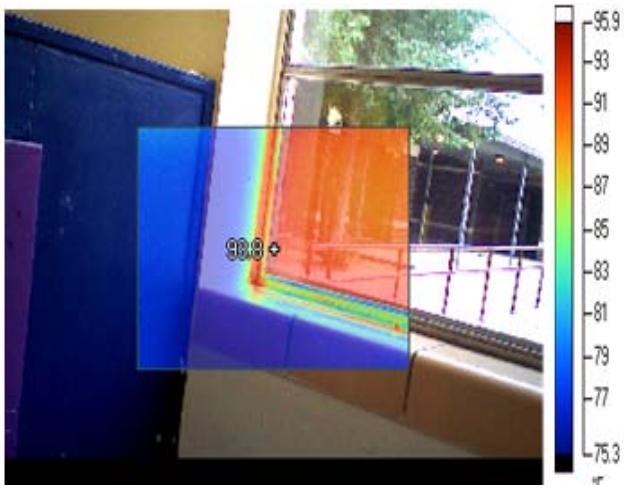
This section describes facility improvement measures that have energy savings opportunities but cannot be justified solely based on the potential energy savings. The following are the facility improvement measures recommended for the District.

REPLACE SINGLE PANE WINDOWS WITH NEW ENERGY EFFICIENT WINDOWS

Replace existing single pane windows enclosing the Main Building of Bois D'Arc Campus, Clearfork Elementary and the Special Education building with new energy efficient windows. The existing single pane windows are energy inefficient and are susceptible to unnecessary air infiltration due to degradation of the weather seals. The picture below on the right indicates heat conducted through the window frame. Replacing these windows with new energy efficient windows will help improve the building envelope's thermal performance, reduce sound transmission and enhance occupant comfort. The new energy efficient windows shall meet ENERGY STAR qualifications.

WINDOW REPLACEMENT	
Project Description	**Estimated Implementation Cost**
Bois D'Arc Campus (Main Bldg.)	$194,000
Clearfork Elementary	$90,700
Miscellaneous Buildings (Spec. Ed.)	$15,700
TOTAL	**$300,400**

Single pane windows at Bois D'Arc Campus



Heat conduction through window frame

REPLACE HVAC SYSTEMS NEARING END OF USEFUL LIFE

The District has several Split-DX units nearing the end of their useful life. The average age of these systems is fourteen (14) years. The District should budget and plan to replace these units within the next five (5) years. Replace these systems with new high efficiency units will have energy savings and help reduce maintenance costs. The HVAC systems nearing the end of their useful life consist of 18 Split-DX systems totaling approximately 60 tons. The table below summarizes the estimated cost for replacing the identified units.

HVAC REPLACEMENT	
Project Description	**Estimated Implementation Cost**
Bois D'Arc Campus	$54,000
Clearfork Elementary	$36,000
Plum Creek Elementary	$10,800
TOTAL	**$100,800**

INSTALL ENERGY MANAGEMENT SYSTEM (EMS)

Install Direct Digital Control (DDC) Energy Management System (EMS) to provide optimum scheduling and precise temperature supervision for the HVAC systems currently controlled with timeclocks and conventional thermostats listed in the table below. The EMS installation will not provide enough savings to be considered a fast payback retrofit opportunity and thus it is included as a facility improvement measure. By adding the facility to the current EMS, the District can remotely diagnose and document HVAC maintenance problems as well as minimize the run time of the units while maintaining comfort throughout the facility. The table below summarizes the estimated cost and saving for each proposed facility improvement EMS project.

EMS INSTALLATION	
Project Description	**Estimated Implementation Cost**
Bois D'Arc Campus	$97,400
TOTAL	**$97,400**

Carver Kindergarten EMS

The current Delta EMS at Carver Kindergarten does not have a graphical frontend. The District could invest in upgrading the current system to include graphics, or the District may consider replacing with an EMS similar to one used elsewhere in the District. By standardizing the controls, the District may benefit from reduced maintenance cost.

10.0 ENERGY MANAGEMENT POLICY

The District has an active energy management program in place. By requesting this study, the District has demonstrated interest in taking a more aggressive approach to energy management. In order to establish an effective Energy Management Program it should have support from top management. An Energy Management Policy adopted by the school board sends a strong signal that energy management is an institutional priority. A formal Energy Management Policy can be as simple as a two-page document that clearly states the District's energy management objectives. The policy should cover items such as:

- who is accountable for energy management
- what your energy savings targets are
- how you will monitor, review and report on progress
- staffing and training to support the policy
- criteria for energy management investment
- working energy efficiency into new capital investments

Along with a clear energy **policy,** an energy management **plan** should be developed to ensure sustained energy savings. The energy management plan is a document that details roles, responsibilities, and objectives. Following are key items that should be included in an energy management plan:

1. ESTABLISH ROUTINE ENERGY TRACKING AND REPORTING PROCEDURES Establishing a procedure to monitor energy usage and cost will help identify energy use patterns. The data will also help determine the effectiveness of the Energy Management Program.

2. ESTABLISH AN ENERGY MANAGEMENT STEERING COMMITTEE The Energy Management Steering Committee will include representatives from a cross section of the District. The steering committee will serve as a review board to evaluate all energy management recommendations before adoption and implementation. The steering committee will meet **quarterly or semiannually** to review the District's energy cost and consumption. Regular meetings will ensure the Districts goals are being met prior to the end of the year.

3. PROMOTE ENERGY AWARENESS The energy management steering committee members shall establish a program to publicize the District's energy goals and progress on a **quarterly or semiannually** basis. For example, student drawn posters of the District's energy savings can be placed in hallways. This will encourage student involvement and act as an educational tool. Continuous promotion of the District's goals will ensure the sustainability of the energy management program and help achieve further energy savings.

4. ESTABLISH ACCEPTABLE EQUIPMENT PARAMETERS Establish a District-wide uniform temperature set point for all HVAC units. Having a standard setpoint will help keep HVAC runtimes to a minimum. The following are some suggested temperature settings, however, the district will need to monitor and ensure that other building parameters (humidity levels etc.) are within acceptable limits. Also, areas with special equipment (MDF/IDF, server rooms, etc.) or materials (wood flooring, paper storage, etc.) shall be maintained at the equipment supplier's recommended settings and settings appropriate to the material.

Occupied Cooling Temperature Setpoints:

Instructional Areas	73 F – 76 F
Admin Areas	72 F – 74 F

Unoccupied Cooling Temperature Setpoints:

Instructional Areas	85 F
Admin Areas	85 F

Occupied Heating Temperature Setpoints:

Instructional Areas	67 F – 69 F
Admin Areas	67 F – 69 F

Unoccupied Heating Temperature Setpoints:

Instructional Areas	55 F
Admin Areas	55 F

5. STAFF INCENTIVES AND RECOGNITION PROGRAM Establishing a student, staff, and campus incentive and recognition program would help promote and encourage support from staff and custodial members. The District may consider implementing a staff incentive and recognition program. Following are some program examples.

- ❖ The energy accounting system can be used to monitor cost savings and compare it to the base year consumption. An energy incentive plan consisting of a 50-50 sharing with the school campus and the Energy Management Program could be employed. The school would get 50% of the savings resulting from energy cost reduction. The school would be free to use the money for educational programs such as materials, supplies, etc. The other 50% would be used for continuing energy management efforts. The following is an example of the Building savings summary report.

EXAMPLE:

High School - Annual Total Electric Cost

Baseline (2006 - 07)	Current (2007 - 08)	Savings	50% Savings
$248,483	$240,483	$8,000	$4,000

In this example, the High School saved $8,000 where 50% ($4,000) will be assigned to the school. This money would be paid in October of the following fiscal year.

- ❖ An energy flag program should be implemented. There would be three energy flags, one flag per each grade level. An energy flag would be awarded to the schools exhibiting the greatest percentage reduction in energy costs. Energy flags would be awarded on a rotating basis each summer. In order to provide motivation, maintain enthusiasm, and recognize individuals doing their part to save the District taxpayers money through the Energy Management Program, the local media (including district newsletters) should be informed of the energy flag results. The energy flags would be awarded in January and August of each year based on the energy consumption of the previous four months.

- ❖ The successes of the program should also be communicated to the public through the media to show what the District is doing to reduce costs to taxpayers.

6. NEW BUILDING AND CONSTRUCTION Ensure proper maintenance and operation of energy using equipment in new buildings by required adequate documentation of all systems and control strategies, specifying minimum content of M&O manuals; specifying contractor requirements for cleaning and adjusting equipment prior to occupancy; specifying on-site vendor training for M&O staff; and requiring as-built drawings.

7. ESTABLISH A WATER MANAGEMENT PROGRAM Along with saving energy the District should establish a program to reduce water consumption. The following conservation measures should be employed.

   a. Investigate the use of water conserving faucets, showerheads, and toilets in all new and existing facilities.
   b. Utilize water-pervious materials such as gravel, crushed stone, open paving blocks or previous paving blocks for walkways and patios to minimize runoff and increase infiltration.
   c. Employ Xeriscaping, using native plants that are well suited to the local climate, that are drought-tolerant and do not require supplemental irrigation.
   d. Utilize drip irrigation systems for watering plants in beds and gardens.
   e. Install controls to prevent irrigation when the soil is wet from rainfall.
   f. Establish a routine check of water consuming equipment for leaks and repair equipment immediately.

11.0 FUNDING OPTIONS FOR UTILITY REDUCTION MEASURES

Institutional organizations have traditionally tapped bond money, maintenance dollars, or federal grants to fund energy-efficient equipment change-outs or additions such as energy-efficient lighting systems, high efficiency air conditioning units, and computerized energy management control systems. Today, more funding options are available. Several are listed below:

Texas LoanSTAR Program

The LoanSTAR (Saving Taxes and Resources) Program, which is administered by the State Energy Conservation Office, finances energy-efficient building retrofits at a low interest rate (typically 3 percent). The program's revolving loan mechanism allows borrowers to repay loans through the stream of cost savings realized from the projects. Projects financed by LoanSTAR must have an average simple payback of ten years or less and must be analyzed in an Energy Assessment Report by a Professional Engineer. Upon final loan execution, the School District proceeds to implement funded projects through the traditional bid/specification process. Contact: Eddy Trevino (512/463-1080).

Internal Financing

Improvements can be paid for by direct allocations of revenues from an organization's currently available operating or capital funds (bond programs). The use of internal financing normally requires the inclusion and approval of energy-efficiency projects within an organization's annual operating and capital budget-setting process. Often, small projects with high rate of return can be scheduled for implementation during the budget year for which they are approved. Large projects can be scheduled for implementation over the full time period during which the capital budget is in place. Budget constraints, competition among alternative investments, and the need for higher rates of return can significantly limit the number of internally-financed energy-efficiency improvements.

Private Lending Institutions or Leasing Corporations

Banks, leasing corporations, and other private lenders have become increasingly interested in the energy efficiency market. The financing vehicle frequently used by these entities is a municipal lease. Structured like a simple loan, a municipal leasing agreement is usually a lease-purchase arrangement. Ownership of the financed equipment passes to the School 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, the lessee pays a nominal amount, usually a dollar, for title to the equipment.

Performance Contracting with an Energy Service Company

Through this arrangement, an energy service company (ESCO) uses third party financing to implement a comprehensive package of energy management retrofits for a facility. This turnkey service includes an initial assessment by the contractor to determine the energy-saving potential for a facility, design work for identified projects, purchase and installation of equipment, and overall project management. The ESCO guarantees that the cost savings generated by the projects will, at a minimum, cover the annual payment due to the ESCO over the term of the contract.

Utility Sponsored Energy Efficiency Incentive Programs

Many of the State's utilities offer energy efficiency incentive programs to offset a portion of the upfront cost associated with energy efficiency measures. The program requirements and incentives range from utility to utility. For example, CenterPoint Energy provides incentives for efficiency measures such as installation of high efficiency equipment, lighting upgrades, and building commissioning. These energy efficiency programs' incentives typically cover $0.06/kWh and $175/kW of verifiable energy and demand reductions, respectively. For further information, contact your utility provider to determine what programs are available in your area.

Qualified School Construction Bond (QSCB)

The federal government authorizes tax-free bonds (QSCBs) through the American Recovery and Reinvestment Act (ARRA), which help school districts fund new construction and major renovation projects as well as land acquisition. In total, schools will save an estimated $10 billion in taxes using these bonds. They will also help reduce the cost of borrowing for use in construction projects for public schools. For more information, please visit http://www.qscb.us.

Build America Bonds

Under the American Recovery and Reinvestment Act, the Build America Bond program provides funding for local and state governments in order to allow for capital projects on public buildings, including public schools, water and sewer projects, energy projects, and environmental projects. The bonds work by having the Treasury Department issue a state or local government 35 percent of an interest payment on the bonds. This will cause the borrowing costs incurred by the state of local government to be much less, allowing them to reach further sources of borrowing. For further information, please visit http://www.ustreas.gov.

Energy Efficiency and Conservation Block Grant (EECBG)

The Office of Weatherization and Intergovernmental Programs (WIP) has administered the EECBG, which provides funding to state and local governments for the purpose of improving energy usage and efficiency, as well as improving environmental effects. It is being funded under the ARRA, and can include building retrofits and audits, which aim to reduce energy use in buildings and transportation. The State Energy Conservation Office receives a portion of these funds to distribute to cities and counties interested in these projects. Further information can be found by visiting: http://www1.eere.energy.gov/wip/eecbg.html

Qualified Energy Conservation Bonds (QECB)

Energy projects can be eligible for QECBs, which are tax credit bonds that serve to assist with energy efficient capital projects, renewable energy usage, and reductions in energy consumption. The federal government has issued this loan program, which assists with funding of the interest costs for the bonds. These energy conservation bonds are different from tax-exempt bonds traditionally used because they can be regarded as taxable income. For more information on QECBs, please visit http://www.dsireusa.org.

Qualified Zone Academy Bond (QZAB)

QZABs are available for school districts that can utilize the bonds from the federal government for repair and rehabilitation projects. Tax credits are provided to bondholders nearly equal to the interest that the state or community would normally be expected to pay. It can be utilized for projects that qualify for the program. More information can be found by visiting http://www2.ed.gov/programs/qualifiedzone.

APPENDICES

APPENDIX A

ENERGY LEGISLATION
(SB12, HB3693 AND SB300)

How to comply with SB12 & HB 3693

What you need to know about Texas Senate Bill 12

The passage of Senate Bill 12 (SB12) by the 80th Texas Legislature signified the continuance of Senate Bill 5 (SB5), the 77th Texas Legislature's sweeping approach in 2001 to clean air and encourage energy efficiency in Texas. SB12 was enacted on September 1, 2007 and was crafted to continue to assist the state and its political jurisdictions to conform to the standards set forth in the Federal Clean Air Act. The bill contains energy-efficiency strategies intended to decrease energy consumption while improving air quality.

All political subdivisions in the 41 non-attainment or near non-attainment counties in Texas are required to:

*1) Adopt a goal to reduce electric consumption by 5 percent each year for six years, beginning September 1, 2007**

2) Implement all cost-effective energy-efficiency measures to reduce electric consumption by existing facilities. (Cost effectiveness is interpreted by this legislation to provide a 20 year return on investment.)

3) Report annually to the State Energy Conservation Office (SECO) on the entity's progress, efforts and consumption data.

*Note: The recommended baseline data for those reporting entities will consist of the jurisdiction's 2006 energy consumption for its facilities and based on the State Fiscal Year (September 1, 2006 to August 31, 2007).

What you need to know about Texas House Bill 3693

The passage of House Bill 3693 (HB3693) by the 80th Texas Legislature is intended to provide additional provisions for energy-efficiency in Texas. Adopted with an effective date of September 1, 2007, HB 3693 is an additional mechanism by which the state can encourage energy-efficiency through various means for School Districts, State Facilities and Political Jurisdictions in Texas.

HB 3693 includes the following state-wide mandates that apply differently according to the nature and origin of the entity:

Record, Report and Display Consumption Data

All Political Subdivisions, School Districts and State-Funded Institutes of Higher Education, are mandated to record and report the entity's metered resource consumption usage data for electricity, natural gas and water on a publically accessible internet page. *Note: The format, content and display of this information are determined by the entity or subdivision providing this information.*

Energy Efficient Light Bulbs

All School Districts and State-Funded Institutes of Higher Education shall purchase and use energy-efficient light bulbs in education and housing facilities.

Who must comply?

The provisions in this bill will apply to entities including: Cities and Counties; School Districts; Institutes of Higher Education; State Facilities and Buildings.

How do you define energy-efficiency measures?

Energy-efficiency measures are defined as any facility modifications or changes in operations that reduce energy consumption. Energy-efficiency is a strategy that has the potential to conserve resources, save money** and better the quality of our air. They provide immediate savings and add minimal costs to your project budget.

Examples of energy-efficiency measures include:

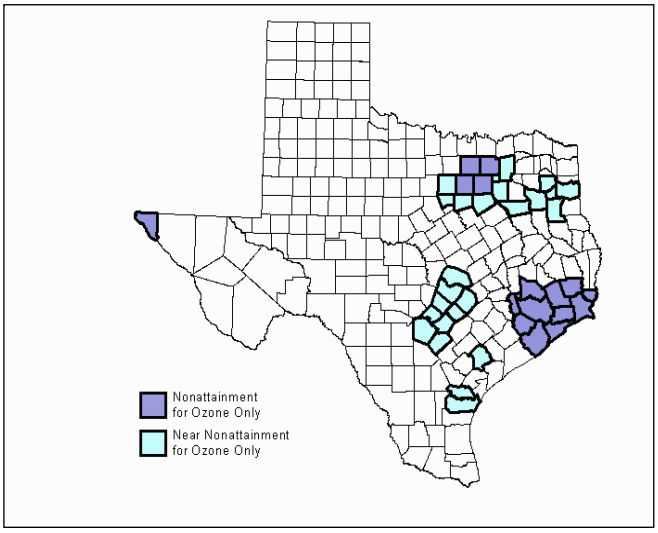
• installation of insulation and high-efficiency windows and doors • modifications or replacement of HVAC systems, lighting fixtures and electrical systems • installation of automatic energy control systems • installation of energy recovery systems or renewable energy generation equipment • building commissioning • development of energy efficient procurement specifications • employee awareness campaigns

***SECO's Preliminary Energy Assessment (PEA) program is an excellent resource for uncovering those energy-efficiency measures that can benefit your organization.*

What counties are affected?

All political jurisdictions located in the following Non-attainment and affected counties:

Bastrop Bexar Brazoria Caldwell Chambers Collin
Comal Dallas Denton El Paso Ellis Fort Bend
Galveston Gregg Guadalupe Hardin Harris Harrison
Hays Henderson Hood Hunt Jefferson Johnson
Kaufman Liberty Montgomery Nueces Orange Parker
Rockwall Rusk San Patricio Smith Tarrant Travis
Upshur Victoria Waller Williamson Wilson



What assistance is available for affected areas?

The Texas Energy Partnership is a partner with Energy Star©, who partners across the nation with the goal of improving building performance, reducing air emissions through reduced energy demand, and enhancing the quality of life through energy-efficiency and renewable energy technologies.

To assist jurisdictions, the Texas Energy Partnership will:

- Present workshops and training seminars in partnership with private industry on a range of topics that include energy services, financing, building technologies and energy performance rating and benchmarking

- Prepare information packages – containing flyers, documents and national lab reports about energy services, management tools and national, state and industry resources that will help communities throughout the region

- Launch an electronic newsletter to provide continuous updates and develop additional information packages as needed

Please contact Stephen Ross at 512-463-1770 for more information.

SECO Program Contact Information

LoanSTAR;
Preliminary Energy Assessments:
Theresa Sifuentes - 512-463-1896
Theresa.Sifuentes@cpa.state.tx.us

Schools Partnership Program:
Glenda Baldwin - 512-463-1731
Glenda.Baldwin@cpa.state.tx.us

Engineering (Codes / Standards):
Felix Lopez - 512-463-1080
Felix.Lopez@cpa.state.tx.us

Innovative / Renewable Energy:
Pamela Groce - 512-463-1889
pam.groce@cpa.state.tx.us

Energy / Housing
Partnership Programs:
Stephen Ross - 512-463-1770
Stephen.Ross@cpa.state.tx.us

Alternate Fuels / Transportation:
Mary-Jo Rowan - 512-463-2637
Mary-Jo.Rowan@cpa.state.tx.us

BILL ANALYSIS

Senate Research Center

S.B. 300
By: Patrick, Dan
Education
7/1/2009
Enrolled

AUTHOR'S / SPONSOR'S STATEMENT OF INTENT

Many independent school districts across Texas are reporting severe financial difficulties due to several factors, including the requirement to fulfill unfunded mandates. These mandates are particularly burdensome to fast-growth school districts. In a difficult economic climate and with dwindling resources, districts are forced to fulfill unnecessary mandates rather than focus on their basic mission, which is to educate students.

S.B. 300 amends current law relating to eliminating or modifying certain mandates on school districts.

RULEMAKING AUTHORITY

This bill does not expressly grant any additional rulemaking authority to a state officer, institution, or agency.

SECTION BY SECTION ANALYSIS

SECTION 1. Amends Section 11.1513(d), Education Code, as follows:

(d) Requires that the employment policy provide that not later than the 10th school day before the date on which a district fills a vacant position for which a certificate or license is required as provided by Section 21.003, other than a position that affects the safety and security of students as determined by the board of trustees, the district is required to provide to each current district employee notice of the position by posting the position on a bulletin board at certain locations or, rather than and, the district's Internet website, if the district has a website, and a reasonable opportunity to apply for the position.

SECTION 2. Amends Section 25.112, Education Code, by amending Subsection (d) and adding Subsections (e)-(g), as follows:

(d) Authorizes the commissioner of education (commissioner), on application of a school district (district), to except the district from the limit in Subsection (a) (relating to the prohibition of more than 22 students enrolled in an elementary school class) if the commissioner finds the limit works an undue hardship on the district. Provides that an exception expires at the end of the school year for which it is granted. Deletes existing text providing that an exception expires at the end of the semester for which it is granted, and prohibiting the commissioner from granting an exception for more than one semester at a time.

(e) Requires a district seeking an exception under Subsection (d) to notify the commissioner and apply for the exception not later than the later of October 1 or the 30th day after the first school day the district exceeds the limit in Subsection (a).

(f) Authorizes the commissioner, if a district repeatedly fails to comply with this section, to take any appropriate action authorized to be taken by the commissioner under Section 39.131 (Sanctions for Districts).

(g) Requires the Texas Education Agency, not later than January 1, 2011, to report to the legislature the number of applications for exceptions under Subsection (d) submitted by

each district and for each application indicate whether the application was granted or denied. Provides that this subsection expires February 1, 2011.

SECTION 3. Amends Section 34.0021, Education Code, by amending Subsections (a) and (b) and adding Subsection (c-1), as follows:

(a) Authorizes, rather than requires, each school district, pursuant to the safety standards established by the Department of Public Safety under Section 34.002, to conduct a training session for students and teachers concerning procedures for evacuating a school bus during an emergency.

(b) Provides that a school district that chooses to conduct a training session under Subsection (a) is encouraged to conduct the school bus emergency evacuation training session in the fall of the school year. Provides that the school district is also encouraged to structure the training session so that the session applies to school bus passengers, a portion of the session occurs on a school bus, and the session lasts for at least one hour. Deletes existing text requiring a school district to conduct the school bus emergency evacuation training at least twice each school year, with one training session occurring in the fall and one training session occurring in the spring. Deletes existing text requiring that a portion of the training session occur on a school bus and requiring the training session to last for at least one hour.

(c-1) Provides that a school district, immediately before each field trip involving transportation by school bus, is encouraged to review school bus emergency evacuation procedures with the school bus passengers, including a demonstration of the school bus emergency exits and the safe manner to exit.

SECTION 4. Amends Section 44.902, Education Code, as follows:

Sec. 44.902. New heading: LONG-RANGE ENERGY PLAN TO REDUCE CONSUMPTION OF ELECTRIC ENERGY. (a) Creates this subsection from existing text. Requires the board of trustees of a district to establish a long-range energy plan to reduce the district's annual electric consumption by five percent beginning with the 2008 state fiscal year and consume electricity in subsequent fiscal years in accordance with the district's energy plan. Deletes existing text requiring the board of trustees of a district to establish a goal to reduce the school district's annual electric consumption by five percent each state fiscal year for six years beginning September 1, 2007.

(b) Requires that the plan required under Subsection (a) include strategies for achieving energy efficiency that result in net savings for the district or can be achieved without financial cost to the district and for each strategy identified under Subdivision (1), the initial, short-term capital costs and lifetime costs and savings that may result from implementation of the strategy.

(c) Requires the board of trustees, in determining under Subsection (b) whether a strategy may result in financial cost to the district, to consider the total net costs and savings that may occur over the seven-year period following implementation of the strategy.

(d) Authorizes the board of trustees to submit the plan required under Subsection (a) to the State Energy Conservation Office for the purposes of determining whether funds available through loan programs administered by the office are available to the district.

SECTION 5. Repealer: Section 44.901(b) (regarding the requirement that the board of trustees establish a goal to reduce electric consumption by five percent each year for six years), Education Code.

SECTION 6. Provides that this Act applies beginning with the 2009-2010 school year.

SECTION 7. Effective date: upon passage or September 1, 2009.

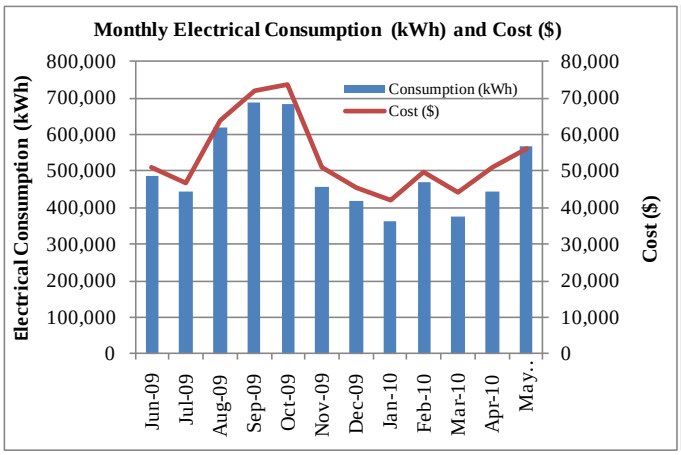
APPENDIX B

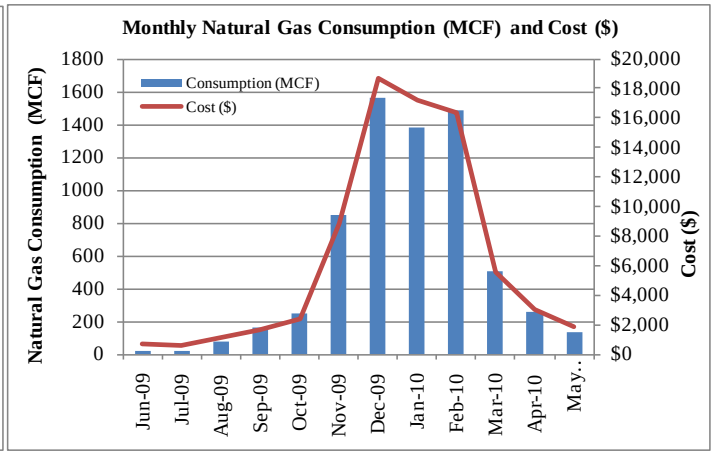
SAMPLE UTILITY DATA REPORTING FORM

Lockhart ISD - Sample Utility Input Form

MONTH	ELECTRICITY			NATURAL GAS		
	KWH	COST $	Avg. Rate $/KWH	MCF	COST $	Avg. Rate $/MCF
Jun-09	488,361	50,984	$0.1044	23.9298	$686	$28.6
Jul-09	443,010	46,901	$0.1059	18.7594	$578	$30.8
Aug-09	618,346	63,873	$0.1033	76.9541	$1,130	$14.7
Sep-09	687,109	71,981	$0.1048	159.4444	$1,646	$10.3
Oct-09	681,853	73,783	$0.1082	243.3521	$2,376	$9.8
Nov-09	456,499	50,874	$0.1114	846.0578	$8,793	$10.4
Dec-09	417,035	45,580	$0.1093	1565.866	$18,666	$11.9
Jan-10	364,953	41,977	$0.1150	1384.798	$17,188	$12.4
Feb-10	471,852	49,804	$0.1056	1481.521	$16,326	$11.0
Mar-10	374,924	44,183	$0.1178	505.9511	$5,601	$11.1
Apr-10	442,693	51,120	$0.1155	257.4789	$3,049	$11.8
May-10	567,628	56,256	$0.0991	133.1061	$1,812	$13.6
Total	6,014,263	$647,316	$0.1076	6,697	$77,849	$11.6

Gross Building Area:	700,857	SF





APPENDIX C

BASE YEAR CONSUMPTION HISTORY

Energy Cost and Consumption Benchmarks

		Electric			Natural Gas			Total	Total	EUI	ECI	
	Building	KWH/Yr	MMBTU/Yr	$Cost/Yr	MCF/Yr	MMBTU/Yr	$Cost/Yr	$Cost/Yr	MMBTU/Yr	kBTU/SF/Yr	$/SF/Yr	SF
1	High School Campus	1,533,214	5,233	170,502	1,665	1,715	19,512	190,015	6,948	43	1.17	162,294
2	Lockhart Junior High	1,335,552	4,558	139,763	871	897	9,875	149,639	5,455	40	1.10	135,835
3	Bois D'Arc Campus	571,800	1,952	62,737	919	947	11,558	74,295	2,898	41	1.04	71,149
4	Clearfork Elementary	411,143	1,403	44,883	512	527	6,009	50,892	1,930	33	0.87	58,670
5	Pride High School	57,625	197	6,732	253	261	3,150	9,881	458	42	0.90	11,001
6	Plum Creek Elementary	512,840	1,750	52,936	434	447	5,012	57,948	2,197	32	0.85	67,922
7	Carver Kindergarten	172,145	588	18,130	444	457	5,517	23,646	1,045	33	0.75	31,394
8	Bluebonnet Elementary	606,000	2,068	59,069	465	479	5,286	64,355	2,547	32	0.80	80,778
9	Navarro Elementary	509,600	1,739	52,136	934	962	10,827	62,963	2,702	54	1.26	50,044
10	Miscellaneous Buildings	304,344	1,039	40,427	200	206	1,104	41,531	1,245	39	1.31	31,770
		KWH/Yr	MMBTU/Yr	$Cost/Yr	MCF/Yr	MMBTU/Yr	$Cost/Yr	$Cost/Yr	MMBTU/Yr	kBTU/SF/Yr	$/SF/Yr	SF
		6,014,263	20,527	647,316	6,697	6,898	77,849	725,165	27,425	29	1.03	700,857

ACCOUNT# 09-01250-00 09-01270-00 09-01920-00 09-02870-00 09-03780-00 09-03750-00 09-03970-00 09-04480-00 09-04540-00 22-00060-00 22-00040-00 09-04560-00 Electric
910422073 910375020 910150646 Gas

District: Lockhart ISD

BUILDING: High School Campus

FLOOR AREA: 162,294 estimated

		Electrical					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	107,955		424		11,711	10	171
July	2009	125,086		288		13,310	11	180
August	2009	191,803		448		19,834	35	374
September	2009	152,418		146		16,761	22	291
October	2009	143,103		341		16,250	31	400
November	2009	121,714		140		14,187	154	1,704
December	2009	102,903		232		11,999	456	5,544
January	2010	104,157		256		12,125	351	4,306
February	2010	126,577		236		11,436	393	4,291
March	2010	97,372		228		11,856	103	1,078
April	2010	107,538		280		13,471	64	724
May	2010	152,588		428		17,562	37	448
TOTAL		1,533,214				170,502	1,664.8	19,512

0.00276042

Energy Use Index:

Annual Total Energy Cost = 190,015 $/year

Total site BTU's/Yr ÷ Total Area (SF) = 43 kBTU/SF/year

Total KWH/yr x 0.003413 = 5,232.86 MMBTU/year

Total MCF/yr x 1.03 = 1,714.74 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 6,948 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 1.17 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 6000088311 6000053592 Electric

910080006 Gas

BUILDING: Lockhart Junior High FLOOR AREA: 135,835 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	112,992		538		11,283	0	0
July	2009	91,584		419		9,073	0	0
August	2009	117,984		484		11,320	0	27
September	2009	150,624		606		14,342	18	180
October	2009	140,832		603		14,363	30	309
November	2009	117,216		523		12,103	37	413
December	2009	103,392		456		10,650	121	1,308
January	2010	72,096		463		8,327	172	2,113
February	2010	95,328		476		10,635	185	2,236
March	2010	97,056		541		11,157	202	2,221
April	2010	114,528		461		12,569	72	718
May	2010	121,920		593		13,943	32	350
TOTAL		1,335,552				139,763	870.7	9,875

0.00446306

Energy Use Index:

Annual Total Energy Cost = 149,639 $/year

Total site BTU's/Yr ÷ Total Area (SF) = 40 kBTU/SF/year

Total KWH/yr x 0.003413 = 4,558.24 MMBTU/year

Total MCF/yr x 1.03 = 896.82 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 5,455 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 1.10 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

ACCOUNT# 11-00300-00 11-03410-00 11-03540-00 22-00010-00 22-00070-00 Electric

910430273 910496216 910100182 910307412 910190027 Gas

District: Lockhart ISD

BUILDING: Bois D'Arc Campus

FLOOR AREA: 71,149 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	58,760		112		6,845	7	204
July	2009	61,480		100		6,893	7	173
August	2009	64,520		127		7,134	11	224
September	2009	65,640		154		7,313	18	282
October	2009	52,080		157		5,997	18	324
November	2009	43,640		104		4,838	98	1,120
December	2009	35,600		104		3,923	239	2,892
January	2010	32,040		100		3,553	168	2,189
February	2010	41,280		104		4,489	274	2,962
March	2010	28,960		100		3,302	46	577
April	2010	36,800		94		4,142	20	332
May	2010	51,000		109		4,310	14	279
TOTAL		571,800				62,737	919.0	11,558

* Natural Gas service not included in this summary. 0.00220945

Annual Total Energy Cost = 74,295 $/year

Total KWH/yr x 0.003413 = 1,951.55 MMBTU/year

Total MCF/yr x 1.03 = 946.57 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 2,898 MMBTU/year

Energy Use Index:

Total site BTU's/Yr ÷ Total Area (SF) = 41 kBTU/SF/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 1.04 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 09-03690-00 09-03960-00 22-00030-00 09-01300-00 Electric
910159050 Gas

BUILDING: Clearfork Elementary

FLOOR AREA: 58,670 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	36,136		184		3,951	1	32
July	2009	32,242		205		3,400	0	0
August	2009	44,607		224		4,665	4	57
September	2009	58,895		248		6,199	10	117
October	2009	39,773		221		4,351	16	194
November	2009	26,955		166		3,030	86	935
December	2009	23,880		88		2,956	140	1,709
January	2010	23,867		90		2,971	97	1,197
February	2010	30,077		94		3,598	113	1,233
March	2010	21,615		94		2,794	23	254
April	2010	28,318		154		3,214	18	205
May	2010	44,778		195		3,756	5	76
TOTAL		411,143				44,883	511.8	6,009

0.00422703

Energy Use Index:

Annual Total Energy Cost = 50,892 $/year

Total site BTU's/Yr ÷ Total Area (SF) = 33 kBTU/SF/year

Total KWH/yr x 0.003413 = 1,403.23 MMBTU/year

Total MCF/yr x 1.03 = 527.15 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 1,930 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 0.87 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 12-05230-00 22-00090-00 Electric
910109158 Gas

BUILDING: Pride High School FLOOR AREA: 11,001 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	4,456		28		528	0	27
July	2009	4,242		22		489	0	27
August	2009	7,021		34		767	0	27
September	2009	7,909		36		871	0	27
October	2009	5,847		35		676	0	27
November	2009	4,602		26		553	30	339
December	2009	3,623		18		439	89	1,064
January	2010	3,250		18		400	56	703
February	2010	4,287		18		505	73	780
March	2010	3,161		18		403	5	75
April	2010	3,742		25		464	0	28
May	2010	5,485		30		635	0	27
TOTAL		57,625				6,732	253.3	3,150

0.00327243

Annual Total Energy Cost = 9,881 $/year

Energy Use Index:

Total site BTU's/Yr ÷ Total Area (SF) = 42 kBTU/SF/year

Total KWH/yr x 0.003413 = 196.67 MMBTU/year
Total MCF/yr x 1.03 = 260.92 MMBTU/year
Total Other x_____ = 0.0 MMBTU/year
Total Site MMBTU's/yr = 458 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 0.90 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 14-03860-00 22-00080-00 Electric
910651524 Gas

BUILDING: Plum Creek Elementary FLOOR AREA: 67,922 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	53,520		239		5,662	1	35
July	2009	29,840		137		3,076	0	27
August	2009	54,640		206		5,555	6	74
September	2009	68,080		326		7,036	10	118
October	2009	88,460		666		9,337	14	172
November	2009	4,580		120		577	124	1,303
December	2009	31,340		159		3,327	80	962
January	2010	32,560		204		3,454	77	960
February	2010	41,340		189		4,341	88	932
March	2010	30,680		204		3,373	17	190
April	2010	33,620		204		3,680	11	140
May	2010	44,180		225		3,516	7	98
TOTAL		512,840		2879		52,936	434.0	5,012

0.00980536

Energy Use Index:

Annual Total Energy Cost = 57,948 $/year

Total site BTU's/Yr ÷ Total Area (SF) = 32 kBTU/SF/year

Total KWH/yr x 0.003413 = 1,750.32 MMBTU/year
Total MCF/yr x 1.03 = 446.99 MMBTU/year
Total Other x_____ = 0.0 MMBTU/year
Total Site MMBTU's/yr = 2,197 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 0.85 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 01-04330-00 22-00050-00 Electric
910164649 910720047 Gas

BUILDING: Carver Kindergarten FLOOR AREA: 31,394 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	18,114		88		$1,954.08	0	$53.76
July	2009	13,345		80		$1,401.40	0	$53.76
August	2009	16,579		100		$1,722.79	7	$113.30
September	2009	22,994		124		$2,407.36	12	$171.41
October	2009	19,361		1,015		$2,084.94	14	$199.57
November	2009	13,657		86		$1,510.16	50	$568.98
December	2009	10,576		54		$1,155.38	135	$1,629.65
January	2010	9,686		54		$1,063.35	84	$1,069.07
February	2010	12,316		53		$1,328.60	98	$1,064.49
March	2010	8,538		53		$975.52	18	$227.74
April	2010	11,724		68		$1,312.04	15	$209.65
May	2010	15,255		86		$1,213.96	10	$155.50
TOTAL		172,145		1861		$18,129.58	444.0	$5,516.88

0.03233739

Annual Total Energy Cost = 23,646 $/year

Energy Use Index:

Total site BTU's/Yr ÷ Total Area (SF) = 33 kBTU/SF/year

Total KWH/yr x 0.003413 = 587.53 MMBTU/year
Total MCF/yr x 1.03 = 457.33 MMBTU/year
Total Other x_____ = 0.0 MMBTU/year
Total Site MMBTU's/yr = 1,045 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 0.75 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 20-00200-00 Electric

910814766 Gas

BUILDING: Bluebonnet Elementary FLOOR AREA: 80,778 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	38,400		312		2,339	1	34
July	2009	33,000		192		3,355	0	27
August	2009	55,800		342		5,628	8	92
September	2009	79,800		372		8,176	20	217
October	2009	67,800		348		7,122	28	314
November	2009	62,700		408		6,689	50	522
December	2009	42,000		225		3,542	68	799
January	2010	33,000		222		3,447	105	1,292
February	2010	49,200		234		5,095	122	1,274
March	2010	35,400		225		3,826	26	279
April	2010	48,000		252		5,159	23	264
May	2010	60,900		297		4,691	15	170
TOTAL		606,000		3429		59,069	465.1	5,286

0.00505088

Energy Use Index:

Annual Total Energy Cost = 64,355 $/year

Total site BTU's/Yr ÷ Total Area (SF) = 32 kBTU/SF/year

Total KWH/yr x 0.003413 = 2,068.28 MMBTU/year

Total MCF/yr x 1.03 = 479.01 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 2,547 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 0.80 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

District: Lockhart ISD

ACCOUNT# 22-00020-00 Electric
910667027 Gas
BUILDING: Navarro Elementary FLOOR AREA: 50,044 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	30,240		224		3,199	5	75
July	2009	23,680		134		2,419	1	37
August	2009	34,080		256		3,453	7	86
September	2009	53,600		256		5,505	13	150
October	2009	101,600		712		10,652	21	251
November	2009	43,200		216		4,621	155	1,681
December	2009	36,400		180		3,802	217	2,625
January	2010	27,200		240		2,848	274	3,331
February	2010	43,600		208		4,520	131	1,431
March	2010	31,600		208		3,420	62	631
April	2010	38,800		208		4,178	34	374
May	2010	45,600		220		3,520	13	155
TOTAL		509,600		3062		52,136	934.4	10,827

0.01422748

Annual Total Energy Cost = 62,963 $/year

Energy Use Index:

Total site BTU's/Yr ÷ Total Area (SF) = 54 kBTU/SF/year

Total KWH/yr x 0.003413 = 1,739.26 MMBTU/year
Total MCF/yr x 1.03 = 962.39 MMBTU/year
Total Other x_____ = 0.0 MMBTU/year
Total Site MMBTU's/yr = 2,702 MMBTU/year

Energy Cost Index:

Total Energy Cost/Yr ÷ Total Area (SF) = 1.26 $/SF/year

Electric Utility: City of Lockhart

Gas Utility: Texas Gas Service

ACCOUNT# 10-02720-00 10-02730-00 10-02740-00 11-00790-00 11-02650-00 11-03210-00 08-04940-00 12-05290-00 08-00440-00 11-02900-00 11-00360-00 11-00370-00 11-02560-00 Electric

910585001 1184691 Gas

District: Lockhart ISD

BUILDING: Miscellaneous Buildings

FLOOR AREA: 31,770 estimated

		ELECTRICAL					NATURAL GAS / FUEL	
			DEMAND			TOTAL ALL		
		CONSUMPTION	METERED	CHARGED	COST OF	ELECTRIC	CONSUMPTION	TOTAL
MONTH	YEAR	KWH	KW	KW	DEMAND ($)	COSTS ($)	MCF	COSTS ($)
June	2009	27,788		27		3,513	0	54
July	2009	28,511		21		3,484	0	54
August	2009	31,312		28		3,793	0	55
September	2009	27,149		28		3,370	36	91
October	2009	22,997		27		2,950	72	184
November	2009	18,235		60		2,765	62	207
December	2009	27,321		63		3,787	22	133
January	2010	27,097		68		3,788	0	27
February	2010	27,847		68		3,857	7	122
March	2010	20,542		64		3,078	2	70
April	2010	19,623		58		2,932	0	54
May	2010	25,922		42		3,110	0	54
TOTAL		304,344		554		40,427	200.2	1,104

0.00214038

Annual Total Energy Cost = 41,531 $/year

Energy Use Index:

Total site BTU's/Yr ÷ Total Area (SF) = 39 kBTU/SF/year

Total KWH/yr x 0.003413 = 1,038.73 MMBTU/year

Total MCF/yr x 1.03 = 206.21 MMBTU/year

Total Other x_____ = 0.0 MMBTU/year

Total Site MMBTU's/yr = 1,245 MMBTU/year

Energy Cost Index:

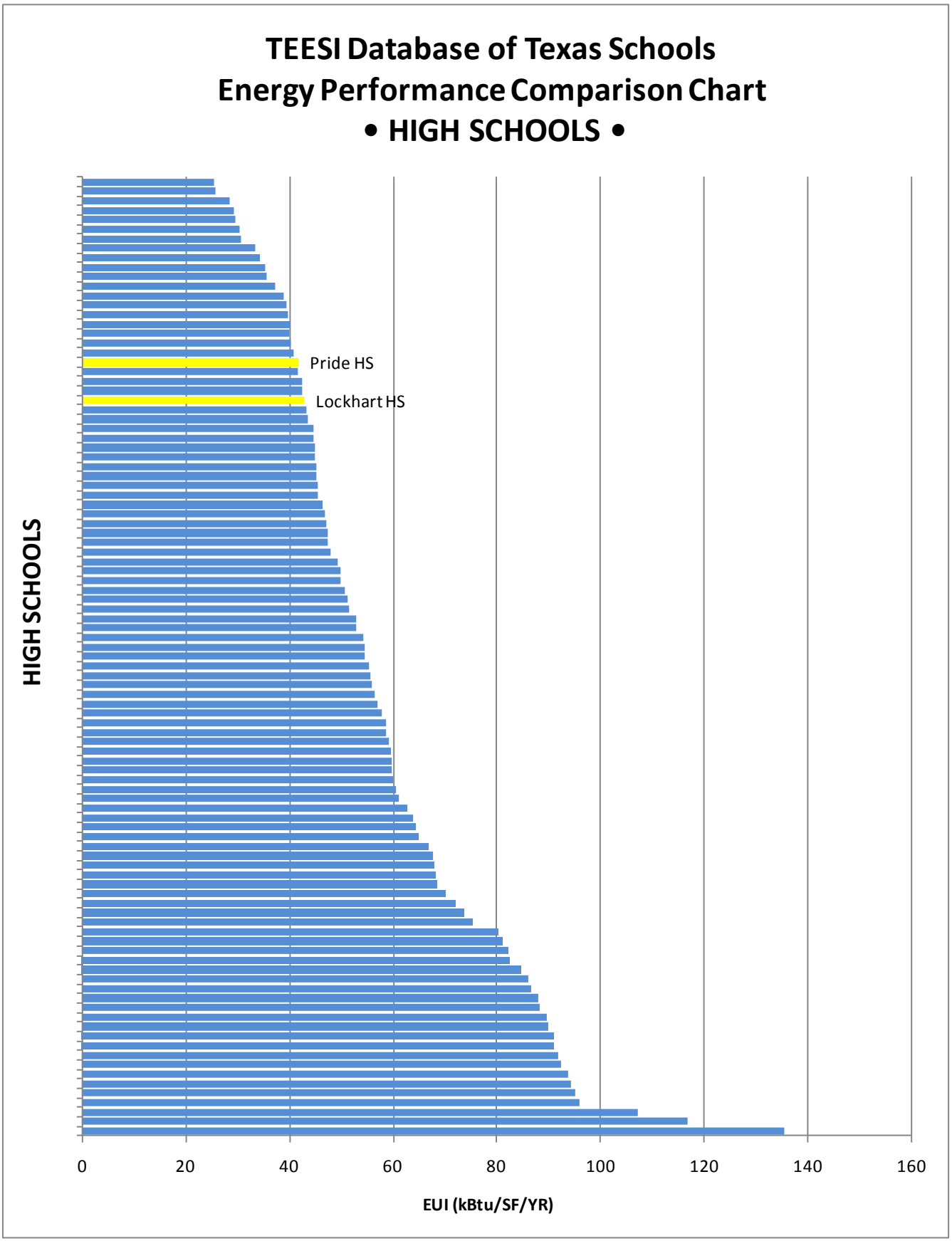
Total Energy Cost/Yr ÷ Total Area (SF) = 1.31 $/SF/year

Electric Utility: City of Lockhart

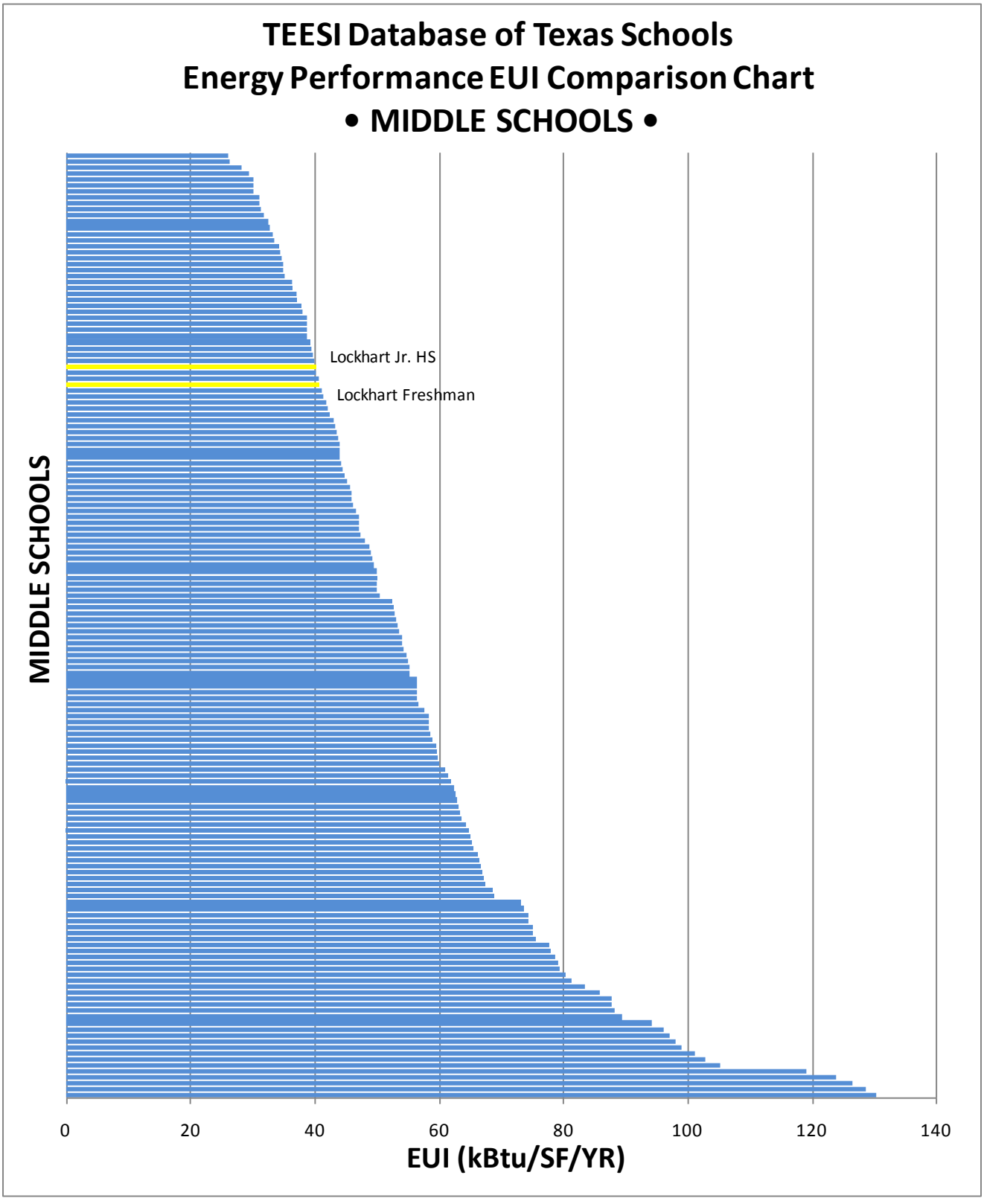
Gas Utility: Texas Gas Service

APPENDIX D

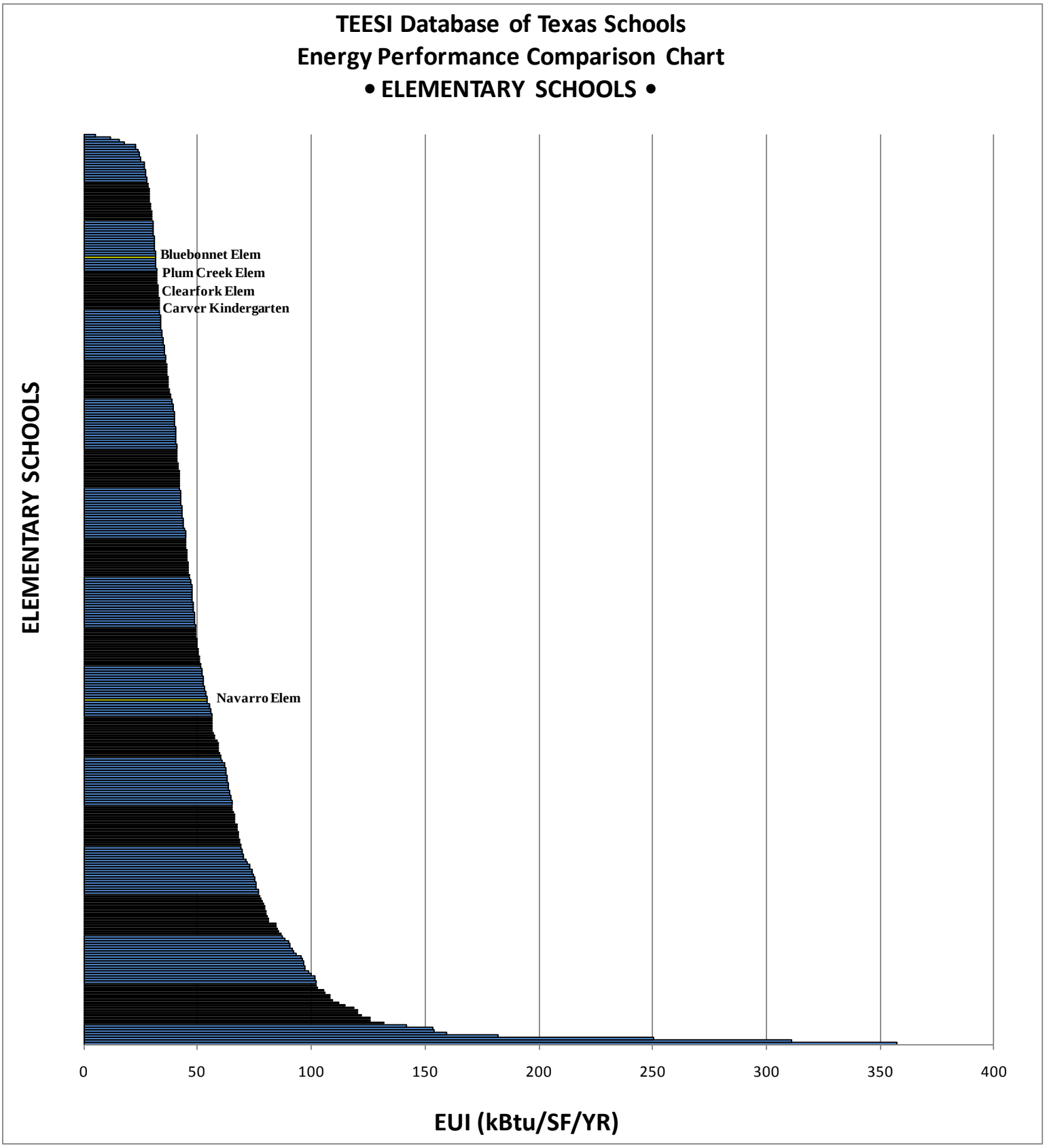
ENERGY PERFORMANCE COMPARISON CHARTS



(The chart above is a comparison of EUIs based on sample data from TEESI's database of Texas Schools)



(The chart above is a comparison of EUIs based on sample data from TEESI's database of Texas Schools)



(The chart above is a comparison of EUIs based on sample data from TEESI's database of Texas Schools)

APPENDIX E

TYPICAL EQUIPMENT MAINTENANCE CHECKLISTS

Boilers Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
Boiler use/sequencing	Turn off/sequence unnecessary boilers	X			
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Follow manufacturer's recommended procedures in lubricating all components	Compare temperatures with tests performed after annual cleaning	X			
Check steam pressure	Is variation in steam pressure as expected under different loads? Wet steam may be produced if the pressure drops too fast	X			
Check unstable water level	Unstable levels can be a sign of contaminates in feedwater, overloading of boiler, equipment malfunction	X			
Check burner	Check for proper control and cleanliness	X			
Check motor condition temperatures	Check for proper function	X			
Check air temperatures in boiler room	Temperatures should not exceed or drop below design limits	X			
Boiler blowdown	Verify the bottom, surface and water column blow downs are occurring and are effective	X			
Boiler logs	Keep daily logs on: • Type and amount of fuel used • Flue gas temperature • Makeup water volume • Steam pressure, temperature, and amount generated Look for variations as a method of fault detection	X			
Check oil filter assemblies	Check and clean/replace oil filters and strainers	X			
Inspect oil heaters	Check to ensure that oil is at proper temperature prior to burning	X			
Check boiler water treatment	Confirm water treatment system is functioning properly	X			
Check flue gas temperatures and composition	Measure flue gas composition and temperatures at selected firing positions - recommended O2% and CO2% Fuel — O2 % — CO2% Natural gas — 1.5 — 10 No. 2 fuel oil — 2.0 — 11.5 No. 6 fuel oil — 2.5 — 12.5 Note: percentages may vary due to fuel composition variations		X		

Boilers Checklist (contd)

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
Check all relief valves	Check for leaks		X		
Check water level control	Stop feedwater pump and allow control to stop fuel flow to burner. Do not allow water level to drop below recommended level.		X		
Check pilot and burner assemblies	Clean pilot and burner following manufacturer's guidelines. Examine for mineral or corrosion buildup.		X		
Check boiler operating characteristics	Stop fuel flow and observe flame failure. Start boiler and observe characteristics of flame.		X		
Inspect system for water/steam leaks and leakage opportunities	Look for: leaks, defective valves and traps, corroded piping, condition of insulation		X		
Inspect all linkages on combustion air dampers and fuel valves	Check for proper setting and tightness		X		
Inspect boiler for air leaks	Check damper seals		X		
Check blowdown and water treatment procedures	Determine if blowdown is adequate to prevent solids buildup			X	
Flue gases	Measure and compare last month's readings flue gas composition over entire firing range			X	
Combustion air supply	Check combustion air inlet to boiler room and boiler to make sure openings are adequate and clean			X	
Check fuel system	Check pressure gauge, pumps, filters and transfer lines. Clean filters as required.			X	
Check belts and packing glands	Check belts for proper tension. Check packing glands for compression leakage.			X	
Check for air leaks	Check for air leaks around access openings and flame scanner assembly.			X	
Check all blower belts	Check for tightness and minimum slippage.			X	
Check all gaskets	Check gaskets for tight sealing, replace if do not provide tight seal			X	
Inspect boiler insulation	Inspect all boiler insulation and casings for hot spots			X	
Steam control valves	Calibrate steam control valves as specified by manufacturer			X	
Pressure reducing/regulating valves	Check for proper operation			X	

Boilers Checklist (contd)

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
Perform water quality test	Check water quality for proper chemical balance			X	
Clean waterside surfaces	Follow manufacturer's recommendation on cleaning and preparing waterside surfaces				X
Clean fireside	Follow manufacturer's recommendation on cleaning and preparing fireside surfaces				X
Inspect and repair refractories on fireside	Use recommended material and procedures				X
Relief valve	Remove and recondition or replace				X
Feedwater system	Clean and recondition feedwater pumps. Clean condensate receivers and deaeration system				X
Fuel system	Clean and recondition system pumps, filters, pilot, oil preheaters, oil storage tanks, etc.				X
Electrical systems	Clean all electrical terminals. Check electronic controls and replace any defective parts.				X
Hydraulic and pneumatic valves	Check operation and repair as necessary				X
Flue gases	Make adjustments to give optimal flue gas composition. Record composition, firing position, and temperature.				X
Eddy current test	As required, conduct eddy current test to assess tube wall thickness				X

Chillers Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Semi-Annually	Annually
Chiller use/sequencing	Turn off/sequence unnecessary chillers	X			
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Check setpoints	Check all setpoints for proper setting and function	X			
Evaporator and condenser coil fouling	Assess evaporator and condenser coil fouling as required		X		
Compressor motor temperature	Check temperature per manufacturer's specifications		X		
Perform water quality test	Check water quality for proper chemical balance		X		
Leak testing	Conduct leak testing on all compressor fittings, oil pump joints and fittings, and relief valves		X		
Check all insulation	Check insulation for condition and appropriateness		X		
Control operation	Verify proper control function including: • Hot gas bypass • Liquid injection		X		
Check vane control settings	Check settings per manufacturer's specification			X	
Verify motor load limit control	Check settings per manufacturer's specification			X	
Verify load balance operation	Check settings per manufacturer's specification			X	
Check chilled water reset settings and function	Check settings per manufacturer's specification			X	
Check chiller lockout setpoint	Check settings per manufacturer's specification				X
Clean condenser tubes	Clean tubes at least annually as part of shutdown procedure				X

Building Controls Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Semi-Annually	Annually
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Verify control schedules	Verify in control software that schedules are accurate for season, occupancy, etc.	X			
Verify setpoints	Verify in control software that setpoints are accurate for season, occupancy, etc.	X			
Time clocks	Reset after every power outage	X			
Check all gauges	Check all gauges to make sure readings are as expected		X		
Control tubing (pneumatic system)	Check all control tubing for leaks		X		
Check outside air volumes	Calculated the amount of outside air introduced and compare to requirements		X		
Check setpoints	Check setpoints and review rational for setting		X		
Check schedules	Check schedules and review rational for setting		X		
Check deadbands	Assure that all deadbands are accurate and the only simultaneous heating and cooling is by design		X		
Check sensors	Conduct thorough check of all sensors - temperature, pressure, humidity, flow, etc. - for expected values			X	
Time clocks	Check for accuracy and clean			X	
Calibrate sensors	Calibrate all sensors: temperature, pressure, humidity, flow, etc.				X

Pumps Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
Pump use/sequencing	Turn off/sequence unnecessary pumps	X			
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Check lubrication	Assure that all bearings are lubricated per the manufacture's recommendation			X	
Check packing	Check packing for wear and repack as necessary. Consider replacing packing with mechanical seals.			X	
Motor/pump alignment	Aligning the pump/motor coupling allows for efficient torque transfer to the pump			X	
Check mountings	Check and secure all pump mountings			X	
Check bearings	Inspect bearings and drive belts for wear. Adjust, repair, or replace as necessary.				X
Motor condition	Checking the condition of the motor through temperature or vibration analysis assures long life				X

Fans Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
System use/sequencing	Turn off/sequence unnecessary equipment	X			
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Observe belts	Verify proper belt tension and alignment			X	
Inspect pulley wheels	Clean and lubricate where required			X	
Inspect dampers	Confirm proper and complete closure control; outside air dampers should be airtight when closed			X	
Observe actuator/linkage control	Verify operation, clean, lubricate, adjust as needed			X	
Check fan blades	Validate proper rotation and clean when necessary			X	
Filters	Check for gaps, replace when dirty - monthly			X	
Check for air quality anomalies	Inspect for moisture/growth on walls, ceilings, carpets, and in/outside of duct-work. Check for musty smells and listen to complaints.			X	
Check wiring	Verify all electrical connections are tight				X
Inspect ductwork	Check and refasten loose connections, repair all leaks				X
Coils	Confirm that filters have kept clean, clean as necessary				X
Insulation	Inspect, repair, replace all compromised duct insulation				X

Electric Motors Checklist

Description	Comments	Maintenance Frequency			
		Daily	Weekly	Monthly	Annually
Motor use/sequencing	Turn off/sequence unnecessary motors	X			
Overall visual inspection	Complete overall visual inspection to be sure all equipment is operating and safety systems are in place	X			
Motor condition	Check the condition of the motor through temperature or vibration analysis and compare to baseline values		X		
Check lubrication	Assure that all bearings are lubricated per the manufacture's recommendation			X	
Check packing	Check packing for wear and repack as necessary. Consider replacing packing with mechanical seals.			X	
Motor alignment	Aligning the motor coupling allows for efficient torque transfer to the pump			X	
Check mountings	Check and secure all motor mountings			X	
Check terminal tightness	Tighten connection terminals as necessary			X	
Cleaning	Remove dust and dirt from motor to facilitate cooling			X	
Check bearings	Inspect bearings and drive belts for wear. Adjust, repair, or replace as necessary.				X
Motor condition	Checking the condition of the motor through temperature or vibration analysis assures long life				X
Check for balanced three-phase power	Unbalanced power can shorten the motor life through excessive heat build up				X
Check for over-voltage or under-voltage conditions	Over- or under-voltage situations can shorten the motor life through excessive heat build up				X

APPENDIX F

LOANSTAR INFORMATION

Texas LoanSTAR Program

FACTS ABOUT LoanSTAR

The State of Texas LoanSTAR (Saving Taxes and Resources) Program finances energy efficient facility up-grades for state agencies, public schools, institutions of higher education, local governments, municipalities, and hospitals. The program's revolving loan mechanism allows participants to borrow money and repay all project costs through the stream of **cost savings** produced.

ELIGIBLE PROJECTS

Up-grades financed through the program include, but are not limited to, (1) energy efficient lighting systems; (2) high efficiency heating, ventilation and air conditioning systems; (3) energy management systems; (4) boiler efficiency improvements; (5) energy recovery systems; (6) building shell improvements; and (7) load management projects. The prospective borrower hires a Professional Engineer to analyze the potential energy efficient projects that will be submitted for funding through the Loan STAR Program. All engineering costs are covered under the program.

PROGRAM REQUIREMENTS

Once the projects are analyzed and the prospective borrower agrees with the recommended projects, the engineer prepares an Energy Assessment Report (EAR) with the project descriptions and calculations. The EAR must be prepared according to the LoanSTAR Technical Guidelines. The EAR is reviewed and approved by the State Energy Conservation Office (SECO) technical staff before project financing is authorized. Projects financed by LoanSTAR must have an average simple payback of ten years or less. Borrowers do, however, have the option of buying down paybacks to meet the composite ten-year limit.

To ensure up-grade projects are designed and constructed according to the EAR, SECO performs a review of the design documents at the 50% and 100% completion phases. On-site construction monitoring is also performed at the 50% and 100% completion phases.

SAVINGS VERIFICATION

To ensure that the Borrower is achieving the estimated energy savings, monitoring and verification is required for all LoanSTAR funded projects. The level of monitoring and verifications may range from utility bill analysis to individual system or whole building metering depending on the size and type of retrofit projects. If whole building metering is required, metering and monitoring cost can be rolled into the loan.

For additional information regarding the
LoanSTAR program, please contact:

Eddy Trevino
SECO, LoanSTAR Program Manager
(512) 463-1080

APPENDIX G

REQUEST FOR ENERGY ASSISTANCE

Post-it® Fax Note 7671	Date 4/8/10	# of pages ▶ 1
To Juline Ferris	From Vangie Rapp	
Co./Dept. SECO	Co. Lockhart ISD	
Phone #	Phone # 512-398-0010	
Fax # 512-475-2569	Fax # 512-398-0991	

OFFICE OF THE COMPTROLLER TEXAS

SECO
State Energy Conservation Office

Public Schools, Colleges and Non-Profit Hospitals

Preliminary Energy Assessment Service Agreement

Investing in our public schools, colleges and non-profit hospitals 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 Lockhart 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 designated 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 key decision makers.

Acceptance of Agreement

PEA 2004
ESA

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

Signature: C. J. Gardner Date: April 8, 2010

Name (Mr./Ms./Dr.) Mr. Cliff Gardner Title: Assistant Superintendent Administration and Operations

Organization: Lockhart Independent School District Phone: 512-398-0042

Street Address: 105 S. Colorado Fax: 512-398-0991

Mailing Address: P.O. Box 120 E-Mail: cliff.gardner@lockhart.txed.net

Lockhart, Texas 78644 County: Caldwell /TEESi

Contact Information:

Name (Mr./Ms./Dr.): _____ Title: _____

Phone: _____ Fax: _____

E-Mail: _____ County: _____

Please sign and mail or fax to: Juline Ferris, **Schools and Education** Program Administrator, State Energy Conservation Office, 111 E. 17th Street, Austin, Texas 78774. Phone: 512-936-9283. **Fax 512-475-2569.**